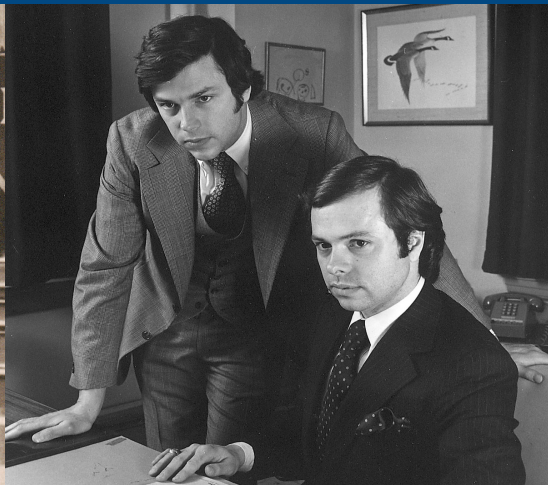
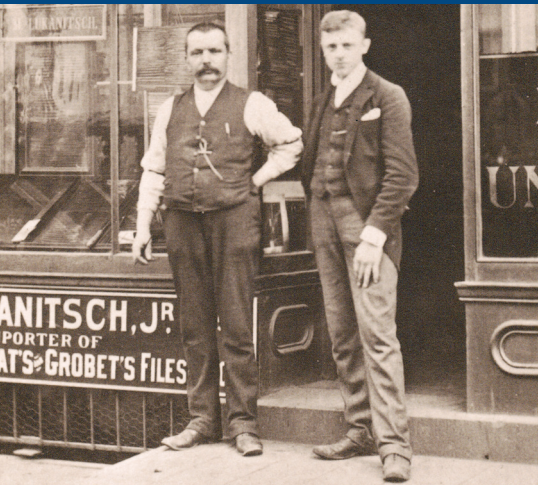


# Gesswein®

The Right Tools



Tools, Equipment and Supplies  
for the Jewelry Industry

# Gesswein®

## The Right Tools

How we came to be here, more than 95 years after incorporating, is truly an American success story. The founder of our company, Paul H. Gesswein, was born in Germany. One of the youngest in a family of 18 children, he came to America with his parents and some of his younger siblings when he was in his early teens.

His arrival in this country typified the struggle that many immigrants faced in becoming self-sufficient. As a teenager, Paul took a job working in a hardware store and soon found that he had many requests from nearby craftsmen for precision tools. Recognizing a unique opportunity, he decided to start his own business. He began by importing European tools, primarily from Germany. Initially, Paul concentrated on local customers, who visited the store to make purchases. As time went on, he visited customers outside the local area, travelling by steamer between New York and Boston. After more people heard about his precision tools, requests from other parts of the country came in. That's when Paul decided to produce a book of tools and supplies that he could mail to those who couldn't visit the store—and our first catalog was born.

By the 1930s, the Paul H. Gesswein Company occupied one room in a building on Maiden Lane in lower Manhattan. Paul made the sales calls while one employee manned the phones. Items sold then were predecessors to the ones we offer in this very catalog.

By decade's end, Paul had died and left the company to his wife. One of his sons, Roger Gesswein Sr. (father of today's chairman of the board), managed the business. At the outset of World War II, tool supplies from Europe, particularly Germany, began to dry up. Roger looked to find domestic sources, but manufacturers had been directed to produce only those goods pertinent to the war effort, meaning they were unable to make the specialized tools needed by Gesswein customers. Discouraged by what would turn out to be a temporary slowdown, Roger offered to sell the company to his one employee for just \$1,200. Fortunately, he was advised to reconsider. As the war ended, more domestic tool sources became available, and the Paul H. Gesswein Company began to grow, expanding as quickly as space became available in the Maiden Lane building.

By 1950, the Paul H. Gesswein Company had 10 employees and carried over 1,000 items. Twenty years after his death, people still remembered what a gentleman Paul Gesswein was, and they remained loyal to the company he founded.

In 1963, the company finally outgrew its available space. We moved uptown a couple of miles to lower Park Avenue, beginning with 5,000 square feet of space. As the decade progressed, so did we.

Within three years, another generation of Gessweins had entered the business. We were still on Park Avenue, but we were renting another floor and part of a third to store equipment. Even with the extra space, we had at least two employees sharing the same desk, alternating their workdays in the office. Another move was clearly in the offing. Ultimately, we decided on Connecticut, designing and constructing our own home office here, later acquiring first one adjacent building and then another.

Until roughly 40 years ago, we focused primarily on domestic sales. Roger then visited Europe to call on suppliers and recognized a vast untapped market. He soon established numerous relationships with European customers who realized, like their American counterparts, the advantages of using our unique, high-quality products. And so began a new era of international sales.

The Paul H. Gesswein Company has come a long way from that one-room walk-in store on Maiden Lane. Today, we employ many more people and offer over 16,000 items to a large community of jewelry manufacturers and retailers around the globe. Even with this growth, however, we are still loyal to the vision Paul had over 95 years ago.

As simply set forth in our guiding policy: "Our customers are the most important part of our business. Without them we would not be here. We are dedicated to giving them the ultimate in service and to making them think the best thing they ever did was buy from Gesswein. Gesswein means quality and value. Our products include those of highest quality and precision as well as those of high value at lower costs. Service means giving the customers more than they expect, responding to their needs immediately and shipping orders the same day."

In closing, it seems appropriate to us that we present this catalog with a passage from our very first:

***"It is with justifiable pride that we contemplate its completion, and in presenting it to you we do so with the firm conviction that it will bring us into closer relations of mutual advantage."***

**Tools, Equipment and Supplies  
for the Jewelry Industry Since 1914**



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Member of



<b>Abrasive Polisher and Wheel Comparison Chart</b>							
Brand	Poly	Edenta	Gesswein Elite	SiC	Dedeco	PT8	Cera
Page	3	8	5	6	4	7	10
Abrasive	SiC	SiC	SiC	SiC	SiC & AIO	AIO	Ceramic
Bond	Polyurethane	Rubberized	Silicone	Silicone	Neoprene	Silicone	Rubber Carrier
Wheels	✓	✓	✓	✓	✓	✓	✓
Mtd. Wheels	✓	✓				✓	
Cylinders	✓	✓	✓		✓		
Mtd. Cylinders	✓					✓	✓
Mtd. Points	✓	✓				✓	
Bullets				✓			
Mtd. Bullet							✓
Rods		✓				✓	
Coarse	Coarse	Prepolish	180		100, 120		80
Medium	Medium	Medium	220	220, 240	180	Medium	120
Fine	Fine	Fine			320	Fine	220, 320
Ultra-Fine	High Shine	High Shine	1000, 1200	800	400		500

### Poly Polishers

Produce superior results on all precious and nonprecious metals. Feature silicon carbide abrasive in a specially formulated polyurethane rubberized bond for long life, outlasting other types of rubber polishers. Available in color-coded grits to finish castings and fabrications from rough to highly polished without leaving the bench. Use on soft metals such as yellow gold, silver, sterling silver, brass and bronze.

### Edenta Polishers

Highest-quality precision-graded polishers, manufactured according to ISO 9001. Offer superior performance, guaranteed consistency, unmatched durability and a slow breakdown rate. Consist of silicon carbide evenly dispersed in a special rubberized bond. Good for removing light scratches, preparing for final polishing and imparting a bright high shine. Use on soft metals such as yellow gold, silver, sterling silver, brass and bronze, as well as hard metals such as white gold, platinum, palladium and titanium.

### Gesswein Elite Polishers

These popular polishers feature a more flexible silicone rubber bond that lets them cut aggressively yet leave a smooth enough finish to proceed right to final polishing. Great for applications ranging from removing deep scratches and burs to imparting an ultra-high shine. Will not scratch or mar stones. Use on soft metals such as yellow gold, silver, sterling silver, brass and bronze.

### SiC Wheels

Feature evenly dispersed abrasive in a silicone rubber bond for smooth finishing. Good for fast cutting, removing light tool and file marks and prepolishing. Can be dressed to a fine point with a file or dressing stone for accessing recessed, detailed areas. Use on soft metals such as yellow gold, silver, sterling silver, brass and bronze, as well as hard metals such as white gold, platinum and palladium.

### Dedeco Wheels

A tradition in excellence, these wheels still set a high standard for many reasons: they feature a unique neoprene bond, are nonloading, are easily dressed with a file and come in several grits, giving you the flexibility to finish any metal to a bright shine. Use on soft metals such as yellow gold, silver, sterling silver, brass and bronze, as well as hard metals such as white gold, platinum, palladium, titanium and stainless steel.

### PT8 Polishers

Consist of aluminum oxide evenly dispersed in a moderately hard silicone rubber bond for producing smooth, uniform surface finishes. Conform slightly to surfaces but hold edges due to slow breakdown rate. Good for removing tool marks, smoothing parting lines and removing casting scale. Use on soft metals such as yellow gold, silver, sterling silver, brass and bronze, as well as hard metals such as white gold and platinum.

### Cera Wheels

Contain ceramic particles in a rubber carrier. Designed to keep abrasive exposed to the polishing surface, ensuring high efficiency and preventing clogging. Good for fast cutting and removing light scratches. Use on soft metals such as yellow gold, silver, sterling silver, brass and bronze, as well as hard metals such as white gold, platinum and palladium.

## Abrasive Wheel Operating Recommendations

Certain precautions should be observed when running any abrasive wheel. Be sure to wear proper eye protection, and never exceed the recommended operating speed stamped on the box or wheel. An improperly used wheel is dangerous. Be sure to comply with American National Standards Institute Safety Code B-7.1 and Occupational Safety and Health Act covering speed, safety guards, flanges, mounting procedures, general operating rules, handling, storage, inspection and general machine conditions.

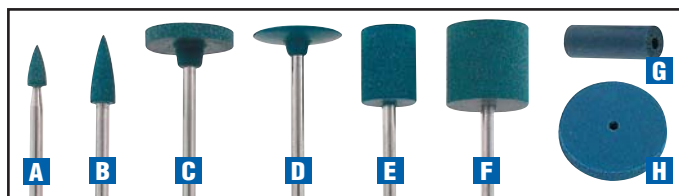
**A - Z Poly Polishers – Hold crisp edge. Feature firmer style.**

Superior results on all precious and nonprecious metals. Silicon carbide abrasive in a specially formulated polyurethane rubberized bond for long life – outlasts other types of rubber abrasives. Available in four color-coded grits (coarse blue, medium gray, fine pre-polish brown, and high-shine green) to finish your castings and fabrications from rough to highly polished without getting up from the bench.

All our Polyurethane Polishers are available in a wide variety of shapes and sizes to finish any jewelry item from the largest ring shanks to the tiniest settings uniformly and without a lot of dressing to make them fit! Mounted abrasives are on  $\frac{3}{32}$ " shanks. Unmounted wheels and cylinders have  $\frac{1}{16}$ " holes and can be mounted on mandrels shown on p. 352. Maximum operating speed: 12,000rpm.

**Blue Poly Polishers – Coarse, Slightly Flexible**

Shape	Dia. x L	Item#	Pkg.(10)	Item#	Pkg.(100)
A. Mtd. Point	3 x 7mm	145-1401	\$11.85	145-1400	\$95.00
B. Mtd. Point	4 x 12mm	145-1115	11.85	145-1114	95.00
C. SE Mtd. Wheel	$\frac{5}{8}$ " x $\frac{3}{32}$ "	145-1409	13.30	145-1408	107.00
D. KE Mtd. Wheel	$\frac{5}{8}$ "	145-1119	13.30	145-1118	107.00
E. Mtd. Cylinder	10 x 12mm	145-1121	13.30	145-1120	107.00
F. Mtd. Cylinder	14 x 12mm	145-1123	21.75	145-1122	173.90
G. Cylinder	7 x 20mm	145-1113	5.30	145-1112	42.35
H. SE Wheel	$\frac{7}{8}$ "	145-1111	5.30	145-1110	42.35



**Gray Poly Polishers – Medium, Moderately Flexible**

Shape	Dia. x L	Item#	Pkg.(10)	Item#	Pkg.(100)
I. Mtd. Point	3 x 7mm	145-1403	\$11.85	145-1402	\$95.00
J. Mtd. Point	4 x 12mm	145-1129	11.85	145-1128	95.00
K. SE Mtd. Wheel	$\frac{5}{8}$ " x $\frac{3}{32}$ "	145-1411	13.30	145-1410	107.00
L. KE Mtd. Wheel	$\frac{5}{8}$ "	145-1133	13.30	145-1132	107.00
M. Mtd. Cylinder	10 x 12mm	145-1135	13.30	145-1134	107.00
N. Mtd. Cylinder	14 x 12mm	145-1137	21.75	145-1136	173.90
O. Cylinder	7 x 20mm	145-1127	5.30	145-1126	42.35
P. SE Wheel	$\frac{7}{8}$ "	145-1125	5.30	145-1124	42.35



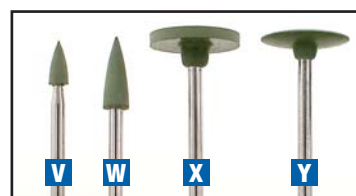
**Brown Poly Polishers – Fine, Moderately Flexible**

Shape	Dia. x L	Item#	Pkg.(10)	Item#	Pkg.(100)
Q. Mtd. Point	3 x 7mm	145-1405	\$11.85	145-1404	\$95.00
R. Mtd. Point	4 x 12mm	145-1143	11.85	145-1142	95.00
S. SE Mtd. Wheel	$\frac{5}{8}$ " x $\frac{3}{32}$ "	145-1413	13.30	145-1412	107.00
T. KE Mtd. Wheel	$\frac{5}{8}$ "	145-1147	13.30	145-1146	107.00
U. Mtd. Cylinder	14 x 12mm	145-1151	21.75	145-1150	173.90



**Green Poly Polishers – High Shine, Moderately Flexible**

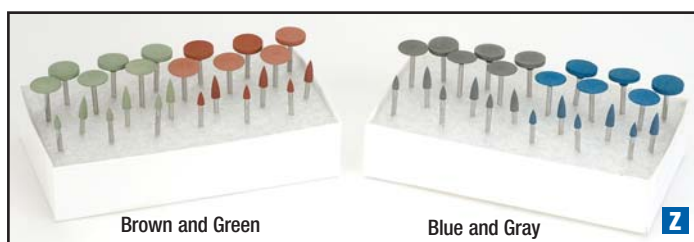
Shape	Dia. x L	Item#	Pkg.(10)	Item#	Pkg.(100)
V. Mtd. Point	3 x 7mm	145-1407	\$11.85	145-1406	\$95.00
W. Mtd. Point	4 x 12mm	145-1157	11.85	145-1156	95.00
X. SE Mtd. Wheel	$\frac{5}{8}$ " x $\frac{3}{32}$ "	145-1415	13.30	145-1414	107.00
Y. KE Mtd. Wheel	$\frac{5}{8}$ "	145-1161	13.30	145-1160	107.00



**Z Poly Polisher Sets**

These 24-piece sets contain three of each shape of mounted polishing points and wheels on  $\frac{3}{32}$ " shanks.

Description	Item#	Each
Brown and Green Poly Polisher Set	145-1100	\$29.95
Blue and Gray Poly Polisher Set	145-1099	29.95

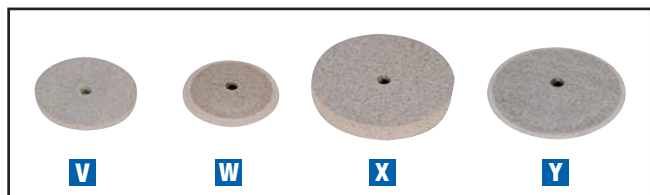
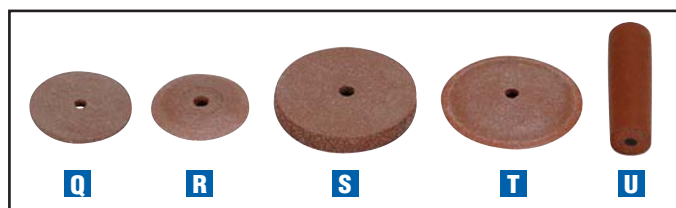
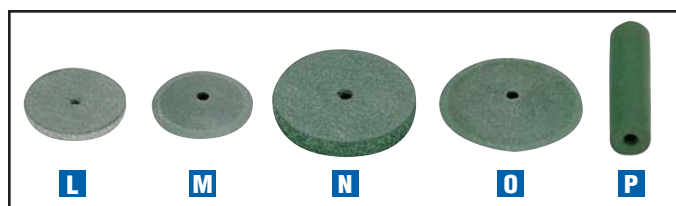
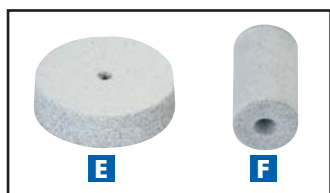
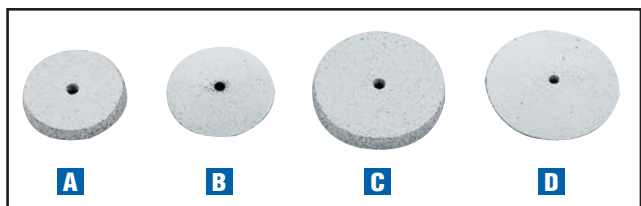






## A - Y Dedeco® Rubberized Wheels

A tradition in excellence, Dedeco wheels have been a standard on the jeweler's bench for years, and with good reason: they come in a variety of grits (brown, green, red and white) and shapes ( $\frac{5}{8}$ " and  $\frac{7}{8}$ " square- and knife-edge wheels and  $\frac{1}{4}$ " x  $\frac{15}{16}$ " cylinders), giving you the flexibility to finish any metal to a bright shine. These wheels feature a neoprene bond, are nonloading and easily dressed with a file. Maximum operating speed: 21,000rpm, (White Universal: 7,000). Sold in boxes of 100. Have  $\frac{1}{16}$ " arbor holes see p. 352 for mandrels.



### White Universal – 100 Grit, Flexible

White (silicon carbide): Takes out scratches, parting lines and burs while leaving a very smooth finish with no flats or dusty residue.

Shape	Style	Dimensions	Item#	Box(100)
A. SE Wheel	7102	$\frac{5}{8}$ " x $\frac{3}{32}$ "	145-0111	\$34.50
B. KE Wheel	7108	$\frac{5}{8}$ "	145-0113	34.50
C. SE Wheel	7104	$\frac{7}{8}$ " x $\frac{1}{8}$ "	145-0115	34.50
D. KE Wheel	7110	$\frac{7}{8}$ "	145-0117	34.50
E. SE Wheel	7106	$\frac{7}{8}$ " x $\frac{1}{4}$ "	145-0119	54.50
F. Cylinder	7124	$\frac{1}{2}$ " x $\frac{15}{16}$ "	145-0127	69.95

### Brown Traditional – 120 Grit, Firm

Brown (aluminum oxide): Extra-long-lasting for fastest precious and nonprecious metal removal.

Shape	Style	Dimensions	Item#	Box(100)
G. SE Wheel	5030	$\frac{5}{8}$ " x $\frac{1}{16}$ "	145-0071	\$29.95
H. KE Wheel	4982	$\frac{5}{8}$ "	145-0073	33.95
I. SE Wheel	5010	$\frac{7}{8}$ " x $\frac{1}{8}$ "	145-0072	29.95
J. KE Wheel	4983	$\frac{7}{8}$ "	145-0074	33.95
K. Cylinder	4595	$\frac{1}{4}$ " x $\frac{15}{16}$ "	145-0075	29.95

### Green Traditional – 180 Grit, Flexible

Green (silicon carbide): Slightly finer than brown for removing file marks and scratches.

Shape	Style	Dimensions	Item#	Box(100)
L. SE Wheel	5021	$\frac{5}{8}$ " x $\frac{1}{16}$ "	145-0076	\$21.95
M. KE Wheel	4951	$\frac{5}{8}$ "	145-0062	25.95
N. SE Wheel	5001	$\frac{7}{8}$ " x $\frac{1}{8}$ "	145-0077	21.95
O. KE Wheel	4950	$\frac{7}{8}$ "	145-0063	25.95
P. Cylinder	4592	$\frac{1}{4}$ " x $\frac{15}{16}$ "	145-0078	21.95

### Red Flexies – 320 Grit, Flexible

Red (silicon carbide): For fine polishing of gold and other precious metals.

Shape	Style	Dimensions	Item#	Box(100)
Q. SE Wheel	5027	$\frac{5}{8}$ " x $\frac{1}{16}$ "	145-0079	\$25.95
R. KE Wheel	4971	$\frac{5}{8}$ "	145-0081	29.95
S. SE Wheel	5007	$\frac{7}{8}$ " x $\frac{1}{8}$ "	145-0080	25.95
T. KE Wheel	4970	$\frac{7}{8}$ "	145-0082	29.95
U. Cylinder	4594	$\frac{1}{4}$ " x $\frac{15}{16}$ "	145-0068	25.95

### White Flexies – 400 Grit, Flexible

White (aluminum oxide): For ultra-fine polishing of gold and other precious metals.

Shape	Style	Dimensions	Item#	Box(100)
V. SE Wheel	5029	$\frac{5}{8}$ " x $\frac{1}{16}$ "	145-0064	\$27.95
W. KE Wheel	4981	$\frac{5}{8}$ "	145-0083	31.95
X. SE Wheel	5009	$\frac{7}{8}$ " x $\frac{1}{8}$ "	145-0065	27.95
Y. KE Wheel	4980	$\frac{7}{8}$ "	145-0084	31.95

## A - U Gesswein® Elite Silicone Wheels

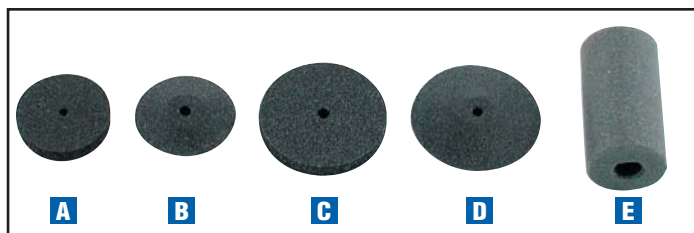
These popular wheels and cylinders contain silicon carbide grit for the most efficient cutting of nonferrous metals. Feature a more flexible silicone rubber bond that allows them to cut aggressively yet leave a smooth enough finish to go right to final polishing.

Use Gray Silicone to remove deep scratches and burs quickly, max. operating speed: 10,000rpm. Green Silicone for removing light scratches, max. operating speed: 10,000rpm. Pink Silicone to produce a high shine, max. operating speed: 10,000rpm. Golden for final polishing and imparting an ultra-high shine, max. operating speed: 15,000rpm. Aqua are ideal for touch ups and fine scratch removal, max. operating speed: 20,000rpm. Safe for most stones, so you can work right next to them in tight areas. Have 1/16" arbor holes see p. 352 for wheel mandrels, and see below for cylinder mandrels.



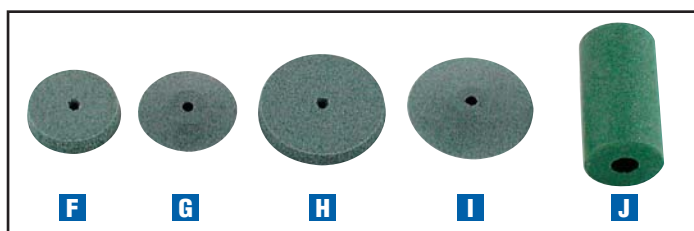
### Gray Elite Silicone – 180 Grit, Very Flexible

Shape	Dimensions	Item#	Pkg.(10)	Item#	Box(100)
A. SE Wheel	5/8" x 1/8"	145-0016	\$4.90	145-0017	\$39.95
B. KE Wheel	5/8"	145-0018	4.90	145-0019	39.95
C. SE Wheel	7/8" x 1/8"	145-0020	4.90	145-0021	39.95
D. KE Wheel	7/8"	145-0022	4.90	145-0023	39.95
E. Cylinder	1/2" x 1"	145-0141	15.60	-	-



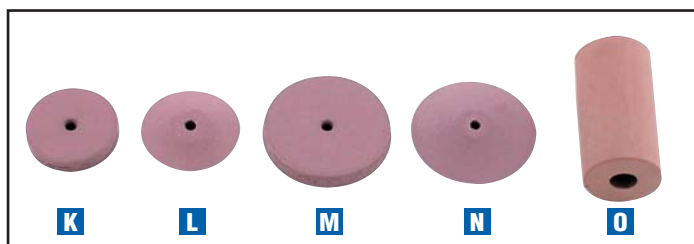
### Green Elite Silicone – 220 Grit, Very Flexible

Shape	Dimensions	Item#	Pkg.(10)	Item#	Box(100)
F. SE Wheel	5/8" x 1/8"	145-0108	\$4.90	145-0109	\$39.95
G. KE Wheel	5/8"	145-0010	4.90	145-0011	39.95
H. SE Wheel	7/8" x 1/8"	145-0012	4.90	145-0013	39.95
I. KE Wheel	7/8"	145-0014	4.90	145-0015	39.95
J. Cylinder	1/2" x 1"	145-0142	15.60	-	-



### Pink Elite Silicone – 1000 Grit, Very Flexible

Shape	Dimensions	Item#	Pkg.(10)	Item#	Box(100)
K. SE Wheel	5/8" x 1/8"	145-0988	\$5.75	145-0989	\$46.95
L. KE Wheel	5/8"	145-0990	5.75	145-0991	46.95
M. SE Wheel	7/8" x 1/8"	145-0984	5.75	145-0985	46.95
N. KE Wheel	7/8"	145-0986	5.75	145-0987	46.95
O. Cylinder	1/2" x 1"	145-0143	18.50	-	-



### Elite Inside Ring Cylinder Kit

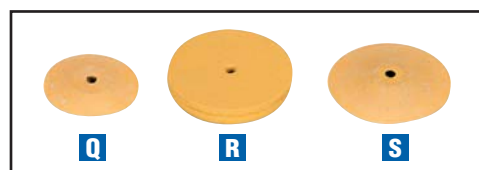
Includes one each of all three Elite 1/2" x 1" Cylinders listed above and Mandrel #145-0146. Mandrel also sold separately.

Description	Item#	Each
P. Cylinder Kit	145-0150	\$7.85
1/8" Shank Mandrel	145-0146	2.20



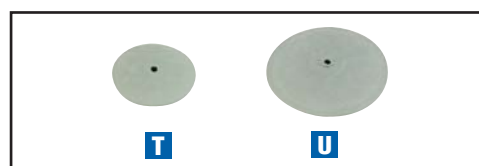
### Golden Elite Silicone – 1000 Grit, Very Flexible

Shape	Dia.	Item#	Pkg.(10)	Item#	Box(100)
Q. KE Wheel	5/8"	275-0521	\$6.75	275-0526	\$55.00
R. SE Wheel	7/8" x 1/8"	275-0501	6.75	275-0506	55.00
S. KE Wheel	7/8"	275-0511	6.75	275-0516	55.00



### Aqua Elite Silicone – 1200 Grit, Slightly Flexible

Shape	Dia. x Thick	Item#	Pkg.(10)	Item#	Box(100)
T. KE Wheel	5/8"	145-3173	\$5.85	145-3175	\$48.95
U. KE Wheel	7/8"	145-3174	5.85	145-3176	48.95

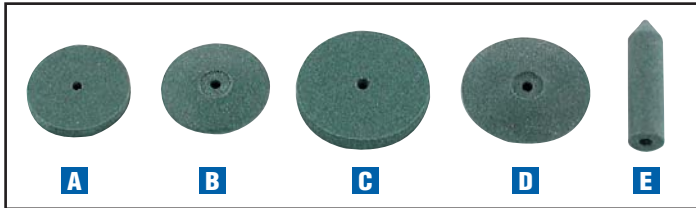




### A - S Silicone SiC Wheels and Points

Fast-cutting silicon carbide abrasive is uniformly dispersed throughout a silicone rubber bond for smooth finishing of precious metals. Ideal for intricate surfaces because of their high flexibility. Follow contours exceptionally well. Cut well and leave a smooth finish ready for polishing. Available in 4 grits: Green (220 grit) for cutting, Black (240 grit) for removal of light tool and file marks, Blue (medium) for medium-fast cutting while leaving a smooth finish and Light Blue (800 grit) for prepolishing.

Bullets measures 1" long by approx. 1/4" diameter. Can be easily dressed to a fine point on a file or our dressing block see p. 7 for accessing recessed and detailed areas. All with 1/16" arbor hole. Maximum operating speed: 10,000rpm. See p. 352 for mandrels.



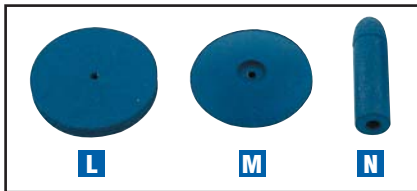
#### Green Silicone SiC – 220 Grit, Extremely Flexible

Shape	Dia. x Thick	Item#	Pkg.(10)	Item#	Box(100)
A. SE Wheel	5/8" x 3/32"	145-1375	\$4.89	145-1374	\$39.15
B. KE Wheel	5/8"	145-1377	4.89	145-1376	39.15
C. SE Wheel	7/8" x 1/8"	145-1371	4.89	145-1370	39.15
D. KE Wheel	7/8"	145-1373	4.89	145-1372	39.15
E. Bullet	1/4" x 1"	145-1379	4.89	145-1378	39.15



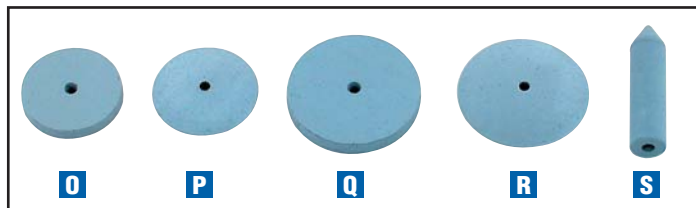
#### Black Silicone SiC – 240 Grit, Very Flexible

Shape	Dia. x Thick	Item#	Pkg.(10)	Item#	Box(100)
F. SE Wheel	5/8" x 3/32"	145-0970	\$4.30	145-0969	\$34.50
G. KE Wheel	5/8"	145-0972	4.30	145-0971	34.50
H. SE Wheel	7/8" x 1/8"	145-0974	4.30	145-0973	34.50
I. KE Wheel	7/8"	145-0976	4.30	145-0975	34.50
J. Bullet	1/4" x 1"	145-0978	4.30	145-0977	34.50
K. SE Wheel	22 x 6mm	145-0962	8.10	145-0961	64.50



#### Blue Silicone SiC – Medium Grit, Flexible

Shape	Dimensions	Item#	Pkg.(10)	Item#	Box(100)
L. SE Wheel	7/8" x 1/8"	145-0980	\$4.30	145-0999	\$40.35
M. KE Wheel	7/8"	145-0982	4.50	145-0998	40.35
N. Bullet	1/4" x 1"	145-0979	5.05	-	-



#### Light Blue Silicone SiC – 800 Grit, Very Flexible

Shape	Dia. x Thick	Item#	Pkg.(10)	Item#	Box(100)
O. SE Wheel	5/8" x 3/32"	145-0024	\$4.30	145-0025	\$34.50
P. KE Wheel	5/8"	145-0026	4.30	145-0027	34.50
Q. SE Wheel	7/8" x 1/8"	145-0028	4.30	145-0029	34.50
R. KE Wheel	7/8"	145-0030	4.30	145-0031	34.50
S. Bullet	1/4" x 1"	145-0032	4.30	145-0033	34.50



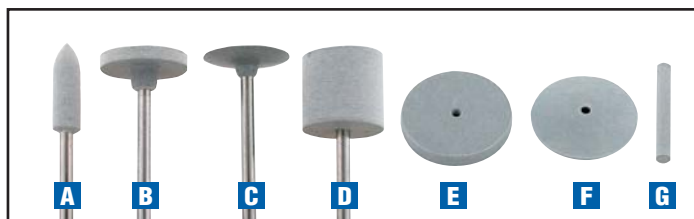
### A - N PT8 Platinum Polishers

These polishers work especially well on platinum. Even abrasive distribution allows them to produce smooth, uniform surface finishes. Moderately hard silicone rubber impregnated with aluminum oxide conforms slightly to surfaces. All shapes hold their edges due to slow breakdown rate. Applications include removing tool marks, smoothing parting lines and removing casting scale. Choose from a variety of unmounted and mounted ( $\frac{3}{32}$ " shank) shapes. Available in two color-coded grits: medium (gray) and fine (lilac). See p. 352 for mandrels. Maximum operating speed: 10,000rpm.



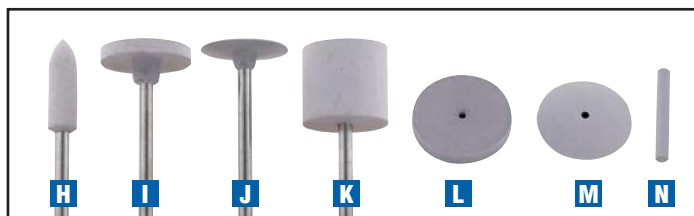
#### Gray PT8 Polishers – Medium for breakdown

Shape	Dimensions	Item#	Pkg.(10)	Item#	Box(100)
A. Mtd. Point	$\frac{3}{16}$ " x $\frac{5}{8}$ "	145-1347	\$15.80	145-1346	\$135.00
B. SE Mtd. Wheel	$\frac{5}{8}$ " x $\frac{3}{32}$ "	145-1351	15.80	145-1350	135.00
C. KE Mtd. Wheel	$\frac{5}{8}$ "	145-1353	15.80	145-1352	135.00
D. Mtd. Cylinder	$\frac{1}{2}$ " x $\frac{1}{2}$ "	145-1349	23.00	145-1348	195.00
E. SE Wheel	$\frac{7}{8}$ "	145-1341	6.50	145-1340	55.00
F. KE Wheel	$\frac{7}{8}$ "	145-1343	6.50	145-1342	55.00
Shape	Dimensions	Item#	Pkg.(25)	Item#	Box(100)
G. Rod	3mm x 1"	145-1345	\$12.50	145-1344	\$44.95



#### Lilac PT8 Polishers – Fine for prepolish

Shape	Dimensions	Item#	Pkg.(10)	Item#	Box(100)
H. Mtd. Point	$\frac{3}{16}$ " x $\frac{5}{8}$ "	145-1363	\$15.80	145-1362	\$135.00
I. SE Mtd. Wheel	$\frac{5}{8}$ " x $\frac{3}{32}$ "	145-1367	15.80	145-1366	135.00
J. KE Mtd. Wheel	$\frac{5}{8}$ "	145-1369	15.80	145-1368	135.00
K. Mtd. Cylinder	$\frac{1}{2}$ " x $\frac{1}{2}$ "	145-1365	23.00	145-1364	195.00
L. SE Wheel	$\frac{7}{8}$ " x $\frac{1}{8}$ "	145-1357	6.50	145-1356	55.00
M. KE Wheel	$\frac{7}{8}$ "	145-1359	6.50	145-1358	55.00
Shape	Dimensions	Item#	Pkg.(25)	Item#	Box(100)
N. Rod	3mm x 1"	145-1361	\$12.50	145-1360	\$44.95



### O Diamond-Coated Dressing Block

Solid steel block with diamond coating for fast dressing and shaping of any of our rubberized abrasives. One side is grooved for shaping rods, points and knife-edged wheels. The other side is flat for dressing square-edged wheels. Measures  $3\frac{1}{2}$ " overall length (including handle).

Description	Item#	Each
Diamond-Coated Dressing Block	145-1315	\$43.95



### P Edenta TopStar Rod Mandrel – $\frac{3}{32}$ " Shank

A precision-machined mandrel for smooth-as-silk opening and closing. Holds 3mm rods.

Description	Item#	EACH Prices	
		1-2	3+
3mm Rod Mandrel	145-1419	\$5.12	\$4.61



### Q, R Polishing Rod Mandrels – $\frac{3}{32}$ " Shank

For use with 2mm and 3mm polishing rods. Holds securely with a twist-tightening grip. Nickel-plated tool steel.

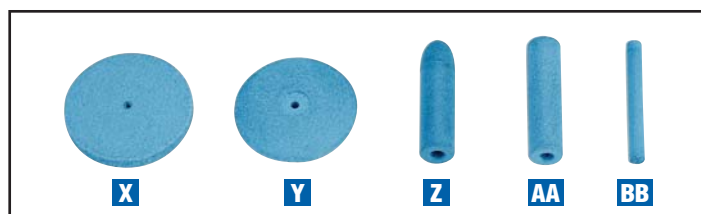
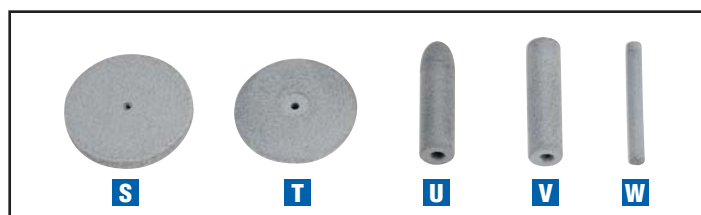
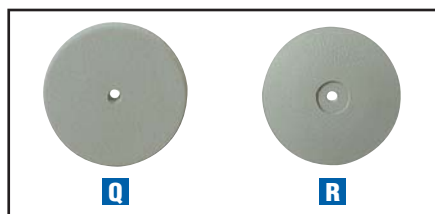
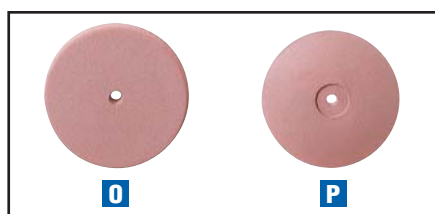
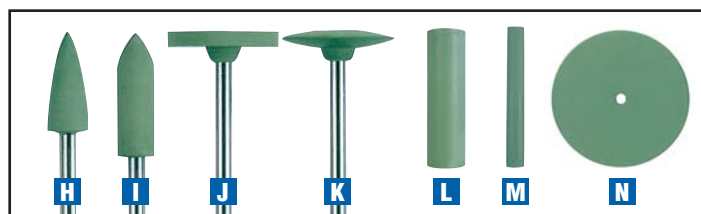
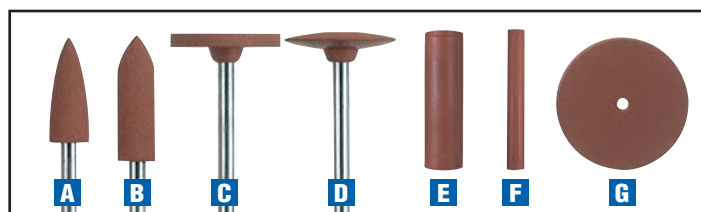
Description	Item#	EACH Prices	
		1-2	3+
Q. 2mm	145-1217	\$3.30	\$2.97
R. 3mm	145-1218	3.30	2.97



## A - BB Edenta Polishers

Top-of-the-line abrasive products manufactured under stringent ISO 9001 guidelines. Feature highest-quality abrasives precision-graded and uniformly dispersed throughout medias. Offer superior performance, guaranteed consistency and unmatched durability. Consist of silicon carbide abrasive in a specially formulated rubberized bond. Break down more slowly and last much longer than competitive brands that use a silicone bond. Produce a superior finish.

Brown TopStar Polishers remove light scratches and prepare surfaces for final polishing, max. operating speed: 20,000rpm. Green TopStar Polishers impart a bright high shine, max. operating speed: 10,000rpm. Pink Platinum Polishers work well as a prepolisher, max. operating speeds: 10,000rpm, and Gray Platinum Polishers impart a mirror finish, max. operating speeds: 5,000rpm. Gray Titanium Polishers are for removing scratches and flaws, max. operating speed: 20,000rpm, while Blue Titanium Polishers impart a final finish, max. operating speeds: 10,000rpm. Mounted shapes have  $\frac{3}{32}$ " shanks, and unmounted shapes have  $\frac{1}{16}$ " arbor holes. See p. 352 for mandrels. Made in Switzerland.



### Brown TopStar Polishes – Prepolish, Flexible

Shape	Size (mm)	Item#	Pkg.(10)	Item#	Box(100)
A. Mtd. Point	5.5 x 15.5	145-1427	\$16.50	145-1426	\$145.00
B. Mtd. Bullet	5 x 16	145-1429	16.50	145-1428	145.00
C. SE Mtd. Wheel	14.5 x 2	145-1433	16.50	145-1432	140.00
D. KE Mtd. Wheel	15	145-1431	16.50	145-1430	140.00
E. Cylinder	6 x 22	145-1423	6.50	145-1422	59.00
F. Rod	3 x 22	145-1425	6.50	145-1424	59.00
G. SE Wheel	22 x 3	145-1421	6.50	145-1420	59.00

### Green TopStar Polishes – High Shine, Flexible

Shape	Size (mm)	Item#	Pkg.(10)	Item#	Box(100)
H. Mtd. Point	5.5 x 15.5	145-1447	\$16.50	145-1446	\$140.00
I. Mtd. Bullet	5 x 16	145-1449	16.50	145-1448	140.00
J. SE Mtd. Wheel	14.5 x 2	145-1453	16.50	145-1452	140.00
K. KE Mtd. Wheel	15	145-1451	16.50	145-1450	140.00
L. Cylinder	6 x 22	145-1443	6.50	145-1442	55.00
M. Rod	3 x 22	145-1445	6.50	145-1444	55.00
N. SE Wheel	22 x 3	145-1441	6.50	145-1440	55.00

### Pink Platinum Polishes – Prepolish, Moderate Flex

Shape	Size (mm)	Item#	Pkg.(10)	Item#	Box(100)
O. SE Wheel	22 x 3	145-1487	\$6.50	145-1486	\$55.00
P. KE Wheel	22	145-1485	6.50	145-1484	55.00

### Gray Platinum Polishes – Mirror Finish, Moderate Flex

Shape	Size (mm)	Item#	Pkg.(10)	Item#	Box(100)
Q. SE Wheel	22 x 3	145-1491	\$6.50	145-1490	\$55.00
R. KE Wheel	22	145-1489	6.50	145-1488	55.00

### Gray Titanium Polishes – Medium, Flexible

Shape	Size (mm)	Item#	Pkg.(10)	Item#	Box(100)
S. SE Wheel	22 x 3	145-3209	\$6.50	145-3208	\$55.00
T. KE Wheel	22 x 3	145-3207	6.50	145-3206	55.00
U. Bullet	6 x 23	145-3205	6.50	145-3204	55.00
V. Cylinder	6 x 22	145-3203	6.50	145-3202	55.00
W. Rod	3 x 22	145-3201	6.50	145-3200	55.00

### Blue Titanium Polishes – Fine, Flexible

Shape	Size (mm)	Item#	Pkg.(10)	Item#	Box(100)
X. SE Wheel	22 x 3	145-3219	\$6.50	145-3218	\$55.00
Y. KE Wheel	22 x 3	145-3217	6.50	145-3216	55.00
Z. Bullet	6 x 23	145-3215	6.50	145-3214	55.00
AA. Cylinder	6 x 22	145-3213	6.50	145-3212	55.00
BB. Rod	3 x 22	145-3211	6.50	145-3210	55.00

### A - I Polyurethane Polishing Rods

Very popular, long lasting rods are designed for cleaning and polishing castings. All are silicone carbide in a polyurethane carrier and can be shaped using our Dressing Stone #145-1240 shown below. Available in three sizes and various grits for all applications.

Each 83-piece set includes both 2 and 3mm sizes, two mandrels (3/32" shank) and a dressing stone to sharpen rods to a fine point. Packaged in a convenient reusable plastic storage box with cover. Choose between Brown and Green or Blue and Gray sets. Maximum operating speed: 21,000rpm.

Color	Grit	Dia. x L	Item#	Pkg.(25)	Item#	Box(100)
A. Blue	Coarse	2 x 20mm	145-1273	\$10.50	145-1244	\$36.90
	Coarse	3 x 23mm	145-1274	10.50	145-1245	36.90
B. Dk. Brown	Extra-coarse	2 x 20mm	145-1270	10.50	145-1241	36.90
	Extra-coarse	3 x 23mm	145-1271	10.50	145-1242	36.90
C. Dk. Gray	Medium	2 x 20mm	145-1276	10.50	145-1247	36.90
	Medium	3 x 23mm	145-1277	10.50	145-1248	36.90
D. Brown	Fine	2 x 20mm	145-1279	10.50	145-1250	36.90
	Fine	3 x 23mm	145-1280	10.50	145-1251	36.90
E. Green	Extra Fine	2 x 20mm	145-1282	10.50	145-1253	36.90
	Extra Fine	3 x 23mm	145-1283	10.50	145-1254	36.90
F. Gray	Medium	3mm x 1"	145-1345	15.65	145-1344	45.00
G. Lilac	Fine	3mm x 1"	145-1361	15.65	145-1360	45.00
Description			Item#	Each		
H. 83-Piece Set (20 of each Brown and Green rod, two mandrels and a dressing stone)			145-1201	\$31.25		
I. 83-Piece Set (20 of each Blue and Gray rod, two mandrels and a dressing stone)			145-1202	31.25		



### J Edenta TopStar Rod Mandrel – 3/32" Shank

A precision-machined mandrel for smooth-as-silk opening and closing. Holds 3mm rods.

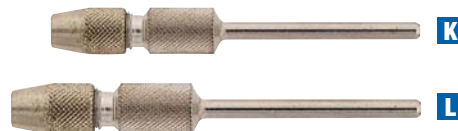
Description	Item#	EACH Prices	
		1-2	3+
3mm Rod Mandrel	145-1419	\$5.12	\$4.61



### K, L Polishing Rod Mandrels – 3/32" Shank

For use with 2mm and 3mm polishing rods. Holds securely with a twist-tightening grip. Nickel-plated tool steel.

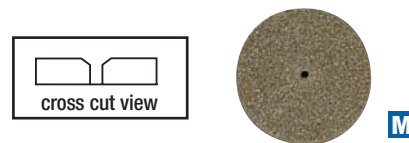
Description	Item#	EACH Prices	
		1-2	3+
K. 2mm	145-1217	\$3.30	\$2.97
L. 3mm	145-1218	3.30	2.97



### M Diamond Impregnated Dressing Stone

Has a concave center hole for forming a point on polishing rods. Measures 3/4" dia. x 1/8" thick.

Description	Item#	Each
Dressing Stone	145-1240	\$3.75



### N, O Everlast Ceramic Polishing Rods – For Platinum, Gold and Silver

Durable, long-lasting ceramic in an epoxy resin. Ideal for smoothing and polishing inside settings and hard-to-reach areas. Easily shaped to a fine point. Can be mounted directly into any flex shaft handpiece. Max. operating speed: 60,000rpm. Measure 2" x 3/32". Imported from Japan.

Grit	Color	Item#	Each
N. 600	Brown	145-0200	\$18.54
O. 1000	Green	145-0205	18.54

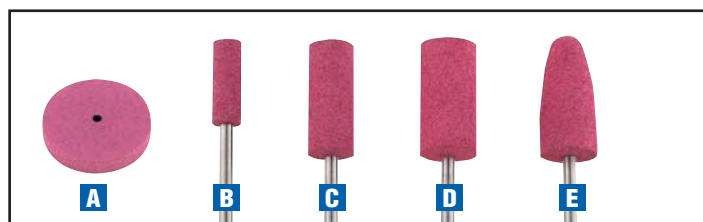






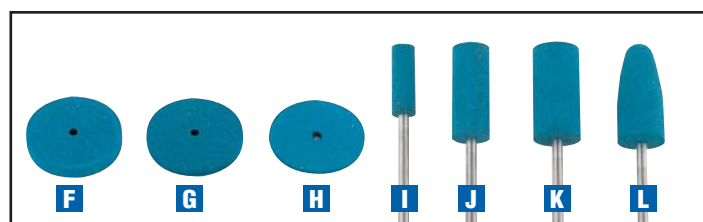
### A - DD Cera Wheels and Points

Contains ceramic particles mixed in a rubber carrier. Keeps the abrasive exposed to the polishing surface, ensuring high efficiency and no clogging. For gold, silver and platinum. Coarser grits cut quickly; medium remove light scratches; fine removes fine scratches leaving ready for polishing. Points are mounted on stainless steel  $\frac{3}{32}$ " shanks. Wheels have  $\frac{1}{16}$ " arbor holes. See p. 352 for mandrels. Max. operating speeds: 30,000rpm for points and 18,000rpm for wheels.



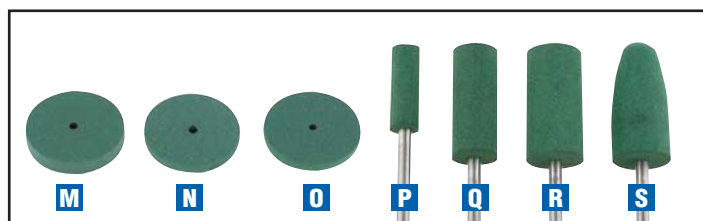
#### Red Cera – 80 Grit

Shape	Dia. x Thick	Item#	PKG. of 10	
			1-4	5+
A. SE Wheel	18 x 3mm	352-0101	\$21.50	\$19.35
Shape	Dia. x Thick	Item#	EACH Prices	
			1-11	12+
B. Mtd. Cylinder	5 x 15mm	351-0600	\$4.35	\$3.92
C. Mtd. Cylinder	8 x 20mm	351-0606	4.35	3.92
D. Mtd. Cylinder	10 x 20mm	351-0612	4.85	4.37
E. Mtd. Bullet	10 x 22mm	351-0624	5.80	5.22



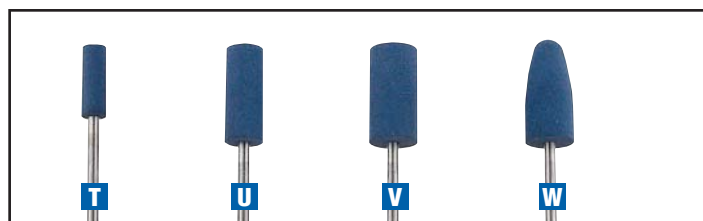
#### Blue Cera – 120 Grit

Shape	Dia. x Thick	Item#	PKG. of 10	
			1-4	5+
F. SE Wheel	18 x 3mm	352-0102	\$21.50	\$19.35
G. SE Wheel	18 x 2mm	352-0108	21.50	19.35
H. SE Wheel	18 x 1mm	352-0114	18.50	16.65
Shape	Dia. x Thick	Item#	EACH Prices	
			1-11	12+
I. Mtd. Cylinder	5 x 15mm	351-0601	\$4.35	\$3.92
J. Mtd. Cylinder	8 x 20mm	351-0607	4.35	3.92
K. Mtd. Cylinder	10 x 20mm	351-0613	4.85	4.37
L. Mtd. Bullet	10 x 22mm	351-0625	5.80	5.22



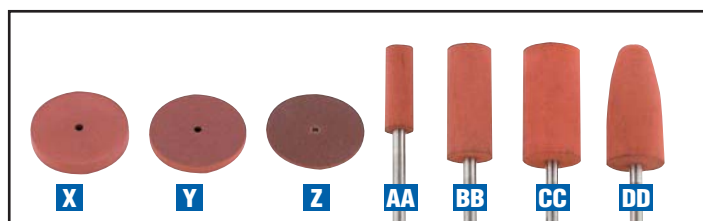
#### Green Cera – 220 Grit

Shape	Dia. x Thick	Item#	PKG. of 10	
			1-4	5+
M. SE Wheel	18 x 3mm	352-0103	\$21.50	\$19.35
N. SE Wheel	18 x 2mm	352-0109	21.50	19.35
O. SE Wheel	18 x 1mm	352-0115	18.50	16.65
Shape	Dia. x Thick	Item#	EACH Prices	
			1-11	12+
P. Mtd. Cylinder	5 x 15mm	351-0603	\$4.35	\$3.92
Q. Mtd. Cylinder	8 x 20mm	351-0609	4.35	3.92
R. Mtd. Cylinder	10 x 20mm	351-0615	4.85	4.37
S. Mtd. Bullet	10 x 22mm	351-0626	5.80	5.22



#### Purple Cera – 320 Grit

Shape	Dia. x Thick	Item#	EACH Prices	
			1-11	12+
T. Mtd. Cylinder	5 x 15mm	351-0604	\$4.35	\$3.92
U. Mtd. Cylinder	8 x 20mm	351-0610	4.35	3.92
V. Mtd. Cylinder	10 x 20mm	351-0616	4.85	4.37
W. Mtd. Bullet	10 x 22mm	351-0627	5.80	5.22



#### Orange Cera – 500 Grit

Shape	Dia. x Thick	Item#	PKG. of 10	
			1-4	5+
X. SE Wheel	18 x 3mm	352-0104	\$21.50	\$19.35
Y. SE Wheel	18 x 2mm	352-0111	21.50	19.35
Z. SE Wheel	18 x 1mm	352-0117	21.50	19.35
Shape	Dia. x Thick	Item#	EACH Prices	
			1-11	12+
AA. Mtd. Cylinder	5 x 15mm	351-0605	\$4.35	\$3.92
BB. Mtd. Cylinder	8 x 20mm	351-0611	4.35	3.92
CC. Mtd. Cylinder	10 x 20mm	351-0617	4.85	4.37
DD. Mtd. Bullet	10 x 22mm	351-0628	5.80	5.22

**A - J Gem Polishers – Diamond Abrasive**

Diamond and rubber combined to give you fast finishes on platinum, precious alloys, titanium and stainless steel. Long-lasting, made in 3 versatile shapes to access the tightest areas. Color-coded for grit identification. Available in three color-coded grits: medium (green), fine (gray) and extra-fine (red). All 3/32" shanks. Max. operating speeds: 10,000rpm. Made in Germany.

**Green Gem Polishers – Medium**

Shape	Dimensions	Item#	EACH Prices	
			1-9	10+
A. Mtd. Point	13 x 4mm	145-1322	\$8.85	\$7.97
B. SE Mtd. Wheel	11 x 2mm	145-1321	8.85	7.97
C. SE Mtd. Wheel	11 x 4mm	145-1323	15.60	14.04

**Gray Gem Polishers – Fine**

Shape	Dimensions	Item#	EACH Prices	
			1-9	10+
D. Mtd. Point	13 x 4mm	145-1325	\$8.85	\$7.97
E. SE Mtd. Wheel	11 x 2mm	145-1324	8.85	7.97
F. SE Mtd. Wheel	11 x 4mm	145-1326	15.60	14.04

**Red Gem Polishers – Extra-Fine**

Shape	Dimensions	Item#	EACH Prices	
			1-9	10+
G. Mtd. Point	13 x 4mm	145-1328	\$8.85	\$7.97
H. SE Mtd. Wheel	11 x 2mm	145-1327	8.85	7.97
I. SE Mtd. Wheel	11 x 4mm	145-1329	15.60	14.04

**J Gem Polisher Set – 3/32" Shank**

Includes of one each shape and grit.

Description	Item#	Each
9-Piece Set	145-1320	\$94.50

**K SX Mounted Polishers**

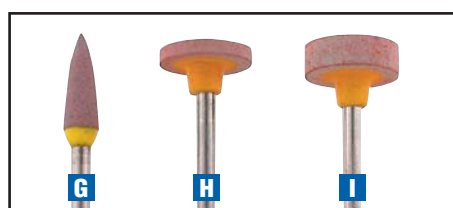
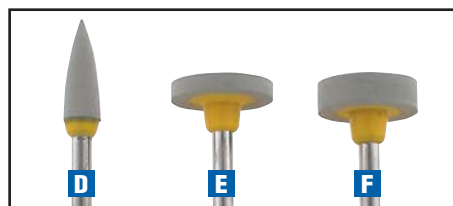
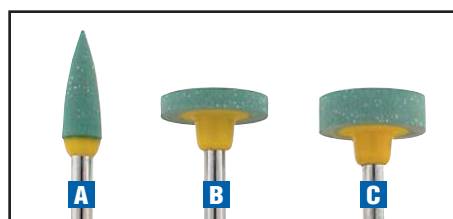
Similar to the now-discontinued 3M FX wheels. Feature large foam cell size for cool operation and long life. Firm enough to lap flat surfaces yet flexible enough to allow polishing of curved surfaces without gouging. Ideal for hard metals such as platinum, white gold, palladium and stainless steel. Also good for yellow gold. Measure 15mm dia. x 25mm long with 3/32" shank. Max. operating speed: 15,000rpm. Made in Japan.

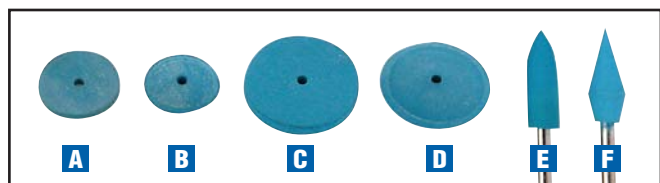
Description	Grit	Item#	EACH Prices	
			1-11	12+
Gray Polisher	220	145-3280	\$2.95	\$2.66
	320	145-3281	2.95	2.66
	400	145-3282	3.15	2.84
	500	145-3286	3.50	3.15
	600	145-3283	3.50	3.15
	800	145-3284	3.65	3.29
White Polisher	1000	145-3285	3.65	3.29
	1500	145-3288	4.50	4.05
8-Piece Set (one each of above)		145-3279	20.95	-

**L Brightboy® Discs**

Aluminum oxide with a resilient rubber bond. Uniform cutting action makes it ideal for scratch removal on nonferrous metals such as gold, silver and aluminum and on porcelain. Also removes sprues, parting lines and flash from cast pieces. Permits cushioned action on flat and contoured surfaces. Approximately 70 grit. 1/16" arbor hole. See p. 352 for mandrels. Maximum operating speed: 25,000rpm.

Dia. x Thick	Item#	Pkg.(10)	Item#	Box(100)
5/8" Knife Edge	277-0031	\$12.05	277-0032	\$83.50
5/8" x 1/8"	277-0061	13.25	277-0062	83.50
5/8" x 1/4"	277-0071	13.25	277-0072	92.25

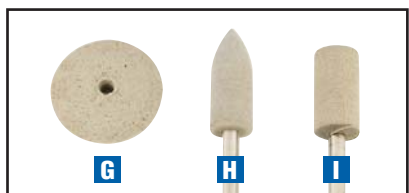




### A - F Dedeco® Rubber Pumice Wheels and Points

These rubberized wheels and points contain an extra-fine grade of pumice for finishing gold and semiprecious metals. Leave a smooth finish ready for final polishing. Safe for most stones. Wheels are unmounted with 1/16" arbor holes. See p. 352 for mandrels. Points come mounted on 3/32" shanks. Maximum operating speed: 21,000rpm.

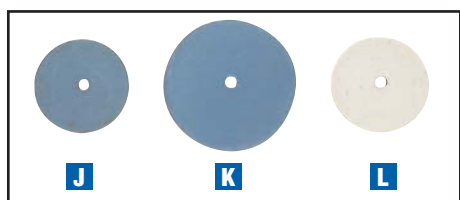
Shape	Style	Dia.	Item#	Box.(25)	Item#	Box(100)
A.	SE Wheel	6501	5/8"	845-2455	\$15.95	845-2456 \$42.95
B.	KE Wheel	6503	5/8"	845-2459	16.95	845-2460 49.95
C.	SE Wheel	6502	7/8"	845-2457	15.95	845-2458 42.95
D.	KE Wheel	6504	7/8"	845-2461	16.95	845-2462 49.95
Shape	Dia. x L (mm)		Item#	Box(12)		
E.	Mtd. Bullet	6 x 15	845-2464	\$22.95		
F.	Mtd. Point, Extra-Fine	6 x 15	845-2463	22.95		



### G - I GK-10 Premium Rubber Pumice Wheels and Points

Utilize pumice and extra-fine aluminum oxide in a natural rubber bond for fast cutting, scratch removal, deburring and removing parting lines. Smooth finishing, long-lasting. Wheels are unmounted with 1/16" arbor holes. See p. 352 for mandrels. Points come mounted on 3/32" shanks. Maximum operating speed: 20,000rpm.

Style	Dia.	Item#	Pkg.(100)	Item#	Box(1,000)
G.	GK-10 KE Wheel	6503	5/8"	845-2060	\$24.95 845-2061 \$195.00
Style	Dia. x L	Item#	Pkg.(10)		
H.	GK-10 Mounted Point	1/4" x 5/8"	845-2065	\$9.95	\$8.96
I.	GK-10 Mounted Cylinder	1/4" x 1/2"	845-2064	9.95	8.96



### J - L Rubber Pumice Wheels

Soft, flexible rubber wheels compounded with pumice abrasive. The light action produces a smooth finish on gold, silver and soft metals. All with 1/16" arbor hole. See p. 352 for mandrels. Maximum operating speed: 25,000rpm.

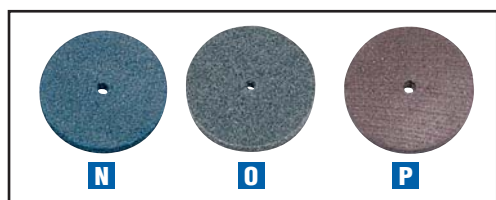
Style	Dia. x Thick	Item#	Pkg.(10)	Item#	Box(100)
J.	822	5/8" x 3/32"	845-2101	\$5.50	845-2102 \$40.50
K.	888	7/8" x 1/8"	845-2151	6.85	845-2152 48.95
L.	999	5/8" tapered	845-2001	7.10	845-2002 53.95



### M Rubber Pumice Wheels

A combination of silicone and pumice make this an excellent product for removing scratches around bezel and prong set stones. Safe for most stones and are long lasting. Max. operating speed: 20,000rpm. See p. 352 for mandrels.

Style	Dia.	Item#	Pkg.(10)	Item#	Box(100)
KE Wheel	5/8"	845-2059	\$4.50	845-2058	\$37.95



### N - P AirFlex Poly Wheels – Cooler grinding and polishing.

Tiny pockets of air are uniformly interspersed throughout so they grind and polish quickly without overheating the workpiece. AirFlex Blue (coarse) quickly removes rough surfaces, burs and tool marks. AirFlex Gray (medium) is a prepolishing wheel which removes medium-grit file marks and leaves a matte finish. AirFlex Brown (fine) removes light scratches and leaves a bright surface ready for rouge.

Work equally well on all precious alloys, including platinum, stainless steel and titanium. Follows contours and leave a smooth, uniform finish. Made of silicon carbide abrasive in a polyurethane bond. All have 1/16" arbor holes. See p. 352 for mandrels.

Grit	Dia. x Thick	Item#	Pkg.(10)	Item#	Box(100)
N.	Coarse (80)	7/8" x 1/8"	145-1106	\$5.40	145-1107 \$59.95
O.	Medium (240)	7/8" x 1/8"	145-1108	5.40	145-1109 59.95
P.	Fine (800)	7/8" x 1/8"	145-1104	5.40	145-1105 59.95



## A Gesswein® 50-Piece Polishing Set

A complete, compact set for every job from fast grinding to final finish. The set features a selection of our most popular rubberized abrasives in both straight- and knife-edged wheels, as well as rods which can be dressed to reach into the tiniest settings. Dressing stone included. The complete set includes:

- 5 Assorted Heatless Wheels—for fast grinding and brush finishing
- 10 Premium GK-10 Rubber Pumice Wheels—the industry standard for scratch removal and shaping
- 10 Assorted Blue Wheels—for light scratch and bur removal
- 10 Assorted Pink Silicone Polishing Wheels—for ultra-high polish
- 5 Brown Prepolisher Rods—for scratch removal in settings or recessed areas
- 5 Green High Shine Rods—for fine polishing of settings and recessed areas
- Dressing Stone for Rods—shapes rods to fine point
- 3 Mandrels:  $\frac{3}{32}$ " for Rods;  $\frac{3}{32}$ " for Wheels;  $\frac{1}{8}$ " for Wheels

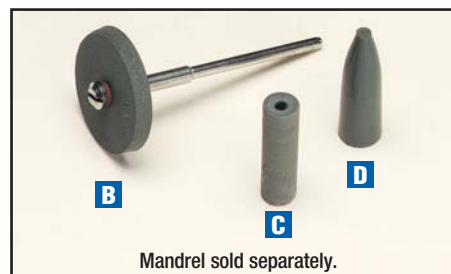


Description	Item#	Each
Gesswein 50-Piece Polishing Set	<b>145-0092</b>	<b>\$31.95</b>

## B - D Rubber SiC

All-purpose, hard rubberized bond, gray in color. Contains 240 grit silicon carbide and can be used for light grinding of parting lines and scratches on both hard and soft metals. All with  $\frac{1}{16}$ " arbor hole. See below for mandrels. Maximum operating speed: 30,000rpm.

Type	Size	Item#	Box(100)
B. Wheel	$\frac{7}{8}$ " x $\frac{1}{8}$ "	<b>845-2200</b>	<b>\$13.95</b>
C. Cylinder	$\frac{1}{4}$ " x $\frac{7}{8}$ "	<b>845-2400</b>	<b>13.95</b>
D. Bullet	$\frac{1}{4}$ " x 1"	<b>845-2450</b>	<b>42.95</b>



## E Heatless Wheels

Especially useful in preparing contrast finishes and texturing—much coarser than a brushed satin finish. Also used for fast grinding and metal removal, these very hard wheels are made of silicon carbide in a resinoid bond. They break down quickly, constantly exposing new grit to produce a uniform, coarse, brushed-look finish with tiny highlights. Easily shaped with a file.  $\frac{1}{16}$ " metal arbor hole. Maximum operating speed: 25,000rpm. (See mandrels, p. 352)

Dia. x Thick	Item#	EACH Prices	
		10-40	50+
$\frac{1}{2}$ " x $\frac{3}{32}$ "	<b>845-0015</b>	<b>\$.45</b>	<b>\$.41</b>
$\frac{5}{8}$ " x $\frac{3}{32}$ "	<b>845-0012</b>	<b>.45</b>	<b>.41</b>
$\frac{3}{4}$ " x $\frac{3}{32}$ "	<b>845-0009</b>	<b>.45</b>	<b>.41</b>
$\frac{1}{2}$ " x $\frac{1}{8}$ "	<b>845-0014</b>	<b>.45</b>	<b>.41</b>
$\frac{5}{8}$ " x $\frac{1}{8}$ "	<b>845-0011</b>	<b>.45</b>	<b>.41</b>
$\frac{3}{4}$ " x $\frac{1}{8}$ "	<b>845-0008</b>	<b>.45</b>	<b>.41</b>
$\frac{7}{8}$ " x $\frac{1}{8}$ "	<b>845-0005</b>	<b>.45</b>	<b>.41</b>
1" x $\frac{1}{8}$ "	<b>845-0002</b>	<b>.45</b>	<b>.41</b>
$\frac{1}{2}$ " x $\frac{3}{16}$ "	<b>845-0013</b>	<b>.45</b>	<b>.41</b>
$\frac{5}{8}$ " x $\frac{3}{16}$ "	<b>845-0010</b>	<b>.45</b>	<b>.41</b>
$\frac{3}{4}$ " x $\frac{3}{16}$ "	<b>845-0007</b>	<b>.45</b>	<b>.41</b>
$\frac{7}{8}$ " x $\frac{3}{16}$ "	<b>845-0004</b>	<b>.45</b>	<b>.41</b>
1" x $\frac{3}{16}$ "	<b>845-0001</b>	<b>.45</b>	<b>.41</b>

10-piece minimum; please order in multiples of 10.



## Cratex® Small Wheels and Points

Cratex is a tough, resilient, rubberized abrasive that utilizes silicon carbide as the abrasive grain in a standard bond of premium grade, oil-resistant chemical rubber. Its unique cushioned action allows the abrasive grains to cut freely, smoothly and softly without gouging or digging into the work surface.

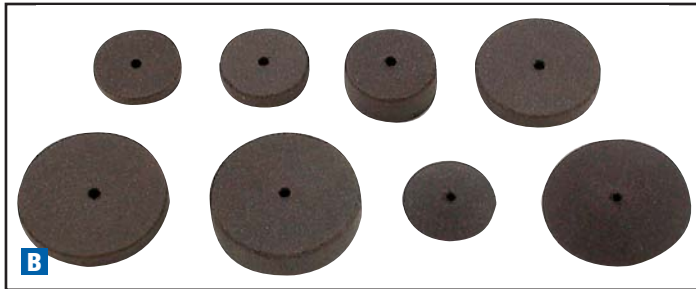
### Some typical applications:

- Cleaning and polishing to remove surface deposits.
- Polishing and smoothing to improve performance, appearance and cleanliness.
- Ideal for work on jewelry, plastic parts, small castings and models.

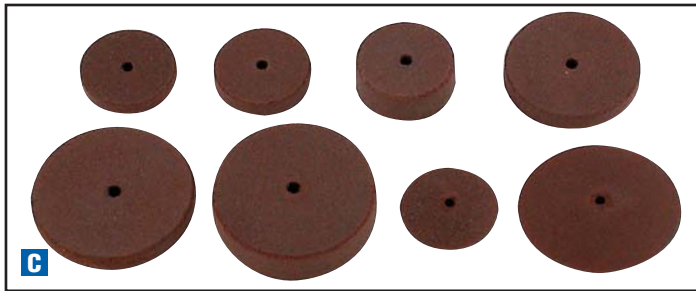
Color	Approximate Grit
Dark Green	Coarse 40
Brown	Medium 90
Red	Fine 120
Light Green	Extra-Fine 240



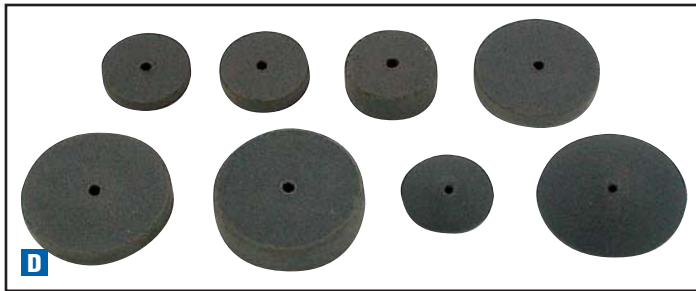
**A**



**B**



**C**



**D**

### A - D Cratex® Small Wheels – Square and Knife Edge

All have 1/16" arbor hole. Maximum operating speed: 25,000rpm. See facing page for Cratex mandrels.

Grit	Shape	Dia. x Thick.	Style	Item#	Box(100)
A. Coarse	SE	5/8" x 3/32"	53	<b>149-0053</b>	<b>\$46.10</b>
	SE	5/8" x 1/8"	54	<b>149-0054</b>	<b>55.70</b>
	SE	5/8" x 1/4"	59	<b>149-0059</b>	<b>61.85</b>
	SE	7/8" x 1/8"	74	<b>149-0074</b>	<b>58.70</b>
	SE	1" x 1/8"	80	<b>149-0080</b>	<b>79.50</b>
	SE	1" x 1/4"	88	<b>149-0088</b>	<b>103.10</b>
	KE	5/8" x 3/32"	2	<b>149-0002</b>	<b>42.00</b>
	KE	1" x 1/8"	5	<b>149-0005</b>	<b>73.20</b>
B. Medium	SE	5/8" x 3/32"	53	<b>148-0053</b>	<b>46.10</b>
	SE	5/8" x 1/8"	54	<b>148-0054</b>	<b>55.70</b>
	SE	5/8" x 1/4"	59	<b>148-0059</b>	<b>61.85</b>
	SE	7/8" x 1/8"	74	<b>148-0074</b>	<b>58.70</b>
	SE	1" x 1/8"	80	<b>148-0080</b>	<b>79.50</b>
	SE	1" x 1/4"	88	<b>148-0088</b>	<b>103.10</b>
	KE	5/8" x 3/32"	2	<b>148-0002</b>	<b>42.00</b>
	KE	1" x 1/8"	5	<b>148-0005</b>	<b>73.20</b>
C. Fine	SE	5/8" x 3/32"	53	<b>147-0053</b>	<b>46.10</b>
	SE	5/8" x 1/8"	54	<b>147-0054</b>	<b>55.70</b>
	SE	5/8" x 1/4"	59	<b>147-0059</b>	<b>61.85</b>
	SE	7/8" x 1/8"	74	<b>147-0074</b>	<b>58.70</b>
	SE	1" x 1/8"	80	<b>147-0080</b>	<b>79.50</b>
	SE	1" x 1/4"	88	<b>147-0088</b>	<b>103.10</b>
	KE	5/8" x 3/32"	2	<b>147-0002</b>	<b>42.00</b>
	KE	1" x 1/8"	5	<b>147-0005</b>	<b>73.20</b>
D. Extra-Fine	SE	5/8" x 3/32"	53	<b>146-0053</b>	<b>46.90</b>
	SE	5/8" x 1/8"	54	<b>146-0054</b>	<b>55.70</b>
	SE	5/8" x 1/4"	59	<b>146-0059</b>	<b>61.85</b>
	SE	7/8" x 1/8"	74	<b>146-0074</b>	<b>58.70</b>
	SE	1" x 1/8"	80	<b>146-0080</b>	<b>79.50</b>
	SE	1" x 1/4"	88	<b>146-0088</b>	<b>103.10</b>
	KE	5/8" x 3/32"	2	<b>146-0002</b>	<b>42.00</b>
	KE	1" x 1/8"	5	<b>146-0005</b>	<b>73.20</b>



**E**



**F**

### E Cratex® Set #777

Contains 80 small wheels and points in popular sizes including coarse, medium, fine and extra-fine grits. Four mandrels with 1/8" shanks are in the set. Packaged in a clear divided box for easy selection.

Description	Item#	Each
Cratex Set #777	<b>146-7770</b>	<b>\$69.95</b>

### F Cratex® Set #778

Contains 64 points in 4 different grits plus 4 mandrels with 1/8" shanks. Packaged in a clear divided box for easy selection.

Description	Item#	Each
Cratex Set #778	<b>146-7780</b>	<b>\$83.25</b>

### A - D Cratex® Cones

All have 1/4" arbor hole. See below for Cratex mandrels. Maximum operating speed: 20,000rpm.

Grit	Shape	Dia. x Thick.	Style	Item#	Each
A. Coarse	Taper	5/8"-1/4" x 1"	1340	<b>149-1340</b>	<b>\$4.90</b>
	Cylinder*	7/8" x 1"	1350	<b>149-1350</b>	<b>9.25</b>
	Bullet*	7/8" x 1 3/4"	4707	<b>149-4707</b>	<b>13.50</b>
B. Medium	Taper	5/8"-1/4" x 1"	1340	<b>148-1340</b>	<b>4.90</b>
	Cylinder*	7/8" x 1"	1350	<b>148-1350</b>	<b>9.25</b>
	Bullet*	7/8" x 1 3/4"	4707	<b>148-4707</b>	<b>13.50</b>
C. Fine	Cylinder*	7/8" x 1"	1350	<b>147-1350</b>	<b>9.25</b>
	Bullet*	7/8" x 1 3/4"	4707	<b>147-4707</b>	<b>13.50</b>
D. Extra Fine	Taper	5/8"-1/4" x 1"	1340	<b>146-1340</b>	<b>4.90</b>
	Cylinder*	7/8" x 1"	1350	<b>146-1350</b>	<b>9.25</b>
	Bullet*	7/8" x 1 3/4"	4707	<b>146-4707</b>	<b>13.50</b>

\*Threaded insert



### E - H Cratex® Cylinders and Points

All have 1/16" arbor hole. See below for Cratex mandrels. Maximum operating speed: 25,000rpm.

Grit	Shape	Dia. x Thick.	Style	Item#	Box(100)
E. Coarse	Cylinder	1/4" x 1/2"	4	<b>149-0004</b>	<b>\$46.05</b>
	Cylinder	1/4" x 7/8"	6	<b>149-0006</b>	<b>54.50</b>
	Point	9/32" x 1"	8	<b>149-0008</b>	<b>54.50</b>
	Point	3/8" x 5/8"	10	<b>149-0010</b>	<b>57.85</b>
F. Medium	Cylinder	1/4" x 1/2"	4	<b>148-0004</b>	<b>46.05</b>
	Cylinder	1/4" x 7/8"	6	<b>148-0006</b>	<b>54.50</b>
	Point	9/32" x 1"	8	<b>148-0008</b>	<b>54.50</b>
	Point	3/8" x 5/8"	10	<b>148-0010</b>	<b>57.85</b>
G. Fine	Cylinder	1/4" x 1/2"	4	<b>147-0004</b>	<b>46.05</b>
	Cylinder	1/4" x 7/8"	6	<b>147-0006</b>	<b>54.50</b>
	Point	9/32" x 1"	8	<b>147-0008</b>	<b>54.50</b>
	Point	3/8" x 5/8"	10	<b>147-0010</b>	<b>57.85</b>
H. Extra Fine	Cylinder	1/4" x 7/8"	6	<b>146-0006</b>	<b>54.50</b>
	Point	9/32" x 1"	8	<b>146-0008</b>	<b>54.50</b>



### I - N Cratex® Mandrels

Fit Cratex small wheels, cylinders points and cones. Use light working pressure.

Style	Shank	For Hole	Item#	EACH Prices	
				1-11	12+
I. #2	3/32"	1/16"	<b>840-3183</b>	<b>\$3.70</b>	<b>\$3.08</b>
J. #3	1/8"	1/16"	<b>840-3186</b>	<b>4.65</b>	<b>3.87</b>
K. #1	3/32"	3/32"	<b>840-3182</b>	<b>2.60</b>	<b>2.17</b>
L. #4	1/8"	3/32"	<b>840-3185</b>	<b>3.50</b>	<b>2.92</b>
M. #6	1/8"	1/8"	<b>840-3085</b>	<b>4.05</b>	<b>3.37</b>
N. 1341	1/4"	1/4"	<b>840-3180</b>	<b>6.05</b>	<b>5.04</b>



All shown actual size.



## Cratex® Large Wheels

Feature the same tough, resilient, rubberized silicon carbide abrasive in a standard bond of oil-resistant chemical rubber as the small wheels. Unique cushioned action allows the abrasive grains to cut freely, smoothly and softly without gouging or digging into the work surface. These square-edge wheels have either 1/4" or 1/2" arbor holes. See chart for maximum operating speeds. Frequently, speeds between 30% and 80% slower than the maximum will yield optimal results

Diameter	Max. Operating Speed
2" with 1/4" arbor hole	10,500rpm
2 1/2" with 1/4" arbor hole	8,300rpm
3" with 1/4" arbor hole	7,000rpm
4" with 1/2" arbor hole	5,250rpm
5" with 1/2" arbor hole	4,200rpm
6" with 1/2" arbor hole	3,500rpm



**A**



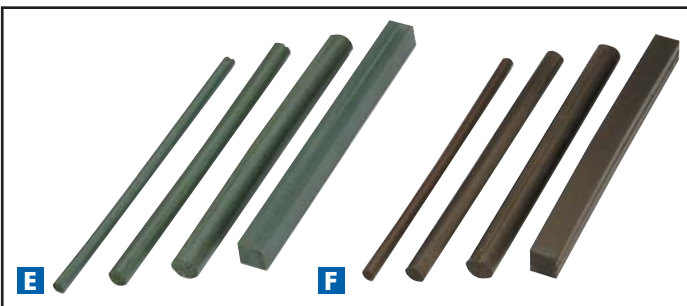
**B**



**C**

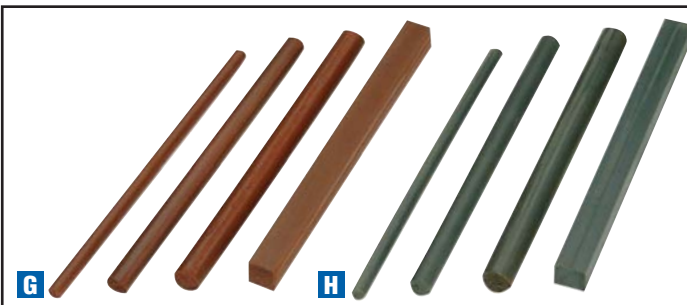


**D**



**E**

**F**



**G**

**H**

### A - D Cratex® Large Wheels – Square Edge.

	Grit	Shape	Dia. x Thick x AH	Style	Item#	Each
<b>A. Coarse</b>	SE Wheel	2" x 1/4" x 1/4"	204	<b>149-0204</b>	<b>\$7.10</b>	
	SE Wheel	3" x 1/8" x 1/4"	302	<b>149-0302</b>	<b>10.39</b>	
	SE Wheel	3" x 1/2" x 1/4"	308	<b>149-0308</b>	<b>19.10</b>	
	SE Wheel	4" x 1/4" x 1/2"	404	<b>149-0404</b>	<b>20.15</b>	
	SE Wheel	4" x 1/2" x 1/2"	408	<b>149-0408</b>	<b>28.65</b>	
	SE Wheel	6" x 1/4" x 1/2"	604	<b>149-0604</b>	<b>38.80</b>	
	SE Wheel	6" x 1/2" x 1/2"	608	<b>149-0608</b>	<b>55.75</b>	
<b>B. Medium</b>	SE Wheel	2" x 1/4" x 1/4"	204	<b>148-0204</b>	<b>7.10</b>	
	SE Wheel	3" x 1/8" x 1/4"	302	<b>148-0302</b>	<b>10.39</b>	
	SE Wheel	3" x 1/2" x 1/4"	308	<b>148-0308</b>	<b>19.10</b>	
	SE Wheel	4" x 1/4" x 1/2"	404	<b>148-0404</b>	<b>20.15</b>	
	SE Wheel	4" x 1/2" x 1/2"	408	<b>148-0408</b>	<b>28.65</b>	
	SE Wheel	6" x 1/4" x 1/2"	604	<b>148-0604</b>	<b>38.80</b>	
	SE Wheel	6" x 1/2" x 1/2"	608	<b>148-0608</b>	<b>55.75</b>	
<b>C. Fine</b>	SE Wheel	2" x 1/4" x 1/4"	204	<b>147-0204</b>	<b>7.10</b>	
	SE Wheel	3" x 1/8" x 1/4"	302	<b>147-0302</b>	<b>10.39</b>	
	SE Wheel	3" x 1/2" x 1/4"	308	<b>147-0308</b>	<b>19.10</b>	
	SE Wheel	4" x 1/4" x 1/2"	404	<b>147-0404</b>	<b>20.15</b>	
	SE Wheel	4" x 1/2" x 1/2"	408	<b>147-0408</b>	<b>28.65</b>	
	SE Wheel	6" x 1/4" x 1/2"	604	<b>147-0604</b>	<b>38.80</b>	
	SE Wheel	6" x 1/2" x 1/2"	608	<b>147-0608</b>	<b>55.75</b>	
<b>D. Extra Fine</b>	SE Wheel	2" x 1/4" x 1/4"	204	<b>146-0204</b>	<b>7.10</b>	
	SE Wheel	3" x 1/8" x 1/4"	302	<b>146-0302</b>	<b>10.39</b>	
	SE Wheel	3" x 1/2" x 1/4"	308	<b>146-0308</b>	<b>19.10</b>	
	SE Wheel	4" x 1/4" x 1/2"	404	<b>146-0404</b>	<b>20.15</b>	
	SE Wheel	4" x 1/2" x 1/2"	408	<b>146-0408</b>	<b>28.65</b>	
	SE Wheel	6" x 1/4" x 1/2"	604	<b>146-0604</b>	<b>38.80</b>	
	SE Wheel	6" x 1/2" x 1/2"	608	<b>146-0608</b>	<b>55.75</b>	

### E - H Cratex® Blocks and Sticks

	Grit	Shape	Dia. x Thick.	Style	Item#	Each
<b>E. Coarse</b>	Round	1/4" x 6"	046	<b>149-0046</b>	<b>\$5.50</b>	
	Round	3/8" x 6"	066	<b>149-0066</b>	<b>6.18</b>	
	Round	1/2" x 6"	086	<b>149-0090</b>	<b>8.79</b>	
	Square	1/2" x 6"	6404	<b>149-6404</b>	<b>10.39</b>	
<b>F. Medium</b>	Round	1/4" x 6"	046	<b>148-0046</b>	<b>5.50</b>	
	Round	3/8" x 6"	066	<b>148-0066</b>	<b>6.18</b>	
	Round	1/2" x 6"	086	<b>148-0090</b>	<b>8.79</b>	
	Square	1/2" x 6"	6404	<b>148-6404</b>	<b>10.39</b>	
<b>G. Fine</b>	Round	1/4" x 6"	046	<b>147-0046</b>	<b>5.50</b>	
	Round	3/8" x 6"	066	<b>147-0066</b>	<b>6.18</b>	
	Round	1/2" x 6"	086	<b>147-0090</b>	<b>8.79</b>	
	Square	1/2" x 6"	6404	<b>147-6404</b>	<b>10.39</b>	
<b>H. Extra Fine</b>	Round	1/4" x 6"	046	<b>146-0046</b>	<b>5.50</b>	
	Round	3/8" x 6"	066	<b>146-0066</b>	<b>6.18</b>	
	Round	1/2" x 6"	086	<b>146-0090</b>	<b>8.79</b>	
	Square	1/2" x 6"	6404	<b>146-6404</b>	<b>10.39</b>	



**GRX – Innovative abrasive material for fast grinding and superb surface finishing.**

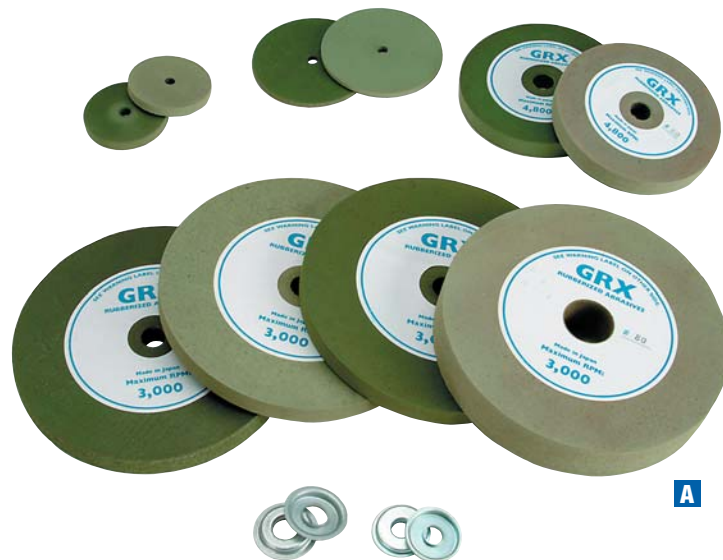
GRX consists of aluminum oxide dispersed in a unique elastic bond. Cuts a bit slower than silicon carbide yet imparts a very smooth surface finish—each grit yields a much higher finish than expected. Grinds platinum, gold, silver, steel and aluminum without clogging. Prevents metal surfaces from becoming scorched during processing. Very long-lasting. Made in Japan.

**A GRX Wheels**

For grinding sprues or burs and removing surface roughness. Use on a polishing motor with arbor. Not for use on tapered spindles. Note: the 6" x 1" x 1" wheel requires a flange (see chart below) for use on a 1/2" or 3/8" arbor.

Dia. x Thick x AH	Grit	Max. RPM	Item#	EACH Prices	
				1-9	10+
2" x 1/4" x 1/4"	80	9,600	277-0180	\$4.25	\$3.61
	120	9,600	277-0185	4.25	3.61
3" x 1/8" x 1/4"	46	6,300	277-0190	6.00	5.10
	80	6,300	277-0195	6.00	5.10
4" x 1/2" x 1/2"	80	4,800	277-0100	19.15	16.28
	150	4,800	277-0105	19.15	16.28
6" x 1/2" x 1/2"	80	3,000	277-0107	39.00	33.15
	120	3,000	277-0108	39.00	33.15
6" x 1" x 1"	80	3,000	277-0110*	57.00	48.45
<b>Flange</b>			<b>Item#</b>	<b>Pair</b>	
Converts 1" AH to 1/2" AH			277-0089	\$4.50	
Converts 1" AH to 3/8" AH			277-0091	4.50	

\*Flange needed to operate.

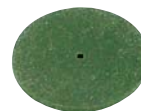


**A**

**B GRX Disc**

See p. 352 for mandrels.

Dia. x Thick x AH	Grit	Max. RPM	Item#	EACH Prices	
				1-9	10+
1" x 1/16" x 1/16"	150	12,000	277-0125	\$1.95	\$1.66



**B**

**C GRX Mounted Bullets**

Dia. x L	Shank	Grit	Max. RPM	Item#	EACH Prices	
					1-9	10+
9/32" x 3/4"	1/8"	46	30,000	277-0121	\$1.50	\$1.28
		80	30,000	277-0122	1.50	1.28
		120	30,000	277-0123	1.50	1.28
1/2" x 1"	3/32"	150	8,000	277-0116	3.95	3.36
		80	15,000	277-0119	3.95	3.36



**C**

**D GRX Rods**

Dimensions	Grit	Item#	EACH Prices	
			1-9	10+
6" L x 1/4" dia.	80	277-0130	\$2.80	\$2.38
	120	277-0135	2.80	2.38
6" L x 3/8" dia.	80	277-0140	4.75	4.04
	120	277-0145	4.75	4.04
6" L x 1/2" dia.	80	277-0150	5.50	4.68
	120	277-0155	5.50	4.68



**D**

**E GRX Sticks**

Dimensions	Grit	Item#	EACH Prices	
			1-9	10+
6" L x 1/2" square	80	277-0160	\$5.65	\$4.80
	120	277-0165	5.65	4.80



**E**



**A - C Sticks and Holders**

Excellent for touch-ups and removal of light scratches. Made of flexible rubber. Holder gives support and gripping power. Stick can be exposed or withdrawn as desired and is easily dressed to the best shape for the job. Also removes rust, heat marks and stains from soft and hard metals. Measure 6" long.

Description	Grit	Item#	Each
A. Rub-out	Extra-Fine (SiC)	<b>145-1302</b>	<b>\$15.50</b>
B. Rub-out	Fine (SiC)	<b>145-1300</b>	<b>15.50</b>
C. Brightboy	Coarse (AlO)	<b>277-0065</b>	<b>16.50</b>
Extra-Fine Refill		145-1308	7.10
Fine Refill		145-1306	7.10
Coarse Refill		277-0063	8.35



**D Brightboy® Tablet**

Used to remove scratches or rust and for general surface cleaning and finishing. Measures 2¼"L x 1⅛"W x ⅜"H.

Description	Item#	Each
Brightboy Tablet	<b>277-0066</b>	<b>\$5.95</b>



**E Brightboy® Wheels**

Brightboy is made of aluminum oxide with a resilient rubber bond. Uniform cutting action makes it ideal for scratch removal on non-ferrous metals such as gold, silver and aluminum and on porcelain. Also removes sprues, parting lines and flash from cast pieces. Permits cushioned action on flat and contoured surfaces. The texture and cutting action are always uniform. Brightboy requires no additives such as cutting compounds. It is inexpensive and long-lasting. Approximately 70 grit.

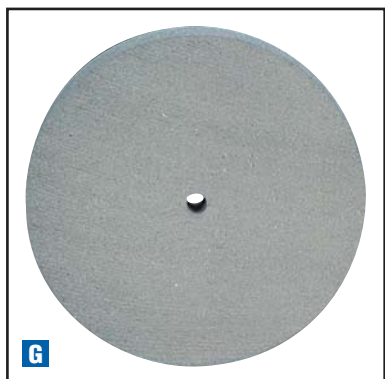
Dia. x Thick	Arbor Hole	Max. (RPM)	Item#	EACH Prices	
				1-9	10+
1½" x ⅜"	¼"	7,625	<b>275-0050</b>	<b>\$12.50</b>	<b>\$8.75</b>
2" x ¼"	¼"	7,625	<b>275-0170</b>	<b>19.95</b>	<b>13.97</b>
3" x ⅜"	¼"	5,060	<b>275-0300</b>	<b>26.35</b>	<b>18.45</b>
3" x ½"	¼"	5,060	<b>275-0310</b>	<b>27.95</b>	<b>19.57</b>
3" x ¾"	½"	5,060	<b>275-0330</b>	<b>32.95</b>	<b>23.07</b>
4" x ¼"	½"	3,800	<b>275-0380</b>	<b>31.95</b>	<b>22.37</b>
4" x ½"	½"	3,800	<b>275-0400</b>	<b>36.25</b>	<b>25.38</b>
4" x ¾"	½"	3,800	<b>275-0410</b>	<b>44.35</b>	<b>31.05</b>



**F Dedeco® Jeweler's Lathe Wheel**

This rubberized wheel is coarse enough to make quick work of grinding jobs yet flexible enough to follow contours and leave a smooth finish. Contains 220 grit silicon carbide abrasive. Max. operating speed: 3,800rpm.

Shape	Dia. x Thick x AH	Item#	Each
SE Wheel	4" x ½" x ½"	<b>145-0085</b>	<b>\$19.95</b>



**G AirFlex Poly Wheels – Cooler grinding and polishing.**

Made of silicon carbide abrasive in a polyurethane bond Airflex has tiny pockets of air uniformly interspersed throughout, so they grind and polish quickly without overheating the workpiece. Follow contours and leave a smooth, uniform finish. Coarse quickly removes rough surfaces, burs and tool marks. Medium is a prepolishing wheel which removes medium-grit file marks and leaves a matte finish. Fine removes light scratches and leaves a bright surface ready for rouge. Work well on all precious alloys, including platinum, stainless steel and titanium. Max. operating speed: 3,000rpm.

Grit	Dia. x Thick x AH	Item#	Each
Coarse (80 grit)	4" x 19/32" x ¼"	<b>145-1180</b>	<b>\$21.45</b>
Medium (240 grit)	4" x 19/32" x ¼"	<b>145-1181</b>	<b>21.45</b>
Fine (800grit)	4" x 19/32" x ¼"	<b>145-1182</b>	<b>21.45</b>

### A 3M™ Scotch-Brite™ Unitized Cutting and Polishing Wheel

A heavy-duty, long-lasting, aggressive wheel for blending and finishing. Contains aluminum oxide abrasive. Works well for all kinds of tough finishing jobs. Produces uniform results quickly and easily. Can be used in place of conventional abrasive wheels, such as rubber-bonded wheels, set-up wheels and abrasive flap wheels. Mount on Tapered Spindle Adapter #145-1931 (see p. 25) for use on tapered spindles. Maximum operating speed: 3,450rpm.

Description	Style	Dia. x Thick x AH	Item#	Each
Fine	5A FIN	6" x 1" x 1"	<b>845-1086</b>	<b>\$60.69</b>



### B 3M™ Scotch-Brite Multi-Finishing Wheels

Soft, conformable wheels with unique open-web construction for imparting attractive scratch and brush-like finishes on rings, bracelets, medallions and earrings. Let you vary pressure and stroke to create a wide variety of finishes. Work on both hard and soft metals. Available in medium and fine grades. Have 1" arbor holes. Mount on Tapered Spindle Adapter #145-1931 (see p. 25) for use on tapered spindles. Maximum operating speed: 6,000rpm.

Description	Style	Dia. x Thick x AH	Item#	Each
Medium	25 M	6" x 1" x 1"	<b>845-1076</b>	<b>\$31.45</b>
Fine	25 F	6" x 1" x 1"	<b>845-1077</b>	<b>31.45</b>



### C 3M™ Scotch-Brite™ High-Strength Discs

Highly conformable aluminum oxide discs. Create a beautiful satin finish (stack two or three together for satin finishing). Also work well for light deburring, cleaning and finishing. Available in medium and very-fine grades. Mount on an arbor (see p. 323) for use with polishing motors. Maximum operating speed: 4,000rpm.

Description	Dia. x Thick x AH	Item#	Each
Medium	6" x 1/4" x 1/2"	<b>108-8110</b>	<b>\$4.35</b>
Very-Fine	6" x 1/4" x 1/2"	<b>108-8115</b>	<b>2.18</b>



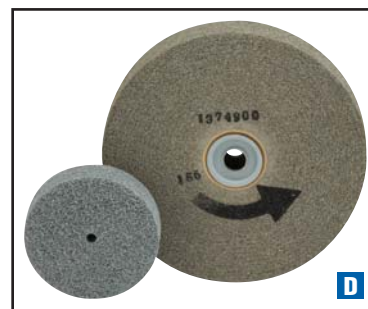
### D Norton® Bear-Tex® Wheels

For quick removal of marks, scratches and surface imperfections. Also great for producing a consistent satin finish. Made of a cushion-type nylon web impregnated with silicon carbide abrasive. Bear-tex does not load or heat up. The 220 grit fine wheel is our most popular; the other grits are for faster finishing.

Dia. x Thick x AH	Grit	Max. RPM	Item#	Each
3" x 3/4" x 1/4"	150	8,000	<b>845-0240</b>	<b>\$9.50</b>
	220	8,000	<b>845-0250</b>	<b>9.50</b>
6" x 1" x 1"	120	6,000	<b>845-0261*</b>	<b>68.50</b>
6" x 1" x 1"	120	6,000	<b>845-0260**</b>	<b>68.50</b>
6" x 1" x 1"	180	6,000	<b>845-0259*</b>	<b>68.50</b>
6" x 1" x 1"	180	6,000	<b>845-0258**</b>	<b>68.50</b>

\*Comes with 1/2" bushing.

\*\*Comes with 3/8" bushing.



### E 3M™ Scotch-Brite™ Light Deburring Wheels

Clean, safe and economical wheels for removing sprues, parting lines, firescale and oxidation. Produce a satin finish on gold, sterling silver, copper, brass and stainless steel. Silicon carbide. Maximum operating speed: 6,000rpm. Mount on Tapered Spindle Adapter #145-1931 (see p. 25) for use on tapered spindles.

Description	Dia. x Thick x AH	Item#	Each
Medium	6" x 1/2" x 1"	<b>845-1159</b>	<b>\$39.99</b>
Fine	6" x 1" x 1"	<b>845-1089</b>	<b>59.75</b>



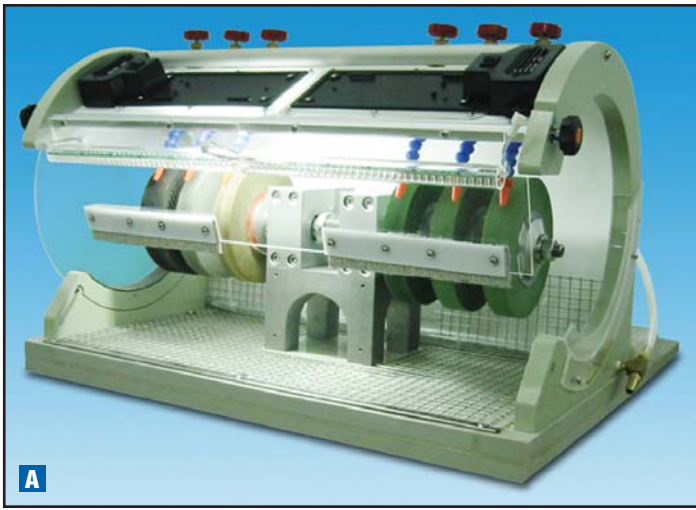
### F 3M™ XR Metalworking Wheels

These molded, compressed unitized wheels provide fast cutting action, smooth finish and long life. Aluminum oxide, hard density. Available in two grades: medium is 120 grit but produces a finer finish; coarse is 80 grit. Maximum operating speed: 3,600rpm. Mount on Tapered Spindle Adapter #145-1931 (see p. 25) for use on tapered spindles.

Description	Dia. x Thick x AH	Item#	Each
Coarse	6" x 1" x 1"	<b>277-0295</b>	<b>\$80.55</b>
Medium	6" x 1" x 1"	<b>277-0290</b>	<b>80.55</b>





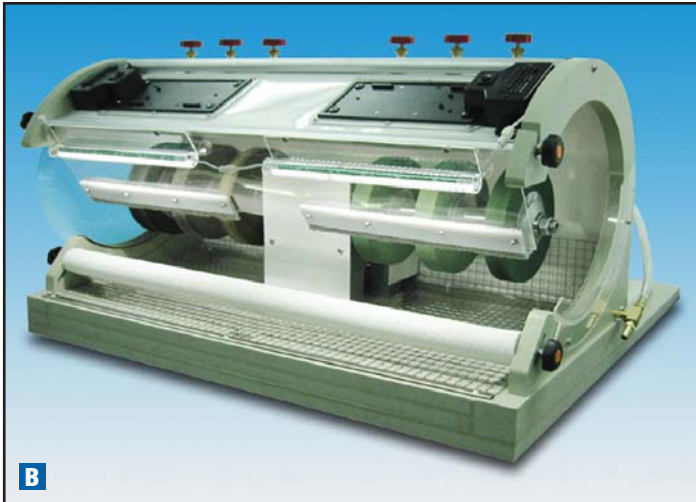


**A, B MAX Multi-Function Finishing Machines**  
**Variable-speed units for wet and dry grinding and polishing!**

Mix and match wheels, belts and discs on your MAX 24 or MAX 30 finishing machine, and run them wet or dry without any mess or time-consuming tool changes. MAX 24 and MAX 30 ("24" and "30" represent widths in inches) can each hold seven different abrasives. Just position them in the progressive order that suits your grinding and polishing requirements, then proceed from start to finish, spending less time and effort. Both units can run 5" or 6" wheels, including a lapping disc on the right side, which works for lapping flat surfaces on virtually any jewelry piece.

MAX 24 is ideal for most jewelry applications, and MAX 30 is made with wider spacing between its wheels for handling larger parts and adapting to manufacturing environments that might require special wheel configurations or other types of customization. Each features digital control for running abrasive products at speeds conducive to maximum performance and life, durable stainless steel cabinet with front-entry design for easy belt maintenance, 4-gallon recirculating water pump, separate water supply hoses and valves for controlling water flow to each abrasive, clear-view spray reduction shield and four strategically positioned lights for viewing work in progress. Operating speed range: 500–3,600rpm.

See below and the following page for a complete line of wheels, belts and discs specifically developed to get the absolute most out of your MAX unit.



Specifications:	MAX 24	MAX 30
Electrical	110V, 60Hz	110V, 60Hz or 220V, 50Hz
Motor	1/2 HP	1/2 HP (110V) or 1 HP (220V)
Dimensions (W x D x H)	25½" x 25½" x 20"	31½" x 25½" x 20¾"
Machine Shaft	1" dia x 22" long	1" dia x 27¾" long
Net/Ship. Wt.	132/224.4 lbs.	154/257.4 lbs.

Description	Motor	Item#	Each
A. MAX 24, 110V	1/2 HP	<b>854-0010</b>	<b>\$2,450.00</b>
B. MAX 30, 110V	1/2 HP	<b>854-0012</b>	<b>2,995.00</b>
MAX 30, 220V*	1 HP	<b>854-0013</b>	<b>3,300.00</b>

\*FOB Taiwan.

**C - F MAX Abrasive Wheels**

Choose from four types of wheels specifically developed for our MAX units: XA grinding, LD light deburring, MF multifinishing and MX polishing. Use XA wheels for removing sprues and parting lines and lapping edges and flat surface areas; LD and MF wheels for deburring and prepolishing; and MX wheels for uniform finishing on contoured surface areas. Measure 6" dia. x 1" thick x 1" AH. Recommended operating conditions: 1,200–1,800rpm with medium water flow for XA, LD and MF wheels; 1,200–1,500rpm with light water flow for MX wheels.



Description	Grit	Item#	EACH Prices	
			1-2	3+
C. XA Wheel	240	<b>845-3060</b>	<b>\$60.00</b>	<b>\$57.00</b>
D. LD Wheel	320	<b>845-3053</b>	<b>30.00</b>	<b>27.00</b>
E. MF Wheel	320	<b>845-3050</b>	<b>30.00</b>	<b>27.00</b>
	600	<b>845-3051</b>	<b>30.00</b>	<b>27.00</b>
	1000	<b>845-3052</b>	<b>30.00</b>	<b>27.00</b>
F. MX Wheel	240	<b>845-3055</b>	<b>40.00</b>	<b>38.00</b>
	600	<b>845-3056</b>	<b>40.00</b>	<b>38.00</b>
	1500	<b>845-3057</b>	<b>40.00</b>	<b>38.00</b>
	3000	<b>845-3058</b>	<b>40.00</b>	<b>38.00</b>



### A 3M™ Cubitron™ Belt

Features Cubitron ceramic abrasive, simply the toughest mineral on the market. Cuts like aluminum oxide but lasts twice as long and produces less dust. Provides a finish ready for further refinement. Measures 1½"W x 18<sup>15</sup>/<sub>16</sub>"L. Use with Expander Drum (see below).

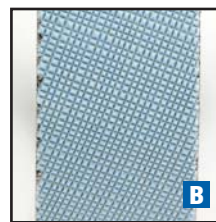
Description	Grit	Item#	Each
Cubitron Belt	80	<b>109-8451</b>	<b>\$5.10</b>



### B 3M™ Trizact™ Belt

Designed to run wet. Cuts fast and imparts a uniform finish. Ideal for use on precious metals, as well as stainless steel and titanium. Measures 1½"W x 18<sup>15</sup>/<sub>16</sub>"L. Use with Expander Drum (see below).

Description	Grit	Item#	Each
Trizact Belt	120	<b>109-8450</b>	<b>\$4.25</b>



### C 3M™ Flex Diamond Belt

A durable, nonloading belt for cleaning, shaping and prefinishing. Coated with diamond in a honeycomb pattern for fast cutting with no gouging or catching. Run wet or dry on hard and soft metals, including platinum, palladium and white gold, and even soft stones. Measures 1½"W x 18<sup>15</sup>/<sub>16</sub>"L. Use with Expander Drum (see below).

Description	Grit	Item#	Each
Flex Diamond Belt	220	<b>109-8453</b>	<b>\$66.00</b>



### D 3M™ Diamond Micro Finishing Film Belts

Consist of precision-graded diamond abrasive bonded onto flexible film backing. Cut faster than aluminum oxide and silicon carbide. Run wet or dry on metals, stone, glass, enamel, plastic and more. Color-coded for easy grit identification. Measure 1½"W x 18<sup>15</sup>/<sub>16</sub>"L. Use with Expander Drum (see below).

Description	Color	Mesh	Item#	Each
Diamond Film Belt	Aqua	220	<b>109-8452</b>	<b>\$13.99</b>
	Yellow	320	<b>109-8454</b>	<b>13.99</b>
	Green	400	<b>109-8455</b>	<b>13.99</b>



### E Expander Drum

This rubber drum expands while running to grip belts securely yet allows simple belt removal. Measures 6" dia. x 1½" thick x 1" AH. Mount on MAX units or polishing motors with included ¾", ⅝" and ½" plastic arbor hole inserts. Max. operating speed: 2,400rpm.

Description	Item#	EACH Prices	
		1-2	3+
Expander Drum	<b>840-1257</b>	<b>\$51.75</b>	<b>\$46.58</b>



### F 3M™ Lapping Film Discs

Consist of aluminum oxide abrasive resin-bonded onto tough PSA backing. Color-coded for easy grit identification. Measure 5" dia. Sold in packages of 10. Use with Stikit Vinyl Backpads (see below).

Description	Color	Micron	Item#	Pkg. of 10
Lapping Film Disc	Yellow	30	<b>105-2230</b>	<b>\$6.45</b>
	Pink	12	<b>105-2212</b>	<b>6.45</b>
	Blue	9	<b>105-2029</b>	<b>6.45</b>
	Green	3	<b>105-2023</b>	<b>6.45</b>
	White	1	<b>105-2021</b>	<b>6.45</b>



### G, H 3M™ Stikit™ Vinyl Backpads

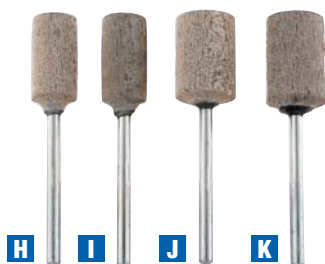
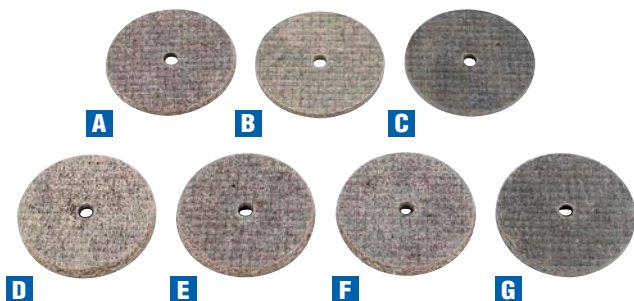
Cushioned backpads with vinyl face for use with lapping film discs. Conform to slightly curved surfaces and allow fast disc removal. Measure 5" dia. Mount on right of MAX units. Max. operating speeds: 12,000rpm for male and 10,000rpm for female.

Description	Item#	Each
G. Male Backpad, ⅝" shaft	<b>105-2005</b>	<b>\$21.58</b>
H. Female Backpad, ⅝" arbor hole	<b>105-2007</b>	<b>23.40</b>



## GMX

GMX utilizes aluminum oxide in a unique composite of laminated cotton fiber in a rubber bond. The result is a long-lasting abrasive wheel which provides a consistent and controlled cut along with a smooth, even finish. GMX cuts and smooths in one operation. The cotton base which supports the grain creates a cushioned feel and eliminates chatter and loading. Discs can be dressed to conform to shape of workpiece. Mounted wheels are popularly used for smoothing the inside of rings. Use 80 grit GMX for deburring and sprue removal, 120 grit to remove parting lines and small burs, 180 and 320 grit to remove light scratches. Made in USA.



### A - G GMX Discs

All with 1/8" arbor hole. Maximum operating speed: 25,000rpm. See p. 352 for mandrel selection.

Dia. x Thickness	Grit	Item#	EACH Prices	
			1-11	12+
A. 1" x 1/16"	120	205-5204	\$3.75	\$3.19
B.	180	205-5206	3.75	3.19
C.	320	205-5208	4.35	3.70
D. 1" x 1/8"	80	205-5252	4.35	3.70
E.	120	205-5254	4.35	3.70
F.	180	205-5256	4.35	3.70
G.	320	205-5258	4.35	3.70

### H - K GMX Cylinders – 1/8" Shank

Use for cleaning and smoothing the inside of ring shanks. Maximum operating speed: 50,000rpm with 1/2" overhang, 36,000rpm with 1" overhang.

Dia. x Length	Grit	Item#	EACH Prices	
			1-11	12+
H. 3/8" x 3/4"	120	205-1774	\$6.15	\$5.23
I.	320	205-1778	7.85	6.67
J. 1/2" x 3/4"	120	205-1864	6.15	5.23
K.	320	205-1868	7.10	6.04

### L GMX Wheels

Dia. x Thick x AH	Grit	Item#	EACH Prices	
			1-24	25+
4" x 1/4" x 1/4"	80	206-1050*	\$13.95	\$12.56
	120	206-1060*	13.95	12.56
	180	206-1070*	13.95	12.56
	320	206-1080*	15.45	13.91
Dia. x Thick x AH	Grit	Item#	EACH Prices	
			1-9	10+
6" x 1/8" x 1/2"	120	206-1360**	\$16.95	\$15.26
	180	206-1660**	24.50	22.05
6" x 1/4" x 1/2"	180	206-1670**	24.50	22.05
	80	206-1750**	49.50	44.55
6" x 1/2" x 1/2"	120	206-1760**	49.50	44.55
	180	206-1770**	49.50	44.55
	320	206-1780**	57.85	52.07

\*Maximum operating speed: 9,075rpm.

\*\*Maximum operating speed: 6,050rpm.

### M GMX Split Laps

Split and beveled for see-through lapping. The embedded abrasive allows fast cutting while the rubber bond assures a very smooth finish. Max. operating speed: 6,050rpm. Made to use with the Gesswein Split Lapping Machine (see p. 318).

Dia. x Thick x AH	Grit	Item#	EACH Prices	
			1-9	10+
6" x 1/4" x 1/2"	80	206-3350	\$28.90	\$26.01
	120	206-3360	28.90	26.01
	180	206-3370	28.90	26.01
6" x 1/2" x 1/2"	80	206-3450	57.25	48.66
	120	206-3460	57.25	48.66
	180	206-3470	57.25	48.66

### A - O 3M™ Scotch-Brite™ Small EXL Unitized Wheels

For deburring, blending parting lines, removing flash, cleaning and finishing. Great for cleanup prior to and after soldering and welding. Long-lasting to help reduce finishing operation costs. Synthetic fiber and resin construction makes a semi-resilient wheel that follows contours well and eliminates undercutting and gouging. All wheels are cool-running and resist heat buildup. Available in three color-coded grits: coarse (orange), medium (red) and fine (purple). See p. 352 for mandrels.

#### Orange EXL – Coarse

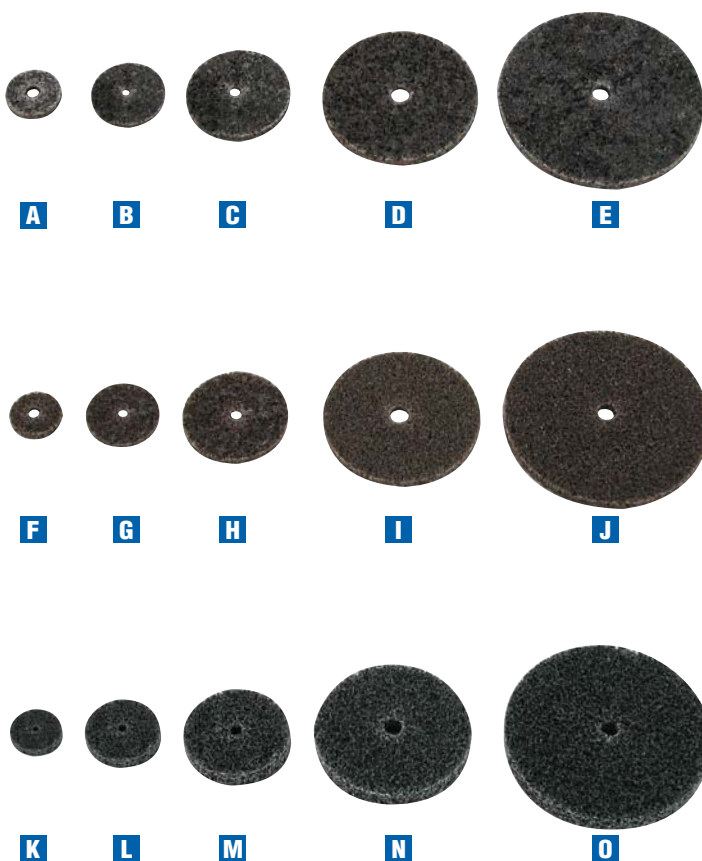
Dia. x W x AH	Max. RPM	Item#	EACH Prices	
			1-9	10+
A. 1/2" x 1/8" x 1/8"	40,100	845-1056	\$1.35	\$1.28
B. 3/4" x 1/8" x 1/8"	40,100	845-1057	1.50	1.43
C. 1" x 1/8" x 1/8"	35,100	845-1060	2.29	2.18
D. 1 1/2" x 1/8" x 3/16"	30,100	845-1069	3.25	3.09
E. 2" x 1/8" x 3/16"	22,100	845-1073	3.79	3.60

#### Red EXL – Medium

Dia. x W x AH	Max. RPM	Item#	EACH Prices	
			1-9	10+
F. 1/2" x 1/8" x 1/8"	40,100	845-1055	\$1.25	\$1.19
G. 3/4" x 1/8" x 1/8"	40,100	845-1058	1.35	1.28
H. 1" x 1/8" x 1/8"	35,100	845-1059	2.10	2.00
I. 1 1/2" x 1/8" x 3/16"	30,100	845-1068	2.89	2.75
J. 2" x 1/8" x 3/16"	22,100	845-1072	3.39	3.22

#### Purple EXL – Fine

Dia. x W x AH	Max. RPM	Item#	EACH Prices	
			1-9	10+
K. 1/2" x 1/4" x 1/8"	35,100	845-1062	\$1.60	\$1.52
L. 3/4" x 1/4" x 1/8"	35,100	845-1063	1.30	1.24
M. 1" x 1/4" x 1/8"	30,100	845-1061	1.20	1.14
N. 1 1/2" x 1/4" x 3/16"	20,100	845-1070	2.89	2.75
O. 2" x 1/4" x 3/16"	16,100	845-1074	3.39	3.22



### P 3M™ Scotch-Brite™ Small EXL Unitized Wheel Set

Includes 26 of the above wheels from 1/2" to 2" in diameter (four 1/2" coarse, four 1/2" medium, two 1" coarse, two 1" medium, two 1" fine, two 1 1/2" coarse, two 1 1/2" medium, two 1 1/2" fine, two 2" coarse, two 2" medium and two 2" fine), two 1/4" mandrels and two 1/8" mandrels.

Description	Item#	Each
30-Piece Set	845-1054	\$53.99



### Q - Z 3M™ Molded XR and Unitized Bobs – 3/32" Shank

Remove light firescale and scratches. Ideal for blending and pre-polishing. Made of long-wearing 3M XR Molded Technology (medium grit) and Unitized Molded Technology (fine grit). Available in a variety of shapes for reaching places rubber wheels can't. Work especially well on contoured surfaces and unique shapes. Mounted on 3/32" shanks. Maximum operating speed: 30,000rpm.

Description	Item#	Each
Q. XR Flame	845-1096	\$3.40
R. XR Slim Taper	845-1097	3.10
S. XR Bullet	845-1098	3.10
T. XR Cylinder	845-1099	3.35
U. XR Ball	845-1100	2.90
V. Unitized Flame	845-1090	2.25
W. Unitized Slim Taper	845-1091	2.25
X. Unitized Bullet	845-1092	2.25
Y. Unitized Cylinder	845-1093	2.25
Z. Unitized Ball	845-1094	2.25





### 3M™ Scotch-Brite™ Radial Bristle Discs – For fast and easy cleaning and polishing.

Use to clean, prepolish, blend and remove scratches and firescale. Excellent on gold, silver, platinum and most other metals. Require no compounds. Work fast and take the mess out of cleaning up tiny findings, bracelet links, nugget rings and more. Long-lasting and nonloading. Color-coded for easy grit identification.

Use a single one for reaching tight areas, or stack several of them for covering large surface areas (for example, 2" and 3" discs can be stacked up to ten in a row). Maximum operating speeds: 10,000rpm for 6" discs, 20,000rpm for 3" discs and 30,000rpm for all others (recommended operating speed for most applications: 15,000rpm). See p. 352 for mandrels.

Color	Application
Brown	Removal of heaviest scratches
Green	Removal of heavy scratches
Yellow	Removal of scratches and firescale
White	Texturing, light cleaning
Red	Removal of light scratches and oxides
Blue	Blending, prepolishing
Pink	Very light cleaning, prepolishing
Peach	Polishing
Lt. Green	Final polishing



Discs must be mounted and used as shown.



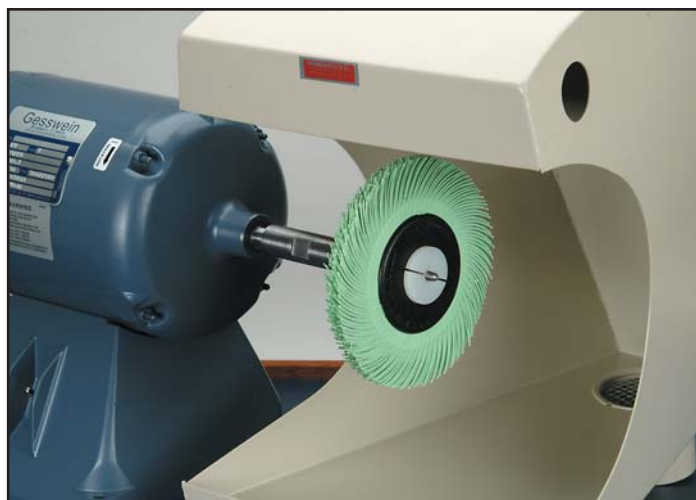
#### A - C Small Discs – For use with rotary handpieces.

Dia.	Color	Grit	Item#	PKG. of 12	
				1-3	4+
A. 9/16" x 1/16"	White	120	145-1520	\$8.85	\$8.23
	Red	220	145-1525	8.85	8.23
	Blue	400	145-1530	8.85	8.23
	Pink	Pumice	145-1535	8.85	8.23
	Peach	6 Micron	145-1545	8.85	8.23
	Lt. Green	1 Micron	145-1540	8.85	8.23
	B. 3/4" x 1/16"	Yellow	80	145-1500	9.20
Red		220	145-1505	9.20	8.74
Blue		400	145-1510	9.20	8.74
Pink		Pumice	145-1515	9.20	8.74
Peach		6 Micron	145-1492	9.20	8.74
Lt. Green		1 Micron	145-1495	9.20	8.74
C. 1" x 1/8"		Brown	36	145-1550	11.15
	Green	50	145-1555	11.15	10.37
	Yellow	80	145-1560	11.15	10.37
	White	120	145-1565	11.15	10.37



Description	Item#	Each
45-Piece Small Disc Set (includes three of each disc listed above except for #145-1492 and #145-1495, one 3/32" shank mandrel and two 1/8" shank mandrels)	145-1670	\$39.79
73-Piece 9/16" Set (includes 12 of each 9/16" disc listed above and one 3/32" shank mandrel in a plastic case)	145-1672	56.75
73-Piece 3/4" Set (includes 12 of each 3/4" disc listed above and one 3/32" shank mandrel in a plastic case)	145-1673	58.90





**A - C Large Discs – For use with polishing motors.**

The 2" and 3" discs are sold with RH tapered spindle adapters in packages of 10 and in sets of 3 of each disc and an adapter. Max. operating speed 30,000rpm for 2" and 20,000rpm for 3".

Each 6" disc consists of eight stacked discs mounted on a plastic hub. Includes adapters for 3/8", 1/2", 5/8" and 3/4" arbors. Tapered spindle adapters sold separately. Max. operating speed 10,000rpm.

Dia. x AH	Color	Grit	Item#	PKG. of 10	
				1-3	4+
A. 2" x 3/8"	Yellow	80	145-1745	\$22.19	\$19.31
	White	120	145-1750	22.19	19.31
	Red	220	145-1755	22.19	19.31
	Blue	400	145-1760	22.19	19.31
	Pink	Pumice	145-1765	22.19	19.31
	Peach	6 Micron	145-1770	22.19	19.31
	Lt. Green	1 Micron	145-1775	22.19	19.31
Description			Item#	Each	
22-Piece 2" Disc Set			145-1814	\$37.90	

Dia. x AH	Color	Grit	Item#	PKG. of 10	
				1-3	4+
B. 3" x 3/8"	Yellow	80	145-1780	\$29.75	\$24.99
	White	120	145-1785	29.75	24.99
	Red	220	145-1790	29.75	24.99
	Blue	400	145-1795	29.75	24.99
	Pink	Pumice	145-1800	29.75	24.99
	Peach	6 Micron	145-1805	29.75	24.99
	Lt. Green	1 Micron	145-1810	29.75	24.99
Description			Item#	Each	
22-Piece 3" Disc Set			145-1815	\$53.65	

Dia. x AH	Color	Grit	Item#	EACH Prices	
				1-2	3+
C. 6" x 1"	Yellow	80	145-1925	\$51.25	\$47.25
	White	120	145-1926	51.25	47.25
	Red	220	145-1927	51.25	47.25
	Blue	400	145-1928	51.25	47.25
	Peach	6 Micron	145-1929	51.25	47.25
	Lt. Green	1 Micron	145-1930	51.25	47.25



**D, E Tapered Spindle Adapters**

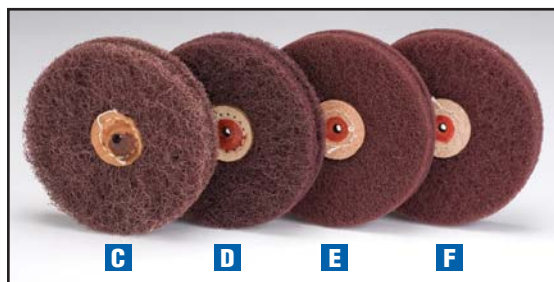
Description	Item#	Each
D. Replacement RH Tapered Spindle Adapter for 2" and 3" discs	145-1921	\$2.50
Optional LH Tapered Spindle Adapter for 2" and 3" discs	145-1922	1.85
E. Tapered Spindle Adapter for 6" discs	145-1931	5.25



**A, B Satin Flap Wheels**

The densest satin flap wheels on the market. As each one is used, fiber on the surface softens to create a beautiful finish with no cross-hatching or overlap marks. Medium wheel produces a subtle line effect that is comparable to a brush finish. Very fine wheel produces a bright satin finish. Measure 4" dia. x 1" thick x 3/8" AH.

Description	Item#	1-11	12+
A. Medium Wheel	142-3075	\$11.25	\$10.13
B. Very Fine Wheel	142-3070	9.50	8.55



**C - F Satin Finish Buffs**

Made of a stiff, nonwoven material, Satin Finish Buffs have abrasive embedded in a red synthetic fiber. They produce a beautiful satin finish and conform to a wide variety of surface contours. Available in either 2-ply or 3-ply with leather center. All measure 4" dia. x 3/16" AH.

Description	Grit	Item#	1-11	12+
C. 2-Ply	Coarse	142-3030	\$5.78	\$4.82
D.	Medium	142-3020	4.41	3.67
E.	Fine	142-3010	3.05	2.54
F.	Extra-Fine	142-3005	2.78	2.32
3-Ply	Coarse	142-3050	6.83	5.69
	Medium	142-3045	5.57	4.64
	Fine	142-3040	4.31	3.59
	Extra-Fine	142-3035	3.99	3.32



**G - J Mounted Satin Finish Wheels**

Use these extra-thick wheels to create the exact degree of satin finish desired, from the soft, subtle texture of Extra Cut to the lustrous glow of Ultra-Fine. Made of dense-weave fiber for a uniform, nondirectional finish. Last much longer than conventional satin finish buffs. Measure approx. 7/8" dia. x 5/8" thick with 3/32" shank.



Description	Abrasive	Color	Item#	1-11	12+
G. Extra Cut	AIO	Brown	288-2260	\$ .88	\$ .79
H. Medium	AIO	Red	288-2262	.88	.79
I. Very Fine	AIO	Red	288-2264	.88	.79
J. Ultra-Fine	SiC	Gray	288-2266	.88	.79
8-Piece Set (two of each grit)			288-2270	6.35	-



**K Mounted Flexible SLP Fiber Wheel - 3/32" Shank**

A flexible yet firm unitized abrasive mounted wheel made of 180 grit pure alumina. Produces a fine, smooth finish. Measures 7/8" dia. x 1/8" thick.

Description	Item#	1-11	12+
SLP Fiber Wheel	288-2276	\$1.10	\$ .99



**L Mounted Hard FR Fiber Wheel - 3/32" Shank**

Ideal for stock removal, this wheel has only slight resilience and cuts fast. Made of silicon carbide. Measures 1" dia. x 1/4" thick.

Description	Item#	1-11	12+
FR Fiber Wheel	288-2272	\$2.75	\$2.48



**M, N Compressed Fiber Wheels - 3/32" Shank**

Fibers are compressed and bonded with aluminum oxide to make a firm, dense wheel with some flexibility. Creates a beautiful scratch finish that contrasts well with highly polished areas. Last much longer than ordinary fiber wheels. Fine Wheel creates a very soft satin finish, Coarse a more distinct scratch. Measures 7/8" dia. x 3/8" thick. Recommended working speed: 5,000rpm. Made in Germany.

Description	Item#	1-11	12+
M. Coarse	288-2250	\$4.95	\$4.46
N. Fine	288-2251	4.95	4.46



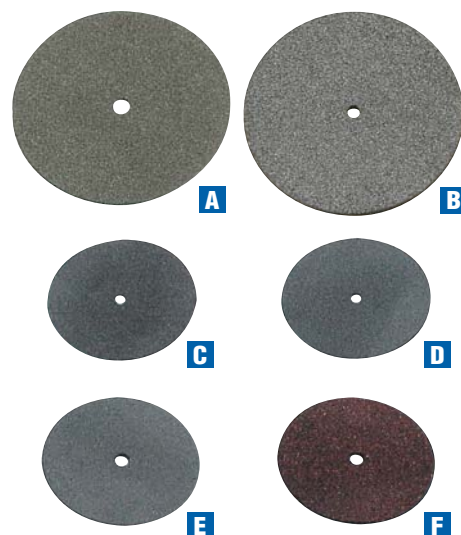
### A - F Cut-Off Discs

Both sides and edges of these thin discs can be used for slitting and finishing gold, silver, brass, steel, porcelain and acrylics. Available in either silicon carbide (SiC) or aluminum oxide (AlO). All are resin-bonded. Arbor hole measures 1/16". Maximum operating speed: 25,000rpm for discs up to 1"; 21,000rpm for discs over 1". Mandrels available separately. See p. 352 for mandrel selection.

Dia. x Thick	Abrasive	Item#	EACH Prices	
			10-90	100+
A. 1 1/4" x .025"	AlO	845-1024*	\$ .54	\$ .35
B. 1 1/2" x .050"	AlO	845-1025*	.54	.35
Dia. x Thick	Abrasive	Item#	Box of 100	
C. 7/8" x .023"	SiC	845-1017**	\$8.50	
D. 7/8" x .023"	SiC	845-1020	8.10	
E. 1" x .023"	SiC	845-1021	8.10	
F. 1" x .025"	AlO	845-1022	8.40	

\*10-piece minimum; please order in multiples of 10.

\*\*One side safe: abrasive on one side only.



### G Ultra-Thin Cut-Off Disc

This super thin silicon carbide disc will cut sprues and rings in a second, leaving a very thin space. Recommended operating speed: 12,000 to 14,000rpm. 1/16" arbor hole. See p. 352 for mandrel selection.

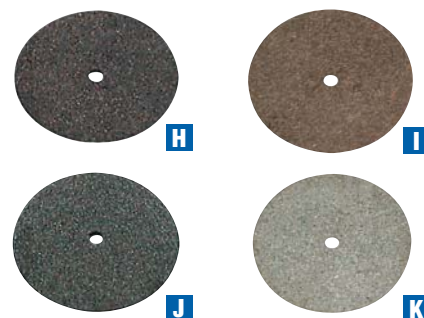
Description	Dia. x Thick	Item#	Box of 25
Ultra-Thin Disc	7/8" x .009"	845-1050	\$8.95



### H - K Dedeco® Separating Discs

Discs for fast, cool cutting. Use High-Speed disc on gold and all other metals, Separating disc on chrome cobalt and other nonprecious metals. Cut on edges only. Safe-Side disc is coated on one side and uncoated on the other, works well on gold. Two-Sided disc is coated on both sides, also good for work on gold. All have 1/16" arbor holes. Maximum operating speed: 21,000rpm. See p. 352 for mandrel selection.

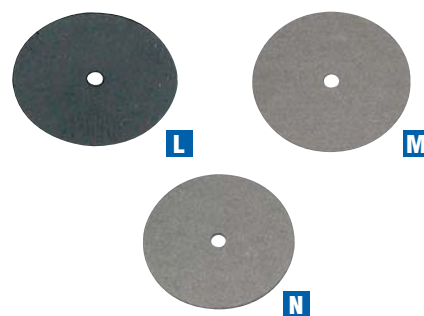
Description	Dia. x Thick	Item#	Box of 100
H. High-Speed AlO Disc	7/8" x .025"	845-1018	\$10.95
I. Separating AlO Disc	1 5/16" x .025"	845-1036	10.95
J. Safe-Side SiC Disc	7/8" x .025"	845-1033	11.95
K. Two-Sided SiC Disc	7/8" x .025"	845-1034	13.75



### L - N Dedeco® Thin Separating Discs

Extremely thin discs coated with silicon carbide abrasive on both sides. Great for precision work on gold, silver and other jewelry metals. Allow fast, clean cutting. Have 1/16" arbor holes. Available in three thicknesses: ultra-thin (UT), super-thin (ST) and very-thin (VT). Maximum operating speed: 21,000rpm. See p. 352 for mandrel selection.

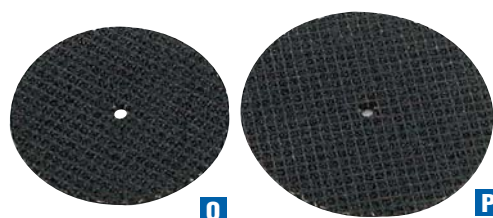
Description	Dia. x Thick	Item#	Box
L. UT Discs, box of 25	7/8" x .005"	845-1051	\$16.95
M. ST Discs, box of 25	7/8" x .009"	845-1052	12.95
N. VT Discs, box of 50	7/8" x .015"	845-1032	14.95



### O, P Dedeco® Fiberglass Cut-Off Discs

Durable, shatterproof fiberglass-reinforced discs for cutting everything from hard metals to plastics. Have 1/16" arbor holes. Available in two sizes. Maximum operating speed: 21,000rpm. See p. 352 for mandrel selection.

Description	Dia. x Thick	Item#	Pkg.
O. Discs, pkg. of 10	1 1/4" x .040"	845-1030	\$10.95
P. Discs, pkg. of 12	1 1/2" x .049"	845-1035	22.95



### Q Nylon Cut-Off Disc

Combination of ceramic and zirconia alumina abrasives. These resin-bonded discs are made from long-lasting interwoven nylon fibers. Fast-cutting and economical. Have 1/16" arbor hole. Maximum operating speed: 24,000rpm. See p. 352 for mandrel selection.

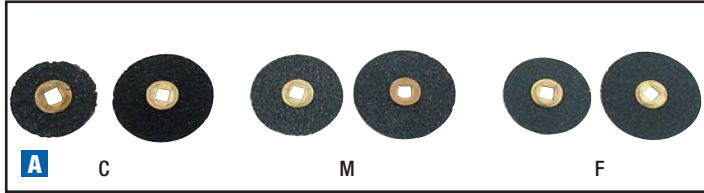
Dia. x Thickness	Grit	Item#	Each
1 1/2" x .035"	60	845-1028	\$1.75





## Snap-On Discs, Brass Center – Moore's Discs

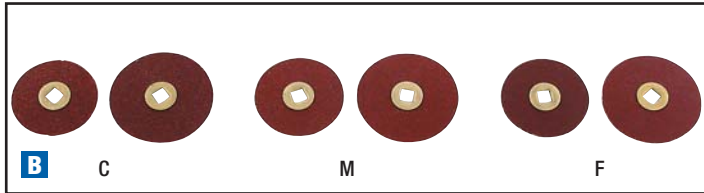
Quick change with a sure-locking square arbor hole makes these Snap-On Discs extremely popular. Inexpensive and available in 4 abrasive types and 1 polishing type. With paper-backed discs, edges will wear along with the abrasive. The plastic discs are 7mm thick and can be dressed smaller as the abrasive wears. All have brass center for durability and must be used with the Snap-On Mandrel (see facing page). Maximum operating speed: 30,000rpm.



### A Emery/Paper Snap-On Discs

A natural fast-cutting abrasive, Emery, which is black silicon carbide, is glue-bonded onto these very thin Snap-On Discs. Economical and great for cleanup and finishing. One cutting face on paper backing.

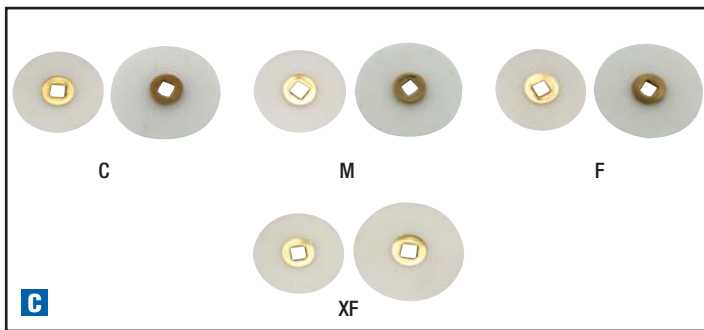
Grit	Dia.	Item#	BOX of 50		
			1-5	6-11	12+
Coarse	3/4"	845-2585	\$2.95	\$2.66	\$2.51
Coarse	7/8"	845-2596	2.95	2.66	2.51
Medium	3/4"	845-2590	2.95	2.66	2.51
Medium	7/8"	845-2597	2.95	2.66	2.51
Fine	3/4"	845-2595	2.95	2.66	2.51
Fine	7/8"	845-2598	2.95	2.66	2.51



### B Adalox/Paper Snap-On Discs

Resin-bonded onto thin, flexible paper-backed discs. Aluminum oxide is a man-made abrasive that is not as aggressive as Emery. Red in color, these discs are long-lasting and water resistant.

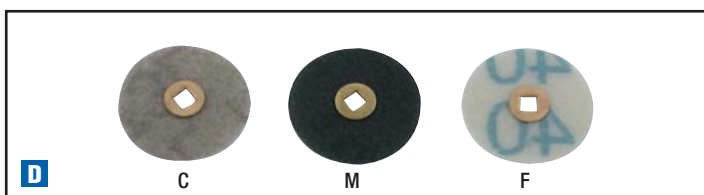
Grit	Dia.	Item#	BOX of 50		
			1-5	6-11	12+
Coarse	3/4"	845-2600	\$3.95	\$3.56	\$3.36
Coarse	7/8"	845-2715	3.95	3.56	3.36
Medium	3/4"	845-2650	3.95	3.56	3.36
Medium	7/8"	845-2710	3.95	3.56	3.36
Fine	3/4"	845-2700	3.95	3.56	3.36
Fine	7/8"	845-2705	3.95	3.56	3.36



### C Sand/Plastic Snap-On Discs

Actually made of white aluminum oxide, this abrasive is glue-bonded onto a thin plastic backing. A bit more flexible than Magnum, it works well on contoured surfaces.

Grit	Dia.	Item#	BOX of 50		
			1-5	6-11	12+
Coarse	3/4"	845-2858	\$4.95	\$4.46	\$4.21
Coarse	7/8"	845-2865	4.95	4.46	4.21
Medium	3/4"	845-2857	4.95	4.46	4.21
Medium	7/8"	845-2863	4.95	4.46	4.21
Fine	3/4"	845-2856	4.95	4.46	4.21
Fine	7/8"	845-2860	4.95	4.46	4.21
Extra Fine	3/4"	845-2855	4.95	4.46	4.21
Extra Fine	7/8"	845-2859	4.95	4.46	4.21



### D Aluminum Oxide/Plastic Snap-On Discs

These premium discs are made of micron-grade aluminum oxide which is electrostatically applied to the resin bonding on a plastic backing. These are our longest lasting discs, with grit evenly dispersed for smooth cutting. The micron grading dramatically narrows the grit size variance for faster cutting. Color-coded: brown is coarse, ivory is medium grit, fine contains no abrasive.

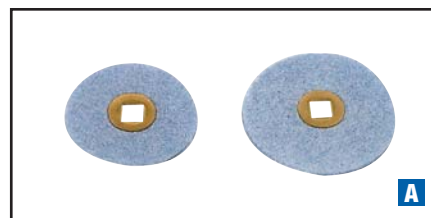
Grit	Dia.	Item#	BOX of 100	
			1-11	12+
Coarse	7/8"	845-2900	\$11.95	\$10.16
Medium	7/8"	845-2902	11.95	10.16
Fine	7/8"	845-2899	11.95	10.16



**A Felt/Plastic Snap-On Discs – For use with compound.**

A special felt-like material is mounted on a plastic backing. Felt side can be charged with tripoli, rouge, or any other compound or paste for quick and easy finishing. Must be used with Snap-On Mandrel.

Grit	Dia.	Item#	BOX of 100	
			1-11	12+
Fine	3/4"	<b>845-0971</b>	<b>\$23.95</b>	<b>\$21.56</b>
	7/8"	<b>845-0970</b>	<b>23.95</b>	<b>21.56</b>



**B Snap-On Disc Assortment Set – With reusable storage box.**

This introductory set is a great way to sample the variety and convenience of all our Snap-On Discs. Set includes 120 Snap-On Discs (10 each of available grits in Emery, Adalox, Sand, Magnum and Felt), all 7/8" diameter, plus 2 Snap-On Mandrels.

Description	Item#	Each
Snap-On Disc Assortment Set	<b>845-2905</b>	<b>\$14.80</b>



**C Snap-On Mandrel – 3/32" Shank**

One-piece construction from high quality steel.

Description	Item#	EACH Prices	
		1-11	12+
Snap-On Mandrel	<b>840-3200</b>	<b>\$1.95</b>	<b>\$1.62</b>



**D, E Fiber Pads**

A loose, nonwoven fiber with abrasive grain mixed throughout. Measure approx. 9"L x 6"W x 3/8" thick. Easily cut to size. Available in two grits: Very Fine (Red) general-purpose aluminum oxide for light deburring and scratch finishing and Ultra-Fine (Gray) silicon carbide for light cosmetic cleaning and finishing.

Description	Item#	Each	Item#	Box(20)
D. Very Fine, Red	<b>108-7445</b>	<b>\$1.60</b>	<b>108-7447</b>	<b>\$23.50</b>
E. Ultra-Fine, Gray	<b>108-7446</b>	<b>1.60</b>	<b>108-7448</b>	<b>23.50</b>



**F - J 3M™ Scotch-Brite™ Hand Pads**

On surfaces that require cleaning, deburring or finishing by hand, Scotch-Brite hand pads outperform steel wool, wire brushes and other nonwoven hand pads. They cut faster and leave a more consistent finish. And Scotch-Brite pads will never rust, so they can be used with water or solvents. Measure 6" x 9". Can be cut to fit Pad Holder or Mini Mandrel (see below).

Description	Application	Item#	Each
F. Tan, box of 10	Heavy-duty cleaning	<b>108-7461</b>	<b>\$28.85</b>
G. Gray, box of 10	Blending and cleaning	<b>108-7459</b>	<b>19.45</b>
H. Maroon, box of 20	Cleaning and finishing	<b>108-7457</b>	<b>21.45</b>
I. Light Gray, box of 20	Fine cleaning and finishing	<b>108-7453</b>	<b>21.45</b>

Description	Size	Item#	Each
J. Pad Holder	4" x 6"	<b>108-7462</b>	<b>\$18.85</b>



**K 3M™ Scotch-Brite™ Mini Mandrel – 1/4" Shank**

For use with 1" x 1 1/2" pieces of Scotch-Brite hand pads (see above). Use on contours. Acts like a flap wheel. Measures 2 7/8" long. Has 1/4" shank.

Description	Max. RPM	Item#	Each
Mini Mandrel	14,000	<b>108-7463</b>	<b>\$19.59</b>





### A - M PSA Discs and Holders

These flexible abrasive discs are made of aluminum oxide, resin-bonded for greater durability. Pressure-sensitive adhesive backing withstands the high frictional heat generated when a disc is in use on the workpiece. PSA Discs will stay on until removed from the holder by pulling off by hand. Peel-off backing assures adhesive freshness. Maximum operating speed: 22,000rpm.

Diameter	Grit	Item#	Box(100)
A. 3/4"	80	105-0708	\$8.70
B.	120	105-0712	8.70
C.	180	105-0718	8.70
D.	240	105-0724	8.70
E.	320	105-0732	8.70
F. 1"	60	105-1006	14.35
G.	80	105-1008	14.35
H.	120	105-1012	14.35
I.	180	105-1018	14.35
J.	240	105-1024	14.35
K.	320	105-1032	14.35

Description	Item#	EACH Prices	
		1-2	3+
L. 1/8" Shank Holder for 3/4" Discs	840-0030	\$4.35	\$3.62
M. 1/8" Shank Holder for 1" Discs	840-0050	4.50	3.75



### N - P Polymond Diamond Film PSA Discs and Holders – For fine finishing.

For precise finishing of both soft and hard metals including yellow gold, white gold, silver and platinum. Polymond is the product of a revolutionary new technology that mixes uniform size diamond grains and base material. (Most diamond polishing films only coat the base with diamonds.) The result is a chemical- and temperature-resistant (-200°C to 400°C) sheet with good tensile strength and excellent cutting power. Can be used with any polishing oil. Maximum operating speed: 10,000 to 15,000rpm.

Size	Grit	Micron	Color	Item#	Each
N. 21mm	280	65-75	Moss Green	107-5740	\$6.95
	400	40-60	Yellow	107-5741	6.95
	600	30-40	Dark Brown	107-5742	6.95
	800	20-30	Red	107-5743	6.95
	1500	8-16	Brown	107-5744	6.95
31mm	280	65-75	Moss Green	107-5760	12.95
	400	40-60	Yellow	107-5761	12.95
	600	30-40	Dark Brown	107-5762	12.95
	800	20-30	Red	107-5763	12.95
	1500	8-16	Brown	107-5764	12.95
Description	Item#	Each			
O. 3mm Shank Holder for 21mm Discs	510-0265	\$8.75			
P. 3mm Shank Holder for 31mm Discs	510-0270	8.75			



### Q Paper Discs, Aluminum Oxide

Paper discs are coated with Aluminum Oxide abrasive on one side. All have 1/16" arbor hole. See p. 352 for mandrel selection.

Grit	Dia.	Item#	PKG. of 100	
			1-9	10+
80	1 1/2"	845-1006	\$14.65	\$13.19
150	1 1/2"	845-1007	14.65	13.19
220	1 1/2"	845-1008	14.65	13.19



### R 3M™ Feathering Disc Adhesive

Specially formulated adhesive for attaching sandpapers and abrasive discs to wood sticks, metal files and more. Hold abrasives firmly on tools yet lets you remove them when desired without adhesive buildup or paper delamination. Works on a wide variety of abrasive backings, such as paper, film and cloth. Allows multiple applications. Sold in 5 oz. tubes.

Description	Item#	EACH Prices		
		1-2	3-5	6+
Feathering Disc Adhesive, 5 oz. tube	820-0670	\$10.20	\$9.69	\$9.18

**A - N Flap Wheels – 1/8" Shank**

Made of aluminum oxide, resin-bonded to cloth and permanently attached to wheels. Can be used on flat or contoured surfaces. Particularly useful in flexible shaft equipment, drill presses and other rotary tools.

Cutting action is slightly finer than normally expected from identical grit sizes. Flap Wheels perform best when only slight pressure is applied. Maximum operating speed: 25,000rpm.

Dia x W	Grit	Item#	EACH PRICES	
			1-2	3+
A. 3/4" x 3/16"	80	107-5900	\$4.35	\$4.13
B.	120	107-5905	4.35	4.13
C.	240	107-5912	4.35	4.13
D.	320	107-5915	4.35	4.13
E. 3/4" x 3/8"	80	107-5920	4.35	4.13
F.	120	107-5925	4.35	4.13
G.	240	107-5932	4.35	4.13
H.	320	107-5935	4.35	4.13
I. 1 3/16" x 3/16"	80	107-5940	5.25	4.99
J.	120	107-5945	5.25	4.99
K.	240	107-5951	5.25	4.99
L.	320	107-5955	5.25	4.99
M.	400	107-5960	5.25	4.99
N. 1 3/16" x 3/8"	400	107-5985	5.25	4.99



**O Cloth 4" Flap Wheels**

Abrasive flap wheels in flexible cloth used for jewellery, spectacles and precious metals. Also intended for many special usage. Different diameters and grits to use in several fields of finishing.

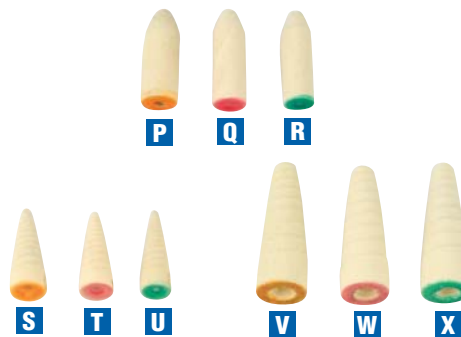
Grit	Item#	EACH PRICES	
		1-2	3+
240	108-0175	\$23.55	\$22.37
320	108-0176	23.55	22.37
400	108-0177	23.55	22.37



**P - X Paper Bullets and Cones**

Economical paper bullets and cones for fine finishing in hard-to-reach areas. Cones expose new grit as they wear. Recommended or use at low speeds for better control and longer life. Designed for fast, easy changing. Use bullets and small cones with threaded mandrel (see p. 352), large cones with split mandrel (see p. 353).

Shape	Dia. x L	Grit	Item#	Pkg. of 10
P. Bullet	1/4" x 5/8"	Coarse	107-1058	\$5.45
Q.		Medium	107-1057	5.45
R.		Fine	107-1056	5.45
S. Small Cone	1/4" x 9/16"	Coarse	107-1055	5.45
T.		Medium	107-1054	5.45
U.		Fine	107-1053	5.45
V. Large Cone	5/8" x 15/16"	Coarse	107-1052	4.95
W.		Medium	107-1051	4.95
X.		Fine	107-1050	4.95



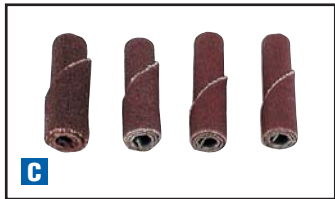
**Y Paper Cone Set**

Perfect for fine finishing in tight areas. Includes 10 yellow (coarse), 10 red (medium) and 10 green (fine) large cones; 10 yellow, 10 red and 10 green small cones; split mandrel for large cones, 3/32" shank; and threaded mandrel for small cones, 3/32" shank. Cones expose new grit as they wear. Recommended for use at low speeds for better control and longer life. Designed for fast, easy changing.

Description	Item#	Each
Paper Cone Set	107-1060	\$39.50







**A - J Abrasive Cartridge Rolls**

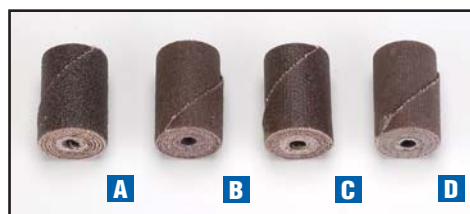
Ideal for finishing inside rings and dead-end holes and for lapping. Their self-renewing feature of wearing through one layer of abrasive cloth to uncover the layer beneath makes them an excellent tool for blending where uniform finishes are required. Made with resin-bonded aluminum oxide. Use on mandrels (on facing page). Maximum operating speed: 16,000-22,000rpm. Sold in boxes of 100.

Dia x L x AH	Use Mandrel	Grit	Item#	BOX of 100	
				1-2	3+
A. 1/8" x 3/4" x 5/64"	A1	80	103-1208	\$31.50	\$29.93
	A1	120	103-1212	31.50	29.93
	A1	180	103-1218	31.50	29.93
	A1	240	103-1224	31.50	29.93
	A1	320	103-1232	31.50	29.93
B. 1/8" x 1" x 5/64"	A1	80	103-1308	31.50	29.93
	A1	120	103-1312	31.50	29.93
	A1	180	103-1318	31.50	29.93
	A1	240	103-1324	31.50	29.93
	A1	320	103-1332	31.50	29.93
C. 3/16" x 3/4" x 3/32"	A2	120	103-2212	25.30	24.04
	A2	180	103-2218	25.30	24.04
	A2	240	103-2224	25.30	24.04
	A2	320	103-2232	25.30	24.04
	D. 3/16" x 1" x 3/32"	A2	80	103-2308	24.95
A2		120	103-2312	24.95	23.70
A2		180	103-2318	24.95	23.70
A2		240	103-2324	24.95	23.70
A2		320	103-2332	24.95	23.70
E. 1/4" x 3/4" x 1/8"	A4	80	103-3208	25.30	24.04
	A4	120	103-3212	25.30	24.04
	A4	180	103-3218	25.30	24.04
	A4	240	103-3224	25.30	24.04
	A4	320	103-3232	25.30	24.04
F. 1/4" x 1" x 1/8"	A5	80	103-3308	25.80	24.51
	A5	120	103-3312	25.80	24.51
	A5	180	103-3318	25.80	24.51
	A5	240	103-3324	25.80	24.51
	A5	320	103-3332	25.80	24.51
G. 3/8" x 3/4" x 1/8"	A4	80	103-5208	25.80	24.51
	A4	120	103-5212	25.80	24.51
	A4	180	103-5218	25.80	24.51
	A4	240	103-5224	25.80	24.51
	A4	320	103-5232	25.80	24.51
H. 3/8" x 1" x 1/8"	A5	80	103-5308	27.95	26.55
	A5	120	103-5312	27.95	26.55
	A5	180	103-5318	27.95	26.55
	A5	240	103-5324	27.95	26.55
	A5	320	103-5332	27.95	26.55
I. 1/2" x 3/4" x 1/8"	A4	80	103-6208	27.95	26.55
	A4	120	103-6212	27.95	26.55
	A4	180	103-6218	27.95	26.55
	A4	240	103-6224	27.95	26.55
	A4	320	103-6232	27.95	26.55
J. 1/2" x 1" x 1/8"	A5	80	103-6308	32.50	30.88
	A5	120	103-6312	32.50	30.88
	A5	180	103-6318	32.50	30.88
	A5	240	103-6324	32.50	30.88
	A5	320	103-6332	32.50	30.88

### A - D 3M™ Aluminum Oxide Cartridge Rolls

High-quality aluminum oxide sandpaper rolls tightly wrapped and resin-bonded together. As each layer of sandpaper wears out, it can be peeled away to reveal a fresh surface. Can be used wet or dry. Use with cartridge roll mandrel. Maximum operating speed: 15,000rpm. Sold in packages of 100.

	Dia. x L x H	Use Mandrel	Grit	Item#	Pkg. of 100
A.	1/2" x 3/4"	A-4	120	101-0150	\$21.95
B.		A-4	180	101-0151	21.95
C.		A-4	240	101-0152	21.95
D.		A-4	320	101-0153	21.95



### E 3M™ Aluminum Oxide Cartridge Roll Kit

Includes 16 rolls (four each of grits 120, 180, 240 and 320), 1/8" shank threaded mandrel and plastic box.

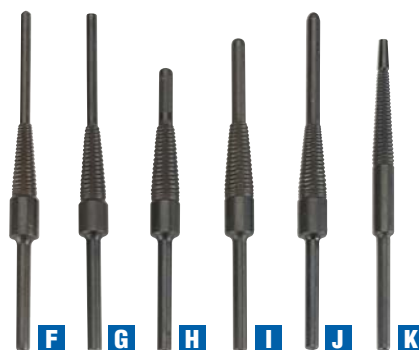
Description	Item#	Each
17-Piece 1/2" x 3/4" Roll Kit	101-0154	\$10.75



### F - K Mandrels for Abrasive Cartridge Rolls – 1/8" Shank

Hardened steel mandrel firmly secures abrasive cartridge rolls. More flexibility may be obtained if pilot length is slightly shorter than the cartridge rolls. If necessary, mandrels may be ground down to needed length. Use K-11 with tapered cone points below.

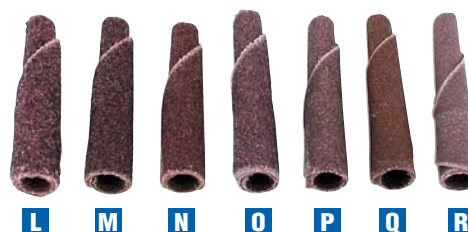
	Mandrel	Shank	Pilot Size	Item#	Each
F.	A-1	1/8"	5/64" x 1"	840-2040	\$3.25
G.	A-2	1/8"	3/32" x 1"	840-2050	3.25
H.	A-3	1/8"	1/8" x 1/2"	840-2060	3.25
I.	A-4	1/8"	1/8" x 3/4"	840-2070	3.25
J.	A-5	1/8"	1/8" x 1"	840-2080	3.60
K.	K-11	1/8"	-	840-2030	4.85



### L - R Tapered Cone Points – K-11

Aluminum oxide, glue-bonded. For cutting and finishing. Measure 3/16" dia. x 1" long with a 2.5° taper. Use with K-11 mandrel above. Maximum operating speed: 25,000rpm.

	Dia. x L	Grit	Item#	Box of 100
L.	3/16" x 1"	60	107-1100	\$33.45
M.		80	107-1150	33.45
N.		100	107-1200	33.45
O.		120	107-1250	33.45
P.		180	107-1350	33.45
Q.		240	107-1400	33.45
R.		320	107-1450	33.45

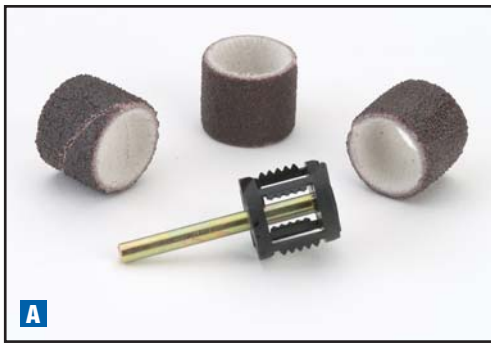


### S - W Premounted Abrasive Rolls – 3/32" Shank

Use for sanding the insides of rings. Each roll consists of aluminum oxide abrasive paper wrapped around a 3/32" shank mandrel, creating many layers. Since paper is secured only at the bottom, user can easily tear off worn portion to expose fresh cutting surface. Unlike regular unmounted rolls, these long-lasting rolls require no trueing. Max. operating speed: 22,000rpm.

	Dia. x H	Grit	Item#	EACH Prices	
				1-9	10+
S.	1/2" x 1 1/8"	240	103-7110	\$1.95	\$1.56
T.		320	103-7112	1.95	1.56
U.		400	103-7114	1.95	1.56
V.		600	103-7116	1.95	1.56
W.		800	103-7118	1.95	1.56





**A, B Propel-Loc Sanding System**

One of the biggest sanding innovations in years! Features a patented locking system that lets you change abrasive bands in seconds—without wrenches or other tools. Consists of a lightweight yet tough polyamide drum roller with gripping teeth and aluminum oxide abrasive bands with cushioned lining.

To mount an abrasive band on the drum roller, simply twist in drive direction (direction that teeth point) while pushing down until seated. To remove an abrasive band from the drum roller, twist in drive direction while pulling up.

Hollowed-out design of drum roller also permits free airflow during operation, which keeps abrasive bands cool to maximize life.

Propel-Loc can be used with any rotary handpiece that accepts 1/8" shank tools. Try our four-piece starter kit, which includes a 1/2" x 1/2" drum roller with 1/8" shank and three abrasive bands (60, 80 and 120 grit). Nine-piece abrasive band assortment (three of each in 60, 80 and 120 grit) sold separately.

**Features:**

- Eliminates time-consuming tool changes
- Ensures secure fit of abrasive bands for consistent, safe sanding
- Permits free airflow for maximum abrasive band life
- Works with any rotary handpiece that accepts 1/8" shank tools

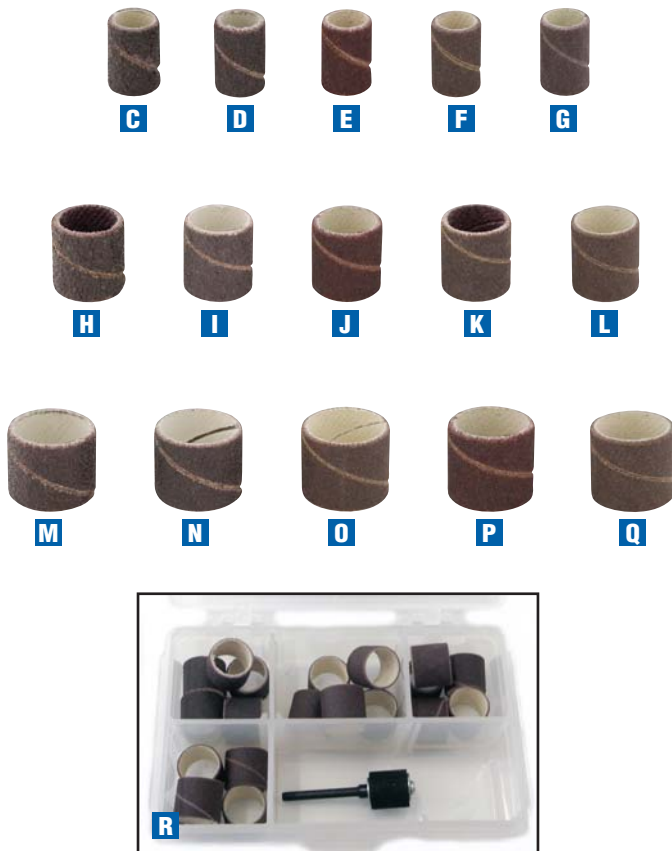
Description	Item#	Each
A. 4-Piece Starter Kit	<b>101-0985</b>	<b>\$5.30</b>
B. 9-Piece Abrasive Band Assortment	<b>101-0986</b>	<b>4.95</b>

**C - R 3M™ Aluminum Oxide Abrasive Bands**

Resin-bonded aluminum oxide abrasive bands. Provide fast, continuous cut and long-lasting performance. Can be used wet or dry. Feature closed-coat construction for fine finish and consistent cut rate. Great for inside rings and curved surfaces. Use with drum arbors, which provide cushioning for smooth cutting. Max. operating speed: 10,000rpm.

Dia x W	Grit	Item#	Pkg. of 100
C. 1/4" x 1/2"	80	<b>101-0905</b>	<b>\$8.25</b>
D.	120	<b>101-0910</b>	<b>8.25</b>
E.	180	<b>101-0915</b>	<b>8.25</b>
F.	240	<b>101-0920</b>	<b>8.25</b>
G.	320	<b>101-0925</b>	<b>8.25</b>
H. 3/8" x 1/2"	80	<b>101-0930</b>	<b>9.25</b>
I.	120	<b>101-0935*</b>	<b>9.25</b>
J.	180	<b>101-0940*</b>	<b>9.25</b>
K.	240	<b>101-0945*</b>	<b>9.25</b>
L.	320	<b>101-0950*</b>	<b>9.25</b>
M. 1/2" x 1/2"	80	<b>101-0955</b>	<b>11.25</b>
N.	120	<b>101-0960**</b>	<b>11.25</b>
O.	180	<b>101-0965**</b>	<b>11.25</b>
P.	240	<b>101-0970**</b>	<b>11.25</b>
Q.	320	<b>101-0975**</b>	<b>11.25</b>

Description	Item#	Each
R. 21-Piece 3/8" x 1/2" Band Kit (5 bands each of grits asterisked above, 3/32" shank drum arbor, plastic case)	<b>101-0976</b>	<b>\$11.25</b>
21-Piece 1/2" x 1/2" Band Kit (5 bands each of grits double asterisked above, 3/32" shank drum arbor, plastic case)	<b>101-0977</b>	<b>12.75</b>

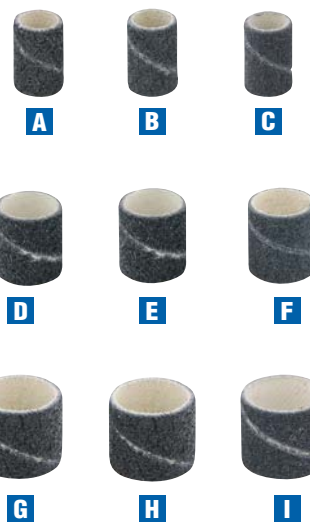




### A - I Abrasive Bands, Glue-Bonded Silicon Carbide

Provides chatter-free operation for grinding, blending, deburring, smoothing, finishing and polishing flat and contoured metal surfaces. Long-lasting, top-quality bands with cloth backing. For soft metals such as gold and silver. Fits on drum arbors (below). Maximum operating speed: 30,000rpm.

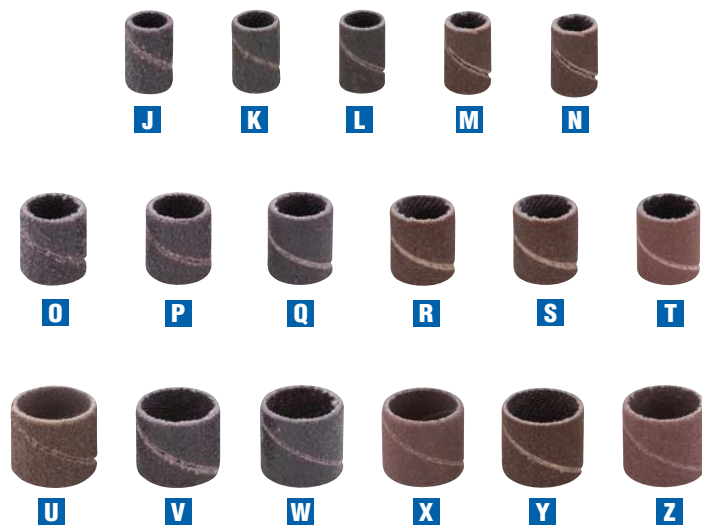
Dia x W	Grit	Item#	Box of 100
A. 1/4" x 1/2"	60	101-0820	\$8.35
B.	80	101-0810	8.35
C.	120	101-0800	8.35
D. 3/8" x 1/2"	60	101-0850	8.60
E.	80	101-0840	8.60
F.	120	101-0830	8.60
G. 1/2" x 1/2"	60	101-0880	9.45
H.	80	101-0870	9.45
I.	120	101-0860	9.45



### J - AA Abrasive Bands, Resin-Bonded Aluminum Oxide

Same as bands (above) except for abrasive grit and resin bond, which gives much longer life. For hard metals, class rings, etc. Fits on Drum Arbors (below). Maximum operating speed: 30,000rpm.

Dia x W	Grit	Item#	Box of 100
J. 1/4" x 1/2"	80	101-0208	\$8.35
K.	120	101-0212	8.35
L.	180	101-0218	8.35
M.	240	101-0224	8.35
N.	320	101-0232	8.35
O. 3/8" x 1/2"	60	101-0306	9.45
P.	80	101-0308	9.45
Q.	120	101-0312	9.45
R.	180	101-0318	9.45
S.	240	101-0324	9.45
T.	320	101-0332	9.45
U. 1/2" x 1/2"	60	101-0406	11.50
V.	80	101-0408	11.50
W.	120	101-0412*	11.50
X.	180	101-0418*	11.50
Y.	240	101-0424*	11.50
Z.	320	101-0432*	11.50



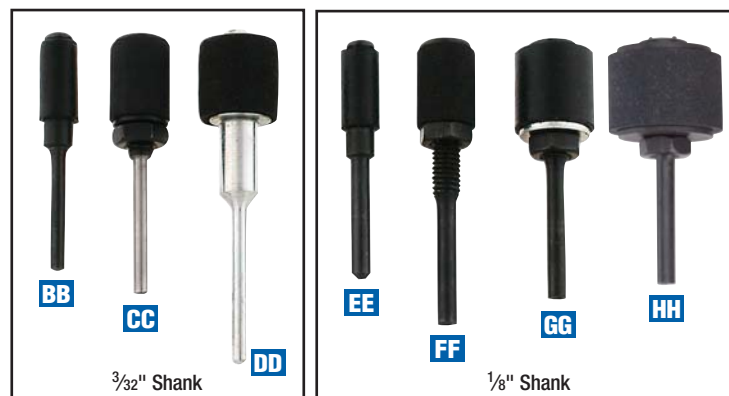
Description	Item#	Each
AA. 44-Piece 1/2" x 1/2" Intro Kit (10 bands each of grits asterisked above, four 3/32" shank drum arbors, plastic case)	101-0440	\$25.95
44-Piece 1/2" x 1/2" Intro Kit (10 bands each of grits asterisked above, four 1/8" shank drum arbors, plastic case)	101-0445	25.95

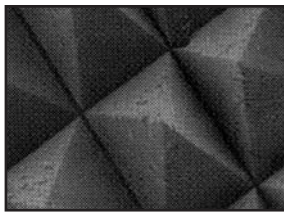


### BB - HH Drum Arbors for Abrasive Bands

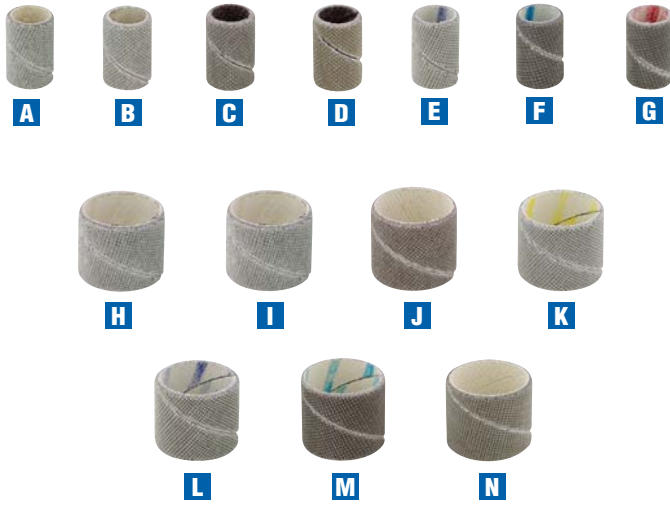
Steel arbor with solid rubber drum which expands to hold Jeweler's Abrasive Bands snugly. Rubber drum provides a cushioned backing so that Abrasive Bands cut smoothly and leave a uniform finish.

Shank	Dia. x W	Item#	EACH Prices		
			1-2	3-11	12+
BB. 3/32"	1/4" x 1/2"	840-1045	\$3.45	\$3.28	\$2.93
CC.	3/8" x 1/2"	840-1035	3.45	3.28	2.93
DD.	1/2" x 1/2"	840-1055	3.45	3.28	2.93
EE. 1/8"	1/4" x 1/2"	840-1050	3.45	3.28	2.93
FF.	3/8" x 1/2"	840-1040	3.45	3.28	2.93
GG.	1/2" x 1/2"	840-1060	3.45	3.28	2.93
HH.	3/4" x 1/2"	840-1030	3.45	3.28	2.93





Close-up of Trizact abrasive



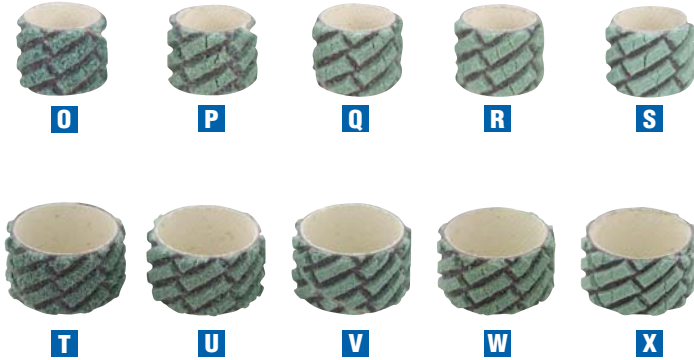
**A - N 3M™ Trizact™ Abrasive Bands**

These abrasive bands consist of unique pyramid-shaped aluminum oxide particles bonded to resilient backing. Because the abrasive particles wear evenly, they maintain their cut rate two to five times longer and produce much more uniform cuts than conventional bands. Sold in packages of 10. Use with drum arbors (see facing page). Max. operating speed: 30,000rpm.

Dia. x H	Grit	Item#	PKG. of 10	
			1-4	5+
A. 1/4" x 1/2"	200	101-1001	\$2.25	\$1.80
B.	220	101-1005	2.25	1.80
C.	280	101-1010	2.25	1.80
D.	400	101-1015	2.25	1.80
E.	600	101-1020	2.25	1.80
F.	1200	101-1025	2.25	1.80
G.	2500	101-1030	2.25	1.80
H. 1/2" x 1/2"	200	101-1035	2.25	1.80
I.	220	101-1040	2.25	1.80
J.	280	101-1045	2.25	1.80
K.	400	101-1050	2.25	1.80
L.	600	101-1055	2.25	1.80
M.	1200	101-1060	2.25	1.80
N.	2500	101-1065	2.25	1.80

**O - X 3M™ Trizact™ CF Abrasive Bands**

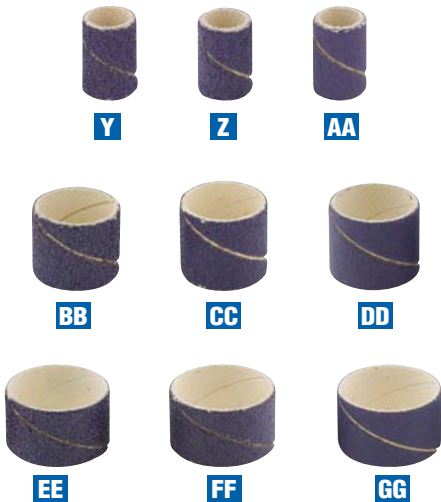
Remove roughness, parting lines, firescale and surface defects and leave a clean, smooth finish in just one step. Deliver consistent cuts and high-quality finishes with unique 3-D macroreplication technology. Designed to cut quickly without loading. Use with drum arbor. Sold in packages of 10. Max. operating speed: 10,000rpm.



Description	Grit/Micron	Item#	PKG. of 10	
			1-4	5+
O. 1/2" x 1/2" Bands	80	101-1080	\$3.65	\$2.56
P.	120	101-1085	3.65	2.56
Q.	180	101-1090	3.65	2.56
R.	240	101-1095	3.65	2.56
S.	400	101-1100	3.65	2.56
T. 3/4" x 1/2" Bands	80	101-1105	5.25	3.68
U.	120	101-1110	5.25	3.68
V.	180	101-1115	5.25	3.68
W.	240	101-1120	5.25	3.68
X.	400	101-1125	5.25	3.68

**Y - GG 3M™ Cubitron™ Ceramic Bands**

Cubitron ceramic aluminum oxide is simply the best, toughest mineral on the market. Cuts like conventional aluminum oxide but lasts twice as long and produces much less dust. Cubitron bands provide a great finish. Use with drum arbor. Sold in packages of 10 or 100. Max. operating speed: 20,000rpm.

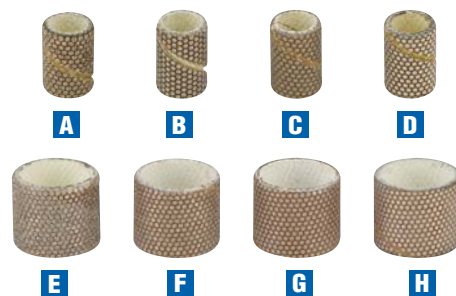


Dia. x H	Grit	Item#	Pkg.	Item#	Pkg.
			of 10		of 100
Y. 1/4" x 1/2"	80	101-1239	\$3.10	101-1240	\$16.95
Z.	120	101-1237	3.10	101-1245	16.95
AA.	220	101-1242	3.10	101-1250	16.95
BB. 1/2" x 1/2"	80	101-1252	4.25	101-1260	23.25
CC.	120	101-1262	4.25	101-1265	23.25
DD.	220	101-1267	4.25	101-1270	23.25
EE. 3/4" x 1/2"	80	101-1277	5.30	101-1280	26.30
FF.	120	101-1282	5.30	101-1285	26.30
GG.	220	101-1287	5.30	101-1290	26.30

### A - I 3M™ Flex Diamond Bands

Incredibly durable, nonloading bands for cleaning, shaping and precision prefinishing. Ideal for inside ring finishing. Coated with micron-graded diamond abrasive in a honeycomb pattern for fast cutting. Can be used wet or dry on both soft and hard metals, including platinum, palladium and white gold, as well as soft stones. Produce optimal finishes with minimal metal removal. Won't gouge or catch. To polish any metal surface to a flawless mirror shine, use Flex Diamond in progressively finer grits, switch to Imperial Film (see below), then finish with rouge. Use with drum arbor. Max. operating speed: 20,000rpm.

Description	Grit	Item#	EACH Prices	
			1-4	5+
A. 1/4" x 1/2" Band	120	101-1310	\$3.50	\$3.15
B.	220	101-1315	3.50	3.15
C.	400	101-1320	3.15	2.84
D.	800	101-1325	3.15	2.84
E. 1/2" x 1/2" Band	120	101-1335*	4.85	4.37
F.	220	101-1340*	4.25	3.83
G.	400	101-1345*	4.10	3.69
H.	800	101-1350*	4.10	3.69
I. 6-Piece 1/2" x 1/2" Diamond Band Set (one each asterisked above plus 60 grit and 3/32" shank drum arbor)		101-1355	23.10	-



### J 3M™ Flex Diamond Disc Set

Includes 25 discs (five each of grits 60, 120, 220, 400 and 800), 3/32" shank mandrel and plastic box. Ideal for finishing flat surfaces, prongs and more while leaving precision edges. Can be used wet or dry on both soft and hard metals, as well as soft stones. Use coarse grits for quick shaping, fine grits for surfacing and prefinishing. Discs measure 7/8" dia. x 1/16" AH. Max. operating speed: 22,000rpm.

Description	Item#	Each
26-Piece Disc Set	101-1360	\$49.85



### K - W 3M™ Imperial™ Micro-Finishing Film Bands

Durable, nonloading bands for producing smooth, uniform finishes. Ideal for inside ring finishing. Feature premium micron-graded aluminum oxide resin-bonded onto high-strength polyester film backing for maximum cutting efficiency. Can be used wet or dry on both soft and hard metals. Use wet with a light touch to create a satin finish. To polish any metal surface to a flawless mirror shine, use Imperial Film following Flex Diamond (see above), then finish with rouge. Color-coded for easy grit identification. Use with drum arbor. Sold in packages of 10. Max. operating speed: 20,000rpm.

Description	Color	Grit/Micron	Item#	PKG. of 10	
				1-4	5+
K. 1/4" x 1/2" Bands	Brown	180/80	101-1140	\$7.10	\$6.39
L.	Black	220/60	101-1145	7.10	6.39
M.	Blue	320/40	101-1150	7.10	6.39
N.	Green	400/30	101-1155	7.10	6.39
O.	Orange	600/15	101-1160	7.10	6.39
P.	Lt. Blue	1200/9	101-1170	7.10	6.39
Q. 1/2" x 1/2" Bands	Brown	180/80	101-1175*	7.95	7.16
R.	Black	220/60	101-1180*	7.95	7.16
S.	Blue	320/40	101-1185	7.95	7.16
T.	Green	400/30	101-1190*	7.95	7.16
U.	Orange	600/15	101-1195*	7.95	7.16
V.	Lt. Blue	1200/9	101-1200*	7.95	7.16
W. 26-Piece 1/2" x 1/2" Imperial Band Set (5 band each of grits asterisked above, 3/32" shank drum arbor, plastic case)			101-1206	19.75	-



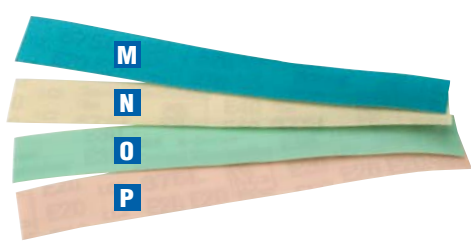
### X 3M™ Imperial™ Micro-Finishing Film Disc Set

Includes 50 discs (10 each of grits 180, 320, 400, 600 and 1200), 3/32" shank mandrel and plastic box. Ideal for following contoured surfaces. Can be used wet or dry on both soft and hard metals to produce smooth, uniform finishes. Color-coded for easy grit identification. Discs measure 7/8" dia. x 1/16" AH. Max. operating speed: 22,000rpm.

Description	Item#	Each
51-Piece Disc Set	101-1400	\$11.30







**A - P 3M™ Diamond Micro Finishing Film**

Choose from bands, discs, PSA strips and Hookit (Velcro-type) strips with precision-graded diamond abrasive bonded onto tough, flexible 5-mil film backing. Can be used wet or dry. Cut faster than aluminum oxide and silicon carbide. Ideal for silver and gold and a great time-saver for harder metals such as platinum and stainless steel. Wonderful for shaping gemstones. Color-coded for easy identification. Use bands with drum arbors, discs with mandrel and strips with sticks (see below). Max. operating speeds: 20,000rpm for bands and 22,000rpm for discs.

Description	Grade	Color	Mesh	Item#	Pkg. of 10
A. ¼" x ½" Bands	E-74	Dk. Aqua	220	<b>101-1376</b>	<b>\$19.30</b>
B.	E-45	Yellow	320	<b>101-1377</b>	<b>18.25</b>
C.	E-30	Lt. Green	400	<b>101-1378</b>	<b>15.45</b>
D.	E-20	Lt. Brown	600	<b>101-1379</b>	<b>14.25</b>
E. ½" x ½" Bands	E-74	Dk. Aqua	220	<b>101-1370</b>	<b>27.25</b>
F.	E-45	Yellow	320	<b>101-1371</b>	<b>26.15</b>
G.	E-30	Lt. Green	400	<b>101-1372</b>	<b>19.30</b>
H.	E-20	Lt. Brown	600	<b>101-1373</b>	<b>18.25</b>
I. ⅞" Discs	E-74	Dk. Aqua	220	<b>101-1382</b>	<b>27.60</b>
J.	E-45	Yellow	320	<b>101-1383</b>	<b>23.40</b>
K.	E-30	Lt. Green	400	<b>101-1384</b>	<b>18.90</b>
L.	E-20	Lt. Brown	600	<b>101-1385</b>	<b>14.25</b>

Description	Grade	Color	Mesh	Item#	Pkg. of 5
M. 1" x 7" PSA Strips	E-74	Dk. Aqua	220	<b>101-1389</b>	<b>\$9.75</b>
N.	E-45	Yellow	320	<b>101-1390</b>	<b>9.75</b>
O.	E-30	Lt. Green	400	<b>101-1391</b>	<b>9.75</b>
P.	E-20	Lt. Brown	600	<b>101-1392</b>	<b>6.50</b>
1" x 7" Hookit Strips	E-74	Dk. Aqua	220	<b>109-8400</b>	<b>9.65</b>
	E-45	Yellow	320	<b>109-8401</b>	<b>9.65</b>
	E-30	Lt. Green	400	<b>109-8402</b>	<b>9.65</b>
	E-20	Lt. Brown	600	<b>109-8403</b>	<b>6.75</b>

Description	Item#	Each
¼" x ½" Drum Arbor, ⅛" shank	<b>840-1050</b>	<b>\$3.45</b>
½" x ½" Drum Arbor, ⅛" shank	<b>840-1060</b>	<b>3.45</b>
Disc Mandrel, ⅛" shank	<b>840-3150</b>	<b>1.35</b>
PSA Sticks (3)	<b>840-4405</b>	<b>6.65</b>
Hookit Sticks (3)	<b>840-4410</b>	<b>9.65</b>

**Q 3M™ Diamond Micro Finishing Film Sets**

Each 21-piece band set includes five bands of each mesh, ⅛" shank drum arbor and plastic box. The 21-piece disc set includes five discs of each mesh, ⅛" shank mandrel and plastic box. The 8-piece PSA strip set includes one PSA strip of each mesh and four PSA sticks. The 6-piece Hookit strip set includes one Hookit strip of each mesh and two Hookit sticks.

Description	Item#	Each
21-Piece ¼" x ½" Band Set	<b>101-1380</b>	<b>\$35.95</b>
21-Piece ½" x ½" Band Set	<b>101-1374</b>	<b>45.95</b>
21-Piece Disc Set	<b>101-1388</b>	<b>41.75</b>
8-Piece PSA Strip Set	<b>101-1395</b>	<b>13.60</b>
6-Piece Hookit Strip Set	<b>109-8405</b>	<b>13.25</b>

**R 3M™ Trizact™ PSA Strips**

Consist of unique pyramid-shaped aluminum oxide abrasive particles bonded onto resilient PSA backing. Maintain cut rate two to five times longer and produce more uniform cuts than conventional abrasive strips. Trizact contains multiple layers which expose fresh sharp mineral during use. Measure ¾"W x 7"L. Use with ¾"W x 12"L plastic stick (see below).

Grit	Item#	Pkg of 10
220	<b>101-1131</b>	<b>\$9.15</b>
400	<b>101-1132</b>	<b>9.15</b>
600	<b>101-1133</b>	<b>9.15</b>
1200	<b>101-1134</b>	<b>9.15</b>

Description	Item#	Each
8-Piece Set (one each of above, 4 sticks)	<b>101-1135</b>	<b>\$15.95</b>
Polishing Stick, ¾" x 12"	<b>101-1130</b>	<b>2.05</b>

### A Grit Stick Sleeves

Sleeves made of aluminum oxide, glue-bonded on durable cloth. Slide over Grit Stick Sleeve Holder (see below) and work right up to corners. Measure 7¼"L x 7⁄8"W.

Grit	Item#	PKG. of 10	
		1-9	10+
120	107-3150	\$10.80	\$9.18
180	107-3350	11.25	9.56
240	107-3450	11.25	9.56
320	107-3550	11.25	9.56



**A**

### B Grit Stick Sleeve Holder

Wooden stick for holding Grit Stick Sleeves (see above). Measures approximately 8"L x 7⁄8"W x 1⁄4" thick.

Description	Item#	EACH Prices	
		3-9	12+*
Grit Stick Sleeve Holder	840-4400	\$ .90	\$ .81

\*Three-piece minimum; please order in multiples of three.



**B**

### C Emery Cloth and Paper Ring Shells

Shells available in both paper and cloth for polishing inside of rings. Cloth backing is long-lasting and more durable than paper, will not tear or snag as easily and is more heat-resistant. Both types fit snugly on wooden Ring Shell Arbor (below). Measure 4" long. Packaged in boxes of 12 shells and supplied in different grits from 4 (coarsest) to 4/0 (finest).

Grit	Cloth Item#	BOX of 12		Paper Item#	BOX of 12	
		1-11	12+		1-11	12+
4	107-9000	\$11.95	\$10.76	107-8660	\$15.95	\$14.36
3	107-8950	11.95	10.76	107-8650	15.95	14.36
2	107-8900	11.95	10.76	107-8600	15.95	14.36
1	107-8850	11.95	10.76	107-8550	15.95	14.36
0	—	—	—	107-8500	15.95	14.36
2/0	107-8750	11.95	10.76	107-8450	15.95	14.36
3/0	107-8700	11.95	10.76	107-8400	15.95	14.36
4/0	107-8675	11.95	10.76	—	—	—



**C**

### D Assorted Ring Shell Sets

Contain six ring shells of different grits and one wooden ring shell arbor.

Description	Item#	Each
Cloth Ring Shell Set	107-9050	\$7.25
Paper Ring Shell Set	107-8300	9.25



**D**

### E Ring Shell Arbor – For Tapered Spindles.

Solid wood, for holding emery paper and Cloth Ring Shells. Measures 4¼" long.

Description	Item#	EACH Prices	
		3-9	12+
Ring Shell Arbor	840-4600	\$1.25	\$1.06

Three-piece minimum; please order in multiples of three.



**E**

### F Emery Hand Buffs

For removing scratches and file marks and for polishing. Fine-grade emery paper carefully mounted on seasoned wood. Corners are sharp and paper will not unravel. Measure 10"L x ¾"W x 1⁄4" thick. Listed in order from coarsest (3 grit) to finest (4/0 grit).

Grit	Item#	EACH Prices	
		3-9	12+
3	107-9850	\$1.21	\$1.03
2	107-9800	1.21	1.03
1	107-9750	1.21	1.03
0	107-9700	1.21	1.03
2/0	107-9650	1.21	1.03
3/0	107-9600	1.21	1.03
4/0	107-9550	1.21	1.03

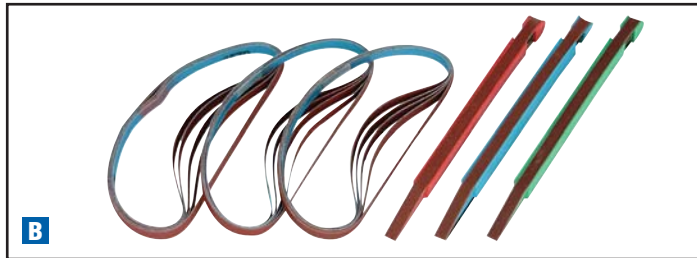
Three-piece minimum; please order in multiples of three.



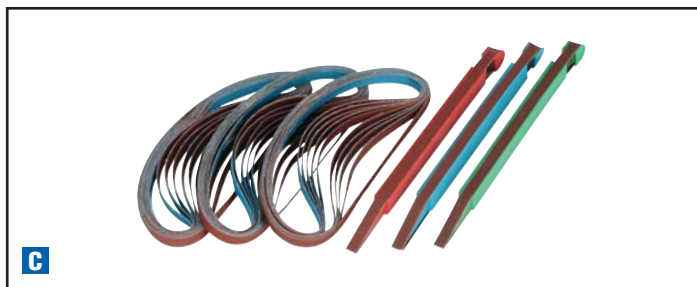
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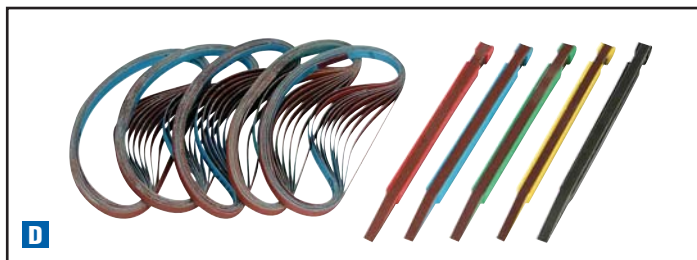
A



B



C



D



E



F

Abrasive strips not included.

## A - E Belt Sticks and Belt Stick Sets

Economical, versatile tools that accommodate 1/4", 1/2" or 3/4" wide abrasive belts, for sanding and smoothing hard-to-reach areas. Made of impact-resistant polypropylene. The tip can be easily reshaped to meet your exact needs. A spring-loaded tensioning device allows the abrasive belt to be rotated so that all areas of the belt can be used and permits quick belt changing. Belt Sticks may be used dry or with water, oil, or solvents. Sticks are supplied in 5 colors to help you quickly distinguish one grit from another. Abrasive belts are resin-bonded, cloth-backed aluminum oxide.

### A Belt Sticks

Width	Color	Grit	Belt Stick w/Belt Item#	Each	Extra Belts Item#	PKG. of 10 1-9	10+
1/4"	Red	120	<b>107-3610</b>	<b>\$1.85</b>	<b>107-3621</b>	<b>\$5.65</b>	<b>\$5.09</b>
	Blue	240	<b>107-3612</b>	<b>1.85</b>	<b>107-3625</b>	<b>5.65</b>	<b>5.09</b>
	Green	320	<b>107-3614</b>	<b>1.85</b>	<b>107-3627</b>	<b>5.65</b>	<b>5.09</b>
	Yellow	400	<b>107-3616</b>	<b>1.85</b>	<b>107-3628</b>	<b>5.65</b>	<b>5.09</b>
	Black	600	<b>107-3618</b>	<b>1.85</b>	<b>107-3629</b>	<b>5.65</b>	<b>5.09</b>
1/2"	Red	120	<b>107-3640</b>	<b>3.25</b>	<b>107-3651</b>	<b>7.85</b>	<b>7.07</b>
	Blue	240	<b>107-3642</b>	<b>3.25</b>	<b>107-3655</b>	<b>7.85</b>	<b>7.07</b>
	Green	320	<b>107-3644</b>	<b>3.25</b>	<b>107-3657</b>	<b>7.85</b>	<b>7.07</b>
3/4"	Red	120	<b>107-3670</b>	<b>4.35</b>	<b>107-3681</b>	<b>10.35</b>	<b>9.32</b>
	Blue	240	<b>107-3672</b>	<b>4.35</b>	<b>107-3685</b>	<b>10.35</b>	<b>9.32</b>
	Green	320	<b>107-3674</b>	<b>4.35</b>	<b>107-3687</b>	<b>10.35</b>	<b>9.32</b>

### B 21-Piece Belt Stick Set – 1/4" Size

Supplied with 3 Belt Sticks: red, blue and green (each with one abrasive belt). 15 additional abrasive belts included (5 of each grit: 120, 240 and 320).

Description	Item#	Each
21-Piece Set	<b>107-3603</b>	<b>\$12.65</b>

### C 36-Piece Belt Stick Set – 1/4" Size

Supplied with 3 Belt Sticks: red, blue and green (each with one abrasive belt). 30 additional abrasive belts included (10 of each grit: 120, 240 and 320).

Description	Item#	Each
36-Piece Set	<b>107-3605</b>	<b>\$19.95</b>

### D 60-Piece Belt Stick Set – 1/4" Size

Supplied with 5 Belt Sticks: one of each color (each with one abrasive belt). 50 additional belts included (10 of each grit: 120, 240, 320, 400 and 600).

Description	Item#	Each
60-Piece Set	<b>107-3606</b>	<b>\$33.25</b>

### E 42-Piece Belt Stick Set – 1/2" & 3/4" Size

Supplied with three 1/2" wide and three 3/4" wide Belt Sticks: red, blue and green (each with one abrasive belt). 30 additional abrasive belts included (5 of both sizes, in grits of 120, 240 and 320).

Description	Item#	Each
42-Piece Set	<b>107-3660</b>	<b>\$57.00</b>

### F Polishing Sticks

Use these tools as you would a file to smooth, debur and polish metal. Hold abrasive cloth and paper in 11" strips. Strips are easy to insert and remove and are held securely. Sanding surfaces measure 5" long, tapering from 3/8" thick to 1/16" at the tip. Made of high-impact, solvent-resistant plastic. Measure 10" long.

Style	Width	Item#	Each
Half-Round	1/2"	<b>813-1952</b>	<b>\$14.95</b>
Half-Round	1"	<b>813-1951</b>	<b>14.95</b>
Flat	1"	<b>813-1950</b>	<b>14.95</b>



**A Wolf™ Belt Sander Kit**

A belt sander makes sanding much faster—and now you don't even have to leave your bench to use one. The Wolf Belt Sander fits any standard flex shaft with a quick-release collar, such as Foredom, Pflingst and Grobet models. Can be clamped to a table or bench and adjusted to a variety of angles. Kit includes sander, clamp and five easy-to-change 1" wide ruby belts in 80, 120, 180, 240 and 320 grits.

Description	Item#	Each
Wolf Belt Sander Kit	<b>265-4010</b>	<b>\$159.95</b>
80 grit 5-Belt Refill Pack	<b>265-4030</b>	<b>14.00</b>
120 grit 5-Belt Refill Pack	<b>265-4031</b>	<b>14.00</b>
180 grit 5-Belt Refill Pack	<b>265-4032</b>	<b>14.00</b>
240 grit 5-Belt Refill Pack	<b>265-4033</b>	<b>14.00</b>
320 grit 5-Belt Refill Pack	<b>265-4034</b>	<b>14.00</b>
5-Belt Refill Pack (one of each grit)	<b>265-4035</b>	<b>14.00</b>



**B 3M™ Trizact Belts for Wolf™ Belt Sander**

Provide unparalleled control over finishing processes. Cut quickly and impart consistent, uniform finishes. Excellent for use on all metals, particularly stainless steel and titanium at slow speeds with light pressure. Measure 1" wide.

Description	Grit	Item#	Pkg. of 5
Trizact Belts	220	<b>265-4041</b>	<b>\$5.60</b>
	400	<b>265-4042</b>	<b>5.60</b>
	600	<b>265-4043</b>	<b>5.60</b>
	1200	<b>265-4044</b>	<b>5.60</b>
20-Piece Kit (five of each grit)		<b>265-4045</b>	<b>21.70</b>



**C 3M™ Diamond Micro-Finish Belts for Wolf™ Belt Sander**

Greatly reduce your finishing time. Can be used wet or dry on all metals and on stone, glass, stained glass, enamel and plastic. To increase cut rate, moisten lightly with a wet sponge as you work. Measure 1" wide.

Description	Mesh	Item#	Each
Diamond Belt	220	<b>265-4036</b>	<b>\$4.85</b>
	320	<b>265-4037</b>	<b>4.85</b>
	400	<b>265-4038</b>	<b>4.85</b>
	600	<b>265-4039</b>	<b>4.85</b>
4-Piece Kit (one of each grit)		<b>265-4040</b>	<b>17.98</b>



**D Wolf™ Sanding Mandrel Set – For use with #30 handpiece.**

Includes three large-diameter mandrels for quicker, smoother sanding of ring insides: ¼" dia. x 1¾"L with ⅛" shank (holds ¾" wide paper); ⅝" dia. x 1⅞"L with ⅛" shank (holds 1" wide paper); ½" dia. x 1⅞"L with ⅝" shank (holds 1" wide paper). Mandrels are precision-made with short, heavy shanks to prevent wobble and bending. Shelf on each mandrel and included bands keep paper in place.

Description	Item#	Set of 3
Wolf Sanding Mandrel Set	<b>840-2305</b>	<b>\$8.95</b>



**E 3M™ Dual-Lock PSA Tape**

The 3M Dual-Lock reclosable fastening system features a network of tiny, microreplicated interlocking polypropylene mushrooms bonded to 3M VHB acrylic foam tape, a high-strength adhesive tape. Allows you to create your own collection of quick-change abrasive tools. Can be removed and refastened hundreds of times. Unlike Velcro, it fully eliminates lateral shift, staying firmly in place until you peel it apart. Sold in 1"W x 15'L rolls.

Description	Item#	Each
Dual-Lock PSA Tape	<b>109-1500</b>	<b>\$12.85</b>



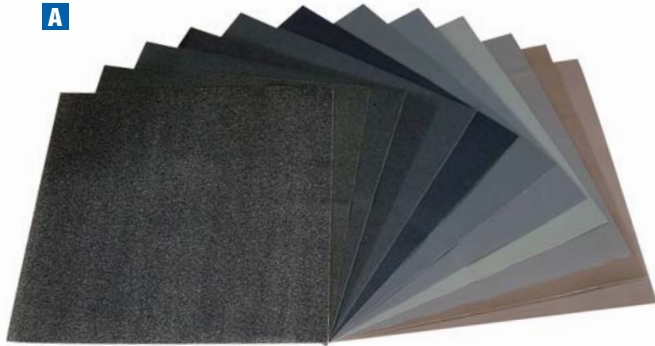
## Micro-Mesh® Abrasives – Wide range of ultra-long-wearing grits.

Micro-Mesh features a unique cushion design that allows its abrasive crystals to recede into its resilient backing and “float” to an even cutting plane. Follows the contours of your work evenly—won’t gouge or create new planes or contours. Perfect for refinishing steel tools and removing light scratches. Restores rolling mill rollers to brand-new condition.

Effective on gold, silver, platinum, even steel! Leaves a smoother, finer finish than expected: 400 grit Micro-Mesh cuts like a 400 grit but leaves an 800–1000 grit finish. Can be used dry or wet. Used dry, it lasts 5–7 times longer than common abrasives. Used with oil or water, it lasts 7–15 times longer. Available in sheets, files and PSA (pressure-sensitive adhesive) discs. The 800 and 1200 grits are aluminum oxide, and all others are silicon carbide.



**A**



**B**



**C**

3/4"

1"

1 1/2"

**D**



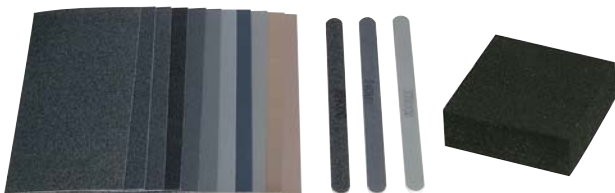
**E**



**F**



**G**



### A - C Micro-Mesh® Sheets, Files, Sticks and PSA Discs

A. SHEET	6" x 12"		12" x 12"	
Grit	Item#	Each	Item#	Each
80	107-3030	\$9.95	107-3050	\$16.50
100	107-3031	9.95	107-3051	16.50
120	107-3032	9.95	107-3052	16.50
150	107-3033	9.95	107-3053	16.50
180	107-3034	9.95	107-3054	16.50
240	107-3035	9.95	107-3055	16.50
320	107-3036	9.95	107-3056	16.50
360	107-3037	9.95	107-3057	16.50
400	107-3038	9.95	107-3058	16.50
600	107-3039	9.95	107-3059	16.50
800	107-3040	9.95	107-3060	16.50
1200	107-3041	9.95	107-3061	16.50

B. FILE (1/2" x 5 3/4", two-sided)	Item#	EACH Prices	
Grits		1-11	12+
100/150	107-3114	\$1.70	\$1.53
180/240	107-3115	1.70	1.53
400/600	107-3116	1.70	1.53

C. DISC	3/4" Dia.	Pkg.	1" Dia.	Pkg.	1 1/2" Dia.	Pkg.
Grit	Item#	of 50	Item#	of 50	Item#	of 50
80	107-3070	\$14.00	107-3090	\$14.00	107-3102	\$16.00
100	107-3071	14.00	107-3091	14.00	107-3103	16.00
120	107-3072	14.00	107-3092	14.00	107-3104	16.00
150	107-3073	14.00	107-3093	14.00	107-3105	16.00
180	107-3074	14.00	107-3094	14.00	107-3106	16.00
240	107-3075	14.00	107-3095	14.00	107-3107	16.00
320	107-3076	14.00	107-3096	14.00	107-3108	16.00
360	107-3077	14.00	107-3097	14.00	107-3109	16.00
400	107-3078	14.00	107-3098	14.00	107-3110	16.00
600	107-3079	14.00	107-3099	14.00	107-3111	16.00
800	107-3080	14.00	107-3100	14.00	107-3112	16.00
1200	107-3081	14.00	107-3101	14.00	107-3113	16.00

### D - F PSA Disc Holders

Description	Item#	EACH Prices	
		1-2	3+
D. 1/8" Shank Holder for 3/4" Discs	840-0030	\$4.35	\$3.62
E. 1/8" Shank Holder for 1" Discs	840-0050	4.50	3.75
F. 1/8" Shank Holder for 1 1/2" Discs	840-0070	5.85	4.87

### G Micro-Mesh® Sampler Package

Includes eleven 3" x 6" Sheets (one of each grit listed above except 80 grit), three Files (one of each listed above) and 3" x 3" Foam Pad.

Description	Item#	Each
Sampler Package	107-3062	\$34.50
Additional Foam Pad	107-3083	2.45

**A Emery Polishing Paper**

Emery grains, a natural composite of corundum and iron oxide are glue-bonded on flexible, lightweight paper. Slow cutting—excellent for dry polishing, lapping and scratch removal. Can be wrapped around a stick to be used as a file or folded to form an edge. Coarsest grit is 3, finest is 4/0. Sheets measure 9" x 13<sup>3</sup>/<sub>4</sub>".

Grit	Item#	EACH Prices		
		1-9	10-99	100+
3	109-1750	\$2.70	\$1.81	\$1.27
2	109-1650	2.70	1.81	1.27
1	109-1550	2.70	1.81	1.27
0	109-1350	2.70	1.81	1.27
2/0	109-1250	3.10	2.08	1.46
3/0	109-1150	3.10	2.08	1.46
4/0	109-1050	3.10	2.08	1.46



**A**

**B 3M™ Emery Cloth Sheets**

Top-quality emery cloth sheets for fast cutting and smooth finishing. Recommended for light cleanup of metal. Produce a beautiful uniform finish ready for polishing. Use wet or dry. Measure 9" x 11".

Description	Item#	EACH Prices		
		1-9	10-49	50+
Coarse	109-1805	\$1.45	\$1.38	\$1.31
Medium	109-1810	1.45	1.38	1.31
Fine	109-1815	1.45	1.38	1.31



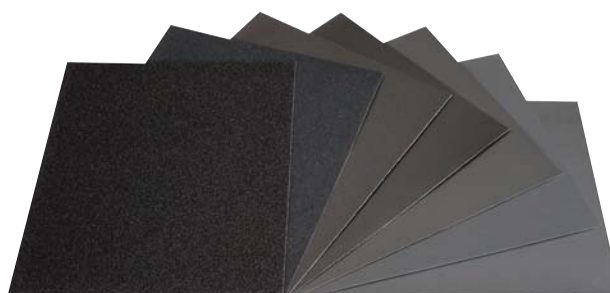
**B**

**C Waterproof Paper**

Silicon carbide abrasive with improved resin bond for exceptional finishes in both wet and dry applications and improved waterproof paper backing for better flexibility and wet-curl resistance. Yield long life in rough, wet applications. Measure 9" x 11".

Grit	Item#	EACH Prices	
		5-45	50+
80	109-7000	\$1.71	\$1.37
120	109-7010	1.51	1.13
220	109-7015	1.10	.83
320	109-7025	1.10	.83
400	109-7035	1.10	.83
600	109-7045	1.10	.83
1200P (slightly finer than 600)	109-7055	2.15	1.61

Five-piece minimum; please order in multiples of five.

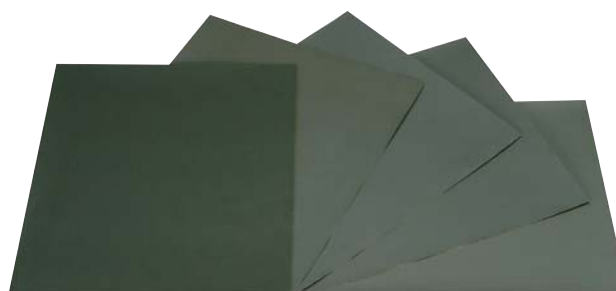


**C**

**D 3M™ Wetordry™ Sheets**

Provide finer finishes than traditional emery papers. Backing and coating offer enhanced cut rates, improved finishes and better durability. Coarser grits come on heavyweight paper (431Q), and finer grits come on lightweight and flexible papers (413Q and 401Q, respectively). All silicon carbide. Measure 9" x 11".

Grit	Paper Type	Item#	EACH Prices		
			1-9	10-99	100+
80	431Q	109-8185	\$1.25	\$1.13	\$1.06
120	431Q	109-8187	.97	.87	.82
180	431Q	109-8189	.87	.78	.74
220	413Q	109-8190	.87	.78	.74
280	413Q	109-8197	.85	.77	.72
320	413Q	109-8193	.87	.78	.74
400	413Q	109-8195	.87	.78	.74
600	413Q	109-8196	.95	.86	.81
1000	401Q	109-8200	1.30	1.17	1.11
1500	401Q	109-8202	1.30	1.17	1.11
2000	401Q	109-8203	1.30	1.17	1.11
2500	401Q	109-8204	1.30	1.17	1.11



**D**





**A**

**A 3M™ Imperial™ Micro-Finishing Film**

Precision micron-graded aluminum oxide resin-bonded to a polyester film backing. For close tolerance finishing on metals and plastic surfaces. Nonloading for longer life and greater efficiency. Measure 8½" x 11".

Color	Grit	Item#	EACH Prices		
			1-9	10-99	100+
Brown	180	<b>109-8100</b>	<b>\$2.29</b>	<b>\$2.06</b>	<b>\$1.83</b>
Black	220	<b>109-8105</b>	<b>2.29</b>	<b>2.06</b>	<b>1.83</b>
Blue	320	<b>109-8110</b>	<b>2.29</b>	<b>2.06</b>	<b>1.83</b>
Green	400	<b>109-8115</b>	<b>2.29</b>	<b>2.06</b>	<b>1.83</b>
Red	500	<b>109-8125</b>	<b>2.29</b>	<b>2.06</b>	<b>1.83</b>
Orange	600	<b>109-8120</b>	<b>2.29</b>	<b>2.06</b>	<b>1.83</b>
Light Blue	1200	<b>109-8130</b>	<b>2.29</b>	<b>2.06</b>	<b>1.83</b>
7-Piece Set (one each of above)		<b>109-8135</b>	<b>14.10</b>	-	-



**B**

**B 3M™ Lapping Films**

Popular prefinishing films for platinum. Feature precision micron-graded premium abrasive resin-bonded to film backing for reliable, repeatable performance. Impart fine, consistent finishes on both soft and hard metals. Resist water, oil and most solvents. Can be used wet or dry alone or cut and wrapped around a stick or file for fine work. Measure 8½" x 11". Use from 12 micron (coarse) to 3 micron (fine) before compounds.

Color	Grade/Grit	Item#	EACH Prices		
			1-9	10-49	50+
Yellow	12 micron/C	<b>109-8353</b>	<b>\$1.36</b>	<b>\$1.22</b>	<b>\$1.09</b>
Brown	5 micron/M	<b>109-8352</b>	<b>1.36</b>	<b>1.22</b>	<b>1.09</b>
Pink	3 micron/F	<b>109-8351</b>	<b>1.36</b>	<b>1.22</b>	<b>1.09</b>



**C**

**C 3M™ Wetordry™ Polishing Paper**

Super-flexible fibrous paper backing allows easy polishing of flat and contoured surfaces of softer materials. Precision micron-graded silicon carbide (481Q) and aluminum oxide (281Q) papers provide a uniform finish. Use wet or dry on precious metals, aluminum, plastic, polyurethane, solid surface composites, fiberglass and wood. Measure 8½" x 11".

Color	Grade/Grit	Paper Type	Item#	EACH Prices		
				1-9	10-99	100+
Green	30 micron/400	481Q	<b>109-8001</b>	<b>\$1.00</b>	<b>\$.90</b>	<b>\$.80</b>
Gray	15 micron/600	481Q	<b>109-8005</b>	<b>1.00</b>	<b>.90</b>	<b>.80</b>
Blue	9 micron/1200	281Q	<b>109-8010</b>	<b>1.00</b>	<b>.90</b>	<b>.80</b>
Pink	3 micron/4000	281Q	<b>109-8015</b>	<b>1.00</b>	<b>.90</b>	<b>.80</b>
Lt. Blue	2 micron/6000	281Q	<b>109-8020</b>	<b>1.00</b>	<b>.90</b>	<b>.80</b>
Mint	1 micron/8000	281Q	<b>109-8025</b>	<b>1.00</b>	<b>.90</b>	<b>.80</b>
6-Piece Set (one each of above)			<b>109-8026</b>	<b>5.60</b>	-	-



**D**

**D Durite Abrasive Paper**

Fast-cutting silicon carbide. Excellent wear, nonloading. For intermediate and final dry sanding. Lightweight paper backing easily conforms to all shapes and angles. Sheets measure 9" x 11".

Grit	Item#	EACH Prices	
		5-95	100+
120	<b>109-6050</b>	<b>\$.98</b>	<b>\$.69</b>
180	<b>109-6100</b>	<b>.98</b>	<b>.69</b>
220	<b>109-6150</b>	<b>.98</b>	<b>.69</b>
280	<b>109-6250</b>	<b>.98</b>	<b>.69</b>
320	<b>109-6300</b>	<b>.98</b>	<b>.69</b>

*Five-piece minimum; please order in multiples of five.*

**A 3M™ Platinum Fre-Cut™ Abrasive Paper**

Use for prepolishing platinum. Sheets measure 9" x 11".

Grit	Item#	EACH Prices		
		1-4	5-9	10+
360	<b>109-8040</b>	<b>\$.61</b>	<b>\$.58</b>	<b>\$.54</b>
500	<b>109-8050</b>	<b>.61</b>	<b>.58</b>	<b>.54</b>



**A**

**B 3M™ Abrasive Sheets**

Sandpaper sheets ideal for dry sanding gold, silver and platinum. Feature silicon carbide abrasive for fast, satin-smooth cutting and A-weight paper backing for excellent flexibility and work surface conformity. Treated with a stearate coating that resists clogging and extends abrasive life. Measure 9" x 11".

Grit	Item#	EACH Prices		
		1-9	10-99	100+
120	<b>109-8301</b>	<b>\$.57</b>	<b>\$.54</b>	<b>\$.51</b>
180	<b>109-8302</b>	<b>.57</b>	<b>.54</b>	<b>.51</b>
240	<b>109-8303</b>	<b>.57</b>	<b>.54</b>	<b>.51</b>
320	<b>109-8304</b>	<b>.57</b>	<b>.54</b>	<b>.51</b>
400	<b>109-8305</b>	<b>.57</b>	<b>.54</b>	<b>.51</b>



**B**

**C - E Lightning Metalite Cloth**

Aluminum oxide bonded onto lightweight, flexible cloth backing. Ideal for cleaning or polishing metal surfaces. Imparts a fine finish. Use 1" roll with Polishing Sticks (see p. 40), 1½" roll with Cone-Loc Drum Sander (see below). For Parallel Split Ring Arbor, see below.

Sheets: 9" x 11"		EACH Prices	
C. Grit	Item#	1-49	50+
180	<b>109-3650</b>	<b>\$1.60</b>	<b>\$1.28</b>
240	<b>109-3750</b>	<b>1.60</b>	<b>1.28</b>
320	<b>109-3850</b>	<b>1.60</b>	<b>1.28</b>
400	<b>109-3950</b>	<b>1.60</b>	<b>1.28</b>



**C**

Rolls: 1"W x 50 yards		Each
D. Grit	Item#	
100	<b>109-5150</b>	<b>\$36.90</b>
120	<b>109-5200</b>	<b>36.90</b>
180	<b>109-5300</b>	<b>36.90</b>
240	<b>109-5350</b>	<b>36.90</b>
320	<b>109-5400</b>	<b>36.90</b>
400	<b>109-5450</b>	<b>36.90</b>
600	<b>109-5510</b>	<b>36.90</b>



**D**

**E**

Rolls: 1½"W x 50 yards		Each
E. Grit	Item#	
80	<b>109-5525</b>	<b>\$53.45</b>
120	<b>109-5545</b>	<b>53.45</b>
180	<b>109-5550</b>	<b>53.45</b>
240	<b>109-5600</b>	<b>53.45</b>
320	<b>109-5650</b>	<b>53.45</b>

**F Cone-Loc Drum Sander**

Excellent for deburring and sprue removal. Eliminates the need for hand filing. Consists of heavy-gauge aluminum casting covered by ½" thick solid rubber pad to conform to work without creating flats. Measures 6" dia. x 1½" thick x ½" AH. Max. operating speed: 4,000rpm. See p. 323 for arbors.

Description	Item#	Each
Cone-Loc Drum Sander	<b>840-1256</b>	<b>\$150.00</b>



**F**

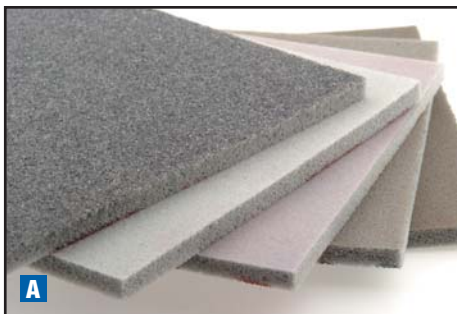
**G Parallel Split Ring Arbor – For Tapered Spindles.**

Wood arbor with slot to hold paper or cloth so it can be wound around to desired thickness. Measures 4" long.

Description	Item#	EACH Prices	
		3-9	12+
Parallel Split Ring Arbor	<b>840-4650</b>	<b>\$1.75</b>	<b>\$1.49</b>



**G**



**A 3M™ Sponge Sanding Pads**

Flexible, palm-sized Sponge Sanding Pads from 3M conform to almost any surface contour. Made of long-lasting, closed-cell rubber with micron-graded aluminum oxide abrasive grains, these pads will not gouge the work surface. Can be used wet or dry for a variety of applications as well as folded or trimmed to fit into detailed areas. Ideal for use on all precious metals. Measure 4½" x 5½".

Description	Item#	EACH Prices		
		1-4	5-19	20+
Medium Pad	<b>108-7020</b>	<b>\$1.20</b>	<b>\$1.10</b>	<b>\$1.05</b>
Fine Pad	<b>108-7015</b>	<b>1.20</b>	<b>1.10</b>	<b>1.05</b>
Super-Fine Pad	<b>108-7010</b>	<b>1.20</b>	<b>1.10</b>	<b>1.05</b>
Ultra-Fine Pad	<b>108-7005</b>	<b>2.18</b>	<b>2.00</b>	<b>1.91</b>
Micro-Fine Pad	<b>108-7000</b>	<b>2.18</b>	<b>2.00</b>	<b>1.91</b>
5-Piece Set	<b>108-7025</b>	<b>7.55</b>	<b>-</b>	<b>-</b>

**B 3M™ Sof-Lex™ Strips**

Feature micro-graded abrasive on flexible, durable film backing. Coated on one side with one abrasive on top half and another on bottom half, divided by a gap. Perform two finishing steps each. Ideal for cleaning tight areas. Require no compounds. Can be used wet or dry in a sawframe or by hand. Measure 8" long. Available in coarse/medium (C/M) and fine/super-fine (F/SF).

Description	Width	Qty.	Item#	Each
C/M Strips	5/64"	10	<b>145-2530</b>	<b>\$4.39</b>
	5/64"	100	<b>145-2525</b>	<b>36.75</b>
	5/32"	10	<b>145-2520</b>	<b>2.95</b>
F/SF Strips	5/32"	150	<b>145-2515</b>	<b>36.75</b>
	5/32"	10	<b>145-2510</b>	<b>3.69</b>
	5/32"	120	<b>145-2505</b>	<b>36.75</b>



**C - G Mitchell's Abrasive Tapes and Cords**

Tapes and cords impregnated with aluminum oxide, silicon carbide or Crocus (ultra-fine iron oxide). Use the first two for cutting and the last one for very fine finishing of metals without scratching. Effective on hard and soft metals, ceramic, plastic and wood.

Great for cutting and polishing wire settings and small heads that are inaccessible to wheels and points. Can be used by hand and in small sawframes, hand drills and power tools. To mount in any tool, simply loop, insert into the chuck and tighten securely. Won't tear or fray and can be cut to size. Supplied in 50' spool dispensers.

Tape	Style	W x Thick	Grit	Item#	50' Spool	
C. AIO	56	.093" x .037"	180	<b>102-1095</b>	<b>\$10.75</b>	
	57	.125" x .037"	180	<b>102-1100</b>	<b>10.75</b>	
D. Crocus	56-C	.093" x .030"	Ultra-fine	<b>102-1115</b>	<b>12.60</b>	
Cord	Style	Dia.	Grit	Item#	50' Spool	
E. AIO	49	.082"	120	<b>102-1000</b>	<b>\$18.15</b>	
	50	.070"	180	<b>102-1005</b>	<b>18.15</b>	
	51	.055"	120	<b>102-1010</b>	<b>10.40</b>	
	53	.040"	180	<b>102-1020</b>	<b>10.75</b>	
	54	.030"	200	<b>102-1025</b>	<b>10.75</b>	
F. SiC	54-H	.025"	200	<b>102-1030</b>	<b>10.75</b>	
	55	.018"	200	<b>102-1035</b>	<b>11.85</b>	
	60	.015"	200	<b>102-1040</b>	<b>11.85</b>	
	66	.012"	280	<b>102-1045</b>	<b>28.65</b>	
	G. Crocus	52-C	.055"	Ultra-fine	<b>102-1060</b>	<b>12.40</b>
		53-C	.040"	Ultra-fine	<b>102-1065</b>	<b>12.40</b>
54-C		.030"	Ultra-fine	<b>102-1070</b>	<b>12.40</b>	
54-HC		.025"	Ultra-fine	<b>102-1075</b>	<b>13.70</b>	
55-C		.018"	Ultra-fine	<b>102-1080</b>	<b>13.70</b>	
60-C		.015"	Ultra-fine	<b>102-1085</b>	<b>13.70</b>	
	66-C	.012"	Ultra-fine	<b>102-1090</b>	<b>28.65</b>	



### A Simichrome

A paste polish which produces a beautiful high finish with very little effort. Simply rub on with a soft cloth and rub off to obtain a brilliant luster. Makes chain polishing easy!

Removes tarnish, dirt and oils, and generally renews polished metal surfaces. It leaves a protective film which retards oxidation. Simichrome works well on gold, silver, brass, bronze, chromium, aluminum and countless other similar metals. It's an excellent polish for renewing the finish on antique jewelry. Simichrome is also used to charge dry polishing medias (such as crushed cob) for tumbling. Color: pink.

Description	Item#	Each
50g Tube	218-2050	\$10.85
50g Tubes, Case of 24	218-2100	194.95
250g Tin	218-2150	31.75
1,000g Tin	218-2200	77.85



A

### B 3M™ Aluminum Restorer and Polish

Formulated to remove oxidation and stains and restore a lustrous shine to bare aluminum surfaces. Also removes heavy oxidation and restores shine to most anodized aluminum surfaces. Test on small inconspicuous anodized area to determine suitability. Use sparingly—a little goes a long way. Sold in 18 oz. jars.

Description	Item#	Each
Aluminum Restorer and Polish, 18 oz. Jar	820-0605	\$18.65



B

### C Blue Magic Metal Polish

Completely safe, nonabrasive paste judged by consumers to be the best metal polish available. Can be used on gold, silver, sterling, chrome, aluminum, stainless steel, brass, copper, plastic and fiberglass. Even works well on coated and lacquered metals. Can also be used to charge dry tumbling medias such as walnut shells or crushed cob for a brighter shine on your tumbled jewelry. Leaves an invisible sealant that bonds to the work surface to impede oxidation and tarnishing. Apply with a soft cloth or brush.

Description	Item#	Each
7 oz. Jar	218-2040	\$12.50
50g Tube	218-2030	4.50
50g Tubes, Box of 24	218-2035	68.99



C

### D 3M™ Stainless Steel Cleaner and Polish

An easy-to-apply high-gloss spray cleaner and polish ideal for stainless steel, chrome, laminated plastic and aluminum surfaces. Wipes clean with no streaks or buildup, resists fingerprints and masks surface blemishes. Has pleasant lime fragrance. Contains no petroleum distillates. Sold in 21 oz. aerosol cans.

Description	Item#	Each
Stainless Steel Cleaner and Polish, 21 oz. Can	820-0600	\$10.99



D

### E, F 3M™ Tarni-Shield™ Strips

Designed to inhibit corrosive gases from tarnishing or staining metal items in transit or storage. Works on silver, copper, gold, brass and solder by absorbing and trapping atmospheric pollutants such as hydrogen sulfide, sulfur dioxide and acetic acid. Easy to use: just add a strip to the container. Available in two sizes: small and large. Small strips protect little containers. Sold in packages of 3,000. Large strips protect big containers (one large strip protects up to 300 cu. in. of container space). Sold in packages of 10 and 1,000.

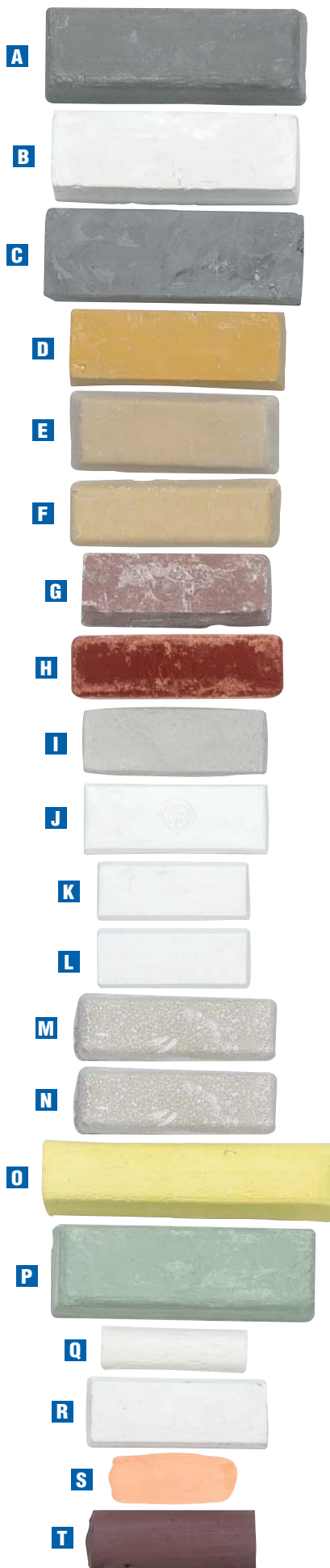
Description	Size	Item#	Each
E. Small Strips, pkg. of 3,000	1" x 1"	813-1790	\$110.00
F. Large Strips, pkg. of 10	2" x 5"	813-1780	2.95
Large Strips, pkg. of 1,000	2" x 5"	813-1785	210.00



E



F



### A - T Polishing Compounds

Listed in approximate order from the most to least aggressive. Many polishing compounds contain respirable silica or other hazardous ingredients. Be sure to use a dust collector to pull polishing dust away from your breathing zone and a properly fitted respirator rated for the specific dust or chemicals with which you are working.

Type	Description and Application	Approx. Weight	Item#	EACH Prices	
				1-9	10+
A. Gray Star	Aggressive, dry compound for removing deep scratches, yet leaves a uniform finish. Excellent for brass, gold, silver and stainless steel.	1 lb. 2.2 lbs.	<b>215-0915</b> <b>215-0910</b>	<b>\$3.50</b> <b>6.95</b>	<b>\$3.15</b> <b>6.26</b>
B. Chrome	Produces mirror finish on hard metals such as chrome, nickel steel and stainless steel. Medium cutting compound for soft metals.	2 lbs.	<b>215-1550</b>	<b>10.25</b>	<b>8.20</b>
C. Stainless Steel	For final finish on stainless steel. Light cutting action on soft metals. Contains a 240 grit abrasive but acts like a 320-400 grit compound.	2 lbs.	<b>215-0500</b>	<b>9.95</b>	<b>7.96</b>
D. Bobbing	For fast cutting on soft metals such as gold, silver, aluminum and brass. Sticks well to laps and brushes. Often used in place of Tripoli.	1 lb.	<b>215-1450</b>	<b>4.80</b>	<b>3.84</b>
E. Manhattan Bobbing	Specially formulated for use on sterling silver, but also works on gold and brass to remove scratches & pits and to prepare for buffing with tripoli and rouge.	1 1/4 lbs.	<b>215-0425</b>	<b>2.99</b>	<b>2.54</b>
F. NYC Tripoli	Fast cutting on soft metals such as brass, aluminum, gold and silver. Sticks well to laps and brushes. Used in place of Tripoli.	1 lb.	<b>215-0475</b>	<b>1.95</b>	<b>1.66</b>
G. Tripoli	For cutting down and removing scratches from soft metals such as gold, silver, aluminum and brass. Leaves surface scratch-free for final polish.	1 lb.	<b>215-1750</b>	<b>1.95</b>	<b>1.56</b>
H. Platinum Tripoli	For cutting down and removing scratches from hard metals such as platinum, chrome and stainless steel. Leaves some degree of finish.	1 lb.	<b>215-0450</b>	<b>6.95</b>	<b>5.91</b>
I. Gray 800	Light cutting compound for removing surface roughness and scratches from platinum.	7/8 lb.	<b>215-0045</b>	<b>16.49</b>	<b>14.02</b>
J. White 1500	Medium cutting compound for platinum. Removes light scratches and prepares surface for final polishing.	7/8 lb.	<b>215-0049</b>	<b>33.99</b>	<b>28.89</b>
K. White 4000	Fine cutting compound for platinum. Removes light haze and scratches.	1/2 lb.	<b>215-0042</b>	<b>32.50</b>	<b>27.63</b>
L. White 6000	Fine cut-and-color compound for platinum. Removes faint scratches and leaves a soft, bright finish.	1/2 lb.	<b>215-0043</b>	<b>35.70</b>	<b>30.35</b>
M. 4X White Diamond	A medium cut-and-color compound for soft metals such as gold, silver, and brass.	3/4 lb.	<b>215-1710</b>	<b>1.95</b>	<b>1.56</b>
N. 3X White Diamond	For soft metals such as gold, silver and brass. Less aggressive than 4X White Diamond compound.	1 lb.	<b>215-1712</b>	<b>1.95</b>	<b>1.56</b>
O. Britecut Yellow	A medium cut-and-color compound that leaves a bright finish on gold and yellow metals.	2 1/2 lbs.	<b>215-0100</b>	<b>9.95</b>	<b>7.96</b>
P. Turquoise Rouge	Produces the final finish on precious metals and soft, semiprecious stones such as turquoise. Useful when buffing turquoises set in silver.	2 lbs.	<b>215-0151</b>	<b>6.75</b>	<b>5.74</b>
Q. White Rouge	High luster on platinum, white gold, chrome and stainless steel.	1/4 lb.	<b>215-0250</b>	<b>2.25</b>	<b>1.91</b>
R. White 8000	Polishing compound for ultra-white high shine on platinum.	1/2 lb.	<b>215-0046</b>	<b>37.99</b>	<b>32.29</b>
S. Orange Luster	Formulated with low oil content to increase polishing power. Works fast and delivers the whitest, brightest shine on platinum	150g	<b>215-0037</b>	<b>14.50</b>	<b>12.33</b>
T. Red Rouge	Imparts extremely high luster on soft metals. The industry standard for producing the final finish. For gold, silver, brass and all nonferrous metals.	1/4 lb. 1/2 lb. 1 lb.	<b>215-1050</b> <b>215-1100</b> <b>215-1150</b>	<b>1.95</b> <b>3.80</b> <b>6.25</b>	<b>1.56</b> <b>3.04</b> <b>5.00</b>

**A - H Polishing Compounds, continued**

Type	Description and Application	Approx. Weight	Item#	EACH Prices	
				1-9	10+
A. Blue Rouge	Clean working compound designed to produce high luster on gold, silver, brass, chrome and all nonferrous metals.	1 lb.	215-1702	\$2.95	\$2.36
B. Green Rouge	Produces an extremely high luster on chrome, stainless steel, silver, platinum, white gold and rhodium.	¼ lb.	215-0800	4.45	3.56
C. Yellow Glow	For ultra-bright final finish on yellow gold. A premium quality rouge that works well on most metals except silver. Has a very light cutting action yet leaves a high luster finish. Less greasy and cleaner to use than rouges. 14 oz. size comes in peel-away tube.	12 oz.	215-0050	4.50	3.83
		14 oz.	215-0054	4.50	3.60
D. Lustre Bar	Produces very high luster finish on all metals as well as plastics. Will remove light scratches, yet leaves a bright mirror finish. Comes in peel-away tube.	1 lb.	215-1600	6.25	5.00
E. Platinum Blue	For cutting and polishing. This specially formulated compound imparts the highest possible finish on platinum. Great for titanium and steel as well.	¼ lb.	215-1785	18.95	16.11
F. Two-Step Platinum	Reduce the polishing steps associated with platinum. Adhere very well to buffs. Yellow bar (Step 1) removes scratches. Green bar (Step 2) imparts mirror finish.	13.4 oz.	215-0038	14.95	12.71
		13.4 oz.	215-0039	14.95	12.71
G. C-Clear Watch Crystal	Remove scuffs and scratches to make old plastic watch crystals look new again.	¼ lb.	215-0041	5.45	-
H. Platinum Sample Set	Four different compounds for platinum: Gray 800, White 1500, White 8000 and Orange Luster.	¾ lb.	215-0036	25.00	-



**I - Q Water-Soluble Polishing Compounds**

Type	Description and Application	Approx. Weight	Item#	EACH Prices	
				1-9	10+
I. Gray/Green	For fast metal removal; more aggressive than Gray Star. For cutting white metals, gold, silver and brass.	2 lbs.	215-1752	\$3.75	\$3.00
J. Gray Star	Aggressive dry compound for removing deep scratches, yet leaves a uniform finish. For brass, gold, silver and stainless steel.	1 lb.	215-1740	3.90	3.12
K. Tripoli	Standard tripoli in a water soluble form. For cutting down and removing scratches from soft metals such as gold, silver, aluminum and brass. Leaves surface scratch-free and ready for final polish.	1 lb.	215-1750	1.95	1.56
L. Yellow	Produces a very high, final finish on white metal, gold, silver and brass.	2 lbs.	215-1751	6.75	5.40
M. Green Rouge	Produces an extremely high luster on chrome, stainless steel, silver, platinum, white gold and rhodium.	1 lb.	215-1730	3.90	3.12
N. Red Rouge	For the highest, brightest finish on yellow gold. Produces a premium grade finish on all precious metals, especially when teamed with our Chamois Buffs (see p. 80).	¼ lb.	215-1715	2.45	1.96
		1 lb.	215-1720	6.60	5.28
O. Black Rouge	Produces a deep, dark luster on gold, pewter and other precious metals and is especially effective on silver.	1 lb.	215-1701	4.15	3.32
P. Turquoise Rouge	For imparting the final finish on precious metals and soft, semiprecious stones. Ideal for buffing jewelry such as silver set with turquoise.	1 lb.	215-0152	3.80	3.23
Q. Sample Set	Four different compounds: Gray Star, Tripoli, Green Rouge and Red Rouge (four 1 lb. bars).	4 lbs.	215-1760	11.75	-







**A - E Veggie Compounds – Vegetable oil-based!**

These vegetable oil-based compounds offer several advantages over standard compounds, including faster loading time, easier cleanup and less dust. Completely free of animal by-products and also kosher. Available in ¼ lb. tubes and 1 lb. bars.

Type	Description and Application	Approx. Weight	Item#	EACH Prices	
				1-9	10+
A. Gray Star	Aggressive compound for removing scratches. Excellent on gold, silver, brass and stainless steel.	¼ lb. tube 1 lb.	<b>215-1806</b> <b>215-1807</b>	<b>\$2.85</b>	<b>\$2.42</b>
				<b>3.55</b>	<b>3.02</b>
B. Premium Brown Tripoli	Fast cut and color compound. Removes scratches and leaves a matte surface ready for final polishing. Good on aluminum, brass, copper, nickel, silver gold and platinum.	¼ lb. tube 1 lb.	<b>215-1808</b> <b>215-1809</b>	<b>2.35</b>	<b>2.00</b>
				<b>3.10</b>	<b>2.64</b>
C. White Ice	General-purpose medium cut and color compound for use on soft metals such as gold, silver and brass. Leaves surfaces scratch-free for final buffing.	¼ lb. tube 1 lb.	<b>215-1800</b> <b>215-1801</b>	<b>3.06</b>	<b>2.60</b>
				<b>3.30</b>	<b>2.81</b>
D. Premium Red Rouge	Imparts high color on soft metals. Ideal for final finishing of precious metals such as gold and silver, as well as brass and bronze.	¼ lb. tube 1 lb.	<b>215-1804</b> <b>215-1805</b>	<b>3.95</b>	<b>3.36</b>
				<b>8.45</b>	<b>7.18</b>
E. Premium Green Rouge	Contains more Chromium than any other green rouge on the market for the deepest, brightest shine possible on silver and white gold.	¼ lb. tube 1 lb.	<b>215-1802</b> <b>215-1803</b>	<b>8.95</b>	<b>7.61</b>
				<b>19.75</b>	<b>16.79</b>

Please ask for quotes on larger quantities.



**F - L Dialux Polishing Compounds**

Premium polishing compounds imported from Europe. Made from select abrasive grades, uniformly blended and manufactured under the strictest quality controls. Adhere exceptionally well to buffs, brushes and felts, so very little is needed, which helps reduce cleanup and save time. Individually packaged in cardboard boxes for cleaner handling. Each bar measures 3 5/8"L x 1 1/8"W x 1"H and weighs approx. 4 oz.

Type	Description and Application	Approx. Weight	Item#	EACH Prices	
				1-9	10+
F. Dialux Bleu (Blue)	All-purpose compound for all types of metal	4 oz.	<b>215-1771</b>	<b>\$4.10</b>	<b>\$3.69</b>
G. Dialux Jaune (Yellow)	For bright high polish of soft metals such as brass, bronze and copper.	4 oz.	<b>215-1772</b>	<b>4.10</b>	<b>3.69</b>
H. Dialux Blanc (White)	For bright polishing of silver.	4 oz.	<b>215-1773</b>	<b>4.10</b>	<b>3.69</b>
I. Dialux Gris (Gray)	Recommended for fine polishing of stainless steel.	4 oz.	<b>215-1774</b>	<b>4.10</b>	<b>3.69</b>
J. Dialux Rouge (Red)	The brightest shine for yellow gold. Also produces a brilliant shine on silver.	4 oz.	<b>215-1775</b>	<b>4.90</b>	<b>4.41</b>
K. Dialux Vert (Green)	Recommended for bright polishing of hard alloys such as platinum, white gold, chrome, chrome cobalt and stainless steel.	4 oz.	<b>215-1776</b>	<b>5.80</b>	<b>5.22</b>
L. Dialux Noir (Black)	For final polishing of silver.	4 oz.	<b>215-1777</b>	<b>5.70</b>	<b>5.13</b>



**M Pumice Powder**

A natural abrasive used for cleaning surfaces and for removing imperfections and firescale. Mix with water or oil and apply with a muslin buff to create a fine matte finish. Sold by the pound.

Description	Item#	LB. Prices	
		1-9	10+
Pumice Powder	<b>845-4000</b>	<b>\$2.50</b>	<b>\$2.13</b>

### A Gesswein® Oil-Soluble Diamond Compounds

Grade	Micron	Approx.		1-gram Syringe		6-gram Syringe	
		Mesh	Color	Item#	Each	Item#	Each
Supreme Finish	0-1	60000	White	<b>216-0045*</b>	<b>\$3.25</b>	<b>216-2045</b>	<b>\$13.20</b>
Super Finish	0-2	14000	Ivory	<b>216-0050</b>	<b>2.50</b>	<b>216-2050</b>	<b>11.00</b>
Very High Finish	2-4	8000	Yellow	<b>216-0100</b>	<b>4.15</b>	<b>216-2100</b>	<b>21.45</b>
Med.-High Finish	4-8	3000	Orange	<b>216-0150</b>	<b>5.45</b>	<b>216-2150</b>	<b>29.15</b>
High Finish	8-12	1800	Green	<b>216-0200</b>	<b>5.45</b>	<b>216-2200</b>	<b>29.15</b>
Fine Finish	12-22	1200	Blue	<b>216-0250*</b>	<b>5.45</b>	<b>216-2250</b>	<b>29.15</b>
Fast Lapping	22-36	600	Red	<b>216-0300*</b>	<b>8.00</b>	<b>216-2300</b>	<b>45.65</b>
Medium Cutting	36-54	325	Brown	<b>216-0350*</b>	<b>8.00</b>	<b>216-2350</b>	<b>45.65</b>
Fast Cutting	-	230	Purple	<b>216-0400</b>	<b>8.00</b>	<b>216-2400</b>	<b>45.65</b>
<b>Description</b>				<b>Item#</b>		<b>Each</b>	
Sample Set (one of each asterisked above and #825-1295 below)				<b>216-9510</b>		<b>\$23.30</b>	



### B, C Lubricant/Thinner

To use a Diamond Compound most efficiently, we recommend adding Lubricant/Thinner, which keeps diamond in suspension to ensure the compound cuts at peak performance. Thins out and extends the compound, creating a slurry.

Size	Item#	Each
<b>B.</b> 3/4 oz. squeeze bottle	<b>825-1295</b>	<b>\$2.50</b>
4 oz. spray pump bottle	<b>825-1303</b>	<b>4.95</b>
<b>C.</b> 8 oz. bottle	<b>825-1300</b>	<b>6.85</b>



### D Diamond Drilling Compound

Used with Diamond Lapp Drills (below) to drill holes in stones. Base in which diamond is suspended holds particles in place until they become embedded in face of drill.

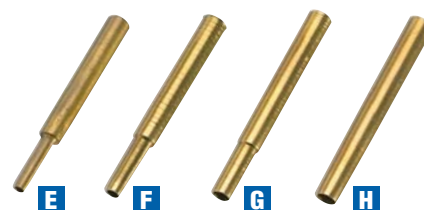
Size	Item#	Each
1g Syringe	<b>216-9050</b>	<b>\$8.00</b>



### E - H Diamond Lapp Drills

Hollow brass drills used with Diamond Drilling Compound (above) to make holes in stones without cracking them. Gently apply drill to surface on which diamond compound has been applied. Use slow speed and let up on drill frequently. Makes perfect holes in onyx, ruby, etc. Due to large shank size, use with #30 handpiece. Must be used with Lubricant/Thinner.

Dia.	Item#	Each
<b>E.</b> 1.5mm	<b>813-0100</b>	<b>\$5.35</b>
<b>F.</b> 2mm	<b>813-0200</b>	<b>5.35</b>
<b>G.</b> 2.5mm	<b>813-0300</b>	<b>5.35</b>
<b>H.</b> 3mm	<b>813-0400</b>	<b>5.35</b>
Set of all 4	<b>813-0500</b>	<b>19.50</b>



### I Pegwood Sticks

A great multipurpose item for lapping with diamond compound, for gluing or for use as a dop stick. Carefully chosen, round, soft sticks. Measure approximately 6" long. All sizes packaged in bundles of 24.

Dia.	Item#	Bundle
2mm	<b>825-1201</b>	<b>\$9.95</b>
2.5mm	<b>825-1202</b>	<b>8.85</b>
3mm	<b>825-1203</b>	<b>8.85</b>
4mm	<b>825-1204</b>	<b>9.29</b>



### J Rockwood Sticks

Very hard, laminated sticks which retain their shape well when polishing with diamond compound. Dark brown in color. All sizes measure 6" long and have blunt ends (except #825-0005, which has one pointed end, and #825-0045, which has one beveled end).

Shape	Size	Item#	Each
Round	1/8"	<b>825-0005</b>	<b>\$3.10</b>
Round	3/16"	<b>825-0010</b>	<b>4.55</b>
Round	1/4"	<b>825-0020</b>	<b>5.59</b>
Square	1/8"	<b>825-0045</b>	<b>2.88</b>
Square	1/4"	<b>825-0060</b>	<b>4.55</b>
Rectangular	1/4" x 1/8"	<b>825-0050</b>	<b>3.65</b>



## High-Speed Mini Diamond Points – 1/16" Shank

Feature coarse or fine diamond particles electroplated onto surgical-grade steel. Designed for use in high-speed air-driven handpieces. All have 1/16" (1.6mm) dia. x approx. 3/4" (20mm) long shanks. Sold individually and in four sets (see below). Always use with water or Lubricant/Thinner (see p. 51). Max. operating speed: 80,000rpm.

Shape	A	B	C	D	E	F	G	H	Each
Coarse Item#	226-1602*	226-1603	226-1604*	226-1605*	226-1606*	226-1607	226-1608*	226-1609	\$2.90
Fine Item#	226-1632*	226-1633	226-1634*	226-1635*	226-1636*	226-1637	226-1638*	226-1639	2.90

Six-piece minimum; please order in multiples of six.

Shape	I	J	K	L	M	N	O	P	Each
Coarse Item#	226-1610*	226-1611	226-1612	226-1613	226-1614	226-1615	226-1616*	226-1617	\$2.90
Fine Item#	226-1640*	226-1641	226-1642	226-1643	226-1644	226-1645	226-1646*	226-1647	2.90

Six-piece minimum; please order in multiples of six.

Shape	Q	R	S	T	U	V	W	X	Each
Coarse Item#	226-1618*	226-1619	226-1620*	226-1621	226-1622*	226-1623*	226-1624	226-1625*	\$2.90
Fine Item#	226-1648*	226-1649	226-1650*	226-1651	226-1652*	226-1653*	226-1654	226-1655*	2.90

Six-piece minimum; please order in multiples of six.



**A**

### A High-Speed Mini Diamond Point Sets

Description	Grit	Item#	Each
12-Piece Set (asterisked above)	Coarse	226-1601	\$32.25
	Fine	226-1631	32.25
24-Piece Set (one each of above)	Coarse	226-1600	64.50
	Fine	226-1630	64.50

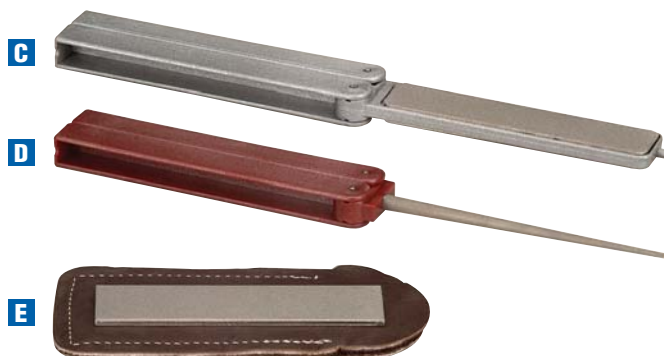


**B**

### B Wet Stick Diamond Dresser

Use this dressing stone with water for cleaning diamond points. Measures 2"L x 1/2"W x 3/4" thick.

Description	Item#	Each
Wet Stick	380-1022	\$2.00



**C**

**D**

**E**

### C - E EZE® Diamond Hand Sharpeners

Ideal for honing the edges of carbide cutting tools. Offer excellent abrasion resistance for superior finishing. Available in assorted grits to match finishing requirements. Color-coded folding sharpeners with butterfly knife-style handles measure 9"L x 1"W open, 5"L x 1"W closed (diamond face area of flat style measures 4"L x 3/4"W). Standard sharpeners measure 4"L x 1"W (include carrying pouch).

Description	Grit	Item#	Each
C. Flat Folding Sharpener	Fine/Med. (silver)	349-6020	\$32.95
D. Tapered Folding Sharpener	Fine (red)	349-6022	24.15
E. Standard Sharpener	Med. (325)	349-6026	12.65
	Fine (600)	349-6024	10.45



## Diamond Cutters – 3/32" Shank

Feature medium grit diamond particles electroplated onto stainless steel for unmatched quality and durability. Great for stone carving and cleanup work on glass, ceramics and metals. Measure 1 3/4" long with 3/32" stainless steel shanks. Sold individually and in three sets (see below). Always use with water or Lubricant/Thinner (see p. 51). Max. operating speed: 30,000rpm.

								
Dia. x L (mm)	2 x 1.5	2.7 x 1.5	4 x 1.5	6 x 2	1.5 x 4	2 x 8	3 x 4	7 x 12
Item#	226-1161*	226-1162*	226-1163*	226-1164*	226-1165	226-1166*	226-1167*	226-1168*
Each	\$3.75	\$3.75	\$4.20	\$5.49	\$3.75	\$3.75	\$4.45	\$10.51

								
Dia. x L (mm)	6 x 7	1.5 x 10	2 x 12	3 x 12	3.5 x 6	1.5 x 10	0.9 x 4	2 x 5
Item#	226-1169*	226-1170*	226-1171*	226-1172*	226-1181*	226-1182	226-1183*	226-1184*
Each	\$7.87	\$3.75	\$4.08	\$4.45	\$5.49	\$3.75	\$3.75	\$3.75

								
Dia. x L (mm)	6 x 10	2.5 x 7	2 x 7	1 x 1	2 x 2	3 x 3	4 x 4	4 x 0.8
Item#	226-1185*	226-1186*	226-1187	226-1188*	226-1189*	226-1190*	226-1191	226-1192*
Each	\$7.87	\$4.35	\$4.35	\$3.75	\$3.75	\$4.20	\$4.91	\$4.20

### A Diamond Cutter Sets – 3/32" Shank

Description	Item#	Each
12-Piece Set #1 (one each of 226-1161 through 226-1172)	226-1160	\$45.50
12-Piece Set #2 (one each of 226-1181 through 226-1192)	226-1180	43.70
20-Piece Master Set (one each of asterisked above)	226-1159	79.00



**A**

### B Diamond Bit Sets

These economical and functional sets are a good value for the novice or hobbyist. Can be used on ceramic, glass, metal or stone. Include 20 bits in different shapes and sizes and a handy plastic organizer. Bits measure 1 3/4" (44.5mm) long. Available with 3/32" or 1/8" shanks. Max. operating speed: 30,000rpm.

Description	Shank	Item#	Each
20-Piece Set	3/32"	226-1220	\$8.45
	1/8"	226-1221	8.45

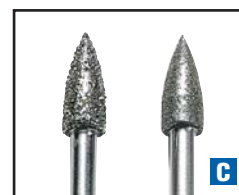


**B**

### C Bullet Diamond Burs – 3/32" Shank

General-purpose burs for a multitude of tasks. Feature top-quality diamond electroplated onto stainless steel heads. Available in medium and coarse grits. Measure 4mm dia. x 9.5mm long with 3/32" shanks. Use with water or Lubricant/Thinner (see p. 51).

Description	Grit	Item#	Each
Bullet Diamond Bur	Coarse	226-1151	\$7.98
	Medium	226-1150	6.80



**C**

### D Economy Diamond Disc

Thin with electroplated diamond on both sides, this medium grit disc is excellent for smoothing or sawing glass, stone or ceramics. Measures 3/4" dia. x 1/8" AH. Use with water or Lubricant/Thinner (see p. 51). For mandrels, see p. 352.

Description	Item#	Each
Economy Diamond Disc	226-1226	\$4.85



**D**

### Large Diamond Cutters – 3/32" Shank

Feature diamond particles that protrude from the bond so only the abrasive contacts the workpiece, greatly reducing frictional heat and thermal distortion. Always use with water or Lubricant/Thinner (see p. 51). Max. operating speed: 50,000rpm.

Dia. x L (mm)	6.5 x 6	6.5 x 4	3	6 x 1	2 x 12.5	1.5 x 9.5	2 x 9.5	2 x 2	2.5 x 2.5	3 x 3
Item#	226-1010	226-1020	226-1030	226-1040	226-1050	226-1060	226-1070	226-1080	226-1090	226-1100
Each	\$18.15	\$18.15	\$18.15	\$18.15	\$18.15	\$18.15	\$18.15	\$18.15	\$18.15	\$18.15

### Single-Layer Diamond Wheels and Points – 3/32" Shank

A wide variety of diamond wheels and points for fast cutting of hard metals, ceramics, stones and more. Feature one layer of diamond electroplated in an optimally exposed position, ensuring long life when used with slight pressure. All are 100 micron (140/170 grit). Max. operating speeds: 100,000rpm for 0.8–3.0mm dia.; 50,000rpm for 4.1–9.3mm dia.; 40,000rpm for 15–22mm dia.

Dia. x L (mm)	4.1 x 1.5	9.3 x 1.3	1.3 x 5	15.0 x 0.6	22 x 20	9 x 0.6	2.4 x 7.5	1.6 x 7.5
Item#	230-2200	230-2050	230-3900	230-2600	230-2750	230-2800	230-2450	230-1450
Each	\$29.95	\$45.25	\$14.25	\$47.50	\$43.75	\$39.95	\$18.45	\$15.75

Dia. x L (mm)	1.6 x 7.5	1.3 x 4	4.3 x 2.7 (80°)	2.5	1.3	0.8	1.7	1.9
Item#	230-3100	230-4050	230-1750	230-3450	230-3300	230-3250	230-3350	230-3400
Each	\$18.65	\$12.85	\$29.35	\$13.95	\$12.95	\$12.95	\$12.95	\$12.95

Dia. x L (mm)	3	4.1	2.5 x 7	2.2 x 7	1.9 x 5	1.42 x 7
Item#	230-1650	230-2550	230-1600	230-2300	230-3850	230-1200
Each	\$20.45	\$26.05	\$16.90	\$16.35	\$13.95	\$13.70



#### A Diamond Disc Set – 1/8" Shank

Five fine diamond discs, all medium grit for cutting or sanding stones and glass. This 6-piece kit comes with a 1/8" mandrel. All discs measure 13/16" (20.25mm) dia. x 0.033" (.84mm) thick x 1/8" AH and have diamond electroplated on both sides. Max. operating speed: 30,000rpm.

Description	Item#	Each
Diamond Disc Set	226-1225	\$12.60

#### B - D Reducing Collets









Instantly convert your collet to the size you need. Simply slip the appropriate reducing collet into your collet to use 3/32" or 1/16" shank tools. Do not use at high speeds, and make sure shank is inserted deeply.


















Description	Item#	Each
B. 1/8"-3/32" Collet	816-1501	\$12.90
C. 1/8"-1/16" Collet	816-1502	12.90
D. 3/32"-1/16" Collet	816-1503	12.90








### Mounted Diamond Points – 1/8" Shank

Inexpensive yet durable cutting tools with diamond particles nickel-electroplated onto medium carbon steel. Use on carbide, steel, ceramic and wood surfaces. Measure 1 3/4" long with 1/8" shanks. Sold individually and in three sets (see below). Always use with water or Lubricant/Thinner (see p. 51). All 1–1.5mm diameter points are fine (150 grit); all 2–5mm diameter points are medium (120 grit). Max. operating speeds: 80,000rpm for 1–3mm dia; 60,000rpm for 3.5–4mm dia; 50,000rpm for 5mm dia.

								
Style	10A	15A	20A	25A	30A	35A	40A	50A
Dia. x L (mm)	1 x 8	1.5 x 8	2 x 8	2.5 x 8	3 x 10	3.5 x 10	4 x 10	5 x 10
Grit	150	150	120	120	120	120	120	120
Max. RPM	80,000	80,000	80,000	80,000	80,000	60,000	60,000	50,000
Item#	<b>226-1250</b>	<b>226-1251</b>	<b>226-1252</b>	<b>226-1253</b>	<b>226-1254</b>	<b>226-1255</b>	<b>226-1256</b>	<b>226-1257</b>
Each	<b>\$3.50</b>	<b>\$3.50</b>	<b>\$3.50</b>	<b>\$3.50</b>	<b>\$3.50</b>	<b>\$3.50</b>	<b>\$3.75</b>	<b>\$3.75</b>

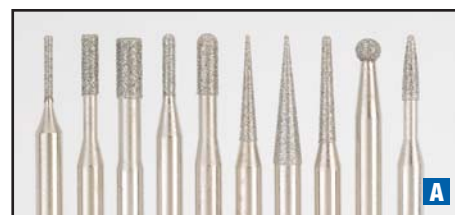
								
Style	20B	30B	50B	15C	20C	25C	30C	35C
Dia. x L (mm)	2	3	5	1.5 x 8	2 x 8	2.5 x 10	3 x 10	3.5 x 10
Grit	120	120	120	150	120	120	120	120
Max. RPM	80,000	80,000	50,000	80,000	80,000	80,000	80,000	60,000
Item#	<b>226-1258</b>	<b>226-1259</b>	<b>226-1260</b>	<b>226-1261</b>	<b>226-1262</b>	<b>226-1263</b>	<b>226-1264</b>	<b>226-1265</b>
Each	<b>\$3.50</b>	<b>\$3.50</b>	<b>\$3.75</b>	<b>\$3.50</b>	<b>\$3.50</b>	<b>\$3.50</b>	<b>\$3.50</b>	<b>\$3.50</b>

							
Style	40C	50C	20F	30F	50F	20P	30P
Dia. x L (mm)	4 x 10	5 x 10	2 x 10	3 x 10	5 x 10	2 x 12	3 x 15
Grit	120	120	120	120	120	120	120
Max. RPM	60,000	50,000	80,000	80,000	50,000	80,000	80,000
Item#	<b>226-1266</b>	<b>226-1267</b>	<b>226-1275</b>	<b>226-1276</b>	<b>226-1277</b>	<b>226-1268</b>	<b>226-1269</b>
Each	<b>\$3.75</b>	<b>\$3.75</b>	<b>\$3.50</b>	<b>\$3.50</b>	<b>\$3.75</b>	<b>\$3.50</b>	<b>\$3.50</b>

							
Style	15R	20R	30R	30S	20T	30T	30V
Dia. x L (mm)	1.5 x 10	2 x 12	3 x 14	3 x 6	2 x 10	3 x 10	3 x 10
Grit	150	120	120	120	120	120	120
Max. RPM	80,000	80,000	80,000	80,000	80,000	80,000	80,000
Item#	<b>226-1270</b>	<b>226-1272</b>	<b>226-1273</b>	<b>226-1274</b>	<b>226-1278</b>	<b>226-1279</b>	<b>226-1280</b>
Each	<b>\$3.50</b>	<b>\$3.50</b>	<b>\$3.50</b>	<b>\$3.50</b>	<b>\$3.50</b>	<b>\$3.50</b>	<b>\$3.50</b>

#### A Diamond Mounted Point Sets – 1/8" Shank

Description	Item#	Each
A. 10-Piece Set (styles 10A, 20A, 30A, 30B, 15C, 25C, 20F, 20P, 30P, 20R)	<b>226-1281</b>	<b>\$31.50</b>
20-Piece Set (styles 10A, 15A, 20A, 25A, 30A, 35A, 20B, 30B, 15C, 20C, 25C, 30C, 20F, 30F, 20P, 30P, 15R, 20R, 30R, 20T)	<b>226-1282</b>	<b>63.00</b>
30-Piece Set (one of each style)	<b>226-1283</b>	<b>94.50</b>





### Red Mounted Points – 3/32" Shank

Fast-cutting, nonloading reddish-brown points for grinding medium and hard materials such as precious metals, glass and porcelain. Made of aluminum oxide bonded with porcelain-type clay and securely mounted on 3/32" dia. x 1 1/2" long nickel-plated steel shanks for strength and rigidity. Guaranteed to run true. Range from medium to fine grit (80–150). Can be dressed with Tru-Stone #380-1030 (see facing page). Consult ANSI (American National Standards Institute) for maximum operating speeds.

Shape	1	2	3	6	7	10	12	13	Pkg. of 12
Pkg.#	321-0010	321-0020	321-0030	321-0060	321-0070	321-0100	321-0120	321-0130	\$13.00

Shape	14	15	16	20	21	22	23	24	Pkg. of 12
Pkg.#	321-0140	321-0150	321-0160	321-0200	321-0210	321-0220	321-0230	321-0240	\$13.00

### White Polishing Points – 3/32" Shank

Extremely fine white points for producing a high finish on metal, glass, porcelain and stone. Made of aluminum oxide bonded with porcelain-type clay and securely mounted on 3/32" dia. x 1 1/2" long nickel-plated steel shanks for strength and rigidity. Guaranteed to run true. All are 400 grit. Can be dressed with Tru-Stone #380-1030 (see facing page). Consult ANSI (American National Standards Institute) for maximum operating speeds.

Shape	3	12	14	18	19	22	26	32	Pkg. of 12
Pkg.#	326-0030	326-0120	326-0140	326-0180	326-0190	326-0220	326-0260	326-0320	\$20.00

Shape	34	41	44	46	Pkg. of 12
Pkg.#	326-0340	326-0410	326-0440	326-0460	\$20.00

## Busch® Pink Polishing Points – 3/32" Shank

Composed of genuine corundum, these points are recommended for use on harder metals. Securely mounted on 3/32" dia. x 1 1/2" long nickel-plated steel shanks. All are medium grit. Consult ANSI (American National Standards Institute) for maximum operating speeds.

Shape	602	603	621	632	637	EACH Prices		
						1-5	6-71*	72+*
Item#	330-1325	330-1330	330-1340	330-1345	330-1350	\$2.50	\$2.13	\$2.00

\*Qty. discount for orders of one item# only, not assorted.

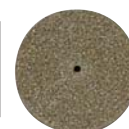
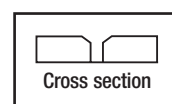
Shape	639	640	649	652	661	662	EACH Prices		
							1-5	6-71*	72+*
Item#	330-1355	330-1360	330-1365	330-1370	330-1375	330-1380	\$2.50	\$2.13	\$2.00

\*Qty. discount for orders of one item# only, not assorted.

### A Diamond Impregnated Dressing Stone

Has a concave center hole for forming a point on polishing rods. Measures 3/4" dia. x 1/8" thick.

Description	Item#	Each
Dressing Stone	145-1240	\$3.75



A

### B Tru-Stone – For dressing and shaping mounted stones and other abrasive wheels.

A very hard and coarse silicon carbide stone with 4 half-round grooves measuring 1/16", 1/8", 3/16" and 1/4" on one side. Quickly reshapes and resurfaces abrasive stones to like-new condition. Measures 3 1/2"L x 1 3/8"W x 5/8"H overall.

Description	Item#	EACH Prices	
		1-9	10+
Tru-Stone	380-1030	\$5.60	\$4.48



B

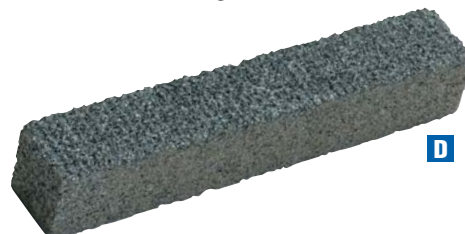
### C, D Dressing Stones

A hard, medium-grit stone in (150 grit) a convenient shape for dressing Beartex, GMX, GRX and grinding wheels. Measures 2 1/2"L x 1 1/2"W x 1/2"H. A very hard, coarse stone (20 grit) that will quickly smooth out and take off irregular edges from almost any grinding wheel, GRX or GMX product. Also excellent for shaping Beartex Wheels. Measures 6" long x 1" square.

Description	Item#	Each
C. Medium	380-1020	\$4.05
D. Coarse	380-1010	10.65



C



D

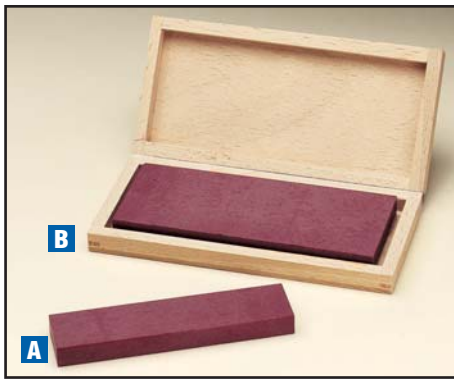
### E Diamond Wheel Dresser #66

A single-point natural diamond mounted in 3/8" diameter x 6" long holder. Used to dress grinding and GMX wheels by hand. Simply discard when worn since diamond cannot be remounted.

Description	Item#	EACH Prices	
		1-11	12+
Diamond Wheel Dresser #66	220-1860	\$15.70	\$14.92



E



**A, B Ruby® Bench Stones – The ultimate sharpening stones.**

Ideal for sharpening tools and gravers—even carbide. May be used dry or with Gesswein Stoning Oil. The pure, sintered crystals of synthetic ruby have an outstanding resistance to wear, which makes them more economical than other stones. They will not groove even after years of use. In addition to metals, they may be used on other materials such as glass, porcelain and quartz. Made in Germany.

Grit	L x W x Thick	Item#	Each
A. Medium	4" x 1" x 3/8" *	<b>350-1002</b>	<b>\$95.00</b>
	6" x 1" x 5/8" *	<b>350-1012</b>	<b>153.00</b>
	4" x 1" x 3/8" **	<b>350-1102</b>	<b>85.00</b>
	4 3/4" x 2" x 3/8" **	<b>350-1112</b>	<b>225.00</b>
B. Fine	4" x 1" x 3/8" *	<b>350-1003</b>	<b>105.00</b>
	6" x 1" x 5/8" *	<b>350-1013</b>	<b>153.00</b>
	4" x 1" x 3/8" **	<b>350-1103</b>	<b>100.00</b>
	4 3/4" x 2" x 3/8" **	<b>350-1113</b>	<b>225.00</b>

\*Finished on both sides.

\*\*Finished on one side and mounted in a wooden box.



**C Ruby® Combination Bench Stone**

One side cuts fast for shaping tools while the other side will impart a brilliant finish for bright cutting. One side is medium grit, the other is fine. Measures 4 3/4"L x 2"W x 3/8"H. Neatly packaged in a wooden box.

Description	Item#	Each
Combination Stone	<b>350-1114</b>	<b>\$264.00</b>



**D Crystolon® Combination Stone**

Silicon carbide bench stone has two distinct cutting surfaces: one side is coarse, the other side is fine. Fast cutting for general sharpening of cutting tools. Dark gray in color. Stone measures 6"L x 2"W x 1"H.

Description	Item#	Each
Crystolon Combination Stone	<b>371-2004</b>	<b>\$26.95</b>



**E Quad-Hone Stone**

Four different stones mounted on a rectangular block for a wide range of sharpening chores from rough shaping to producing a sharp final edge. Quad-Hone includes one each of coarse, medium, fine and ultra-fine Arkansas stones. Each stone measures approximately 6"L x 1"W x 1/4"H. Use with oil.

Description	Item#	Each
Quad-Hone Stone	<b>380-1102</b>	<b>\$34.75</b>



**F Grinding Wheels**

Aluminum oxide wheels developed for fast grinding and shaping operations without excessive heat buildup. Available in two grits: 60 grit for initial grinding and 100 grit for final grinding. Wheels measure 4" diameter x 1/2" thick with 1/2" leadened arbor holes. Use with our #840-4550 or #840-4500 polishing arbors (see p. 323). Do not use on tapered spindles.

Grit	Item#	Each
60	<b>845-0054</b>	<b>\$16.85</b>
100	<b>845-0100</b>	<b>16.85</b>



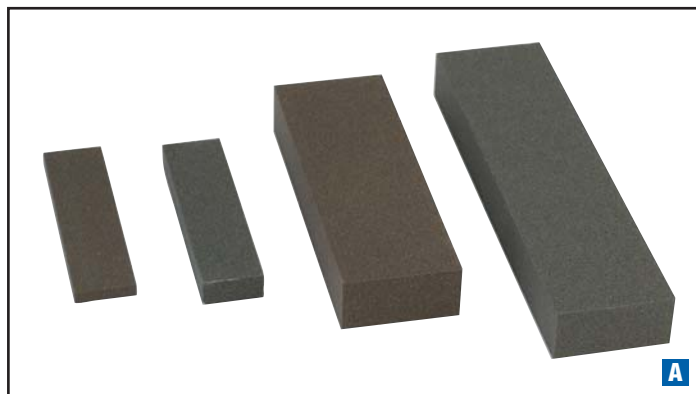
## India® Stones

Fast-cutting aluminum oxide stones in a variety of shapes. Prefilled with oil to retard loading and eliminate the need to presoak prior to first use, making cutting easier and more efficient. Available in coarse (100 grit), medium (240 grit) and fine (320 grit). Hold shape while producing a fine, uniform finish on edges of chisels, gravers, knives and other precision tools. Made in USA.

### A India® Bench Stones

Grit	L x W x H	Style	Item#	Each*
Coarse	4" x 1" x 1/4"	14	<b>361-0141</b>	<b>\$8.10</b>
	4" x 1" x 1/2"	24	<b>361-0241</b>	<b>11.25</b>
	6" x 2" x 1"	6	<b>361-0061</b>	<b>25.15</b>
Medium	8" x 2" x 1"	8	<b>361-0081</b>	<b>29.65</b>
	4" x 1" x 1/4"	14	<b>361-0142</b>	<b>7.80</b>
	4" x 1" x 1/2"	24	<b>361-0242</b>	<b>9.75</b>
Fine	6" x 2" x 1"	6	<b>361-0062</b>	<b>25.15</b>
	8" x 2" x 1"	8	<b>361-0082</b>	<b>29.65</b>
	4" x 1" x 1/4"	14	<b>361-0143</b>	<b>7.80</b>
	4" x 1" x 1/2"	24	<b>361-0243</b>	<b>9.75</b>
	6" x 2" x 1"	6	<b>361-0063</b>	<b>25.15</b>
	8" x 2" x 1"	8	<b>361-0083</b>	<b>29.65</b>

\*Please ask for quotes on larger quantities.



### B Combination India® Bench Stones

For all-purpose use. One side coarse, the other side fine.

L x W x H	Style	Item#	Each*
4" x 1 3/4" x 5/8"	IB-134	<b>361-1344</b>	<b>\$16.95</b>
6" x 2" x 1"	IB-6	<b>361-0064</b>	<b>25.15</b>
8" x 2" x 1"	IB-8	<b>361-0084</b>	<b>31.95</b>

\*Please ask for quotes on larger quantities.



### C India® Files

Measure 4" long.

Grit	Shape	Size	Style	Item#	Each*
Coarse	Square	1/4"	14	<b>360-0141</b>	<b>\$5.90</b>
	Square	3/8"	34	<b>360-0341</b>	<b>7.45</b>
	Triangular	1/4"	114	<b>360-1141</b>	<b>7.15</b>
	Triangular	3/8"	134	<b>360-1341</b>	<b>7.50</b>
	Round	1/4"	214	<b>360-2141</b>	<b>11.25</b>
	Round	3/8"	234	<b>360-2341</b>	<b>11.35</b>
Medium	Square	1/4"	14	<b>360-0142</b>	<b>5.14</b>
	Square	3/8"	34	<b>360-0342</b>	<b>6.50</b>
	Triangular	1/4"	114	<b>360-1142</b>	<b>7.15</b>
	Triangular	3/8"	134	<b>360-1342</b>	<b>7.50</b>
	Round	1/4"	214	<b>360-2142</b>	<b>11.25</b>
	Round	3/8"	234	<b>360-2342</b>	<b>11.35</b>
Fine	Square	1/4"	14	<b>360-0143</b>	<b>5.14</b>
	Square	3/8"	34	<b>360-0343</b>	<b>6.50</b>
	Triangular	1/4"	114	<b>360-1143</b>	<b>7.15</b>
	Triangular	3/8"	134	<b>360-1343</b>	<b>7.50</b>
	Round	1/4"	214	<b>360-2143</b>	<b>11.25</b>
	Round	3/8"	234	<b>360-2343</b>	<b>10.95</b>

\*Please ask for quotes on larger quantities.



### D - F Engraver's Points and Chuck XT1

For stoning and cleaning tight corners and recesses. Measure 1" long x 1/8" dia., tapered to a point. India point is fine grit. Arkansas point is ultra-fine grit. Use chuck to mount both. Measures 3 3/8" long.

Description	Item#	Each
D. India Point	<b>362-5113</b>	<b>\$6.75</b>
E. Arkansas Point	<b>372-5110</b>	<b>7.50</b>
F. Engraver's Chuck	<b>372-6000</b>	<b>25.60</b>

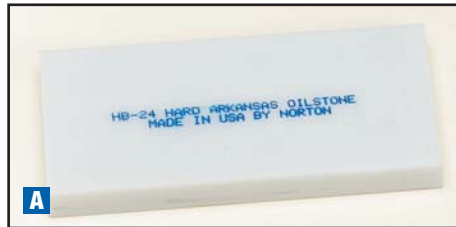


## Arkansas Stones

Natural Arkansas stones have gained an excellent reputation over the years as the finest all-purpose stones for polishing as well as for sharpening precision tools. Hard Arkansas stones are dense and fine-grained for final honing of the absolute sharpest precision edges. Soft Arkansas stones, with their less dense and more open structure, are ideal for shaping before final finishing.

### Norton Arkansas Stones

All of the Arkansas stones produced by the Norton Company are *ultra-fine grit*. These specially selected natural Arkansas stones are for sharpening the precision cutting tools used by setters and engravers.



### A Norton® Hard Arkansas Bench Stone

This stone is for the final finish on gravers and more. Can be used on both sides. Ultra-fine grit. Measures 4"L x 2"W x 3/8"H.

Description	Item#	EACH Prices	
		1-4	5+
Hard Arkansas Bench Stone	<b>371-1045</b>	<b>\$82.75</b>	<b>\$55.44</b>

### B Norton® Arkansas Penknife Stones

Can be used on both sides. Ultra-fine grit.

Type	L x W x H	Style	Item#	EACH Prices	
				1-9	10+
Hard	3" x 1" x 1/4"	HB13	<b>371-1130</b>	<b>\$30.25</b>	<b>\$20.27</b>
Hard	4" x 1" x 1/4"	HB14	<b>371-1140</b>	<b>36.25</b>	<b>24.29</b>
Soft	4" x 1" x 1/4"	SB14	<b>371-4140</b>	<b>11.35</b>	<b>7.60</b>

### C Norton® Hard Arkansas Files

Dense, translucent stones, various shades of gray. Have precision edges. Ultra-fine grit. Length varies from 3" to 3 1/2".

Type	Width	Style	Item#	EACH Prices	
				1-9	10+
Triangular	1/4"	HF113	<b>370-1130</b>	<b>\$17.45</b>	<b>\$11.69</b>
	3/8"	HF133	<b>370-1330</b>	<b>18.65</b>	<b>12.50</b>
Square	1/4"	HF13	<b>370-0130</b>	<b>17.40</b>	<b>11.66</b>
	3/8"	HF33	<b>370-0330</b>	<b>18.65</b>	<b>12.50</b>
Round	1/4"	HF813	<b>370-8130</b>	<b>22.65</b>	<b>15.18</b>

### D Hard Black Arkansas Bench Stone – Fine Grit

For precision sharpening or finishing a very sharp edge. Dense, black stone, more aggressive than Norton Arkansas stones. Measures 6"L x 2"W x 1/2"H. Packaged in an attractive cedar box. Finished on both sides.

Description	Item#	Each
Hard Arkansas Bench Stone	<b>374-2000</b>	<b>\$59.75</b>

### E Soft Arkansas Bench Stone – Medium Grit

A natural medium-grit bench stone. Recommended for relatively fast cutting. Excellent for shaping gravers, knives, and precision tools prior to final finish with either our Ruby or Hard Black Arkansas stones. Use with Gesswein Stoning Oil #800-0100 (see facing page). Packaged in an attractive cedar box. Measures 6"L x 2"W x 1"H. Finished on both sides.

Description	Item#	Each
Soft Arkansas Bench Stone	<b>374-1000</b>	<b>\$25.95</b>

### F Hard Arkansas Bench Stones – Ultra-Fine Grit

Genuine Hard Arkansas Stones, white to light gray, cut to size in Europe. Glued into hardwood storage box. Finished on one side.

Size	Item#	Each
4" x 1 5/8"	<b>374-0900</b>	<b>\$37.50</b>
F. 6" x 2"	<b>374-0910</b>	<b>92.60</b>

### A Hard Black Arkansas Stones – Fine Grit

These natural hard Arkansas stones are the finest grade abrasive stones available. Use on gravers, knives and other cutting tools when an extremely fine polish and a keen cutting edge are required. Use with Gesswein Stoning Oil (see below).

Type	Size	Item#	EACH Prices	
			1-9	10+
Square	3" x 1/4"	375-0131	\$11.25	\$10.13
	3" x 3/8"	375-0331	12.65	11.39
	3" x 1/2"	375-0431	15.65	14.09
Triangular	3" x 1/4"	375-1131	11.95	10.76
	3" x 3/8"	375-1331	11.95	10.76
	3" x 1/2"	375-1431	15.65	14.09
Round	3" x 1/4"	375-8131	14.50	13.05
Knife	3 1/2" x 3/4" x 1/8"	375-8731	19.75	17.78



**A**

### B Gesswein Pencil Stones

Fast-cutting, aluminum oxide abrasive material in a size convenient for stoning small or intricate areas. For general purpose stoning on most metals. Semihard, moderate breakdown rate. Available in 320, 400, 600 and 800 grit. Recommended for harder metals. All measure 4" long x 5/32" square. Use with Pencil Stone Holder (below).

Style	Grit	Item#	EACH Prices	
			1-11	12+
#3	320	415-0030	\$1.93	\$1.61
#4	400	415-0040	1.93	1.61
#6	600	415-0060	2.18	1.82
#8	800	415-0080	2.29	1.91



**B**

### C Pencil Stone Holder

Push-button feature makes this hand holder convenient and easy to load. Holds 5/32" square stones. Measures 5 1/4" long.

Description	Item#	EACH Prices		
		1-2	3-11	12+
Stone Holder	403-0050	\$9.95	\$9.35	\$8.46

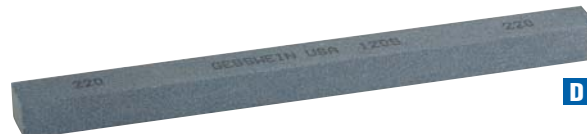


**C**

### D Silicon Carbide Moldmaker Stones

Made of silicon carbide with a specially formulated bonding agent that permits rapid breakdown, these stones are ideal for finishing softer metals. Moldmaker stones are easily dressed and follow contours well. 220 grit. Measure 6" long.

Size	Style	Item#	EACH Prices	
			1-5	6+
1/2" sq.	1205	410-1205	\$6.02	\$5.02
1" sq.	1206	410-1206	12.66	10.55



**D**

### E Stoning and Lubricating Oil

A special lubricant to be used on bench stones when sharpening gravers. Helps keep stones from loading up and produces a better cutting surface on gravers. Use with India, aluminum oxide, silicon carbide and crystolon stones. Comes in 1 pt. jar.

Description	Item#	Each
Stoning and Lubricating Oil	800-0100	\$12.95



**E**

### F Rub-and-Rinse Stone Cleaner

Gesswein Rub-and-Rinse Stone Cleaner is a semiliquid material that sheds tiny metal particles from hard stones to keep them at their peak efficiency. It is recommended for use on hard stones such as our Ruby, India and Hard Arkansas Stones. Weighs 1/2 fl. oz.

Description	Item#	Each
Rub-and-Rinse	813-1700	\$9.80



**F**





A

**A Tri-Cord™ Bead Stringing Set**

Includes the tools you need to start bead stringing: Tri-Cord knotter, 400 yards of size E white silk thread, tube of glue, thread snips to cut cord and snip apart knotted strands for restringing, chain nose pliers, 30 stainless steel beading needles (10 of each size: small, medium and large), 40 bead tips (20 of each tip: silver-plated and gold-plated) and French wire (gold-filled and sterling silver). Comes complete with sturdy organizer case with detachable lid that doubles as a designing tray and Tri-Cord's *Professional Bead Stringing* videotape (VHS format, 30 minutes).

Description	Item#	Each
Tri-Cord Bead Stringing Set	816-3000	\$91.95



B

**B Basic Bead Stringing Set**

Ideal for novice beaders. Includes 12½" x 8½" bead board (holds strands up to 28" long, marked in ½" and 1" increments), beading awl, beading tweezers, 80mm brass gauge, 4½" chain-nose pliers, 4½" round-nose pliers, 4½" side-cutting nippers and thread scissors. Comes complete with *The Basics of Bead Stringing* instructional book. Beads not included.

Description	Item#	Each
Basic Bead Stringing Set	816-3015	\$35.95



C

**C Wire Wrapping Set**

Contains everything you need to get started. Includes three lap-joint leaf-spring pliers (round-nose, chain-nose and flat-nose), side cutters, aluminum ring mandrel, rawhide mallet, pin vise with four interchangeable collets, equalling needle file, brass gauge, steel ruler and scribe.

Description	Item#	Each
Wire Wrapping Set	816-4090	\$118.00



D

**D Beader's WorkStation**

Every beader can use the WorkStation at class or home. Provides organized storage for tools, bead cord, beads and more. Convenient dowels at the top hold pliers, cutters, scissors, shears, tweezers and other tools at arm's length for easy access. Two shelves hold all types of beading supplies. Top shelf features ten hooks for hanging corded cord, and lower shelf features ruler for easy measuring. Because the WorkStation is made entirely of wood, user can screw additional hooks on the sides for extra storage. Assembles in just five minutes with a Phillips screwdriver (comes boxed with assembly instructions). Measures 22"W x 6¾"D x 15"H. Weighs 7 lbs. Beading supplies and bead board not included.

Description	Item#	Each
Beaders' WorkStation	816-4055	\$39.95

**A Easy-Design Bead Board**

This large bead board features ten compartments for holding beads and other beading supplies. Accommodates up to three strands at once. Covered in neutral gray flock. Measures 16" x 10¼".

Description	Item#	Each
Easy-Design Bead Board	816-3012	\$10.95



**A**

**B Small Bead Board**

Covered in soft gray flock to help keep beads from rolling and to reduce eyestrain. Holds necklaces up to 28" in length. Marked in ½" increments. Has five compartments for holding extra beads. Measures 13¼"L x 9"W.

Description	Item#	Each
Small Bead Board	816-3010	\$6.65

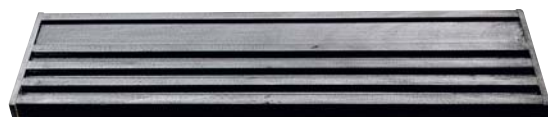


**B**

**C Bead Stringing Board**

Black wooden board used to align beads prior to stringing. Has three ⅜" wide grooves. Measures 13¾"L x 3¾"W.

Description	Item#	Each
Bead Stringing Board	816-3009	\$7.05



**C**

**D Bead Stringing Tweezers**

Feature narrow tapered ends for easy knot tying. Made of stainless steel with nonglare satin finish. Measure 4½" long.

Description	Item#	Each
Bead Stringing Tweezers	195-1355	\$2.80



**D**

**E - G Economical Diamond Tweezers**

Engineered for precision work. Available in nonlocking and locking styles. All have fine serrated tips. Measure 6⅜" long.

Description	Item#	EACH Prices		
		1-2	3-9	10+
E. Stainless Tweezers	195-0334	\$7.80	\$7.02	\$6.63
F. Black Tweezers	195-0335	8.95	8.06	7.61
G. Stainless Locking Tweezers	195-0330	9.95	8.96	8.46



**E**



**F**



**G**

**H Dumont® Grooved Diamond Tweezers**

Feature a centered groove for securely gripping large stone girdles. Have medium serrated tips. Made of stainless steel. Measure 5⅞" long.

Description	Item#	EACH Prices		
		1-2	3-9	10+
Grooved Diamond Tweezers	195-0356	\$25.30	\$22.77	\$21.51



**H**

**I Cup-Shaped Pearl Tweezers**

Tweezers with cup-shaped ends for holding pearls, beads and more. Have coated tips that prevent scratching of delicate surfaces. Measure 5¾" long.

Description	Item#	EACH Prices		
		1-2	3-9	10+
Cup-Shaped Pearl Tweezers	195-0310	\$9.95	\$8.96	\$8.46



**I**

**J Split Ring Tweezers**

Easy-to-use tweezers for opening small to medium split rings. Just put the split ring under the claw and squeeze—it's that simple. Made of stainless steel. Measure 4½" long.

Description	Item#	Each
Split Ring Tweezers	816-4080	\$6.10



**J**

**K, L Stone Holders**

Ideal for picking up small stones and beads. Just press plunger to open, then release to grasp item securely. Available in four-prong and loop-end styles. Made of stainless steel. Measure 4½" long.

Description	Item#	EACH Prices		
		1-2	3-9	10+
K. Four-Prong Stone Holder	840-4451	\$5.95	\$5.65	\$5.36
L. Loop-End Stone Holder	840-4452	4.50	4.28	4.05



**K**



**L**



**A**

**A Motorized Bead Reamer**

A revolutionary tool for the beading industry. Motor runs up to maximum speed of 15,500rpm, adjustable by a sliding switch on the AC adapter. Handpiece features lightweight design and measures just 1 1/8" in diameter, making it comfortable for extended use. Has a chuck that accommodates 1/8" shank diamond tips. Includes three diamond tips: large reamer, small reamer and 45° edger. Use water or lubricant (such as Lube Stik #816-2460) with diamond tools. Electrical: 115V.

Description	Item#	Each
<b>A. Motorized Bead Reamer</b>	<b>260-2586</b>	<b>\$39.95</b>
Large Reamer	821-2009	2.45
Small Reamer	821-2007	1.85
45° Edger	821-2008	1.65

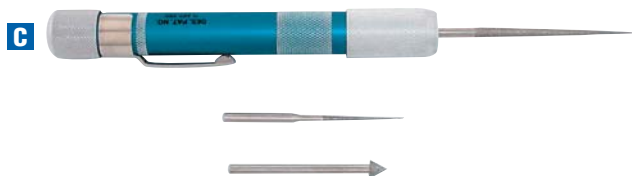


**B**

**B Diamond-Coated Bead Reamer Set**

Excellent for bead stringers, this set includes two diamond tools with hardwood handles: reaming tool has a long, sharp point for reaming bead holes; edging tool has a 45° point for rounding off the edges of holes so they won't cut through bead cord. Use water or lubricant (such as Lube Stik #816-2460) with diamond tools.

Description	Item#	Each
<b>B. Bead Reamer Set</b>	<b>821-2000</b>	<b>\$8.75</b>
Reaming Tool	821-2001	4.45



**C**

**C Deluxe Diamond-Coated Bead Reamer Set**

Includes hollow anodized aluminum handle for storing tips when not in use, easy-to-open brass tool chuck that will not rust and three diamond tips: large reamer, small reamer and 45° edger. Use water or lubricant (such as Lube Stik #816-2460) with diamond tools. Handle measures 1/2" dia. x 4 1/2"L.

Description	Item#	Each
<b>C. Deluxe Bead Reamer Set</b>	<b>821-2005</b>	<b>\$13.75</b>
Large Reamer	821-2009	2.45
Small Reamer	821-2007	1.85
45° Edger	821-2008	1.65



**D**

**D Reamer Set**

Includes fine (1.0mm) and very fine (0.6mm) detailers with comfortable wooden handles. Feature points with spiral, file-like edges that cut smoothly and quickly. Made of stainless steel to resist rust and clogging. Detailers measure 5" long with 3/8" dia. x 4"L handles. Made in USA.

Description	Item#	Each
<b>D. Reamer Set</b>	<b>260-2590</b>	<b>\$9.95</b>
Fine Detailer, 1.0mm	260-2589	5.15
Very Fine Detailer, 0.6mm	260-2588	5.15



**E**

**E Small Beading Awl**

Handy awl with fine stainless steel point and lightweight PVC handle. Great for knotting cord, picking and probing. Measures 5 3/4" long.

Description	Item#	Each
<b>Small Beading Awl</b>	<b>816-4045</b>	<b>\$3.45</b>



### A - C Beading Needles

Flexible, twisted steel wire needles for stringing beads. Measure approx. 3 7/8" long. Sold in packages of 25.

Description	Item#	Pkg. of 25
A. Fine Needles	<b>816-3040</b>	<b>\$5.15</b>
B. Medium Needles	<b>816-3041</b>	<b>5.15</b>
C. Heavy Needles	<b>816-3042</b>	<b>5.15</b>



### D Wire Rounder

This simple, economical tool deburs wire ends after they have been cut. Features a 1.8mm cup bur that does the job in seconds with just a couple twists of the hardwood handle. Measures 5 1/4" long.

Description	Item#	Each
Wire Rounder	<b>816-4040</b>	<b>\$5.99</b>



### E Bead Cord

Individual cards of fine twisted bead cord with fine needles attached. Available in sizes 1 (thinnest) to 8 (thickest). White nylon and silk cords measure 72" long. Brilliantly dyed, colorfast nylon cords measure 78" long. Three-piece minimum order.

Size	Color	Material	Item#	EACH Prices	
				3-9	10+
1	White	Nylon	<b>816-3020</b>	<b>\$1.05</b>	<b>\$.95</b>
1 1/2	White	Nylon	<b>816-3021</b>	<b>1.05</b>	<b>.95</b>
2	White	Nylon	<b>816-3022</b>	<b>1.05</b>	<b>.95</b>
3	White	Nylon	<b>816-3023</b>	<b>1.15</b>	<b>1.04</b>
4	White	Nylon	<b>816-3024</b>	<b>1.15</b>	<b>1.04</b>
5	White	Nylon	<b>816-3025</b>	<b>1.15</b>	<b>1.04</b>
6	White	Nylon	<b>816-3026</b>	<b>1.15</b>	<b>1.04</b>
8	White	Nylon	<b>816-3028</b>	<b>1.25</b>	<b>1.13</b>
8	White	Silk	<b>816-3032</b>	<b>1.30</b>	<b>1.17</b>
4	Black	Nylon	<b>816-3060</b>	<b>1.05</b>	<b>.84</b>
6	Black	Nylon	<b>816-3061</b>	<b>1.05</b>	<b>.84</b>
8	Black	Nylon	<b>816-3062</b>	<b>1.29</b>	<b>1.03</b>
4	Red	Nylon	<b>816-3063</b>	<b>1.05</b>	<b>.84</b>
8	Red	Nylon	<b>816-3065</b>	<b>1.20</b>	<b>.96</b>
4	Blue	Nylon	<b>816-3066</b>	<b>1.05</b>	<b>.84</b>
8	Blue	Nylon	<b>816-3068</b>	<b>1.20</b>	<b>.96</b>
4	Amethyst	Nylon	<b>816-3069</b>	<b>1.05</b>	<b>.84</b>
6	Amethyst	Nylon	<b>816-3070</b>	<b>1.05</b>	<b>.84</b>
8	Amethyst	Nylon	<b>816-3071</b>	<b>1.20</b>	<b>.96</b>
4	Med. Green	Nylon	<b>816-3072</b>	<b>1.05</b>	<b>.84</b>
6	Med. Green	Nylon	<b>816-3073</b>	<b>1.05</b>	<b>.84</b>
8	Med. Green	Nylon	<b>816-3074</b>	<b>1.20</b>	<b>.96</b>

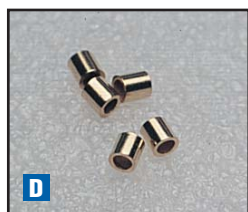


### F - H Tigertail

Twisted stainless steel wire coated with nylon, normally used without knotting for heavy stones and beads and for less expensive bead work. Does not require bead needle. Sold in 30' spools.

Description	Thickness	Item#	Each
F. Fine Spool (8 lb. test)	0.012"	<b>816-3050</b>	<b>\$2.65</b>
G. Medium Spool (18 lb. test)	0.018"	<b>816-3051</b>	<b>3.35</b>
H. Heavy Spool (27 lb. test)	0.021"	<b>816-3052</b>	<b>3.60</b>





### A Bead Crimping Pliers

These revolutionary low-cost hand tools form smooth, unobtrusive crimps. Eliminate the unsightly sharp-edge crimps formed by conventional methods (if desired, hide finished crimps in clam-type bead tips or slip into large-hole beads). Work equally well with bead and tube crimps. Use Micro Bead Crimping Pliers for crimps up to 1mm, and use Standard Bead Crimping Pliers for crimps over 1mm. Include instructions. Measure 5 1/8" long. Imported.

Description	Item#	Each
Micro Bead Crimping Pliers	<b>180-0031</b>	<b>\$11.65</b>
Standard Bead Crimping Pliers	<b>180-0030</b>	<b>11.65</b>

### B - E Bead and Tube Crimps

Metal bead and tube crimps are ideal for attaching micro cable, soft flex wire and translucent cord. Use with Standard Bead Crimping Pliers (see above) for a great finished look.

Just 1mm long, mini tube crimps are perfect for even the smallest, most delicate cords. Use Micro Bead Crimping Pliers (see above) for mini tube crimps and 1mm or smaller bead and tube crimps.

Description	Type	Hole Dia.	Item#	Bag of 1 oz.
B. Bead Crimps	Gold (brass)	2.5mm	<b>816-4002</b>	<b>\$12.90</b>
C.	Silver	2.5mm	<b>816-4001</b>	<b>12.50</b>

Description	Type	Hole Dia.	Length	Item#	Pkg. of 100
D. Tube Crimps	Gold-filled	2mm	2mm	<b>816-4005</b>	<b>\$9.95</b>
E.	Sterling silver	2mm	2mm	<b>816-4006</b>	<b>7.25</b>
Mini Tube Crimps	Sterling silver	1mm	1mm	<b>816-4010</b>	<b>3.99</b>

### F Stainless Steel Pliers

These well-made, lightweight box-joint pliers feature bent grooved jaws. Made of stainless steel for durability. Have slim handles with textured nonslip grips for secure handling. Measure 5" long.

Description	Jaw Size	Item#	Each
Stainless Steel Pliers	7/8"L x 3/8"W	<b>180-0325</b>	<b>\$10.95</b>

### G Wire Looping Pliers

These box-joint pliers feature a jaw with three finely polished round sections and a concave jaw for easily bending wire. Made of stainless steel for durability. Measure 5 5/8" long.

Description	Item#	Each
Wire Looping Pliers	<b>180-0035</b>	<b>\$10.75</b>

### H Split Ring Pliers

Open split rings easily with these pliers: just put the toothed jaw between the overlapping split ring, then squeeze the handles to pop the ring open. Measure 5 1/4" long.

Description	Item#	Each
Split Ring Pliers	<b>180-0033</b>	<b>\$7.60</b>

### I Bead Stringing Instruction Booklet – By Griffin

From Griffin, producer of high-quality bead cord, this classic offers good, simple instructions and clear black-and-white illustrations for making both knotted and unknotted necklaces. Also includes valuable tips for finishing off your necklaces like a pro. Softcover, 32 pages.

Description	Item#	Each
Bead Stringing Instruction Booklet	<b>811-0221</b>	<b>\$5.95</b>

**A Beadalon Knotter Tool**

Produces a tight, consistent knot each and every time. Can be used in your left or right hand to yield professional-level results. Works wonderfully for pearls and crystals strung on silk or poly thread. Also great for classroom bead stringing projects and others for which affordability is a key factor. Does the work of both a beading awl and tweezers, making knot creation easy and fun. Includes complete illustrated instructions. Measures 5¾" long.

Description	Item#	Each
Beadalon Knotter Tool	816-3006	\$21.95



**B Henrietta's Gum Arabic**

Used to make self-threading needles and to seal closing knots. It's water-soluble, so it washes off hands, tools and beads easily. Has full directions on label. Sold in 1 oz. bottle.

Description	Item#	Each
Henrietta's Gum Arabic	811-2180	\$3.95



**C Micro Beading Snips**

Use these snips to cut cords and snip apart knotted strands for restringing. Reflex action lets you do light work quickly and easily. Measure 3½" long.

Description	Item#	Each
Micro Beading Snips	819-0210	\$2.95



**D Precision Scissors**

Great for bead stringing work. Feature 1¼" pointed blades made of high-quality stainless steel and large handles made of black ABS plastic and contoured for comfort. Have lightweight design for easy maneuverability in tight places. Held together by a high-impact rivet and nylon washer for smooth cutting and extended life. Measure 4¼" long.

Description	Item#	Each
Precision Scissors	819-0110	\$8.95



**E Plastic/Fiberglass Dial Caliper – mm**

Measures inside, outside or depth up to 150mm in increments of 0.1mm. Features durable superpolyamide plastic and fiberglass construction. Comes complete with fitted plastic case. Made in Switzerland.

Description	Item#	Each
Plastic/Fiberglass Dial Caliper	825-1660	\$32.50



**F Pocket Vernier Caliper – inch and mm**

Measures up to 3¼" (1/16" increments) or 80mm (1.0mm increments), with Vernier scale of 0.1mm. Can be used as a handy conversion tool for inches and millimeters. Designed for outer measurements only. Made of brass.

Description	Item#	EACH Prices		
		1-2	3-5	6+
Pocket Vernier Caliper	813-1200	\$11.50	\$10.93	\$10.35



**G Bead Scoop**

This large scoop makes counting and sorting beads easy. Features flat end for scooping beads and long, thin end for dispensing beads one at a time. Measures 6" long with 2½" wide flat lip. Made of nickel-plated brass.

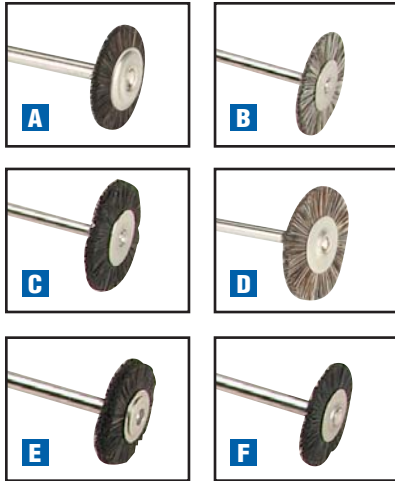
Description	Item#	Each
Bead Scoop	816-1205	\$5.85





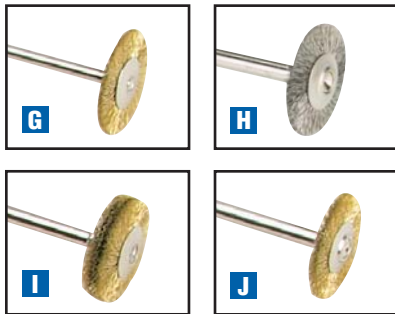
**SUPRA® “MM” Brushes – Made in USA.**

Gesswein miniature mandrel-mounted wheel and cup brushes are made with solid steel ring construction for durability. Brush filaments are permanently anchored in the solid steel ring and uniformly distributed for even wear. Great for flat, curved, small and hard-to-reach surfaces. Hard and soft bristle types are made of animal hair. Maximum operating speed: 25,000rpm. **Asterisked items also available on 3mm shanks.**

**A - F SUPRA® “MM” Bristle Wheel Brushes**

Styles 701D, 711D, 702D and 712D each contain two rows of upright bristles.

Style	Bristle Type	Shank	Trim Length	Diameter	Item#	DOZEN Prices	
						1-11	12+
710	Hard	3/32"	1/8"	9/16"	<b>112-7100</b>	<b>\$8.60</b>	<b>\$7.17</b>
A. 700	Soft	3/32"	1/8"	9/16"	<b>112-7000</b>	<b>9.69</b>	<b>8.07</b>
B. 711	Hard/Silver	3/32"	3/16"	3/4"	<b>112-7110</b>	<b>6.45</b>	<b>5.37</b>
711	Hard/Black	3/32"	3/16"	3/4"	<b>112-7109</b>	<b>5.70</b>	<b>4.75</b>
C. 711D	Hard	3/32"	3/16"	3/4"	<b>112-7111</b>	<b>24.35</b>	<b>20.29</b>
D. 701	Soft	3/32"	3/16"	3/4"	<b>112-7010</b>	<b>7.45</b>	<b>6.21</b>
701D	Soft	3/32"	3/16"	3/4"	<b>112-7011</b>	<b>36.75</b>	<b>30.62</b>
E. 712D	Hard	1/8"	3/16"	3/4"	<b>112-7120</b>	<b>38.40</b>	<b>32.00</b>
702D	Soft	1/8"	3/16"	3/4"	<b>112-7020</b>	<b>46.95</b>	<b>39.12</b>
F. 713*	Hard	1/8"	3/16"	3/4"	<b>112-7130</b>	<b>11.20</b>	<b>9.33</b>
703*	Soft	1/8"	3/16"	3/4"	<b>112-7030</b>	<b>13.45</b>	<b>11.21</b>

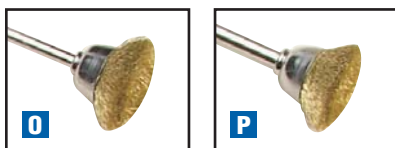
**G - J SUPRA® “MM” Wire Wheel Brushes**

All made of .003" diameter crimped wire except #112-7315, which is made of .005" diameter crimped wire. Styles 722 and 732 each contain two rows of upright bristles.

Style	Wire Type	Shank	Trim Length	Diameter	Item#	DOZEN Prices	
						1-11	12+
G. 721	Brass	3/32"	3/16"	3/4"	<b>112-7210</b>	<b>\$26.65</b>	<b>\$22.21</b>
731	Steel	3/32"	3/16"	3/4"	<b>112-7310</b>	<b>25.75</b>	<b>21.46</b>
H. 731	Stainless	1/8"	3/16"	3/4"	<b>112-7315</b>	<b>37.95</b>	<b>31.62</b>
I. 722	Brass	1/8"	3/16"	3/4"	<b>112-7220</b>	<b>79.95</b>	<b>66.62</b>
732	Steel	1/8"	3/16"	3/4"	<b>112-7320</b>	<b>75.95</b>	<b>63.29</b>
J. 723*	Brass	1/8"	3/16"	3/4"	<b>112-7230</b>	<b>25.80</b>	<b>21.50</b>
733*	Steel	1/8"	3/16"	3/4"	<b>112-7330</b>	<b>25.85</b>	<b>21.54</b>

**K - N SUPRA® “MM” Bristle Cup Brushes**

Style	Wire Type	Shank	Trim Length	Diameter	Item#	DOZEN Prices	
						1-11	12+
K. 760	Hard	3/32"	5/32"	1/2"	<b>112-7600</b>	<b>\$10.95</b>	<b>\$9.12</b>
750	Soft	3/32"	5/32"	1/2"	<b>112-7500</b>	<b>12.65</b>	<b>10.54</b>
L. 761	Hard	3/32"	1/4"	9/16"	<b>112-7610</b>	<b>12.30</b>	<b>10.25</b>
751	Soft	3/32"	1/4"	9/16"	<b>112-7510</b>	<b>12.75</b>	<b>10.62</b>
M. 762*	Hard	1/8"	1/4"	9/16"	<b>112-7620</b>	<b>10.85</b>	<b>9.04</b>
752*	Soft	1/8"	1/4"	9/16"	<b>112-7520</b>	<b>11.95</b>	<b>9.96</b>
N. 764*	Hard	1/8"	7/16"	1"	<b>112-7640</b>	<b>45.15</b>	<b>37.62</b>
754*	Soft	1/8"	7/16"	1"	<b>112-7540</b>	<b>53.70</b>	<b>44.75</b>

**O, P SUPRA® “MM” Wire Cup Brushes**

All made of .003" diameter crimped wire except #112-7825, which is made of .005" diameter crimped wire.

Style	Wire Type	Shank	Trim Length	Diameter	Item#	DOZEN Prices	
						1-11	12+
O. 771	Brass	3/32"	3/16"	9/16"	<b>112-7710</b>	<b>\$30.60</b>	<b>\$25.50</b>
781	Steel	3/32"	3/16"	9/16"	<b>112-7810</b>	<b>30.60</b>	<b>25.50</b>
P. 772*	Brass	1/8"	3/16"	9/16"	<b>112-7720</b>	<b>29.70</b>	<b>24.75</b>
782*	Steel	1/8"	1/4"	5/8"	<b>112-7820</b>	<b>28.95</b>	<b>24.12</b>
782	Stainless	1/8"	1/4"	5/8"	<b>112-7825</b>	<b>72.00</b>	<b>60.00</b>

**SUPRA® “ME” Brushes – Made in USA.**

Gesswein miniature mandrel-mounted end brushes are available in a wide variety of sizes. One-piece ferrule construction ensures that the stem and ferrule will not become separated during use. Plastic ferrules are available to prevent scratching when used for interior polishing work. In the table below, please note that those brushes with a style number containing the letter “P” have plastic ferrules, which are slightly larger than stated diameter. All other ferrules are metal. Hard and soft bristle types are made of animal hair. Maximum operating speed: 25,000rpm. **Asterisked items also available on 3mm shanks.**

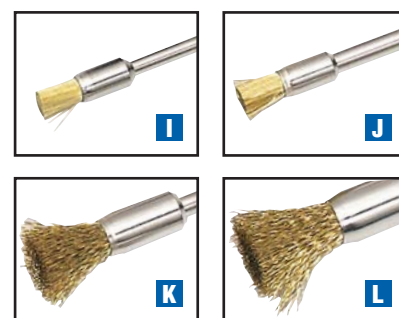
**A - H SUPRA® “ME” Bristle End Brushes**

Style	Bristle Type	Shank	Trim Length	Ferrule Diameter	Item#	DOZEN Prices	
						1-11	12+
A. 864	Hard	3/32"	1/4"	5/32"	110-8640	\$10.25	\$8.54
B. 860	Hard	3/32"	1/4"	3/16"	110-8600	6.90	5.75
860 <sup>3/8</sup>	Hard	3/32"	3/8"	3/16"	110-8603	7.85	6.54
860 <sup>1/2</sup>	Hard	3/32"	1/2"	3/16"	110-8605	8.40	7.00
850	Soft	3/32"	1/4"	3/16"	110-8500	17.50	14.58
C. 861	Hard	3/32"	3/8"	1/4"	110-8610	13.80	11.50
861 <sup>1/2</sup>	Hard	3/32"	1/2"	1/4"	110-8615	14.60	12.17
851	Soft	3/32"	3/8"	1/4"	110-8510	24.90	20.75
D. 859*	Hard	1/8"	1/4"	3/16"	110-8590	7.65	6.37
E. 859P	Hard	1/8"	1/4"	3/16"	111-8590	9.85	8.21
849*	Soft	1/8"	1/4"	3/16"	110-8490	12.50	10.42
849P	Soft	1/8"	1/4"	3/16"	111-8490	18.45	15.37
F. 862*	Hard	1/8"	3/8"	1/4"	110-8620	13.50	11.25
G. 862P	Hard	1/8"	3/8"	1/4"	111-8620	14.75	12.29
862 <sup>1/2</sup>	Hard	1/8"	1/2"	1/4"	110-8625	15.30	12.75
862 <sup>3/4</sup>	Hard	1/8"	3/4"	1/4"	110-8627	20.90	17.42
852	Soft	1/8"	3/8"	1/4"	110-8520	24.96	20.80
852P	Soft	1/8"	3/8"	1/4"	111-8520	24.60	20.50
H. 962*	Hard	1/8"	9/16"	5/16"	110-9620	19.50	16.25

**I - L SUPRA® “ME” Wire End Brushes**

All made of .003" diameter straight wire except #110-8795, #110-8720, #110-8820, #110-9720 and #110-9820, which are made of .005" diameter crimped wire.

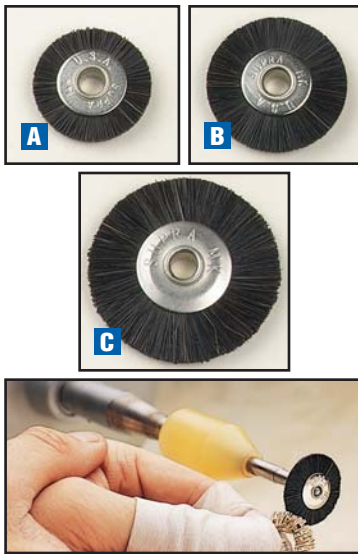
Style	Wire Type	Shank	Trim Length	Ferrule Diameter	Item#	DOZEN Prices	
						1-11	12+
I. 870	Brass	3/32"	1/4"	3/16"	110-8700	\$14.25	\$11.87
880	Steel	3/32"	1/4"	3/16"	110-8800	13.80	11.50
J. 869*	Brass	1/8"	1/4"	3/16"	110-8690	14.25	11.87
879*	Steel	1/8"	1/4"	3/16"	110-8790	13.80	11.50
879	Stainless	1/8"	1/4"	3/16"	110-8795	30.25	25.21
K. 872*	Brass	1/8"	7/16"	1/4"	110-8720	35.75	29.79
882*	Steel	1/8"	7/16"	1/4"	110-8820	34.75	28.96
882	Stainless	1/8"	7/16"	1/4"	110-8823	46.25	38.54
L. 972	Brass	1/8"	9/16"	5/16"	110-9720	39.25	32.71
982	Steel	1/8"	9/16"	5/16"	110-9820	39.25	32.71

**M SUPRA® Introductory Brush Sets**

Try these 12-piece sets of our most popular Supra brushes. Set #1 (3/32" shank set) includes assortment of bristle and wire cup, wheel and end brushes. Set #2 (1/8" shank set) includes bristle cup and end brushes with both plastic and metal ferrules.

Description	Shank	Ferrule Type	Item#	Each
Set #1	3/32"	Metal	112-8000	\$11.95
M. Set #2	1/8"	Metal and plastic	112-8003	17.85



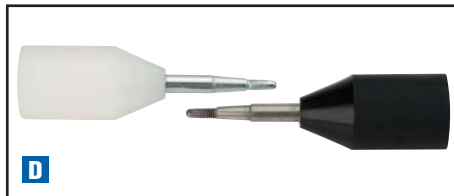
**A - C SUPRA® "MK"® Wheel Brushes – The world's best jewelry brushes!**

Our most popular unmounted wheel brushes. Feature solid-ring construction for great durability and plenty of evenly distributed animal hair bristles for uniform wear. Designed to run true. Mount on our unbreakable SUPRA "MK" Plastic Spindles (see below) in seconds, helping speed up production. Can also be mounted on mandrels #20 and #22 (see p. 352 for mandrel specifications). Have brass hubs with 1/8" arbor holes. Maximum operating speed: 25,000rpm. Made in USA.

Bristle Type	Trim Length	Wheel Dia.	Item#	DOZEN Prices			
				1-11	12-35	36-71	72+
A. Hard	1/8"	5/8"	<b>113-0100</b>	<b>\$5.45</b>	<b>\$4.54</b>	<b>\$4.31</b>	<b>\$4.09</b>
	Medium	1/8"	5/8"	<b>113-0150</b>	<b>5.45</b>	<b>4.54</b>	<b>4.31</b>
	Soft	1/8"	5/8"	<b>113-0250</b>	<b>6.35</b>	<b>5.29</b>	<b>5.02</b>
B. Hard	3/16"	3/4"	<b>113-0400</b>	<b>5.10</b>	<b>4.25</b>	<b>4.03</b>	<b>3.83</b>
	Medium	3/16"	3/4"	<b>113-0500</b>	<b>5.10</b>	<b>4.25</b>	<b>4.03</b>
	Soft	3/16"	3/4"	<b>113-0600</b>	<b>5.45</b>	<b>4.54</b>	<b>4.31</b>
C. Hard	1/4"	1"	<b>113-0800</b>	<b>5.75</b>	<b>4.79</b>	<b>4.54</b>	<b>4.31</b>
	Medium	1/4"	1"	<b>113-0850</b>	<b>5.75</b>	<b>4.79</b>	<b>4.54</b>
	Soft	1/4"	1"	<b>113-0950</b>	<b>7.15</b>	<b>5.96</b>	<b>5.65</b>

**D Plastic Spindles for SUPRA® "MK"® Wheel Brushes**

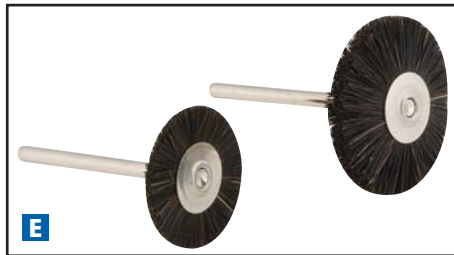
Threaded steel mandrels mounted in hard plastic spindle bases. Accommodate all SUPRA "MK" Brushes. Fit on tapered spindles. Allow easy mounting of brushes—require only slight pressure and a quarter-turn. Choose for right or left motor shaft.



Description	Item#	Each
White Spindle for Right Shaft	<b>840-4950</b>	<b>\$12.25</b>
Black Spindle for Left Shaft	<b>840-4900</b>	<b>12.25</b>

**E SUPRA® "MKM" Mounted Wheel Brushes – 1/8" Shank**

Feature hard, evenly distributed, converging animal hair bristles mounted on 1/8" shanks. Available in two styles: 1" diameter standard thickness and heavy-duty 1 1/2" diameter double thickness. Have 1/8" shanks. Maximum operating speed: 25,000rpm.



Bristle Type	Trim Length	Wheel Dia.	Item#	DOZEN Prices	
				1-11	12+
Hard	1/4"	1"	<b>112-5100</b>	<b>\$23.25</b>	<b>\$19.37</b>
Hard	3/8"	1 1/4"	<b>112-5200</b>	<b>66.95</b>	<b>55.79</b>

**F Double Row Mounted Wheel Brush – 3/32" Shank**

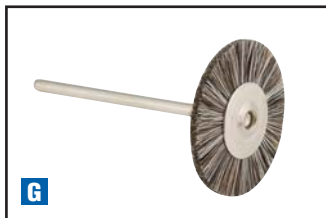
Contains soft, white goat hair bristles ideal for applying rouge and compounds. Measures approx. 3/4" diameter x 1/4" thick. Has 3/32" shank. Maximum operating speed: 8,000rpm.



Bristle Type	Wheel Dia.	Item#	EACH Prices	
			1-5	6+
Soft	3/4"	<b>113-1520</b>	<b>\$4.95</b>	<b>\$4.46</b>

**G Single Row Mounted Wheel Brush – 3/32" Shank**

Features a single row of natural bristles mounted securely in a copperplated steel hub. Great for cleaning and polishing tight areas. Measures 1" dia. with 3/32" shank. Maximum operating speed: 25,000rpm.



Bristle Type	Trim Length	Wheel Dia.	Item#	DOZEN Prices	
				1-11	12+
Soft	1/4"	1"	<b>113-1526</b>	<b>\$6.30</b>	<b>\$5.67</b>

**Safety Recommendations**

For safe operation of motor-driven brushes, comply with the Safety Standards of the Industrial Division of the American Brush Manufacturers Association and of the American National Standards Institute: ANSI B165.1-1991, "Power-Driven Brushing Tools—Safety Requirements."



## A Wood Hub Wheel Brushes

Our standard high-quality wheel brushes marked with a blue imprint. These superior brushes consist of hard Chungking (animal hair) bristles securely mounted in hardwood hubs. Those with two or more rows of bristles are converging type. All have 1/4" arbor holes. Recommended for use on tapered spindles. Made in USA. Maximum operating speed: 10,000rpm.

Style	Type	Trim Length	Rows of Bristles	Hub Dia.	Wheel Dia.	Item#	EACH Prices			
							1-11	12-71	72-143	144+
53	5A	5/8"	1	1 1/4"	2 1/2"	<b>115-1530</b>	<b>\$1.30</b>	<b>\$1.04</b>	<b>\$ .98</b>	<b>\$ .91</b>
54SC	6C	3/8"	2	1 1/4"	2"	<b>115-1540</b>	<b>1.75</b>	<b>1.40</b>	<b>1.31</b>	<b>1.23</b>
55	6A	5/8"	2	1 1/4"	2 1/2"	<b>115-1550</b>	<b>1.60</b>	<b>1.28</b>	<b>1.20</b>	<b>1.12</b>
56	7A	5/8"	3	1 1/4"	2 1/2"	<b>115-1560</b>	<b>1.95</b>	<b>1.56</b>	<b>1.46</b>	<b>1.37</b>
57	8A	5/8"	4	1 1/4"	2 1/2"	<b>115-1570</b>	<b>2.75</b>	<b>2.20</b>	<b>2.06</b>	<b>1.93</b>
62	10	3/4"	2	1 1/2"	3"	<b>115-1620</b>	<b>2.05</b>	<b>1.64</b>	<b>1.54</b>	<b>1.44</b>
63	11	3/4"	3	1 1/2"	3"	<b>115-1630</b>	<b>2.40</b>	<b>1.92</b>	<b>1.80</b>	<b>1.68</b>
64	12	3/4"	4	1 1/2"	3"	<b>115-1640</b>	<b>2.70</b>	<b>2.16</b>	<b>2.03</b>	<b>1.89</b>
70SC	1C	3/8"	1	1 7/8"	2 5/8"	<b>115-1700</b>	<b>1.50</b>	<b>1.20</b>	<b>1.13</b>	<b>1.05</b>
71	1A	5/8"	1	1 7/8"	3 1/8"	<b>115-1710</b>	<b>1.50</b>	<b>1.20</b>	<b>1.13</b>	<b>1.05</b>
72SC	2C	3/8"	2	1 7/8"	2 5/8"	<b>115-1720</b>	<b>2.05</b>	<b>1.64</b>	<b>1.54</b>	<b>1.44</b>
73	2A	5/8"	2	1 7/8"	3 1/8"	<b>115-1730</b>	<b>2.05</b>	<b>1.64</b>	<b>1.54</b>	<b>1.44</b>
73SC	2B	1/2"	2	1 7/8"	2 7/8"	<b>115-1732</b>	<b>2.05</b>	<b>1.64</b>	<b>1.54</b>	<b>1.44</b>

SC stands for short cut bristles, which give more aggressive brushing action.



## B Economy Wheel Brushes

Marked with a black imprint. Consist of equal-quality black or white Chungking bristles (depending on availability) securely mounted in hardwood hubs. Almost as stiff as our top-of-the-line blue imprint brushes. Those with two or more rows of bristles are converging type. All have 1/4" arbor holes. Recommended for use on tapered spindles. Made in USA.

Style	Type	Trim Length	Rows of Bristles	Hub Dia.	Wheel Dia.	Item#	EACH Prices		
							12-60	72-132	144+
54E SC	6C	3/8"	2	1 1/4"	2"	<b>115-1800</b>	<b>\$1.15</b>	<b>\$1.04</b>	<b>\$ .92</b>
1E-B	1B	1/2"	1	1 7/8"	2 7/8"	<b>115-1803</b>	<b>.98</b>	<b>.88</b>	<b>.78</b>
70E SC	1C	3/8"	1	1 7/8"	2 5/8"	<b>115-1805</b>	<b>.95</b>	<b>.86</b>	<b>.76</b>
72E SC	2C	3/8"	2	1 7/8"	2 5/8"	<b>115-1810</b>	<b>1.30</b>	<b>1.17</b>	<b>1.04</b>
73E	2A	5/8"	2	1 7/8"	3 1/8"	<b>115-1815</b>	<b>1.30</b>	<b>1.17</b>	<b>1.04</b>
73CE	2B	1/2"	2	1 7/8"	3"	<b>115-1820</b>	<b>1.30</b>	<b>1.17</b>	<b>1.04</b>

SC stands for short cut bristles, which give more aggressive brushing action. Twelve-piece minimum; please order in multiples of 12.



## C Plastic Hub Wheel Brushes

Consist of extra-hard, premium-quality Chungking bristles. Mounted on narrow, unbreakable plastic hubs. Bristles converge exceptionally well, eliminating the need for burn-in. All have 1/2" thick hubs with 1/4" arbor holes. Recommended for use on tapered spindles. Made in USA.

Style	Type	Trim Length	Rows of Bristles	Hub Dia.	Wheel Dia.	Item#	EACH Prices			
							1-11	12-71	72-143	144+
54P SC	6PC	3/8"	2	1 1/4"	2"	<b>115-1541</b>	<b>\$2.10</b>	<b>\$1.68</b>	<b>\$1.58</b>	<b>\$1.47</b>
55P	6PA	5/8"	2	1 1/4"	2 1/2"	<b>115-1551</b>	<b>2.10</b>	<b>1.68</b>	<b>1.58</b>	<b>1.47</b>
72P SC	2PC	3/8"	2	2"	2 5/8"	<b>115-1721</b>	<b>2.40</b>	<b>1.92</b>	<b>1.80</b>	<b>1.68</b>
73P	2PA	5/8"	2	2"	3 1/8"	<b>115-1731</b>	<b>2.40</b>	<b>1.92</b>	<b>1.80</b>	<b>1.68</b>

SC stands for short cut bristles, which give more aggressive brushing action.



## D Plastic Hub Wheel Brush – With Muslin Insert

Features muslin cloth sandwiched between two rows of pure Chungking bristles. Helps retain compound so you don't have to apply it as often—saves time. Recommended for use on tapered spindles. Has 3/16" arbor hole. Recommended operating speed: 1,500rpm.

Description	Trim Length	Rows of Bristles	Hub Dia.	Wheel Dia.	Item#	EACH Prices	
						1-5	6+
Plastic Hub Wheel Brush	1/2"	2	1 1/4"	2 1/4"	<b>115-1735</b>	<b>\$4.95</b>	<b>\$4.46</b>





A

**A Wheel Brush – With Lead Center**

Brush with two rows of tightly packed hard Chungking bristles. Provides good stiffness and better performance than individually tufted brushes. Lead center ensures secure retention on tapered spindles. Measures 2" diameter x 9/16" trim length. Maximum operating speed: 3,450rpm. Made in USA.

Style	Bristle Type	Trim Length	Wheel Dia.	Rows	Item#	EACH Prices		
						1-11	12-143	144+
EL-192	Hard	9/16"	2"	2	<b>114-5192</b>	<b>\$5.40</b>	<b>\$4.50</b>	<b>\$3.78</b>



B

**B Bristle End Brushes**

Small diameter brushes made of hard Chungking bristles. Use with or without polishing compounds to clean or polish. All have 3/16" arbor holes. Use on tapered spindles. Maximum operating speed: 3,500rpm. Made in USA.

Bristle Type	Trim Length	Knots	Item#	EACH Prices	
				1-11	12+
Hard	7/8"	7	<b>115-3007</b>	<b>\$3.50</b>	<b>\$2.98</b>
Hard	7/8"	10	<b>115-3010</b>	<b>4.75</b>	<b>4.04</b>
Hard	1 1/4"	12	<b>115-3012</b>	<b>5.10</b>	<b>4.34</b>



C



D

E

**C - E Wire Scratch Wheel Brushes**

Made of .003" diameter crimped wire. Lead centers (plastic centers for 4403B and 4403NS), ensure secure retention on tapered spindles. Ideal for cleaning, light deburring and imparting a fine satin finish on nonferrous metals such as gold and silver. Use brass on yellow metals, others on white metals. All have 1/4" arbor holes. Maximum operating speed: 6,000rpm (4,000rpm for 4403B and 4403NS). Made in USA.

Style	Wire Type	Trim Length	Wheel Dia.	Rows	Item#	EACH Prices	
						1-11	12+
2203B	Brass	3/4"	2"	2	<b>116-2203</b>	<b>\$18.35</b>	<b>\$15.60</b>
C. 3203B	Brass	1"	3"	2	<b>116-3203</b>	<b>16.45</b>	<b>13.98</b>
D. 3203S	Steel	1"	3"	2	<b>117-3203</b>	<b>16.45</b>	<b>13.98</b>
E. 3203NS	Nickel Silver	1"	3"	2	<b>118-3203</b>	<b>16.15</b>	<b>13.73</b>
3403B	Brass	1"	3"	4	<b>116-3403</b>	<b>38.25</b>	<b>32.51</b>
4403B	Brass	1 1/4"	4"	4	<b>116-4403</b>	<b>39.35</b>	<b>33.45</b>
4403NS	Nickel Silver	1 1/4"	4"	4	<b>118-4403</b>	<b>42.15</b>	<b>35.83</b>



F



G

**F, G Mounted Wire Wheel Brushes – 3/32" Shank**

Made of .003" diameter crimped wire. For cleaning and brush finishing with flex shafts. Use brass for yellow metals, steel for white metals. Both have 3/32" shanks. Maximum operating speed: 22,000rpm (recommended 17,000rpm).

Wire Type	Trim Length	Wheel Dia.	Item#	DOZEN Prices	
				1-11	12+
F. Steel	3/16"	3/4"	<b>113-1000</b>	<b>\$16.80</b>	<b>\$14.00</b>
G. Brass	3/16"	3/4"	<b>113-1050</b>	<b>17.15</b>	<b>14.29</b>



H



I



J



K

**H - K Scratch Brush Pens**

Excellent for removing rust or corrosion and for reaching into narrow areas. Handy and comfortable to hold. Available in four color-coded types with metal ferrules for durability: steel, nylon, fiberglass and brass. Measure 4 1/2" overall length. The 1 1/4" long refills are sold in packages of six. Made in Germany.

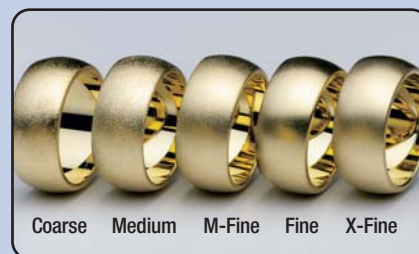
Description	Color	Item#	EACH Prices	
			1-2	3+
H. Stainless Steel Pen	Orange	<b>115-2310</b>	<b>\$7.25</b>	<b>\$6.89</b>
I. Nylon Pen	Blue	<b>115-2312</b>	<b>6.45</b>	<b>6.13</b>
J. Fiberglass Pen	Green	<b>115-2314</b>	<b>6.45</b>	<b>6.13</b>
K. Brass Pen	Red	<b>115-2316</b>	<b>7.25</b>	<b>6.89</b>

Description	Item#	PKG. of 6	
		1-2	3+
Stainless Steel Refills	<b>115-2311</b>	<b>\$5.25</b>	<b>\$4.99</b>
Nylon Refills	<b>115-2313</b>	<b>3.75</b>	<b>3.56</b>
Fiberglass Refills	<b>115-2315</b>	<b>4.50</b>	<b>4.28</b>
Brass Refills	<b>115-2317</b>	<b>4.75</b>	<b>4.51</b>

## Texturing Wheels – Create a variety of beautiful textured finishes in seconds!

Whether you want a fine satin finish, a coarse textured surface or something in between, Texturing Wheels have it covered. Choose from a wide variety of sizes and wire diameters to get the exact finish you're looking for.

They produce a look similar to a sandblasted finish without the gritty mess or chore of changing sand in the blaster. You don't even have to get up from the bench. Mounted Texturing Wheels ( $\frac{3}{32}$ " shanks) can be used on a standard flex shaft handpiece. Unmounted Texturing Wheels can be used on a tapered spindle on your polishing motor. Consist of steel wires firmly attached to plastic hubs. Color-coded for easy selection. Benchtop dust collector or gold saving box strongly recommended to collect gold for refining. Safety goggles or face shield and finger protection required.

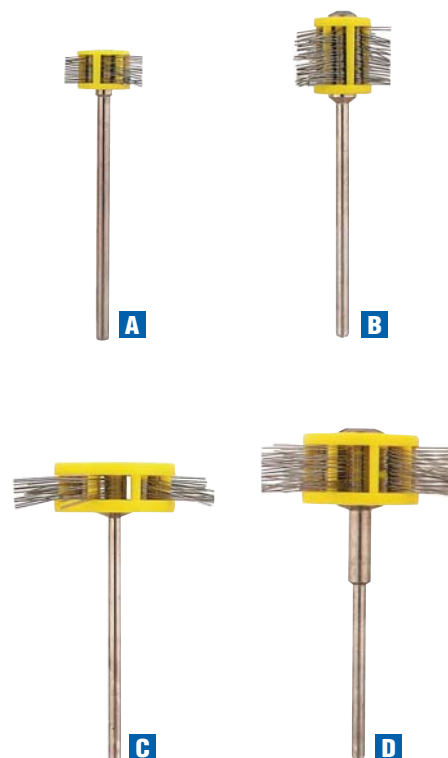


### A - D Mounted Texturing Wheels – $\frac{3}{32}$ " Shank

Wheels in four different sizes and a variety of wire diameters for use on your flex shaft. Use with safety goggles (face shield and finger guards also recommended). Recommended operating speed: 5,000rpm.

Dia.* x H (mm)	Wire Dia. (mm)	Finish	Color	Item#	EACH Prices	
					1-2	3+
A. 13 x 5	0.2	X-Fine	Yellow	113-1052	\$34.00	\$32.30
	0.3	Fine	Red	113-1053	34.00	32.30
	0.4	M-Fine	Blue	113-1054	34.00	32.30
	0.5	Medium	Green	113-1055	34.00	32.30
B. 16 x 12	0.2	X-Fine	Yellow	113-1062	32.00	30.40
	0.3	Fine	Red	113-1063	32.00	30.40
	0.45	M-Fine	Blue	113-1064	32.00	30.40
C. 40 x 8	0.2	X-Fine	Yellow	113-1072	22.80	21.66
	0.3	Fine	Red	113-1073	22.80	21.66
	0.6	Medium	Green	113-1076	22.80	21.66
	0.7	Coarse	Gray	113-1077	22.80	21.66
D. 40 x 12	0.2	X-Fine	Yellow	113-1082	24.70	23.47
	0.3	Fine	Red	113-1083	24.70	23.47
	0.45	M-Fine	Blue	113-1084	24.70	23.47
	0.6	Medium	Green	113-1086	24.70	23.47
	0.7	Coarse	Gray	113-1087	24.70	23.47
	0.8	X-Coarse	Black	113-1088	24.70	23.47

\*Overall diameter including hub and wire bristles.



### E Texturing Wheel Set with Stand

A money-saving set of our six most popular Texturing Wheels. Includes all 40 x 12mm mounted wheels listed above. Comes complete with plastic stand that keeps wheels organized and at your fingertips.

Description	Item#	Each
Texturing Wheel Set with Stand	113-1099	\$149.95



### F Unmounted Texturing Wheels

Five different 4" diameter wheels for use with a tapered spindle on your polishing motor. Use with safety goggles (face shield and finger guards also recommended). Recommended operating speed: 15,000rpm.

Dia.* x H (mm)	Wire Dia. (mm)	Finish	Color	Item#	EACH Prices	
					1-2	3+
F. 100 x 25	0.2	X-Fine	Yellow	113-1092	\$42.55	\$40.42
	0.3	Fine	Red	113-1093	42.55	40.42
	0.45	M-Fine	Blue	113-1094	39.10	37.15
	0.6	Medium	Green	113-1096	39.10	37.15
	0.6	Coarse	Gray	113-1097	39.10	37.15

\*Overall diameter including hub and wire bristles.







A



B



C



D



E



F



G



H

### A Bench Duster – Wooden Handle

Contains four rows of 1½" long medium natural bristles. Ideal for cleaning dust from surfaces. Measures 9¾" long.

Description	Face Size (L x W)	Item#	EACH Prices		
			1-2	3-11	12+
Bench Duster	4" x ¾"	115-2260	\$9.50	\$8.55	\$7.60

### B Watchmaker's Brush – Wooden Handle

Contains four rows of ⅝" long, soft natural bristles. Recommended for cleaning and dusting clocks and instruments and for general-purpose work. Measures 10¼" long.

Description	Face Size (L x W)	Item#	EACH Prices		
			1-2	3-11	12+
Watchmaker's	4½" x ½"	115-2340	\$5.60	\$5.04	\$4.48

### C Brass Scratch Brush – Wooden Handle

Has four rows of ¾"L x .004" dia. anchored brass wire. Produces a fine satin finish on soft yellow metals. Measures 8¼" long.

Description	Face Size (L x W)	Item#	EACH Prices	
			1-11	12+
Brass Scratch	3¼" x ⅝"	118-3400	\$9.70	\$8.25

### D Wire Brushes – Plastic Handles

Ideal for cleaning bur teeth. Can also be used for texturing. Available with ⅞"L x .006" dia. stainless steel or ⅞"L x .004" dia. brass wire bristles. Measure 7¼" long.

Description	Face Size (L x W)	Item#	EACH Prices	
			1-11	12+
D. Stainless Steel	1⅜" x ¼"	114-5300	\$2.10	\$1.75
Brass	1⅜" x ¼"	114-5305	2.85	2.37

### E Hand-Laced Scratch Brushes – Wooden Handles

Feature three rows of soft, flexible ⅞"L x .003" dia. bristles. Hand-laced with stainless steel wire to retain maximum bristles and allow handle expansion and contraction when exposed to wetness. Measure 7¾" long.

Description	Face Size (L x W)	Item#	EACH Prices	
			1-11	12+
Stainless Steel	1⅜" x ¼"	114-5320	\$6.95	\$6.26
E. Brass	1⅜" x ¼"	114-5315	6.25	5.63

### F Washout Brushes – Lucite Handles

Have extra-stiff natural bristles in lucite handles. The 3-Row Brush has ⅝" long bristles, and the 4-Row Brush has ¾" long bristles. Measure 7¼" long.

Description	Face Size (L x W)	Item#	EACH Prices		
			1-2	3-11	12+
F. 3-Row	3½" x ½"	115-2060	\$5.51	\$4.96	\$4.41
4-Row	3¼" x ¾"	115-2070	5.95	5.36	4.76

### G Washout Brushes – Wooden Handles

Have four rows of ¾" long natural bristles. Short-Face has extra-stiff bristles, and Regular has stiff bristles. Measure 8¼" long.

Description	Face Size (L x W)	Item#	EACH Prices		
			1-2	3-11	12+
G. Short-Face	2" x ½"	115-2100	\$5.40	\$4.86	\$4.32
Regular	3½" x ¾"	115-2200	5.75	5.18	4.60

### H Small Washout Brush – Plastic Handle

Has four rows of ½" long extra-stiff nylon bristles. Fits inside most rings. Measures 6⅝" long.

Description	Face Size (L x W)	Item#	EACH Prices		
			1-2	3-11	12+
Small Washout	1¾" x ½"	115-2250	\$2.40	\$2.16	\$1.92



**A Econo Flux Brush**

Disposable brush with tin ferrule. Use for fluxes and other liquids.

Description	Overall Length	Item#	EACH Prices	
			3-9	12+
Econo Flux Brush	1 <sup>3</sup> / <sub>4</sub> "	115-0100	\$3.35	\$3.30

Three-piece minimum; please order in multiples of three.

**B - G Quill Flux Brushes**

Inexpensive disposable brushes made of camel hair mounted in hollow quill handles. Use for applying fluxes and other liquids.

Style	Overall Length	Item#	EACH Prices	
			3-9	12+
B. 1	3 <sup>3</sup> / <sub>4</sub> "	115-0010	\$1.50	\$1.28
C. 2	3 <sup>1</sup> / <sub>2</sub> "	115-0020	1.50	1.28
D. 3	3"	115-0030	1.50	1.28
E. 5	2 <sup>1</sup> / <sub>4</sub> "	115-0050	1.18	1.00
F. 7	1 <sup>3</sup> / <sub>4</sub> "	115-0070	1.18	1.00
G. 9	1 <sup>1</sup> / <sub>2</sub> "	115-0090	1.18	1.00

Three-piece minimum; please order in multiples of three.

**H - J Wood Flux Brushes**

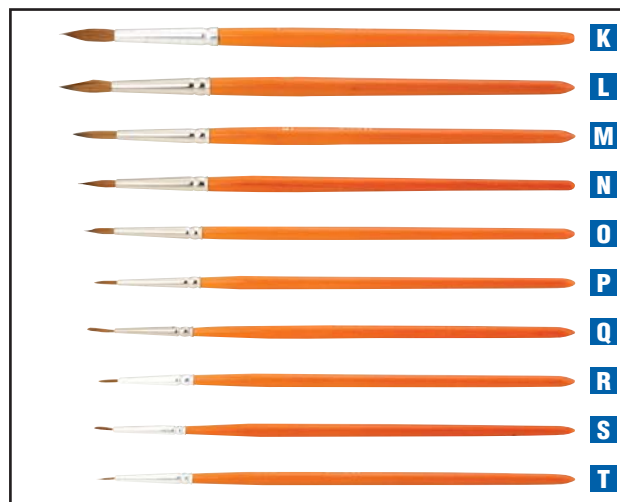
Well-constructed, durable camel hair brushes with wooden handles.

Description	Overall Length	Item#	EACH Prices	
			1-11	12+
H. Large Brush	7 <sup>1</sup> / <sub>2</sub> "	115-0400	\$2.65	\$2.25
I. Medium Brush	7 <sup>1</sup> / <sub>2</sub> "	115-0500	2.65	2.25
J. Small Brush	7 <sup>1</sup> / <sub>2</sub> "	115-0600	1.95	1.66

**K - T Red Sable Brushes**

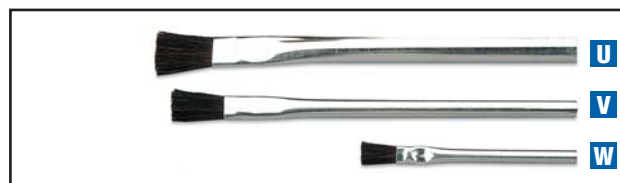
Feature pure red sable tips hand-cupped and mounted in seamless aluminum ferrules on wooden handles. Can be used with oil- and water-based paints. Measure 6<sup>1</sup>/<sub>8</sub>" long not including bristles.

Size	Item#	EACH Prices	
		1-11	12+
K. 7	115-0709	\$13.15	\$11.84
L. 6	115-0708	7.20	6.48
M. 5	115-0707	5.40	4.86
N. 4	115-0706	4.30	3.87
O. 3	115-0705	3.55	3.20
P. 2	115-0704	2.70	2.43
Q. 1	115-0703	2.20	1.98
R. 1/0	115-0702	2.20	1.98
S. 2/0	115-0701	2.20	1.98
T. 3/0	115-0700	2.20	1.98

**U - W Mucilage/Acid Brushes**

Extra-stiff black horsehair brushes with tin handles. Can be used for soldering applications and with acids.

Dia. x L	Item#	Dozen
U. 1/2" x 5 <sup>3</sup> / <sub>4</sub> "	115-0762	\$2.70
V. 3/8" x 5 <sup>3</sup> / <sub>4</sub> "	115-0761	1.65
W. 1/4" x 3 <sup>1</sup> / <sub>4</sub> "	115-0760	1.35

**X - AA Nylon Tube Brushes**

Single-stem, single-spiral nylon tube brushes for cleaning inside rings and grooves. Each has loop handle for sure grip.

Brush Size (Dia. x L)	Overall Length	Item#	EACH Prices		
			1-2	3-11	12+
X. 1" x 4"	12 <sup>1</sup> / <sub>4</sub> "	115-2285	\$3.49	\$3.14	\$2.79
Y. 3/4" x 3"	8 <sup>1</sup> / <sub>2</sub> "	115-2280	2.05	1.85	1.64
Z. 1/2" x 3"	8 <sup>1</sup> / <sub>2</sub> "	115-2275	1.90	1.71	1.52
AA. 1/4" x 2"	6 <sup>1</sup> / <sub>4</sub> "	115-2270	1.60	1.44	1.28



**Buff Selection Guide (pp. 76–81)**

Muslin, flannel, felt, cotton and chamois create buffs with different characteristics. Used with compounds, buffs can handle everything from removing deep scratches to imparting a high luster. Reserve just one buff for each compound to avoid mixtures, which can produce unpredictable finishes. When selecting buffs, please consider the following information.

- **Stitched Buffs** – Joined by several rows of stitching for firmer action. Use with cutting compounds.
- **Loose Buffs** – Joined only at arbor hole for softer action and following contours. Use with rouge for final polishing.
- **Razor-Edge Buffs** – Perfect for reaching into tight areas.
- **Chemical Treatments** – Improve stiffness and provide better compound retention.
- **Combed Edges** – Hold compounds well. Require no break-in period.
- **Centers** – Choose from leather pinhole, shellac-hardened and lead for use on tapered spindles or arbor holes for use on arbor shafts.



**A Stitched White Muslin Buffs – Leather Pinhole Center**

Made of fine-weave muslin with combed edges and leather centers.

Dia. x Ply	Rows of Stitching	Thread Count	Item#	EACH Prices		
				1-11	12-35	36+
3" x 40	3	80/80	140-2300	\$1.95	\$1.76	\$1.56
4" x 40	3	80/80	140-2400	2.75	2.48	2.20
4" x 50	3	80/80	140-2450	3.10	2.79	2.48
4" x 60	3	80/80	140-2455	3.95	3.56	3.16
5" x 45	3	80/80	140-2500	3.75	3.38	3.00
5" x 50	3	80/80	140-2550	3.80	3.42	3.04
6" x 50	4	80/80	140-2650	4.89	4.40	3.91
6" x 60	4	80/80	140-2660	5.80	5.22	4.64
7" x 50	4	80/80	140-2700	6.20	5.58	4.96
8" x 55	4	80/80	140-2800	6.85	6.17	5.48



**B Stitched Coarse White Muslin Buffs – Shellac Pinhole Center**

Made of coarse-weave muslin with uncombed edges and shellac-hardened centers.

Dia. x Ply	Rows of Stitching	Thread Count	Item#	EACH Prices		
				1-11	12-35	36+
4" x 40	3	60/60	140-2000	\$1.69	\$1.52	\$1.35
5" x 45	3	60/60	140-2010	2.40	2.16	1.92
6" x 50	4	60/60	140-2020	3.50	3.15	2.80



**C Loose White Muslin Buffs – Leather Pinhole Center**

Made of fine-weave muslin with combed edges and leather centers.

Dia. x Ply	Thread Count	Item#	EACH Prices		
			1-11	12-35	36+
3" x 40	80/80	140-4300	\$2.10	\$1.89	\$1.68
4" x 40	80/80	140-4400	2.28	2.05	1.82
4" x 50	80/80	140-4350	2.68	2.41	2.14
5" x 45	80/80	140-4500	3.25	2.93	2.60
6" x 50	80/80	140-4650	4.95	4.46	3.96
6" x 60	80/80	140-4660	5.40	4.86	4.32
7" x 50	80/80	140-4700	5.95	5.36	4.76
8" x 55	80/80	140-4800	6.50	5.85	5.20



**D Loose White Muslin Buffs – Lead Center**

Made of fine-weave muslin with combed edges and lead centers. A tapered spindle will create threads in the lead, providing a positive seat.

Dia. x Ply	Thread Count	Item#	EACH Prices		
			1-11	12-35	36+
3" x 36	80/80	140-6330	\$3.40	\$3.06	\$2.72
3" x 54	80/80	140-6350	3.85	3.47	3.08
4" x 54	80/80	140-6450	4.40	3.96	3.52
5" x 54	80/80	140-6500	5.30	4.77	4.24
6" x 54	80/80	140-6650	6.20	5.58	4.96
6" x 63	80/80	140-6560	6.70	6.03	5.36

**A Loose White Muslin Buffs – 3/8" Arbor Hole**

Made of fine-weave muslin with combed edges. Have 3/8" diameter arbor holes for use on 3/8" arbor shafts. Not for use on tapered spindles.

Dia. x Ply	Thread Count	Item#	EACH Prices		
			1-11	12-35	36+
3" x 20	80/80	140-4315	\$ .81	\$ .73	\$ .65
4" x 20	80/80	140-4320	.99	.89	.79
5" x 20	80/80	140-4420	1.39	1.25	1.11
6" x 20	80/80	140-4520	1.49	1.34	1.19



**B Razor-Edge White Muslin Buffs – Leather Pinhole Center**

Made of fine-weave muslin except for #140-8650, which is made of coarse-weave muslin. Can reach into areas where conventional buffs cannot, such as corners, channels and slots. Stitching provides firm edge and maintains buff shape. Buffs with 86/80 thread count are a bit stiffer and more aggressive than buffs with 80/80 thread count.

Dia.	Rows of Stitching	Thread Count	Item#	EACH Prices		
				1-11	12-35	36+
2 1/2"	5	86/80	140-8250	\$1.78	\$1.60	\$1.42
3"	5	86/80	140-8300	2.10	1.89	1.68
4"	5	86/80	140-8400	2.40	2.16	1.92
5"	9	80/80	140-8500	3.75	3.38	3.00
6"	11	80/80	140-8600	4.25	3.83	3.40
6"	11	86/80	140-8650	3.85	3.47	3.08



**C Stitched Yellow Muslin Buffs – Leather Pinhole Center**

Made of chemically treated fine-weave muslin with combed edges and leather centers. Feature a degree of stiffness that serves particularly well for cutting with tripoli. Last two to three times longer than white muslin buffs.

Dia. x Ply	Rows of Stitching	Thread Count	Item#	EACH Prices		
				1-11	12-35	36+
4" x 40	3	86/80	141-2400	\$3.10	\$2.79	\$2.48
4" x 50	3	86/80	141-8700	3.30	2.97	2.64
5" x 45	3	86/80	141-2500	4.15	3.74	3.32
5" x 50	3	86/80	141-8710	4.12	3.71	3.30
6" x 30	4	86/80	141-8720	3.80	3.42	3.04
6" x 50	4	86/80	141-2600	5.40	4.86	4.32
6" x 60	4	86/80	141-2650	6.45	5.81	5.16
7" x 50	4	86/80	141-8730	7.30	6.57	5.84
7" x 60	4	86/80	141-8735	8.00	7.20	6.40

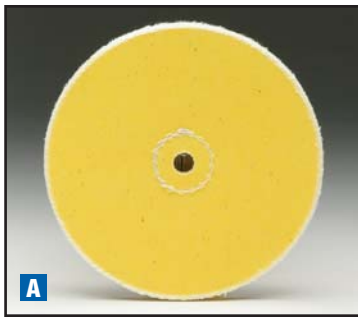


**D Loose Yellow Muslin Buffs – Leather Pinhole Center**

Made of the same treated fine-weave muslin with combed edges and leather centers as our stitched yellow muslin buffs, without the stitching. Can be used with rouge. Work very well with cut-and-color compounds.

Dia. x Ply	Thread Count	Item#	EACH Prices		
			1-11	12-35	36+
4" x 50	86/80	141-1000	\$3.10	\$2.79	\$2.48
5" x 50	86/80	141-1005	4.20	3.78	3.36
6" x 50	86/80	141-1010	5.15	4.64	4.12

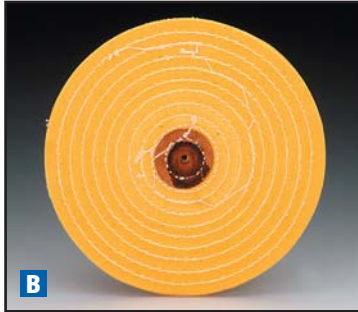




**A Loose Yellow Muslin Buffs – 3/8" Arbor Hole**

Made of the same treated fine-weave muslin with combed edges as our other yellow buffs. Have 3/8" diameter arbor holes for use on 3/8" arbor shafts. Not for use on tapered spindles.

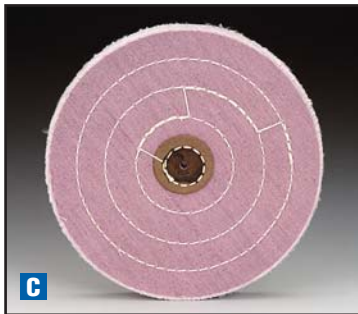
Dia. x Ply	Thread Count	Item#	EACH Prices		
			1-11	12-35	36+
4" x 20	86/80	141-0995	\$1.45	\$1.31	\$1.16
5" x 20	86/80	141-1002	1.90	1.71	1.52
6" x 20	86/80	141-1007	1.99	1.79	1.59
7" x 20	86/80	141-1009	2.50	2.25	2.00



**B Razor-Edge Yellow Muslin Buffs – Leather Pinhole Center**

Made of the same treated fine-weave muslin with leather centers as our other yellow buffs. Can reach into areas where conventional buffs cannot, such as corners, channels and slots. Stitching provides firm edge and maintains buff shape.

Dia.	Rows of Stitching	Thread Count	Item#	EACH Prices		
				1-11	12-35	36+
4"	5	86/80	141-8495	\$3.20	\$2.88	\$2.56
5"	9	86/80	141-8500	3.35	3.02	2.68
6"	11	86/80	141-8600	4.50	4.05	3.60



**C Stitched Plum Muslin Buffs – Leather Pinhole Center**

Made of chemically treated fine-weave muslin with combed edges and leather centers. Outlast yellow and white buffs by a wide margin. Cut fast and provide ultra-high polish when used with yellow glow or rouge. Retain compound extremely well, producing a brighter finish than other buffs. Impart an amazing finish on soft metals.

Dia. x Ply	Rows of Stitching	Thread Count	Item#	EACH Prices		
				1-11	12-35	36+
4" x 40	3	86/80	140-6660	\$3.60	\$3.24	\$2.88
5" x 45	3	86/80	140-6661	4.95	4.46	3.96
6" x 50	4	86/80	140-6662	6.49	5.84	5.19



**D Loose Plum Muslin Buffs – Leather Pinhole Center**

Made of the same treated fine-weave muslin with combed edges and leather centers as our stitched plum muslin buffs, without the stitching.

Dia. x Ply	Thread Count	Item#	EACH Prices		
			1-11	12-35	36+
4" x 40	86/80	141-1020	\$3.15	\$2.84	\$2.52
5" x 45	86/80	141-1021	4.95	4.46	3.96
6" x 50	86/80	141-1022	6.15	5.54	4.92



**E Loose Plum Muslin Buffs – 3/8" Arbor Hole**

Made of the same treated fine-weave muslin with combed edges as our other plum buffs. Have 3/8" diameter arbor holes for use on 3/8" arbor shafts. Not for use on tapered spindles.

Dia. x Ply	Thread Count	Item#	EACH Prices		
			1-11	12-35	36+
4" x 20	86/80	141-1025	\$1.79	\$1.61	\$1.43
5" x 20	86/80	141-1030	2.05	1.85	1.64
6" x 20	86/80	141-1035	2.50	2.25	2.00



**A Razor-Edge Plum Muslin Buffs – Leather Pinhole Center**

Made of the same treated fine-weave muslin with leather centers as our other plum buffs. Can reach into areas where conventional buffs cannot, such as corners, channels and slots. Stitching provides firm edge and maintains buff shape.

Dia.	Rows of Stitching	Thread Count	Item#	EACH Prices		
				1-11	12-35	36+
4"	7	86/80	<b>140-6665</b>	<b>\$3.98</b>	<b>\$3.58</b>	<b>\$3.18</b>
6"	11	86/80	<b>140-6670</b>	<b>4.70</b>	<b>4.23</b>	<b>3.76</b>



A

**B Stitched Blue Platinum Muslin Buffs – Leather Pinhole Center**

Made of chemically treated premium-weave muslin with combed edges and leather centers. More aggressive and durable than yellow and plum buffs. Optimize the effectiveness of all platinum compounds, providing a higher polish on platinum in less time than other buffs.

Dia. x Ply	Rows of Stitching	Thread Count	Item#	EACH Prices		
				1-11	12-35	36+
4 x 50	3	86/80	<b>140-6701</b>	<b>\$4.75</b>	<b>\$4.28</b>	<b>\$3.80</b>
5 x 50	3	86/80	<b>140-6702</b>	<b>5.45</b>	<b>4.91</b>	<b>4.36</b>
6 x 50	4	86/80	<b>140-6703</b>	<b>6.95</b>	<b>6.26</b>	<b>5.56</b>



B

**C Razor-Edge Blue Platinum Muslin Buffs – Leather Pinhole Center**

Made of the same treated fine-weave muslin with leather centers as our other blue buffs. Can reach into areas where conventional buffs cannot, such as corners, channels and slots. Stitching provides firm edge and maintains buff shape.

Dia.	Rows of Stitching	Thread Count	Item#	EACH Prices		
				1-11	12-35	36+
6"	11	86/80	<b>140-6704</b>	<b>\$5.75</b>	<b>\$5.18</b>	<b>\$4.60</b>



C

**D Stitched Gray Battle Muslin Buffs – Leather Pinhole Center**

Made of chemically treated premium-weave muslin with combed edges and leather centers. Aggressive, extremely durable buffs for the toughest polishing jobs. Ideal for production use. Speed up cutting and polishing of hard metals such as platinum and stainless steel.

Dia. x Ply	Rows of Stitching	Thread Count	Item#	EACH Prices		
				1-11	12-35	36+
4" x 50	3	86/80	<b>140-6801</b>	<b>\$4.75</b>	<b>\$4.28</b>	<b>\$3.80</b>
5" x 50	3	86/80	<b>140-6802</b>	<b>5.45</b>	<b>4.91</b>	<b>4.36</b>
6" x 50	4	86/80	<b>140-6803</b>	<b>6.95</b>	<b>6.26</b>	<b>5.56</b>

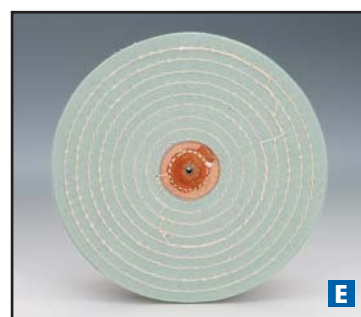


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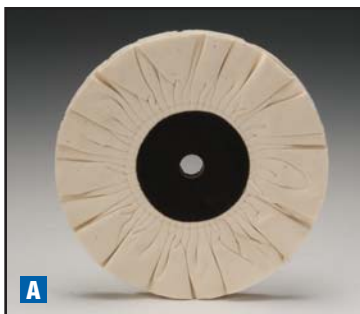
**E Razor-Edge Gray Battle Muslin Buffs – Leather Pinhole Center**

Made of the same treated fine-weave muslin with leather centers as our other gray buffs. Can reach into areas where conventional buffs cannot, such as corners, channels and slots. Stitching provides firm edge and maintains buff shape.

Dia.	Rows of Stitching	Thread Count	Item#	EACH Prices		
				1-11	12-35	36+
6"	11	86/80	<b>140-6804</b>	<b>\$5.75</b>	<b>\$5.18</b>	<b>\$4.60</b>



E



**A**

**A Airflow Buff – 1/2" Arbor Hole**

Open-faced buff made of wrapped cloth for softness and flexibility. Leaves minimal streaks on flat surfaces due to spiral effect produced by the cloth and resistance to separation at the rim. Conforms to irregularly shaped parts. Great for hollowware, musical instruments and any other objects you want to polish without scratching. Has 1/2" diameter arbor hole for use on 1/2" arbor shafts. Not for use on tapered spindles.

Dia. x Ply	Thread Count	Item#	EACH Prices		
			1-11	12-35	36+
6" x 15	86/82	<b>140-5005</b>	<b>\$6.55</b>	<b>\$5.90</b>	<b>\$5.24</b>

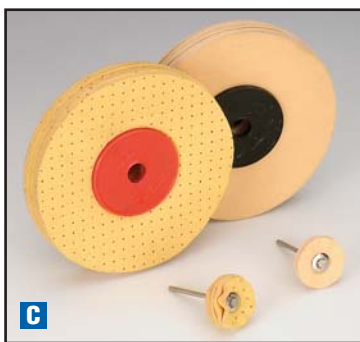


**B**

**B Canton Flannel Buffs – Shellac Pinhole Center**

Made of soft, thick fabric with combed edges and shellac-hardened centers. Use with rouge to impart a high finish on precious metals. Excellent for high-karat gold and silver.

Dia. x Ply	Rows of Stitching	Item#	EACH Prices	
			1-11	12+
4" x 30	3	<b>142-8400</b>	<b>\$3.55</b>	<b>\$2.96</b>
5" x 30	3	<b>142-8500</b>	<b>4.20</b>	<b>3.50</b>
6" x 30	4	<b>142-8600</b>	<b>5.55</b>	<b>4.62</b>



**C**

**C Faux Chamois Buffs**

Durable artificial chamois buffs that hold compound very well. Choose from unmounted and mounted perforated yellow and smooth tan styles. Unmounted 4" have plastic hubs with 3/8" arbor holes for tapered spindles; mounted 1" have 3/32" stainless steel shanks. Perforated yellow work with tripoli and other aggressive compounds; smooth tan produce a wonderful luster with rouge. Purchase four-piece intro pack to try one of each.

Dia. x Thick	Material	Item#	EACH Prices	
			1-11	12+
4" x 5/8"	Perforated Yellow	<b>142-0004</b>	<b>\$6.20</b>	<b>\$5.58</b>
4" x 1/2"	Smooth Tan	<b>142-0006</b>	<b>6.20</b>	<b>5.58</b>
1" x 3/8"	Perforated Yellow	<b>142-0020</b>	<b>.99</b>	<b>.89</b>
1" x 3/16"	Smooth Tan	<b>142-0024</b>	<b>.99</b>	<b>.89</b>
4-Piece Pack (one each of above)		<b>142-0015</b>	<b>12.95</b>	<b>-</b>



**D**

**D Chamois Buffs – Leather Pinhole Center**

Made of soft, pliant leather with leather centers. Impart a mirror finish on precious metals. Produce the brightest possible finish on yellow gold when used with Premium Red Rouge.

Dia. x Thick	Rows of Stitching	Item#	EACH Prices	
			1-2	3+
3" x 1/2"	3	<b>142-5300</b>	<b>\$7.25</b>	<b>\$6.53</b>
4" x 3/4"	3	<b>142-5400</b>	<b>15.15</b>	<b>13.64</b>
5" x 3/4"	3	<b>142-5500</b>	<b>25.25</b>	<b>22.73</b>
6" x 3/4"	4	<b>142-5600</b>	<b>33.10</b>	<b>26.48</b>



**E**

**E Felt Buffs – Leather Pinhole Center**

These wool felt buffs combine the excellent compound retention and long life of a lap with the flexibility and conformability of a buff. Soft is flexible for following surface contours and is perfect for rouge and other polishing compounds; medium is semiflexible and designed for use with tripoli on soft metals; hard is stiff and perfect for use with Gray Star or White Diamond for deep scratch removal. All have four rows of stitching.

Dia. x Thick	Type	Item#	Each
6" x 3/4" (6 ply)	Soft	<b>283-0001</b>	<b>\$11.85</b>
	Medium	<b>283-0002</b>	<b>15.80</b>
	Hard	<b>283-0003</b>	<b>17.40</b>



**F**

**F Brilliant Buff – No rouge, no mess!**

Made of soft, long-strand pure Egyptian cotton treated with an environmentally friendly polishing chemical that creates no mess. Yields a bright shine on platinum, gold and silver without additional compound. After using Tripoli, polish with this buff for a brilliant finish. Leaves behind an undetectable residue that inhibits tarnish. For use on tapered spindles.

Dia. x Thick	Item#	Each
4 1/2" x 3/4" (30 ply)	<b>142-0010</b>	<b>\$11.20</b>

### A - C Specialty Buffs

Three different buffs for specialized jobs. Cylinder buffs polish inside tubular shapes. Tapered buffs polish inside tapered shapes. Goblet buffs polish inside goblets, chalices and other irregular shapes. Made of stitched fine-weave muslin. For use on tapered spindles.

Description	Size	Item#	EACH Prices	
			1-11	12+
A. Cylinder Buff	2" x 2"	143-5200	\$16.20	\$13.50
	3" x 3"	143-5300	21.15	17.62
B. Tapered Buff	2"	143-1200	16.20	13.50
	3"	143-1300	21.15	17.62
	3½"	143-1350	24.99	20.82
C. Goblet Buff	2"	143-3200	11.88	9.90
	3"	143-3300	14.25	11.87
	4"	143-3400	20.45	17.04



### D Cotton String Buffs

These ultra-soft buffs impart a superb finish on gold, especially when used with our Premium Red Rouge. Made of soft cotton string tufts firmly anchored in hub for durability. Ideal for accessing tight or recessed areas. Can be used with any polishing compound. Hold compound extremely well. Choose from 4" dia. x 2" thick unmounted style with wooden hub for use on tapered spindles and 1" dia. mounted style with 3/32" shank for use with flex shaft handpieces. Max. operating speeds: 3,000rpm for unmounted (recommended 2,800rpm), 22,000rpm for mounted (recommended 17,000rpm).

Description	Size	Item#	EACH Prices	
			1-11	12+
Unmounted Buff	4" x 2"	142-0001	\$10.25	\$8.54
Mounted Buff	1"	142-0300	2.35	1.96



### E Mandrel Buffs

Small unmounted stitched buffs for use with flex shaft handpieces. Made of fine-weave muslin with shellac pinhole centers. Mandrels not included (see p. 352 for mandrel selection).

Dia. x Ply	Rows of Stitching	Thread Count	Item#	EACH Prices		
				3-9	12-141	144+
7/8" x 16	1	80/80	142-0090	\$.90	\$.75	\$.63
1" x 16	2	80/80	142-0100	.94	.78	.66
1¼" x 16	2	80/80	142-0125	.95	.79	.67
1½" x 16	3	80/80	142-0150	.98	.82	.69
2" x 16	4	80/80	142-0200	1.08	.90	.76

Three-piece minimum; please order in multiples of three.



### F Mounted Muslin Buff – 3/32" Shank

Miniature muslin buff for use with flex shaft handpieces. Mounted on a 3/32" shank. Recommended operating speed: 5,000rpm.

Dia. x Thick	Item#	EACH Prices	
		1-5	6+
7/8" x 1/4"	142-0325	\$5.10	\$4.59



### G Econo Mounted Muslin Buffs – 3/32" Shank

Available in firm yellow for cutting and soft white for polishing. Mounted on a 3/32" shank. Max. operating speeds: 6,000rpm for yellow, 5,000rpm for white.

Dia. x Thick	Color	Item#	EACH Prices	
			1-11	12+
1" x 3/16"	Yellow	142-0330	\$.89	\$.80
	White	142-0335	.78	.70



### H Mounted Chamois Buff – 3/32" Shank

A soft, pliant leather buff for use with flex shaft handpieces. Produces the ultimate shine on gold and silver. Store in plastic bag when not in use. Mounted on a 3/32" shank.

Dia. x Ply	Item#	EACH Prices	
		1-11	12+
1" x 4	288-2212	\$3.10	\$2.57



**Felt Bobs, Buffs and Wheels (pp. 82–85)**

Gesswein felt products are manufactured from carefully selected wool with no synthetic fibers or fillers, ensuring product reliability. Feature uniform density throughout for quality finishes every time. Can be shaped to accommodate unique curvatures.

**A - E Mounted Felt Bobs – 3/32" Shank**

Made of pure wool. Sold individually and in a set of all five shapes, which comes in a wooden stand with plastic case to keep bobs free of dust and dirt. Mounted on 3/32" shanks. Max. operating speed: 15,000rpm.

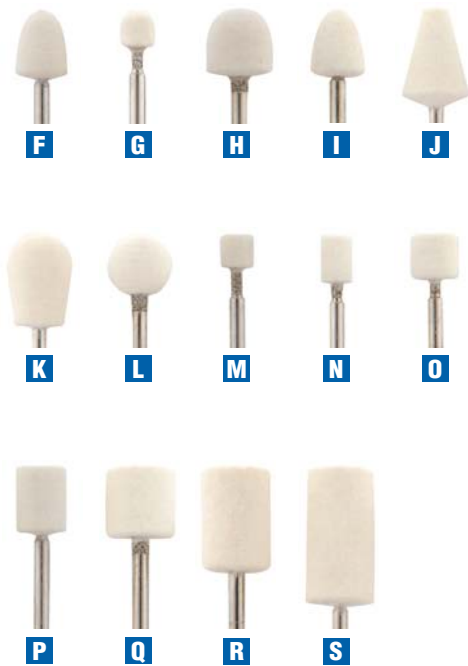


Dia. x H	Shape	Medium Item#	Hard Item#	EACH Prices	
				1-11	12+*
A. 1/4" x 3/4"	Point	288-2300	288-2200	\$2.50	\$2.08
B. 3/8" x 3/4"	Flame	288-2301	288-2201	2.50	2.08
C. 5/16" x 3/8"	Ball	288-2302	288-2202	2.50	2.08
D. 5/16" x 5/8"	Bullet	288-2303	288-2203	2.50	2.08
E. 3/8" x 5/8"	Cylinder	288-2305	288-2205	2.50	2.08
5-Piece Set		–	288-2307	10.75	–

\*Quantity discount for orders of one item# only, not assorted.

**F - S Mounted Felt Bobs – 1/8" Shank**

Made of the finest pure wool for long life. Can be used with polishing compounds or rouges to produce clean, high finishes on jewelry. Mounted on 1/8" shanks. Max. operating speed: 15,000rpm.



Dia. x H	Soft Item#	Medium Item#	Hard Item#	EACH Prices	
				12-24	36+*
F. 3/8" x 1/2"	289-1010	290-1010	286-1010	\$1.79	\$1.70
G. 1/4" x 1/4"	289-1020	290-1020	286-1020	1.69	1.61
H. 1/2" x 1/2"	289-1022	290-1022	286-1022	1.79	1.70
I. 3/8" x 1/2"	289-1030	290-1030	286-1030	1.69	1.61
J. 1/2" x 3/4"	–	–	286-1040	1.70	1.62
K. 1/2" x 3/4"	–	–	286-1051	1.70	1.62
L. 1/2" x 1/2"	–	–	286-1060	1.70	1.62
M. 1/4" x 1/4"	289-1100	290-1100	286-1100	1.10	1.05
N. 1/4" x 3/8"	289-1101	290-1101	286-1101	1.12	1.06
O. 3/8" x 3/8"	289-1102	290-1102	286-1102	1.16	1.10
P. 3/8" x 1/2"	289-1103	290-1103	286-1103	1.22	1.16
Q. 1/2" x 1/2"	289-1104	290-1104	286-1104	1.30	1.24
R. 1/2" x 3/4"	289-1105	290-1105	286-1105	1.44	1.37
S. 1/2" x 1"	289-1106	290-1106	286-1106	1.58	1.50

12-piece minimum; please order in multiples of 12.

\*Quantity discount for orders of one item# only, not assorted.

**T Mounted Felt Bob Sets – 1/8" Shank**

Choose from six different sets of mounted bobs listed above.



Description	Components	Item#	Each
T. 4-Piece Soft Set	289-1010, 20, 22, 30	289-1116	\$6.20
7-Piece Soft Set	289-1100, 1, 2, 3, 4, 5, 6	289-1119	8.00
4-Piece Medium Set	290-1010, 20, 22, 30	290-1117	6.20
7-Piece Medium Set	290-1100, 1, 2, 3, 4, 5, 6	290-1120	8.00
7-Piece Hard Set	286-1010, 20, 22, 30, 40, 51, 60	286-1118	8.00
7-Piece Hard Set	286-1100, 1, 2, 3, 4, 5, 6	286-1121	8.00

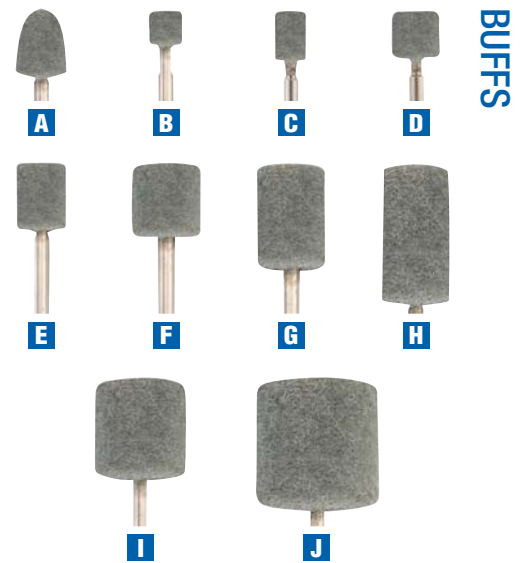


## A - J Mounted Impregnated Felt Bobs – 1/8" Shank

Felt bobs evenly impregnated with 8000 grit silicon carbide abrasive for uniform removal of light scratches and brightening. Help shorten the final finishing process. Reduce messy compound cleanup. Suitable for all metals, including soft metals such as brass. Available in hard and medium grades. Mounted on 1/8" shanks. Max. operating speed: 15,000rpm.

Dia. x H	Medium Item#	Hard Item#	EACH Prices	
			1-35	36+*
A. 3/8" x 1/2"	284-2000	284-1030	\$2.57	\$2.44
B. 1/4" x 1/4"	284-2002	284-1100	1.60	1.52
C. 1/4" x 3/8"	–	284-1101	1.60	1.52
D. 3/8" x 3/8"	284-2004	284-1102	1.60	1.52
E. 3/8" x 1/2"	284-2006	284-1103	1.60	1.52
F. 1/2" x 1/2"	284-2008	284-1104	1.60	1.52
G. 1/2" x 3/4"	284-2010	284-1105	1.75	1.66
H. 1/2" x 1"	–	284-1106	2.55	2.42
I. 3/4" x 3/4"	284-2012	284-1110	2.99	2.84
J. 1" x 1"	284-2014	284-1114	3.69	3.51

\*Quantity discount for orders of one item# only, not assorted.



## K Unmounted Hard Felt Bobs

Made of pure wool. Mandrels not included (see below for mandrel selection).

Dia. x H	Use Mandrel	Item#	EACH Prices	
			12-132	144+
1/4" x 3/8"	#3 or #13	288-0010	\$1.00	\$.83
3/8" x 1/2"	#30	288-0020	1.12	.93
1/2" x 1/2"	#30	288-0030	1.28	1.07
3/4" x 3/4"	#33	288-0040	1.65	1.37
1" x 1"	#33	288-0050	2.79	2.32

12-piece minimum; please order in multiples of 12.



## L Unmounted Hard Felt Cones

Made of the finest pure wool for long life. Great for polishing objects with rounded surfaces. Mandrels not included (see below for mandrel selection).

Dia. x H	Shape	Item#	EACH Prices	
			1-11	12+
1/4" x 1/2"	Pointed	282-0480*	–	\$.89
3/8" x 3/4"	Pointed	282-0490*	–	1.19
1/2" x 1"	Pointed	282-0500*	–	1.65
1/2" x 1"	Blunt	282-0501*	–	1.65
3/4" x 1 1/2"	Pointed	282-0510	\$2.95	2.46
3/4" x 1 1/2"	Blunt	282-0511	3.15	2.62
1" x 2"	Pointed	282-0520	4.45	3.71

\*12-piece minimum; please order in multiples of 12.



## M - R Tapered Threaded Mandrels

Tapered mandrels with right-hand threads for use with felt buffs, wheels, cylinders, points and more.

Style	Shank	For Hole	Length of Taper	Item#	EACH Prices	
					3-9	12+
M. 3	3/32"	1/16"	3/16"	840-3070*	\$1.00	\$.83
N. 13	1/8"	1/16"	3/16"	840-3090*	1.00	.83
O. 0	3/32"	1/16"	3/8"	840-3040*	1.00	.83
P. 30	1/8"	1/16"	3/8"	840-3120*	.95	.79
Style	Shank	For Hole	Length of Taper	Item#	EACH Prices	
Q. 33	1/8"	1/4"	3/4"	840-3130	\$3.75	\$3.12
R. 43	1/4"	3/8"	1"	840-3140	6.80	5.67

\*Three-piece minimum; please order in multiples of three.





**A**



**B**



**C**



**D**



**E**



**F**



**G**



**H**



**I**

**A Felt Ring Buffs – Patented by F.W. Gesswein in 1872 and still the ring buffs of choice!**

For cutting and polishing insides of rings and curved surfaces. Made of pure wool felt mounted on reinforced wooden mandrels drilled for tapered spindles.

Felt Length	Ring Sizes	Taper	For Ring Types*	Item#	EACH Prices			
					1-5	6-11	12-143	144+
3"	1-5	9/16"-5/16"	C	283-0010	\$2.55	\$2.30	\$2.12	\$1.79
3"	5-8	3/4"-1/2"	L	283-0700	2.55	2.30	2.12	1.79
4"	8-11	7/8"-5/8"	L	283-0710	2.60	2.34	2.17	1.82
4"	10-17	1"-3/4"	B	283-0715	4.50	4.05	3.75	3.15
5"	8-17	1"-11/16"	B	283-0721	3.95	3.75	3.29	3.16
6"	10-21	1 1/16"-5/8"	M	283-0730	5.99	5.39	4.99	4.19
3"***	6-9	3/4"-1/2"	L	283-1700	3.10	2.79	2.58	2.17
4"***	8-17	1"-5/8"	M	283-1710	4.40	3.96	3.67	3.08

\*C = children's, L = ladies', M = men's, B = ladies' and men's

\*\*\*Hardened and treated

**B Soft Felt Ring Buffs**

For direct mounting on tapered spindles. Made entirely of pure wool felt.

Felt Length	Ring Sizes	Taper	Item#	EACH Prices			
				1-5	6-11	12-143	144+
B. 3"	5-8	3/4"-7/16"	283-2030	\$2.69	\$2.42	\$2.24	\$1.88
4"	8-12	5/8"-3/16"	283-2040	2.58	2.32	2.15	1.81

**C, D Combination Felt Ring Buffs**

Each consists of pure wool felt wheel buff and inside ring buff mounted on wooden mandrel drilled for tapered spindles. Lets user polish outsides and insides of rings and curved surfaces without changing buffs. Knife-edge buff works especially well for settings.

Felt Length	Ring Sizes	Wheel Type	Item#	EACH Prices		
				1-5	6-11	12+
C. 3"	5-8	2" x 1/2" square-edge	283-4010	\$6.40	\$5.76	\$5.33
4"	7-13	2" x 9/16" square-edge	283-4020	6.85	6.17	5.71
D. 3"	5-8	2" knife-edge	283-4030	6.70	6.03	5.58

**E Outside Ring Holder**

Wooden clamp for safely holding rings while polishing with felt buffs (see above).

Description	Item#	Each
Outside Ring Holder	812-0311	\$15.50

**F Felt Bangle Buff**

Made of felt mounted on a wooden mandrel drilled for tapered spindles. Ideal for finishing insides of bangle bracelets and other large pieces. Measures 3 1/2" long. For use on tapered spindles.

Dia. x H	Type	Item#	Each
2"-1 7/8" x 2"	Medium	283-0050	\$10.99

**G Felt Sticks**

Beveled ends of these solid felt sticks can be used with cutting or polishing compounds, including diamond compounds.

Size	Type	Item#	Each
4"L x 1/4" sq.	Soft	288-3020	\$5.59
	Hard	288-3010	.68

12-piece minimum; please order in multiples of 12.

**H, I Soft Felt Hand Buffs**

For high finish when used with rouge. Have wooden handles. Measure 11 1/2" long with 6" of pure wool felt.

Size	Type	Item#	EACH Prices		
			1-11	12-143	144+
H. 1/2"W	Soft	288-1015	\$3.25	\$2.71	\$2.28
I. 7/8"W	Soft	288-1010	4.30	3.58	3.01

**A Square-Edge Felt Wheels**

Soft wheels are made for cutting and polishing irregular surfaces. Hard wheels are cut from sheet stock, hardened to appropriate standards and dressed for more aggressive action. Have pinhole centers. Mandrels not included (see p. 352 for mandrel selection).

Dia. x Thick	Type	Item#	EACH Prices			
			1-2	3-11	12-143	144+
1/2" x 1/8"	Hard	280-0020*	—	—	\$ .34	\$ .28
5/8" x 1/8"	Hard	280-0041*	—	—	.35	.29
3/4" x 1/8"	Hard	280-0060*	—	—	.38	.32
1" x 1/8"	Soft	280-0005*	—	—	.30	.25
	Hard	280-0101*	—	—	.51	.42
1" x 1/4"	Hard	280-0110*	—	—	1.13	.94
1 1/4" x 1/4"	Soft	280-0006*	—	—	1.07	.89
	Hard	280-0120	\$1.75	\$1.58	1.46	1.23
1 1/4" x 3/8"	Hard	280-0130	1.87	1.68	1.56	1.31
1 3/8" x 3/8"	Hard	280-0140	2.10	1.89	1.75	1.47
1 1/2" x 3/8"	Hard	280-0160	2.29	2.06	1.91	1.60
1 1/2" x 1/2"	Hard	280-0170	3.64	3.28	3.03	2.55
2" x 1/4"	Hard	280-0200	2.46	2.21	2.05	1.72
2" x 3/8"	Hard	280-0210	3.06	2.75	2.55	2.14
2" x 1/2"	Hard	280-0220	4.73	4.26	3.94	3.31
2 1/2" x 3/8"	Hard	280-0260	4.42	3.98	3.68	3.09

\*12-piece minimum; please order in multiples of 12.



**B Knife-Edge Felt Wheels**

Hard, rock-hard and flint-hard wheels with tapered edges for polishing joints and crevices. Have pinhole centers. Mandrels not included (see p. 352 for mandrel selection).

Dia.	Type	Item#	EACH Prices		
			1-11	12-143	144+
1/2"	Hard	281-0021*	—	\$ .81	\$ .67
5/8"	Hard	281-0041*	—	1.23	1.02
3/4"	Hard	281-0060*	—	.83	.69
1"	Hard	281-0100*	—	1.18	.98
	Rock-Hard	281-0101*	—	1.35	1.12
1 1/4"	Hard	281-0201*	—	2.05	1.71
1 1/2"	Hard	281-0300*	—	1.39	1.16
1 3/4"	Hard	281-0400	\$3.20	2.69	2.24
2"	Hard	281-0501	4.22	3.52	2.95
2 1/2"	Hard	281-0700	5.10	4.25	3.57
3"	Hard	281-0801	7.99	6.66	5.59
	Flint-Hard	281-1030	9.85	8.21	6.90
4"	Flint-Hard	281-1040	23.95	19.96	16.77

\*12-piece minimum; please order in multiples of 12.



**C, D Mounted Felt Wheels – 3/32" Shank**

Soft wheel is ideal for cutting and polishing larger surfaces. Hard wheel provides more aggressive action. Mounted on 3/32" shanks. Max. operating speed: 30,000rpm.

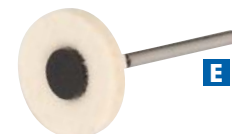
Dia. x Thick	Type	Item#	EACH Prices	
			1-11	12+
C. 7/8" x 1/2"	Soft	288-2210	\$2.25	\$1.87
D. 7/8" x 1/4"	Hard	288-2206	2.29	1.90



**E Mounted Felt Wheel with Plastic Hub – 3/32" Shank**

A soft felt wheel securely mounted on a nonscratching plastic hub. Use with compound for cutting and polishing. Mounted on 3/32" shank. Max. operating speed: 5,000rpm.

Dia. x Thick	Type	Item#	EACH Prices	
			1-11	12+
1" x 3/16"	Soft	288-2209	\$ .95	\$ .86



**Lap Selection Guide (pp. 86–87)**

Lapping maintains integrity of flat surfaces and keeps angles and corners from being rounded off during polishing. Unlike buffs, which are soft, laps are very firm and have a wider area to cover much more of the work surface. Can even be shaped to knife or beveled edges. When selecting laps, please consider the following information.

- **Felt Laps** – Pure wool felt laps hardened by a process of steaming and pounding. Free of artificial hardeners.
- **Diamond-Hard Laps** – Pure wool felt laps excellent for lapping due to a treatment that results in extreme density.
- **SUPRA Woolflexx Split Laps** – Pure wool felt laps that hold edges, wear longer and polish quicker than all other laps. Also retain compound extremely well.
- **Split Laps** – Slotted in four places to allow user to see finish as work is held on lap. Use on split lapping machines.

**A Gesswein/Paramount® Felt Laps**

Pure wool felt laps uniquely made to ensure proper hardness and performance. All have pinhole centers. Max. operating speed: 3,450rpm.



**A**



**B**



**C**

Dia. x Thick	Type	Item#	EACH Prices		
			1-5	6-11	12+
4" x 1/4"	Hard	284-4145	\$12.50	\$11.25	\$10.42
	Rock-Hard	284-4147	13.85	12.47	11.54
4" x 1/2"	Soft	284-4121	9.75	8.78	8.12
	Medium	284-4123	15.00	13.50	12.50
	Hard	284-4125	17.20	15.48	14.33
4" x 3/4"	Rock-Hard	284-4127	18.75	16.88	15.62
	Medium	284-4343	21.00	18.90	17.50
6" x 1/4"	Hard	284-4345	23.45	21.11	19.54
	Flint-Hard	284-6148	28.40	25.56	23.67
6" x 1/2"	Soft	284-6121	21.15	19.04	17.62
	Medium	284-6123	36.10	32.49	30.08
	Hard	284-6125	36.35	32.72	30.29
	Rock-Hard	284-6127	39.65	35.69	33.04
	Flint-Hard	284-6128	40.85	36.77	34.04
6" x 1"	Soft	284-6101	40.35	36.32	33.62
	Medium	284-6103	45.50	40.95	37.92
	Hard	284-6105	48.30	43.47	40.25

**B Diamond-Hard Felt Laps**

Pure wool felt laps treated and pressed for exceptional durability. Max. operating speed: 3,600rpm.

Dia. x Thick x AH	Type	Item#	EACH Prices		
			1-5	6-11	12+
4" x 1/4" x 1/4"	Diamond-Hard	284-4149	\$11.30	\$10.17	\$9.42
4" x 1/2" x 1/4"	Diamond-Hard	284-4129	17.59	15.83	14.66
6" x 1/4" x 1/4"	Diamond-Hard	284-6149	23.89	21.50	19.91
6" x 1/4" x 1/2"	Diamond-Hard	284-6249	23.90	21.51	19.92

**C SUPRA® Woolflexx Split Laps**

**Hold edges better, wear longer and polish quicker than any other split lap!**

Pure wool felt laps processed to hold their edges better, wear longer and polish quicker than any other conventional felt or synthetic lap. Combine the feel and texture of felt with the durability of synthetics. Actually bond with compound for super-efficient polishing, producing less mess and yielding more parts completed per lap. All have pinhole centers. Max. operating speed: 3,600rpm.

Dia. x Thick	Type	Item#	EACH Prices		
			1-5	6-11	12+
6" x 1/2"	Hard	285-2064	\$28.85	\$25.97	\$23.08
	Rock-Hard	285-2065	30.95	27.86	24.76



### A Piedmont™ Felt Split Laps

Fine virgin wool felt laps formed by an exacting process to ensure uniform density and maximum dimensional stability for consistent polishing results. All have pinhole centers. Max. operating speed: 3,600rpm.

Dia. x Thick	Type	Item#	EACH Prices	
			1-11	12+
6" x 1/2"	Medium	285-6130	\$24.35	\$20.45
	Hard	285-6131	27.55	23.14
	Rock-Hard	285-6132	29.69	24.94
	Flint-Hard	285-6133	32.90	27.64



A

### B Gesswein/Paramount® Felt Split Laps

Made of pure wool felt that has been steamed to shrink and thicken, then pounded into specific hardnesses. Feature consistent density throughout for identical polishing results from wheel to wheel, even wear and three to five times the life of conventional split laps. All have pinhole centers. Max. operating speed: 3,450rpm.

Dia. x Thick	Type	Item#	EACH Prices		
			1-5	6-11	12+
4" x 1/2"	Medium	285-8130	\$36.75	\$33.08	\$30.62
	Hard	285-8131	39.99	35.99	33.32
	Rock-Hard	285-8132	44.70	40.23	37.25
6" x 1/2"	Medium	285-6123	40.15	36.14	33.46
	Hard	285-6125	42.90	38.61	35.75
	Rock-Hard	285-6127	46.95	42.26	39.12
7" x 1/2"	Flint-Hard	285-6128	54.20	48.78	45.16
	Medium	285-7120	47.95	43.16	39.96
	Hard	285-7121	59.95	53.96	49.96
8" x 1/2"	Rock-Hard	285-7122	66.80	60.12	55.66
	Flint-Hard	285-7123	75.35	67.82	62.79
	Medium	285-8123	54.85	49.37	45.71
8" x 1/2"	Hard	285-8125	67.10	60.39	55.91
	Rock-Hard	285-8127	79.00	71.10	65.83
	Flint-Hard	285-8128	88.60	79.74	73.83



B



C

### C Diamond-Hard Felt Split Laps

Made of treated and pressed felt for increased durability. Max. operating speed: 3,450rpm.

Dia. x Thick x AH	Type	Item#	EACH Prices		
			1-5	6-11	12+
6" x 1/2" x 1/4"	Diamond-Hard	285-6129	\$38.98	\$35.08	\$32.48



D

### D GMX Split Laps

Contain aluminum oxide abrasive for fast cutting. Feature unique cotton fiber and rubber bond that imparts very smooth finishes. Maximum operating speed: 6,050rpm.

Dia. x Thick x AH	Grit	Item#	EACH Prices	
			1-9	10+
6" x 1/4" x 1/2"	80	206-3350	\$28.90	\$26.01
	120	206-3360	28.90	26.01
	180	206-3370	28.90	26.01
6" x 1/2" x 1/2"	80	206-3450	57.25	48.66
	120	206-3460	57.25	48.66
	180	206-3470	57.25	48.66



E

### E Prepolish Split Lap

A split lap for finishing rough castings. Fast-acting yet not too aggressive. Leaves a smooth satin finish. Made of flexible polyurethane embedded with 180 grit silicon carbide abrasive. Max. operating speed: 2,800rpm.

Dia. x Thick x AH	Grit	Item#	EACH Prices	
			1-11	12+
6" x 1/2" x 1/4"	180	277-0400	\$52.75	\$50.11



**A**

**A Gesswein® Royal Gem Cloth**

Our high-quality, lint-free gem cloth keeps your jewelry looking its best. Removes dust and fingerprints quickly and easily, bringing back the luster in your finest pieces. Completely free of abrasives and chemicals, so it's safe for all types of gemstones and metals. Leaves no residue behind, so it keeps your jewelry and your hands squeaky clean. Features durable construction with stitched edges that resist fraying even after repeated washing. Available in light blue and ivory.

Size	Color	Item#	EACH Prices	
			1-11	12+
10" x 10"	Light Blue	<b>820-0419</b>	<b>\$5.65</b>	<b>\$4.71</b>
	Ivory	<b>820-0415</b>	<b>5.65</b>	<b>4.71</b>



**B**

**B Gesswein® Rouge Cloth**

Unique double polishing cloth: inner cloth is impregnated with rouge for removing tarnish; outer cloth lets you apply final polish while keeping your hands clean. Call for quotes on special imprinting with your store name (500-piece minimum). For dry use only.

Size	Item#	EACH Prices	
		1-11	12+
9" x 11"	<b>820-0050</b>	<b>\$4.25</b>	<b>\$3.54</b>



**C**

**C Luster Cloth**

Cleaner than rouge cloth, this cloth is made of soft, felt-like material with special additives that remove tarnish and dirt—plus, it actually polishes. Works on precious metals, glass, mirrors, ceramic and faceted stones. Won't scratch or stain. Leaves your hands free of chemical and rouge residues. Ideal for cleaning and polishing your own finished jewelry. Economical enough to use as giveaways for your valued customers. For dry use only.

Size	Item#	EACH Prices	
		1-11	12+
5" x 7½"	<b>820-0360</b>	<b>\$2.35</b>	<b>\$1.76</b>



**D**

**D 3M™ High Performance Cloth**

This amazing cloth has oil- and water-absorbing fibers that lift and trap both liquid and solid contaminants. Features a specially knitted design that does a better job of cleaning than conventional wipes. Can be used dry or damp. Removes grease, silicone, solvents, abrasive residues, polishes, waxes and fingerprints. Leaves no smears or streaks and is resistant to common cleaning chemicals. Can be washed in temperatures up to 200°F. Comes in five different colors for easy assignment to specific uses.

Size	Color	Item#	EACH Prices	
			1-4	5+
12¾" x 14"	Red	<b>820-0511</b>	<b>\$5.50</b>	<b>\$4.40</b>
	Blue	<b>820-0505</b>	<b>5.50</b>	<b>4.40</b>
	White	<b>820-0500</b>	<b>5.50</b>	<b>4.40</b>
	Yellow	<b>820-0509</b>	<b>5.50</b>	<b>4.40</b>
	Green	<b>820-0507</b>	<b>5.50</b>	<b>4.40</b>



**E**

**E Diamond Cleaning Cloth – A brilliant choice for brighter diamonds.**

Lintless synthetic cloth perfect for removing oils and contaminants from diamonds and other precious gems. Not only works great but also looks great on the retail counter due to its velvety texture and iridescent gold color. For dry use only.

Size	Item#	EACH Prices	
		1-11	12+
10" x 10"	<b>820-0080</b>	<b>\$4.50</b>	<b>\$3.75</b>

**A SELVYT® Professional Cloth**

Features low nap and tight weave, same as original Selvyt SR Cloth. Removes dust, smudges, dirt and fingerprints. Designed for use on the finest surfaces, including plastic and glass optical lenses. Made of woven unbleached cotton velvet. Stays lint-free after repeated washing. Stitched edges prevent fraying. Machine washable.

Size	Item#	EACH Prices	
		1-11	12+
10" x 10"	820-0270	\$7.25	\$6.53
14" x 14"	820-0275	8.95	8.06

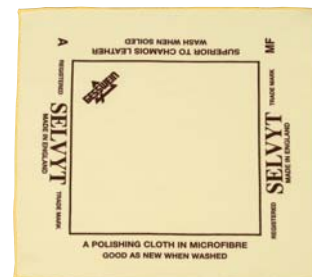


**A**

**B SELVYT® Microfiber Cloth**

Ideal for cleaning diamonds and gemstones. Made of ultra-soft heavy brushed microfiber. Retains softness after repeated washing. Stitched edges prevent fraying. Machine washable.

Size	Item#	EACH Prices	
		1-11	12+
10" x 10"	820-0260	\$6.95	\$6.26
14" x 14"	820-0262	8.35	7.52

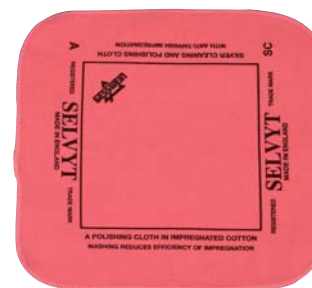


**B**

**C SELVYT® SC Cloth for Silver**

Impregnated with an anti-tarnish agent, Selvyt SC removes light tarnish from silverware and silver jewelry. Leaves behind an invisible coating that eliminates oxidation. Stitched edges prevent fraying.

Size	Item#	EACH Prices	
		1-11	12+
10" x 10"	820-0280	\$5.25	\$4.73
14" x 14"	820-0285	7.35	6.62



**C**

**D SELVYT® SR Cloth**

Made of pure unbleached cotton. Features no-lint texture that polishes without scratching. Use on precious jewelry, watches, silverware and crystal. Retains its suppleness even after repeated washing.

Size	Item#	EACH Prices	
		1-11	12+
5" x 5"	820-0100	\$1.50	\$1.25
10" x 10"	820-0155	5.95	5.18
14" x 14"	820-0205	6.95	6.05



**D**

**E Astic-Brille Cloth**

A rub with this treated polishing cloth imparts a brilliant, long-lasting luster on all metals without scratching. Excellent for cleaning chains. Leaves no residue. Made of felt-type material impregnated with a nonscratching polishing agent. Contains no rouge, so it keeps your hands clean. For dry use only. Available in orange and gray.

Size	Color	Item#	EACH Prices	
			1-11	12+
11 <sup>3</sup> / <sub>4</sub> " x 7 <sup>7</sup> / <sub>8</sub> "	Orange	820-0351	\$6.70	\$6.03
14 <sup>1</sup> / <sub>2</sub> " x 18 <sup>1</sup> / <sub>2</sub> "	Gray	820-0355	10.50	9.45



**E**

**F Cape Cod Anti-Tarnish Polishing Cloth**

With easy rubbing, this moist cotton cloth removes dirt and tarnish from sterling silver, gold, brass, bronze, copper, pewter, aluminum and stainless steel. Also leaves behind an invisible coating that protects against tarnish, water stains and corrosion. Keeps jewelry brighter longer. Sold in packages of two.

Size	Item#	PKG. of 2	
		1-11	12+
4" x 6"	820-0370	\$5.15	\$4.29



**F**



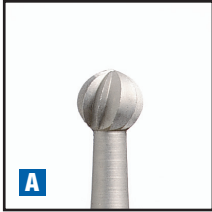
**Busch® Burs (pp. 90–92) – 3/32" Shank**

Made of tungsten vanadium steel for strength and durability. Feature precision-machined, uniformly spaced teeth for accurate and smooth cutting.

Use with a good lubricant such as Gesswein Lube-Stick (see facing page) to facilitate cutting and prolong tool life.

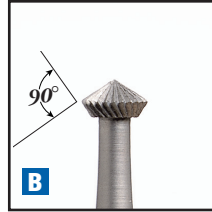
Shanks measure approx. 1 3/4" long. Maximum operating speed varies with bur size and is indicated on each individual box. Burs packaged six to a box and available only in multiples of six unless otherwise indicated.

**Please ask for quotes on larger quantities.**



**A Busch® Round Burs – Fig 1**

Dia. (mm)	Item#	EACH Prices	
		6-66	72-138
0.30	122-2008	\$2.70	\$2.30
0.35	122-2007	1.35	1.15
0.40	122-2006	1.35	1.15
0.50	122-2005	.90	.77
0.60	122-2004	.90	.77
0.70	122-2003	.90	.77
0.80	122-2002	.90	.77
0.90	122-2001	.90	.77
0.97	122-3005	.90	.77
1.00	122-2010	.90	.77
1.10	122-3015	.90	.77
1.20	122-2020	.90	.77
1.30	122-3025	.90	.77
1.40	122-2030	.90	.77
1.42	122-3035	.90	.77
1.50	122-2040	.90	.77
1.58	122-3045	.90	.77
1.60	122-2050	.90	.77
1.70	122-3055	.90	.77
1.80	122-2060	.90	.77
1.90	122-3065	.90	.77
2.00	122-3066	.90	.77
2.10	122-2070	.90	.77
2.20	122-3075	.90	.77
2.30	122-2080	.90	.77
2.40	122-3085	1.93	1.64
2.50	122-2090	1.93	1.64
2.60	122-3095	1.93	1.64
2.70	122-2100	1.93	1.64
2.90	122-2110	1.93	1.64
3.10	122-2120	2.81	2.39
3.30	122-2130	2.81	2.39
3.50	122-2140	2.81	2.39
3.70	122-2150	2.81	2.39
4.00	122-2160	3.52	2.99
4.20	122-2170	3.52	2.99
4.50	122-2180	3.52	2.99
5.00	122-2200	3.52	2.99
Dia. (mm)	Item#	EACH Prices	
		1-71	72-143
5.50	122-2220	\$5.50	\$4.68
6.00	122-2240	5.50	4.68
6.50	122-2260	5.50	4.68
7.00	122-2280	5.50	4.68
7.50	122-2300	7.15	6.08
8.00	122-2320	7.15	6.08
8.50	122-2340	7.15	6.08



**B Busch® 90° Hart Burs – Fig 156c**

Dia. (mm)	Item#	EACH Prices	
		6-66	72-138
0.90	121-9001	\$2.42	\$2.06
0.97	121-9305	2.42	2.06
1.00	121-9010	2.42	2.06
1.10	121-9315	2.42	2.06
1.20	121-9020	2.42	2.06
1.30	121-9325	2.42	2.06
1.40	121-9030	2.42	2.06
1.42	121-9335	2.42	2.06
1.50	121-9040	2.42	2.06
1.58	121-9345	2.42	2.06
1.60	121-9050	2.42	2.06
1.70	121-9355	2.42	2.06
1.80	121-9060	2.42	2.06
2.00	121-9365	2.42	2.06
2.10	121-9070	2.42	2.06
2.20	121-9375	2.42	2.06
2.30	121-9080	2.42	2.06
2.50	121-9090	3.20	2.72
2.70	121-9100	3.20	2.72
2.90	121-9110	3.20	2.72
3.10	121-9120	4.10	3.49
3.30	121-9130	4.10	3.49
3.50	121-9140	4.10	3.49
3.70	121-9150	4.10	3.49
4.00	121-9160	5.12	4.35
4.20	121-9170	5.12	4.35
4.50	121-9180	5.12	4.35
4.70	121-9190	5.12	4.35
5.00	121-9200	5.12	4.35



**C Busch® 90° Hart Bur Sets**

Twelve-piece set includes 1.0, 1.2, 1.4, 1.5, 1.6, 1.8, 2.1, 2.3, 2.5, 2.7, 2.9 and 3.1mm sizes. Six-piece set includes 3.3, 3.5, 3.7, 4.0, 4.2 and 4.5mm sizes.

Description	Item#	Each
12-Piece Set	121-9500	\$31.20
6-Piece Set	121-9550	27.60



**D Reducing Collets**

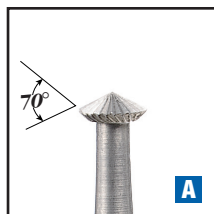
Convert your 1/8" handpiece collet to hold 3/32" shank tools. Easy to use: slip the reducing collet into your handpiece collet, then slip the tool into the reducing collet. Make sure the reducing collet and the tool are fully inserted before operating.

Description	Item#	Each
1/8"-3/32" Collet	816-1501	\$12.90



**A Busch® 70° Hart Burs – Fig 446**

Dia. (mm)	Item#	EACH Prices	
		6-66	72-138
1.00	121-8210	\$2.42	\$2.06
1.20	121-8220	2.42	2.06
1.40	121-8230	2.42	2.06
1.60	121-8240	2.42	2.06
1.80	121-8250	2.42	2.06
2.10	121-8260	2.42	2.06
2.30	121-8270	2.42	2.06
2.50	121-8280	3.52	2.99
2.70	121-8290	3.52	2.99
2.90	121-8300	3.52	2.99
3.10	121-8310	4.52	3.84
3.30	121-8320	4.52	3.84
3.50	121-8330	4.52	3.84
3.70	121-8340	4.52	3.84
4.00	121-8350	5.63	4.79



**D Busch® Square Cyl. Burs – Fig 15**

Dia. (mm)	Item#	EACH Prices	
		6-66	72-138
0.70	121-2003	\$1.30	\$1.11
0.80	121-2002	1.30	1.11
0.90	121-2001	1.30	1.11
1.00	121-2010	1.30	1.11
1.20	121-2020	1.30	1.11
1.40	121-2030	1.30	1.11
1.60	121-2050	1.30	1.11
1.80	121-2060	1.30	1.11
2.10	121-2070	1.30	1.11
2.30	121-2080	1.30	1.11
2.70	121-2090	1.44	1.22
3.10	121-2120	3.21	2.73



**B Busch® Setting Burs – Fig 413**

Dia. (mm)	Item#	EACH Prices	
		6-66	72-138
1.00	121-8360	\$2.54	\$2.16
1.25	121-8370	2.54	2.16
1.75	121-8380	2.54	2.16
2.00	121-8390	2.54	2.16
2.25	121-8400	2.54	2.16
2.50	121-8410	3.94	3.35
2.75	121-8420	3.94	3.35



**E Busch® Cross-Cut Square Cyl. Burs – Fig 21**

Dia. (mm)	Item#	EACH Prices	
		6-66	72-138
0.80	121-4002	\$1.30	\$1.11
0.90	121-4001	1.30	1.11
1.00	121-4010	1.30	1.11
1.20	121-4020	1.30	1.11
1.40	121-4030	1.30	1.11
1.60	121-4050	1.30	1.11
1.80	121-4060	1.30	1.11
2.10	121-4070	1.30	1.11
2.30	121-4080	1.30	1.11
2.70	121-4100	2.74	2.33
3.10	121-4120	3.21	2.73

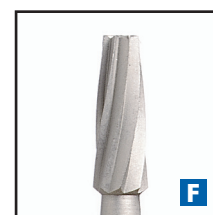


Dia. (mm)	Item#	EACH Prices	
		1-71	72-143
3.00	121-8430	\$5.35	\$4.55
3.75	121-8440	5.35	4.55
4.00	121-8450	6.76	5.75
4.50	121-8470	6.76	5.75
5.00	121-8490	6.76	5.75
5.50	121-8510	7.75	6.59
6.00	121-8520	7.75	6.59
7.00	121-8530	7.75	6.59
8.00	121-8540	9.10	7.74

Description	Item#	Each
16-Piece Set (one each)	121-8541	\$79.00

**F Busch® Square Cone Burs – Fig 17**

Dia. (mm)	Item#	EACH Prices	
		6-66	72-138
0.70	121-3003	\$1.30	\$1.11
0.80	121-3002	1.30	1.11
0.90	121-3001	1.30	1.11
1.00	121-3010	1.30	1.11
1.20	121-3020	1.30	1.11
1.40	121-3030	1.30	1.11
1.60	121-3050	1.30	1.11
1.80	121-3060	1.30	1.11
2.10	121-3070	1.30	1.11



**C Gesswein® Lube-Stik**

Use on grinding, cutting, drilling, piercing or similar tools to speed up production and increase tool life. Reduces both friction and heat buildup so that tools stay sharper, work faster and cut smoother. Easy to use: just run your tools into the soft lubricant every so often. Can also be used to reduce the effort needed for drawing operations. Supplied in handy push-up dispenser tube.

Description	Item#	EACH Prices	
		1-9	10+
Lube-Stik	816-2460	\$4.15	\$3.74



**G Busch® Cross-Cut Square Cone Burs – Fig 23**

Dia. (mm)	Item#	EACH Prices	
		6-66	72-138
0.70	121-5003	\$1.30	\$1.11
0.80	121-5002	1.30	1.11
0.90	121-5001	1.30	1.11
1.00	121-5010	1.30	1.11
1.20	121-5020	1.30	1.11
1.40	121-5030	1.30	1.11
1.60	121-5050	1.30	1.11
1.80	121-5060	1.30	1.11
2.10	121-5070	1.30	1.11
2.30	121-5080	1.30	1.11
2.70	121-5100	2.74	2.33
3.10	121-5120	3.21	2.73





**A Busch® Inverted Cone Burs – Fig 3**

Dia. (mm)	Item#	EACH Prices	
		6-66	72-138
0.70	122-0003	\$ .90	\$ .77
0.80	122-0002	.90	.77
0.90	122-0001	.90	.77
1.00	122-0010	.90	.77
1.20	122-0020	.90	.77
1.40	122-0030	.90	.77
1.60	122-0050	.90	.77
1.80	122-0060	.90	.77
2.10	122-0070	.90	.77
2.30	122-0080	.90	.77
2.50	122-0090	1.93	1.64
2.70	122-0100	1.93	1.64
2.90	122-0110	1.93	1.64
3.10	122-0120	2.81	2.39
3.30	122-0130	2.81	2.39
3.70	122-0150	2.81	2.39



**B Busch® Wheels – Fig 2**

Dia. (mm)	Item#	EACH Prices	
		6-66	72-138
0.70	122-4003	\$ .90	\$ .77
0.80	122-4002	.90	.77
0.90	122-4001	.90	.77
1.00	122-4010	.90	.77
1.20	122-4020	.90	.77
1.40	122-4030	.90	.77
1.60	122-4050	.90	.77
1.80	122-4060	.90	.77
2.10	122-4070	.90	.77
2.30	122-4080	.90	.77
2.50	122-4090	1.93	1.64
2.70	122-4100	1.93	1.64
2.90	122-4110	1.93	1.64
3.50	122-4140	2.81	2.39
4.00	122-4160	3.50	2.98
4.50	122-4180	3.50	2.98
5.00	122-4200	3.50	2.98



**C Busch® Saws – Fig 231S**

Dia. (mm)	Item#	EACH Prices	
		1-71	72-143
2.30	121-8025	\$2.10	\$1.79
5.00	121-8050	5.35	4.55
10.00	121-8100	11.70	9.95



**D Busch® Knife-Edge Routers – Fig 161**

Dia. (mm)	Item#	EACH Prices	
		1-71	72-143
7.00	121-7070	\$15.55	\$13.22
10.00	121-7100	21.90	18.62
12.00	121-7120	21.90	18.62
14.00	121-7140	25.35	21.55



**E Busch® Bud Burs – Fig 6**

Dia. (mm)	Item#	EACH Prices	
		6-66	72-138
0.60	121-0004	\$1.02	\$.87
0.70	121-0003	1.02	.87
0.80	121-0002	1.02	.87
0.90	121-0001	1.02	.87
1.00	121-0010	1.02	.87
1.20	121-0020	1.02	.87
1.40	121-0030	1.02	.87
1.50	121-0040	1.02	.87
1.60	121-0050	1.02	.87
1.80	121-0060	1.02	.87
2.10	121-0070	1.02	.87
2.30	121-0080	1.02	.87
2.50	121-0090	2.11	1.79
2.70	121-0100	2.11	1.79
2.90	121-0110	2.11	1.79
3.10	121-0120	3.21	2.73
3.30	121-0130	3.21	2.73
3.50	121-0140	3.21	2.73
3.70	121-0150	3.21	2.73
4.00	121-0160	4.08	3.47
4.20	121-0170	4.08	3.47
4.50	121-0180	4.08	3.47
5.00	121-0200	4.08	3.47

Dia. (mm)	Item#	EACH Prices	
		1-71	72-143
8.00	121-0320	\$5.25	\$4.46
8.50	121-0340	5.42	4.61



**F Busch® Pointed Burs – Fig 5**

Dia. (mm)	Item#	EACH Prices	
		6-66	72-138
0.90	122-1001	\$1.02	\$.87
1.00	122-1010	1.02	.87
1.20	122-1020	1.02	.87
1.40	122-1030	1.02	.87
1.60	122-1050	1.02	.87
1.80	122-1060	1.02	.87
2.10	122-1070	1.02	.87
2.30	122-1080	1.02	.87
2.50	122-1090	2.11	1.79
2.70	122-1100	2.11	1.79
2.90	122-1110	2.11	1.79
3.10	122-1120	3.21	2.73
3.30	122-1130	3.21	2.73
3.50	122-1140	3.21	2.73
3.70	122-1150	3.21	2.73
4.00	122-1160	4.08	3.47
4.50	122-1180	4.08	3.47
4.70	122-1190	4.08	3.47
5.00	122-1200	4.08	3.47



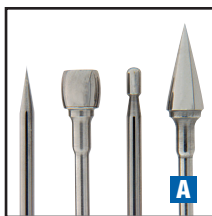
**G Busch® Krause Burs – Fig 256**

Dia. (mm)	Item#	EACH Prices	
		6-66	72-138
1.00	122-6010	\$3.15	\$2.68
1.20	122-6020	3.15	2.68

**A Busch® Carbide Starlight Polishers**

Made of the finest carbide. Impart a unique high gloss on precious metals such as gold and platinum. Have 3/32" shanks.

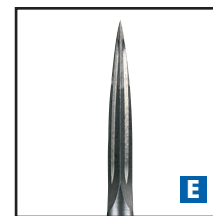
Description	Item#	Each
Point	122-7135	\$31.75
Barrel	122-7133	43.50
Cylinder	122-7136	31.75
Cone	122-7134	43.50
4-Piece Set (one each)	122-7137	149.45



**E Busch® Reamers – Fig 115A**

Have 3/32" shanks.

Dia. (mm)	Item#	EACH Prices	
		1-71	72-143
1.80	122-7130	\$6.99	\$5.94
2.10	122-7131	6.99	5.94
2.30	122-7132	6.99	5.94



**B Busch® High-Speed Twist Drills**

Made of high-speed steel. More durable than tungsten vanadium steel when used on hard metals such as white gold, platinum, surgical steel and more. Have 3/32" shanks.

Dia. (mm)	Item#	EACH Prices	
		1-71	72-143
0.50	122-6992	\$5.40	\$4.59
0.60	122-6993	5.40	4.59
0.70	122-6994	5.40	4.59
0.80	122-6995	5.40	4.59
0.90	122-6996	5.40	4.59
1.00	122-6997	5.40	4.59
1.10	122-6998	5.40	4.59
1.20	122-6999	5.40	4.59
1.30	122-7000	5.40	4.59
1.40	122-7001	5.40	4.59
1.50	122-7002	5.40	4.59
1.60	122-7003	5.40	4.59



**F Busch® Wax/Plastic Burs – Fig 260a**

Feature very coarse cut for carving waxes and plastics. Have 3/32" shanks.

Dia. (mm)	Item#	EACH Prices	
		1-71	72-143
1.80	121-8170	\$3.66	\$3.11
2.30	121-8180	3.66	3.11
3.10	121-8190	6.89	5.86
5.00	121-8200	7.25	6.16



**G Wolf Wax Round Burs – 3/32" Shank**

Made of high-speed steel. Coarse cut for rapid removal of wax. Ideal cut for controlled rapid removal of material.

Dia. (mm)	Item#	Each
1.70	260-2675	\$6.50
3.50	260-2676	8.70
5.00	260-2677	9.50
7.20	260-2678	11.15
8.90	260-2679	12.95



**C Busch® Twist Drills – Fig 77**

Made of tungsten vanadium steel. Use on yellow gold, silver and other soft metals. Have 3/32" shanks.

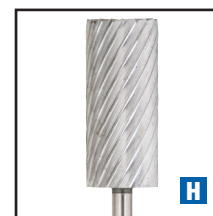
Dia. (mm)	Item#	EACH Prices	
		6-66	72-138
0.50	122-7005	\$2.17	\$1.84
0.60	122-7006	2.17	1.84
0.70	122-7007	2.17	1.84
0.80	122-7008	2.17	1.84
0.90	122-7009	2.17	1.84
1.00	122-7010	2.17	1.84
1.10	122-7011	2.17	1.84
1.20	122-7012	2.17	1.84
1.40	122-7014	2.17	1.84
1.50	122-7015	2.17	1.84
1.60	122-7016	2.17	1.84
1.70	122-7017	2.17	1.84
1.80	122-7018	2.17	1.84
1.90	122-7019	2.17	1.84
2.10	122-7021	2.17	1.84
2.30	122-7023	2.17	1.84



**H Wolf Wax Cylinder Burs 1/8" and 3/32" Shank**

Made of high-speed steel. Coarse cut for rapid removal of wax. Teeth on the end for milling. Longer cutting surface. Shorter shank (25mm) reduces centrifugal wobble.

Dia. (mm)	Shank	Item#	Each
3.30	3/32"	260-2680	\$10.35
4.70	3/32"	260-2681	11.60
6.30	3/32"	260-2682	12.95
8.00	1/8"	260-2683	14.60
11.1	1/8"	260-2684	19.50



**D Busch® Twist Drill Set – Fig 77**

Includes 0.6, 0.7, 0.8, 0.9, 1.0, 1.2, 1.4, 1.5, 1.6, 1.8, 2.1 and 2.3mm sizes. Have 3/32" shanks.

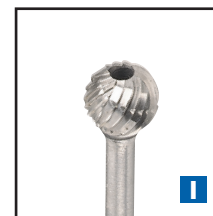
Description	Item#	Each
12-Piece Set	122-7030	\$26.05



**I Pearl Peg Burs – 3/32" Shank**

Specially designed to clean the seat around a peg. Hole in end of each bur measures 1.5mm dia. to fit over peg. Made of high-speed steel.

Dia. (mm)	Item#	Each
4.00	132-1040	\$4.55
4.50	132-1045	4.55
5.40	132-1050	5.00
5.90	132-1055	5.00
6.00	132-1060	5.45
Description	Item#	Each
5-Piece Set (one each)	132-1066	\$23.00



**Cup Burs – 3/32" Shank**

Made of tungsten vanadium steel. Use with a good lubricant such as Gesswein Lube-Stick to facilitate cutting and prolong tool life. Please see facing page for Supra Swiss Cup Burs. Cup Burs can not be resharpened. **Please ask for quotes on larger quantities.**



**A Busch® Clean-Cut Cup Burs**

Feature four slits for allowing metal particles to fall out. Eliminate clogging to cut easier and maintain tooth edges longer.

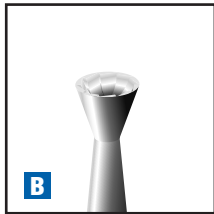
Dia. (mm)	Item#	EACH Prices	
		6-66	72-138
1.00	121-1510	\$2.82	\$2.40
1.10	121-1511	2.82	2.40
1.20	121-1512	2.82	2.40
1.30	121-1513	2.82	2.40
1.40	121-1514	2.82	2.40
1.50	121-1515	2.82	2.40
1.60	121-1516	2.82	2.40
1.80	121-1518	2.82	2.40
2.10	121-1521	2.82	2.40
2.30	121-1523	2.82	2.40
Description	Item#	Each	
10-Piece Set (one each)	121-1524	\$28.80	



**D Fox™ Champion Cup Burs**

Tooth-free cups that burnish rather than cut. Two slits allow metal particles to escape.

Dia. (mm)	Item#	EACH Prices	
		6-66	72+
0.90	124-7039	\$2.10	\$1.79
1.00	124-7040	2.10	1.79
1.10	124-7041	2.10	1.79
1.20	124-7042	2.10	1.79
1.30	124-7043	2.10	1.79
1.40	124-7044	2.10	1.79
1.50	124-7045	2.10	1.79
1.60	124-7046	2.10	1.79
1.70	124-7047	2.10	1.79
1.80	124-7048	2.10	1.79
2.10	124-7050	2.10	1.79
2.30	124-7051	2.10	1.79
Description	Item#	Each	
6-Piece Set (1.0, 1.2, 1.4, 1.6, 1.8, 2.1mm)	124-7052	\$12.55	



**B Busch® Fast-Cut Cup Burs**

Feature slim blade design for faster cutting, ensuring long bur life. Ideal when prongs are close together.

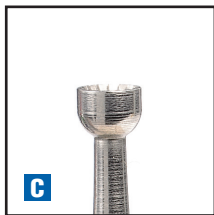
Dia. (mm)	Item#	EACH Prices	
		6-66	72-138
1.00	121-1410	\$2.82	\$2.40
1.20	121-1420	2.82	2.40
1.40	121-1430	2.82	2.40
1.50	121-1440	2.82	2.40
1.60	121-1450	2.82	2.40
1.80	121-1460	2.82	2.40
2.10	121-1470	2.82	2.40
2.30	121-1480	2.82	2.40



**E Black Top Cup Burs**

Hardened black tops and superior tooth geometry for long life.

Dia. (mm)	Item#	EACH Prices	
		3-9	12-141
1.00	122-7140	\$2.05	\$1.74
1.20	122-7141	2.05	1.74
1.40	122-7142	2.05	1.74
1.50	122-7143	2.05	1.74
1.60	122-7144	2.05	1.74
1.80	122-7145	2.05	1.74
2.10	122-7146	2.05	1.74
2.30	122-7147	2.05	1.74
Description	Item#	Each	
8-Piece Set (one each)	122-7148	\$16.85	



**C Busch® Cup Burs – Fig 77b**

Precision machined, uniformly spaced teeth for accurate and smooth cutting.

Dia. (mm)	Item#	EACH Prices	
		6-66	72-138
0.90	121-1001	\$2.82	\$2.40
1.00	121-1010	2.82	2.40
1.20	121-1020	2.82	2.40
1.40	121-1030	2.82	2.40
1.50	121-1040	2.82	2.40
1.60	121-1050	2.82	2.40
1.80	121-1060	2.82	2.40
2.10	121-1070	2.82	2.40
2.30	121-1080	2.82	2.40
2.50	121-1090	4.78	4.06
2.70	121-1100	4.78	4.06
2.90	121-1110	4.78	4.06
3.10	121-1120	6.33	5.38
Description	Item#	Each	
12-Piece Set (one each, except 0.90mm)	121-1130	\$41.90	



**F Super-Cut™ Swiss Cup Burs**

Two large teeth with smaller teeth in between create a self-centering action. As teeth load burs cut and burnish in one step.

Dia. (mm)	Item#	PKG. of 6	
		1-2	3+
0.80	122-8115	\$10.80	\$9.94
0.90	122-8116	10.80	9.94
1.00	122-8117	10.80	9.94
1.10	122-8118	10.80	9.94
1.20	122-8119	10.80	9.94
1.30	122-8120	10.80	9.94
1.40	122-8121	10.80	9.94
1.50	122-8122	10.80	9.94
1.60	122-8123	10.80	9.94
1.70	122-8124	10.80	9.94
1.80	122-8125	10.80	9.94
2.00	122-8126	10.80	9.94
2.20	122-8127	10.80	9.94
Description	Item#	Each	
13-Piece Set (one each)	122-8128	\$21.00	

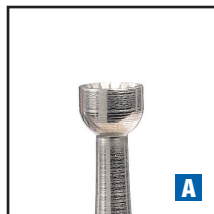


## SUPRA® Swiss Burs – 3/32" Shank

The best burs in the industry with lower prices than comparable ones. Save money without sacrificing quality. Made of high-quality, long-lasting tungsten vanadium steel. **Please ask for quotes on larger quantities.**

### A SUPRA® Swiss Cup Burs

Dia. (mm)	Item#	PKG. of 6	
		1-2	3-5
0.90	122-8010	\$10.80	\$9.94
1.00	122-8011	10.80	9.94
1.20	122-8013	10.80	9.94
1.40	122-8016	10.80	9.94
1.50	122-8017	10.80	9.94
1.60	122-8018	10.80	9.94
1.80	122-8022	10.80	9.94
2.10	122-8024	10.80	9.94
2.30	122-8026	10.80	9.94
Description	Item#	Each	
9-Piece Set (one each)	122-8045	\$15.90	



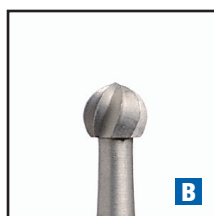
### E SUPRA® Swiss Deluxe Bur Set

Includes all Round, 90° Hart, Cup and Krause burs. Packaged in an attractive wooden box.

Description	Item#	Each	
33-Piece Set	122-8005	\$47.60	

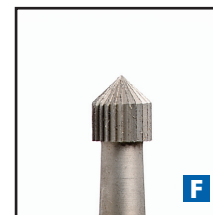
### B SUPRA® Swiss Round Burs

Dia. (mm)	Item#	PKG. of 6	
		1-2	3-5
0.50	122-8080	\$3.60	\$3.31
0.60	122-8081	3.60	3.31
0.70	122-8082	3.60	3.31
0.80	122-8083	3.60	3.31
0.90	122-8084	3.60	3.31
1.00	122-8085	3.60	3.31
1.20	122-8087	3.60	3.31
1.40	122-8089	3.60	3.31
1.50	122-8090	3.60	3.31
1.60	122-8091	3.60	3.31
1.80	122-8093	3.60	3.31
2.10	122-8097	3.60	3.31
2.30	122-8099	3.60	3.31
Description	Item#	Each	
13-Piece Set (one each)	122-8112	\$7.80	



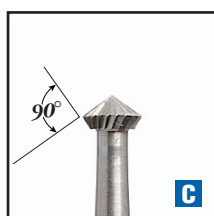
### F SUPRA® Swiss Setting Burs

Dia. (mm)	Item#	PKG. of 6	
		1-2	3-5
1.20	124-7002	\$5.95	\$5.47
1.60	124-7005	5.95	5.47
2.30	124-7008	7.50	6.90
2.50	124-7010	7.50	6.90
2.60	124-7011	7.50	6.90
3.00	124-7012	7.50	6.90



### C SUPRA® Swiss 90° Hart Burs

Dia. (mm)	Item#	PKG. of 6	
		1-2	3-5
0.90	122-8050	\$10.80	\$9.94
1.00	122-8051	10.80	9.94
1.20	122-8053	10.80	9.94
1.40	122-8055	10.80	9.94
1.50	122-8056	10.80	9.94
1.60	122-8057	10.80	9.94
1.80	122-8059	10.80	9.94
2.10	122-8062	10.80	9.94
2.30	122-8064	10.80	9.94
Description	Item#	Each	
9-Piece Set (one each)	122-8079	\$15.90	



### G Reducing Collets

Convert your 1/8" handpiece collet to hold 3/32" shank tools. Easy to use: slip the reducing collet into your handpiece collet, then slip the tool into the reducing collet. Make sure the reducing collet and the tool are fully inserted before operating.

Description	Item#	Each	
1/8"-3/32" Collet	816-1501	\$12.90	



### D SUPRA® Swiss Krause Burs

Use these burs when setting to remove metal for seating the points of marquise, pear, heart and other fancy cut diamonds.

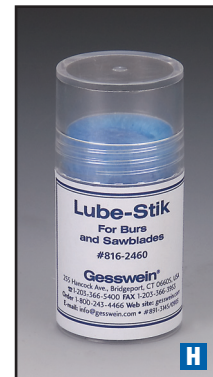
Dia. (mm)	Item#	PKG. of 6	
		1-2	3-5
1.00	122-8006	\$9.50	\$8.74
1.20	122-8007	9.50	8.74



### H Gesswein® Lube-Stik

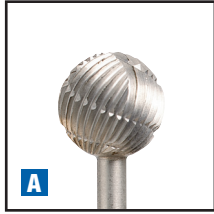
Use on grinding, cutting, drilling, piercing or similar tools to speed up production and increase tool life. Reduces both friction and heat buildup so that tools stay sharper, work faster and cut smoother. Easy to use: just run your tools into the soft lubricant every so often. Can also be used to reduce the effort needed for drawing operations. Supplied in handy push-up dispenser tube.

Description	Item#	EACH Prices	
		1-9	10+
Lube-Stik	816-2460	\$4.15	\$3.74



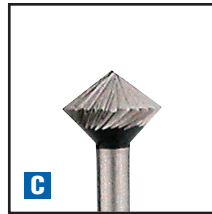
**High-Speed Burs (pp. 96–99) – 3/32" Shank**

Made of extremely rugged high-speed steel to withstand heat buildup under the most extreme conditions. Cut faster and last longer than dental burs. Can be resharpened for a nominal fee.



**A High-Speed Round Burs**

Size	Dia. (mm)	Item#	EACH Prices	
			1-5	6+
1	0.90	123-8010	\$2.50	\$2.10
2	1.10	123-8020	2.50	2.10
3	1.30	123-8030	2.50	2.10
4	1.50	123-8040	2.50	2.10
5	1.70	123-8050	2.50	2.10
6	1.90	123-8060	2.50	2.10
7	2.10	123-8070	2.50	2.10
8	2.30	123-8080	2.50	2.10
9	2.50	123-8090	3.12	2.62
10	2.70	123-8100	3.12	2.62
11	2.90	123-8110	3.12	2.62
12	3.10	123-8120	3.12	2.62
13	3.30	123-8130	3.70	3.11
14	3.50	123-8140	3.70	3.11
15	3.80	123-8150	3.70	3.11
16	4.00	123-8160	3.70	3.11
17	4.30	123-8170	3.70	3.11
18	4.50	123-8180	3.70	3.11
19	4.70	123-8190	4.50	3.78
20	5.00	123-8200	4.50	3.78
22	5.20	123-8220	4.50	3.78
23	5.40	123-8230	4.50	3.78
24	5.60	123-8240	4.50	3.78
25	5.90	123-8250	4.50	3.78
26	6.30	123-8260	5.50	4.62
27	6.70	123-8270	5.50	4.62
28	7.20	123-8280	5.50	4.62
29	7.60	123-8290	5.50	4.62
30	8.00	123-8300	5.50	4.62
31	8.90	123-8310	6.70	5.63
32	9.60	123-8320	6.70	5.63
33	10.40	123-8330	7.30	6.13
34	11.10	123-8340	7.30	6.13



**C High-Speed 45° Hart Burs**

Size	Dia. (mm)	Item#	EACH Prices	
			1-5	6+
2	1.10	123-5020	\$2.60	\$2.18
3	1.30	123-5030	2.60	2.18
4	1.50	123-5040	2.60	2.18
5	1.70	123-5050	2.60	2.18
6	1.90	123-5060	2.60	2.18
7	2.10	123-5070	2.60	2.18
8	2.30	123-5080	2.60	2.18
9	2.50	123-5090	3.65	3.07
10	2.70	123-5100	3.65	3.07
11	2.90	123-5110	3.65	3.07
12	3.10	123-5120	3.65	3.07
13	3.30	123-5130	4.40	3.70
14	3.50	123-5140	4.40	3.70
15	3.80	123-5150	4.40	3.70
16	4.00	123-5160	4.40	3.70
17	4.30	123-5170	4.40	3.70
18	4.50	123-5180	4.40	3.70
19	4.70	123-5190	4.99	4.19
20	5.00	123-5200	4.99	4.19
22	5.20	123-5220	4.99	4.19
24	5.60	123-5240	4.99	4.19
26	6.30	123-5260	5.50	4.62
28	7.20	123-5280	5.50	4.62
30	8.00	123-5300	5.50	4.62
34	11.10	123-5340	7.30	6.13



**B High-Speed Round Bur Sets**

Five convenient sets all in wooden boxes.

Bur Qty.	Sizes	Item#	Each
18	1–18	124-4111	\$55.25
25	1–26	124-4112	78.50
29	1–30	124-4113	96.25
33	1–34	124-4114	109.00
36	1–12 (3 each)	124-4115	93.50



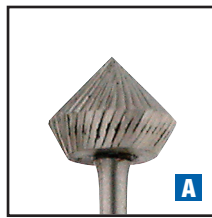
**D High-Speed 45° Hart Bur Sets**

Select between four convenient sets all in wooden boxes.

Bur Qty.	Sizes	Item#	Each
17	2–18	124-4551	\$58.50
14	2–28 (evens)	124-4552	57.25
24	2–30	124-4553	87.50
33	2–12 (3 each)	124-4554	96.50

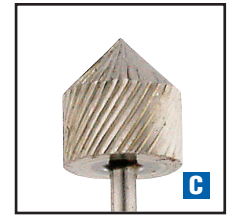
### A High-Speed 90° Bearing Burs

Size	Dia. (mm)	Item#	EACH Prices	
			1-5	6+
1	0.90	123-0010	\$2.60	\$2.18
2	1.10	123-0020	2.60	2.18
3	1.30	123-0030	2.60	2.18
4	1.50	123-0040	2.60	2.18
5	1.70	123-0050	2.60	2.18
6	1.90	123-0060	2.60	2.18
7	2.10	123-0070	2.60	2.18
8	2.30	123-0080	2.60	2.18
9	2.50	123-0090	3.65	3.07
10	2.70	123-0100	3.65	3.07
11	2.90	123-0110	3.65	3.07
12	3.10	123-0120	3.65	3.07
13	3.30	123-0130	4.40	3.70
14	3.50	123-0140	4.40	3.70
15	3.80	123-0150	4.40	3.70
16	4.00	123-0160	4.40	3.70
17	4.30	123-0170	4.40	3.70
18	4.50	123-0180	4.40	3.70
19	4.70	123-0190	4.99	4.19
20	5.00	123-0200	4.99	4.19
22	5.20	123-0220	4.99	4.19
23	5.40	123-0230	4.99	4.19
24	5.60	123-0240	4.99	4.19
25	5.90	123-0250	4.99	4.19
26	6.30	123-0260	5.50	4.62
27	6.70	123-0270	5.50	4.62
28	7.20	123-0280	5.50	4.62
29	7.60	123-0290	5.50	4.62
30	8.00	123-0300	5.50	4.62
31	8.90	123-0310	6.70	5.63
32	9.60	123-0320	6.70	5.63
33	10.40	123-0330	7.30	6.13
34	11.10	123-0340	7.30	6.13



### C High-Speed Setting Burs

Size	Dia. (mm)	Item#	EACH Prices	
			1-5	6+
1	0.90	124-0010	\$2.60	\$2.18
2	1.10	124-0020	2.60	2.18
3	1.30	124-0030	2.60	2.18
4	1.50	124-0040	2.60	2.18
5	1.70	124-0050	2.60	2.18
6	1.90	124-0060	2.60	2.18
7	2.10	124-0070	2.60	2.18
8	2.30	124-0080	2.60	2.18
9	2.50	124-0090	3.65	3.07
10	2.70	124-0100	3.65	3.07
11	2.90	124-0110	3.65	3.07
12	3.10	124-0120	3.65	3.07
13	3.30	124-0130	4.40	3.70
14	3.50	124-0140	4.40	3.70
15	3.80	124-0150	4.40	3.70
16	4.00	124-0160	4.40	3.70
17	4.30	124-0170	4.40	3.70
18	4.50	124-0180	4.40	3.70
19	4.70	124-0190	4.99	4.19
20	5.00	124-0200	4.99	4.19
22	5.20	124-0220	4.99	4.19
23	5.40	124-0230	4.99	4.19
24	5.60	124-0240	4.99	4.19
25	5.90	124-0250	4.99	4.19
26	6.30	124-0260	5.50	4.62
27	6.70	124-0270	5.50	4.62
28	7.20	124-0280	5.50	4.62
29	7.60	124-0290	5.50	4.62
30	8.00	124-0300	5.50	4.62
31	8.90	124-0310	6.70	5.63
32	9.60	124-0320	6.70	5.63
33	10.40	124-0330	7.30	6.13
34	11.10	124-0340	7.30	6.13



BURS



### B High-Speed 90° Bearing Bur Sets

Select between five sets all in wooden boxes.

Bur Qty.	Sizes	Item#	Each
18	1-18	124-4441	\$63.85
25	1-26	124-4442	89.50
14	2-28 (evens)	124-4443	57.25
33	1-34	124-4444	119.75
36	1-12 (3 each)	124-4445	103.50



### D High-Speed Setting Bur Sets

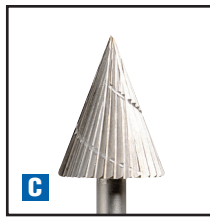
Four convenient sets all in wooden boxes.

Bur Qty.	Sizes	Item#	Each
18	1-18	124-4661	\$63.95
25	1-26	124-4662	89.50
29	1-30	124-4663	110.00
33	1-34	124-4664	116.75



**A High-Speed Bud Burs**

Size	Dia. (mm)	Item#	EACH Prices	
			1-5	6+
2	1.10	123-1020	\$2.50	\$2.10
3	1.30	123-1030	2.50	2.10
4	1.50	123-1040	2.50	2.10
5	1.70	123-1050	2.50	2.10
6	1.90	123-1060	2.50	2.10
7	2.10	123-1070	2.50	2.10
8	2.30	123-1080	2.50	2.10
9	2.50	123-1090	3.12	2.62
10	2.70	123-1100	3.12	2.62
11	2.90	123-1110	3.12	2.62
12	3.10	123-1120	3.12	2.62
13	3.30	123-1130	3.70	3.11
14	3.50	123-1140	3.70	3.11
16	4.00	123-1160	3.70	3.11
18	4.50	123-1180	3.70	3.11
20	5.00	123-1200	4.50	3.78
22	5.20	123-1220	4.50	3.78
24	5.60	123-1240	4.50	3.78
26	6.30	123-1260	5.50	4.62
28	7.20	123-1280	5.50	4.62
30	8.00	123-1300	5.50	4.62
32	9.60	123-1320	6.70	5.63
34	11.10	123-1340	7.30	6.13



**C High-Speed Cone Burs**

Size	Dia. (mm)	Item#	EACH Prices	
			1-5	6+
2	1.10	123-2020	\$2.50	\$2.10
3	1.30	123-2030	2.50	2.10
4	1.50	123-2040	2.50	2.10
5	1.70	123-2050	2.50	2.10
6	1.90	123-2060	2.50	2.10
7	2.10	123-2070	2.50	2.10
8	2.30	123-2080	2.50	2.10
9	2.50	123-2090	3.12	2.62
10	2.70	123-2100	3.12	2.62
11	2.90	123-2110	3.12	2.62
12	3.10	123-2120	3.12	2.62
13	3.30	123-2130	3.70	3.11
14	3.50	123-2140	3.70	3.11
16	4.00	123-2160	3.70	3.11
18	4.50	123-2180	3.70	3.11
20	5.00	123-2200	4.50	3.78
22	5.20	123-2220	4.50	3.78
24	5.60	123-2240	4.50	3.78
26	6.30	123-2260	5.50	4.62
28	7.20	123-2280	5.50	4.62
30	8.00	123-2300	5.50	4.62
32	9.60	123-2320	6.70	5.63
34	11.10	123-2340	7.30	6.13



**B High-Speed Bud Bur Sets**

Two convenient sets both in wooden boxes.

Bur Qty.	Sizes	Item#	Each
19	2-26	124-4221	\$69.25
23	2-34	124-4222	81.00



**D High-Speed Cone Bur Sets**

Two convenient sets both in wooden boxes.

Bur Qty.	Sizes	Item#	Each
19	2-26	124-4331	\$69.25
23	2-34	124-4332	81.00



**E High-Speed Grand Bur Set**

Includes all the following 119 burs: 25 Round burs, sizes 1-26; 33 Setting burs, sizes 1-34; 25 Bearing burs, sizes 1-26; 17 Hart burs, sizes 2-18; 19 Bud burs, sizes 2-26. Packaged in an attractive wooden box.

Description	Item#	Each
119-Piece Set	124-4670	\$395.00



**A High-Speed 17° Bezel Cone Bur**

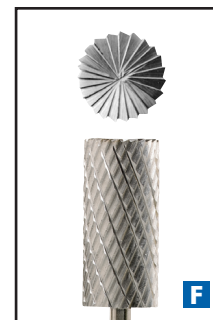
Use to drill an angled hole that matches the 17° angle on many settings, most notably bezel settings. Solves the problem of inserting a standard tapered prong or bezel setting into a standard shank.

Size	Dia. (mm)	Item#	EACH Prices	
			1-5	6+
30	8.00	123-2301	\$5.30	\$4.45



**F High-Speed Cylinder Burs**

Size	Dia. (mm)	Item#	EACH Prices	
			1-5	6+
5	1.70	123-3050	\$2.88	\$2.42
8	2.30	123-3080	2.88	2.42
13	3.30	123-3130	4.40	3.70
16	4.00	123-3160	4.40	3.70
19	4.70	123-3190	4.99	4.19
26	6.30	123-3260	5.50	4.62
30	8.00	123-3300	5.50	4.62
34	11.10	123-3340	7.30	6.13



**B High-Speed Flame Burs**

Size	Dia. (mm)	Item#	EACH Prices	
			1-5	6+
2	1.10	123-4020	\$2.88	\$2.42
4	1.50	123-4040	2.88	2.42
6	1.90	123-4060	2.88	2.42
8	2.30	123-4080	2.88	2.42
10	2.70	123-4100	3.65	3.07
12	3.10	123-4120	3.65	3.07
14	3.50	123-4140	4.40	3.70
16	4.00	123-4160	4.40	3.70
18	4.50	123-4180	4.40	3.70
20	5.00	123-4200	4.99	4.19
22	5.20	123-4220	4.99	4.19
24	5.60	123-4240	4.99	4.19
26	6.30	123-4260	5.50	4.62
30	8.00	123-4300	5.50	4.62



**G High-Speed Inverted Cone Burs**

Size	Dia. (mm)	Item#	EACH Prices	
			1-5	6+
5	1.70	123-6050	\$2.88	\$2.42
8	2.30	123-6080	2.88	2.42
13	3.30	123-6130	4.40	3.70
19	4.70	123-6190	4.99	4.19
26	6.30	123-6260	5.50	4.62
30	8.00	123-6300	5.50	4.62



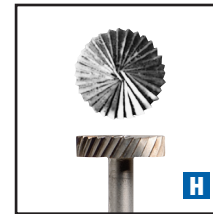
**C High-Speed Tree Burs**

Size	Dia. (mm)	Item#	EACH Prices	
			1-5	6+
5	1.70	124-2050	\$2.88	\$2.42
8	2.30	124-2080	2.88	2.42
13	3.30	124-2130	4.40	3.70
19	4.70	124-2190	4.99	4.19
26	6.30	124-2260	5.50	4.62
30	8.00	124-2300	5.50	4.62



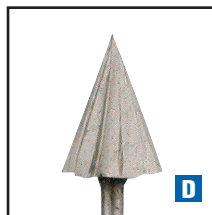
**H High-Speed Square-Edge Wheels**

Size	Dia. (mm)	Item#	EACH Prices	
			1-5	6+
5	1.70	124-3050	\$2.88	\$2.42
8	2.30	124-3080	2.88	2.42
13	3.30	124-3130	4.40	3.70
16	4.00	124-3160	4.40	3.70
19	4.70	124-3190	4.99	4.19
26	6.30	124-3260	5.50	4.62
30	8.00	124-3300	5.50	4.62
34	11.10	124-3340	7.30	6.13



**D High-Speed Reamers**

Size	Dia. (mm)	Item#	EACH Prices	
			1-5	6+
26	6.30	123-7260	\$5.50	\$4.62
30	8.00	123-7300	5.50	4.62
34	11.10	123-7340	7.30	6.13



**I High-Speed Round-Edge Wheels**

Size	Dia. (mm)	Item#	EACH Prices	
			1-5	6+
5	1.70	123-9050	\$2.88	\$2.42
8	2.30	123-9080	2.88	2.42
13	3.30	123-9130	4.40	3.70
16	4.00	123-9160	4.40	3.70
19	4.70	123-9190	4.99	4.19
26	6.30	123-9260	5.50	4.62
30	8.00	123-9300	5.50	4.62
34	11.10	123-9340	7.30	6.13



**E High-Speed Slim Reamers**

Size	Dia. (mm)	Item#	EACH Prices	
			1-5	6+
9	2.50	124-1090	\$3.65	\$3.07
13	3.30	124-1130	4.40	3.70
19	4.70	124-1190	4.99	4.19



**TiN (Titanium Nitride) Burs – 3/32" Shank**

Made of gold-colored high-speed steel. Feature TiN (titanium nitride) coating that increases wear resistance to 10–20 times that of plain steel, significantly improves corrosion resistance, reduces friction and allows freer chip flow for better workpiece finishes.



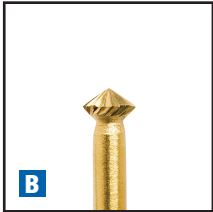
**A TiN Round Burs**

Size	Dia. (mm)	Item#	EACH Prices	
			1-5	6+
1	0.90	124-3701	\$6.65	\$5.59
2	1.10	124-3702	6.65	5.59
3	1.30	124-3703	6.65	5.59
4	1.50	124-3704	6.65	5.59
5	1.70	124-3705	6.65	5.59
6	1.90	124-3706	6.65	5.59
7	2.10	124-3707	6.65	5.59
8	2.30	124-3708	6.65	5.59
9	2.50	124-3709	7.45	6.26
10	2.70	124-3710	7.45	6.26
11	2.90	124-3711	7.45	6.26
12	3.10	124-3712	7.45	6.26
13	3.30	124-3713	8.18	6.87
14	3.50	124-3714	8.18	6.87
15	3.80	124-3715	8.18	6.87
16	4.00	124-3716	8.18	6.87
17	4.30	124-3717	8.18	6.87
18	4.50	124-3718	8.18	6.87
Description		Item#	Each	
18-Piece Set (one each)		130-1006	\$101.85	



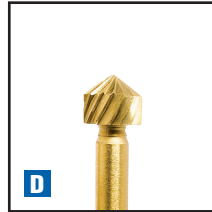
**C TiN 90° Bearing Burs**

Size	Dia. (mm)	Item#	EACH Prices	
			1-5	6+
1	0.90	124-3919	\$6.90	\$5.80
2	1.10	124-3920	6.90	5.80
3	1.30	124-3921	6.90	5.80
4	1.50	124-3923	6.90	5.80
5	1.70	124-3924	6.90	5.80
6	1.90	124-3925	6.90	5.80
7	2.10	124-3926	6.90	5.80
8	2.30	124-3927	6.90	5.80
9	2.50	124-3928	7.65	6.43
10	2.70	124-3929	7.65	6.43
11	2.90	124-3930	7.65	6.43
12	3.10	124-3931	7.65	6.43
13	3.30	124-3932	8.75	7.35
14	3.50	124-3933	8.75	7.35
15	3.80	124-3934	8.75	7.35
16	4.00	124-3935	8.75	7.35
17	4.30	124-3936	8.75	7.35
18	4.50	124-3937	8.75	7.35
Description		Item#	Each	
18-Piece Set (one each)		130-1013	\$106.75	



**B TiN 45° Hart Burs**

Size	Dia. (mm)	Item#	EACH Prices	
			1-5	6+
2	1.10	124-3902	\$6.90	\$5.80
3	1.30	124-3903	6.90	5.80
4	1.50	124-3904	6.90	5.80
5	1.70	124-3905	6.90	5.80
6	1.90	124-3906	6.90	5.80
7	2.10	124-3907	6.90	5.80
8	2.30	124-3908	6.90	5.80
9	2.50	124-3909	7.65	6.43
10	2.70	124-3910	7.65	6.43
11	2.90	124-3911	7.65	6.43
12	3.10	124-3912	7.65	6.43
13	3.30	124-3913	8.75	7.35
14	3.50	124-3914	8.75	7.35
15	3.80	124-3915	8.75	7.35
16	4.00	124-3916	8.75	7.35
17	4.30	124-3917	8.75	7.35
18	4.50	124-3918	8.75	7.35
Description		Item#	Each	
17-Piece Set (one each)		130-1012	\$102.25	



**D TiN Setting Burs**

Size	Dia. (mm)	Item#	EACH Prices	
			1-5	6+
1	0.90	124-3801	\$6.90	\$5.80
2	1.10	124-3802	6.90	5.80
3	1.30	124-3803	6.90	5.80
4	1.50	124-3804	6.90	5.80
5	1.70	124-3805	6.90	5.80
6	1.90	124-3806	6.90	5.80
7	2.10	124-3807	6.90	5.80
8	2.30	124-3808	6.90	5.80
9	2.50	124-3809	7.65	6.43
10	2.70	124-3810	7.65	6.43
11	2.90	124-3811	7.65	6.43
12	3.10	124-3812	7.65	6.43
13	3.30	124-3813	8.75	7.35
14	3.50	124-3814	8.75	7.35
15	3.80	124-3815	8.75	7.35
16	4.00	124-3816	8.75	7.35
17	4.30	124-3817	8.75	7.35
18	4.50	124-3818	8.75	7.35
Description		Item#	Each	
18-Piece Set (one each)		130-1000	\$106.75	



**E TiN Deluxe Bur Set**

Includes one of each bur listed above. Packaged in an attractive wooden box.

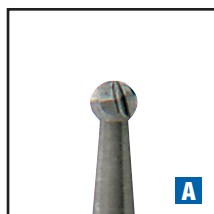
Description	Item#	Each
71-Piece Set	130-1014	\$395.00

**Super Carbide Burs – 3/32" Shank**

Made of the finest tungsten carbide, accurately fluted and honed to sharp cutting edges. Consist of heads brazed onto 3/32" steel shanks. Have coarse tooth structure. Designed to operate at very high speeds. Cannot be resharpened. Made in Germany.

**A Round Burs – Fig 1**

Dia. (mm)	Item#	EACH Prices	
		1-9	10+
0.70	126-0005	\$2.55	\$2.30
0.80	126-0010	2.55	2.30
1.00	126-0020	2.55	2.30
1.20	126-0030	2.55	2.30
1.40	126-0040	2.55	2.30
1.60	126-0050	2.55	2.30
1.80	126-0060	2.55	2.30
2.30	126-0080	2.55	2.30



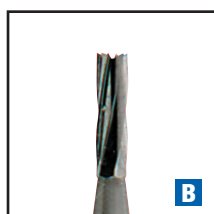
**F Square Cone Burs – Fig 17**

Dia. (mm)	Item#	EACH Prices	
		1-9	10+
0.80	126-7037	\$2.55	\$2.30
0.90	126-7038	2.55	2.30
1.00	126-1700	2.55	2.30
1.40	126-1710	2.55	2.30



**B Square Cylinder Burs – Fig 15**

Dia. (mm)	Item#	EACH Prices	
		1-9	10+
1.00	126-0570	\$2.55	\$2.30
1.20	126-0580	2.55	2.30



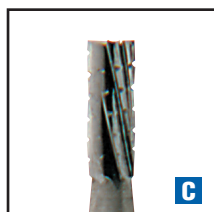
**G Cross-Cut Square Cone Burs – Fig 23**

Dia. (mm)	Item#	EACH Prices	
		1-9	10+
1.00	126-7000	\$2.55	\$2.30
1.40	126-7010	2.55	2.30
1.60	126-7020	2.55	2.30
1.80	126-7030	2.55	2.30



**C Cross-Cut Square Cylinder Burs – Fig 21**

Dia. (mm)	Item#	EACH Prices	
		1-9	10+
1.00	126-5570	\$2.55	\$2.30
1.20	126-5580	2.55	2.30
1.40	126-5590	2.55	2.30
1.60	126-5600	2.55	2.30
1.80	126-5610	2.55	2.30



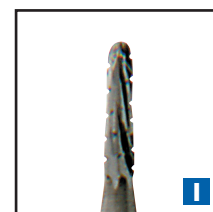
**H Universal Cone Burs – Fig 17U**

Dia. (mm)	Item#	EACH Prices	
		1-9	10+
1.00	126-1705	\$2.55	\$2.30
1.40	126-1715	2.55	2.30



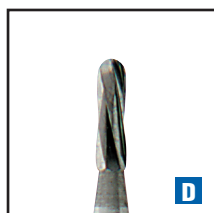
**I Cross-Cut Universal Cone Burs – Fig 23U**

Dia. (mm)	Item#	EACH Prices	
		1-9	10+
1.00	126-7005	\$2.55	\$2.30
1.40	126-7015	2.55	2.30
1.60	126-7025	2.55	2.30
1.80	126-7035	2.55	2.30



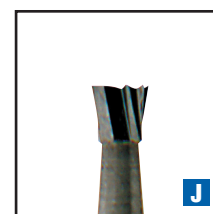
**D Universal Cylinder Burs – Fig 15U**

Dia. (mm)	Item#	EACH Prices	
		1-9	10+
1.00	126-0575	\$2.55	\$2.30
1.20	126-0585	2.55	2.30



**J Inverted Cone Burs – Fig 3**

Dia. (mm)	Item#	EACH Prices	
		1-9	10+
0.80	126-0340	\$2.55	\$2.30
1.00	126-0350	2.55	2.30
1.20	126-0360	2.55	2.30
1.40	126-0370	2.55	2.30
1.60	126-0380	2.55	2.30
1.80	126-0390	2.55	2.30



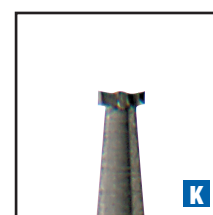
**E Cross-Cut Universal Cylinder Burs – Fig 21U**

Dia. (mm)	Item#	EACH Prices	
		1-9	10+
1.00	126-5575	\$2.55	\$2.30
1.20	126-5585	2.55	2.30
1.40	126-5595	2.55	2.30
1.60	126-5605	2.55	2.30
1.80	126-5615	2.55	2.30



**K Wheel Bur – Fig 2**

Dia. (mm)	Item#	EACH Prices	
		1-9	10+
1.20	126-0140	\$2.55	\$2.30



**Jeweler's Carbide Burs (pp. 102–103) – 3/32" Shank**

Burs hand-cut with diamond wheels. Have fine teeth. Outlast and cut faster than any other burs. Must be run at maximum speed—will chip if started on work at slow speed or if not removed from work at fast speed. Can be resharpened. Please consult ANSI American National Standards Institute for speed recommendations.



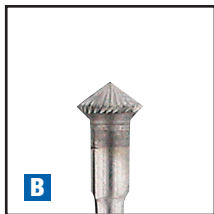
**A Jeweler's Carbide Round Burs**

Size	Dia. (mm)	Item#	Each
4	1.50	125-5040	\$15.85
5	1.70	125-5050	15.85
6	1.90	125-5060	15.85
7	2.10	125-5070	15.85
8	2.30	125-5080	15.85
9	2.50	125-5090	16.80
10	2.70	125-5100	16.80
11	2.90	125-5110	16.80
12	3.10	125-5120	16.80
13	3.30	125-5130	17.80
14	3.50	125-5140	17.80
16	4.00	125-5160	17.80
18	4.50	125-5180	17.80
20	5.00	125-5200	17.80
24	5.60	125-5240	17.80
26	6.30	125-5260	17.80
28	7.20	125-5280	27.70
30	8.00	125-5300	27.70



**D Jeweler's Carbide 90° Bearing Burs**

Size	Dia. (mm)	Item#	Each
4	1.50	125-0040	\$15.85
5	1.70	125-0050	15.85
6	1.90	125-0060	15.85
7	2.10	125-0070	15.85
8	2.30	125-0080	15.85
9	2.50	125-0090	16.80
10	2.70	125-0100	16.80
11	2.90	125-0110	16.80
12	3.10	125-0120	16.80
13	3.30	125-0130	17.80
14	3.50	125-0140	17.80
15	3.80	125-0150	17.80
16	4.00	125-0160	17.80
18	4.50	125-0180	17.80
20	5.00	125-0200	17.80
22	5.20	125-0220	17.80
23	5.40	125-0230	17.80
24	5.60	125-0240	17.80
25	5.90	125-0250	17.80
26	6.30	125-0260	17.80
27	6.70	125-0270	27.70
28	7.20	125-0280	27.70
29	7.60	125-0290	27.70
30	8.00	125-0300	27.70



**B Jeweler's Carbide 45° Hart Burs**

Size	Dia. (mm)	Item#	Each
4	1.50	125-4040	\$15.85
5	1.70	125-4050	15.85
6	1.90	125-4060	15.85
7	2.10	125-4070	15.85
8	2.30	125-4080	15.85
9	2.50	125-4090	16.80
10	2.70	125-4100	16.80
11	2.90	125-4110	16.80
12	3.10	125-4120	16.80
13	3.30	125-4130	17.80
14	3.50	125-4140	17.80
15	3.80	125-4150	17.80
16	4.00	125-4160	17.80
18	4.50	125-4180	17.80
20	5.00	125-4200	17.80
22	5.20	125-4220	17.80
24	5.60	125-4240	17.80
26	6.30	125-4260	17.80
28	7.20	125-4280	27.70
30	8.00	125-4300	27.70



**E Jeweler's Carbide Setting Burs**

Size	Dia. (mm)	Item#	Each
4	1.50	125-6040	\$15.85
5	1.70	125-6050	15.85
6	1.90	125-6060	15.85
7	2.10	125-6070	15.85
8	2.30	125-6080	15.85
9	2.50	125-6090	16.80
10	2.70	125-6100	16.80
11	2.90	125-6110	16.80
12	3.10	125-6120	16.80
13	3.30	125-6130	17.80
14	3.50	125-6140	17.80
15	3.80	125-6150	17.80
16	4.00	125-6160	17.80
17	4.30	125-6170	17.80
18	4.50	125-6180	17.80
19	4.70	125-6190	17.80
20	5.00	125-6200	17.80
22	5.20	125-6220	17.80
23	5.40	125-6230	17.80
24	5.60	125-6240	17.80
25	5.90	125-6250	17.80
26	6.30	125-6260	17.80
28	7.20	125-6280	27.70
29	7.60	125-6290	27.70
30	8.00	125-6300	27.70



**C Gesswein® Lube-Stik**

Use on grinding, cutting, drilling, piercing or similar tools to speed up production and increase tool life. Reduces both friction and heat buildup so that tools stay sharper, work faster and cut smoother. Can also be used to reduce the effort needed for drawing operations. Supplied in handy push-up dispenser tube.

Description	Item#	EACH Prices	
		1-9	10+
Lube-Stik	816-2460	\$4.15	\$3.74



**A Jeweler's Carbide Bud Burs**

Size	Dia. (mm)	Item#	Each
4	1.50	125-1040	\$15.85
6	1.90	125-1060	15.85
8	2.30	125-1080	15.85
10	2.70	125-1100	16.80
12	3.10	125-1120	16.80
14	3.50	125-1140	17.80
16	4.00	125-1160	17.80
18	4.50	125-1180	17.80
20	5.00	125-1200	17.80
24	5.60	125-1240	17.80
26	6.30	125-1260	17.80
28	7.20	125-1280	27.70
30	8.00	125-1300	27.70



**D Carbide Inside Ring Burs**

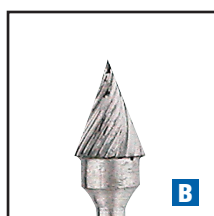
Feature carbide heads securely brazed on heat-treated shanks. Special diamond fluting finishes hundreds of rings. All extra-smooth except #129-0030, which is smooth.

Head Dia. x L	Shank	Item#	Each
1/4" x 5/8"	3/32"	129-0105	\$10.75
3/8" x 3/4"	1/8"	129-0110	27.30
1/2" x 1"	1/4"	129-0020	39.50
1/2" x 1"	1/4"	129-0030	39.50



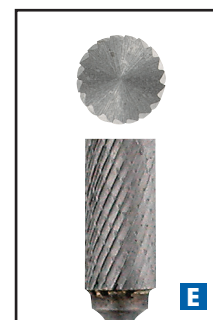
**B Jeweler's Carbide Cone Burs**

Size	Dia. (mm)	Item#	Each
4	1.50	125-2040	\$15.85
6	1.90	125-2060	15.85
8	2.30	125-2080	15.85
10	2.70	125-2100	16.80
12	3.10	125-2120	16.80
14	3.50	125-2140	17.80
16	4.00	125-2160	17.80
18	4.50	125-2180	17.80
20	5.00	125-2200	17.80
24	5.60	125-2240	17.80
26	6.30	125-2260	17.80
28	7.20	125-2280	27.70
30	8.00	125-2300	27.70



**E Jeweler's Carbide Cylinder Burs**

Size	Dia. (mm)	Item#	Each
26	6.30	125-3260	\$17.80
30	8.00	125-3300	27.70



**F Carbide Florentine Burs**

These solid carbide burs produce some of the deepest and brightest finishes of any rotary tool. Each outwears at least 10 carbon steel wheels, lasting for hundreds of jobs. Designed to match a #16 hand liner.

Head Dia. x L	Shank	Item#	Each
1/8" x 1/2"	1/8"	845-1201	\$19.75
1/8" x 5/32"	1/8"	845-1202	19.75
1/8" x 1/2"	1/8"	845-1203	19.75



**C Jeweler's Carbide Wheel Burs**

Size	Dia. (mm)	Item#	Each
26	6.30	125-7260	\$17.80
30	8.00	125-7300	27.70



**G Steel Florentine Wheels**

These medium grade wheels leave a deep bright cut on almost any piece of jewelry. Made of case-hardened steel for long life. Designed to match a #18 hand liner.

Head Dia. x Thick	Shank	Item#	Each
1/2" x 1/8"	3/32"	845-1338	\$40.65
3/4" x 1/8"	1/8"	845-1324	40.65

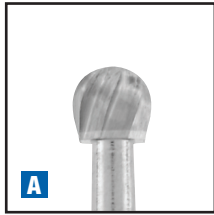


**BUR SIZE CHART – For High-Speed, Titanium Nitrided and Jeweler's Carbide Burs only.**

SIZE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
mm	0.90	1.10	1.30	1.50	1.70	1.90	2.10	2.30	2.50	2.70	2.90	3.10	3.30	3.50	3.80	4.00	4.30
inches	.035	.043	.051	.059	.067	.075	.083	.091	.098	.106	.114	.122	.130	.138	.150	.157	.169
SIZE	18	19	20	22	23	24	25	26	27	28	29	30	31	32	33	34	
mm	4.50	4.70	5.00	5.20	5.40	5.60	5.90	6.30	6.70	7.20	7.60	8.00	8.90	9.60	10.40	11.10	
inches	.177	.185	.197	.205	.213	.220	.232	.248	.264	.283	.299	.315	.350	.378	.409	.437	

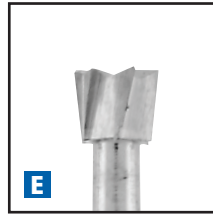
**SS White® Carbide Burs – 3/32" Shank**

High-quality tungsten carbide burs with reinforced teeth for elimination of premature chipping. Superior fluting improves cutting edges for pinpoint accuracy. Cannot be resharpened. Made in USA. Available only in multiples of five.



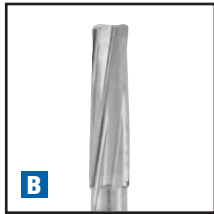
**A Round Burs**

Dia. (mm)	Item#	EACH Prices	
		5	10+
0.79	<b>128-0010</b>	<b>\$2.30</b>	<b>\$1.96</b>
0.99	<b>128-0020</b>	<b>2.30</b>	<b>1.96</b>
1.19	<b>128-0030</b>	<b>2.30</b>	<b>1.96</b>
1.40	<b>128-0040</b>	<b>2.30</b>	<b>1.96</b>
1.60	<b>128-0050</b>	<b>2.30</b>	<b>1.96</b>
1.80	<b>128-0060</b>	<b>2.30</b>	<b>1.96</b>
2.10	<b>128-0070</b>	<b>2.30</b>	<b>1.96</b>
2.31	<b>128-0080</b>	<b>2.30</b>	<b>1.96</b>



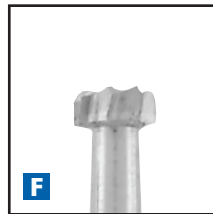
**E Inverted Cone Burs**

Dia. (mm)	Item#	EACH Prices	
		5	10+
0.79	<b>128-0340</b>	<b>\$2.30</b>	<b>\$1.96</b>
0.99	<b>128-0350</b>	<b>2.30</b>	<b>1.96</b>
1.19	<b>128-0360</b>	<b>2.30</b>	<b>1.96</b>
1.40	<b>128-0370</b>	<b>2.30</b>	<b>1.96</b>
1.60	<b>128-0380</b>	<b>2.30</b>	<b>1.96</b>



**B Square Cylinder Burs**

Dia. (mm)	Item#	EACH Prices	
		5	10+
0.99	<b>128-0570</b>	<b>\$2.30</b>	<b>\$1.96</b>
1.40	<b>128-0590</b>	<b>2.30</b>	<b>1.96</b>



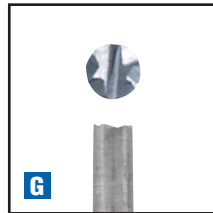
**F Wheel Bur**

Dia. (mm)	Item#	EACH Prices	
		5	10+
1.19	<b>128-0140</b>	<b>\$2.30</b>	<b>\$1.96</b>



**C Cross-Cut Square Cylinder Burs**

Dia. (mm)	Item#	EACH Prices	
		5	10+
0.99	<b>128-5570</b>	<b>\$2.30</b>	<b>\$1.96</b>
1.19	<b>128-5580</b>	<b>2.30</b>	<b>1.96</b>
1.40	<b>128-5590</b>	<b>2.30</b>	<b>1.96</b>
1.60	<b>128-5600</b>	<b>2.30</b>	<b>1.96</b>



**G End Bur**

Dia. (mm)	Item#	EACH Prices	
		5	10+
0.99	<b>128-9570</b>	<b>\$2.30</b>	<b>\$1.96</b>



**D Cross-Cut Square Cone Burs**

Dia. (mm)	Item#	EACH Prices	
		5	10+
0.56	<b>128-7000</b>	<b>\$2.30</b>	<b>\$1.96</b>
0.76	<b>128-7010</b>	<b>2.30</b>	<b>1.96</b>
1.11	<b>128-7020</b>	<b>2.30</b>	<b>1.96</b>
1.55	<b>128-7030</b>	<b>2.30</b>	<b>1.96</b>



**H Reducing Collets**

Convert your 1/8" handpiece collet to hold 3/32" shank tools. Easy to use: slip the reducing collet into your handpiece collet, then slip the tool into the reducing collet. Make sure the reducing collet and the tool are fully inserted before operating.

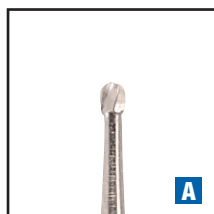
Description	Item#	Each
1/8"-3/32" Collet	<b>816-1501</b>	<b>\$12.90</b>

## Friction Grip Carbide Burs – 1/16" Shank

Made of super-hard tungsten carbide to withstand extremely high speeds up to 350,000rpm. Designed to get into small, tight spaces. Use with reducing collets (see below).

### A Round Burs

Dia. (mm)	Item#	EACH Prices	
		1-4	5+
0.51	128-9700	\$2.60	\$2.47
0.61	128-9705	2.60	2.47
0.79	128-9710	2.60	2.47
0.99	128-9715	2.60	2.47
1.19	128-9720	2.60	2.47
1.40	128-9725	2.60	2.47
1.60	128-9730	2.60	2.47
1.80	128-9735	2.60	2.47
2.11	128-9740	2.60	2.47
2.31	128-9745	2.60	2.47



A

### F Square Cone Burs

Dia. (mm)	Item#	EACH Prices	
		1-4	5+
0.46	128-9840	\$2.60	\$2.47
0.56	128-9845	2.60	2.47
0.76	128-9850	2.60	2.47



F

### B Pear Burs

Dia. (mm)	Item#	EACH Prices	
		1-4	5+
0.79	128-9855	\$2.60	\$2.47
0.99	128-9860	2.60	2.47
1.19	128-9865	2.60	2.47



B

### G Cross-Cut Square Cone Burs

Dia. (mm)	Item#	EACH Prices	
		1-4	5+
0.46	128-9785	\$2.60	\$2.47
0.56	128-9790	2.60	2.47
0.76	128-9795	2.60	2.47
1.12	128-9800	2.60	2.47
1.55	128-9805	2.60	2.47



G

### C Square Cylinder Burs

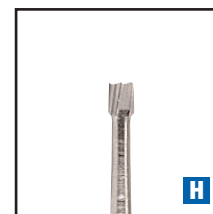
Dia. (mm)	Item#	EACH Prices	
		1-4	5+
0.79	128-9810	\$2.60	\$2.47
0.99	128-9815	2.60	2.47
1.19	128-9820	2.60	2.47



C

### H Inverted Cone Burs

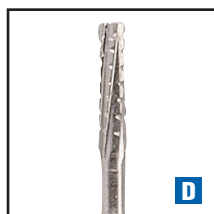
Dia. (mm)	Item#	EACH Prices	
		1-4	5+
0.79	128-9755	\$2.60	\$2.47
0.99	128-9760	2.60	2.47
1.19	128-9765	2.60	2.47
1.40	128-9770	2.60	2.47
1.60	128-9775	2.60	2.47
1.80	128-9780	2.60	2.47



H

### D Cross-Cut Square Cylinder Burs

Dia. (mm)	Item#	EACH Prices	
		1-4	5+
0.79	128-9825	\$2.60	\$2.47
0.99	128-9830	2.60	2.47
1.19	128-9835	2.60	2.47



D

### I Reducing Collets

Convert your 1/8" or 3/32" handpiece collet to hold 1/16" shank tools. Easy to use: slip the reducing collet into your handpiece collet, then slip the tool into the reducing collet. Make sure the reducing collet and the tool are fully inserted before operating. Made of stainless steel.

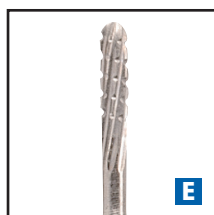


I

Description	Item#	Each
1/8"-1/16" Collet	816-1502	\$12.90
3/32"-1/16" Collet	816-1503	12.90

### E Cross-Cut Dome Cylinder Burs

Dia. (mm)	Item#	EACH Prices	
		1-4	5+
0.79	128-9870	\$2.60	\$2.47
0.99	128-9875	2.60	2.47
1.19	128-9880	2.60	2.47



E

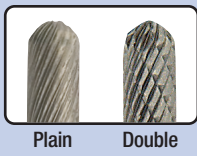
### J Gesswein® Lube-Stik

Use on grinding, cutting, drilling, piercing or similar tools to speed up production and increase tool life. Reduces both friction and heat buildup so that tools stay sharper, work faster and cut smoother. Easy to use: just run your tools into the soft lubricant every so often. Can also be used to reduce the effort needed for drawing operations. Supplied in handy push-up dispenser tube.



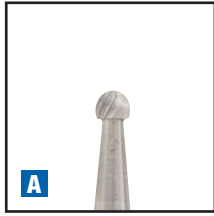
J

Description	Item#	EACH Prices	
		1-9	10+
Lube-Stik	816-2460	\$4.15	\$3.74



### Gesswein® Solid Carbide Burs – 1/8" Shank

Each features one-piece construction—head and shank are fashioned from a single piece of carbide. Available in two fluting styles: plain cut and double cut. Plain cut provides aggressive cutting action for fast stock removal, leaving a slightly rough finish. Double cut makes small chips for efficient stock removal, leaving a better finish than plain cut. Can be resharpened. Measure 1 1/2" long.



#### A Round Burs

Head Dia. x L		Cut	Item#	EACH Prices	
				1-4	5+
1/8" x 1/8"		Plain	129-1070	\$5.30	\$5.04
		Double	129-1075	5.80	5.51



#### B Oval Burs

Head Dia. x L		Cut	Item#	EACH Prices	
				1-4	5+
1/8" x 7/32"		Plain	129-1080	\$5.30	\$5.04
		Double	129-1085	5.80	5.51



#### C Bud Burs

Head Dia. x L		Cut	Item#	EACH Prices	
				1-4	5+
1/8" x 1/4"		Plain	129-1110	\$5.30	\$5.04
		Double	129-1115	5.80	5.51



#### D Bullet Burs

Head Dia. x L		Cut	Item#	EACH Prices	
				1-4	5+
1/8" x 1/4"		Plain	129-1120	\$5.30	\$5.04
		Double	129-1125	5.80	5.51



#### E Tapered Burs

Head Dia. x L		Cut	Item#	EACH Prices	
				1-4	5+
1/8" x 1/4"		Plain	129-1100	\$5.30	\$5.04
		Double	129-1105	5.80	5.51



#### F Long Tapered Burs

Head Dia. x L		Cut	Item#	EACH Prices	
				1-4	5+
1/8" x 1/2"		Plain	129-1090	\$5.30	\$5.04
		Double	129-1095	5.80	5.51



#### G Square Cylinder Burs

Head Dia. x L		Cut	Item#	EACH Prices	
				1-4	5+
1/16" x 1/4"		Plain	129-1010	\$5.30	\$5.04
		Double	129-1015	5.80	5.51
3/32" x 7/16"		Plain	129-1020	5.30	5.04
		Double	129-1025	5.80	5.51
1/8" x 9/16"		Plain	129-1030	5.30	5.04
		Double	129-1035	5.80	5.51



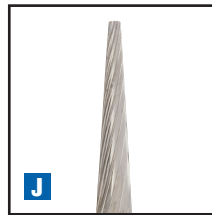
#### H Dome Cylinder Burs

Head Dia. x L		Cut	Item#	EACH Prices	
				1-4	5+
1/8" x 9/16"		Plain	129-1050	\$5.30	\$5.04
		Double	129-1055	5.80	5.51



#### I 12° Flat Cone Burs

Head Dia. x L		Cut	Item#	EACH Prices	
				1-4	5+
1/8" x 1 1/32"		Plain	129-1160	\$5.30	\$5.04
		Double	129-1165	5.80	5.51



#### J 7° Flat Cone Burs

Head Dia. x L		Cut	Item#	EACH Prices	
				1-4	5+
1/8" x 5/8"		Plain	129-1170	\$5.30	\$5.04
		Double	129-1175	5.80	5.51



#### K 8° Rounded Cone Burs

Head Dia. x L		Cut	Item#	EACH Prices	
				1-4	5+
1/8" x 1/2"		Plain	129-1180	\$5.30	\$5.04
		Double	129-1185	5.80	5.51



#### L 10° Inverted Cone Burs

Head Dia. x L		Cut	Item#	EACH Prices	
				1-4	5+
1/8" x 3/16"		Plain	129-1200	\$5.30	\$5.04
		Double	129-1205	5.80	5.51



#### M Assorted Bur Sets

Plain cut set includes all plain cut burs listed above except #129-1010 and #129-1160. Double cut set includes all double cut burs listed above except #129-1015 and #129-1165. Packaged in an attractive wooden box.

Description	Item#	Each
M. 12-Piece Plain Cut Set	129-1000	\$60.00
12-Piece Double Cut Set	129-1005	66.00



**A Wooden Bur Boxes – For 3/32" Shanks**

Sturdy, attractive wooden boxes for holding burs or tools with 3/32" shanks.

Description	Item#	Each
A. 200-Hole Box	<b>814-1200</b>	<b>\$25.75</b>
100-Hole Box	<b>814-1205</b>	<b>13.50</b>
36-Hole Box	<b>814-1210</b>	<b>7.95</b>

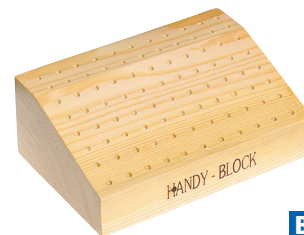


**A**

**B Handy Block – For 3/32" or 1/8" Shanks**

Cured hardwood block with 88 holes for burs or tools with 3/32" or 1/8" shanks. Slanted design lets you see all items at a glance. Stay-put rubber pads prevent sliding. Measures 6" x 4 1/2".

Description	Holes	Item#	Each
Handy Block	3/32", 1/8"	<b>814-1215</b>	<b>\$14.95</b>



**B**

**C Rotating Bur Holders – For Burs and Tools**

Style 126 has 45 holes for burs with 1/16" shanks, 69 two-step holes for burs with 3/32" or 1/8" shanks and 12 holes for burs with 1/4" shanks. Style 114 has 114 holes for burs with 3/32" shanks and 2 3/4" dia. x 3"H center cup for hand tools. Style 112 has 92 holes for burs with 3/32" or 1/8" shanks, 13 holes for burs with 1/4" shanks, 7 holes for 1/16" to 5/32" drills and 2 3/4" dia. x 3"H center cup for hand tools. Rotate on ball bearings for smooth action. Measure 7" dia. x 4"H.

Description	Holes	Item#	Each
Style 126	1/16", 3/32", 1/8", 1/4"	<b>850-0004</b>	<b>\$14.95</b>
Style 114	3/32"	<b>850-0005</b>	<b>14.95</b>
C. Style 112	1/16"-5/32", 3/32", 1/8", 1/4"	<b>850-0006</b>	<b>14.95</b>



**C**

**D Econo Rotating Bur Holder – For 3/32" Shanks**

Accepts up to 150 burs or tools with 3/32" shanks. Rotates to keep items within easy reach. Measures 6" dia. x 4"H.

Description	Holes	Item#	Each
Econo Rotating Bur Holder	3/32"	<b>124-4720</b>	<b>\$11.90</b>



**D**

**E Mini Bur Stand with Cover – For 3/32" or 1/8" Shanks**

A compact tiered plastic stand for holding up to 24 tools with 3/32" shanks and 24 tools with 1/8" shanks. Clear plastic cover keeps all items dust-free without hiding them from view. Measures 2 1/8" dia. x 2 1/2"H.

Description	Holes	Item#	Each
Mini Bur Stand with Cover	3/32", 1/8"	<b>850-0007</b>	<b>\$3.25</b>

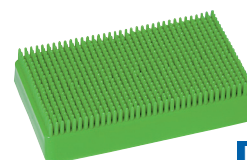


**E**

**F Plastic Bur Holder – For 3/32" Shanks**

Accepts up to 100 burs or tools with 3/32" shanks. Supplied with tilt stand. Measures 5" x 3".

Description	Holes	Item#	EACH Prices	
			1-2	3+
Plastic Bur Holder	3/32"	<b>840-0007</b>	<b>\$5.45</b>	<b>\$4.36</b>



**F**

**G Interlocking Bur Block – For 3/32" Shanks**

Accepts up to 40 burs or tools with 3/32" shanks. Features interlocking design for limitless storage capacity. Measures 4 1/4" x 3 1/8".

Description	Holes	Item#	EACH Prices	
			1-2	3+
Interlocking Bur Block	3/32"	<b>124-4710</b>	<b>\$2.65</b>	<b>\$2.39</b>



**G**



**A B C D E**

**A - E Wolf Wax™ Gold Ring Tubes**

Flexible, medium-hard waxes that can be carved into the finest detail and polished to an incredibly smooth finish. Ideal for hand carving both simple and intricate designs and strong enough for machining on a lathe. Easy to read and a total delight to carve. Burn out cleanly from molds. Wax color appears dark in uncarved form; when carved, the color appears pale, translucent and closely resembles gold. Melting temperature: 240°F (115.6°C). Measure 6" long. Tubes have 5/8" dia. finger hole.

Description	Dimensions	Item#	Each
A. Solid Round	1 1/16" O.D.	<b>261-4900</b>	<b>\$8.85</b>
B. Round, Centered	1 1/16" O.D.	<b>261-4904</b>	<b>8.85</b>
C. Round, Off-Center	1 1/16" O.D.	<b>261-4908</b>	<b>8.85</b>
D. Flat-Top	1"W x 1 1/8"H	<b>261-4912</b>	<b>8.85</b>
E. Lg. Flat-Top	1 3/16"W x 1 5/16"H	<b>261-4916</b>	<b>9.95</b>

O.D. = approximate outside diameter

**F - N Ferris® File-A-Wax® Ring Tubes**

Start your model making with the finest carving wax in the industry. It's the accepted standard for making a wide variety of designs, especially detailed carvings. Easily turned on a lathe and burns out cleanly from flasks. Cannot be steam dewaxed. Not recommended for wax injectors.

Available in three hardness grades. **Green:** A very hard wax, it can't be flexed. Ideal for sharp edges, intricate carvings and delicate engraving. Melting temperature: 240°F (115.6°C). **Purple:** General purpose, hard with some flexibility. Melting temperature: 230°F (110°C). **Blue:** Less hard and more flexible than green or purple. Melting temperature: 220°F (104.5°C). Measure 6" long. All tubes have 5/8" dia. finger hole.



**F G H I J K L M N**



Ferris File-A-Wax available in green, purple and blue.

Description	Color	Dimensions	Item#	EACH Prices		
				1-2	3-5	6+
F. Solid Round	Green	7/8" O.D.	<b>261-5380</b>	<b>\$7.72</b>	<b>\$7.33</b>	<b>\$6.95</b>
G. Solid Round		1 1/16" O.D.	<b>261-5450</b>	<b>7.72</b>	<b>7.33</b>	<b>6.95</b>
H. Round, Centered		7/8" O.D.	<b>261-5700</b>	<b>7.72</b>	<b>7.33</b>	<b>6.95</b>
I. Round, Centered		1 1/16" O.D.	<b>261-5810</b>	<b>7.72</b>	<b>7.33</b>	<b>6.95</b>
J. Round, Off-Center		1 1/16" O.D.	<b>261-5800</b>	<b>7.72</b>	<b>7.33</b>	<b>6.95</b>
K. Flat-Top		1"W x 1"H	<b>261-5835</b>	<b>7.72</b>	<b>7.33</b>	<b>6.95</b>
L. Flat-Top		1"W x 1 1/8"H	<b>261-5825</b>	<b>7.72</b>	<b>7.33</b>	<b>6.95</b>
M. Med. Flat-Top		1 1/8"W x 1 1/8"H	<b>261-5845</b>	<b>7.72</b>	<b>7.33</b>	<b>6.95</b>
N. Lg. Flat-Top		1 3/16"W x 1 5/16"H	<b>261-5550</b>	<b>7.72</b>	<b>7.33</b>	<b>6.95</b>
Solid Round	Purple	7/8" O.D.	<b>261-5385</b>	<b>7.72</b>	<b>7.33</b>	<b>6.95</b>
Solid Round		1 1/16" O.D.	<b>261-5460</b>	<b>7.72</b>	<b>7.33</b>	<b>6.95</b>
Round, Centered		7/8" O.D.	<b>261-5660</b>	<b>7.72</b>	<b>7.33</b>	<b>6.95</b>
Round, Centered		1 1/16" O.D.	<b>261-5815</b>	<b>7.72</b>	<b>7.33</b>	<b>6.95</b>
Round, Off-Center		1 1/16" O.D.	<b>261-5805</b>	<b>7.72</b>	<b>7.33</b>	<b>6.95</b>
Flat-Top		1"W x 1"H	<b>261-5836</b>	<b>7.72</b>	<b>7.33</b>	<b>6.95</b>
Flat-Top		1"W x 1 1/8"H	<b>261-5826</b>	<b>7.72</b>	<b>7.33</b>	<b>6.95</b>
Med. Flat-Top		1 1/8"W x 1 1/8"H	<b>261-5846</b>	<b>7.72</b>	<b>7.33</b>	<b>6.95</b>
Lg. Flat-Top		1 3/16"W x 1 5/16"H	<b>261-5555</b>	<b>7.72</b>	<b>7.33</b>	<b>6.95</b>
Solid Round	Blue	7/8" O.D.	<b>261-5400</b>	<b>7.72</b>	<b>7.33</b>	<b>6.95</b>
Solid Round		1 1/16" O.D.	<b>261-5500</b>	<b>7.72</b>	<b>7.33</b>	<b>6.95</b>
Round, Off-Center		7/8" O.D.	<b>261-5650</b>	<b>7.72</b>	<b>7.33</b>	<b>6.95</b>
Round, Off-Center		1 1/16" O.D.	<b>261-5820</b>	<b>7.72</b>	<b>7.33</b>	<b>6.95</b>
Round, Off-Center		1 1/16" O.D.	<b>261-5750</b>	<b>7.72</b>	<b>7.33</b>	<b>6.95</b>
Flat-Top		1"W x 1"H	<b>261-5840</b>	<b>7.72</b>	<b>7.33</b>	<b>6.95</b>
Flat-Top		1"W x 1 1/8"H	<b>261-5830</b>	<b>7.72</b>	<b>7.33</b>	<b>6.95</b>
Med. Flat-Top		1 1/8"W x 1 1/8"H	<b>261-5855</b>	<b>7.72</b>	<b>7.33</b>	<b>6.95</b>
Lg. Flat-Top		1 3/16"W x 1 5/16"H	<b>261-5600</b>	<b>7.72</b>	<b>7.33</b>	<b>6.95</b>

O.D. = approximate outside diameter

**O Matt™ Ring Template**

Now it's easy to get the precise ring outline you need on your wax blank. Template features 18 different cutouts of both men's and ladies' rings from the most popular styles to some of the more unusual designs. Unbreakable plastic with precision-milled cutouts.

Description	Item#	Each
Matt Ring Template	<b>265-2333</b>	<b>\$11.95</b>



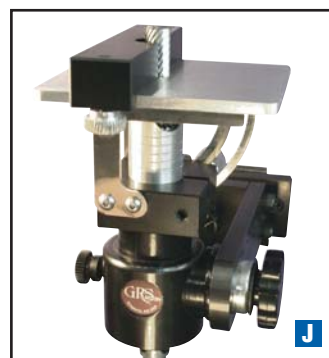
## A - G Matt™ Ring Tubes

Hard waxes formulated to meet the demanding specifications of professional wax carvers. Compounded with special care to avoid contamination, pitting and air bubbles. Accurately shaped to minimize preparation time.

Choose from three color-coded grades of flexibility. **Green** (rigid) cuts clean and crisp, excellent for detailed carving and milling. Melting temperature: 230°F. **Purple** (all-purpose) easy to work, good for chip carving. Melting temperature: 225°F. **Blue** (bendable) works for items that require flexibility. Melting temperature: 220°F. Measure 6" long. All tubes have 5/8" dia. finger hole.

Description	Color	Dimensions	Item#	Each
A. Round, Centered	Green	7/8" O.D.	261-7700	\$6.95
B. Round, Centered		1 1/16" O.D.	261-7810	6.95
C. Round, Centered		1 5/16" O.D.	261-7860	6.95
D. Round, Off-Center		1 1/16" O.D.	261-7800	6.95
E. Flat-Top Tube		1"W x 1 1/8"H	261-7825	6.95
F. Med. Flat-Top Tube		1 1/8"W x 1 1/8"H	261-7845	6.95
G. Lg. Flat-Top Tube		1 1/4"W x 1 1/4"H	261-7550	6.95
Round, Centered	Purple	7/8" O.D.	261-7660	6.95
Round, Centered		1 1/16" O.D.	261-7815	6.95
Round, Centered		1 5/16" O.D.	261-7865	6.95
Round, Off-Center		1 1/16" O.D.	261-7805	6.95
Flat-Top Tube		1"W x 1 1/8"H	261-7826	6.95
Med. Flat-Top Tube		1 1/8"W x 1 1/8"H	261-7846	6.95
Lg. Flat-Top Tube		1 1/4"W x 1 1/4"H	261-7555	6.95
Round, Centered	Blue	7/8" O.D.	261-7650	6.95
Round, Centered		1 1/16" O.D.	261-7820	6.95
Round, Centered		1 5/16" O.D.	261-7880	6.95
Round, Off-Center		1 1/16" O.D.	261-7750	6.95
Flat-Top Tube		1"W x 1 1/8"H	261-7830	6.95
Med. Flat-Top Tube		1 1/8"W x 1 1/8"H	261-7855	6.95
Lg. Flat-Top Tube		1 1/4"W x 1 1/4"H	261-7560	6.95
H. 6-Piece Assortment		1"W	261-7500	7.20

O.D. = approximate outside diameter



Shown with BenchMate (see p. 440)

## I, J Wolf Trimmers

Simply slide one of these units over our #30 handpiece or any other 1" diameter handpiece to turn it into a trimmer and shaper. Use with a cylinder bur up to 11mm in diameter to cut carving waxes or with a separating disc to cut metal for inlay work or channel setting. Hold by hand against a bench pin or tabletop, or secure in GRS BenchMate (see p. 440).

The standard trimmer makes 90° cuts only. Made of heavy-duty plastic with a 3" diameter stainless steel top. The adjustable trimmer makes cuts at angles of your choosing. Includes degree index for uniform results and ripfence that can be put on either hole side so you can use either bur side. Measures 75 x 75 x 67mm.

Description	Item#	Each
I. Standard Trimmer	265-4011	\$39.95
J. Adjustable Trimmer	856-0189	110.00

## K Matt™ Trimmer

Trim wax blanks to the exact shape you need. Also use to mill out center of wax rings for sizing. The rotary file is specially designed for wax work. The platform locks at 90° to create a perfectly symmetrical wax pattern and can also be angled for taper cuts. Platform can be adjusted parallel to the handpiece for milling operations to create seats, perfect channels and decorative work. The Matt Trimmer requires a Flexible Shaft machine and 1" diameter handpiece (such as our #30). Comes complete with mounting bracket, adjustable platform, rotary file, ring template (with 18 profiles for men's and ladies' rings), assorted carving wax blanks and instruction book.

Description	Item#	Each
Matt Trimmer	265-2352	\$150.00
Replacement Rotary File (1/8" shank)	265-2357	29.95



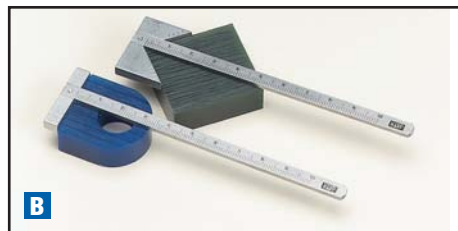




### A Matt™ Miter Box and Saw

Slice wax bars, rods and ring tubes into wax blanks that have perfectly straight and parallel walls or tapered sides. The ring tube is firmly held in place inside the box so there is no strain on the hand. A stop-lock feature enables multiple wax blanks to be cut to the same thickness. The rugged steel sawblade allows virtually effortless cutting of tubes and leaves a smooth finish. Consists of extruded aluminum miter box, 6"L x 2"W, steel back saw and stop-lock.

Description	Item#	Each
Matt Miter Box and Saw	265-2346	\$50.95



### B Wax Model Gauges

Set of 2 gauges for measuring straight or angled pieces. T-Square for measuring and checking perpendicular angles and 90° gauge for checking right angles. Both are indispensable tools for checking the accuracy of wax blanks before beginning carving. Made of stainless steel. Approx. 4<sup>3</sup>/<sub>4</sub>" long. Both gauges measure up to 10cm in 1mm increments.

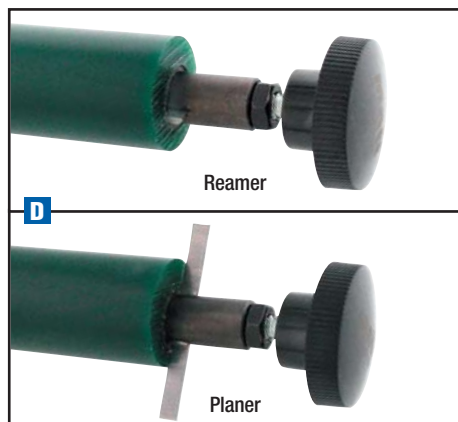
Description	Item#	Each
Wax Model Gauges	265-2380	\$23.95



### C Wax-a-Sizer

Perfect for professional wax carvers. Features machined aluminum bits with sharp blades for cutting accurate finger hole sizes straight through wax ring blanks in one pass. A pilot head on each bit is sized to match the hole in standard wax tubes for stability and symmetry when cutting. You can even hold the whole wax tube in your hand while sizing, making it easier to handle, then simply cut off the desired width after sizing is complete. Wax-A-Sizer includes 20 individual bits in color-coded full- and half-sizes from 5 to 14<sup>1</sup>/<sub>2</sub>, a sturdy wooden handle and wooden storage box. Sizes are clearly marked on bits and box.

Description	Item#	Each
Wax-a-Sizer	265-2319	\$169.00



### D Matt™ Reamer/Planer

A good design begins with a perfect blank. With the Matt Reamer, you can quickly create perfect wax blanks with smooth, parallel walls and bore finger sizes straight through the blanks to exact dimensions. Consists of a precision-ground steel rod with a holding knob and two specially designed carbide blanks.

The wing blade is for planing the tube surface, and the boring bit is for boring the finger size. Turn the reamer clockwise and counterclockwise, and the wing blade cuts in both directions, sheering off a thin film of wax with every stroke, leaving a perfectly flat surface. After replacing the wing blade with the boring bit, turn the reamer clockwise to enlarge the finger hole to the precise size with smooth inner walls. Has engraved lines that indicate various finger sizes. Also lets you create bezels for round stones or coin holders.

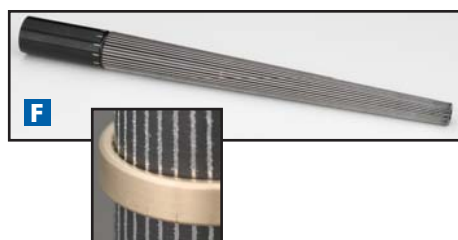
Description	Item#	Each
Matt Reamer/Planer	261-7905	\$52.75



### E Matt™ Ring Tube Reamer

Enlarge the finger hole of wax ring models with speed and accuracy. Hardwood mandrel is specially machined to incorporate a steel cutting blade that extends from the handle to the tapered tip. Slide this reamer through the hole of a wax ring or ring tube and gently rotate clockwise. As the blade turns, it scrapes the inner wall, enlarging the ring to the size that is clearly marked on the mandrel and leaving a smooth, shiny, uniform finish on the ring in seconds.

Description	Item#	Each
Matt Ring Tube Reamer	265-2349	\$29.00



### F S.C. Brown Indexing Mandrel

Designed by master jeweler Samuel Brown for fellow jewelers, this anodized heavyweight aluminum mandrel will prove indispensable for working on waxes and finished rings. Accommodates sizes 1–13. Marked with 36 lines, each 10° apart. Excellent for designing eternity and other rings because it allows you to quickly divide each ring into symmetrical sections. Includes complete instructions.

Description	Item#	Each
Indexing Mandrel	820-8160	\$23.50

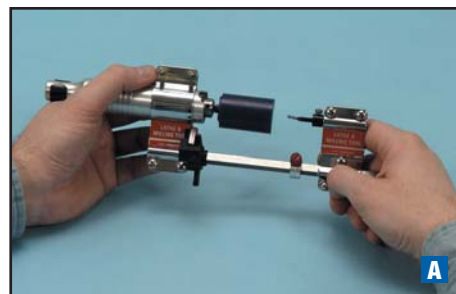


**A Matt™ Mini Lathe with Gauge**

For turning and milling hard carving wax. New gauge accessory allows precise millimeter measurements so you can cut the exact amounts you need for uniform dimensions. Gauge is also sold separately for easy retrofit onto older Matt Wax Lathes. Must be used with a flex shaft and a 1" dia. handpiece, such as our #30 handpiece #850-1350. Ideal for wedding bands, bezels and special settings. Complete with lathe, three wax-holding collets, assorted wax blanks, three hand tools for cutting and shaping wax, cutting tool installed in lathe, two cutting tool blanks for custom shaping, Allen wrench and instruction booklet.

Description	Item#	Each			
A. Mini Lathe with Gauge	<b>265-2312</b>	<b>\$155.00</b>			
Mini Lathe Gauge only	<b>265-2313</b>	<b>29.95</b>			
Replacement Parts	Item#	Each			
Wax-Holding Collet	265-2347	\$5.90			
Cutting Tools, set of three	265-2344	18.25			
		<b>BOX of 4</b>			
Wax Rods	Green Item#	Purple Item#	Blue Item#	1	2+*
1 <sup>5</sup> / <sub>16</sub> " dia. x 1 <sup>1</sup> / <sub>2</sub> "L	<b>261-7884</b>	<b>261-7886</b>	<b>261-7882</b>	<b>\$8.70</b>	<b>\$7.57</b>
1 <sup>3</sup> / <sub>32</sub> " dia. x 1 <sup>1</sup> / <sub>2</sub> "L	<b>261-7890</b>	<b>261-7892</b>	<b>261-7888</b>	<b>8.70</b>	<b>7.57</b>
7/ <sub>8</sub> " dia. x 1 <sup>1</sup> / <sub>2</sub> "L	<b>261-7896</b>	<b>261-7898</b>	<b>261-7894</b>	<b>8.70</b>	<b>7.57</b>

\*Quantity discounts for orders of one item# only, not assorted.



Wax Rods

**B Ti-Research EZ-Lathe® Startup Kit**

Includes EZ-Lathe and eight Wolf Wax blanks: four with 10mm center hole, four solid. For use on any flex shaft or micromotor handpiece with a 3/32" collet, EZ-Lathe uses prefabricated cylinders to create basic wax patterns quickly and easily. Offers variable offset positioning for creating eccentric designs. Allows cutting of both outer and inner ring surfaces. Holds wax blanks securely. Works well with conventional carving tools and techniques.

Description	Item#	Each
EZ-Lathe Startup Kit	<b>265-5040</b>	<b>\$51.00</b>
Gold Center Hole Refill, Pack of 10	<b>265-5044</b>	<b>25.00</b>
Silver Center Hole Refill, Pack of 10	<b>265-5043</b>	<b>25.00</b>
Gold Solid Refill, Pack of 10	<b>265-5042</b>	<b>29.00</b>
Silver Solid Refill, Pack of 10	<b>265-5041</b>	<b>29.00</b>

**C Matt™ Wax Rod Centering Tool**

Centers wax rods perfectly for true turning on your Matt Lathe. Heat a wax holding collet, then slide it into one of the three centering tool holes (corresponding to the three Matt wax rod diameters). Lay a wax rod on the centering tool base, aligned with the collet, and press them together. Saves wax—and time. Accommodates all sizes of Matt wax rods: 7/8", 1<sup>3</sup>/<sub>32</sub>" and 1<sup>5</sup>/<sub>16</sub>" diameters. Made of machined, polished aluminum. Measures 4" overall length.

Description	Item#	Each
Wax Rod Centering Tool	<b>265-2433</b>	<b>\$34.50</b>

**D Matt™ Bracelet Wax Bars**

From one blank style you can create round, oval or square bracelets in a variety of sizes. Simply cut 2 slices of the desired thickness to form the bracelet, then trim using the Matt Bracelet Shaper. Measure 6<sup>1</sup>/<sub>4</sub>"L x 3<sup>3</sup>/<sub>4</sub>"W x 1<sup>3</sup>/<sub>4</sub>"H.

Color	Item#	EACH Prices	
		1-2	3+
Green	<b>265-2339</b>	<b>\$15.60</b>	<b>\$13.57</b>
Purple	<b>265-2338</b>	<b>15.60</b>	<b>13.57</b>
Blue	<b>265-2341</b>	<b>15.60</b>	<b>13.57</b>

**E Matt™ Bracelet Shaper**

Create individual, exciting bracelet designs quickly and easily! The Matt Bracelet Shaper attaches to your #30 handpiece (or other 1" diameter handpiece) for fast, precise carving of all kinds of bangle and hinged wax bracelets. Includes a Bracelet Template to help you create round, square or oval bracelet profiles. The large platform can be easily angled for perfect bevel, channel or taper cuts. Two sample pieces of Matt Blue Bracelet Wax are included. You can also use standard wax blocks to make belt buckles, pendants and other large pieces.

Description	Item#	Each
Matt Bracelet Shaper	<b>265-2353</b>	<b>\$116.50</b>
Replacement Parts	Item#	Each
Template	265-2336	\$12.50
Rotary File (1/8" shank)	265-2357	29.95





**A**



**B**



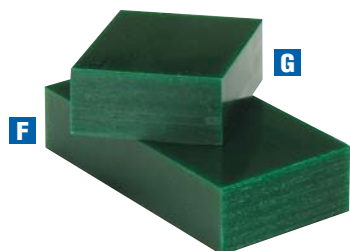
**C**



**D**



**E**



**F**

**G**



**H**

**I**



**J**

**A - D Matt™ Carving Waxes**

Hard waxes accurately shaped to minimize preparation time. Available in three color-coded grades of flexibility: green (rigid) cuts clean and crisp. Excellent for detailed carving and milling. Melting temperature: 230°F. Purple (all-purpose) is easy to work. Good for chip carving. Melting temperature: 225°F. Blue (bendable) works for items that require flexibility. Melting temperature: 220°F.

Description	Color	Dimensions	Item#	Each
A. Bar, 1/2 lb.	Green	3 <sup>3</sup> / <sub>8</sub> "L x 3 <sup>1</sup> / <sub>8</sub> "W x 1 <sup>7</sup> / <sub>16</sub> "H	<b>261-7520</b>	<b>\$8.25</b>
B. Bar, 1 lb.		6 <sup>1</sup> / <sub>2</sub> "L x 3 <sup>1</sup> / <sub>8</sub> "W x 1 <sup>7</sup> / <sub>16</sub> "H	<b>261-7510</b>	<b>11.50</b>
C. Slices, box of 1/2 lb.		3 <sup>1</sup> / <sub>8</sub> "W x 1 <sup>7</sup> / <sub>16</sub> "H x 1/8"-1/2" Thick	<b>261-7540</b>	<b>9.95</b>
D. Slices, box of 1 lb.		3 <sup>1</sup> / <sub>8</sub> "W x 1 <sup>7</sup> / <sub>16</sub> "H x 1/8"-1" Thick	<b>261-7530</b>	<b>13.50</b>
Bar, 1/2 lb.	Purple	3 <sup>3</sup> / <sub>8</sub> "L x 3 <sup>1</sup> / <sub>8</sub> "W x 1 <sup>7</sup> / <sub>16</sub> "H	<b>261-7522</b>	<b>8.25</b>
Bar, 1 lb.		6 <sup>1</sup> / <sub>2</sub> "L x 3 <sup>1</sup> / <sub>8</sub> "W x 1 <sup>7</sup> / <sub>16</sub> "H	<b>261-7512</b>	<b>11.50</b>
Slices, box of 1/2 lb.		3 <sup>1</sup> / <sub>8</sub> "W x 1 <sup>7</sup> / <sub>16</sub> "H x 1/8"-1/2" Thick	<b>261-7542</b>	<b>9.95</b>
Slices, box of 1 lb.		3 <sup>1</sup> / <sub>8</sub> "W x 1 <sup>7</sup> / <sub>16</sub> "H x 1/8"-1" Thick	<b>261-7532</b>	<b>13.50</b>
Bar, 1/2 lb.	Blue	3 <sup>3</sup> / <sub>8</sub> "L x 3 <sup>1</sup> / <sub>8</sub> "W x 1 <sup>7</sup> / <sub>16</sub> "H	<b>261-7524</b>	<b>8.25</b>
Bar, 1 lb.		6 <sup>1</sup> / <sub>2</sub> "L x 3 <sup>1</sup> / <sub>8</sub> "W x 1 <sup>7</sup> / <sub>16</sub> "H	<b>261-7514</b>	<b>11.50</b>
Slices, box of 1/2 lb.		3 <sup>1</sup> / <sub>8</sub> "W x 1 <sup>7</sup> / <sub>16</sub> "H x 1/8"-1/2" Thick	<b>261-7544</b>	<b>9.95</b>
Slices, box of 1 lb.		3 <sup>1</sup> / <sub>8</sub> "W x 1 <sup>7</sup> / <sub>16</sub> "H x 1/8"-1" Thick	<b>261-7534</b>	<b>13.50</b>

**E Matt™ Smooth Precision Wax Tablet Sets**

Sets of rectangular wax tablets with large, flat, incredibly smooth surfaces for designing jewelry directly onto carving wax. Each contains six 6" x 2<sup>3</sup>/<sub>8</sub>" tablets: three 4.5mm thick tablets, one 6mm thick tablet, one 8mm thick tablet and one 10.5mm thick tablet.

Description	Item#	Each
Purple Tablet Set	<b>261-7912</b>	<b>\$22.95</b>
Blue Tablet Set	<b>261-7910</b>	<b>22.95</b>
Green Tablet Set	<b>261-7900</b>	<b>22.95</b>

**F, G Ferris® File-A-Wax® Blocks**

Blocks are available individually in 2 weights: 1/2 lb. and 1 lb.

Description	Color	Dimensions	Item#	EACH Prices		
				1-2	3-5	6+
F. 1 lb. blocks	Green	6"L x 3 <sup>5</sup> / <sub>8</sub> "W x 1 1/2" thick	<b>261-5100</b>	<b>\$15.23</b>	<b>\$14.47</b>	<b>\$13.71</b>
G. 1/2 lb. blocks		3 1/2"L x 3 1/2"W x 1 1/8" thick	<b>261-5050</b>	<b>8.35</b>	<b>7.93</b>	<b>7.52</b>
1 lb. blocks	Purple	6"L x 3 <sup>5</sup> / <sub>8</sub> "W x 1 1/2" thick	<b>261-5200</b>	<b>15.23</b>	<b>14.47</b>	<b>13.71</b>
1/2 lb. blocks		3 1/2"L x 3 1/2"W x 1 1/8" thick	<b>261-5150</b>	<b>8.35</b>	<b>7.93</b>	<b>7.52</b>
1 lb. blocks	Blue	6"L x 3 <sup>5</sup> / <sub>8</sub> "W x 1 1/2" thick	<b>261-5300</b>	<b>15.23</b>	<b>14.47</b>	<b>13.71</b>
1/2 lb. blocks		3 1/2"L x 3 1/2"W x 1 1/8" thick	<b>261-5250</b>	<b>8.35</b>	<b>7.93</b>	<b>7.52</b>

**H, I Ferris® File-A-Wax® Slices**

Each slice is 3<sup>5</sup>/<sub>8</sub>"L x 1 1/2"W. Assorted thicknesses come in each box.

Description	Color	Dimensions	Item#	EACH Prices		
				1-2	3-5	6+
1 lb. of slices (B.S.L.)	Green	3/16" to 1" thick	<b>261-5005</b>	<b>\$18.53</b>	<b>\$17.60</b>	<b>\$16.68</b>
1/2 lb. of slices (A.S.L.)		1/8" to 1/4" thick	<b>261-5020</b>	<b>14.44</b>	<b>13.72</b>	<b>13.00</b>
1 lb. of slices (B.S.L.)	Purple	3/16" to 1" thick	<b>261-5010</b>	<b>18.53</b>	<b>17.60</b>	<b>16.68</b>
1/2 lb. of slices (A.S.L.)		1/8" to 1/4" thick	<b>261-5025</b>	<b>14.44</b>	<b>13.72</b>	<b>13.00</b>
H. 1 lb. of slices (B.S.L.)	Blue	3/16" to 1" thick	<b>261-5015</b>	<b>18.53</b>	<b>17.60</b>	<b>16.68</b>
I. 1/2 lb. of slices (A.S.L.)		1/8" to 1/4" thick	<b>261-5030</b>	<b>14.44</b>	<b>13.72</b>	<b>13.00</b>

**J Ferris® File-A-Wax® Bars**

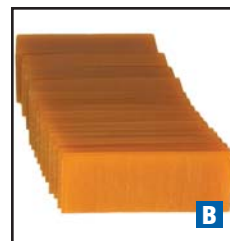
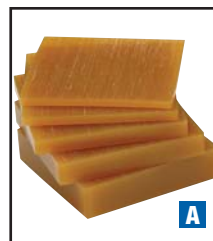
Each 1/2 lb. box contains 3 bars (1/3 lb. each) measuring 1<sup>13</sup>/<sub>16</sub>" square x 3<sup>3</sup>/<sub>4</sub>" long. Available in green, purple, blue or assorted (1 of each color).

Description	Color	Item#	EACH Prices		
			1-2	3-5	6+
J. 1/2 lb. of blocks (3)	Assorted	<b>261-5350</b>	<b>\$10.76</b>	<b>\$10.22</b>	<b>\$9.68</b>
	Green	<b>261-5351</b>	<b>10.76</b>	<b>10.22</b>	<b>9.68</b>
	Purple	<b>261-5352</b>	<b>10.76</b>	<b>10.22</b>	<b>9.68</b>
	Blue	<b>261-5353</b>	<b>10.76</b>	<b>10.22</b>	<b>9.68</b>

### A, B Wolf Wax™ Gold Slices

Flexible, medium-hard wax that can be carved into the finest detail and polished to an incredibly smooth finish. Ideal for hand carving both simple and intricate designs and strong enough for machining on a lathe. Burn out cleanly from molds. Wax colors appear dark in uncarved form but pale when carved. Melting temperature: 240°F (115.6°C). Square set measures 3<sup>9</sup>/<sub>16</sub>" square, BSL set measures 3<sup>5</sup>/<sub>8</sub>" x 1<sup>7</sup>/<sub>16</sub>". Both sets contain 1 lb. of assorted thicknesses.

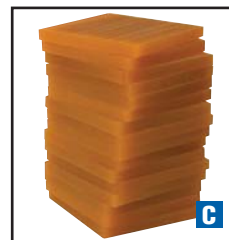
Description	Item#	Box
A. Square Set	<b>261-4928</b>	<b>\$15.75</b>
B. BSL Set	<b>261-4944</b>	<b>21.95</b>



### C Wolf Wax™ Slices

Measure 53mm x 53mm square, gold.

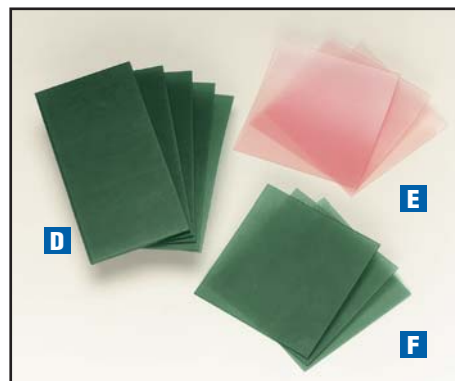
Description	Qty. per Pkg.	Item#	Each
C. 5mm	16	<b>261-4941</b>	<b>\$21.95</b>
10mm	9	<b>261-4942</b>	<b>21.95</b>
15mm	6	<b>261-4943</b>	<b>21.95</b>
Assortment	5mm, 10mm, 15mm	<b>261-4946</b>	<b>26.75</b>



### D - F Sheet Wax

Pliable sheets of wax with smooth surfaces. Trace designs directly on sheet, then cut with scissors or carving tool. Flexible sheets measure 3" x 6". Sold in boxes of five. Thickest is 8-gauge. Transparent sheets measure 4" x 4". Sold in boxes of 15 assorted sheets.

Description	B&S Gauge	Item#	Box
D. Flexible Sheet Wax	8	<b>261-9255</b>	<b>\$8.93</b>
	12	<b>261-9260</b>	<b>8.93</b>
	14	<b>261-9265</b>	<b>8.93</b>
	18	<b>261-9270</b>	<b>8.93</b>
	20	<b>261-9275</b>	<b>8.93</b>
Flexible Sheet Assortment (one each of above)		<b>261-9250</b>	<b>14.65</b>
E. Transparent Pink (soft) Sheet Wax	20, 22 & 24	<b>261-9200</b>	<b>14.65</b>
F. Transparent Green (firm) Sheet Wax	20, 22 & 24	<b>261-9150</b>	<b>14.65</b>



### G Water-Soluble Carving Wax

Used to form cores in hollow patterns and for making beads, pendants, dome rings and other items with hollowed out areas. Can be carved or injected to make inner core, then covered with regular waxes. Entire model can be immersed in a mild acid/water mix, which will dissolve the inner core and leave the outer shell. Melting temperature: 140°F.

Description	Item#	Each
1 lb. Block	<b>263-1050</b>	<b>\$14.65</b>



### H Ferris® Mold-A-Wax®

Works like clay when softened in hot water. Melts at 150°F. Sold in 1 lb. blocks. Black Mold-A-Wax is slightly pliable and can be softened in hot water and injected at 150°F. Red Mold-A-Wax is much softer than Black and is not injectable.

Description	Item#	EACH Prices		
		1-2	3-5	6+
Black #5 (med.)	<b>261-5850</b>	<b>\$17.27</b>	<b>\$16.41</b>	<b>\$15.54</b>
Red #6 (soft)	<b>261-5849</b>	<b>17.27</b>	<b>16.41</b>	<b>15.54</b>



### I Wax Burs – 3/32" Shank

Very coarse cut for carving wax. Will not clog with wax like regular burs.

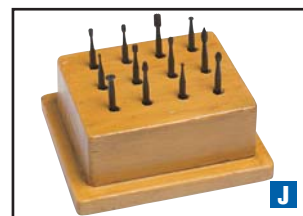
Shape	Diameter (mm)	Item#	Each
●	1.8	<b>121-8170</b>	<b>\$3.66</b>
●	2.3	<b>121-8180</b>	<b>3.66</b>
●	3.1	<b>121-8190</b>	<b>6.89</b>
●	5.0	<b>121-8200</b>	<b>7.25</b>



### J Wax Bur Sets – 3/32" Shank

Each includes 12 different vanadium steel burs with teeth that are widely spaced to prevent clogging. Includes convenient wooden stand that keeps burs organized and accessible.

Description	Item#	Each
Small Set	<b>122-7151</b>	<b>\$14.95</b>
J. Large Set	<b>122-7150</b>	<b>25.15</b>



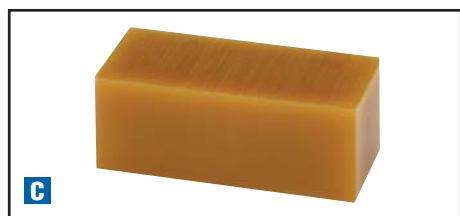




### A, B Wolf Touch-Up and Relief Wax™

Use Touch-Up wax for correcting imperfections such as pits and cracks or filling bezel walls for a tighter fit. Flow temperature: 163°F (73°C). Easily scraped or trimmed for a smooth finish. Use Relief wax for creating raised detail on carving waxes. Apply molten Relief Wax on wax model surface. Can be easily carved. Flow temperature: 165°F (74°C).

Description	Item#	Each
A. Touch-Up Wax, 1.7 oz. tin	<b>261-4940</b>	<b>\$15.95</b>
B. Relief Wax, 1.7 oz. tin	<b>261-4945</b>	<b>15.95</b>



### C Wolf Build-Up/Repair Wax™

A durable repair wax that makes it easy to blend built-up and repaired sections. To ensure a thorough bond, gently melt model where repair wax is to be added. Sold in 3 oz. blocks. Measures 1<sup>7</sup>/<sub>16</sub>" sq. x 3<sup>9</sup>/<sub>16</sub>"L.

Description	Item#	Each
Gold Build-Up/Repair Wax, 3 oz. block	<b>261-4932</b>	<b>\$8.85</b>



### D Wolf Wicked Sticky Positioning Wax™

Ideal for securing stones for accurate tracing. Just smear wax on stone, press stone onto wax or metal, and scribe around stone. Flow temperature: 173°F (78°C). Sold in 3 oz. boxes of sticks. Each stick measures 3<sup>3</sup>/<sub>16</sub>" sq. x 5"L.

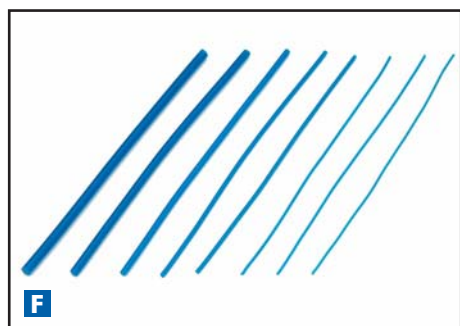
Description	Item#	Each
Wicked Sticky Positioning Wax, 3 oz. box	<b>261-4936</b>	<b>\$8.85</b>



### E Sticky Wax

Fast-setting wax for joining other waxes. Melting temperature: 160°F. Supplied in 1 lb. package of random chunks or 3 oz. package of 1/4" dia. x 5"L sticks.

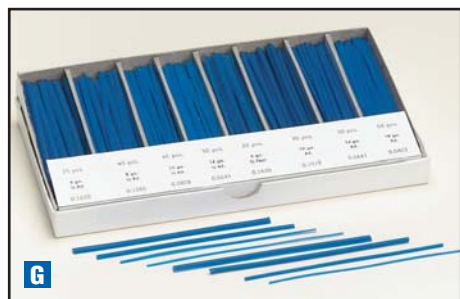
Description	Item#	Each
Chunks (1 lb.)	<b>261-6310</b>	<b>\$7.61</b>
Sticks (3 oz.)	<b>261-6305</b>	<b>7.61</b>



### F Wax Wire – Round

Flexible 4<sup>1</sup>/<sub>2</sub>" long wires can be twisted or bent. Packaged in convenient storage box. Each box contains approximately 2 oz. of round wax wire. Thickest wire is 6-gauge.

Description	B&S Gauge	Item#	Each
Wax Wire	6	<b>261-5945</b>	<b>\$11.18</b>
	8	<b>261-5950</b>	<b>11.18</b>
	10	<b>261-6000</b>	<b>11.18</b>
	12	<b>261-6050</b>	<b>11.18</b>
	14	<b>261-6100</b>	<b>11.18</b>
	16	<b>261-6150</b>	<b>11.18</b>
	18	<b>261-6200</b>	<b>11.18</b>
	20	<b>261-6250</b>	<b>11.18</b>



### G Wax Wire Assortment

Contains 6 oz. of wax wire. Includes half-round (6-, 8-, 12- and 14-gauge), round (10-, 14- and 18-gauge) and half-pear shapes (6-gauge). Sticks measure 4" long.

Description	Item#	Each
Wax Wire Assortment	<b>261-5900</b>	<b>\$11.92</b>



### H Wax Wire Spools – Round

Flexible round wax wire (1/4 lb.) spooled for less waste when different lengths of wire are needed. You only cut off the exact length you need. Can be used for decorative wax work such as braids, macramé, scroll work, etc. Thickest wire is 6-gauge.

Description	B&S Gauge	Item#	Each
Wax Wire Spools	6	<b>261-6286</b>	<b>\$16.43</b>
	8	<b>261-6287</b>	<b>16.43</b>
	10	<b>261-6288</b>	<b>16.43</b>
	12	<b>261-6289</b>	<b>16.43</b>
	14	<b>261-6290</b>	<b>16.43</b>
	16	<b>261-6291</b>	<b>16.43</b>
	18	<b>261-6292</b>	<b>16.43</b>



## Ferris™ Cowdery Profiles

These precision-formed wax extrusions help reduce time and effort spent on creating prong settings, channels, clasps, hinges and other complex shapes. Can be used individually or in combinations. Choose from 14 styles, 10 sizes and two colors: blue (soft) and purple (hard). Sold in plastic tubes of six precut 5" lengths (one style, size and color per tube).

Style	Shape	Size (mm)	Blue Item#	Purple Item#	Pkg. of 6
Round Rod	●	1.0	261-9350	261-9580	\$8.93
		1.5	261-9355	261-9585	8.93
		2.0	261-9360	261-9590	8.93
		2.5	261-9365	261-9595	8.93
		3.0	261-9370	261-9600	8.93
		3.5	261-9375	261-9605	8.93
Square Rod	■	1.0	261-9385	261-9615	8.93
		1.5	261-9390	261-9620	8.93
		2.0	261-9395	261-9625	8.93
		2.5	261-9400	261-9630	8.93
		3.0	261-9405	261-9635	8.93
		3.5	261-9410	261-9640	8.93
Round Tube (0.75mm wall)	○	2.0	261-9430	261-9660	8.93
		2.5	261-9435	261-9665	8.93
		3.0	261-9440	261-9670	8.93
		3.5	261-9445	261-9675	8.93
		4.0	261-9450	261-9680	8.93
		5.0	261-9420	261-9650	8.93
Square Tube (0.75mm wall)	□	2.0	261-9465	261-9695	8.93
		2.5	261-9470	261-9700	8.93
		3.0	261-9475	261-9705	8.93
		3.5	261-9480	261-9710	8.93
		4.0	261-9485	261-9715	8.93
		5.0	261-9455	261-9685	8.93
Flat Ribbon (1.0mm thick)	—	2.0	261-9490	261-9720	8.93
		3.0	261-9495	261-9725	8.93
		4.0	261-9500	261-9730	8.93
		5.0	261-9505	261-9735	8.93
Three-Prong	⋈	8.0	261-9510	261-9740	8.93
Four-Prong	⋈	8.0	261-9515	261-9745	8.93
Six-Prong	⋈	8.0	261-9520	261-9750	8.93
90° Corner	└	1.5	261-9525	261-9755	8.93
60° Corner	▽	1.5	261-9530	261-9760	8.93
Hinge Tube (1.0mm hole)	○	2.0	261-9535	261-9765	8.93
		2.5	261-9540	261-9770	8.93
		3.0	261-9545	261-9775	8.93
Catch (3.0 x 6.0mm)	⌘	3.0	261-9550	261-9780	8.93
Channel	□	1.0	261-9555	261-9785	8.93
		1.5	261-9560	261-9790	8.93
		2.0	261-9565	261-9795	8.93
Ball & Socket (3.5 x 5.0mm)	⊕	2.5	261-9570	261-9800	8.93
		3.5	261-9575	261-9805	8.93



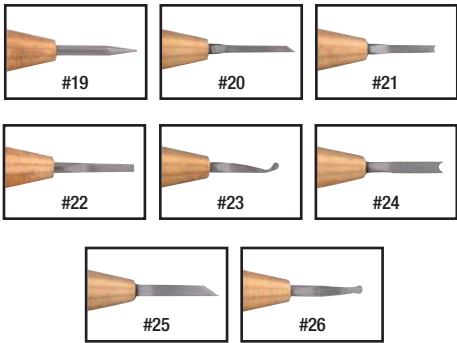
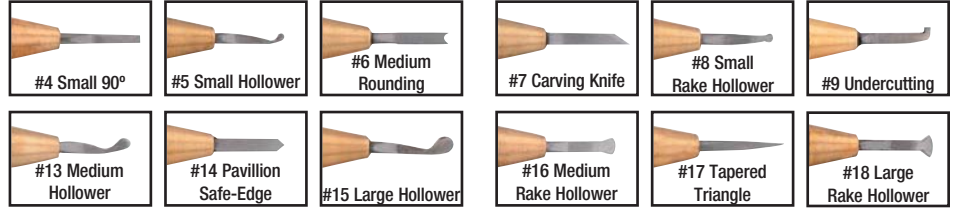
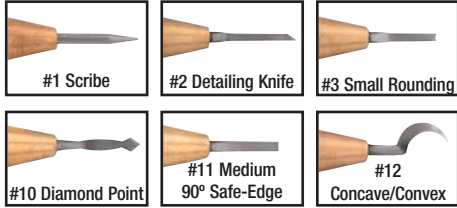
CASTING



**A Wolf Precision Wax Carvers**

Designed by Kate Wolf, master modelmaker and educator. Feature chromium manganese tool steel tips with precise, sharp, durable edges and color-coded, numbered beech handles. Ideal for carving wax, polymer clay and PMC. Sold in sets of six and in a full set of 18 tools with heavy-duty plastic canister and 24-page full-color instruction booklet.

Description	Item#	Each
A. Full Set of Tools 1-18 with canister and instruction booklet	<b>260-2978</b>	<b>\$125.00</b>
Set of Tools 1-6	<b>260-2979</b>	<b>54.00</b>
Set of Tools 7-12	<b>260-2980</b>	<b>54.00</b>
Set of Tools 13-18	<b>260-2981</b>	<b>54.00</b>



**Wolf Micro Wax Carvers**

Made of high speed and chromium manganese tool steel, precision ground with extremely sharp edges and color coded handles. Smaller than Wolf carvers for fine detailing, finishing, pierce out work, and for carving settings for smaller stones.

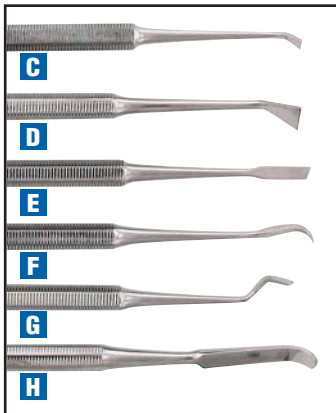
Description	Item#	Each
#19 90° with Safety Edge	<b>260-2984</b>	<b>\$11.25</b>
#20 90° with Safety Edge	<b>260-2985</b>	<b>11.25</b>
#21 Detailing Knife	<b>260-2986</b>	<b>11.25</b>
#22 Small Diamond Point	<b>260-2987</b>	<b>11.25</b>
#23 Small Hollower	<b>260-2988</b>	<b>11.25</b>
#24 Small Rake Hollower	<b>260-2989</b>	<b>11.25</b>
#25 Small Pavillion	<b>260-2990</b>	<b>11.25</b>
#26 Small Tapered Triangle	<b>260-2991</b>	<b>11.25</b>
8-Piece Set	<b>260-2983</b>	<b>64.95</b>



**B Wax Carver Set – Double Hollow Ends**

The hollow ends of these unique wax carvers can pick up and hold more melted wax than standard wax carvers. When working cold hollow ends allow shavings to fall away freely. Each carver has one large and small end; complete set provides 8 different tips in 4 shapes: square, round, pointed and flat. Especially useful for hollowing. Octagonal handles prevent carvers from rolling away when you put them down. Each measures approx. 7" long.

Description	Item#	Each
4-Piece Wax Carver Set	<b>260-2610</b>	<b>\$24.95</b>



**C - H Sharp-Edge Wax Carvers**

Made of high-grade stainless steel, these carvers feature heads with sharp edges that cut and scrape wax exceptionally well. All have nonroll octagonal handles with cross-grooves for comfortable yet secure grip. Available individually or in a set of all six styles. Each measures approx. 5 3/4" long.

Description	Item#	Each
C. Small Flat Draw	<b>260-2921</b>	<b>\$3.45</b>
D. Large Flat Draw	<b>260-2922</b>	<b>3.45</b>
E. Angled Blade	<b>260-2923</b>	<b>3.45</b>
F. Small Claw	<b>260-2925</b>	<b>3.45</b>
G. Thin Chisel	<b>260-2926</b>	<b>3.45</b>
H. Scooper	<b>260-2927</b>	<b>3.45</b>
6-Piece Set	<b>260-2919</b>	<b>18.95</b>



**I Swiveling Wax Carver/Deburrer**

This handy tool is great for radiusing and rounding off corners and edges, especially on insides of rings. Replaceable tip swivels 360° (forward or backward). Comes with large and small hardened tool steel tips. Metal handle measures 1/2" diameter x 5 7/8" overall length.

Description	Item#	Each
Swiveling Wax Carver/Deburrer	<b>846-2055</b>	<b>\$13.95</b>

### A Wax Carving Tool Set

Set of 10 stainless steel wax-carving tools for the professional. Coated handles provide insulated, sure grip. These well-balanced tools have round handles that are larger and more comfortable than standard wax-carving tools. Working ends are brightly polished. All tools measure approximately 6" long. Available as set only.

Description	Item#	Each
Wax Carver Tool Set	260-3030	\$76.00



### B - G Wax Carving Tools

Carve, form, shape and patch wax models. Stainless steel tools with hexagonal handles. Double-ended. Measure 6½" long. See picture for shapes.

Description	Item#	Each
B. #7	260-2700	\$6.20
C. #50	260-2900	6.20
D. #1	260-2650	6.20
E. #6	260-2850	6.20
F. #3	260-2800	6.20
G. #1/2	260-2750	6.20
Set of all six	260-2600	21.95



### H Large Wax File Set

Five large sized wax files for shaping wax. Set includes round, half-round, square, pillar and 3-square. Coarse, nonclogging. Measures 8" long. Swiss-made.

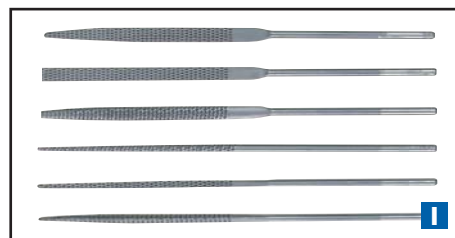
Description	Item#	Each
Large Wax File Set	265-2337	\$62.50



### I Wax Needle File Set

High quality files for rough filing wax. Each file is 5½" long. Coarse, nonclogging. Set of six: crochet, equalling, half-round, round, square and three-square. Swiss-made.

Description	Item#	Each
I. Wax Needle File Set	265-2335	\$60.90
Econo Set (imported from Asia)	265-2315	9.95



### J Wax Carving File Set

Includes four files designed for precision wax carving. Their pen-like design provides optimal control. And their single-cut teeth never clog. Made of stainless steel. Measure 6¾" overall length, 1" cut length.

Description	Item#	Each
Wax Carving File Set	260-2950	\$19.80



### K Wax Detailer Set – Goes where other tools and files can't.

Small enough to file in tiny corners, crevices and holes impossible to reach with your other tools. Points have spiral, file-like edges to cut smoothly and quickly. Stainless steel so they will not rust or clog. Comfortable wooden handle. Measure 5" overall length. Made in USA.

Description	Diameter (mm)	Item#	Each
Very Fine	0.6	260-2588	\$5.15
Fine	1.0	260-2589	5.15
K. Two-Piece Set	–	260-2590	9.95



### L, M Wax Rasps – The fastest way to rough out wax models!

These rasps feature extra-sharp teeth for a fast cut with no clogging. Open back allows wax shavings to fall away quickly. Available in square or round. Both measure 6" long.

Shape	Item#	Each
L. Square	260-3062	\$7.25
M. Round	260-3060	8.50





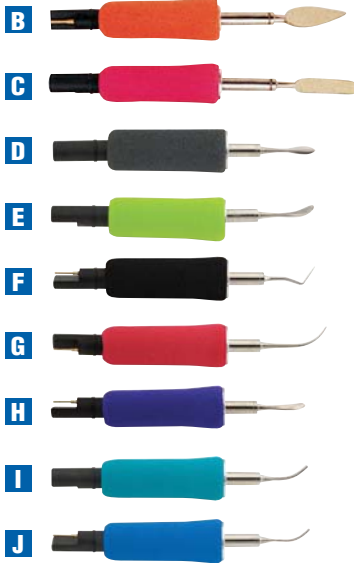
**A - J** **Kerr® Ultra Waxer**

Ultra Waxer incorporates all the features asked for by professional model makers. Digital accuracy with LED readout. Membrane keypad for easy temperature setting. Super-heat button for immediate tip response. Lightweight aluminum handpiece with color-coded soft foam finger grips stays cool in your hand. Aluminum drip guard. Built-in handpiece holder and four built-in tip holders. Convenient foot control. Temperature range: 100°-700°F (60°-370°C).

Convenient quick-change tips: just slide back the collar on the handpiece and the tip slides out. Every tip comes with its own built-in heating element, which is user replaceable. Comes with one tip (Small PKT) and foot pedal.

**Specifications:**

Electrical 115V or 230V, 50/60Hz  
 Dimensions 8¾"L x 4"W x 2½"H  
 Ship. Wt. 2½ lbs.



Model	Item#	Each
A. 115V	<b>265-2575</b>	<b>\$430.00</b>
230V	<b>265-2576</b>	<b>430.00</b>
Tips	Item#	Each
B. Large Denture	<b>265-2573</b>	<b>\$76.95</b>
C. Small Denture	<b>265-2572</b>	<b>76.95</b>
D. Short #7	<b>265-2440</b>	<b>68.95</b>
E. Large #7	<b>265-2441</b>	<b>68.95</b>
F. Short ½ Hollenback	<b>265-2442</b>	<b>68.95</b>
G. Short Needle	<b>265-2443</b>	<b>68.95</b>
H. Short Beavertail	<b>265-2444</b>	<b>68.95</b>
I. Short Large PKT	<b>265-2445</b>	<b>68.95</b>
J. Short Small PKT (replacement)	<b>265-2446</b>	<b>68.95</b>
9-Piece Tip Set (1 each of above)	<b>265-2447</b>	<b>605.00</b>
Replacement Handpiece and Cord	265-2562	91.95



**K** **Freedom® Wax Carver**

Offers outstanding features at a great price. Ultra-compact 2½"W x 2"D x 1"H control box occupies very little of your precious bench space. Lightweight handpiece with cork insulation and drip reservoir keeps your fingers cool so you can work comfortably. Extremely flexible 41" long handpiece cord gives you added maneuverability. Brass carving tips (three included) can be easily modified with files or pliers to create custom shapes.

Has six dial settings for approximate heats: Low (95°F), Setting 2 (200°F), Setting 3 (340°F), Setting 4 (425°F), Setting 5 (525°F) and Max. (560°F). Includes detachable power cord with 6V transformer. Ship. wt: 1 lb. Made in Japan.

Description	Item#	Each
K. Wax Carver, 115V	<b>265-2113</b>	<b>\$189.00</b>
Replacement Handpiece	265-2122	95.00
Handpiece Cap with Cork Cover	265-2123	10.00



**L - Q** **Wax Heat Carver**

This easy-to-use carver features a heavy-duty variable-power rheostat that enables precise, consistent temperature control from approx. 100–1,200°F. Includes comfortable handpiece with ultra-flexible 35" power cord, built-in handpiece holder and blue tip. Measures 4"W x 6"D x 3"H.

Description	Item#	Each
L. Wax Heat Carver, 110V	<b>265-1980</b>	<b>\$115.95</b>
Wax Heat Carver, 220V	<b>265-1981</b>	<b>195.00</b>
M. Red Tip, Broad Spatula	<b>265-1983</b>	<b>9.95</b>
N. Yellow Tip, Bent Needle Nose	<b>265-1984</b>	<b>9.95</b>
O. Orange Tip, Straight Needle Nose	<b>265-1986</b>	<b>10.50</b>
P. Green Tip, Straight Flat Sharp	<b>265-1987</b>	<b>10.50</b>
Replacement Handpiece	265-1982	39.00
Q. Replacement Blue Tip, Bent Needle Nose Sharp	265-1985	9.95



**A TouchAmatic Digital Wax Pen**

Features unique on/off instant-heat touch control for immediate response up to 800°F. Generates heat immediately when the pen's collar is touched, which happens naturally when the pen is held in working position. Shuts off automatically when put down. Easy to use for left- and right-handers. Continuous-heat mode switch lets you bypass instant-heat feature. Lighted display indicates percentage of maximum heat. Includes four color-coded Nichrome tips. Use with optional set of nine Nichrome tips that are ideal for spruing and treeing waxes. Measures 6"W x 4½"D x 3"H. Voltage selector switch for 115V, 0.2A, 60Hz or 220V, 0.1A, 50Hz operation.

Description	Item#	Each
A. TouchAmatic Digital Wax Pen	<b>265-2890</b>	<b>\$159.00</b>
Optional 9-Piece Nichrome Tip Set	<b>830-2895</b>	<b>65.95</b>
Replacement Red Tip	830-2897	9.25

**A****B Giles® Precision Waxer**

An indispensable tool for wax model making. Great for carving, shaping, texturing and sizing. Graduated dial adjustment has nine settings for accurate temperature modulation. Slim, lightweight handpiece with flexible 26" cord provides fine control for intricate work. Measures 4" long without tip. Weighs 1 oz. Waxer features mounted handpiece holder, pilot light and on/off switch. Includes three tips. Electrical: 110V or 220V, 1A, 15W, 50/60Hz. Measures 4"L x 5"W x 3"H. Made in Japan.

Description	Item#	Each	
B. Precision Waxer, 110V	<b>265-2300</b>	<b>\$154.50</b>	
Precision Waxer, 220V	<b>265-2301</b>	<b>203.00</b>	
Replacement Handpiece and Cord	265-2309	46.90	
Tips	Shape	Item#	Each
Red*	Wide	<b>265-2302</b>	<b>\$13.25</b>
Yellow*	Wide (grooved)	<b>265-2303</b>	<b>11.70</b>
Blue*	Narrow (bent)	<b>265-2304</b>	<b>11.70</b>
Orange	Flat	<b>265-2305</b>	<b>11.70</b>
Green	Needle (fine)	<b>265-2306</b>	<b>12.60</b>
Black	Sprue Burning	<b>265-2307</b>	<b>13.65</b>

\*Supplied with Precision Waxer.

**B****C Hot Seats™ Wax Carving Tips**

With Hot Seats you can instantly melt in the stone seats you need using your standard hot wax pen. Made of solid brass, Hot Seats slip easily over the tips of most standard wax pens. To use, push the Hot Seat into your wax; within seconds, a perfect seat is hollowed out. Then trim and clean up the edges. Each Hot Seats set includes 9 sizes of each shape in a handsome, solid wood stand. Grand Set includes all 8 Hot Seats sets. Made in USA.

Description	For Stone Sizes	Item#	Each
Oval Set	4 x 2.5 to 12 x 10mm	<b>260-2626</b>	<b>\$36.00</b>
Marquise Set	5 x 2.5 to 13 x 6.5mm	<b>260-2627</b>	<b>36.00</b>
Trillion Set	2 x 2.0 to 10 x 10mm	<b>260-2628</b>	<b>36.00</b>
Square Set	2 x 2.0 to 10 x 10mm	<b>260-2629</b>	<b>36.00</b>
Pear Set	4 x 2.5 to 12 x 8mm	<b>260-2630</b>	<b>36.00</b>
Triangle Set	2 x 2.0 to 10 x 10mm	<b>260-2631</b>	<b>36.00</b>
Emerald Set	4 x 2.5 to 12 x 10mm	<b>260-2632</b>	<b>36.00</b>
Heart Set	3 x 3.0 to 11 x 11mm	<b>260-2633</b>	<b>36.00</b>
Grand Set (includes all 8 sets)	—	<b>260-2625</b>	<b>259.00</b>

**C****D Wax Ring Mandrel**

Step-type aluminum mandrel for full sizes 4-13. Rotates a full 360° and can be detached from base. Measures 12½" long. Use Mold Release Spray (see p. 128) for lubricant.

Description	Item#	Each
Wax Ring Mandrel	<b>260-4250</b>	<b>\$30.40</b>

**D****E PEPE Wax Ring Design Sleeve Set**

Includes 10 full-size and 10 half-size aluminum sleeves ranging in size from 4 to 13½ (made to allow for metal shrinkage during casting), holder and wooden storage base. Sleeves can be rotated 360° on holder. Sizes are clearly marked on sleeves and base.

Description	Item#	Each
Sleeve Set	<b>260-4255</b>	<b>\$109.00</b>

**E**



Wooden mandrel sold separately in Matt Supply Box (see below).

### A Matt™ Wax Gun Set

A wax extruder for creating unique and intricate jewelry designs. The lightweight gun has a thermostatic control for wax temperatures from 120-300°F. Convenient wax cartridges are used for fast loading. Flow is controlled with your thumb.

Endless design possibilities include macramé, twists, wax weaving and more. Comprehensive 113-page instruction book included. Set is complete with gun, book, 2 brass nozzles (one small and one large round orifice), nozzle-changing wrench and 15 wax cartridges in 3 types from easy-flow to stiff.

Description	Item#	Each
110V	<b>265-2355</b>	<b>\$145.00</b>
220V	<b>265-2354</b>	<b>147.00</b>
Blue Pellets, 1 lb.	<b>265-2330</b>	<b>26.75</b>
Green Pellets, 1 lb.	<b>265-2362</b>	<b>26.75</b>
Red Pellets, 1 lb.	<b>265-2363</b>	<b>26.75</b>



### B Matt™ Supply Box

Includes a highly polished rotating hardwood mandrel mounted on a sturdy steel base, an alcohol lamp, and 120 pieces of wax for the Matt Wax Gun (40 each of green, red and blue).

Description	Item#	Each
Matt Supply Box	<b>265-2345</b>	<b>\$52.75</b>



### C Smoothy™ Flameless Wax Finisher/Mini Torch

A flameless jet of heated air gives you a smooth, scratch-free surface when passed over wax patterns. Blends parting lines without actually touching the wax. Remove tip and you have a pencil-point torch producing temperatures up to 2,300°F. Great for light soldering or minor casting repairs. Uses standard Butane fuel. UL registered.

Description	Item#	Each
Smoothy Flameless Wax Finisher/Mini Torch	<b>262-0500</b>	<b>\$151.95</b>



### D, E Speedy Wax Pens

These lightweight wax-carving tools offer instant heat. Feature a pointed heating element that operates with fingertip control. Excellent for beads and details, removing flash and repairing mistakes. Tip is easy to replace. Standard Pen measures 6" long and runs on 1 AA battery (supplied). Super Pen measures 8" long and runs on 2 AA batteries (supplied). Made in USA.

Description	Item#	EACH Prices	
		1-2	3+
D. Super Pen	<b>265-2881</b>	<b>\$28.00</b>	—
E. Pen	<b>265-2880</b>	<b>21.35</b>	<b>\$18.79</b>
Replacement Tip	265-2885	5.95	5.36



### F Bunsen Burner

For heating wax and wax-carving tools. Can be used with artificial or natural gas. Has adjustable needle valve for gas control to produce a hot brush flame down to a needle flame with intense heat. Measures 4½"H, 3" base diameter.

Description	Item#	Each
Bunsen Burner	<b>811-1600</b>	<b>\$41.25</b>

F



### G Alcohol Lamps

Safety cap to prevent evaporation of fuel. Faceted bowl can be tipped on angle. Each bowl holds 4 oz. of fuel, measures 4" diameter. One wick is supplied.

Description	Item#	EACH Prices	
		1-5	6+
G. Lamp w/ sleeve adjustment	<b>813-1905</b>	<b>\$7.20</b>	<b>\$6.48</b>
Lamp w/ screw adjustment	<b>813-1900</b>	<b>6.95</b>	<b>6.26</b>
Replacement Wicks		Item#	Each
¼" for #813-1905	813-1906*		\$ .40
¾" for #813-1900	813-1901*		.40

\*Six-piece minimum; please order in multiples of 6.

### A Electric Waxing Tray

A must for model making or assembling trees. Features divided compartments for keeping three different waxes melted at the same time, hinged lid, pilot light and dial control for temperature adjustment up to approx. 280°F. Extremely compact and lightweight. Measures 4<sup>5</sup>/<sub>8</sub>"W x 5<sup>1</sup>/<sub>2</sub>"D x 2<sup>1</sup>/<sub>2</sub>"H. Two small compartments each measure 2<sup>1</sup>/<sub>4</sub>"L x 1<sup>3</sup>/<sub>8</sub>"W x 3<sup>3</sup>/<sub>4</sub>"D, and large compartment measures 4<sup>1</sup>/<sub>2</sub>"L x 2<sup>3</sup>/<sub>8</sub>"W x 3<sup>3</sup>/<sub>4</sub>"D. Ship wt: 2 lbs., 2 oz.

Description	Item#	Each
Electric Waxing Tray, 110V, 60Hz	265-2358	\$183.00



A

### B Akrovest Wax Wash

Spray on wax pattern to reduce surface tension, allowing complete adherence of investment to wax. Nonhazardous. Sold in 8 oz. spray bottle.

Description	Item#	Each
Wax Wash	260-4520	\$12.70



B

### C Wax Kleen™

Rub this 100% organic solution on your wax patterns to polish them before casting. Removes scratches and leaves a clean, smooth surface. Pleasant citrus scent.

Description	Item#	Each
4 oz. Bottle	261-9003	\$6.95
8 oz. Bottle	261-9004	12.95



C

### D Wax Wash

Brush on or dip wax pattern into Wax Wash to reduce surface tension, allowing complete adherence of investment to wax. Can be used whether flask will be vibrated or vacuumed.

Description	Size	Item#	EACH Prices	
			1-3	4+
Wax Wash	1 pint	260-4555	\$8.45	—
	1 quart	260-4550	12.75	\$10.20



D

### E Wax Shine

This wax solvent removes fine scratches and polishes waxes to a smooth, bright luster. Use on carved wax originals to remove sandpaper scratches or file marks or to smooth injected wax patterns after repair. Can also be used to clean wax from rubber molds—will not harm rubber. Store in Dispensing Bottle #830-4525 to prevent evaporation.

Description	Item#	Each
8 oz. Bottle	261-9006	\$10.95



E

### F Dispensing Bottle

Plastic bottle holds Wax Shine or other solvents. Special stainless steel lid with one-way valve allows pumping of solution into shallow well on top of bottle. Ideal for dispensing solutions that would otherwise evaporate.

Description	Item#	Each
Dispensing Bottle	830-4525	\$21.70



F

### G Ferris® Bubble-gard™

Spray Bubble-gard on your wax trees to create an invisible shield that protects against the formation of bubbles while investing. Won't foam under vacuum conditions. Produces totally smooth casting surfaces that are free of bumps and other imperfections. Nonflammable and biodegradable. Can be shipped ground or air nonhazardous.

Description	Item#	Each
16 oz. Spray Bottle	261-9008	\$11.18
1 gal. Bottle	261-9009	30.03



G

### H Electric Fan

Heavy-duty fan blows fumes away from work area. Rigid, one-piece, die-cast zinc venturi frame with polycarbonate fan blades. Impedance-protected motor. Comes complete with plastic guard. Electrical: 115V, 0.19A, 16W. Runs at 2,200rpm. Measures 4<sup>11</sup>/<sub>16</sub>" square.

Description	Item#	Each
Electric Fan	831-2053	\$39.50



H



**A - G Ferris® Pellet Injection Waxes**

Injection waxes specially formulated by the makers of Ferris File-A-Wax. Compounded from the purest synthetic virgin waxes and resins, with unique properties essential for perfect injection: durability, ductility, excellent flow and precise replication of detail. Injection temperature: 150° to 160°F (66° to 71° C).



**A Ferris® Turquoise Wax**

Super tough, medium-hard wax with built-in release agents. General purpose for both large and small molds.

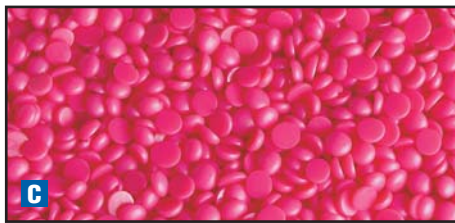
Color	Item#	PKG. of 5 lbs.		Item#	BOX of 50 lbs.	
		1	2+		1	5+
Turquoise	261-8143	\$31.34	\$28.21	261-8152	\$236.25	\$224.44



**B Ferris® NYC Blue Wax**

Identical formulation as the Turquoise wax above, but in a bright readable blue made popular in the New York City area.

Color	Item#	PKG. of 5 lbs.		Item#	BOX of 50 lbs.	
		1	2+		1	5+
NYC Blue	261-8145	\$31.34	\$28.21	261-8155	\$236.25	\$224.44



**C Ferris® Magnaject™ Pink and Blue Waxes**

Extremely fluid wax to fill the most intricate patterns—including filigree, even at low pressures. Minimal shrinkage. Durable, nonbrittle with long shelf life. Available in blue or pink.

Color	Item#	PKG. of 5 lbs.		Item#	BOX of 50 lbs.	
		1	2+		1	5+
C. Magnaject Pink	261-8144	\$38.80	\$34.92	261-8153	\$291.90	\$277.31
Magnaject Blue	261-8146	38.80	34.92	261-8154	291.90	277.31



**D Ferris® Blue Wax**

Specially formulated for intricate, detailed molds. Hard wax with excellent memory. Cools quickly, pulls easily from mold.

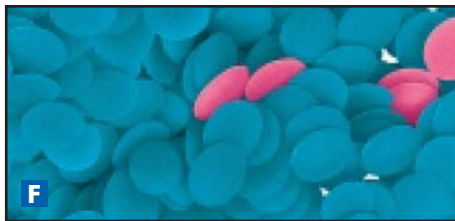
Color	Item#	PKG. of 5 lbs.		Item#	BOX of 50 lbs.	
		1	2+		1	5+
Blue	261-8142	\$31.34	\$28.21	261-8151	\$236.25	\$224.44



**E Ferris® Aqua Wax**

General purpose for both large and small intricate molds with thin and thick sections. Medium hardness with good memory and built-in release agent to ease pattern removal.

Color	Item#	PKG. of 5 lbs.		Item#	BOX of 50 lbs.	
		1	2+		1	5+
Aqua	261-8140	\$31.34	\$28.21	261-8150	\$236.25	\$224.44



**F Ferris® Magna-Stone Set™ Injection Wax**

Exceptionally fluid, durable and nonbrittle low ash wax for stone-in-place casting. Fills delicate patterns and holds stones without distortion. Inject at pressures as low as 2 lbs. to eliminate mold lines. Built-in release agent. Injection temperature: 156-158°F (69-70°C).

Description	Pkg. of 5 lbs.		Box of 50 lbs.	
	Item#	Each	Item#	Each
Magna-Stone	261-8141	\$38.80	261-8159	\$291.90



**G Ferris® Plastic Injection Wax**

This plastic-type wax combines the excellent flow characteristics of wax and the durability of plastic. Minimum shrinkage, excellent memory and flexibility. Long shelf life before and after injection. Releases easily from molds. Melting point: 155°-160°F.

Description	Item#	PKG. of 5 lbs.		
		1-9	10-49	50+
Plastic Injection Wax	261-8130	\$31.34	\$28.21	\$25.07



**A Plast-O-Wax®**

This is the original and very popular plastic-type wax, dark blue in color. Perhaps the most carvable wax, and it releases easily from the mold. Features long shelf life before and after injection. Excellent flow and memory, best for carving and filing. Melting point: 155°-160°F.

Description	Item#	2kg Box	Item#	20kg Box
Plast-O-Wax	261-8137	\$37.95	261-8136	\$273.00

**B Freeman® General-Purpose Flakes™**

Offers excellent flow and flexibility for injecting intricate molds and minimal shrinkage for large molds. Less flexible than Tuf Guy yet has excellent memory, pattern reshaping is unnecessary. Ideal for stone-in-place casting. Injection temperature: 150°F (65°C).

Description	Item#	5 lb. Box	Item#	50 lb. Box
Ruby Red	261-9321	\$27.75	261-9320	\$250.00
Aqua	261-9323	27.75	261-9322	250.00
Turquoise	261-9325	27.75	261-9324	250.00

**C Freeman® Flexible Blue Flakes™ – Formerly Flexplast™**

An extremely flexible, plastic-type injection wax. Developed for the caster who needs a wax to reproduce sharp detail. Will not break upon removal from the mold. Melts clean, leaving no sediment behind in the pot. Tough and flexible with long shelf life. Injection temperature: 155°F (68°C).

Description	Item#	5 lb. Box	Item#	50 lb. Box
Flexible Blue	261-9327	\$29.30	261-9326	\$260.00

**D Freeman® Tuf Guy Flakes™ – Formerly Tuffy Green™**

Extremely tough yet highly flexible wax. Will not break if dropped or bent and can handle the rigors of shipping. Excellent memory and flexibility allow easy pattern removal from any mold. High flexibility, low shrinkage and good flow characteristics make it ideal for injecting both intricate and large molds. Injection temperature: 165°F (73°C).

Description	Item#	5 lb. Box	Item#	50 lb. Box
Tuf Guy	261-9329	\$27.75	261-9328	\$250.00

**E Freeman® Super Pink Flakes™**

Provides superior flow, rapid solidification and easy mold removal without distortion. Its opacity makes it superior in readability. Low injection temperature ensures minimal shrinkage. Injection temperature: 150°F (65°C).

Description	Item#	5 lb. Box	Item#	50 lb. Box
Super Pink	261-9331	\$27.75	261-9330	\$250.00

**F Freeman® Filigree Pink Flakes™ – Formerly NYC Pink™**

Combines the flexibility of Tuf Guy with the excellent flow characteristics of General-Purpose. Lets you easily reproduce the most highly detailed patterns and remove them from the mold with no distortion. Injection temperature: 155°F (68°C).

Description	Item#	5 lb. Box	Item#	50 lb. Box
Filigree Pink	261-9333	\$27.75	261-9332	\$250.00

**G Freeman® Carvable Purple Flakes™ – Formerly ACCU® Carve™**

Offers excellent carvability in an injection wax. Features low shrinkage, excellent flow and low ash content. Does not gum up wax files or tools like traditional injection waxes. Will not break or react to body heat from fingers during handling. Ideal for those who often find it necessary to rework wax patterns. Injection temperature: 170°F (77°C).

Description	Item#	5 lb. Box	Item#	50 lb. Box
Carvable Purple	261-9335	\$29.30	261-9334	\$260.00





**A, B Riacewax® Vacuum Wax Injector Systems**

**Evolution meets intelligent design!**

Fully automated systems with intelligent features: a transparent wax pot, up to four molds injected from one pot, precision control, no maintenance and the ability to make perfect wax patterns.

The transparent wax pot makes it easy to assess wax level. The wax is under vacuum at all times to eliminate air bubbles and humidity. The vacuum pump is integrated into the machine (no separate purchase required).

The central wax pot feeds 8 cubic centimeters (approx. 1/2 cubic inch) of wax into a pre-injection wax crucible in each station. The crucible's independent heat control maintains perfect wax temperature throughout injection. Afterwards any remaining wax in the crucible is returned to the wax pot, eliminating waste and maintenance; no more draining wax from a separate chamber.

A proportionally controlled injection syringe maintains pressure during injection. By using the programmable "ramp" feature, pressure can also be changed during injection to eliminate shrink and sink. Increasing pressure during injection compensates for shrink by forcing the wax to fill the mold cavity rather than shrink back. Sink (a depressed area, especially common on heavier parts of a wax) is eliminated.

All wax variables are controlled, resulting in **perfect patterns** with **consistent weights**.

Each Riacewax System comes with a radio frequency identification (RFID) system to read your molds for instant adjustment of mold parameters, including injection pressure, vacuum off or on with duration, clamp pressure, injection and dwell times. Inexpensive reprogrammable RFID microchips are easily added to molds. And for molds without microchips, each station has its own touch screen for fast, easy programming.

There is no manual work other than inserting and removing molds. One person can easily handle two stations simultaneously. Increases productivity dramatically.

Choose from one- and two-station units. Both include wax pot, clamping station, integrated vacuum pump and RFID system. The Riacewax System is also available in a modular format that accommodates 1-4 clamping stations with independent controls (call for more information). Air compressor required (see p. 128).

**Features:**

- Independent control of every mold for perfect patterns with consistent weights.
- Automatic control using the included RFID system.
- Pre-injection crucible with independent heat and pressure control for precision injection.
- Transparent wax pot for instant visual assessment of wax.
- Eliminates waste; excess wax is returned to the wax pot.
- Wax pot is under full vacuum, eliminating bubbles and humidity.
- Self-centering clamping mechanism ensures molds always find the nozzle.
- Side-mounted nozzle allows operator to easily assess mold placement.
- Pneumatic-static vacuum generators for absolute vacuum value of 90% inside the mold. (Other vacuum injectors utilize rotating dry pumps for a maximum value of 80%.)
- Proportional analog valve controls wax injection syringe for gradual, continuous pressure during injection to compensate as wax begins to cool, eliminating shrink and sink.

**Specifications:**

Wax Capacity	3 qts. (6 lbs.)
Electrical	110V, 5.8A, 650W
Dimensions	24"W x 15"D x 21"H for one-station; 35 1/2"W x 15"D x 21"H for two-station
Net Wt.	73 lbs. for one-station; 102 lbs. for two-station

Description	Item#	Each
A. One-Station Injector with Clamp & RFID System	<b>265-2910</b>	<b>Please call.</b>
B. Two-Station Injector with Clamps & RFID System	<b>265-2920</b>	<b>Please call.</b>

**C Injector Cleaning Wax**

Quick and easy method of eliminating all traces of injection wax from wax pots and injectors. This soft, white, translucent wax removes even the most stubborn wax residues. Excellent purging wax for large injectors. Has a melting temperature of approximately 130°F. Supplied in 5 lb. box.



Description	Item#	EACH Prices	
		1	2+
Injector Cleaning Wax	<b>261-9000</b>	<b>\$30.98</b>	<b>\$27.88</b>

### A Galloni Digital Vacuum Wax Injection System

**Increases production by up to 50% over handheld injection!**

This state-of-the-art digital vacuum wax injection system with integral clamp and pressure controller compensates for shrinkage during injection by means of a unique proportional pressure injection system.

As the mold fills with wax, injection pressure is adjusted to expand the soft surface of the pattern, keeping the mold cavity filled to capacity and greatly reducing shrinkage. Helps eliminate sink from large patterns and reduces shrink in all patterns.

Choose from manual and automatic modes of operation. Following parameters can be individually set and saved in memory for each mold: wax temperature, nozzle temperature, vacuum time, injection time, initial injection pressure, proportional injection pressure, clamp holding time, clamp mold pressure and clamp forward-movement pressure.

The Digital Pressure Controller with preprogrammed touch-screen allows pressure to be adjusted instantly in PSI or bar. The Auto Clamp produces perfect wax patterns that are consistent in weight. Accommodates up to 3¼" x 3½" x 1¼" (80 x 90 x 30mm) rubber molds. System can operate in English, Spanish, French and Italian. CE approved. Requires air compressor such as Silent Air #265-3100 and vacuum pump such as Oil-less #265-2255.

#### Specifications:

Wax Capacity	7½ lbs. (3.5kg)
Electrical	110V or 230V, 1 Ph, 750W, 50/60Hz
Dimensions	
Injector	15"W x 10¾"D x 15¾"H
Auto Clamp	6¼"W x 9½"D x 9"H
Net Wt.	61¾ lbs.

Description	Item#	Each
110V	<b>265-2189</b>	<b>\$6,750.00</b>
230V	<b>265-2190</b>	<b>6,999.00</b>



A

### B Digital Vacuum Wax Injection System

**Increases production by eliminating wax pattern defects!**

An advanced system for delivering consistent, repeatable wax patterns with the best possible surface finish. Draws air out of the mold before injection, eliminating the air bubbles that result in wax pattern defects. Injects wax immediately after vacuuming to ensure a complete fill. Performs two-stage injection to compensate for shrinkage.

Offers both manual and automatic modes with the ability to set the following parameters for different molds: wax and nozzle temperatures, vacuum and injection times, injection pressures, clamp holding time, clamp holding pressure and clamp forward pressure.

System consists of digital vacuum wax injector, digital pressure controller auto clamp and foot pedal. Accommodates up to 3⅝" x 3⅞" x 1¼" rubber molds. Requires air compressor such as Silent Air #265-3100 and vacuum pump such as Oil-less #265-2255.

#### Specifications:

Wax Capacity	3 qts. (6 lbs.)
Electrical	120V, 10A, 60Hz or 240V, 5A, 50/60Hz
Dimensions	
Wax Injector	21½"W x 15"D x 17½"H
Controller	8¼"W x 13½"D x 7½"H
Clamp	6¼"W x 7"D x 8¼"H
Net Wt.	72 lbs.

Description	Electrical	Item#	Each
B. Complete System	120V	<b>265-4144</b>	<b>\$3,850.00</b>
	220V	<b>265-4145</b>	<b>3,995.00</b>
Wax Injector only	120V	<b>265-4140</b>	<b>2,100.00</b>
	220V	<b>265-4141</b>	<b>2,200.00</b>
Controller/Clamp only	120V	<b>265-4142</b>	<b>2,050.00</b>
	220V	<b>265-4143</b>	<b>2,195.00</b>



B

### C Dial Thermometer

Stainless steel, with a temperature range of 50°F to 400°F. Use to accurately measure wax temperature and to calibrate vulcanizer platen temperature. Measures 8½" overall length.

Description	Item#	Each
Dial Thermometer	<b>210-2255</b>	<b>\$26.10</b>



C





A

### A ARBE Hand Pump Wax Injector

A well-built hand pump wax injector with an air pressure gauge that reads up to 30 PSI and an ultra-sensitive thermostat that ensures precise and consistent temperature control up to 250°F. Insert a thermometer in the port on the cover (not included; consider #210-2255). Designed for great reliability with ceramic mica heating elements, heated sealed nozzle, fully insulated cast-aluminum pot and powder-coated steel outer drum. Also includes on/off switch, power indicator light and spigot drain. Made in USA.

#### Specifications:

Wax Capacity	2¾ qts. (5½ lbs.)
Electrical	110V, 6A, 660W, 50/60Hz or 220V, 3A, 660W, 50/60Hz
Dimensions	10½" dia. by 14"H

Description	Item#	Each
Hand Pump Wax Injector, 110V	<b>265-4950</b>	<b>\$520.00</b>
Hand Pump Wax Injector, 220V	<b>265-4951</b>	<b>520.00</b>



B

### B Air Pressure Wax Injectors

Feature a thermostat for accurate temperature control up to 230°F, sensitive air pressure regulator and gauge, heavy-wall aluminum pot, heated nozzle, safety valve, drain cock, drip guard and power indicator light. Require an air compressor such as #265-3100 and a thermometer such as #210-2255.

#### Specifications:

	3-Quart	4-Quart
Wax Capacity	3 qts. (6 lbs.)	4 qts. (8 lbs.)
Electrical	120V, 9A, 60Hz or 240V, 4.5A, 50Hz	120V, 7A, 60Hz
Dimensions	12" dia. x 18"H	12¾" dia. x 19¾"H

Description	Electrical	Item#	Each
B. 3-Quart Injector	120V	<b>265-2174</b>	<b>\$425.00</b>
	240V	<b>265-2176</b>	<b>475.00</b>
4-Quart Injector	120V	<b>265-2179</b>	<b>550.00</b>



C

### C Mini Air Pressure Wax Injector

Just as efficient as many larger injectors. Features a thermostat for accurate temperature control up to 230°F, sensitive air pressure regulator and gauge, heavy-wall aluminum pot, heated nozzle, safety valve, drain cock, drip guard and power indicator light. Requires an air compressor such as #265-3100.

#### Specifications:

Wax Capacity	1¼ qts. (2.5 lbs.)
Electrical	120V, 3A, 60Hz or 240V, 1.5A, 50/60Hz
Dimensions	8" dia. x 14"H

Description	Electrical	Item#	Each
C. Mini Injector	120V	<b>265-2171</b>	<b>\$270.00</b>
	240V	<b>265-2173</b>	<b>325.00</b>



D

E

### D Automatic Pressure Wax Injector

This efficient unit requires no air compressor or pump. Just push your rubber mold against the nozzle, and wax is injected. Great for small models. Features dial-adjustable heater for controlling temperature up to 350°F, special cover for avoiding wax contamination and power indicator light. Requires a thermometer such as #210-2255.

#### Specifications:

Wax Capacity	½ qt. (1 lb.)
Electrical	120V, 3A, 60Hz
Dimensions	8" dia. x 11"H

Description	Item#	Each
Automatic Injector	<b>265-2721</b>	<b>\$199.50</b>

### E Universal Debubbler Valve – For Wax Injectors

Are air bubbles ruining your waxes? Attach this valve to your wax injector, hook up to your vacuum pump and vacuum out all the bubbles for perfect wax patterns.

Description	Item#	Each
Universal Debubbler Valve	<b>260-3375</b>	<b>\$64.95</b>



## A HD Pattern Making System

Wax model production from rubber molds has always been problematic, especially in the field of jewelry manufacturing. Incomplete injections, breakage, shrinkage and irregular surfaces have been common to the process since its inception. The time required to produce, re-inject, repair and touch up today's complex jewelry models has increased, adding significant labor to manufacturing.

These issues have led to the invention of HD polymer, a marvel that replaces injection wax as a model material for high-end, intricate designs. Offers a combination of accuracy, consistency, flow, flexibility, durability and compatibility that allows artisans and jewelry manufacturers to leverage the latest design and pattern-making technologies in previously impossible ways.

### Features:

- Maximizes RP potential for production.
- Produces patterns with more details than possible with wax.
- Creates lightweight pieces that can't be injected with wax.
- Ensures consistent pattern weight.
- Works faster and costs less with a better finish than metal molds.
- Allows seats to be pre-cut, even in smallest sizes.
- Lets stones snap into place for easy casting.
- Burns out completely at 950°F, no ash nor diamond discoloration.
- Guarantees unlimited pattern shelf life.
- Virtually eliminates shrinkage.

### How It Works:

Confirm your original master is as finished as you'd like (wax, rapid prototype, metal or other). Make an RTV clear silicone mold using provided components. Cure and cut silicone mold, remove master, and inject HD polymer. Cures in minutes with provided lights. Remove pattern and cast when ready. For high-volume production see HD Injector below.

### HD Pattern Kit Components:

- HD Polymer Bottle, 118ml
- HD RTV Clear Silicone Cartridge, 280ml
- Heavy-Duty Silicone Applicator Gun
- Two HD Curing Lightbulbs
- $\frac{3}{4}$ " Mold Frame
- Nylon Sock
- Pair of Latex Gloves
- Instructional DVD

Description	Item#	Each
HD Pattern Kit, 110V	<b>261-9336</b>	<b>\$399.00</b>
HD Pattern Kit, 220V	<b>261-9337</b>	<b>399.00</b>
Refill HD Polymer Bottle, 118ml	261-9338	150.00
Refill HD RTV Clear Silicone Cartridge, 280ml	261-9339	41.60



## B HD Injection and Curing Machine

Designed for mold injection and curing of HD polymer, this machine injects and cures 400–600 defect-free patterns per day. Uses a programmable touch screen to navigate through a variety of operational modes for injection and curing of patterns and molds. Allows injection values for any mold to be stored in memory for easy retrieval and proper filling each time the mold is injected. Includes replaceable drop-in cartridge of HD polymer with enough material to produce patterns that can yield 169 tr. oz. of 14K gold castings.

Vacuum canister collects unused HD polymer from the filling process and recycles it to minimize material loss. Curing chamber houses ten light bays that accept one to two molds each. Remove light assembly for overnight pressure curing of up to 15 clear silicone RTV molds per day, or add a second chamber for high-volume production.

Includes internal vacuum generator to eliminate expense of the external vacuum pump necessary for most vacuum wax injectors. Requires an air compressor. Consumes just 25–150W, making it considerably more energy-efficient than traditional wax injectors. Electrical: 110–230V.

Description	Item#	Each
HD Injection and Curing Machine	<b>261-9346</b>	<b>\$12,800.00</b>





**A**

**A Silent Air Compressor – Compressors should be seen and not heard!**

Unlike similar models this unit features cooling fins for improved performance, filter/regulator with drain for condensation removal, coalescent filter for small particle and oil removal. Virtually soundless so you can work with it right under your table. You'll never know it's there, but you can be sure its powerful 1/2 HP motor will provide over 2 CFM of air. Just one can handle up to 10 large wax injectors. Completely automatic. Made in USA.

**Features:**

- Filter/regulator with drain
- Coalescent filter
- Tank pressure gauge
- Safety valve
- Handle for balanced carrying

**Specifications:**

Motor	1/2 HP
Max. Pressure	114 PSI
Tank Capacity	4 gallons
Displacement	2.15 CFM
Dimensions	13" dia. x 25"H
Noise Level	40 dB

Description	Item#	Each
A. 110V Silent Air	<b>265-3100</b>	<b>\$1,325.00</b>
220V, 50/60Hz Silent Air	<b>265-3102</b>	<b>1,375.00</b>
Oil, 22 oz.	<b>265-3103</b>	<b>22.95</b>



**B**

**B Quiet Air Compressor**

The ideal unit for anyone who wants an affordable, quiet, long-lasting air compressor. Features a 1/2 HP motor that provides 1.8 CFM of air. Designed for continuous operation. Very well-balanced to resist walking. Electrical: 110V. Measures 16.5"W x 8"D x 16.8"H. Weighs 26 lbs. Made in USA. Filter, regulator and/or lubricator might be required between the compressor and air tool (see p. 181). Accepts 1/4" male fittings.

**Features:**

- Runs quietly for indoor operation.
- Offers high airflow delivery.
- Rated for continuous use.
- Balanced to prevent walking.
- Requires no oil.

**Specifications:**

Motor	1/2 HP
Max. Pressure	125 PSI
Tank Capacity	2 gals.
Displacement	1.8 CFM
Noise Level	60 dB

Description	FOB Point	Item#	Each
B. Quiet Air Compressor	CT	<b>265-3105</b>	<b>\$395.00</b>
	WI	<b>265-3106</b>	<b>415.00</b>



**C**



**D**

**C Castaldo® Mold Release Spray**

Castaldo mold release spray is pure silicone oil in an aerosol can for use in releasing wax patterns from rubber or metal molds. Safe, non-toxic, colorless, odorless, greaseless. Will not damage molds made of natural mold rubber. Contains no CFCs nor VOCs.

Description	Item#	Each
Mold Release Spray	<b>816-2915</b>	<b>\$12.75</b>

**D Sprints GF Mold Release Spray**

Sprints all-purpose GF, gentle formula, mold release spray is a heavy-duty, food grade, non-paintable, silicone spray compatible with solvent-sensitive thermoplastics. Ultra-fine atomization for uniform coverage, fast drying. Contains no CFCs.

Description	Item#	Each
Mold Release Spray 12 oz. can	<b>816-2925</b>	<b>\$8.30</b>
Mold Release Spray (case of 12)	<b>816-2938</b>	<b>94.60</b>



**E**

**E Econo Mold Clamp**

This handy little clamp holds standard rubber molds firmly for wax injection, applying even pressure across the entire mold. Accommodates rubber molds up to 1 7/8" thick. Includes heavy-duty spring latch for quick loading and release.

Description	Item#	Each
Econo Mold Clamp	<b>260-2575</b>	<b>\$27.00</b>



**F**

**F Wax Injection Mold Plates**

Thick, well-finished aluminum plates for uniform pressure on your rubber mold during wax injection. Each set contains 2 plates, 12-gauge thickness, 3"L x 1 3/4"W.

Description	Item#	Each
Wax Injection Mold Plates	<b>265-2340</b>	<b>\$2.05</b>

**A Model Master® Photoetcher****Makes master models in minutes!**

With Model Master you can quickly turn your design ideas into 3-D plastic master models that are ready for mold making. Make earrings, charms, pendants, tie tacs, cuff links, logos, insignias and much more.

**How does Model Master work?**

First, draw your design on paper, create your design on a computer or copy a design from the many noncopyrighted design books available in libraries and book stores.

Next, use a copier or your computer printer to copy your design onto Transparency Paper or any standard transparency film. Place the transparency on top of the special polymer (plastic), and insert both into Model Master for one minute. Model Master's special ultraviolet light hardens the area of polymer that is exposed to the light. Scrub out the unexposed polymer with a brush and water, revealing your design in 3-D. Then use the polymer to make a rubber mold, and cast your designs.

With Model Master, you can make a positive or negative image of your design. You can make left and right images for matching earrings and cuff links. Use the enlarging or reducing feature of your copier or printer to transform your design into pendants and matching earrings.

To create a negative (engraved) image, you'll need Transparency Paper. To create a positive (raised) image, you'll need Transparency Paper and the Reversing Kit.

The Model Master Starter Set includes Processing Box, 120 square inches of assorted polymers, 50 sheets of Transparency Paper, Small Reversing Kit (5 sheets of 3½" x 5" reversing film, 4 oz. bottle of developer solution and 12 cotton pads) and an 18-minute instructional video.

Green Polymer is very hard, so it's great for mold making (not for use with silicone mold rubber). Ideal for logos and finely detailed designs. Yellow Polymer is less hard than Green, so it can be flexed and domed. Can be used for mold making (not for use with silicone mold rubber).

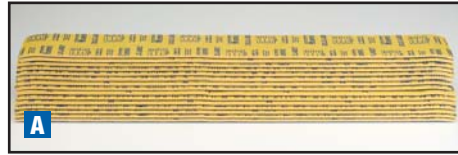
**A**

Examples of work.

Description		Item#	Each
<b>A. Model Master Starter Set</b>		<b>262-0072</b>	<b>\$399.00</b>
<b>Replacements and Accessories</b>	<b>Details</b>	<b>Item#</b>	<b>Each</b>
Transparency Paper for plain paper copiers and laser printers	Box of 100 sheets, 8½" x 11"	262-0083	\$35.00
Green Polymer, 49 sq. inches	1mm thick, 0.40mm etching depth*	262-0092	22.00
	1.80mm thick, 0.80mm etching depth*	262-0076	24.00
Yellow Polymer, 49 sq. inches	1mm thick, 0.40mm etching depth.*	262-0090	22.00
	1.80mm thick, 0.80mm etching depth.*	262-0075	24.00
	2.30mm thick, 1.30mm etching depth.*	262-0091	42.00
Replacement Lightbulb	U-shaped	262-0087	23.50
Large Reversing Kit	Ten sheets of film negative, 8½" x 11", 1 liter of developer and 100 cotton pads	<b>262-0074</b>	<b>55.00</b>
<b>Reversing Kit Replacements</b>		<b>Item#</b>	<b>Each</b>
Reversing Film, box of 10 sheets		262-0078	\$38.00
Developer Solution, 1 liter		262-0079	5.00
Cotton Pads, pkg. of 100		262-0080	12.00

\*Due to manufacturing variables, measurements may vary slightly.

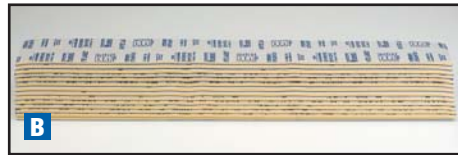




### A Castaldo® Gold Label®

Contains more pure natural gum rubber than Castaldo White Label, making Castaldo Gold softer and more pliable. The superior qualities of Castaldo Gold make it the ideal rubber for difficult molds containing undercuts, filigree or multiple settings. Easy to pack and highly flexible so that wax patterns release smoothly. Vulcanize at 310°F for 15 minutes per 1/4" of mold frame thickness. Rubber is 1/8" thick.

Description	Item#	BOX of 5 lbs.		
		1	2-9	10+
A. Strips (2 7/8" x 18")	260-1460	\$41.85	\$39.76	\$37.67
Ready Cut (1 7/8" x 2 7/8")	260-1480	48.95	44.06	39.16
Description	Item#	ROLL		
		1-9	10+	
5 lb. Roll (18"W)	260-1468	\$43.95	\$39.56	
50 lb. Roll (18"W)	260-1600	379.00	341.10	



### B Castaldo® White Label®

A high concentration of pure natural gum rubber makes Castaldo White firm but flexible. A good all-purpose mold rubber that cuts well. Well-suited for thin molds. Vulcanize at 310°F for 15 minutes per 1/4" of mold frame thickness. Rubber is 1/8" thick.

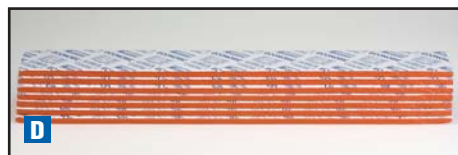
Description	Item#	BOX of 5 lbs.		
		1	2-9	10+
B. Strips (2 7/8" x 18")	260-1450	\$39.95	\$37.95	\$35.96
Ready Cut (1 7/8" x 2 7/8")	260-1475	45.95	41.36	36.76
Description	Item#	ROLL		
		1-9	10+	
5 lb. Roll (18"W)	260-1465	\$40.75	\$36.68	
50 lb. Roll (18"W)	260-1650	360.00	324.00	



### C Castaldo® No-Shrink Pink®

Specially formulated for less than 1% shrinkage! Can be used alone or combined with Castaldo Gold or White rubber to reduce shrinkage and save money. Use No-Shrink Pink around the model and Castaldo White or Gold for the outside of the mold. Vulcanize at 290°F for 12 minutes per layer of rubber. Note: This rubber must be vulcanized at precisely 290°F. Use a thermometer to check your vulcanizer accuracy before using this rubber.

Description	Box of 1 lb.		Item#	BOX of 5 lbs.		
	Item#	Each		1	2-9	10+
C. Strips	260-1482	\$11.15	260-1455	\$53.25	\$50.59	\$47.93
Ready Cut	-	-	260-1485	56.85	51.17	45.48



### D Castaldo® Econosil®

This putty-like material is a harder, firmer, more affordable version of Castaldo Super High Strength mold rubber. Makes strong production rubber molds that cut like butter. Gives waxes a high-shine finish for easy release from molds without messy sprays or powders. Brick-red in color. Vulcanize at 330°F for 15 minutes per layer of rubber.

Description	Item#	BOX of 5 lbs.		
		1	2-9	10+
Strips (2 7/8" x 18")	260-1660	\$42.00	\$37.80	\$33.60



### E Castaldo® Super High Strength™

This silicone-based rubber makes molds that cut like butter. Uncured, it has the consistency of soft putty, making it very easy to pack in undercuts and detailed areas. Produces a firm mold with excellent flexibility and tear strength. Strong enough to make complex multi-part molds. Gives waxes a smooth, shiny finish for easy release from molds. Vulcanize at 330°F for 15 minutes per layer of rubber. Strips measure 2 7/8" x 18".

Description	Item#	BOX of 5 lbs.		
		1	2-9	10+
Standard Yellow	260-1470	\$45.95	\$41.36	\$36.76
Gelato Pistachio	260-1490	45.95	41.36	36.76
Gelato Lemon	260-1491	45.95	41.36	36.76
Gelato Peach	260-1492	45.95	41.36	36.76
Gelato Fuchsia	260-1493	45.95	41.36	36.76
Gelato Violet	260-1494	45.95	41.36	36.76
Gelato Blue	260-1495	45.95	41.36	36.76
E. Gelato Assorted Colors	260-1496	45.95	41.36	36.76



### A Castaldo® VLT™ Silicone Mold Rubber

Castaldo VLT (Very Low Temperature) Silicone Mold Rubber vulcanizes at 160°F (71°C), allowing you to make long-lasting production molds directly from CAD/CAM and Rapid Prototyping plastic resin models, without risk of model damage. Speeds your designs from computer concept to production in hours, not days. Easy to pack and cut. Shrinkage is only 1.4%. Produces highly detailed wax injections with extraordinarily shiny surfaces that require less finishing. Available in 2 7/8"W x 18"L x 3/8" thick strips. Sold in boxes of 5 lbs.

Description	Item#	1	BOX of 5 lbs.	
			2-9	10+
VLT Strips, 5 lbs.	260-1487	\$46.25	\$41.63	\$37.00



**A**

### B Castaldo® Titanium Label™

Castaldo Titanium Label packs, cuts, bends, flexes and stretches just like Gold and White, but because Titanium is so much harder after vulcanization, you can use higher clamp pressures, higher injection pressures and lower wax temperatures. There's no pattern distortion, even on multi-part molds, and much less shrinkage—only 1.4%! Fine details won't move or distort, and very thin sections will stay open and fill more easily. Ideal for filigree and hard-to-fill models. Vulcanize at 310°F for 15 minutes per 1/4" of mold frame thickness.

Description	Item#	1	BOX of 5 lbs.	
			2-9	10+
Strips (2 7/8" x 18")	260-1462	\$45.75	\$43.46	\$41.18
Ready Cut (1 7/8" x 2 7/8")	260-1476	45.95	41.36	36.76



**B**

### C Aluminum Mold Frames

Predrilled holes in sides allow excess rubber to escape during vulcanization, helping to prevent model deformation. Measurements denote mold sizes.

Description	L x W x Thickness	Item#	Each
C. Single Frame	2 7/8" x 1 7/8" x 3/4"	260-2200	\$9.95
	2 7/8" x 1 7/8" x 1"	260-2300	12.25
	2 7/8" x 1 7/8" x 1 1/4"	260-2400	14.95
	3 3/4" x 2 1/2" x 1"	260-2450	31.50



**C**

### D - F Castaldo® Moldmatic® Ready Made Molds™

A two-part system consisting of Ready Made Molds with preformed locks and Moldmatic Mold Frames. Mold cutting time and effort are greatly reduced. The mold halves fit together perfectly in a precision-engineered mold frame for consistently perfect wax patterns. The same high quality Castaldo mold rubber known throughout the world, but now prefabricated and ready to use. Mold locks are preformed. Merely remove the protective cloth squares at the center of the mold and insert your model. After vulcanization, simply pull the edges of the mold apart to expose perfectly formed locks. The center of the mold is cut normally. Sold in boxes of 10 molds along with 10 extra pieces of rubber so that any thickness mold can be made. You must use Ready Made Molds with the Moldmatic Frame.

White Label	Dimensions	Item#	Each
D. Small	1 7/8" x 2 7/8"	260-1430	\$54.95
Medium	2 3/8" x 3"	260-1432	67.95
Large	2 7/8" x 3 3/8"	260-1434	77.95
Gold Label	Dimensions	Item#	Each
Small	1 7/8" x 2 7/8"	260-1440	\$54.95
E. Medium	2 3/8" x 3"	260-1442	67.95
Large	2 7/8" x 3 3/8"	260-1444	77.95
No-Shrink Pink Label	Dimensions	Item#	Each
Small	1 7/8" x 2 7/8"	260-1416	\$54.95
Medium	2 3/8" x 3"	260-1422	67.95
F. Large	2 7/8" x 3 3/8"	260-1424	77.95



**D**



**E**



**F**

### G, H Ready Made Mold Frames

Size	Dimensions	Item#	Each
Small	1 7/8" x 2 7/8"	260-1830	\$186.00
Medium	2 3/8" x 3"	260-1835	195.00
G. Large	2 7/8" x 3 3/8"	260-1840	216.00
H. Double Small	Both 1 7/8" x 2 7/8"	260-1845	485.00



**G**

**H**



**A**

**A Sprue Formers and Rods**

Machined from solid brass. The angle of the sprue formers is calculated to maintain the correct contact point between the mold and wax injector nozzle. Matching rods measure 2" long. 3mm (approx. 1/8") for standard models and 4mm for heavier models.

Description	Item#	Each
Formers and 3mm Rods, pkg. of 10	<b>260-3095</b>	<b>\$21.95</b>
Formers and 3mm Rods, pkg. of 26	<b>260-3094</b>	<b>43.95</b>
Formers and 4mm Rods, pkg. of 10	<b>260-3096</b>	<b>26.00</b>



**B**

**B Brass Sprue Rod**

Solid brass sprue rod can be cut to exact lengths as needed. Measures 1/8" dia. x 12"L. Sold in packages of 10.

Description	Item#	Each
Brass Sprue Rod	<b>260-3098</b>	<b>\$23.95</b>



**C**

**C Castaldo® Mold Locks**

Insert one of these brass cones into each corner of your rubber mold. They will form locks to prevent mold shifting during injection. May be used alone or with powder for easier separation after vulcanizing. Each bag contains 1/4 cup (3 oz.) of Mold Locks, equalling approximately 150 pieces.

Description	Item#	EACH Prices		
		1-2	3-9	10+
Castaldo Mold Locks	<b>260-1350</b>	<b>\$17.25</b>	<b>\$16.39</b>	<b>\$15.53</b>



**D**

**D Rubber Mold Locking Pins**

This is the fastest, easiest way to automatically form locks in your rubber molds! Pack your mold normally, then push one of these solid stainless steel pins into each corner of the mold before vulcanizing. Use the 15mm pins for 3/4" to 1" thick molds and the 23mm pins for 1 1/8" to 1 1/2" thick molds. Sold in sets of 4 pins.

Description	Length	Item#	SET Prices	
			1-2	3+
Rubber Mold Locking Pins	15mm	<b>265-0854</b>	<b>\$9.00</b>	<b>\$7.20</b>
	23mm	<b>265-0856</b>	<b>13.50</b>	<b>10.80</b>



**E**

**F**

**E, F Mold-Mate®**

Mold-Mate holds molds securely to simplify and speed up the mold cutting process. Helps you relax and focus on cutting the mold. A springless heavy-duty clamp acts as a third hand that maintains tension on the mold while taking pressure off your hand. The clamp is attached to a ball chain that can be easily adjusted to position any size mold for cutting. Specially designed jaws grasp the mold firmly without tearing the rubber. Holdback bars keep the mold from snapping shut as you cut deeper. Two retractable claws, one single and one double, assist in holding the mold for cutting in the right places and cutting cores. Includes a fully illustrated 28-page manual with color-coded instructions. Measures 12 1/2"L x 6"W x 3/4" thick. To use Mold-Mate Junior, mount the chain holder approx. 10 1/2" from the edge of the cutting surface to provide necessary tension for holding the mold open securely with less effort. Kinkless steel ball chain improves rotation of mold and speeds up cutting time.

Description	Item#	Each
<b>E. Mold-Mate</b>	<b>260-2578</b>	<b>\$75.00</b>
<b>F. Mold-Mate Junior</b>	<b>260-2579</b>	<b>35.50</b>



**G**

**G PEPE Mold Vise**

A fast and simple way to learn rubber mold cutting. Cut a line about 1/8" to 1/4" deep around the perimeter of the mold. Then fasten the PEPE Mold Vise clamps onto the edges of the mold at the sprue end. The 2 clamps firmly grip each half of the mold, leaving both hands free to finish the cutting. As the cutting progresses, turn the knobs to spread the mold—you'll have no problem seeing or reaching where you want to cut.

Description	Item#	Each
Mold Vise	<b>260-2545</b>	<b>\$68.95</b>

**A Castaldo® Mold Separation Cream**  
**The easy way to eliminate or reduce mold cutting.**

With Castaldo Mold Separation Cream, you may never have to handle a sharp mold knife again. Pack your model normally. When you have established a parting line between the 2 halves, spread a small amount of Mold Separation Cream on one surface with a fingertip or small brush. After the mold is vulcanized, insert a screwdriver into the parting line and peel the halves apart. Castaldo Mold Separation Cream can be used to separate the entire mold or just part of the mold, including locks. May be used with or without mold lock formers and on any type of mold rubber. Nontoxic, nonhazardous. Net Wt. 1 oz.



**A**

Description	Item#	Each
Castaldo Mold Separation Cream	<b>260-1401</b>	<b>\$10.50</b>

**B - D Plastic Knife Handles**

Contoured to fit your hand. Hold blades securely.

Description	Item#	Each
B. B-P #5 USA	<b>260-3050</b>	<b>\$25.99</b>
C. B-P #6 USA*	<b>260-3051</b>	<b>25.99</b>
D. Imported	<b>260-3052</b>	<b>5.30</b>

\*Accepts only Heavy-Duty Steel Knife Blade #260-3000.



**B**



**C**



**D**

**E Stainless Steel Knife Handle**

Smooth, durable handle holds blades securely.

Description	Item#	EACH Prices	
		1-5	6+
Stainless Steel Knife Handle	<b>260-3055</b>	<b>\$3.10</b>	<b>\$2.79</b>



**E**

**F - H Swann Morton® Knife Blades**

High-carbon steel surgical blades (non-sterilized) for precise mold cutting. Last much longer and are sharper than stainless steel blades. Available in packages of 5 blades or in individually wrapped boxes of 100. Blades fit either Plastic or Stainless Steel Handles (above) except #260-3051.

Blades	Item#	Pkg. of 5		Item#	BOX of 100		
		Each	Each		1-4	5-9	10+
F. #11 Straight	<b>260-2951</b>	<b>\$1.75</b>		<b>260-2952</b>	<b>\$22.50</b>	<b>\$21.38</b>	<b>\$20.25</b>
G. #12 Curved	<b>260-3001</b>	<b>1.75</b>		<b>260-3002</b>	<b>22.50</b>	<b>21.38</b>	<b>20.25</b>
H. #10A Wide-Angle Straight	-	-		<b>260-3005</b>	<b>22.50</b>	<b>21.38</b>	<b>20.25</b>



**F**



**G**



**H**

**I Heavy-Duty Steel Knife Blade**

Exclusive "rib-back" design adds strength to these blades, making them the most durable mold cutting blades available. Fits only Plastic Knife Handle #260-3051.

Description	Item#	BOX of 150		
		1-4	5-14	15+
#25 Heavy-Duty Steel Knife Blade	<b>260-3000</b>	<b>\$155.00</b>	<b>\$144.15</b>	<b>\$139.50</b>



**I**

**J - L Soft Grip Knife**

Round with comfortable, nonslip, soft grip handle. Blades are held securely and locked or released by turning knurled knob at rear of handle. Comes with one #11 knife blade. Measures 4 3/4" overall length without blade. Color: blue.

Description	Item#	Each
J. Soft Grip Knife with #11 Blade	<b>260-3040</b>	<b>\$3.35</b>
Blades for Soft Grip Knife Handle		Pkg. of 5
K. #11 Steel Blade	<b>260-3045</b>	<b>\$1.35</b>
L. #16 Steel Blade	<b>260-3048</b>	<b>1.38</b>



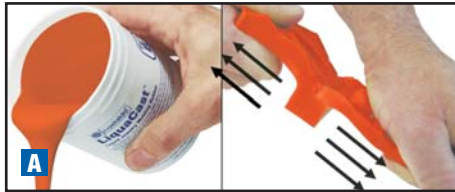
**J**



**K**



**L**



### A Castaldo® LiquaCast® Ultra Liquid Mold Rubber

An improvement over regular LiquaCast, this 0% shrinkage two-part liquid mold rubber offers extra strength, tear resistance and firmness. Easy to mix, pour and vacuum due to its 1:1 mixing ratio by weight or volume and very low viscosity. Vulcanizes without pressure at room temperature. Ideal for even the most delicate patterns. Produces long-lasting molds with a mirror finish, which yield bright, shiny wax models. Bright orange in color. Sold in two-part kits weighing 1 or 8kg. Use Castaldo Resin Release Spray to protect Rapid Prototype models (see facing page).

Description	Item#	Each
1kg Set	<b>260-1497</b>	<b>\$64.95</b>
8kg Set	<b>260-1498</b>	<b>175.00</b>

### B Castaldo® Original LiquaCast™ Liquid Mold Rubber

A two-part liquid mold rubber that vulcanizes without pressure at room temperature. Use it to make molds of waxes, organics, plastics, and anything that cannot withstand the heat/pressure of normal vulcanization. Contains no silicone and makes a stronger, more durable mold than standard liquid mold rubbers. 0% Shrinkage. Cures in 16–24 hrs. Requires vacuuming. Use with Castaldo Liquid Rubber Mold Frames. Use Castaldo Resin Release Spray to protect Rapid Prototype models (see facing page).

Description	Item#	Each
1 lb. Set	<b>260-1662</b>	<b>\$35.95</b>
10 lb. Set	<b>260-1664</b>	<b>105.00</b>

### C Freeman Jewel-Sil RTV Molding Rubber

A two-part clear silicone rubber for room temperature vulcanization of your jewelry molds. Reproduces intricate details with close tolerances. Features low viscosity for easy pouring, excellent clarity for precise cutting, high tear strength and ability to endure temperatures up to 350°F. Mix and use within an hour. Cures in 24 hours with less than 0.1% shrinkage (can be cured in an oven at 120–150°F for 3–4 hours, but this affects physical properties). Sold in 1kg and 5kg kits.

Description	Item#	Each
1kg Kit	<b>261-9347</b>	<b>\$54.00</b>
5kg Kit	<b>261-9348</b>	<b>240.00</b>

### D Ti-Research Replisil Liquid Mold Rubber

Two-part liquid silicone with incredible fluidity for replicating even the tiniest details. Ideal for organic and detailed models. Boasts excellent stability and longevity, in addition to extremely high tensile strength for demanding applications. Requires vacuuming. Cures in 12 hours at room temperature. Use with Acrylic Mold Frames (see facing page). Sold in 1kg (2.2 lb.) packages. Made in Germany.

Description	Item#	Each
Liquid Mold Rubber	<b>265-5023</b>	<b>\$126.00</b>

### E Castaldo® LiquaGlass™ – Crystal-clear liquid mold rubber with 0% shrinkage.

Castaldo LiquaGlass professional nonsilicone liquid rubber produces strong, flexible production molds at a mere fraction of the price of clear silicone rubber. Allows you to see models take shape as you cut for easier mold making. Sold in 1kg kit that contains 500g Part A and 500g Part B. Not much thicker than water, it mixes easier than traditional liquid rubber (use vacuum to remove air bubbles). Made for easy pouring and mixing in 1:1 ratio. Needs just 45–60 minutes of work time. Requires 24 hours of cure time for best results. Use with Castaldo Liquid Rubber Mold Frames.

Description	Item#	Each
LiquaGlass	<b>260-1685</b>	<b>\$63.95</b>

### F Dow Corning Silastic® E RTV Rubber Set

A pourable silicone mold rubber that vulcanizes without pressure at room temperature. For use with models that cannot withstand the heat and pressure of vulcanization. Hardly any shrinkage. Vacuuming is recommended to remove air bubbles. Produces high-strength rubber molds. Will make 2–3 molds (standard size). Consists of a base and curing agent mixed 10:1. Work time: 2 hours. Cures tack-free in 24 hours and reaches full physical strength in about 72 hours. Net Wt. 1 lb.

Description	Item#	Each
Silastic E RTV Rubber Set	<b>260-1410</b>	<b>\$60.95</b>



**A Castaldo® Resin Release™ Spray**

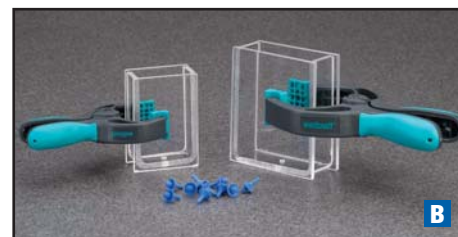
Although designed specifically for use on Castaldo VLT silicone mold rubber, Castaldo Resin Release Spray also acts as a protectant on Rapid Prototype models. RP and resin models should be tested before using liquid mold rubber. Some RP and resin model materials will react with the liquid rubber becoming gummy, distorted or bond destructively to their molds. To prevent this problem, spray Resin Release onto models shortly before vulcanizing, helping you make production-quality molds directly from CAD/CAM resin and wax models. Natural soy-based formula is nonflammable and biodegradable. Sold in 340g cans.

Description	Item#	Each
Resin Release Spray	<b>816-2917</b>	<b>\$14.95</b>

**A****B Ti-Research Acrylic Mold Frames**

Durable small and large mold frames made of thick acrylic for use with Replisil and other liquid mold rubbers. Small frame measures 80 x 50 x 25mm, large frame 100 x 80 x 30mm. Each includes two acrylic plates, heavy-duty plastic clamp for secure clamping of mold frame and 10 wax sprue formers that attach easily to any metal, wax or organic model. Acrylic plates and clamp serve double-duty as mold clamp for wax injection.

Description	Item#	Each
Small Mold Frame	<b>265-5020</b>	<b>\$42.00</b>
Large Mold Frame	<b>265-5021</b>	<b>49.00</b>
Wax Sprue Formers, pkg. of 50	<b>265-5022</b>	<b>21.00</b>

**B****C Castaldo® Liquid Rubber Mold Frames**

Each consists of a solid aluminum U-frame with built-in sprue former, two pieces of heavy-duty clear plastic and industrial bands. Made extra-tall to allow expansion of liquid rubber during vacuuming—no more spills. Eliminate need for paper collars. Available in four thicknesses: 3/4", 1", 1 1/4" and 1 1/2". All make molds up to 1 7/8"W x 6"H.

Description	Thickness	Item#	Each
Liquid Rubber Mold Frames	3/4" (19mm)	<b>260-1661</b>	<b>\$18.95</b>
	1" (25mm)	<b>260-1663</b>	<b>18.95</b>
	1 1/4" (32mm)	<b>260-1665</b>	<b>18.95</b>
	1 1/2" (38mm)	<b>260-1667</b>	<b>18.95</b>

**C****D Castaldo® Quick-Sil™ RTV Jewelry Molding Rubber**

**Cures in 15 minutes – no heat, 0% shrinkage.**

Two-part silicone mold rubber that cures in just 15 minutes—without heat or pressure! Quick-Sil is soft and pliable, so it's easy to mix and easy to pack even complicated models. Because no heat or pressure is used, there is absolutely no shrinkage. Tear resistance is equal to any standard silicone mold rubber.

Safe, nonhazardous, nontoxic. Use standard mold frames. Available in 2 lb. kit (1 lb. each of Part A and Part B) to make 3-4 standard size molds.

Description	Item#	EACH Prices		
		1-2	3-4	5+
Jewelry Molding Rubber	<b>260-1675</b>	<b>\$53.00</b>	<b>\$50.35</b>	<b>\$47.70</b>

**D****E Talc Powder**

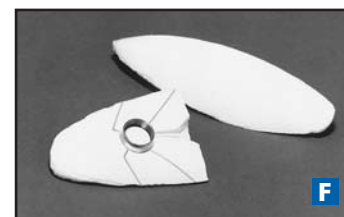
Brush or dust onto your rubber molds to permit easy removal of waxes and to open vents. Also used as a separating powder. 5 lb. bag.

Description	Item#	Each
Talc Powder	<b>260-1375</b>	<b>\$16.50</b>

**E****F Cuttlefish Bone**

For casting small objects by pressing model directly into cuttlefish. Soft shell makes a smooth-walled mold. Cut sprues, gates and vents into the wall with a sharp knife. Supplied in random sizes. Package contains 4-6 pieces weighing approx. 1/2 lb. total.

Description	Item#	Each
Cuttlefish Bone	<b>265-3000</b>	<b>\$19.70</b>

**F**



**A**

**A Mini Vulcanizer**

A forged yoke with acme threads allow a high degree of pressure to be applied to the upper platen. Stainless steel guide rods assure equal pressure on the platens and therefore on the mold frame being vulcanized. Power and heat cycling lights indicate status of operation. Accurate thermostat control heats precisely and platens distribute heat evenly. Platens are unique on this machine because the heating elements are die cast directly into the platen assuring direct transfer of heat. Accepts mold frames up to 7" x 6".

**Specifications:**

Electrical	120V, 3.4A, 500W, 60Hz 240V, 1.7A, 500W, 50Hz
Dimensions	11"W x 7"D x 15 <sup>3</sup> / <sub>8</sub> "H
Platens	6 <sup>1</sup> / <sub>2</sub> " x 5 <sup>1</sup> / <sub>2</sub> "
Max. Temp.	572°F (300°C)
Max. Opening	3 <sup>3</sup> / <sub>8</sub> "
Ship. Wt.	35 lbs.

Model	Item#	Each
110V	<b>265-2168</b>	<b>\$395.00</b>
220V	<b>265-2169</b>	<b>425.00</b>



**B**

**B Junior Vulcanizer**

Heavy-duty cast-iron and aluminum construction. Stainless steel heating platens. Large handle and sturdy 1" diameter pressure screw. Two large diameter guide rods keep platens in alignment. Thermostat with dial for accurate temperature control up to 500°F/260°C. Equipped with power and thermostat pilot lights and on/off switch. Predrilled holes in base for easy mounting. Made in USA.

**Specifications:**

Electrical	110V, 6A, 660W, 50/60Hz 220V, 3A, 660W, 50/60Hz
Dimensions	13"W x 7"D x 18"H
Platens	8" x 5"
Max. Temp.	500°F (260°C)
Max. Opening	3"
Ship. Wt.	37 lbs.

Model	Item#	Each
110V	<b>265-2225</b>	<b>\$460.00</b>
220V	<b>265-2227</b>	<b>540.00</b>



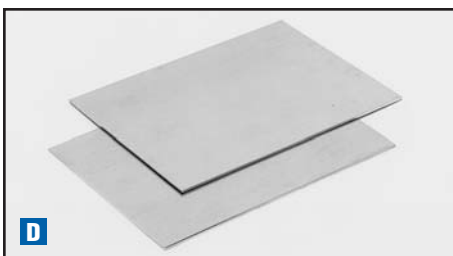
**C**

**C Polder Timer/Thermocouple – For investing and vulcanizing**

This handy countdown timer also measures temperature with a plug-in thermocouple on a 48" long wire and independent alarms that can be used separately or together. Perfect for monitoring vulcanizer temperature, timing molds, investing and plating baths.

Shows countdown in hours, minutes and seconds. Reverts to last setting when shut off—great for investing multiple flasks. Displays set temperature, alarm sounds when reached, and actual temperature. Temperature range: 32-392°F (0-200°C).

Description	Item#	Each
Polder Timer/Thermometer	<b>265-1915</b>	<b>\$27.00</b>



**D**

**D Vulcanizer Mold Plates**

Thin aluminum plates for covering aluminum mold frames and rubber when vulcanizing. Keeps platens clean and prevents rubber from sticking to the platens.

Size	Item#	Set of 2
3 <sup>7</sup> / <sub>8</sub> " x 5 <sup>3</sup> / <sub>8</sub> "	<b>260-1850</b>	<b>\$4.50</b>
5" x 7 <sup>1</sup> / <sub>8</sub> "	<b>260-1900</b>	<b>9.45</b>

**A Dual-Control Deluxe Vulcanizer**

No more over- or under-cooked molds! Two independent thermostats control each platen separately, so you get the exact temperature you need for the top and bottom of your mold. Ideal for the new 0% shrinkage rubbers (such as Castaldo No-Shrink Pink, p. 124) that demand precise temperature control.

Heavy-duty cast-iron and aluminum construction with 1" diameter pressure screw and heavy guide posts to ensure uniform pressure on mold and perfect alignment of stainless steel platens. On/off toggle switch with pilot light and 2 separate thermostat pilot lights. Accepts both single and double mold frames. Made in USA.

**Specifications:**

Electrical 110V, 6A, 660W, 50/60Hz  
220V, 3A, 660W, 50/60Hz

Dimensions 15½"W x 9½"D x 20½"H

Platens 8¼" x 6"

Max. Temp. 500°F (260°C)

Max. Opening 4¾"

Ship. Wt. 58 lbs.

Model	Item#	Each
110V	<b>265-1950</b>	<b>\$865.00</b>
220V	<b>265-1955</b>	<b>865.00</b>



A

**B Unipress Vulcanizer****Digital Temperature Regulation for Consistent Molds and Waxes.**

This versatile unit features electronic heating controls and timer for maximum accuracy and proper operation. Heating control has a digital readout accurate to ±1°C. Electronic timer has an automatic shutoff with alarm.

Compressed air opens and closes upper and lower platens, both of which are heated. Uniform pressure and accurate temperature assure minimal shrinkage. Maximum air pressure: 8 bar (115 PSI). Heavy-duty construction with high-tech performance. CE certified. Made in Germany.

**Features:**

- Digital heat control and LED display for accurate temperature maintenance. Heat is evenly distributed over both platens so there are no hot spots.
- Constant pressure (87 PSI, or 6 bar, is recommended) evenly vulcanizes mold with minimal shrinkage. Wax pattern weights and dimensions are consistent from mold to mold. Your product is uniform and your pricing is more accurate.

**Specifications:**

Electrical 220V, 1 Ph, 50/60Hz

Air Requirement 60-115 PSI

Dimensions 12½"L x 13¾"W x 21¼"H  
(320mm x 350mm x 540mm)

Platens 7¾" (200mm) x 6¾" (175mm)

Max. Temp. 500°F (260°C)

Timer Digital timer with alarm automatically shuts off heat at end of cycle. Mold can be removed or allowed to cool under pressure.

Max. Opening 5" (125mm)

Min. Opening 1¾" (45mm)\*

Ship. Wt. 57 lbs.

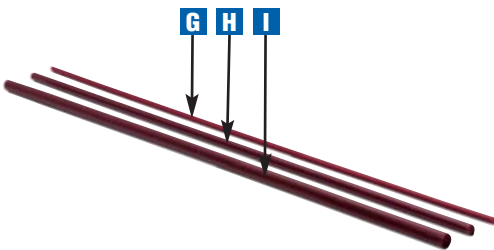
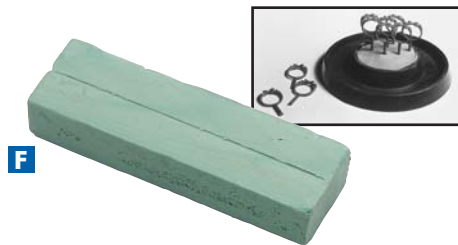
Model	Item#	Each
Unipress Vulcanizer	<b>265-2178</b>	<b>\$3,995.00</b>

\*Use with Mold Frames for Ready Made Molds (see p. 131) for best results.



B





### A - E Sprue Bases

For setting up wax patterns before investing. Made of durable vulcanized rubber. Flexible enough to fit flasks that have been distorted from use. Creates a leakproof seal. In 3 styles for a wide range of sprue shapes.

	Item#	EACH Prices		
		1-2	3-9	10+
<b>A. Button – For flask diameter</b>				
2½"	260-0600	\$2.45	\$2.33	\$2.08
3"	260-0750	2.89	2.75	2.46
3½"	260-0900	3.30	3.14	2.81
4"	260-1050	3.70	3.52	3.15
<b>B. Donut – For flask diameter</b>				
3½"	260-0950	4.30	4.09	3.66
<b>C. Tree*, Round Center – For flask diameter</b>				
2"	260-0560	2.85	2.71	2.42
2½"	260-0700	4.15	3.94	3.53
3"	260-0850	3.15	2.99	2.68
3⅜"	260-1010	5.30	5.04	4.51
3½"	260-1000	5.10	4.85	4.34
4"	260-1150	4.90	4.66	4.17
5"	260-1170	7.05	6.70	5.99
4" (with ½" sprue hole )	260-1190	4.75	4.51	4.04
<b>D. Tree*, Cone Center – For use with VCM and other vacuum casting machines</b>				
4"	260-1155	3.15	2.99	2.68
<b>E. Universal</b>				
2½" or 3½"	260-1175	2.85	2.71	2.42

\*All sprue holes ⅜" diameter except as indicated.

### F Mold Clay

Used for modeling or filling the centers of sprue bases to hold wax patterns. Sold in ½ lb. bars.

Description	Item#	Each
Mold Clay	260-3400	\$2.39

### G - I Sprue Wax – 24" Length

Flexible and long, this sprue wax is custom-formulated to our strictest specifications for proper burnout, melts at 120°F. The injectable feature of our sprue wax is a time-saver. If you often use a complicated tree design, make a mold of it and inject multiples using our sprue wax. Your exact tree system is quickly created every time. Sold in 1 lb. boxes.

B&S Gauge	Approx. Qty. per Box	Item#	Box
G. ¼"	15	261-6260	\$8.35
H. ⅜"	10	261-6265	7.88
I. ½"	8	261-6270	7.09

### J, K Sprue Wax – 6" Length

Available in 2 grades, flexible is the same as our longer sprue wax (above), melts at 120°F. Hard is very rigid and stable, providing extra support for large trees or patterns, melts at 168°F. Both are 6" long, ⅜" diameter. Packaged in 1 lb. boxes.

B&S Gauge	Approx. Qty. per Box	Item#	Box
J. Flexible	45	261-6272	\$11.39
K. Hard	45	261-6273	11.39

### L, M Sprue Wax Wire – 6" Length

These flexible sticks are for spruing and mounting wax patterns. Melts at 155°F.

B&S Gauge	Approx. Qty. per Box	Item#	Box
L. 6	75	261-6256	\$20.21
M. 8	135	261-6258	20.21

### N Hexagonal Sprue Wax – 6" Length

Six-sided hexagon shape makes for easier spruing and permits more patterns to be sprued than conventional round sprue wax. This is a firm sprue wax with a melting temperature of 154°F. Each stick measures ⅜" dia. x 6"L. Packaged in 1 lb.

B&S Gauge	Approx. Qty. per Box	Item#	Box
⅜"	45	261-5890	\$12.95



## A, B Perforated Flasks

Heavy-duty stainless steel for vacuum chamber casting, available with or without flange.

### A. Flasks with Flange

Dia.* x H	Item#	Each
3 <sup>3</sup> / <sub>8</sub> " x 4"	260-0020	\$39.00
4" x 4"	260-0025	41.00
4" x 5 <sup>3</sup> / <sub>4</sub> "	260-0032	46.00
4" x 8 <sup>1</sup> / <sub>2</sub> "	260-0035	58.00
5" x 7"	260-0037	58.00

### B. Flasks without Flange\*\*

Dia. x H	Item#	Each
4" x 6"	260-0012	\$31.00
5" x 8"	260-0014	53.00
6" x 8"	260-0016	65.00

\*Diameter not including flange.

\*\*For use in Galloni VCM.



## C Tape for Perforated Flasks

Wide tape to be applied around perforated flask while investing. Can be burned out.

Width	Length	Item#	Roll
4"	60 yards	260-0036	\$13.95
6"	60 yards	260-0038	24.95
7"	60 yards	260-0045	25.95
8"	60 yards	260-0039	35.00



## D Rubber Sleeves for Perforated Flasks

Reusable, flexible rubber sleeves for covering perforations when investing.

Dia. x H	Item#	Each
3 <sup>3</sup> / <sub>8</sub> " x 4"	260-0003	\$3.55
4" x 7"	260-0007	5.60
4" x 8 <sup>1</sup> / <sub>2</sub> "	260-0009	6.60
5" x 8"	260-0011	8.10



## E Rubber Flask Extenders

Slide flexible sleeve over standard flasks to prevent overflow while vacuuming investment. For solid-wall flasks. All 2<sup>1</sup>/<sub>2</sub>" long.

Dia.	Item#	Each
2 <sup>1</sup> / <sub>2</sub> "	260-0401	\$4.75
3"	260-0451	5.10
3 <sup>1</sup> / <sub>2</sub> "	260-0501	5.75
4"	260-0551	6.00



## F Casting Flasks

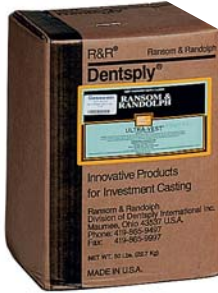
Heavy-duty stainless steel designed to withstand thermal shock of casting, quenching and numerous burnouts.

Dia. x H	Gauge Thickness	Item#	EACH Prices	
			1-2	3+
2" x 2 <sup>1</sup> / <sub>2</sub> "	14	260-0040	\$4.50	\$4.28
2 <sup>1</sup> / <sub>2</sub> " x 2 <sup>1</sup> / <sub>2</sub> "	12	260-0050	5.25	4.99
2 <sup>1</sup> / <sub>2</sub> " x 3"	12	260-0055	6.10	5.80
2 <sup>1</sup> / <sub>2</sub> " x 4"	12	260-0060	7.55	7.17
3" x 3"	12	260-0150	7.35	6.98
3" x 4"	12	260-0170	8.50	8.08
1 <sup>1</sup> / <sub>2</sub> " x 3"	12	260-0200	9.25	8.79
3 <sup>1</sup> / <sub>2</sub> " x 4"	12	260-0210	10.75	10.21
3 <sup>1</sup> / <sub>2</sub> " x 5"	12	260-0250	11.90	11.31
4" x 4"	12	260-0310	11.25	10.69
4" x 5"	12	260-0320	13.50	12.83
4" x 6"	12	260-0350	15.35	14.58





**A**



**B**



**C**



**D**



**E**



**F**

**A R&R® Platinum Investment**

High-strength, high-temperature investment for casting platinum and stainless steel. Two-part investment includes 100 lbs. of powder and a 900ml bottle of binder concentrate.

Description	Size	FOB Shipping Point	Item#	Each
Platinum Investment with Binder	100 lb. drum	Ohio	<b>260-4030</b>	<b>\$232.55</b>

**B R&R® Ultra-Vest MAXX – For RP models**

Formulated to provide thermal stability under severe casting conditions. Can handle the higher temperatures required for casting palladium white gold and rapid prototype materials such as SLS and SLA. Mixes easily with water and sets like standard investments. Eliminates orange peel and reduces porosity, providing superior surface finishes and excellent castings. Handles sustained, increased pressure better than other investments, providing rapid prototype shops with quality castings. Provides the appropriate thermal expansion characteristics for successful casting of metal mold injected plastic patterns. Also works very well for yellow gold casting. Contains no phosphates.

Description	Size	FOB Shipping Point	Item#	Each
Ultra-Vest MAXX	50 lb. carton	Ohio	<b>260-4043</b>	<b>\$61.89</b>

**C R&R® Ultra-Vest® Investment**

An excellent investment for gold, silver and other alloys cast at 2,200°F and below. R&R Ultra-Vest is widely used by jewelry casters since it provides consistent quality from batch to batch.

Description	Size	FOB Shipping Point	Item#	Each
Ultra-Vest Investment	50 lb. carton	Connecticut	<b>260-4012</b>	<b>\$55.90</b>
		California	<b>260-4017</b>	<b>59.45</b>
	100 lb. drum	Connecticut	<b>260-4010</b>	<b>82.65</b>
		California	<b>260-4005</b>	<b>86.50</b>
		Ohio (factory)*	<b>260-4000</b>	<b>79.50</b>

\*Minimum order: 5 drums.

**D R&R® AstroVest**

For casting platinum, stainless steel and other alloys cast above 2,200°F. Mixes with water only, requires no acid.

Description	Size	FOB Shipping Point	Item#	DRUM Prices	
				1-17	18+
R&R AstroVest	100 lb. drum	Connecticut	<b>260-4095</b>	<b>\$130.65</b>	<b>\$117.59</b>
		California	<b>260-4096</b>	<b>130.88</b>	<b>117.59</b>

**E R&R® Advantage™**

Developed for the price-conscious caster, R&R Advantage maintains the quality and consistency you've come to expect from R&R. Use for castings that don't require the exceptionally smooth surface finish of Ultra-Vest. R&R Advantage can be used to cast gold, silver and other metals that melt at temperatures less than 2,200°F.

Description	Size	FOB Shipping Point	Item#	Each
R&R Advantage	50 lb. carton	Connecticut	<b>260-3951</b>	<b>\$47.25</b>
		Ohio	<b>260-3952</b>	<b>45.20</b>
	100 lb. drum	Connecticut	<b>260-4020</b>	<b>77.85</b>
		Ohio*	<b>260-4022</b>	<b>66.10</b>

\*Minimum order: 18 drums.

**F R&R® Solitaire Investment – For stone-in-place casting**

Gypsum-based investment specially formulated to protect stones during burnout and casting. Allows flasks to be burned out at higher temperatures and minimizes the chances of cracked or cloudy stones. Deionized water is recommended for consistency. Solitaire leaves a smooth surface finish.

Description	Size	FOB Shipping Point	Item#	Each
R&R Solitaire Investment	50 lb. carton	Connecticut	<b>260-3953</b>	<b>\$61.40</b>
		Ohio	<b>260-3954</b>	<b>58.80</b>
	100 lb. drum	Connecticut	<b>260-4023</b>	<b>91.30</b>
		Ohio	<b>260-4024</b>	<b>87.15</b>

**A Kerr® KerrCast 2000 Investment**

Similar to Kerr's premium investment, Satin Cast 20, in mixing, burnout and ease of break out, KerrCast 2000 was formulated to address the requirements of price-sensitive and specialty casters. KerrCast 2000 uses the popular standard jeweler's grade of cristobolite instead of the premium grade used in Satin Cast. Surface finish is not as fine as that achieved with Satin Cast 20. For gold or silver casting.

Description	Size	FOB Shipping Point	Item#	Each
KerrCast Investment	100 lb. drum	Michigan*	260-4052	\$56.80

\*Minimum order: 36 drums.



A

**B Kerr® Opticast – The Ultimate Platinum Casting Investment**

Specifically developed for casting platinum. Kerr Opticast leaves a satin-smooth surface finish on platinum castings without fins, nodules or cracking. Reduces polishing costs. Two-part investment includes powder and binder concentrate. Can also be used to cast stainless steel, nickel or cobalt-based super alloys and any metal with casting temperatures greater than 2,000°F (1,093°C).

Description	Size	FOB Shipping Point	Item#	Each
Opticast	77 lb. drum	Connecticut	260-4067	\$146.75



B

**C Kerr® Supervest #20**

Stronger at high temperatures, it sustains thermal shocks. Primarily used by school ring manufacturers; also good for small sculpting. For metals that melt under 2,000°F.

Description	Size	FOB Shipping Point	Item#	Each
Supervest #20	100 lb. drum	Connecticut	260-4980	\$82.75
		Michigan (factory)*	260-4975	79.00

\*Minimum order: 10 drums.



C

**D Kerr® Satin Cast 20®**

Recognized throughout the world as a superior investment capable of meeting demands for high quality. Produces excellent satin-smooth casting surfaces for gold, silver, brass, bronze and other metals that melt under 2,000°F (1,093°C).

Description	Size	FOB Shipping Point	Item#	Each
Satin Cast 20	4.4 lb. canister	Connecticut	260-4064	\$14.99
D.	4.4 lb. canisters, pkg. of 6		260-4063	83.50
			260-4966	32.00
			260-4060	79.99
	100 lb. drum		260-4070	72.59

100 lb. drums also available FOB Rapid City, SD.

\*Minimum order: 10 drums.



D

**E SUPRA® Platinum Investment**

SUPRA Platinum Investment is the choice of professional platinum casters. Our 2-part investment is specially formulated to withstand the high temperatures of platinum casting. SUPRA Platinum Investment provides ultra-smooth castings—that saves you time and money on finishing. Each box of SUPRA Platinum Investment contains a 55 lb. bag of investment powder, a 1-liter bottle of acid-based binder and complete instructions.

Description	Item#	BOX Prices	
		1-4	5+
SUPRA Platinum Investment	260-5001	\$255.00	\$229.50



E

**F Platinum Investment**

Gesswein's own 2-part investment for casting platinum, palladium and other metals with a high melting point (over 3,200°F). This traditional formulation has a special liquid binder to give the investment the additional strength to withstand these higher temperatures. Superior strength for smooth castings. Each box of Platinum Investment contains a 50 lb. bag of investment and a 16 oz. bottle of binder.

Description	Item#	Each
Platinum Investment with Binder	260-3900	\$58.00
Replacement Binder, 16 oz.	260-3905	25.00



F





### A Ti-Research Invest C/P Fast-Setting Investment

Phosphate-bonded investment powder for casting both precious and nonprecious metals, including platinum, gold, silver and stainless steel. Features ultra-fine grain for accurate replication of the finest details. Very fast and easy to use with 8-minute work time and 20-minute setting time. Allows investing and casting in the same day. Use with C/P liquid binder. Mixing ratio: 100g powder to 25ml binder. Because it expands as it sets, Invest C/P requires "fleece" flask liner, available in 130' (40m) rolls in two widths: 25mm for Cast/T Small Mold Ring and 55mm for Cast/T Large Mold Ring.

Description	Item#	Each
Invest C/P Investment Powder, 5kg	<b>265-5014</b>	<b>\$57.40</b>
Invest C/P Investment Powder, 20kg	<b>265-5015</b>	<b>205.00</b>
C/P Liquid Binder, 1,000ml	<b>265-5016</b>	<b>14.75</b>
C/P Liquid Binder, 5,000ml	<b>265-5017</b>	<b>75.40</b>
Fleece Flask Liner, 25mmW roll (130' long)	<b>265-5051</b>	<b>37.00</b>
Fleece Flask Liner, 55mmW roll (130' long)	<b>265-5050</b>	<b>49.00</b>



### B CIW Investment Additive – For Stone-in-Wax Casting

This special mix of boric acid and borax can be added to your regular investment and allows burnout temperature to be increased. You can get a complete burnout without harming stones. Mix 1 lb. of CIW with 100 lbs. of investment powder.

Description	Qty.	Item#	Pkg.
CIW Investment Additive	2 lbs.	<b>260-3870</b>	<b>\$8.95</b>
	10 lbs.	<b>260-3871</b>	<b>32.65</b>
	20 lbs.	<b>260-3872</b>	<b>46.15</b>



### C Ti-Research Mix-It Investment Mixers

For mixing both standard investments and fast-setting investments such as Invest C/P, nothing could be easier, cleaner and more efficient than a Mix-It Investment Mixer. Just pour required amount of water or binder into the acrylic bowl, add the investment, put on the lid, turn the handle, and the mixing blade smoothly and thoroughly mixes the contents. Attach a vacuum pump to the fitting on the lid to remove bubbles while you mix. Mix-It Mixers work with any standard vacuum pump or the Waterjet Vacuum Pump, simply connect to a faucet for Venturi effect: water running through the constricted tube produces a vacuum in the Mix-It bowl and pulls air bubbles out of your investment. Feature thick-wall construction and solid stainless steel handle and mixing blade. Made in Germany.

Description	Item#	Each
250ml (fills a 3" x 3" flask)	<b>265-5030</b>	<b>\$217.00</b>
500ml (fills a 4" x 4" flask)	<b>265-5031</b>	<b>222.00</b>
1,000ml (fills a 5" x 6" flask)	<b>265-5032</b>	<b>238.00</b>
Waterjet Vacuum Pump	<b>265-5033</b>	<b>91.00</b>



### D Gralab® Timer – Ideal for investing and vulcanizing.

Works with your vulcanizer to put an end to mold burning. Automatically shuts off at the time set. Features easy-to-read 1/2" high numerals, sweep minute and second hands and adjustable 0-80 dB alarm. Can be bench- or wall-mounted. Measures 7 3/4"W x 2 1/2"D x 7 3/4"H. Electrical: 120V, 60Hz (220V, 50Hz available by special order). UL listed. Made in USA.

Description	Item#	Each
Gralab Timer	<b>265-1911</b>	<b>\$165.00</b>



### E Timer – Ideal for investing and vulcanizing.

A simple 60-minute windup with long ring.

Description	Item#	Each
Timer	<b>265-1910</b>	<b>\$13.35</b>



### F 10-Hour Timer

For timing investment and vulcanization cycles. Just key in hours and minutes, then hit start. Loud beeping alarm sounds after time expires. Features repeat timing: within two minutes after alarm, press start to repeat the previous countdown. You may safely clean the timer under a faucet without causing any damage. Built-in magnet allows easy mounting on metal surfaces. Requires one AAA alkaline battery.

Description	Item#	Each
10-Hour Timer	<b>265-1912</b>	<b>\$12.95</b>



**A Investment Vac Model HD – For Vacuuming Investment**

Designed for vacuuming investment in a production environment. Large capacity unit for investing multiple flasks. Reliable, heavy-duty vacuum pump with in-line filter traps to prevent moisture from contaminating vacuum oil. Easy-to-read vacuum gauges. Incorporates a 150 liters/minute, single-stage pump (1/2 HP). Complete with a 12" dia. x 12"H bell jar, 14½" x 14½" rubber investing pad, 1 quart vacuum pump oil and instructions. Bell Jar (#260-4155) is included.

**Specifications:**

Electrical	120V, 5A, 60Hz
Dimensions	23"W x 14"D x 35"H
Ship. Wt.	261 lbs.

Description	Item#	Each	
A. Investment Vac Model HD	<b>265-1550</b>	<b>\$1,995.00</b>	
Replacements	Size	Item#	Each
Bell Jar	12" dia. x 12"H	260-4155	\$85.00
Rubber Pad	14½" dia. x 14½"H	265-1551	35.00
Vacuum Pump Oil	1 qt.	265-1700	8.79

**A****B Investment Mixer K45**

The elliptical mixing motion of the beater blades thoroughly mixes investment. Powerful enough to handle both standard and platinum investment. The head of this heavy-duty unit tilts up for easy removal of the 4½-quart stainless steel bowl. Comes complete with 2 mixing blades. Has 10 speeds, 8 lb. capacity.

**Specifications:**

Electrical	115V, 2.3A, 50/60Hz or 230V, 1.2A, 50/60Hz
Dimensions	9"W x 14¼"D x 14"H
Ship. Wt.	26 lbs.

Description	Item#	Each
B. Investment Mixer K45, 115V	<b>265-1800</b>	<b>\$269.00</b>
Investment Mixer K45, 230V	<b>265-1805</b>	<b>539.00</b>

**B****C Rubber Mixing Bowls**

Made of flexible rubber heavy enough to hold mixtures yet flexible enough for easy pouring.

Description	Dia. x H	Capacity	Item#	Each
Small Bowl	4" x 3"	¾ pt.	<b>260-3250</b>	<b>\$3.40</b>
Medium Bowl	6" x 6"	1½ qts.	<b>260-3300</b>	<b>7.70</b>
Large Bowl	9" x 7"	1 gal.	<b>260-3350</b>	<b>15.15</b>

**C****D Mixing Spatula**

Made of thick, flexible stainless steel with hardwood walnut handle. Blade measures 6" long.

Description	Item#	Each
Mixing Spatula	<b>260-1710</b>	<b>\$10.95</b>

**D****E Investment Vibrator**

This well-built vibrator eliminates air bubbles and voids around wax models. Also adds density to the investment. Has three-speed control and on/off switch and 4" diameter table. Electrical: 110V, 3A, 40W, 60Hz. Measures 4"L x 4"W x 3¾"H.

Description	Item#	Each
Investment Vibrator	<b>265-1245</b>	<b>\$93.85</b>

**E**



**A**

**A Auto-Vac Investing Machine**

Take the worry out of investing with Auto-Vac. This timesaving machine mixes investment and fills flasks under full vacuum, eliminating the air bubbles that hurt casting quality and kill productivity down the line. Produces smooth, crisply detailed molds, which result in better castings. Also helps keep dust out of the air for a healthier workspace. Easy to use and clean: place flasks in vacuum chamber, swivel mixing unit over it, pour water and investment into mixing unit, seal lid and run machine; when done, swivel mixing unit over wash basin and clean out with water gun. Includes two all-metal stands for flexibility. Requires vacuum pump (see below).

**Features:**

- Mixes and fills in a controlled environment to help reduce casting defects.
- Reduces exposure to harmful investment dust.
- Easy to use and clean.

**Specifications:**

Investment Capacity	40 lbs.
Flask Capacity	6
Max. Flask Size	4" dia. x 11"H
Vacuum Requirement	10 CFM, 29½" Hg
Electrical	220V, 1 Ph, 50/60Hz
Dimensions	27"W x 26"D x 47¼"H or 55"H (height depends on stand used)
Net/Ship. Wt.	269/364 lbs.

Description	Item#	Each
Auto-Vac Investing Machine	<b>265-2181</b>	<b>\$6,325.00</b>



**B**

**B Rotary Vane Vacuum Pumps**

Oil-flooded, air-cooled direct-drive vacuum pumps designed for reliability and longevity. Feature durable composite vanes, oil level sight glass, wire mesh inlet filter, exhaust filters and vibration isolators for quiet operation. Choose from 15 CFM and 31 CFM models.

**Specifications:**

	<b>15 CFM</b>	<b>31 CFM</b>
Motor	1 HP	2 HP
Noise Level	62 dBA	67 dBA
Electrical	115/230V, 1 Ph, 60Hz	208-230/460V, 3 Ph, 50/60Hz
Dimensions	16½"L x 10¾"W x 8⅝"H	27"L x 11½"W" x 11"H
Net/Ship. Wt.	42/70	116/140

Description	Item#	Each
15 CFM Vacuum Pump	<b>265-1690</b>	<b>\$2,130.00</b>
31 CFM Vacuum Pump	<b>265-1691</b>	<b>3,225.00</b>



**C**

**C Investment Scale with Pan**

Large, easy-to-read dial indicates pounds of investment and amount of water required for a precise 2:5 ratio. Removable aluminum pan shaped for easy pouring holds up to 20 lbs. investment. Measures 10½"L x 7"W x 16"H. Ship. wt: 7½ lbs.

Description	Item#	Each
Investment Scale with Pan	<b>200-2100</b>	<b>\$76.65</b>



**D**

**D Investment Scale**

This economical yet accurate scale weighs up to 10 lbs. in 2 oz. increments. Features 4" dial with large, easy-to-read numbers that indicate weights and water/investment ratios. Includes scoop.

Description	Item#	Each
Investment Scale	<b>200-2020</b>	<b>\$22.05</b>

**A VacuVest – Investment mixing and pouring all under vacuum!**

Improve the quality of your casting and save time! VacuVest eliminates investing problems and easily increases your productivity. To operate, place flasks in lower chamber. Add pre-measured water and investment into top. Operator controls exact mixing time, then fills each flask—all under full vacuum. Unit is cleaned using built-in automatic water wash and hand water gun. Waste empties into a tub for easy disposal. Backed by a one-year warranty against defects (except pouring taps, which may wear after extended use). Vacuum pump not included. Made in England.

**Features:**

- Improves quality for fewer rejects and speeds up production.
- Reduces airborne investment powder for a healthier environment.
- Controls mixing, vacuum and pouring conditions.
- Rotary table holds up to 16 flasks.

**Specifications:**

	<b>VacuVest #10</b>	<b>VacuVest #20</b>
Investment Capacity	Up to 22 lbs. (10 kg)	Up to 44 lbs. (20 kg)
Max. Flask Height	9" (228mm)	11.8" (300mm)
Flask Capacity	5 (4" dia.)	10 (4" dia.)
Vac. Requirement	10 CFM, 28.5" Hg	28 CFM, 28.5" Hg
Dimensions	24"W x 28"D x 54"H	42"W x 28"D x 62"H
Net/Ship. Wt.	320/465 lbs.	500/1,060 lbs.

Description	Electrical	Item#	Each
A. VacuVest #10	220V, 1 Ph, 60Hz	<b>265-2385</b>	<b>\$14,500.00</b>
	220V, 1 Ph, 50Hz*	<b>265-2384</b>	<b>14,500.00</b>
VacuVest #20	220V, 1 Ph, 60Hz	<b>265-2390</b>	<b>29,750.00</b>
	220V, 3 Ph, 60Hz	<b>265-2409</b>	<b>29,750.00</b>
	220V, 1 Ph, 50Hz*	<b>265-2389</b>	<b>29,750.00</b>

\*For export only.

**A****B Busch™ Rotary Vane Vacuum Pumps**

Oil-sealed, air-cooled direct-drive pumps excellent for applications in which the vacuum source must be reliable and unobtrusive. Operate quietly with low vibration. Each includes inlet filter assembly. Vacuum Pump #15 provides 15 CFM free air displacement. Ideal for use with VacuVest #10. Vacuum Pump #28 provides 28 CFM free air displacement. Ideal for use with VacuVest #20.

**Specifications:**

	<b>#15</b>	<b>#28</b>
Motor	1¼ HP	2 HP
Dimensions	17"L x 10½"W x 9"H	28"L x 15"W x 10½"H
Net/Ship. Wt.	42/60 lbs.	129/165 lbs.

Description	Electrical	Item#	Each
B. Vacuum Pump #15	220V, 1 Ph, 60Hz	<b>265-2386</b>	<b>\$2,200.00</b>
Vacuum Pump #15	220V, 1 Ph, 50Hz*	<b>265-2388</b>	<b>2,790.00</b>
Vacuum Pump #28	115/230V, 1 Ph, 60Hz	<b>265-2381</b>	<b>3,550.00</b>
Vacuum Pump #28	230V, 3 Ph, 50/60Hz	<b>265-2387</b>	<b>3,170.00</b>
Oil for #15, 1 qt.	–	265-1708	32.00
Oil for #28, 1 qt.	–	265-1707	8.65

\*For export only.

**B****C - F Measuring Beakers, Investment Scoop and Graduated Cylinder**

Graduated cylinder is used to calculate the amount of metal needed for casting by water displacement method. Made of polypropylene. Capacity: 250ml with 2ml graduations and 500ml with 5ml graduations. Investment scoop has high sides to prevent spilling and waste. Made of plastic. Holds about 3 lbs. standard investment. Measures 8½"L x 4¾"W x 3"H. Measuring beakers have handles for easy pouring. Made of polypropylene. Available in two sizes: 1,000ml with 1ml graduations and 5,000ml with 100ml graduations.

Description	Capacity	Item#	Each
C. Small Measuring Beaker	1,000ml (1,000cc)	<b>210-2425</b>	<b>\$16.95</b>
D. Large Measuring Beaker	5,000ml (5,000cc)	<b>210-2426</b>	<b>45.90</b>
E. Investment Scoop	Roughly 3 lbs.	<b>260-1750</b>	<b>7.05</b>
F. Graduated Cylinder	250ml (250cc)	<b>265-1905</b>	<b>16.60</b>
Graduated Cylinder	500ml (500cc)	<b>265-1906</b>	<b>14.30</b>

**C****D****E****F**



**A**



**B**



**C**



Rear view of exhaust/blower system

**A, B Steam Wax Removers – Reduce smoke and odors from burnout!**

Remove wax from invested flasks before burnout without harming the investment. Up to 95% of the wax is eliminated within an hour. Special ventilation not necessary. Reduces penetration of carbon into investment mold walls during burnout. Immediately after steam wax removal, flasks can be loaded directly into your preheated 300°F furnace for standard burnout cycle. Furnace life is increased because heating element is not exposed to corrosive wax fumes. Ideal for locations such as malls or other public buildings since fumes and smoke from burnout are virtually eliminated. All units feature stainless steel, double-wall construction with easy-access front drain, one-hour timer with auto-off and power light. Will eliminate waxes with melting points up to 190°F.

Specifications:	Compact Model	Medium-Duty Model	Industrial Model
Flask Capacity	Up to 6 (3½" x 5")	Up to 11 (4" x 8") or 17 (4" x 7") double-stacked	Up to 17 (4" x 8") or 28 (4" x 8") double-stacked
Max. Flask Height	6"	16"	16"
Electrical	120V, 9A 1080W, 50/60Hz	120V, 12.5A 1500W, 50/60Hz or 240V, 6A, 1200W, 1 Ph, 50/60Hz	240V, 15A, 3600W, 1 Ph, 50/60Hz
Dimensions (W x D x H)			
Outside	14" x 11½" x 13½"	14½" x 24½" x 22½"	26¾" x 24½" x 22¼"
Chamber	13¾"W x 8" x 7¾"	14¼" x 19" x 16¾"	26½" x 19" x 16¾"
Water Capacity	1.5 gallon	2 gallons	6 gallons
Ship. Wt.	18 lbs.	40 lbs.	85 lbs.

Description	Item#	Each
<b>A. Compact, 120V</b>	<b>261-9030</b>	<b>\$395.00</b>
<b>B. Medium-Duty, 120V</b>	<b>261-9035</b>	<b>595.00</b>
Medium-Duty, 240V*	<b>261-9036</b>	<b>595.00</b>
Industrial, 240V*	<b>261-9045</b>	<b>895.00</b>

\*Supplied without electrical plug.

**C Ney® 3-550A Venturi Air Furnace – Excellent for use with platinum.**

The Ney 3-550A Venturi Air Furnace is engineered for the cleanest burnout possible in an electric oven. Gas porosity, also known as pinhole or micro porosity, can ruin platinum castings or require expensive rework such as laser welding later. The Ney 3-550A Venturi Air Furnace tackles gas porosity at its source.

The self-contained Venturi exhaust/blower system continuously introduces fresh air for more complete combustion of your waxes. It substantially reduces carbon residue and other by-products of incomplete combustion, virtually eliminating gas porosity in castings. Great for gold and silver too.

**Features:**

- Air intensity is user-controlled—increase airflow when you need to hold more flasks.
- Air is preheated before entering furnace to keep temperature constant.
- Flasks are uniformly heated—no hot or cold spots.
- Fully programmable digital temperature controller with LCD readout of temperature and countdown time, delay start and membrane keypad.
- Durable hybrid muffle material for more efficient heating.
- Slide-out heating elements for easy replacement.
- Space-saving vertical rise door with smooth roll-back action for maximum access.

**Specifications:**

Max. Flask Size	4" x 6" (holds four solid or two perforated)
Electrical	220–240V, 1 Ph, 2800W, 50/60Hz
Dimensions	
Outside	15.8"W x 17.0"D x 16.0"H (25.0"H with door open)
Chamber	9.0"W x 9.0"D x 7.0"H
Max. Temp.	2,012°F (1,100°C)
Net/Ship. Wt.	45/60 lbs.

Description	Item#	Each
Ney 3-550A Venturi Air Furnace	<b>265-1361</b>	<b>\$2,460.00</b>



**A, B Ney® Vulcan Furnaces**

Burnout furnaces designed by Ney to make your burnout more precise and your casting process more convenient. Vulcan's high-performance, hybrid muffle is more durable than fiber and allows faster heating and cooling than firebrick. Two slide-out side element plates make element replacement easy. Vulcan's door opens vertically with a smooth roll-back action to give maximum access to the chamber while using minimum vertical space. Available with your choice of manual or programmable temperature controls.

**Manual Temperature Control:**

Temperature is selected using a front panel control knob. Degrees are marked so you can dial the exact temperature you want, up to 2,012°F.

**Programmable Temperature Control:**

Features 9 three-stage programs and 1 single-temperature hold program. You can link programs together for a maximum burnout of 6 temperatures, 6 hold times and 6 rate settings. Temperature, countdown time and program number are digitally displayed at all times. Also features delay start. Membrane keypad and LED indicators make this controller easy to program and operate.

Specifications:	A-550	3-550
Temp. Control	Manual	Programmable
Electrical	100-125V, 50/60Hz or 200-250V, 50/60Hz	100-125V, 50/60Hz or 200-250V, 50/60Hz
Dimensions		
Outside	16"W x 17"D x 16"H (25"H with door open)	16"W x 17"D x 16"H (25"H with door open)
Chamber	9"W x 9"D x 7"H	9"W x 9"D x 7"H
Max. Temp.	2,012°F	2,012°F
Firing Time	15 min. to 1000°F	15 min. to 1000°F
Net/Ship. Wt.	45/50 lbs.	45/50 lbs.



Description	Item#	Each
A. A-550 Furnace, 100-125V	<b>265-1350</b>	<b>\$1,230.00</b>
A-550 Furnace, 200-250V	<b>265-1355</b>	<b>1,260.00</b>
B. 3-550 Furnace, 100-125V	<b>265-1362</b>	<b>1,995.00</b>
3-550 Furnace, 200-250V	<b>265-1364</b>	<b>2,100.00</b>
Replacement Heating Element	265-1351	175.00

**C Ney® Fiber Furnace**

A compact, electric burnout furnace which uses 25% less energy than a standard firebrick design. The secret is a lightweight ceramic insulating fiber muffle throughout the furnace chamber. Heating elements are embedded into fiber muffle for quick heating and even heat distribution throughout chamber. One-piece-construction chamber is replaceable, lightweight, heats faster and uses less energy. Efficient design achieves 4-wall heating for even temperature distribution. Sturdy 20-gauge metal cabinet is coated inside and out with temperature-resistant enamel. Heat is kept inside the furnace where it belongs, leaving the outside cool. Pilot light and temperature control knob included. Tapered chamber fits flasks up to 6"H in the front and 5"H in the back. Includes 8" x 8" ceramic burnout tray.

**Specifications:**

Electrical	115V, 12A, 1320W, 50/60Hz or 230V, 6A, 1320W, 50/60Hz
Dimensions	
Outside	15"W x 14½"D x 16½"H
Chamber	9"W x 9"D x 6½"H
Max. Temp.	2,000°F
Firing Time	15 minutes to 1,000°F
Ship. Wt.	36 lbs.

Description	Item#	Each
C. Ney Fiber Furnace, 115V	<b>265-1525</b>	<b>\$675.00</b>
Ney Fiber Furnace, 230V	<b>265-1526</b>	<b>739.00</b>
Optional 4" x 4" x ¾" Ceramic Burnout Tray*	<b>265-1527</b>	<b>23.50</b>
Replacement 8" x 8" x ¾" Ceramic Burnout Tray	265-1528	58.65
Replacement Heating Element, 115V	265-1530	395.00
Replacement Heating Element, 230V	265-1531	379.00

\*Four required.





**A**

**A Programmable Burnout Furnaces, Models 914 and 918**

These furnaces feature a programmable controller with three built-in, easy-to-use programs plus the ability to be custom-programmed for your own burnout schedule up to 99 hours, with delay start capability. Controller allows you to preset up to six segments or “ramps.” Each ramp consists of (1) rate of heating/cooling, (2) temperature setting in °F or °C, and (3) hold time for each temperature. The program you set stays in permanent memory until you reset it. Furnaces are enclosed in tough stainless steel cabinets with firebrick chambers. Easily replaceable heating elements are secured in grooves inside the chambers.

Specifications:	Model #914	Model #918
Electrical	220V, 17A, 50/60Hz	220V, 25A, 50/60Hz
Dimensions		
Outside	19"W x 22"D x 26½"H	24"W x 27"D x 31"H
Chamber	14" x 14" x 14"	18" x 18" x 18"
Ship. Wt.	209 lbs.	295 lbs.

Description	Item#	Each
#914 Programmable Burnout Furnace	<b>265-1431</b>	<b>\$2,200.00</b>
<b>A.</b> #918 Programmable Burnout Furnace	<b>265-1436</b>	<b>2,640.00</b>
#914 Heating Elements, set of 3	265-1428	269.00
#918 Heating Elements, set of 4	265-1429	305.00



**B**

**B Heavy-Duty Electric Burnout Furnace**

A compact electric burnout furnace built for heavy-duty use. Features inner chamber lined with 2½" thick firebrick, swing-down door that can be used as a platform for loading and unloading flasks, counterweight for easy opening and closing and dial control with six temperature settings up to 2,000°F. Sold alone or with pyrometer and Type K thermocouple. Electrical: 240V, 13A, 1 Ph, 3.1kW, 50/60Hz. Measures 17½"W x 17½"D x 17½"H with 12"W x 12"D x 8"H chamber. Ship. wt: 136 lbs.

Description	Item#	Each
<b>B.</b> Heavy-Duty Burnout Furnace	<b>265-1450</b>	<b>\$799.00</b>
Heavy-Duty Burnout Furnace with Pyrometer and Type K Thermocouple	<b>265-1449</b>	<b>899.00</b>
Replacement Heating Element	265-1448	39.00
Replacement Thermocouple	265-1921	58.00



**C**



**D**

**C, D Burnout Oven Wax Trays**

Two-part steel trays with upper grid for holding flasks during burnout and lower tray for collecting melted wax. After wax has melted out of flasks, remove stainless steel tray to prevent release of wax fumes. Flasks remain undisturbed, heating elements last longer and the furnace floor stays clean.

Description	Fits	Item#	Each
<b>C.</b> 8" sq. Tray	Ney Fiber Furnace, other small models	<b>265-2550</b>	<b>\$37.15</b>
<b>D.</b> 12 <sup>5</sup> / <sub>8</sub> " sq. Tray	#914 Furnace	<b>265-1434</b>	<b>120.00</b>
16 <sup>1</sup> / <sub>2</sub> " sq. Tray	#918 Furnace	<b>265-1438</b>	<b>145.00</b>



**E**

**E Analog Pyrometer**

A high-quality analog pyrometer for exceptional accuracy. Features large needle indicator for easy reading. Measures temperatures from 100°F to 2,400°F. Accurate to within ±2% of total reading. Includes Type K chromel-alumel thermocouple, wall hanging bracket and drilled plug for quick mounting in peephole.

Description	Item#	Each
Analog Pyrometer	<b>265-1920</b>	<b>\$150.00</b>



**F**

**F Handheld Digital Pyrometer**

Enjoy digital accuracy on a modest budget with this reliable handheld unit. Features large LCD for easy reading even in bright light, low battery indicator and on/off switch to save battery life. Measures temperatures up to 1,999°F. Accurate to within ±2% of total reading. Includes easily replaceable Type K thermocouple with 5' wire and wall hanging bracket. Requires 9V battery. Measures 2¾"W x 1"D x 4¼"H. Weighs 5 oz.

Description	Item#	Each
Digital Pyrometer	<b>265-1914</b>	<b>\$78.00</b>

**A Ney® Programmable Controller – For Electric Ovens**

This unit offers standard and ramp-type burnout programs with 6–24 temperature settings, 6–24 time settings (each can run from 0–499 hours) and delay start from 0–99 hours. Features 4-Program memory with the unique ability to link 2, 3 or even all 4 programs. Includes detailed instructions. Made in USA.

**Features:**

- Digital temperature readout in °F or °C
- Elapsed time display
- Electronic feedback to eliminate temperature overshoot
- High-temperature safety shutoff
- Power outage return
- Auxiliary electrical outlet for chart recorder, fan or other device

**A****Specifications:**

Electrical	120V or 240V, 50/60Hz
Dimensions	15"W x 14½"D x 4¼"H
Ship. Wt.	16½ lbs.

Description	Electrical	Item#	Each
Ney Controller	120V, 50/60Hz	<b>265-1480</b>	<b>\$965.00</b>
	240V, 50/60Hz	<b>265-1485</b>	<b>1,187.00</b>

**B Paragon® Programmable Controller – For Electric Ovens**

Offers ramp-type burnout program with 6 temperature settings, 6 time settings (runs from 0–99 hours) and delay start. Includes detailed instructions. Made in USA.

**Features:**

- Digital temperature display in °F or °C
- High-temperature safety shutoff
- Type K thermocouple

**Specifications:**

Electrical	120V or 240V, 50/60Hz
Dimensions	6½"W x 4"D x 15½"H
Ship. Wt.	10 lbs.

Description	Electrical	Item#	Each
Paragon Controller	120V, 50/60Hz	<b>265-1453</b>	<b>\$625.00</b>
	240V, 50/60Hz	<b>265-1454</b>	<b>625.00</b>

**B****C Kilnminder 4.E Programmable Controller – For Electric and Gas Ovens**

Offers standard and ramp-type burnout programs with ramp time and dwell time from 0–42 hours in 10-minute increments and delay start from 0–85 hours in 20-minute increments. Boasts 99-program memory (a program can consist of 1–20 stages, each of which controls kiln temperature, ramp time and dwell time). Includes detailed instructions. Made in USA.

**Features:**

- Digital temperature readout in °F or °C
- Temperature control precision of ±8°F (±5°C)
- Elapsed time display
- Security lock to prevent accidental program changes
- Electronic feedback to eliminate temperature overshoot
- High-temperature safety shutoff
- Power outage return
- Built-in surge protector
- Secondary thermocouple accommodation for backup purposes

**Specifications:**

Electrical	90–250V, 50/60Hz
Dimensions	6⅝"W x 8½"D x 4½"H
Ship. Wt.	6 lbs.

Description	Electrical	Item#	Each
Kilnminder 4.E Controller	90–250V, 50/60Hz	<b>265-1514</b>	<b>\$550.00</b>

**C**





A

Representative items pictured; actual items may vary.

### A Deluxe Vacuum Casting Kit For high-quality production casting.

With the Gesswein Deluxe Casting Kit, you can carve original designs in wax, pack, vulcanize and cut rubber molds, inject the rubber molds to make wax patterns, tree your patterns, mix and vacuum the investment, burn out the flasks and vacuum cast them. This kit offers the flexibility to cast both perforated flasks and standard solid-wall flasks. All you need is a melting torch (see p. 402) or electric melter (see p. 156) to cast from one item to over 50 items per day depending on size. Add extra flasks and cast even more!

#### Features:

#### Deluxe Vacuum Casting Machine, Model T1.5

This bench top unit will vacuum investment on the left side and cast both perforated and solid-wall flasks on the right side. The advantage of using perforated flasks is that air may be evacuated through the walls as well as through the bottom of the flasks, ensuring a complete fill and denser castings—particularly important when casting intricate pieces or large trees.

Includes Vacuum Pump and oil, 9"W x 8½"H Bell Jar, adapter rings and silicone gaskets for various sized perforated flasks up to 5"D x 7"H, adapter for casting solid-wall flasks and more. See facing page for more details.

#### Ney Fiber Furnace

A compact electric furnace with a ceramic insulating fiber muffle throughout the furnace chamber. Chamber size 9"W x 9"D x 6½"H. See p. 147 for more details.

#### ARBE Hand Pump Wax Injector

Features built-in air pump, 30 PSI air pressure gauge and temperature control up to 250°F. Wax capacity of 5½ lbs. (2¾ quart). For more details see p. 126.

#### Junior Vulcanizer

Heavy-duty compact unit that will accept single or double mold frames. Includes temperature gauge and control up to 380°F. See p. 136 for more details.

#### Includes:

- Deluxe Vacuum Casting Machine, Model T1
- Ney Fiber Furnace
- Hand Pump Wax Injector (2¾ qts.)
- Junior Vulcanizer
- Perforated Flask, 3⅜"D x 4⅜"H
- Sprue Base for above
- Perforated Flask Sleeve
- Perforated Flask Tong
- Solid-Wall Flasks (2)
- Sprue Bases for above (2)
- Rubber Flask Sleeves (2)
- Standard Flask Tong
- Mold Release Spray
- Sprue Former and Rod (3)
- Dial Thermometer
- Knife Blades (10)
- Knife Handle
- Injection Wax (5 lbs.)
- Injection Mold Plates
- Investment (15kg)
- Investment Scoop
- Investment Scale
- Spatula

- Rubber Mixing Bowl
- Graduated Cylinder
- Handled Melting Crucible
- Heat-Resistant Gloves
- Carbon Stirring Rod
- Mold Rubber (5 lbs.)
- Mold Frames (2)
- Mold Frame Plates (4)
- Ferris Bubble Guard
- File-A-Wax Set
- Sprue Wax (1 lb.)
- Sticky Wax
- Wax Carving Tools (set of 6)
- Alcohol Lamp
- *Jewelry Casting* book, by Murray Bovin

Electrical: 115V (220V available).

Ship. wt: 280 lbs.

Description	Item#	Each
Deluxe Vacuum Casting Kit	<b>265-1161</b>	<b>\$2,995.00</b>

*Jewelry Casting* book covers the complete casting process from model making to finishing. Great for checking procedures to obtain optimal results.

### Substitutions

We will be happy to consider substitutions, at your request, of the major pieces of equipment in any of our Casting Kits. For example, if you substitute a larger furnace (which will accommodate more flasks) you can cast dozens or even hundreds of items per day using the same casting machine. Please call our Inside Sales Department for price quotations on kits with substitute items.



### A Basic Vacuum Casting Kit

All you need is a melting torch and our Basic Vacuum Casting Kit to cast your own wax patterns one piece at a time or to make small trees to cast several items at once. An excellent casting reference book is included.

#### Features:

#### Vacuum Casting Machine, Model T3

Compact, dual-purpose unit which vacuums investment and vacuum casts. Includes Vacuum Pump, Bell Jar and more. See p. 152 for more details.

#### Includes:

- Vacuum Casting Machine, Model T3
- Ney Fiber Furnace
- Investment (50 lbs.)
- Investment Scale
- Investment Scoop
- Rubber Mixing Bowl, Spatula
- Graduated Cylinder
- Heat-Resistant Gloves
- Solid-Wall Flasks (2)



Representative items pictured; actual items may vary.

- Flask Tongs
- Sprue Bases (2)
- Sticky & Sprue Wax
- Wax Carving Tool
- Wax Wash
- Alcohol Lamp
- Carbon Stirring Rod

- Handled Melting Crucible
- *Jewelry Casting* book, by Murray Bovin Electrical: 115V.

Ship. wt: 155 lbs. Can be shipped UPS.

Description	Item#	Each
Basic Vacuum Casting Kit	265-1167	\$1,595.00

### B T1.5 Deluxe Vacuum Casting/Investing Machine

#### For both standard and perforated flasks.

Our redesigned benchtop caster allows you to invest your flasks under vacuum on the left side of the machine and vacuum cast both perforated and standard flasks on the right side. Turn the control handle to "Investment Table," and the powerful 3 CFM vacuum pump pulls air bubbles from the investment under a 9" dia. x 8½"H bell jar. Turn the handle to "Casting Chamber," and vacuum is redirected to the casting side. Three adapters are included to cast small and large perforated flasks (up to 5" x 7") and standard solid-wall flasks. Use of perforated flasks in the casting chamber allows vacuum to be pulled from both the walls and bottom of the flask, ensuring a complete fill and denser casting.

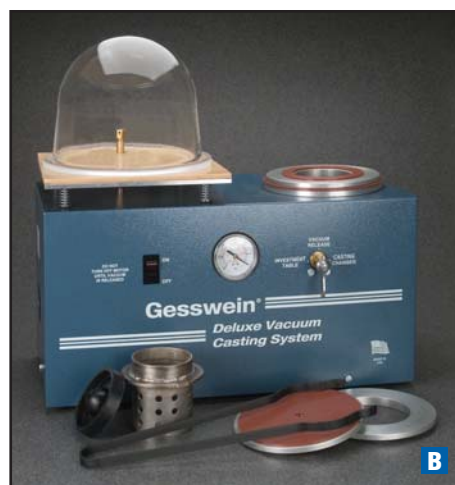
#### Includes:

- Two adapter plates to cast 3½" and 4" dia. flasks (no adapter plate needed for 5" flasks)
- Adapter plate to cast solid-wall flasks
- Bell jar, flask tongs, vacuum pad, 1 pt. vacuum pump oil
- 3½" x 4" perforated flask, 3½" sprue base

#### Specifications:

Electrical	110V, 6A, 60Hz or 220V, 3A, 50Hz
Construction	Steel with powder-coated finish
Motor	1/2 HP
Vacuum Pump	3 CFM
Ship. Wt.	90 lbs.

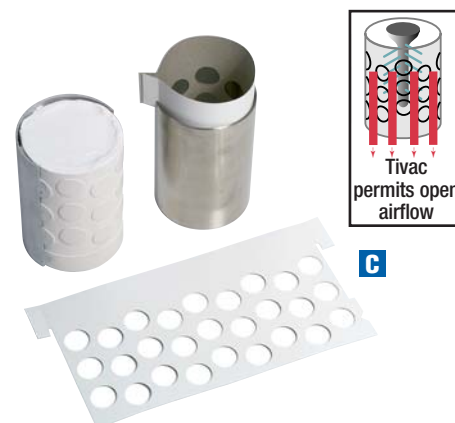
Description	Item#	Each
T1.5 Casting/Investing Machine, 110V	265-1580	\$1,020.00
T1.5 Casting/Investing Machine, 220V	265-1585	1,020.00
Vacuum Pump Oil, 1 quart	265-1700	8.79



### C Tivac Paper Flask Liner – Maximizes the power of any vacuum casting machine.

Substantially increases the power of your vacuum casting machine by increasing the exposed surface area of the investment 2 to 3 times more than perforated flasks. Vacuum channels formed by Tivac Paper Flask Liners are extra-wide, creating an unobstructed air flow unlike the smaller zigzag channels formed by mesh materials. Provides over 40% more vacuum capacity than wax web, plastic web, or vacuum rods. Eliminates need for perforated flasks. Burns out cleanly. Completely nonhazardous. Built-in collar replaces flask sleeves to speed up investing. Tivac #4 fits 4" x 6", 4" x 7" and 4" x 8" solid-wall flasks. Tivac #5 fits 5" x 6", 5" x 7" and 5" x 8" solid-wall flasks.

	10-pc. Sample Pack		50-pc. Pack	
	Item#	Each	Item#	Each
C. Tivac #4 for 4" dia. flasks	260-0047	\$4.55	260-0046	\$20.20
Tivac #5 for 5" dia. flasks	260-0049	7.15	260-0048	32.40





**A**

**A Vacuum Casting/Investing Machine, Model T3  
For Standard Flasks**

An ideal system to use when space is at a minimum! The 1/2 HP, 3 CFM vacuum pump will create a negative pressure equal to 27–29" Hg at sea level to eliminate air bubbles from investment and for vacuum-assist casting. Includes vacuum pump, 6' hose and connections, built-in vacuum gauge, sturdy Plexiglas bell jar (9"D x 8"H inside), rubber investing pad and silicone casting pad. Recommended for flasks up to 4" x 4". Electrical 110V, 6A, 60Hz. Casting unit measures 12½"L x 12½"W.

Description	Ship. Wt. (lbs.)	Item#	Each
A. T3, complete	55.5	<b>265-1755</b>	<b>\$715.00</b>
T3, without vacuum pump	21	<b>265-1756</b>	<b>\$374.75</b>
Vacuum Pump only	34.5	<b>265-1757</b>	<b>\$397.50</b>
Replacement Bell Jar	–	260-4175	65.00



**B**

**B Neycraft Centrifugal Casting Machine**

Features built-in protective safety shield, an easy winding/locking and release mechanism, instant balance with counterbalance weight, universal flask carriage to accommodate flasks up to 4" x 4", and two-way mounting base for quick setup and storage. Complete with 9 troy oz. crucible, flask tongs, 2 flasks (2" x 2" and 4" x 4") and 2 sprue bases. Measures 20" dia. x 12"H.

Description	Item#	Each
B. Neycraft	<b>265-1220</b>	<b>\$680.00</b>
Replacement Main Spring	265-1222	115.00
Replacement Crucible, 9 oz.	260-9020	22.50



**C**

**C Centrifugal Casting Unit #5**

Extra-long arm with heavy-duty spring ensures denser, porosity-free casting. Will accept flasks up to 3½" x 5". Complete with 2 cradles and weights for balance, 3 stainless steel flasks (2½" x 2½", 3" x 3", and 3½" x 5"), universal sprue base, 12½ troy oz. crucible and flask tongs. Caution: mount in Casting Machine Drum #265-1170 or wash-tub to prevent injury from metal spillage. Measures 21¾"L x 10¼"H.

Description	Item#	Each
C. Unit #5	<b>265-1200</b>	<b>\$370.00</b>
Optional #5 Drum	<b>265-1170</b>	<b>88.00</b>
Optional #5 Cover	<b>265-1171</b>	<b>52.20</b>



**D**

**D 15" Flask Tongs**

Specially designed for holding small to large heated flasks. Made of spring-tempered steel. Measure 15" long.

Description	Item#	Each
15" Flask Tongs	<b>195-0200</b>	<b>\$5.70</b>



**E**

**E 20" Flask Tongs**

Unique steel tongs for holding flasks and melting dishes. The good length and light spring action make them convenient for handling flasks up to 3½" diameter. Measure 20" long.

Description	Item#	Each
20" Flask Tongs	<b>195-0210</b>	<b>\$59.85</b>



**F**

**F 30" Adjustable Flask Tongs**

A pleasure to use because they are lightweight yet will hold the heaviest flasks. Center adjustment has three positions for setting jaws to hold flasks up to 5" in diameter. Measure 30" long.

Description	Item#	Each
30" Adjustable Flask Tongs	<b>195-0065</b>	<b>\$74.95</b>

**A, B Ti-Research Cast/T Centrifugal Casting Machine**

Cast/T is an award-winning centrifugal casting device designed to make casting more efficient and versatile. The compact machine is designed for torch melting and can cast silver, gold, platinum and stainless steel. In fact, Cast/T can handle any metal or alloy that can be melted and cast under atmospheric conditions. Cast/T can even produce rings with stones in place. A maximum of 450 grams of gold can be cast in one cycle within its compact frame.

In contrast to conventional centrifugal machines, the flask does not sit at the end of a revolving arm. Instead it rotates in place along its own axis. Patterns are not treed but sprued radially onto a wax disk to effectively fill the mold during casting. Because no tree or center sprue is necessary, Cast/T cuts metal waste by about 50% over traditional casting methods.

Don't let Cast/T's small size fool you; it can handle up to 25 ladies' rings per flask. The unique flask design allows you to use less investment and to fit more flasks in your oven. Three different mold sizes are available to accommodate both large and small jewelry models and a wide variety of casting needs.

Cast/T spins the flask at a fast speed of 1,100rpm to ensure complete fills of even high-temperature metals such as platinum and stainless steel. As a result, Cast/T requires a strong investment. Dental investments can be used, but for consistent, predictable results, we recommend Ti-Research's fast-setting Invest C/P (see p. 142). Both models include small mold ring (flask), large mold ring, 250g crucible, crucible holder, sprue base, five wax sprue disks, pair of tongs and comprehensive instruction manual.

Electrical: 115V, 40W, 60Hz or 230V, 30W, 50Hz. Measures 6.6" dia. x 10"H. Weighs 19 lbs. Meets stringent European safety standards, including CE and TUV. Backed by a two-year manufacturer's warranty (excludes consumables). Made in Germany.

Description	Electrical	Item#	Each
A. Cast/T Tabletop Machine	115V, 60Hz	<b>265-5002</b>	<b>\$3,250.00</b>
	230V, 50Hz	<b>265-5003</b>	<b>3,250.00</b>
B. Cast/T Recessed Machine	115V, 60Hz	<b>265-5000</b>	<b>3,450.00</b>
	230V, 50Hz	<b>265-5001</b>	<b>3,450.00</b>

Description	Size (mm)	Item#	Each
Small Mold Ring	100 dia. x 30H	<b>265-5006</b>	<b>\$69.95</b>
Small Mold Ring Divider*	30H	<b>265-5007</b>	<b>86.50</b>
Large Mold Ring	100 dia. x 60H	<b>265-5008</b>	<b>79.00</b>
Mold Base	100 dia.	<b>265-5009</b>	<b>83.50</b>
Wax Sprue Discs, pkg. of 25	—	<b>265-5010</b>	<b>23.25</b>
150g Crucible	—	<b>265-5011</b>	<b>99.00</b>
250g Crucible	—	<b>265-5012</b>	<b>118.00</b>
450g Crucible	—	<b>265-5013</b>	<b>136.00</b>

\*Partitions small mold ring to save investment when casting just one wax model.

**C Heat-Resistant Gloves with Aluminized Back**

Gloves are manufactured from 22 oz. basket-weave Kevlar fiber blended with Nomex fiber and fiberglass. Aluminized back protects against radiant heat while wool lining protects against contact heat. Specially designed for better cooling, comfort and safety. Gloves have been used in temperatures up to 800°F for brief contact. Wide cuff openings allow gloves to be dropped with the flick of the wrist in case of excess heat buildup. Measure 14" long.

Description	Item#	Each
Heat-Resistant Gloves, pair	<b>816-1020</b>	<b>\$53.95</b>

**D - F Kevlar Heat-Resistant Gloves**

For safe, easy handling of hot objects. Gloves are fully lined with black felt and manufactured from 22 oz. basket-weave Kevlar fiber blended with Nomex fiber and fiberglass. Ideal for use in temperatures up to 1,000°F for brief contact. Extra-wide cuff openings allow gloves to be dropped with a flick of the wrist in case of molten splash or excess heat buildup.

Description	Item#	Each
D. 14" Gloves, pair	<b>816-1015</b>	<b>\$41.95</b>
E. 18" Gloves, pair	<b>816-1017</b>	<b>53.95</b>
F. 23" Gloves, pair	<b>816-1016</b>	<b>76.50</b>







**A - J Crucibles**

Long-lasting, quality crucibles. Clay crucibles can be used up to 2,500°F; Wesgo crucibles used for higher platinum temperatures. Crucibles A-G are designed for use in casting machines.

Description	Capacity	Item#	EACH Prices	
			1-5	6+
A. Wesgo A	3 oz.	260-8700	\$24.95	\$23.70
B. Wesgo D	10 oz.	260-8750	39.75	37.76
C. Ney	9 oz.	260-9020	22.50	—
D. Style 1	7 oz.	260-8900	12.95	12.30
E. Style 2	12½ oz.	260-8950	14.90	14.16
F. Style 3	25 oz.	260-8955	26.80	25.46
G. Kerr	12 oz.	260-9030	28.50	—
H. Wesgo Plat.	8 oz.	260-8800	22.40	21.28
I. Wesgo HB Plat.	10 oz.	260-8810	24.35	23.13
J. Burno	100 dwt.	260-8550	14.80	—
Burno	50 dwt.	260-8600	12.99	—
Burno	25 dwt.	260-8650	11.45	—

**K Crucible with Handle**

This melting dish has a removable heat-resistant wooden handle for ease in melting and pouring of metal. Made of fused silica with clay bond and is suitable for melting precious metals. 6 oz. capacity.

Description	Item#	Each
K. Crucible with Handle	260-8400	\$19.95
Crucible only, 6 oz.	260-8410	14.85
Handle only	260-9050	6.95

**L Stainless Steel Crucible Tongs**

Sturdy stainless steel, with finger grips. Specially formed ends will hold crucibles and small flasks. Measure 18" long.

Description	Item#	Each
Stainless Steel Crucible Tongs	195-0150	\$15.95

**M Bent Crucible Tongs**

For picking up and holding crucibles and other hot objects. Measure 19" long.

Description	Item#	Each
Bent Crucible Tongs	195-0225	\$13.75

**N Burno Tongs**

Shaped to hold all Burno crucibles. Measure 10" long.

Description	Item#	EACH Prices	
		1-2	3+
Burno Tongs	195-0050	\$2.95	\$2.66

**O, P ZO Paint for Crucibles**

Prevents platinum contamination during casting.

ZO Paint is a calcia-stabilized zirconium oxide (ZrO<sub>2</sub>) paint which shields platinum from harmful chemicals leached out of silica or quartz crucibles. Preventing platinum contamination and brittle, porous casting. Best applied in several thin coats with an airbrush (sold separately). Quick to dry. Because it allows you to use the same crucible for more melts without worrying about contamination, you get the most out of each crucible. Use Airbrush Set (includes 9 oz. Propel propellant) to apply in multiple thin layers.

Description	Item#	Each
O. ZO Paint, 1 pint	260-9150	\$53.00
ZO Paint, 1 quart	260-9151	70.00
ZO Paint, gallon	260-9152	235.00
P. Air Brush Set	260-1780	37.95
Replacement Propel can (9 oz.)	260-1781	9.95





**A Salamander Graphite Crucibles**

Top-quality crucibles resistant to high heat and thermal shock. Consist of natural flake graphite and silicon carbide bonded with fire clay. Lined with mullite for long life. Include spouts for easy pouring. Dimensions and capacities may vary slightly from those listed.

Style	Dia. x H	18K Gold Capacity (dwt/grams)	Item#	Each
4/0	2 <sup>3</sup> / <sub>8</sub> " x 3"	600/935	<b>260-8050</b>	<b>\$26.95</b>
1	3 <sup>1</sup> / <sub>8</sub> " x 3 <sup>5</sup> / <sub>8</sub> "	1,500/2,330	<b>260-8100</b>	<b>28.55</b>
2	3 <sup>11</sup> / <sub>16</sub> " x 4 <sup>1</sup> / <sub>2</sub> "	2,400/3,730	<b>260-8150</b>	<b>28.55</b>
3	4 <sup>1</sup> / <sub>8</sub> " x 5 <sup>5</sup> / <sub>8</sub> "	4,320/6,720	<b>260-8200</b>	<b>31.70</b>
4	4 <sup>9</sup> / <sub>16</sub> " x 5 <sup>3</sup> / <sub>4</sub> "	5,120/7,960	<b>260-8250</b>	<b>33.29</b>
6	5 <sup>1</sup> / <sub>4</sub> " x 6 <sup>1</sup> / <sub>2</sub> "	7,830/12,175	<b>260-8300</b>	<b>42.85</b>

**A****B Carbon Stirring Rods**

Used to stir molten metal in crucibles while helping pick up impurities. Measures 12" long.

Description	Diameter	Item#	Each
Carbon Stirring Rods	1/4"	<b>260-3152</b>	<b>\$2.10</b>
Carbon Stirring Rods	1/2"	<b>260-3150</b>	<b>3.05</b>

**B****C Quartz Stirring Rod**

Noncontaminating rod for stirring molten metal. Made of pure fused silica. Stays cool and cleaner and lasts longer than carbon. Electrically nonconductive—perfect for use with induction melters. Measures 12" long.

Description	Diameter	Item#	EACH Prices	
			1-9	10+
Quartz Stirring Rod	3/8"	<b>260-3160</b>	<b>\$7.95</b>	<b>\$7.16</b>

**C****D Ceramic Oval Stirring Rod**

Very long-lasting. Does not contaminate metal while stirring. Electrically nonconductive—excellent for use with induction melting machines. Measures 12" long.

Description	Diameter	Item#	Each
Ceramic Oval Stirring Rod	3/4"	<b>260-3155</b>	<b>\$8.45</b>

**D****E Boron Nitride Crucible Spray Paint**

High-temperature, anti-stick release agent gives added life to your graphite crucibles. Spray several thin coats on the inside and outside of your graphite crucibles to help prevent graphite disintegration. Spraying on paint is easier than glazing with borax. Usable in all atmospheres: up to 1,830°F (1000°C) in air, 2,550°F (1400°C) in vacuum, 3,250°F (1800°C) in reducing or inert atmosphere. Contains no CFCs. (Not for platinum melting or casting.)

Description	Item#	Each
12 oz.	<b>260-9155</b>	<b>\$51.00</b>

**E****F Borax**

Glaze your crucibles with borax to extend crucible life and to protect melting metal from oxidation.

Description	Item#	Each
8 oz. powder	<b>811-0700</b>	<b>\$4.75</b>
5 lbs. powder	<b>811-0701</b>	<b>13.50</b>
50 lbs. powder	<b>811-0702</b>	<b>115.00</b>

**F**

**A**  **Kerr® Standard Electro-Melt**

This self-contained furnace for melting metal is designed to be handheld. Provides the easiest way to vacuum cast—just pick up the Electro-Melt like a coffeepot and pour! This sturdy unit is loaded with features, including a temperature control dial, analog temperature gauge, pyrometer and pilot light. Comes complete with a graphite crucible, 12" carbon stirring rod and safety switch. CE and UL approved.

**Specifications:**

Electrical	120V, 6.2A, 50/60Hz or 230V, 3.1A, 50/60Hz
Capacity	30 troy oz.
Max. Temp.	2,000°F
Firing Time	22 min. to 1,800°F
Dimensions	6"W x 4"D x 11½"H

Description	Electrical	Item#	Each
A. Standard Electro-Melt	120V	<b>265-1281</b>	<b>\$766.70</b>
	230V	<b>265-1282</b>	<b>766.70</b>

Description	Item#	EACH Prices		
		1-2	3-11	12+
Replacement Crucible for Standard Electro-Melt	260-8000	\$17.50	\$15.75	\$14.58



**B**

**B, C**  **Kerr® Automatic Electro-Melt and Maxi-Melt**

These self contained furnaces offer the additional feature of an electronic controller that holds the temperature you set to within ±5°F! Most importantly, their electronics are designed to eliminate temperature overshoot. Each unit features a bright LCD for °F or °C readouts and a safety switch. CE and UL approved.

**Specifications:**

	<b>Auto Electro-Melt</b>	<b>Auto Maxi-Melt</b>
Electrical	120V, 6.2A, 50/60Hz or 230V, 3.1A, 50/60Hz	120V, 11.3A, 50/60Hz or 230V, 5.6A, 50/60Hz
Capacity	30 troy oz.	100 troy oz.
Max. Temp.	2,050°F	2,050°F
Firing Time	21 min. to 1,800°F	31 min. to 1,800°F
Dimensions	8¼"W x 6¼"D x 13½"H	8¼"W x 6¼"D x 15"H

Description	Electrical	Item#	Each
B. Auto Electro-Melt	120V	<b>265-1283</b>	<b>\$1,095.00</b>
	230V	<b>265-1284</b>	<b>1,095.00</b>
	120V	<b>265-1256</b>	<b>1,720.00</b>
C. Auto Maxi-Melt	230V	<b>265-1261</b>	<b>1,720.00</b>

Description	Item#	EACH Prices		
		1-2	3-11	12+
Replacement Crucible for Automatic Electro-Melt	260-8000	\$17.50	\$15.75	\$14.58
Replacement Crucible for Automatic Maxi-Melt	260-8005	30.00	27.00	25.00



**C**



**D**

**D** **Accu-Melt Furnace**

Electric melting furnace for melting gold, silver and other nonferrous alloys for casting, ingot or shot making. Graphite crucible has a capacity of 1kg pure gold. Groove in crucible lip makes it easy to remove crucible from melter with special tongs (included). Dial thermostat and 700W of power provide temperatures up to 2,012°F. Supplied with one crucible. Made in Italy.

**Specifications:**

Electrical	110V, 700W, 60Hz or 220V, 1 Ph, 700W, 60Hz
Capacity	1 kg fine gold (32.15 troy oz.)
Dimensions	9"W x 9"D x 13½"H

Description	Electrical	Item#	Each
D. Accu-Melt	110V	<b>265-2150</b>	<b>\$799.00</b>
	220V	<b>265-2149</b>	<b>680.00</b>
Replacement Crucible	—	265-2152	29.95

**A Gesswein® Alloys**

Add 24K gold to our high-purity alloys to create the karat and color that you desire (18K = 75% fine gold, 25% alloy; 14K = 58.33% fine gold, 41.67% alloy; 10K = 41.67% fine gold, 58.33% alloy). Can also be used to lower karat. Sold in shot form and packaged in preweighed bags. Since the price of alloy will fluctuate with the price of silver, please consider prices below as approximate.



Color	To Make	Alloy Flow Point	10K Flow Point	14K Flow Point	18K Flow Point	Pkg. Wt.	Item#	PKG. Prices	
								1-4	5+
White	10K, 14K	2,100°F	1,855°F	1,735°F	–	10 troy oz.	<b>857-2020</b>	<b>\$15.55</b>	<b>\$12.44</b>
White	18K	2,165°F	–	–	1,670°F	10 troy oz.	<b>857-2030</b>	<b>19.75</b>	<b>15.80</b>
Yellow	10K, 14K	1,715°F	1,555°F	1,545°F	–	5 troy oz.	<b>857-2000</b>	<b>21.44</b>	<b>17.15</b>
Hamilton Yellow	10K, 14K, 18K	1,620°F	1,525°F	1,520°F	1,560°F	5 troy oz.	<b>857-2010</b>	<b>31.65</b>	<b>25.32</b>

**B Re-Cast It**

A remarkable alloy additive that restores the fluidity, color and brightness of old or scrap yellow gold before you cast it. Use to eliminate the porosity associated with casting old gold. Add 5% to your gold, melt and stir. Flow temperature: 1,950°F. One jar casts up to 800 dwt of gold. Ship. wt: 2 oz.

Description	Item#	Each
Re-Cast It	<b>857-3010</b>	<b>\$52.35</b>

**C Manganese Bronze Casting Grain**

This nonprecious alloy resembles 14K gold. It can be oxidized, antiqued or plated. Great for sample lines to avoid theft and use of gold. Casting temp: 1,700-2,100°F. Melting point: 1,620°F. Specific gravity: 8.3.

Description	Item#	LB. Prices	
		1-9	10+
Manganese Bronze Casting Grain	<b>857-2995</b>	<b>\$18.25</b>	<b>\$15.51</b>

**D Combination Sliding Ingot Mold**

High-quality finished steel mold for converting clean scrap metal into convenient and usable shapes. Great versatility—round, half-round, and different size flat shapes can easily be formed. Flat width adjustable up to 2". Simply melt metal, heat ingot and pour. Made in Germany.

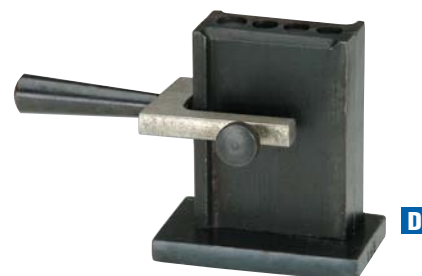
**Ingot Sizes:**

Half-Round: 3, 4, 5 and 6mm

Round: 3, 4, 5 and 6mm

Flat: 80 x 50 x 4mm

Description	Item#	Each
Combination Sliding Ingot Mold	<b>268-1100</b>	<b>\$37.70</b>

**E Sliding Ingot Mold**

Used to convert clean scrap metal into flat stock for rolling. Molten metal is poured into the mold, which can be parted by removing the clamp. Each mold can be made smaller by adjusting the sides in a horizontal direction. Maximum capacity: 115 dwt. Maximum ingot size: 50 x 45 x 3.5mm.

Description	Item#	Each
Sliding Ingot Mold	<b>268-1260</b>	<b>\$32.70</b>

**F Econo Extra-Long Wire Ingot Mold**

One-piece cast-iron mold with handle. Use for making wire ingots. Features three 9¼" long depressions: two are approximately ⅛" wide, and the third is approximately ⅜" wide. Measures 15" long.

Description	Item#	Each
Econo Extra-Long Wire Ingot Mold	<b>268-1201</b>	<b>\$22.10</b>

**G Small Wire Ingot Mold**

Makes strips in three sizes: 19 x 8 x 170mm, 7 x 8 x 170mm and 9 x 9 x 170mm. Measures 11¼" long.

Description	Item#	Each
Small Wire Ingot Mold	<b>268-1250</b>	<b>\$9.90</b>







A



Control Panel



Casting Chamber

### A Galloni Pressovac

State-of-the-art technology yields excellent results with precious and nonprecious alloys, including platinum and titanium alloys. Melts via electronic induction melting, then casts under vacuum with pressure assist to guarantee higher purity and homogeneity. Pulls molten metal by vacuum into thinnest model parts, then solidifies the metal under pressure to yield castings of the best quality.

Pressovac's fully automated electronic control system ensures a successful melting and casting cycle. By means of a push button, the metal is poured into the model under vacuum, then pressurized after completion of the pour. After 60 seconds, pressure is released, the casting chamber is opened again, and the machine is ready to begin a new cycle. Backed by a one-year warranty. CE approved.

#### Specifications:

Electrical	230V, 1 Ph, 50/60Hz
Power	3.5kW
Max. Temperature	3,992°F (2,200°C)
Max. Crucible Capacity	200g plat, 200g 18K gold, 120g silver, 100g palladium, 130g steel
Max. Flask Size	3½" dia. x 3½" high
Air Requirement	85 PSI (sold separately)
Water Requirement	0.5 gal.
Vacuum Requirement	7 CFM (sold separately)
Inert Gas Requirement	Nitrogen, helium or argon
Dimensions	23.6"W x 19.7"D x 18.9"H
Net Wt.	154 lbs.

Description	Item#	Each
Galloni Pressovac	<b>265-0861</b>	<b>Please Call</b>
Vacuum Pump, 7 CFM, 110V	<b>265-2404</b>	<b>\$710.00</b>
Vacuum Pump, 7 CFM, 220V	<b>265-2406</b>	<b>710.00</b>
Plat Crucible 150g	<b>265-0915</b>	<b>93.75</b>
Ceramic Container for Gold	<b>265-0863</b>	<b>33.00</b>
Graphite Liner Gold	<b>265-0862</b>	<b>35.00</b>
Ceramic Crucible for Steel	<b>265-0864</b>	<b>18.00</b>
Flask Insulating Plate	<b>265-0865</b>	<b>27.50</b>

### B Galloni Platinaurum – For casting platinum and gold.

This entry-level medium-frequency induction melting machine is designed primarily for platinum casting but can cast small amounts of gold. Melts metal quickly under an inert atmosphere to protect against oxidation and discoloration. Has optical temperature control with digital display in °F or °C. Gives you reliable, repeatable, high-quality results. Includes ceramic crucible for 350g platinum, graphite crucible for 650g fine gold or 475g 18K gold and flask cradle (please specify flask size). Backed by a one-year warranty. CE approved.

#### Specifications:

Electrical	230V, 17A, 1 Ph, 50/60Hz
Power	4kW
Max. Crucible Capacity	350g plat, 650g fine or 475g 18K gold
Max. Flask Size	4" dia. x 5"H
Dimensions	27½"W x 30½"D x 42½"H
Air Requirement	45 PSI to raise/lower induction coil
Water Requirement	2 liters/minute for cooling
Inert Gas Requirement	Nitrogen or argon
Net/Ship. Wt.	297/370 lbs.

Description	Item#	Each
Platinaurum	<b>265-1240</b>	<b>Please Call</b>
Melting Coil	<b>265-0991</b>	<b>\$432.50</b>
Crucible Plate, 350g Platinum	<b>265-0985</b>	<b>186.75</b>
Crucible 350g Platinum	<b>265-0987</b>	<b>145.00</b>
Crucible 650g Gold, Container & Lid	<b>265-0988</b>	<b>54.85</b>
Lid Cover	<b>265-0990</b>	<b>12.00</b>



B



**A, B Galloni G1 and G3 Casting Machines**

The latest and most advanced heated vacuum “over-pressure” machines available worldwide, featuring low-frequency generators and fully proportional computer-controlled power output.

Unlike other vacuum pressure machines, these contain both crucible and flask in a single chamber. This design ensures gas is applied at full pressure, without constriction. Full vacuum is applied in the chamber while inert gas (argon, nitrogen or helium) is introduced into the crucible. When casting temperature is reached 60 PSI is exerted resulting in castings with a very smooth surface and dense, compact interior. Surface and subsurface porosity are virtually eliminated. Operation is simple: just add metal, place perforated or solid wall flask in position and press one button.

Both units lead the operator step-by-step through the casting sequence. Frequency and power output are automatically and continuously adjusted. Just before preset casting temperature is reached, the computer begins modulating heating current with low-frequency impulses, inductively stirring the melt. When all parameters are achieved and temperature spread is  $\pm 4^{\circ}\text{C}$  from the set point, pouring starts automatically, followed by strong pressurization of the metal with inert gas. Complete cycle takes 3–4 min. Backed by a two-year manufacturer’s warranty. CE approved. Optional grounding unit available.

**Specifications:**

Electrical	<b>Galloni G1 Plus</b> 230V, 1 Ph, 50/60Hz
Power	7kW
Max. Crucible Capacity	2.3kg fine gold, 2.0kg 18K gold, 1.4kg sterling
Max. Flask Size	150mm dia. x 250mmH
Air Requirement	100–120 PSI
Vacuum Requirement	60m <sup>3</sup> /hr. (sold separately)
Water Requirement*	3 liters/min.
Dimensions	24"W x 24"D x 44½"H
Net Wt.	407 lbs.

**Specifications:**

Electrical	<b>Galloni G3</b> 230/380/415V, 3 Ph, 50/60Hz
Power	12kW
Max. Crucible Capacity	3.5kg fine gold, 2.8kg 18K gold, 2.0kg sterling
Max. Flask Size	150mm dia. x 300mmH
Air Requirement	100–120 PSI
Vacuum Requirement	60 or 100m <sup>3</sup> /hr. (sold separately)
Water Requirement*	3 liters/min.
Dimensions	28½"W x 28½"D x 51¼"H
Net Wt.	616 lbs.

Description	Item#	Each
<b>A. G1 Plus</b>	<b>265-0841</b>	<b>Please Call</b>
G1 Plus 60 m <sup>3</sup> /hr. Vacuum Pump	<b>265-0837</b>	<b>Please Call</b>
G1 Plus Graph Crucible 1.8Kg	<b>265-0846</b>	<b>\$152.00</b>
G1 Plus Ceramic Container 1.8Kg	<b>265-0847</b>	<b>139.50</b>
G1 Plus Ceramic Container 2Kg	<b>265-0853</b>	<b>137.00</b>
G1 Plus Graph Crucible 2KG	<b>265-0851</b>	<b>185.00</b>
G1 Plus Type K Thermocouple	<b>265-0977</b>	<b>160.00</b>
G1 Plus Stopper	<b>265-0849</b>	<b>84.25</b>
<b>B. G3</b>	<b>265-0845</b>	<b>Please Call</b>
G3 60 m <sup>3</sup> /hr. Vacuum Pump	<b>265-0837</b>	<b>Please Call</b>
G3 100 m <sup>3</sup> /hr. Vacuum Pump	<b>265-0836</b>	<b>Please Call</b>
G3 Graph Crucible 3.5Kg	<b>265-0857</b>	<b>\$235.00</b>
G3 Ceramic Container 3.5Kg	<b>265-0858</b>	<b>150.00</b>
G3 Type K thermocouple	<b>265-0976</b>	<b>137.00</b>
G3 Stopper	<b>265-0859</b>	<b>102.70</b>

\*Pipe directly to cold water line, or use a recirculating pump with tank or a chiller.



A



B



**A**

**A Galloni Heavy-Duty Fusus New**

**High-production centrifugal casting machine with vacuum assist.**

Incorporates state-of-the-art features for high-production casting of both platinum and gold with extremely fast cycle times (3 minutes for gold and just 60 seconds for platinum). Includes crucible kit (please specify gold or platinum) and flask cradle (please specify flask size). Available with choice of 60- or 100-cubic meter vacuum pump (sold separately). Backed by a one-year warranty. CE approved.

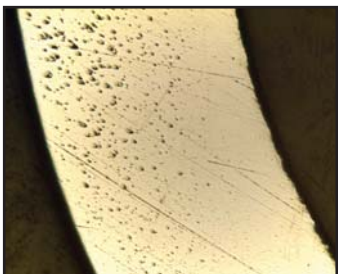
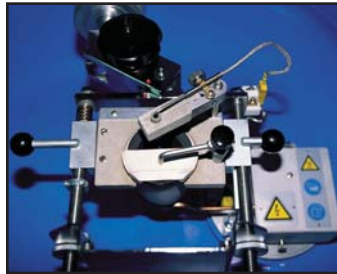
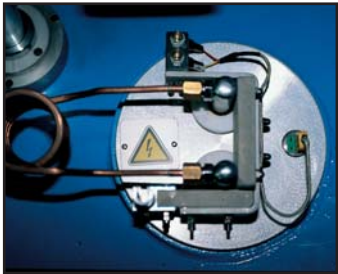
**Features:**

- Full vacuum casting chamber to radically enhance crucible life, removes gases from the flask, minimizing/eliminating gas porosity.
- After vacuuming, the casting chamber is flooded with inert gas to prevent oxidation of gold and platinum/cobalt alloys
- Medium-frequency induction melting with self-stirring effect for homogeneous melts.
- Produces extremely dense castings.
- Double-broken arm for straight trajectory of molten metal into flask.
- All casting parameters are programmable and can be stored in memory, including metal temperature, arm speed, acceleration, vacuum pressure and gas pressure. Builds a library of casting programs linked to specific models and metals for repeatable results.
- Semiautomatic and fully automatic cycles..
- Two temperature control systems: immersion thermocouple for gold up to 2,100°F (1,150°C) and infrared optical pyrometer for platinum up to 3,800°F (2,100°C) ±2.5%.
- Digital temperature display in °F or °C.
- Optional state-of-the-art Land Instruments Dual-Color Optical Controller available for maximum temperature accuracy of platinum up to 3,800°F (2,100°C) ±1.0%. This fiber-optic pyrometer is designed for precise contact-free temperature measurement. Highly recommended for use with automatic cycle for platinum. Must be specified at time of order—not available for retrofit.
- Computer-controlled PID adjusts power as metal temperature reaches set point to ensure accuracy and prevent overshoot.

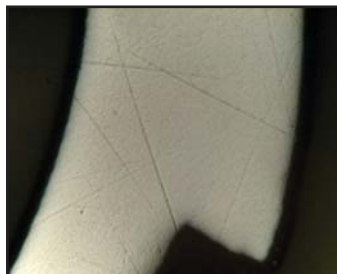
**Specifications:**

Electrical	220V, 30A, 3 Ph, 50/60Hz (others avail.)
Power	12kW
Max. Crucible Capacity	500g platinum, 2.0kg fine gold
Max. Flask Size	5" dia. x 6"H
Dimensions	41½"W x 33½"D x 51"H (including optical pyrometer)
Air Requirement	85 PSI to raise/lower induction coil
Water Requirement	3 liters/minute
Vacuum Requirement	60 or 100m³/hr. (sold separately)
Inert Gas Requirement	Nitrogen or argon
Net/Ship. Wt.	616/737 lbs.

Description	Item#	Each
Heavy-Duty Fusus New	<b>265-1380</b>	<b>Please Call</b>
60 m³/hr. Vacuum Pump	<b>265-0837</b>	<b>Please Call</b>
100 m³/hr. Vacuum Pump	<b>265-0836</b>	<b>Please Call</b>
Optional Dual-Color Optical Controller	<b>265-0835</b>	<b>Please Call</b>
Type K Thermocouple	<b>265-0976</b>	<b>\$137.00</b>
Crucible 150g Platinum	<b>265-0915</b>	<b>93.75</b>
Crucible Container, 2Kg Au	<b>265-1395</b>	<b>205.00</b>
Crucible Plate, 0.5-2Kg Au	<b>265-1383</b>	<b>186.75</b>
Crucible 350g Platinum	<b>265-1005</b>	<b>108.00</b>
Crucible Plate, 350g Platinum	<b>265-1390</b>	<b>186.75</b>
Crucible 500g Platinum	<b>265-1072</b>	<b>193.00</b>
Crucible Plate, 500g Platinum	<b>265-1388</b>	<b>186.75</b>
Sheath Holder for Insulating Arm	<b>265-1385</b>	<b>105.00</b>
Protective Silicone Sheath	<b>265-0975</b>	<b>99.00</b>
Gasket Insulating Plate	<b>265-1391</b>	<b>14.15</b>



Micrograph of casting cast in a non-Galloni machine with evidence of extreme porosity.



Actual micrograph of casting cast in Heavy-Duty Fusus New showing a compact, dense casting with no holes or porosity.

## A Galloni Platinaurum Vac

Advanced vacuum induction/centrifugal casting machine for platinum, white and yellow gold, steel and silver. Keeps casting chamber under full vacuum to remove porosity-causing gases from the invested flask and supplies inert gas protection to ensure metal is oxidation-free. Provides accurate temperature measurement with dual-pyrometer system: optical pyrometer reads platinum temperatures up to 3,812°F (2,100°C); immersion thermocouple reads gold and silver temperatures up to 2,642°F (1,450°C). Pneumatically actuated induction coil automatically makes and breaks the thermocouple circuit. Temperature controller regulates proportional power output, stabilizing the metal temperature at the appropriate set point and eliminating overshoot, another common cause of porosity. Constant self-stirring effect guarantees homogeneity of molten metal.

Purchase only the crucible kit you need. The platinum kit includes a special ceramic crucible for platinum and steel, the gold kit a fine-grain graphite crucible for gold and silver. Both also include crucible cover, melting coil and crucible carriage with holding plate. Changeover from one kit to the other is fast and easy.

### Features:

- Melts and casts up to 350g platinum and up to 1kg fine gold, as well as steel and silver.
- Makes use of medium-frequency induction melting with constant self-stirring effect for absolute homogeneity from top to bottom of cast tree.
- Provides repeatable results with fully programmable casting parameters, including precise metal temperature, arm acceleration and speed, vacuum pressure and gas pressure.
- Draws 25m<sup>3</sup>/hr. of air with integral vacuum pump.
- Backed by one-year manufacturer's warranty.
- CE approved.

### Specifications:

Electrical	230V, 1 Ph, 50/60Hz
Power	5kW
Frequency	Approx. 30kHz
Max. Crucible Capacity	350g platinum, 1.5kg fine gold
Max. Flask Size	5" x 5" (120 x 120mm)
Air Requirement	80 PSI (6 bar)
Vacuum Requirement	25m <sup>3</sup> /hr. (included)
Water Requirement	2.5 liters/min. at 60–75°F (20–25°C)
Inert Gas Requirement	Argon or nitrogen
Dimensions	28 <sup>3</sup> / <sub>4</sub> "W x 35 <sup>1</sup> / <sub>2</sub> "D x 47 <sup>1</sup> / <sub>4</sub> "H (900 x 730 x 1200mm)
Ship. Wt.	473 lbs. (215kg)

Description	Item#	Each
Platinaurum Vac	<b>265-1244</b>	<b>Please Call</b>
Crucible Kit, Platinum	<b>265-1236</b>	<b>\$1,595.00</b>
Coil, 350g Platinum	<b>265-1238</b>	<b>432.50</b>
Crucible Plate, 350g Platinum	<b>265-1068</b>	<b>186.75</b>
Crucible 350g Platinum	<b>265-0987</b>	<b>145.00</b>
Crucible Kit, Gold	<b>265-1235</b>	<b>1,695.00</b>
Coil, 1Kg Gold	<b>265-1242</b>	<b>432.50</b>
Crucible Plate, 1Kg Gold	<b>265-1239</b>	<b>186.75</b>
Crucible 1Kg Gold	<b>265-1035</b>	<b>34.00</b>
Lid Cover, 1Kg Au	<b>265-0964</b>	<b>19.70</b>



A





**A**

**A Devesting Machine**

Use this high power, heavy-duty system to thoroughly clean investment from castings. Two-piece unit has a rollout catch chamber for removal of accumulated investment. Adjustable water spray nozzle is controlled by a foot pedal. Seam-welded steel frame construction with brushed stainless steel body. Internal work light. Front hinged door for optimal viewing. Heavy-duty replaceable rubber gloves.

**Specifications:**

Electrical	240V, 15A, 1 PH, 60Hz
Motor	3 HP
Dimensions	
Overall	24 <sup>3</sup> / <sub>8</sub> "W x 28 <sup>3</sup> / <sub>8</sub> "D x 59"H
Workspace	23 <sup>3</sup> / <sub>8</sub> "W x 13 <sup>1</sup> / <sub>2</sub> "D x 12 <sup>5</sup> / <sub>8</sub> "H
Max. Water Pressure	1,700 PSI
Water Flow	10.5L/min.
Net/Ship. Wt.	293/440 lbs.

Description	Item#	Each
A. Devesting Machine	<b>265-2183</b>	<b>\$4,695.00</b>
Replacement Gloves, pair	265-2185	29.95



**B**

**B Hydro Air Wash Gun**

Removes investment from castings by using compressed air and water. Made of chrome-plated zinc and brass. Includes heavy-duty, squeeze-trigger air valve, rubber nozzle and hand grips for protection against hot water. Reduces cleaning time and eliminates costly cleaning equipment. Operates on 50–200 PSI. Requires 3/4" dia. x 4"L hose (sold separately) for connection to faucet. Net wt: 3 lbs.

Description	Item#	Each
B. Hydro Air Wash Gun	<b>260-1800</b>	<b>\$86.65</b>
Water Hose	<b>260-1805</b>	<b>10.95</b>



**C**

**C NeyClean SP Investment Remover**

Specially formulated NeyClean SP makes quick work of investment removal. The powerful powder formula strips investment from your castings and molds exceptionally fast. If you use it in a heated ultrasonic tank, NeyClean SP works even faster: heat enhances its cleaning power. Better still, the exclusive powder formula can be used over and over again, providing great savings over competitive products. All this and it's even biodegradable! Effective, easy to use, economical and safe for the environment—NeyClean SP is all of these. Supplied in a plastic container. Combined with hot tap water, one container makes 12½ liters of solution.

Description	Item#	Each
NeyClean SP Investment Remover	<b>260-4260</b>	<b>\$28.95</b>



**D**

**D Vest Off**

A mildly acidic water-based cleaner for removing investment plaster. Dilute with five parts water in ultrasonic cleaner (use auxiliary pan or beaker). Use cold and undiluted as dip. Rinse off with water. Gives off no fumes. Comes in 1-gallon bottle.

Description	Item#	EACH Prices	
		1-4	5+
1-gallon bottle	<b>260-4300</b>	<b>\$35.60</b>	<b>\$26.70</b>



**E**

**E Hand Brush with Enclosed Handle**

Features stiff nylon bristles set in a durable block with enclosed handle for keeping skin and fingernails clean. Ideal for removing investment and more. Measures 4"L x 1½"W.

Description	Item#	EACH Prices		
		1-2	3-11	12+
Hand Brush with Enclosed Handle	<b>115-2255</b>	<b>\$3.50</b>	<b>\$3.15</b>	<b>\$2.80</b>



### A SonoCraft III – Ultrasonic Porosity Remover

SonoCraft III was designed especially for professional jewelers to remove porosity and other surface imperfections quickly and easily. But it is also an amazing surface finisher with excellent reach into the tiniest areas: polishing under cathedral settings and cleaning up half round rails. It polishes and burnishes areas that are almost impossible to reach by hand that traditionally had to be done with a magnetic tumbler. Includes compact power pack, light-weight handpiece with tool holder, on/off foot switch, handpiece rest, wrenches and instructions.

#### Benefits:

- Advanced ultrasonic technology drastically reduces finishing time for increased productivity.
- Automatic frequency adjustment provides optimal efficiency for excellent finishing results.
- High output power handles all kinds of metals with ease.

#### Specifications:

Operating Frequency	24kHz
Frequency Adjustment	Automatic feedback
Power Consumption	100VA
Max. Power Output	30W
Output Adjustment	Continuously variable
Electrical	110V or 220V, 50/60Hz
Dimensions	6 <sup>7</sup> / <sub>8</sub> "W x 6 <sup>7</sup> / <sub>8</sub> "D x 3 <sup>3</sup> / <sub>16</sub> "H
Net Wt.	2.6 lbs.

Description	Electrical	Item#	Each
SonoCraft III	110V	<b>510-0880</b>	<b>\$1,775.00</b>
	220V	<b>510-0881</b>	<b>1,775.00</b>

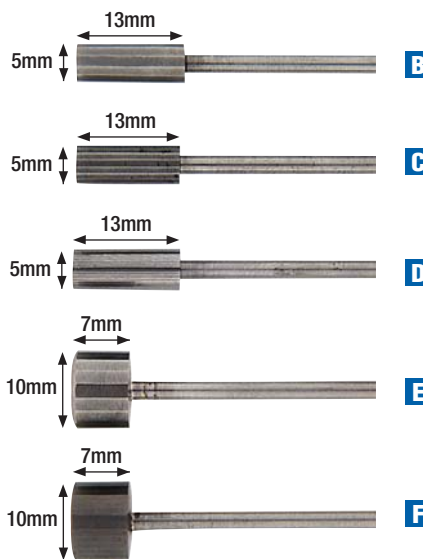


**A**

### B - F Rotary Burnishers – For platinum, gold and silver

Rotary burnishers are the fastest and most effective tools for removing porosity, firescale and scratches. Patented creations, they are made of highly polished tungsten carbide and mounted on <sup>3</sup>/<sub>32</sub>" (2.35mm) shanks. Each burnisher has a 12-, 18- or 36-facet sidewall that produces its own unique effect on metals. The 12-facet burnisher leaves a coarse finish and covers large pinholes on gold and silver; the 18-facet burnishers leave a medium finish and cover moderate pinholes on all metals; and the 36-facet burnishers leave a fine finish and cover small pinholes on all metals.

Facets	Dia. x H	Finish	Max. RPM	Item#	EACH Prices	
					1-9	10+
B. 12	5 x 13mm	Coarse	10,000	<b>811-2170</b>	<b>\$40.00</b>	<b>\$32.00</b>
C. 18	5 x 13mm	Medium	10,000	<b>811-2171</b>	<b>40.00</b>	<b>32.00</b>
D. 36	5 x 13mm	Fine	10,000	<b>811-2172</b>	<b>44.00</b>	<b>35.20</b>
E. 18	10 x 7mm	Medium	8,000	<b>811-2175</b>	<b>52.00</b>	<b>41.60</b>
F. 36	10 x 7mm	Fine	8,000	<b>811-2176</b>	<b>65.00</b>	<b>52.00</b>



### G Margin Roller Burnisher – <sup>3</sup>/<sub>32</sub>" Shank

For burnishing over scratches in gold, making it possible to salvage many pieces without gold loss. Can also be used for burnishing over microporosity in castings. The <sup>3</sup>/<sub>16</sub>" (5mm) head consists of five steel rollers that act as rotating mallets. Measures 1<sup>3</sup>/<sub>4</sub>" long.

Description	Item#	Each
Margin Roller Burnisher	<b>811-2150</b>	<b>\$18.35</b>



**G**

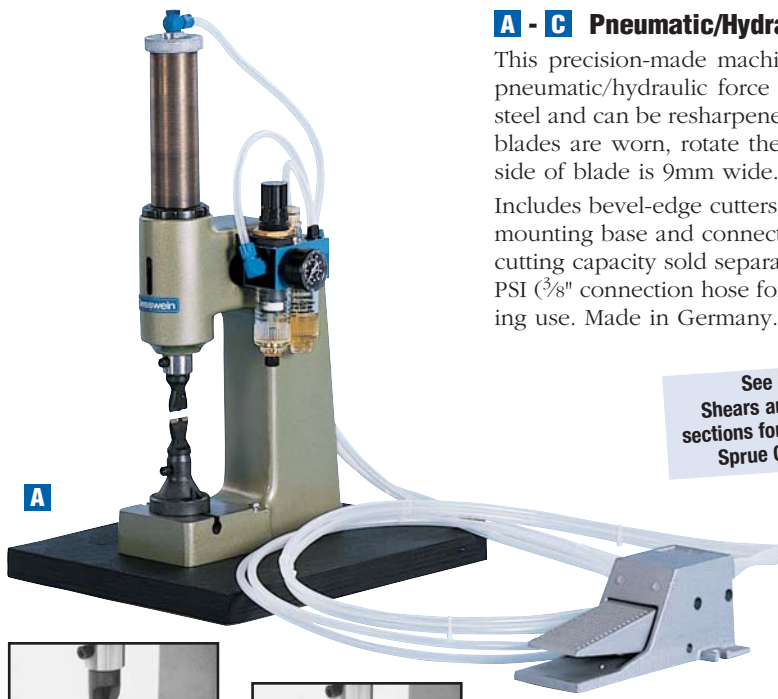
### H Porosity Killer – <sup>3</sup>/<sub>32</sub>" Shank

For burnishing over porosity in gold, making it possible to salvage highly porous pieces without gold loss. Similar in operation and effect to a margin roller but more aggressive. Has a <sup>3</sup>/<sub>32</sub>" shank for use with your flex shaft machine.

Description	Item#	Each
Porosity Killer	<b>260-1775</b>	<b>\$12.95</b>



**H**



**A**



**B**



**C**

**A - C Pneumatic/Hydraulic Production Sprue Cutter**

This precision-made machine provides guillotine cutting action powered by tremendous pneumatic/hydraulic force of more than 8,500 PSI. Blades are made of high-quality tool steel and can be resharpened. Their unique design prevents damage to cutting edges. Once blades are worn, rotate them and utilize the unworn portion, then resharpen them. Each side of blade is 9mm wide.

Includes bevel-edge cutters with 6mm cutting capacity, air pressure gauge, filter/lubricator, mounting base and connection hose for foot switch. Optional semi-flush cutters with 4mm cutting capacity sold separately (see below). Requires air compressor that produces 75-100 PSI (3/8" connection hose for compressor not included). Safety goggles should be worn during use. Made in Germany.

**Specifications:**

Working Pressure	Approx. 8,500 PSI	
Input Pressure	72.5-101.5 PSI	
Dimensions	14"L x 12"W x 21"H	
Ship. Wt.	48 lbs.	
<b>Description</b>	<b>Item#</b>	<b>Each</b>
<b>A. Production Sprue Cutter</b>	<b>260-3130</b>	<b>\$3,995.00</b>
<b>B. Optional Semi-Flush Cutters</b>	<b>260-3132</b>	<b>225.00</b>
<b>C. Replacement Bevel-Edge Cutters</b>	260-3133	225.00
Oil Refill, 4 oz.	260-3135	17.99

**D Pneumatic Sprue Cutters**

Heavy-duty air-powered tools for cutting castings from sprues. Feature tapered blades that make it easy to get in between closely spaced castings. Eliminate hand and arm fatigue and increase production. Can be operated by hand when not on stand. Each includes one pair of blades, stand, foot pedal, air hose and hose connectors. Air compressor requirements: 60-85 PSI, 0.8 CFM.



**D**

**Specifications:**

	<b>Model 25</b>	<b>Model 35</b>
Blades	P6, High-Speed Steel	Z8P, Carbide
Cutting Capacity at Midsection of Blade	3mm	4mm
Size without Blade	1 3/4" dia. x 9 1/2"L	2 1/8" dia. x 11 1/2"L
Length of Cutting Edge	1/2"	1 1/8"
Ship. Wt.	5 lbs., 4 oz.	6 lbs., 4 oz.



<b>Description</b>	<b>Item#</b>	<b>Each</b>	
<b>D. Model 25 with P6 Blades</b>	<b>260-3110</b>	<b>\$495.00</b>	
Model 35 with Z8P Blades	<b>260-3115</b>	<b>595.00</b>	
Replacement Stand	260-3118	84.95	
Replacement Foot Pedal	260-3119	113.00	
Replacement Hose with Connectors	260-3114	24.50	
<b>Blades</b>	<b>For</b>	<b>Item#</b>	<b>Each</b>
Z61, H.S.S. pointed	Model 25	<b>260-3112</b>	<b>\$110.00</b>
S7P, Tool Steel pointed	Model 35	<b>260-3111</b>	<b>65.00</b>
P6, H.S.S. blunt	Model 25	260-3116	65.00
Z8P, Carbide blunt	Model 35	260-3117	175.00

**E Heavy-Duty Sprue Cutter**

A space-saving manual cutter ideal for cutting heavy sprues or the center rod of a tree sprue system. Should be bolted to a bench.

**Specifications:**

Cutting Capacity	3/8" (10mm) thick nonferrous sprues
Dimensions	6"L x 3"W base with 21" long handle
Ship. Wt.	10 lbs.



**E**

<b>Description</b>	<b>Item#</b>	<b>Each</b>
<b>E. Heavy-Duty Sprue Cutter</b>	<b>260-3120</b>	<b>\$350.00</b>
Replacement Blade	260-3122	113.65

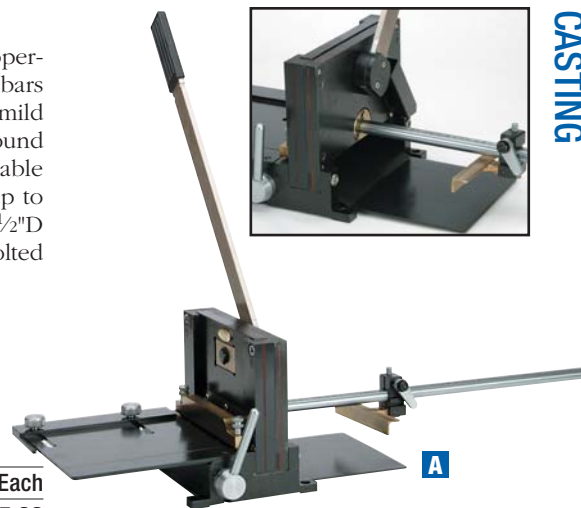
### A Precision Guillotine Shears

These heavy-duty guillotines speed up production and reduce waste by allowing the operator to cut sheets neatly to the exact sizes required. Use exclusive lever-action locking bars to hold material securely and prevent accidents. Cut up to 14-gauge (1.6mm thick) mild steels and up to 10-gauge (2.4mm thick) mild nonferrous metals. Have precision-ground and hardened high-carbon steel blades that can be resharpened when necessary. Available in two sizes: small 6" for cutting metal up to 6" wide and large 12" for cutting metal up to 12" wide. Accept any length of metal sheet. Small 6" Guillotine requires 11½"W x 30½"D bench space. Large 12" Guillotine requires 19¾"W x 39¼"D bench space. Must be bolted to sturdy table or bench for safety. Made in Europe.

#### Features:

- Squared work surface
- Easy-to-read adjustable ruler with cutting guide
- Open back with receiving table for catching cut metal
- All-steel construction

Description	Ship Wt.	Item#	Each
A. 6" Guillotine	58 lbs.	<b>819-0275</b>	<b>\$695.00</b>
12" Guillotine	99 lbs.	<b>819-0280</b>	<b>765.00</b>



### B, C Bergeon Heavy-Duty Cutters – Cut sprues up to 3mm.

Top-quality cutters with special linkage design that multiplies hand pressure many times to provide full, clean cuts. Helps reduce hand fatigue from constant cutting. Feature hardened steel jaws with 7/8" (22mm) long cutting edges, extra-long handles for additional leverage and locking system for protection of cutting edges.

Side cutter has pointed ends for easy access to tight areas. Cuts sprues up to 3mm thick. Measures 10" long. End cutter measures 9½" long. Cuts sprues up to 3mm. Made in Switzerland.

Description	Item#	Each
B. Side Cutter	<b>181-4075</b>	<b>\$167.00</b>
C. End Cutter	<b>181-4070</b>	<b>159.00</b>



### D, E 3-Peaks Sprue Cutters – Cuts sprues up to 4mm.

These compound sprue cutters feature 60–65 HRC hardened alloy steel construction with 15mm long jaws and comfortable handles. Both cut up to 4mm copper or 1.5mm steel. Side cutter is angled for better access to tight areas. Measure approx. 8½" long. Imported.

Description	Item#	Each
D. Cutter	<b>181-4081</b>	<b>\$25.65</b>
E. Side Cutter	<b>181-4082</b>	<b>27.60</b>



### F Knipex Sprue Cutter

Treat yourself to a Knipex Sprue Cutter and find out how much easier sprue cutting can be. This top-quality heavy-duty cutter is a pleasure to use, multiplying manual force exerted by 20 times to make quick work of cutting sprues up to 3mm in diameter, even platinum ones. Features oil-hardened chrome vanadium electric steel construction with induction-hardened 64 HRC cutting edges and spring assist for fast and smooth cutting action, plastic-coated handles for secure grip and handle lock. Measures 8" long. Made in Germany.

Description	Item#	Each
Knipex Sprue Cutter	<b>181-4078</b>	<b>\$85.20</b>



### G Power Sprue Cutter – Cuts sprues up to 3mm.

Cuts sprues and soft wire up to 3mm and hard wire up to 1mm. Makes a semi-flush cut. Features compound joint construction for reduced cutting effort, hardened chrome vanadium steel cutting head and steel handles with plastic nonslip grips. Measures 9½" long with 11/16" (18mm) long jaws. Made in Italy.

Description	Item#	Each
Power Sprue Cutter	<b>181-4061</b>	<b>\$110.00</b>



## Ultrasonic Cleaner Comparison Chart

Brand	Gesswein	L&R Quantrex	Gesswein Sweep	Elma SX30H	Digital
Capacity	0.50, 0.87, 1.10, 1.50, 2.70 or gals.	0.50, 0.84, 1.50, 3.25 or 6.50 gals.	0.84 gal.	3 qts.	2½ qts.
Frequency	45kHz	43kHz	42kHz	37kHz	42kHz
Workload	Medium to Heavy	Medium to Heavy	Medium to Heavy	Medium to Heavy	Light to Medium
Control	Digital	Analog	Analog	Analog	Digital
Timer	0–60 min.	0–60 min.	0–30 min.	0–30 min.	5 Different Cycles
Timer Bypass	No	No	Yes	Yes	No
Heater	Yes	Yes	Yes	Yes	Yes
Housing	Powder-Coated Aluminum	Vinyl-Clad Steel	Vinyl-Coated Steel	Stainless Steel	ABS Plastic
Tank	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
Lid	Yes	Yes	Yes	Yes	Yes
Drain	Yes (except D50)	Yes (except 90)	Yes	No	No
Country of Origin	USA	USA	USA	Germany	China

### A Gesswein® Standard One-Piece Digital Ultrasonic Cleaners

Space-saving one-piece units with highly reliable lead zirconate titanate transducers and advanced circuitry for optimal cleaning results throughout the tank, not just in the center. Feature digital control, 0–60 minute timer, thermostatic heater (136–140°F), powder-coated aluminum housing, stainless steel tank and lid, QD-style drain (except D50), rubber feet and external fuse. Include tank cleaning pad. For best results, use with accessories shown on pp. 172–174. Electronics housed in lower cabinet. Electrical plugs not supplied with 220V units. All 50/60Hz. TUV approved, ROHS compliant. Backed by a 5-year warranty on transducers, housing and tank and a 2-year warranty on circuitry. Made in USA.



A

110V Model	Capacity (gals.)	Sonic/Peak Power (W)	Dimensions (W x D x H)		Item#	Each
			Overall	Tank		
D50	0.50	80/224	7" x 7½" x 8"	5½" x 6" x 4"	<b>851-5080</b>	<b>\$280.00</b>
D87	0.87	100/282	10½" x 7½" x 8½"	9½" x 5½" x 4"	<b>851-5082</b>	<b>420.00</b>
D110	1.10	125/350	10½" x 7½" x 10"	9½" x 5½" x 6"	<b>851-5084</b>	<b>559.00</b>
D165	1.50	150/420	13" x 7½" x 10½"	11½" x 6" x 6"	<b>851-5086</b>	<b>670.00</b>
D270	2.70	200/560	13" x 12½" x 10"	11½" x 9½" x 6"	<b>851-5088</b>	<b>865.00</b>
220V Model	Capacity (gals.)	Sonic/Peak Power (W)	Dimensions (W x D x H)		Item#	Each
			Overall	Tank		
D50	0.50	80/224	7" x 7½" x 8"	5½" x 6" x 4"	<b>851-5081</b>	<b>\$345.00</b>
D87	0.87	100/282	10½" x 7½" x 8½"	9½" x 5½" x 4"	<b>851-5083</b>	<b>488.00</b>
D110	1.10	125/350	10½" x 7½" x 10"	9½" x 5½" x 6"	<b>851-5085</b>	<b>625.00</b>
D165	1.50	150/420	13" x 7½" x 10½"	11½" x 6" x 6"	<b>851-5087</b>	<b>735.00</b>
D270	2.70	200/560	13" x 12½" x 10"	11½" x 9½" x 6"	<b>851-5089</b>	<b>930.00</b>

### B Gesswein® Heavy-Duty Two-Piece Digital Ultrasonic Cleaners

Rugged two-piece units with all the same features as our standard units and much more. Provide higher power, making them excellent choices for production shops. Designed for the toughest jobs. Include tank cleaning pad. For best results, use with accessories shown on pp. 172–174. Electronics housed in separate control boxes for protection from spills and splashes. All 50/60Hz. TUV approved, ROHS compliant. Backed by a 5-year warranty on transducers, housing and tank and a 2-year warranty on circuitry. Made in USA.



B

110V Model	Capacity (gals.)	Sonic/Peak Power (W)	Dimensions (W x D x H)		Item#	Each
			Overall	Tank		
D110-2	1.10	150/420	10½" x 7½" x 10"	9½" x 5½" x 6"	<b>851-5090</b>	<b>\$710.00</b>
D270-2	2.70	250/700	13" x 12½" x 10"	11½" x 9½" x 6"	<b>851-5092</b>	<b>1,070.00</b>
220V Model	Capacity (gals.)	Sonic/Peak Power (W)	Dimensions (W x D x H)		Item#	Each
			Overall	Tank		
D110-2	1.10	150/420	10½" x 7½" x 10"	9½" x 5½" x 6"	<b>851-5091</b>	<b>\$775.00</b>
D270-2	2.70	250/700	13" x 12½" x 10"	11½" x 9½" x 6"	<b>851-5093</b>	<b>1,135.00</b>



**A L&R Quantrex® Ultrasonic Cleaners**

Made by L&R, a leader in ultrasonic cleaning technology, Quantrex ultrasonics feature durable vinyl-clad steel housing, stainless steel tank and lid, 60-minute timer and drain (except model 90, which has timer but no drain), EMI (electromagnetic interference) filter for worry-free operation around other electronic equipment, premium system components and contemporary design. Include integral heating elements at a preset temperature of approx. 160°F. Provide quiet yet powerful 43kHz cleaning action. Backed by a 2½-year manufacturer's warranty. Made in USA.

115V Model	Capacity (qts.)	Dimensions (W x D x H)		Item#	Each
		Overall	Tank		
90	2	7" x 6¾" x 8¾"	5⅞" x 5⅜" x 4"	<b>851-5070</b>	<b>\$285.00</b>
140	3⅜	10¼" x 6½" x 8¼"	9⅜" x 5⅜" x 4"	<b>851-5072</b>	<b>425.00</b>
<b>A. 210</b>	6	12¾" x 7" x 11"	11¾" x 6" x 6"	<b>851-5074</b>	<b>695.00</b>
310	13	16½" x 10" x 12"	15½" x 9" x 6"	<b>851-5076</b>	<b>1,475.00</b>
650	26	21¾" x 14" x 12½"	19¾" x 4¾" x 6½"	<b>851-5077</b>	<b>1,525.00</b>
220V Model	Capacity (qts.)	Dimensions (W x D x H)		Item#	Each
		Overall	Tank		
90	2	7" x 6¾" x 8¾"	5⅞" x 5⅜" x 4"	<b>851-5071</b>	<b>\$334.00</b>
140	3⅜	10¼" x 6½" x 8¼"	9⅜" x 5⅜" x 4"	<b>851-5073</b>	<b>475.00</b>
210	6	12¾" x 7" x 11"	11¾" x 6" x 6"	<b>851-5075</b>	<b>855.00</b>
310	13	16½" x 10" x 12"	15½" x 9" x 6"	<b>851-5078</b>	<b>2,050.00</b>
650	26	21¾" x 14" x 12½"	19¾" x 4¾" x 6½"	<b>851-5079</b>	<b>2,095.00</b>



**A**

**B Gesswein® Sweep Ultrasonic Cleaner**

Instead of having fixed-kilohertz output like other ultrasonics, the sweep ultrasonic cycles regularly through a kilohertz range, generating tightly packed layers of ultrasonic waves throughout its tank for more powerful, faster cleaning action. Fully and evenly distributes ultrasonic waves regardless of cleaning load and solution level, yielding cavitation that reaches into all corners of the tank, leaving no weak zones or hot spots. Engineered for heavy-duty, full-time use. Features stainless steel tank and lid, timer (set for 1–30 minutes or hold), heater, EMI (electromagnetic interference) filter, on/off switch, drain and hose. Electrical: 115V, 50/60Hz. Made in USA. Backed by a 2½-year manufacturer's warranty.

115V Model	Capacity (gals.)	Sonic Power (W)	Dimensions (W x D x H)		Item#	Each
			Overall	Tank		
84	0.84	150	10⅜" x 6⅜" x 8"	9⅜" x 5⅜" x 4"	<b>851-5046</b>	<b>\$495.00</b>



**B**

**C, D Elma SX30H Ultrasonic Cleaner**

**Fully loaded with more features than any other unit!**

With its microprocessor control and user-friendly design, this professional unit runs 30% more efficiently than Elma's economy unit. Features 37kHz high-performance transducers, built-in heater with LED display that shows both set and actual temperatures from 30–80°C (88–175°F), 30-minute electronic timer with LED display of set and remaining cleaning time, continuous-on option and an automatic de-gas function for a new bath in just 10 minutes. Offers choice of automatic sweep function for full tank cleaning or nonsweep function for concentrated cleaning.

Made to withstand years of abuse with stainless steel housing and tank, dry-run protection for heater and splash-proof membrane keypad. Includes heavy-duty plastic lid that helps reduce noise and also doubles as a drip tray for ring racks and mesh baskets, as well as a free sample of ultrasonic cleaning solution. Optional cleaning kit also available (see below). Electrical: 115V, 50/60Hz. CE approved. Made in Germany. *Has no drain; just lift and pour to remove water.* Backed by a 2-year manufacturer's warranty.

115V Model	Capacity (qts.)	Dimensions (W x D x H)		Item#	Each
		Overall	Tank		
<b>C. SX30H</b>	3	12" x 7" x 8¾"	9½" x 5⅜" x 4"	<b>851-4203</b>	<b>\$535.00</b>
<b>Description</b>				<b>Item#</b>	<b>Each</b>
<b>D. Optional SX30H Cleaning Kit (plastic basket, 16-hook ring rack, 1 qt. ultrasonic cleaning solution)</b>				<b>851-4190</b>	<b>\$48.00</b>
Plastic Basket				851-5107	25.90



**C**



**D**



### A Digital Ultrasonic Cleaner – 2½ qts.

A moderately sized ultrasonic cleaner for removing dirt and compounds from jewelry. Provides 42kHz of cleaning power. Features integral heater with radiator fan; quiet solid-state circuitry; digital controls with 90-, 180-, 280- 380- and 480-second cleaning cycles; isolated electronics for protection against moisture; heavy-duty wipe-clean plastic housing; durable stainless steel tank; and auto-shutoff for safety. Includes lid with convenient viewing window, jewelry cleaning basket and free sample of ultrasonic cleaning solution. Capacity: 2½ qts. Electrical: 115V, 160W, 50/60Hz. Measures 13¾"W x 10"D x 8⅞"H with 10¾"W x 6½"D x 3⅞"H tank. Weighs 5½ lbs. CE, GS, NRTL and PSE approved.

Description	Electrical	Item#	Each
Digital Ultrasonic	115V	<b>851-4906</b>	<b>\$119.95</b>



### B Elmasonic Ultrasonic Cleaner – 1 qt.

The Elmasonic cleaner provides 35 kHz of quiet cleaning power in a sleek, compact design. Fits easily in the smallest spaces. Features powerful sandwich transducer for removing even the heaviest contaminants, 120-minute digital countdown timer, overheating protection, stainless steel tank, removable cover with groove for collecting water and PC-ABS housing. Cleans anywhere liquid can permeate. Perfect for necklaces, watchbands, bracelets, rings, earrings and more. Includes removable plastic basket and ultrasonic cleaning solution. Capacity: 1 quart. Electrical: 90–250V, 40W, 50/60 Hz. Measures 9.3"W x 5.7"D x 6.2"H with 7.6"W x 3.3"D x 2.4"H tank. Backed by a two-year manufacturer's warranty.

Description	Electrical	Item#	Each
Elmasonic	90-250V	<b>851-4201</b>	<b>\$275.00</b>
Replacement Plastic Basket	–	851-5106	16.25



### C Sonic Wave Ultrasonic Cleaner – ½ qt.

A compact ultrasonic for cleaning rings, earrings, bracelets, necklaces, eyeglasses and more. Provides 42,000 cycles of cleaning power. Features quiet solid-state circuitry, high-impact plastic body, attached see-through lid, one-piece stainless steel tank, three-minute timer with auto-shutoff and blue power light. Includes jewelry cleaning basket and free sample of ultrasonic cleaning solution. Capacity: ½ quart. Electrical: 115V, 35W, 50/60Hz. Measures 7¾"W x 5"D x 5"H. CE and ETL approved.

Description	Electrical	Item#	EACH Prices	
			1-5	6+
Sonic Wave	115V	<b>851-4901</b>	<b>\$33.95</b>	<b>\$28.86</b>



### D Mini Ultrasonic Cleaner – ½ pt.

A compact countertop ultrasonic with quiet solid-state circuitry that provides powerful cleaning action. Has stainless steel tank. Supplied with cover, removable plastic basket and free sample of ultrasonic cleaning solution. Electrical: 115V, 0.5A. Measures 5¼"W x 5¼"D x 5"H.

Description	Electrical	Item#	EACH Prices			
			1-2	3-5	6-11	12+
Mini Ultrasonic	115V	<b>851-4900</b>	<b>\$87.50</b>	<b>\$65.63</b>	<b>\$58.34</b>	<b>\$52.50</b>

## Cleaning Kits

Select from five money-saving all-encompassing cleaning kits. Each includes both an ultrasonic and a steamer for your cleaning needs. For full details on these products, please refer to pages indicated below.

### Components (each kit comprises a different combination of these):

- Elma SX30H Ultrasonic – 3-quart capacity, heater, 37kHz high-power transducers, 9½"W x 5⅜"D x 4"H stainless steel tank (see p. 167)
- Digital Ultrasonic – 2½-quart capacity, heater, 42kHz cleaning power, 10⅜"W x 6½"D x 3⅜"H stainless steel tank (see p. 168)
- Sonic Wave Ultrasonic – ½-quart capacity, 42kHz cleaning power, stainless steel tank (see p. 168)
- GemOro Brilliant Spa™ – 1-cup capacity, 25 PSI max. pressure (see p. 170)
- GemOro XSteam Steamer – 3-quart capacity, 65 PSI max. pressure (see p. 170)
- Royal Gem Cloth – Lint-free and fray-resistant (see p. 88)



### A Deluxe Pro Cleaning Kit

#### Components:

- Elma SX30H Ultrasonic Cleaner
- GemOro XSteam™ Steam Cleaner

Description	Electrical	Item#	Each
Deluxe Jewel Jet Pro Kit	120V	853-0082	\$750.00

### B Pro Cleaning Kit

#### Components:

- Digital Ultrasonic Cleaner
- GemOro XSteam™ Steam Cleaner

Description	Electrical	Item#	Each
Standard Jewel Jet Pro Kit	120V	853-0083	\$349.00

### C Mini Cleaning Kit

#### Components:

- Sonic Wave Ultrasonic Cleaner
- Brilliant Spa Personal Mini Steam Cleaner
- Light Blue 10" x 10" Royal Gem Cloth

Description	Electrical	Item#	Each
Mini Cleaning Kit	120V	853-0085	\$88.95



A



B



C



D

**A Steam Dragon™ Steamers – Safe for malls, stores and offices.**

These space-saving units produce steam on-demand rather than holding it under pressure like boiler-type steamers, so they eliminate the risk of explosion. Perform comparably to much larger machines yet require no boiler permits, so they're welcome in public locations. Simple to operate: just insert the supplied water feed hose into a bottle of water, step on the foot pedal to feed water into your unit, and watch as water instantly flashes into steam and exits the nozzle. Flow of steam stops when all the water has boiled to steam.

Choose from the Silver Dragon and the high-power Deluxe Dragon. Feature foot switch, durable 20-gauge stainless steel construction and solid-state controls. UL Listed. Deluxe also CE approved. *Require distilled water.*

Specifications:	Silver Dragon	Deluxe Dragon
Electrical	115V, 11A, 1300W, 60Hz	115V, 12.5A, 1400W, 60Hz
Max. Pressure	90–125 PSI	90–125 PSI
Dimensions	9"W x 12"D x 10"H	15"W x 12"D x 11"H
Ship. Wt.	26 lbs.	30 lbs.

Description	Electrical	Item#	Each
A. Silver Dragon	115V	<b>853-0042</b>	<b>\$635.00</b>
Deluxe Dragon	115V	<b>853-0041</b>	<b>\$865.00</b>

**B Cyclone Steamer – Safe for malls, stores and offices.**

This compact yet highly efficient steamer does not have a pressurized boiler like the type found in standard steamers. Instead, it has a small heating chamber that instantly flashes incoming water into steam. Requires no boiler permits, so it's welcome in public locations. Delivers 60 PSI of dry steam. After an initial warm-up period of 5-10 minutes, just step on the foot pedal. You get continuous steam as long as you keep the foot pedal depressed—up to 1½ minutes. Runs quietly, too.

Features high-limit temperature shutoff with automatic reset, foot switch, stainless steel front panel and off-white finished housing. UL listed. *Requires distilled water.*

Specifications:	
Electrical	115V, 12.5A, 1500W
Max. Pressure	60 PSI
Dimensions	8¼"W x 9¾"D x 8¼"H
Ship. Wt.	17 lbs.

Description	Electrical	Item#	Each
Cyclone Steamer	115V	<b>853-0066</b>	<b>\$719.00</b>

**C GemOro XSteam™ Steam Cleaner**

The ideal steam cleaner for jewelers and small repair shops. Generates up to 65 PSI of high-pressure steam with hands-free foot-pedal operation. Safely blasts away dirt, grime and oil using ordinary tap water. Features LED indicators that show when unit is heating up and when it is ready to steam, steam pressure indicator gauge, durable stainless steel cabinet, easy-lift handles and moisture-protected on/off rocker switch. Includes removable stainless steel basket, water funnel and measuring cup. Capacity: 3 qts. Electrical: 120V, 60Hz. Measures 9"W x 16"D x 12¾"H. ETL listed. Backed by a one-year limited warranty.

Description	Electrical	Item#	Each
XSteam	120V	<b>853-0099</b>	<b>\$249.95</b>

**D GemOro Brilliant Spa™ Personal Steam Cleaner**

A compact steam cleaner perfect for home use. Generates high-pressure steam with simple push-button operation. Safely blasts away dirt, grime and oil using ordinary tap water. Features LED indicators that show when unit is heating up and when it is ready to steam (takes 5 minutes), durable ABS cabinet with stainless steel accent panel, easy-lift handles and in-line on/off switch. Includes removable stainless steel basket, plastic-coated stainless steel tweezers, water funnel and measuring cup. Capacity: 1 cup. Electrical: 120V, 60Hz. Measures 6"W x 11½"D x 10½"H. ETL listed. Backed by a one-year limited warranty.

Description	Electrical	Item#	Each
Brilliant Spa	120V	<b>853-0098</b>	<b>\$54.95</b>



**A Deluxe Junior Steamer – For moderate production.**

This compact tabletop unit boasts up to 40% greater effective capacity than similar units, so it provides more steam before needing a water refill. Features a high-limit pressure control switch that regulates heat and pressure automatically. Made of the toughest heavy-duty materials to withstand constant use. Easy to install with no plumbing required.

Includes fast-response heating element, foot-controlled solenoid switch, safety relief valve, recessed sight gauge, low-water cutoff with reset switch, steam pressure gauge, lockable blowdown drain valve and water fill funnel and valve. Complies with ASME safety code. UL and CSA approved. Uses ordinary tap water.

**Specifications:**

Electrical	120V, 12.5A, 1500W, 60Hz or 240V, 6A, 1500W, 50Hz
Capacity	1.5 gals.
Max. Pressure	60–85 PSI
Dimensions	16½"W x 12"D x 19"H

Description	Electrical	FOB Point	Item#	Each
A. Jr. Steamer		CT	<b>853-0059</b>	<b>\$1,115.00</b>
		VA	<b>853-0072</b>	<b>1,075.00</b>
Jr. Steamer with Modified Feed Pump*	120V	CT	<b>853-0067</b>	<b>1,075.00</b>
Jr. Steamer, 240V**	240V	CT	<b>853-0065</b>	<b>1,295.00</b>

\*Complies with Texas boiler rules.

\*\*Export only—no UL certificate.



**A**

**B, C Automatic Water Feed Series Steamers – For high production.**

These steamers eliminate the need to manually fill and refill. Each model is equipped with an automatic water feeder that injects water as needed into the boiler under full pressure. Eliminates downtime, making steam readily available. Provides constant steam at approx. operating pressure of 50 PSI. Auto-6 is a compact version with one steam jet. Auto-8 has two steam jets. Electrical plugs not supplied. All models plumb to water line. Comply with ASME safety code. Use ordinary tap water.

**Specifications:**

	Auto-6	Auto-8
Volts	208, 240 or 415	208, 240 or 415
Watts	6/8kW	10kW
Amps	33 (1 Ph)	48/42 (1 Ph)
Jets	1	2
Chamber Size	0.33 cu. ft.	0.92 cu. ft.
Max. Pressure	60–85 PSI	60–85 PSI per jet
Steam Generation	27 lbs./hour	34 lbs./hour
Dimensions	14¼"W x 14¼"D x 18"H	18"W x 30"D x 21"H
Ship. Wt.	76 lbs.	184 lbs.

Description	Electrical	Item#	Each
B. Auto-6	208V, 1 Ph, 60Hz	<b>853-0209</b>	<b>\$4,350.00</b>
	240V, 1 Ph, 50Hz*	<b>853-0211</b>	<b>4,350.00</b>
C. Auto-8	208V, 1 Ph, 60Hz	<b>853-0215</b>	<b>4,350.00</b>
	208V, 3 Ph, 60Hz	<b>853-0216</b>	<b>4,350.00</b>
	240V, 1 Ph, 60Hz	<b>853-0217</b>	<b>4,350.00</b>
	240V, 3 Ph, 60Hz	<b>853-0218</b>	<b>4,350.00</b>
	240V, 3 Ph, 50Hz*	<b>853-0219</b>	<b>4,350.00</b>
	415V, 3 Ph, 50Hz*	<b>853-0220</b>	<b>4,350.00</b>

\*Export only—no UL certificate.



**B**

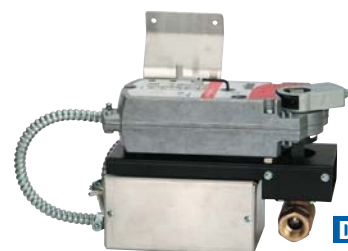


**C**

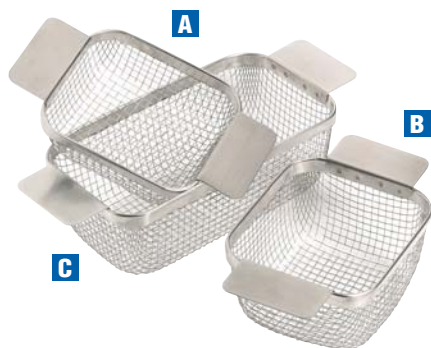
**D Auto-Blowdown Attachment – For Auto-6 and Auto-8.**

Drains the steamer tank automatically every night, keeping it clean for maximum life and reliable performance day after day. Activates when the steamer pressure drops to 15 PSI, opening the steamer valve and emptying the tank into your drain (steamer valve must be plumbed to drain). Refills tank automatically when steamer is turned on in the morning. Can be installed at time of purchase or retrofitted upon return of steamer to factory.

Description	Item#	Each
D. Auto-Blowdown for 120–240V, 60Hz units	<b>853-1075</b>	<b>\$865.00</b>
Auto-Blowdown for 240–415V, 50Hz units	<b>853-1076</b>	<b>865.00</b>



**D**



C



D



E



F



G



H

I



J

K



L

### A - C Stainless Steel Mesh Baskets

High-quality stainless steel mesh baskets with convenient handles that let you move jewelry pieces into and out of your ultrasonic cleaner with ease. Designed to fit many brands.

Approx. Overall Width	W x D x H	Item#	Each
A. 8"	5 $\frac{1}{4}$ " x 4 $\frac{3}{4}$ " x 2"	851-5099	\$31.99
B. 8"	5 $\frac{3}{8}$ " x 5" x 3 $\frac{1}{4}$ "	851-5101	36.99
C. 11 $\frac{1}{2}$ "	9" x 5" x 3 $\frac{3}{8}$ "	851-5121	39.99
13 $\frac{1}{2}$ "	11" x 5 $\frac{3}{8}$ " x 5 $\frac{1}{4}$ "	851-5126	68.00
13 $\frac{1}{2}$ "	11 $\frac{1}{8}$ " x 8 $\frac{3}{4}$ " x 4 $\frac{7}{8}$ "	851-5131	75.00

### D Universal Stainless Steel Mesh Basket

This basket hangs on the side with  $\frac{1}{2}$ " wide hooks. Has fine mesh for cleaning small parts and findings.

Description	W x D x H	Item#	Each
Universal Basket	5" x 4" x 1 $\frac{1}{2}$ "	851-5105	\$13.95

### E Extra-Fine Stainless Steel Mesh Basket

Features stainless steel frame with extra-fine stainless steel mesh that prevents even the smallest items from dropping to the bottom of your ultrasonic. Has two handles for fitting on many 2-, 3- and 6-quart units.

Description	Approx. Overall Width	W x D x H	Item#	Each
Extra-Fine Basket	8 $\frac{1}{2}$ "	4 $\frac{1}{2}$ " x 3" x 1 $\frac{1}{2}$ "	851-5097	\$14.75

### F Baskets

Baskets prevent parts from touching bottoms of tanks. Ends fit over edges of tanks. Rubber feet on lips eliminate vibration. All have screened bottoms. Stainless steel.

Approx. Overall Width	W x D x H	Item#	Each
7 $\frac{1}{4}$	5" x 4 $\frac{1}{2}$ " x 2 $\frac{3}{4}$ "	851-5100	\$78.00
10 $\frac{1}{2}$	8 $\frac{3}{8}$ " x 4 $\frac{1}{2}$ " x 3"	851-5110	92.00
10 $\frac{1}{2}$	8 $\frac{1}{8}$ " x 4 $\frac{1}{4}$ " x 4 $\frac{3}{4}$ "	851-5120	99.00
10 $\frac{1}{2}$	9 $\frac{3}{4}$ " x 5" x 5"	851-5125	112.00
13 $\frac{1}{2}$	10 $\frac{1}{8}$ " x 8 $\frac{1}{2}$ " x 4 $\frac{3}{4}$ "	851-5130	129.00

### G UltraBasket™

This unique combo basket features 16 hooks and fine plastic mesh to keep both large and small items from falling to the bottom of your ultrasonic. Includes plastic legs that can be easily trimmed to the ideal height and convenient handle for easy removal. Designed so most ultrasonics can accommodate two.

Description	Dia. x H	Item#	Each
UltraBasket	4 $\frac{7}{8}$ " x 3 $\frac{7}{8}$ "	851-5127	\$16.50

### H, I FitzAll Nylon Mesh Baskets

These baskets will never scratch or damage precious jewelry. Feature plastic frames with fine nylon mesh that prevents small items from dropping to the bottom of your ultrasonic. Choose from small and large sizes. The small basket has one 6 $\frac{1}{4}$ " handle and a flat end with two 1 $\frac{1}{4}$ " tabs for fitting on the edge of almost any unit—you can even place several across larger units. Measures 11 $\frac{3}{4}$ " long. The large basket has two handles for fitting on many 2-, 3- and 6-quart units. Measures 9 $\frac{1}{4}$ " long. Both can be stacked or hung on a wall.

Description	W x D x H	Item#	Each
H. Small Basket	4" x 2 $\frac{3}{4}$ " x 2"	851-4116	\$4.15
I. Large Basket	4 $\frac{1}{2}$ " x 3 $\frac{1}{2}$ " x 2"	851-4117	4.95

### J, K Small Parts Baskets

Stainless steel wire mesh baskets with plastic handles. Perfect for holding small parts in your ultrasonic or steamer. Available in two sizes.

Description	Dia.	Item#	Each
J. Small Basket	1 $\frac{1}{2}$ "	851-4110	\$3.45
K. Large Basket	2 $\frac{1}{2}$ "	851-4111	3.90

### L Screw-Type Parts Basket

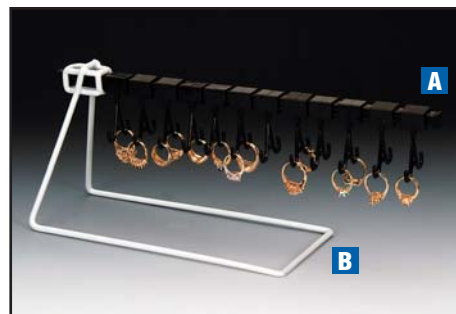
Tiny wire mesh basket for fully securing the smallest parts during ultrasonic cleaning. Prevents costly loss.

Description	Dia. x L	Item#	Each
Screw-Type Basket	$\frac{5}{8}$ " x $\frac{7}{8}$ "	851-4115	\$8.95

**A, B Deluxe Ultrasonic Ring Racks**

Easily assembled modular ring racks that can be easily customized to meet your needs. Steel rack with rubber feet rests on top of your ultrasonic, suspending hooks inside tank. Long-lasting solid plastic hooks adjust to hold both large and small items (each hook holds two rings). PVC-coated stand holds rack after rinsing, letting items drip-dry.

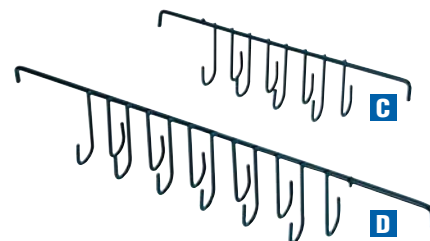
Description	Hooks	Length	Item#	Each
8 Hook Rack	8 (hold 16 rings)	11 <sup>3</sup> / <sub>4</sub> "	851-2050	\$6.55
A. 12 Hook Rack	12 (hold 24 rings)	14 <sup>3</sup> / <sub>4</sub> "	851-2052	8.20
B. Stand for Ring Rack	—	—	851-2055	9.95
Replacement Hook	(hold 2 rings)	—	851-2058	.78



**C, D Ultrasonic Ring Racks**

Durable plastic-coated wire ring racks with hanging hooks that measure approx. 2" long. Available in two sizes.

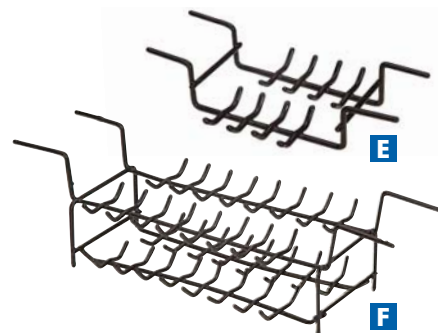
Description	Hooks	Overall Length	W x D	Item#	Each
C. Small Rack	8	8"	4 <sup>1</sup> / <sub>4</sub> " x 2"	851-4100	\$14.60
D. Large Rack	12	12"	5 <sup>1</sup> / <sub>2</sub> " x 2"	851-4105	17.50



**E, F Econo Ultrasonic Ring Racks**

These affordable ring racks feature heavy PVC coating and double-sided arms. Available in three sizes.

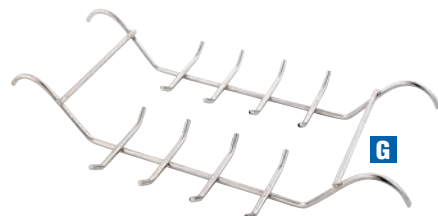
Description	Hooks	Overall Width	W x D x H	Item#	Each
E. Small Hanging Rack	16	8"	6" x 4 <sup>1</sup> / <sub>2</sub> " x 1 <sup>1</sup> / <sub>4</sub> "	851-4107	\$3.25
Medium Standing Rack	32	8"	5 <sup>1</sup> / <sub>4</sub> " x 4 <sup>1</sup> / <sub>2</sub> " x 4"	851-4108	4.25
F. Large Standing Rack	64	12"	9 <sup>1</sup> / <sub>8</sub> " x 4 <sup>1</sup> / <sub>2</sub> " x 3 <sup>1</sup> / <sub>2</sub> "	851-4106	5.95



**G Stainless Steel Ring Rack**

Stainless steel rack for holding up to 16 rings. Fits 6"-6<sup>1</sup>/<sub>2</sub>" wide tanks.

Description	Hooks	W x D x H	Item#	Each
Stainless Steel Ring Rack	16	7 <sup>3</sup> / <sub>4</sub> " x 4 <sup>1</sup> / <sub>2</sub> " x 1 <sup>3</sup> / <sub>8</sub> "	851-5921	\$5.85



**H Positioning Covers**

Prevent beakers from touching sides or bottoms of tanks. Supplied with rubber O-rings for holding 600ml beakers (see below) in place. All hold two beakers.

Fits Ultrasonic(s)	W x D	Item#	Each
D50	6 <sup>7</sup> / <sub>8</sub> " x 6 <sup>3</sup> / <sub>8</sub> "	851-5352	\$12.99
D87, 110, 110-2	10 <sup>1</sup> / <sub>2</sub> " x 6 <sup>1</sup> / <sub>2</sub> "	851-5353	14.50
D165	12 <sup>3</sup> / <sub>4</sub> " x 6 <sup>7</sup> / <sub>8</sub> "	851-5355	16.80
D270, D270-2	12 <sup>3</sup> / <sub>4</sub> " x 10 <sup>1</sup> / <sub>4</sub> "	851-5356	38.00



**I, J 600ml Beaker and Flexible Cover**

Safely holds ammonia, acids and other strong chemicals that can ruin your ultrasonic tank. Use positioning covers (see above) to suspend beakers in your ultrasonic cleaner.

Description	Item#	Each
I. Flexible Cover	210-2952	\$5.90
J. Beaker	210-2750	6.75





A

**A Long-Reach Tweezers**

Stainless steel tweezers ideal for holding pieces during cleaning. Feature heat-resistant plastic-covered tips that grip workpiece firmly without scratching. Measure 10" long.

Description	Item#	EACH Prices		
		1-2	3-9	10+
Long-Reach Tweezers	195-1900	\$7.95	\$7.16	\$6.76



B

**B Steamostat**

The perfect holder for steam cleaning. Features stainless steel box-joint construction with nonscratching PVC tips and lockable handles. Measures 7¼" long.

Description	Item#	EACH Prices		
		1-2	3-9	10+
Steamostat	181-5010	\$6.25	\$5.94	\$5.31



C

D

**C, D Small Parts Baskets**

Stainless steel wire mesh baskets with plastic handles. Perfect for holding small parts in your ultrasonic or steamer. Available in two diameters.

Description	Dia.	Item#	Each
C. Small Basket	1½"	851-4110	\$3.45
D. Large Basket	2½"	851-4111	3.90

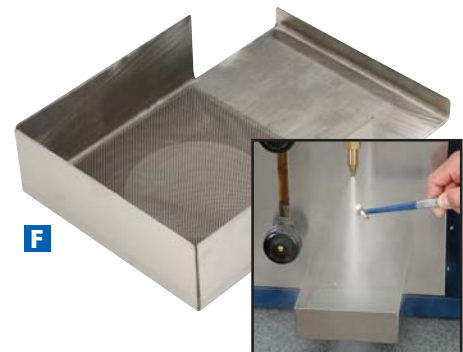


E

**E Steam Cleaning Basket**

Lets you clean stones and small parts thoroughly without fear of losing them. Has two different sides: fine stainless steel mesh side and solid stainless steel side with small hole for insertion of your steamer nozzle. Opens with squeeze of the handle. Measures 6¼" long.

Description	Dia.	Item#	Each
Steam Cleaning Basket	1½"	853-7099	\$3.20



F

**F Stone Saver Tray**

This stainless steel tray fits in our Deluxe Junior Steamer to catch all your dropped stones before they hit the floor. Measures 5" x 5" square.

Description	Item#	Each
Stone Saver Tray	853-0321	\$24.70



G

**G Ti-Research Stainless Steel Detergent**

This solvent-free detergent removes stubborn fingerprints and other contaminants from stainless steel surfaces of steamers and much more. Leaves behind a protective barrier with no streaks. Nontoxic and odorless. Sold in ready-to-use 100ml bottles. *Surfaces must be dry before application.*

Description	Item#	Each
Stainless Steel Detergent, 100ml	852-1260	\$8.00



H

**H Steam Cleaner Powder**

For removing rust and mineral deposits from boiler chamber of Deluxe Junior, Auto-6 and Auto-8 steamers (see p. 171). Comes in 4 oz. bottle sufficient for one cleaning, which should be done once a week.

Description	Item#	EACH Prices		
		1-2	3-9	10+
Steam Cleaner Powder, 4 oz.	853-1000	\$5.95	\$4.76	\$4.17



**A - E Speed Brite Ionic Cleaners**

Speed Brite units use a revolutionary ionic cleaning process to clean precious metal and stones in less than a minute. Safe for emeralds, opals, pearls, turquoise and other soft stones. Four units available: Large 9" x 5", Standard 200SB, Mini Speed Brite and Speed Brite Adapter. Large 9" x 5" has 1-qt. capacity. Features push-button to agitate solution for faster cleaning. Standard 200SB has 1/2-qt. capacity. Cleans gold and silver in seconds and also softens dirt behind stones. Mini Speed Brite has 6 oz. capacity. Fits easily on crowded countertops and can be resold to your customers for home use. Speed Brite Adapter clamps onto virtually any ultrasonic cleaner to add ionic power for higher cleaning efficiency.

Each unit comes with a generous supply of Gem Sparkle Concentrate, an environmentally safe cleaning solution formulated to gently remove dirt, grime and tarnish.

Description	Electrical	Item#	EACH Prices	
			1-2	3+
A. Large 9" x 5"	120V	851-4933	\$135.00	—
B. Standard 200SB	120V	851-4925	99.80	\$89.82
C. Mini Speed Brite	9V battery (included) or power adapter (see below)	851-4920	49.00	44.10
D. Speed Brite Adapter	120V	851-4928	105.45	—
Power Adapter for Mini	120V	851-4924	12.00	—
Description	Dia. x H	Item#	Each	
Stainless Steel Mesh Basket for 200SB	4" x 2"	851-4934	\$25.95	
Description	Item#		Each	
E. Gem-Sparkle, 4 oz.	851-4937		\$7.95	
Gem-Sparkle, 16 oz.	851-4930		9.95	
Gem-Sparkle, 32 oz.	851-4931		13.20	
Gem-Sparkle, 1 gallon	851-4932		26.00	



**F TENARIS Antitarnish Solution**

Efficient chemical solution for preventing oxygen in the air from tarnishing your silver. Leaves behind a colorless and invisible chemical barrier that remains effective over time. Effectively prevents tarnish not only on silver but also on low-karat gold and gold alloys. Use with distilled water at a 4:1 mixing ratio. No electrical current required. Chromium-free and nontoxic. UPS shippable with no hazardous charges. Sold by the liter.

Description	Mixing Ratio	Item#	Each
1 Liter Bottle	4:1	210-1359	\$79.00



**G JAX Silver Cleaner/Polisher**

Cleans and polishes the blackest silver in just one application. Will not strip, streak or dull, making it safe for use on even the most delicate surfaces. Sold by the pint.

Description	Item#	Each
1 pt. Bottle	210-1433	\$13.10



**H Dazzle™ Foaming Jewelry Cleanser**

Safely cleans all jewelry. Easy to use: just shake, place jewelry in cap, cover with Dazzle, let soak for 5–10 minutes, scrub with soft brush and rinse thoroughly under warm water. A great giveaway or resale item.

Description	Item#	Each
6 oz. Bottle	851-5309	\$9.95

**I Silver Man Polishing Set – Cleans and shines in seconds—no scrubbing**

Silver Man provides a fast, easy way to restore lustrous shine to sterling silver, silver plate, gold, gold plate, stainless steel and copper. Simply place Silver Man tray into a container or sink with hot water, add washing soda powder (two packets supplied; can be found in most supermarkets) to activate the tarnish removing action, and add your tarnished objects. The electrolytic reaction instantly draws the tarnish away from your silver in just seconds! Silver Man is economically priced for your own use and for resale to your customers. Nontoxic and nonabrasive. Tray measures 8"L x 6"W.

Description	Item#	EACH Prices		
		1-2	3-11	12+
Silver Man Polishing Set	820-0400	\$9.65	\$7.24	\$5.79





**A**



**B**

**A, B Supra Galvex Ultrasonic Cleaning Solution**

The most effective jewelry cleaner you'll ever use!

Supra Galvex Swiss Formula allows fast, thorough cleaning of precious metals, brass, stainless steel, titanium, zinc and more. This nonoxidizing polishing compound remover is free of complexing agents (EDTA), silicates, phosphates and alkaline hydroxides. Imported from Switzerland. Concentrated: use 50:1 in tap water, 100:1 in distilled or deionized water.

Description	Yield at 100:1	Item#	EACH Prices	
			1-5	6+
1 pt. Bottle	12.5 gals.	<b>851-5301</b>	<b>\$17.50</b>	<b>\$15.75</b>
<b>A.</b> 1 qt. Bottle	25 gals.	<b>851-5302</b>	<b>24.50</b>	<b>19.60</b>
1 gal. Bottle	100 gals.	<b>851-5307</b>	<b>66.00</b>	—
<b>B.</b> 5 gal. Pail	500 gals.	<b>851-5304</b>	<b>325.00</b>	—



**C**



**D**

**C, D Gesswein® Ultrasonic Cleaning Solution**

Improves performance of your ultrasonic cleaner, reducing cleaning time. Cleans without using harsh chemicals that can damage your ultrasonic tank, such as ammonia. In fact, it inhibits rust, so it actually helps protect your parts and tank. Contains no phosphates, which thicken with use and shorten solution life. Gives you a long-lasting supply for your money at 40:1 concentration. Won't irritate eyes or nose. Complies with water treatment regulations for direct disposal into sewage. Meets OSHA standards.

Description	Yield at 40:1	Item#	EACH Prices	
			1-5	6+
1 pt. Bottle	5 gals.	<b>851-5303</b>	<b>\$14.80</b>	<b>\$13.32</b>
<b>C.</b> 1 qt. Bottle	10 gals.	<b>851-5300</b>	<b>23.60</b>	<b>18.88</b>
1 gal. Bottle	40 gals.	<b>851-5308</b>	<b>81.00</b>	—
<b>D.</b> 5 gal. Pail	200 gals.	<b>851-5305</b>	<b>290.00</b>	—

Ask for bulk pricing.



**E**

**E OrganiClean® – Organic-Based Ultrasonic Soap Concentrate**

A very effective yet safe low-foaming concentrate for removal of polishing compounds, finger grease and other contaminants. Restores brilliance of fine jewelry without harming metals or stones. Gentle on hands due to neutral pH of 7 and organic-based formulation. Use a mixing ratio of 128:1 to 40:1 for best results. Nontoxic and biodegradable. Emits no harsh fumes or vapors. Pleasant, mild aroma.

Description	Yield at 40:1	Item#	Each
<b>E.</b> 1 qt. Bottle	10 gals.	<b>851-5363</b>	<b>\$19.50</b>
1 gal. Bottle	40 gals.	<b>851-5362</b>	<b>66.00</b>
5 gal. Pail	200 gals.	<b>851-5361</b>	<b>260.00</b>



**F**

**F Magic Green – Powdered Ultrasonic Soap Concentrate**

Magic Green is more economical and occupies much less space than liquid concentrates. Saves on shipping costs, too. And since it won't evaporate, it even keeps longer. Just mix 1 gal. of water with 1 oz. of powder to formulate a fast-acting solution. Perfect for gold and silver because it removes rouge and tripoli instantly. Ammonia-free and biodegradable.

Description	Mixing Ratio	Item#	EACH Prices	
			1-5	6+
32 oz. Bottle	1 oz./gal.	<b>812-0701</b>	<b>\$17.95</b>	<b>\$16.16</b>



**G**

**G Drum Pump – For 5-, 15-, 30- and 51-gallon drums.**

A reusable plastic pump that makes it easy to dispense ultrasonic cleaning solution from any standard-size drum. Saves you from having to lift or tilt heavy, awkward containers. Lets you take advantage of bulk pricing. Features raised spout that dispenses liquid at a convenient height. Includes adapters and extension tubing to fit standard 5-, 15-, 30- and 51-gallon drums. Adjusts to dispense exact quantities of 4, 8, 12 or 16 av. oz.

Description	Item#	Each
Drum Pump	<b>852-0942</b>	<b>\$69.00</b>

**A - C Gesswein® Brite Ultrasonic Cleaning Solutions**

**Pick the right solution for every cleaning application.**

Three concentrated solutions formulated for specific jewelry applications. All three work well for ultrasonic cleaning, hand brushing and immersion or soak cleaning. Contain no chelating agents. Can be used from room temperature up to 160°F. Use in concentration of 2–20% for best results. Available in 1-quart bottles, 5-gallon pails and 55-gallon drums.

**Brite** (blue) is a moderately alkaline solution best suited for cleaning plain or stone-set rings (excluding those with delicate stones). Ideal for gold, silver and platinum as well as copper and brass. Perfect for everyday use in the retail store or repair shop.

**Supra Brite** (green) is a neutral pH solution containing special additives for cleaning delicate stones without harming them. Designed primarily for immersion cleaning or hand cleaning with a soft brush, Supra Brite is safe for opals and other fragile stones that cannot withstand ultrasonic cleaning or harsh chemicals. Supra Brite can also be used in an ultrasonic for light cleaning jobs on precious metals and aluminum.

**Ultra Brite** (pink) is a heavy-duty cleaning solution designed to quickly remove the most stubborn polishing compound residue. We think Ultra Brite is the strongest cleaner on the market, and it's free of ammonia and other harmful chemicals that could hurt your fine jewelry. Ultra Brite is ideal for all precious metals and stainless steel as well as diamonds and other stones that can withstand normal ultrasonic cleaning.



**A**



**B**



**C**

Description	Item#	1 qt. Bottle	Item#	5 gal. Pail	Item#	55 gal. Drum
A. Brite	851-5311	\$16.25	851-5312	\$189.85	851-5313	\$1,527.00
B. Supra Brite	851-5314	17.50	851-5315	199.30	851-5316	1,658.25
C. Ultra Brite	851-5317	17.65	851-5318	227.00	851-5319	1,949.00

**D BCR Cleaner – Original buffing compound remover.**

A fast-acting alkaline cleaning solution developed especially for the removal of buffing compounds such as tripoli, white diamond and rouge. Works effectively on gold, platinum, silver, steel, stainless steel, zinc, magnesium, brass, copper and aluminum. Exceptional rinsability eliminates hand wiping and streaking.

Description	Item#	Each
D. 1 gal. Bottle	812-0650	\$29.95
5 gal. Pail	812-0655	134.75
19 gal. Drum	812-0656	332.00
51 gal. Drum	812-0660	819.00



**D**

**E BCR Plus – Extra-strong buffing compound remover.**

Ideal for your toughest cleaning jobs. Works effectively on gold, platinum, silver, steel, stainless steel, zinc, magnesium, brass, copper and aluminum. Concentrated: use 3–20% by volume depending on extent of compound buildup. Exceptional rinsability eliminates hand wiping, streaking and discoloration.

Description	Item#	Each
E. 1 gal. Bottle	812-0670	\$28.75
5 gal. Pail	812-0675	132.00
15 gal. Drum	812-0680	290.00
51 gal. Drum	812-0685	790.00



**E**

**F Liquid Cleaner #52 – Concentrated polishing compound remover.**

An all-purpose alkaline detergent. Concentrated: use just 2–4 ounces per gallon of water. One gallon of concentrate makes approximately 40 gallons of solution.

Description	Item#	Each
F. 1 gal. Bottle	812-0600	\$19.60
5 gal. Pail	812-0500	71.95



**F**





A

### A ODX Organic-Based Degreaser

This water-soluble degreaser provides a safe, effective way to prepare wood, metal, plastic or glass surfaces for gluing. Also removes excess glue or epoxy up to maximum setting time of adhesive. Organic-based, nontoxic and biodegradable, no harmful vapors, no residue.

Description	Item#	Each
2 oz. Spray Bottle	812-0695	\$8.99
Case of 12 Bottles with Display	812-0206	97.00



B

### B Glitz Organic-Based Jewelry Shiner

Employs organic cleaning agents and surfactants to clean, shine and protect your customers' jewelry. Contains no ammonia or other harsh chemicals. Safe for costume, fashion, metal, rhinestone and even opal jewelry due to its neutral pH. To use, just spray on and wipe off with soft cleaning cloth. Maintains brilliance with regular application.

Description	Item#	Each
2 oz. spray bottle	812-0690	\$7.99
Case of 12 bottles with Display*	812-0691	57.48

\*Two-case minimum order. Price reflects 40% savings off total price of individual bottles.



C

### C Jewelry Shield™ – Eliminates allergic reactions!

This specially formulated, completely transparent liquid coats jewelry to shield sensitive skin from metallic irritation. Prevents skin discoloration. Lets your customers wear all types of jewelry with complete comfort and confidence. Works on rings, pierced and clip-on earrings, bracelets, watches, eyeglasses and more. Easy to use: just apply one coat to metal parts of jewelry that will touch skin, let dry 20 minutes, repeat procedure as needed (pierced earrings will need 2-3 coats), then let dry completely overnight. Comes off with nail polish remover.

Description	Item#	Each
Case of 12 bottles with display	210-1510	\$43.95

### D Sprits Citrus Mold Cleaner

A great general-purpose cleaner for removing release agents, greases, oils, fingerprints and other contaminants from molds, tools and machines. Biodegradable.

Description	Item#	Each
Citrus Mold Cleaner, 12 fl. oz. can	816-2932	\$6.70
Citrus Mold Cleaner, case of 12	816-2939	77.00

### E Sprits Mold Cleaner/Degreaser

A powerful all-purpose cleaner and degreaser for molds, tools and machines. Ideal for post-run use. Nonflammable.

Description	Item#	Each
Mold Cleaner/Degreaser, 12 fl. oz. can	816-2933	\$6.70
Mold Cleaner/Degreaser, case of 12	816-2940	77.00

### F Sprits Hi-Purity Mold Cleaner

Contains an odorless solvent that removes release agents, greases and oils from molds, tools and machines. FDA regulated.

Description	Item#	Each
Hi-Purity Mold Cleaner, 12 fl. oz. can	816-2935	\$5.95
Hi-Purity Mold Cleaner, case of 12	816-2942	67.95

### G Sprits Mold Protectant

Contains three components that neutralize fingerprints, condensation and corrosion on molds, tools and machines. Helps safeguard all metals. Use one light coat to protect for a few weeks, two light coats to protect for a year.

Description	Item#	Each
Mold Protectant, 12 fl. oz. can	816-2934	\$5.95
Mold Protectant, case of 12	816-2941	67.95



D



E



F



G



**A Quatro Fresh-Air Series HEPA Air Purifiers**

Ensure optimal gold recovery and air quality.

Polishing operations and bench work create a great deal of dust, some precious, some harmless and some toxic. Many dust collectors pick up much of the dust at the source, but jewelry polishing operations also allow a substantial amount of dust to become airborne and settle around the shop. Quatro HEPA Air Purifiers capture airborne dust and other contaminants before they settle in an advanced three-stage filtration system, then recirculate clean air back into the room. All units provide complete room air exchange approx. 15 times per hour. Each includes smooth-rolling casters for easy relocation to dustiest areas. Electrical: 120V (240V available). Optional odor filter available by special order. Backed by a 2-year manufacturer's warranty.

**Filtration System Features:**

- Stage-1 Prefilter – Captures the biggest particles, prolonging the life of subsequent filters. Inexpensive and easy to change.
- Stage-2 HiCap Filter – Provides high-capacity particle retention. (Most precious metal will be captured by stage-1 and stage-2 filters, which can be sent to your refiner for reclamation.)
- Stage-3 HEPA Filter – Picks up 99.97% of 0.3 micron particulate, including soot and pollen. Recirculates clean air back into the room to help minimize heating and AC costs.

Description	Dimensions (W x D x H)	Max. Room Size (Sq. Feet)*	Amperage Draw	Item#	Each
Model 400	13" x 16" x 28½"	250	0.6	<b>854-1523</b>	<b>\$920.00</b>
<b>A.</b> Model 600	22" x 16" x 37"	400	1.0	<b>854-1522</b>	<b>1,640.00</b>
Model 1000	22" x 16" x 52"	600	1.6	<b>854-1521</b>	<b>2,000.00</b>
Model 2000	24" x 26" x 71"	1200	5.4	<b>854-1520</b>	<b>3,135.00</b>

Replacement filters available.

\*Based on 8' ceiling.



**A**

**B Quatro Ductless Fume Hoods**

Ideal for jewelers located in offices without access to outside ductwork. Feature a two-stage filtration system that captures fumes, then recirculates clean air back into the room to save on heating and AC costs. Burnout fume hood installs right on wall behind burnout furnace. Rhodium fume hood installs directly over plating area. Each has a metal-frame filter container that holds an activated charcoal media mixture specifically formulated for the respective application. Electrical: 120V, 1.6A, 60Hz. Measures 28"W x 18"D x 26"H. Backed by a two-year manufacturer's warranty. Media refills available (each contains enough mixture for four refills).

Description	Item#	Each
<b>B.</b> Burnout Fume Hood	<b>854-1525</b>	<b>\$1,130.00</b>
Rhodium Fume Hood	<b>854-1526</b>	<b>1,130.00</b>
Media Refills (4) for Burnout Filter	854-1527	207.00
Media Refills (4) for Rhodium Filter	854-1396	145.00



**B**

**C Quatro AirStream**

Perfect for small shops because it mounts on the wall instead of taking up precious floor space. Features an advanced filtration system that captures airborne dust, odors and other contaminants down to 0.3 microns. Recirculates clean air back into the room. Provides 100% air exchange approx. 15 times per hour. Suitable for rooms up to 200 sq. ft. in size (based on 8' ceiling). Includes easy-to-use electronic controls and filter replacement alert. Electrical: 120V, 1.0A, 60Hz. Measures 16¾"W x 9¾"D x 23½"H.

**Filtration System Features:**

- Dust/Odor Filter – Advanced fine-grade dust filter impregnated with activated carbon.
- HEPA Filter – Picks up 99.97% of 0.3 micron particulate, including soot and pollen. Recirculates clean air back into the room to help minimize heating and AC costs.

Description	Item#	Each
<b>C.</b> Quatro AirStream	<b>854-2099</b>	<b>\$895.00</b>
Replacement Dust/Odor Filters (6)	854-2098	40.00
Replacement HEPA Filter	854-2093	117.00



**C**



### A Quatro SolderPure Fume and Particulate Extractor

Ideal for brazing, dedrossing, electroforming, electroplating, laser cutting, marking and soldering applications. Removes acid activator, electrocleaner, rhodium, solder, solvent and wax fumes from the air before you breathe them (not suitable for cyanide).

Features a four-stage filtration system that captures fumes and particulate down to 0.3 micron: prefilter captures large particles to extend life of three subsequent filters; high-capacity dust filter captures small particulate; advanced media filter formulated for specific applications captures fumes; HEPA filter captures smallest particulate down to submicron levels.

Returns 99.97% clean air to your workplace, making outside ventilation unnecessary. Includes capture hood with flex arm, which can be flexed and rotated 360° to accommodate any soldering or plating layout. Includes table bracket and 8' flex hose that can be cut to desired length for remote location as well as casters for good mobility. Installs quickly and easily. Backed by a two-year manufacturer's warranty. Made in Canada.

#### Features:

- Three models to choose from based on your specific application
- Four-stage filtration system for capturing fumes and particles at the source before they disperse throughout the room
- Extremely quiet, maintenance-friendly design with easy-to-change filters
- Capture hood on flexible arm for 360° positioning
- Table bracket and 8' flex hose for remote location and casters for mobility
- Fused on/off controls

#### Specifications:

Electrical	120V, 1A, 60Hz
Airflow	125 CFM
Noise Level	52 dBA
Dimensions	13"W x 16"D x 20"H

Description	Item#	Each
SolderPure for Rhodium, Electrocleaner, & Soldering Fumes	<b>854-1375</b>	<b>\$1,325.00</b>
<b>A.</b> SolderPure for Rhodium & Electrocleaner Fumes	<b>854-1387</b>	<b>1,246.00</b>
SolderPure for Soldering & Wax Fumes	<b>854-1376</b>	<b>1,195.00</b>
Optional Odor Filter	<b>854-1378</b>	<b>105.00</b>
Optional 3" Plastic Blast Gate for multi-station use	<b>854-1374</b>	<b>32.00</b>
Replacement Capture Hood with Flex Arm	854-1377	187.00
Replacement Prefilters, pkg. of 6	854-1393	24.00
Replacement Dust Filters, pkg. of 8	854-1394	47.00
Replacement Rhodium Filter Assembly	854-1379	145.00
Replacement HEPA Filter	854-2093	117.00
Media Refill (4) for Rhodium models	854-1396	145.00
Media Refill (4) for Soldering & Wax model	854-1409	105.00



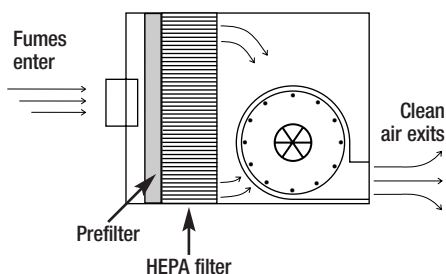
### B Air Cleaning System 250

#### Compact benchtop unit for removing hazardous fumes.

This compact, lightweight and portable air cleaning system pays for itself by filtering and returning your heating and cooling air back into your shop. Efficiently filters welding and soldering fumes and smoke and dust from grinding ceramic, rubber, plastic and graphite. No outside ventilation or additional ductwork required. Features HEPA filter that is 99.97% efficient for 0.3 micron or larger particles (meeting or exceeding OSHA and EPA standards), so it returns absolutely clean air to your workplace. Comes complete with collector box, three prefilters, HEPA filter (installed), round suction hood with base, 10' of duct hose and two hose clamps. Powerful blower accommodates up to 30' of duct hose with minimal loss of power. Indicator light alerts operator of necessary filter maintenance.

#### Specifications:

Electrical	115V, 14A, 60Hz (230V available)
Airflow	250 CFM
Noise	80 dBA
Dimensions	13"W x 13"D x 12"H



Description	Item#	Each
<b>B.</b> Air Cleaner System 250	<b>831-2000</b>	<b>\$890.00</b>
Optional Charcoal Filter	<b>831-2002</b>	<b>41.75</b>
Replacement HEPA Filter	831-2010	130.00
Replacement Prefilters, set of 3	831-2005	9.00

## A - H Compressed Air Filters

Compressed air filters remove water, oil, dirt and dust from compressed air. These contaminants can cause rust or premature wear in air handpieces, clogged lines in sandblasters or wax contamination in injectors. Even if your air compressor has an outlet filter, a long air line allows water vapor to condense downstream. To prevent contamination problems, install filters in the air line as close as possible to the air-driven tool, sandblaster or wax pot. Gesswein filters feature screw-on transparent polycarbonate bowls with automatic drains. Bowls are easily disassembled for cleaning without removal from the air line. Filters have 1/4" ports unless otherwise specified.

### A, B Miniature Filter/Regulator/Lubricator Assembly – For air handpieces.

Combines functions of filter, regulator and lubricator. General-purpose filter removes solid and liquid particles down to 5 microns. Regulator allows outlet pressure adjustment from 5 to 100 PSI. Micro-fog lubricator provides oil mist to lubricate moving parts of air handpieces. Has 1 oz. reservoir. Use optional bracket to mount on wall or bench. Maximum inlet pressure: 150 PSI. Ports: 1/8".

Description	Item#	Each
A. Filter Assembly	850-7349	\$115.00
B. Mounting Bracket	850-7335	9.30
Lube Oil, 8 oz.	850-0985	18.50
Replacement Filter	850-7369	8.65



### C, D Miniature Prefilter/Coalescing Filter Assembly

Ideal for applications requiring dry and extremely clean air. Designed for air compressors rated up to 3.5 CFM. Prefilter removes liquid and solid particles down to 5 microns; coalescing filter removes particles down to 0.01 micron. Use optional bracket to mount on wall or bench. Maximum inlet pressure: 150 PSI. Ports: 1/4".

Description	Item#	Each
C. Filter Assembly	850-7353	\$94.00
D. Mounting Bracket	850-7359	7.25
Replacement Prefilter (white)	850-7337	11.90
Replacement Coalescing Filter (green)	850-7357	42.95



### E, F Miniature Filter/Regulator

Combines the functions of filter and regulator. Filter removes solid and liquid particles in compressed air down to 5 microns. Regulator allows outlet pressure adjustment from 5 to 100 PSI. Maintains nearly constant outlet pressure despite changes in inlet pressure. Use optional bracket to mount on wall or bench. Maximum inlet pressure: 150 PSI. Ports: 1/4".

Description	Item#	Each
E. Filter Assembly	850-7333	\$68.75
F. Mounting Bracket	850-7335	9.30
Replacement Filter	850-7369	8.65



### G, H Large Prefilter/Coalescing Filter Assembly

Designed for large air compressors rated up to 15 CFM. Ideal for applications requiring greater airflow. Prefilter removes liquid and solid particles down to 5 microns; coalescing filter removes particles down to 0.01 microns. Requires regulator for use with most air tools. Use optional bracket to mount on wall or bench. Maximum inlet pressure: 150 PSI. Ports: 1/4".

Description	Item#	Each
G. Filter Assembly	850-7355	\$125.00
H. Mounting Bracket	850-7367	23.50
Replacement Prefilter (white)	850-7337	11.90
Replacement Coalescing Filter (green)	850-7365	57.95





**A Silent Air Compressor – Quiet yet powerful!**

So quiet you'll barely know it's there. Makes about as much noise as a refrigerator, so you can keep it under your table and work without distraction. Features powerful 1/2 HP motor that provides over 2 CFM of air. Handles up to 10 large Wax Injectors. Fully automatic. Includes handle for easy carrying. Measures 13" dia. x 25"H. Weighs 58 lbs. Made in USA. Filter, regulator and/or lubricator might be required between the compressor and air tool (see p. 181). Accepts 1/4" male fittings (see below).

**Features:**

- Tank and line pressure gauge
- Line pressure regulator
- Moisture trap and filter
- Safety valve
- Air-intake filter

**Specifications:**

Motor	1/2 HP
Max. Pressure	114 PSI
Tank Capacity	4 gals.
Displacement	2.15 CFM
Noise Level	40 dB

Description	Electrical	Item#	Each
A. Silent Air Compressor	110V	<b>265-3100</b>	<b>\$1,325.00</b>
	220V, 50/60Hz	<b>265-3102</b>	<b>1,375.00</b>
Replacement Oil, 22 oz.		265-3103	22.95



**B Quiet Air Compressor**

The ideal unit for anyone who wants an affordable, quiet, long-lasting air compressor. Features a 1/2 HP motor that provides 1.8 CFM of air. Designed for continuous operation. Very well-balanced to resist walking. Electrical: 110V. Measures 16.5"W x 8"D x 16.8"H. Weighs 26 lbs. Made in USA. Filter, regulator and/or lubricator might be required between the compressor and air tool (see p. 181). Accepts 1/4" male fittings (see below).

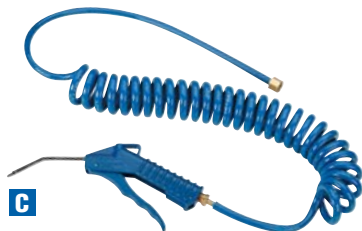
**Features:**

- Runs quietly for indoor operation.
- Offers high airflow delivery.
- Rated for continuous use.
- Balanced to prevent walking.
- Requires no oil.

**Specifications:**

Motor	1/2 HP
Max. Pressure	125 PSI
Tank Capacity	2 gals.
Displacement	1.8 CFM
Noise Level	60 dB

Description	FOB Point	Item#	Each
Quiet Air Compressor	CT	<b>265-3105</b>	<b>\$395.00</b>
	WI	<b>265-3106</b>	<b>415.00</b>



**C Air Gun with Self-Coiling Hose**

A high-quality blow gun with responsive spring-loaded trigger. Produces a very narrow air stream on-demand. Includes convenient self-coiling 1/4" hose and 1/4" NPT coupler. Gun tip extends roughly 4" out of molded plastic handle.

Description	Item#	Each
Air Gun with Self-Coiling Hose	<b>265-2325</b>	<b>\$47.00</b>



**D - O Quick Disconnect Air Hose and Fittings**

Sturdy 1/4" O.D. nylon air hose with .040" wall thickness and a collection of timesaving quick-disconnect fittings. To connect, just push air hose into fitting—it automatically locks in place. To disconnect, push back plastic ring on fitting and pull air hose out. The 1/4" and 1/8" male fittings work with a variety of sandblasters, wax injectors, sprue cutters and more. Use 1/4" males for air filters, regulators and vacuum pumps.

Description	Item#	Per Foot
D. Nylon Air Hose, 1/4" O.D.	<b>265-2286</b>	<b>\$ .94</b>



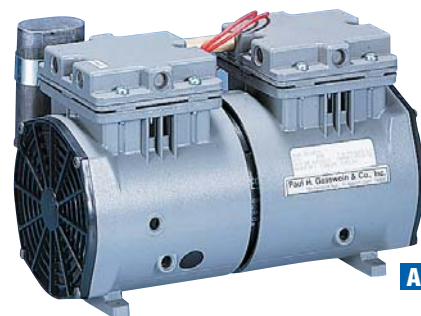
Description	Item#	Each
E. QD Connector, Male, 1/4"	<b>265-2276</b>	<b>\$6.85</b>
F. QD Swivel Elbow, Male, 1/4"	<b>265-2293</b>	<b>7.05</b>
G. QD Elbow, Male, 1/4"	<b>265-2288</b>	<b>7.80</b>
H. QD Swivel Elbow, Male, 1/8"	<b>265-2291</b>	<b>5.96</b>
I. QD Swivel T-Connector, Male, 1/4"	<b>265-2278</b>	<b>7.70</b>
J. QD Connector, Male, 1/8"	<b>265-2277</b>	<b>3.75</b>
K. Nipple Reducer, 1/4"-1/8"	<b>265-2289</b>	<b>2.65</b>
L. Plug for QD 1/4" Connectors	<b>265-2283</b>	<b>1.60</b>
M. Coupling, Female, 1/4" to 1/4"	<b>265-2284</b>	<b>2.75</b>
N. QD Union (Straight), 1/4"	<b>265-2282</b>	<b>4.65</b>
O. QD Union T, 1/4"	<b>265-2281</b>	<b>6.65</b>



### A Oil-less Vacuum Pump

A quiet, efficient oil-less 1/4 HP unit designed for continuous use with your wax injector. Creates 29.9" Hg of vacuum. Recommended when maximum vacuum is the critical factor (i.e., when injecting large, complex or filigree molds). Runs cool and has few moving parts for minimal maintenance. Includes thermal overload protector with auto-reset. Measures 10"L x 6"W x 7"H. Ship. wt: 15.5 lbs.

Description	Electrical	Item#	Each
A. Oil-less Vacuum Pump	115V, 4A, 60Hz	<b>265-2255</b>	<b>\$699.00</b>
Oil-less Vacuum Pump	230V, 1.6A, 1 Ph, 50Hz	<b>265-2256</b>	<b>665.00</b>
Repair Kit (two required)		<b>265-2258</b>	<b>108.25</b>



**A**

### B Busch™ Rotary Vane Vacuum Pumps

Oil-sealed, air-cooled direct-drive pumps excellent for applications in which the vacuum source must be reliable and unobtrusive. Operate quietly with low vibration. Each includes inlet filter assembly.

The 1/4 HP Vacuum Pump #15 provides 15 CFM free air displacement. Ideal for use with VacuVest #10. Measures 17"L x 10 1/2"W x 9"H. Ship. Wt: 60 lbs. The 2 HP Vacuum Pump #28 provides 28 CFM free air displacement. Ideal for use with VacuVest #20. Measures 28"L x 15"W x 10 1/2"H. Ship. wt: 165 lbs.

Description	Electrical	Item#	Each
B. Vacuum Pump #15	220V, 1 Ph, 60Hz	<b>265-2386</b>	<b>\$2,200.00</b>
Vacuum Pump #15	220V, 1 Ph, 50Hz	<b>265-2388</b>	<b>2,790.00</b>
Vacuum Pump #28	115/230V, 1 Ph, 60Hz	<b>265-2381</b>	<b>3,550.00</b>
Vacuum Pump #28	230V, 3 Ph, 50/60Hz	<b>265-2387</b>	<b>3,170.00</b>
Oil for #15, 1 qt.		265-1708	32.00
Oil for #28, 1 qt.		265-1707	8.65



**B**

### C Vacuum Pump – For standard flasks.

A 1/3 HP unit for removing air bubbles from investment or pulling gases from flasks during casting so that molten metal can flow quickly into cavities. Electrical: 115V, 1 Ph, 60Hz. Measures 14 1/4"L x 5 1/2"W x 11 1/2"H. Ship. wt: 30 lbs.

Description	Item#	Each
Vacuum Pump	<b>265-1757</b>	<b>\$397.50</b>



**C**

### Flushing Oil (not shown)

For optimal service and long life from your vacuum pump, use flushing oil once a year. Just drain all the old oil, fill to normal level with flushing oil, run pump for 30 minutes, drain flushing oil, then fill with appropriate vacuum pump oil. Sold in 1 qt. container.

Description	Item#	Each
Flushing Oil, 1 qt.	<b>265-1706</b>	<b>\$23.50</b>

### D, E Barbed Fitting and Worm Drive Clamp

Fitting works with most wax injectors and small vacuum pumps. Worm drive clamp fastens air hose securely to fitting.

Description	Item#	Each
D. Worm Drive Clamp	<b>265-2274</b>	<b>\$3.65</b>
E. Barbed Fitting, 1/4" NPT	<b>265-2272</b>	<b>5.95</b>



**D**

**E**

### F Reinforced Air Hose

Sturdy 1/4" I.D. rubber air hose reinforced to withstand air pressures up to 250 PSI. Use for compressed air and vacuum pumps. Works with barbed fittings. Sold by the foot.

Description	Item#	Per Foot
Reinforced Air Hose	<b>265-2273</b>	<b>\$2.50</b>



**F**

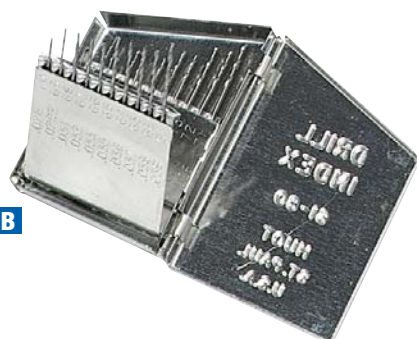


**A**

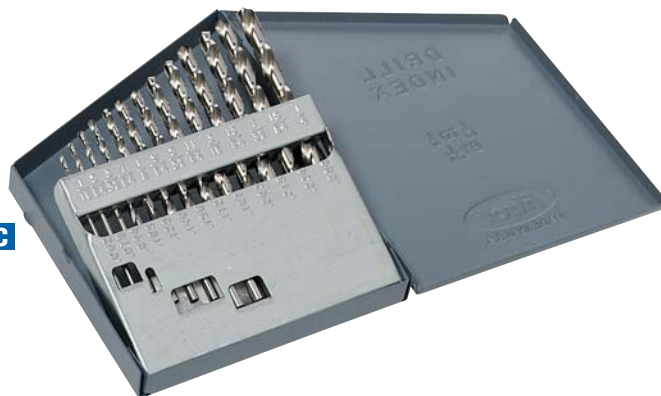
**A Blue Ribbon™ High-Speed Twist Drills – Made in USA.**

Jobbers length drills made of the finest high-speed steel, heat-treated to 63–65 HRC and precision-ground to a tolerance of +.0003" for a perfect hole every time. Great on all metals, even surgical steel. Checked under a 20X microscope before shipping. Sold by the dozen.

Size	Dia. (inches)	Item#	DZ. Prices	
			1-11	12+
50	.070	155-0500	\$14.75	\$13.28
51	.067	155-0510	14.75	13.28
52	.0635	155-0520	14.75	13.28
53	.0595	155-0530	14.75	13.28
54	.055	155-0540	14.75	13.28
55	.052	155-0550	14.75	13.28
56	.0465	155-0560	14.75	13.28
57	.043	155-0570	14.75	13.28
58	.042	155-0580	14.75	13.28
59	.041	155-0590	14.75	13.28
60	.040	155-0600	14.75	13.28
61	.039	155-0610	14.75	13.28
62	.038	155-0620	14.75	13.28
63	.037	155-0630	14.75	13.28
64	.036	155-0640	14.75	13.28
65	.035	155-0650	14.75	13.28
66	.033	155-0660	14.75	13.28
67	.032	155-0670	14.75	13.28
68	.031	155-0680	14.75	13.28
69	.0292	155-0690	16.60	14.94
70	.028	155-0700	16.60	14.94
71	.026	155-0710	20.20	18.18
72	.025	155-0720	20.20	18.18
73	.024	155-0730	20.20	18.18
74	.0225	155-0740	20.20	18.18
75	.021	155-0750	20.20	18.18
76	.020	155-0760	20.20	18.18
77	.018	155-0770	20.20	18.18
78	.016	155-0780	20.20	18.18
79	.0145	155-0790	24.55	22.10
80	.0135	155-0800	24.55	22.10



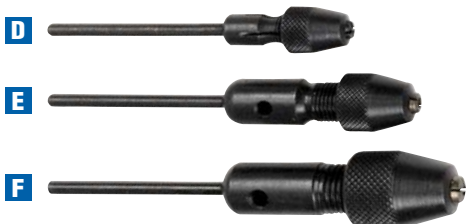
**B**



**C**

**B, C Blue Ribbon™ High-Speed Twist Drill Sets**

Description	Item#	Each
<b>B.</b> 20-Piece Set with case (sizes 61–80)	155-2030	\$39.30
20-Piece Set (sizes 61–80)	155-2020	34.50
<b>C.</b> 13-Piece Set with case (1/16"–1/4" sizes by 1/64" increments)	155-2038	28.50
13-Piece Set (1/16"–1/4" sizes by 1/64" increments)	155-2035	23.30
12-Piece Set (sizes 55, 57, 60, 62, 64, 65, 66, 68, 70, 72, 73 and 75)	155-2010	16.25
Metal Index Case for sizes 61–80	155-2000	7.15



**D**

**E**

**F**

**D - F Adapter Chucks – 3/32" Shank**

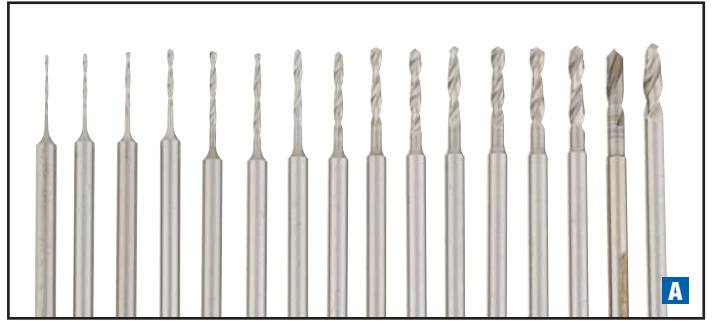
Allow you to use tools with small shanks in standard flex shaft handpieces. Threads are right-hand.

Description	Item#	Each
<b>D.</b> 1.00mm Chuck	840-3210	\$12.50
<b>E.</b> 2.62mm Chuck	840-3220	12.65
<b>F.</b> 2.77mm Chuck	840-3230	14.50

**A Busch® High-Speed Metric Twist Drills – 3/32" Shank**

Made of high-speed steel. More durable than tungsten vanadium steel on hard metals such as white gold, platinum, surgical steel and more.

Diameter		Item#	EACH Prices		
(mm)	(inches)		1-71	72-143	144+
0.50	.0197	122-6992	\$5.95	\$5.06	\$4.76
0.60	.0236	122-6993	5.95	5.06	4.76
0.70	.0276	122-6994	5.95	5.06	4.76
0.80	.0315	122-6995	5.95	5.06	4.76
0.90	.0354	122-6996	5.95	5.06	4.76
1.00	.0393	122-6997	5.95	5.06	4.76
1.10	.0433	122-6998	5.95	5.06	4.76
1.20	.0472	122-6999	5.95	5.06	4.76
1.30	.0512	122-7000	5.95	5.06	4.76
1.40	.0551	122-7001	5.95	5.06	4.76
1.50	.0591	122-7002	5.95	5.06	4.76
1.60	.0630	122-7003	5.95	5.06	4.76



**B Busch® Metric Twist Drills – 3/32" Shank**

Made of tungsten vanadium steel. For handpieces with 3/32" collets. Sold in multiples of six.

Diameter		Item#	EACH Prices		
(mm)	(inches)		6-66	72-138	144+
0.50	.0197	122-7005	\$2.39	\$2.03	\$1.91
0.60	.0236	122-7006	2.39	2.03	1.91
0.70	.0276	122-7007	2.39	2.03	1.91
0.80	.0315	122-7008	2.39	2.03	1.91
0.90	.0354	122-7009	2.39	2.03	1.91
1.00	.0393	122-7010	2.39	2.03	1.91
1.10	.0433	122-7011	2.39	2.03	1.91
1.20	.0472	122-7012	2.39	2.03	1.91
1.40	.0551	122-7014	2.39	2.03	1.91
1.50	.0591	122-7015	2.39	2.03	1.91
1.60	.0630	122-7016	2.39	2.03	1.91
1.70	.0669	122-7017	2.39	2.03	1.91
1.80	.0709	122-7018	2.39	2.03	1.91
1.90	.0748	122-7019	2.39	2.03	1.91
2.10	.0827	122-7021	2.39	2.03	1.91
2.30	.0906	122-7023	2.39	2.03	1.91



**C Busch® Metric Twist Drill Set**

Includes 0.60, 0.70, 0.80, 0.90, 1.00, 1.20, 1.40, 1.50, 1.60, 1.80, 2.10 and 2.30mm sizes.

Description	Item#	Each
12-Piece Set	122-7030	\$28.65

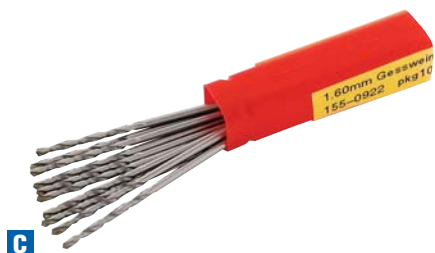


**D Hand Drill**

A sturdy, smooth-operating tool for easy control of drilling speed and pressure. Includes keyless chuck with 1/4" capacity.

Description	Item#	Each
Hand Drill	816-1410	\$24.70





**A SUPRA® Metric Twist Drills – 3/32" Shank**

Made of tungsten vanadium steel. For handpieces with 3/32" collets. Sold in multiples of six.

Diameter		Item#	EACH Prices		
(mm)	(inches)		6-66	72-138	144+
0.50	.0197	155-2300	\$1.95	\$1.66	\$1.56
0.60	.0236	155-2301	1.95	1.66	1.56
0.70	.0276	155-2302	1.95	1.66	1.56
0.80	.0315	155-2303	1.95	1.66	1.56
0.90	.0354	155-2304	1.95	1.66	1.56
1.00	.0393	155-2305	1.95	1.66	1.56
1.10	.0433	155-2306	1.95	1.66	1.56
1.20	.0472	155-2307	1.95	1.66	1.56
1.40	.0551	155-2309	1.95	1.66	1.56
1.50	.0591	155-2310	1.95	1.66	1.56
1.60	.0630	155-2311	1.95	1.66	1.56
1.70	.0669	155-2312	1.95	1.66	1.56
1.80	.0709	155-2313	1.95	1.66	1.56
1.90	.0748	155-2314	1.95	1.66	1.56
2.10	.0827	155-2316	1.95	1.66	1.56
2.30	.0906	155-2318	1.95	1.66	1.56

**B SUPRA® Metric Twist Drill Set**

Includes 0.60, 0.70, 0.80, 0.90, 1.00, 1.20, 1.40, 1.50, 1.60, 1.80, 2.10 and 2.30mm sizes.

Description	Item#	Each
12-Piece Set	155-2319	\$21.00

**C Econo Metric Twist Drills**

High-speed steel twist drills with matching tip and shank diameters. Feature bright finish, precision tips with the optimal cutting angle and sharp flutes with the proper spiral and finished outer edges. Made in Germany. Sold in packages of 10.

Diameter		Item#	PKG. of 10	
(mm)	(inches)		1-4	5+
0.50	.0197	155-0900	\$9.95	\$8.96
0.60	.0236	155-0902	9.95	8.96
0.70	.0276	155-0904	8.95	8.06
0.80	.0315	155-0906	8.50	7.65
0.90	.0354	155-0908	8.50	7.65
1.00	.0393	155-0910	8.40	7.56
1.10	.0433	155-0912	7.90	7.11
1.20	.0472	155-0914	7.90	7.11
1.30	.0512	155-0916	7.90	7.11
1.40	.0551	155-0918	7.90	7.11
1.50	.0591	155-0920	7.90	7.11
1.60	.0630	155-0922	7.90	7.11

**D Econo Metric Twist Drill Set**

Includes one package of each size listed above.

Description	Item#	Each
120-Piece Set	155-0899	\$59.95

**E Automatic Center Punch**

Delivers a sharp blow when depressed. Lets you vary impressions by simply adjusting the knurled head. Measures 4 3/4" long.

Description	Item#	Each
Automatic Center Punch	814-1100	\$59.95
Replacement Tip	814-1102	3.95



### A Diamond Twist Drills

High-speed steel twist drills coated at the tips with medium-fine diamond grit for drilling stones, ceramics, glass and other hard, nonmetallic materials. Use water as a lubricant.

Size	Diameter		Item#	Each
	(mm)	(inches)		
65	0.90	.035	<b>226-1365</b>	<b>\$3.95</b>
61	0.99	.039	<b>226-1361</b>	<b>3.95</b>
56	1.18	.0465	<b>226-1356</b>	<b>3.95</b>
54	1.39	.055	<b>226-1354</b>	<b>3.95</b>
53	1.51	.0595	<b>226-1353</b>	<b>3.95</b>
52	1.61	.0635	<b>226-1352</b>	<b>3.95</b>
51	1.70	.067	<b>226-1351</b>	<b>3.95</b>
50	1.77	.070	<b>226-1350</b>	<b>3.95</b>
47	1.99	.078	<b>226-1347</b>	<b>3.95</b>
45	2.08	.082	<b>226-1345</b>	<b>3.95</b>
40	2.49	.098	<b>226-1340</b>	<b>3.95</b>
36	2.70	.106	<b>226-1336</b>	<b>3.95</b>
12-Piece Set (one of each size)			<b>226-1300</b>	<b>44.95</b>



### B Metric Diamond Twist Drills – 3/32" Shank

Twist drills electroplated with medium-fine diamond grit for drilling stones, pearls, glass and ceramics. Can be used with any standard flex shaft handpiece. Use small amount of water as lubricant.

Diameter (mm)	(inches)	Item#	Each	
				1.00
1.30	.0512	<b>226-1242</b>	<b>4.55</b>	
1.40	.0551	<b>226-1243</b>	<b>4.55</b>	
1.60	.0630	<b>226-1244</b>	<b>4.55</b>	
1.80	.0709	<b>226-1245</b>	<b>4.55</b>	
2.10	.0827	<b>226-1246</b>	<b>4.55</b>	
6-Piece Set (one of each size)			<b>226-1240</b>	<b>24.45</b>



### C Diamond Drill Sticks

Hardened steel drills coated at the tips with diamond grit for fast drilling of stones and ceramics. Run at speeds between 5,000 and 20,000rpm. Use water or light oil as lubricant.

Dia. (mm)	Item#	Each	
0.75	<b>226-1455</b>	<b>\$2.75</b>	
1.0	<b>226-1460</b>	<b>2.75</b>	
1.25	<b>226-1465</b>	<b>2.75</b>	
1.5	<b>226-1470</b>	<b>2.75</b>	
2.0	<b>226-1475</b>	<b>2.75</b>	
2.5	<b>226-1480</b>	<b>2.75</b>	
6-Piece Set (one of each size)		<b>226-1450</b>	<b>16.95</b>



### D Diamond Core Drills – 3mm Shank

Stainless steel drills electroplated with medium-fine diamond grit for cutting holes in stones, ceramics and glass without chipping or cracking. Use water or light oil as lubricant.

Dia. (mm)	Item#	Each
1.5	<b>226-1401</b>	<b>\$5.42</b>
2.0	<b>226-1402</b>	<b>5.42</b>
2.5	<b>226-1403</b>	<b>5.42</b>
3.0	<b>226-1404</b>	<b>5.42</b>
5.0	<b>226-1408</b>	<b>8.47</b>
6.5	<b>226-1411</b>	<b>10.82</b>
9.5	<b>226-1417</b>	<b>14.86</b>
10.0	<b>226-1418</b>	<b>15.90</b>
11.0	<b>226-1420</b>	<b>18.27</b>





**A**

Handpiece not included.

**A PEPE Professional Pearl Drill**

Drilling holes in pearls and stones can present several challenges, mainly when it comes to fixing them in place. This drill press meets those challenges head-on to help save precious time. Features a unique adjustable holding jig for securing multiple sizes of pearls and stones, ensuring you get straight, properly sized holes each and every time. Works in combination with your #30 handpiece (see p. 345).

**Features:**

- Double-loop holder for securing your #30 handpiece
- Brass cup jaws for easy and stable mounting of pearls and stones
- 180° rotating jaw table for preventing hole misalignment when drilling from the opposite side
- Water holding post for cooling items while drilling
- Advancing lever for moving items into drill

Description	Item#	Each
Professional Pearl Drill	<b>816-1445</b>	<b>\$199.95</b>



**B**



**B Pearl Drills – 1/8" Shank**

Used to drill setting holes for seed pearls as well as both round and half-round stones. Sold individually and in a set of 12 diameters with plastic stand and cover.

Dia. (mm)	Item#	Each
1.05	<b>816-1425</b>	<b>\$5.95</b>
1.20	<b>816-1426</b>	<b>5.95</b>
1.45	<b>816-1427</b>	<b>5.95</b>
1.65	<b>816-1428</b>	<b>5.95</b>
1.85	<b>816-1429</b>	<b>5.95</b>
2.05	<b>816-1430</b>	<b>5.95</b>
2.26	<b>816-1431</b>	<b>5.95</b>
2.40	<b>816-1432</b>	<b>5.95</b>
3.00	<b>816-1435</b>	<b>5.95</b>
12-Piece Set (1.05, 1.20, 1.35, 1.45, 1.65, 1.85, 2.05, 2.26, 2.40, 2.65, 2.83, 3.00mm)		<b>816-1420</b> <b>82.15</b>



**C**



**C Pearl Drilling Jig**

A precision-machined tool for accurately drilling pearls and other spherical objects. Holds up to a 1/2" diameter ball. Features drill stop for partial or complete drill-through. Cushioned to prevent marring. Use with twist drills. Measures 1 1/2"W x 1/2"D x 3 5/8"H.

Description	Item#	Each
Pearl Drilling Jig	<b>816-1450</b>	<b>\$49.95</b>



**D**

**D Pearl Holding Vise**

This steel vise secures all popular sizes of pearls for easy drilling. Has 13 holes for holding pearls or beads and knurled locknuts for fast clamping and releasing. Includes carrying pouch. Measures 1 3/8" in diameter. Imported.

Description	Item#	Each
Pearl Holding Vise	<b>816-1440</b>	<b>\$7.70</b>

### A Colibri Tap Set with Die Plate

Includes eight replaceable steel taps (see below) for threading insides of holes and matching 4 3/8"L x 7/8"W steel die plate with clearly marked sizes for threading wires. Lets you make your own screws and ear wire threads. Made in Germany.

Description	Item#	Each
Tap Set with Die Plate	<b>816-2047</b>	<b>\$134.95</b>
0.6mm Tap	816-1997	6.95
0.8mm Tap	816-2001	6.95
1.0mm Tap	816-2003	6.95
1.2mm Tap	816-2005	6.95
1.4mm Tap	816-2007	6.95
1.6mm Tap	816-2009	6.95
1.8mm Tap	816-2011	6.95
2.0mm Tap	816-2013	6.95



**A**

### B - F Reamers

Made of tempered steel, these five-sided cutting broaches are used for cleaning and reaming holes. Sizes are for diameters measured slightly below largest part of cutting edges.

Stubbs Size	Diameter (mm)	Diameter (inches)	Item#	Each
<b>B. 30</b>	3.226	.127	<b>821-0300</b>	<b>\$4.80</b>
<b>C. 40</b>	2.464	.097	<b>821-0400</b>	<b>3.00</b>
<b>D. 50</b>	1.753	.069	<b>821-0500*</b>	<b>2.30</b>
<b>E. 60</b>	0.990	.039	<b>821-0600*</b>	<b>1.55</b>
<b>F. 70</b>	0.685	.027	<b>821-0700*</b>	<b>1.55</b>
12-Piece Set (15, 25, 30, 35, 40, 45, 48, 51, 54, 56, 65, 70)			<b>821-1157</b>	<b>33.35</b>
12-Piece Set (30, 35, 40, 45, 48, 52, 54, 55, 58, 62, 65, 70)			<b>821-1307</b>	<b>33.35</b>

\*Three-piece minimum; please order in multiples of three.



**B**

**C**

**D**

**E**

**F**

### G Reamer Set

Includes six five-sided cutting broaches in Stubbs sizes 46-72 (0.61-2.01mm in diameter). Comes complete with plastic case. Broaches feature regular taper with excellent finish and comfortable plastic handles. Made in Germany.

Description	Item#	Each
Reamer Set	<b>821-1309</b>	<b>\$11.75</b>



**G**

### H Diamond-Coated Bead Reamer Set

Includes two diamond tools with hardwood handles: reaming tool has a long, sharp point for reaming bead holes; edging tool has a 45° point for rounding off edges of holes so they won't cut through bead cord.

Description	Item#	Each
<b>H. Bead Reamer Set</b>	<b>821-2000</b>	<b>\$8.75</b>
Replacement Reaming Tool	821-2001	4.45



**H**

### I Brass Riveting Wire

Used to make pins or rivets in pin findings for jewelry. Sold in packages of 6" lengths in assorted B&S gauge diameters (14-21).

Description	Item#	PKG. Prices	
		1-11	12+
Brass Riveting Wire	<b>816-2600</b>	<b>\$3.05</b>	<b>\$2.59</b>



**I**





### A Microplate System

**All-in-one system for electroplating, electroforming and pen plating!**

A compact, self-contained benchtop system for handling all your plating needs with ease. With Microplate you can electroclean your jewelry in the first beaker, rinse, then plate it with rhodium, gold, silver, nickel or copper in the next beakers.

Includes large plating module, digital micro-agitator for electroforming and pen plating kit (plating pen with fiber tip and alligator clip). Plating module features fully variable 10A, 0–12V DC rectifier with electronic controls, automatic heater, three plastic beakers with lids (each holds one liter of solution), two stainless steel anodes, platinum-clad anode, anode and cathode bars and two rinse tanks. Made of corrosion-resistant polypropylene.

#### Specifications:

Electrical	120V, 60Hz
Rectifier	10A, 0–12V DC
Bath Capacity	1 liter per bath
Dimensions	19"W x 13¾"D x 10"H
Ship. Wt.	20 lbs.

Description	Item#	Each
A. Microplate System	<b>212-0912</b>	<b>\$2,535.00</b>
Plating Module	212-0907	1,495.00
Digital Micro-Agitator	212-0910	650.00
Pen Plating Kit	212-0911	240.00
Rinse Tank	212-0909	45.00



### B Silverkote Metallizing Powder

Silverkote is a silver-containing electrostatic powder that you brush onto nonmetallic objects to prepare them for the electroforming process. Readily adheres to wax, plastic, glass, wood and organic materials. Apply very light coat with standard artist's brush. Sold in 1 oz. jars, which go a long way.

Description	Qty.	Item#	Each
Silverkote Powder	1 oz.	<b>212-1053</b>	<b>\$119.00</b>



### C Earring Post Protectors

Slip onto earring posts to protect while plating. Made of red rubber. Sold by the gross.

Description	Item#	Gross
Earring Post Protectors	<b>852-1150</b>	<b>\$3.49</b>



### Why Electroform?

Both electroplating and electroforming are processes used to deposit a metal coating on a base object, but only electroforming produces a very thick coating that can be separated from the base object and further worked by additional methods such as filing and buffing. Requires Microplate System (see above)—you can't electroform with plating rectifiers.

The electroforming process duplicates the most intricate details of just about any object with exceptional precision, whether it be an inorganic object made of wax, Plexiglas, wood or Styrofoam or an organic object such as a leaf or insect. All nonmetallic objects must be painted with Silverkote (see above) before electroforming for proper results.

Use electroforming to produce unusual, intricate jewelry designs that would be difficult or even impossible to create otherwise. Or use it to build up models prior to lost wax casting to compensate for shrinkage.



## About Rectifiers

Rectifiers serve as sources of direct current for electroplating and electrostripping operations. A rectifier that operates on 115V AC and converts it to direct current can be easily regulated to produce the required voltage. When selecting a rectifier, be sure to choose one with sufficient amperage output, which determines the size of the bath as well as the surface area that can be plated. A rectifier with 10A output is recommended for smaller baths and can be used for electrostripping smaller items. For larger baths and electrostripping larger items, a rectifier capable of producing 25A or more should be considered.

### A Digital Rectifiers

Precision digital rectifiers for a variety of plating and stripping jobs. Choose from three different models: 10A, 25A and 60A. Model 10A can be used for plating small and large individual items. Model 25A can plate several items at once and handle small stripping jobs. Production model 60A offers greater plating and stripping volume, additional advanced technology and heavy-duty lead wires.

#### Features:

- Digital volt/amp regulation for control in 0.1 V/A increments
- Integrated digital LCD readout
- 99% filtration for terminal output voltage fluctuations of < 1%
- Classic transformer-less PC architecture
- Compact, lightweight design
- Internal cooling system for prevention of overheating
- Self-restoring internal short-circuit protection
- Automatic safety switch for protection of internal components
- Dual input voltage switch for operation at 115/230V, 50/60Hz

Description	Item#	Each
A. 10A/12V Rectifier	<b>212-0950</b>	<b>\$239.00</b>
25A/12V Rectifier	<b>212-0952</b>	<b>259.00</b>
60A/12V Rectifier	<b>212-1022</b>	<b>449.00</b>



### B - G Anodes

Used to introduce electrical current and to replenish metal ions in plating baths. Stems of all standard anodes can be bent to hang on edges of Pyrex beakers (dimensions given do not include stems).

#### Types:

- Soluble—Copper, nickel and silver anodes dissolve in the bath, replacing metal ions as they are deposited onto the workpiece during plating.
- Inert—Stainless steel and platinum-clad anodes do not dissolve in the plating bath. Serve to introduce electrical current into bath.

*Note: A stainless steel beaker can be used as an inert anode.*

Description	Size (L x W)	Item#	Each
B. Copper Anode	5 <sup>3</sup> / <sub>4</sub> " x 2"	<b>210-2500</b>	<b>\$16.25</b>
C. Nickel Anode (depolarized)	3 <sup>7</sup> / <sub>8</sub> " x 1"	<b>210-2550</b>	<b>19.80</b>
D. Silver Anode (fine)	3 <sup>7</sup> / <sub>8</sub> " x 1"	<b>210-2650</b>	<b>34.99</b>
E. Stainless Steel Anode	5 <sup>3</sup> / <sub>4</sub> " x 2"	<b>210-2700</b>	<b>8.60</b>
F. Platinum-Clad Niobium Anode*	4" x 1"	<b>210-2600</b>	<b>145.00</b>
Stainless Steel "T" Anode	4" x 12"	<b>210-2710</b>	<b>15.00</b>
G. Platinum-Clad Titanium "T" Anode	4" x 12"	<b>210-2610</b>	<b>39.00</b>

\*Performs as well as solid platinum for rhodium and gold plating. Consists of niobium clad at heavy gauge with 99% pure platinum, cold-rolled to a uniform thickness and meshed to expose more surface area. Because of mesh form and high conductivity (3.5 times more than platinized titanium anodes), this platinum-clad anode provides better current distribution for more uniform plating. Costs less than solid platinum and lasts longer than electroplated anodes.





### A Rhodium Plating Kits

Each includes all you need to rhodium-plate any precious metal.

#### Components:

- 10A or 25A digital rectifier with lead wires (115/230V)
- 1g rhodium and 1 pt. distilled water (nonhazardous-shipping rhodium #210-0961)
- 1 lb. electrocleaner powder for removing fingerprints and dirt
- Stainless steel anode for electrocleaning
- Platinum-clad niobium anode for transmitting current to the rhodium plating bath
- Two 1,000ml graduated Pyrex beakers with flexible plastic covers for holding and storing electrocleaner and rhodium solutions
- ½ lb. spool of copper work wire for holding items while plating

Description	Item#	Each
Kit with 10A Rectifier	<b>210-0001</b>	<b>\$630.00</b>
Kit with 25A Rectifier	<b>210-0003</b>	<b>650.00</b>

*Prices change with current market value.*



### B Econo Rhodium Plating Kits

Each includes all you need to rhodium-plate any precious metal.

#### Components:

- 10A or 25A digital rectifier with lead wires (115/230V)
- ½g rhodium and 1 pt. distilled water (nonhazardous-shipping rhodium #210-0978)
- 1 lb. electrocleaner powder for removing fingerprints and dirt
- Stainless steel "T" anode for electrocleaning
- Platinum-clad titanium "T" anode for transmitting current to the rhodium plating bath
- Two 600 ml graduated Pyrex beakers with flexible plastic covers for holding and storing electrocleaner and rhodium solutions
- ½ lb. spool of copper work wire for holding items while plating

Description	Item#	Each
Econo Kit with 10A Rectifier	<b>210-0004</b>	<b>\$470.00</b>
Econo Kit with 25A Rectifier	<b>210-0005</b>	<b>495.00</b>

*Prices change with current market value.*



### C Rhodium Plating Kits Without Rhodium

Each includes all you need to rhodium-plate any precious metal, minus the actual rhodium (for those who prefer to use their own).

#### Components:

- 10A or 25A digital rectifier with lead wires (115/230V)
- 1 lb. electrocleaner powder for removing fingerprints and dirt
- Stainless steel anode for electrocleaning
- Platinum-clad niobium anode for transmitting current to the rhodium plating bath
- Two 1,000ml graduated Pyrex beakers with flexible plastic covers for holding and storing electrocleaner and rhodium solutions
- ½ lb. spool of copper work wire for holding items while plating

Description	Item#	Each
Kit with 10A Rectifier (no rhodium)	<b>210-0011</b>	<b>\$420.00</b>
Kit with 25A Rectifier (no rhodium)	<b>210-0013</b>	<b>440.00</b>

**A The Complete Palladium Plating Kit**

Plating with palladium before rhodium simply uses less rhodium—and that saves you money. This kit yields perfect results each and every time you plate. Includes 10A digital rectifier with lead wires, magnetic stirrer, digital heater, four 1-qt. Pyrex beakers (two each for plating and rinsing), two covers, electrocleaner, PD2 Palladium Plating Solution, platinum-clad anode, stainless steel anode and complete instructions. Use palladium as preplate for any rhodium, although we think SUPRA Brilliant White Rhodium is brighter and whiter than all other brands. Due to price fluctuations, rhodium is sold separately (see pp. 196–197).

Description	Item#	Each
The Complete Palladium Plating Kit	<b>210-1332</b>	<b>\$849.95</b>

**B PEPE Thermocontroller and Magnetic Mixer Set**

Because hotplates and similar heating units for plating heat from underneath, and the glass commonly used for beakers is a very good insulator, these units take a long time to heat and fail to provide accurate, consistent temperature control. This set solves these problems by heating your bath from within and constantly stirring it to maintain even temperature. Suitable for small and large baths. Heats a 2-liter bath to 125°F in 30 minutes.

Includes Thermocontroller with coil and sensor and Magnetic Mixer with stirring pellet. Thermocontroller turns blue when bath is not hot enough and green when at temperature, allowing you to see at a glance when solution is ready. Has a control dial and switch for displaying temperature in °F or °C. Measures 4.8"W x 5.9"D x 1.4"H. Magnetic Mixer has a control dial that allows you to fine-tune stirring speed. Measures 3.0"W x 6.9"D x 5.1"H. Both units also include 110/220V selector switch. Also sold separately.

Description	Item#	Each
Thermocontroller and Magnetic Mixer Set	<b>212-0732</b>	<b>\$495.00</b>

**C PD2 Palladium Plating Solution**

Ready-to-use palladium plating solution especially designed for flash plating. Features highly compact consistency and resistance of the galvanic layer, making it particularly suitable for pre-rhodium treatment on low-karat gold and silver articles. Also serves as a tough barrier against diffusion of gold deposits on copper and copper alloys. Ideal for use as an intermediate layer between rhodium and white gold, reducing the possibility that scratches and abrasions of the rhodium-plated layer will affect the alloy underneath—very important to prevent release onto skin of white gold alloys containing nickel. Sold by the liter.

**Features:**

- Cyanide-free
- 2g/L concentration
- Room-temperature plating—no heater required
- Premixed solution—UPS shippable with no hazardous charges
- Nontoxic and noncorrosive
- Neutral pH

Description	Qty.	Item#	Each
PD2 Solution	1L	<b>210-1350</b>	<b>\$130.00</b>







A

### A EarthGold Cyanide-Free Plating Kits

Each kit includes all you need to plate 14K gold, nickel, copper and rhodium over nickel, silver, sterling silver, gold, rhodium and most other precious and nonprecious metals. Components are completely cyanide-free. Plating solutions leave bright, durable deposits just as thick as those produced by standard cyanide plating solutions.

#### EarthGold Kit with Rhodium includes:

- 10A digital rectifier with lead wires (115/230V)
- 1 qt. 14K gold solution for creating bright yellow gold plating (contains ½ dwt. gold)
- 1 qt. bright nickel solution, often used for preplating
- 1 qt. copper strike solution for use on any hard-to-plate metal
- 1 qt. bright copper solution for a bright mirror plate
- 1g rhodium and 1 pt. distilled water (nonhazardous-shipping rhodium #210-0961)
- 1 lb. electrocleaner powder for removing fingerprints and dirt
- 1 lb. acid activator powder for preparing hard-to-plate metals, such as stainless steel, chrome and those containing lead or zinc
- Two copper, one nickel, two stainless steel and one platinum-clad niobium anode
- Six 600ml Pyrex beakers with flexible plastic covers
- One 1,000ml Pyrex beaker with flexible plastic cover
- Plating thermometer, air agitator, stirring rod and Whatman 0–14 pH strips
- ½ lb. spool of copper work wire for holding items while plating
- 2 oz. Supra Galvex ultrasonic cleaning solution

Description	Item#	Each
A. EarthGold Kit with Rhodium	<b>210-0900</b>	<b>\$925.00</b>
EarthGold Kit without Rhodium*	<b>210-0901</b>	<b>615.50</b>

\*Includes everything listed except rhodium and 1,000ml beaker.

Prices change with current market value.



B

### B Large Measuring Beaker

A durable polypropylene 5,000ml beaker with convenient handle and 100ml graduations for easy, accurate pouring.

Description	Item#	Each
Large Measuring Beaker	<b>210-2426</b>	<b>\$45.90</b>

C



### C Whatman 0–14 pH Strips

Extra pH strips for checking your EarthGold plating baths.

Description	Item#	Pkg. of 100
Whatman 0–14 pH Strips	<b>210-2401</b>	<b>\$24.50</b>



**A - J EarthGold Cyanide-Free Plating Solutions**

Choose from 10 different cyanide-free plating solutions for leaving bright, durable deposits just as thick as those produced by standard cyanide plating solutions.

Description	Qty.	Item#	Each
A. 14K Yellow	1 qt.	210-0930	\$64.95
	1 gal.	210-0931	241.00
B. 18K Yellow	1 qt.	210-0932	64.95
	1 gal.	210-0933	241.00
C. 24K Yellow	1 qt.	210-0934	64.95
	1 gal.	210-0935	241.00
D. Silver Plating	1 qt.	210-0942	48.60
	1 gal.	210-0943	143.25
E. Bright Nickel	1 qt.	210-0952	29.00
	1 gal.	210-0953	98.50
F. Nickel-Free*	1 qt.	210-0944	33.95
	1 gal.	210-0945	105.25
G. Copper Strike	1 qt.	210-0936	28.40
	1 gal.	210-0937	89.25
H. Bright Copper	1 qt.	210-0948	24.85
	1 gal.	210-0949	75.25
I. Bright White	1 qt.	210-0954	20.00
	1 gal.	210-0955	61.50
J. Black Plus	1 qt.	210-0959	32.25
	1 gal.	210-0958	82.75

\*Hypoallergenic

Prices change with current market value.

**K EarthGold Stripper**

Strips gold deposits from rhodium, nickel, stainless steel and steel. Do not use on silver for an extended period of time.

Description	Qty.	Item#	Each
K. Stripper	1 qt.	210-0940	\$15.00
	1 gal.	210-0941	57.50

**L EarthGold Electrocleaner**

Provides a completely clean, contaminant-free metal surface prior to electroplating.

Description	Qty.	Item#	Each
L. Electrocleaner	1 lb.	210-0946	\$10.00
	3 lbs.	210-0947	28.99

**M EarthGold Acid Activator**

Provides excellent oxide removal and etching properties to help metals bond better when electroplating. Effective on white metals, brass, bronze, nickel, stainless steel, steel, silver and gold. Do not use on zinc.

Description	Qty.	Item#	Each
M. Acid Activator	1 lb.	210-0938	\$8.80
	3 lb.	210-0939	23.70





### A Gesswein® Super-Concentrated Rhodium Solution – Non-Hazardous shipping!

Now we can ship our rhodium solution via major carriers without an extra \$20 hazardous shipping charge. It's the same sulphate-type formula with the same amount of rhodium in each bottle, just super-concentrated to comply with non-hazardous shipping regulations. Produces a beautiful white finish and works at room temperature, a distinct advantage. Purchase concentrate alone or in one of two sets that include rhodium and distilled water.

Description	Rh Content	Item#	Each
Super-Concentrated Solution	1g	210-0966	\$221.00
Super-Concentrated Replenisher Solution	1g	210-0976	221.00
A. Super-Concentrated Standard Set (Rh, distilled water)	1g	210-0961	221.00
Super-Concentrated Small Set (Rh, distilled water)	1/2g	210-0978	121.00

Prices change with current market value.



### B, C Gesswein® Concentrated Rhodium Solution

This sulfate-type rhodium solution produces a whiter finish than phosphate-type solutions and works at room temperature, a distinct advantage. Often used following repair work on white gold jewelry but can also be used to create attractive two-tone effects on yellow, rose or green gold. Dilute with distilled water for bath plating; use undiluted for pen plating. Will plate rhodium, gold, platinum, ferrous metals and copper.

Most metals except for high-karat gold and nickel require a nickel underplating before rhodium plating to prevent acid in bath from attacking them and contaminating solution. Bottle containing 1 gram rhodium makes 1 pint of solution, and bottle containing 5 grams makes 2½ quarts. Use with Pyrex beaker and platinum-clad anode (see pp. 198, 191).

Description	Rh Content	Item#	EACH Prices	
			1-2	3+
B. Concentrated Solution	1g	210-1000	\$216.00	\$198.72
C. Concentrated Solution	5g	210-1016	1,004.00	–

Prices change with current market value.



### D Gesswein® Rhodium Replenisher Solution

Use to replenish your rhodium bath as it becomes depleted. Do not use rhodium solution (see above) to replenish; doing so will upset the bath's chemical balance. Can also be used undiluted for pen plating.

Description	Rh Content	Item#	EACH Prices	
			1-2	3+
D. Replenisher Solution	1g	210-1010	\$216.00	\$198.72
Replenisher Solution	5g	210-1017	1,004.00	–

Prices change with current market value.



### E Gesswein® Rhodium Premixed Solution

Comes fully ready to use for bath plating only. Contains the same 1 gram rhodium as our rhodium concentrate (see above) premixed with 1 pint distilled water.

Description	Rh Content	Item#	EACH Prices	
			1	2+
Premixed Solution, pint	1g	210-1018	\$252.00	\$239.40

Prices change with current market value.



### F Gesswein® Rhodium Solution Assortments

Save when you buy three assorted bottles of 1-gram rhodium concentrate and replenisher (see above).

Description	Item#	Each
F. 2 Concentrates, 1 Replenisher	210-1005	\$602.00
1 Concentrate, 2 Replenishers	210-1015	602.00

Prices change with current market value.

**A, B SUPRA® 'Brilliant White' Rhodium Solution**

Specially formulated with the latest in brightener technology, this is the brightest and whitest rhodium available. Thanks to its advanced sulphate-type formula, it plates quickly and can achieve thicknesses of 0.3–0.5 microns. Excellent wear resistance makes it ideal for plating jewelry and watchbands. Concentrate can be used for pen plating or diluted for bath plating. Premixed is already diluted for bath plating only.

Description	Rh Content	Item#	Each
A. Concentrated Solution	2g	<b>210-1031</b>	<b>\$220.00</b>
B. Replenisher Solution	1g	<b>210-1032</b>	<b>133.00</b>
Replenisher Solution	5g	<b>210-1034</b>	<b>549.00</b>
Premixed Solution, pint	1g	<b>210-1033</b>	<b>133.00</b>

Prices change with current market value.

**C Rhodium Test Kit**

As your rhodium bath is used, it depletes rhodium as well as other important chemicals. Our Rhodium Test Kit helps you determine when to add replenisher so you can restore the bath to its original condition. Saves money by ensuring you add just enough replenisher, not too much. Easy to use. Includes complete instructions, control and sample vials, pipette and test block. Designed for use only with our rhodium solutions (#210-1000, #210-1018, #210-0978, #210-0966 and #210-0961).

Description	Item#	Each
Rhodium Test Kit	<b>210-2000</b>	<b>\$59.50</b>

**D Carbon Treatment Sets for Rhodium Baths**

It eventually happens to every plater: rhodium comes out looking gray instead of white. The usual culprits? Organic contaminants introduced to your plating bath from wax or other stop-offs, electrocleaner or soap, dust or dirt. Once dissolved, these pesky contaminants can't be removed by sieving or straining.

Each money-saving Carbon Treatment Set uses activated charcoal to absorb contaminants so you can filter them out and restore the bath to like-new condition rather than discard it. Includes charcoal (3 oz. in standard set, enough for approx. 48 one-liter bath treatments; 11 oz. in large set, enough for approx. 176 one-liter bath treatments), funnel, treatment tank with cover, glass stirring rod, filtration tank, filter paper and instructions. Use for monthly preventive maintenance and emergency situations. Excellent for gold plating baths, too. *Note: Will not remove metal contamination, such as that from soft solder.*

Description	Item#	Each
D. Standard Set	<b>210-2020</b>	<b>\$64.50</b>
Large Set	<b>210-2124</b>	<b>117.00</b>

**E Gesswein® Electrocleaner Powder**

Removes fingerprints, grease and similar contaminants from the plating surface without removing metal. Promotes optimal adherence of electroplating deposits. Especially useful in place of electrostripping on jewelry parts that are too delicate to withstand metal removal. Sold in a 3 lb. jar, which makes 32 qts. of electrocleaning solution. Cyanide-free. Use with stainless steel beaker or with Pyrex beaker and stainless steel anode (see pp. 198, 191).

Description	Item#	Each
Electrocleaner Powder	<b>210-3300</b>	<b>\$19.90</b>





A

### A Electric Hot Plates

Choose from single and double models. The double model saves precious plating time by heating two baths simultaneously (includes separate temperature controls). Feature durable chrome tops for resistance to scratching and marring and lift-out heating elements for fast, easy cleaning. Made in USA. *Note: You must provide insulation such as a Solderite Pad (see pp. 392-393) between stainless steel beaker and hot plate during plating to prevent your rectifier from shorting out.*

Specifications:	Single	Double
Electrical	120V, 6A, 700W, 60Hz	120V, 12A, 1400W, 60Hz
Dimensions	8½"W x 8½"D x 3¼"H	17"W x 9¾"D x 3¼"H

Description	Item#	Each
Single Electric Hot Plate	212-2051	\$53.35
A. Double Electric Hot Plate	212-2050	73.35

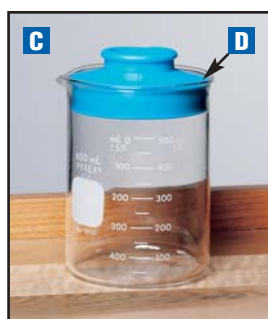


B

### B Stainless Steel Beakers and Covers

Stainless steel beakers act as anodes for electrostripping and electroplating—just attach your lead wire directly to the lip of the beaker. Stainless steel covers protect solutions.

Description	Size (I.D. x H)	Item#	Each
0.6 qt. Beaker	3¼" x 4½"	210-2954	\$55.75
1¼ qt. Beaker	4" x 5½"	210-2955	19.99
2 qt. Beaker	4¾" x 6¾"	210-3000	23.39
4¼ qt. Beaker	6½" x 7⅝"	210-2957	29.60
8½ qt. Beaker	8" x 9½"	210-2959	46.99
1¼ qt. Cover		210-2969	11.39
2 qt. Cover		210-3150	12.19
4¼ qt. Cover		210-2967	14.79
8½ qt. Cover		210-2965	17.25



C

D

### C, D Pyrex Beakers and Covers

Pyrex beakers feature graduations for fast and accurate liquid measurement and spouts for easy pouring. Available in four sizes. Pyrex covers let you heat and store solutions in the same containers. Plastic covers provide tight seals to prevent solution evaporation.

Description	Item#	Each
250ml Beaker for small bath	210-2749	\$6.35
C. 600ml Beaker for half-pint bath	210-2750	6.75
1,000ml Beaker for pint bath	210-2800	11.35
1,500ml Beaker for quart bath	210-2850	17.50
600/1,000ml Pyrex Cover	210-2900	6.30
1,000/1,500ml Pyrex Cover	210-2950	8.79
D. 600ml Plastic Cover	210-2952	5.90
1,000ml Plastic Cover	210-2953	6.45



E

F

### E, F Ribbed Glass Funnel and Filter Paper

Use together for filtering impurities from plating baths. Funnel features ribbed design for better flow of solution. Measures approx. ¼" thick. Paper measures 13" in diameter.

Description	Item#	Each
E. Ribbed Glass Funnel	210-2450	\$27.75

Description	Item#	EACH Prices	
		10-90	100+
F. Filter Paper	210-2400*	\$1.05	\$84

\*10-piece minimum; please order in multiples of 10.

G

### G Plastic Stirring Rod

For mixing your electrocleaning, electrostripping and electroplating baths. Will not react with solutions. Measures ½" dia. x 12"L.

Description	Item#	Each
Plastic Stirring Rod	210-2460	\$4.15



**A Lead Wires**

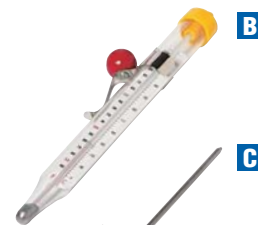
Color-coded wire sets (one red, one black) with alligator clips at one end and terminal lugs at the other end. Insulating sleeves over the spring clips protect hands from solutions and electrical current. Measure 4' long.

Description	Item#	Each
A. Lead Wires for 10/25A Rectifiers, pair	<b>210-2153</b>	<b>\$14.95</b>
Lead Wires for 60A Rectifiers, pair	<b>210-2151</b>	<b>47.95</b>

**A****B, C Plating Thermometers**

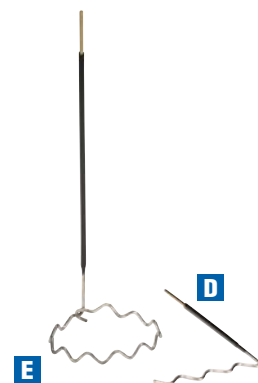
Two different types for measuring stripping and plating bath temperatures. Help eliminate guesswork to improve results. Include metal clip for easy attachment to edges of beakers. Glass type reads up to 220°F or 100°C (has both scales). Stainless steel dial type reads from 50 to 400°F. Measure 8½" long.

Description	Item#	Each
B. Glass Thermometer	<b>210-2310</b>	<b>\$6.35</b>
C. Stainless Steel Dial Thermometer	<b>210-2255</b>	<b>26.10</b>

**B****C****D, E Plating Racks**

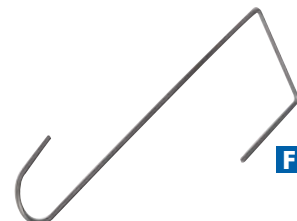
Use L-shaped rack for plating one ring at a time. Use round rack for plating multiple rings or chains.

Description	Item#	Each
D. L-Shaped Rack	<b>210-1333</b>	<b>\$17.95</b>
E. Round Rack	<b>210-1334</b>	<b>24.95</b>

**D****E****F Stripping Hook**

Use this 10-gauge stainless steel hook to suspend an item in an electrostripping bath. Measures 10" long.

Description	Item#	Each
Stainless Steel Stripping Hook	<b>210-2350</b>	<b>\$3.00</b>

**F****G Copper Work Wire**

Soft 24-gauge copper wire for holding items to be stripped or plated. Sold in ½ lb. spool.

Description	Item#	Each
Copper Work Wire	<b>210-2100</b>	<b>\$9.95</b>

**G****H OxiGuard Solution Set**

This two-step solution set applies a durable finish to plated jewelry in just two minutes, stopping tarnish before it has a chance to start. Works at room temperature. Formulated to keep gold, silver, brass and imitation rhodium looking bright and shiny week after week, with absolutely no polishing. Includes Step-1 electrolyte solution (requires small rectifier) and Step-2 immersion solution.

Description	Item#	Each
H. 1 qt. Set (two 1 qt. bottles)	<b>210-1420</b>	<b>\$19.95</b>
1 gal. Set (two 1 gal. bottles)	<b>210-1421</b>	<b>44.50</b>

**H**



### A 3M™ Half-Facepiece Respirator

Protects you from dusts, mists and airborne contaminants. NIOSH rated N95 for protection from respirable silica (in investment, tripoli and more). Also suitable for rhodium plating. Features a soft, pliable silicone face seal for a secure, gapless fit on most every face shape. Extremely comfortable to wear, especially for extended periods of use. Features roomy nose chamber and special 3M Cool Flow valve to ensure easy natural breathing while reducing heat and condensation in the facepiece. Complete respirator includes facepiece, two deluxe cartridges, two deluxe prefilters and two retainer rings. NIOSH approved.

Description	Item#	Each
A. Half-Facepiece Respirator	<b>805-1035</b>	<b>\$41.25</b>
Deluxe Cartridges, pair	805-1036	9.39
Deluxe Prefilters, pair	805-1037	2.75
Retainer Rings, pair	805-1038	3.15



### B Chemical Splash Goggles

Heavy-duty chemical splash goggles with generously sized frame and lens that slip easily over most prescription glasses. Clear lens with anti-fog coating maintains exceptionally clear visibility. One-way vents let air in and keep harmful liquids out. Adjustable headband provides a comfortable, secure fit. These goggles provide 99% UV protection and exceed ANSI Z87.1-2003 impact requirements.

Description	Item#	Each
Chemical Splash Goggles	<b>270-0300</b>	<b>\$10.75</b>



### C, D Neoprene Apron and Sleeves

Heavy-duty double-coated yellow neoprene apron and sleeves for frontal body and lower-arm protection from a wide range of chemicals, including caustics and solvents. Apron features extra-long neck and waist ties. Measures 35"W x 45"L. Weighs 12½ oz. Recyclable. Sleeves feature elastic cuffs on both ends for secure fit. Measure 18" long. Sold by the pair.

Description	Item#	Each
C. Apron	<b>827-1509</b>	<b>\$24.75</b>
D. Sleeves, pair	<b>827-1510</b>	<b>7.75</b>



### E MicroFlex® NeoPro® EC Polychloroprene Gloves – Latex-free!

NeoPro EC combines the barrier protection of a synthetic with the fit and feel of natural rubber latex while eliminating the possibility of latex allergic reaction. Resists a broad range of hazardous substances. Provides almost twice the puncture resistance of latex. Ideal for electroplating, electrocleaning and most other plating tasks. Ambidextrous with extended, beaded cuff and textured fingertips for great grip in wet or dry conditions. Powder-free and polymer-coated for easy donning. Length: 11¾". Thicknesses: 8.3mil finger, 6.3mil palm, 4.7mil cuff. Color: green. Sold in dispenser box of 50.

Description	Item#	Box of 50
Small	<b>805-1052</b>	<b>\$19.95</b>
Medium	<b>805-1051</b>	<b>19.95</b>
Large	<b>805-1050</b>	<b>19.95</b>



### F MicroFlex® UltraSense™ Nitrile Gloves – Latex-free!

UltraSense combines the barrier protection of a synthetic with the fit and feel of natural rubber latex while eliminating the possibility of latex allergic reaction. Resists a broad range of hazardous substances. Highly elastic for increased comfort and reduced fatigue. Ideal for electroplating, electrocleaning and most other plating tasks. Ambidextrous with beaded cuff and textured fingertips for great grip in wet or dry conditions. Powder-free and polymer-coated for easy donning. Length: 9¾". Thicknesses: 5.1mil finger, 3.5mil palm. Color: blue. Sold in dispenser box of 100.

Description	Item#	Box of 100
Small	<b>805-1072</b>	<b>\$16.95</b>
Medium	<b>805-1071</b>	<b>16.95</b>
Large	<b>805-1070</b>	<b>16.95</b>

**A Background Antique and Aul Solvent**

Background Antique provides dramatic highlighting and subtle dark background effects. Imparts a matte, nonreflective antique finish to class rings. After final polishing or plating, apply with a soft hair brush, and let dry for a few minutes. If desired, wipe lightly with a lint-free cloth dipped in Aul Solvent to remove coloring from high spots and leave behind an oxidized finish. For long-lasting results, allow to dry for 24–48 hours after highlighting. Sold individually and in a money-saving kit that includes 2 oz. bottle of Black Antique and 2 oz. bottle of Aul Solvent.

Description	Qty.	Item#	Each
Black Antique	2 oz.	<b>210-1300</b>	<b>\$14.60</b>
	1 qt.	<b>210-1305</b>	<b>63.00</b>
Brown Antique	2 oz.	<b>210-1320</b>	<b>15.80</b>
	1 qt.	<b>210-1325</b>	<b>75.00</b>
Aul Solvent	2 oz.	<b>210-1410</b>	<b>5.90</b>
	1 qt.	<b>210-1415</b>	<b>30.00</b>
Black Antique Kit	2 oz. Black Antique, 2 oz. Aul Solvent	<b>210-1301</b>	<b>22.80</b>

**A****B Liver of Sulphur**

Use this product to permanently antique silver and copper. Will not rub off or disappear during ultrasonic or steam cleaning. Just mix a small amount with ordinary tap water in a Pyrex beaker, immerse or paint your jewelry, and watch it turn from brown to blue/green to light gray then dark gray. Stop process when the appropriate color has been obtained by rinsing jewelry thoroughly. For antique effect, buff selected areas to bright shine and leave background dark. Requires no anode. Not suitable for antiquing gold because there is no noticeable effect. Sold in ½ lb. container.

Description	Qty.	Item#	Each
Liver of Sulphur	½ lb.	<b>210-1450</b>	<b>\$20.65</b>

**B****C JAX Green Antique**

Chemical darkener for producing an antique green patina on brass, bronze and copper. Apply to clean metal surface with a bristle brush or immerse entire object. The initial coat is critical: when a dull film appears, that indicates the patina has reacted to the metal. Additional coats can be applied if desired (allow complete air drying in between coats).

Description	Qty.	Item#	Each
Green Antique	1 pt.	<b>210-1430</b>	<b>\$13.10</b>

**C****D JAX Black Antique**

Chemical darkener for producing an antique black patina on brass, bronze and copper. Apply to clean metal surface with a bristle brush or immerse entire object. Rinse well with water and dry. To achieve desired finish, highlight with steel wool or Scotch-Brite. You can also over-darken and then relieve with steel wool or polishing cloth.

Description	Qty.	Item#	Each
Black Antique	1 pt.	<b>210-1431</b>	<b>\$13.10</b>

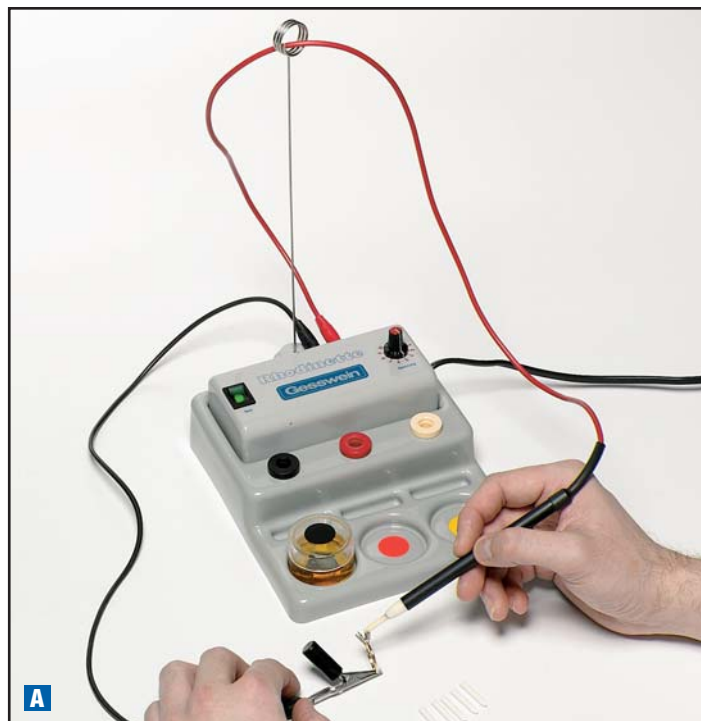
**D****E JAX Black Antique for Silver**

Chemical darkener for producing an antique black patina on silver and gold. Apply to clean metal surface with a bristle brush or immerse entire object. Rinse well with water and dry. To achieve desired finish, buff with rouge. When using on gold, preheat metal before applying solution.

Description	Qty.	Item#	Each
Black Antique for Silver	1 pt.	<b>210-1432</b>	<b>\$13.60</b>

**E**





A

### A Rhodinette Pen Plater

Create exciting two-tone effects and make touch-up repairs with our Rhodinette Pen Plater. Takes just minutes to learn how to use like an expert. Features highly absorbent, hard fiber electrode tips that can be easily shaped and will plate the most delicate details and contours with an even deposit of metal (masking may be unnecessary). Plating solutions and concentrates sold separately. Electrical: 110V, 1A, 50/60Hz. Measures 5½"W x 6¾"D x 2½"H. Made in Germany.

#### Includes:

- Compact rectifier base with recesses for holding up to three pens and three plating solutions (not included)
- Plating pen (anode) with six regular felt tips
- Smooth-jaw alligator clip with lead wire (cathode)
- Glass jar with cover for holding plating solution
- Stand for supporting wires

Description	Item#	Each
A. Rhodinette Pen Plater	<b>212-0900</b>	<b>\$575.00</b>
Plating Pen	210-2105	227.00
Black Lead Wire	210-2110	54.00
Glass Jar with Cover	210-2107	15.00



B

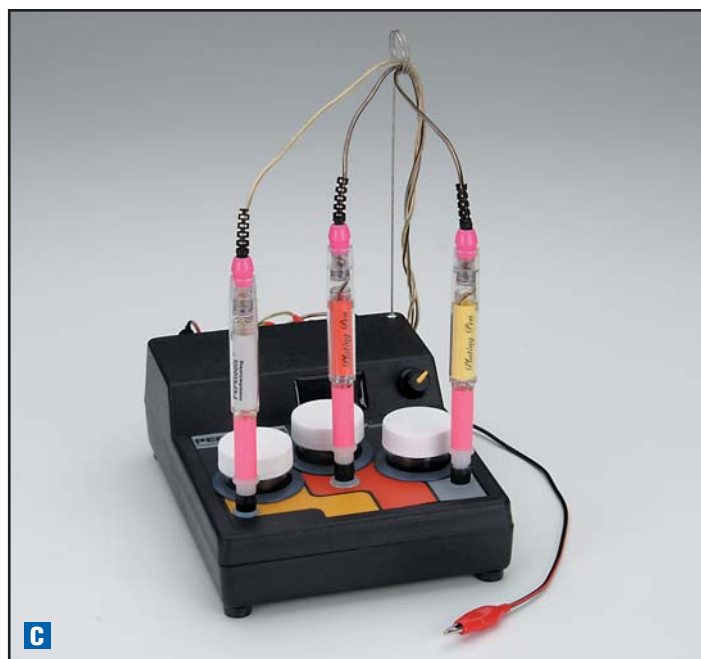
### B VM Pen Platers

Two powerful yet compact rectifiers with fiber-tipped pens designed for easy, pinpoint plating. Use to customize jewelry with different colors. Great for plating tight areas. Features fiber tips that can be shaped for many different applications. Large unit includes two pens and three plastic jars with covers. Small unit includes pen and plastic jar with cover. Electrical: 110/220V, 50/60Hz. Both measure 6"W x 3"D x 2"H. Made in USA.

#### Include:

- Rectifier base
- Plating pen(s) with regular felt tip(s)
- Alligator clip with lead wire
- Plastic jar(s) with covers

Description	Item#	Each
B. Large VM with Two Pens	<b>212-0703</b>	<b>\$295.00</b>
Small VM with One Pen	<b>212-0701</b>	<b>199.95</b>
Plating Pen	212-0705	99.00
Plastic Jar with Cover	212-0706	4.00



C

### C Digital Pen Plating System

A compact plating system with precision voltage regulator and clear digital readout. Lets you dial in voltage you need for perfect results. Provides stabilized voltage output with less than 1% variance at maximum load. Uses state-of-the-art circuitry with automatic current limitation (500mA maximum). Plating solutions and concentrates sold separately. Electrical: 110/220V. Measures 5¾"W x 7½"D. Made in Europe.

#### Includes:

- Compact rectifier base with recesses for holding up to three pens and three plating solutions (not included)
- Three color-coded plating pens with nine felt tips (three bullets, three chisels and three points)
- Alligator clip with lead wire
- Three plating jars with twist-off lids for avoiding spills
- Stand for supporting wires

Description	Item#	Each
C. Digital Pen Plating System	<b>212-0720</b>	<b>\$189.00</b>
Plating Pens, set of 3	212-0725	95.00



### A Plating Pens

These pens turn any rectifier into a pen plater. Easy to use: just plug red and black lead wires into your rectifier, adjust voltage and plate. Ideal for quick touch-ups and two-tone plating. Sold in three colors for easy identification. Each includes platinum contact, alligator clip with lead wire, three fiber tips and cap for one tip.

Description	Item#	Each
A. White Pen	212-0712	\$35.50
Yellow Pen	212-0711	35.50
Red Pen	212-0710	35.50



### B Wizard Disposable Rhodium Pen Plater

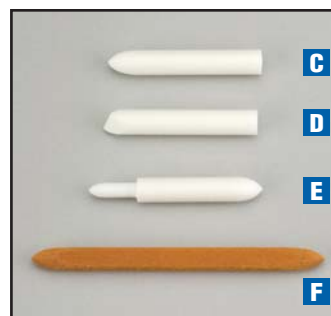
Self-contained pen plater without any knobs to set. Simply soak fiber tip in your plating solution, attach alligator clip to workpiece and plate. Discard when plating results decline.

Description	Item#	Each
Wizard Disposable Rhodium Pen Plater	212-0707	\$15.65

### C - F Felt Tips for Plating Pens

Solid compact tips that can be custom-shaped for any pen plater.

Description	Item#	PKG. of 12	
		1-2	3+
C. Regular Tips	210-2102	\$6.95	\$5.91
D. Chisel Tips	210-2103	6.95	5.91
E. Double-Ended Regular Tips	210-2115	6.95	5.91
F. Double-Ended Point/Bullet Tips	210-2112	6.95	5.91



### G - I Cohler EARTHCOAT™ Gold Pen Plating Solutions

These cyanide-free solutions deposit a resilient flash plate of gold on nickel, sterling silver, rhodium, gold and most other similar metals. Allow very easy control of color due to their excellent combination of brighteners, which offer excellent coverage and leveling ability.

Description	Au Content	Item#	Each
G. 14K	1 dwt.	210-0926	\$34.00
H. 18K	1 dwt.	210-0927	34.00
I. 24K	1 dwt.	210-0928	36.00

Prices change with current market value.



### J, K Cohler Rhodium Pen Plating Solutions

Description	Rh Content	Item#	Each
J. Bright White	1/4g	210-1021	\$59.40
K. Deep Black	1/4g	210-1022	76.80

Prices change with current market value.



### L Gesswein Rhodium Pen Plating Solutions

Description	Rh Content	Item#	Each
White	1/3g	210-1003	\$81.00
	1g	210-1000	216.00
Black	1/2g	210-0977	169.00
Blue	1/2g	210-0967	91.50
	1g	210-0968	147.00

Prices change with current market value.



### M Stop-Off Lacquer

A specially prepared lacquer for masking in preparation for spot plating. Especially useful when creating a two-tone effect. Remove with acetone, lacquer thinner or steam.

Description	Qty.	Item#	Each
M. Stop-Off Lacquer	2 oz.	210-1250	\$5.00
	1 qt.	210-1255	39.00





COLORiT Material

# COLORiT

The revolutionary way to add brilliant color to your jewelry!

Add COLORiT ceramic-reinforced composite material to a variety of jewelry and bedazzle your customers with its brilliance. When dried with the included curing light, this material cures into a solid polymer network of exceptional strength and durability. Resists both chipping and cracking better than hard-fired enamels. Won't flake and peel like epoxies. Comes in liquid form, making it easy to apply on both flat and curved surfaces. Produces colorfast, non-shrinking design accents.

Use a single color, or mix colors to obtain any hue and shade. Adding Deep colors to other colors makes them more opaque, adding White makes them more pastel and opaque, and adding Clear makes them more transparent. Pearl White and Pearl Blue are stunning by themselves, and they create a stunning opalescent or marbled look when added to any of the other colors. Swirl in some Neon for highlights that actually glow under ultraviolet light, or layer spectacular metal-flake sparkle with the Eye Effect colors. The possibilities are limited only by your imagination.

Choose from small and large sets to get started today. Each contains everything you need to work COLORiT material from start to finish, including complete instructions.

**Features:**

- COLORiT gives your jewelry the look and feel of enamel.
- COLORiT can be inlaid into any precious or nonprecious metal, including platinum, silver and stainless steel. Can even be inlaid into more COLORiT.
- COLORiT can be formed into beads or imitation cabochons of any color—even multicolored stones are possible.
- COLORiT colors can be used right next to each other to create a cloisonné look. A few seconds of precuring eliminates color bleed. Colors can also be worked uncured to create artistic effects.
- COLORiT colors can be mixed to create any hue, opaque or transparent.
- COLORiT is colorfast—it won't fade over time.
- COLORiT can be carved, sanded, filed, machined, lathe-turned at high speeds, sandblasted or polished to a high shine right along with the metal.
- COLORiT is highly resistant to scratching, shock and impact. Bright finishes can be restored with a simple repolishing.
- COLORiT is so durable that it can withstand tumbling, plating and mild ultrasonic, steam and solvent cleaning.
- COLORiT application is easily mastered.
- COLORiT is so versatile, workable and durable, it opens up entirely new design options.



Small UV-XS Hand Light



Large UV-XL Desklight

**Set Components:**

- Eight jars of COLORiT ceramic-reinforced composite material (white, hi-clear, deep black, deep red, deep blue, deep yellow, deep green and neon red)
- Curing light (the small set includes UV-XS hand light for curing a single piece of jewelry at a time, and the large set includes both UV-XS hand light and UV-XL desklight for curing several pieces of jewelry at a time)
- Light-protected workstation, 13¾"W x 10"D x 9½"H
- Workplate with heater
- Bottle of COLORiT bond
- Brush handle
- 100 disposable brush tips
- Applicator tool
- Ring holder
- Instrument holder



Light-Protected Workstation

Workplate



### The COLORiT Process

Both a mechanical bond and a chemical bond are required to ensure COLORiT durability and colorfastness. Inlaid areas must be undercut, and proper application and curing instructions must be followed. COLORiT is easy to apply and dries in just minutes under the special curing light. From cleaning to curing, the complete process usually takes no longer than 30 minutes; curing comprises roughly half that time and requires only minor operator attention.



1. Apply bond.



2. Apply color.



3. Cure with special light source.



4. File, sand, sandblast or polish.



COLORiT Set	Item#	Each	
Small Set, 110V	821-3505	<b>\$3,290.00</b>	
Small Set, 220V	821-3506	<b>3,290.00</b>	
Large Set, 110V	821-3490	<b>5,670.00</b>	
Large Set, 220V	821-3491	<b>5,670.00</b>	
COLORiT Set Component	Item#	Each	
UV-XS Hand Light, 110V	821-3518	<b>\$1,925.00</b>	
UV-XS Hand Light, 220V	821-3519	<b>1,925.00</b>	
UV-XL Desklight, 110V	821-3516	<b>2,680.00</b>	
UV-XL Desklight, 220V	821-3517	<b>2,680.00</b>	
Light-Protected Workstation	821-3575	<b>199.00</b>	
Bond, 4ml	821-3555	<b>155.00</b>	
Glass Mixing Plate	821-3565	<b>72.00</b>	
Brush Handle	821-3660	<b>4.50</b>	
100 Disposable Brush Tips	821-3560	<b>26.00</b>	
Applicator Tool	821-3570	<b>72.00</b>	
Ring Holder	821-3576	<b>55.00</b>	
Instrument Holder	821-3577	<b>39.00</b>	
COLORiT Material, 5-gram Jar	Item#	EACH Prices	
		1-2	3+
Yellow	821-3525	<b>\$59.50</b>	<b>\$53.55</b>
Orange	821-3529	<b>59.50</b>	<b>53.55</b>
Kiwi	821-3528	<b>59.50</b>	<b>53.55</b>
White	821-3521	<b>59.50</b>	<b>53.55</b>
Clear	821-3520	<b>59.50</b>	<b>53.55</b>
Hi-Clear	821-3551	<b>59.50</b>	<b>53.55</b>
Deep Black	821-3584	<b>59.50</b>	<b>53.55</b>
Deep Red	821-3581	<b>59.50</b>	<b>53.55</b>
Deep Blue	821-3580	<b>59.50</b>	<b>53.55</b>
Deep Yellow	821-3582	<b>59.50</b>	<b>53.55</b>
Deep Green	821-3583	<b>59.50</b>	<b>53.55</b>
Neon Red	821-3592	<b>59.50</b>	<b>53.55</b>
Neon Blue	821-3591	<b>59.50</b>	<b>53.55</b>
Neon Yellow	821-3600	<b>59.50</b>	<b>53.55</b>
Pearl Blue	821-3590	<b>59.50</b>	<b>53.55</b>
Pearl White	821-3522	<b>59.50</b>	<b>53.55</b>
Eye Effect Amber	821-3640	<b>59.50</b>	<b>53.55</b>
Eye Effect Jade	821-3641	<b>59.50</b>	<b>53.55</b>
Eye Effect Malachite	821-3642	<b>59.50</b>	<b>53.55</b>
Eye Effect Sapphire	821-3643	<b>59.50</b>	<b>53.55</b>
COLORiT Material, 18-gram Jar	Item#	EACH Prices	
		1-2	3+
Yellow	821-3540	<b>\$203.10</b>	<b>\$182.79</b>
White	821-3536	<b>203.10</b>	<b>182.79</b>
Clear	821-3535	<b>203.10</b>	<b>182.79</b>
Hi-Clear	821-3552	<b>203.10</b>	<b>182.79</b>
Deep Black	821-3614	<b>203.10</b>	<b>182.79</b>
Deep Red	821-3611	<b>203.10</b>	<b>182.79</b>
Deep Blue	821-3610	<b>203.10</b>	<b>182.79</b>
Deep Yellow	821-3612	<b>203.10</b>	<b>182.79</b>
Deep Green	821-3613	<b>203.10</b>	<b>182.79</b>
Neon Red	821-3622	<b>203.10</b>	<b>182.79</b>
Neon Blue	821-3620	<b>203.10</b>	<b>182.79</b>
Neon Yellow	821-3621	<b>203.10</b>	<b>182.79</b>
Pearl Blue	821-3630	<b>203.10</b>	<b>182.79</b>
Pearl White	821-3537	<b>203.10</b>	<b>182.79</b>
Eye Effect Amber	821-3650	<b>203.10</b>	<b>182.79</b>
Eye Effect Jade	821-3651	<b>203.10</b>	<b>182.79</b>
Eye Effect Malachite	821-3652	<b>203.10</b>	<b>182.79</b>
Eye Effect Sapphire	821-3653	<b>203.10</b>	<b>182.79</b>



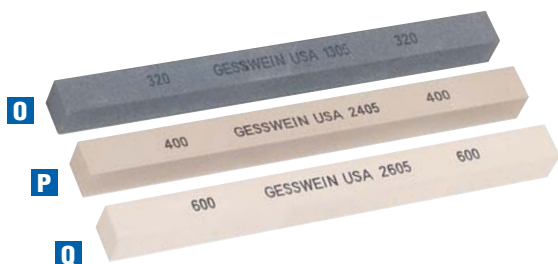
**A - N Ceramitation – Resin that cures at a low temperature!**

This resin is mixed with a catalyst, then fired at a low temperature to make hard, ceramic-like surfaces similar to kiln-fired enamels in both appearance and physical properties. Simple enough to use for beginners to produce professional work in a short time.

Can be brushed on, sprayed on or applied with a spatula or squeeze bottle. Apply single coat, or build up in successive layers to obtain unusual and elegant finishes. Adheres to metal, wood, plastic and ceramic. Cures after being fired at 200°F for one hour by an electric kitchen oven, infrared lamp or forced air blower. Boasts hardness of 60–75 on Sward scale once cured—very close to kiln-fired enamels with hardness of 65–80, which must be fired up to 1,500°F. Can be stoned and polished after curing.

Choose from seven vivid opaque colors and six transparent colors that let the base metal shine through for brilliant jewel-tone effects. Mix colors to obtain an infinite variety of hues. Sold in 2 oz. bottles and in money-saving sets. Opaque set includes all seven opaque colors listed below, transparent clear and a 1-pint bottle of catalyst. Transparent set includes all six transparent colors listed below and a 1-pint bottle of catalyst.

Opaque Ceramitation, 2 oz.		EACH Prices	
	Item#	1-2	3+
A. Black	821-4204	\$6.10	\$4.88
B. White	821-4205	6.10	4.88
C. Red	821-4206	6.10	4.88
D. Chinese Red	821-4207	6.10	4.88
E. Blue	821-4208	6.10	4.88
F. Israeli Blue	821-4209	6.10	4.88
G. Yellow	821-4210	6.10	4.88
Transparent Ceramitation, 2 oz.		EACH Prices	
	Item#	1-2	3+
H. Red	821-4212	\$5.25	\$4.20
I. Brown	821-4213	5.25	4.20
J. Blue	821-4216	5.25	4.20
K. Green	821-4215	5.25	4.20
L. Yellow	821-4214	5.25	4.20
M. Clear	821-4211	5.25	4.20
Ceramitation Catalyst		Each	
8 oz.	821-4201	\$10.90	
1 pint	821-4202	17.50	
1 quart	821-4203	27.00	
Ceramitation Thinner		Each	
1 pint	821-4194	\$17.50	
1 quart	821-4196	28.50	
Ceramitation Set		Each	
N. Opaque	821-4200	\$57.25	
Transparent	821-4199	38.95	



**O - Q Enameling Stones**

Can be used for a wide variety of operations, including imparting a matte finish on enameled objects, removing excess enamel, firescale or contamination between firings and leveling uneven enameled surfaces. Measure 6"L x 1/2"W x 1/2" thick.

Description	Grit	Item#	EACH Prices	
			1-5	6+
O. SiC Stone	320	410-1305	\$7.13	\$5.94
P. AlO Stone	400	405-2405	7.30	6.08
Q.	600	405-2605	9.47	7.89



### A - F Enamel

High-quality lead-free 80 mesh enamel for gold, silver and copper. Medium fusion temperature: 1,450–1,500°F. Sold in 2 oz. bottles with mesh screen tops for sifting and in money-saving sets.

Opaque Enamel, 2 oz.	Item#	Each
A. Black	821-3001	\$9.95
B. Blue	821-3002	9.95
C. Green	821-3003	9.25
D. Red	821-3004	14.75
E. White	821-3005	9.25
F. Yellow	821-3006	9.25

Transparent Enamel, 2 oz.	Item#	Each
Black	821-3040	\$9.25
Blue	821-3038	9.95
Green	821-3037	9.25
Red	821-3039	14.75
White	821-3041	9.25
Yellow	821-3036	14.75

Enamel Set	Item#	Each
Opaque (one of each)	821-3000	\$57.95
Transparent (one of each)	821-3035	59.95



### G Undercoat White Enamel

Opaque white 80 mesh enamel frequently used as undercoat on jewelry metals before applying transparent enamels. Provides low acid resistance. Medium fusion temperature: 1,450–1,500°F. Sold in 2 oz. plastic jar with mesh screen top for sifting.

Description	Qty.	Item#	Each
Undercoat White Enamel	2 oz.	821-3310	\$9.25



### H Clear Flux Enamel

Clear 80 mesh flux for transparent enameling over gold, silver, copper and more. Medium fusion temperature: 1,450–1,500°F. Sold in 2 oz. plastic jar with mesh screen top for sifting.

Description	Qty.	Item#	Each
Clear Flux Enamel	2 oz.	821-3007	\$9.25

### I Klyr-Fire

Nontoxic adhesive agent for enameling. Paint onto metal, then sift the enamel onto the wet surface, and the enamel adheres fully, even to domed surfaces. Dry thoroughly with heat lamp or air dryer before firing. Sold in 16 oz. bottle.

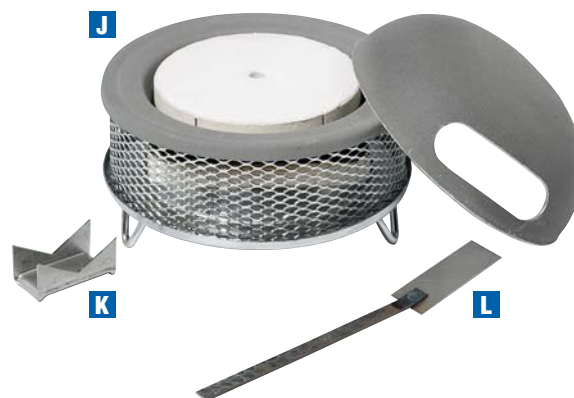
Description	Qty.	Item#	Each
Klyr-Fire	16 oz.	821-3072	\$5.98



### J - L Hot Plate Furnace for Enameling

A popular compact hot plate furnace that's great for beginners. Perfect for enameling jewelry items up to 3" in diameter. Made of stainless steel and cast aluminum with asbestos-free heating plate. Ample lid opening allows clear viewing of enamel, helping prevent over- and under-firing. Requires one hour of preheating before use. Electrical: 120V, 900W. Measures 7¼" dia. x 6"H including lid.

Description	Item#	Each
J. Hot Plate Furnace	265-1325	\$165.00
K. Single-Piece Trivet	821-3070	8.70
L. Stainless Steel Spatula	821-3071	7.65



For engraving only.



**A**

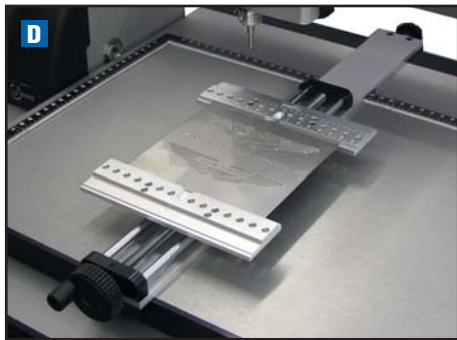


**B**

For engraving and cutting.



**C**



**D**



**A - D U-MARQ Computerized Engraving Machines**  
**Personalize your sales for increased profits!**

The easiest to use, fastest, most versatile four-axis jewelry and gift engravers in the world! Used with your PC, these units engrave on flat and curved surfaces as well as 360° around cylindrical items. Work on gold, silver, copper, brass, stainless steel, glass, plastic, wood and more. Compact and very quiet, making them perfect for retail environments.

**GEM-RX4** handles various jewelry pieces and other small items such as lighters, mirrors, pens and flashlights. Includes spindle motor, self-centering vise, standard aluminum jigs, four 13mm jig pins, plastic nose cone, pen holder and bushings, 120° diamond drag graver, carbide cutter, light-touch cutter knob, brass cutter knob, wrenches, USB-to-serial adapter, 6' serial cable, 6' power cable, dongle (key) with fob, engraving software with 20 fonts and 100 designs/logos and full instructions. Backed by a one-year manufacturer's warranty. Inside/outside ring engraving attachment and additional accessories sold separately.

**GEM-VX4** handles all the same small items as GEM-RX4 plus much larger items such as plaques and trophies. Can also cut out names and other irregular shapes from gold, silver and copper sheet. Includes spindle motor, plastic nose cone, 120° diamond drag graver, carbide cutter, light-touch cutter knob, brass cutter knob, wrenches, USB-to-serial adapter, 6' serial cable, 6' power cable, dongle (key) with fob, engraving software with 900 fonts and 100 designs/logos, scanning module with vectorization software and full instructions. Backed by a one-year manufacturer's warranty. Inside/outside ring engraving attachment, self-centering vise, bangle attachment and additional accessories sold separately.

Included engraving software ensures professional results. Provides advanced alignment, rotation, scaling, shading and spacing capabilities for text and graphics. Makes it easy to engrave on straight, curved and circular paths. Allows you to save all files for future use. Photo engraving software for reproducing digital photos also available (see facing page).

**Specifications:**

	<b>GEM-RX4</b>	<b>GEM-VX4</b>
Flat Work Size	6.0 x 3.0" (160 x 75mm)	16" x 12" (406 x 340mm)
Cylindrical Work Size	2.75" (70mm) dia. without nose cone	5.5" dia. x 10.25"L (140 x 260mm)
Z-axis Travel	2.5" (65mm)	2.5" (65mm)
Z-axis Clearance	2.0" (50mm) top of jaws; 1.18" (30mm) top of beam	—
Max. Vise Opening	5.7" (145mm)	12" (304mm)
Spindle Motor Speed	14,000rpm	14,000rpm
Spindle Motor Power	42W brushless DC motor	42W brushless DC motor
Max. Feed Rate	5.25"/sec. (8.0m/min.)	4.5"/sec. (6.85m/min.)
Mechanics	Cartridge spindle, lead screws and linear rails on steel chassis	Cartridge spindle, lead screws and linear rails on steel chassis
Operating Conditions	41–104°F (5–40°C); 35–80% humidity	41–104°F (5–40°C); 35–80% humidity
Noise Levels	75 dBA or less during no-load operation; 45 dBA or less in standby	75 dBA or less during no-load operation; 45 dBA or less in standby
PC Interface	USB and serial (with adapter)	USB and serial (with adapter)
PC Requirements	1.0 GHz Pentium 4 PC running Microsoft Windows 2000/XP, 256 MB RAM, 100 MB free hard disk space, two free USB ports, 256-color SVGA display, CD-ROM drive, mouse	2.4 GHz Pentium 4 PC running Microsoft Windows XP/Vista, 1 GB RAM, 100 MB free hard disk space, two free USB ports, 256-color SVGA display, CD-ROM drive, mouse
Electrical	110/220V, 50/60Hz	110/220V, 50/60Hz
Dimensions	10.8"W x 9.4"D x 13.4"H (275 x 240 x 340mm)	24.2"W x 21.3"D x 14.6"H (615 x 540 x 370mm); requires extra 8.9"D (225mm)
Net Wt.	40 lbs. (18kg)	88 lbs. (40kg)

Description	Item#	Each
<b>A.</b> GEM-RX4 Computerized Engraving Machine	<b>821-5800</b>	<b>\$6,995.00</b>
<b>B.</b> GEM-RX4 Ring Engraving Attachment	<b>821-5805</b>	<b>998.00</b>
<b>C.</b> GEM-VX4 Computerized Engraving Machine	<b>821-5815</b>	<b>11,995.00</b>
GEM-VX4 Ring Engraving Attachment	<b>821-5825</b>	<b>1,250.00</b>
<b>D.</b> GEM-VX4 Self-Centering Vise	<b>821-5835</b>	<b>549.00</b>
GEM-VX4 Bangle Attachment*	<b>821-5840</b>	<b>199.00</b>

\*Requires Ring Engraving Attachment.

**A U-MARQ Photo Engraving Software – For GEM-RX4 and GEM-VX4**

Add-on software for engraving photos that you've taken with your own digital camera. Helps produce beautifully detailed images that stand the test of time without requiring any special coating since they have actual depth.

Description	Item#	Each
Photo Engraving Software	821-5850	\$395.00

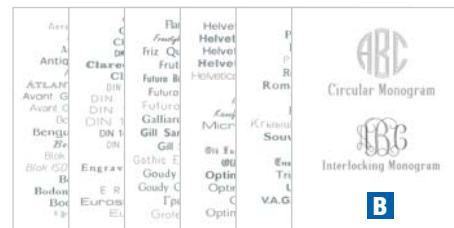


**A**

**B U-MARQ Font Pack Software – For GEM-RX4**

Contains 80 additional fonts and monograms.

Description	Item#	Each
Font Pack Software	821-5857	\$295.00



**B**

**C U-MARQ Metal Cutting Kit – For GEM-VX4**

Ideal for making precious metal cutouts. Includes four metal cutters, 8 oz. of cutting oil, two different widths of double-sided adhesive, large protective sheet, compressed air and a micro-fiber polishing cloth.

Description	Item#	Each
C. Metal Cutting Kit	821-5845	\$325.00
Replacement Metal Cutter	821-5875	54.95
Replacement Cutting Oil, 4 oz.	821-5873	7.95



**C**

**D U-MARQ Glass Engraving Kit – For GEM-RX4 and GEM-VX4**

Ideal for engraving glass and crystal flutes, vases and more. Includes two glass burnishers, 4 oz. of glass engraving lubricant and a micro-fiber polishing cloth.

Description	Item#	Each
D. Glass Engraving Kit	821-5830	\$225.00
Replacement Glass Burnisher	821-5861	149.00
Replacement Glass Engraving Lubricant, 4 oz.	821-5874	9.95



**D**

**E U-MARQ Jewelry/Watch/Ring Jig Set – For GEM-RX4 and GEM-VX4**

Includes three pairs of jigs for holding all types of jewelry, watches, medals, rings and pens.

Description	Item#	Each
Jewelry/Watch/Ring Jig Set	821-5855	\$175.00



**E**

**F U-MARQ Stone Burnisher – For GEM-RX4 and GEM-VX4**

Strong enough to engrave some of the hardest stones. Measures 6 1/2" long x 1 1/4" dia.

Description	Item#	Each
Stone Burnisher	821-5863	\$149.00



**F**

**G U-MARQ 100° Diamond Drag Graver – For GEM-RX4 and GEM-VX4**

Produces deeper cuts than the standard 120° graver. Ideal for items with a coated finish. Measures 6 1/2" long x 1 1/4" dia.

Description	Item#	Each
100° Diamond Drag Graver	821-5865	\$89.95



**G**

**H U-MARQ Pen Tester – For GEM-RX4 and GEM-VX4**

A real lifesaver. Allows you to test on a piece of Scotch tape so you can make adjustments before permanently engraving expensive items. Measures 7" long x 1 1/4" dia.

Description	Item#	Each
Pen Tester	821-5869	\$69.00



**H**

**I U-MARQ Rub-N-Buff Engraving Color Fill Set – For GEM-RX4 and GEM-VX4**

To make an engraving pop, just fill with a color from this set, let dry and wipe off excess. Includes 20 colors in 1/2 oz. bottles.

Description	Item#	Each
Rub-N-Buff Engraving Color Fill Set	821-5872	\$47.95



**I**

**J**

**J U-MARQ Aluminum/Brass Oxidizer – For GEM-RX4 and GEM-VX4**

Great for blackening plaques, trophies and other engraved items. Sold in 4 oz. bottles.

Description	Item#	Each
Aluminum/Brass Oxidizer, 4 oz.	821-5871	\$9.95





A



**A Roland Power Impact Engraver**

This incredible machine lets you imprint pictures, logos and text on everything from charms and pendants to souvenirs and plaques. Operates 30% faster than traditional engravers so customers won't have to wait. Easy to operate, even with no engraving experience: plug USB cable into your PC, install the METAZASTudio software, import or create a design, secure the workpiece and engrave. Occupies little space and runs quietly.

The intuitive software handles bitmap images such as .jpg files from digital cameras as well as vector graphics such as .ai files from Adobe Illustrator. Provides a sophisticated level of text control, allowing you to choose from many TrueType fonts, use stroke or fill characters and wrap words along curves or contours.

The impact head with pyramid-shaped carbide tool strikes the workpiece uni- or bidirectionally with great speed and precision, leaving behind a durable impression without removing material. Works on gold, silver, platinum, copper, brass, aluminum, iron, stainless steel and plastic (surface hardness must be 200 HV or less). MPX-80 comes complete with vise and adhesive pad to hold your workpieces in place, test material, AC adapter and user guides.

**Specifications:**

Max. Material Size	3.9"W x 3.9"D x 1.6"H (0.8"H with vise)
Max. Engraving Area	3.1"W x 3.1"D
Engraving Resolutions	529 dpi (high-res), 353 dpi (photo), 265 dpi (text), 1058 dpi (vector)
Engraving Speeds	1.9"/sec. (photo), 1.2"/sec. (high-res or text), 0.6"/sec. (vector)
Operating Conditions	50–86°F, 35–80% humidity
Noise Level	70 dBA
Electrical	100–240V, 1.7A, 15W, 50/60Hz
Dimensions	9.7"W x 12.8"D x 8.6"H
Net Wt.	11.2 lbs.

Description	Item#	Each
Power Impact Engraver	<b>821-6865</b>	<b>\$3,495.00</b>

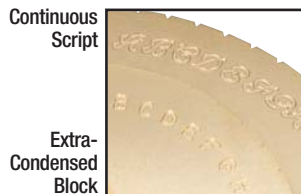
**B New Hermes® RV-II Inside Ring Engraver**

Point-of-purchase engraving makes it much easier to close the sale, offers your customers instant gratification and turns each ring into a personalized keepsake. With RV-II, you can quickly and easily engrave initials, dates or phrases on the inside of almost any ring, such as wedding bands and even stone-set rings. Requires no prior engraving experience—a novice user can engrave up to 20 letters in just one minute. Yields bright, professional results.

The clamping jig centers your ring, a simple lever ensures uniform spacing between letters, and the diamond stylus creates lettering with a hand-engraved appearance. Included reversible type dial produces two type styles: simple, highly readable Gothic and more formal Tilted Block. Optional type dials available: Continuous Script produces romantic type; Extra-Condensed Block produces simple, highly readable type.



B



Description	Item#	Each
<b>B. RV-II Inside Ring Engraver</b>	<b>821-6980</b>	<b>\$1,795.00</b>
Continuous Script Dial	<b>821-6982</b>	<b>239.00</b>
Extra-Condensed Block Dial	<b>821-6985</b>	<b>135.00</b>
Replacement Ring Jig	821-6981	56.65
Replacement Stylus Point	821-6956	29.00

**C, D Brass Practice Rings**

Use to practice engraving, bead setting and more. Size 6.

Description	Item#	Pkg. of 10
<b>C. Thin (3mm) Rings</b>	<b>260-3070</b>	<b>\$17.95</b>
<b>D. Wide (8mm) Rings</b>	<b>260-3071</b>	<b>17.95</b>



C



D



### A PEPE Inside Ring Engraver

This easy-to-use engraver helps close the sale by enabling you to personalize your customer's jewelry on the spot. Engraves a variety of rings, including narrow and wide bands and stone-set rings. Includes two-sided block type dial, three brass practice rings and complete instructions. Optional type dials available (see below). Made in Europe.

#### Features:

- Automatic letter centering
- Uniform character spacing and depth
- 360° rotating jaws for correct positioning
- Diamond stylus for bright, clear engraving

Description	Item#	Each
A. Inside Ring Engraver with Block Dial	<b>821-6989</b>	<b>\$495.00</b>
Optional Greek Block Dial	<b>820-8341</b>	<b>95.00</b>
Optional Spanish Block Dial	<b>820-8340</b>	<b>95.00</b>
Optional Continuous Script Dial	<b>821-6988</b>	<b>95.00</b>
Optional Discontinuous Script Dial	<b>820-8343</b>	<b>95.00</b>
Replacement Block Dial	820-8342	95.00



Greek Block  
Block  
Spanish Block  
Continuous Script  
Discontinuous Script



**A**

### B, C PEPE Two-Line Horizontal Engraving Machine

Gives you professional results in minutes. Ideal for ID and medical bracelets, watches, charms, lighters, pens, gift items and flat and semicurved items. Features quick-slide vise for holding circular and rectangular plates. Insert set of four brass pins in vise holes to hold thick items. Purchase optional holding attachment set to firmly grasp irregularly shaped items. Includes double-line block type set and complete instructions. Optional type sets available (see below). Made in Europe.

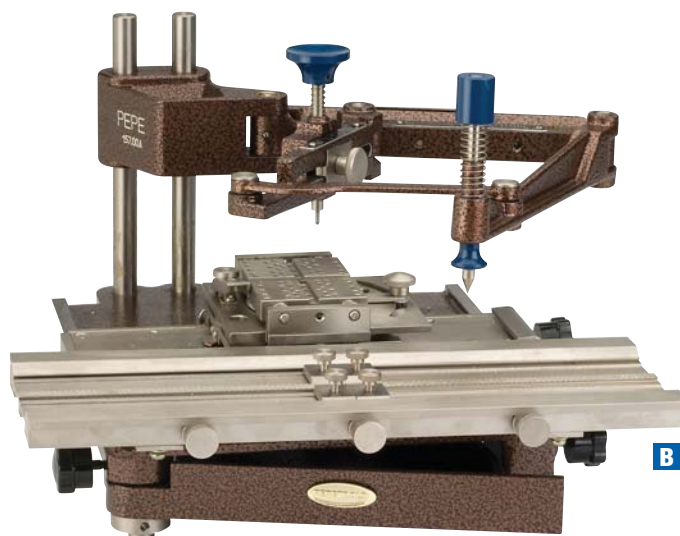
#### Specifications:

Max. Plate Size	4"
Max. Letter Height	4"
Dimensions	14"W x 14 <sup>1</sup> / <sub>8</sub> "D x 11"H
Ship Wt.	23 lbs.

#### Features:

- 15 engraving ratios from 2.5:1 to 6:1
- Adjustable two-line combination type slide
- 360° rotating vise with stops at every 45° increment
- Precision diamond stylus

Description	Item#	Each
B. Two-Line Horizontal Engraving Machine with Double-Line Block Type Set	<b>821-7007</b>	<b>\$675.00</b>
Double-Line Script Type Set (2 <sup>3</sup> / <sub>4</sub> ")	<b>821-7003</b>	<b>190.00</b>
Single-Line Block Type Set (1 <sup>1</sup> / <sub>4</sub> ")	<b>821-7004</b>	<b>149.00</b>
C. Holding Attachment Set	<b>821-7005</b>	<b>96.00</b>
Type Set Box	<b>821-7006</b>	<b>15.00</b>
Replacement Double-Line Block Type Set (1 <sup>1</sup> / <sub>4</sub> ")	821-7002	170.00
Replacement Diamond Stylus	821-7001	37.95



**B**



Included  
Double-Line Block Type Set

**C**

### D Brass Practice Sheets

Brass blanks for use with Two-Line Horizontal Engraving Machine or any pantograph. Great for experimenting with different type sets and ratio adjustments. Use to make a master set of templates in a range of ratios so you can easily select the right ratio for every job. Each 23-gauge sheet measures 2<sup>7</sup>/<sub>8</sub>"L x <sup>9</sup>/<sub>16</sub>"W.

Description	Item#	Pkg. of 12
Brass Practice Sheets	<b>821-6860</b>	<b>\$14.65</b>



**D**

## GRS® Power Engravers

Designed for beginners and professionals alike, GRS Power Engravers make clean, sharp cuts in precious metals, steels, crystal, glass, stone, wood and other materials. Transform compressed air into powerful impact action for engraving, texturing, carving and more. Backed by a two-year manufacturer's warranty. Made in USA.



### A GRS® Gravermeister® – The original standalone machine!

This unit comes ready to use with its own oil-less air compressor, making it readily portable. Features adjustable speed of 1,600–2,400 strokes/min. (sliding lever on front controls stroke rate). Can be used for engraving on precious metals, steels and more, carving, stippling, bright-cutting and bead raising.

Sold alone or with GRS #509 handpiece (see p. 214 for details). Includes foot control, air tubing and four tools. Electrical: 115V, 7A, 60Hz. Measures 14"W x 11½"D x 8½"H.

Description	Item#	Each
Gravermeister	856-0049	\$1,279.00
Gravermeister with #509 QC HP	856-0302	1,465.00



### B GRS® GraverMach™ – Optimized for power and control!

Provides great power and control in one compact unit. Features a front-mounted precision regulator, combo filter and water trap that can be mounted on unit or remotely, adjustable speed of 400–8,000 strokes/min. and quick-disconnect handpiece fittings. Better porting gives ensures crisp impact from low to high end. Front-mounted bias valve setting lets you tailor foot control feel.

Sold alone or with handpiece (see pp. 214–215 for details). Requires air compressor that yields at least 1.4 CFM of air at 45 PSI. Includes foot control and air tubing. Measures 5½"W x 11½"D x 8¼"H. Electrical: 100–240V, 50/60Hz. UL, GS, CE, LPS approved.

Description	Item#	Each
GraverMach	856-0306	\$1,095.00
GraverMach with #940 QC HP	855-9953	1,320.50
GraverMach with #901 QC HP	856-0246	1,315.00



### C GRS® GraverMax SC™ – Revamped for better performance!

The proud GraverMax tradition continues with this unit. Features a front-mounted standard regulator, combo filter and water trap that can be mounted on unit or remotely, adjustable speed of 400–4,000 strokes/min. and two quick-disconnect handpiece fittings.

Sold alone or with handpiece (see pp. 214–215 for details). Requires air compressor that yields at least 1.4 CFM of air at 45 PSI. Includes foot control and air tubing. Measures 5½"W x 11½"D x 8¼"H. Electrical: 100–240V, 50/60Hz. UL, GS, CE, LPS approved.

Description	Item#	Each
GraverMax SC	856-0308	\$895.00
GraverMax SC with #940 QC HP	855-9954	1,130.50
GraverMax SC with #710 QC HP	855-9964	1,120.00
GraverMax SC with #901 QC HP	855-9963	1,120.00



### D GRS® GraverSmith™ – The budget-oriented choice!

Performs basic engraving and setting for less than its siblings, GraverMach and GraverMax SC. Features regulator with pressure gauge, combo filter and water trap, adjustable speed of 400–8,000 strokes/min. and quick-disconnect handpiece fitting.

Requires air compressor that yields at least 1.4 CFM of air at 45 PSI. Includes foot control, air tubing, and holes for storing accessories. Electrical: 110/220V. Measures 5¾"W x 9½"D x 9½"H. (Handpiece sold separately, see pp. 214–215.)

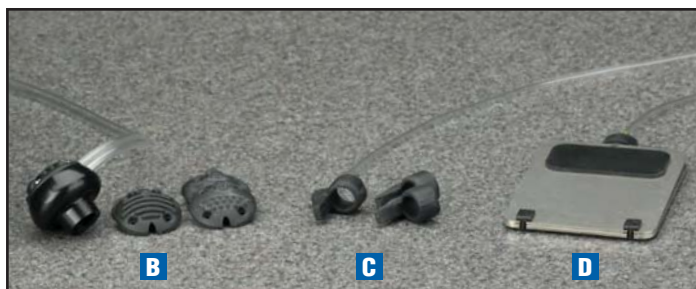
Description	Item#	Each
GraverSmith	855-9950	\$695.00

### A - D GRS® Airtact® Control System

Airtact replaces the foot control on your GRS machine to provide an incredibly tactile, precise way to control power to your impact handpiece using only the pressure of your palm, thumb/finger or foot, bringing higher precision to engraving work.

Consists of Control System and your choice of Touch Elements: Palm style installs on back of handpiece for those who hold it like a hand engraver, Thumb/Finger style installs on front of handpiece for those who hold it like a pencil and FootPod style is designed for those who prefer tried-and-true foot control.

Airtact works with any GraverMach, GraverMax SC, Graversmith, GraverMax or GraverMate, regardless of when it was made (GraverMax and GraverMate require proper Filter Hookup Set). Control System includes tubing and connections for up to two Touch Elements. Measures 3½"W x 7"D x 4½"H. Backed by a two-year manufacturer's warranty.



Description	Item#	Each
A. Control System	855-9957	\$398.00
B. Palm Element Set for #901 HP	855-9961	59.00
Palm Element Set for #921 HP	855-9962	59.00
C. Thumb/Finger Element Set for #901 HP	855-9960	26.00
Thumb/Finger Element Set for #921 HP	855-9959	26.00
D. FootPod Set	855-9958	29.00
Filter Hookup Set for GraverMax	855-9955	39.95
Filter Hookup Set for GraverMate	855-9956	39.95

### E GRS® Quick-Change Handpiece System 3

The most affordable, least complicated air impact handpiece system from GRS. Unlike the Gravermeister, GraverMax and GraverMate, which produce special air pulses to control impact handpieces, Handpiece System 3 uses normal compressed air to run a simpler self-oscillating piston-and-port quick-change impact handpiece.

Features a lightweight, cool-running handpiece that reduces fatigue so you can work faster. Delivers good power for engraving, texturing and carving a variety of materials. Includes air filter/regulator, foot control, three quick-change tool holders, six tools, air tubing and interchangeable springs for fine to heavy work. Requires air compressor that yields at least 1.2 CFM of air at 50 PSI.



Description	Item#	Each
Quick-Change Handpiece System 3	856-0020	\$447.00

### F GRS® Progressive Foot Control

Offers innovative power delivery for extremely smooth startup and excellent control over both bulino and banknote-style engraving and fine shading, as well as an amazingly wide power range. Combines a control zone and a power zone in one seamless unit.

Standard foot controls provide roughly 50% power halfway through pedal travel. The Progressive Foot Control meters 20% power for the first half of pedal travel, then increases power progressively until 100% is reached at full pedal travel, giving you precise control at the start of each cut plus a full range of power as you need it. For use with GraverMach, GraverMax SC, Graversmith as well as GraverMax/Mate. Measures 8½"W x 10"D x 6"H.



Description	Item#	Each
Progressive Foot Control	856-0048	\$109.75

### G Quick-Disconnect Kit – Saves time changing handpieces.

Allows quick changes from one handpiece to another without interrupting workflow. Cuts off airflow immediately when release button is pushed. Installs on vinyl tubing of Gravermeister, GraverMach, GraverMax SC or GraverSmith. Includes main body and two quick-disconnect handpiece fittings.



Description	Item#	Each
Quick-Disconnect Kit	856-0282	\$26.95





**A GRS® #940 Magnum Quick-Change Handpiece – For GraverMach/Max SC/Smith.**

The compact handpiece with an unmatched combination of power and control—try it and you'll be more than impressed. Offers a better range of power than any other handpiece, from very fine to amazingly heavy. In fact, it exceeds the power of previous models that are twice as large. Also offers fine control with shading capability that's significantly better than any handpiece with this much top-end power. Includes palm knob, oval knob, head and six quick-change holders. Measures 2.8" long. Weighs 6.4 oz.

Description	Item#	Each
#940 Magnum Quick-Change Handpiece	856-0303	\$295.00



**B GRS® #710 Quick-Change Handpiece – For GraverMach/Max SC/Smith.**

Offers plenty of power for working on hard metals such as platinum and steel as well as good control for making smooth cuts in gold and other soft metals. Features stainless steel construction, ergonomic handle and quiet rear exhaust. Includes six quick-change holders. Measures 4.4" long. Weighs 6.4 oz.

Description	Item#	Each
#710 Quick-Change Handpiece	856-0015	\$249.00



**C GRS® #901 Quick-Change Handpiece – For GraverMach/Max SC/Smith.**

Offers a wide power range and fine control. Excellent for stone setting, fine engraving, deep relief work, bead raising and hammer setting. Features heat-treated stainless steel construction, ergonomic handle and adjustable side hose connection. Available with six quick-change holders or in a complete set with quick-change handle, nine quick-change holders, six steel points, one GlenSteel graver and tool tray. Measures 2.6" long. Weighs 2.6 oz.

Description	Item#	Each
C. #901 Quick-Change Handpiece	855-9991	\$249.00
#901 Quick-Change Handpiece Set	855-9992	279.00



**D GRS® #921 Monarch Quick-Change Handpiece – For GraverMach/Max SC/Smith.**

The top-quality Monarch impact handpiece makes ultra-fine engraving easier than ever, including bulino and banknote styles. Features heat-treated stainless steel construction, graver-style handle and adjustable side hose connection. Includes six quick-change holders. Measures 2.4" long. Weighs 1.8 oz.

Description	Item#	Each
#921 Monarch Quick-Change Handpiece	855-9990	\$239.00



**E GRS® #509 Large Quick-Change Handpiece – For Gravermeister only.**

The most powerful Gravermeister handpiece available. Great for heavy metal engraving, hammering and wood carving. Includes six quick-change holders. Measures 6.0" long. Weighs 7.9 oz.

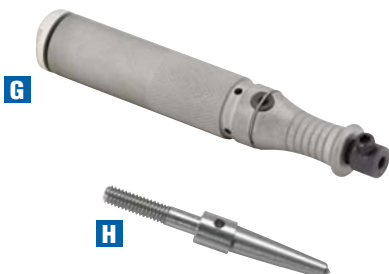
Description	Item#	Each
#509 Large Quick-Change Handpiece	856-0301	\$218.00



**F GRS® #506 Large Handpiece – For GraverMach/Max SC/Smith.**

A very powerful handpiece designed for heavy metal engraving, wood carving and other demanding jobs. Two-jaw chuck holds 0.06"–0.19" (1.6–4.8mm) round and square tools as well as standard gravers. Measures 5.7" long. Weighs 7.4 oz.

Description	Item#	Each
#506 Large Handpiece	856-0285	\$198.00



**G, H GRS® #610 Hammer Handpiece – For GraverMach/Max SC/Smith.**

This exceptional impact tool offers the power for stone setting and control necessary for light jobs. Operates with tool directly on work rather than loosely above it for reduced stone damage. Built for all-day use. Produces the brightest stippling possible when used with Lazer Point #850-3590 (see below). Setscrew chuck holds round tools up to 0.13" (3.3mm) and square tools up to 0.10" (2.5mm). Measures 4.5" long. Weighs 5.5 oz.

Description	Item#	Each
G. #610 Hammer Handpiece	856-0280	\$219.00
H. Lazer Point	850-3590	17.65



**A - C GRS® #850 Ultra-High-Speed Rotary Handpiece**

**For GraverMach/Max SC/Smith.**

Provides considerably more power and torque than other rotary handpieces. Operates at 300,000–400,000rpm for effortless engraving, decorating and grinding of metal, plastic, glass, stone, wood and many other materials. Runs with virtually no vibration or noise. Needs no lubrication. Accepts only 1/16" tools due to its high operating speed (see below for diamond/stone and carbide bur sets). Includes air tubing, connectors and carbide bur. Connects to GraverMach, GraverMax SC or any regulated air supply. Requires 1.3 CFM of air at 30–35 PSI. Measures approx. 3/8" dia. x 5 1/8" long. Weighs 2.5 oz.

Description	Item#	Each
A. #850 Ultra-High-Speed Rotary Handpiece	<b>855-9989</b>	<b>\$389.00</b>
B. Diamond/Stone Bur Set	<b>856-0289</b>	<b>39.80</b>
C. Carbide Bur Set	<b>856-0288</b>	<b>23.95</b>



**D Foredom® Power Graver™ – For engraving and setting.**

Power Graver is a flexible shaft system specially designed for engraving and hammering. Uses standard gravers to give you the feel of hand engraving with less effort and fatigue. Provides stone setters the power they need for bezel and channel setting, raising beads, turning prongs and chasing.

Includes motor, #9D hammer handpiece with duplex spring, manual speed controller, on/off foot switch, accessory kit, grease, handpiece oil and DVD. Permanently lubricated ball-bearing motor provides high torque at low speed for tough jobs. Can be used with hammer handpieces other than #9D. The #9D handpiece comes with 1/16", 3/32", 1/8" and 3mm collets for gravers, beading tools and setting tools. Fits Power Graver motor only. Benchtop manual speed controller runs motor at 500–2,800 strokes/min., keeping selected speed constant. On/off foot switch lets you stop and start again without readjusting speed.

Description	Item#	Each
D. Power Graver, 110V	<b>821-6725</b>	<b>\$395.00</b>
Power Graver, 220V	<b>821-6730</b>	<b>395.00</b>



**E Pneumatic Diamond Engraver – For a “velvet” finish.**

Features a fine diamond tip in a floating stylus that creates bright stippling. Lets you adjust impact strength from gentle to heavy and spring action of stylus from tight to relaxed to create a wide variety of effects. Runs cool with little vibration. Made of stainless steel. Includes two diamond tips (one mounted and one spare), 39" air hose and quick-connect air fittings. Measures 3/8" dia. x 5 1/2" long. Air requirement: 45–70 PSI.

Description	Item#	Each
Pneumatic Diamond Engraver	<b>850-1328</b>	<b>\$395.00</b>

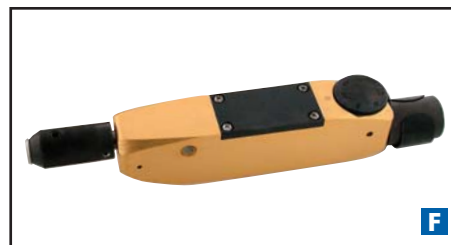


**F Magna-Graver® II Vari-Pact™**

Vari-Pact is a powerful impact handpiece that attaches to any standard flex shaft except Power Graver. Performs scrollwork, florentining, bead raising, texturing and stippling on precious metals as well as brass and steel. Selector button lets the user choose from four impact power settings that range from light to heavy for better cutting control. To protect handpiece from undue wear and tear and improve control, use with a flex shaft that has gear reduction, such as Foredom LX/LXB (see p. 341). Measures 5 1/4" long. Made in USA. Graver set sold separately.

Description	Item#	Each
F. Magna-Graver II Vari-Pact	<b>821-6042</b>	<b>\$325.00</b>
Graver Set for Magna-Gravers*	<b>821-6045</b>	<b>33.39</b>

\*Three gravers (square, flat and liner) and round high-speed steel tool blank, all with 1/8" shanks



**G - I Dremel® Electric Engraver**

An economical adjustable engraver for creating designs on metal, wood, plastic, ceramic, glass and leather. Features stroke adjustment dial and pencil-type grip. Includes hanger and carbide point. Measures 6" long. UL listed.

Description	Item#	Each
G. Electric Engraver, 110V	<b>821-6010</b>	<b>\$21.75</b>
H. Optional Diamond Point	<b>821-6020</b>	<b>15.45</b>
I. Replacement Carbide Point	821-6015	4.99





## Muller® Swedish Steel Gravers

Made of premium-grade Swedish steel pretempered for work on nonferrous metals such as gold, platinum, silver and copper. Can be retempered to suit individual requirements.

### Muller Flat

No.	Item#	EACH Prices	
		1-2	3+
36	165-1360	\$5.70	\$5.13
37	165-1370	5.70	5.13
38	165-1380	5.70	5.13
39	165-1390	5.70	5.13
40	165-1400	5.70	5.13
41	165-1410	5.70	5.13
42	165-1420	5.70	5.13
43	165-1430	5.70	5.13
44	165-1440	5.70	5.13
45	165-1450	5.70	5.13
46	165-1460	5.70	5.13
47	165-1470	5.70	5.13
48	165-1480	5.70	5.13
49	165-1490	5.70	5.13

### Muller Round

No.	Item#	EACH Prices	
		1-2	3+
50	165-1500	\$5.70	\$5.13
51	165-1510	5.70	5.13
52	165-1520	5.70	5.13
53	165-1530	5.70	5.13
54	165-1540	5.70	5.13
56	165-1560	5.70	5.13
58	165-1580	5.70	5.13
60	165-1600	5.70	5.13

### Muller Point (Onglette)

No.	Item#	EACH Prices	
		1-2	3+
000	165-6003	\$5.70	\$5.13
00	165-6002	5.70	5.13
0	165-6001	5.70	5.13
1	165-6010	5.70	5.13
2	165-6020	5.70	5.13
3	165-6030	5.70	5.13
4	165-6040	5.70	5.13
5	165-6050	5.70	5.13

### Muller Half-Point Left

No.	Item#	EACH Prices	
		1-2	3+
0	165-2001	\$5.70	\$5.13
1	165-2010	5.70	5.13
2	165-2020	5.70	5.13
3	165-2030	5.70	5.13

### Muller Half-Point Right

No.	Item#	EACH Prices	
		1-2	3+
0	165-3001	\$5.70	\$5.13
1	165-3010	5.70	5.13
2	165-3020	5.70	5.13
3	165-3030	5.70	5.13

### Muller Bevel Edge

No.	Item#	EACH Prices	
		1-2	3+
0	165-0001	\$5.70	\$5.13
1	165-0010	5.70	5.13
2	165-0020	5.70	5.13
3	165-0030	5.70	5.13

### Muller Oval

No.	Item#	EACH Prices	
		1-2	3+
63	165-0630	\$5.70	\$5.13
64	165-0640	5.70	5.13
65	165-0650	5.70	5.13

### Muller Knife

No.	Item#	EACH Prices	
		1-2	3+
0	165-4000	\$5.70	\$5.13
1	165-4010	5.70	5.13
2	165-4020	5.70	5.13
3	165-4030	5.70	5.13
4	165-4040	5.70	5.13

### Muller Square

No.	Item#	EACH Prices	
		1-2	3+
2	165-7020	\$5.70	\$5.13
4	165-7040	5.70	5.13
6	165-7060	5.70	5.13
8	165-7080	5.70	5.13
10	165-7100	5.70	5.13
12	165-7120	5.70	5.13











### Muller Tapered Square

No.	Item#	EACH Prices	
		1-2	3+
1	165-8010	\$5.70	\$5.13
2	165-8020	5.70	5.13
3	165-8030	5.70	5.13









**Gesswein® High-Speed Red Tang Gravers**

Made of high-speed steel. Generally preferred for use on gold, platinum, silver and steel. Hold cutting edges four to five times longer than Swedish tool steel gravers.







**Gesswein HS Flat**

No.	Item#	EACH Prices	
		1-2	3+
 36	166-1360	\$6.98	\$6.28
 37	166-1370	6.98	6.28
 38	166-1380	6.98	6.28
 39	166-1390	6.98	6.28
 40	166-1400	6.98	6.28
 41	166-1410	6.98	6.28
 42	166-1420	6.98	6.28
 43	166-1430	6.98	6.28
 44	166-1440	6.98	6.28
 45	166-1450	6.98	6.28




**Gesswein HS Round**

No.	Item#	EACH Prices	
		1-2	3+
 50	166-1500	\$6.98	\$6.28
 51	166-1510	6.98	6.28
 52	166-1520	6.98	6.28
 53	166-1530	6.98	6.28
 54	166-1540	6.98	6.28
 55	166-1550	6.98	6.28
 56	166-1560	6.98	6.28
 57	166-1570	6.98	6.28






**Gesswein HS Point (Onglette)**

No.	Item#	EACH Prices	
		1-2	3+
 0	166-5001	\$6.98	\$6.28
 1	166-5010	6.98	6.28
 2	166-5020	6.98	6.28
 3	166-5030	6.98	6.28
 4	166-5040	6.98	6.28
 5	166-5050	6.98	6.28

**Gesswein HS Bevel Edge**

No.	Item#	EACH Prices	
		1-2	3+
 1	166-0010	\$6.98	\$6.28
 2	166-0020	6.98	6.28
 3	166-0030	6.98	6.28









**Gesswein HS Knife**

No.	Item#	EACH Prices	
		1-2	3+
 0	166-4000	\$6.98	\$6.28
 1	166-4010	6.98	6.28
 2	166-4020	6.98	6.28
 3	166-4030	6.98	6.28
 4	166-4040	6.98	6.28






**Glardon/Vallorbe Swiss High-Speed Yellow Tang Gravers**

Made of high-speed steel specially melted and rolled just for gravers. Suitable for use on precious metals, wood, bone, ivory and onyx.









**Yellow Tang Flat**

No.	Item#	Each
 36	166-7210	\$8.85
 37	166-7211	8.85
 38	166-7212	8.85
 39	166-7213	8.85
 40	166-7214	8.85
 41	166-7215	8.85
 42	166-7216	8.85
 43	166-7217	8.85

**Yellow Tang Round**

No.	Item#	Each
 50	166-7220	\$8.85
 51	166-7221	8.85
 52	166-7222	8.85
 53	166-7223	8.85
 54	166-7224	8.85

**Yellow Tang Point (Onglette)**

No.	Item#	Each
 2/0	166-7200	\$8.85
 0	166-7201	8.85
 1	166-7202	8.85
 2	166-7203	8.85
 3	166-7204	8.85
 4	166-7205	8.85
 5	166-7206	8.85
 6	166-7207	8.85

Make your own custom grips and handles with JETT SETT—see p. 374.





**A**



**B**

**A, B Muller® Line Gravers (Liners)**

Made of premium-grade Swedish steel. Choose from straight and bent styles. Each has a size that represents the distance between lines (the first number) and the number of lines (the second number). The larger the first number, the greater the distance between lines. Size 18/10 creates a standard Florentine finish. Made in USA.

Style	Size	Item#	Each
A. Straight	6/4	167-0604	\$15.50
	6/6	167-0606	15.50
	6/8	167-0608	15.50
	6/10	167-0610	15.50
	8/6	167-0806	15.50
	8/10	167-0810	15.50
	10/6	167-1006	15.50
	10/10	167-1010	15.50
	12/10	167-1210	16.08
	14/10	167-1410	15.83
	16/10	167-1610	17.08
	16/12	167-1612	18.17
	18/6	167-1806	16.92
	18/8	167-1808	18.25
	18/10	167-1810	18.25
	18/12	167-1812	18.25
	20/10	167-2010	17.92
	24/6	167-2406	18.08
	24/8	167-2408	21.08
	26/10	167-2610	18.25
28/10	167-2810	21.25	
30/10	167-3010	21.25	
32/8	167-3208	21.25	
32/10	167-3210	21.25	
B. Bent	6/4	168-0604	18.20
	6/6	168-0606	18.20
	6/8	168-0608	18.20
	6/10	168-0610	18.20
	8/4	168-0804	18.20
	8/6	168-0806	18.20
	14/10	168-1410	18.50
	18/10	168-1810	20.95
	18/12	168-1812	20.95

**C**

**D**

**E**

**F**

**C - F GRS® GlenSteel™ Gravers**

Made of GlenSteel, a high-speed tool steel forged exclusively by GRS for engraving, setting and other demanding work. Stay sharp longer and resist breakage better than other gravers and tools. Easier to grind and cobalt-free for increased safety. Measure 0.093" (2.35mm) square x 2.7" (70mm) long. Fit all GRS QC (quick-change) impact handpieces.

Style	Item#	Each
C. Square	856-0001	\$11.45
D. Flat	856-0002	11.45
E. 120° Point	856-0003	13.95
F. Blank	856-0004	10.95

**G**

**H**

**G, H Carbide Gravers**

Made of a special grade of extra-fine-grain carbide that withstands impact better than any other grade. Sharpen with Power Hone (see p. 224) and diamond wheel. Square has one end angled at 45°. Blank is unground and ready to be custom-shaped. Measure just under 3/32" square x 2" long.

Style	Item#	Each
G. Square	856-0292	\$9.90
H. Blank	856-0290	9.40

**A - D GRS® QC Gravers – In convenient ready-to-go shapes.**

Just sharpen and use. Eliminate the need for tedious shaping—think of the time they'll save. Fit all GRS QC (quick-change) impact handpieces when mounted in GRS QC Holders (see below). Also fit many other handpieces, including Power Graver, Magna-Graver and more. Precision-ground from high-speed chrome tool steel. Sold individually and in two kits. Setter's Kit includes flat 37, 40, 42; round 50, 51, 52, 53; onglette 2/0, 0, 1; knife 1, 2. Engraver's Kit includes flat 37, 38, 39, 40, 42; round 51, 52; onglette 2/0, 0, 1, 3; knife 1, 2.

Style	No.	Width	Item#	Each
A. Flat	37	0.4mm	<b>855-9975</b>	<b>\$7.95</b>
	38	0.6mm	<b>855-9976</b>	<b>7.95</b>
	39	0.8mm	<b>855-9977</b>	<b>7.95</b>
	40	1.0mm	<b>855-9978</b>	<b>7.95</b>
	42	1.4mm	<b>855-9979</b>	<b>7.95</b>
B. Round	44	1.8mm	<b>855-9980</b>	<b>7.95</b>
	50	0.2mm	<b>855-9981</b>	<b>7.95</b>
	51	0.4mm	<b>855-9982</b>	<b>7.95</b>
	52	0.6mm	<b>855-9983</b>	<b>7.95</b>
C. Onglette (Point)	53	0.8mm	<b>855-9984</b>	<b>7.95</b>
	2/0	1.45mm	<b>855-9969</b>	<b>7.95</b>
	0	1.58mm	<b>855-9970</b>	<b>7.95</b>
	1	1.78mm	<b>855-9971</b>	<b>7.95</b>
D. Knife	3	1.94mm	<b>855-9972</b>	<b>7.95</b>
	1	2.0mm	<b>855-9985</b>	<b>7.95</b>
	2	2.2mm	<b>855-9986</b>	<b>7.95</b>
<b>Description</b>			<b>Item#</b>	<b>Each</b>
Setter's Kit			<b>855-9967</b>	<b>\$78.00</b>
Engraver's Kit			<b>855-9968</b>	<b>78.00</b>



**E GRS® QC Holders – For fast tool changes.**

Fit GRS QC (quick-change) impact handpieces, QC Handle and QC Sharpening Fixture. Allow fast tool changes. Accept square tools up to 0.10" (2.5mm) thick, round tools up to 0.13" (3.3mm) in diameter and most gravers, including GRS QC Gravers (see above).

Description	Item#	Each
QC Holders, pkg. of 3	<b>855-9987</b>	<b>\$14.90</b>
QC Holders, pkg. of 10	<b>855-9988</b>	<b>46.00</b>



**F GRS® Combination Tool Carousel – For gravers and small tools.**

Occupies very little space on the workbench. Top tray holds up to 30 tools and gravers, and bottom tray has four removable QC (quick-change) tool trays that each hold 10 gravers with GRS QC Holders attached.

Description	Item#	Each
Combination Tool Carousel	<b>856-0293</b>	<b>\$29.60</b>



**G Ruby® Bench Stones – The ultimate sharpening stones.**

Ideal for sharpening gravers and tools—even carbide ones. Made of pure, sintered crystals of synthetic ruby for outstanding wear resistance, which makes them more economical than other stones. Will not groove, even after years of use. Choose from double-sided sizes and single-sided sizes mounted in wooden boxes. Made in Germany.

Description	Size (L x W x Thick)	Grit	Item#	Each
Stone only	4" x 1" x 3/8"	Medium	<b>350-1002</b>	<b>\$95.00</b>
		Fine	<b>350-1003</b>	<b>105.00</b>
	6" x 1" x 5/8"	Medium	<b>350-1012</b>	<b>153.00</b>
		Fine	<b>350-1013</b>	<b>153.00</b>
Stone with box	4" x 1" x 3/8"	Medium	<b>350-1102</b>	<b>85.00</b>
		Fine	<b>350-1103</b>	<b>100.00</b>
	4 3/4" x 2" x 3/8"	Medium	<b>350-1112</b>	<b>225.00</b>
		Fine	<b>350-1113</b>	<b>225.00</b>





A



B

**A, B GRS® Engraver's Blocks**

The Magnablock and the Small Block are extremely well-made devices used to hold objects firmly for engraving, stone setting and general-purpose work. Each holds both large and small items. Features heavy weight and adjustable drags for keeping the work-piece in the proper position. Uses two industrial ball bearings and a large roller thrust bearing to eliminate side play and wobble. Includes rubber ring pad with Nylon glides, upper jaw plates, five pins and wrench. Available with or without 30-Piece Attachment Set (see below). Made in USA.

**Features:**

- Solid steel construction for exceptional durability
- Adjustable friction lock from zero to full lock for crown rotation control
- Nonglare satin finish on body, black oxide finish on jaws for protection
- Precision-machined parts for smooth, efficient operation
- Easily adjustable working angles for comfort

**Specifications:**

	Magnablock	Small Block
Spherical Diameter	5¾"	5⅛"
Jaw Size	3"W x 1¾"H	2½"W x 1½"H
Max. Jaw Opening	3½"	3"
Net/Ship. Wt.	30/33 lbs.	19/22 lbs.

Description	Item#	Each
A. Magnablock	<b>856-0275</b>	<b>\$498.00</b>
Magnablock with 30-Piece Attachment Set	<b>856-0276</b>	<b>\$549.00</b>
B. Small Block	<b>821-6000</b>	<b>\$388.00</b>
Small Block with 30-Piece Attachment Set	<b>821-6005</b>	<b>\$448.00</b>

**C GRS® 30-Piece Attachment Set**

Includes 30 small attachments for GRS Engraver's Blocks and wooden storage base.

Description	Item#	Each
30-Piece Attachment Set	<b>856-0277</b>	<b>\$78.00</b>



C

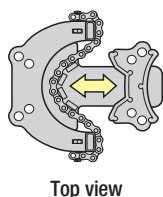
**D GRS® Ring Holding Clamp**

Uses leather lining to prevent objects from marring. Fits GRS Engraver's Blocks (included in above set).

Description	Item#	Each
Ring Holding Clamp	<b>856-0296</b>	<b>\$19.90</b>



E



Top view

**E GRS® Contoured Vise Jaw Set**

Ideal for holding odd-shaped parts in GRS Engraver's Blocks. Fits in top holes of blocks. Has rubber-lined jaws that automatically conform to a part's shape to grip it firmly with minimal clamping force. Provides a fast and safe way to hold shaped mold inserts and irregular items for polishing. Small jaw can be rotated 180° for greater versatility.

Description	Item#	Each
Contoured Vise Jaw Set	<b>821-5997</b>	<b>\$59.00</b>



F

**F GRS® Inside Ring Holder for Vises**

Holds rings from the inside for easy stone setting or engraving. Safely handles tapered and delicate designs that can be crushed by ordinary ring clamps. Fits in all GRS Engraver's Blocks and most vises. Includes seven different mandrels for holding ring sizes 4-13 without marring, expansion screw and wrench. Made of solid steel.

Description	Item#	Each
Inside Ring Holder	<b>856-0209</b>	<b>\$43.95</b>



G

H

**G, H GRS® Super Pins**

Made of heavy-duty plastic to hold large parts without marring. Fit in GRS Magnablock and Small Block. Available with ⅜" and ¼" steel shanks.

Description	Item#	Each
G. Super Pins with ⅜" shanks, pkg. of 2	<b>821-5999</b>	<b>\$4.90</b>
H. Super Pins with ¼" shanks, pkg. of 4	<b>821-5998</b>	<b>8.40</b>

**A, B Gesswein® Engraver's Block and Attachments**

High-quality chrome-plated block designed to hold workpieces firmly without side motion. Has ball bearings for freedom of movement and smooth swiveling. Includes 5" felt ring pad and hex key. Available with or without 35-piece attachment set (see below). Made in USA.

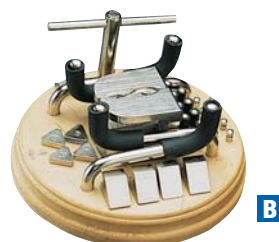
**Specifications:**

Spherical Diameter	5"
Jaw Width	2"
Jaw Height	2¼"
Max. Jaw Opening	3"
Net/Ship. Wt.	16/18 lbs.

Description	Item#	Each
<b>A. Engraver's Block</b>	<b>821-6111</b>	<b>\$287.00</b>
Engraver's Block with 35-Piece Attachment Set	<b>821-6110</b>	<b>355.00</b>
<b>B. 35-Piece Attachment Set (includes Replacement Hex Key)</b>	<b>821-6112</b>	<b>95.00</b>
Long Rubber-Covered Pins, set of 4	<b>821-6150</b>	<b>7.08</b>
Tapered Pins, set of 4	<b>821-6300</b>	<b>8.75</b>
Replacement 5" Felt Ring Pad	288-5010	51.70
Replacement Hex Key	821-6800	8.00



**A**



**B**

**C GRS® Microblock™ Ball Vise**

A high-quality miniature engraving block with compact, low-profile design. Perfect for microscope work and other jobs where a larger vise is an obstacle. Smooth, self-centering jaw system is perfect for stone setting, small engraving jobs and other precision work. Adjustable internal brake system lets the user choose the amount of rotational resistance from totally free to fully locked and anywhere in between. Like larger GRS vises, Microblock is machined from solid stainless steel and finished with low-glare treatment to reduce eyestrain. Includes positioning ring, four jaw pins, wrenches and Thermo-Loc Sample Kit (four bars). Sold individually or with 30-Piece Attachment Set. Measures 3.1" dia. with 1.8"W x .87"H jaws. Max. jaw opening: 2".

Description	Item#	Each
Microblock	<b>856-0304</b>	<b>\$228.00</b>
<b>C. Microblock with 30-Piece Attachment Set</b>	<b>856-0305</b>	<b>288.00</b>



**C**

**D GRS® Thermo-Loc®**

Very tough work-holding plastic. Softens with heat to clay-like pliable consistency so you can form it around an endless variety of workpieces. Turns rock-hard once it cools to hold items securely. Economical and practical—can be reused again and again. Neutral gray in color to prevent eyestrain, even under bright work lights. Heat in a microwave oven on the Teflon pad included with the Starter Kit, in a conventional oven, in hot water or with a heat gun (be sure to follow proper heating instructions).

Description	Item#	Each
Thermo-Loc, ½ lb.	<b>816-1592</b>	<b>\$15.95</b>
Thermo-Loc, 1 lb.	<b>816-1593</b>	<b>26.95</b>
Thermo-Loc, 5 lbs.	<b>816-1594</b>	<b>108.95</b>
Thermo-Loc Starter Kit (includes 1 lb. Thermo-Loc and 6" x 6" Teflon pad)	<b>816-1597</b>	<b>32.95</b>



**D**



**E GRS® Thermo-Loc® Jaw Sets**

Hold irregularly shaped and fragile parts securely without damaging them. Choose from small and large jaw sets for respective GRS Engraving Blocks. Each includes two stainless steel master jaws and four aluminum bonding strips. Easy to use: just set jaws in your Engraving Block, bolt on aluminum bonding strips, apply Thermo-Loc to strips, and form them around your workpiece. Unbolt and save custom jaws for repeat jobs, or resoften the Thermo-Loc to hold another workpiece.

Description	Item#	Each
Thermo-Loc Small (Small Block) Jaw Set	<b>816-1595</b>	<b>\$68.00</b>
Thermo-Loc Large (Magnablock) Jaw Set	<b>816-1596</b>	<b>68.00</b>



**E**





A

B



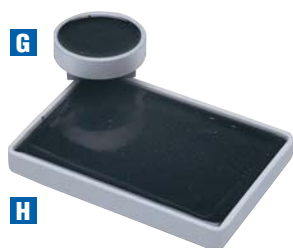
C

D

E



F



G

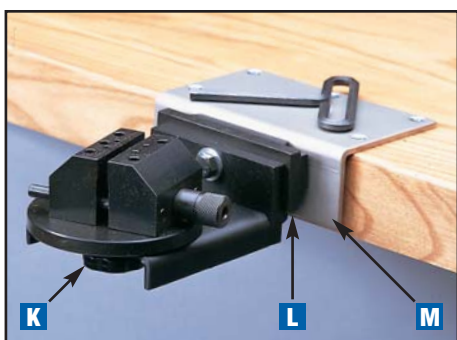
H



I



J



K

L

M

**A, B Pitch Bowls**

Made of cast iron. The 5" diameter bowl holds up to 2 lbs. of pitch, and the 8" diameter bowl holds up to 4 lbs. of pitch (not included). Use with ring pad (see below) for stability.

Description	Diameter	Item#	Each
A. Small Bowl	5"	811-1290	\$20.95
B. Large Bowl	8"	811-1310	24.50

**C - F Ring Pads**

Use with pitch bowls to insulate the workbench surface from heat. Lets you tilt engraver's block or pitch bowl so you can find the best working angle.

Description	Diameter	Item#	Each
C. Felt Pad	5"	288-5010	\$51.70
D. Leather Pad	5"	821-6850	76.70
E. Small Rubber Pad	5"	811-1291	5.15
F. Large Rubber Pad	8"	811-1311	9.95

**G, H GRS® Pitch Cup and Bowl**

Compact pitch cup and bowl for mounting in jaws of any vise or engraver's block. Each comes prefilled with black pitch, a special material that softens when heated and provides firm support for hard-to-hold, irregularly shaped and delicate items. Gently reheat pitch to remove workpiece.

Description	Dimensions	Item#	Each
G. Pitch Cup	2" diameter	856-0171	\$22.95
H. Pitch Bowl	5"L x 3½"W x ¾"H	856-0170	58.00

**I Black Pitch**

Traditional, ready-to-mix pitch for holding and supporting jewelry during engraving and more. Especially useful for holding objects too delicate to hold in an engraver's block. Use in a pitch bowl and set into a ring pad for a handy engraving fixture. Mix with plaster or pumice and linseed oil to vary hardness. Includes instructions for mixing and use. Sold in 8 oz. containers.

Description	Item#	Each
Black Pitch, 8 oz.	811-1805	\$20.00

**J Peg Clamp**

A mini handheld tool for holding odd-shaped items for engraving. Features 2" dia. half-round spring-loaded jaws that open and close on twin guides at the turn of a thumb screw. Includes four pegs that can be easily positioned in any of the 30 holes in each jaw. Has wooden handle. Measures 5" long. Max. jaw opening: 7/8".

Description	Item#	Each
J. Peg Clamp	812-0210	\$18.25
Replacement Pegs, pkg. of 4	812-0200	2.95

**K - M GRS® BenchMate™ Multipurpose Vise**

Attaches to BenchMate or directly to your bench. Tilts left and right and rotates on vertical axis so you can find the best working angle. Features holes in top for holding pins or the padded ring clamp from GRS 30-Piece Attachment Set #856-0277 (see p. 220). Made of satin-finished steel. To mount, fit in Fixed Mounting Plate, secure to Benchtop Mounting Adapter, then screw into bench.

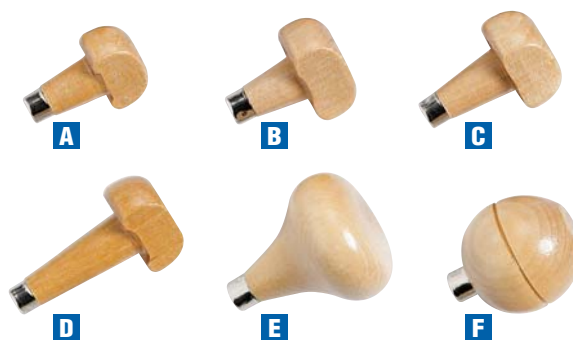
Description	Item#	Each
K. Multipurpose Vise	856-0172	\$118.95
L. Fixed Mounting Plate	856-0196	15.98
M. Benchtop Mounting Adapter	856-0193	23.00

### A - F Graver Handles

Six different hardwood handles with metal ferrules for firmly holding gravers.

Description	Style	Item#	EACH Prices	
			3-9	12+
A. Small 1/2-Head	4	170-2040	\$1.35	\$1.15
B. Medium 1/2-Head	8	170-2080	1.21	1.03
C. Large 1/2-Head	7	170-2070	1.45	1.23
D. X-Large 1/2-Head	5	170-2050	1.45	1.23
E. Mushroom	9	170-2090	1.95	1.66
F. Ball	11	170-2110	1.35	1.15

Three-piece minimum; please order in multiples of three.



### G - J Rosewood Graver Handles

Four different rosewood handles with metal ferrules for firmly holding gravers.

Description	Item#	Each
G. Small 1/2-Head	170-2140	\$2.50
H. Large 1/2-Head	170-2141	2.50
I. Mushroom	170-2143	2.50
J. Ball	170-2142	2.50



### K Graver Handle with Tool Chucks

Wooden handle with two interchangeable tool chucks for holding gravers and other small tools up to 3mm. To swap tools, just unscrew knurled holder, remove chuck, replace with other chuck and screw holder back on. Graver not included.

Description	Item#	Each
Graver Handle w/ Tool Chucks	840-4210	\$8.59



### L GRS® Adjustable Graver Handle Set

Includes three adjustable aluminum handles color-coded for easy graver identification. To adjust, just loosen lock screw, slide graver to desired position and tighten.

Description	Item#	Each
Adjustable Graver Handle Set	170-2201	\$28.95



### M GRS® QC Handle

Rubber-covered handle with short reach and comfortable feel for engraving by hand. Includes three QC (quick-change) Holders for fast tool changes. Accepts square tools up to 0.10" (2.5mm) thick, round tools up to 0.13" (3.3mm) in diameter and most gravers.

Description	Item#	Each
QC Handle	856-0264	\$29.50





**A GRS® Power Hone Sharpening System**

Sharpens gravers and tools in seconds without heat! Yields much sharper, stronger tool edges for making brighter cuts, cleaner lines and scrolls, more precise beads and finer shading. Teaches the beginner proper sharpening in minutes and saves the professional an hour or more each day by drastically reducing sharpening time.

Uses diamond wheels to sharpen hardened steel, high-speed steel and carbide gravers and tools, then ceramic lap with diamond spray to impart final polish. Features steel housing, heavy-duty motor and double-bearing spindle for years of dependability.

Deluxe/Standard versions include Power Hone, Sharpening Fixture (Dual-Angle/Standard, respectively), Quick-Change Wheel Adapter, two Diamond Wheels (260, 600 grit), Ceramic Lap, Diamond Spray and Wheel Storage Rack. Basic version includes Power Hone and 600 grit Diamond Wheel only. Made in USA.

Description	Item#	Each
A. Deluxe System, 110V	<b>856-0295</b>	<b>\$858.00</b>
Standard System, 220V	<b>856-0297</b>	<b>748.00</b>
Basic System, 110V	<b>856-0255</b>	<b>379.00</b>
Basic System, 220V	<b>856-0257</b>	<b>379.00</b>



**B GRS® Dual-Angle Sharpening Fixture – Head Only**

Holds gravers with or without handles and those in QC Holders for precise sharpening. Features two large, easy-to-read degree dials for setting both elevation and rotation angles.

Description	Item#	Each
Dual-Angle Sharpening Fixture, head only	<b>856-0299</b>	<b>\$179.00</b>



**C GRS® QC Sharpening Fixture – Head and Post**

Holds gravers in QC holders for precise sharpening. Features two degree dials for setting both elevation and rotation angles and a post with magnetized base.

Description	Item#	Each
QC Sharpening Fixture, head and post	<b>856-0262</b>	<b>\$179.00</b>



**D GRS® Standard Sharpening Fixture – Head and Post**

Holds gravers for sharpening. Features one degree dial for setting elevation angle and a post with magnetized base.

Description	Item#	Each
Standard Sharpening Fixture, head and post	<b>856-0200</b>	<b>\$92.00</b>



**E - H GRS® Power Hone Wheels**

The low-cost, high-quality Diamond Wheels eliminate heat buildup in gravers and tools, last for years and stay flat for accuracy. Produce a fine, dependable finish. Excellent for sharpening carbide, cobalt and standard steel tools. The solid Ceramic Lap produces a mirror finish on tools, resulting in bright cuts on your workpieces. Must be periodically charged with Diamond Spray. Can be used with Quick-Change Wheel Conversion Set (see below).

Description	Dia. x AH	Grit	Item#	Each
E. Diamond Wheel	5" x 1/2"	260	<b>856-0259</b>	<b>\$97.00</b>
		600	<b>856-0256</b>	<b>89.00</b>
		1200	<b>856-0032</b>	<b>114.00</b>
F. Ceramic Lap	6" x 1/2"	–	<b>856-0258</b>	<b>188.60</b>
G. Diamond Spray, 2 oz.			<b>856-0260</b>	<b>23.90</b>
H. Wheel Storage Rack			<b>856-0035</b>	<b>19.80</b>



**I GRS® Power Hone Quick-Change Wheel Conversion Set**

Easily attaches to the Power Hone without tools. Lets you change wheels in seconds: simply lift wheel off and replace with another. Can be used with all GRS 5" and 6" wheels.

Description	Item#	Each
Quick-Change Wheel Conversion Set	<b>856-0261</b>	<b>\$49.00</b>

### A Crocker-Style Graver Sharpening Fixture

Keeps graver in a fixed position for sharpening on a bench stone. Holds graver at any angle: just set index as desired and lock in for repeated accuracy. Stone and graver not included.

Description	Item#	Each
Crocker-Style Graver Sharpening Fixture	816-1000	\$46.00



### B Graver Sharpening Holder

A small, inexpensive holder for sharpening. Holds gravers in either of two angled openings. Has roller on bottom for smooth action. Use with a bench stone (see p. 58 for our Ruby Bench Stones). Measures 1 3/8"W x 1 1/2"H.

Description	Item#	Each
Graver Sharpening Holder	816-1012	\$6.95



### C - F Scribes

Double-ended steel scriber features one-piece steel construction and twisted center for good grip.

Carbide-tipped scriber can be used on hard metals, glass, stones, and diamond scriber can be used on all metals and most stones. Both have hexagonal aluminum handles that prevent rolling.

Steel needle scriber features one-piece steel construction and knurled handle for sure grip.

Description	Length	Item#	Each
C. Double-Ended Steel Scriber	6 1/2"	816-0890	\$6.40
D. Carbide-Tipped Scriber	5 1/4"	816-0950	4.60
E. Diamond Scriber	5 1/4"	220-1900	9.97
F. Steel Needle Scriber	4 1/2"	816-0905	2.10



### G Waller Carbide-Tipped Scriber

Has knurled aluminum handle with pocket clip. Carbide tip can be removed and inserted in handle for protection when not in use. Replacement tip available. Measures 5 1/8" long.

Description	Item#	Each
G. Waller Carbide-Tipped Scriber	816-0960	\$7.30
Replacement Carbide Tip	816-0961	5.70



### H Chinese White

A fast-drying, nontoxic, white watercolor for layout work. Forms a background so letters or designs can be drawn on the work surface prior to engraving. To use, simply moisten surface with water using fingertip or soft brush, then apply to workpiece. Sold in 0.175 oz. half-cake packaged in aluminum foil for protection from moisture.

Description	Item#	Each
Chinese White	812-0100	\$13.30





## Swiss Pattern Precision Files (pp. 226–231)

The most precise, durable files on the market. Cut sharper and last longer than other files. Offer great performance on soft and hard metals, including platinum. Made of tough chrome alloy steel. Length measurements exclude tangs.

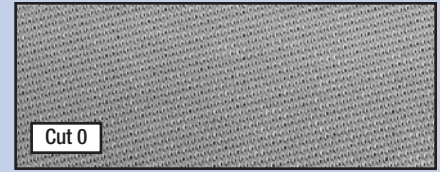
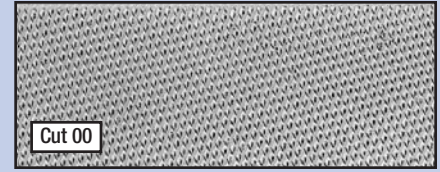
### Comparison of Cuts

Swiss	=	American
00		Bastard Cut
0		Second Cut
2		Smooth Cut

### Scale of Cuts for Swiss Files\*

Teeth per Inch	3"	Pattern 4" to 8"	10"+	Needle 10 to 20cm	Escapement 14cm
30	–	–	00	–	–
41	–	00	0	00	–
51	00	0	1	–	–
64	0	1	2	0	0
79	1	2	3	–	–
97	2	3	4	2	2
117	3	4	–	–	–
142	4	–	6	4	4
173	–	6	–	–	–
213	6	–	–	6	6
295	–	–	–	–	8

\*Except Checkering Pillar Files



### Barrette

Length of Cut	Width x Thickness	Cut	Item#	EACH Prices	
				1-11	12+
3"	$\frac{23}{64}$ " x $\frac{3}{32}$ "	0	735-0301	\$19.10	\$16.24
		00	735-0402	19.37	16.46
		0	735-0401	20.44	17.37
		1	735-0410	21.35	18.15
		2	735-0420	22.10	18.79
4"	$\frac{1}{2}$ " x $\frac{1}{8}$ "	4	735-0440	25.84	21.96
		00	735-0602	22.68	19.28
		0	735-0601	23.11	19.64
		1	735-0610	26.43	22.47
		2	735-0620	27.02	22.97
6"	$\frac{23}{32}$ " x $\frac{5}{32}$ "	4	735-0640	30.33	25.78
		0	735-0801	33.12	28.15
		2	735-0820	35.79	30.42



### Checkering Pillar

Frequently used to create a coarse Florentine finish. After initial cut, overcut at 45° or 90°. Cut 2 is very coarse. Cut 4 closely matches a 26-grade liner.

Length of Cut	Width x Thickness	Lines per inch	Cut	Item#	EACH Prices	
					1-11	12+
6"	$\frac{1}{2}$ " x $\frac{11}{64}$ "	50	2	746-0620	\$37.34	\$31.74
		75	4	746-0640	53.93	45.84



### Crossing

Length of Cut	Width x Thickness	Cut	Item#	EACH Prices	
				1-11	12+
4"	1 <sup>5</sup> / <sub>32</sub> " X 9/ <sub>64</sub> "	0	742-0401	\$37.40	\$31.79
		2	742-0420	40.39	34.33
		4	742-0440	47.24	40.15
6"	1 <sup>9</sup> / <sub>32</sub> " X 3/ <sub>16</sub> "	0	742-0601	44.14	37.52
		2	742-0620	47.62	40.48
		4	742-0640	55.59	47.25



### Equalling

Length of Cut	Width x Thickness	Cut	Item#	EACH Prices	
				1-11	12+
4"	1 <sup>3</sup> / <sub>32</sub> " X 5/ <sub>64</sub> "	0	741-0401	\$20.06	\$17.05
		2	741-0420	21.67	18.42
		4	741-0440	25.25	21.46
6"	1/2" X 7/ <sub>64</sub> "	00	741-0602	22.31	18.96
		0	741-0601	23.70	20.15
		2	741-0620	25.57	21.73



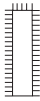
### Half-Round

Length of Cut	Width x Thickness	Cut	Item#	EACH Prices	
				1-11	12+
4"	1 <sup>5</sup> / <sub>32</sub> " X 9/ <sub>64</sub> "	00	730-0402	\$24.98	\$21.23
		0	730-0401	26.38	22.42
		2	730-0420	29.43	25.02
		3	730-0430	31.30	26.61
		4	730-0440	34.40	29.24
6"	1 <sup>9</sup> / <sub>32</sub> " X 3/ <sub>16</sub> "	00	730-0602	30.33	25.78
		0	730-0601	32.05	27.24
		1	730-0610	33.60	28.56
		2	730-0620	34.61	29.42
		3	730-0630	36.92	31.38
		4	730-0640	40.39	34.33
8"	1 <sup>3</sup> / <sub>16</sub> " X 5/ <sub>16</sub> "	00	730-0660	66.07	56.16
		0	730-0802	41.84	35.56
		0	730-0801	44.14	37.52
		1	730-0810	46.28	39.34
		2	730-0820	47.78	40.61
		4	730-0840	55.75	47.39



### Half-Round Ring

Length of Cut	Width x Thickness	Cut	Item#	EACH Prices	
				1-11	12+
6"	1 <sup>5</sup> / <sub>32</sub> " x 9 <sup>9</sup> / <sub>64</sub> "	00	736-0602	\$31.99	\$27.19
		0	736-0601	33.87	28.79
		1	736-0610	35.47	30.15
		2	736-0620	36.54	31.06
		3	736-0630	38.79	32.97
		4	736-0640	42.69	36.29



### Hand

Length of Cut	Width x Thickness	Cut	Item#	EACH Prices	
				1-11	12+
4"	1 <sup>7</sup> / <sub>32</sub> " x 1 <sup>1</sup> / <sub>8</sub> "	0	731-0401	\$14.12	\$12.00
		2	731-0420	15.19	12.91
		4	731-0440	17.66	15.01
6"	3 <sup>3</sup> / <sub>4</sub> " x 5 <sup>5</sup> / <sub>32</sub> "	00	731-0602	16.75	14.24
		0	731-0601	17.82	15.15
		1	731-0610	18.56	15.78
		2	731-0620	19.21	16.33
		3	731-0630	20.33	17.28
		4	731-0640	22.31	18.96
8"	2 <sup>9</sup> / <sub>32</sub> " x 3 <sup>3</sup> / <sub>16</sub> "	6	731-0660	34.13	29.01
		00	731-0802	23.17	19.69
		0	731-0801	24.45	20.78
		2	731-0820	26.43	22.47
		4	731-0840	30.76	26.15
10"	1" x 1 <sup>1</sup> / <sub>4</sub> "	00	731-1002	31.73	26.97
		0	731-1001	33.54	28.51
		2	731-1020	36.27	30.83



### Knife-Edge

Length of Cut	Width x Thickness	Cut	Item#	EACH Prices	
				1-11	12+
4"	1 <sup>5</sup> / <sub>32</sub> " x 1 <sup>1</sup> / <sub>8</sub> "	2	745-0420	\$24.24	\$20.60
		4	745-0440	28.30	24.06
6"	2 <sup>3</sup> / <sub>32</sub> " x 5 <sup>5</sup> / <sub>32</sub> "	00	745-0602	25.09	21.33
		0	745-0601	26.43	22.47

**Pillar, Regular**

Length of Cut	Width x Thickness	Cut	Item#	EACH Prices	
				1-11	12+
4"	$\frac{3}{8}$ " x $\frac{1}{8}$ "	00	737-0402	\$14.82	\$12.60
		0	737-0401	15.73	13.37
		2	737-0420	16.96	14.42
		4	737-0440	19.74	16.78
6"	$\frac{1}{2}$ " x $\frac{11}{64}$ "	00	737-0602	17.55	14.92
		0	737-0601	18.46	15.69
		1	737-0610	19.37	16.46
		2	737-0620	15.89	13.51
		3	737-0630	21.29	18.10
		4	737-0640	23.22	19.74
8"	$\frac{19}{32}$ " x $\frac{13}{64}$ "	0	737-0801	25.52	21.69
10"	$\frac{23}{32}$ " x $\frac{15}{64}$ "	00	737-1002	33.12	28.15
		0	737-1001	35.15	29.88
		2	737-1020	37.72	32.06

**Pillar, Demi-Narrow**

Length of Cut	Width x Thickness	Cut	Item#	EACH Prices	
				1-11	12+
6"	$\frac{3}{8}$ " x $\frac{5}{32}$ "	0	738-0601	\$82.71	\$70.30
		1	738-0610	35.20	29.92
		2	738-0620	51.15	43.48

**Pillar, Narrow**

Length of Cut	Width x Thickness	Cut	Item#	EACH Prices	
				1-11	12+
4"	$\frac{3}{16}$ " x $\frac{3}{32}$ "	00	739-0402	\$17.60	\$14.96
		0	739-0401	18.62	15.83
		2	739-0420	20.06	17.05
		4	739-0440	23.49	19.97
6"	$\frac{1}{4}$ " x $\frac{9}{64}$ "	00	739-0602	20.76	17.65
		0	739-0601	21.94	18.65
		1	739-0610	23.01	19.56
		2	739-0620	23.75	20.19
		4	739-0640	27.71	23.55
		6	739-0660	45.21	38.43





### Pillar, Extra-Narrow

Length of Cut	Width x Thickness	Cut	Item#	EACH Prices	
				1-11	12+
3"	1/8" x 5/64"	2	740-0320	\$18.56	\$15.78
4"	5/32" x 5/64"	0	740-0401	17.60	14.96
		2	740-0420	18.94	16.10
		4	740-0440	22.15	18.83
6"	13/64" x 1/8"	00	740-0602	19.63	16.69
		0	740-0601	20.76	17.65
		1	740-0610	21.77	18.50
		2	740-0620	22.42	19.06
		4	740-0640	26.16	22.24
		6	740-0660	42.80	36.38



### Pippin

Length of Cut	Width x Thickness	Cut	Item#	EACH Prices	
				1-11	12+
6"	25/64" x 9/64"	2	747-0620	\$61.79	\$52.52



### Round, Parallel

Length of Cut	Diameter	Cut	Item#	EACH Prices	
				1-11	12+
4"	1/16"	0	733-4501	\$15.19	\$12.91
		2	733-4520	17.12	14.55
4"	1/8"	0	733-4401	17.66	15.01
6"	3/32"	0	733-3601	20.54	17.46
		2	733-3620	22.36	19.01
6"	1/8"	0	733-4601	20.54	17.46
		2	733-4620	22.36	19.01
6"	5/32"	0	733-5601	21.35	18.15
		2	733-5620	23.54	20.01



### Round, Tapered

Length of Cut	Diameter	Cut	Item#	EACH Prices	
				1-11	12+
4"	$\frac{5}{32}$ "	2	732-0420	\$14.66	\$12.46
		4	732-0440	17.92	15.23
6"	$\frac{1}{4}$ "	0	732-0601	14.71	12.50
		2	732-0620	18.03	15.33
		4	732-0640	21.08	17.92
8"	$\frac{5}{16}$ "	1	732-0810	24.08	20.47
		2	732-0820	24.82	21.10



### Three-Square

Length of Cut	Width	Cut	Item#	EACH Prices	
				1-11	12+
6"	$\frac{3}{8}$ "	0	734-0601	\$21.13	\$17.96
		1	734-0610	22.10	18.79
		2	734-0620	22.84	19.41
		4	734-0640	26.64	22.64



### Warding

Length of Cut	Width x Thickness	Cut	Item#	EACH Prices	
				1-11	12+
4"	$\frac{1}{2}$ " x $\frac{3}{64}$ "	00	749-0402	\$18.30	\$15.56
		0	749-0401	19.37	16.46
		2	749-0420	20.76	17.65
6"	$\frac{5}{8}$ " x $\frac{5}{64}$ "	2	749-0620	24.56	20.88
		4	749-0640	28.57	24.28

### File Card

Features steel wire bristles for removing particles and wax caught in teeth of files. Has wooden handle. Measures 8" long.

Description	Item#	EACH Prices	
		1-5	6+
File Card	816-2800	\$6.05	\$4.84

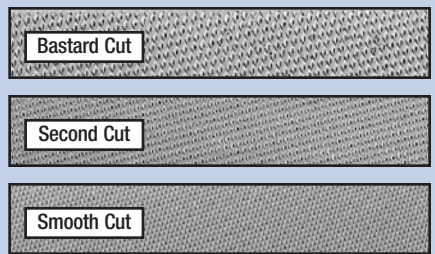


## American Pattern Precision Files

For jobs that do not require the accuracy of Swiss Pattern Precision Files (see p. 226-231), American Pattern Files provide best results. Designed for faster metal removal than their Swiss counterparts. Length measurements exclude tangs.

### Comparison of Cuts

American	=	Swiss
Bastard Cut		00
Second Cut		0
Smooth Cut		2



### Flat, End Tapered

Dimensions (L x W x Thick)	Bastard Cut		Second Cut		Smooth Cut	
	Item#	Each	Item#	Each	Item#	Each
6" x $\frac{39}{64}$ " x $\frac{5}{32}$ "	770-0627	\$2.84	770-0628	\$3.10	770-0629	\$3.53
8" x $\frac{25}{32}$ " x $\frac{13}{64}$ "	770-0827	3.85	770-0828	4.23	770-0829	4.55



### Half-Round

Dimensions (L x W x Thick)	Bastard Cut		Second Cut		Smooth Cut	
	Item#	Each	Item#	Each	Item#	Each
6" x $\frac{19}{32}$ " x $\frac{11}{64}$ "	770-0667	\$4.55	770-0668	\$4.92	770-0669	\$5.14
8" x $\frac{3}{4}$ " x $\frac{7}{32}$ "	770-0867	5.78	770-0868	6.37	770-0869	6.79



### Hand, Parallel

Dimensions (L x W x Thick)	Bastard Cut		Second Cut		Smooth Cut	
	Item#	Each	Item#	Each	Item#	Each
6" x $\frac{5}{8}$ " x $\frac{5}{32}$ "	-	-	-	-	770-0639	\$3.53
8" x $\frac{25}{32}$ " x $\frac{7}{32}$ "	770-0837	\$3.85	770-0838	\$4.23	770-0839	4.55
10" x $\frac{31}{32}$ " x $\frac{1}{4}$ "	770-1037	4.92	770-1038	5.40	770-1039	5.94



### Round

Dimensions (L x W x Thick)	Bastard Cut		Second Cut		Smooth Cut	
	Item#	Each	Item#	Each	Item#	Each
6" x $\frac{1}{4}$ "	770-0677	\$2.84	770-0678	\$2.84	770-0679	\$3.10
8" x $\frac{19}{64}$ "	770-0877	3.42	770-0878	3.42	770-0879	3.53



### Utility File Set

Match each job perfectly!

Includes six smooth cut American pattern files with wooden handles (flat, half-round, round, square, three-square and warding) and hanging pouch. Files measure 7" long with approx. 4" cut length.

Description	Item#	Each
Utility File Set	705-1005	\$15.09

**A Valtitan Hand Files – For platinum and other hard metals.**

Work exceptionally well on tough-to-file surfaces and hard metals such as platinum and steel. Feature 72 HRC hardness and resistance to corrosion for long life. Will not clog—one knock is enough to remove metal chips. Have yellow tangs for quick identification. Half-round in shape. Measure 6" long excluding tang. Made in Switzerland. *If used on platinum, do not contaminate by using on gold or silver.*

Description	Cut	Item#	EACH Prices	
			1-2	3+
Valtitan Hand File	0	<b>702-0060</b>	<b>\$37.99</b>	<b>\$36.09</b>
	2	<b>702-0061</b>	<b>40.98</b>	<b>38.93</b>
	4	<b>702-0062</b>	<b>49.92</b>	<b>47.42</b>



A

**B Swiss Vulcanite File**

High-quality Swiss file with open teeth for filing and shaping wax and other soft materials. Has one coarse end and one medium end. Half-round in shape. Measures 8" long.

Description	Item#	Each
Swiss Vulcanite File	<b>704-0010</b>	<b>\$34.61</b>



B

**C Econo Vulcanite File**

An economical alternative to the popular Swiss version for filing and shaping plastic, wax and wood. Has one coarse end and one medium end. Half-round in shape. Measures 8" long.

Description	Item#	Each
Econo Vulcanite File	<b>704-0020</b>	<b>\$19.95</b>



C

**D Habilis™ Swiss Files**

Ideal for those in-between jobs that are too big for needle files but require finer control than heavier files. Shaped for easy handling and finely balanced for efficient cutting. Measure 8½" long with 4" cut length. Sold individually and in sets of all five shapes.

Description	Cut	Item#	Each
Half-Round	00	<b>704-1010</b>	<b>\$14.66</b>
	1	<b>704-1011</b>	<b>14.66</b>
Hand (3 cut sides)	00	<b>704-1000</b>	<b>10.59</b>
	1	<b>704-1001</b>	<b>10.59</b>
Round	00	<b>704-1040</b>	<b>9.15</b>
	1	<b>704-1041</b>	<b>9.15</b>
Square	00	<b>704-1030</b>	<b>10.38</b>
	1	<b>704-1031</b>	<b>12.47</b>
Three-Square	00	<b>704-1020</b>	<b>11.50</b>
	1	<b>704-1021</b>	<b>10.38</b>
D. 5-Piece Set	00	<b>704-2000</b>	<b>70.30</b>
	1	<b>704-2001</b>	<b>70.51</b>



D

**E Screwhead File**

Mini file used for filing slots in small screws. Measures 4½"L x 25/64"W x .022" thick with 27/8" cut length.

Description	Item#	EACH Prices	
		1-11	12+
Screwhead File	<b>749-1000</b>	<b>\$32.90</b>	<b>\$27.97</b>



E



**Swiss Needle Files (pp. 234–237)**

The finest files for precise, even filing of small areas. Feature sharp cross-cut teeth. Perform very well on both soft and hard metals, including platinum. Have knurled handles for sure grip. Length measurements include handles.

**Barrette**

Cut	Length		Item#	EACH Prices	
	(inches)	(cm)		1-11	12+
00	6¼	16	715-1029	\$13.96	\$11.87
0	4	10	705-1020	13.05	11.09
	5½	14	710-1020	10.86	9.23
	6¼	16	715-1020	11.72	9.96
	7¾	20	720-1020	14.39	12.23
2	4	10	705-1022	12.41	10.55
	5½	14	710-1022	10.86	9.23
	6¼	16	715-1022	11.72	9.96
	7¾	20	720-1022	14.39	12.23
4	4	10	705-1024	13.05	11.09
	5½	14	710-1024	11.18	9.50
	6¼	16	715-1024	12.36	10.51
	7¾	20	720-1024	16.16	13.74
6	6¼	16	715-1026	16.26	13.82

**Crochet**

Cut	Length		Item#	EACH Prices	
	(inches)	(cm)		1-11	12+
0	4	10	705-1080	\$13.86	\$11.78
	5½	14	710-1080	11.40	9.69
	6¼	16	715-1080	12.52	10.64
2	4	10	705-1082	13.86	11.78
	5½	14	710-1082	11.40	9.69
	6¼	16	715-1082	12.52	10.64

**Crossing**

Cut	Length		Item#	EACH Prices	
	(inches)	(cm)		1-11	12+
0	4	10	705-1090	\$16.95	\$14.10
	5½	14	710-1090	12.95	11.01
	6¼	16	715-1090	13.48	11.46
	7¾	20	720-1090	16.69	14.19
2	4	10	705-1092	16.59	14.10
	5½	14	710-1092	12.95	11.01
	6¼	16	715-1092	13.48	11.46
	7¾	20	720-1092	16.69	14.19
4	5½	14	710-1094	13.75	11.69
	6¼	16	715-1094	15.09	12.83
	7¾	20	720-1094	18.78	15.96
6	6¼	16	715-1096	18.73	15.92



### Equalling

Cut	Length		Item#	EACH Prices	
	(inches)	(cm)		1-11	12+
00	5½	14	710-1101	\$10.65	\$9.05
	6¼	16	715-1109	10.49	8.92
0	4	10	705-1100	11.66	9.91
	5½	14	710-1100	9.63	8.19
	6¼	16	715-1100	10.49	8.92
	7¾	20	720-1100	13.91	11.82
2	4	10	705-1102	11.66	9.91
	5½	14	710-1102	9.63	8.19
	6¼	16	715-1102	10.49	8.92
	7¾	20	720-1102	13.91	11.82
4	4	10	705-1104	12.89	10.96
	5½	14	710-1104	10.17	8.64
	6¼	16	715-1104	10.86	9.23
	7¾	20	720-1104	14.45	12.28
6	6¼	16	715-1106	14.39	12.23



### Half-Round

Cut	Length		Item#	EACH Prices	
	(inches)	(cm)		1-11	12+
00	6¼	16	715-1039	\$13.48	\$11.46
0	4	10	705-1030	15.78	13.41
	5½	14	710-1030	12.73	10.82
	6¼	16	715-1030	13.48	11.46
	7¾	20	720-1030	16.69	14.19
2	4	10	705-1032	12.68	10.78
	5½	14	710-1032	12.73	10.28
	6¼	16	715-1032	13.48	11.46
	7¾	20	720-1032	16.69	14.19
4	4	10	705-1034	16.75	14.24
	5½	14	710-1034	13.75	11.69
	6¼	16	715-1034	15.09	12.83
	7¾	20	720-1034	18.78	15.96
6	6¼	16	715-1036	18.73	15.92



### Knife-Edge

Cut	Length		Item#	EACH Prices	
	(inches)	(cm)		1-11	12+
0	4	10	705-1110	\$15.62	\$13.28
	5½	14	710-1110	12.20	10.37
	6¼	16	715-1110	13.16	11.19
	7¾	20	720-1110	16.26	13.82
2	4	10	705-1112	15.62	13.28
	5½	14	710-1112	12.20	10.37
	6¼	16	715-1112	13.16	11.19
	7¾	20	720-1112	16.26	13.82
4	5½	14	710-1114	13.43	11.42
	6¼	16	715-1114	14.71	12.50
	7¾	20	720-1114	18.35	15.60
6	6¼	16	715-1116	18.24	15.50



### Marking

Cut	Length		Item#	EACH Prices	
	(inches)	(cm)		1-11	12+
2	6¼	16	715-1122	\$13.16	\$11.19
4	6¼	16	715-1124	14.71	12.50



### Oval

Cut	Length		Item#	EACH Prices	
	(inches)	(cm)		1-11	12+
0	6¼	16	715-1140	\$12.89	\$10.96
2	6¼	16	715-1142	12.89	10.96
4	6¼	16	715-1144	14.39	12.23



### Round

Cut	Length		Item#	EACH Prices	
	(inches)	(cm)		1-11	12+
00	6¼	16	715-1059	\$10.49	\$8.92
0	4	10	705-1050	12.36	10.51
	5½	14	710-1050	10.06	8.55
	6¼	16	715-1050	10.49	8.92
	7¾	20	720-1050	12.73	10.82
2	4	10	705-1052	12.36	10.51
	5½	14	710-1052	10.17	8.64
	6¼	16	715-1052	10.49	8.92
	7¾	20	720-1052	12.73	10.82
4	4	10	705-1054	14.82	12.60
	5½	14	710-1054	10.70	9.10
	6¼	16	715-1054	11.56	9.83
	7¾	20	720-1054	14.23	12.10
6	6¼	16	715-1056	14.39	12.23



### Square

Cut	Length		Item#	EACH Prices	
	(inches)	(cm)		1-11	12+
00	6¼	16	715-2069	\$11.72	\$9.96
0	4	10	705-1060	13.43	11.42
	5½	14	710-1060	11.13	9.46
	6¼	16	715-2060	11.72	9.96
	7¾	20	720-1060	14.39	12.23
	4	10	705-1062	13.43	11.42
2	5½	14	710-1062	11.13	9.46
	6¼	16	715-2062	11.72	9.96
	7¾	20	720-1062	14.39	12.23
	4	10	705-1064	15.41	13.10
4	5½	14	710-1064	12.09	10.28
	6¼	16	715-2064	13.05	11.09
	7¾	20	720-1064	16.16	13.74
	6	6¼	16	715-2066	16.26



### Three-Square

Cut	Length		Item#	EACH Prices	
	(inches)	(cm)		1-11	12+
00	6¼	16	715-1069	\$11.72	\$9.96
0	4	10	705-1010	13.75	11.69
	5½	14	710-1010	11.13	9.46
	6¼	16	715-1060	11.72	9.96
	7¾	20	720-1010	14.82	12.60
2	4	10	705-1012	13.75	11.69
	5½	14	710-1012	11.13	9.46
	6¼	16	715-1062	11.72	9.96
	7¾	20	720-1012	14.39	12.23
4	4	10	705-1014	15.41	13.10
	5½	14	710-1014	12.09	10.28
	6¼	16	715-1064	13.05	11.09
	7¾	20	720-1014	16.16	13.74
6	6¼	16	715-1066	16.26	13.82



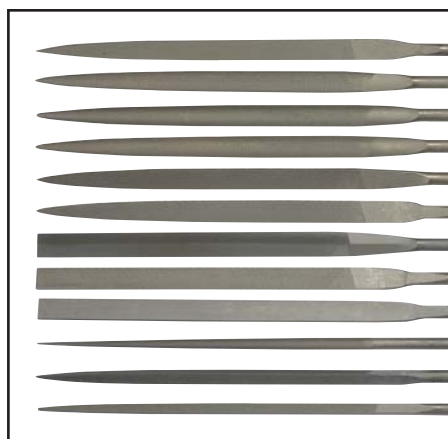
### Warding

Cut	Length		Item#	EACH Prices	
	(inches)	(cm)		1-11	12+
0	5½	14	710-1070	\$10.86	\$9.23
	6¼	16	715-1070	11.77	10.00
2	5½	14	710-1072	10.86	9.23
	6¼	16	715-1072	11.77	10.00
4	5½	14	710-1074	11.24	9.55
	6¼	16	715-1074	12.36	10.51

### Swiss Needle File Sets

Each includes 12 of our most popular files in one cut and storage pouch.

Cut	Length		Item#	Set of 12
	(inches)	(cm)		
0	4	10	703-1000	\$131.29
	5½	14	703-1400	113.96
	6¼	16	703-1600	120.16
2	4	10	703-1020	132.15
	5½	14	703-1420	110.00
	6¼	16	703-1620	118.88
4	5½	14	703-1440	115.56
	6¼	16	703-1640	124.44
6	6¼	16	703-1660	154.88





**A - E Gesswein® Diamond Rifflers**

Feature synthetic diamonds for faster and more uniform cutting, high-density wear-resistant plating and high-strength steel blanks. Measure 6" long with 1" long curved coated ends (22R has curved and straight ends). All are 150 grit. Made in USA.

Description	Shape	Item#	EACH Prices		
			1-4	5-9	10+
A. 16R		240-3165	\$25.00	\$23.75	\$22.50
B. 18R		240-3180	25.00	23.75	22.50
C. 22R		240-3222	25.00	23.75	22.50
D. 24R		240-3225	25.00	23.75	22.50
E. 26R		240-3230	25.00	23.75	22.50
5-Piece Set		240-3250	115.00	-	-

**F - K Gesswein® Diamond Needle Files**

Feature synthetic diamonds for faster and more uniform cutting, high-density wear-resistant plating and high-strength steel blanks. Measure 5½" (14cm) long with 2¾" long coated ends and 3mm round handles. All are 150 grit. Can be used with file handles (see p. 242). Sold individually and in set of all six shapes. Made in USA.

Description	Shape	Item#	EACH Prices		
			1-4	5-9	10+
F. Barrette		240-2102	\$22.00	\$20.90	\$19.80
G. Equalling		240-2112	22.00	20.90	19.80
H. Half-Round		240-2152	22.00	20.90	19.80
I. Round		240-2162	22.00	20.90	19.80
J. Square		240-2142	22.00	20.90	19.80
K. Three-Square		240-2132	22.00	20.90	19.80
6-Piece Set		240-2200	125.00	-	-

**L - Q Gesswein® Econo Swiss Needle Files**

Economical chrome alloy steel Swiss needle files. Measure 5½" (14cm) long. Can be used with file handles (see p. 242). Sold individually and in sets of all six shapes.

Description	Shape	Cut	Item#	EACH Prices	
				1-11	12+
L. Barrette		2	704-3012	\$4.07	\$3.39
		4	704-3014	4.23	3.52
M. Equalling		2	704-3022	4.07	3.39
		4	704-3024	4.17	3.47
N. Half-Round		2	704-3032	4.87	4.06
		4	704-3034	4.92	4.10
O. Round		2	704-3042	4.07	3.39
		4	704-3044	4.17	3.47
P. Square		2	704-3052	4.07	3.39
Q. Three-Square		2	704-3062	4.07	3.39
		4	704-3064	4.28	3.57
6-Piece Set		2	704-3002	27.07	-
		4	704-3004	29.64	-

**R Econo Mini Needle File Set**

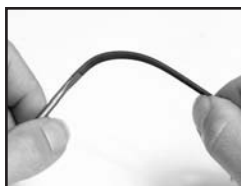
An inexpensive set of 12 miniature needle files in our most popular shapes. Excellent for getting into tight spots and tiny settings. Files measure 4" (10cm) long.

Description	Cut	Item#	Each
12-Piece Set	2	705-1000	\$11.06

## A - F Flexi-Files

### Files that actually bend!

These 66 HRC electric steel alloy files can be bent to conform to any shape desired while still maintaining their hardness. Feature a tooth design that permits free flow of chips for precise and efficient cutting with maximum stability and resistance to heat buildup. Measure 6¼" long. Sold individually and in set of all six shapes.



Description	Shape	Cut	Item#	EACH Prices	
				1-11	12+
A. Barrette		2	702-0011	\$19.90	\$16.58
B. Equalling		2	702-0001	19.90	16.58
C. Half-Round		2	702-0005	19.90	16.58
D. Round		2	702-0003	19.90	16.58
E. Square		2	702-0007	19.90	16.58
F. Three-Square		2	702-0009	19.90	16.58
6-Piece Set		2	702-0013	90.00	-



## G - L Valtitan Needle Files

### For platinum and other hard metals.

Work exceptionally well on tough-to-file surfaces and hard metals such as platinum and steel. Feature 72 HRC hardness and resistance to corrosion for long life. Will not clog—one knock is enough to remove metal chips. Have yellow handles for quick identification. Measure 6⅜" long. Made in Switzerland. *If used on platinum, do not contaminate by using on gold or silver.*

Description	Shape	Cut	Item#	EACH Prices	
				1-2	3+
G. Barrette		0	702-0046	\$11.93	\$11.33
		2	702-0047	12.57	11.94
H. Equalling		0	702-0021	12.52	11.89
		2	702-0022	12.52	11.89
I. Half-Round		0	702-0026	14.12	13.41
		2	702-0027	14.98	14.23
J. Round		0	702-0041	12.41	11.79
		2	702-0042	12.41	11.79
K. Square		0	702-0036	13.11	12.45
		2	702-0037	13.11	12.45
L. Three-Square		0	702-0031	13.11	12.45
		2	702-0032	13.11	12.45
6-Piece Set		0	702-0051	80.20	-
		2	702-0052	80.20	-



## M Needle File Stand

### Keeps needle files organized and accessible.

This attractive metal stand conveniently holds and displays up to 12 needle files in 4", 5½" or 6¼" lengths. Freestanding on workbench, hanging on peg or snapped closed for carrying, it keeps your frequently used files visible and handy at all times. Files not included.

Description	Item#	Each
Needle File Stand	704-3070	\$14.65



**Swiss Escapement Files (pp. 240–241)**

Sometimes known as square-handled needle files, escapement files are used for even smaller work. Measure 5½" (14cm) long with 1½" to 2½" cut length. Shown actual size.

**Barrette**

Cut	Item#	EACH Prices	
		1-11	12+
0	725-1100	\$18.19	\$15.46
2	725-1102	18.24	15.50
4	725-1104	19.80	16.83
6	725-1106	23.17	19.69
8	725-1108	24.24	20.60

**Barrette, Parallel**

Cut	Item#	EACH Prices	
		1-11	12+
2	725-1112	\$18.24	\$15.50
4	725-1114	19.80	16.83
6	725-1116	23.17	19.69

**Crossing**

Cut	Item#	EACH Prices	
		1-11	12+
2	725-1032	\$21.35	\$18.15
4	725-1034	23.22	19.74
6	725-1036	26.86	22.83

**Equalling**

Cut	Item#	EACH Prices	
		1-11	12+
2	725-1082	\$17.01	\$14.46
4	725-1084	18.99	16.14
6	725-1086	22.52	19.14

**Half-Round**

Cut	Item#	EACH Prices	
		1-11	12+
0	725-1020	\$21.24	\$18.05
2	725-1022	21.35	18.15
4	725-1024	23.22	19.74
6	725-1026	26.86	22.83
8	725-1028	28.19	23.96

**Knife-Edge**

Cut	Item#	EACH Prices	
		1-11	12+
2	725-1092	\$21.13	\$17.96
4	725-1094	23.06	19.60
6	725-1096	26.64	22.64



### Round

Cut	Item#	EACH Prices	
		1-11	12+
0	725-1010	\$15.09	\$12.83
2	725-1012	15.09	12.83
4	725-1014	16.26	13.82
6	725-1016	16.37	13.91
8	725-1018	19.10	16.24



### Rounding Off

Cut	Item#	EACH Prices	
		1-11	12+
4	725-1124	\$21.35	\$18.15
6	725-1126	24.66	20.96



### Square

Cut	Item#	EACH Prices	
		1-11	12+
0	725-1040	\$18.46	\$15.69
2	725-1042	18.51	15.73
4	725-1044	20.06	17.05
6	725-1046	23.59	20.05
8	725-1048	24.50	20.83



### Three-Square

Cut	Item#	EACH Prices	
		1-11	12+
0	725-1050	\$18.19	\$15.46
2	725-1052	18.24	15.50
4	725-1054	19.80	16.83
6	725-1056	23.17	19.69
8	725-1058	24.24	20.60



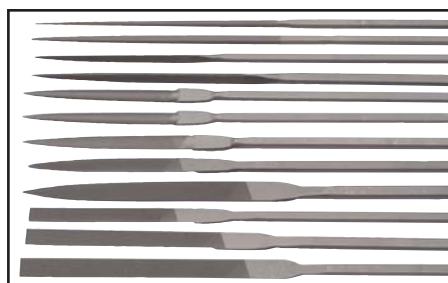
### Three-Square, Short and Slim

Cut	Item#	EACH Prices	
		1-11	12+
2	725-1062	\$18.24	\$15.50
4	725-1064	19.80	16.83
6	725-1066	23.17	19.69

### Swiss Escapement File Sets

Choose from 5-piece sets in two cuts and a 12-piece set of our most popular files in a storage stand.

Cut	Item#	Set of 5
2	725-1150	\$82.02
4	725-1175	87.74
Cut	Item#	Set of 12
2	725-2002	\$213.47







### A - E Grobet Plastic File Handles

Virtually unbreakable plastic handles shaped and textured to fit your hand comfortably and prevent slipping. Feature tempered metal tang-holding inserts that are threaded to ensure proper alignment and positive grip. Allow easy file changes: just unscrew the file in use and screw in another. Have holes at top for hanging near your workbench.

#### Handle Selection Guide:

File Shape	File Length						File Shape	File Length					
	3"	4"	6"	8"	10"	12"		3"	4"	6"	8"	10"	12"
Barrette	2	3	4	5	-	-	Pillar	2	3	4	5	6	6
Checkering	-	-	4	-	-	-	Pippin	-	3	4	5	-	-
Crochet	-	3	4	5	-	-	Round, Parallel	-	-	2	3	-	-
Crossing	-	3	4	5	-	-	Round, Tapered	-	2	3	4	5	-
Equalling	-	3	4	5	-	-	Square	-	2	3	4	5	-
Half-Round	-	3	4	5	6	6	Three-Square	2	3	4	5	6	6
Hand	-	3	4	5	6	6	Warding	-	3	4	5	-	-
Knife-Edge	-	3	4	5	6	6							

Description	Item#	EACH Prices	
		1-11	12+
A. #2 Handle	170-6002	\$3.25	\$2.93
B. #3 Handle	170-6003	3.25	2.93
C. #4 Handle	170-6004	3.35	3.02
D. #5 Handle	170-6005	3.35	3.02
E. #6 Handle	170-6006	3.50	3.15

### F Plastic File Handle

Durable plastic handle for holding all needle files. Measures 3¼" long.

Description	Item#	EACH Prices	
		1-11	12+
Plastic File Handle	170-4010	\$4.95	\$4.21

### G Wooden File Handle with Collet

Wooden handle with metal collet for needle and escapement files. Measures 4½" long.

Description	Item#	Each
Wooden File Handle with Collet	170-4013	\$3.98

### H Wooden File and Burnisher Handle

Hardwood handle with metal ferrule curved to fit in your hand. Measures 3⅞"L x 7/8" dia.

Description	Item#	Each
Wooden File and Burnisher Handle	170-3005	\$2.30

### I Skroo-Zon® File Handle

A white birch handle with heavy-gauge steel ferrule. Features a hardened steel insert inside the handle that cuts a thread on the file tang to grip it firmly. Keeps strain off the handle to prevent it from breaking. Holds 6" files. Measures 4"L x 1⅛" dia.

Description	Item#	EACH Prices	
		1-11	12+
Skroo-Zon File Handle	170-6000	\$2.06	\$1.85

### J Wooden File Handles

Wooden handles with metal ferrules for needle and escapement files. Measure 4" long.

Description	Diameter	Item#	EACH Prices	
			1-11	12+
J. Wooden File Handle	3/8"	170-6010	\$.95	\$.86
	5/8"	170-6011	.95	.86

### K, L Contoured Wooden File Handles

Polished wooden handles with metal ferrules for needle, escapement and pattern files.

Description	Length	Item#	EACH Prices		
			1-2	3-9	10+
K. Needle File Handle	3½"	170-4011	\$.89	\$.85	\$.80
	4"	170-4012	.89	.85	.80
L. Pattern File Handle	3"	170-6012	1.95	1.85	1.76
	4"	170-6013	1.95	1.85	1.76
	5"	170-6014	2.10	2.00	1.89

**A Suede Bib Apron**

This durable and comfortable apron protects clothing while you work with power equipment and hand tools. Has no side pockets in which debris can collect. Made of tanned, split, rust-colored heavyweight suede. Includes adjustable ties with brass grommet reinforcements. One size fits all. Measures 24"W x 36"L.

Description	Item#	Each
Suede Bib Apron	827-1507	\$41.95

**B Bib Apron**

Protects clothing and holds frequently used tools close at hand. Includes extra-long waist strings for front tying. Made of machine-washable heavyweight cotton. Available with or without pockets. Comes in royal blue with white screen-printed Gesswein logo. Measures 17¼"W x 24"L. Made in USA.

Description	Item#	Each
B. Bib Apron with pockets	827-1201	\$19.99
Bib Apron without pockets	827-1200	14.50

**C Panaspec Plus Safety Glasses**

Feature an impact-resistant clear polycarbonate lens that protects against most common eye hazards encountered during benchwork, polishing and other jobs. The lens offers greater impact resistance than glass lenses, provides a wide field of view and is easily replaced. Have side panels and browbar that help protect from the sides and from above the eyes. Comply with ANSI Z87.1.

Description	Item#	Each
C. Safety Glasses	270-0101	\$6.25
Replacement Lens	270-0112	3.15

**D Finger Guard Safety Tape**

Offers ideal protection during buffing and grinding, benchwork and other jobs for which gloves are awkward. Protects hands, fingers and wrists from the common hazards of sharp edges, hot surfaces and abrasive materials. Made of pure surgical-grade gauze coated with natural latex rubber, it's dry to the touch and self-adhering. Sticks only to itself, not to hair, skin or clothing. Goes on and comes off fast and easily. Readily conforms to the smallest contours while letting skin breathe. Will not stain or leave residue. Available in individual rolls or in an economical package of 16 rolls. Each roll contains 90' of ¾" wide green tape.

Description	Item#	Each
Individual Roll	816-0203	\$1.89
Package of 16 Rolls	816-0202	28.00

**E Wooden Ring Clamp**

A high-quality Philippine mahogany double-ended clamp with thick leather-lined jaws to protect rings from marring. Securely holds rings and other jewelry pieces while filing, polishing and stone setting. Supplied with wedge, which can be driven in hard for a tight grip. Measures 6½" long.

Description	Item#	EACH Prices		
		1-2	3-9	10+
Wooden Ring Clamp	812-0300	\$7.95	\$7.55	\$7.16

**F Bench Duster**

Contains four rows of 1½" long medium natural bristles in a wooden handle. Ideal for cleaning dust from surfaces and for general-purpose work. Measures 9¾" long.

Description	Face Size (L x W)	Item#	EACH Prices		
			1-2	3-11	12+
Bench Duster	4" x ¾"	115-2260	\$9.50	\$8.55	\$7.60





A



B



C



D



E

### A Dead-Blow Mallets

Feature cast-iron heads filled with iron shot. As each mallet is struck, shot moves forward behind the blow to dampen rebound and ensure efficient transmission of force. Includes two replaceable nonmarring polyurethane faces: medium (green) and hard (black). Impervious to oils and most solvents. Grooved hickory handles.

Head Dia. x L	Head Wt.	Length	Item#	Each
1" x 4 1/4"	3/4 lbs.	11"	<b>821-9070</b>	<b>\$31.95</b>
1 1/2" x 5 1/4"	2 lbs.	13 1/8"	<b>821-9080</b>	<b>42.95</b>
2" x 6 1/4"	3 1/2 lbs.	14 1/2"	<b>821-9090</b>	<b>58.60</b>
Replacement Face	Color	Hardness	Item#	Each
1" dia.	Green	Med.	821-9100	\$6.50
	Black	Hard	821-9110	8.65
1 1/2" dia.	Green	Med.	821-9120	8.95
	Black	Hard	821-9130	11.95
2" dia.	Green	Med.	821-9140	12.15
	Black	Hard	821-9150	17.60

### B Polyurethane Dead-Blow Mallets

One-piece mallets with no exposed metal. Will not mushroom, split or pick up debris. Outlast rawhide, rubber, brass, lead, nylon and plastic mallets 10–20 times over. Made in USA.

Head Dia. x L	Head Wt.	Length	Item#	Each
7/8" x 2 7/8"	8 oz.	9 3/8"	<b>821-7060</b>	<b>\$24.95</b>
1 1/4" x 4 3/16"	18 oz.	10 5/8"	<b>821-7061</b>	<b>29.95</b>

### C Polyethylene Mallet

Made of dense, nonporous polyethylene, which is nonmarring and easy to clean. Hickory handle.

Head Dia. x L	Head Wt.	Length	Item#	Each
1 3/4" x 3 7/8"	8 oz.	11 1/4"	<b>821-8790</b>	<b>\$10.25</b>

### D Weighted Rawhide Mallets

Feature heads made of lead strips surrounded by multiple layers of tough water buffalo hide with screw fastening for great longevity. Deliver extra-strong blows without scratching fine work surfaces. Hickory handles. Made in USA.

Head Dia. x L	Head Wt.	Length	Item#	EACH Prices	
				1-2	3+
1 1/4" x 2 1/2"	8 oz.	9 1/4"	<b>821-8000</b>	<b>\$22.20</b>	<b>\$21.09</b>
1 1/2" x 3"	12 oz.	10"	<b>821-8001</b>	<b>22.65</b>	<b>21.52</b>
1 3/4" x 3 3/8"	16 oz.	11 1/2"	<b>821-8002</b>	<b>26.25</b>	<b>24.94</b>
2" x 3 1/2"	20 oz.	12"	<b>821-8003</b>	<b>32.60</b>	<b>30.97</b>

### E Rawhide Mallets

Compressed rawhide mallets for use when extra care must be taken not to mar the work surface. Hickory handles.

Head Dia. x L	Head Wt.	Length	Item#	EACH Prices	
				1-2	3+
1" x 2"	2 1/2 oz.	8"	<b>821-8800</b>	<b>\$12.50</b>	<b>\$11.25</b>
1 1/4" x 2 1/2"	4 1/2 oz.	9"	<b>821-8850</b>	<b>14.00</b>	<b>12.60</b>
1 1/2" x 3"	6 oz.	10"	<b>821-8900</b>	<b>16.60</b>	<b>14.94</b>
1 3/4" x 3 1/2"	9 1/2 oz.	11"	<b>821-8950</b>	<b>20.95</b>	<b>18.86</b>
2" x 3 1/2"	12 oz.	11 3/4"	<b>821-9000</b>	<b>24.50</b>	<b>22.05</b>

**A Brass Mallets**

Feature solid brass heads that deliver a hard blow. Ideal for work that requires a solid hit, including stamping, clapping and punching. Metal handles with nonslip grips. Made in USA.

Head Dia. x L	Head Wt.	Length	Item#	Each
1" x 2 <sup>5</sup> / <sub>8</sub> "	1 lb.	9 <sup>3</sup> / <sub>4</sub> "	<b>821-7050</b>	<b>\$31.25</b>
1 <sup>1</sup> / <sub>4</sub> " x 2 <sup>5</sup> / <sub>8</sub> "	2 lbs.	9 <sup>3</sup> / <sub>4</sub> "	<b>821-7051</b>	<b>\$39.95</b>

**A****B Brass Mallet with Wooden Handle**

Features small brass head. Will not mar steel. Hickory handle.

Head Dia. x L	Head Wt.	Length	Item#	Each
1 <sup>1</sup> / <sub>16</sub> " x 2"	4 oz.	8 <sup>1</sup> / <sub>4</sub> "	<b>822-0040</b>	<b>\$9.95</b>

**B****C Mini Brass Mallet**

Features a high-quality solid brass head with flat and ball-peen ends threaded onto an anodized aluminum handle. Hexagonal handle prevents slipping. Made in USA.

Head Dia. x L	Head Wt.	Length	Item#	Each
1/2" x 1 <sup>3</sup> / <sub>4</sub> "	2 oz.	8"	<b>821-8170</b>	<b>\$12.95</b>

**C****D K&D® Mallets**

Feature replaceable brass and nylon faces. Hardwood handles. Made in USA.

Head Dia. x L	Head Wt.	Length	Item#	Each
9/16" x 2 <sup>3</sup> / <sub>4</sub> "	3 <sup>1</sup> / <sub>2</sub> oz.	9"	<b>822-0010</b>	<b>\$12.30</b>
5/8" x 2 <sup>3</sup> / <sub>4</sub> "	5 oz.	9"	<b>822-0015</b>	<b>15.95</b>
Replacement Face	Type	Item#	Each	
9/16" dia.	Brass	822-0020*	\$1.35	
	Nylon	822-0025*	1.35	
5/8" dia.	Brass	822-0030*	1.35	
	Nylon	822-0035*	1.35	

**D**

\*Three-piece minimum; please order in multiples of three.

**E Nylon Mallets with Plastic Handles**

Shock-cushioned mallets with replaceable nonmarring nylon faces. Plastic handles with rubber nonslip grips impervious to moisture and oil.

Head Dia. x L	Head Wt.	Length	Item#	Each
1 <sup>1</sup> / <sub>4</sub> " x 3 <sup>7</sup> / <sub>8</sub> "	1 lb.	11 <sup>1</sup> / <sub>2</sub> "	<b>821-7100</b>	<b>\$38.50</b>
1 <sup>1</sup> / <sub>2</sub> " x 4 <sup>3</sup> / <sub>4</sub> "	1 <sup>1</sup> / <sub>2</sub> lbs.	12"	<b>821-7120</b>	<b>44.00</b>
Replacement Faces	Item#	Pair		
1 <sup>1</sup> / <sub>4</sub> " dia.	821-7010	\$11.40		
1 <sup>1</sup> / <sub>2</sub> " dia.	821-7012	14.80		

**E****F Nylon Mallet with Wooden Handle**

Shock-cushioned mallet with replaceable nonmarring nylon faces. Hickory handle.

Head Dia. x L	Head Wt.	Length	Item#	Each
1" x 3 <sup>7</sup> / <sub>8</sub> "	10 oz.	10"	<b>821-7080</b>	<b>\$32.00</b>
Replacement Faces	Item#	Pair		
1" dia.	821-7008	\$9.60		

**F****G Plastic Mallet**

Features nonmarring plastic head with flat faces. Hardwood handle.

Head Dia. x L	Head Wt.	Length	Item#	Each
3/4" x 2 <sup>3</sup> / <sub>4</sub> "	5 <sup>1</sup> / <sub>2</sub> oz.	10 <sup>1</sup> / <sub>2</sub> "	<b>821-8795</b>	<b>\$7.80</b>

**G****H Ball-Peen Hammers**

Steel hammers with flat and ball-peen faces. Wooden handles.

Head Dia. x L	Head Wt.	Length	Item#	Each
1/2" x 2"	2 oz.	10 <sup>1</sup> / <sub>2</sub> "	<b>821-8050</b>	<b>\$4.05</b>
3/4" x 2 <sup>3</sup> / <sub>4</sub> "	4 oz.	10 <sup>1</sup> / <sub>2</sub> "	<b>821-8100</b>	<b>4.55</b>
7/8" x 3"	8 oz.	10 <sup>1</sup> / <sub>2</sub> "	<b>821-8150</b>	<b>5.50</b>

**H**



A



B



C



D



E



F



G



H



I



## A, B Planishing Hammers

Precision-ground and hardened steel hammers with polished faces. Flat style has round and square flat faces, and domed style has flat and slightly domed round faces. Solid ash handles.

Head Style, Dia. x L	Head Wt.	Length	Item#	Each
A. Flat, 1" x 4 1/8"	13 oz.	12 1/2"	821-8240	\$35.75
B. Domed, 7/8" x 3 3/4"	12 oz.	11 1/2"	821-8242	44.95

## C Chasing Hammers

Feature hardened flat face for striking chisels and chasing tools and ball-peen face for forming rivet heads and more. Well-balanced hardwood handles with oval grip and narrow shaft provide spring when striking, reducing vibration in your hand. Made in Germany.

Head Dia.	Head Wt.	Length	Item#	Each
3/4"	3 1/2 oz.	10"	821-8243	\$44.00
1"	4 oz.	10"	821-8245	44.00
1 1/8"	5 oz.	10"	821-8250	48.00
1 1/4"	6 oz.	10"	821-8255	49.50

## D Economy Chasing Hammer

Has flat face for striking chasing tools and polished ball-peen face for hammering directly on metal. Wooden handle.

Head Dia.	Head Wt.	Length	Item#	Each
1 1/8"	4 oz.	10 1/2"	821-8253	\$11.75

## E Riveting Hammers

Polished steel hammers with flat and chisel faces. Wooden handles. Made in USA.

Head Dia. x L	Head Wt.	Length	Item#	Each
3/8" x 2 3/4"	2 1/2 oz.	10"	821-8600	\$26.88
1/2" x 3 1/2"	4 oz.	10"	821-8650	26.88
9/16" x 4"	5 oz.	10"	821-8700	26.88
5/8" x 4 1/4"	7 oz.	10"	821-8750	32.32

## F Swiss-Style Riveting Hammer

Polished steel hammer with flat and chisel faces. Wooden handle.

Head Dia. x L	Head Wt.	Length	Item#	Each
7/16" x 3"	2 oz.	9 1/2"	821-8775	\$7.15

## G Goldsmith's Hammer

Well-balanced, polished steel hammer with flat and chisel faces for riveting, shaping and forming. Wooden handle. Made in Germany.

Head Dia. x L	Head Wt.	Length	Item#	Each
5/8" x 3 1/2"	5 oz.	12"	821-8235	\$28.50

## H Silversmith's Planishing Hammer

Used to smooth irregularities or finish surfaces of pieces that have been raised. Can also be used to form faceted effects on bowls, vases and more. Features precision-ground, hardened, hand-forged steel head with highly polished faces: round measures 1 1/8" in dia., and rectangular measures 1 1/4" x 5/16". Hickory handle.

Head Length	Head Wt.	Length	Item#	Each
4 3/4"	13 oz.	12 1/2"	821-8238	\$72.10

## I Silversmith's Raising Hammer

Used on outside surfaces to force the basic shape of bowls, vases and more in the early stages. Features precision-ground, hardened hand-forged steel head with highly polished faces: large measures 1 1/4" x 1/4", and small measures 1 3/16" x 3/16". Hickory handle.

Head Length	Head Wt.	Length	Item#	Each
4 1/2"	8 oz.	11 1/2"	821-8791	\$62.15

**A Peddinghaus Planishing Hammer**

Fine steel hammer with highly polished flat (24mm dia.) and bowed (24mm dia.) faces. Solid ash handle. Meets strict ISO and DIN standards. Made in Germany.

Head Length	Head Wt.	Length	Item#	Each
80mm	6 oz.	10 <sup>1</sup> / <sub>4</sub> "	<b>821-7024</b>	<b>\$37.95</b>

**A****B Peddinghaus Polishing Hammer**

Fine steel hammer with highly polished lightly bowed (24mm dia.) and heavily bowed (24mm dia.) faces. Solid ash handle. Meets strict ISO and DIN standards. Made in Germany.

Head Length	Head Wt.	Length	Item#	Each
104mm	8 <sup>3</sup> / <sub>4</sub> oz.	11 <sup>3</sup> / <sub>4</sub> "	<b>821-7026</b>	<b>\$37.95</b>

**B****C Peddinghaus Chasing Hammer**

Fine steel hammer with two satin-polished differently bowed (15 and 20mm thick) faces. Solid ash handle. Meets strict ISO and DIN standards. Made in Germany.

Head Length	Head Wt.	Length	Item#	Each
117mm	14 oz.	12 <sup>1</sup> / <sub>4</sub> "	<b>821-7025</b>	<b>\$37.95</b>

**C****D Peddinghaus Goldsmith's Hammer**

Fine chrome-plated steel hammer with highly polished flat and chisel faces. Solid ash handle. Meets strict ISO and DIN standards. Made in Germany.

Head Dia. x L	Head Wt.	Length	Item#	Each
16 x 90mm	2 <sup>3</sup> / <sub>4</sub> oz.	11 <sup>1</sup> / <sub>2</sub> "	<b>821-7020</b>	<b>\$37.95</b>

**D****E Peddinghaus Embossing HB Hammer**

Fine steel hammer with two highly polished heavily bowed (18 and 21mm dia.) faces. Solid ash handle. Meets strict ISO and DIN standards. Made in Germany.

Head Length	Head Wt.	Length	Item#	Each
135mm	7 oz.	11"	<b>821-7021</b>	<b>\$37.95</b>

**E****F Peddinghaus Embossing DB Hammer**

Fine steel hammer with two highly polished differently bowed (11 and 14mm dia.) faces. Solid ash handle. Meets strict ISO and DIN standards. Made in Germany.

Head Length	Head Wt.	Length	Item#	Each
105mm	3 <sup>1</sup> / <sub>2</sub> oz.	10 <sup>3</sup> / <sub>4</sub> "	<b>821-7023</b>	<b>\$37.95</b>

**F****G Peddinghaus Bordering Hammer**

Fine steel hammer with two satin-polished straight pattern faces. Solid ash handle. Meets strict ISO and DIN standards. Made in Germany.

Head H x L	Head Wt.	Length	Item#	Each
72 x 140mm	10 <sup>1</sup> / <sub>2</sub> oz.	11 <sup>3</sup> / <sub>4</sub> "	<b>821-7022</b>	<b>\$37.95</b>

**G**



## Fretz Hammers (pp. 248, 249)

The size of the hammer will be dictated by the size of the workpiece. Small, light projects will require small hammers (HMR-1 to 5), and big, heavy projects will require large hammers (HMR-101 to 105). Corresponding small and large hammers perform the same functions.

Planishing is smoothing metal against a stake by overlapping blows. This stretching technique also forms the metal to the underlying stake. Raising is compressing metal down to a stake without stretching it. The trick is to angle the metal off the stake so that there is a suitable air gap for compression. Embossing is stretching metal by hammering it from the inside. Blocking is a form of embossing in which metal is hammered into a cavity. Freeform embossing is done on a sandbag base.



A



B



C



D



E



F



G

### A Planishing Hammers

For smoothing metal: round head smooths previous raising marks, and flat head smooths marks from round head to a nearly even finish. Can also be used for sizing rings, shaping bezels and forming metal against mandrels and stakes.

Description	Faces	Length	Item#	Each
HMR-1	3/4"	9"	821-7030	\$52.00
HMR-101	7/8"	9 7/8"	821-7035	74.50

### B Wide Raising Hammers

For raising sheet metal into a bowl against a wooden or metal stake. Can also be used for raising cylinders and concave shapes and planishing subtle concave shapes.

Description	Faces	Length	Item#	Each
HMR-2	3/4"	9"	821-7031	\$52.00
HMR-102	7/8"	9 7/8"	821-7036	74.50

### C Narrow Raising Hammers

For raising small cylinders and concave shapes and planishing tiny concave shapes. Feature thinner heads that fit into tighter curves. Also useful for forging and texturing.

Description	Faces	Length	Item#	Each
HMR-3	3/4"	9"	821-7032	\$52.00
HMR-103	7/8"	9 7/8"	821-7037	74.50

### D Large Embossing Hammers

For doming metal from the inside as it is supported on a sandbag or a depression in wood in preparation for raising. Impart an interesting dimpled texture on flat or slightly domed metal when hammering on the outside of a form against a stake.

Description	Faces	Length	Item#	Each
HMR-4	9/16" & 7/16"	9"	821-7033	\$52.00
HMR-104	7/8" & 1/2"	9 7/8"	821-7038	74.50

### E Small Embossing Hammers

For forming small raised areas by hammering from the inside in preparation for chasing or shaping. Impart a fine dimpled texture that can be varied by blow strength.

Description	Faces	Length	Item#	Each
HMR-5	3/8" & 1/4"	9"	821-7034	\$52.00
HMR-105	1/2" & 3/8"	9 7/8"	821-7039	74.50

### F Narrow Round Raising/Embossing Hammer

For embossing pods and other oblong shapes much easier than a round embossing hammer.

Description	Faces	Length	Item#	Each
HMR-8	3/4"	9"	821-7044	\$52.00

### G Wide Round Raising/Embossing Hammer

For blocking bowls and wide strips into concave shapes much easier than a round embossing hammer.

Description	Faces	Length	Item#	Each
HMR-9	1/2"	8 7/8"	821-7045	\$52.00

**A Short Narrow Raising Hammer**

A substitute for HMR-3 when a smaller striking head with a lighter touch is desired.

Description	Faces	Length	Item#	Each
HMR-10	1/2"	8 3/4"	821-7046	\$52.00

**B Short Wide Raising Hammer**

A substitute for HMR-2 when a smaller striking head with a lighter touch is desired.

Description	Faces	Length	Item#	Each
HMR-11	1/2"	9"	821-7047	\$52.00

**C Sharp Raising/Texturing Hammer**

For creating very detailed textures on surfaces of rings and other small items. Can also be used for making extremely tight curves when raising jewelry portions.

Description	Faces	Length	Item#	Each
HMR-12	3/4"	9"	821-7048	\$52.00

**D Short Sharp Raising/Texturing Hammer**

A substitute for HMR-12 when texturing on wire and other very small items.

Description	Faces	Length	Item#	Each
HMR-13	1/2"	9"	821-7049	\$52.00

**E "Raw Silk" Planishing/Texturing Hammer**

Features randomly ground heads that create a texture of "raw silk" similar to one that could be easily rolled onto flat metal shapes but not onto 3-D shapes.

Description	Faces	Length	Item#	Each
HMR-14	3/4"	9"	821-7065	\$57.00

**F Planishing Hammer with Single Plastic Head**

Features replaceable plastic head for forming metal without marking and slightly domed metal head for easier striking of flat or slightly domed metal. Designed for the bench jeweler who sizes rings and wants only one hammer. Includes hex key and extra screw for plastic head.

Description	Faces	Length	Item#	Each
HMR-6	3/4"	9"	821-7040	\$62.25
Replacement Plastic Heads, pkg. of 3			821-7041	7.00

**G Multipurpose Hammer with Double Plastic Heads**

Features nine different plastic heads for planishing, raising and embossing metal without marking. Useful for forming without stretching. Has enough weight to move metal with assurance.

Description	Faces	Length	Item#	Each
HMR-7	3/4"	9"	821-7042	\$79.50
Replacement Plastic Heads, pkg. of 9			821-7043	19.00

**H Mallets with Plastic Heads**

For flattening and shaping metal without marking.

Description	Faces	Length	Item#	Each
HMR-201	1" faces	9"	821-7066	\$15.95
HMR-202	1 1/8" faces	9"	821-7067	16.95
HMR-203	1 3/8" faces	9 3/4"	821-7068	17.95
HMR-204	1 5/8" faces	10 1/2"	821-7069	18.95

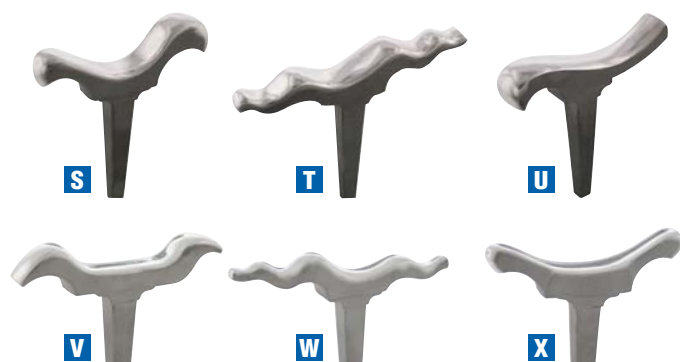
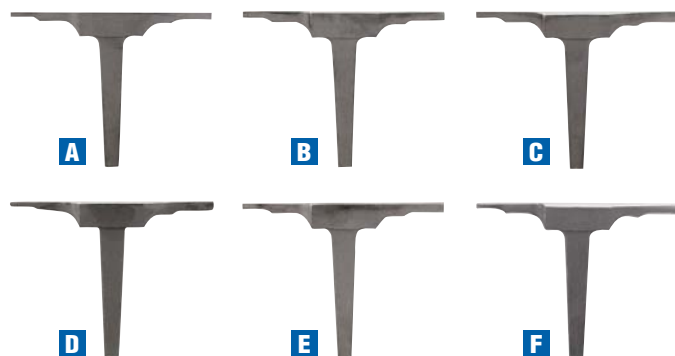






**Fretz Miniature Stakes (pp. 250, 251) – Give yourself more creative forming options!**

Expand your fabrication possibilities with these hardened, highly polished 416 stainless steel stakes. Use B-series stakes to make bezels for unusually shaped stones; M, R and F-series stakes to create complex shapes; and micro-miniature stakes to form bezels for small stones. Stakes are hardened to 38 HRC for easy reshaping. Holders are softer to ensure stakes fit securely. Purchase extra holders to progress from one task to the next without constantly changing stakes. Sold individually and in money-saving sets. Made in USA.



**A - F B-Series Mini Bezel Stakes**

Use with H-1 holder (sold separately). Measure 3¼"W x 2½"H.

Description	Item#	Each
A. B-1 Flat	814-1061	\$47.80
B. B-2 Low Dome	814-1062	47.80
C. B-3 High Dome	814-1063	47.80
D. B-4 Trillion Undercut	814-1064	47.80
E. B-5 Rolled Edge Flat	814-1065	47.80
F. B-6 Rolled Edge Dome	814-1066	47.80

**G - O M-Series Mini Silversmithing Stakes**

Use with H-1 holder (sold separately). Measure 2¼"-3"H.

Description	Item#	Each
G. M-4 10mm Flat	814-1070	\$48.95
H. M-5 10mm Low Dome	814-1071	48.95
I. M-6 10mm High Dome	814-1072	48.95
J. M-1 14mm Flat	814-1067	48.95
K. M-2 14mm Low Dome	814-1068	48.95
L. M-3 14mm High Dome	814-1069	48.95
M. M-7 18mm Flat	814-1073	51.00
N. M-8 18mm Low Dome	814-1074	51.00
O. M-9 18mm High Dome	814-1075	51.00

**P - R R-Series Mini Silversmithing Stakes**

Use with H-1 holder (sold separately). Measure 3¼"W x 2½"H.

Description	Item#	Each
P. R-1 (for making large bezels, oval rings)	814-1076	\$49.95
Q. R-2 (for making oval and round rings)	814-1077	52.00
R. R-3 (for making large round rings)	814-1078	52.00

**S - X F-Series Mini Silversmithing Stakes**

Use with H-1 holder (sold separately). Measure 3¾"W x 3"H.

Description	Item#	Each
S. F-2 (for making convex bracelets and domed rings)	814-1089	\$87.00
T. F-6 (for making convex and concave shapes such as shells)	814-1091	87.00
U. F-9 (for making convex and concave bracelets and more)	814-1090	87.00
V. F-1 (for making bracelets with rolled edges and transitioning flat surfaces to curved)	814-1092	87.00
W. F-7 (for making spiral shapes and curves in earrings and wedding bands)	814-1093	87.00
X. F-8 (for making beads from tubes and cones and extreme curves in hollow rings)	814-1094	87.00

**Y, Z Micro-Miniature Stake and Mandrel Assortments**

Stake assortment includes three 1¾" long stainless steel stakes for cupping and doming of tiny areas, such as the ends of forged wires. Mandrel assortment includes four 3¼" long tapered and straight stainless steel mandrels for hammering tight bezels and radiuses. Use stakes and mandrels with H-2 holder (sold separately).

Description	Item#	Each
Y. Stake Assortment	814-1085	\$44.95
Z. Mandrel Assortment	814-1086	61.50

### A Bezel and Forming Stake Set

The ideal set for bezel making, doming, metal raising and forming. Includes B-1 to B-6 bezel stakes, M-1 to M-3 mushroom stakes, R-1 raising stake, H-1 holder mounted on VB-1 cherry vise block and S-1 cherry/birch stand.

Description	Item#	Each
<b>A. Bezel and Forming Stake Set</b>	<b>814-1083</b>	<b>\$560.00</b>
H-1 Holder	814-1060	52.75
VB-1 Cherry Vise Block	814-1081	19.85
S-1 Cherry/Birch Stand	814-1079	35.20



### B Bezel Stake Set

Includes B-1 to B-6 bezel stakes, H-1 holder mounted on VB-1 cherry vise block and S-1 cherry/birch stand.

Description	Item#	Each
<b>B. Bezel Stake Set</b>	<b>814-1082</b>	<b>\$375.00</b>
H-1 Holder	814-1060	52.75
VB-1 Cherry Vise Block	814-1081	19.85
S-1 Cherry/Birch Stand	814-1079	35.20



### C Micro-Miniature Set

Includes all micro-miniature mandrels and stakes, H-1 holder mounted on VB-1 cherry vise block, H-2 holder for hands-free hammering and S-2 cherry/birch stand.

Description	Item#	Each
<b>C. Micro-Miniature Mandrel and Stake Set</b>	<b>814-1088</b>	<b>\$275.00</b>
H-1 Holder	814-1060	52.75
VB-1 Cherry Vise Block	814-1081	19.85
H-2 Holder	814-1084	79.95
S-2 Cherry/Birch Stand	814-1087	23.00



### D - F Stake Holders and Vise Block

Use the H-1 holder with the VB-1 cherry vise block for securing all stakes and mandrels (B, M, R and F-series stakes mount directly in H-1 holder; micro-miniature stakes and mandrels fit in H-2 holder, which in turn mounts in H-1 holder). Vise block measures 3"L x 2"W x 1½"H. Purchase extras to improve workflow.

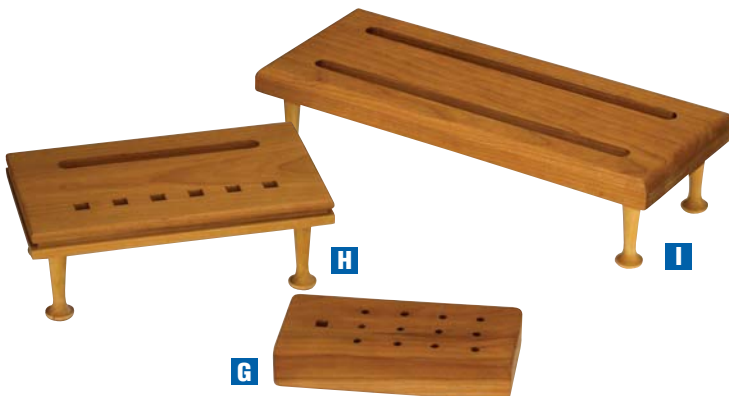
Description	Item#	Each
<b>D. H-1 Holder</b>	<b>814-1060</b>	<b>\$52.75</b>
<b>E. VB-1 Cherry Vise Block</b>	<b>814-1081</b>	<b>19.85</b>
<b>F. H-2 Holder</b>	<b>814-1084</b>	<b>79.95</b>

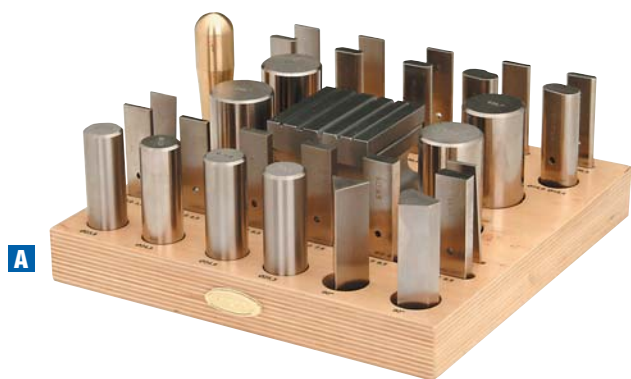


### G - I Wooden Stake Stands

S-1 stand holds all B, M and R-series stakes. Measures 8"L x 5"W x 3"H. S-2 cherry/birch stand holds all micro-miniature mandrels and stakes, as well as H-2 holder. Measures 6"L x 3"W x 1"H. S-3 mahogany stand holds all stakes. Measures 12"L x 5"W x 3"H.

Description	Item#	Each
<b>G. S-1 Cherry/Birch Stand</b>	<b>814-1079</b>	<b>\$35.20</b>
<b>H. S-2 Cherry/Birch Stand</b>	<b>814-1087</b>	<b>23.00</b>
<b>I. S-3 Mahogany Stand</b>	<b>814-1080</b>	<b>42.50</b>





**A Professional Forming Set**

This comprehensive set affords excellent metal forming versatility and accuracy. An absolute must-have for design shops. Includes 29 half-round, triangular, square and rectangular stakes made of high-grade tool steel hardened to 50 HRC, 70mm square forming block with six different grooved sides (#810-2010, p. 253) and hardwood storage base inscribed with all tool sizes for easy identification. Made in Europe.

Description	Item#	Each
31-Piece Set	<b>841-2025</b>	<b>\$329.00</b>



**B Planishing Anvil Set**

Lets you raise, form and smooth metal with great precision. Ideal for vessels and other large items. Includes 12 highly polished tool steel anvils, cast-iron base with mounting holes for holding anvil bottoms at height of 5", steel extension holder that slides into anvil base for holding anvil bottoms at height of 11" and hardwood storage base. Anvil types: five low-dome (2", 3", 4", 5" and 6" dia.), two concave (1 3/4" x 1 3/4" with 3/4" and 1/2" depressions), flat square (2 3/4" x 2 3/4"), flat rectangular (2 1/4" x 1 1/8"), convex (1 3/8" x 1" x 1/2"H), triangular (two sides, each 1 7/8" x 1 7/8") and high-dome (1 1/8" dia. x 1 3/8"H).

Description	Item#	Each
15-Piece Set	<b>815-1080</b>	<b>\$290.00</b>



**C, D Combination T-Stake and Holder**

Originally designed for silversmiths, our generously sized T-stake serves as an invaluable tool for all types of hammering, peening, shaping and forming. Measures 10" long with three polished working areas: 4"L x 1 1/2"W round-end arm, 3 1/4"L x 3/8"W cylindrical arm and 2 3/4"L x 1 1/2"W flat center surface. The matching holder with mounting holes in base securely holds the T-stake out and away from your bench, providing ample room. Measures 7 3/4"L x 4"W.

Description	Item#	Each
C. T-Stake	<b>814-1030</b>	<b>\$286.00</b>
D. T-Stake Holder	<b>814-1040</b>	<b>94.24</b>



**E Horn Anvil on Base**

Made of hardened and tempered steel. Has round and flat horns for flattening and shaping. Measures 4 3/4"W x 3 1/4"H. Made in Italy.

Description	Item#	Each
Horn Anvil on Base	<b>814-1025</b>	<b>\$56.00</b>



**F Machined Horn Anvil**

Machined from a block of tool steel. Case-hardened and polished to perfection. Has round and flat horns and hole in top for riveting. Measures 4 1/2"W x 1 5/8"H.

Description	Item#	Each
Machined Horn Anvil	<b>814-1021</b>	<b>\$23.95</b>



**G Hexagon Anvil**

Ideal for drilling, riveting and staking small parts. Case-hardened and ground flat and smooth. Has 16 holes ranging from 5/64" to 1/4" and five milled slots. Measures 1 7/8"W x 3/4"H.

Description	Item#	Each
Hexagon Anvil	<b>814-1050</b>	<b>\$19.95</b>

**A Machined Bending Block**

Used for forming and shaping metal into ring shanks, bezels and much more. Has eleven semicircular grooves and one 45° groove. Measures 4"L x 2"W x 1"H. Made in Europe.

Description	Item#	Each
Machined Bending Block	810-2050	\$80.00

**B Large Bending Block**

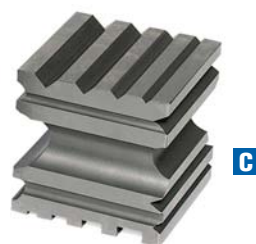
Used for forming and bending metal. Made of high-quality tool steel hardened to 45–50 HRC and polished. Has five semicircular grooves: three half-rounds and two third-rounds, perfect for ID nameplates and other designs that require a gentler curve. Measures 6<sup>3</sup>/<sub>8</sub>"L x 2<sup>3</sup>/<sub>8</sub>"W x 2"H. Made in Europe.

Description	Item#	Each
Large Bending Block	810-2055	\$72.00

**C Premium Forming Block**

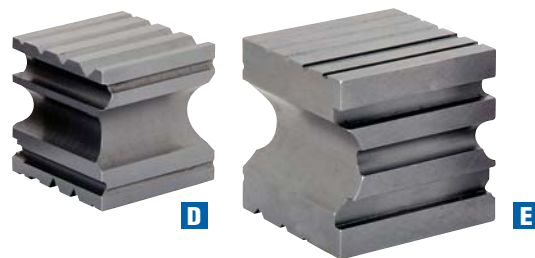
Used for forming small lengths of rod, wire and sheet. Made of the finest steel hardened to 65 HRC, precision-milled and polished to a satin finish. Has eight half-round grooves, seven V-shaped grooves, four rectangular grooves and several flat surfaces. Extremely rugged and versatile. Measures 2<sup>3</sup>/<sub>8</sub>"L x 1<sup>5</sup>/<sub>8</sub>"W x 2<sup>3</sup>/<sub>8</sub>"H. Made in Italy.

Description	Item#	Each
Premium Forming Block	810-2000	\$159.00

**D, E Forming Blocks**

Used for forming small lengths of rod, wire and sheet. Made of high-grade tool steel hardened to 50 HRC. The 2<sup>1</sup>/<sub>4</sub>" block has seven half-round grooves, seven V-shaped grooves, four rectangular grooves and several flat surfaces. The 2<sup>3</sup>/<sub>4</sub>" block has eight half-round grooves, seven V-shaped grooves, four rectangular grooves and several flat surfaces. Made in Europe.

Description	Item#	Each
D. 2 <sup>1</sup> / <sub>4</sub> " Forming Block	810-2005	\$72.00
E. 2 <sup>3</sup> / <sub>4</sub> " Forming Block	810-2010	69.75

**F Lead Bench Block**

Used as a stable base for cutting, stamping, forming and chasing. Measures 3<sup>3</sup>/<sub>8</sub>"L x 3<sup>3</sup>/<sub>8</sub>"W x 1"H.

Description	Item#	Each
Lead Bench Block	812-1640	\$13.10

**G, H Steel Bench Blocks**

Each provides a solid, stable base for workpiece when flattening or laying out designs. Made of high-quality tool steel hardened to 46–50 HRC and ground to a smooth, flat surface. Small block measures 2<sup>1</sup>/<sub>2</sub>"L x 2<sup>1</sup>/<sub>2</sub>"W x 3/4"H. Large block measures 4"L x 4"W x 3/4"H. Made in Europe.

Description	Item#	Each
G Small Steel Bench Block	812-1650	\$9.25
H. Large Steel Bench Block	812-1655	17.50







**A GRS® Metal Former**

Shapes flat strips of metal to perfect “C” bracelets after you have engraved your designs. Features a soft alloy die seat that supports pressure from the die without distorting your work (die seat can be reformed by heating when necessary). Simple to use: place one end of stock under the die, press down on the handle and work stock through the former, shaping until you create the desired “C” shape. Includes two different fixed punches and adjustable die cavity to form .025”–1.25” bracelets. Recommended for use on .030”–.080” thick soft metals such as gold, silver and copper. Made in USA.

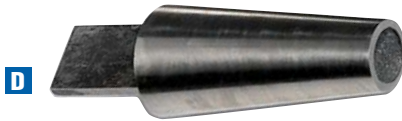
Description	Item#	Each
Metal Former	<b>814-1058</b>	<b>\$199.00</b>



**B**



**C**



**D**

**B, C Bracelet Mandrels**

Ideal for shaping, stretching and forming bracelets and other items. Made of hardened and polished cast iron. Round mandrel measures 14<sup>3</sup>/<sub>8</sub>"L and tapers from 3<sup>1</sup>/<sub>2</sub>" to 2". Oval mandrel measures 11<sup>3</sup>/<sub>4</sub>"L and tapers from 3" x 2<sup>1</sup>/<sub>2</sub>" to 2<sup>1</sup>/<sub>8</sub>" x 1<sup>3</sup>/<sub>4</sub>".

Description	Item#	Each
B. Round Bracelet Mandrel	<b>841-2050</b>	<b>\$105.00</b>
C. Oval Bracelet Mandrel	<b>841-2060</b>	<b>145.00</b>

**D Bracelet Mandrel with Tang**

Ideal for shaping, stretching and forming bracelets and other items. Fits easily in Bench Pin and Anvil #814-1010 (see p. 439) or a vise. Made of cast steel polished to a smooth finish. Measures 5<sup>3</sup>/<sub>4</sub>"L with 3" tang and tapers from 2<sup>1</sup>/<sub>2</sub>" x 2<sup>3</sup>/<sub>8</sub>" to 1<sup>3</sup>/<sub>4</sub>" x 1<sup>1</sup>/<sub>2</sub>".

Description	Item#	Each
Oval Bracelet Mandrel with Tang	<b>841-2070</b>	<b>\$64.15</b>



**E**

**E Wooden Bracelet Mandrel**

A round tapered hardwood mandrel for shaping and removing dents and kinks from bracelets and bangles made of soft, nonferrous metals. Will not mar jewelry. Measures 15"L x 2<sup>1</sup>/<sub>2</sub>"–1<sup>1</sup>/<sub>2</sub>" dia.

Description	Item#	Each
Wooden Bracelet Mandrel	<b>841-3032</b>	<b>\$16.45</b>



**F**

**F Premium Disc Cutters**

High-carbon tool steel cutters machined and tempered to perfection for cutting flawless circles from 12-gauge and thinner soft metals. Feature shoulder rings to stop punches from falling through base. Small disc cutter includes seven punches: 1/8", 3/16", 1/4", 5/16", 3/8", 7/16" and 1/2". Large disc cutter includes five punches: 1/2", 5/8", 3/4", 7/8" and 1". Combo disc cutter includes 11 punches: 1/8", 3/16", 1/4", 5/16", 3/8", 7/16", 1/2", 5/8", 3/4", 7/8" and 1". Made in Europe.

Description	Item#	Each
Small Cutter	<b>812-1300</b>	<b>\$84.00</b>
Large Cutter	<b>812-1310</b>	<b>80.00</b>
F. Combo Cutter	<b>812-1325</b>	<b>124.00</b>



**G**

**G Chasing Tool Set**

Consists of 22 different punches for making decorative designs on sheet metal. The tool ends are struck with a chasing hammer while the work is held in a pitch bowl or on a lead block.

Description	Item#	Each
Chasing Tool Set	<b>815-2000</b>	<b>\$109.75</b>



### A Bezel Block and Punch Sets

Each includes precision-machined block and punch. Used to punch and form bezels from flat stock. Made of hardened, tempered, polished steel.

Description	Holes	Punch Angle	Item#	Each
A. Round Set	20 (5–20mm)	17°	815-2050	\$97.50
		28°	815-2055	97.50
Oval Set	11 (4–14mm)	17°	815-2060	121.00
Heart Set	11 (5–15mm)	17°	815-3000	312.00



A

### B Oval Dapping Die and Punch Set

Includes heavyweight steel die with 16 oval depressions ranging from 7/16" x 5/16" up to 1 1/8" x 1 3/16" and four precisely matched, high-grade hardened steel oval punches. Comes complete with sturdy 7 3/8"L x 5 1/2"W wood stand. Made in Italy.

Description	Item#	Each
Oval Dapping Die and Punch Set	815-0550	\$499.00



B

### C Dapping Punch Set

Includes 11 high-grade steel dapping punches with ball ends: 1/8" to 3/4" in 1/16" increments. Matches cube #815-1005, cube #815-1007 and block #815-1000. Made in USA.

Description	Item#	Each
Dapping Punch Set	815-0600	\$38.95



C

### D, E Dapping Cubes

Hardened high-grade steel cubes polished to a satin-smooth finish. Match punches in set #815-0600. The 2" cube has 18 hemispherical depressions: 1/8" to 7/8" in 1/16" increments, plus 1", 1 1/8", 1 1/4" and 1 3/8". The 2 1/2" cube has 21 hemispherical depressions: 3/32" to 1 3/4". Made in USA.

Description	Item#	Each
D. 2" Dapping Cube	815-1005	\$48.50
E. 2 1/2" Dapping Cube	815-1007	95.35



D



E

### F Designer's Dapping Block

Hardened high-grade steel block polished to a satin-smooth finish. Matches punches in set #815-0600. Has 14 hemispherical depressions: 1/8" to 7/8" in 1/16" increments, plus 1". Also has eight different semicircles on edges for shaping rings, stone settings and bezels. Measures approx. 3 3/4"L x 2 1/2"W x 7/8"H. Made in USA.

Description	Item#	Each
Designer's Dapping Block	815-1000	\$61.00



F

### G Dent Remover

A 2 1/4" hardwood block with two wooden punches for shaping and repairing lockets and cases and removing dents. Has six different shallow cups.

Description	Item#	EACH Prices	
		1-9	10+
Dent Remover	815-1010	\$7.20	\$5.76



G

## Perfect Match Dapping Sets and Components (pp. 256, 257)

Dapping sets and components ideal for jewelers and designers. Choose from a variety of tool steel dapping punches and high-grade tool steel dapping cubes and blocks, all made in Europe. Dapping punches are precision-machined and hardened in a unique process that improves both performance and longevity: hitting ends and highly polished working ends are hardened to 50 HRC; shanks are left at mill hardness of 32–36 HRC to absorb shock and prevent metal crystallization. Sold in sets only. Dapping cubes and blocks have depressions that are precision-machined, hardened and polished to meet rigorous quality standards. Sold individually and in sets.



A



B



C



D



E

### A, B Perfect Match Dapping Punch and Cube Sets

Small set includes 17 punches and matching 2" (50mm) cube with 17 half-spheres (3.2, 4.8, 6.4, 7.9, 9.5, 11.1, 12.7, 14.3, 15.9, 17.5, 19.1, 20.6, 22.2, 25.4, 28.6, 31.8 and 34.9mm). Large set includes 21 punches and matching 2½" (65mm) cube with 21 half-spheres (2.0, 3.2, 4.8, 6.4, 7.9, 9.5, 11.1, 12.7, 14.3, 15.9, 17.5, 19.1, 20.6, 22.2, 25.4, 27.0, 28.6, 31.8, 34.9, 44.5 and 50.8mm). Each comes complete with hardwood storage base inscribed with tool sizes for easy identification.

Description	Item#	Each
A. 19-Piece Small Set	815-1025	\$140.00
B. 23-Piece Large Set	815-1030	163.00

### C, D Perfect Match Dapping Punch and Block Sets

Small set includes 14 punches and matching designer's block with 14 half-spheres (3.2, 4.8, 6.4, 7.9, 9.5, 11.1, 12.7, 14.3, 15.9, 17.5, 19.1, 20.6, 22.2 and 25.4mm) and eight half-cylinders (6.4, 7.9, 9.5, 12.7, 15.9, 19.1, 22.2 and 25.4mm). Large set includes 22 punches and matching flat block with 27 half-spheres (1.5, 2.0, 2.4, 2.8, 3.2, 3.6, 4.4, 4.8, 5.6, 6.4, 7.1, 7.9, 8.7, 9.5, 10.7, 11.1, 12.7, 14.3, 15.5, 15.9, 17.1, 17.5, 19.1, 20.6, 22.2, 23.8 and 25.4mm). Each comes complete with hardwood storage base inscribed with tool sizes for easy identification.

Description	Item#	Each
C. 16-Piece Small Set	815-1020	\$118.00
D. 24-Piece Large Set	815-1015	144.00

### E Perfect Match Deluxe Dapping and Design Set

This comprehensive 61-piece deluxe set provides an overwhelming number of fabrication and design possibilities. Includes tool steel dapping punches and cutters, high-grade tool steel dapping cubes and blocks and hardwood storage base inscribed with tool sizes for easy identification.

I.D. punches are made 1mm smaller than regular punches to allow for metal clearance. Cutters have sharp milled edges for cleanly cutting up to 28-gauge soft metals; can also be used with a light touch to create surface textures and patterns.

#### Includes:

- 30 dapping punches (2.8, 3.2, 3.6, 4.0, 5.6, 6.4, 7.1, 7.9, 9.5, 10.3, 11.1, 11.9, 12.7, 14.3, 15.1, 15.9, 17.5, 18.3, 19.1, 19.8, 20.6, 22.2, 23.0, 24.6, 25.4, 28.6, 31.8, 38.1, 44.5 and 50.8mm)
- 5 I.D. dapping punches (27.6, 30.8, 33.9, 43.5 and 49.8mm)
- 22 cutters (2.8, 3.2, 3.6, 4.0, 5.6, 6.4, 7.1, 7.9, 9.5, 10.3, 11.1, 11.9, 12.7, 14.3, 15.1, 15.9, 17.5, 18.3, 19.1, 19.8, 20.6 and 22.2mm)
- 2" and 2½" dapping cubes (see p. 257)
- Flat and designer's dapping blocks (see p. 257)
- Hardwood storage base

Description	Item#	Each
61-Piece Deluxe Set	815-1035	\$495.00



**A Perfect Match Dapping Punch Set**

Includes 30 tool steel dapping punches (2.8, 3.2, 3.6, 4.0, 5.6, 6.4, 7.1, 7.9, 9.5, 10.3, 11.1, 11.9, 12.7, 14.3, 15.1, 15.9, 17.5, 18.3, 19.1, 19.8, 20.6, 22.2, 23.0, 24.6, 25.4, 28.6, 31.8, 38.1, 44.5, and 50.8mm) and hardwood storage base inscribed with tool sizes for easy identification. Works with dapping cubes and blocks (see below).

Description	Item#	Each
31-Piece Set	<b>815-1036</b>	<b>\$157.00</b>



**A**

**B Perfect Match I.D. Dapping Punch Set**

Includes five tool steel I.D. dapping punches (27.6, 30.8, 33.9, 43.5 and 49.8mm) and hardwood storage base inscribed with tool sizes for easy identification. Works with 2 1/2" dapping cube (see below). I.D. punches are made 1mm smaller than regular punches to allow for metal clearance.

Description	Item#	Each
6-Piece Set	<b>815-1037</b>	<b>\$97.00</b>



**B**

**C, D Perfect Match Dapping Cubes**

High-grade tool steel dapping cubes. The 2" (50mm) cube has 17 half-spheres: 3.2, 4.8, 6.4, 7.9, 9.5, 11.1, 12.7, 14.3, 15.9, 17.5, 19.1, 20.6, 22.2, 25.4, 28.6, 31.8 and 34.9mm. The 2 1/2" (65mm) cube has 21 half-spheres: 2.0, 3.2, 4.8, 6.4, 7.9, 9.5, 11.1, 12.7, 14.3, 15.9, 17.5, 19.1, 20.6, 22.2, 25.4, 27.0, 28.6, 31.8, 34.9, 44.5 and 50.8mm.

Description	Item#	Each
<b>C.</b> 2" Dapping Cube	<b>815-1004</b>	<b>\$63.00</b>
<b>D.</b> 2 1/2" Dapping Cube	<b>815-1006</b>	<b>80.00</b>



**C**



**D**

**E, F Perfect Match Dapping Blocks**

High-grade tool steel dapping blocks. Flat block has 27 half-spheres (1.5, 2.0, 2.4, 2.8, 3.2, 3.6, 4.4, 4.8, 5.6, 6.4, 7.1, 7.9, 8.7, 9.5, 10.7, 11.1, 12.7, 14.3, 15.5, 15.9, 17.1, 17.5, 19.1, 20.6, 22.2, 23.8 and 25.4mm). Measures 5 1/8"L x 2 1/2"W x 3/4"H. Designer's block has 14 half-spheres (3.2, 4.8, 6.4, 7.9, 9.5, 11.1, 12.7, 14.3, 15.9, 17.5, 19.1, 20.6, 22.2 and 25.4mm) and eight half-cylinders (6.4, 7.9, 9.5, 12.7, 15.9, 19.1, 22.2 and 25.4mm). Measures 3 3/4"L x 2 1/2"W x 7/8"H.

Description	Item#	Each
<b>E.</b> Flat Block	<b>815-1038</b>	<b>\$82.00</b>
<b>F.</b> Designer's Block	<b>815-1039</b>	<b>63.00</b>



**E**



**F**

**G Perfect Match Cupola Dapping Punch and Die Sets**

Used for forming large spherical shapes. Choose from four sets: small, medium, large and deluxe. Each includes tool steel dapping punches and matching double-sided die(s). Comes complete with hardwood storage base.

Description	Components	Item#	Each
Small Set	2" and 2 1/4" punches and double-sided die	<b>815-1055</b>	<b>\$72.00</b>
Medium Set	2 1/2" and 2 3/4" punches and double-sided die	<b>815-1060</b>	<b>86.00</b>
Large Set	3" and 3 1/4" punches and double-sided die	<b>815-1065</b>	<b>109.00</b>
<b>G.</b> Deluxe Set	All six punches and three dies	<b>815-1070</b>	<b>240.00</b>



**G**





**A**



**B**



**A Sherline Metric Lathe**

Lets you create precision wax, plastic and metal models and parts like a true pro. Features high-torque DC motor with variable speed control and automatic converter that adjusts between 110V/220V and 50/60Hz without any loss of torque.

Includes 70mm x 114mm cross slide, 381mm steel bed to allow 203.05mm between centers, aluminum handwheels, pulleys, belt, faceplate, lathe dog, two dead centers, two hexagonal keys, tool post, high-speed cutting tool, 8' power cord and instructions. Measures 18"L x 7 1/2"W x 6"H. Operating speed range: 70–2,800rpm.

**Specifications:**

Swing over Bed	90mm (3 1/2")
Swing over Carriage	45mm (1 3/4")
Distance Between Centers	200mm (8")
Hole Through Spindle	10mm (.405")
Main Spindle Accuracy	0.0127mm (.0005")
Spindle Nose Thread	3/4", 16 TPI
Spindle Nose Taper	#1 Morse
Travel of Cross Slide	110mm (4 1/4")
Handwheel Graduations	0.01mm (.001")

Description	Item#	Each
Metric Lathe	<b>856-1100</b>	<b>\$629.00</b>

**B Sherline Vertical Milling Column Attachment**

Turns your Sherline Metric Lathe into a small milling machine for drilling, boring and many other general tasks. Converts lathe to mill in less than one minute. Consists of dovetailed vertical column with aluminum base that fastens to lathe bed in place of headstock; headstock then attaches to dovetailed saddle on vertical column. Turn handwheel to change cutting depth in 0.01mm increments. Mount workpiece on lathe cross slide.

Description	Item#	Each
Vertical Milling Column Attachment	<b>856-1102</b>	<b>\$163.00</b>

**C - E Sherline Chucks**

Four-jaw chuck holds irregularly shaped parts on or deliberately off center. Clamps tighter than three-jaw chuck. Grips from 2mm (3/32") to 38mm (1 1/2") diameter stock with jaws in normal position, up to 70mm (2 3/4") with jaws in reverse position. Measures 17mm (.687") dia. through hole with 3/4", 16 thread.

Three-jaw chuck centers parts within a few thousandths of an inch. Grips from 2mm (3/32") to 38mm (1 1/2") diameter stock with jaws in normal position, up to 70mm (2 3/4") with jaws in reverse position. Measures 17mm (.687") dia. through hole with 3/4", 16 thread.

Three-jaw tailstock chuck is used for accurate center-line drilling, reaming or tapping of any part mounted in the lathe. Grips from 0.8mm (1/32") to 9.5mm (3/8") diameter stock. Includes key and two arbors: #0 Morse for tailstock and #1 Morse for headstock.

Description	Item#	Each
<b>C. Four-Jaw Chuck</b>	<b>856-1104</b>	<b>\$117.95</b>
<b>D. Three-Jaw Chuck</b>	<b>856-1106</b>	<b>108.95</b>
<b>E. Three-Jaw Tailstock Chuck</b>	<b>856-1108</b>	<b>69.75</b>



**C**



**D**



**E**



**F**



**G**



**H**

**F - H Sherline Accessories**

Tool rest mounts on your lathe for steadying chisels and other tools. Tool bit set includes three high-speed steel bits for turning and threading applications: right-hand, left-hand and boring.

Tool blank can be easily ground into desired shape for turning and facing applications. Made of high-speed steel. Measures 1/4" square.

Description	Item#	Each
<b>F. Tool Rest</b>	<b>856-1114</b>	<b>\$59.00</b>
<b>G. Tool Bit Set</b>	<b>856-1116</b>	<b>26.80</b>
<b>H. Tool Blank</b>	<b>856-1110</b>	<b>3.25</b>

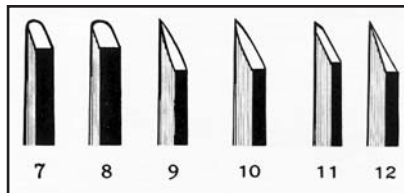
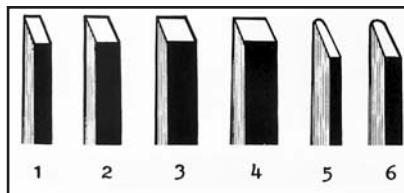
**A High-Speed Steel Chisels**

Feature one-piece construction ground to shape from round stock. Excellent for evenly removing large amounts of material. Will not lose temper when sharpened. Made of the finest high-speed steel. Measure 6" long. Available individually or in a set of all 12 styles.

Description	Item#	EACH Prices	
		1-11	12+
Chisel #1	166-9010	\$14.40	\$12.00
Chisel #2	166-9020	14.40	12.00
Chisel #3	166-9030	14.40	12.00
Chisel #4	166-9040	14.40	12.00
Chisel #5	166-9050	14.40	12.00
Chisel #6	166-9060	14.40	12.00
Chisel #7	166-9070	14.40	12.00
Chisel #8	166-9080	14.40	12.00
Chisel #9	166-9090	14.40	12.00
Chisel #10	166-9100	14.40	12.00
Chisel #11	166-9110	14.40	12.00
Chisel #12	166-9120	14.40	12.00
12-Piece Set	166-9990	152.00	—



A

**B Matt™ Mini Lathe with Gauge**

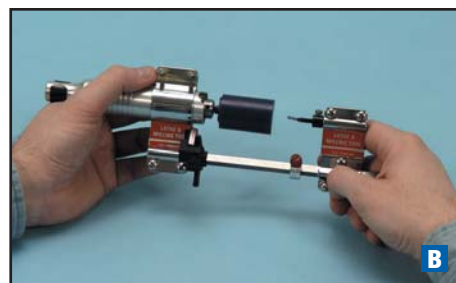
For turning and milling hard carving wax. New gauge accessory allows precise millimeter measurements so you can cut the exact amounts you need for uniform dimensions. Gauge is also sold separately for easy retrofit onto older Matt Wax Lathes. Must be used with a flex shaft and a 1" dia. handpiece, such as our #30 handpiece #850-1350. Ideal for wedding bands, bezels and special settings. Complete with lathe, three wax-holding collets, assorted wax blanks, three hand tools for cutting and shaping wax, cutting tool installed in lathe, two cutting tool blanks for custom shaping, Allen wrench and instruction booklet.

Description	Item#	Each
B. Mini Lathe with Gauge	265-2312	\$155.00
Mini Lathe Gauge only	265-2313	29.95
Replacement Wax-Holding Collet	265-2347	5.90
Replacement Cutting Tools, set of three	265-2344	18.25

Wax Rods	Green Item#	Purple Item#	Blue Item#	BOX of 4	
				1	2+*
1 <sup>5</sup> / <sub>16</sub> " dia. x 1 <sup>1</sup> / <sub>2</sub> "L	261-7884	261-7886	261-7882	\$8.70	\$7.57
1 <sup>3</sup> / <sub>32</sub> " dia. x 1 <sup>1</sup> / <sub>2</sub> "L	261-7890	261-7892	261-7888	8.70	7.57
7/ <sub>8</sub> " dia. x 1 <sup>1</sup> / <sub>2</sub> "L	261-7896	261-7898	261-7894	8.70	7.57

\*Quantity discounts for orders of one item# only, not assorted.



B



Wax Rods

**C Ti-Research EZ-Lathe® Startup Kit**

Includes EZ-Lathe and eight Wolf Wax blanks: four with 10mm center hole and four solid. For use on any flex shaft or micromotor handpiece with a 3/<sub>32</sub>" collet, EZ-Lathe uses pre-fabricated cylinders to create basic wax patterns quickly and easily. Offers variable offset positioning for creating eccentric designs. Allows cutting of outer and inner ring surfaces. Holds wax blanks securely. Works well with conventional carving tools and techniques.

Description	Item#	Each
C. EZ-Lathe Startup Kit	265-5040	\$51.00
Gold Center-Hole Refill, pkg. of 10	265-5044	25.00
Silver Center-Hole Refill, pkg. of 10	265-5043	25.00
Gold Solid Refill, pkg. of 10	265-5042	29.00
Silver Solid Refill, pkg. of 10	265-5041	29.00

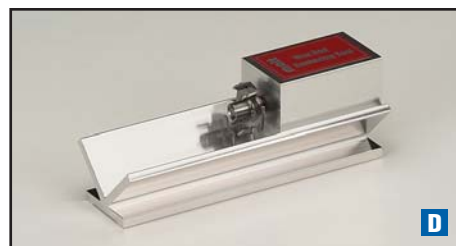


C

**D Matt™ Wax Rod Centering Tool**

Centers wax rods perfectly for true turning on your Matt Lathe. Heat a wax holding collet, then slide it into one of the three centering tool holes (corresponding to the three Matt wax rod diameters). Lay a wax rod on the centering tool base, aligned with the collet, and press them together. Saves wax—and time. Accommodates all sizes of Matt wax rods: 7/<sub>8</sub>", 1<sup>3</sup>/<sub>32</sub>" and 1<sup>5</sup>/<sub>16</sub>" diameters. Made of machined, polished aluminum. Measures 4" overall length.

Description	Item#	Each
Wax Rod Centering Tool	265-2433	\$34.50



D

**Imaging Systems – Ideal for capturing digital images of your jewelry!**

Gesswein offers several high-quality imaging systems for capturing digital images of jewelry and other small items. Choose from our top-of-the-line models all the way down to economical ones, and combine with your digital camera. All provide exceptional lighting to ensure images turn out clean and crisp. Use the resulting images for inventory management, repair documentation and much more—you can even include them in printed and electronic marketing materials. We also offer proprietary software for image management. Whatever your imaging needs, we have the right system for you!



**A The BOX™ II Advanced Light Box**

The BOX II offers several high-end features: extra-large imaging chamber allows easy adjustment of compositions; built-in horizontal and vertical camera tracks let you shoot pictures from any desired angle with a compatible digital camera; independently controlled lights in the top, front doors, back and sides ensure you have the right lighting environment for every composition; motorized lighted platform tilts 30° and rotates 180° for additional still-shot and video applications; and halogen and LED accent lights really bring out the sparkle in your images. Includes elevated and tilted platforms with remote control, three colored composition plates, assorted holding fixtures and positioning wax. Electrical: 110V. Measures 20¼"W x 22¼"D x 20"H with 14"W x 17½"D x 10"H chamber and 12½" dia. platform.

**Features:**

- Extra-large imaging chamber for easy composition adjustments
- Horizontal and vertical camera tracks for optimal shot angles
- Independent light switches for full lighting control
- Motorized lighted platform for still-shot and video applications
- Three halogen accent lights in left, right and back sides
- One ultra-bright LED accent light in top
- Built-in Dual-LED Sparkle Light

Description	Item#	Each
The BOX II	817-0499	\$2,995.00



**B, C MEDALight® Mini Studio**

This mini studio provides a versatile 5000°K lighting environment for shooting your parts. With its compact size and multiple adjustable light sources, it gives you the flexibility you need to work with a wide range of compositions without using too much space (30" x 30" area required).

Features 17" x 23" imaging platform, durable shooting table frame, translucent diffusion tabletop (attaches securely to frame), innovative 48/32W bottom/back lighting unit, 48W large fluorescent light panel and two 32W small fluorescent light panels with barn-door reflectors. Comes complete with removable diffusion material for hard, soft or mixed lighting, top light stand with boom arm, two swing-arm light mounts and all necessary mounting hardware. Electrical: 120V, 60Hz. Roof diffuser sold separately (see below).

**Features:**

- Provides full control over shadows and highlights in images
- Perfect size for shooting a wide variety of compositions
- Unique 5000°K fluorescent foldaway bottom/back lighting unit
- Fluorescent light panels with barn-door reflectors
- Removable diffusion material for hard, soft or mixed lighting

Description	Item#	Each
B. Mini Studio	817-0843	\$1,250.00
C. Roof Diffuser	817-0876	49.95



### A MEDALight® Large Light Box

A full-size light box for shooting a wide range of items. Features 11" x 16" imaging platform; five individually controllable, dimmable 5000°K fluorescent lights in front, rear, sides and bottom; and infinity curve from bottom platform to rear panel for seamless background transition.

Includes removable front door, universal camera bracket, power adapter, six colored background papers and two black side masks. Electrical: 120V, 60Hz. Measures 19"W x 15"D x 14"H.

Description	Item#	Each
Large Light Box	817-0842	\$950.00



### B MEDALight® Medium Light Box

This mid-range light box offers great control and flexibility at a reasonable price. Features 9" x 12" imaging platform; three individually controllable, dimmable 5000°K fluorescent lights in front, rear and bottom; light-reflecting sides; and infinity curve from bottom platform to rear panel for seamless background transition.

Includes removable front door, universal camera bracket, power adapter, six colored background papers and two black side masks. Electrical: 120V, 60Hz. Measures 14½"W x 13"D x 12"H.

Description	Item#	Each
Medium Light Box	817-0839	\$695.00



### C MEDALight® Multi-Light Light Box

This economical light box offers good control and flexibility at a very fair price. Features 9" x 12" imaging platform, three individually controllable lights (5600°K diffused fluorescent light, 5600°K 12-LED accent light and 2700°K nondiffused fluorescent light) and infinity curve from bottom platform to rear panel for seamless background transition.

Includes removable front door, universal camera bracket, power adapter, six colored background papers and two black side masks. Electrical: 110–220V, 60Hz. Measures 14½"W x 13"D x 12"H.

Description	Item#	Each
Multi-Light Light Box	817-0825	\$450.00



### D, E MEDALight® Sparkling Lights

These add-on accessories for the MEDALight Mini Studio and Light Boxes employ multiple high-intensity LEDs (light-emitting diodes) to bring out the brilliance of diamonds, pearls and other precious stones, helping improve jewelry photos and increase sales. Although MEDALight imaging systems have always provided well-balanced diffused lighting for displaying the overall characteristics and details of jewelry, they couldn't really enhance its appearance until now. Sparkling Lights add eye-catching accents that make jewelry more appealing and enticing. MEDALight Mini Studio and Light Boxes with Sparkling Lights are perfect for taking attention-getting photos that can be used in your advertising.

Description	Item#	Each
D. Sparkling Light for Mini Studio	817-0874	\$145.00
E. Sparkling Light for Light Boxes	817-0872	95.00







A

**A Photo eBox Plus**

Offers an exceptional level of control and flexibility. Features both 6500°K fluorescent and 3000°K halogen accent lighting. Includes a main power switch and five light switches: four switches for controlling the four fluorescent lights individually and another switch for controlling the three halogen accent lights. Allows you to shoot from the top at a variety of angles using the included L-shaped and magnetic camera mounts or from the front through the sliding camera opening. Electrical: 110V. Measures 19¾"W x 13¼"D x 13"H with 10" x 13½" imaging platform.

Description	Item#	Each
Photo eBox Plus	817-0846	\$995.00



B

**B Gem eBox**

Offers quality lighting at an affordable price while saving valuable space. Features three 6500°K fluorescent lights, two 3200°K halogen accent lights and a special 5800°K 15-LED accent light. Includes a main power switch and three light switches for controlling the three types of lights. Allows you to shoot from the top using the included L-shaped camera mount or from the front through the removable door. Comes complete with assorted stands and positioning wax. Electrical: 110V. Measures 15"W x 7½"D x 10½"H.

Description	Item#	Each
Gem eBox	817-0497	\$399.00



C

**C Dual-LED Sparkle Light**

Better than fiber-optic lights that cost much more. Features two high-intensity LED lamps that each emit about 40 lumens of bright white 5800°K light collimated into an intense cone that brings out the sparkle in diamonds and colored gemstones. Emits no heat, so subject and control box stay cool. Consumes very little power: just 5W, compared to 150–250W for most fiber-optic lights. Boasts 50,000-hour bulb life. Rugged, flexible 18" goosenecks with RCA connections allow lamps to be bent into virtually any position for optimal lighting angles. Compact base with adjustment knob for variable-intensity lighting control measures 3⅜"W x 4¼"D x 1⅝"H. Occupies just 13.5 square inches of workspace. Includes 110V AC adapter.

Description	Item#	Each
Dual-LED Sparkle Light	821-5765	\$350.00



D

**D The LiteRoom™ Kit**

The easy-to-use lighting solution for shooting hard-to-move items. Produces crisp, consistent images. Includes 24"W x 32"D x 17"H LiteRoom tent with 22" x 30" imaging area, two light heads, two 250W tungsten lightbulbs, two light stands and tent carrying bag; all you need is a camera and tripod. Extremely easy to set up and break down.

The translucent LiteRoom tent helps create a soft wraparound lighting environment that results in even, reflection-free photos. Gives you a wide range of camera angle choices: take pictures from overhead through the circular opening or from the front through the multiple-zippered opening. Features a vestibule interior with Velcro tabs for attaching a variety of sweep backdrops. Best of all, the tent is bottomless, so you can move it without disturbing your composition. The professional-grade lights with stands provide precise, adjustable lighting. Made to last with replaceable tungsten lightbulbs for years of trouble-free use. Electrical: 110V.

Description	Item#	Each
The LiteRoom Kit	817-0858	\$395.00

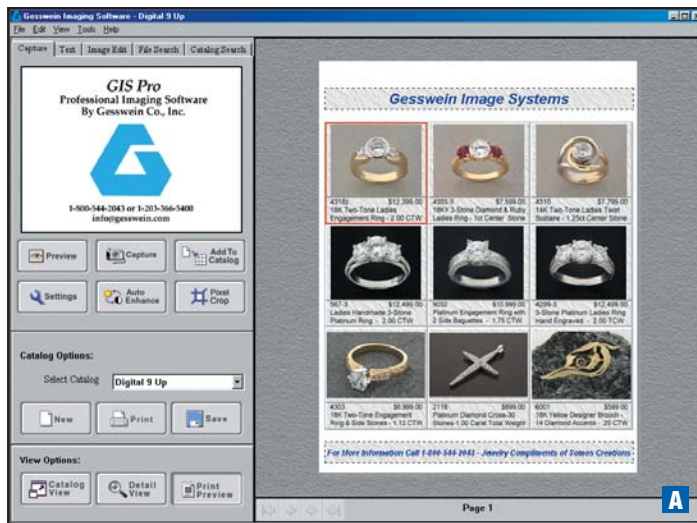
## A GIS Pro – Jewelry Imaging Software

GIS Pro Software gives jewelers the ability not only to capture exceptional images but also to easily use those images in a broad range of promotional media. Produce catalog pages, create presentations and slide shows on CD-ROM, enhance appraisals, even design Web pages.

### Features:

- Use simple buttons and tabs to maneuver through imaging and publishing steps.
- Customize pages with headers, footers, frames, fonts and colors.
- Fully describe each piece with three customizable user fields plus a notes field.
- Print descriptive text with each image.
- Use a large selection of image enhancement tools.
- Perform a keyword search within any descriptive field.
- Use just about any imaging device—digital camera, scanner, internal capture card or other—to capture images.
- Create an on-screen slide show or CD-ROM presentation with special effects and sound.
- Design professional-looking Web pages with images and text.

Description	Item#	Each
GIS Pro	<b>817-0427</b>	<b>\$99.95</b>



LIGHT BOXES

## B Gorillapod SLR-ZOOM™

This handy mini tripod holds your camera in the perfect position for photographing from the front or top of all our digital imaging light boxes: 10" or higher for high-angle shots or as low as 3" for low-angle shots. Features joints that bend and rotate 360° and ring-and-foot-grips for flexible, stable positioning on its own or affixed to stationary objects. Includes 1/4" universal screw for tripod-mountable cameras and 3/8" adapter screw for professional tripod heads. Supports up to 6.6 lbs. of weight. Measures 9.8" x 2.4" x 2.4" when folded. Weighs just 8.5 oz.

### Specifications:

Compatibility	Tripod-mountable cameras and professional tripod heads
Capacity	6.6 lbs. total camera weight
Dimensions	9.8" x 2.4" x 2.4"
Net Wt.	8.5 oz.

Description	Item#	Each
Gorillapod SLR-ZOOM	<b>817-0495</b>	<b>\$49.95</b>

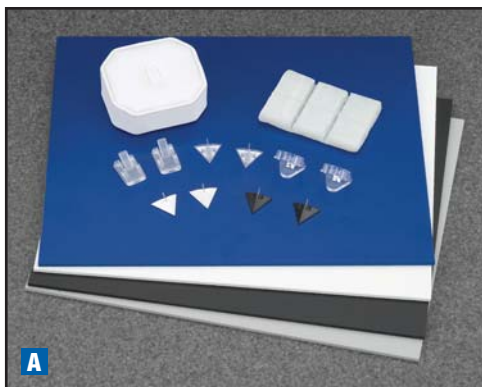


## C Turntable Displays

Perfect for displaying jewelry as well as for imaging. Choose from solar-powered and battery-powered styles. Latter requires two AA batteries (not included).

Description	Item#	Each
Solar-Powered Display	<b>820-8715</b>	<b>\$35.95</b>
Battery-Powered Display	<b>820-8716</b>	<b>39.95</b>





**A Imaging Accessory Sets**

Large imaging accessory set includes four 9" x 11" composition plates (black, white, neutral gray and royal blue) for use as back-grounds, six pieces of jewelry positioning wax, leatherette ring stand and assortment of ten plastic ring stands. Compatible with MEDALight Mini Studio, Large Light Box and other large systems.

Small imaging accessory set includes four 4" x 6" composition plates (black, white, neutral gray and royal blue) for use as backgrounds, six pieces of jewelry positioning wax, leatherette ring stand and assortment of ten plastic ring stands. Compatible with all Gesswein imaging systems.

Description	Item#	Each
A. Large Set	<b>817-0865</b>	<b>\$34.95</b>
Small Set	<b>817-0864</b>	<b>23.45</b>

**B Composition Plate Sets**

Large composition plate set includes four 9" x 11" colored composition plates (black, white, neutral gray and royal blue) for use as backgrounds. Compatible with MEDALight Mini Studio, Large Light Box and other large systems.

Small composition plate set includes four 4" x 6" colored composition plates (black, white, neutral gray and royal blue) for use as backgrounds. Compatible with all Gesswein imaging systems.

Description	Item#	Each
B. Large Set	<b>817-0580</b>	<b>\$30.95</b>
Small Set	<b>817-0581</b>	<b>15.95</b>

**C - E Ring Stands**

These small ring stands allow you to position your rings at the perfect angles for photographing from above or from the front. Delta and Marquise are available in clear only. Pyramid are available in black, white and clear (use black stands on black or dark-colored backgrounds, white stands on white or light-colored backgrounds).

Description	Size (W x D)	Color	Item#	Pkg. of 5
C. Delta	5/8" x 7/8"	Clear	<b>817-0860</b>	<b>\$9.50</b>
D. Marquise	13/16" x 7/8"	Clear	<b>817-0861</b>	<b>9.25</b>
E. Pyramid	13/16" x 3/4"	Clear	<b>817-0866</b>	<b>8.95</b>
		White	<b>817-0863</b>	<b>8.95</b>
		Black	<b>817-0862</b>	<b>8.95</b>

**F Positioning Wax**

Allows items in the light box to be placed upright without any visible holding apparatus. Especially useful for rings. Only a tiny bit of this wax is necessary. Sold in packages of six squares that measure approximately 1"L x 1"W x 1/4" thick.

Description	Item#	Each
Positioning Wax	<b>817-0758</b>	<b>\$4.95</b>

**G Leatherette Ring Stand**

Provides a subtle, classy texturized background. The pad clip easily and securely fits all types of rings. Measures 2 1/2"W x 2 7/8"D x 1"H.

Description	Item#	EACH Prices	
		1-2	3+
Leatherette Ring Stand	<b>857-1485</b>	<b>\$3.95</b>	<b>\$3.36</b>



## JewelCAD – 3-D Design Software

Powerful, intuitive Computer-Aided Design and Manufacturing (CAD/CAM) software created especially for the jewelry industry. Boasts robust surface-based solid modeling toolkits, full parts and components database, materials library and tutorials. Features a customizable workspace that lets you design in the way that is most comfortable for you. Has user-friendly, nontechnical interface that helps you take your present jewelry design skills to a new level of creativity and precision, enabling you to communicate your ideas in full color and with remarkable accuracy.

Develop your new design in simplified wire-frame mode, using the Zoom and 3-D Rotation functions to view work from every angle. As your ideas get more complex, keep your workspace uncluttered by working in multiple Layers, using the Hide/Un-Hide tool to modify different areas so you get just the result you want in even the most minute detail. Check your progress in various Color Modes as your design comes to life. Add finished designs to the database to build a comprehensive virtual portfolio. Whether you choose to Render to File and print your designs in full color or export them for Rapid Prototyping or CNC Milling, they can be recalled anytime for making endless modifications.

### Features:

- Menus, icons and hotkeys for working the way you want
- Measuring tools, modeling aids and weight estimators for estimating costs of designs before committing to wax models
- Curve and surface building tools
- Boolean operations for joining, hollowing and drilling
- Copy tools for simple creation of gemstone layouts and mirrored objects.
- Moving and scaling tools for free-form or numerical modeling
- Deformation tools for bending, twisting and tapering.
- Mapping tools for quickly applying gemstone layouts to surfaces
- Jewel libraries for selecting most popular cuts.
- Text library ideal for engraving or embossing text in your design.
- Interoperability with Import and Export of DXF, IGES and STL formats.
- Output standard GM code, Roland MDX code and slicing STL data for CNC Milling.
- Output both standard and seamless STL and SLC data for Rapid Prototyping.
- Render to File function.

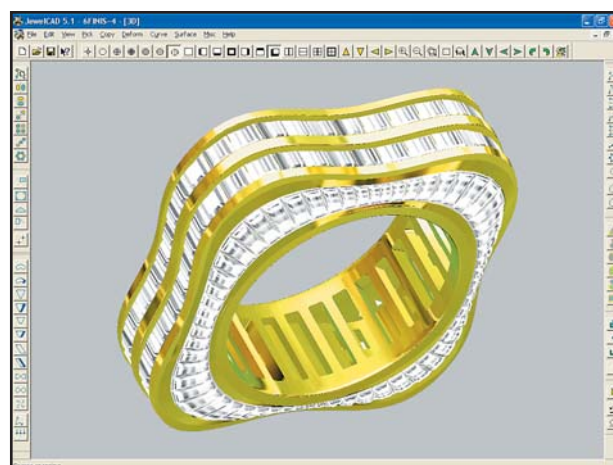
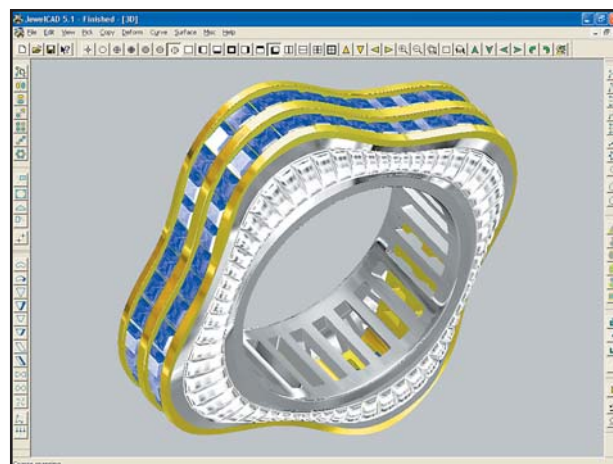
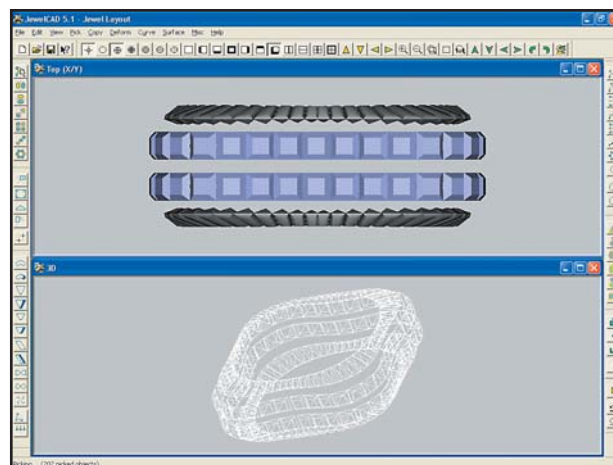
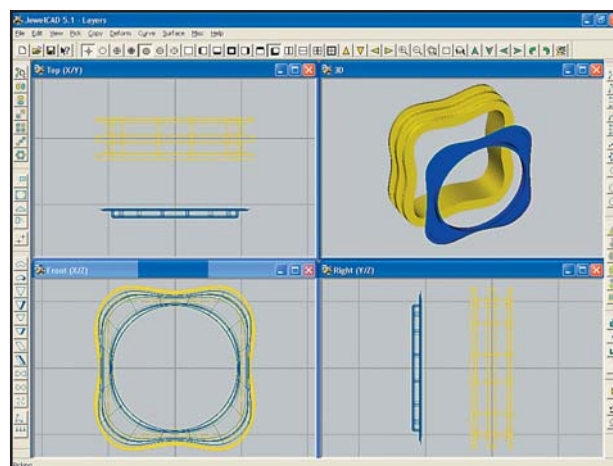
### Computer System Requirements:

- Pentium, Celeron or higher processor
- Microsoft Windows 98/NT/ME/2000/XP
- 55 MB disk space for software installation
- 128 MB RAM (256 or more recommended)
- OpenGL graphics display card (recommended)

Description	Item#	Each
JewelCAD Full Version	<b>266-4006</b>	<b>\$3,595.00</b>
JewelCAD Educational Version*	<b>266-4004</b>	<b>1,995.00</b>
JewelCAD Designer Version**	<b>266-4007</b>	<b>1,000.00</b>
JewelCAD Designer Educational Version*	<b>266-4008</b>	<b>500.00</b>

\*Sold exclusively to educational institutions.

\*\*Streamlined version of Full Version that focuses on designer features. Perfect for communicating ideas to customers on your computer with the JewelCAD Viewer and for generating print-ready bitmap files. Does not include the Full Version's expanded manufacturing toolset for generating Rapid Prototyping output data.



Call 1-800-544-2043 ext. 334 for your  
FREE JewelCAD Demo CD-ROM #890-9595.





**A, B Dazor® High-Power LED Lamps**

These advanced LED lamps represent a tremendous improvement over competing lamps on the market. Feature phosphorous-coated LEDs that emit pure white light for exceptional color accuracy. Boast incredible LED service life of more than 50,000 hours with no color degradation. Diffuse light efficiently with precision optics to eliminate distracting glare and hot-spots. Naturally dissipate heat with ceramic-coated core board to quell the need for noisy fans. Employ floating arm for fast, easy positioning.

Consume less power than traditional lamps. Produce no ultraviolet or infrared radiation. Contain no mercury or gas. Choose from weighted or clamp-on styles. Electrical: 110V, 60Hz with 8' cord and 3-prong plug. UL approved. Backed by a five-year warranty.

Description	Item#	Each
A. Weighted Desk Lamp with 24" Arm	821-5539	\$335.00
B. Clamp-on Lamp with 24" Arm	821-5538	325.00
Clamp-on Lamp with 34" Arm	821-5541	325.00



**C - E Dazor® Fluorescent Floating-Arm Lamps**

Fluorescent lamps precision-built for home and shop. Uses 15W daylight fluorescent tubes to provide ample cool white lighting for gemstone grading, jewelry fabrication and most general work. Feature 33" floating arm for fast, easy positioning. Can be mounted horizontally or vertically with universal base. Built for years of use with bonderized metal construction finished in baked enamel. Choose from two-tube and three-tube styles. Color: light gray. Electrical: 115V, 60Hz (UL approved) or 230V, 50Hz (CE approved) with 7' cord and 3-prong plug. Backed by a five-year warranty.

Optional optical-quality acrylic clamp-on magnifier also available. Provides 2X magnification with 4X inset. Can be flipped up when not in use. Includes all mounting hardware. Measures 5" dia.

Description	Item#	EACH Prices	
		1-2	3+
C. Two-Tube Lamp, 115V	821-5530	\$195.00	\$189.15
Export Two-Tube Lamp, 230V	821-5531	190.00	184.30
D. Three-Tube Lamp, 115V	821-5535	209.00	202.73
Export Three-Tube Lamp, 230V	821-5532	209.00	202.73
E. Optional Clamp-on Magnifier	821-5551	43.50	
Optional Full-Spectrum 15W Tube	821-5303	13.50	-
Replacement 15W Tube	821-5350	7.95	-

**F Dazor® Fluorescent Magnifying Lamps**

Ideal for assembly, inspection and other high-precision work. Feature 5" diameter 3-diopter crown optical glass lens with shade and 22W cool white fluorescent tube for total visual freedom with minimal eyestrain. Provide 75% magnification at 13" focal distance along with even, shadow-free light from all angles. Made of steel to endure years of rough use. Can be mounted horizontally or vertically on a bench, machine or wall. Available with a 28" heavy-duty lock-joint arm with three control knobs for reducing vibration or a 28" or 42" counterbalanced floating arm for fast, easy positioning. Color: gray. Electrical: 115V, 60Hz with 9' cord and 3-prong plug. UL approved. Backed by a five-year warranty.

Description	Item#	EACH Prices	
		1-2	3+
F. Lamp with 28" Lock-Joint Arm	821-5534	\$197.00	\$191.09
Lamp with 28" Floating Arm	821-5529	209.00	202.73
Lamp with 42" Floating Arm	821-5517	209.00	202.73
Optional Full-Spectrum 22W Tube	821-5304	11.50	-
Replacement 22W Tube	821-5300	9.95	-



**A, B Dazor® Halogen Lamps**

Halogen lamps for producing very intense light at the focal points of assembly and inspection stations. Light from the halogen bulb is more concentrated than that from an incandescent bulb, yet the 20W halogen is a real energy-saver. The 2½" diameter head has a protective shield to guard against bulb breakage. Proper ventilation keeps reflector head cool. The 34" industrial-strength, flexible arm works well around most machine tools. Choose from weighted and clamp-on styles. Halogen bulb is rated to 2,000 hours. Color: black. Electrical: 115V, 60Hz with 8' cord and 3-prong plug. UL approved. Backed by a five-year warranty.



Description	Item#	EACH Prices	
		1-2	3+
A. Weighted Desk Lamp	821-5555	\$170.00	\$164.90
B. Clamp-On Lamp	821-5560	180.00	174.60
Replacement 20W Bulb	821-5549	8.95	-

**C Dazor® Asymmetria Fluorescent Lamps**

Compact, energy-efficient fluorescent lamps for soft lighting in the home or shop. Produce an asymmetric light pattern that lowers reflective glare on work surfaces to reduce eyestrain. Feature 18W fluorescent tube in head and 34" friction arm with three tension control knobs for precise, stable positioning. Include on/off rocker switch in head, weighted base and C-clamp for mounting on bench-tops up to 2¼" thick. Electrical: 115V, 60Hz with 7' cord and 3-prong plug. UL approved. Backed by a five-year warranty.



Description	Item#	Each
C. White Lamp	821-5543	\$69.85
Optional Full-Spectrum 13W Tube	821-5302	14.95
Replacement 18W Tube	821-5305	19.95

**D - F Dazor® Full-Spectrum Tubes**

**For Dazor Floating-Arm, Magnifying and Asymmetria Lamps**

Full-spectrum lighting offers several advantages over traditional fluorescent lighting. It displays colors accurately, allowing correct viewing and matching. It produces less glare, reducing eyestrain, headaches and general fatigue, increasing productivity. And it emits less heat, making for a comfortable workplace. Advocates of full-spectrum lighting go so far as to claim it provides health benefits and general feelings of well-being due to its simulation of natural outdoor light. Some even use it to treat a condition known as Seasonal Affective Disorder (SAD).

Jewelers, graphic artists, dentists and other discerning professionals use Dazor's full-spectrum lights to perform their crafts with razor-sharp precision. Now you can as well, without investing a fortune. Just replace the fluorescent tube in your existing Dazor lamp with the appropriate 15W (5900°K) standard, 22W Circline (5000°K) or 13W compact (5000°K) tube, and you can start reaping the benefits of full-spectrum lighting today.



Description	Fits	Item#	Each
D. 15W Standard	Floating-Arm Lamps	821-5303	\$13.50
E. 22W Circline	Magnifying Lamps	821-5304	11.50
F. 13W Compact	Asymmetria Lamps	821-5302	14.95



**A**



**B**



**C**



**D**

**A Magna Deluxe Fluorescent Lamp**

Treat yourself to a whole new class of elegant fluorescent lighting with the Magna Deluxe. Features a 55W fluorescent tube in an enclosed 20" head. Provides crisp, flicker-free, uniform light with maximum surface area. Lends a sleek, polished look to your bench. Built-in electronic ballast increases lumens. Head swivels 310° and tilts 210° for great flexibility. Heavy-duty 32" arm with tempered steel springs and smooth-glide tension control knobs allows fast, easy adjustment. Includes C-clamp for mounting on benchtops up to 2" thick. Electrical: 115V, 60Hz with 5' cord and 3-prong plug. UL listed. Backed by a one-year warranty.

Description	Item#	Each
Magna Deluxe Lamp	<b>821-5029</b>	<b>\$195.00</b>

**B Magna Fluorescent Lamps**

These attractive, affordable workhorses use 15W daylight fluorescent tubes in a 19" head to produce uniform light. Flexible 42" spring-balanced arm with tension control knobs at joints and convenient handle on head allow precise placement. Built to last with all-metal construction in powder-coated beige. Includes C-clamp for mounting on benchtops up to 2" thick. Two-tube lamp includes two fluorescent tubes, and three-tube lamp includes three. Electrical: 115V, 60Hz with 5' cord and 3-prong plug. UL listed. Backed by a one-year warranty.

Description	Item#	Each
<b>B. Magna Two-Tube Lamp</b>	<b>821-5027</b>	<b>\$95.00</b>
Magna Three-Tube Lamp	<b>821-5028</b>	<b>192.00</b>

**C Mighty Mag Fluorescent Magnifying Lamp**

With its extra-large 7.5" x 6.2" lens, Mighty Mag boasts the widest field of view of all our magnifying lamps. The 3-diopter lens provides 1.75X magnification for making objects appear 75% larger. Focal distance of 13" offers plenty of room to work under the lens. Twin 9W daylight fluorescent tubes mounted on each side of lens help illuminate objects from several angles and can be switched on and off independently to control glare and shadows. Mar-resistant beige plastic housing mounted on spring-balanced 35" steel arm can be set in any position. Includes C-clamp for mounting on benchtops up to 2" thick. Electrical: 115V, 60Hz with 5' cord and 3-prong plug. UL listed. Backed by a one-year warranty.

Description	Item#	Each
Mighty Mag Magnifying Lamp	<b>821-5045</b>	<b>\$135.00</b>

**D ProVue Fluorescent Magnifying Lamp**

The professional's choice for inspection, assembly, beading and other fine work. Each features ultra-bright 22W circular fluorescent tube and crystal-clear 3-diopter (1.75X) magnifying lens for 360° distortion-free viewing. Two optional add-on lenses provide more magnification: 3-diopter auxiliary lens adds another 1.75X for total magnification of 3.5X, and 5-diopter swing-away lens adds another 2.25X for total magnification of 4X. Lamp head measures 9" dia. with 5" dia. lens. The 45" spring-balanced arm locks in place via smooth-glide thumbscrews. Built to last with all-metal construction in powder-coated beige. Includes C-clamp for mounting on benchtops up to 2" thick. Electrical: 115V, 60Hz with 5' cord and 3-prong plug. UL listed. Backed by a one-year warranty.

Description	Item#	Each
<b>D. ProVue Magnifying Lamp</b>	<b>821-5040</b>	<b>\$85.00</b>
Optional 3-Diopter Lens (+1.75X)	<b>821-5043</b>	<b>24.95</b>
Optional 5-Diopter Lens (+2.25X)	<b>821-5042</b>	<b>8.35</b>
Replacement 22W Tube	821-5044	13.35

**A Aurora Incandescent/Fluorescent Combo Lamp**

Features a 60W incandescent bulb, 22W circular fluorescent tube and 9½" shade to enhance color perception, eliminate glare and reduce eyestrain. Use just one light source at a time for general work, or use them together to create optimal conditions for examining and grading diamonds and other precious stones. Adjustable 42" spring-balanced arm with tension control allows you to position head exactly where you need it. Built to last with all-metal construction in powder-coated beige. Includes C-clamp for mounting on benchtops up to 2" thick. Electrical: 115V, 60Hz with 5' cord and polarized plug. UL listed.

Description	Item#	Each
Aurora Combo Lamp	821-5035	\$95.00



**B Sirius Quartz Halogen Task Lamp**

Provides high-intensity illumination for assembly and inspection. Comes with a 20W MR16 halogen bulb yet accepts up to a 50W bulb. Head can be moved up and down. Flexible arm with 20½" reach resists vibration, staying put without drifting. Includes on/off rocker switch on head, C-clamp for mounting on benchtops up to 1¾" thick. Electrical: 115V, 60Hz with 5' cord and polarized plug. UL listed.

Description	Item#	Each
Sirius Quartz Task Lamp	821-5025	\$65.00



**C Elumina Halogen Task Lamp**

With its classic design and contemporary brushed silver finish, Elumina complements any decor. Uses a 50W halogen bulb shielded with UV filter glass. Adjustable arm extends 23" from 6" dia. weighted base. Built-in 4" dia. shade can be rotated to focus light where you want. Joints lock firmly into place with smooth-glide thumbscrews. Electrical: 115V, 60Hz with 5' power cord, in-line on/off switch and polarized plug. UL listed.

Description	Item#	Each
Elumina Task Lamp	821-5020	\$45.00



**D Econo Fluorescent Magnifying Lamp**

The affordable solution for viewing small, detailed areas. Uses a 13W fluorescent tube and 5X lens. Provides cool white light and good magnification to reduce eyestrain, helping you work faster. Flexible 11½" gooseneck allows easy positioning. Weighted metal base with nonslip pad ensures stability. Flip-down cover protects lens from dust when not in use. Electrical: 120V, 60Hz with 5' cord and polarized plug. UL listed.

Description	Item#	Each
Econo Magnifying Lamp	821-5010	\$39.95



**E Fluorescent Flip Lamp**

A compact 13W fluorescent lamp ideal for the workshop. Unique swivel arm with 180° range delivers light at the precise angle you need: just raise arm to turn on lamp, and lower to turn off. Easy to use on crowded benchtops. Lightweight yet sturdy. Measures 10½" high with ¾" square base. Electrical: 120V, 60Hz with 6' cord and polarized plug.

Description	Item#	Each
Flip Lamp	821-5006	\$17.80







**A**

**A Versalume™ Ultraviolet Light**

One of the most powerful and versatile ultraviolet lights on the market today. Produces 33% more UV output than competing models. Features compact, lightweight construction. Runs on a 115V AC adapter (included) or four AA batteries (not included). When home, open the stand for hands-free operation. In the field, close the stand to form a carrying handle. Comes complete with exclusive lifetime filters and *The Story of Fluorescence*, a 60-page softcover book that details fluorescence and its applications in the field of mineralogy. Measures 7¾"W x 3¼"D x 3½"H when open.

Description	Item#	Each
Versalume Ultraviolet Light	821-5740	\$85.50



**B**

**B 3-LED 400nm Ultraviolet Light**

An invaluable aid for detecting fluorescence in diamonds and other gemstones. Essential when buying diamonds, especially since fluorescence information is now included on all diamond gemological reports. Features three LEDs that produce 400nm UV light. Anodized aluminum housing. Pocket-sized for portability. Includes belt pouch and three LR1 1.5V batteries. Measures 4½"L x ⅝" dia.

Description	Item#	Each
3-LED 400nm Ultraviolet Light	821-5731	\$25.00



**C**

**C LED Diamond Presentation Light**

Illuminates your diamonds to produce maximum sparkle. Can be used as a presentation, refraction or transmission light. Features one super-white LED that produces 5800°K light. Anodized aluminum housing. Pocket-sized for portability. Includes storage pouch, wrist strap, two CR123A lithium batteries and gift box. Measures 4¼"L x ⅞" dia.

Description	Item#	Each
LED Diamond Presentation Light	821-5766	\$45.00



**D**

**D Xenon Presentation Light**

Enhances the glow and sparkle of rubies, emeralds and opals, as well as the warmth of yellow gold. Features an extremely powerful, high-purity xenon bulb that produces 3800°K light. Anodized aluminum housing. Pocket-sized for portability. Includes storage pouch, wrist strap, two CR123A lithium batteries and gift box. Measures 4¼"L x ⅞" dia.

Description	Item#	Each
Xenon Presentation Light	821-5767	\$19.95

### A - C Multi Lamp with Flex Arm

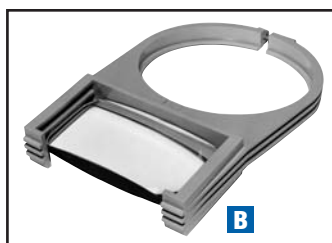
This unique lamp with vinyl-covered flexible arm can be mounted virtually anywhere extra light is needed. Comes with three different mounting fixtures: nylon and steel buttons, which occupy roughly 1" of space and can be mounted on any flat surface, as well as a right-angle bracket. Simply slide the base of the lamp arm over mounting button, and the lamp locks firmly in place. Includes studs for horizontal and vertical surfaces. Installs in just a few minutes. Easy to clean with soap and water. Uses up to a 100W incandescent bulb (not included). Electrical: 110V with heavy-duty jacketed cord and 3-prong plug.

Optional magnifier attachment with shade-mounted, ground-glass magnifying lens sold separately. The 2X and 4X double lens offers a clear view of small workpieces.

#### Features:

- Lightweight, durable construction
- 360° rotating base and 1½-turn rotating shade
- Center-suspended reflector and socket for keeping shade cool

Description	Item#	EACH Prices	
		1-2	3+
A. Black Multi Lamp with 18" Arm	821-4500	\$55.35	\$52.58
Black Multi Lamp with 24" Arm	821-4510	58.30	55.39
B. Optional Magnifier Attachment	821-4530	35.70	—
C. Replacement Steel Button	821-4540	3.15	—
Replacement Right-Angle Bracket	821-4550	4.05	—



### D Bausch & Lomb® Illuminating Stand Magnifier

An all-purpose large-field magnifier with a wide range of uses from inspection to general repair work. Lens and light are adjustable. With lens tilted, small handheld objects can be viewed clearly and worked on. With lens parallel to the work surface, anything placed beneath it is in focus.

Features 2X lens with 7/8" dia. 6X insert for additional magnification, 7W GE 7C7 bulb or equivalent, black plastic lens/lamp housing, chromium-plated steel rod stand and plastic sleeves on feet that help protect even highly finished surfaces. Electrical: 110/120V, 50/60Hz.

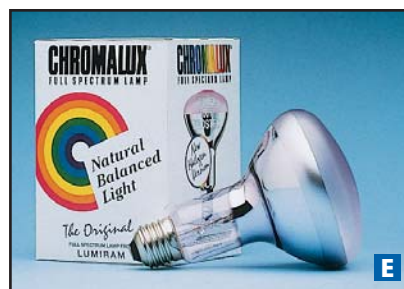
Description	Item#	EACH Prices	
		1-2	3+
Illuminating Stand Magnifier	272-5010	\$41.60	\$34.67



### E Chromalux® Plus™ Spotlight Bulb

Provides brighter white light than any halogen or incandescent bulb on the market. In comparison testing, Chromalux makes jewelry look brighter and more reflective than halogen bulbs, and it emits almost 40% more light than incandescent bulbs while using the same wattage. In fact, the patented technology behind this energy-efficient, full-spectrum bulb actually intensifies your stone colors. Closely simulates natural daylight, boasting high color temperature (4200°K) for enhanced whiteness, contrast and color distinction. R30FL bulb design with medium base fits standard light fixtures. Electrical: 120V, 75W.

Description	Item#	EACH Prices	
		1	2+
Chromalux Plus Spotlight	821-5502	\$19.20	\$17.28



## Important Magnifier Characteristics

**Magnification Power:** The ability of a lens to increase the visual size of an object. The symbol "X" represents power (a 3X magnifier triples the size of an image).

**Focal Distance:** The distance a magnifier should be from an object for it to be in focus (a 10X magnifier has a focal distance of 1"). Measured from lens unless otherwise noted.



A

### A Vigor® 10X Aplanatic Premium Hex Triplet Loupe

Features a 10X aplanatic, achromatic round glass lens that provides large field of view. Eliminates linear aberrations for clear magnification. Ideal for gemstone grading. Black finish and hex shape control glare. Suitable for engraving because the plates are reversible. Complete with leatherette pouch. Made in Japan.

Description	Focal Distance	Lens Diameter	Item#	EACH Prices	
				1-2	3+
10X Premium Loupe	1"	18.5mm	272-4000	\$70.20	\$63.18



B

### B Eschenbach 10X Aplanatic Precision Metal Loupe

A precision loupe made of matte chrome-plated brass. Features a 10X aplanatic optical glass lens that delivers a distortion-free image over the entire field of view. Meets EN ISO 9001 standards. Backed by a one-year manufacturer's warranty. Made in Germany.

Description	Focal Distance	Lens Diameter	Item#	Each	
10X Metal Loupe	1"	23mm	272-3255		\$64.00



C

### C Eschenbach 10X Aplanatic Precision Fiberglass Loupe

A precision folding loupe made of durable fiberglass-reinforced polyamide. Features a 10X aplanatic optical glass lens that delivers a distortion-free image over the entire field of view. Keeps out dust when closed, protecting lens from damage. Meets EN ISO 9001 standards. Backed by a one-year manufacturer's warranty. Made in Germany.

Description	Focal Distance	Lens Diameter	Item#	Each	
10X Fiberglass Loupe	1"	23mm	272-3240		\$48.00



D

### D Bausch & Lomb® Hastings Triplet Loupes

The best loupes from Bausch & Lomb. Highly corrected for spherical and chromatic aberrations. Feature three layers of optical glass cemented together and large field of view out to lens edge. Swing-away nickel-plated case protects lens and serves as handle.

Description	Focal Distance	Lens Diameter	Item#	Each	
7X Hastings Loupe	1½"	19.8mm	272-2039		\$39.50
10X Hastings Loupe	1"	15.8mm	272-2040		39.50
20X Hastings Loupe	½"	8.3mm	272-2060		48.35



E

### E Bausch & Lomb® Coddington Loupes

Feature thick single-lens construction with internal diaphragm for providing sharp images. Next to Hastings triplet loupes in performance, Coddington loupes have much larger lenses for corresponding powers. Usable lens portion: approx. 60% of diameter. Swing-away nickel-plated case protects lens and serves as handle.

Description	Focal Distance	Lens Diameter	Item#	Each	
10X Coddington Loupe	1"	19.8mm	272-2010		\$25.50
20X Coddington Loupe	½"	12.5mm	272-2030		30.75



F

### F Silver-Plated Loupe Chain

This snake-style chain allows you to wear loupes around your neck so you never have to worry about losing them. Highly flexible for comfortable extended wear. Heavily plated in silver and coated with an antitarnish agent to keep it looking bright. Measures 39" long. Made in USA.

Description	Item#	Each
Silver-Plated Loupe Chain	272-4047	\$7.95

**A - C 10X Gesswein Hex Triplet Loupes**

Feature generously sized clear round glass lens for excellent viewing and hex shape for secure gripping. Choose from marble green, matte silver with metal grip and bright silver with nubby rubber grip. Suitable for engraving because the plates are reversible. Complete with leather pouch. Imported.

Description	Focal Distance	Lens Diameter	Item#	EACH Prices	
				1-2	3+
A. 10X Marble Green Loupe	1"	20.5mm	<b>272-3980</b>	<b>\$16.95</b>	<b>\$15.26</b>
B. 10X Matte Silver Loupe	1"	20.5mm	<b>272-4004</b>	<b>16.95</b>	<b>15.26</b>
C. 10X Bright Silver Loupe	1"	20.5mm	<b>272-4006</b>	<b>16.95</b>	<b>15.26</b>

**D - F 10X Marbleized Hex Triplet Loupes**

Feature generously sized lens for excellent viewing and hex shape for secure gripping. Have attractive marbleized finish. Suitable for engraving because the plates are reversible. Complete with leather pouch. Imported.

Description	Focal Distance	Lens Diameter	Item#	EACH Prices	
				1-2	3+
D. 10X Brown Loupe	1"	20.5mm	<b>272-3981</b>	<b>\$16.95</b>	<b>\$15.26</b>
E. 10X Lapis Loupe	1"	20.5mm	<b>272-3982</b>	<b>16.95</b>	<b>15.26</b>
F. 10X Black Loupe	1"	20.5mm	<b>272-3983</b>	<b>16.95</b>	<b>15.26</b>

**G - I 10X Gesswein Triplet Loupes – With Rubber Grips**

High-quality pocket loupes that rival any on the market. Each has three lens optics for higher correction and rubber grip for secure holding. Suitable for engraving because the plates are reversible. Complete with key ring and leather pouch. Imported.

Description	Focal Distance	Lens Diameter	Item#	EACH Prices	
				1-2	3+
G. 10X Black Loupe	1"	18mm	<b>272-4009</b>	<b>\$15.95</b>	<b>\$14.36</b>
H. 10X Chrome Loupe	1"	18mm	<b>272-4008</b>	<b>15.95</b>	<b>14.36</b>
I. 10X Gold Loupe	1"	18mm	<b>272-4007</b>	<b>15.95</b>	<b>14.36</b>

**J - L 10X Diamond-Cut Triplet Loupes**

As practical as they are beautiful, these loupes feature a unique diamond-cut design that offers the user a much better grip than conventional loupes. Each has large lens that provides good depth of field with minimal glare. Complete with leather pouch. Imported.

Description	Focal Distance	Lens Diameter	Item#	EACH Prices	
				1-2	3+
J. 10X Black Loupe	1"	18mm	<b>272-4036</b>	<b>\$12.95</b>	<b>\$11.66</b>
K. 10X Silver Loupe	1"	18mm	<b>272-4038</b>	<b>12.95</b>	<b>11.66</b>
L. 10X Gold Loupe	1"	18mm	<b>272-4037</b>	<b>13.55</b>	<b>12.20</b>

**M 10X Doublet Loupes**

Quality loupes at inexpensive prices. Each has chrome-plated metal swing-away case. Knurled metal grip prevents slipping. Imported.

Description	Focal Distance	Lens Diameter	Item#	EACH Prices	
				1-2	3+
M. 10X Small Loupe	1"	15mm	<b>272-4035</b>	<b>\$7.50</b>	<b>\$6.75</b>
10X Large Loupe	1"	21mm	<b>272-4031</b>	<b>9.25</b>	<b>8.33</b>







**A**

**A 10X LED Triplet Loupe – The LOUPE with LIGHT™**

View gemstones and jewelry under intense illumination. Features a high-quality 10X triplet lens and built-in LED ring light. Includes batteries and carrying case.

Description	Focal Distance	Lens Diameter	Item#	Each
10X LED Loupe	1"	20.5mm	<b>272-4075</b>	<b>\$29.95</b>



**B**

**B GemOro® 10X LED LightLoupe™**

Features a 10X lens and built-in LED light source. Lets you view gemstones and jewelry under intense illumination. Includes batteries and carrying case.

Description	Focal Distance	Lens Diameter	Item#	Each
10X LED LightLoupe	1"	21mm	<b>272-4039</b>	<b>\$8.95</b>



**C**



**D**

**C, D Bausch & Lomb® Clip-On Eyeglass Loupes**

Mini loupes with optical glass lenses for attachment to wire or plastic eyeglass frames. Double-lens styles have two separate lenses that can be used individually or combined. Swing up when not in use. Focal distance: 1½"–3½" depending on magnification.

Description	Power(s)	Lens Diameter(s)	Item#	Each
C. Single-Lens Style	4X	24mm	<b>272-3002</b>	<b>\$33.25</b>
	7X	24mm	<b>272-3000</b>	<b>33.25</b>
D. Double-Lens Style	3, 5, 8X*	24mm	<b>272-3012</b>	<b>42.85</b>
	4, 7, 11X*	24mm	<b>272-3010</b>	<b>42.85</b>

\*Combined



**E**

**E Bausch & Lomb® 10X Hastings Triplet Eye Loupe**

The best eye loupe from Bausch & Lomb. Consists of a Hastings triplet lens in a lightweight watchmaker's style frame. Features three layers of optical glass cemented together and a large field of view out to lens edge. Can be used with headband (see below).

Description	Focal Distance	Lens Diameter	Item#	Each
10X Hastings Eye Loupe	1"	15.8mm	<b>272-1008</b>	<b>\$48.00</b>



**F**

**G**

**F, G Bausch & Lomb® Eye Loupes**

Lightweight, comfortable eye loupes with precision-ground, polished optical glass lenses. Double-lens styles have two separate lenses (front lens screws off when not needed). Focal distance: ½"–2½" depending on magnification.

Description	Power(s)	Lens Diameter(s)	Item#	Each
F. Single-Lens Style	4X	25.4mm	<b>272-1040</b>	<b>\$14.50</b>
	5X	25.4mm	<b>272-1030</b>	<b>14.50</b>
	7X	25.4mm	<b>272-1020</b>	<b>14.50</b>
	10X	25.4mm	<b>272-1010</b>	<b>14.50</b>
G. Double-Lens Style	4, 8X	25.4mm	<b>272-1090</b>	<b>24.25</b>
	8, 17X	25.4mm	<b>272-1091</b>	<b>27.45</b>



**H**

**H Bausch & Lomb® Eye Loupe Headband**

For use with both single-lens and double-lens eye loupes (see above). Frees up your hands so you can work faster. Made of black neoprene with Velcro end closures.

Description	Item#	Each
Eye Loupe Headband	<b>272-1005</b>	<b>\$9.00</b>

**A Inscription Loupe**

This customer-friendly loupe is specifically designed for easy reading of laser-inscribed certification numbers on diamond girdles. Features an adjustable ring holder and a thumb-operated armature for fast, effortless positioning and focusing. Includes instruction card. Measures 3½" high.

Description	Item#	Each
Inscription Loupe	272-5050	\$59.95



**B Bausch & Lomb® 5X Handheld Magnifier**

Lightweight handheld magnifier. Features an aspheric lens that offers a wider field of view at higher power than a normal lens, plus edge-to-edge clarity. Ideal for viewing large areas at high power. Includes soft protective case. Measures 6¾" long.

Description	Focal Distance	Lens Diameter	Item#	Each
5X Handheld Magnifier	2"	50mm	272-5005	\$28.60



**C 10X Lighted Handheld Magnifier**

Features built-in light source and aspheric lens for brighter, clearer viewing of small items. Runs on two AA batteries (included). Measures 4⅞" long.

Description	Focal Distance	Lens Diameter	Item#	Each
10X Lighted Magnifier	1"	35mm	272-5006	\$17.50



**D, E Bausch & Lomb® Folding Pocket Magnifiers**

Each consists of multiple optical glass lenses mounted in a durable plastic protective case (can be used alone or combined). Focal distance: ½"-3½" depending on magnification.

Description	Power(s)	Lens Diameter(s)	Item#	Each
D. Double-Lens Style	3, 4, 7X*	36mm	272-4020	\$20.75
E. Triple-Lens Style	5, 7, 9, 12*, 14*, 16*, 21X*	21, 17mm	272-4025	25.00

\*Combined



**F Bausch & Lomb® 5X Pocket Magnifier**

Pocket magnifier with slide-on plastic carrying case. Features an aspheric lens that offers a wider field of view at higher power than a normal lens, plus edge-to-edge clarity. Ideal for viewing large areas at high power. Measures approx. 2⅛"L x 1⅝"W x ⅝"H when closed.

Description	Focal Distance	Lens Diameter	Item#	Each
5X Pocket Magnifier	2"	36mm	272-5007	\$8.25



**G Bausch & Lomb® 3.5X Engraver's Magnifier**

An engraver's magnifier with two plano-convex lenses. Has near-universal application in precision work. Provides a wide, flat field.

Description	Focal Distance	Lens Diameter	Item#	Each
3.5X Engraver's Magnifier	3"	40mm	272-5015	\$35.89



**H 10X Linen Tester**

Although its name is derived from the textile industry, this magnifier can be used anywhere. Has graduated lateral scale. Stands 1¼" high when open. Folds flat for easy carrying.

Description	Focal Distance	Lens Diameter	Item#	Each
10X Linen Tester	1"	14.3mm	272-4050	\$11.95



A



B



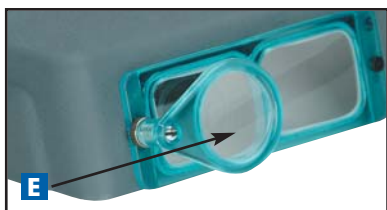
C



D



Items sold separately.



**A, B Optivisor® Magnifiers**

Each Optivisor features an interchangeable binocular lens plate made of high-quality optical glass, ground and polished to precision ophthalmic standards. Lightweight, impact-resistant visor assembly with pivot mechanism and adjustable genuine leather headband allow comfortable extended wear. Available in blue and black.

Description	Power	Focal Distance	Item#	Each
A. Blue Optivisor	1½X	20"	<b>270-1020</b>	<b>\$31.75</b>
	1¾X	14"	<b>270-1030</b>	<b>31.75</b>
	2X	10"	<b>270-1040</b>	<b>31.75</b>
	2½X	8"	<b>270-1050</b>	<b>31.75</b>
	2¾X	6"	<b>270-1070</b>	<b>32.80</b>
B. Black Optivisor	3½X	4"	<b>270-1100</b>	<b>32.80</b>
	1½X	20"	<b>270-1120</b>	<b>31.75</b>
	1¾X	14"	<b>270-1130</b>	<b>31.75</b>
	2X	10"	<b>270-1140</b>	<b>31.75</b>
	2½X	8"	<b>270-1150</b>	<b>31.75</b>
	2¾X	6"	<b>270-1170</b>	<b>32.80</b>
	3½X	4"	<b>270-1180</b>	<b>32.80</b>

Description	Item#	Each
Blue Visor Assembly only	270-1010	\$20.50
Black Visor Assembly only	270-1115	20.50
1½X Lens Plate	270-2020	23.45
1¾X Lens Plate	270-2030	23.45
2X Lens Plate	270-2040	23.45
2½X Lens Plate	270-2050	23.45
2¾X Lens Plate	270-2070	24.70
3½X Lens Plate	270-2100	24.70

**C Optivisor® LX Magnifiers**

Each features a high-quality optical acrylic lens plate made from a precision-ground, highly polished mold. Lightweight yet tough visor assembly with pivot mechanism and adjustable padded leather headband allow comfortable extended wear. Available in blue only.

Description	Power	Focal Distance	Item#	Each
Optivisor LX	1¾X	14"	<b>270-1200</b>	<b>\$24.95</b>
	2X	10"	<b>270-1201</b>	<b>24.95</b>
	2½X	8"	<b>270-1202</b>	<b>24.95</b>
	2¾X	6"	<b>270-1203</b>	<b>24.95</b>

**D Optivisor® Xenon Light**

Clips onto Optivisor (see above) to illuminate the viewing area. Features 6,000-candlepower bright xenon bulb. Swivels for optimal coverage. Runs 5–6 hours on two AA batteries (not included).

Description	Battery Pack Location	Item#	Each
D. LT-06, 10" cord	Visor assembly	<b>270-2150</b>	<b>\$21.95</b>
LT-42, 42" cord	Belt or pocket	<b>270-2151</b>	<b>21.95</b>
Replacement Bulb		270-2152	6.50

**E Optivisor® Optiloupe**

Attaches to Optivisor (see above) for additional 2½X magnification in one eye.

Description	Power	Item#	Each
Optiloupe	2½X	<b>270-2200</b>	<b>\$9.80</b>

**A Eschenbach MAXDetail Magnifier**

This top-quality headset magnifier with Galilean design provides wide field of view (20°) and independently adjustable magnification and focus for each lens, ensuring excellent clarity for each eye. Objective lenses compensate for ±3-diopter spherical correction or allow adjustment for close-up activities. Lightweight PXM(R) optics, flexible plastic temples and smooth bridge allow extended wear. Frosted objective housing eliminates reflections. Magnifies up to 2X. Includes carrying case and head strap. Made in Germany.



Description	Item#	Each
MAXDetail	272-3280	\$89.00

**B Bausch & Lomb® Magna Visor with Three Lens Plates**

The lightweight, well-balanced magnifier with formfitting design, extra-thick padded headband and precision adjusting hardware. Can be worn comfortably for extended periods of time without loosening or slipping. Flips up when not in use. Includes three high-quality 1.8X, 2.2X and 2.6X interchangeable lens plates with focal distances of 12", 8" and 6", respectively. Lens plates can be quickly removed and cleaned without tools.



Description	Item#	Each
Magna Visor	272-3103	\$37.40

**C Optisight™ Magnifier with Three Lens Plates**

From the makers of Optivisor, this lightweight yet tough magnifier features a visor assembly with pivot mechanism and headband with adjustable strap for comfortable extended wear. Provides hands-free magnification. Includes three high-quality 1¾X, 2X and 2½X interchangeable lens plates with focal distances of 14", 10" and 8", respectively. Optional 2¾X lens plate with focal distance of 6" also available for intermittent close-up work.



Description	Item#	Each
Optisight	270-0400	\$25.85
2¾X Lens Plate	270-0404	7.15

**D Magni-Focuser® Mark 2 Magnifiers**

Feature interchangeable binocular lenses made of shatter-resistant optical acrylic and adjustable headbands for comfort. Choose from standard and deluxe styles, the latter of which include an auxiliary lens that provides an additional 2½X magnification in one eye.



Description	Power(s)	Focal Distance(s)	Item#	Each
Standard Style	2¼X	8"	271-1050	\$20.50
	2¾X	6"	271-1070	20.50
	3½X	4"	271-1100	21.50
D. Deluxe Style	1¾, 4¼X	14", 4"	271-1130	24.75
	2¼, 4¾X	8", 3"	271-1150	24.75
	2¾, 5¼X	6", 2"	271-1170	24.75

**E Bausch & Lomb® Premoistened Lens Cleaning Tissues**

Anti-fog, anti-static, nonsilicone-based tissues treated with special surfactants for cleaning all glass and plastic lenses. Ideal for cleaning loupes, glasses, mirrors, even computer screens. Sold in convenient cardboard dispensing boxes of 100 that can be bench- or wall-mounted. Each individually wrapped, premoistened tissue measures 5" x 8". Box measures 9"L x 5⅜"W x 2⅜"H.



Description	Item#	Box of 100
Lens Tissues	272-1001	\$12.85





**A Eschenbach Precision Galilean Binoculars**

These lightweight, well-balanced binoculars provide comfortable hands-free viewing for detailed work. Feature prescription-grade shatter-resistant achromatic 23mm lenses made of PXM optically pure plastic, focusing adjustment and diopter setting for each eye-piece and adjustable nose bridge. Available in 2.5X and 4X powers with 3½" and 1¼" fields of view, respectively. Include leather carrying case. Meet EN ISO 9001 standards. Backed by a one-year manufacturer's warranty. Made in Germany.

Description	Power	Focal Distance	Item#	Each
Galilean Binoculars	2½X	14"	<b>272-3245</b>	<b>\$294.00</b>
	4X	10"	<b>272-3246</b>	<b>294.00</b>

**B, C Telesights®**

Binocular magnifiers with optical-quality acrylic lenses coated to resist abrasion. Standard styles include half-frame for independent use. Clip-on styles include clamp for attachment to eyeglasses.

Description	Power	Focal Distance*	Item#	EACH Prices	
				1-2	3+
B. Standard Style	1¾X	13½"	<b>270-0430</b>	<b>\$32.75</b>	<b>\$27.29</b>
	2X	10"	<b>270-0440</b>	<b>32.75</b>	<b>27.29</b>
	2¼X	8"	<b>270-0450</b>	<b>32.75</b>	<b>27.29</b>
	2½X	6⅔"	<b>270-0460</b>	<b>32.75</b>	<b>27.29</b>
C. Clip-On Style	3X	5"	<b>270-0480</b>	<b>35.85</b>	<b>29.87</b>
	1¾X	13½"	<b>270-0530</b>	<b>27.85</b>	<b>23.21</b>
	2X	10"	<b>270-0540</b>	<b>27.85</b>	<b>23.21</b>
	2¼X	8"	<b>270-0550</b>	<b>27.85</b>	<b>23.21</b>
	2½X	6⅔"	<b>270-0560</b>	<b>27.85</b>	<b>23.21</b>
	3X	5"	<b>270-0580</b>	<b>30.80</b>	<b>25.67</b>

\*Measured from eye.

**D Donegan Magnifiers – From the Makers of Optivisor**

Ideal for small jobs that require your hands to be free. Feature lightweight construction with dual-lens system that eases eyestrain by converging on focal point. Include half-frame for independent use and small clip for attachment to eyeglasses.

Description	Power	Focal Distance	Item#	Each
Donegan Magnifier	1¾X	14"	<b>271-1200</b>	<b>\$22.60</b>
	2X	10"	<b>271-1201</b>	<b>22.60</b>
	2½X	8"	<b>271-1202</b>	<b>22.60</b>
	2¾X	6"	<b>271-1203</b>	<b>22.60</b>

**E LED Magnifier – With Three Lens Plates**

Includes LED light and 1½X, 2½X and 3½X interchangeable acrylic lens plates with focal distances of 20", 8" and 4", respectively. Clip to your eyeglasses or half-frame for independent use.

Description	Item#	Each
LED Magnifier	<b>271-1020</b>	<b>\$24.95</b>

**F Eschenbach Clip-On Magnifiers**

Feature prescription-grade lenses made of PXM optically pure plastic coated with Cera-Tec for resistance to breakage and scratching and lightweight fiberglass-reinforced plastic clip assembly. Include four soft rubber clip sleeves that protect eyeglasses from abrasion, plastic box and lens cleaning cloth. Meet EN ISO 9001 standards. Backed by a one-year manufacturer's warranty. Made in Germany.

Description	Power	Working Distance	Item#	Each
Clip-On Magnifier	2½X	7"	<b>272-3260</b>	<b>\$53.90</b>
	3X	6"	<b>272-3261</b>	<b>53.90</b>

**A, B Stereo Zoom Microscopes**

Professional zoom microscopes mounted on freestanding booms. Ideal for inspection, close-up work, teaching and demonstrations in jewelry, electronics and computer industries, as well as any other industry in which precision inspection capabilities are required.

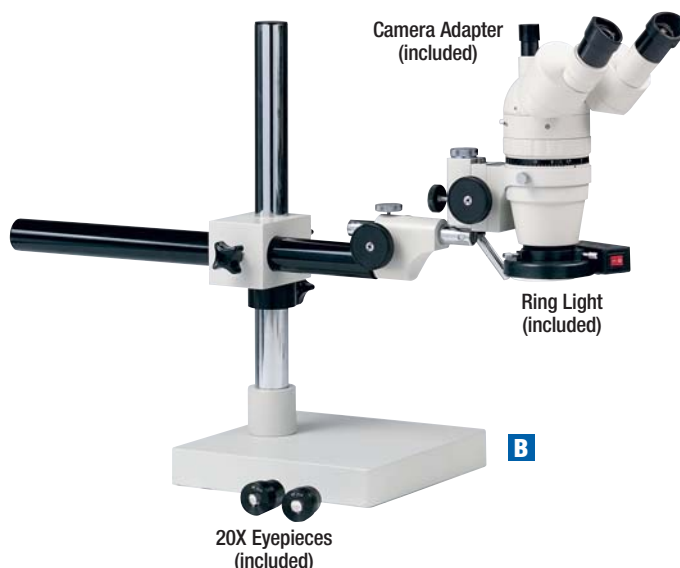
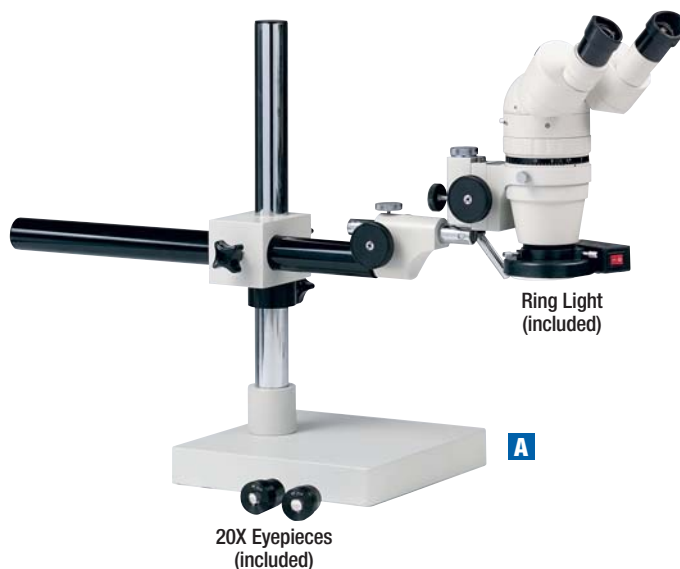
Available in standard binocular and camera-ready trinocular styles. Feature excellent optics, true stereo imaging, 1–4X stepless zoom, 5–160X magnification and ring light adapter with on/off switch for maximum illumination. Trinocular unit also features an adapter for a video or still camera, with a lever that switches your view from left eyepiece to camera, leaving right eyepiece open for use.

The main 1½" diameter boom allows you to extend the microscope head up to approx. 24" without any wobble, and small boom with fine adjustment knob lets you extend head 2" more while you remain seated. Head can also be infinitely positioned from 0–90° and moved up and down the riser to a minimum height of 18" from the tabletop. Weighted 10" square base ensures stability. All parts are precision-machined for smooth action.

**Specifications:**

Eyepiece Lenses	10X and 20X
Zoom Range	1–4X
Objective Lenses	0.5X and 2X
Magnification	5–160X (5X = 10X eyepiece x 1X zoom x 0.5X objective; 160X = 20X eyepiece x 4X zoom x 2X objective)
Working Distance	160mm and 30mm
Field of View	20mm and 13mm
Focus Adjustment	50mm range
Stand Type	Weighted base with boom
Electrical	110V (for ring light adapter)
Dimensions	10" square base
Ship. Wt.	58 lbs.

Description	Item#	Each
<b>A. Binocular Microscope</b>	<b>810-0065</b>	<b>\$1,785.00</b>
<b>B. Trinocular Microscope</b>	<b>810-0066</b>	<b>1,995.00</b>
Ring Light Adapter	810-0068	159.30
Replacement Bulb	810-0067	21.95



**C GemOro® Elite 1030 Microscope**

A precision microscope at a surprisingly affordable price. Offers a choice of 10X and 30X magnification. Provides true professional darkfield and brightfield with sliding baffle. Has adjustable iris diaphragm for controlling lower light. Features 360° rotating head for easy focus adjustment. Comes complete with full-view gem clip, comfort eyeguards and dustcover. For added surface illumination, an optional fluorescent overhead light with Verilux daylight tubes can be attached. Backed by a five-year mechanical warranty and a two-year electrical warranty. Imported with optics from Japan.

**Specifications:**

Magnification	10X and 30X
Field of View	25mm at 10X
Electrical	110/220V, 50/60Hz
Dimensions	4½"W x 7½"D x 12½"H
Ship. Wt.	10 lbs.

Description	Item#	EACH Prices	
		1-2	3+
<b>C. Elite 1030 Microscope</b>	<b>810-0083</b>	<b>\$299.00</b>	<b>\$269.10</b>
Overhead Light	<b>810-0078</b>	<b>79.95</b>	–





A

**A Meiji Stereo Zoom Microscopes**  
**Standard Binocular and Camera-Ready Trinocular Styles**

From the premier optics manufacturer in Japan, these microscopes feature a Greenough optical design and high-resolution optics free of chromatic and spherical aberrations for yielding crystal-clear upright and unreversed stereoscopic images with rich contrast, impressive brightness and true-to-life color. Boast great depth of field and image flatness for accurate viewing and long working distances for ample workspace. Ideal for inspection of fine details.

Lightweight yet durable all-metal aluminum alloy bodies with premium components and chemical-resistant finishes provide stability and durability for a lifetime of dependable use. The 45°-inclined observation tubes with adjustable interpupillary distance and diopter tubes eliminate eyestrain.

GRS acrobat boom stand with friction arms, focus block and padded headrest ensures superb flexibility and comfort. Entire assembly can be easily positioned and quickly swung away when not in use. Friction arms lock in place when needed. Focus block securely holds microscope body. Padded headrest reduces neck and back fatigue.

Ring light with extra-bright circular fluorescent bulb provides cool, glare-free illumination. Fits many other microscopes besides those from Meiji. Electrical: 115V.

**Features:**

- Binocular and Trinocular styles that can be rotated 360° and locked in any position
- High-resolution optics for yielding upright and unreversed stereoscopic images
- Rugged all-metal bodies and components designed to last a lifetime
- Ergonomically positioned bilateral zoom controls
- Interpupillary distance adjustment from 54–75mm
- Dual dioptic adjustment (±5 diopters) for maintaining focus throughout zoom range

**Binocular and Trinocular Components:**

- 10X eyepieces with eyeshields
- 0.5X auxiliary objective lens for increased working distance
- GRS Acrobat Boom Stand with focus block and headrest
- Ring Light, 115V
- Protective dust cover
- Instruction manual

**Specifications:**

Body Style	Binocular or Trinocular, each with 360° rotation
Zoom Control	Dual, graduated, bilateral mount
Zoom Range	0.7–4.5X (0.35–2.25X with 0.5X objective lens)
Magnification	7–45X (3.5–22.5X with 0.5X objective lens)
Field of View	32.8–5.1mm (65.6–10.2mm with 0.5X objective lens)
Working Distance	93mm (Binocular/Trinocular with 0.5X objective lens: 150/170mm)
Interpupillary Distance	Adjustable from 54–75mm
Dioptic Adjustment	Dual (±5 diopters)



Ring Light on Microscope



Ring Light Circuline Bulb

Description	Item#	Each
A. Binocular Microscope with Acrobat Stand and Ring Light	<b>271-3029</b>	<b>\$1,830.00</b>
Trinocular Microscope with Acrobat Stand and Ring Light*	<b>271-3067</b>	<b>2,375.00</b>

\*Designed for photo and video applications. When the beamsplitter is engaged, it does not obstruct the eyetubes; all three viewing ports are lighted for simultaneous use. Can be used with most cameras, including digital, SLR, digital SLR and CCD. Call for available adapters.

**B GRS® Positioning Vise for Stereo Zoom Microscopes**

Simply pull a lever, and this vise lets you easily reposition its center of rotation to keep the object within your microscope's field of view. Its upper half moves off-center to left or right as desired; after moving, it rotates about set position. Includes upper jaw plates, five pins and wrench. Spherical diameter: 7.1". Jaw size: 3"W x 1.8"H. Max. jaw opening: 3.5". Weighs a massive 42 lbs. for incredible stability.

Description	Item#	Each
Positioning Vise for Stereo Zoom Microscopes	<b>271-3025</b>	<b>\$748.00</b>

B



## Mantis® Stereo Optical Inspection System

The accepted standard of ergonomic wide-field inspection for quality control, redesigned to incorporate the most modern technological advances in optical design, plastic molding and LED illumination. Choose from two distinct versions: the affordable Compact and the high-performance Elite.

Each one combines the viewing ease of a bench magnifier with the high resolution of a microscope. Provides a large viewing area that promotes maximum user comfort while producing razor-sharp 3-D stereo images. Eliminates the muscle fatigue and eyestrain commonly associated with traditional eyepiece technologies. Easily accommodates users who wear safety or prescription glasses.

### Mantis Compact or Mantis Elite?

Mantis Compact is smaller, with lower magnification (4X and 6X) and a considerably lower price. Mantis Elite offers high-performance enhancements, including powerful magnification (up to 20X) and an extra-large field of view. The Elite head can be tilted from +5° to -20° for added viewing adjustment and compensation for taller subjects. Includes a twin turret that holds two lenses simultaneously, allowing the user to rotate either lens into place as needed, as well as an ambient glare shield.

Both Compact and Elite can be mounted on a counterbalanced universal stand that allows fluid movement and stop-on-a-dime positioning or on a stable bench stand that offers integrated focus and dimmable substage illumination. Please specify stand type and lens power(s) when ordering.

Optional Floating Stage for Compact and Elite bench stands features multidirectional capability, making it very easy to position items in the viewing field.

### Compact and Elite Features:

- Stereo viewing with true optical magnification (neither diopter nor video)
- Patented expanded-exit pupil technology for free head movement and eye comfort
- Multilayer anti-reflection coated optics
- Adjustable interpupillary distance (59–76mm)
- Choice of counterbalanced universal stand or bench stand
- Bright white LED illumination, true daylight color-corrected
- Noiseless, cool operation

Specifications:	Mantis Compact	Mantis Elite
Available Lenses	4 / 6X	4 / 6 / 8 / 10 / 15 / 20X
Working Distance	96 / 73mm	96 / 68 / 59 / 54 / 40 / 29mm
Field of View	27.5 / 19.2mm	34 / 23 / 17 / 13.5 / 8.8 / 6.5mm
Illumination	Twin-bank 20-LED array	Two-piece twin-bank 24-LED array
Electrical	110/220V (universal)	110/220V (universal)
Head Width	213mm	213mm
Height Range*	395–605mm	415–624mm
Depth Range*	565–775mm	593–802mm

\*On Universal Stand.

Description	Item#	Each
Compact Head	271-3040	\$1,045.00
Compact Universal Stand	271-3041	580.00
Compact Bench Stand	271-3042	715.00
Compact 4X Lens	271-3043	120.00
Compact 6X Lens	271-3044	210.00
Compact 4/6X Lens Cap	271-3051	18.75
Elite Head	271-3030	1,595.00
Elite Universal Stand	271-3031	685.00
Elite Bench Stand	271-3032	700.00
Elite 4X Lens	271-3033	160.00
Elite 6X Lens	271-3034	350.00
Elite 8X Lens	271-3035	485.00
Elite 10X Lens	271-3036	500.00
Elite 15X Lens	271-3037	565.00
Elite 20X Lens	271-3038	585.00
Elite 4/8/10X Lens Cap	271-3052	27.65
Elite 6X Lens Cap	271-3053	22.65
Compact/Elite Floating Stage	271-3050	350.00

Compact and Elite components are not interchangeable.



Compact Head and Universal Stand\*

Compact Head and Bench Stand\*

\*Head, stand and lenses sold separately.



Elite Head and Bench Stand\*

Elite Head and Universal Stand\*

\*Head, stand and lenses sold separately.



Long working distance and extra-large field of view make working under magnification easy.



Precision lenses offer superior optics.





**A**

**A Premium Digital Caliper – inches and mm**

This extremely accurate caliper can be connected to any computer for recording or printing data. Features large, high-contrast LCD screen for easy readability. Has conversion, zero and hold functions (hold function freezes display for later viewing). Made of hardened stainless steel for durability. Uses setscrew to prevent jaws from moving. Runs for 2–3 years on an efficient lithium wafer battery (included). Measures inside, outside, depth and step. Comes in fitted plastic case with see-through cover.

**Specifications:**

Max. Measurement	6"/150mm
Resolution	0.0005"/0.01mm
Accuracy	±0.001"/0.03mm
Conversion	True inch/mm conversion

Description	Item#	Each
Premium Digital Caliper	<b>825-1635</b>	<b>\$159.95</b>



**B**

**B Swiss Digimax – inches and mm**

Made of glass fiber-reinforced, stain-resistant plastic to resist wear and marring. Weighs less than 2 oz. Features large LCD screen for good readability. Has conversion and zero functions. Runs for two years on 1.5V battery (included). Measures inside, outside, depth and step. Comes in hard plastic case. Made in Switzerland.

**Specifications:**

Max. Measurement	6"/150mm
Resolution	0.0005"/0.01mm
Accuracy	±0.001"/0.03mm
Conversion	True inch/mm conversion

Description	Item#	Each
Swiss Digimax	<b>825-1550</b>	<b>\$75.00</b>



**C**

**C Econo Digital Caliper – inches and mm**

Provides full digital accuracy at a reasonable price. Features large LCD screen for good readability. Has conversion and zero functions. Uses setscrew to prevent jaws from moving. Runs for one year on 1.5V silver oxide watch battery (included). Measures inside, outside, depth and step. Comes in fitted plastic box.

**Specifications:**

Max. Measurement	6"/150mm
Resolution	0.0005"/0.01mm
Accuracy	±0.001"/0.03mm
Conversion	True inch/mm conversion

Description	Item#	Each
Econo Digital Caliper	<b>825-1630</b>	<b>\$69.50</b>



**D**

**D 4" Pocket Digital Caliper – inches and mm**

Provides digital accuracy and portability at a very affordable price. Features large LCD screen as well as conversion and zero functions. Uses setscrew to prevent jaws from moving. Runs for one year on 1.5V silver oxide watch battery (included). Measures inside, outside, depth and step. Comes in fitted plastic box.

**Specifications:**

Max. Measurement	4"/100mm
Accuracy	±0.001"/0.01mm
Conversion	True inch/mm conversion

Description	Item#	Each
4" Pocket Digital Caliper	<b>825-1625</b>	<b>\$35.00</b>

**A Fine-Adjustment Vernier Caliper – inches and mm**

Graduations with Vernier: 0.001" and 0.02mm. Measuring capacity: 6"/150mm. Depth of jaws: 1.6". Made of hardened stainless steel with precision-ground measuring faces. Uses setscrews to prevent jaws from moving. Has microfine black graduations on a satin chrome finish for easy and precise inside, outside, depth and step measurements. Comes in fitted protective case.

Description	Item#	Each
Fine-Adjustment Vernier Caliper	825-1715	\$39.00



**B Econo Vernier Caliper – inches and mm**

Graduations with Vernier: 0.001" and 0.02mm. Measuring capacity: 6"/150mm. Depth of jaws: 1.6". Made of hardened stainless steel. Uses setscrew to prevent jaws from moving. Has black graduations on a satin chrome finish for easy inside, outside and depth measurements. Comes in plastic box.

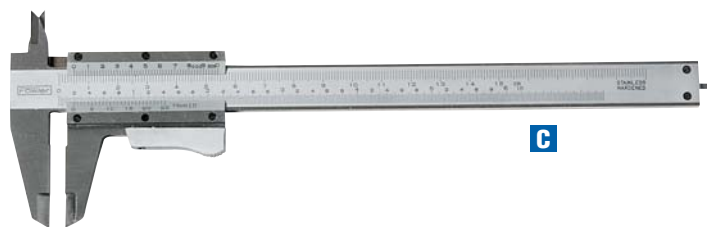
Description	Item#	Each
Econo Vernier Caliper	825-1725	\$36.50



**C Thumb-Lock Vernier Caliper – inches and mm**

Graduations with Vernier: 0.001" and 0.02mm. Measuring capacity: 6"/150mm. Depth of jaws: 1.6". Made of hardened stainless steel with precision-ground measuring faces. Has microfine black graduations on a satin chrome finish for easy and precise inside, outside and depth measurements. Comes in plastic box.

Description	Item#	Each
Thumb-Lock Vernier Caliper	825-1720	\$36.00



**D Swiss Plastic/Fiberglass Dial Caliper – mm**

Made of durable superpolyamide plastic and fiberglass. Measuring capacity: 150mm. Dial graduations: 0.1mm. Measures inside, outside and depth. Comes complete with fitted plastic case. Made in Switzerland.

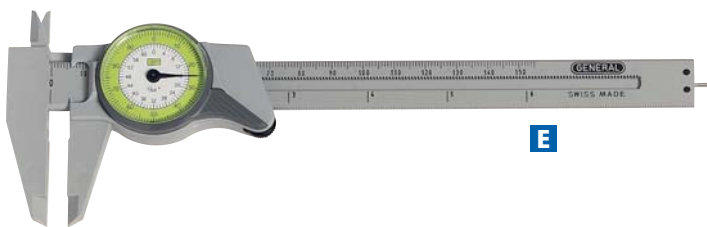
Description	Item#	Each
Swiss Plastic/Fiberglass Dial Caliper	825-1660	\$32.50



**E Swiss Plastic Dial Caliper – inches**

Made of tough reinforced plastic. Measuring capacity: 6". Dial graduations: 0.01" and 1/64". Measures inside, outside, depth and step. Includes fraction conversion table on back. Comes in plastic case. Made in Switzerland.

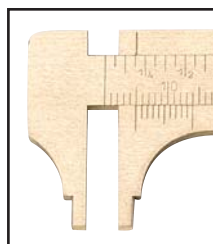
Description	Item#	Each
Swiss Plastic Dial Caliper	825-1815	\$31.65



**F Pocket Vernier Caliper – inch and mm**

Measures up to 3 1/4" (1/16" increments) or 80mm (1.0mm increments), with Vernier scale of 0.1mm. Can be used as a conversion tool for inches and millimeters. Designed for outer measurements only. Made of brass.

Description	Item#	EACH Prices		
		1-2	3-5	6+
Pocket Vernier Caliper	813-1200	\$11.50	\$10.93	\$10.35





**A**

**A Deluxe Combination Degree Gauge**

This high-quality, precision steel degree gauge measures in millimeters and lignes. Far superior to ordinary gauges in terms of construction, readability, convenience and finish. Has screw adjustment at base for perfect accuracy even after years of use. Capacity: 13.5mm or 6 lignes (72 douziemes). Graduations: 0.1mm or 1/12 ligne (douzieme). Measures 8" long. Made in Switzerland.

Description	Item#	Each
Deluxe Combination Degree Gauge	<b>813-0905</b>	<b>\$139.00</b>



**B**

**B Combination Degree Gauge**

Made of satin-finished steel with brass index plate. Capacity: 15mm or 6 lignes (72 douziemes). Graduations: 0.1mm or 1/12 ligne (douzieme). Measures 6 1/2" long.

Description	Item#	Each
Combination Degree Gauge	<b>813-0900</b>	<b>\$44.00</b>



**C**

**C Degree Gauge**

A lightweight, sensitive gauge made of satin-finished steel. Has easy-to-read brass indices. Capacity: 15mm. Graduations: 0.1mm. Measures 6 1/2" long.

Description	Item#	Each
Degree Gauge	<b>813-0800</b>	<b>\$39.95</b>



**D**

**D Pocket Degree Gauge**

An economically priced pocket-size steel gauge. Has easy-to-read black indices on polished brass plate. Capacity: 10mm. Graduations: 0.01mm. Measures 3 7/8" long.

Description	Item#	Each
Pocket Degree Gauge	<b>813-0909</b>	<b>\$16.95</b>



**E**

**E Mini Degree Gauge**

A compact, lightweight gauge made of polished stainless steel. Features easy-to-read indices on both sides. Smaller than conventional gauges yet just as accurate. Capacity: 10mm. Graduations: 0.1mm. Measures 4" long.

Description	Item#	Each
Mini Degree Gauge	<b>813-0850</b>	<b>\$8.60</b>



**F**

**F Econo Micrometer**

This affordable micrometer features 6.5mm diameter satin chrome measuring faces with microfine black graduations, friction thimble, locking lever and durable enamel-coated frame. Carbide-tipped for long wear. Capacity: 25mm. Graduations: 0.01mm. Includes wrench and wooden box.

Description	Item#	Each
Econo Micrometer	<b>825-1827</b>	<b>\$36.50</b>

### A Divider with Replaceable Tips

Features easily replaceable extra-hard tool steel tips for marking soft and hard metals. Has heavy-duty spring for durability. Measures 3" long. Made in Germany.

Description	Item#	Each
Divider with Replaceable Tips	<b>812-1710</b>	<b>\$11.50</b>
Replacement Tips, pair	812-1711	1.85



### B German Dividers

Well-balanced, precision-machined steel dividers with ground and hardened points. Use for measuring between points, marking shanks for sizing, scribing circles and more. Sold in three lengths. Made in Germany.

Description	Item#	Each
3" Divider	<b>812-1706</b>	<b>\$10.20</b>
4" Divider	<b>812-1805</b>	<b>10.95</b>
6" Divider	<b>812-1905</b>	<b>12.95</b>



### C Mini German Divider

Precision-machined divider for measuring between points, marking shanks for sizing, scribing circles and more. Measures 2½" long. Made in Germany.

Description	Item#	Each
Mini German Divider	<b>812-1695</b>	<b>\$11.95</b>



### D Econo Divider

A steel divider with hardened points, knurled pivot handle and adjusting screw. Measures 3" long. Imported.

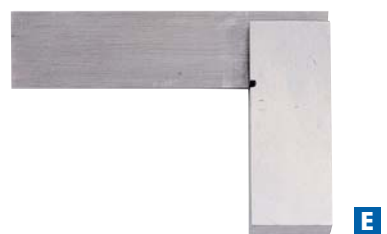
Description	Item#	EACH Prices	
		1-2	3+
Econo Divider	<b>812-1705</b>	<b>\$5.95</b>	<b>\$4.96</b>



### E 2" Steel Square

Forms an exact 90° angle for making corners and centering stones. Made of milled steel.

Description	Item#	EACH Prices		
		1-4	5-9	10+
2" Steel Square	<b>811-1715</b>	<b>\$4.20</b>	<b>\$3.78</b>	<b>\$3.57</b>



### F Gesswein® 6" Stainless Steel Ruler

Measures up to 6" (1/32" increments up to 3", 1/16" increments up to 6") or 15.2cm (1mm increments). Features black etched graduations on glare-resistant polished surface for easy reading. Has a table for converting inch fractions to decimal inches or millimeters and a ring length gauge on reverse. Measures 3/4" wide.

Description	Item#	Each
6" Stainless Steel Ruler	<b>811-1710</b>	<b>\$5.80</b>







**A**



**B**

**A, B Bergeon Four-Scale Ring Sticks**

Heavy-duty ring sticks invaluable for translating foreign sizes. Graduated in four most popular scales: USA sizes 2–15 by 1/4-size increments, French sizes 1–36, English sizes D–Z and EURO sizes 41–76mm. Have laser-etched lines. Available in anodized aluminum or black plastic. Measure 10" long.

Description	Item#	Each
A. Anodized Aluminum Ring Stick	<b>820-8306</b>	<b>\$73.65</b>
B. Black Plastic Ring Stick	<b>820-8307</b>	<b>59.00</b>



**C**

**C Four-Scale Aluminum Ring Stick**

Heavy-duty aluminum ring stick for translating foreign sizes. Graduated in four most popular scales: USA sizes 2–15 by 1/4-size increments, French sizes 1–36, mm diameter 13–24 and EURO sizes 41–76mm. Have laser-etched lines. Measure 9 3/4" long.

Description	Item#	Each
Four-Scale Aluminum Ring Stick	<b>820-8309</b>	<b>\$17.95</b>



**D**

**D Bergeon Aluminum Ring Stick**

Heavy-duty aluminum ring stick. Graduated in USA sizes 1 1/2–15 by 1/4-size increments. Features nice heft and glare-free brush finish. Measures 9 7/8" long. Made in Switzerland.

Description	Item#	Each
Aluminum Ring Stick	<b>820-8305</b>	<b>\$59.00</b>



**E**



**F**

**E - G PEPE Aluminum Ring Sticks**

Round aluminum ring sticks with laser-engraved sizes. EURO style is graduated in sizes 41–76mm and 13–24.5mm and marked in USA sizes 1–15 by 1/4-size increments. USA style is graduated in sizes 1–16 by 1/4-size increments. USA Standard Sizing Set includes the Aluminum Ring Stick #841-1100, Steel Ring Mandrel #841-1105 and Precision Ring Sizes #820-8055. All are perfectly matched interchangeable components.

Description	Item#	Each
E. EURO Style	<b>841-1101</b>	<b>\$29.35</b>
F. USA Style	<b>841-1100</b>	<b>24.50</b>
G. USA Standard Sizing Set	<b>841-1110</b>	<b>49.95</b>



**G**



**H**



**I**

**H - J PEPE Grooved Aluminum Ring Sticks**

Round aluminum ring sticks with laser-engraved sizes, grooved for accepting stone-set rings. EURO style is graduated in sizes 41–76mm and 13–24.5mm and marked in USA sizes 1–15 by 1/4-size increments. USA style is graduated in sizes 1–16 by 1/4-size increments. USA Grooved Sizing Set includes the Aluminum Ring Stick #841-1103, Steel Ring Mandrel #841-1107 and Precision Ring Sizes #820-8055. All are perfectly matched interchangeable components.

Description	Item#	Each
H. EURO Style	<b>841-1104</b>	<b>\$34.95</b>
I. USA Style	<b>841-1103</b>	<b>27.50</b>
J. USA Grooved Sizing Set	<b>841-1111</b>	<b>53.95</b>



**J**

**A Grooved Aluminum Ring Stick**

Round aluminum ring stick grooved for accepting stone-set rings. Graduated in sizes 1–13 by  $\frac{1}{4}$ -size increments. Has length gauge to measure shank stock for specific ring sizes.

Description	Item#	Each
Grooved Aluminum Ring Stick	841-1250	\$17.80

**B, C Metal Ring Sticks**

Nickel-plated hollow metal ring sticks. Graduated in USA sizes 1–15 by  $\frac{1}{4}$ -size increments. Ideal for wax work since they retain no heat. Available in plain style or grooved style for stone-set rings.

Description	Item#	Each
B. Plain Style	820-8330	\$14.75
C. Grooved Style	820-8320	15.95

**D Deluxe Grooved Plastic Ring Stick**

Extremely accurate hollow plastic ring stick with marked recessed metal insert. Graduated in USA sizes 1–15 by  $\frac{1}{4}$ -size increments. Has groove for holding stone-set rings and gauge for measuring material needed to make specific ring sizes.

Description	Item#	Each
Deluxe Grooved Plastic Ring Stick	820-8300	\$39.50

**E Grooved Plastic Ring Stick**

Made of durable black plastic. Has groove for stone-set rings. Graduated in sizes 1–15 by  $\frac{1}{4}$ -size increments.

Description	Item#	Each
Grooved Plastic Ring Stick	820-8310	\$4.30

**F Wooden Ring Stick**

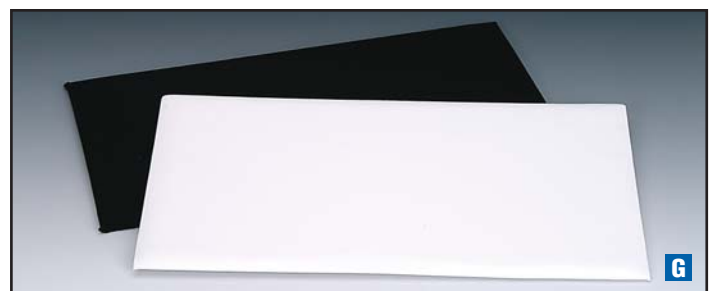
An extremely accurate, finely finished hardwood ring stick. Graduated in sizes 3–15. Great for wirework because it won't scratch jewelry. Less likely than metal ring sticks to damage glass and other fine surfaces.

Description	Item#	Each
Wooden Ring Stick	816-0180	\$12.95

**G Display Trays and Velvet Pads**

Vibrant velvet pads for providing wonderful contrast to jewelry and protecting glass countertops from accidental damage by ring sticks. Available in black and white. Measure  $14\frac{3}{4}$ "L x  $8\frac{1}{4}$ "W.

Description	Item#	Each
Black Velvet Pad	807-1070	\$2.70
White Velvet Pad	807-1071	2.70





**A**



**B**



**C**

**A - C PEPE Steel Ring Mandrels**

Round steel ring mandrels with laser-engraved sizes. EURO style is graduated in sizes 41–76mm and 13–24.5mm and marked in USA sizes 1–16 by 1/4-size increments. USA style is graduated in sizes 1–16 by 1/4-size increments. USA Standard Sizing Set includes the Aluminum Ring Stick #841-1100, Steel Ring Mandrel #841-1105 and Precision Ring Sizes #820-8055. All are perfectly matched interchangeable components.

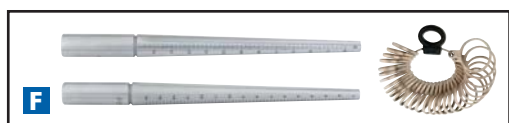
Description	Item#	Each
A. EURO Style	<b>841-1106</b>	<b>\$28.50</b>
B. USA Style	<b>841-1105</b>	<b>18.95</b>
C. USA Standard Sizing Set	<b>841-1110</b>	<b>49.95</b>



**D**



**E**



**F**

**D - F PEPE Grooved Steel Ring Mandrels**

Round steel ring mandrels with laser-engraved sizes, grooved for accepting stone-set rings. EURO style is graduated in sizes 41–76mm and 13–24.5mm and marked in USA sizes 1–15 by 1/4-size increments. USA style is graduated in sizes 1–16 by 1/4-size increments. USA Grooved Sizing Set includes the Aluminum Ring Stick #841-1103, Steel Ring Mandrel #841-1107 and Precision Ring Sizes #820-8055. All are perfectly matched interchangeable components.

Description	Item#	Each
D. EURO Style	<b>841-1108</b>	<b>\$26.75</b>
E. USA Style	<b>841-1107</b>	<b>20.75</b>
F. USA Grooved Sizing Set	<b>841-1111</b>	<b>53.95</b>



**G**

**G PEPE Square Steel Ring Mandrel**

Square steel ring mandrel with rounded corners for holding, shaping and straightening rings. Tapers from 24mm to 12mm square.

Description	Item#	Each
Modern Steel Ring Mandrel	<b>841-1109</b>	<b>\$29.85</b>



**H**



**I**

**H, I Steel Ring Mandrels**

Round steel ring mandrels. Available in plain style or grooved style for stone-set rings. Graduated in sizes 1–16 by 1/4-size increments.

Description	Item#	Each
H. Plain Style	<b>841-1165</b>	<b>\$23.15</b>
I. Grooved Style	<b>841-1170</b>	<b>23.75</b>

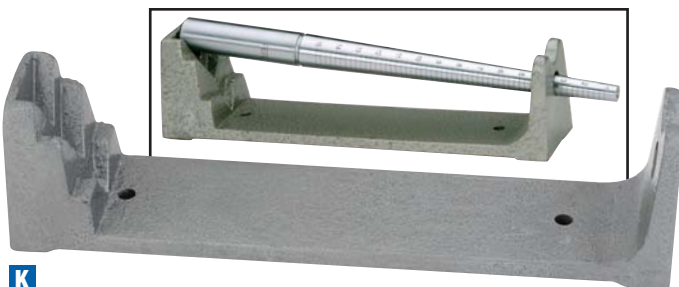


**J**

**J Steel Mandrel for Large Rings**

Round steel mandrel for holding large rings, bezels, hoop earrings and other items. Graduated in sizes 16–24 by 1/4-size increments. Features knurled handle for solid grip. Measures 8 1/4" long.

Description	Item#	Each
Steel Mandrel for Large Rings	<b>841-1171</b>	<b>\$23.50</b>



**K**

**K Mandrel Rest**

Holding a ring mandrel while working can be awkward. This rest holds the mandrel at both ends to solve the problem. Also holds bracelet mandrels without tangs. Can be secured to your benchtop. Made of cast iron. Mandrel not included.

Description	Item#	Each
Mandrel Rest	<b>841-2080</b>	<b>\$32.65</b>

**A Four-Scale Metal Ring Sizes**

Nickel-plated, brightly polished 3mm wide metal bands (36 total) marked with inside diameters from 13.0–24.2mm, circumferences from 41–76mm and closest equivalents of USA sizes from 1–15½ and French sizes from 1–36. Seamless one-piece construction.

Description	Item#	Each
Four-Scale Metal Ring Sizes	816-0174	\$28.50



A

**B Wide Metal Ring Sizes**

Nickel-plated, polished 7mm wide metal bands (29 total) in sizes 1–15 by ½-size increments. Use to measure fingers for wide rings.

Description	Item#	Each
Wide Metal Ring Sizes	820-8150	\$14.65



B

**C Precision Metal Quarter Ring Sizes**

Chrome-plated metal bands (24 total) in USA quarter sizes 1½–12¾ by ½-size increments: 1½ (only exception), 1¾, 2¼, 2¾ and so on. Precision-machined to ±0.01". Marked with large red numbers.

Description	Item#	Each
Precision Metal Ring Sizes	820-8065	\$13.95



C

**D Metal Ring Sizes**

Durable, highly polished metal bands (20 total) in sizes 4–13 by ½-size increments.

Description	Item#	Each
Metal Ring Sizes	820-8060	\$12.70



D

**E PEPE Precision Steel Ring Sizes**

Unpolished die-struck steel bands (31 total) in USA sizes 1–16 by ½-size increments. Tapered for an absolutely perfect match with USA Steel Ring Mandrels and Aluminum Ring Sticks listed on pp. 288 and 286. Ideal for precision sizing jobs.

Description	Item#	Each
USA Precision Steel Ring Sizes	820-8055	\$11.85



E

**F Comfort-Fit Plastic Ring Sizes**

Black plastic bands (23 total) in sizes 4–15 by ½-size increments. Modeled after the comfort-fit standard. Molded with large numbers.

Description	Item#	Each
Comfort-Fit Plastic Ring Sizes	820-8070	\$15.00



F

**G Plastic Quarter Ring Sizes**

Aqua plastic bands (19 total) in quarter sizes 4¼–13¼ by ½-size increments: 4¼, 4¾, 5¼, 5¾ and so on. Use with standard sizes to give your customers a perfect fit.

Description	Item#	Each
Plastic Ring Sizes	820-8125	\$3.95



G

**H Econo Plastic Ring Sizes**

Lightweight turquoise plastic bands (29 total) in sizes 1–15 by ½-size increments. Can be given to customers for use at home.

Description	Item#	Each
Econo Plastic Ring Sizes	820-8100	\$1.30

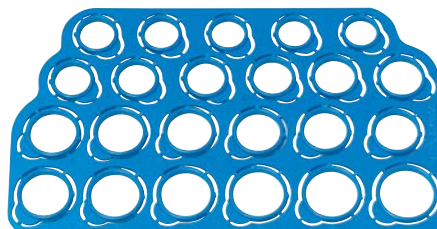


H

**I Disposable Plastic Ring Sizes**

Blue plastic bands in sizes 2½–14 by ½-size increments (23 total). Just punch out the one you need for each sizing job to ensure a perfect fit. Sold in sets of 12 sheets (276 bands per set).

Description	Item#	Set of 12
Disposable Plastic Ring Sizes	820-8105	\$4.30



I





A

**A Scientech Scale SE250 – A feature-enhanced workhorse!**

The precision electronic balance for extremely accurate gem and metal weighing. Reads in grams, carats, pennyweights, ounces and troy ounces. Made for longevity with metal housing, stainless steel pan and custom weighing pans. Provides accurate readouts at the touch of a button. Has attached windscreen with sliding doors for easy access to weighing pans. Features real-time temperature compensation software that yields accurate, reproducible results without the need for recalibration as ambient temperature varies. Includes gem and metal pans, calibration weight and adjustable feet with level indicator. Runs on 120V AC adapter (included). Measures 7¾"W x 11½"D x 12¾"H with 4½" weighing pan. Backed by a three-year warranty. CE approved.

**Features:**

- Glass windscreen
- Large LCD screen
- Capacity tracker
- Stability indicator
- Adjustable feet with level indicator
- Part-counting function
- One-button calibration function
- Below-balance weighing function for measuring specific gravity

**Specifications:**

Capacity x Grad. 250 x 0.001g /  
 1,250 x 0.01ct., 1,000 x 0.001ct. /  
 160 x 0.001dwt, 100 x 0.0001dwt /  
 8.8 x 0.00001oz. /  
 8 x 0.00001tr.oz.

Tare Range 0–250g / 0–1,250ct. / 0–150dwt /  
 0–8oz. / 0–9tr.oz.

Linearity ±0.0015g / ±0.0075ct. / ±0.001dwt /  
 ±0.00005oz. / ±0.00005tr.oz.

Description	Item#	Each
Scientech Scale SE250	200-3421	\$1,559.00



B

**B iBalance 211**

Simply one of the best scales available for precision weighing. Reads in grams, carats, pennyweights, ounces, troy ounces and pounds. Features glass windscreen, large backlit LCD screen, 210,000 division sensors, part-counting function and RS-232 port for your computer. Includes 100g calibration weight, stainless steel weighing platform and adjustable feet with level indicator. Runs on six AA batteries or 110V AC adapter (included). Measures 7"W x 10"D x 10"H with 4" weighing pan.

**Features:**

- Glass windscreen
- Large LCD screen
- 210,000 division sensors
- Adjustable feet with level indicator
- Part-counting function
- RS-232 port

**Specifications:**

Capacity x Grad. 210g x 0.001g /  
 1,050ct. x 0.005ct. /  
 135.033dwt x 0.001dwt /  
 7.40oz. x 0.00005oz. /  
 6.75tr.oz. x 0.00005tr.oz. /  
 0.46250lb. x 0.00005lb.

Description	Item#	Each
iBalance 211	200-3629	\$525.00

### A Mettler® Gold Balance JL1501-G

This scale ensures highly accurate readings for every weighing job. Offers weighing, piece counting and percent weighing functions. Weighs in grams, carats, grains, pennyweights, ounces, troy ounces, pounds, momme and mesghal. Features both primary and auxiliary backlit displays for easy reading, small footprint and RS-232 port. Includes adjustable feet and dust cover. Runs on four AA batteries (not included) or 120V AC adapter (included). Calibration weight sold separately. Measures 7<sup>5</sup>/<sub>8</sub>"W x 11<sup>1</sup>/<sub>4</sub>"D x 2<sup>5</sup>/<sub>8</sub>"H with 6<sup>1</sup>/<sub>4</sub>" weighing pan. ISO 9001 certified and CE approved. Made in Switzerland.

#### Features:

- Weighing, piece counting and percent weighing functions
- Primary and backlit auxiliary displays
- Adjustable feet
- RS-232 port

#### Specifications:

Capacity x Grad. 1,510g x 0.1g

Tare Range 0–1,510g

Repeatability 0.1g

Linearity ±0.2g

Description	Item#	Each
A. Scale JL1501-G	<b>200-1041</b>	<b>\$675.00</b>
1,000g Calibration Weight	<b>200-1029</b>	<b>92.85</b>



### B GemPro 250

A compact scale bound to surpass expectations of even the most demanding jeweler. Reads in grams, carats, grains, pennyweights, ounces and troy ounces. With its dual-division capability, static-electricity resistance, three calibration settings, six weighing modes, programmable auto-off function (1–9 minutes), optional backlight and full tare function, this scale is in a league of its own. Includes calibration weight, stainless steel expansion tray, expansion scoop/bowl, adjustable stabilization feet with level indicator and protective hard plastic storage case. Runs on 4 AAA batteries (included). Measures 3<sup>3</sup>/<sub>4</sub>"W x 5<sup>1</sup>/<sub>4</sub>"D x 2"H.

#### Specifications:

Capacity x Grad. 50g x 0.002g / 250ct. x 0.01ct. /  
 771gn x 0.02gn / 32.150dwt x 0.002dwt /  
 1.764oz. x 0.0001oz. / 1.608tr.oz. x 0.0001tr.oz.

Description	Item#	Each
GemPro 250	<b>200-3628</b>	<b>\$189.95</b>



### C Pocket Diamond Balance – 100 carats

A pocket-size scale for weighing diamonds and precious stones. Features agate bearing for good accuracy. Includes tweezers and carat weights from 0.01 to 50 carats. Comes in polished 7"L x 2<sup>1</sup>/<sub>2</sub>"W x 1<sup>1</sup>/<sub>2</sub>"H hardwood case. Capacity: 100 carats. Sensitivity: 0.01 ct.

Description	Item#	Each
Diamond Pocket Balance	<b>200-1550</b>	<b>\$57.50</b>



### D Mini Diamond Balance – 10 carats

A miniature scale for weighing diamonds and precious stones. Includes mini tweezers and carat weights from 0.01 to 5 carats. Comes in highly polished 3"L x 2"W x 1"H wooden box with leatherette carrying case. Capacity: 10 carats. Sensitivity: 0.01 ct.

Description	Item#	Each
Mini Pocket Balance	<b>200-1500</b>	<b>\$29.95</b>



A



**A Digital Gold Scales**

Lightweight, portable scales with advanced load-cell technology for instant weighing results. Fully electronic with no moving parts to wear out. Use computer chips for faster response time than models that use slower resistors and transistors. Each has a five-digit LCD, tare function, overload indicator and battery indicator. Calibration weights sold separately. Runs on 120V AC adapter (sold separately) or 9V battery (not included). Measures 4<sup>3</sup>/<sub>4</sub>"W x 7"D x 2<sup>3</sup>/<sub>8</sub>"H.

Specifications:	Model N-250	Model N-610
Capacity x Grad.	250 x 0.1g / 160 x 0.1dwt / 8 x 0.005oz. / 8 x 0.005tr.oz.	610 x 0.1g / 392 x 0.1dwt / 21.5 x 0.005oz. / 19.6 x 0.005tr.oz.

Description	Item#	Each
A. Model N-250	<b>200-3587</b>	<b>\$134.10</b>
Model N-610	<b>200-3586</b>	<b>159.00</b>
Optional 200g Weight for N-250	<b>200-3592</b>	<b>19.85</b>
Optional 500g Weight for N-610	<b>200-3593</b>	<b>19.95</b>
Optional AC Adapter for both scales	<b>200-3590</b>	<b>15.00</b>

B



**B MY WEIGH™ i-Series Scales**

Compact scales with commercial-grade true-division load cells for outstanding accuracy and durability: i500 uses 5,000-division cell, and i1200 uses 12,000-division cell. Other scales in this price range use multipliers, which are not nearly as accurate. Each features extra-large LCD with backlight for good readability, thermistor to compensate for temperature changes, auto-zero tracking and tare function with beep. Includes 5<sup>3</sup>/<sub>4</sub>" square stainless steel tray and six AA batteries (AC adapter sold separately). Sold individually and in money-saving kits. Backed by a five-year manufacturer's warranty.

Specifications:	i500	i1200
Capacity x Grad.	500 x 0.1g / 2,500 x 0.5ct. / 7,716 x 1gn / 322 x 0.05dwt / 17.635 x 0.005oz. / 17.075 x 0.005tr.oz. / 1.1 x 0.0005lbs.	1,200 x 0.1g / 6,000 x 0.5ct. / 18,518 x 1gn / 772 x 0.05dwt / 42.3 x 0.005oz. / 39.0 x 0.005tr.oz. / 2.65 x 0.0005lbs.
Operating Temp.	32–104°F (0–40°C)	32–104°F (0–40°C)

Description	Item#	Each
B. i500 Scale	<b>200-3615</b>	<b>\$89.95</b>
i1200 Scale	<b>200-3619</b>	<b>129.95</b>
Optional Calibration Weight for i500	<b>200-3616</b>	<b>9.99</b>
Optional Calibration Weights for i1200	<b>200-3620</b>	<b>13.99</b>
Optional AC Adapter for both scales	<b>200-3617</b>	<b>4.98</b>
i500 Kit (scale, weight, AC adapter)	<b>200-3618</b>	<b>95.90</b>
i1200 Kit (scale, weights, AC adapter)	<b>200-3621</b>	<b>139.99</b>

C



**C MY WEIGH™ Palmscale® 7.0**

The best-selling pocket scale in both North America and Europe. Features protective cover which doubles as an expansion tray, reverse lit LCD display, stainless steel weighing platform, calibration function and tare function. Includes calibration weight, expansion tray, 2 lithium batteries and auto-off feature. Measures 3<sup>1</sup>/<sub>4</sub>"W x 4<sup>3</sup>/<sub>4</sub>"D. Backed by a lifetime/30-year manufacturer's warranty.

Specifications:	
Capacity x Grad.	200 x 0.01g / 7.055 x 0.0005oz. / 128.6 x 0.01dwt / 1,000 x 0.05ct.

Description	Item#	Each
Silver Scale 7.0	<b>200-3627</b>	<b>\$68.75</b>



**A Gold Testers G-XL-18 and G-XL-24 PRO**

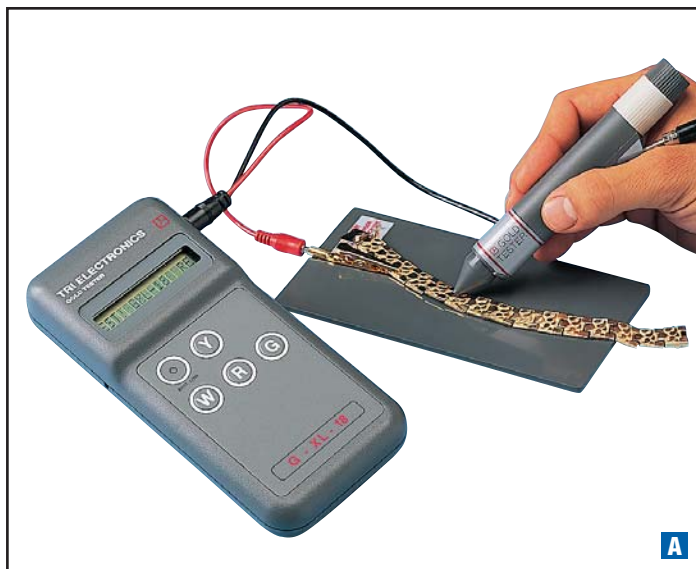
Test gold with assurance in the shop or on buying trips.

These testers are small enough to fit in a pocket or attaché case for on-the-spot testing in the field. The G-XL-18 takes four seconds to test from 6 up to 18K yellow, white, red or green gold. Indicates “Not Gold” if the metal is plated or gold-filled and “Platinum” if pure platinum. The G-XL-24 PRO tests from 6 up to 24K yellow, white, red or green gold.

Each unit initiates an electrochemical reaction with the test piece to measure karat content within a half-karat. Displays a reading only to the nearest karat. Intended for use as a first tool for indicating karat content—does not adequately substitute for fire assaying. Runs on two 9V batteries (included).

Description	Item#	Each
A. G-XL-18	<b>817-1022</b>	<b>\$560.75</b>
G-XL-24 PRO	<b>817-1026</b>	<b>599.00</b>
G-XL-18 Gel Refill (off-white)	817-1029	16.70
G-XL-24 PRO Gel Refill (pink)	817-1027	16.70

Replacement sensor pens available.



A

**B Gold Testers GT-3000 and GT-4000**

Portable electronic devices for efficient and quick determination of yellow, white, pink and green gold karat values. The GT-3000 tests from 6 up to 18K gold and pure platinum, and the GT-4000 tests from 6 up to 24K gold and pure platinum. Both units can also distinguish solid gold from gold-plated items.

Each unit is easy to use: place drop of conductive gel on test item, touch item with sensor pen, wait just four seconds for reading to appear on the LCD, then match reading to the chart conveniently imprinted on the Gold Tester to find correct karat value. Runs on two 9V batteries (included).

Description	Item#	Each
B. GT-3000 (6-18K)	<b>817-1021</b>	<b>\$242.50</b>
GT-4000 (6-18K, 20K, 22K, 24K)	<b>817-1030</b>	<b>372.75</b>
GT-3000 Gel Refill (off-white)	817-1029	16.70
GT-4000 Gel Refill (pink)	817-1027	16.70

Replacement sensor pen available.



B

**C Gold Test Kit**

Determines the karat content of jewelry. Provides accurate results for 8 to 18K gold (white gold, platinum and palladium should be checked against a similar piece of known quality). Packaged in an attractive hardwood storage box. Requires distilled water and both nitric and hydrochloric testing acids (not included).

**Includes:**

- Five gold-tipped test needles: 8, 10, 12, 14 and 18K
- Black test stone, 3"L x 1½"W x ½"H
- Two ½-oz. glass acid bottles, each with ground glass stopper and applicator
- Complete instructions

Description	Item#	Each
C. Gold Test Kit	<b>813-1405</b>	<b>\$56.95</b>
Test Needles, pkg. of 5	813-1505	44.95
Black Test Stone	813-1600	12.50
½-oz. Glass Acid Bottle	813-1410	1.95



C





**A**

**A GemOro® UltraTester™  
Diamond, Moissanite and White Sapphire Tester**

Provides fast one-touch testing with lights and beeps for diamond, moissanite and even white sapphire indication. Features superior surface mount technology, metal warning tone, illuminator light, auto-sleep function and ergonomic design with rubberized finish. Runs on three AAA batteries (included). Comes complete with leatherette pouch and case. Measures 6½"L x 1½"W x ¾"D. Backed by lifetime limited manufacturer's warranty.

Description	Item#	Each
GemOro UltraTester	<b>817-1009</b>	<b>\$225.00</b>



**B**

**B Ceres XL Dual Tester – Diamond and Moissanite Tester**

Provides one-touch testing with lights and beeps to distinguish diamond from moissanite and other simulants. Features sophisticated surface mount technology, retractable tip, warning buzzer that sounds when tip is touching metal and not the stone and automatic shutoff for conservation of battery life. Includes rechargeable nicad battery, AC adapter/charger and soft carrying case. Measures 6¾"L x 1¾"W x ⅝"D. Backed by lifetime limited manufacturer's warranty. Made in USA.

Description	Item#	Each
B. Ceres XL Dual Tester, 110V	<b>817-1014</b>	<b>\$299.00</b>
Ceres XL Dual Tester, 220V	<b>817-1015</b>	<b>305.00</b>



**C**

**C DiamondNite Dual Tester – Diamond and Moissanite Tester**

Performs two tests in sequence: first test determines if the stone is diamond or simulant; half a second later, second test determines if the stone is diamond or Moissanite. Saves time and money over two separate testers. Runs on 9V battery (included). Comes complete with metal holding plate for loose stones and tip cover. Measures 6¾"L x 1¾"W x ¾"D.

Description	Item#	Each
DiamondNite Dual Tester	<b>817-1002</b>	<b>\$229.00</b>



**D**

**D Ceres CZeckpoint® – Diamond Tester**

Provides one-touch testing with audible beeps and visible lights to distinguish diamond from moissanite and other simulants. Features retractable tip, warning buzzer that sounds when tip is touching metal and not the stone and automatic shutoff. Includes rechargeable nicad batteries, 110V AC adapter/charger and carrying case. Measures 6¾"L x 1¾"W x ⅝"D. Backed by two-year limited manufacturer's warranty. Made in USA.

Description	Item#	Each
Ceres CZeckpoint Tester	<b>817-1005</b>	<b>\$108.50</b>



**E**

**E Diamond Tech Pro – Diamond Tester**

Offers automatic and manual modes (former requires no adjustments, and latter lets you make adjustments for stone size and environmental conditions). Uses adjustable gain to test even the smallest stones. Features clear linear display, audible diamond signal, metal alert, low battery indicator and automatic shutoff. Runs on 9V battery (included). Measures 6½"L x 1⅞"W x ¾"D. Backed by seven-year limited manufacturer's warranty. Made in USA.

Description	Item#	Each
Diamond Tech Pro Tester	<b>817-1008</b>	<b>\$99.00</b>

**A GemOro® CZ Color Master Set**

The perfect set for professional color grading of your diamonds. Features ten 1.00 carat CZ master stones expertly graded using GIA color standards: E, F, G, H, I, J, K, L, M and N. Grades are laser-inscribed on stone tables for easy viewing with a 10X loupe to eliminate confusion and error. Includes clamshell display case with smooth-operating hydro-hinge, white and yellow display rings for comparing stones and carrying pouch. Master stones are backed by limited lifetime manufacturer's warranty against color change. Made in USA.

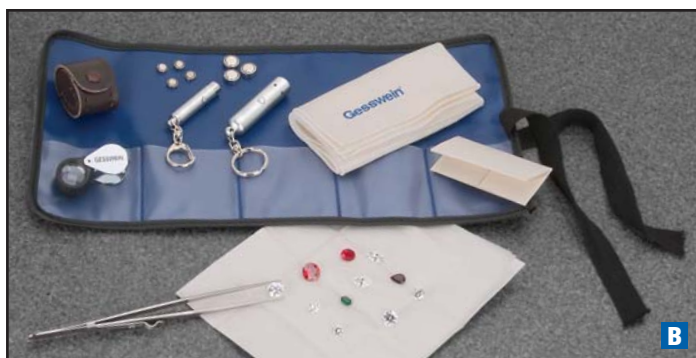
Description	Item#	Each
CZ Color Master Set	813-1661	\$299.00



**B Gem Inspection Travel Pal**

The convenient set for gem inspection on the go. Includes fine-point locking tweezers with serrated tips for holding stones securely, two 3-ply diamond papers for protecting stones and showing them off at their very best, 10X triplet loupe for fine viewing, 5800°K LED refraction keychain light for evaluating both cut and quality, 400nm-wavelength LED UV keychain light for detecting fluorescence and 10" x 10" ivory royal gem cloth for cleaning. Comes complete with replacement batteries for both keychain lights and roll-up pouch with ties.

Description	Item#	Each
Gem Inspection Travel Pal	813-2005	\$29.95



**C LED Keychain Light Set**

Includes LED refraction light and UV light. The refraction light uses an ultra-bright LED that emits 5800°K light for accurately comparing stones. Produces maximum refraction in diamonds for easy evaluation of cut and quality. Measures 2 3/8" long. The UV light uses a 400nm-wavelength LED that emits ultraviolet light for revealing fluorescence in a wide range of stones. Helps identify diamonds that appear cloudy or milky in natural daylight. Keychains and batteries included.

Description	Item#	Each
C. LED Keychain Light Set	821-5747	\$8.50
LED Refraction Light only	821-5746	5.10



**D Diamond Sieves**

A total of 22 chrome-plated brass plates, 50mm in diameter. Use for sorting diamonds, pearls and more. Packaged in leather case.

Description	Item#	Each
Diamond Sieves	816-1300	\$65.00



**E Stone Shovel**

Nickel-plated shovel with handle for scooping and handling stones. Measures approx. 3"L x 1 3/4"W.

Description	Item#	Each
Stone Shovel	816-1200	\$2.50





**A Micromat Gemstone Gauge and Weight Estimator**

A precision dial caliper used by jewelers, appraisers and cutters the world over to accurately estimate weights of gemstones and pearls. Takes both inside and outside measurements in millimeters. Features specially designed jaws that fit inside stone settings and prongs for precise measuring without requiring you to remove stones first. Also has ring size scale for reading USA sizes of rings placed in jaws. Includes attractive leatherette-covered metal case with thorough 42-page booklet of tables and complete instructions fully translated in three languages: English, French and German. Melee table sold separately.

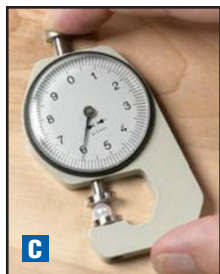
Description	Item#	Each
A. Gemstone Gauge	<b>813-1910</b>	<b>\$230.95</b>
Melee Table	<b>813-1915</b>	<b>5.20</b>



**B Sciencetech Digital Gemstone Gauge**

This digital gauge takes fast, accurate gemstone measurements in inches or millimeters. Includes high setting attachment and zeroing function for fast and easy calibration of stones in melee settings. Comes with protective case. Measuring range: 0.875"/22.25mm. Resolution: 0.0005"/0.01mm. Accuracy: ±0.0025"/0.05mm.

Description	Item#	Each
Digital Gemstone Gauge	<b>813-1911</b>	<b>\$153.00</b>



**C Pearl and Stone Gauge – Works great with baguettes!**

A precision-engineered gauge with measuring faces ground level with the back to stay flat for accurate measuring of pearls and stones such as baguettes. Securely holds stones without slipping. Uses rotating dial gauge for fast, easy zeroing. Has enamel-coated metal body for durability. Capacity: 10mm. Graduations: 0.1mm. Measures 3 1/8" long. Made in Germany.

Description	Item#	Each
Pearl and Stone Gauge	<b>813-0650</b>	<b>\$65.50</b>



**D Mini Digital Thickness Gauge – inches and mm**

Features large LCD screen for good readability. Has conversion and zero functions. Takes both inside and outside measurements in inches and millimeters. Uses setscrew to prevent jaws from moving. Runs for one year on a 1.5V silver oxide watch battery (included). Measures inside, outside, depth and step. Comes with plastic case. Measuring range: 4"/100mm. Accuracy: ±0.001"/0.01mm.

Description	Item#	Each
Mini Digital Thickness Gauge	<b>825-1620</b>	<b>\$59.95</b>



**E The Meleemeeter® Microgauge Template System**

Ideal for gauging inaccessible mounted diamond melee. Eliminates measuring and computing of weights. Consists of 10 transparent polyester gauges with 590 melee shapes and sizes placed around the edges for maximum accessibility. Includes extensive profiles of straight and tapered baguettes, each identified by dimensions and carat weight. Use under a microscope in same position as stone under inspection. Comes in solid brass card case.

Description	Item#	Each
The Meleemeeter	<b>813-1350</b>	<b>\$49.25</b>



**F Stone Table Gauge**

A standard millimeter scale divided into 0.05mm increments for measuring tables of stones inaccessible by micrometer or caliper. Uses a very fast and accurate scanning method to take measurements without computing between marks, as with a conventional scale. Measures from 1.00 to 10.00mm with accuracy of ±0.01mm. Must be used with 15X or higher magnification. Comes in a protective plastic case. Measures 3 1/2"L x 2"W.

Description	Item#	Each
Stone Table Gauge	<b>813-1360</b>	<b>\$5.35</b>



### A Centennial Diamond Mounting Gauge Set

Accurately measures any blank crown or plate within seconds to determine the stone size you need. Eliminates the time-consuming wax and tweezer method. Includes 18 stainless steel gauges clearly marked in point sizes from 1/2 point to 50 points (1/2 carat) and stand marked in both point sizes and millimeters from 1mm to 5mm. Comes complete with storage case. Made in USA.

Description	Item#	Each
Centennial Diamond Mounting Gauge Set	813-0550	\$125.00



**A**

### B Brown & Sharpe Wire and Sheet Gauge

For measuring wire and sheet sizes. Features B&S sizes 0-36 marked on one side, sizes .325"-.005" on other.

Description	Item#	Each
B&S Wire and Sheet Gauge	813-0700	\$22.35



**B**

### C K&B Stone Gauge

A handy tempered aluminum pocket gauge for measuring loose stones and settings. Marked in carats and millimeters. Features revolving stone size gauge. Has birthstone chart on reverse. Capacity: 1/32 to 4 carats (2 to 11mm). Measures 3 5/8" L x 2 5/8" W.

Description	Item#	Each
K&B Stone Gauge	813-1000	\$7.55



**C**

### D Baker Diamond Gauge

An aluminum gauge with holes for measuring stones and round extensions for measuring mountings. Marked in carats on one side and corresponding millimeters on the other. Capacity: 1/32 to 4 carats (2 to 11mm). Measures 4" in diameter.

Description	Item#	Each
Baker Diamond Gauge	813-0600	\$6.00



**D**

### E Diamond Gauge

An aluminum gauge for measuring round and baguette stones. Capacity: 1 point to 2 carats. Measures 1 1/2" in diameter when closed.

Description	Item#	Each
Diamond Gauge	813-1120	\$5.60



**E**

### F, G MeasureMate® Fact Card Set and Gauge

Fact card set consists of ten durable plastic double-sided fact cards packaged in a flip-through wallet. Provides information on gemstone grades, shapes, sizes and weights; setting methods; ring, wire gauge and watch battery sizes; hardness scales; metal properties; and more. Fits in shirt pocket for easy access.

Plastic gauge is ideal for measuring diamonds, ring sizes and more. Measures up to 2" or 50mm. Includes table for converting millimeter sizes to rough carat weights and scale for approximating ring sizes. Comes complete with neck strap and fact card that details relationships between diamond shapes, sizes and weights.

Description	Item#	Each
F. MeasureMate Fact Card Set	813-0561	\$9.95
G. MeasureMate Gauge	813-0560	4.95



**F**

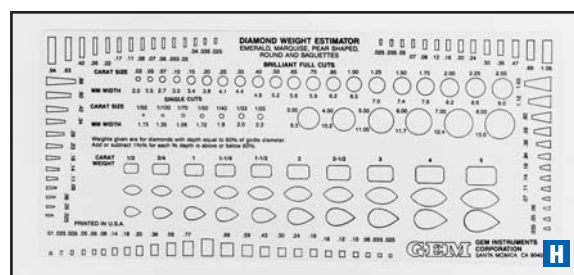


**G**

### H Gem Weight Estimator

Perfect for determining sizes of both loose and mounted stones when other methods fail. Just place estimator on your stone pad, then place selected diamond on the appropriate outline, and you will instantly be able to tell the approximate weight of the stone. Works well for emerald, marquise, pear, round and baguette stones. Made of flexible, transparent plastic. Measures 9" L x 4" W.

Description	Item#	Each
Gem Weight Estimator	813-1919	\$4.45



**H**





**A**

**A Ring Stamping Device**

A timesaving, accurate stamping device. Accommodates standard ring stamps with approx.  $\frac{5}{16}$ " square bodies. Eliminates the need to hold ring and stamp in one hand. Just position ring over the non-marring nylon anvil to prevent slipping and tap stamp with mallet. Also ideal for flat stamping. Allows you to use your existing stamps (if not exactly  $\frac{5}{16}$ " square, simply reverse sleeve or file stamp body to fit). Also works with Bent Ring Stamps listed below.

Description	Item#	Each
A. Ring Stamping Device	<b>190-1005</b>	<b>\$32.35</b>
Replacement Nylon Anvil	190-1006	1.50



**B**

**B Bent Ring Stamps**

Bent ring stamps made of hand-cut steel to stamp impressions on curved and flat metal surfaces. Have  $\frac{5}{16}$ " square bodies for use with Ring Stamping Device (see above).

#1 ( $\frac{1}{24}$ " Stamp)	Item#	EACH Prices	
		1-2	3+
10K	<b>190-5150</b>	<b>\$15.95</b>	<b>\$14.36</b>
14K	<b>190-5400</b>	<b>15.95</b>	<b>14.36</b>
18K	<b>190-5650</b>	<b>15.95</b>	<b>14.36</b>
STER	<b>190-6100</b>	<b>26.50</b>	<b>23.85</b>

#2 ( $\frac{1}{32}$ " Stamp)	Item#	EACH Prices	
		1-2	3+
10K	<b>190-5200</b>	<b>\$15.95</b>	<b>\$14.36</b>
14K	<b>190-5450</b>	<b>15.95</b>	<b>14.36</b>
18K	<b>190-5700</b>	<b>15.95</b>	<b>14.36</b>
PLAT	<b>190-5945</b>	<b>26.50</b>	<b>23.85</b>
STER	<b>190-6150</b>	<b>26.50</b>	<b>23.85</b>

#3 ( $\frac{1}{45}$ " Stamp)	Item#	EACH Prices	
		1-2	3+
10K	<b>190-5250</b>	<b>\$15.95</b>	<b>\$14.36</b>
14K	<b>190-5500</b>	<b>15.95</b>	<b>14.36</b>
18K	<b>190-5750</b>	<b>15.95</b>	<b>14.36</b>
PLAT	<b>190-5950</b>	<b>26.50</b>	<b>23.85</b>
PT900	<b>190-5965</b>	<b>25.00</b>	<b>22.50</b>
PT950	<b>190-5980</b>	<b>25.00</b>	<b>22.50</b>
STER	<b>190-6200</b>	<b>26.50</b>	<b>23.85</b>



**C**

**C Letter Stamp Set**

Includes 27 steel stamps: one for each letter of the alphabet and one period. Makes  $\frac{1}{16}$ " impressions. Packaged in hardwood storage case with cover.

Description	Item#	Each
Letter Stamp Set	<b>190-0010</b>	<b>\$49.95</b>



**D**

**D Number Stamp Set**

Includes nine steel stamps: numbers 0-9 (use 9 upside-down to make 6). Makes  $\frac{1}{16}$ " impressions. Packaged in hardwood storage case with cover.

Description	Item#	Each
Number Stamp Set	<b>190-0030</b>	<b>\$16.75</b>

**A Roller Marking Machine**

Makes precise, uniform impressions quickly and effortlessly.

This machine uses simple roller action to mark up to 46 evenly spaced characters in one impression from engraved steel rollers. Maintains consistent depth even on very thin pieces since variable pressure can only be adjusted mechanically, not by hand. Ideal for marking trademark and karat on rings, pendants, charms and stone-set rings. Accommodates ring sizes 4 and larger. Uses nylon ring supports to prevent marring and distortion of work. Includes two blank unhardened roller dies, set of eight curved shank supports and one flat bar support.

Description	Item#	Each
A. Roller Marking Machine	<b>856-0420</b>	<b>\$835.00</b>
Optional 14K Roller Die	<b>856-0430</b>	<b>87.00</b>
Optional 18K Roller Die	<b>856-0435</b>	<b>87.00</b>
Replacement Curved Shank Support Set	856-0421	114.00
Replacement Blank Unhardened Roller Die	856-0425	39.00



**A**

**B Ring and Earpost Marking System**

The easiest system for karat-marking rings and earposts. To stamp a ring, position it over the stamp and squeeze the pliers; anvil with felt pad prevents marring. To stamp an earpost, simply insert the earpost jaw set, position the earpost and squeeze the pliers. Includes nickel-plated marking pliers, both flat and concave metal ring anvils, 14K ring stamp, earpost jaw set with 14K earpost stamp, two felt pads and Allen wrench. Stamps make 0.75mm impressions.

Description	Item#	Each
B. Ring and Earpost Marking System	<b>191-1054</b>	<b>\$199.50</b>
Marking Pliers only*	<b>191-1000</b>	<b>99.95</b>
<b>Ring Marking Accessories</b>	<b>Item#</b>	<b>Each</b>
Flat Metal Ring Anvil**	<b>191-1051</b>	<b>\$6.00</b>
Concave Metal Ring Anvil**	<b>191-1052</b>	<b>6.00</b>
10K Ring Stamp	<b>191-1020</b>	<b>29.99</b>
14K Ring Stamp*	<b>191-1030</b>	<b>29.99</b>
18K Ring Stamp	<b>191-1040</b>	<b>29.99</b>
SS Ring Stamp	<b>191-1010</b>	<b>29.99</b>
Pt Ring Stamp	<b>191-1044</b>	<b>29.99</b>
900 Ring Stamp	<b>191-1041</b>	<b>29.99</b>
925 Ring Stamp	<b>191-1042</b>	<b>29.99</b>
950 Ring Stamp	<b>191-1043</b>	<b>29.99</b>
<b>Earpost Marking Accessories</b>	<b>Item#</b>	<b>Each</b>
Earpost Jaw Set with 14K Earpost Stamp*	<b>191-1056</b>	<b>\$119.00</b>

\*Included with #191-1054.

\*\*Included with #191-1054 and #191-1000.



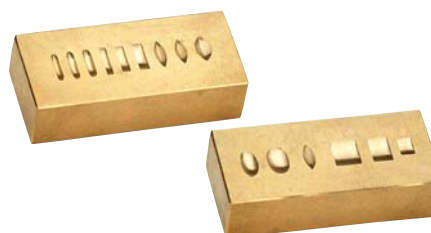
**B**



**C Double-Sided Ring Marking Anvil**

This brass anvil has a wide variety of shank-shaped depressions in graduated sizes so you can karat-stamp both ladies' and men's rings without marring the shank or creating a flat spot. Measures 3"L x 1 1/4"W x 3/4"H.

Description	Item#	Each
Double-Sided Ring Marking Anvil	<b>190-1007</b>	<b>\$29.00</b>



**C**



**A - D Lindstrom® RXPS Platinum Cutters**

Specially designed for cutting platinum, these fine pliers are a joy to use on soft metals. Exemplify state-of-the-art hand tool design and performance. High-grade steel jaws handle tough-to-cut materials. Wider slightly rounded handles provide superior hand contact and total control. Adjustable BioSpring reduces spring tension lessening fatigue.



**A Lindstrom® RXPS Platinum Flush Cutter**

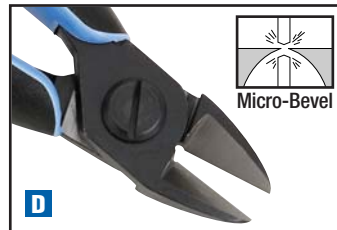
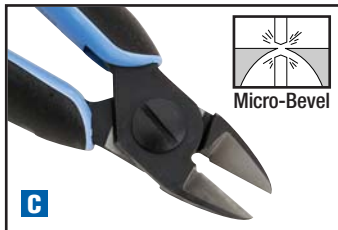
Cut 0.1-2.0mm copper wire. Less flush than Mico-Bevel. 5½" long.

Description	Jaw Length	Item#	Each
8141 Flush	0.41"	<b>182-8143</b>	<b>\$63.80</b>

**B Lindstrom® RXPS Platinum Micro-Bevel Cutter**

Cut 0.1-2.0mm copper wire. Measure 5½" long.

Description	Jaw Length	Item#	Each
8140 Micro-Bevel	0.41"	<b>182-8144</b>	<b>\$65.30</b>



**C Lindstrom® RXPS Platinum Micro-Bevel Cutter**

Cut 0.1-2.0mm copper wire. Measure 5½" long.

Description	Jaw Length	Item#	Each
8150 Micro-Bevel	0.51"	<b>182-8155</b>	<b>\$68.30</b>

**D Lindstrom® RXPS Platinum Micro-Bevel Cutter**

Cut 0.1-2.0mm copper wire. Measure 5½" long.

Description	Jaw Length	Item#	Each
8160 Micro-Bevel	0.63"	<b>182-8161</b>	<b>\$69.00</b>



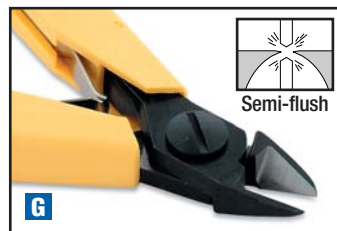
**E - I Lindstrom® Diagonal Nippers**

High-quality nippers for jewelry, electronics and other industries. Perfect for accessing narrow, confined spaces. Feature precision-ground, black oxidized cutting edges for exceptional cutting accuracy and durability, adjustable screw lap joints, return springs and yellow plastic grips.

**E Ultra-Flush Diagonal Nipper**

Cut 0.1-1.0mm copper wire. Measure 4⅓" long.

Description	Jaw Size (L x W)	Item#	Each
Ultra-Flush	⅜" x ⅜"	<b>182-8142</b>	<b>\$58.20</b>



**F Flush Diagonal Nipper**

Cut 0.1-1.25mm copper wire. Measure 4⅓" long.

Description	Jaw Size (L x W)	Item#	Each
Flush	⅜" x ⅜"	<b>182-8141</b>	<b>\$44.10</b>

**G Semi-Flush Small Diagonal Nipper**

Cut 0.2-1.25mm copper or 0.1-0.6mm iron wire. Measure 4⅓" long.

Description	Jaw Size (L x W)	Item#	Each
Semi-Flush Small	⅜" x ⅜"	<b>182-8140</b>	<b>\$42.95</b>



**H Semi-Flush Medium Diagonal Nipper**

Cut 0.3-1.6mm copper, 0.2-0.8mm iron or 0.1-0.4mm piano wire. Measure 4⅞" long.

Description	Jaw Size (L x W)	Item#	Each
Semi-Flush Medium	½" x ½"	<b>182-8150</b>	<b>\$44.35</b>

**I Semi-Flush Large Diagonal Nipper**

Cut 0.4-2.0mm copper, 0.3-1.2mm iron or 0.1-0.4mm piano wire. Measure 5" long.

Description	Jaw Size (L x W)	Item#	Each
Semi-Flush Large	⅝" x ⅝"	<b>182-8160</b>	<b>\$45.50</b>

**A - G Lindstrom® Lightweight Pliers and Nippers**

A wide selection of the finest lightweight pliers and nippers. Feature smooth, precision-ground jaws for gripping without marring, spring-loaded handles and white plastic grips. Made in Sweden.

**A Long Nose Chain Pliers**

Have box joint and precision-ground jaws. Measure 5¼" long.

Description	Jaw Size (L x W)	Item#	Each
Long Nose Chain	1¼" x 1/32"*	182-7890	\$41.60

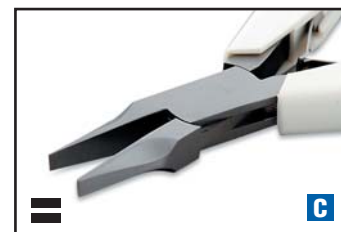
\*Tapers to this width.

**B Chain Nose Pliers**

Have box joint and precision-ground jaws. Measure 4¾" long.

Description	Jaw Size (L x W)	Item#	Each
Chain Nose	¾" x 1/32"*	182-7893	\$41.60

\*Tapers to this width.

**C Flat Pliers**

Have box joint and precision-ground jaws. Measure 4¾" long.

Description	Jaw Size (L x W)	Item#	Each
Flat	¾" x 1/8"	182-7490	\$36.75

**D Round Pliers**

Have box joint and perfectly round precision-ground jaws. Ideal for making loops, bends and coils. Taper to 1/32". Measure 4¾" long.

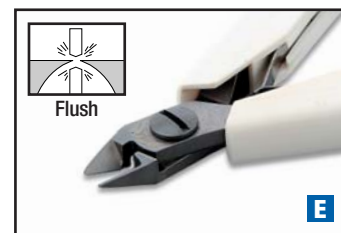
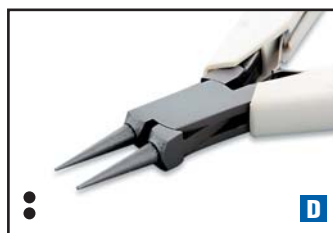
Description	Jaw Size (L x W)	Item#	Each
Round	¾" x 1/32"*	182-7590	\$38.85

\*Tapers to this width.

**E Diagonal Nipper**

Flush-cutting nipper with screw lap joint and tapered, relieved head for reaching tight areas. Cuts 28-18 AWG, .014"-.039" or 0.35-1.0mm dia. copper or annealed 14K gold wire. Measures 4½" long.

Description	Jaw Size (L x W)	Item#	Each
Diagonal	¾" x ¾"	182-7191	\$48.25

**F Oblique Nipper**

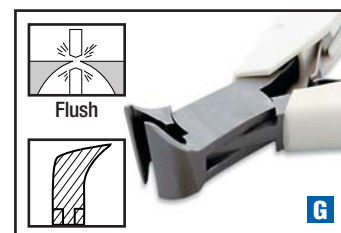
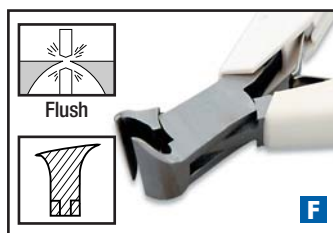
Flush-cutting nipper with box joint and 11°-angle head with one rounded and one pointed end. Cuts 28-18 AWG, .014"-.040" or 0.35-1.0mm dia. copper or annealed 14K gold wire. Measures 4¼" long.

Description	Jaw Size (L x W)	Item#	Each
Oblique	9/16" x 1/3"	182-7291	\$47.35

**G Relieved Oblique Nipper**

Flush-cutting nipper with box joint and 11°-angle relieved head for reaching tight areas. Cuts 28-18 AWG, .014"-.040" or 0.35-1.0mm dia. copper or annealed 14K gold wire. Measures 4¼" long.

Description	Jaw Size (L x W)	Item#	Each
Relieved Oblique	¾" x 1/3"	182-7293	\$54.95

**Proper Use of Lindstrom® Nippers**

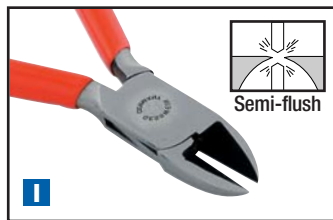
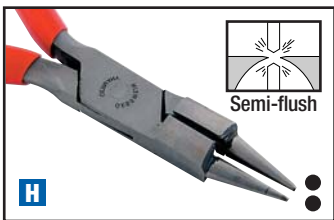
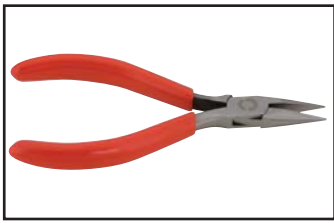
To protect premium-quality Lindstrom nippers, do not use them to cut beyond the capacities for which they have been designed. Even fine cutters such as these are subject to damage when improperly used. The following observations should help determine if you are properly using your cutters.

1. Examine the cutting edge. If there are any nicks seen, the nipper is being used to cut something beyond the stated capacity that is printed on the handle. Cutting capacity of copper wire is equal to that of soft yellow gold. For hard gold and white gold, the cutting capacity is reduced.

2. Nippers with adjustable lap joints must be adjusted so that the cutting surfaces are properly aligned and do not wobble. If the joint is wobbly during use, the misaligned edges can break.
3. If the distance between the handles of the nippers has decreased with use (observe with no pressure on the handles), it is evident that too great a force is being used, causing the handles to bend toward one another. The wire being cut is either too hard or too large in diameter and can result in jaw breakage.

By not exceeding the cutting capacities of your Lindstrom nippers, you will guarantee they last as long as possible and eliminate premature replacement purchases.





**A - J Standard-Weight Pliers and Nippers**  
 Feature box joints and plastic nonslip grips. Pliers have smooth jaws for holding work without marring. Nippers cut up to 1mm dia. copper or annealed 14K gold wire. Measure 5 1/4" long. Made in Germany.

**A Chain Nose Pliers**

Description	Jaw Size (L x W)	Item#	Each
Chain Nose	7/8" x 1/16" *	180-1221	\$18.50

\*Tapers to this width.

**B Flat Pliers**

Description	Jaw Size (L x W)	Item#	Each
Flat	1" x 3/16"	180-1220	\$20.25

**C Round Pliers**

Description	Jaw Size (L x W)	Item#	Each
Round	7/8" x 1/16" *	180-1222	\$20.25

\*Tapers to this width.

**D Half Round/Flat Pliers**

Description	Jaw Size (L x W)	Item#	Each
Half Round/Flat	7/8" x 5/16"	180-1223	\$23.50

**E Half Round/Hollow Pliers**

Description	Jaw Size (L x W)	Item#	Each
Half Round/Hollow	7/8" x 1/4"	180-0215	\$29.90

**F Round/Hollow Pliers**

Description	Jaw Size (L x W)	Item#	Each
Round/Hollow	7/8" x 1/16" *	180-1235	\$26.65

\*Tapers to this width.

**G Round/Flat Pliers**

Description	Jaw Size (L x W)	Item#	Each
Round/Flat	1" x 1/16"	180-1230	\$25.90

**H Rosary Pliers/Nipper**

Description	Jaw Size (L x W)	Item#	Each
Rosary	1" x 1/16" *	180-0217	\$28.10

\*Tapers to this width.

**I Semi-Flush Diagonal Nipper**

Description	Jaw Size (L x W)	Item#	Each
Semi-Flush Diagonal	3/4" x 9/16" *	180-1250	\$29.25

\*Tapers to this width.

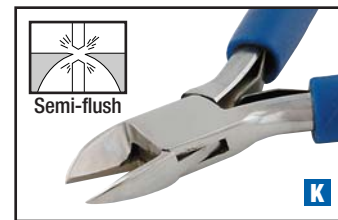
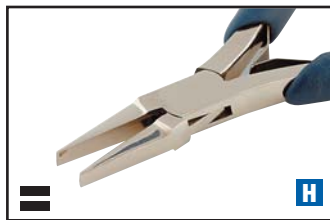
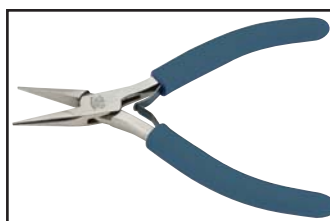
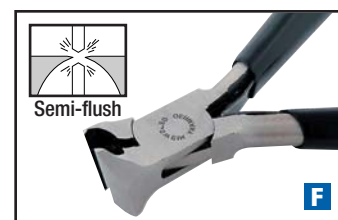
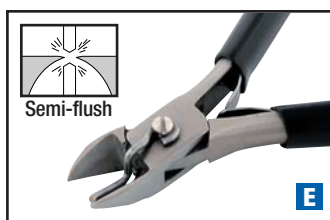
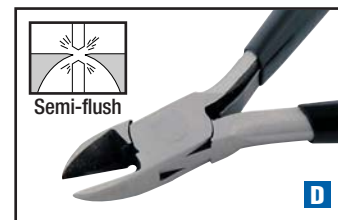
**J Standard-Weight Box-Joint Plier Set**

Includes four of our most popular Standard-Weight Box-Joint Pliers: chain, flat, round and half-round/flat pliers. Made in Germany.

Description	Item#	Each
4-Piece Set	180-1225	\$63.75

**A - F Lightweight Box-Joint Pliers and Nippers**

Feature spring-loaded handles with black plastic nonslip grips. Pliers have smooth jaws for holding work without marring. Nippers cut up to 1.5mm dia. copper or annealed 14K gold wire. Measure 4½" long. Made in Germany.



**A Chain Nose Pliers**

Description	Jaw Size (L x W)	Item#	1-2	3-9	10+
Chain Nose	7/8" x 1/16" *	180-1722	\$24.50	\$23.28	\$22.05

\*Tapers to this width.

**B Flat Pliers**

Description	Jaw Size (L x W)	Item#	1-2	3-9	10+
Flat	3/4" x 1/8"	180-1720	\$23.25	\$22.09	\$20.93

**C Round Pliers**

Description	Jaw Size (L x W)	Item#	1-2	3-9	10+
Round	7/8" x 1/16" *	180-1721	\$24.50	\$23.28	\$22.05

\*Tapers to this width.

**D Diagonal Nipper**

Description	Jaw Size (L x W)	Item#	1-2	3-9	10+
Diagonal	1/2"	180-1726	\$24.95	\$23.70	\$22.46

**E Diagonal Nipper w/ Trap**

Description	Jaw Size (L x W)	Item#	1-2	3-9	10+
Diagonal w/ Trap **	1/2"	180-1255	\$37.40	\$35.53	\$31.42

\*\*Traps and holds wire end so it will not fly.

**F Oblique Nipper**

Description	Jaw Size (L x W)	Item#	1-2	3-9	10+
Oblique	5/8"	180-1729	\$28.25	\$26.84	\$25.43

**G - L Foam-Grip Stainless Steel Pliers and Nipper**

Economical stainless steel box-joint pliers and nipper. Feature spring-loaded handles with extra-thick foam nonslip grips. Measure 4½" long.

**G Chain Nose Pliers**

Description	Jaw Size (L x W)	Item#	1-2	3-9	10+
Chain Nose	7/8" x 1/16" *	180-0330	\$15.00	\$13.50	\$12.50

\*Tapers to this width.

**H Flat Pliers**

Description	Jaw Size (L x W)	Item#	1-2	3-9	10+
Flat	7/8" x 9/32"	180-0331	\$15.00	\$13.50	\$12.50

**I Round Pliers**

Description	Jaw Size (L x W)	Item#	1-2	3-9	10+
Round	3/4" x 1/16" *	180-0332	\$15.00	\$13.50	\$12.50

\*Tapers to this width.

**J Bent Chain Pliers**

Description	Jaw Size (L x W)	Item#	1-2	3-9	10+
Bent Chain	7/8" x 1/16"	180-0336	\$15.00	\$13.50	\$12.50

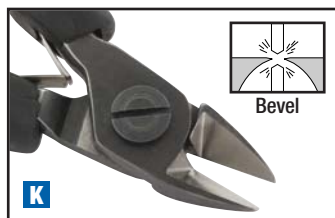
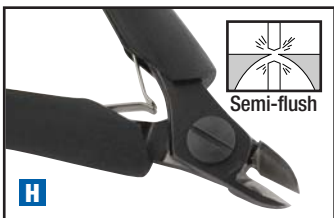
**K Diagonal Nipper**

Description	Jaw Size (L x W)	Item#	1-2	3-9	10+
Diagonal	1/2"	180-0333	\$15.90	\$14.31	\$13.25

**L Foam-Grip Stainless Steel Plier and Nipper Set**

Includes all Foam-Grip Stainless Steel Pliers and Nipper listed above except bent chain pliers.

Description	Item#	Each
4-Piece Set	180-0335	\$55.00



**A - K Teborg Pliers and Nippers**

Feature precision-ground jaws, box or adjustable screw lap joints, dual leaf springs and hardened, treated handles with comfort grips. Will not break with proper use. Made in Sweden.

**A Chain Pliers**

Measure 4<sup>3</sup>/<sub>4</sub>" long.

Description	Jaw Size (L x W)	Item#	Each
Chain	20 x 9mm	<b>182-9893</b>	<b>\$33.95</b>

**B Flat Pliers**

Measure 4<sup>3</sup>/<sub>4</sub>" long.

Description	Jaw Size (L x W)	Item#	Each
Chain	20 x 9mm	<b>182-9490</b>	<b>\$32.25</b>

**C Round Pliers**

Measure 4<sup>3</sup>/<sub>4</sub>" long.

Description	Jaw Size (L x W)	Item#	Each
Round	20 x 9mm	<b>182-9590</b>	<b>\$33.95</b>

**D Long-Nose Chain Pliers**

Measure 5<sup>1</sup>/<sub>4</sub>" long.

Description	Jaw Size (L x W)	Item#	Each
Long-Nose Chain	32 x 9mm	<b>182-9890</b>	<b>\$33.95</b>

**E Bent Chain Pliers**

Measure 5" long.

Description	Jaw Size (L x W)	Item#	Each
Bent Chain	29 x 9mm	<b>182-9892</b>	<b>\$33.95</b>

**F Bevel Diagonal Nipper**

Cuts 0.35–1.25mm soft wire. Measure 4<sup>3</sup>/<sub>8</sub>" long.

Description	Jaw Size (L x W)	Item#	Each
Bevel Diagonal	9.5 x 9mm	<b>182-9190</b>	<b>\$38.20</b>

**G Bevel Oblique Nipper**

Cuts 0.35–1.0mm soft wire. Measure 4<sup>3</sup>/<sub>8</sub>" long.

Description	Jaw Size (L x W)	Item#	Each
Bevel Oblique	8 x 9mm	<b>182-9291</b>	<b>\$43.10</b>

**H Semi-Flush Small Nipper**

Cuts 0.1–1.25mm soft wire. Measure 4<sup>3</sup>/<sub>8</sub>" long.

Description	Jaw Size (L x W)	Item#	Each
Semi-Flush Small	9.5 x 9mm	<b>182-9141</b>	<b>\$36.50</b>

**I Bevel Small Nipper**

Cuts 0.2–1.25mm soft wire. Measure 4<sup>3</sup>/<sub>8</sub>" long.

Description	Jaw Size (L x W)	Item#	Each
Bevel Small	9.5 x 8.5mm	<b>182-9140</b>	<b>\$36.50</b>

**J Bevel Medium Nipper**

Cuts 0.3–1.6mm soft wire. Measure 4<sup>1</sup>/<sub>2</sub>" long.

Description	Jaw Size (L x W)	Item#	Each
Bevel Medium	12.5 x 12mm	<b>182-9150</b>	<b>\$36.50</b>

**K Bevel Large Nipper**

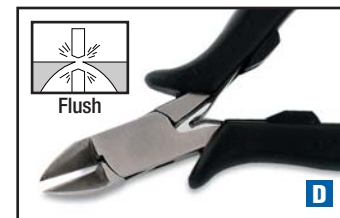
Cuts 0.4–2.0mm soft wire. Measure 5<sup>1</sup>/<sub>4</sub>" long.

Description	Jaw Size (L x W)	Item#	Each
Bevel Large	16 x 15mm	<b>182-9160</b>	<b>\$38.20</b>



**A - E Comfort-Grip Stainless Steel Pliers and Nippers**

These economical standard-weight pliers and nippers feature box joints for stability, double leaf springs for smooth action and molded plastic handles for secure grip. Measure 5" long.



**A Chain Pliers**

Description	Jaw Size (L x W)	Item#	EACH Prices		
			1-2	3-9	10+
Chain	7/8" x 1/16" *	180-0366	\$5.95	\$5.36	\$4.96

\*Tapers to this width.

**B Flat Pliers**

Description	Jaw Size (L x W)	Item#	EACH Prices		
			1-2	3-9	10+
Flat	7/8" x 5/32"	180-0367	\$5.95	\$5.36	\$4.96

**C Round Pliers**

Description	Jaw Size (L x W)	Item#	EACH Prices		
			1-2	3-9	10+
Round	7/8" x 1/32" *	180-0368	\$5.95	\$5.36	\$4.96

\*Tapers to this width.

**D Diagonal Nipper**

Description	Jaw Size (L x W)	Item#	EACH Prices		
			1-2	3-9	10+
Diagonal	1/2"	180-0369	\$6.95	\$6.26	\$5.79

**E Comfort-Grip Stainless Steel Plier and Nipper Set**

Includes all four Comfort-Grip Pliers and Nipper listed above.

Description	Item#	Each
4-Piece Set	180-0370	\$21.95

**F - K ValueLine Pliers and Nippers**

These inexpensive pliers and nippers feature box joints for stability, double leaf springs for smooth action, green PVC grips and brush finishes. Measure 4 1/2" long.

**F Chain Pliers**

Description	Jaw Size (L x W)	Item#	Each
Chain	7/8" x 1/32" *	180-0340	\$4.95

\*Tapers to this width.

**G Flat Pliers**

Description	Jaw Size (L x W)	Item#	Each
Flat	7/8" x 1/8"	180-0341	\$4.95

**H Round Pliers**

Description	Jaw Size (L x W)	Item#	Each
Round	7/8" x 1/32" *	180-0342	\$4.95

\*Tapers to this width.

**I Bent Chain Pliers**

Description	Jaw Size (L x W)	Item#	Each
Bent Chain	3/4" x 1/16"	180-0344	\$5.30

**J Diagonal Nipper**

Description	Jaw Size (L x W)	Item#	Each
Bent Chain	1/2"	180-0343	\$5.95

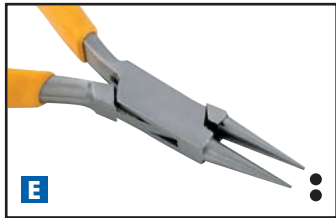
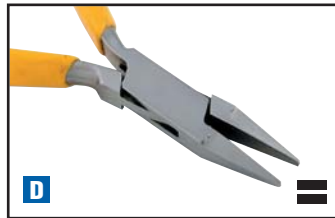
**K ValueLine Plier and Nipper Set**

Includes all ValueLine Pliers and Nipper above except bent chain.

Description	Item#	Each
4-Piece Set	180-0345	\$18.75







**A, B Palm Grip Pliers and Nipper**

Small, lightweight stainless steel pliers and nipper ideal for working with small items. Feature perfectly aligned jaws and return springs for holding jaws open until handles are compressed. Pliers measure 4" long. Nipper measures 3½" long. Made in Japan.

**A, Palm Grip Pliers and Nipper**

Description	Jaw Size (L x W)	Item#	EACH Prices	
			1-2	3+
M-21 Chain	7/8" x 1/16"	180-0265	\$16.95	\$15.26

**B Palm Grip Nipper**

Description	Jaw Size (L x W)	Item#	EACH Prices	
			1-2	3+
M-17 Nipper	1/4"	180-0245	\$16.95	\$15.26

**C - I Economy Stainless Steel Pliers**

Economical stainless steel pliers for everyday use at the bench. Feature box joints for stability and yellow plastic grip-tight handles. Available individually or in a set of all four popular shapes (see below). Measure 5¼" long. Imported.

**C Chain Pliers**

Description	Jaw Size (L x W)	Item#	EACH Prices	
			1-2	3+
Chain	3/4" x 1/16" *	180-0352	\$9.95	\$8.96

\*Tapers to this width.

**D Flat Pliers**

Description	Jaw Size (L x W)	Item#	EACH Prices	
			1-2	3+
Flat	3/4" x 1/4"	180-0350	\$9.95	\$8.96

**E Round Pliers**

Description	Jaw Size (L x W)	Item#	EACH Prices	
			1-2	3+
Round	3/4" x 1/16" *	180-0351	\$9.95	\$8.96

\*Tapers to this width.

**F Half-Round/Flat Pliers**

Description	Jaw Size (L x W)	Item#	EACH Prices	
			1-2	3+
Half-Round/Flat	3/4" x 1/4"	180-0353	\$10.50	\$9.45

**G Half-Round/Hollow Pliers**

Description	Jaw Size (L x W)	Item#	EACH Prices	
			1-2	3+
Half-Round/Hollow	3/4" x 1/4"	180-0357	\$10.50	\$9.45

**H Round/Hollow Pliers**

Description	Jaw Size (L x W)	Item#	EACH Prices	
			1-2	3+
Round/Hollow	3/4" x 1/8"	180-0356	\$10.50	\$9.45

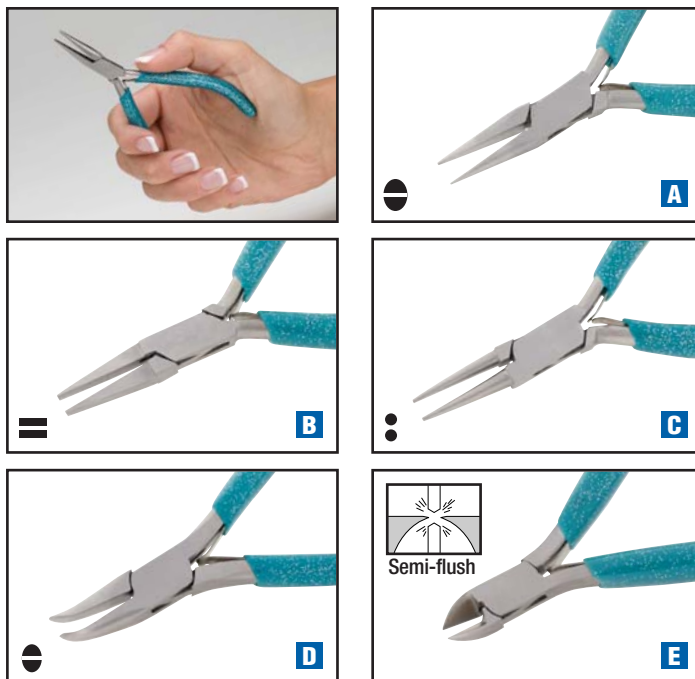
**I Economy Stainless Steel Plier Set**

Includes four of our most popular Economy Stainless Steel Pliers: chain, flat, round and half-round/flat pliers. Imported.

Description	Item#	Each
4-Piece Set	180-0360	\$35.95

**A - F Glitter Pliers and Cutter**

Lightweight, well-balanced solid stainless steel pliers and cutter with turquoise PVC grips speckled with silver glitter to add a little fun to your work. Feature precision-ground tips for securely gripping the tiniest wires and threads, sturdy box joints and double leaf springs. Measure 4½" to 4¾" long.



**A Chain Pliers**

Description	Jaw Size (L x W)	Item#	Each
Chain	15/16"	180-0230	\$7.75

**B Flat Pliers**

Description	Jaw Size (L x W)	Item#	Each
Flat	13/16"	180-0231	\$7.75

**C Round Pliers**

Description	Jaw Size (L x W)	Item#	Each
Round	13/16"	180-0232	\$7.75

**D Bent Chain Pliers**

Description	Jaw Size (L x W)	Item#	Each
Bent Chain	3/4"	180-0234	\$7.75

**E Semi-Flush Cutter**

Description	Jaw Size (L x W)	Item#	Each
Semi-Flush	1/2"	180-0233	\$7.75

**F Glitter Plier and Cutter Set**

Description	Item#	Each
5-Piece Set	180-0236	\$38.80

**G Wolf™ Groovy Chain-Nose Pliers**

Single-grooved jaws produce 90° bends in wire and flat pieces. Prevent wire from twisting or slipping when filing. Hold jump rings firmly for easy alignment of ends prior to soldering. Feature durable box-joint construction with dual leaf springs and ergonomic handles with PVC grips. Made of stainless steel. Measure 5¾" long.

Description	Item#	Each
Chain-Nose	180-0382	\$16.95

**H Wolf™ Groovy Looping Pliers**

Triple-grooved jaws allow you to repeat three exact sizes of loops when wire wrapping, making earring loops and jump rings. Feature durable stainless steel box-joint construction with dual leaf springs and ergonomic handles with PVC grips. Measure 5" long.

Description	Item#	Each
Looping	180-0380	\$16.95

**I Loop Opening Pliers**

Reverse-action pliers for opening loops, rings and more. Feature yellow nonslip grips. Measure 6¼" long.

Description	Item#	EACH Prices	
		1-2	3+
Loop Opening	180-0354	\$13.50	\$12.15

**J Loop Closing Pliers**

Feature smooth shaped jaws for closing loops, jump rings, bracelet links and more without distorting or marring, durable box-joint construction and PVC grips. Measure 4½" long.

Description	Item#	EACH Prices	
		1-2	3+
Loop Closing	180-0011	\$12.80	\$11.52



**A - E Xuron Micro-Shear® Flush Cutters and Pliers**

Micro-Shear Flush Cutters feature a patented design that keeps blades sharper longer than conventional nippers. Blade edges bypass each other in a shearing motion rather than striking, resulting in clean square cuts with no spikes. Blades stay sharper and last much longer than conventional nippers because there is no edge-to-edge impact. Greatly reduce mechanical shock delivered to components and require roughly 50% less effort to cut wire than conventional compression-type wire cutters. Have ergonomically shaped, nonslip Xuro-Rubber comfort grips. Made in USA.

**A Xuron 9100 Micro-Shear® Flush Cutter**

Made of tough steel alloy with ultra-precise CNC grinding and state-of-the-art heat treating. Features oval head for added durability, Light Touch return spring and glare-free black finish. Comfortable for high-volume applications. Flush cuts soft wire up to 14 AWG (1.6mm). Measures 5" long.

Description	Jaw Size (L x W)	Item#	EACH Prices	
			1-2	3+
9100 Cutter	9 x 12.2mm	<b>181-0202</b>	<b>\$18.75</b>	<b>\$17.81</b>

**B Xuron 9200 Micro-Shear® Flush Cutter**

Made of tough steel alloy with ultra-precise CNC grinding and state-of-the-art heat treating. Features tapered head for cutting in high-density areas, Light Touch return spring and glare-free black finish. Comfortable for high-volume applications. Flush cuts soft wire up to 14 AWG (1.6mm). Measures 5" long.

Description	Jaw Size (L x W)	Item#	EACH Prices	
			1-2	3+
9200 Cutter	9 x 12.2mm	<b>181-0204</b>	<b>\$18.75</b>	<b>\$17.81</b>

**C Xuron 2175 Maxi-Shear® Flush Cutter**

Features elongated and tapered head with extra-tough high-carbon steel blades for cutting in high-density areas. Has nonprotruding flat return spring for excellent feel without excessive tension and glare-free black finish. Flush cuts soft wire up to 14 AWG (1.6mm). Measures 6" long.

Description	Jaw Size (L x W)	Item#	EACH Prices	
			1-2	3+
2175 Cutter	12 x 17mm	<b>181-0208</b>	<b>\$14.95</b>	<b>\$14.20</b>

**D Xuron LX Micro-Shear® Flush Cutter**

Features ultra-slim profile and tapered head with precision-ground, extra-tough high-carbon steel blades for cutting in high-density areas with maximum maneuverability. Perfect for small hands. Flush cuts soft wire up to 19 AWG (1.0mm). Measures 4.8" long.

Description	Jaw Size (L x W)	Item#	EACH Prices	
			1-2	3+
LX Cutter	9 x 14mm	<b>181-0200</b>	<b>\$14.50</b>	<b>\$13.78</b>

**E Xuron 450 Tweezer Nose™ Pliers**

Ultra-precise, durable needle nose pliers capable of grasping and holding wire less than 1mm thick with the strength for wire forming. Prevent leads from popping free, tip misalignment and blade crossover. Have radiused edges for protecting lead wires. Feature lightweight construction, Light Touch return spring and glare-free black finish. Measure 5" long. Made in USA.

Description	Jaw Size (L x W)	Item#	EACH Prices	
			1-2	3+
450 Pliers	20 x 10mm	<b>181-0206</b>	<b>\$14.50</b>	<b>\$13.78</b>

**A Micro Flush Cutter**

Hardened tool steel cutter with induction-hardened jaws. Features relieved cutting edges for clean cutting, fine points for tight work, steel return spring and comfort grips. Measures 4<sup>3</sup>/<sub>4</sub>" long.

Description	Jaw Size	Item#	Each
Micro Flush	1/2"	180-4090	\$11.50

**B Oblique Nipper**

Flush-cutting nipper with 20°-angle head for reaching tight areas. Has return spring for smooth cutting action and nonadjustable lap joint. Cuts 28-18 AWG, .014"-.059" or 0.3-1.25mm dia. copper or annealed 14K gold wire. Measures 4<sup>1</sup>/<sub>2</sub>" long. Made in Sweden.

Description	Jaw Size	Item#	Each
Oblique	14mm	182-7231	\$75.50

**C Barracuda Diagonal Nipper**

Flush-cutting nipper made of tool steel alloy. Features 61-63 HRC cutting edges, lap joint, double leaf springs and cushion-grip handles. Cuts up to 26 AWG or 0.40mm hard wire. Measures 4<sup>1</sup>/<sub>2</sub>" long. Made in Germany.

Description	Jaw Size	Item#	Each
Diagonal	1/2"	181-4094	\$25.95

**D Stone Setting Pliers**

Ideal for tightening prongs. Feature box joints for stability. Available in deluxe and economy styles. Measure 4<sup>3</sup>/<sub>4</sub>" long.

Description	Jaw Size (L x W)	Item#	Each
E. Deluxe German	1/2" x 3/16"	181-2900	\$41.00
Economy Imported	1/2" x 3/16"	181-2950	9.95

**E Jump Ring Opening Pliers**

Reverse-action pliers for stretching or opening jump rings as small as 20-gauge, bows, links and rings. Has ridges on outside edges of jaws that hold rings securely in place. Made of chrome vanadium steel with PVC grips. Measure 5<sup>3</sup>/<sub>4</sub>" long. Taper to 3/16" at the tips. Made in Germany.

Description	Item#	Each
Jump Ring Opening	180-0292	\$24.15

**F Prong Opening Pliers**

Open prongs without fracturing stones. Use grooved jaw to hold prong in place and angled jaw to slip under prong and raise it. Avoid putting pressure on top of stone to prevent marring and scratching. Feature box joint for stability, perfectly aligned tapered jaws, double leaf springs and cushion grips. Measure 4<sup>1</sup>/<sub>2</sub>" long. Made in Germany.

Description	Jaw Size (L x W)	Item#	Each
Prong Opening	3/4" x 1/16"	180-0020	\$24.85

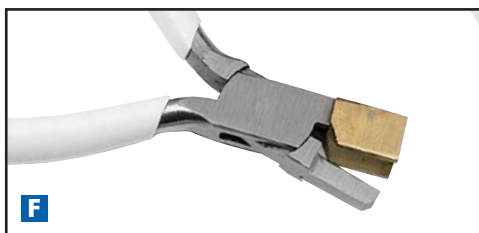
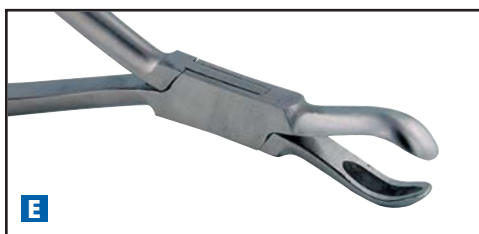
**G Prong Closing Pliers**

Close prongs over stones without slipping. Use curved, tapered jaws with grooved tips to hold prong securely. Feature box joint for stability, perfectly aligned jaws, double leaf springs and cushion grips. Measure 4<sup>1</sup>/<sub>2</sub>" long. Made in Germany.

Description	Jaw Size (L x W)	Item#	Each
Prong Closing	3/4" x 1/16"	180-0025	\$24.85







**A Ring Forming Pliers**

Feature heavy-duty box-joint construction and two different smooth jaws: concave and convex. Have white plastic grips. Measure 6½" long. Jaw size: 1⅛"L x ⅜"W. Made in Germany.

Description	Item#	EACH Prices	
		1-2	3+
Ring Forming	180-0100	\$41.00	\$36.90

**B Ring Bending Pliers**

Feature heavy-duty box-joint construction and two different smooth jaws: one with wide, rounded V-slot and the other shaped to fit into the slot. For bending wire and strips. Have white plastic grips. Measure 6½" long with ⅝" long jaws. Made in Germany.

Description	Item#	EACH Prices	
		1-2	3+
Ring Bending	180-0050	\$38.50	\$34.65

**C Stone Removal Pliers**

Easily remove stones from settings while preventing damage. Can be used on all prong settings, bead settings, clusters, channels, fishtails and baguettes. Feature thin narrow tips that fit into tight recessed areas and very small settings, box joint for perfect alignment of jaws and cushion-grip handles for comfort. Measure 4¾" long.

Description	Item#	Each
Stone Removal	181-2975	\$14.75

**D Bent Grooved Stainless Steel Pliers**

Lightweight box-joint pliers with textured nonslip grips for secure handling. Made of stainless steel. Measure 5" long.

Shape	Jaw Size (L x W)	Item#	Each
Bent Grooved	⅞" x ⅜"	180-0325	\$10.95

**E Ring Holding Pliers**

Lightweight nickel-plated box-joint pliers with curved, depressed jaws for gripping rings securely. Measure 5½" long. Jaw size: 1⅛"L x ⅜"W. Imported.

Description	Item#	EACH Prices	
		1-2	3+
Ring Holding	180-0200	\$8.75	\$7.88

**F Ring and Bow Closing Pliers**

Standard-weight box-joint pliers for closing small rings, bows, jump rings, loops and more. Feature one brass jaw to prevent marring. Measure 5¼" long with ⅝" long jaws. Made in Germany.

Description	Item#	EACH Prices	
		1-2	3+
Ring and Bow Closing	180-0005	\$55.00	\$49.50

**G Econo Bow Closing Pliers**

Well-made stainless steel box-joint pliers for closing rings, bows and more. Have yellow comfort grips curved to fit in palm. Measure 6½" long with ⅝" long jaws. Imported.

Description	Item#	EACH Prices	
		1-2	3+
Econo Bow Closing	180-0355	\$15.95	\$14.36

**A Carbide Diagonal Cut Nipper**

Cuts up to 12-gauge nonferrous metal. Features PVC cushion grip handles and return springs. Measures 5½" long. Made in Pakistan.

Description	Item#	Each
Carbide Diagonal Cut Nipper	181-4095	\$26.95



**B Wire Looping Pliers**

These box-joint pliers feature a jaw with three finely polished round sections and a concave jaw for easily bending wire. Made of stainless steel for durability. Measure 5⅝" long.

Description	Item#	Each
Wire Looping Pliers	180-0035	\$10.75



**C Split Ring Pliers**

Open split rings easily with these pliers: just put the toothed jaw between the overlapping split ring, and squeeze the handles to pop the ring open.

Description	Item#	Each
Split Ring Pliers	180-0033	\$7.60



**D - F Parallel-Jaw Pliers**

Feature jaws that stay parallel along their entire lengths whether opened or closed for positive grip of square and hexagonal components. Have nickel-plated sealed handles with anti-rust finish and fully heat-treated black jaws.

Available in two styles: flat and chain. Flat pliers come with smooth or serrated jaws that open to 7/16" (11mm). Serrated version has a single longitudinal V-slot. Chain pliers come with smooth jaws that open to 3/8" (10mm) and measure 3/32" (2mm) square at each tip.

Both styles allow wire to be fed through the throats from either end and held firmly over full jaw lengths. Packaged in vinyl sleeves for protection during shipping and storage. Measure 5" long.

Description	Item#	EACH Prices		
		1-2	3-9	10+
D. Flat Pliers w/ smooth jaws	181-1035	\$20.48	\$19.46	\$18.23
E. Flat Pliers w/ serrated jaws	181-1030	18.50	17.58	16.47
F. Chain Pliers w/ smooth jaws	181-1060	26.80	25.46	23.85



**G Maun Nippers**

Cut sprues up to 3mm with less hand strain. Feature heavy-duty springs that open jaws for repetitive use. Available in two lengths: 5½" with 15mm long jaws and 6½" with 17mm long jaws. The 5½" nipper comes with nickel-plated handles. The 6½" nipper comes with plastic grip guards only. Made in England.

Description	Item#	EACH Prices		
		1-2	3-9	10+
G. 5½" Nipper w/ nickel-plated handles	181-4050	\$39.50	\$37.53	\$35.16
6½" Nipper w/ plastic grip guards	181-4055	59.00	56.05	52.51

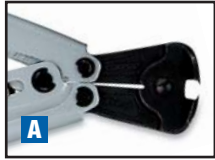


**H Wire Twisting Pliers**

Twists wire up to .060-gauge with simple one-pull action. Produces durable strands that won't unravel. Hardened and tempered. Measures 9" long.

Description	Item#	Each
Wire Twisting Pliers	180-4095	\$22.55





**A, B Bergeon Heavy-Duty Cutters – Cut sprues up to 3mm.**

Top-quality cutters with special linkage design that multiplies hand pressure many times to provide full, clean cuts. Helps reduce hand fatigue. Feature hardened steel jaws with 7/8" (22mm) long cutting edges, extra-long handles for additional leverage and locking system for protection of cutting edges.

Side cutter has pointed ends for easy access to tight areas. Cuts sprues up to 3mm thick. Measures 10" long. End cutter measures 9 1/2" long. Made in Switzerland.

Description	Item#	Each
A. End Cutter	181-4070	\$159.00
B. Side Cutter	181-4075	167.00

**C Power Sprue Cutter – Cuts sprues up to 3mm.**

Cuts sprues and soft wire up to 3mm and hard wire up to 1mm. Makes a semi-flush cut. Features compound joint construction for reduced cutting effort, hardened chrome vanadium steel cutting head and steel handles with plastic nonslip grips. Measures 9 1/2" long with 1 1/16" (18mm) long jaws. Made in Italy.

Description	Item#	Each
Power Sprue Cutter	181-4061	\$110.00

**D Knipex Sprue Cutter**

This top-quality heavy-duty cutter multiplies manual force exerted by 20 times to cut sprues up to 3mm in diameter, even platinum ones. Features oil-hardened chrome vanadium electric steel construction with induction-hardened 64 HRC cutting edges and spring assist for fast and smooth cutting action. Measures 8" long. Made in Germany.

Description	Item#	Each
Knipex Sprue Cutter	181-4078	\$85.20

**E Compound Cutter – Cuts sprues up to 3mm.**

This heavy-duty tool cuts sprues up to 3mm thick. Features compound joint for cutting with minimal effort and insulated plastic grips. Measures 7 1/4" long with 7/16" long jaws. Made in Germany.

Description	Item#	EACH Prices		
		1-2	3-9	10+
Compound Cutter	181-4060	\$41.95	\$39.85	\$37.76

**F Power Max Cutters**

Feature leverage-enhancing design and induction-hardened, high-grade steel jaws for extra-close cutting. Have ergonomically shaped handles for preventing fatigue and injuries. Measure 6 1/2" long.

Description	Item#	EACH Prices		
		1-2	3-9	10+
Flush Cutter	181-4066	\$33.50	\$31.83	\$30.15

**G, H 3-Peaks Sprue Cutters – Cut sprues up to 4mm.**

These compound sprue cutters feature 60–65 HRC hardened alloy steel construction with 15mm long jaws and comfortable handles. Both cut up to 4mm copper or 1.5mm steel. Side cutter is angled for better access to tight areas. Measure approx. 8 1/2" long. Imported.

Description	Item#	Each
G. Side Cutter	181-4082	\$27.60
H. Standard Cutter	181-4081	25.65

**I Econo Bent Side Cutter – Cuts sprues up to 4mm.**

Cuts sprues up to 4mm with ease. Features special linkage design for cutting large sprues with very little hand strain and adjustable stop for controlling cutting depth and preserving blade life. Has plastic nonslip handles. Measures 8" long with 9/16" long jaws. Made in Japan.

Description	Item#	EACH Prices	
		1-2	3+
Econo Bent Side Cutter	181-1000	\$36.00	\$32.40

### A - E Nylon-Jaw Pliers

Heavy-duty stainless steel pliers with box joints and plastic comfort grips. Feature replaceable nylon jaws for gripping firmly without marring. Can be easily customized by filing or carving. Measure 5¾" long. Imported.

#### A Flat Pliers

For general-purpose work. Jaw size: 1"L x 7/16"W.

Description	Item#	Each
Flat Pliers	<b>180-0001</b>	<b>\$13.95</b>
Replacement Jaws, pair	180-0002	3.55



#### B Bracelet Bending Pliers

Feature a gentle arch for shaping and reshaping bracelets.

Description	Item#	Each
Bracelet Bending Pliers	<b>180-0282</b>	<b>\$20.95</b>
Replacement Jaws, pair	180-0283	3.95



#### C Ring Bending Pliers

Have a pronounced curve for bending ring sizes 6½ and larger.

Description	Item#	Each
Ring Bending Pliers	<b>180-0286</b>	<b>\$20.95</b>
Replacement Jaws, pair	180-0287	3.95



#### D Ring Closing Pliers

Commonly used to reshape or close rings after sizing. Bottom jaw is nylon with V-groove. Top jaw is polished stainless steel.

Description	Item#	Each
Ring Closing Pliers	<b>180-0288</b>	<b>\$22.50</b>
Replacement Jaws, pair	180-0289	3.95



#### E Ring Holding Pliers

Feature parallel nylon jaws for holding rings securely while working the inside.

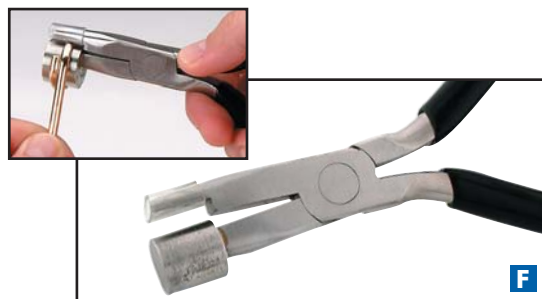
Description	Item#	Each
Ring Holding Pliers	<b>180-0284</b>	<b>\$19.60</b>
Replacement Jaws, pair	180-0285	3.95



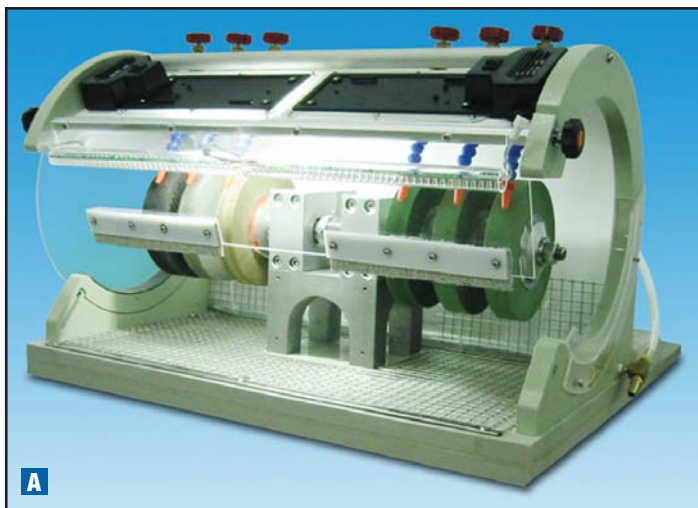
#### F Wrap-and-Tap Ring-Forming Pliers

Use these heavy-duty stainless steel pliers to speed up ring and shank forming: just wrap wire or ring stock around the barrel-shaped solid steel jaw, then gently tap against a mandrel; the PVC-covered small jaw prevents marring of hollow rings and rings with one-sided designs. Form perfect rings, half-shanks and quarter-shanks from stock up to 2mm thick. Have lap joint and smooth, nonslip PVC grips. Measure 6" long. Imported.

Description	Item#	EACH Prices		
		1-2	3-9	10+
14mm Barrel Pliers	<b>180-0160</b>	<b>\$22.95</b>	<b>\$20.66</b>	<b>\$18.36</b>







**A**



**B**

**A, B MAX Multi-Function Finishing Machines**

**Variable-speed units for wet and dry grinding and polishing!**

Mix and match wheels, belts and discs on your MAX 24 or MAX 30 finishing machine, and run them wet or dry without any mess or time-consuming tool changes. MAX 24 and MAX 30 ("24" and "30" represent widths in inches) can each hold seven different abrasives. Just position them in the progressive order that suits your grinding and polishing requirements, then proceed from start to finish, spending less time and effort. Both units can run 5" or 6" wheels, including a lapping disc on the right side, which works for lapping flat surfaces on virtually any jewelry piece.

MAX 24 is ideal for most jewelry applications, and MAX 30 is made with wider spacing between its wheels for handling larger parts and adapting to manufacturing environments that might require special wheel configurations or other types of customization. Each features digital control for running abrasive products at speeds conducive to maximum performance and life, durable stainless steel cabinet with front-entry design for easy belt maintenance, 4-gallon recirculating water pump, separate water supply hoses and valves for controlling water flow to each abrasive, clear-view spray reduction shield and four strategically positioned lights for viewing work in progress. Operating speed range: 500–3,600rpm.

See below and the following page for a complete line of wheels, belts and discs specifically developed to get the absolute most out of your MAX unit.

Specifications:	MAX 24	MAX 30
Electrical	110V, 60Hz	110V, 60Hz or 220V, 50Hz
Motor	1/2 HP	1/2 HP (110V) or 1 HP (220V)
Dimensions (W x D x H)	25½" x 25½" x 20"	31½" x 25½" x 20¾"
Machine Shaft	1" dia x 22" long	1" dia x 27¾" long
Net/Ship. Wt.	132/224.4 lbs.	154/257.4 lbs.

Description	Motor	Item#	Each
A. MAX 24, 110V	1/2 HP	<b>854-0010</b>	<b>\$2,450.00</b>
B. MAX 30, 110V	1/2 HP	<b>854-0012</b>	<b>2,995.00</b>
MAX 30, 220V*	1 HP	<b>854-0013</b>	<b>3,300.00</b>

\*FOB Taiwan.

**C - F MAX Abrasive Wheels**

Choose from four types of wheels specifically developed for our MAX units: XA grinding, LD light deburring, MF multifinishing and MX polishing. Use XA wheels for removing sprues and parting lines and lapping edges and flat surface areas; LD and MF wheels for deburring and prepolishing; and MX wheels for uniform finishing on contoured surface areas. Measure 6" dia. x 1" thick x 1" AH. Recommended operating conditions: 1,200–1,800rpm with medium water flow for XA, LD and MF wheels; 1,200–1,500rpm with light water flow for MX wheels.



**C**



**D**



**E**



**F**

Description	Grit	Item#	EACH Prices	
			1-2	3+
C. XA Wheel	240	<b>845-3060</b>	<b>\$60.00</b>	<b>\$57.00</b>
D. LD Wheel	320	<b>845-3053</b>	<b>30.00</b>	<b>27.00</b>
E. MF Wheel	320	<b>845-3050</b>	<b>30.00</b>	<b>27.00</b>
	600	<b>845-3051</b>	<b>30.00</b>	<b>27.00</b>
	1000	<b>845-3052</b>	<b>30.00</b>	<b>27.00</b>
F. MX Wheel	240	<b>845-3055</b>	<b>40.00</b>	<b>38.00</b>
	600	<b>845-3056</b>	<b>40.00</b>	<b>38.00</b>
	1500	<b>845-3057</b>	<b>40.00</b>	<b>38.00</b>
	3000	<b>845-3058</b>	<b>40.00</b>	<b>38.00</b>

### A 3M™ Cubitron™ Belt

Features Cubitron ceramic abrasive, simply the toughest mineral on the market. Cuts like aluminum oxide but lasts twice as long and produces less dust. Provides a finish ready for further refinement. Measures 1½"W x 18<sup>15</sup>/<sub>16</sub>"L. Use with Expander Drum (see below).

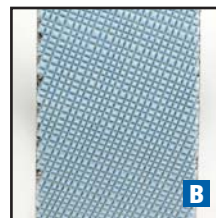
Description	Grit	Item#	Each
Cubitron Belt	80	<b>109-8451</b>	<b>\$5.10</b>



### B 3M™ Trizact™ Belt

Designed to run wet. Cuts fast and imparts a uniform finish. Ideal for use on precious metals, as well as stainless steel and titanium. Measures 1½"W x 18<sup>15</sup>/<sub>16</sub>"L. Use with Expander Drum (see below).

Description	Grit	Item#	Each
Trizact Belt	120	<b>109-8450</b>	<b>\$4.25</b>



### C 3M™ Flex Diamond Belt

A durable, nonloading belt for cleaning, shaping and prefinishing. Coated with diamond in a honeycomb pattern for fast cutting with no gouging or catching. Run wet or dry on hard and soft metals, including platinum, palladium and white gold, and even soft stones. Measures 1½"W x 18<sup>15</sup>/<sub>16</sub>"L. Use with Expander Drum (see below).

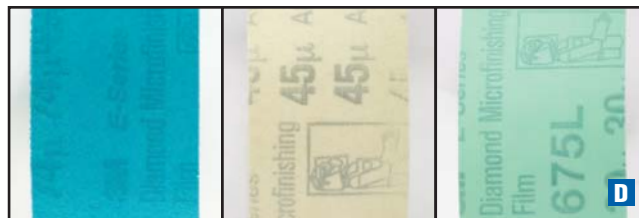
Description	Grit	Item#	Each
Flex Diamond Belt	220	<b>109-8453</b>	<b>\$66.00</b>



### D 3M™ Diamond Micro Finishing Film Belts

Consist of precision-graded diamond abrasive bonded onto flexible film backing. Cut faster than aluminum oxide and silicon carbide. Run wet or dry on metals, stone, glass, enamel, plastic and more. Color-coded for easy grit identification. Measure 1½"W x 18<sup>15</sup>/<sub>16</sub>"L. Use with Expander Drum (see below).

Description	Color	Mesh	Item#	Each
Diamond Film Belt	Aqua	220	<b>109-8452</b>	<b>\$13.99</b>
	Yellow	320	<b>109-8454</b>	<b>13.99</b>
	Green	400	<b>109-8455</b>	<b>13.99</b>



### E Expander Drum

This rubber drum expands while running to grip belts securely yet allows simple belt removal. Measures 6" dia. x 1½" thick x 1" AH. Mount on MAX units or polishing motors with included ¾", ⅝" and ½" plastic arbor hole inserts. Max. operating speed: 2,400rpm.

Description	Item#	EACH Prices	
		1-2	3+
Expander Drum	<b>840-1257</b>	<b>\$51.75</b>	<b>\$46.58</b>



### F 3M™ Lapping Film Discs

Consist of aluminum oxide abrasive resin-bonded onto tough PSA backing. Color-coded for easy grit identification. Measure 5" dia. Sold in packages of 10. Use with Stikit Vinyl Backpads (see below).

Description	Color	Micron	Item#	Pkg. of 10
Lapping Film Disc	Yellow	30	<b>105-2230</b>	<b>\$6.45</b>
	Pink	12	<b>105-2212</b>	<b>6.45</b>
	Blue	9	<b>105-2029</b>	<b>6.45</b>
	Green	3	<b>105-2023</b>	<b>6.45</b>
	White	1	<b>105-2021</b>	<b>6.45</b>



### G, H 3M™ Stikit™ Vinyl Backpads

Cushioned backpads with vinyl face for use with lapping film discs. Conform to slightly curved surfaces and allow fast disc removal. Measure 5" dia. Mount on right of MAX units. Max. operating speeds: 12,000rpm for male and 10,000rpm for female.

Description	Item#	Each
G. Male Backpad, ⅝" shaft	<b>105-2005</b>	<b>\$21.58</b>
H. Female Backpad, ⅝" arbor hole	<b>105-2007</b>	<b>23.40</b>





**A JoolTool Finishing System – The space-saving do-it-all finishing system!**

Provides first-rate lapping, polishing, grinding, sharpening, sanding and deburring results. Reduces or eliminates the need for bench grinders, belt sanders, sharpeners and the like. Includes JoolTool power tool, Ninja Disc Backpad, three Ninja Purple Discs (one of each grit), eight Ninja Trizact Discs (two of each grit), Ninja 2½" Buff & Polish Felt Disc, tapered spindle, Allen wrench, 5A fuse and demo CD-ROM.

The JoolTool power tool has a compact, ergonomic vertical design with 17° tilt toward the user for comfortable operation, rugged construction for continuous use and powerful motor for high torque at all speed settings. Accommodates discs and wheels up to 3" in diameter. Flex shaft attachment also available for using smaller tools with all flex shaft handpieces except 25H, 30H and 44HT (see pp. 345–348 for handpieces). Electrical: 110/220V. Measures 8" dia. x 12"H with 1½" dia. vent for optional vacuum hookup. Operating speed: 500–5,000rpm. Backed by a one-year warranty. Made in USA.

Ninja accessories have a revolutionary see-through design for clear view of work in progress. Impart clean, uniform finishes.

Description	Item#	Each
A. JoolTool Finishing System	<b>854-1775</b>	<b>\$279.99</b>
Flexible Shaft Attachment	<b>854-1819</b>	<b>39.99</b>



**B Ninja™ Disc Backpad and Disc Cushion**

Uniquely designed hard backpad and soft cushion for holding all Ninja Discs, which are backed with adhesive and cut to match. Purchase extra backpads to make disc changes fast and easy and to prevent abrasive damage. Sandwich resilient polyurethane cushions between discs and backpads to eliminate chatter and conform better to contoured areas. Measure 3" diameter. Max. operating speed: 3,650rpm.

Description	Item#	Pkg. of 3
B. Disc Backpad	<b>854-1777</b>	<b>\$38.99</b>
Disc Cushion	<b>854-1798</b>	<b>32.99</b>



**C 3M™ Ninja™ Scotch-Brite™ Discs**

Scotch-Brite fiber discs glued to Ninja Backpads. Choose from three grades: coarse for sprue removal, medium for cleaning castings and fine for prepolishing. Conform to workpieces to prevent flat spots. Measure 3" diameter. Max. operating speed: 3,650rpm.

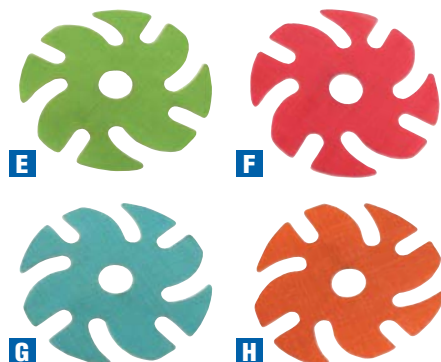
Description	Grade	Item#	Each
C. Scotch-Brite Disc	Coarse	<b>854-1792</b>	<b>\$24.99</b>
	Medium	<b>854-1790</b>	<b>24.99</b>
	Fine	<b>854-1789</b>	<b>24.99</b>
3-Piece Set (1 of each grade)		<b>854-1796</b>	<b>73.99</b>



**D 3M™ Ninja™ Purple Discs**

Self-adhesive fast-cutting discs for use on a variety of metals, including platinum, gold, silver, brass, steel and copper. Ideal for high-speed grinding, sprue removal and tool sharpening. Measure 3" diameter. Max. operating speed: 3,650rpm.

Description	Grit	Item#	Pkg. of 6
D. Purple Disc	80	<b>854-1778</b>	<b>\$16.99</b>
	120	<b>854-1779</b>	<b>16.99</b>
	220	<b>854-1788</b>	<b>16.99</b>
9-Piece Set (3 of each grit)		<b>854-1791</b>	<b>24.99</b>



**E - H 3M™ Ninja™ Trizact™ Discs**

Self-adhesive Trizact discs for use on a variety of metals and materials, including platinum, gold, silver, brass, copper, acrylics, solid surfaces such as Corian and nonprecious and semiprecious stones such as opals and turquoise. Also excellent for sharpening chisels, gravers, knives and other tools. Measure 3" diameter. Max. operating speed: 3,650rpm.

Description	Color	Micron	Item#	Pkg. of 6
E. Trizact Disc	Green	35	<b>854-1784</b>	<b>\$17.99</b>
F. Trizact Disc	Red	20	<b>854-1785</b>	<b>17.99</b>
G. Trizact Disc	Blue	10	<b>854-1786</b>	<b>17.99</b>
H. Trizact Disc	Orange	5	<b>854-1787</b>	<b>17.99</b>
12-Piece Set (3 of each grit)			<b>854-1793</b>	<b>25.99</b>



### A - D 3M™ Ninja™ Micro Finishing Film Discs

Self-adhesive AIO discs for use on precious metals and more. Color-coded for easy grit identification. Measure 3" diameter. Max. operating speed: 3,650rpm.

Description	Color	Micron	Item#	Pkg. of 6
A. Micro Film Disc	Brown	60	<b>854-1828</b>	<b>\$17.99</b>
B.	Green	30	<b>854-1829</b>	<b>17.99</b>
C.	Orange	15	<b>854-1830</b>	<b>17.99</b>
D.	Blue	9	<b>854-1831</b>	<b>17.99</b>
12-Piece Set (3 of each grit)			<b>854-1799</b>	<b>24.99</b>

### E - H 3M™ Ninja™ Diamond Micro Finishing Film Discs

Self-adhesive discs made of diamond abrasive bonded onto flexible film backing. Cut faster than SiC and AIO. Color coded for easy grit identification. Measure 3" diameter. Max. operating speed: 3,650rpm.

Description	Color	Mesh	Item#	Pkg. of 2
E. Diamond Micro Film Disc	Aqua	220	<b>854-1833</b>	<b>\$24.99</b>
F.	Yellow	320	<b>854-1834</b>	<b>24.99</b>
G.	Green	400	<b>854-1835</b>	<b>24.99</b>
H.	Brown	600	<b>854-1836</b>	<b>24.99</b>
4-Piece Set (1 of each grit)			<b>854-1797</b>	<b>39.99</b>

### I 3M™ Ninja™ Premium Diamond and Cerium Oxide Discs

Self-adhesive discs made of premium-grade diamond embedded in ceramic bead and resin-bonded to tough waterproof backing. Create a wet polished look on precious and semi-precious stones and watch crystals. Provide superior results with fewer steps and reduced processing time. Measure 3" diameter. Max. operating speed: 3,650rpm.

Description	Mesh	Item#	Each
Premium Diamond Disc	1800	<b>854-1823</b>	<b>\$21.99</b>
	3000	<b>854-1824</b>	<b>21.99</b>
	8000	<b>854-1825</b>	<b>21.99</b>
	50000	<b>854-1826</b>	<b>21.99</b>
Cerium Oxide Discs (2)	Final polish	<b>854-1827</b>	<b>15.99</b>
I. 6-Piece Set (1 of each diamond, 2 cerium oxide)		<b>854-1822</b>	<b>85.99</b>

### J - O 3M™ Ninja™ Polishing Paper Discs

Self-adhesive discs made of SiC or AIO abrasive bonded onto flexible nonwoven backing. Ideal for removing fine scratches and oxidation from precious metals and more. Must be used with Ninja Disc Cushion and Backpad (see p. 316). Max. operating speed: 3,650rpm.

Description	Color	Micron	Item#	Pkg. of 6
J. Polishing Paper Disc	Green	30 (SiC)	<b>854-1839</b>	<b>\$14.99</b>
K.	Gray	15 (SiC)	<b>854-1840</b>	<b>14.99</b>
L.	Blue	9 (AIO)	<b>854-1841</b>	<b>14.99</b>
M.	Pink	3 (AIO)	<b>854-1842</b>	<b>14.99</b>
N.	Lt. Blue	2 (AIO)	<b>854-1843</b>	<b>14.99</b>
O.	Mint	1 (AIO)	<b>854-1844</b>	<b>14.99</b>
12-Piece Set (2 of each grit)			<b>854-1838</b>	<b>38.50</b>

### P, Q 3M™ Ninja™ Lapping Film Discs

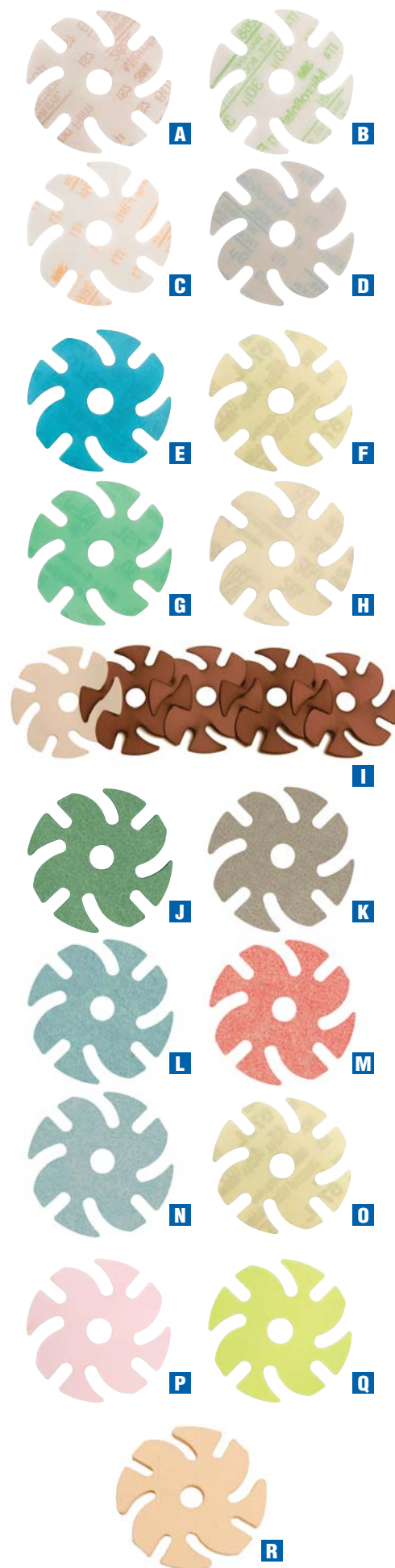
Self-adhesive discs made of finely graded abrasive bonded onto film backing. Great for final polishing in place of felt and compounds. Must be used with Ninja Disc Cushion and Backpad (see p. 316). Measure 3" diameter. Max. operating speed: 3,650rpm.

Description	Color	Micron	Item#	Pkg. of 6
P. Lapping Film Disc	Pink	3	<b>854-1820</b>	<b>\$17.99</b>
Q.	Lime	1	<b>854-1821</b>	<b>17.99</b>
6-Piece Set (3 of each grit)			<b>854-1795</b>	<b>17.99</b>

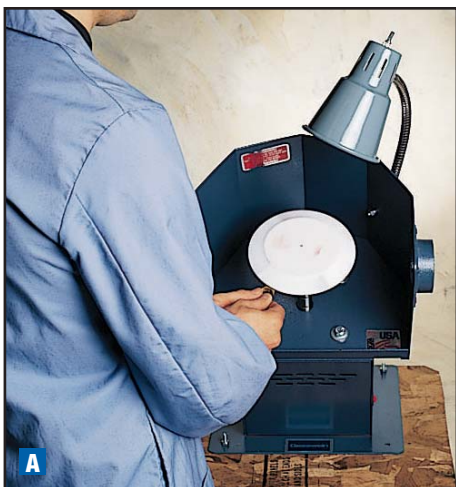
### R Ninja™ Buff & Polish Felt Disc

Self-adhesive felt disc for use with standard cutting and polishing compounds to bring your jewelry parts to a mirror shine while maintaining perfect geometry. Measures 3" diameter. Max. operating speed: 3,650rpm.

Description	Item#	Each
Buff and Polish Felt Disc	<b>854-1837</b>	<b>\$17.99</b>







**A**

**A Split Lapping Machine**

Features 1/2 HP ball-bearing motor mounted at a 45° angle for great visibility. Lets you see work surface. Includes heavy-gauge steel hood with 3" inlets for your dust collector, tapered spindle and adjustable light. Sold alone or mounted on a 24"W x 24"D x 28½"H heavy-gauge steel table with laminated top and 6' grounded cord. Measures 15"W x 18"D x 20"H. Electrical: 110V, 6.2A, 60Hz (220V, 50Hz available). Max. operating speed: 3,450rpm. Accepts 6", 7" or 8" split laps (see pp. 86–87). To improve visibility of work in progress, mark split lap bevels with black crayon (sold separately).

Description	Ship. Wt.	Item#	Each
A. Split Lapping Machine	46 lbs.	<b>854-1802</b>	<b>\$385.00</b>
Split Lapping Machine with Table	168 lbs.	<b>854-4000</b>	<b>830.00</b>
Optional Black Crayon		<b>810-0425</b>	<b>1.95</b>
Replacement Steel Hood		854-1805	130.00
Replacement Tapered Spindle		840-5361	27.95



**B**

**B, C Foredom® Bench Motor – 1/6 HP; 500–7,000rpm**

This high-torque permanent-magnet motor provides ample power for grinding and polishing tasks. Features variable speed control, permanently lubricated ball bearings, fully sealed motor housing, cast-iron base and power light. Includes two tapered spindles for buffs up to 4" diameter, threaded right wheel mandrel for wheels up to 2" diameter and right collet holder with ⅜" and ¼" collets. Electrical: 110V, 2A, 50/60Hz. Measures 13" wide from spindle to spindle with 6"W x 5"D base. Motor height: 5½". Shaft height: 3¾". Shaft diameter: ⅝". Available with or without polishing hoods.

Each polishing hood collects metal particles and polishing dust to help keep your shop clean. Includes 2" connection pipe for most shop-vacs. Measures 4¾"W x 8"D x 6⅜"H. Jacobs Chuck Arbor allows mounting of tools with ⅛"-¼" shanks. Includes chuck key.

Description	Item#	Each
B. Bench Motor with Polishing Hoods	<b>850-0625</b>	<b>\$250.00</b>
Bench Motor only	<b>850-0619</b>	<b>185.00</b>
Polishing Hood only	<b>850-0626</b>	<b>49.00</b>
C. Optional Jacobs Chuck Arbor	<b>850-0629</b>	<b>45.00</b>
Optional Left Wheel Mandrel	<b>850-0613</b>	<b>14.00</b>
Optional ⅛" Collet for Right Collet Holder	<b>850-5430</b>	<b>7.00</b>
Replacement Right Wheel Mandrel	850-0621	14.00
Replacement ⅜" Collet for Right Collet Holder	850-5420	7.00



**C**



**D**

**D Polishing Starter Set**

Designed for your Foredom Bench Motor. Includes Water-Soluble Compound Set #215-1760 (four 1 lb. bars: Gray Star for fast cutting, Tripoli for removing scratches, Premium Red Rouge for polishing yellow gold and Green Rouge for polishing silver and white gold), two 4" Stitched White Muslin Buffs #140-2450, two 4" Loose White Muslin Buffs #140-4350 and four ¾" SUPRA "MK" Wheel Brushes #113-0600 for accessing tight areas.

Description	Item#	Each
Polishing Starter Set	<b>810-0045</b>	<b>\$15.25</b>

**Polishing Safety Measures**

- Many polishing compounds contain respirable silica or other hazardous ingredients. Be sure to use a dust collector to pull all polishing dust away from your breathing zone, and wear a properly fitted respirator rated for the specific dust or chemicals with which you are working.
- Any grinding operation will remove small amounts of metal from the workpiece. To protect your eyes from flying debris, always wear safety goggles or similar eye protection.
- Tie back loose hair and clothing to prevent entanglement in the polishing motor or spindle.
- Firmly twist the buff onto the tapered spindle before turning on the motor, and keep the buff centered and straight to ensure true running. With the spindle correctly installed, turning force of the motor will keep the buff safely mounted during grinding and polishing.
- Always use the lower quarter of the buff to control the action and to prevent the workpiece from being pulled from your grip. Never entwine your fingers with the workpiece; instead hold it in a manner that will prevent your fingers from being harmed should it be pulled from your grip.

### A MicroVac III Under-Bench Dust Collector

The sophisticated, powerful MicroVac III provides quiet, efficient dust collection at your bench. Extracts 99.99% of dust from the air. Positioned vertically in an easily accessible door, a bag filter with barrier mat allows dust to settle to the bottom to maintain suction and extend filter life. An extra-fine cartridge filter captures tiniest dust particles.

Features two-stage turbine with muffler that offers enough power to collect dust from two stations at once, control knob for fully adjustable suction and auxiliary outlet that provides the option to operate both your MicroVac III and flex shaft or micromotor at the flip of one switch (manual switch allows override).

Sold with 6' hose only or 6' hose, safety-glass face shield on stand and magnetic handrest. Includes mounting plate and all hardware for optional under-bench attachment and set of filters. Has 1½" dia. inlet in back. Noise level: 52–61 dB. Electrical: 120V, 60Hz. Measures 10½"W x 14½"D x 15"H. Backed by a one-year warranty. CE approved. Made in Germany.



Face shield on stand



A

Description	Ship Wt. (lbs.)	Item#	Each
A. MicroVac III w/ 6' hose only	46	<b>854-2128</b>	<b>\$1,150.00</b>
MicroVac III w/ all accessories	54	<b>854-2127</b>	<b>1,295.00</b>
Optional Standard Bag Filters (3)		<b>854-2119</b>	<b>39.95</b>
Replacement Bag Filters with Mat (3)		854-2117	74.85
Replacement Cartridge Filter		854-2121	74.25

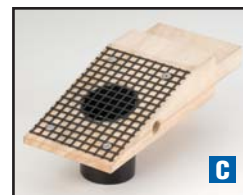
### B, C ARBE Under-Bench Vacuum System

This compact, efficient, quiet system fits neatly under or next to your bench, removing air contaminants while you work. Features a fish-mouth suction hood that can be placed on top of your bench to pull dust and fumes away from your face. Has on/off switch on top for easy accessibility.

Includes 6'L x 1½" dia. flexible hose and two quick-change filters: disposable bag filter for particulate (send to your refiner when full) and activated charcoal filter for odors (replace every 6–8 months). Optional vacuum bench pin sold separately (see below). Airflow: 110 CFM. Noise level: 56 dB. Electrical: 110V, 4.5A, 50/60Hz. Measures 10"W x 15¼"D x 14"H. Backed by a one-year warranty. Made in USA.



B



C

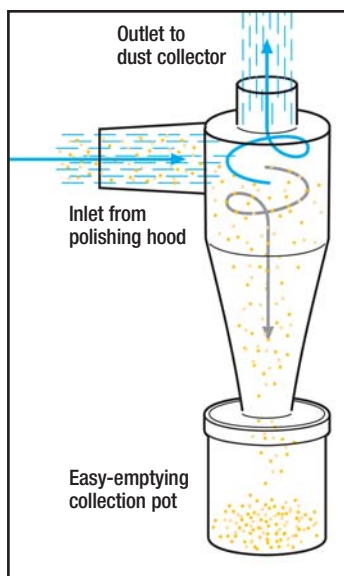
Description	Item#	Each
B. Under-Bench Vacuum System	<b>854-1762</b>	<b>\$497.00</b>
C. Optional Vacuum Bench Pin	<b>854-1769</b>	<b>49.95</b>
Replacement Bag Filters (6)	854-1763	29.95
Replacement Charcoal Filter	854-1764	29.95

### D The Accumulator™

**Collects 90–95% of all precious metal dust particles!**

A problem-solving prefilter for your current dust collection system. Protects workers and equipment from harm, collecting dust and precious metal before they reach the dust collector. How it works: (1) air with dust and debris enters the swirling vortex inside the Accumulator; (2) dust and debris separate out of air and fall into Accumulator bowl; (3) cleansed air, 95% free of dust and debris, flows out of the Accumulator and into your dust collector.

Installs between your existing dust collector and polishing stations. Adapts easily with PVC fittings and can be mounted anywhere along the line. Creates no noticeable drop in suction. Made of durable polyethylene. Choose from small (for 1 station), medium (for 1–2 stations) and large (for 1–4 stations) styles. Made in USA.



Style	Size (L x W x H)*	Hose Inlets**	Item#	Each
D. Small	9" x 4½" x 13¾"	1½"	<b>854-0995</b>	<b>\$130.00</b>
Medium	11" x 6" x 24"	2½", 3"	<b>854-1000</b>	<b>138.00</b>
Large	13½" x 8" x 30"	4"	<b>854-1005</b>	<b>235.00</b>

\*Allow 2" extra height for cup removal. \*\*Adapters available for other hose sizes.



D



**A**



**B**

**A, B Quatro Two-Station SPU and Junior SPU (Standup Polishing Unit)**  
**Capture more precious metal and keep your shop cleaner!**

These units use progressive filtration systems to capture all your precious metal dust, not just a portion of it. Recover more metal for refining and keep your workplace cleaner and healthier than ever before. Choose from Two-Station and Junior models.

An excellent choice for many large shops, the Two-Station SPU comes with Baldor 1/4 HP two-speed double-spindle polishing motor and two tapered spindles. Also includes two lighted Clearview hoods, prefilter, bag filters and HEPA filter.

An ideal fit for small shops, the Junior SPU comes with Quatro 1/4 HP two-speed single-spindle polishing motor and tapered spindle. Choose from Deluxe and Standard types: Deluxe includes lighted Clearview hood, prefilter, bag filters and HEPA filter; Standard includes lighted metal hood with Plexiglas safety shield, prefilter and bag filters.

Clearview hoods fully enclose buff areas, trapping precious metal dust inside. Energy-efficient, low-heat lights in hoods use up to 75% less power than incandescent lights and keep your work area much cooler. Affordable, easy-to-change prefilters under the hoods collect large particles, and subsequent filters capture tiny particles (as small as 0.3 micron with HEPA filter), after which clean air is recirculated back into the room.

**Features:**

- Advanced filtration systems and powerful suction motors for maximum metal dust recovery.
- Strategically placed inlet locations right below motor spindles for optimal intake.
- Office-friendly whisper-quiet operation.
- Optional on/off foot pedal for on-the-fly polishing.

Specifications:	Two-Station SPU	Junior SPU Deluxe	Junior SPU Standard
Suction Motor			
Electrical	120V, 9.2A, 1 Ph, 60Hz	120V, 4.6A, 1 Ph, 60Hz	120V, 4.6A, 1 Ph, 60Hz
	(240V available)		
Power	1 HP	1/2 HP	1/2 HP
Airflow	1,200 CFM	600 CFM	600 CFM
Polishing Motor	Baldor 1/4 HP two-speed: 3,450/1,725rpm	Quatro 1/4 HP two-speed: 3,450/1,725rpm	Quatro 1/4 HP two-speed: 3,450/1,725rpm
Dimensions (W x D x H)	40" x 20" x 53"	24" x 20" x 50"	18" x 19" x 44"

Description	Ship. Wt. (lbs.)	Item#	Each
<b>A.</b> Two-Station SPU w/ Baldor Motor*	227	<b>854-2080</b>	<b>\$2,800.00</b>
Junior SPU Deluxe w/ Quatro Motor*	136	<b>854-2183</b>	<b>1,689.00</b>
<b>B.</b> Junior SPU Standard w/ Quatro Motor*	137	<b>854-2086</b>	<b>1,495.00</b>
Optional On/Off Foot Pedal		<b>854-2094</b>	<b>95.00</b>
Replacement Clearview Hood		854-2090	208.00
Replacement Metal Hood (Junior only)		854-2089	119.00
Replacement Prefilters (20)		854-2091	46.00
Replacement Prefilters (500)		854-2095	123.00
Replacement Bag Filters (6)		854-2092	59.00
Replacement HEPA Filter		854-2093	117.00

\*Additional motors available—please call our Sales Department for details.



### A Benchtop Polisher/Dust Collector

Features suction motor with squirrel-cage turbine, 18-gauge steel construction for longevity, hinged front that tilts up for polishing large pieces and 1/2" lip for storing buffs and compounds. Holds buffs up to 6" in diameter, as well as long ring buffs. Includes replaceable fiberglass filter and double work light (60W bulbs not included). Available with or without polishing motor and tapered spindles (see below). Backed by a one-year warranty. Made in USA. Can be shipped UPS.

#### Specifications:

Suction Motor	
Electrical	110V, 50/60Hz
Airflow	368 CFM
Polishing Motor	
	#16 or #15 1/2 HP (3,450rpm) or
	#25 1/4 HP two-speed (3,450/1,725rpm)
Filter Size	29 <sup>3</sup> / <sub>4</sub> " x 11 <sup>3</sup> / <sub>4</sub> " x 2"
Dimensions	32 <sup>1</sup> / <sub>2</sub> "W x 22"D x 12"H



Description	Ship Wt. (lbs.)	Item#	Each
Benchtop w/ Motor #16	94	854-4008	\$675.00
A. Benchtop w/ Motor #15	91	854-4007	489.00
Benchtop w/ Motor #25	95	854-4004	740.00
Benchtop w/o Motor	58	854-4009	330.00
Replacement Filter		854-4012	9.95

### B Compact Double-Spindle Polisher/Dust Collector

Ideal for shops with very limited space. Features suction motor with squirrel-cage turbine, 18-gauge steel construction for longevity and 1/2 HP polishing motor. Holds buffs up to 6" in diameter. Includes replaceable fiberglass filter, 1/2" tapered spindles and double work light (60W bulbs not included). Backed by a one-year warranty. Made in USA. Can be shipped UPS.

#### Specifications:

Suction Motor	
Electrical	110V, 50/60Hz
Airflow	165 CFM
Polishing Motor	
	1/2 HP (3,450rpm)
Filter Size	22" x 12" x 2"
Dimensions	22 <sup>1</sup> / <sub>2</sub> "W x 19"D x 12"H



Description	Ship Wt. (lbs.)	Item#	Each
B. Compact D-S w/ Motor	57	854-4006	\$330.00
Replacement Filters (3)		854-4011	24.95

### C Compact Single-Spindle Polisher/Dust Collector

Ideal for shops with very limited space. Features suction motor with squirrel-cage turbine, 18-gauge steel construction for longevity and 1/2 HP polishing motor. Holds buffs up to 6" in diameter. Includes replaceable fiberglass filter, 1/2" tapered spindle and work light (60W bulb not included). Backed by a one-year warranty. Made in USA. Can be shipped UPS.

#### Specifications:

Suction Motor	
Electrical	110V, 50/60Hz
Airflow	165 CFM
Polishing Motor	
	1/2 HP (3,450rpm)
Filter Size	13" x 9 <sup>3</sup> / <sub>4</sub> " x 2"
Dimensions	15"W x 17"D x 10"H



Description	Ship Wt. (lbs.)	Item#	Each
C. Compact S-S w/ Motor	47	854-4005	\$339.00
Replacement Filters (3)		854-4010	23.95



**A - E Gesswein/Baldor® Motors**

Built to withstand the most demanding workloads. Feature sealed casings to keep internal parts free of dust, prelubricated ball bearings that last for the life of the motor and on/off switch. Backed by a three-year manufacturer's warranty. Can be taken to one of over 3,000 service centers in the U.S. for quick repairs. UL listed. Made in USA.

**A****A Baldor® #75 Sealed Motor – 3/4 HP; 3,600rpm**

Very strong motor for buffs up to 8" in diameter. Designed for continuous operation. Has threaded tapered shaft. Supplied with threaded tapered spindle. Motor height: 10<sup>1</sup>/<sub>2</sub>". Width to spindle end: 15<sup>7</sup>/<sub>8</sub>". Shaft height: 7<sup>1</sup>/<sub>8</sub>". Ship. wt: 46 lbs.

Model	Electrical	Base (W x D)	Item#	Each
A. #75R	220/380/415–440V, 3 Ph, 50/60Hz	8" x 8 <sup>1</sup> / <sub>2</sub> "	<b>854-1070</b>	<b>\$380.00</b>
#75L	220/380/415–440V, 3 Ph, 50/60Hz	8" x 8 <sup>1</sup> / <sub>2</sub> "	<b>854-1077</b>	<b>380.00</b>

*Plugs not supplied for 220V models. Other voltages available. Motor speed at 50Hz: 3,000rpm.*

**B****B Baldor® #50 Sealed Motor – 1/2 HP; 3,600rpm**

Heavy-duty motor for buffs up to 8" in diameter. Designed for continuous operation. Has threaded tapered shaft. Supplied with threaded tapered spindle. Motor height: 11<sup>5</sup>/<sub>8</sub>". Width to spindle end: 18". Shaft height: 8<sup>1</sup>/<sub>8</sub>". Ship. wt: 39 lbs.

Model	Electrical	Base (W x D)	Item#	Each
B. #50R	110V, 1 Ph, 50/60Hz	8" x 8 <sup>1</sup> / <sub>2</sub> "	<b>854-1050</b>	<b>\$390.00</b>
#50R	220V, 1 Ph, 50/60Hz	8" x 8 <sup>1</sup> / <sub>2</sub> "	<b>854-1052</b>	<b>420.00</b>
#50L	110V, 1 Ph, 50/60Hz	8" x 8 <sup>1</sup> / <sub>2</sub> "	<b>854-1051</b>	<b>390.00</b>

*Plugs not supplied for 220V model. Motor speed at 50Hz: 3,000rpm.*

**C****C Baldor® #29-1 Sealed Motor – 1/2 HP; 3,600rpm**

Double-spindle heavy-duty motor for buffs up to 8" in diameter. Has <sup>5</sup>/<sub>8</sub>" diameter straight shafts. Supplied with two tapered spindles. Motor height: 11<sup>1</sup>/<sub>2</sub>". Shaft height: 8<sup>1</sup>/<sub>8</sub>". Ship. wt: 51 lbs.

Electrical	Width to Spindle Ends	Base (W x D)	Item#	Each
110V, 1 Ph, 50/60Hz	29"	8" x 8 <sup>1</sup> / <sub>2</sub> "	<b>854-1250</b>	<b>\$475.00</b>

*Motor speed at 50Hz: 3,000rpm.*

**D****D Baldor® #16 Sealed Motor – 1/2 HP; 3,450rpm**

Sealed double-spindle motor for buffs up to 6" in diameter. Slightly tapered <sup>3</sup>/<sub>8</sub>" shaft tips allow quick change of chucks and hold spindles true, preventing buff wobble. Supplied with two Ritter friction-fit tapered spindles. Shaft height: 5". Ship. wt: 37 lbs.

Electrical	Width to Spindle Ends	Base (W x D)	Item#	Each
115V, 1 Ph, 60Hz	20 <sup>1</sup> / <sub>4</sub> "	6 <sup>1</sup> / <sub>2</sub> " x 7 <sup>1</sup> / <sub>2</sub> "	<b>854-1254</b>	<b>\$370.00</b>

**E****E Baldor® #25 Sealed Motor – 1/4 HP; 3,450/1,725rpm**

Sealed double-spindle two-speed motor for buffs up to 6" in diameter. Slightly tapered <sup>3</sup>/<sub>8</sub>" shaft tips allow quick change of chucks and hold spindles true, preventing buff wobble. Supplied with two Ritter friction-fit tapered spindles. Shaft height: 5<sup>1</sup>/<sub>4</sub>". Ship. wt: 37 lbs.

Electrical	Width to Spindle Ends	Base (W x D)	Item#	Each
115V, 1 Ph, 60Hz	20 <sup>1</sup> / <sub>4</sub> "	6 <sup>1</sup> / <sub>2</sub> " x 7 <sup>1</sup> / <sub>2</sub> "	<b>854-1030</b>	<b>\$355.00</b>

**F****F #15 Sealed Motor – 1/2 HP; 3,450rpm**

Sealed double-spindle motor with <sup>5</sup>/<sub>8</sub>" shafts. Supplied with two tapered spindles. Shaft height: 5". Ship. wt: 29 lbs. Imported.

Electrical	Width to Spindle Ends	Base (W x D)	Item#	Each
110V, 50/60Hz	21 <sup>1</sup> / <sub>2</sub> "	7 <sup>1</sup> / <sub>4</sub> " x 6 <sup>5</sup> / <sub>8</sub> "	<b>854-1265</b>	<b>\$198.00</b>

*Motor speed at 50Hz: 3,000rpm.*

### A Quatro Single-Spindle Motor – 3,450/1,725rpm

Single-spindle motor for buffs up to 8" in diameter. Features an open casing with filter for resistance to overheating. Has 1/2" diameter straight shaft. Supplied with tapered spindle. Electrical: 115V, 1 Ph, 60Hz. Motor height: 9 1/4". Shaft height: 6 3/8". Ship wt: 25 lbs.

Model	Width to Spindle End	Base (W x D)	Item#	Each
A. 1/4 HP	14 1/4"	7 1/4" x 8 1/2"	<b>854-1084</b>	<b>\$210.00</b>
1/2 HP	14 1/4"	7 1/4" x 8 1/2"	<b>854-1086</b>	<b>291.00</b>
3/4 HP	14 1/4"	7 1/4" x 8 1/2"	<b>854-1088</b>	<b>347.00</b>



**A**

### B Quatro Double-Spindle Motor – 3,450/1,725rpm

Double-spindle motor for buffs up to 8" in diameter. Features an open casing with filter for resistance to overheating. Has 1/2" diameter straight shafts. Supplied with two tapered spindles. Electrical: 115V, 1 Ph, 60Hz. Motor height: 9 1/4". Shaft height: 6 3/8". Ship wt: 25 lbs.

Model	Width to Spindle Ends	Base (W x D)	Item#	Each
B. 1/4 HP	21 1/2"	7 1/4" x 8 1/2"	<b>854-1085</b>	<b>\$251.00</b>
1/2 HP	21 1/2"	7 1/4" x 8 1/2"	<b>854-1087</b>	<b>323.00</b>
3/4 HP	21 1/2"	7 1/4" x 8 1/2"	<b>854-1089</b>	<b>379.00</b>



**B**

### C - P Tapered Spindles

Used to mount soft buffs onto polishing or lapping motors.

Description	I.D. R or L	Thread Length	Overall Length	Item#	Each
C. For #16, #25. Ritter left taper friction fit. No setscrews.	L	2 5/8"	3 5/8"	<b>840-5000</b>	<b>\$8.95</b>
D. For #16, #25. Ritter right taper friction fit. No setscrews.	R	2 5/8"	3 5/8"	<b>840-5050</b>	<b>8.95</b>
E. For #16, #25. Baldor left taper friction fit, brass. No setscrews.	L	2"	3 1/4"	<b>840-5055</b>	<b>22.40</b>
F. For #16, #25. Baldor right taper friction fit, brass. No setscrews.	R	2"	3 1/4"	<b>840-5056</b>	<b>22.40</b>
G. For straight shafts. Setscrews.	1/2"L	2 5/8"	4 1/2"	<b>840-5200</b>	<b>9.95</b>
H. For straight shafts. Setscrews.	1/2"R	2 5/8"	4 1/2"	<b>840-5250</b>	<b>9.95</b>
I. For #29-1, #15. For straight shafts. Setscrews.	5/8"L	2 5/8"	4 1/2"	<b>840-5300</b>	<b>9.95</b>
J. For #29-1, #15. For straight shafts. Setscrews.	5/8"R	2 5/8"	4 1/2"	<b>840-5350</b>	<b>9.95</b>
K. For straight shafts. Setscrews.	1/2"L	2 5/8"	6"	<b>840-5363</b>	<b>28.00</b>
L. For straight shafts. Setscrews.	1/2"R	2 5/8"	6"	<b>840-5362</b>	<b>28.00</b>
M. For #29-1, #15, Split Lapping Machine. For straight shafts. Setscrews.	5/8"L	2 5/8"	6"	<b>840-5361</b>	<b>27.95</b>
N. For #29-1, #15. For straight shafts. Setscrews.	5/8"R	2 5/8"	6"	<b>840-5360</b>	<b>27.95</b>
O. For #50L, #75L. No setscrews.*	L	2 5/8"	6"	<b>840-4710</b>	<b>19.50</b>
P. For #50R, #75R. No setscrews.*	R	2 5/8"	6"	<b>840-4700</b>	<b>19.50</b>

\*Also for Whirlwind and Red Wing motors. Threaded and tapered.



**C**  
**D**  
**E**  
**F**  
**G**  
**H**  
**I**  
**J**  
**K**  
**L**  
**M**  
**N**  
**O**  
**P**

### Q - U Arbors

Used to mount wheels with 1/2" arbor holes onto polishing or lapping motors.

Description	I.D. R or L	For Wheel Thickness	Overall Length	Item#	Each
Q. For straight shafts. Setscrews.	1/2"L	1"	4 1/4"	<b>840-4500</b>	<b>\$21.00</b>
R. For straight shafts. Setscrews.	1/2"R	1"	4 1/4"	<b>840-4550</b>	<b>21.00</b>
S. For #29-1, Split Lapping Machine.	5/8"L	1 1/2"	6"	<b>840-4660</b>	<b>31.00</b>
T. For #29-1.*	5/8"R	1 1/2"	7"	<b>840-4668</b>	<b>31.00</b>
U. For #50, #75R.**	R	1 1/2"	5 3/4"	<b>840-4670</b>	<b>31.00</b>

\*Has extended tapered spindle for cloth buffs.

\*\*Threaded and tapered.



**Q**  
**R**  
**S**  
**T**  
**U**



### A Quatro Clearview Hood

Helps you reclaim more precious metal and keeps your shop cleaner. Features acrylic sides, back and top for optimal viewing of polishing operations. Includes rubber sweeper strips in front and at the spindle inlet to provide maximum containment of precious metal and compound dust. Works on left or right side of polishing motor. Has 3" rear inlet for dust collector hose (hose clamp included). Available with or without metal collection drawer with wipe-clean enamel finish and low-heat light (both can also be easily retrofitted to any Clearview Hood). Measures 18"W x 18"D x 17"H with drawer and 15"W x 17"D x 14½"H without drawer. Assembly required.

Description	Item#	Each
Clearview Hood with Drawer, Mesh Bottom and Light	<b>854-2185</b>	<b>\$353.00</b>
Clearview Hood with Drawer	<b>854-2096</b>	<b>300.00</b>
A. Clearview Hood	<b>854-2090</b>	<b>208.00</b>
Clearview Metal Collection Drawer (for retrofit)	<b>854-2097</b>	<b>99.00</b>
Clearview Low-Heat Light (for retrofit)	<b>854-2088</b>	<b>61.00</b>
Clearview Replacement Sweeper Strips, pair	854-2186	26.95



### B Quatro Fluorescent Jeweler's Hood

Powder-coated heavy-gauge metal hood with Plexiglas shield for protection from debris and dust, fluorescent light fixture with on/off switch, 60W fluorescent bulb and 3" screened rear inlet. Works on either side of motor. Measures 8"W x 10"D x 12"H.

Description	Item#	Each
Fluorescent Jeweler's Hood	<b>854-2089</b>	<b>\$119.00</b>



### C Incandescent Jeweler's Hood

Powder-coated heavy-gauge metal hood with two incandescent light fixtures and 3" screened rear inlet. Requires two 60W incandescent bulbs. Works on either side of motor. Measures 12¾"W x 16"D x 15"H.

Description	Item#	Each
Incandescent Jeweler's Hood	<b>854-3104</b>	<b>\$96.75</b>



### D Jeweler's Hood Shield

This adjustable shield protects the user from flying particles. Fits on any jeweler's hood. Meets OSHA requirements. Made of clear acrylic. Measures 6"W x 9"H x 1/8" thick.

Description	Item#	Each
Jeweler's Hood Shield	<b>854-3105</b>	<b>\$23.50</b>



### E Quatro Blast Gate

A 3" gate used for multi-station collection. Install to shut off suction at one station and increase suction at others.

Description	Item#	Each
Blast Gate, 3"	<b>854-1518</b>	<b>\$42.00</b>



### F - H Flexible Hose, Hose Clamp and Duct Tape

Use our heavy-duty 3" diameter hose to connect dust collection equipment. Features low-profile ribs for maximum suction. Sold by the foot. Secure with hose clamps or duct tape.

Description	Item#	Each
F. Flexible Hose, 1' length	<b>854-3050</b>	<b>\$7.40</b>
G. Hose Clamp	<b>854-3060</b>	<b>4.25</b>
H. Duct Tape, 2"W x 180'L Roll	<b>854-3119</b>	<b>7.25</b>

### A Quatro Air Wedge Collection Port

A versatile collection port for recovering precious metal dust right at your bench. Pulls dust and contaminants away from your face before you breathe them in. Perforated base ensures particles stay within the work area. Plexiglas shield lifts off for easy access to tray below. Flange can be positioned under or behind unit for connection to hose leading to dust collector. Blast gate lets you cut off airflow when unit is not in use. Measures 12"W x 10"D x 10"H with 3" diameter inlet. Made in Canada.

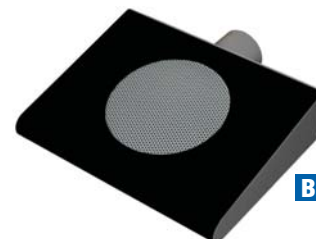
Description	Item#	Each
Air Wedge Collection Port	854-1386	\$181.00



### B Quatro Airport Collection Port

Allows you to recover precious metal dust right at your bench. Features ergonomic cushioned design. Measures 12"W x 9½"D x 3¼"H with 3" diameter inlet.

Description	Item#	Each
Airport Collection Port	854-1516	\$131.00



### C Quatro Fishmouth Collection Port

Allows you to recover precious metal dust right at your bench. Features powder-coated heavy-duty steel construction. Measures 8"W x 9½"D x 5"H with 3" diameter inlet.

Description	Item#	Each
Fishmouth Collection Port	854-1517	\$92.00



### D Arbor with Bur Chuck

For right side of motor only. Fits ½" shafts. Features keyless three-jaw chuck for holding up to ¼" shanks. Measures 4" long.

Description	Item#	Each
Arbor with Bur Chuck	840-4150	\$31.00



### E Mandrel Chuck

For right side of motor. Screws snugly onto tapered spindle. Holds ⅜" and ½" shanks. Measures 3½" long.

Description	Item#	Each
Mandrel Chuck	840-4250	\$8.90



### F Polishing Gizmo

Made of select hardwood, Gizmo provides a safer method of holding chains, bracelets and rings for polishing. Wrap the chain around the Gizmo and hold it to the polishing wheel. Its large diameter exposes a greater length of chain to the wheel, allowing for faster and more thorough polishing. Get one Gizmo for each compound to avoid buff contamination. Measures 2½" dia. x 6½"L. Accommodates ring sizes 3–17.

Description	Item#	Each
Polishing Gizmo	812-0360	\$10.95



### G Wooden Bracelet Holder

Securely supports your bracelets, chains and more as you polish. Helps prevent tangles. Measures approx. 3½" long.

Description	Item#	EACH Prices	
		1-9	10+
Wooden Bracelet Holder	840-4455	\$4.95	\$3.96



### H, I Wooden Drill Sticks

Safety devices for holding rings while drilling or polishing. You can also wrap chain around wood drill sticks while working. The 6" stick tapers from 1" to ⅜", and the 7" stick tapers from 1½" to ⅜".

Description	Length	Item#	EACH Prices		
			3-9	12-141	144+
H. Wooden Drill Stick	6"	816-1710	\$1.40	\$1.19	\$0.98
I.	7"	816-1700	1.95	1.66	1.37



Three-piece minimum; please order in multiples of three.





**A**



**B**



**C**



**D**

**A - D Quatro Velocity Dust Collectors**

These professional units collect 99.97% of all compound dust and precious metal particulate down to submicron levels. Ideal for grinding and polishing applications. Prefilter and state-of-the-art cartridge filter ensure return air is absolutely clean, eliminating the need for outside ventilation. Built-in collection tray captures your precious metal dust and lets you reclaim it without removing the cartridge filter.

Choose from 1-Port, 2-Port, 4-Port and 4X4-Port models. The 1-Port includes 6' of 3" diameter flex hose and two hose clamps, 2-Port includes 12' of hose and four clamps, 4-Port includes 25' of hose and eight clamps, and 4X4-Port includes 50' of hose and 16 clamps. Electrical: 120V (240V available). Backed by a two-year manufacturer's warranty. CSA and CE approved. Made in Canada. Both the 1-Port and the 2-Port can be shipped UPS.

**Features:**

- Prefilter prolongs filter cartridge life 2–4 years.
- “Slide & Glide” easy-in/out filter cartridge captures particulate down to submicron particle levels.
- Advanced filtration technology with highest possible rating (Category C: 99.9% dust extraction) recirculates clean air back into the workplace.
- Built-in collection tray captures your precious metal dust for easy, immediate reclaiming.
- Inlet ports can be positioned on top or side of unit.
- Optional on/off foot switch, on/off remote button, silencer and odor filter also available.

Specifications:	1-Port	2-Port	4-Port	4X4-Port
No. of Stations	1	1–2	2–4	5–8
Suction Motor				
Electrical	120V, 5.3A, 50/60Hz	120V, 6.1A, 50/60Hz	120V, 9.2A, 50/60Hz	120V, 18A, 50/60Hz
Power	1/2 HP	3/4 HP	1 HP	2 HP
Airflow	200 CFM	400 CFM	800 CFM	1,600 CFM
Filter Area	25 sq. ft.	35 sq. ft.	60 sq. ft.	60 sq. ft.
Inlet Diameter	3"	3"	3"	3"
Net/Ship. Wt.	65/72 lbs.	73/80 lbs.	120/131 lbs.	140/233 lbs.

Description	Dimensions (W x D x H)	Item#	Each
<b>A.</b> 1-Port Velocity Dust Collector	14" x 19½" x 16"	<b>854-1383</b>	<b>\$905.00</b>
<b>B.</b> 2-Port Velocity Dust Collector	14" x 25" x 17"	<b>854-1382</b>	<b>1,170.00</b>
<b>C.</b> 4-Port Velocity Dust Collector	18" x 25½" x 23"	<b>854-1380</b>	<b>1,525.00</b>
<b>D.</b> 4X4-Port Velocity Dust Collector	18" x 34" x 23"	<b>854-1381</b>	<b>1,950.00</b>
Optional On/Off Foot Pedal for all units		<b>854-2094</b>	<b>95.00</b>
Optional On/Off Remote Button for all units		<b>854-1515</b>	<b>46.00</b>
Optional Silencer for all units		<b>854-1528</b>	<b>88.00</b>
Optional Odor Filter for 4-Port and 4X4-Port		<b>854-1529</b>	<b>111.00</b>
Replacement 1-Port Prefilters (20)		854-1399	43.00
Replacement 2-Port Prefilters (20)		854-1392	48.00
Replacement 4-Port and 4X4-Port Prefilters (20)		854-1389	54.00
Replacement 1-Port Cartridge Filter		854-1398	69.00
Replacement 2-Port Cartridge Filter		854-1391	95.00
Replacement 4-Port and 4X4-Port Cartridge Filter		854-1388	115.00

### A Quatro CollectAll Dust Collector

This powerful unit uses a high-speed brushless turbine motor for removing precious metal, dust and fumes from the air before you breathe them in. Features three-stage filtration system that captures fumes and particulate down to 0.3 micron: bag filter captures large particles from grinding and polishing; odor filter captures rhodium and soldering fumes; HEPA filter captures the smallest particulate down to submicron levels. Returns 99.97% clean air to your shop, making outside ventilation unnecessary. Runs very quietly, so it's perfect for small shops, malls and other places where noise can pose a problem. Includes 6' of 3" dia. flex hose and hose clamps. Backed by a two-year manufacturer's warranty. Made in Canada.

#### Specifications:

Inlets	Two 3" dia. inlets in top
Suction Motor	1½ HP
Airflow	600 CFM
Noise Level	60 dBA
Electrical	120V, 9A, 1 Ph, 60Hz
Dimensions	17"W x 14"D x 26"H

Description	Net Wt.	Item#	Each
A. CollectAll Dust Collector	75 lbs.	<b>854-2184</b>	<b>\$1,695.00</b>
Optional On/Off Foot Pedal		<b>854-2094</b>	<b>95.00</b>
Replacement Bag Filters (6)		854-2092	59.00
Media Refills (4) for rhodium fumes		854-1396	145.00
Media Refills (4) for soldering fumes		854-1409	105.00
Replacement HEPA Filter		854-2093	117.00



### B Dust Collector #60B

This affordable dust collector fits neatly under many workbenches, saving precious bench space without taking up too much legroom. Includes silencer for quiet operation, external foot pedal for filter shakedown and removable catch pan for easy reclamation.

#### Specifications:

Inlets	Two 3" dia. inlets in back
Suction Motor	1/2 HP
Airflow	400 CFM
Electrical	110V, 9A, 1 Ph, 60Hz
Dimensions	15"W x 15½"D x 23½"H

Description	Ship. Wt.	Item#	Each
B. Dust Collector #60B	80 lbs.	<b>854-1370</b>	<b>\$795.00</b>
Replacement Filter Bags, set of 14		854-3152	279.00



### C Quatro Gold Vault Dust Collector

This affordable unit fits neatly under or beside many workbenches. Uses a variable-speed turbine motor for capturing all your valuable precious metal. Features a bag filter nested within a cartridge filter to keep the interior chamber much cleaner. Runs very quietly. Includes 6' of 1½" dia. flex hose and hose clamps. Backed by a two-year manufacturer's warranty. Made in Canada.

#### Specifications:

Inlet	One 1½" dia. inlet in top
Suction Motor	1 HP
Airflow	150 CFM
Electrical	120V, 7A, 1 Ph, 60Hz
Dimensions	9"W x 9"D x 19"H

Description	Net Wt.	Item#	Each
C. Gold Vault Dust Collector	28 lbs.	<b>854-1530</b>	<b>\$699.00</b>
Optional On/Off Foot Pedal		<b>854-2094</b>	<b>95.00</b>
Replacement Bag Filters (5)		854-1531	29.00
Replacement Filter Cartridge		854-1532	49.00





**A**

**A Quatro Fresh-Air Series HEPA Air Purifiers**

Ensure optimal gold recovery and air quality.

Polishing operations and bench work create a great deal of dust, some precious, some harmless and some toxic. Many dust collectors pick up much of the dust at the source, but jewelry polishing operations also allow a substantial amount of dust to become airborne and settle around the shop.

Fresh-Air Series Air Purifiers capture airborne dust and other contaminants in an advanced three-stage filtration system, then recirculate clean air back into the room. All provide complete room air exchange approx. 15 times per hour. Each includes smooth casters for easy relocation to dusty areas. Electrical: 120V (240V available). Please call for details on replacement filters. Optional odor filter also available by special order. Backed by a two-year manufacturer's warranty. Made in Canada.

**Filtration System Features:**

- Stage-1 Prefilter – Captures the biggest particles, prolonging the life of subsequent filters. Inexpensive and easy to change.
- Stage-2 HiCap Filter – Provides high-capacity particle retention. (Most precious metal will be captured by stage-1 and 2 filters, which can be sent to your refiner for reclamation.)
- Stage-3 HEPA Filter – Picks up 99.97% of 0.3 micron particulate, including soot and pollen. Recirculates clean air back into the room to help minimize heating and AC costs.

Specifications:	400	600	1000	2000
Max. Room Size (with 8' ceiling)	250 sq. ft.	400 sq. ft.	600 sq. ft.	1200 sq. ft.
Current Draw	0.6A	1.0A	1.6A	5.4A
Net Wt.	63 lbs.	119 lbs.	190 lbs.	350 lbs.

Description	Dimensions (W x D x H)	Item#	Each
Fresh-Air 400	13" x 16" x 28½"	<b>854-1523</b>	<b>\$920.00</b>
<b>A.</b> Fresh-Air 600	22" x 16" x 37"	<b>854-1522</b>	<b>1,640.00</b>
Fresh-Air 1000	22" x 16" x 52"	<b>854-1521</b>	<b>2,000.00</b>
Fresh-Air 2000	24" x 26" x 71"	<b>854-1520</b>	<b>3,135.00</b>



**B**

**B Quatro AirStream**

This unique air purifier is perfect for small shops because it mounts on the wall instead of taking up precious floor space. Captures airborne dust, odors and other contaminants down to 0.3 microns in an advanced filtration system, then recirculates clean air back into the room. Provides room air exchange approx. 15 times per hour. Max. room size: 200 sq. ft. (with 8' ceiling). Includes easy-to-use electronic controls and filter replacement alert. Backed by a two-year manufacturer's warranty. Made in Canada.

**Filtration System Features:**

- Stage-1 Dust/Odor Filter – Advanced fine-grade dust/odor filter impregnated with activated carbon.
- Stage-2 HEPA Filter – Picks up 99.97% of 0.3 micron particulate, including soot and pollen. Recirculates clean air back into the room to help minimize heating and AC costs.

**Specifications:**

Electrical	120V, 1.0A, 60Hz
Dimensions	16¾"W x 9¾"D x 23½"H
Net Wt.	47 lbs.

Description	Item#	Each
<b>B.</b> Quatro AirStream	<b>854-2099</b>	<b>\$895.00</b>
Replacement Dust/Odor Filter (6)	854-2098	40.00
Replacement HEPA Filter	854-2093	117.00

### A Quatro SolderPure Fume and Particulate Extractor

Ideal for brazing, dedrossing, electroforming, electroplating, laser cutting, marking and soldering applications. Removes acid activator, electrocleaner, rhodium, solder, solvent and wax fumes from the air before you breathe them (not suitable for cyanide).

Features a four-stage filtration system that captures fumes and particulate down to 0.3 micron: prefilter captures large particles to extend life of three subsequent filters; high-capacity dust filter captures small particulate; advanced refillable media filter formulated for specific applications captures fumes; HEPA filter captures smallest particulate down to submicron levels.

Returns 99.97% clean air to your workplace, making outside ventilation unnecessary. Includes capture hood with flex arm, which can be flexed and rotated 360° to accommodate any soldering or plating layout. Includes table bracket and 8' flex hose that can be cut to desired length for remote location as well as casters for mobility. Installs quickly and easily. Backed by a two-year manufacturer's warranty. Made in Canada.

#### Specifications:

Airflow	125 CFM
Noise Level	52 dBA
Electrical	120V, 1A, 60Hz
Dimensions	13"W x 16"D x 20"H
Net Wt.	47 lbs.

Description	Item#	Each
SolderPure for Rhodium, Electrocleaner and Soldering Fumes	<b>854-1375</b>	<b>\$1,325.00</b>
A. SolderPure for Rhodium and Electrocleaner Fumes	<b>854-1387</b>	<b>1,246.00</b>
SolderPure for Soldering and Wax Fumes	<b>854-1376</b>	<b>1,195.00</b>
Optional Blast Gate, 3"	<b>854-1374</b>	<b>32.00</b>
Optional Odor Filter	<b>854-1378</b>	<b>105.00</b>
Replacement Prefilters (6)	854-1393	24.00
Replacement Dust Filters (6)	854-1394	47.00
Media Refills (4) for rhodium fumes	854-1396	145.00
Media Refills (4) for soldering fumes	854-1409	105.00
Replacement HEPA Filter	854-2093	117.00



**A**

### B Quatro Ductless Fume Hoods

Ideal units for those without access to outside ductwork. Feature a two-stage filtration system that captures fumes, then recirculates clean air back into the room to save on heating and AC costs. Burnout fume hood installs right on wall behind burnout furnace. Rhodium fume hood installs directly over plating area. Each has a metal-frame filter container that holds an activated charcoal media mixture specifically formulated for the respective application. Backed by a two-year manufacturer's warranty. Made in Canada.

#### Specifications:

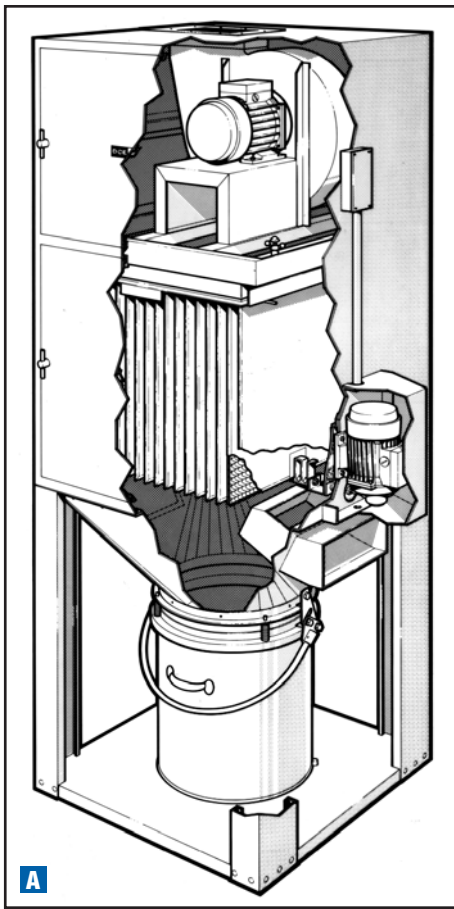
Electrical	120V, 1.6A, 60Hz
Dimensions	28"W x 18"D x 26"H
Net Wt.	50 lbs.

Description	Item#	Each
B. Burnout Fume Hood	<b>854-1525</b>	<b>\$1,130.00</b>
Rhodium Fume Hood	<b>854-1526</b>	<b>1,130.00</b>
Replacement Dust Filters (8)	854-2103	74.00
Stage-2 Media Refills (4) for both fumes	854-1409	105.00
Stage-3 Media Refills (4) for burnout fumes	854-1527	207.00
Stage-3 Media Refills (4) for rhodium fumes	854-1396	145.00
Replacement HEPA Filter	854-2079	117.00



**B**





**A Gesswein/DCE Vokes Dust Collector #68**  
**The finest in the industry. Provides better suction with less noise.**

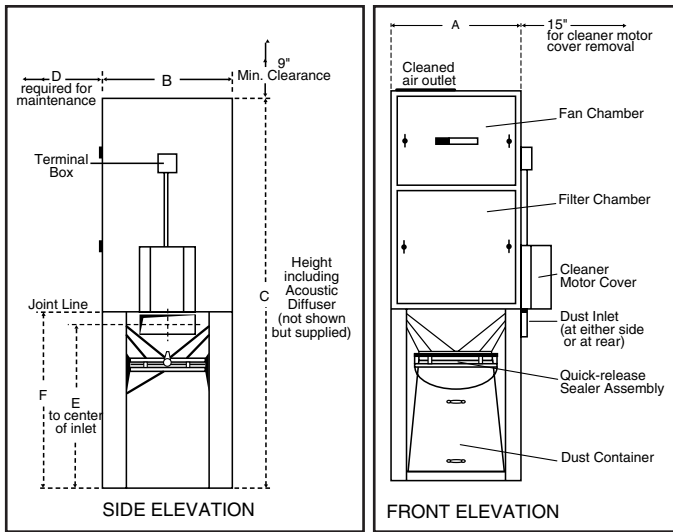
Equipped with a triple inlet hopper. A quick-release sealer gear provides an airtight seal between the hopper and the dust container. Filter bags are rigidly separated to prevent blockage. The automatic shaker vigorously cleans the filter bags for approximately 60 seconds every time the fan is switched off. Supplied with filter assembly and transition inlet. Backed by a full two-year warranty.

**Features:**

- Shakers for filter assembly activate automatically every time unit is switched off, keeping filters cleaner so they last longer.
- Fully electronic controller (switch box).
- Wide, flush-fitting front panels for fast, easy access to fan and filter chambers.
- Multi-pad filter assembly provides maximum fabric area for optimal filtration.
- High-quality filter fabric.
- One-piece multiple filter bag system minimizes the number of seals needed between the fabric and frame.
- Flexible wire mesh pad inserts ensure maximum effective use of fabric area.
- Airtight design for maximum efficiency.
- Built-in silencer reduces noise to level well within OSHA specifications: 71 dBA.
- A choice of three inlet positions for convenient location of unit in relation to workstations and for best use of available space.

**Specifications:**

No. of Stations	5-8	Dimensions	
Suction Motor	5 HP	A (Width)	2' 6 1/8"
Airflow	2,000 CFM	B (Depth)	2' 6 1/8"
Filter Area	150 sq. ft.	C (Height)	8' 3 1/2"
Min. Ceiling Ht.	9' 1/2"	D	2' 6"
Duct Diameter	8"	E	3' 1 1/2"
Dust Container	3 cu. ft.	F	3' 5"
Ship. Wt.	606 lbs. (approx.)		



Description	Item#	Each
A. Model 68 Dust Collector, 220V, 3 Ph, 60Hz	854-1750*	\$6,850.00
Model 68 Dust Collector, 415V, 3 Ph, 50Hz	854-1765*	8,195.00
Replacement Filter Assembly	854-1753	810.00

\*Prices FOB Kentucky. Additional charges for other voltages and for export crating.



**D01 Series Dust Collectors**

**Drastically improve precious metal recovery—  
 reduce your gold loss by 1-2%!**

Dust collection technology has taken a giant step forward with these very affordable single units, which offer greatly improved filters and suction capabilities. They quickly pay for themselves through increased precious metal recovery. Can service several to over 100 polishers. Feature high-tech easy-to-replace filters designed for polishers and filers alike. Please send us your individual requirements for an accurate price quote.

**A - C Goldwashers**  
**Precious metal recovery systems**  
**with automatic filters.**

These patented automatic hand-wash sinks recover precious metal from your workshop's soapy water. Feature inexpensive, corrosion-resistant 25 micron cartridge filters, which can be easily replaced and burned. Use powerful 500W motors to pump water through separation compartments at an impressive rate of 30 liters per minute—much faster than other models on the market. Have perfectly watertight covered tanks, which eliminate liquid stagnation and all its accompanying odors. Made of stainless steel and corrosion-resistant material. Include chrome-plated taps with separate handles for hot and cold water and indicator gauges for filter replacement.



**Specifications:**

Electrical 110V, 5A, 1 Ph, 500W, 60Hz  
 (220V, 50/60Hz available)

Cartridge Filter 25 micron

Description	Dimensions (W x D x H)	Net/Ship. Wt. (lbs.)	Item#	Each
A. 4-Tap Unit	50" x 18½" x 43¼"	172/227	<b>212-1085</b>	<b>\$6,350.00</b>
B. 2-Tap Unit	34¾" x 18½" x 43¼"	123/172	<b>212-1080</b>	<b>4,945.00</b>
C. 1-Tap Unit	19¾" x 18½" x 43¼"	90/140	<b>212-1090</b>	<b>4,065.00</b>
Replacement Filter			212-1087	23.99

**D Gold Catcher**

**Recovers all your precious metals before they go down the drain.**

By providing room for sedimentation in the tank, Gold Catcher captures your precious metals before they are lost forever, letting you turn them into cash at the refinery. Includes heavy-duty 8-gallon plastic drum with sealed lid, complete external 1½" diameter PVC connections for any sink or drain and easy-to-change, corrosion-resistant 40 micron filter. Has no pumps, moving parts or electrical components. Measures 13" dia. x 20½"H. Weighs just 7 lbs.

Description	Item#	Each
D. Gold Catcher	<b>856-1205</b>	<b>\$267.00</b>
Replacement Filter	856-1206	58.00



**E MIŞER™ Gold and Stone Trap**

Replaces standard P-Trap or S-Trap (1¼" or 1½") under your sink to collect small stones and gold particles. Made of durable, chemical-resistant PVC. Uses a 40 mesh nylon screen to trap particles as small as 0.030" (0.75mm). Easy to install, open and clean. Includes 1½" pipe fittings for installation in PVC or metal pipeline.

Description	Item#	Each
E. Miser Gold and Stone Trap	<b>856-1201</b>	<b>\$69.95</b>
Replacement Screen	856-1203	10.50



**F 3M™ Clean Walk Mat**

An adhesive-coated mat that can be used as a bench pan liner or doormat for dust and scrap collection. Includes 30 adhesive sheets on a 2.0mm polyethylene backing. Just peel back top sheet to expose fresh adhesive. Won't adhere to shoes or wheels. Measures 36"L x 18"W.

Description	Item#	EACH Prices	
		1-3	4+
Clean Walk Mat	<b>821-2965</b>	<b>\$45.99</b>	<b>\$41.39</b>



A

**A Kagan Wedding Ring Sizer**

One of the finest sizers available. Enlarges and reduces on the downstroke, requiring less effort than other models. Features eight-spline mandrel for enlarging rings up to size 14 and reversible reducer plate with 12 countersunk dies (six on each side) for gently compressing rings to smaller sizes. Can be bolted to bench or used as a portable sizer. Measures 16"L x 18"H. Ship. wt: 17¾ lbs. Made in USA.

Description	Item#	Each
A. Kagan Wedding Ring Sizer	<b>856-0350</b>	<b>\$378.00</b>
Replacement Eight-Spline Mandrel	856-0355	106.95



B

**B Premium Wedding Ring Sizer**

Sizes with almost no effort. Enlarges on the upstroke and reduces on the downstroke. Features six-spline mandrel for enlarging rings up to size 15 and reversible reducer plate with 16 countersunk dies (eight on each side) for gently compressing rings to smaller sizes. Also available without reducer plate for use as an enlarger only. Can be bolted to bench or used as a portable sizer. Ship. wt: 16 lbs. Made in Italy.

Description	Item#	Each
B. Premium Wedding Ring Sizer	<b>856-0375</b>	<b>\$365.00</b>
Wedding Ring Sizer w/o Reducing Plate	<b>856-0370</b>	<b>287.00</b>
Reducing Plate	<b>856-0376</b>	<b>97.00</b>
Replacement Six-Spline Mandrel	856-0377	134.75



C

**C PEPE Stepped Wedding Ring Sizer**

Sizes rings quickly and easily. Enlarges on the upstroke and reduces on the downstroke. Unlike traditional stretchers, which all use a tapered mandrel to stretch rings in two steps (first on one side and then on the other), often yielding uneven and disappointing results, this unit features a stepped, straight-wall mandrel for uniformly enlarging rings up to size 15 in just one step. Also has a reversible reducer plate with 16 countersunk dies (eight on each side) for gently compressing rings to smaller sizes. Can be bolted to bench or used as a portable sizer. Ship. wt: 23 lbs. Made in Europe.

Description	Item#	Each
C. Stepped Wedding Ring Sizer	<b>856-0382</b>	<b>\$245.00</b>
Replacement Step Mandrel	856-0383	97.95



D

**D PEPE Wedding Ring Sizer**

Sizes rings up to 12mm wide. Enlarges on the upstroke and reduces on the downstroke. Features six-spline mandrel for enlarging rings up to size 15 and reducing plate with 16 countersunk dies (eight on each side) for gently compressing rings to smaller sizes. Can be bolted to bench or used as a portable sizer. Ship. wt: 24 lbs. Made in Europe.

Description	Item#	Each
D. Wedding Ring Sizer	<b>856-0380</b>	<b>\$225.00</b>
Replacement Six-Spline Mandrel	856-0379	89.95



**A Kagan Stone-Set Ring Stretcher**

Enlarges stone-set rings using parallel rollers to stretch the shank without disturbing the stone. Includes eight dies for knife-edge, half-round, oval and flat shanks. Also works as a mini rolling mill for making filigree wire. Can be bolted to a workbench. Ship. wt: 8¾ lbs. Made in USA.

Description	Item#	Each
A. Kagan Stone-Set Ring Stretcher	<b>856-0300</b>	<b>\$283.50</b>
Replacement Die Set	856-0360	94.75

**B Stone-Set Ring Stretcher**

This economical, easy-to-use tool rolls out shanks of stone-set rings and thin wedding bands to stretch the metal and enlarge the size. Includes 17 polished rollers for different styles of rings with shanks up to 5mm wide. Can be bolted to a workbench. Ship. wt: 2¾ lbs.

Description	Item#	Each
Stone-Set Ring Stretcher	<b>856-0330</b>	<b>\$63.95</b>

**C Ring Bender IV**

Bends ring blanks into circular form prior to soldering. Can also shape other pieces, such as earrings and pendants. Includes three high-quality, hardened steel alloy dies for exceptional durability. Made of cast iron. Can be bolted to a workbench. Ship. wt: 5.7 lbs. Imported.

Description	Item#	Each
Ring Bender IV	<b>856-0415</b>	<b>\$315.00</b>

**D PEPE Ring Bender**

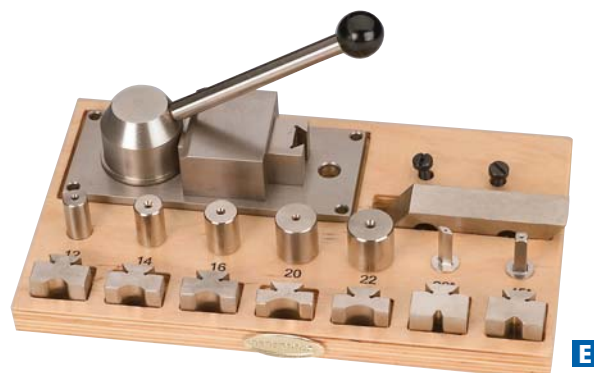
Heavy-duty cast iron unit for bending flat, oval and half-round blanks up to 4mm thick. Includes two precision-machined, hardened steel forming dies that are stepped to accommodate a variety of ring sizes and blanks. Ship. wt: 10½ lbs. Imported.

Description	Item#	Each
Ring Bender	<b>856-0381</b>	<b>\$125.00</b>

**E, F PEPE Super Ring Bending/Forming Set**

The most versatile ring bending set available. Makes round and angled bends. Includes bending unit, seven dies and seven matching mandrels, steel block with screws that can be fastened to bottom of unit for mounting in a vise and wooden storage base. Eccentric bending unit base and handle provide high torque, requiring user to exert less effort to bend metal. Includes 12, 14, 16, 20 and 22mm round dies and 45° and 90° angled dies. Use with optional Delrin Die Set (includes 12, 14, 16, 20 and 22mm round wear-resistant, low-friction dies) to shape patterned metal without scratching and distortion that often occur with standard steel dies.

Description	Item#	Each
E. Super Ring Bending/Forming Set	<b>856-0417</b>	<b>\$125.00</b>
F. Optional Delrin Die Set	<b>810-2021</b>	<b>75.00</b>







A

**A Wooden Ring Clamp**

Double-ended (one square, one round) clamp with thick leather-lined jaws that prevent marring. Securely holds rings and other jewelry pieces while filing, polishing and setting. Includes wedge for adjusting grip. Measures 6½" long.

Description	Item#	EACH Prices		
		1-2	3-9	10+
Wooden Ring Clamp	812-0300	\$7.95	\$7.55	\$7.16



B

**B Wooden Ring Clamp with Screw**

Spring-loaded wooden ring clamp with brass screw and wing nut for more precise control, leather-lined jaws that prevent marring and rounded clamp end that allows easy pivoting and rotating. Measures 5¼" long.

Description	Item#	EACH Prices		
		1-2	3-9	10+
Wooden Ring Clamp with Screw	812-0320	\$8.50	\$8.08	\$7.23



C

**C Plastic Ring Clamp**

High-impact plastic double-ended (one square, one round) clamp with thick leather-lined jaws that prevent marring. Similar in design to our wooden ring clamp. Includes wedge for adjusting grip. Measures 6¼" long.

Description	Item#	EACH Prices		
		1-2	3-9	10+
Plastic Ring Clamp	812-0400	\$8.95	\$8.50	\$8.06



D

**D Nylon Setter's Ring Clamp**

Durable, resilient nylon ring clamp with a comfortable grip and leather-lined jaws that prevent marring. Features a protruding lip for stabilization against the side of a workbench or pin while working. Measures 5¾" long.

Description	Item#	Each
Nylon Setter's Ring Clamp	812-0215	\$16.75



E

**E Outside Metal Ring Clamp**

Metal ring clamp for holding rings securely from the outside so you can easily file, sand and polish the inside. Measures 6" long.

Description	Item#	Each
External Ring Clamp	812-0351	\$23.35



F

**F Outside/Inside Metal Ring Clamp**

Die-cast high-strength 380 aluminum alloy clamp for holding rings securely from either the outside or the inside. Conducts heat away from rings. Holds ring sizes 1–13. Measures 5½" long.

Description	Item#	Each
Outside/Inside Metal Ring Clamp	812-0350	\$15.95



G

**G Inside Wooden Ring Clamp**

Economical wooden clamp for holding rings firmly from the inside so the outside can be worked. Won't mar rings. Shaped for a comfortable grip. Holds ring sizes 5–11. Measures 5¾" long.

Description	Item#	Each
Inside Wooden Ring Clamp	812-0315	\$10.25

**A PEPE Jump Ring Maker**

Perfect for winding jump rings in consistent sizes. Includes 20 steel winding rods in diameters from 2.55–12.5mm, Jacobs chuck for winding jump rings, 1¼" and 1½" blades and wooden storage base. Use circular sawblade or separating disc in your #30 handpiece to cut rings using supplied coiled wire holder and guide attachment. Wooden base measures 12½"L x 8½"W.

Description	Item#	Each
A. Jump Ring Maker	<b>856-0440</b>	<b>\$155.00</b>
Replacement 1¼" Blade	856-0442	12.00
Replacement 1½" Blade	856-0443	15.00

**B GRS® Ring Size Cutter**

This unique unit quickly cuts off a precise amount of ring shank without sawing. Removes metal in one whole piece so there are no particles to lose, saving you time and money. Results in perfectly parallel sides for neat and easy soldering. Includes seven different heat-treated steel blades that can be changed by hand in seconds without tools. Made in USA.

Description	Item#	Each
B. Ring Size Cutter	<b>812-1270</b>	<b>\$268.00</b>
½-Size Blade	812-1272	9.80
¾-Size Blade	812-1273	9.80
1-Size Blade	812-1274	9.80
1¼-Size Blade	812-1275	9.80
1½-Size Blade	812-1276	9.80
1¾-Size Blade	812-1277	9.80
2-Size Blade	812-1278	9.80
7-Piece Blade Set (one each)	812-1271	59.50

**C Beaver Ring Cutter**

Safely cuts ring shanks while on or off finger. Has guarded blade with satin chrome finish and molded plastic handle. Entire unit can be sterilized. Measures 5⅞" long.

Description	Item#	Each
C. Beaver Ring Cutter	<b>812-0900</b>	<b>\$149.50</b>
Replacement Blade	812-1000	21.50
Replacement Key	812-0960	29.65
Replacement Hub	812-0950	16.70

**D Premium Ring Cutting Pliers**

Safely cut ring shanks while on or off finger. Have guarded blade, sturdy box-joint construction and plastic-covered handles. Made of durable high-speed steel. Measure 6⅞" long.

Description	Item#	Each
D. Premium Ring Cutting Pliers	<b>812-1249</b>	<b>\$91.50</b>
Replacement Blade	812-1100	29.95

**E French Ring Cutting Pliers**

Safely cut ring shanks while on or off finger. Have guarded blade and traditional key. Made of fine steel. Measure 4¾" long.

Description	Item#	Each
E. French Ring Cutting Pliers	<b>812-1251</b>	<b>\$38.80</b>
Replacement Blade	812-1252	13.95

**F Mark-a-Size**

Lets you resize rings accurately. Etches exact amount of material to be removed directly onto the ring shank for correct sizing in ¼-size increments from ¼ size up to 3 sizes. Made of tempered steel. Measures only 3"L x 1"W x ¾" thick when closed.

Description	Item#	Each
Mark-a-Size	<b>816-0170</b>	<b>\$35.95</b>



## Cavallin Manual Rolling Mills (pp. 336, 337)

High-quality mills for discerning jewelry manufacturers. Feature rugged one-piece nickel-alloy frames for durability, Swedish steel rollers hardened to 63–65 HRC, central roller controls, double half-step gears for smooth rolling and bronze bushings. Available in a variety of sizes and styles. Produce smooth metal free of waves, ridges and distortion. Backed by a one-year warranty. Made in Italy.



### A Cavallin L-80 Flat Mill ■

Rolls sheet only. Has indicator dials for precise reduction of sheet.

#### Specifications:

Gear Ratio	Direct drive
Roller Size	80.0 x 44.0mm (W x dia.)
Sheet Capacity	80.0 x 5.0mm (W x thick)
Ship. Wt.	44 lbs.

Description	Item#	Each
A. L-80 Flat Mill	<b>855-3005</b>	<b>\$860.00</b>
Optional Stand, 32½"H	<b>855-2033</b>	<b>315.00</b>

### B Cavallin LF-80 Combination Mill ■ ◆ ▲

Rolls sheet, square wire and half-round wire. Has indicator dials for precise reduction of sheet and side rollers for half-round wire.

#### Specifications:

Gear Ratio	Direct drive
Roller Size	80.0 x 44.0mm (W x dia.)
Sheet Capacity	38.0 x 5.0mm (W x thick)
Wire Capacity	3.5-1.0mm square; 3.6 x 1.2mm half-round
Ship. Wt.	38 lbs.

Description	Item#	Each
B. LF-80 Combo Mill	<b>855-3007</b>	<b>\$920.00</b>
Optional Stand, 32½"H	<b>855-2033</b>	<b>315.00</b>

### C Cavallin LF-100 Combination Mill ■ ◆ ▲

Rolls sheet, square wire and half-round wire. Accepts 52.5mm diameter half-round rollers. Has indicator dials for precise reduction of sheet and side rollers for half-round wire. Single pattern side rollers available—please call for Mill Pattern Chart #890-0870.

#### Specifications:

Gear Ratio	Direct drive
Roller Size	100.0 x 52.5mm (W x dia.)
Sheet Capacity	50.0 x 3.0mm (W x thick)
Wire Capacity	4.5-1.0mm square; 3.6 x 1.2mm half-round
Ship. Wt.	58 lbs.

Description	Item#	Each
C. LF-100 Combo Mill	<b>855-3037</b>	<b>\$1,055.00</b>
Optional Stand, 32½"H	<b>855-2031</b>	<b>315.00</b>

### D Cavallin LFR-100 Combination Mill ■ ◆

Rolls sheet and square wire. Features 4:1 gear ratio for easy rolling. Has indicator dials for precise reduction of sheet.

#### Specifications:

Gear Ratio	4:1
Roller Size	100.0 x 52.5mm (W x dia.)
Sheet Capacity	50.0 x 3.0mm (W x thick)
Wire Capacity	4.5-1.0mm square
Ship. Wt.	68 lbs.

Description	Item#	Each
D. LFR-100 Combo Mill	<b>855-3011</b>	<b>\$1,315.00</b>
Optional Stand, 32½"H	<b>855-2031</b>	<b>315.00</b>

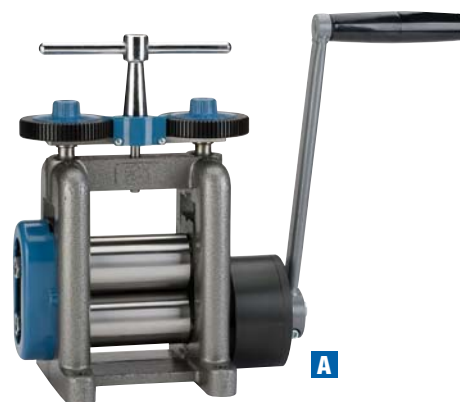
**A Cavallin LR-120 Flat Mill**

Rolls sheet only. Features 4:1 gear ratio for easy rolling. Has indicator dials for precise reduction of sheet.

**Specifications:**

Gear Ratio	4:1
Roller Size	120.0 x 65.0mm (W x dia.)
Sheet Capacity	120.0 x 3.0mm (W x thick)
Ship. Wt.	91 lbs.

Description	Item#	Each
A. LR-120 Flat Mill	<b>855-3025</b>	<b>\$1,420.00</b>
Optional Stand, 32½"H	<b>855-2032</b>	<b>315.00</b>


**A**
**B Cavallin LFR-120 Combination Mill**

Rolls sheet, square wire and half-round wire. Features 4:1 gear ratio for easy rolling. Has indicator dials for precise reduction of sheet and side rollers for half-round wire.

**Specifications:**

Gear Ratio	4:1
Roller Size	120.0 x 65.0mm (W x dia.)
Sheet Capacity	62.0 x 3.0mm (W x thick)
Wire Capacity	6.0-1.0mm square; 3.6 x 1.2mm half-round
Ship. Wt.	68 lbs.

Description	Item#	Each
B. LFR-120 Combo Mill	<b>855-3023</b>	<b>\$1,525.00</b>
Optional Stand, 32½"H	<b>855-2032</b>	<b>315.00</b>


**B**
**C Cavallin LFR-120L London-Style Combination Mill**

Rolls sheet, square wire and half-round wire. Features 4:1 gear ratio for easy rolling. Has indicator dials for precise reduction of sheet.

**Specifications:**

Gear Ratio	4:1
Roller Size	120.0 x 65.0mm (W x dia.)
Sheet Capacity	60.0 x 3.0mm (W x thick)
Wire Capacity	4.5-1.0mm square; 5.0 x 2.0mm to 2.0 x 0.8mm half-round
Ship. Wt.	84 lbs.

Description	Item#	Each
C. LFR-120L London Mill	<b>855-3042</b>	<b>\$1,555.00</b>
Optional Stand, 32½"H	<b>855-2032</b>	<b>315.00</b>


**C**
**D Cavallin LFM-120-1 Motorized Combination Mill**

Rolls sheet, square wire and half-round wire. Includes intermittent-duty motor that can run for 10–15 minutes uninterrupted. Applies steady pressure for fully uniform results. Features forward/reverse switch, indicator dials for precise reduction of sheet and side rollers for half-round wire. Backed by a one-year warranty.

**Specifications:**

Roll Speed	Approx. 6 meters/min.
Motor	1 HP, 110V, 8.5A, 60Hz (220V available)
Roller Size	120.0 x 65.0mm (W x dia.)
Sheet Capacity	60.0 x 5.5mm (W x thick)
Wire Capacity	7.0-1.0mm square; 3.6 x 1.2mm half-round
Dimensions	19"W x 16"D x 20"H
Ship. Wt.	205 lbs.

Description	Item#	Each
LFM-120-1 Motorized Combination Mill	<b>855-3031</b>	<b>\$5,195.00</b>


**D**





**A**



**B**



**C**



**D**

**A PEPE 90mm Combo Rolling Mill** ■ ◆ ▲

Features carbon steel alloy rollers with 60 HRC hardened surfaces for durability, 4:1 gear ratio and compact powder-coated frames. Provides distortion-free results. Can roll metal foil as thin as 0.001".

**Specifications:**

Roller Size	90 x 42.6mm (W x dia.)
Sheet Capacity	38 x 4mm (W x thick)
Wire Capacity	1.5, 2, 3, 4, 5mm square; 2.5 x 1, 3 x 1.25, 4 x 1.5mm half-round
Ship. Wt.	34 lbs.

Description	Item#	Each
A. 90mm Combo Mill	<b>855-3087</b>	<b>\$525.00</b>
Optional Stand, 28"-40 <sup>3</sup> / <sub>4</sub> "H	<b>855-3088</b>	<b>289.00</b>

**B PEPE 110mm Combo Rolling Mill** ■ ◆ ▲

Features carbon steel alloy rollers with 60 HRC hardened surfaces for durability, 4:1 gear ratio and compact powder-coated frames. Provides distortion-free results. Can roll metal foil as thin as 0.001".

**Specifications:**

Roller Size	110 x 55mm (W x dia.)
Sheet Capacity	57 x 5mm (W x thick)
Wire Capacity	1, 1.5, 2, 2.5, 3, 3.5, 4mm square; 2.5 x 1, 3 x 1.25, 4 x 1.5mm half-round
Ship. Wt.	44 lbs.

Description	Item#	Each
B. 110mm Combo Mill	<b>855-3089</b>	<b>\$670.00</b>
Optional Stand, 28"-40 <sup>3</sup> / <sub>4</sub> "H	<b>855-3088</b>	<b>289.00</b>

**C PEPE 130mm Combo Rolling Mill** ■ ◆ ▲

Features carbon steel alloy rollers with 60 HRC hardened surfaces for durability, 4:1 gear ratio and compact powder-coated frames. Provides distortion-free results. Can roll metal foil as thin as 0.001".

**Specifications:**

Roller Size	130 x 65mm (W x dia.)
Sheet Capacity	57 x 5mm (W x thick)
Wire Capacity	1, 2, 3, 4, 4.5, 5, 5.5, 6, 6.5, 7mm square; 2.5 x 1, 3 x 1.25, 4 x 1.5mm half-round
Ship. Wt.	54 lbs.

Description	Item#	Each
C. 130mm Combo Mill	<b>855-3091</b>	<b>\$759.00</b>
Optional Stand, 28"-40 <sup>3</sup> / <sub>4</sub> "H	<b>855-3088</b>	<b>289.00</b>

**D Cavallin Corrugation Rolling Mill**

This heavy-duty mill lets you create beautiful corrugated effects such as those shown in *Metal Corrugation* (see p. 459). Has 21, 25, 30 and 38-tooth roller sets for producing a variety of patterns from coarse to fine; simply reposition handle to desired roller set. Rolls gold, silver and other soft jewelry metals up to 18-gauge. Tension knob on top allows adjustment of roller pressure. Base can be mounted on table or in benchtop vise for stability. Measures 2"W x 1<sup>3</sup>/<sub>4</sub>"D x 9"H. Made in Italy.

Description	Item#	Each
Corrugation Rolling Mill	<b>855-0001</b>	<b>\$199.00</b>

**Rolling Mill Care**

Anneal metal often. Try to use roller centers when possible. Clean metal before rolling. Reduce stock gradually. Check every six months that rollers are parallel. When not in use, oil rollers with ESP Anti-Rust Spray (see p. 339) or #40 or thicker oil.



**A**

### A Cavallin Wire Drawing Bench

Features extra-large milled gears and continuous traction chain for drawing up to 4' of 10mm diameter wire with virtually no effort. Easy to use: just insert a drawplate (not included) into the holder, file your wire to a point, start it through the drawplate, grip the wire with the heavy-duty draw clamp and turn the supplied handle. Operates smoothly—will not kink or draw wire unevenly. Can be used with round, half-round, square or fancy-shaped drawplates. Has heavy-duty steel construction for durability. Measures 72"L x 24"W x 43"H. Ship. wt: 150 lbs.

Description	Item#	Each
Wire Drawing Bench	<b>268-3050</b>	<b>\$1,725.00</b>

### B Round Carbide Drawplate

Allows you to draw extremely bright, smooth round wire. Made of stainless steel with highly polished carbide die inserts for holes. Lasts much longer than steel drawplates.

Description	Hole Sizes	No. of Holes	Item#	Each
Round ●	2.2–0.26mm	36	<b>269-3000</b>	<b>\$194.00</b>



**B**

### C Round Steel Drawplates

Economical steel drawplates for reducing round wire diameter. Anneal wire occasionally to keep soft, and lubricate with beeswax or Lube-Stik. Made in Italy.

Description	Hole Sizes	No. of Holes	Item#	Each
Round ●	3–1mm	20	<b>268-2030</b>	<b>\$62.00</b>
	5–1mm	50	<b>268-2110</b>	<b>140.50</b>



**C**

### D Steel Drawplates

Economical, durable steel drawplates for reducing wire diameter. Have plenty of holes to make drawing down gradual and easy. Anneal wire occasionally to keep soft, and lubricate with beeswax or Lube-Stik. Made in Italy.

Description	Hole Sizes	No. of Holes	Item#	Each
Round ●	6–3mm	31	<b>268-1500</b>	<b>\$84.00</b>
	3–0.5mm	31	<b>268-1502</b>	<b>68.00</b>
	2–0.3mm	31	<b>268-1504</b>	<b>72.00</b>
Half-Round ◐	3–1mm	20	<b>268-1506</b>	<b>72.00</b>
Square ■	3–1mm	20	<b>268-1510</b>	<b>81.50</b>
Oval ○	3–1mm	20	<b>268-1508</b>	<b>86.00</b>
8-Point Star ☆	6–3mm	31	<b>268-1514</b>	<b>181.00</b>
Heart ♥	3–1mm	20	<b>268-1516</b>	<b>245.00</b>
Butterfly ♀	9–6mm	31	<b>268-1512</b>	<b>456.00</b>
Multiform ●◐■	3.5–1mm	60*	<b>268-1518</b>	<b>270.00</b>

\*20 round, 20 half-round and 20 square holes.



**D**

### E Drawing Tongs

Grip wire firmly for pulling through drawplates.

Description	Item#	Each
8" Drawing Tongs	<b>195-0249</b>	<b>\$19.15</b>
10" Drawing Tongs	<b>195-0250</b>	<b>26.00</b>



**E**

### F ESP Anti-Rust Spray – Contains no CFCs!

ESP (Extra Special Protection) leaves an ultra-thin film that shields metals from rust and corrosion. Lubricates delicate mechanisms and penetrates to loosen frozen nuts and bolts. Neutralizes fingerprints and displaces moisture. Protects rolling mills, machinery and tools.

Description	Item#	Each
ESP Spray, 16 oz. Spray Bottle	<b>825-1450</b>	<b>\$13.95</b>



**F**

## Gesswein/Foredom® Flexible Shaft Motors and Kits (pp. 340, 341)

Use for a variety of operations, including grinding, carving, drilling, deburring, engraving, polishing and more. Our wide selection of flexible shaft motors, handpieces and accessories allows you to grind and finish almost any material. Each motor comes complete with flexible shaft and sheath. Motors are sold individually, with handpiece, with handpiece and foot pedal or in kits that include motor, handpiece, foot rheostat, accessory set and rotating bur holder. Backed by a two-year manufacturer's warranty. All motors have fully grounded wiring. UL listed. Made in USA.

Motor Specifications:	TX, TXM, TXH and TXMH	SR, SRM and SRH	LX and LXB
Max. Operating Speed	15,000rpm	18,000rpm	5,000rpm
Power	1/3 HP	1/6 HP	1/25 HP
Applications	Toughest grinding and finishing	General-purpose grinding and finishing	Controlled grinding and finishing



**A**



**B**



**C**



**D**

### **A - D Foredom® Series TX – 1/3 HP**

Provides full torque and smooth, controlled acceleration throughout the entire speed range. Ideal for stone setting, wax carving, polishing, milling, drilling and other applications that call for high torque. Capable of this torque due to the fact that they use rare earth magnets in place of universal wound magnets. Offer great control under any load. Speed range: 0–15,000rpm. All 50/60Hz. Not available in 230V.

- TX is a hanging-style flexible shaft motor with 39" shaft and sheath. Use with TXR or SXR foot rheostat or EMX speed controller (see p. 342) and all standard quick change handpieces (see pp. 345–348).
- TXM is a bench-mounted flexible shaft motor with 39" shaft and sheath and built-in speed control. Use with all standard quick change handpieces (see pp. 345–348).
- TXH is a hanging-style square-drive flexible shaft motor with heavy-duty 60" flexible shaft with sheath liner/silencer. Ideal for the toughest applications using large stones and tools mounted on 1/4" and 6mm shanks. Use with TXR or SXR foot rheostat or EMX speed controller (see p. 342) and 25H, 30H and 44HT handpieces (see p. 344).
- TXMH is a bench-mounted square-drive flexible shaft motor with heavy-duty 60" flexible shaft with sheath liner/silencer and built-in speed control. Ideal for the toughest applications using large stones and tools mounted on 1/4" and 6mm shanks. Use with 25H, 30H and 44HT handpieces (see p. 344).

Description	Electrical	Item#	Each
<b>A.</b> TX Motor	115V	<b>850-0381</b>	<b>\$194.50</b>
TX + 30 + TXR-1	115V	<b>850-0384</b>	<b>299.75</b>
TX + 30 + SXR-1	115V	<b>850-1469</b>	<b>355.25</b>
<b>B.</b> TXM Motor	115V	<b>850-0379</b>	<b>288.00</b>
TXM + 30	115V	<b>850-0385</b>	<b>367.25</b>
<b>C.</b> TXH Motor	115V	<b>850-0465</b>	<b>234.00</b>
TXH + 30H + TXR-1	115V	<b>850-0467</b>	<b>346.00</b>
TXH + 30H + SXR-1	115V	<b>850-1467</b>	<b>341.50</b>
TXH + 44HT + SXR-1	115V	<b>850-1474</b>	<b>375.00</b>
<b>D.</b> TXMH Motor	115V	<b>850-0380</b>	<b>309.95</b>
TXMH + 30H	115V	<b>850-0388</b>	<b>395.00</b>

### **Series TX Flexible Shaft Maintenance Supplies and Replacements**

Maintenance kit below includes shaft, pair of motor brushes, grease and instructions for 115V models.

Description	Item#	Each
Maintenance Kit for TX	<b>850-4006</b>	<b>\$24.00</b>
Flex Shaft Grease, 1 oz.	<b>850-4100</b>	<b>3.50</b>
Flex Shaft Oil, 2 oz.	<b>850-4105</b>	<b>3.75</b>
Motor Brushes for TX, pair	850-4119	11.80
39" Shaft for TX, SR (1/6 and 1/8 HP), S, CC, LX, L, PG, R, K	850-3395	8.95
39" Sheath for all models except LX, L, PG, EE, F	850-3010	12.95
60" Shaft/Sheath for TXH	850-3408	58.00

**A - C Gesswein/Foredom® Series SR – 1/6 HP**

These motors combine all the best features: power, reliability and reversibility. Built with a larger commutator, brushes and fan to increase performance and longevity, they provide all you need for general-purpose grinding and finishing. Reverse capability allows both left- and right-handers to control direction of debris. Speed range: 0–18,000rpm. All 50/60Hz.

- SR is a hanging-style flexible shaft motor with 39" shaft and sheath. Use with FCT, SCT or WF-7 foot rheostat or EM speed controller (see p. 342) and all standard quick change handpieces (see pp. 345–348).
- SRM is a bench-mounted flexible shaft motor with 39" shaft and sheath and built-in speed control. Use with all standard quick change handpieces (see pp. 345–348).
- SRH is a hanging-style square-drive flexible shaft motor with heavy-duty 60" flexible shaft with sheath liner/silencer. Ideal for tough applications using large stones and tools mounted on 1/4" and 6mm shanks. Use with FCT, SCT or WF-7 foot rheostat or EM speed controller (see p. 342) and 25H, 30H or 44HT handpieces (see p. 344).

Description	Electrical	Item#	Each
<b>A.</b> SR Motor	115V	<b>850-0480</b>	<b>\$157.50</b>
SR + 20 + FCT-1 Kit*	115V	<b>850-0493</b>	<b>190.00</b>
SR + 20 + FCT-2 Kit*	230V	<b>850-0494</b>	<b>199.00</b>
SR + 30 + SCT-1	115V	<b>850-0490</b>	<b>240.75</b>
SR + 30 + SCT-1 Kit*	115V	<b>850-0484</b>	<b>302.50</b>
SR + 30 + FCT-1 Kit*	115V	<b>850-0495</b>	<b>180.00</b>
SR + 30 + FCT-2 Kit*	230V	<b>850-0496</b>	<b>189.00</b>
SR-2 Motor	230V	<b>850-0482</b>	<b>199.00</b>
SR-2 + 30 + FCH-2	230V	<b>850-0487</b>	<b>266.50</b>
SR-2 + 30 + SCH-2	230V	<b>850-0492</b>	<b>285.95</b>
<b>B.</b> SRM Motor	115V	<b>850-0497</b>	<b>226.80</b>
<b>C.</b> SRH Motor	115V	<b>850-1462</b>	<b>210.00</b>
SRH + 30H + FCT-1	115V	<b>850-1464</b>	<b>303.85</b>
SRH + 30H + SCT-1	115V	<b>850-1463</b>	<b>322.50</b>
SRH-2 Motor	230V	<b>850-1466</b>	<b>210.00</b>
SRH-2 + 30H + FCH-2	230V	<b>850-1465</b>	<b>303.85</b>
SRH-2 + 30H + SCH-2	230V	<b>850-1468</b>	<b>327.00</b>

\*Includes 54-piece flex shaft accessory set and rotating bur holder.

**D, E Foredom® Series LX – 1/10 HP**

These motors are great for low-speed, high-torque applications that require more control. Prevent tools from slowing under load. Speed range: 0–5,000rpm. 50/60Hz.

- LX is a hanging-style flexible shaft motor with 39" shaft and more flexible neoprene sheath. Use with TXR, SXR or WF-7 foot rheostat or EMX speed controller (see p. 342) and all standard quick change handpieces (see pp. 345–348).
- LXB is a bench-mounted flexible shaft motor with 39" shaft and more flexible neoprene sheath. Use with TXR, SXR or WF-7 foot rheostat or EMX speed controller (see p. 342) and all standard quick change handpieces (see pp. 345–348).

Description	Electrical	Item#	Each
<b>D.</b> LX Motor	115V	<b>850-1220</b>	<b>\$185.00</b>
LX-2 Motor	230V	<b>850-1221</b>	<b>185.00</b>
<b>E.</b> LXB Motor	115V	<b>850-1240</b>	<b>241.00</b>
LXB-2 Motor	230V	<b>850-1241</b>	<b>241.00</b>

**Series SR and LX Flexible Shaft Maintenance Supplies and Replacements**

Maintenance kit below includes inner shaft, pair of motor brushes, grease and instructions for 115V and 230V models, unless otherwise noted.

Description	Item#	Each
Maintenance Kit for SR (1/6 HP)	<b>850-4020</b>	<b>\$16.00</b>
Flex Shaft Grease, 1 oz.	<b>850-4100</b>	<b>3.50</b>
Flex Shaft Oil, 2 oz.	<b>850-4105</b>	<b>3.75</b>
Motor Brushes for SR (1/6 HP), pair	850-4108	8.50
39" Shaft for TX, SR (1/6 and 1/8 HP), S, CC, LX, L, PG, R, K	850-3395	8.95
39" Sheath for all models except LX, L, PG, EE, F	850-3010	12.95
39" Neoprene Sheath for LX, L	850-3015	14.00
60" Shaft/Sheath, Silencer for SRH	850-3408	58.00







A



B



C



D



E



F

### A Foredom® TXR Rheostat

Solid-state foot-operated speed controller for exceptionally smooth control over the entire speed range. Features heavy-duty, low-profile Rynite plastic housing with wide footpad and skid-resistant bottom for comfort and stability. Runs continuously without heat buildup. Measures 6<sup>3</sup>/<sub>4</sub>"L x 4<sup>1</sup>/<sub>2</sub>"W x 2<sup>1</sup>/<sub>2</sub>"H. All 50/60Hz. CSA listed.

Model	Electrical	For Flex Shaft	Item#	Each
TXR-1	115V	TX, TXB, TXH, TXBH; LX, LXB	<b>850-3510</b>	<b>\$44.50</b>

### B Foredom® SXR, SCH and SCT Foot Rheostats

Solid-state foot-operated speed controllers for immediate response with light pressure. Feature heavy-duty, low-profile cast-iron housing with ribbed top and skid-resistant bottom for comfort and stability. Run continuously without heat buildup. Measure 6<sup>1</sup>/<sub>4</sub>"L x 5"W x 2<sup>1</sup>/<sub>4</sub>"H. All 50/60Hz.

Model	Electrical	For Flex Shaft	Item#	Each
B. SXR-1	115V	TX, TXB, TXH, TXBH; LX, LXB	<b>850-3508</b>	<b>\$60.00</b>
SCH-1*	115V	H, HB	<b>850-3455</b>	<b>49.00</b>
SCH-2	230V	1/6 HP SR, SRB, SRH; H, HB	<b>850-3456</b>	<b>53.00</b>
SCT-1*	115V	1/6 HP SR, SRB, SRH; 1/8 HP SR, SRB; S, SB; CC; L, LB	<b>850-3503</b>	<b>53.45</b>
SCT-2	230V	1/8 HP SR, SRB; S, SB; CC; L, LB	<b>850-3504</b>	<b>60.00</b>

\*CSA Listed

### C Foredom® FCH and FCT Foot Rheostats

Solid-state foot-operated speed controllers for exceptionally smooth control over the entire speed range. Feature heavy-duty, low-profile Rynite plastic housing with wide footpad and skid-resistant bottom for comfort and stability. Run continuously without heat buildup. Measure 6<sup>3</sup>/<sub>4</sub>"L x 4<sup>1</sup>/<sub>2</sub>"W x 2<sup>1</sup>/<sub>2</sub>"H. All 50/60Hz.

Model	Electrical	For Flex Shaft	Item#	Each
C. FCH-1*	115V	H, HB	<b>850-3460</b>	<b>\$34.45</b>
FCH-2	230V	1/6 HP SR, SRB, SRH; H, HB	<b>850-3461</b>	<b>35.00</b>
FCT-1*	115V	1/6 HP SR, SRB, SRH; 1/8 HP SR, SRB; S, SB; CC; L, LB	<b>850-3480</b>	<b>30.00</b>
FCT-2	230V	1/8 HP SR, SRB; S, SB; CC; L, LB	<b>850-3485</b>	<b>34.45</b>

\*CSA Listed

### D WF-7 Foot Rheostat

Ultra-tough solid-state foot-operated speed controller with convenient extra-wide treadle. Features rugged, low-profile cast-iron housing with ribbed top and skid-resistant bottom for comfort and stability. Runs continuously without heat buildup. Measures 5<sup>1</sup>/<sub>4</sub>"L x 7"W x 1<sup>3</sup>/<sub>4</sub>"H. All 50/60Hz. CSA listed.

Model	Electrical	For Flex Shaft	Item#	Each
WF-7	115V	1/6 HP SR, SRB, SRH; 1/8 HP SR, SRB; S, SB; CC; L, LB	<b>850-3505</b>	<b>\$126.00</b>

### E Foredom® Manual Speed Controllers

Dial-operated speed controllers for benchtop use—great alternatives to foot rheostats. Feature tough plastic housing with low profile for stability. Measure 6"L x 5"W x 2<sup>1</sup>/<sub>2</sub>"H. Also available in 230V. All 50/60Hz.

Model	Electrical	For Flex Shaft	Item#	Each
E. EMX-1	115V	TX, TXB, TXH, TXBH; LX, LXB	<b>850-3516</b>	<b>\$67.00</b>
EMH-1	115V	H, HB	<b>850-3515</b>	<b>59.00</b>
EM-1	115V	1/6 HP SR, SRB, SRH; 1/8 HP SR, SRB; S, SB; CC; L, LB	<b>850-3511</b>	<b>53.00</b>

### F Electronic Foot Control

Heavy-duty, precision-crafted variable-speed foot rheostat with all the features of similar high-end controls at a fraction of the price. Features solid-state electronics, die-cast aluminum housing with chip-resistant enamel finish, mounting holes and grounded electrical cord. Works with any flexible shaft motor with standard three-prong connection (120V only). Measures 7<sup>1</sup>/<sub>4</sub>"L x 4<sup>1</sup>/<sub>2</sub>"W x 2<sup>1</sup>/<sub>2</sub>"H.

Description	For Flex Shafts	Item#	Each
Electronic Foot Control	CC, EE, GG, S/SR, LX/LXB	<b>850-3520</b>	<b>\$37.00</b>

**A Freedom® Chuck Keys**

Two different chuck keys for adjusting #30 and #30H handpiece chucks. Available with or without plastic handle. Chuck key with handle measures 4 1/8" long, making it easier to find and use.

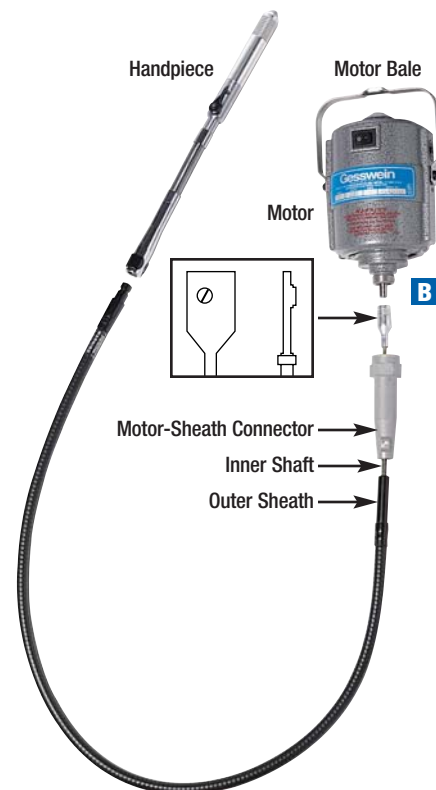
Description	Item#	Each
A. Chuck Key with Handle	<b>850-3545</b>	<b>\$4.95</b>
Chuck Key without Handle	<b>850-3550</b>	<b>2.50</b>



**B Maintenance Supplies and Replacements for Previous Generations of Flexible Shaft Motors**

Maintenance kits below include inner shaft, pair of motor brushes, grease and instructions for 115V and 230V models, unless otherwise noted.

Description	For Flex Shafts	Item#	Each
Maintenance Kit	CC (110V), S	<b>850-4015</b>	<b>\$16.00</b>
Maintenance Kit	EE, GG	<b>850-4005</b>	<b>22.00</b>
Flex Shaft Grease, 1 oz.	All	<b>850-4100</b>	<b>3.50</b>
Flex Shaft Oil, 2 oz.	All	<b>850-4105</b>	<b>3.75</b>
Inner Shaft	CC, S/SR, R/RB, L/LB	850-3395	8.95
Outer Sheath	CC, S/SR, R/RB, L/LB	850-3010	12.95
Inner Shaft	EE, GG	850-3390	9.95
Outer Sheath	EE, GG	850-3000	14.45
Shaft/Sheath Assembly	H	850-3400	56.00
Motor Brushes, pair	CC (110V)	850-4110	8.90
Motor Brushes, pair	CC (220V), EE, GG, R/RB (110V)	850-4113	10.50
Motor Brushes, pair	S/SR (1/8 HP), H	850-4117	8.00
Brush Holder (two required)	CC (110V), R/RB	850-4130	6.50
Brush Cap	CC, EE, GG, R/RB	850-4120	1.05
Motor-Sheath Connector	CC, S/SR, R/RB, L/LB	850-2180	3.60
Armature (110V)	CC, R/RB	850-2165	43.00
Armature (110V)	S	850-2167	55.00
Bearing	CC, R/RB	850-2155	2.00
Motor Bale	CC, S/SR, R, L, H	850-2207	1.50



**C, D Dremel® #395 and #275 Grinders**

These economical power grinders are excellent for a wide range of grinding, sharpening, cutting, cleaning and polishing applications. Choose from two different models: #395 is a variable-speed grinder with five selectable speeds from 5,000 to 30,000rpm, and #275 is a 28,000rpm fixed-speed grinder. Each features a double-insulated, shatter-resistant housing with permanently lubricated ball bearings for smooth, dependable operation. Supplied with 1/8" collet. Optional 1/32", 1/16" and 3/32" collets available. Electrical: 120V AC, 2A, 50/60Hz. Measure 7 1/4" long. UL listed.

Description	Item#	Each
C. Model #395	<b>850-8025</b>	<b>\$78.45</b>
D. Model #275	<b>850-8015</b>	<b>48.23</b>
Optional 1/32" Collet	<b>850-4155</b>	<b>2.15</b>
Optional 1/16" Collet	<b>850-4150</b>	<b>2.15</b>
Optional 3/32" Collet	<b>850-4145</b>	<b>2.15</b>
Replacement 1/8" Collet	850-4140	2.15
Replacement Type 3 Brushes*	850-8035	3.05
Replacement Type 1 and 2 Brushes**	850-8030	3.05

\*For models manufactured in 1989 and after.

\*\*For models manufactured prior to 1989.



## Heavy-Duty Rotary Handpieces for TXH, TXMH and SRH only

Use for a variety of operations, including grinding, carving, drilling, deburring, engraving, polishing and more. All three handpieces have square drives and attach quickly with positive sheath locking mechanisms to TXH, TXMH and SRH flexible shaft motors (see pp. 340–341), as well as H flexible shaft motors. Have shielded ball bearings that require no lubrication. Feature compact, lightweight designs for accessing tight areas while minimizing hand fatigue.



**A**

### **A** Foredom® #25H Handpiece

Features one-piece spindle construction with permanently lubricated, double-sealed ball bearings for cool extended running. Includes  $\frac{1}{8}$ " and  $\frac{1}{4}$ " collets. Measures 1" dia. x  $6\frac{1}{8}$ "L. Weighs  $8\frac{1}{2}$  oz.

Description	Item#	Each
<b>A. #25H Handpiece</b>	<b>850-1340</b>	<b>\$149.00</b>
$\frac{1}{16}$ " Collet	850-5200	17.50
$\frac{3}{32}$ " Collet	850-5210	17.50
Replacement $\frac{1}{8}$ " Collet	850-5220	17.50
$\frac{3}{16}$ " Collet	850-5230	17.50
Replacement $\frac{1}{4}$ " Collet	850-5240	17.50
3mm Collet	850-5242	17.50
4mm Collet	850-5245	17.50
Set of all five inch-size collets	850-5052	79.00



**B**

### **B** Foredom® #30H Handpiece

Chuck-style handpiece with prelubricated ball bearings. Features geared Jacobs chuck that accepts shanks up to  $\frac{5}{32}$ ". Includes chuck key without handle. Measures 1" dia. x  $5\frac{5}{8}$ "L. Weighs  $7\frac{1}{4}$  oz.

Description	Item#	Each
<b>B. #30H Handpiece</b>	<b>850-1355</b>	<b>\$65.50</b>
Foam Comfort Grip	850-0003	1.95
Chuck Key with Handle	850-3545	4.95
Replacement Chuck Key without Handle	850-3550	2.50



**C**

### **C** Foredom® #44HT Handpiece

Collet-type version of #30H handpiece. Includes  $\frac{3}{32}$ " and  $\frac{1}{4}$ " collets. Measures 1" dia. x  $6\frac{1}{8}$ "L. Weighs  $8\frac{1}{2}$  oz.

Description	Item#	Each
<b>C. #44HT Handpiece</b>	<b>850-1455</b>	<b>\$50.95</b>
$\frac{1}{16}$ " Collet*	850-5410	7.00
Replacement $\frac{3}{32}$ " Collet*	850-5420	7.00
$\frac{1}{8}$ " Collet*	850-5430	7.00
$\frac{5}{32}$ " Collet*	850-5440	7.00
$\frac{3}{16}$ " Collet	850-5450	7.00
Replacement $\frac{1}{4}$ " Collet*	850-5470	7.00
3mm Collet*	850-5475	7.00
6mm Collet*	850-5480	7.00
Set of seven asterisked collets	850-5400	45.00

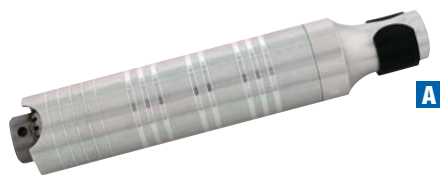
## Handpieces for Standard Flexible Shaft Machines (pp. 345–348)

We offer a wide selection of handpieces to fit your needs, including both rotary and reciprocating handpieces with fixed collets, changeable collets or chucks. Several come with a quick-tool-change mechanism, and many are also available with a duplex spring for better control. All quickly detach from shaft. Compatible with all flexible shaft motors except TXH, TXMH, SRH and H.

### A Freedom® #30 Handpiece

Our top-selling handpiece for all-purpose use. Features geared Jacobs chuck that accepts shanks up to  $\frac{5}{32}$ ". Prelubricated ball bearings require no maintenance. Includes chuck key with handle. Measures 1" dia. x 5"L. Weighs 6 oz.

Description	Item#	Each
A. #30 Handpiece	<b>850-1350</b>	<b>\$46.95</b>
Foam Comfort Grip	<b>850-0003</b>	<b>1.95</b>
Chuck Key without Handle	<b>850-3550</b>	<b>2.50</b>
Replacement Chuck	850-2220	40.00
Replacement Bearing	850-2222	6.95
Replacement Chuck Key with Handle	850-3545	4.95



### B Buffalo #330 Handpiece

Offers heavy-duty power and precision. Runs true and remains cool during operation. Sealed ball bearings require no maintenance. Jacobs chuck accepts shanks up to  $\frac{5}{32}$ ". Includes chuck key. Measures 1" dia. x 5"L. Made in USA.

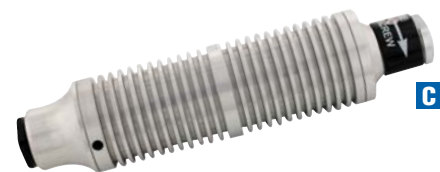
Description	Item#	Each
#330 Handpiece	<b>850-1560</b>	<b>\$43.00</b>



### C Freedom® #35 Handpiece

Precision high-speed handpiece ideal for use with carbide and diamond tool accessories. Six collets available. Supplied with  $\frac{1}{8}$ " or 3mm collet. Attaches to any Freedom flexible shaft and increases speed to 35,000rpm by means of a planetary drive system. Measures  $1\frac{1}{8}$ " dia. x 5"L. Weighs 8 oz.

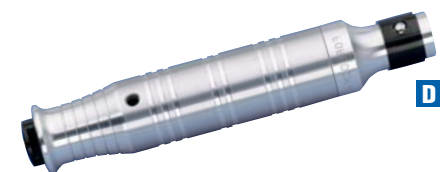
Description	Item#	Each
C. #35 Handpiece with $\frac{1}{8}$ " collet	<b>850-1400</b>	<b>\$139.50</b>
#35 Handpiece with 3mm collet	<b>850-1410</b>	<b>139.50</b>
$\frac{1}{16}$ " Collet	<b>850-5200</b>	<b>17.50</b>
$\frac{3}{32}$ " Collet	<b>850-5210</b>	<b>17.50</b>
Replacement $\frac{1}{8}$ " Collet	850-5220	17.50
$\frac{3}{16}$ " Collet	<b>850-5230</b>	<b>17.50</b>
$\frac{1}{4}$ " Collet	<b>850-5240</b>	<b>17.50</b>
Replacement 3mm Collet	850-5242	17.50
4mm Collet	<b>850-5245</b>	<b>17.50</b>
Set of all five inch-size collets	<b>850-5052</b>	<b>79.00</b>



### D Freedom® #44T Handpiece

Similar to #30 handpiece except that it has a collet-type chuck for holding various shank sizes. Six collets from  $\frac{1}{16}$ " to  $\frac{1}{4}$ " available, plus 3mm and 6mm collets. Includes  $\frac{3}{32}$ ",  $\frac{1}{8}$ " and  $\frac{1}{4}$ " collets, pin and collet wrench. Prelubricated ball bearings require no maintenance. Measures 1" dia. x  $5\frac{1}{2}$ "L. Weighs 7 oz.

Description	Item#	Each
D. #44T Handpiece	<b>850-1425</b>	<b>\$47.00</b>
$\frac{1}{16}$ " Collet*	<b>850-5410</b>	<b>7.00</b>
Replacement $\frac{3}{32}$ " Collet*	850-5420	7.00
Replacement $\frac{1}{8}$ " Collet*	850-5430	7.00
$\frac{5}{32}$ " Collet*	<b>850-5440</b>	<b>7.00</b>
$\frac{3}{16}$ " Collet	<b>850-5450</b>	<b>7.00</b>
Replacement $\frac{1}{4}$ " Collet*	850-5470	7.00
3mm Collet*	<b>850-5475</b>	<b>7.00</b>
6mm Collet*	<b>850-5480</b>	<b>7.00</b>
Set of seven asterisked collets	<b>850-5400</b>	<b>45.00</b>







**A, B Freedom® #10/#10D Handpiece**

Features a quick-release lever for rapid tool changing. Pre-lubricated ball bearings require no maintenance. Accepts 3/32" shanks only. Measures 3/4" dia. x 10 3/4"L (without duplex). Weighs 5 oz.

Description	Item#	Each
A. #10 Handpiece	<b>850-1252</b>	<b>\$245.00</b>
B. #10D Handpiece with duplex spring	<b>850-1253</b>	<b>260.00</b>

**C Tecno X Handpiece**

A lightweight, vibration-free, high-precision handpiece with quick-change flip-lever chuck release. Supplied with 3/32" collet. Shaped for the hand. Can be held like a pen. Has all-metal dustproof casing. Includes wrench and screwdriver. Measures approx. 1" dia. x 6"L. Weighs 4 1/2 oz.

Description	Item#	Each
C. Tecno X Handpiece	<b>850-2054</b>	<b>\$219.00</b>
Replacement 3/32" Collet	850-2055	39.00
1/8" Collet	<b>850-2056</b>	<b>39.00</b>

**D, E Freedom® #20/#20D Quick-Change Handpiece**

Lever action allows instant tool changes. Wider metal body is designed to stay cooler. Front-end tapers to a molded plastic grip for close, easy handling. Pre-lubricated ball bearings require no oil. Accepts 3/32" shanks only. Measures 1 1/8"-3/8" dia. x 5 5/8"L (without duplex). Weighs 4 oz.

Description	Item#	Each
D. #20 Handpiece	<b>850-1280</b>	<b>\$78.00</b>
E. #20D Handpiece with Duplex Spring	<b>850-1285</b>	<b>98.00</b>
3/32" Collet	<b>850-5425</b>	<b>9.50</b>

**F Freedom® #28 Handpiece**

A lightweight handpiece for intricate work and general grinding, polishing, deburring and carving applications. Slim, tapered grip provides comfort and control. Permanently lubricated ball bearings ensure smooth operation. Includes 3/32" and 1/8" collets, pin and collet wrench. Measures 3/4" dia. x 5 3/8"L. Weighs 2.9 oz.

Description	Item#	Each
F. #28 Handpiece	<b>850-1348</b>	<b>\$47.00</b>
Replacement 3/32" Collet	850-5040	7.00
Replacement 1/8" Collet	850-5050	7.00
3mm Collet	<b>850-5060</b>	<b>7.00</b>

**G, H Freedom® #52/#52D Handpiece**

Lightweight handpiece with plastic housing. Features a simple yet effective quick-change mechanism for changing tools in seconds: just push chuck out to open, remove old tool, insert new one and pull chuck back to lock in place. Permanently lubricated ball bearings ensure smooth operation. Accepts 3/32" shanks only. Measures 3/4" dia. x 6" (without duplex). Weighs 3.1 oz.

Description	Item#	Each
G. #52 Handpiece	<b>850-1460</b>	<b>\$99.00</b>
H. #52D Handpiece with duplex spring	<b>850-1461</b>	<b>114.00</b>

**I #180/00 Handpiece**

Smooth-running rotary handpiece with duplex spring for balance and flexibility. Has quick-change flip-lever chuck release. Accepts 3/32" shanks only. Measures 1 1/8"-1/2" dia. x 11"L. Weighs 8 oz.

Description	Item#	Each
I. #180/00 Handpiece with duplex spring	<b>850-1755</b>	<b>\$215.00</b>
Inner Duplex Spring with connectors	850-1758	25.00
Outer Duplex Spring Cover	850-1756	58.00
Replacement 3/32" Collet	850-1757	24.50

**A, B Freedom® #18/#18D Quik Change™ Handpiece**

Allows faster bur changes for improved productivity. Ideal for stone setting and applications that require many bur changes. Has permanently lubricated ball bearing for cool and quiet continuous operation. Includes 3/32" collet. Measures 5/8" dia. x 7"L (without duplex). Weighs 3.5 oz.

Description	Item#	Each
A. #18 Handpiece	<b>850-1325</b>	<b>\$99.75</b>
B. #18D Handpiece with duplex spring	<b>850-1320</b>	<b>112.00</b>
Replacement 3/32" Collet	850-5485	26.50



**C, D Faro Handpiece**

Exceptionally cool-running handpiece with quick-release lever for rapid tool changing. Accepts 3/32" shanks only. Includes 3/32" collet. Measures 1 1/16" dia. x 6 3/4"L (without duplex). Weighs 7 oz.

Description	Item#	Each
C. Faro Handpiece	<b>850-1960</b>	<b>\$175.00</b>
D. Faro Handpiece with duplex spring	<b>850-1950</b>	<b>195.00</b>
Replacement 3/32" Collet	850-1964	51.65



**E VTX Handpiece**

Right-angle handpiece with telescopic head that extends up to 3 1/4". Excellent for hard-to-reach areas. Includes 3/32" and 1/8" collets and collet wrench. Measures 3/4" dia. x 7 3/4"L. Weighs 6 1/2 oz.

Description	Item#	Each
E. VTX Handpiece	<b>850-2150</b>	<b>\$655.00</b>
Replacement 3/32" Collet	850-5340	29.85
Replacement 1/8" Collet	850-5350	31.60
3mm Collet	<b>850-5255</b>	<b>45.00</b>

**F, G #8/#8D Handpiece**

Has prelubricated ball bearings for sustained operation at high speeds without overheating. Allows fingertip operation of collet chuck for quick changing of tools. Features sliding protective sleeve for close work. Includes 3/32" collet. Measures 3/4" dia. x 6"L (without duplex). Weighs 4 oz.

Description	Item#	Each
F. #8 Handpiece	<b>850-1250</b>	<b>\$50.00</b>
G. #8D Handpiece with duplex spring	<b>850-1300</b>	<b>60.00</b>
1/32" Collet	<b>850-5020</b>	<b>7.00</b>
1/16" Collet	<b>850-5030</b>	<b>7.00</b>
Replacement 3/32" Collet	850-5040	7.00
1/8" Collet	<b>850-5050</b>	<b>7.00</b>
3mm Collet	<b>850-5060</b>	<b>7.00</b>
Set of all four inch-size collets	<b>850-5010</b>	<b>25.00</b>

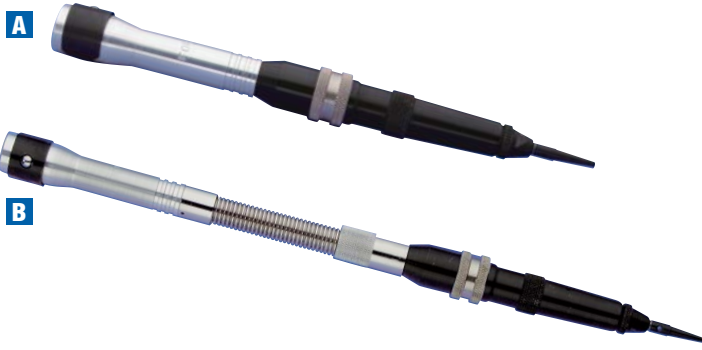


**H Chicago Pneumatic Air Scribe®**

The Chicago Pneumatic Air Scribe has a carbide stylus that writes as easily as a ballpoint pen on a variety of metals up to 64 HRC. Use with Filter/Regulator/Lubricator (see p. 181). Includes 8' reinforced hose. Requires less than 1 CFM of air. Measures 1 1/16" dia. x 4 3/4"L. Weighs 5 oz.

Description	Item#	Each
H. Pneumatic Air Scribe	<b>850-7395</b>	<b>\$295.00</b>
On/Off Foot Pedal	<b>850-7394</b>	<b>59.95</b>
Flat Tip	<b>850-7399</b>	<b>19.85</b>
Round Tip	<b>850-7397</b>	<b>18.95</b>
Blank Tip	<b>850-7398</b>	<b>7.95</b>
Replacement Carbide Stylus	850-7396	20.85





**A, B Foredom® Hammer Handpiece #15/#15D**

Hammer handpiece with reciprocating action for stone setting and decorative work. Has 1/32" stroke with adjustable impact. Includes anvil point. Can also be used with Pavé Point for special texturing or Carbide Stylus for texturing, marking or scribing hardened steel. Speed range for most applications: 0–5,000rpm. Measures 1/2" dia. at tip x 9 1/2"L (without duplex). Weighs 4 oz.

Description	Item#	Each
A. #15 Handpiece	<b>850-1270</b>	<b>\$90.95</b>
B. #15D Handpiece with duplex spring	<b>850-1272</b>	<b>104.95</b>
Optional Pavé Point	<b>850-1275</b>	<b>19.50</b>
Optional Carbide Stylus	<b>850-1274</b>	<b>29.00</b>
Replacement Anvil Point	850-1273	4.00

**C Technique Hammer Handpiece**

Features a lightweight, slender body that you can hold comfortably for long periods. Runs with very little vibration. Includes screw-in pointed tip. Optional tips available (see below). Measures 1/2" dia. x 5 1/2"L (without duplex). Weighs 2 oz. Precision-made in Switzerland.

Description	Item#	Each
C. Technique Handpiece	<b>850-1295</b>	<b>\$175.00</b>
Technique Handpiece with duplex spring	<b>850-1290</b>	<b>216.00</b>

**D, E Swiss Hammer Handpiece**

Provides adjustable striking force for closing bezels and prongs or creating textures. Minimizes vibration for comfortable extended use. Includes Round Flat Tip #850-3720. Additional tips available (see below). Measures 1/2" dia. x 9 1/2"L (without duplex). Weighs 6 oz.

Description	Item#	Each
D. Swiss Handpiece	<b>850-1333</b>	<b>\$259.95</b>
E. Swiss Handpiece with duplex spring	<b>850-1330</b>	<b>287.95</b>

**Hammer Handpiece Tips**

For Technique and Swiss Hammer Handpieces (see above).

Description	Item#	Each
Round Flat Tip, 4mm*	<b>850-3720</b>	<b>\$17.95</b>
Round Concave Tip, 0.8mm*	<b>850-3710</b>	<b>38.95</b>
Round Concave Tip, 1mm*	<b>850-3715</b>	<b>38.95</b>
Rectangular Flat Tip, 1 x 2mm*	<b>850-3725</b>	<b>38.95</b>
Rectangular Grooved Tip, 1.2 x 2.5mm*	<b>850-3730</b>	<b>38.95</b>
Rectangular Smooth Tip, 1.2 x 2.5mm	<b>850-3735</b>	<b>38.95</b>
Set of five asterisked tips	<b>850-3770</b>	<b>157.00</b>

**F - H Replacements for Handpieces with Duplex Springs**

Suitable for all Gesswein/Foredom flexible shaft handpieces except #180/00.

Description	Item#	Each
F. Inner Duplex Spring only	850-3800	\$8.50
G. Inner Duplex Spring with connectors	850-2223	11.75
H. Outer Duplex Spring Cover	850-3802	15.00

**I Foredom® Handpiece Oil**

Recommended for all Gesswein/Foredom flexible shaft handpieces.

Description	Item#	Each
Handpiece Oil, 2 oz. bottle	<b>850-4105</b>	<b>\$3.75</b>

**A, B Foredom® Single Flex Shaft Hangers**

Each holds one flex shaft motor. Stands 21" tall. Pole height can be adjusted to hold motor up to 3' above the work surface. Clamp style attaches to bench by means of a C-clamp that opens to a maximum of 2 1/4". Includes an accessory tray. Mounting base style screws or bolts to side or top of bench for permanent placement. Both styles come with handpiece rest.

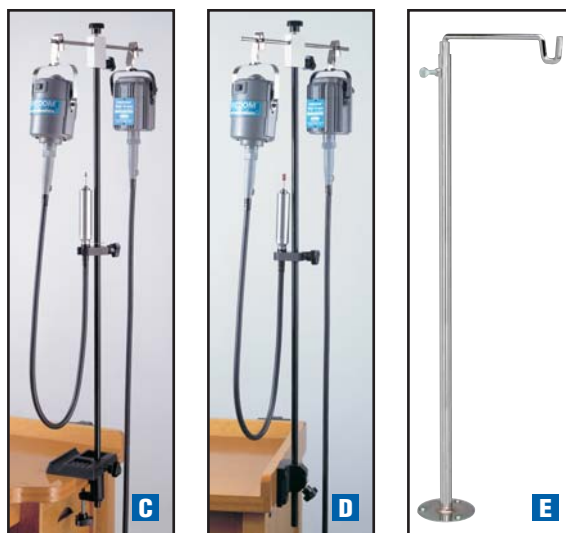
Description	Item#	Each
A. Single Hanger, Clamp style	850-0500	\$39.00
B. Single Hanger, Mounting Base style	850-0504	59.00



**C, D Foredom® Double Flex Shaft Hangers**

Each has a T-top that holds two flex shaft motors. T-top rotates 360° and slides side-to-side. Locks in place with two locking screws. Pole height can be adjusted to hold motors up to 3' above the work surface. Clamp style attaches to bench by means of a C-clamp that opens to a maximum of 2 1/4". Includes an accessory tray. Mounting Base style screws or bolts to side or top of bench for permanent placement. Both styles come with handpiece rest.

Description	Item#	Each
C. Double Hanger, Clamp Style	850-0502	\$45.95
D. Double Hanger, Mounting Base Style	850-0503	69.00



**E Adjustable Telescoping Flex Shaft Hanger**

Now you can adjust the height of your flex shaft motor in seconds. Sturdy metal rod attaches firmly to bench with three screws. Height can then be set at 26" to 41" by simply adjusting wing nut. Swivel arm at top allows easy rotation of motor.

Description	Item#	Each
Adjustable Telescoping Flex Shaft Hanger	850-0501	\$23.25

**F, G Handpiece Holders**

Accept Foredom flexible shaft handpieces.

Economical holders for converting your Foredom flexible shaft machine into a high-speed lathe. Let you grind, polish, sand and carve while both hands control the workpiece. Adjust to hold handpieces up to 10" above the workbench and rotate 360°. Clamp to benchtops up to 1 3/4" thick.

Description	Item#	Each
F. Holder for #30, #30H, #44T and #44HT Handpieces	850-0605	\$35.00
G. Holder for #35 Handpiece	850-0607	35.00



**H Nylon Jiffy Jig – Accepts 1" diameter handpieces.**

A convenient block for holding jeweler's handpieces in place. Leaves your hands free for cutting, grinding and polishing operations. Just place the block in your vise, pull handpiece through it, tighten the vise and you're ready to go. Tools in the handpiece can be easily changed without removing handpiece from the block. Accepts Foredom #30 handpiece and other 1" diameter handpieces.

Description	Item#	Each
Nylon Jiffy Jig	850-0608	\$10.80







**A**

**A Matt™ Gold Collector Box**

Traps gold and other precious metals for easy retrieval. Has side openings that let you keep your hands and arms in a natural, comfortable working position for reduced fatigue. Protects eyes, skin and clothing from flying dust, particles and brush wires. Keeps your work area clean, reducing time-consuming cleanup and increasing productivity while maintaining a healthier work environment. Features high-impact extruded plastic housing and easy-to-remove, nonglare Plexiglas shield. Attaches to bench with integral C-clamp when needed. Stores easily when not in use. Lightweight, sturdy and completely portable. Measures 7"W x 7½"D x 8¾"H.

Description	Item#	Each
Matt Gold Collector Box	<b>265-2343</b>	<b>\$70.50</b>



**B**

**B Klear-Vue Safety Shield**

Sturdy, crystal-clear Plexiglas shield almost ¾" thick. Protects you from flying debris while you work at the bench. Has cutouts for your wrists that allow you to hold your hands and tools at a normal working angle. More comfortable and convenient than a grinding box—use when gold containment is not a factor. Provides an extra barrier that protects face, neck and clothing from dust and dirt kicked up by abrasive wheels, polishing compounds and more. Does not eliminate the need for safety glasses. Measures 7"W x 6½"D x 9⅞"H.

Description	Item#	Each
Klear-Vue Safety Shield	<b>857-1000</b>	<b>\$69.00</b>



**C**

**C Face Shield – Complete protection with excellent optics.**

This lightweight plastic shield is a must for full face and neck protection against flying chips while grinding, drilling or polishing. Can be worn over dust masks, respirators and glasses with no obstruction of view. Features pivoting visor for easy raising and lowering, molded visor edge for reinforcement, cushioned vinyl comfort band and pin-and-hole adjustable headbands. Visor measures 8"L x 12"W x .040" thick. Does not eliminate need for safety glasses.

Description	Item#	Each
<b>C. Face Shield</b>	<b>270-0210</b>	<b>\$16.25</b>
Replacement Visor	270-0212	4.65
Replacement Vinyl Sweatband	270-0214	1.48

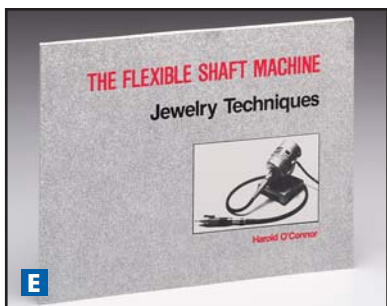


**D**

**D Flex Shaft Accessory Set**

Includes 90 of our most popular polishing wheels, brushes and buffs, texturing wheels, cut-off discs and felt bobs and brushes, all with ⅜" shanks for your flex shaft. Ideal for grinding, sanding and buffing the insides and outsides of rings and other pieces of jewelry. Use polishing wheels, brushes and buffs for fine polishing, texturing wheels for brushed or satin finishing, cut-off discs for fast sizing of rings and felt bobs and brushes for accessing prongs and other tight areas. Packaged in a convenient 24-compartment plastic storage case.

Description	Item#	Each
Flex Shaft Accessory Set	<b>850-0510</b>	<b>\$59.95</b>



**E**

**E The Flexible Shaft Machine: Jewelry Techniques – By Harold O'Connor**

The flexible shaft machine is probably used more often than any other by the practicing craftsman. This book provides information in chart form on the various burs and abrasives available for use with flex shafts. Also covers many other flex shaft accessories. Contains line drawings and instructional black-and-white photos. Softcover, 47 pages.

Description	Item#	Each
The Flexible Shaft Machine	<b>811-0265</b>	<b>\$16.00</b>

## A - C Jump Ringer™ System

### A money-saving system for making jump rings in seconds!

Provides the fastest, easiest way to make perfectly uniform jump rings. Lets you wind and precisely machine-cut jump rings with inside diameters from 1.5mm to over 25.4mm (1") using your Freedom flex shaft and a #30 handpiece (see p. 345). Cuts plain and fancy gold, silver, gold-filled, copper, brass, aluminum and niobium wire. Will not cut iron, steel, titanium or platinum wire.

Features precision-engineered winder with greased nylon bearings for ultra-smooth action. Winds stock wire into a coil, which you then place in a holder and cut apart into jump rings using your #30 handpiece with the supplied rotary sawblade. Has unique safety guard/guide that protects your fingers during cutting and ensures jump rings are cut straight and on-center.

Jump Ringer System includes winder, 5" coil, coil holder, safety guard/guide for your #30 handpiece, rotary sawblade with mandrel, chuck key and three round steel mandrels in 0.094", 0.141" and 0.234" diameters. Works with Multi-Shape Coil Holder and Mandrel Sets listed below to make jump rings in a wide range of sizes and shapes. If you have your own method of cutting, you can purchase the Winding Set separately. Includes winder, chuck key and three round steel mandrels. Or if you have your own method of winding, you can purchase the Cutting Set separately. Includes coil holder, safety guard/guide for your #30 handpiece and rotary sawblade with mandrel.

Description	Item#	Each
A. Complete Jump Ringer System (B and C)	<b>815-2011</b>	<b>\$289.00</b>
B. Jump Ringer Winding Set	<b>815-2014</b>	<b>94.75</b>
C. Jump Ringer Cutting Set	<b>815-2013</b>	<b>199.00</b>
Replacement Sawblade	815-2015	12.99



## D - F Jump Ringer™

### Multi-Shape Coil Holder and Mandrel Sets

Use with your Jump Ringer. The Multi-Shape Coil Holder works in conjunction with the Mandrel Sets to make jump rings in shapes that complement your jewelry designs. Includes guides for adjusting depth and making perfect cuts for every shape and size. Mandrel Sets include seven brass mandrels each, all 3¾" long.

#### Mandrel Sizes:

- Oval Mandrel Set: 1.4 x 2.6, 2.1 x 3.4, 2.7 x 4.4, 3.8 x 6.2, 4.3 x 7.5, 6.2 x 11.5 and 9.2 x 14.6mm sizes
- Square Mandrel Set: 2.0, 3.0, 3.5, 4.5, 6.0, 9.0 and 12.0mm sizes

Description	Item#	Each
D. Multi-Shape Coil Holder	<b>815-2038</b>	<b>\$90.00</b>
E. Oval Mandrel Set	<b>815-2034</b>	<b>54.75</b>
F. Square Mandrel Set	<b>815-2036</b>	<b>54.75</b>



## G MAN-O® Protective Skin Cream

Features unique formulation with solvent, insoluble protectants that guard skin against the toughest solvents, grime and grease, as well as other irritants that can harm and stain. Apply before working to form an invisible shield that lasts for hours. Won't block pores or stop perspiration. Contains lanolin and glycerin to prevent drying and cracking. Comes off easily with soap and water. Silicone-free. Nontoxic. Made in USA.

Description	Item#	Each
MAN-O, 1 lb. tub	<b>805-1085</b>	<b>\$9.95</b>





All shown actual size.

**A - I Screw Mandrels**

Use in handpieces and hand grinders for holding felt wheels, pumice, Cratex and other wheels up to 1/4" thick. Threads are right-hand. Style 321 1/2" is made of stainless steel.

Style	Shank	For Hole	Item#	EACH Prices	
				3-9	12+
A. 321	3/32"	1/16"	840-3170*	\$1.15	\$0.96
B. 321 1/2	3/32"	1/16"	840-3160*	2.30	1.92
C. 304	3/32"	1/16"	840-3175*	2.40	2.00
D. 2	3/32"	1/8"	840-3060*	1.95	1.62
E. 311	1/8"	1/16"	840-3150*	1.35	1.12
F. 20	1/8"	1/8"	840-3100*	2.05	1.71
G. 22	1/8"	1/8"	840-3110*	2.90	2.42
H. 24	1/8"	1/4"	840-3112*	2.20	1.83

Style	Shank	For Hole	Item#	EACH Prices	
				1-11	12+
I. 25	1/4"	1/4"	840-3115	\$4.30	\$3.58

\*Three-piece minimum; please order in multiples of three.

**J - O Tapered Threaded Mandrels**

For use with felt buffs, wheels, cylinders, points and more. Threads are right-hand.



All shown actual size.

Style	Shank	For Hole	Length of Taper	Item#	EACH Prices	
					3-9	12+
J. 3	3/32"	1/16"	3/16"	840-3070*	\$1.00	\$0.83
K. 13	1/8"	1/16"	3/16"	840-3090*	1.00	.83
L. 0	3/32"	1/16"	3/8"	840-3040*	1.00	.83
M. 30	1/8"	1/16"	3/8"	840-3120*	.95	.79

Style	Shank	For Hole	Length of Taper	Item#	EACH Prices	
					1-11	12+
N. 33	1/8"	1/4"	3/4"	840-3130	\$3.75	\$3.12
O. 43	1/4"	3/8"	1"	840-3140	6.80	5.67

\*Three-piece minimum; please order in multiples of three.

**P, Q Threaded Mandrels with Nut**

For use with rubberized points, cones, and cylinders such as Cratex. Threads are right-hand.

Style	Shank	For Hole	Length of Taper	Item#	EACH Prices	
					3-9	12+
P. 1	3/32"	3/32"	1/2"	840-3050	\$1.20	\$1.00
Q. 4	1/8"	3/32"	1/2"	840-3080	1.15	.96

Three-piece minimum; please order in multiples of three.

**R - T Reducing Collets**

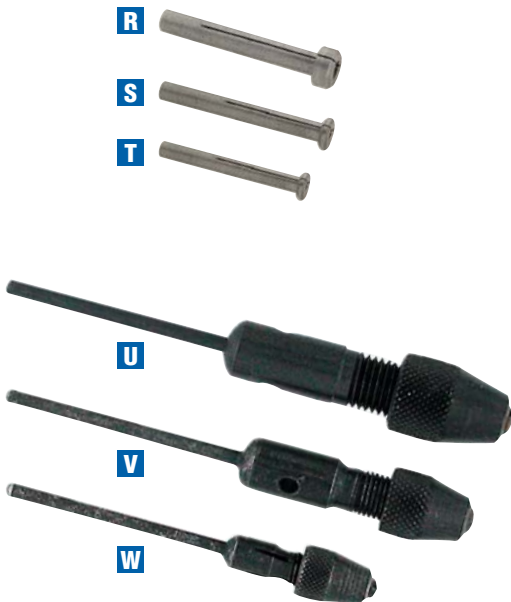
Instantly convert your collet to the size you need. Simply slip the appropriate reducing collet into your collet to use 3/32" or 1/16" shank tools. Do not use at high speeds, and make sure shank is inserted deeply.

Description	Item#	Each
R. 1/8"-3/32" Reducing Collet	816-1501	\$12.90
S. 1/8"-1/16" Reducing Collet	816-1502	12.90
T. 3/32"-1/16" Reducing Collet	816-1503	12.90
3mm-3/32" Reducing Collet	816-1504	12.90
3mm-1/16" Reducing Collet	816-1505	12.90

**U - W Adapter Chucks - 3/32" Shank**

Allow you to use tools with small shanks in standard flex shaft handpieces. Threads are right-hand.

Description	Collet Capacity	Item#	Each
U. Large Chuck	2.77mm	840-3230	\$14.50
V. Medium Chuck	2.62mm	840-3220	12.65
W. Small Chuck	1.00mm	840-3210	12.50





### A - C Cratex® Small Wheel Mandrels

Fit Cratex small wheels. Max. operating speed with 1/2" overhang (exposed mandrel length) or less: 25,000rpm. With each additional 1/4" of overhang, max. operating speed decreases by at least 20%. Use light working pressure.

Style	Shank	For Hole	Item#	EACH Prices	
				1-11	12+
A. #2	3/32"	1/16"	840-3183	\$3.70	\$3.08
B. #3	1/8"	1/16"	840-3186	4.65	3.87
C. #5	1/8"	1/8"	840-3187	5.40	4.50

### D - F Cratex® Cylinder and Point Mandrels

Fit Cratex cylinders and points. Mandrels #1 and #4 have a number 3-48 thread and hex nut flange. Mandrel #6 has a number 5-40 thread and hex nut flange.

Style	Shank	For Hole	Item#	EACH Prices	
				1-11	12+
D. #1	3/32"	3/32"	840-3182	\$2.60	\$2.17
E. #4	1/8"	3/32"	840-3185	3.50	2.92
F. #6	1/8"	1/8"	840-3085	4.05	3.37

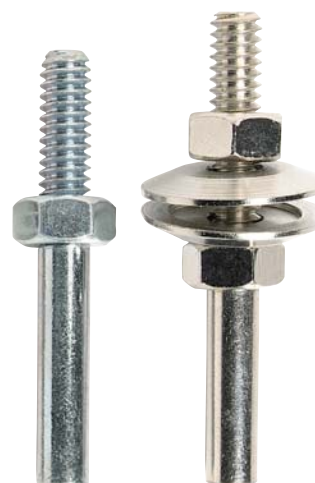


All shown actual size.

### G Cratex® Cone Mandrel – 1/4" Shank

Fits Cratex cones. Max. operating speed with 1/2" overhang (exposed mandrel length) or less: 20,000rpm. With each additional 1/4" of overhang, max. operating speed decreases by at least 20%. Use light working pressure.

Style	Shank	For Hole	Item#	EACH Prices	
				1-11	12+
1341	1/4"	1/4"	840-3180	\$6.05	\$5.04



Both shown actual size.

### H Cratex® Large Wheel Mandrel – 1/4" Shank

Fits Cratex wheels up to 3" dia. x 1/2" thick or less. Max. operating speeds with 1/2" overhang or less: 15,000rpm for 1 1/2" wheels; 8,300rpm for 2" wheels; 7,000rpm for 3" wheels (based on 5,500 surface feet per minute). Best results are usually obtained at 30% to 80% of max. operating speed. Use light working pressure.

Style	Shank	For Hole	Item#	EACH Prices	
				1-11	12+
1342	1/4"	1/4"	840-3184	\$9.45	\$7.87

### I Mounted Screw Mandrel

For right side of motor only. Mandrel with screw for holding wheels with 1/16" holes mounted in wood arbor drilled for threading on tapered spindle.

Description	Item#	EACH Prices	
		3-9	12+
Mounted Screw mandrel	840-3190	\$2.40	\$2.00

Three-piece minimum; please order in multiples of three.



I

### J - L Split Mandrels – 3/32" Shank

For holding strips of emery paper. Have 3/32" shanks.

Description	Item#	EACH Prices	
		1-11	12+
J. Straight Head, 11/64"	840-3405	\$2.40	\$2.00
K. Straight Head, 9/64"	840-3406	2.40	2.00
L. Tapered Head, 3/32"-3/16"	840-3407	2.40	2.00



J

K

L

### M Snap-On Mandrel – 3/32" Shank

Features one-piece construction. Made of high-quality steel. Has 3/32" shank. Fits Snap-On Discs (see p. 29).

Description	Item#	EACH Prices	
		1-11	12+
Snap-On Mandrel	840-3200	\$1.95	\$1.62



M





**A**

**A Safety Glasses**

Comfortable, lightweight safety glasses with high-impact plastic lenses for full eye protection when drilling, polishing and more. One size fits all.

Description	Item#	Each
Safety Glasses	<b>270-0205</b>	<b>\$4.30</b>



**B**

**B Finger Guard Safety Tape**

Offers ideal protection during buffing and grinding, benchwork and other jobs for which gloves are awkward. Protects hands, fingers and wrists from the common hazards of sharp edges, hot surfaces and abrasive materials. Made of pure surgical-grade gauze coated with natural latex rubber, it's dry to the touch and self-adhering. Sticks only to itself, not to hair, skin or clothing. Goes on and comes off fast and easy. Readily conforms to the smallest contours while letting skin breathe. Will not stain or leave residue. Each roll contains 90' of 3/4" wide green tape.

Description	Item#	Each
Safety Tape, roll	<b>816-0203</b>	<b>\$1.89</b>
Safety Tape, pkg. of 16 rolls	<b>816-0202</b>	<b>28.00</b>



**C**

**C 3M® Vetrap™ Bandage Tape**

This easy-to-use flexible tape wraps securely around fingers. Stays comfortable and cool, helping maintain your sense of touch. Available in five colors. Sold in 15'L x 2"W rolls.

Description	Item#	EACH Prices	
		1-5	6+
Blue Roll	<b>816-0214</b>	<b>\$1.80</b>	<b>\$1.69</b>
Green Roll	<b>816-0215</b>	<b>1.80</b>	<b>1.69</b>
Pink Roll	<b>816-0216</b>	<b>1.80</b>	<b>1.69</b>
Red Roll	<b>816-0217</b>	<b>1.80</b>	<b>1.69</b>
White Roll	<b>816-0218</b>	<b>1.80</b>	<b>1.69</b>



**D**

**D Suede Bib Apron**

This durable and comfortable apron protects clothing while you work with power equipment and hand tools. Has no pockets in which debris can collect. Made of tanned, split, rust-colored heavy-weight suede. Includes adjustable ties with brass grommet reinforcements. One size fits all. Measures 24"W x 36"L.

Description	Item#	Each
Suede Bib Apron	<b>827-1507</b>	<b>\$41.95</b>



**E**

**E Fire-Resistant Apron**

Made of fire-resistant fabric ideal for welding applications. Features full-coverage design that provides excellent protection of neck, chest and lap. Includes small chest pocket, large waist pocket, bottom flap for catching runaway parts, comfortable neckband and extra-long waist strings for front tying. Comes in navy blue. One size fits all. Measures 27"W x 36"L.

Description	Item#	Each
Fire-Resistant Apron	<b>827-1508</b>	<b>\$24.95</b>



**F**

**F Bib Apron**

Protects clothing and holds frequently used tools close at hand. Includes extra-long waist strings for front tying. Made of machine-washable heavyweight cotton. Comes in royal blue with white screen-printed Gesswein logo. Measures 17 1/4"W x 24"L. Made in USA.

Description	Item#	Each
F. Bib Apron with pockets	<b>827-1201</b>	<b>\$19.99</b>
Bib Apron without pockets	<b>827-1200</b>	<b>14.50</b>

### A Freedom® Drill Press DP-39

A perfect addition to your shop. Works with your flexible shaft and 1" diameter handpiece, such as the #30, #30H, #44T or #44HT. Securely holds handpiece for drilling accurate holes. Equipped with a dial indicator for precise control of vertical handpiece movement in 0.01mm increments. Features sturdy cast-iron construction with smooth action, adjustable head with precision locking mechanism, drill depth scale and spring return. Handpiece holder and table are adjustable for maximum flexibility. Table can also be swung away for drilling large pieces.

#### Specifications:

Throat Height	2"
Stroke Length	1¼"
Post Diameter	¾"
Dimensions	
Overall	4"W x 5¾"D x 15¼"H (not including handle)
Table	3¼"W x 3¼"D
Base	4"W x 5"D
Ship. Wt.	10 lbs.

Description	Item#	Each
Drill Press DP-39	850-0591	\$239.00



### B Freedom® Mini Vise

Securely holds small parts. Has 1¾" slotted grooves in the base for mounting on a drill press or bench. Stationary jaw has a perpendicular V-groove, and movable jaw has a horizontal V-groove for holding round stock or tube. Jaw width: 1¾". Jaw opening: 1¾". Measures 4"L x 2⅜"W x 1½"H. Glare-free black finish.

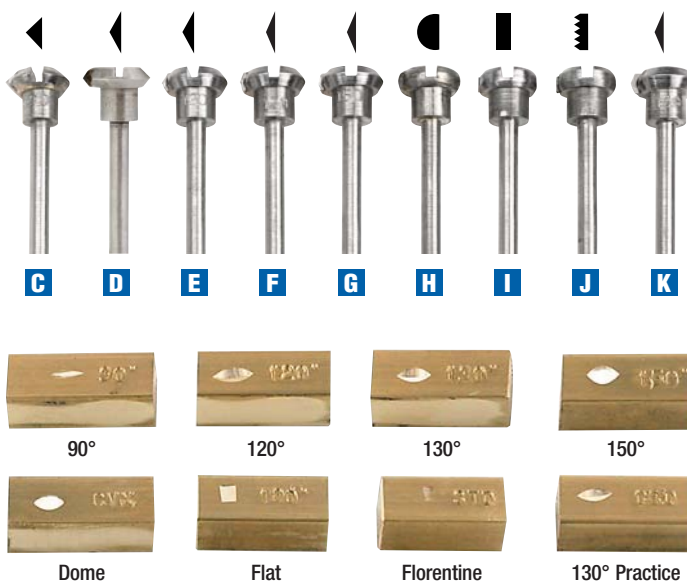
Description	Item#	Each
Mini Vise	820-4700	\$19.00



### C - K Diamond Flywheels – 3mm Shank

These flywheels produce the most decorative bright cuts you've ever seen, helping your jewelry really stand out from the rest. Contain natural grade-A diamonds for fast, easy bright cutting. When used with a high-speed rotary handpiece (minimum 30,000rpm), these flywheels make bright cuts in seconds. Can be resharpened. Have 3mm shanks. We strongly recommend that you purchase a practice wheel—flywheels are not covered by warranty.

Description	Item#	EACH Prices	
		1-9	10+
C. 90° Flywheel	845-1400	\$53.75	\$48.38
D. 110° Flywheel	845-1407	58.75	52.88
E. 120° Flywheel	845-1401	53.75	48.38
F. 130° Flywheel	845-1404	53.75	48.38
G. 150° Flywheel	845-1405	53.75	48.38
H. Dome Flywheel	845-1406	59.95	53.96
I. Flat Flywheel	845-1402	53.75	48.38
J. Serrated Florentine Flywheel	845-1403	59.95	53.96
K. 130° Practice Wheel	845-1410	34.65	—



### L Lazer Point – Produces the brightest stippling possible.

Use this unique diamond-pointed tool with our Technique or Swiss Hammer Handpiece (see p. 348) and your flexible shaft machine. Creates a sparkling finish on gold and silver that mimics pavé. Measures 1¼" long.

Description	Item#	EACH Prices	
		1-2	3+
Lazer Point	850-3590	\$17.65	\$15.89



## POWER/HAND®2X Rotary Micromotor System

The finest system available today. Ideal for grinding, polishing, setting, bright-cutting and more. Consists of modular controllers, handpieces and accessories that you can mix and match to suit your needs.

To create your system, start by selecting one of our two controllers (see below): Standard to run just a single handpiece at a time or Dual to run two handpieces simultaneously.

After that, choose from four lightweight, well-balanced handpieces (see below), which run cool and with little vibration for comfortable use. Include phone-type cords for connection to controller.



A

### A POWER/HAND®2X Standard Controller

Features two handpiece outlets and a switch for changing power from one handpiece to the other. Speed can be adjusted by slide rheostat, optional variable-speed foot rheostat or optional on/off foot switch. Runs in forward and reverse. Provides overload protection. Includes handpiece holder on side. Electrical: 115V, 50/60Hz (230V available). Output voltage: 3–30V DC (continuously variable). Measures 3<sup>3</sup>/<sub>8</sub>"W x 7<sup>3</sup>/<sub>4</sub>"D x 5<sup>3</sup>/<sub>4</sub>"H. Weighs 5.5 lbs. Made in Japan.

Description	Item#	Each
Standard Controller, 115V	510-3000	\$330.00



B

### B POWER/HAND®2X Dual Controller

Has two handpiece outlets with independent speed controls so that two people can use separate handpieces at the same time. Speed of each handpiece can be adjusted by slide rheostat, optional variable-speed foot rheostat or optional on/off foot switch. Runs in forward and reverse. Provides overload protection. Includes handpiece rest on top. Electrical: 115V, 50/60Hz (230V available). Output voltage: 3–30V DC (continuously variable). Measures 8<sup>1</sup>/<sub>4</sub>"W x 8"D x 7"H. Weighs 9 lbs. Made in Japan.

Description	Item#	Each
Dual Controller, 115V	510-2100	\$399.00

### POWER/HAND®2X Accessories

Description	Item#	Each
Optional Variable-Speed Foot Rheostat	510-2995	\$95.00
Optional On/Off Foot Switch	510-3105	45.00
Replacement 3/32" Collet for rotary handpieces	501-0100	35.00
Replacement 1/8" Collet for rotary handpieces	501-0105	35.00
Optional 3mm Collet for rotary handpieces	501-0106	35.00



C

### C POWER/HAND®2X Z-55X High-Speed Rotary Handpiece

The lightest, fastest (55,000rpm) and most comfortable of our straight rotary handpieces. Terrific for general bench work, polishing and bright-cutting. Features quick-tool-change mechanism. Includes 3/32" and 1/8" collets; 3mm collet available (see above). Weighs 6.5 oz.

Description	Max. Speed	Item#	Each
Z-55X High-Speed Handpiece	55,000rpm	510-2290	\$525.00

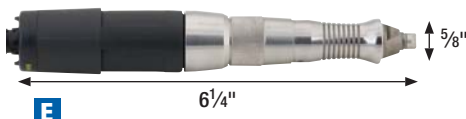


D

### D POWER/HAND®2X Z-35XS and Z-20XS Slimline Rotary Handpieces

Small, lightweight handpieces balanced to ensure better control and comfort. Well-suited for continuous operation. The Z-35XS (35,000rpm) is for general bench work, polishing and bright-cutting, and the Z-20XS (20,000rpm) is for heavier work. Feature quick-tool-change mechanisms. Include 3/32" and 1/8" collets; 3mm collet available (see above). Weigh 8 oz.

Description	Max. Speed	Item#	Each
D. Z-35XS Slimline Handpiece	35,000rpm	510-2287	\$585.00
Z-20XS Slimline Handpiece	20,000rpm	510-2277	495.00



E

### E POWER/HAND®2X Hammer Handpiece

A sleek, smooth, high-tech hammer handpiece. Impact is activated only when you press its tool point firmly to the workpiece, which also makes it a great engraving tool. Offers a broad range of impact speed (from very slow to 32 strokes/sec.) for a variety of tasks. Includes three anvil points and graver holder. Weighs 11 oz.

Description	Max. Speed	Item#	Each
Hammer Handpiece	32 strokes/sec.	510-1280	\$593.00



### A ECO-Torque 280 Rotary Micromotor System

For the economically minded, we offer the ECO-Torque 280 System. With 35W of power, ECO-Torque 280 can handle a wide range of light-duty bench applications. Whether you need a system for grinding, drilling, polishing or bright-cutting, ECO-Torque 280 provides the most affordable solution.

The well-balanced handpiece runs smoothly up to 35,000rpm. Includes a quick-tool-change mechanism for fast tool changes. Measures 6"L x 1" dia., tapering to 3/4" dia. at finger grips. Weighs 7.3 oz. The controller features a voltage selector for 110/220V, 50/60Hz operation and forward/reverse handpiece switch. Output voltage: 3–30V DC (continuously variable). Measures 4 1/4"W x 5 3/4"D x 3"H. Weighs 2.8 lbs.

System includes ECO-Torque 280 controller, lightweight rotary handpiece with 3/32" collet, on/off foot switch, handpiece cradle rest and a replacement pair of carbon brushes.



Description	Item#	Each
ECO-Torque 280 System with 3/32" collet	510-2975	\$199.95

### B POWER/HAND<sup>2</sup>X Marathon Rotary Micromotor System

A bit more powerful than ECO-Torque 280, the Marathon System is still quite affordable. With 50W of power, Marathon handles a wide range of bench applications. Whether you need a system for grinding, drilling, polishing or bright-cutting, Marathon will do the job.

The well-balanced handpiece runs smoothly up to 35,000rpm. Includes a quick-tool-change mechanism for fast tool changes. Measures 6"L x 1" dia., tapering to 5/8" dia. at finger grips. Weighs 7.5 oz. The controller features a voltage selector for 110/220V, 50/60Hz operation and forward/reverse handpiece switch. Output voltage: 0–30V DC (continuously variable). Measures 4 1/4"W x 5 1/2"D x 3 3/4"H. Weighs 2.6 lbs.

System includes Marathon controller, lightweight rotary handpiece with 3/32" collet for bench work or 3mm collet for bright-cutting, variable-speed foot rheostat with constant speed feature, handpiece cradle rest and safety goggles. Purchase the hammer handpiece (see facing page for details) to do bead raising, riveting, peening and engraving.



Description	Item#	Each
B. Marathon System with 3/32" collet	510-2955	\$299.00
Marathon System with 3mm collet	510-2970	299.00
Optional Hammer Handpiece	510-1280	593.00

### C Marathon Handy 700 Rotary Micromotor System Provides 230W of unstoppable power throughout the entire speed range!

The most advanced rotary micromotor system available. Excellent for grinding, polishing, setting, texturing, bright-cutting, finishing and more.

The brushless, vibration-free, cool-running rotary handpiece provides an incredible 230W of power at any speed from 1,000–50,000rpm. Has enclosed motor for quiet operation and quick-tool-change mechanism for fast tool changes. Controller accepts a second standard brush-type handpiece, such as a Power Hand 2X rotary handpiece or hammer handpiece (see facing page for details). Lets you control speed by dial or foot rheostat.

System includes Handy 700 controller, lightweight rotary handpiece with 3/32" or 1/8" collet, variable-speed foot rheostat, handpiece cradle rest, detachable handpiece holder and an extra fuse. Backed by a two-year warranty. CE approved.

#### Features:

- Unstoppable power at any speed with low vibration and noise
- Second receptacle for brush-type hammer or rotary handpiece
- Dial or foot rheostat speed control and auto-cruise function
- Digital display for precise speed and torque settings
- Forward/reverse handpiece switch
- Error-checking/troubleshooting system and overload protection

#### Specifications:

Electrical	100–120V, 4.0A, 40W, 50/60Hz (230V available)
Controller	5.4"W x 9.1"D x 7"H, 6 lbs.
Handpiece	6.3" long, 8.4 oz.



Description	Item#	Each
C. Handy 700 System with 3/32" collet	510-2920	\$995.00
Handy 700 System with 1/8" collet	510-2925	995.00
Optional Hammer Handpiece	510-1280	593.00





### A 3M™ Half-Facepiece Respirator

Protects you from dusts, mists and airborne contaminants. NIOSH rated N95 for protection from respirable silica (in investment, quartz, tripoli and more). Also suitable for rhodium plating. Features a soft, pliable silicone face seal for a secure, gapless fit on most every face shape. Extremely comfortable to wear, especially for extended periods of use. Roomy nose chamber and special 3M Cool Flow valve ensure easy natural breathing while reducing heat and condensation in the facepiece. Complete respirator includes facepiece, two deluxe cartridges, two deluxe prefilters and two retainer rings. NIOSH approved.

Description	Item#	Each
Half-Facepiece Respirator	805-1035	\$41.25
Replacement Deluxe Cartridges, pair	805-1036	9.39
Replacement Deluxe Prefilters, pair	805-1037	2.75
Replacement Retainer Rings, pair	805-1038	3.15



### B Dust and Mist Respirator – NIOSH/MSHA approved for dusts and mists.

Disposable mask with strengthened outer shell for greater toughness, durability and moisture resistance. Dual prestretched polymer head straps require no user adjustments and prevent hair from catching in elastic. Large filter area ensures easy breathing, clear communication and a high degree of worker comfort. Lightweight, formable nosepiece and inner foam seal permit a safe, effective fit. Compact design fits well with glasses, goggles and face shields.

Description	Item#	EACH Prices	
		1-9	10+
Dust and Mist Respirators, pkg. of 5	805-1015	\$5.95	–
Dust and Mist Respirators, box of 20	805-1010	22.25	\$18.91



### C Dust Mask

Disposable mask for protection against nontoxic dusts and powders. Elastic headband provides just enough tension to hold mask snugly against the face without undue pressure. Doesn't interfere with breathing, speech or vision. Contoured design provides maximum field of vision, even with eyeglasses or safety goggles. Flexible metal nosepiece adjusts to fit individual facial contours. Entire surface of mask is used for filtering and allows free passage of air. Mask stands away from nose and mouth for comfort and holds its shape even when wet from use. Excellent for grinding operations.

Description	Item#	EACH Prices	
		1-9	10+
Dust Masks, box of 50	805-1000	\$12.00	\$10.20



### D Corded Earplugs

These soft foam tapered plugs fit easily and securely in the ear. Made of hypoallergenic material. Have noise reduction rating of 29 dB when used as directed. Connected by a braided plastic cord that prevents loss. Easy to carry and handy to have for visitors who might be exposed to loud noise. Sold in packages of 10 pairs and boxes of 100 pairs (each pair is individually packaged for cleanliness).

Description	Item#	Each
Corded Earplugs, pkg. of 10 pairs	805-1061	\$2.55
Corded Earplugs, box of 100 pairs	805-1060	25.99



### E MAN-O® Protective Skin Cream

Features unique formulation with solvent, insoluble protectants that guard skin against the toughest solvents, grime and grease, as well as other irritants that can harm and stain. Apply before working to form an invisible shield that lasts for hours. Won't block pores or prevent perspiration. Contains lanolin and glycerin to prevent drying and cracking. Removes easily with soap and water. Silicone-free. Nontoxic. Made in USA.

Description	Item#	Each
1 lb. Tub	805-1085	\$9.95



### F PR-88 Hand Protectant

This glycerine-based compound prevents grease and grime from penetrating your skin. Apply before working to form an invisible shield that lasts for hours. Removes easily with soap and water.

Description	Item#	Each
3.5 oz. Tin	812-0490	\$7.95

**A Finger Guard Safety Tape**

Offers ideal protection during buffing and grinding, benchwork and other jobs for which gloves are awkward. Protects hands, fingers and wrists from the common hazards of sharp edges, hot surfaces and abrasive materials. Made of pure surgical-grade gauze coated with natural latex rubber, it's dry to the touch and self-adhering. Sticks only to itself, not to hair, skin or clothing. Goes on and comes off fast and easy. Readily conforms to the smallest contours while letting skin breathe. Will not stain or leave residue. Available in individual rolls or in an economical package of 16 rolls. Each roll contains 90' of 3/4" wide green tape.

Description	Item#	Each
Safety Tape, roll	<b>816-0203</b>	<b>\$1.89</b>
Safety Tape, pkg. of 16 rolls	<b>816-0202</b>	<b>28.00</b>
Safety Tape 1" Green, roll	<b>816-0199</b>	<b>2.85</b>
Safety Tape 1", pkg. of 12 rolls	<b>816-0198</b>	<b>28.00</b>

**B 3M® Vetrap™ Bandage Tape**

This easy-to-use flexible tape wraps securely around fingers. Stays comfortable and cool, helping maintain your sense of touch. Available in five colors. Sold in 15'L x 2"W rolls.

Description	Item#	EACH Prices	
		1-4	5+
Blue Roll	<b>816-0214</b>	<b>\$1.80</b>	<b>\$1.69</b>
Green Roll	<b>816-0215</b>	<b>1.80</b>	<b>1.69</b>
Pink Roll	<b>816-0216</b>	<b>1.80</b>	<b>1.69</b>
Red Roll	<b>816-0217</b>	<b>1.80</b>	<b>1.69</b>
White Roll	<b>816-0218</b>	<b>1.80</b>	<b>1.69</b>

**C Leather Finger Cots – USA**

Protect fingers during polishing operations. Made of soft leather for a comfortable fit. Available in three sizes: small/medium for ladies' fingers, medium/large for men's fingers and large for men's thumbs and large fingers. Also available with an elastic back for a secure fit on any finger size. Sold in multiples of 10 and money-saving boxes of 1,000.

Description	Dimensions (L x W)	Item#	EACH Prices		Item#	Box of 1,000
			10-90	100+		
Small/Med. Cots	2 1/4" x 1"	<b>816-0205*</b>	<b>\$ .79</b>	<b>\$ .71</b>	<b>816-0206</b>	<b>\$615.00</b>
Med./Large Cots	3" x 1 1/2"	<b>816-0190*</b>	<b>2.80</b>	<b>2.52</b>	<b>816-0195</b>	<b>2,187.50</b>
Large Thumb Cots**	2 1/2" x 2"	<b>816-0186*</b>	<b>1.69</b>	<b>1.52</b>	—	—
Elastic-Back Cots	2 3/4" x 1 3/4"	<b>816-0188*</b>	<b>2.78</b>	<b>2.50</b>	—	—

\*10-piece minimum; please order in multiples of 10.

\*\*Slightly stiffer leather.

**D Suede Finger Guards**

These thick suede guards offer the greatest protection from compounds, abrasives and heat. Feature open-ended design and elastic cloth back for comfortable fit.

Description	Item#	EACH Prices	
		10-90	100+
Suede Finger Guards	<b>816-0200</b>	<b>\$ .98</b>	<b>\$ .88</b>

10-piece minimum; please order in multiples of 10.

**E Rubber Finger Guards**

Superior guards for sure grip and extra-long life. Ventilated for comfort. Protect fingers while polishing and handling workpieces. Sold by the dozen.

Description	Style	Item#	DOZEN Prices	
			1-11	12+
Small Guards	11	<b>816-0220</b>	<b>\$4.89</b>	<b>\$3.91</b>
Medium Guards	12	<b>816-0225</b>	<b>4.89</b>	<b>3.91</b>
Large Guards	13	<b>816-0230</b>	<b>4.89</b>	<b>3.91</b>
X-Large Guards	14	<b>816-0235</b>	<b>4.89</b>	<b>3.91</b>

**F Cotton Knit Finger Guards**

Provide excellent protection from heat, burns and abrasion during buffing and grinding operations. Made of pure soft cotton yarn with no side seams for a better feel. Small size fits most women, large most men. Sold in multiples of 10 and money-saving boxes of 1,000.

Description	Item#	EACH Prices		Item#	Box of 1,000
		10-90	100+		
Small Guards	<b>816-0207*</b>	<b>\$ .48</b>	<b>\$ .43</b>	—	—
Large Guards	<b>816-0211*</b>	<b>.48</b>	<b>.43</b>	<b>816-0212</b>	<b>\$399.00</b>

\*10-piece minimum; please order in multiples of 10.





A

### A Safety Glasses

Comfortable, lightweight safety glasses with high-impact plastic lenses for full eye protection when drilling, polishing and more. One size fits all.

Description	Item#	Each
Safety Glasses	270-0205	\$4.30



B

### B Chemical Splash Goggles

Heavy-duty Chemical Splash Goggles feature generously sized frame and lens, which fit easily over prescription glasses. Clear lens with fog-free coating helps maintain excellent visibility. One-way vents let air in yet keep harmful liquids out. Adjustable headband ensures a comfortable, secure fit. Provide 99% UV protection. Exceed ANSI Z87.1-2003 impact requirements.

Description	Item#	Each
Chemical Splash Goggles	270-0300	\$10.75



C

### C Aspen Safety Glasses – Fashion, comfort and safety!

Safety glasses aren't safe if you don't wear them! Our Aspen Safety Glasses provide eye protection against most common eye hazards of polishing and benchwork except for severe impacts. Feature polycarbonate lenses and side shields. Also offer UV protection. M.E. II glasses come with adjustable silicone nose pads. Meet ANSI Z87.1 requirements.

Description	Frame	Item#	Each
Aspen Safety Glasses	Clear plastic	270-0123	\$8.65



D

### D Panaspec Plus Safety Glasses

Feature impact-resistant clear polycarbonate lenses that provide eye protection against most common eye hazards of benchwork, polishing and more. These lenses offer greater impact resistance than glass lenses, provide a wide field of view and are easily replaced. Side panels and browbar help provide protection from the side and from above the eye. Available in three different polycarbonate frame colors. Meet ANSI Z87.1 requirements.

Description	Item#	Each
Glasses with Smoke Gray Frame	270-0100	\$6.25
Glasses with Clear Frame	270-0101	6.25
Glasses with Brown Frame	270-0102	6.10
Replacement Lens (clear)	270-0112	3.15



E

### E Safety Goggles

A must for polishing, buffing and grinding. Comfortable and lightweight, they easily fit over glasses. Have polycarbonate lens. The sides and top are perforated to reduce fogging. One size fits all. Meet ANSI Z87.1 requirements.

Description	Item#	EACH Prices	
		1-2	3+
Safety Goggles	270-0200	\$2.90	\$2.76



F

### F Face Shield – Complete protection with excellent optics.

This lightweight plastic shield is a must for full face and neck protection against flying chips while grinding, drilling or polishing. Can be worn over dust masks, respirators and glasses with no obstruction of view. Features pivoting visor for easy raising and lowering, molded visor edge for reinforcement, cushioned vinyl comfort band and pin-and-hole adjustable headbands. Visor measures 8"L x 12"W x .040" thick. Does not eliminate need for safety glasses.

Description	Item#	Each
F. Face Shield	270-0210	\$16.25
Replacement Visor	270-0212	4.65
Replacement Vinyl Sweatband	270-0214	1.48



G

### G Bausch & Lomb® Eye Wash

This eye irrigating solution flushes away foreign particles, chlorine and other eye irritants. Gently cleanses and soothes irritated eyes. Keep on hand for eye emergencies. Includes sterile eye wash cup. Sold in 4 oz. dropper bottles.

Description	Item#	Each
Eye Wash	272-1002	\$5.75



**A C-Kure® Vinyl Gloves**

These powder-free gloves offer a snug fit but are easier to slide on and off than latex. Vinyl gloves are the ideal alternative for the sensitive user.

Size	Item#	Box of 100
Small	805-1045	\$7.95
Medium	805-1046	7.95
Large	805-1047	8.55

**B MicroFlex® UltraSense™ Powder-Free Nitrile Glove – The alternative to latex!**

Powder-free UltraSense is a breakthrough in nitrile technology, providing the fit and feel of latex while eliminating the possibility of natural rubber latex allergic reaction. Provides reliable barrier protection against many hazardous and infectious substances. Highly elastic for easy conformance and reduced fatigue. Textured fingertips offer excellent grip in wet or dry conditions. Ambidextrous. Beaded cuff. Polymer-coated for easy donning. Length: 245mm (9<sup>5</sup>/<sub>8</sub>" ). Thicknesses: 5.1mil finger, 3.5mil palm. Color: blue. Sold in dispenser box of 100.

Size	Item#	Box of 100
Small	805-1072	\$16.95
Medium	805-1071	16.95
Large	805-1070	16.95

**C MicroFlex® NeoPro® EC Glove – Ideal for rhodium plating!**

Exceptional comfort in a tough synthetic glove. NeoPro EC offers the barrier protection of a synthetic with the comfort, fit and feel of natural rubber latex. Offers 90% more puncture resistance than natural rubber latex. Resists a broad range of chemicals. Ideal for rhodium plating, electrocleaning and most other plating operations. Textured fingertips provide a secure grip. Extended, beaded cuff guards against splashes and spills. Made of polychloroprene, the generic name for neoprene. Ambidextrous. Powder-free and polymer-coated for easy donning. Length: 300mm (11.8"). Thicknesses: 8.3mil finger, 6.3mil palm, 4.7mil cuff. Color: green. Sold in dispenser box of 50.

Size	Item#	Box of 50
Small	805-1052	\$19.95
Medium	805-1051	19.95
Large	805-1050	19.95

**D Latex Gloves**

Disposable latex gloves for everyday use. Prevent skin problems that arise from chemical reactions caused by constant exposure to soaps, solvents and other mild chemicals. Powdered to go on and off easily. Available in small, medium and large sizes. Sold in boxes of 100.

Description	Item#	Box of 100
Small	805-1043	\$14.95
Medium	805-1041	14.95
Large	805-1042	14.95

**E, F Neoprene Sleeves**

Neoprene sleeves provide lower-arm protection against a wide range of chemicals, oils, acids, caustics and solvents. Feature elastic cuffs on both ends for a secure fit. Measure 18" long. Sold by the pair. Heavy-duty double-coated yellow neoprene apron for broad-spectrum protection from a wide range of chemicals, including acids, caustics and solvents. Features extra-long neck and waist ties. Measures 35"W x 45"L. Weighs 12<sup>1</sup>/<sub>2</sub> oz. Recyclable.

Description	Item#	Each
E. Neoprene Sleeves, pair	827-1510	\$7.75
F. Neoprene Apron	827-1509	24.75







**A Microetcher™ Model E**

A reliable, precise miniature tool designed for jewelers. Small in size yet powerful enough for devesting castings, removing oxides, etching, texturing, preparing surfaces for soldering, creating matte surface finishes and detailing, especially in tight areas. Features a 1/2" diameter handpiece with tungsten carbide tip, extra-flexible 6' air line and sensitive finger control valve for precise on/off action. Use a Prefilter/Coalescing Filter (see p. 181) for your compressed air line to prevent moisture from entering the media reservoir and clogging the sandblaster. Recommended for use with Aluminum Oxide #854-1294, Jet Brite Glass Beads #810-1200 or Glass Beads #854-1291 (see p. 364). Requires 60–100 PSI air supply.

**Includes:**

- Handpiece with replaceable 0.048" tungsten carbide tip
- Push-button finger control valve
- Abrasive reservoir with two quick-switch interchangeable jars
- 6' flexible air line with fittings

Description	Item#	Each
Microetcher Model E	<b>854-1283</b>	<b>\$130.00</b>



**B Econo Benchtop Sandblaster**

Features compact size, hinged front access door with a large 5" square viewing glass, built-in rubber side glove, trigger-operated air control valve, interior light, 1/2" dia. x 3'L air hose for connection to your air compressor and rear exhaust port with filter. Made of heavy-gauge sheet steel and finished in a durable baked coating. Holds and recirculates coarse or fine media, including matte sand, crushed ruby or glass beads (see p. 364). Includes 5 lbs. medium-grit sand abrasive.

**Specifications:**

Media Capacity	5 lbs.
Air Requirement	30–60 PSI at 2 CFM
Dimensions	10"W x 10"D x 14"H
Ship. Wt.	17 lbs.

Description	Electrical	Item#	Each
Econo Sandblaster	110V	<b>854-0070</b>	<b>\$309.00</b>
	220V	<b>854-0075</b>	<b>309.00</b>



**C, D Benchtop Sandblasters**

Compact units with solid molded construction for eliminating annoying leaks, large viewing glass, adjustable pressure regulator and self-cleaning nozzle with replaceable orifice. Available in Single and Dual styles. Single has left-hand heavy-duty rubber glove and manual blast control; Dual has left-hand and right-hand heavy-duty rubber gloves and foot pedal blast control. Each sits comfortably atop the workbench and can be easily moved when not in use. Holds and recirculates coarse or fine media, including matte sand, crushed ruby or glass beads (see p. 364). Includes two replacement ceramic orifices, internal lightbulb and 5 lbs. quartz abrasive.

**Specifications:**

Media Capacity	5 lbs.
Air requirement	25–100 PSI at 2.4 CFM
Dimensions	11 1/2"W x 12"D x 18"H
Ship. Wt.	18 lbs.

Description	Electrical	Item#	Each
C. Single Sandblaster	110V, 50/60Hz	<b>854-0050</b>	<b>\$464.00</b>
	220V, 50/60Hz	<b>854-0055</b>	<b>475.00</b>
D. Dual Sandblaster	110V, 50/60Hz	<b>854-0060</b>	<b>545.00</b>
	220V, 50/60Hz	<b>854-0065</b>	<b>550.00</b>
Replacement Plexiglas Door		854-0056	26.75
Replacement Nozzle Assembly Kit (two ceramic orifices and two setscrews)		854-0057	18.15
Replacement Gloves, pair		854-1278	11.40

### A Wolf™ Sandblaster

This compact unit provides all the features you've wanted in a sandblaster: crystal-clear acrylic cabinet lets in plenty of light for easy viewing of work in progress; large lid opens wide to accommodate big pieces and is lined with replaceable 3M film liner to prevent frosting; pivoting nozzle adjusts to differently sized pieces; on/off switch located inside the cabinet offers quick flow control; built-in air filter eliminates clump-causing moisture and includes a quick-disconnect fitting for your air hose; integral dust filter and lid gasket keep hazardous dust out of the workplace; and metal grate holds pieces above the abrasive media. Permits two-handed operation for easy working. Holds and recirculates coarse or fine media, including matte sand, crushed ruby or glass beads (see p. 364).

#### Specifications:

Media Capacity	5 lbs.
Air Requirement	42-70 PSI
Dimensions	19"W x 17"D x 16"H
Ship. Wt.	19 lbs.

Description	Item#	Each
Wolf Sandblaster	<b>854-0080</b>	<b>\$550.00</b>
Extra 3M Film Liner	<b>854-0081</b>	<b>26.95</b>



### B, C Power Sandblaster #20

Our heavy-duty Power Sandblaster #20 features 6 CFM gun for fast, powerful blasting and large front-opening door and work chamber for accommodating large or multiple parts. Holds and recirculates 20 lbs. of abrasive media (see p. 364). Removes fine dust particles via a built-in dust collector with easily replaceable filter for safe, efficient, clean operation. Requires 1½ HP air compressor.

Can be mounted on a bench or an optional stand at a comfortable working height. Accepts optional pencil gun attachment with 1/16" orifice and optional 12 CFM gun jet for double the blasting power (requires 3 HP air compressor).

#### Features:

- 14-gauge welded steel construction
- Heavyweight rubber gloves
- Dust collection system
- Fluorescent light
- Double-laminated safety viewing glass
- 6 CFM tungsten carbide nozzle and jet
- Trapdoor for easy media change
- Pressure regulator and gauge
- Safety foot valve blasting control

#### Specifications:

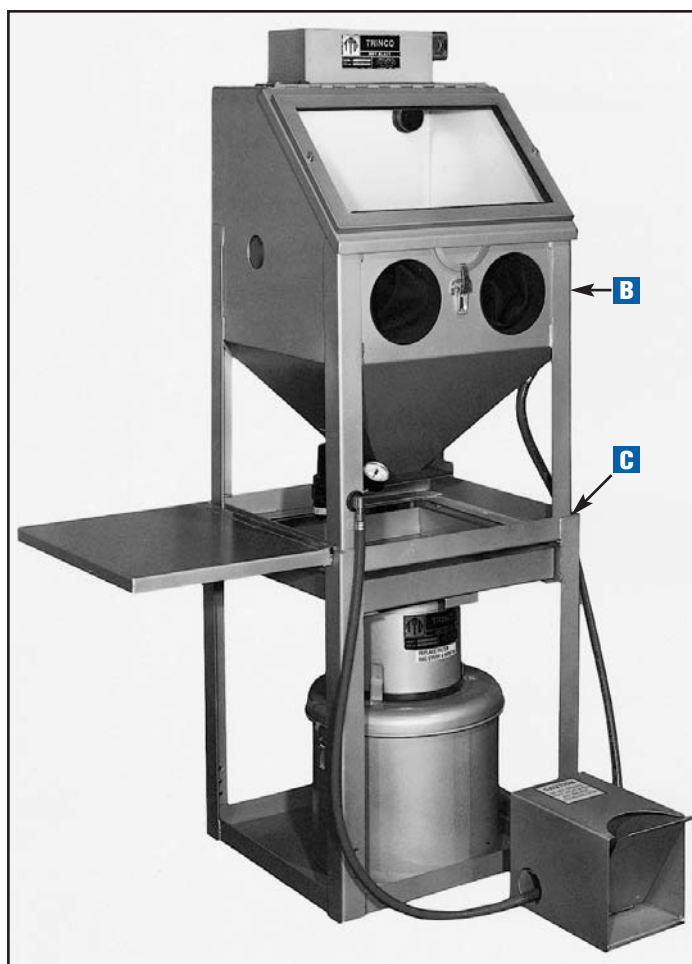
Airflow 6 CFM (12 CFM with optional gun jet)

#### Dimensions

Overall	21"W x 18½"D x 38½"H
Inside	20"W x 18"D x 18"H
Door Opening	20"W x 15"H
Viewing Glass	18"W x 10"H
Dust Collector	15" dia. x 24"H

Ship. Wt. 165 lbs.

Description	Electrical	Item#	Each
B. Sandblaster #20	115V, 1 Ph, 60Hz	<b>854-0015</b>	<b>\$660.00</b>
	230V, 1 Ph, 50/60Hz	<b>854-0016</b>	<b>895.00</b>
C. Optional Stand with Swing-Out Shelf		<b>854-0025</b>	<b>179.00</b>
Optional Pencil Gun Attachment		<b>854-0035</b>	<b>180.00</b>
Optional 12 CFM Gun Jet		<b>854-0034</b>	<b>13.75</b>
24" Gloves, pair		854-0040	26.00
Dust Filter		854-0036	11.50
Viewing Glass Shields, pkg. of 10		854-0038	5.95



## Sandblasting Medias

Sandblasting abrasive medias have many different applications, including cleaning, peening metal, removing investment from cast parts, removing imperfections, blending surfaces, deburring, finishing, decorating and descaling. Work is cleaned, deburred, decorated and cold-worked without etching, removing surface details or leaving undesirable residues.



### A Aluminum Oxide

Aluminum oxide, 90 micron, tan in color. Allows rapid removal of oxides, scales, cements, resins and investment. Excellent for soldering and preparing metallic surfaces for bonding. Can be used in any sandblaster. Sold in 1 lb. package.

Description	Micron	Item#	EACH Prices	
			1-4	5+
Aluminum Oxide, 1 lb.	90	854-1294	\$18.65	\$15.85



B



### B Matte Sand

Graded aluminum oxide in a 300–350 micron range for imparting a beautiful matte finish coarser than glass beads and slightly finer than crushed ruby. Produces a finish similar to the traditional quartz abrasive but contains no silica. Yields best results with 50–80 PSI of air pressure. Cannot be used with Microetcher due to micron size. Sold in 5 lb. package.

Description	Micron	Item#	EACH Prices	
			1-4	5+
Matte Sand, 5 lbs.	300–350	854-1298	\$27.50	\$26.13



C



### C Crushed Ruby

Synthetic ruby crushed to a 212–300 micron range for imparting a unique matte finish with a subtle sparkle. Provides best results with 60–80 PSI of air pressure. Cannot be used with Microetcher due to micron size. Sold in 5 lb. package.

Description	Micron	Item#	EACH Prices	
			1-4	5+
Crushed Ruby, 5 lbs.	212–300	854-1297		\$109.00



D



### D Jet Brite Glass Beads

Glass beads in the 50–105 micron range coated with silicone to repel moisture. Stay separated to prevent clogging of sandblaster. Impart an attractive satin-blasted finish. Can be used with any sandblaster. Air pressure must be kept under 45 lbs. to obtain best results and prevent beads from shattering. Sold in 5 lb. package.

Description	Micron	Item#	EACH Prices	
			1-4	5+
Jet Brite Glass Beads, 5 lbs.	50–105	810-1200	\$29.95	\$28.45



E



### E Glass Beads

Glass beads, 100 micron. Actual round beads, not cupels (oval-shaped beads with seams that crack easily), so they cost less in the long run. Impart an attractive satin-blasted finish. Can be used with any sandblaster. Air pressure must be kept under 45 lbs. to obtain best results and prevent beads from shattering. Sold in 5 and 25 lb. packages.

Description	Micron	Item#	EACH Prices	
			1-4	5+
Glass Beads, 5 lbs.	100	854-1291		\$16.25
Glass Beads, 25 lbs.	100	854-1292		64.95



### A Silent Air Compressor – Quiet yet powerful!

So quiet you'll barely know it's there. Makes about as much noise as a refrigerator, so you can keep it under your table and work without distraction. Features powerful 1/2 HP motor that provides over 2 CFM of air. Handles up to 10 large Wax Injectors. Fully automatic. Includes handle for easy carrying. Measures 13" dia. x 25"H. Weighs 58 lbs. Made in USA. Use with #850-7353 (see below) for sandblasting. Accepts 1/4" male fittings (see below).

#### Features:

- Tank and line pressure gauge
- Line pressure regulator
- Moisture trap and filter
- Safety valve
- Air-intake filter

#### Specifications:

Motor	1/2 HP
Max. Pressure	114 PSI
Tank Capacity	4 gals.
Displacement	2.15 CFM
Noise Level	40 dB

Description	Electrical	Item#	Each
Silent Air Compressor	110V	<b>265-3100</b>	<b>\$1,325.00</b>
	220V, 50/60Hz	<b>265-3102</b>	<b>1,375.00</b>



### B Quiet Air Compressor

The ideal unit for anyone who wants an affordable, quiet, long-lasting air compressor. Features a 1/2 HP motor that provides 1.8 CFM of air. Designed for continuous operation. Very well-balanced to resist walking. Electrical: 110V. Measures 16.5"W x 8"D x 16.8"H. Weighs 26 lbs. Made in USA. Use with #850-7353 (see below) for sandblasting. Accepts 1/4" male fittings (see below).

#### Features:

- Runs quietly for indoor operation.
- Offers high airflow delivery.
- Rated for continuous use.
- Balanced to prevent walking.
- Requires no oil.

#### Specifications:

Motor	1/2 HP
Max. Pressure	125 PSI
Tank Capacity	2 gals.
Displacement	1.8 CFM
Noise Level	60 dB

Description	FOB Point	Item#	Each
Quiet Air Compressor	CT	<b>265-3105</b>	<b>\$395.00</b>
	WI	<b>265-3106</b>	<b>415.00</b>



### C, D Miniature Prefilter/Coalescing Filter Assembly

Ideal for applications requiring dry and extremely clean air. Designed for air compressors rated up to 3.5 CFM. Prefilter removes liquid and solid particles down to 5 microns; coalescing filter removes particles down to 0.01 micron. Use optional bracket to mount on wall or bench. Maximum inlet pressure: 150 PSI. Ports: 1/4".

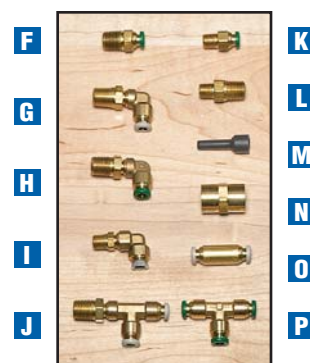
Description	Item#	Each
C. Filter Assembly	<b>850-7353</b>	<b>\$94.00</b>
D. Mounting Bracket	<b>850-7359</b>	<b>7.25</b>



### E - P Quick Disconnect Air Hose and Fittings

Sturdy 1/4" O.D. nylon air hose with .040" wall thickness and a collection of timesaving quick-disconnect fittings. To connect, just push air hose into fitting—it automatically locks in place. To disconnect, push back plastic ring on fitting and pull air hose out. The 1/4" and 1/8" male fittings work with a variety of sandblasters, wax injectors, sprue cutters and more. Use 1/4" males for air filters, regulators and vacuum pumps.

Description	Item#	Per Foot
E. Nylon Air Hose, 1/4" O.D.	<b>265-2286</b>	<b>\$.94</b>
Description	Item#	Each
F. QD Connector, Male, 1/4"	<b>265-2276</b>	<b>\$6.85</b>
G. QD Swivel Elbow, Male, 1/4"	<b>265-2293</b>	<b>7.05</b>
H. QD Elbow, Male, 1/4"	<b>265-2288</b>	<b>7.80</b>
I. QD Swivel Elbow, Male, 1/8"	<b>265-2291</b>	<b>5.96</b>
J. QD Swivel T-Connector, Male, 1/4"	<b>265-2278</b>	<b>7.70</b>
K. QD Connector, Male, 1/8"	<b>265-2277</b>	<b>3.75</b>
L. Nipple Reducer, 1/4"-1/8"	<b>265-2289</b>	<b>2.65</b>
M. Plug for QD 1/4" Connectors	<b>265-2283</b>	<b>1.60</b>
N. Coupling, Female, 1/4" to 1/4"	<b>265-2284</b>	<b>2.75</b>
O. QD Union (Straight), 1/4"	<b>265-2282</b>	<b>4.65</b>
P. QD Union T, 1/4"	<b>265-2281</b>	<b>6.65</b>







### A Knew Concepts Precision Saw System

Consists of a lightweight laser-cut anodized aluminum frame designed for extreme rigidity and matching guide that attaches to your benchtop. Makes precision cutting much easier than standard hand saws.

Knurled knob on upper clamp in frame allows fast sawblade tensioning. Ergonomic foam handle grip conforms to your hand and matches the mechanics of your sawing motion. Two ball-bearing wheels at top and bottom of guide keep frame in perfect position for making vertical cuts: upper wheel runs within vertical frame slot, which has a keyhole opening at top for easy disengagement; lower wheel simply accepts front end of frame. Anodized aluminum workpiece table with slot tilts 45° either way for making angular cuts. Hold-down pin prevents workpiece from lifting, reducing sawblade breakage.

Accommodates standard jeweler's sawblades. Has a 5" deep throat. Made in USA.

Description	Item#	Each
Knew Concepts Precision Saw System	<b>812-1293</b>	<b>\$385.00</b>



### B Knew Concepts Precision Power Saw

Not just another power saw, but one of the most advanced saws available for fast, precise, intricate cutting. Makes sawing less of a chore and more of an exercise in sheer creativity. Provides far better control and a much finer finish than other power saws and hand saws, with advanced features that are hard to match.

Clamps to your benchtop with two hand knobs so you can attach when needed and store when not in use. Stands fully upright for making vertical cuts scroll saws can't. Also tilts 45° either way and locks in place for making angular cuts. Fail-safe cable drive system instantly stops if sawblade breaks, preventing workpiece damage. Hold-down foot prevents workpiece from lifting, reducing sawblade breakage. Carbide buttresses support sawblade from above and below workpiece to prevent bowing, increasing sawblade life. Toggle-link at upper-rear allows rapid and repetitive sawblade tensioning.

Accommodates standard jeweler's sawblades in sizes 8/0 to 8. Has an 8" deep throat and an adjustable stroke up to 2½" long for materials up to ¾" thick. Requires proper Freedom foot rheostat (not included) for variable-speed operation from 0–160 strokes per minute. Electrical: 110V. Made in USA.

Description	Item#	Each
Knew Concepts Precision Power Saw	<b>812-1292</b>	<b>\$1,895.00</b>



### C Gesswein® Lube-Stik

Use on grinding, cutting, drilling, piercing or similar tools to speed up production and increase tool life. Reduces friction and heat buildup so that tools stay sharper, work faster and cut smoother. Easy to use—just run your tools into the soft lubricant every so often. Can also be used to reduce the effort needed for drawing operations. Supplied in a handy push-up dispenser tube.

Description	Item#	EACH Prices	
		1-9	10+
Lube-Stik	<b>816-2460</b>	<b>\$4.15</b>	<b>\$3.74</b>

**A Jeweler's Sawframe – With end screw**

Quality steel sawframe with end screw and comfortable wooden handle. Holds sawblades up to 6" long. End screw allows precise adjustment of blade tension. Imported.

Description	Depth	Item#	EACH Prices	
			1-2	3+
Small Sawframe with End Screw	2 <sup>7</sup> / <sub>8</sub> "	187-1026	\$10.95	\$9.86

**B - D Flat Sawframes**

Quality adjustable steel frames in four convenient sizes. Feature thumbscrews for quick tightening and loosening of sawblades and hardened steel plates with serrated surfaces for firmly holding sawblades up to 6" in length. Adjust to allow use of broken sawblades. Have comfortably shaped hardwood handles. Imported.

Description	Depth	Item#	EACH Prices	
			1-2	3+
B. Small Flat Sawframe	2 <sup>1</sup> / <sub>4</sub> "	187-1159	\$6.50	\$5.85
Med. Flat Sawframe	2 <sup>7</sup> / <sub>8</sub> "	187-1160	8.45	7.61
C. Large Flat Sawframe	3 <sup>3</sup> / <sub>4</sub> "	187-1170	9.45	8.51
D. X-Large Flat Sawframe	4 <sup>3</sup> / <sub>4</sub> "	187-1171	11.15	10.04

**E, F Swiss Sawframes**

Spring steel frames with aluminum guide posts and guides, holes at both ends for quick blade insertion and perfect alignment every time. Feature easy-lock mechanism that prevents wobble, reducing blade breakage. Have ultra-lightweight rubber-coated sure-grip handles for easier cutting and reduced arm fatigue. Available fixed for standard 5<sup>1</sup>/<sub>4</sub>" jeweler's sawblades or adjustable for broken blades. Made in Switzerland.

Description	Depth	Item#	EACH Prices	
			1-2	3+
E. Adjustable Swiss Sawframe	2 <sup>3</sup> / <sub>4</sub> "	187-1120	\$14.25	\$12.54
F. Fixed Swiss Sawframe	2 <sup>3</sup> / <sub>4</sub> "	187-1122	14.25	12.54

**G Deluxe Sawframe**

Black, laser-cut, high-quality spring steel sawframe with machined slots and tenons at both ends for gripping sawblades quickly and easily. For perfect alignment, just slip sawblade into slots and tighten the large, sturdy thumbscrews. Feature special blade gripping mechanism that prevents wobble during sawing, reducing blade breakage. Has smooth wooden handle. Made in Switzerland.

Description	Depth	Item#	EACH Prices	
			1-2	3+
Small Deluxe Sawframe	2 <sup>3</sup> / <sub>4</sub> "	187-1097	\$69.95	\$62.96

**H, I Apprentice's Sawframes**

Beautiful chrome-plated sawframes priced low enough for students. Feature thumbscrews and slightly oversized polished wooden handles. Slightly more flexible for easier tightening of sawblades. Available in fixed style for holding standard-size blades and adjustable style for holding both standard-size and broken blades.

Description	Depth	Item#	EACH Prices	
			1-2	3+
H. Fixed Sawframe	3 <sup>1</sup> / <sub>4</sub> "	187-1180	\$7.95	\$7.16
I. Adjustable Sawframe	3 <sup>1</sup> / <sub>4</sub> "	187-1185	8.95	8.06



## Saw Blade Specifications

Blade Size	Blade Thickness	Blade Depth	Teeth per inch	Recommended for: (B&S) Gauge	Drill Size for Piercing	Blade Size	Blade Thickness	Blade Depth	Teeth per inch	Recommended for: (B&S) Gauge	Drill Size for Piercing
8/0	.0063"	.0126"	89.0	up to 26	80	1	.0120"	.0240"	51.0	18-20	71
7/0	.0067"	.0130"	84.0	24-26	80	2	.0134"	.0276"	43.0	16-18	70
6/0	.0070"	.0140"	76.0	24	79	3	.0140"	.0290"	40.5	16-18	68
5/0	.0080"	.0157"	71.0	22-24	78	4	.0150"	.0307"	38.0	16-18	67
4/0	.0086"	.0175"	66.0	22	77	5	.0158"	.0331"	35.5	16	65
3/0	.0095"	.0190"	61.0	22	76	6	.0173"	.0370"	33.0	14	58
2/0	.0103"	.0204"	56.0	20-22	75	7	.0189"	.0400"	30.5	12	57
1/0	.0110"	.0220"	53.5	18-22	73	8	.0197"	.0440"	28.0	12	55

### A Pike Platinum Jeweler's Sawblades

These blades are tougher and more durable than standard jeweler's sawblades. Ideal for platinum because teeth stay sharper longer. Measure 5¼" (13cm) long. Made in Switzerland. Sold by the gross.



A

Size	Thickness	Width	Approx. Teeth Per Inch	Item#	GROSS Prices	
					1-11	12+
4/0	0.009"	0.017"	64	<b>187-0500</b>	<b>\$19.30</b>	<b>\$17.76</b>
3/0	0.010"	0.019"	57	<b>187-0501</b>	<b>19.30</b>	<b>17.76</b>
2/0	0.010"	0.021"	53	<b>187-0502</b>	<b>19.30</b>	<b>17.76</b>
1/0	0.011"	0.023"	51	<b>187-0503</b>	<b>19.30</b>	<b>17.76</b>
1	0.012"	0.025"	47	<b>187-0504</b>	<b>19.30</b>	<b>17.76</b>
2	0.013"	0.027"	44	<b>187-0505</b>	<b>19.30</b>	<b>17.76</b>



B

### B Econo-Saws

Inexpensive nonbrittle sawblades for making straight cuts. Measure 13cm (5¼") long. Sold by the gross.

Size	Item#	Gross
4/0	<b>184-0400</b>	<b>\$11.65</b>



C

D

### C Skip-Tooth Sawblade

Designed for smooth wax cutting. Teeth are widely spaced to prevent clogging. Measures 13cm (5¼") long. Sold by the dozen.

Description	Item#	DOZEN Prices	
		1-11	12+
Skip-Tooth Sawblade	<b>186-9060</b>	<b>\$5.25</b>	<b>\$3.68</b>

### D Spiral Sawblade

For cutting hard wax models. Teeth are spaced to prevent clogging. Circular design permits cutting in all directions. Measures 13cm (5¼") long. Sold by the dozen.

Description	Item#	DOZEN Prices	
		1-11	12+
Spiral Sawblade	<b>186-9050</b>	<b>\$3.95</b>	<b>\$2.77</b>



E

### E Diamond Sawblades

Consist of piano wire electroplated with diamond particles. Make quick work of sawing glass, ceramic and stones. Available in four grits. Fit standard jeweler's sawframes. Measure 5⅜" long. Plated portion measures approx. 3" long. Sold individually.

Grit	Approx. Diameter	Item#	EACH Prices	
			1-2	3+
60 Coarse	0.058"	<b>226-1500</b>	<b>\$8.20</b>	<b>\$7.38</b>
100 M/C	0.048"	<b>226-1505</b>	<b>8.20</b>	<b>7.38</b>
120 Medium	0.045"	<b>226-1510</b>	<b>8.20</b>	<b>7.38</b>
140 M/F	0.043"	<b>226-1515</b>	<b>8.20</b>	<b>7.38</b>



**A SUPRA® Golden Piercing Sawblades – The world’s finest sawblades at great prices!**

Extremely flexible straw-colored sawblades made of the finest steel using the latest technology. Cut straight and stay sharp. Can be used on both hand- and power-driven tools that have a blade clamping device. Measure 13cm (5¼") long. Made in Germany. Sold by the gross.

Size	Thickness	Width	Approx. Teeth Per Inch	Item#	GROSS Prices		
					1-2	3-5	6+
6/0	0.0070"	0.0140"	82	<b>187-0060</b>	<b>\$27.85</b>	<b>\$25.07</b>	<b>\$22.28</b>
5/0	0.0080"	0.0157"	80	<b>187-0050</b>	<b>24.65</b>	<b>22.19</b>	<b>19.72</b>
4/0	0.0086"	0.0175"	72	<b>187-0040</b>	<b>22.15</b>	<b>19.94</b>	<b>17.72</b>
3/0	0.0095"	0.0190"	66	<b>187-0030</b>	<b>20.15</b>	<b>18.14</b>	<b>16.12</b>
2/0	0.0103"	0.0204"	62	<b>187-0020</b>	<b>20.15</b>	<b>18.14</b>	<b>16.12</b>
0	0.0110"	0.0220"	56	<b>187-0010</b>	<b>20.15</b>	<b>18.14</b>	<b>16.12</b>
1	0.0120"	0.0240"	52	<b>187-0100</b>	<b>20.15</b>	<b>18.14</b>	<b>16.12</b>
2	0.0134"	0.0276"	48	<b>187-0200</b>	<b>20.15</b>	<b>18.14</b>	<b>16.12</b>
3	0.0140"	0.0290"	46	<b>187-0300</b>	<b>20.15</b>	<b>18.14</b>	<b>16.12</b>

**B Herkules® “White Label” Piercing Sawblades**

High-quality sawblades made of a special alloy steel. Feature teeth that are uniform in size, shape and sharpness for fast, easy cutting. Can be used on both hand- and power-driven tools that have a blade clamping device. Measure 13cm (5¼") long. Made in Germany.

Size	Thickness	Width	Approx. Teeth Per Inch	Item#	Dozen	Item#	GROSS Prices		
							1-2	3-5	6+
8/0	0.0063"	0.0126"	86	<b>185-0080</b>	<b>\$3.80</b>	<b>186-0080</b>	<b>\$29.50</b>	<b>\$28.03</b>	<b>\$25.67</b>
7/0	0.0067"	0.0130"	84	<b>185-0070</b>	<b>3.60</b>	<b>186-0070</b>	<b>28.50</b>	<b>27.08</b>	<b>24.80</b>
6/0	0.0070"	0.0140"	82	<b>185-0060</b>	<b>3.30</b>	<b>186-0060</b>	<b>25.75</b>	<b>24.46</b>	<b>22.40</b>
5/0	0.0080"	0.0157"	80	<b>185-0050</b>	<b>2.95</b>	<b>186-0050</b>	<b>22.95</b>	<b>21.80</b>	<b>19.97</b>
4/0	0.0086"	0.0175"	72	<b>185-0040</b>	<b>2.80</b>	<b>186-0040</b>	<b>20.75</b>	<b>19.71</b>	<b>18.05</b>
3/0	0.0095"	0.0190"	66	<b>185-0030</b>	<b>2.70</b>	<b>186-0030</b>	<b>19.75</b>	<b>18.76</b>	<b>17.18</b>
2/0	0.0103"	0.0204"	62	<b>185-0020</b>	<b>2.70</b>	<b>186-0020</b>	<b>19.75</b>	<b>18.76</b>	<b>17.18</b>
0	0.0110"	0.0220"	56	<b>185-0010</b>	<b>2.70</b>	<b>186-0010</b>	<b>19.75</b>	<b>18.76</b>	<b>17.18</b>
1	0.0120"	0.0240"	52	<b>185-0100</b>	<b>2.70</b>	<b>186-0100</b>	<b>19.60</b>	<b>18.62</b>	<b>17.05</b>
2	0.0134"	0.0276"	48	<b>185-0200</b>	<b>2.70</b>	<b>186-0200</b>	<b>19.60</b>	<b>18.62</b>	<b>17.05</b>
3	0.0140"	0.0290"	46	<b>185-0300</b>	<b>2.70</b>	<b>186-0300</b>	<b>19.60</b>	<b>18.62</b>	<b>17.05</b>
4	0.0150"	0.0307"	40	<b>185-0400</b>	<b>2.70</b>	<b>186-0400</b>	<b>19.60</b>	<b>18.62</b>	<b>17.05</b>
5	0.0158"	0.0331"	36	<b>185-0500</b>	<b>2.85</b>	<b>186-0500</b>	<b>20.75</b>	<b>19.71</b>	<b>18.05</b>
6	0.0173"	0.0370"	34	<b>185-0600</b>	<b>3.10</b>	<b>186-0600</b>	<b>24.50</b>	<b>23.28</b>	<b>21.32</b>
7	0.0189"	0.0400"	32	<b>185-0700</b>	<b>3.70</b>	<b>186-0700</b>	<b>31.50</b>	<b>29.93</b>	<b>27.41</b>
8	0.0197"	0.0440"	30	<b>185-0800</b>	<b>3.70</b>	<b>186-0800</b>	<b>32.65</b>	<b>31.02</b>	<b>28.41</b>
10	0.0215"	0.0510"	25	<b>185-1000</b>	<b>5.00</b>	<b>186-1000</b>	<b>38.75</b>	<b>36.81</b>	<b>33.71</b>
12	0.0236"	0.0650"	21	<b>185-1200</b>	<b>5.00</b>	<b>186-1200</b>	<b>40.25</b>	<b>38.24</b>	<b>35.02</b>
14	0.0236"	0.0690"	19	<b>185-1400</b>	<b>5.00</b>	<b>186-1400</b>	<b>57.60</b>	<b>54.72</b>	<b>50.11</b>

**C ULTRA-Swiss™ Piercing Sawblades**

Extremely flexible straw-colored sawblades made of a special steel alloy. Break less often and last much longer than ordinary sawblades, even under rough conditions. Have rounded backs for sawing curves with more control. Measure 13cm (5¼") long. Made in Switzerland. Sold by the gross.

Size	Thickness	Width	Approx. Teeth Per Inch	Item#	GROSS Prices		
					1-2	3-5	6+
6/0	0.0070"	0.0140"	82	<b>183-0060</b>	<b>\$29.55</b>	<b>\$26.60</b>	<b>\$23.64</b>
5/0	0.0080"	0.0157"	80	<b>183-0050</b>	<b>26.75</b>	<b>24.08</b>	<b>21.40</b>
4/0	0.0086"	0.0175"	72	<b>183-0040</b>	<b>24.30</b>	<b>21.87</b>	<b>19.44</b>
3/0	0.0095"	0.0190"	66	<b>183-0030</b>	<b>22.45</b>	<b>20.21</b>	<b>17.96</b>
2/0	0.0103"	0.0204"	62	<b>183-0020</b>	<b>22.45</b>	<b>20.21</b>	<b>17.96</b>
0	0.0110"	0.0220"	56	<b>183-0010</b>	<b>22.45</b>	<b>20.21</b>	<b>17.96</b>
1	0.0120"	0.0240"	52	<b>183-0100</b>	<b>22.45</b>	<b>20.21</b>	<b>17.96</b>
2	0.0134"	0.0276"	48	<b>183-0200</b>	<b>22.45</b>	<b>20.21</b>	<b>17.96</b>
3	0.0140"	0.0290"	46	<b>183-0300</b>	<b>22.45</b>	<b>20.21</b>	<b>17.96</b>





A

**A PEPE Tube Cutter**

Lets you make straight cuts on tubing for jewelry manufacturing or repair. Features 1–13cm ruler and precision-machined components for fast, consistent cutting and comfortable wooden handle. Easy to use: just place stock in V-shaped jig, slide out to desired length, secure with built-in holder, position sawblade in guide and cut.

Description	Item#	Each
Tube Cutter	812-1291	\$49.00



B

**B Wire and Tube Cutting Jig**

**Makes wire and tube cutting quick and easy.**

Cut wire and tube quickly with this ingenious timesaving device. Simply place stock, wire or tube in the V-shaped jig groove, secure with built-in holder, insert your sawblade into the precision-machined saw guide and cut. It's that easy! The saw guide keeps your blade properly aligned for a straight cut every time. There's no need to file the cut end flush. A built-in adjustable stop allows you to cut segments of the same length up to 3¼". Can be removed if longer lengths are needed. Accommodates stock up to 6mm round or 7.5mm square. Made of high-quality steel. Has contoured wood handle for comfort. Made in Italy.

Description	Item#	Each
Wire and Tube Cutting Jig	812-1290	\$78.65



C

**C Tube Cutter**

A high-quality three-section cutter for making ultra-precise 45° and 90° angled cuts. Upper locking screws allow adjustment for large or small stock. Adjusting screws and guides ensure exact repetition of desired lengths. Can be held in hand or secured with a bench vise for stability. Includes instructions. Made in Europe.

Description	Item#	Each
Tube Cutter	812-1289	\$250.00



D

**D Matt™ Miter Box and Saw Set**

Includes extruded aluminum miter box with stop-lock and steel back saw. Slices wax bars, rods and ring tubes into tablets with perfectly straight and parallel walls or tapered sides. Miter box holds the ring tube firmly in place to eliminate hand strain. Stop-lock lets you cut multiple tablets of the same thickness. Rugged steel sawblade cuts through tubes with very little effort, leaving a smooth finish. Miter box measures 6"L x 2"W. Sawblade measures 6½"L x 2"D.

Description	Item#	Each
D. Miter Box and Saw Set	265-2346	\$49.95
Replacement Sawblade	265-2348	14.60



E

**E Razor Saw**

A must for cutting metal, wood and plastic rod and tubing. Features specially hardened, rigid thin blade with fine teeth (32 teeth per inch) ideal for making straight cuts. Lets you cut with light pressure to prevent tubing collapse. Measures 9½" overall length. Blade measures 4½"L x ⅛"D.

Description	Item#	Each
Razor Saw	812-1281	\$5.50

## A - C Jump Ringer™ System

### A money-saving system for making your own jump rings in seconds!

Provides the fastest, easiest way to make perfectly uniform jump rings. Lets you wind and precisely machine-cut jump rings with inside diameters from 1.5mm to over 25.4mm (1") using your Freedom flex shaft and a #30 handpiece (see p. 345). Cuts plain and fancy gold, silver, gold-filled, copper, brass, aluminum and niobium wire. Will not cut iron, steel, titanium or platinum wire.

Features precision-engineered winder with greased nylon bearings for ultra-smooth action. Winds stock wire into a coil, which you then place in a holder and cut apart into jump rings using your #30 handpiece with the supplied rotary sawblade. Has unique safety guard/guide that protects your fingers during cutting and ensures jump rings are cut straight and on-center.

Jump Ringer System includes winder, 5" coil, coil holder, safety guard/guide for your #30 handpiece, rotary sawblade with mandrel, chuck key and three round steel mandrels in 0.094", 0.141" and 0.234" diameters. Works with Multi-Shape Coil Holder and Mandrel Sets listed below to make jump rings in a wide range of sizes and shapes. If you have your own method of cutting, you can purchase the Winding Set separately. Includes winder, chuck key and three round steel mandrels. Or if you have your own method of winding, you can purchase the Cutting Set separately. Includes coil holder, safety guard/guide for your #30 handpiece and rotary sawblade with mandrel.



Description	Item#	Each
A. Complete Jump Ringer System (B and C)	<b>815-2011</b>	<b>\$289.00</b>
B. Jump Ringer Winding Set	<b>815-2014</b>	<b>94.75</b>
C. Jump Ringer Cutting Set	<b>815-2013</b>	<b>199.00</b>
Replacement Sawblade	815-2015	12.99

## D - F Jump Ringer™ Multi-Shape Coil Holder and Mandrel Sets

Use with your Jump Ringer. The Multi-Shape Coil Holder works in conjunction with the Mandrel Sets to make jump rings in shapes that complement your jewelry designs. Includes guides for adjusting depth and making perfect cuts for every shape and size. Mandrel Sets include seven brass mandrels each, all 3¾" long.

### Mandrel Sizes:

- Oval Mandrel Set: 1.4 x 2.6, 2.1 x 3.4, 2.7 x 4.4, 3.8 x 6.2, 4.3 x 7.5, 6.2 x 11.5 and 9.2 x 14.6mm sizes
- Square Mandrel Set: 2.0, 3.0, 3.5, 4.5, 6.0, 9.0 and 12.0mm sizes
- Triangular Mandrel Set: 3.0, 4.0, 5.5, 6.0, 8.0, 11.0 and 14.5mm sizes
- Diamond Mandrel Set: 2.0 x 3.5, 3.0 x 5.5, 3.2 x 6.0, 3.8 x 6.5, 4.5 x 8.0, 5.3 x 9.3 and 6.7 x 10.0mm sizes

Description	Item#	Each
D. Multi-Shape Coil Holder	<b>815-2038</b>	<b>\$90.00</b>
E. Oval Mandrel Set	<b>815-2034</b>	<b>54.75</b>
F. Square Mandrel Set	<b>815-2036</b>	<b>54.75</b>



## G Jump Ringer™ Deluxe Round Mandrel Set

Works with the coil holder included with the Jump Ringer System and the Jump Ringer Cutting Set. Includes 16 round steel mandrels in 0.063", 0.078", 0.094", 0.125", 0.141", 0.156", 0.172", 0.188", 0.219", 0.234", 0.281", 0.313", 0.359", 0.391", 0.438" and 0.469" diameters. Mandrels measure 3¾" long.

Description	Item#	Each
Deluxe Round Mandrel Set	<b>815-2020</b>	<b>\$44.50</b>





Prong setting with AllSet



A

**A Foredom® AllSet™ Stone Setting Master Kit – Four AllSet Sets in one.**

Turns your Foredom handpiece into a precision setting tool for prong, channel, pavé and plate setting. Allows professional setters to dramatically increase their speed. Helps beginning setters with its built-in accuracy. Contains everything you need for almost any type of setting (prong, channel, pavé and plate setting) and a milling table for cutting seats in pendants, baskets and other large items. Gives you control over cutting for better speed and accuracy. Dramatically shortens the entire stone setting process by ensuring cuts are precise and seats are perfectly even. Just set the depth you want and cut. Eliminates repeated measuring even when channel setting.

Lets you notch all prongs at the same time and at uniform depth. Cuts channels evenly so stones sit level with no wobble. Reduces risk of stone breakage because prongs can be tightened uniformly without overcompensating for uneven seats and crooked stones. Eliminates the risk of accidentally cutting through even the thinnest plates. Allows you to pavé over any surface with the assurance that all stone tables will be level with each other. Improves your speed and the quality of your work at the same time.

The redesigned milling table has two prong guides that give you the control to set larger items such as pendants. All parts except screws and wrench are made of stainless steel. Kit is available with or without Foredom #30 handpiece. Add-on AllSet Kits turn your handpiece into a miniature machine shop for milling, drilling, grinding, sanding and planing wax and metal.

**Includes:**

- AllSet Mounting Bracket for #30 Handpiece
- Two L-Brackets with shaft and depth control
- AllSet Prong Setting Set (13 guides)
- AllSet Pavé Setting Set (7 guides)
- AllSet Channel Setting Set (3 guides)
- AllSet Milling Table with two prong guides
- Instructional Videotape

Description	Item#	Each
Master Kit with #30 Handpiece	<b>265-0325</b>	<b>\$495.00</b>
A. Master Kit without #30 Handpiece	<b>265-0320</b>	<b>445.00</b>



B



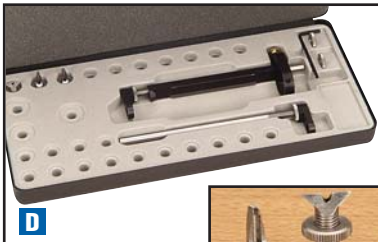
C

**B, C Foredom® AllSet™ Prong Setting Sets**

Cut seats in each prong individually or in all prongs at once—to the exact same depth. Stones are set level with no wobble, reducing risk of stone breakage during prong tightening. Dramatically speeds up your setting and improves accuracy. Sets include 13 stainless steel setting guides (for 3/32" shank burs), adjustable depth control and complete instructions. Available with or without AllSet brackets.

Description	Item#	Each
B. Prong Setting Set with AllSet Brackets	<b>265-0321</b>	<b>\$199.00</b>
C. Prong Setting Set without AllSet Brackets*	<b>265-0323</b>	<b>89.00</b>

\*Included in Master Kit (see above)



D



E

**D, E Foredom® AllSet™ Channel Setting Sets**

Allow you to cut perfect channels faster and with more precision than you ever thought possible. Cut one channel, then flip the ring to cut the other channel without having to remeasure. Stones sit level and even because AllSet ensures your cuts are at precisely the same depth. Use AllSet to quickly calculate depth of cut to the number of stones for a perfect layout. Professional setters will be amazed at how much faster they can work (up to 75% faster) with a corresponding increase in profits. Inexperienced setters will benefit from the built-in accuracy that AllSet automatically provides. Sets include three stainless steel channel setting guides (for 3/32" shank burs), finger nut for depth control and complete instructions. Available with or without AllSet brackets.

Description	Item#	Each
D. Channel Setting Set with AllSet Brackets	<b>265-0324</b>	<b>\$199.95</b>
E. Channel Setting Set without AllSet Brackets	<b>265-0326</b>	<b>99.00</b>



F

**F Foredom® AllSet™ Easy-Cut Prong Guide Set**

Ideal for cutting seats in pendants, baskets and other large settings. Features a high-quality stainless steel 2" diameter table (accepts 3/32" shank burs) and two guides. Ensures a uniform height and level cut for perfect stone setting. Prong guide keeps your bur from grabbing and wrapping around a prong, which helps to prevent accidental gouging. Adjustable guide in the back controls depth of cut as well. Designed to fit all AllSet Kits, including the new Quick-Change Handpiece Kits.

Description	Item#	Each
Easy-Cut Prong Guide Set	<b>265-0340</b>	<b>\$89.00</b>



**A Pneumatic Stone Setting Machine**

The unit of choice for setting diamonds, colored stones and even synthetics with impressive speed and precision.

Set stones just like a pro with the Pneumatic Stone Setting Machine. A must for all jewelry manufacturers, this unit represents a big leap forward in stone setting technology. Lets you quickly and easily tube set, burnish, bezel and bead set both flat and curved surfaces, as well as channel set in single and double rows. Simplifies many complicated procedures, taking the guesswork out of difficult jobs. Offers the precise control you need to set stones perfectly each and every time. Includes six tools for setting round stones (1.75, 2.00, 2.25, 2.50, 2.75 and 3.00mm diameters; other sizes also available by special order), one set of plates and rollers for channel setting and one set of ring holders for plate setting.

**Features:**

- Easy to learn and operate, even for novices—requires no special stone setting experience.
- Lets you set stones quickly and consistently, making it perfect for high-volume production.
- Eliminates the need for time-consuming manual setting.
- Has precision-machined tooling for easy changing.
- Compact in size to fit comfortably in the shop.
- Affordable enough to be used for piecework.

**Specifications:**

Electrical	220V, 1 Ph, 100W, 50/60Hz
Dimensions	39½"W x 27½"D x 55"H
Table Height	32"
Air Requirement	90 PSI
Net Wt.	250 lbs.

Description	Item#	Each
Pneumatic Stone Setting Machine	265-0349	\$18,500.00

**A****B Premium Loose Stone Detector**

The only piece of equipment you need to identify loose stones quickly and definitively. Allows you to efficiently isolate stones that are loose from those that are not. Invaluable for checking settings after ring sizing. Works especially well for clusters of many small stones, such as pavé settings. Saves time over traditional methods.

Easy to use: slide your ring onto the padded mandrel, turn on unit, and experiment with different vibration frequency and power settings until you are positively satisfied that every setting is sound. Includes a magnifier with flexible stand for taking a good, close look at potential problem areas as the detector vibrates. Combine that with your own light source, and no loose stone will escape your attention.

Compact enough to store out of the way until you need to use it. Finished in matte black to eliminate most distracting reflections. Electrical: 110V. Measures 12<sup>5</sup>/<sub>8</sub>"W x 9<sup>5</sup>/<sub>8</sub>"D x 8<sup>1</sup>/<sub>4</sub>"H. Weighs 22 lbs.

Description	Item#	Each
Premium Loose Stone Detector	857-0030	\$3,300.00

**B****C Loose Stone Detector**

Instantly checks the stones in a ring or bracelet and pinpoints exactly which ones are loose. Simply hold the ring against the vibrating platform and look through the large 5X glass magnifying lens. Loose stones will vibrate or rotate in their settings.

Leave it on the counter to help increase repair business. Customers can't resist checking their jewelry, and you write the repair order. Works equally well on all styles of settings: prong, channel, bezel and more. Features built-in light for easy viewing. Includes Plexiglas bracelet holder for proper support when testing bracelets. Made in USA.

Description	Item#	Each
Loose Stone Detector, 110V	857-0020	\$199.00
Loose Stone Detector, 220V	857-0025	280.00
Replacement Bracelet Holder	857-0026	24.95

**C**





**A**

**A JETT SETT® Thermoplastic and Tools**  
**Make your own custom tools!**

JETT SETT is an easy-to-use thermoplastic material for making fixturing devices, forming tools, custom tool handles and more. Becomes smooth and pliable when placed in hot water (140-160°F), at which point it can be formed into any shape desired. Hardens in just minutes when exposed to air and even faster when placed in cold water. Extremely tough and durable. To remove parts from JETT SETT and reuse, just immerse in hot water until soft again.

**Here are just some of the things you can make with JETT SETT:**

- Fixturing devices for holding, setting and engraving any jewelry item.
- Custom-grip file and graver handles.
- Nonmarring surfaces for pliers and vises.
- Custom hammer heads that won't mar the metal you hammer.

Description	Item#	Each
JETT SETT, 1 lb. pkg.	<b>816-1580</b>	<b>\$36.00</b>

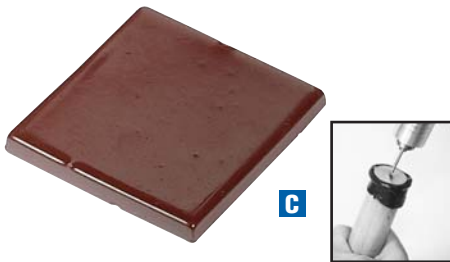


**B**

**B JETTBasic**

A slightly more tacky form of JETT SETT with no ceramic content. Adheres well to smooth surfaces such as bezels when hot. Hardens and loses tackiness when completely cool. Clear in color, can also be used to make customized tool handles. Sold in 1 lb. bags.

Description	Item#	Each
JETTBasic, 1 lb.	<b>816-1591</b>	<b>\$25.00</b>



**C**

**C Diamond D Cement**

Shellac mixed with wax to make it stronger and less brittle. When melted and applied to a wooden dowel, it securely holds diamonds and other stones for polishing. Also holds jewelry that's too small for conventional clamps. Easy to melt and use repeatedly. Can be pulled from setting when work is complete. Sold in 4 oz. cakes.

Description	Item#	Each
Diamond D Cement, 4 oz. cake	<b>811-2600</b>	<b>\$21.95</b>



**D**

**E**

**D, E Orange Flake Shellac and Shellac Stick**

Used to hold small objects firmly for stone setting and engraving. Softens when heated. Hardens quickly in cold water. Articles can be removed by dipping in alcohol. Shellac stick measures 7½"L x ½"W.

Description	Item#	Each
D. Orange Flake Shellac, 1 lb.	<b>816-1100</b>	<b>\$13.25</b>
Orange Flake Shellac, ½ lb.	<b>816-1101</b>	<b>7.65</b>
E. Shellac Stick, 2 oz.	<b>816-1600</b>	<b>6.95</b>

**A Setting Design System**

The patented EMLO Setting Design System gives jewelers a faster, easier, more precise way to prepare stone settings. Offers a much finer degree of control over the final design while also serving as a unique visual aid, helping you map out differently sized stones in minutes instead of hours.

Consists of tiny color-coded stickers that match specific stone diameters ranging from 0.7mm to 2.7mm. Stickers can be placed on both flat and curved surfaces of precious metal, steel and even wax. Designed for use with 3M Spray Mount Adhesive, which allows hassle-free repositioning.

Choose from two convenient kits: Starter Kit #1511 and Deluxe Kit #1512. Starter Kit #1511 includes 3,200 stickers in the 16 most commonly used diameters from 0.9mm to 2.4mm. Deluxe Kit #1512 includes 4,200 stickers in 21 diameters from 0.7mm to 2.7mm.

Refills of 200, 500 and 1,000 stickers also available separately. Made in Switzerland.

Description	Item#	Each
Starter Set #1511	<b>812-1661</b>	<b>\$160.00</b>
A. Deluxe Set #1512	<b>812-1662</b>	<b>199.95</b>



**A**



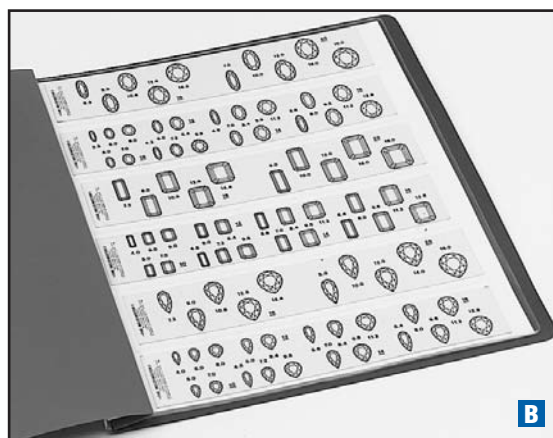
**B Meleemeeter™ Large Stone Profiler Set**

This revolutionary set is unsurpassed in its ability to aid designers in determining the most pleasing ratio of stone length to width, as well as the most pleasing stone shape.

Makes visualizing your finished piece easy. Eliminates the need to purchase stones or make mountings to see your final product. Excellent for adjusting wax models to the stone size and shape that your mounting will accommodate. Place wax models or life-size pictures and drawings under the profiles to see the final appearance of your designs.

Contains 168 different ratios and sizes of all the popular stone shapes: oval, pear, marquise, emerald, round, square and even heart-shaped. Produced with gemologically correct facets and bold outlines.

Description	Item#	Each
Meleemeeter Large Stone Profiler Set	<b>813-1380</b>	<b>\$38.95</b>



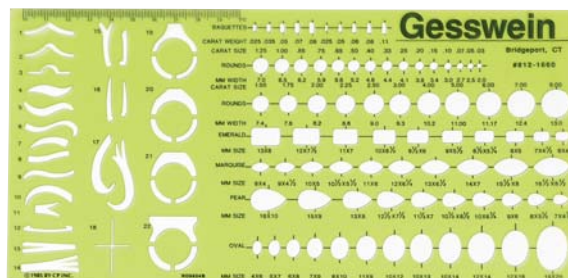
**B**

**C Jewelry Drawing Template**

An easy-to-use calibrated template for jewelry designers. Immediately improves your jewelry designs and simplifies the task of determining stone sizes required for your jewelry.

Contains stone shape profiles and sizes, as well as shank top and side views. Great for sketches and wax work. Measures 10 1/4" L x 4 3/4" W. Includes instructions.

Description	Item#	Each
Jewelry Drawing Template	<b>812-1660</b>	<b>\$14.95</b>



**C**

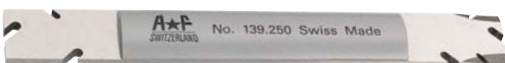
**D Layout Wax Sheets**

Place one of these transparent wax sheets on top of your jewelry drawing, then position the stones. Provides an excellent way to visualize your finished design prior to stone setting. Thickness: 24-gauge. Measure 4" x 4". Sold in boxes of 32.

Description	Item#	Each
Layout Wax Sheets, box of 32	<b>263-1000</b>	<b>\$15.85</b>



**D**



### A Prong Opening Pliers

Open prongs without fracturing stones. Use grooved jaw to hold prong in place and angled jaw to slip under prong and raise it. Avoid putting pressure on top of stone to prevent marring and scratching. Feature box joint for stability, perfectly aligned tapered jaws, double leaf springs and cushion grips. Measure 4½" long. Made in Germany.

Description	Jaw Length	Item#	Each
Prong Opening	15/16"	180-0020	\$24.85

### B Prong Closing Pliers

Close prongs over stones without slipping. Use curved, tapered jaws with grooved tips to hold prong securely. Feature box joint for stability, perfectly aligned jaws, double leaf springs and cushion grips. Measure 4½" long. Made in Germany.

Description	Jaw Length	Item#	Each
Prong Closing	15/16"	180-0025	\$24.85

### C Stone Setting Pliers

Ideal for tightening prongs. Feature box joints for stability. Available in deluxe and economy styles. Measure 4¾" long.

Description	Item#	Each
C. Deluxe German	181-2900	\$41.00
Economy Imported	181-2950	9.95

### D Setting Tool

Steel tool with flat end for pushing crown points or prongs onto stone. Also for forcing bezel around stones. Mounted in wooden handle. Measures approximately 3½" long.

Description	Item#	Each
Setting Tool	816-0100	\$2.75

### E Prong Pusher

Used for pushing prongs or crown points around stone. Grooved end fits on prong and prevents slipping. Mounted in wooden handle. Measures approximately 3½" long.

Description	Item#	Each
Prong Pusher	816-0110	\$7.10

### F Swiss Prong Lifter – Precise and accurately ground.

You need top quality in a frequently used tool. This prong lifter is sturdy and well-balanced. Its special hardened steel will not chip or wear. The seven precision-ground slots easily fit all sizes and types of prongs so they can be lifted easily and safely when remounting, resetting or retipping. Greatly reduces risk of damage to stone. Comfortable plastic handle is firmly bonded to tool. Measures 4¾"L x ½"W x ⅛" thick. Made in Switzerland.

Description	Item#	Each
Swiss Prong Lifter	816-0090	\$58.95

### G Precision Prong Lifter

This highly tempered prong lifter provides easy access to small prongs. Measures only 4"L x 0.079" (2mm) thick, so it's easy to maneuver in even the tiniest settings. Durable and precise. Made in USA.

Description	Item#	Each
Precision Prong Lifter	816-0092	\$12.95

### H, I Stone Holders

Ideal for picking up small stones and beads. Just press plunger to open, then release to grasp item securely. Available in four-prong and loop-end styles. Made of stainless steel. Measure 4½" long.

Description	Item#	EACH Prices		
		1-2	3-9	10+
H. Four-Prong Stone Holder	840-4451	\$5.95	\$5.65	\$5.36
I. Loop-End Stone Holder	840-4452	4.50	4.28	4.05



**A Final Touch Stone Setting System**

Tightens all prongs with one tap to make stone setting incredibly fast. Stones never chip or crack because the force is evenly distributed on all prongs. Works on all round prong settings, including 4-prong, 6-prong, snap-in and hand-set. Easy to use: seat round stones level in setting (no need to tighten prongs), place earring posts into holes in the urethane base, hold punch straight on setting, and tap punch with hammer.

**Includes:**

- Five hardened steel punches in 2.0-3.4mm, 2.8-5.2mm, 3.2-6.6mm, 4.9-8.6mm and 5.6-10.0mm sizes
- Urethane base for holding posts

Description	Item#	Each
Final Touch Stone Setting System	<b>816-0096</b>	<b>\$56.75</b>

**B Gem Setting Graver Outfit**

Includes six shaped gravers for setting diamonds and other stones in modern settings, six comfortably shaped wooden handles for working ease and a model plate that shows various steps needed for project completion.

Description	Item#	Each
Gem Setting Graver Outfit	<b>166-8000</b>	<b>\$64.70</b>

**C Round Tennis Bracelet Holder**

This versatile bracelet holder saves time when setting stones. Eliminates messy shellac and firmly holds bracelets up to 7mm wide without marring or distorting. Lets you easily set stones in prong, channel and pavé settings with the assurance that bracelets will always stay in place. Provides extra space for accommodating clasps. Made of sturdy aluminum. Hex wrench included. Measures 3½" diameter.

Description	Item#	Each
Round Tennis Bracelet Holder	<b>840-4205</b>	<b>\$26.95</b>

**D Setter's Tube Holder Set**

Set of seven spring-tempered three-jaw collets with wooden handle. Holds tubes from 1/32" to 1/4" in diameter while stone setting without causing them to collapse.

Description	Item#	Each
Setter's Tube Holder Set	<b>840-4225</b>	<b>\$21.90</b>

**E Claw Setting Jig**

Easily makes small or large four-, six- and eight-prong claw settings for 0.15-2 carat stones. The base unit holds the chosen jig, and the length of wire used is based upon the size of the stone to be set—larger, deeper stones require longer wires. Filing and soldering can be done with the setting still on the jig.

Description	Item#	Each
Claw Setting Jig	<b>816-1465</b>	<b>\$35.95</b>







A

B

C



D



E



F



G



H



I



J



K



L

### A Setting Burnisher Set

Set of 18 setting closers, or burnishers, ranging in size from 1/2 point to 1.75 carats. For burnishing tubes over stones. Includes heavy-duty handle and attractive hardwood box. Made in Europe.

Description	Item#	Each
Setting Burnisher Set	811-2165	\$159.00

### B Large Setting Burnisher Set

Set of 24 setting closers, or burnishers, ranging in size from 1/2 point to 1.9 carats. For burnishing tubes over stones. Comes complete with handle and attractive wooden storage box. Made in France.

Description	Item#	Each
Large Setting Burnisher Set	811-2000	\$149.95

### C Curved and Slim Burnisher

Curved and slim for hard-to-reach areas. Polished steel tip and wooden handle. Great for jewel settings. Blade measures 1 3/4" long. Made in USA.

Description	Item#	Each
Curved and Slim Burnisher	811-1880	\$7.70

### D, E Steel Burnishers

Polished steel tips with wooden handles. For use on bezels and larger surfaces. Measure approximately 6" overall length. Blades measure 2 1/2" long. Made in USA.

Description	Item#	Each
D. Straight Burnisher	811-2100	\$7.65
E. Curved Burnisher	811-1900	7.25

### F Margin Roller Burnisher – 3/32" Shank

For burnishing over scratches in gold, making it possible to salvage many pieces without gold loss. Can also be used for burnishing over microporosity in castings. The 3/16" (5mm) head consists of five steel rollers that act as rotating mallets. Measures approximately 1 3/4" long with 3/32" shank for use with handpiece.

Description	Item#	Each
Margin Roller Burnisher	811-2150	\$18.35

### G - I Tungsten Carbide Burnishers

Feature highly polished tungsten carbide tips. Ideal for safe burnishing of platinum because tungsten carbide is noncontaminating. Also produce a brilliant finish on gold. Measure approximately 6 3/8" overall length. Tips measure 1" long.

Description	Item#	Each
G. 2mm Burnisher	811-1849	\$19.50
H. 3mm Burnisher	811-1850	19.50
I. 4mm Burnisher	811-1851	19.50

### J, K Tungsten Carbide Scrapers

Highly polished, triangular cut scrapers that are extremely sharp on all three sides. Come to a sharp point. Ideal for cleanly removing flash and other casting defects from hard-to-reach areas. Measure approx. 6 3/8" overall length, including handle. Tips measure approx. 7/8" long.

Description	Item#	Each
J. 3mm Scraper	816-0161	\$18.50
K. 5mm Scraper	816-0162	20.75

### L Tungsten Carbide Burnisher/Scraper Set

Includes three burnishers (2mm, 3mm and 4mm round) and two scrapers (3mm and 5mm). Feature tungsten carbide tips for burnishing both soft and hard metals to a high shine. Sharpened scrapers make quick work of bur and flash removal and general cleanup on any jewelry metal.

Description	Item#	Each
Burnisher/Scraper Set	811-2155	\$84.00

**A, B French Beading Tools**

Used to form beads for holding diamonds, half-pearls and other stones in mountings. Have 2.6mm shanks.

Size	Item#	EACH Prices		
		3-9	12-141	144+
A. #2	810-1402*	\$1.70	\$1.45	\$1.19
#4	810-1404*	1.70	1.45	1.19
#6	810-1406*	1.70	1.45	1.19
#7	810-1407*	1.70	1.45	1.19
#8	810-1408*	1.70	1.45	1.19
#9	810-1409*	1.70	1.45	1.19
#10	810-1410*	1.70	1.45	1.19
#11	810-1411*	1.70	1.45	1.19
#12	810-1412*	1.70	1.45	1.19
#13	810-1413*	1.70	1.45	1.19
#14	810-1414*	1.70	1.45	1.19
#16	810-1416*	1.70	1.45	1.19
Description	Item#	Each		
B. 12-Piece Set (one each of above)	810-1400	\$25.50		

\*Three-piece minimum; please order in multiples of three.

**C - E Swiss Beading Tools**

Made of fine hardened tool steel with precise concave tips to form smooth beads and make well-defined, consistent size graduations. Have 2.6mm shanks. Measure 2<sup>3</sup>/<sub>8</sub>" long.

Size	Dia. (mm)	Item#	EACH Prices		Item#	Pkg. of 100
			3-9	12+		
C. #0	0.25	810-1252*	\$1.10	\$.91	810-1300	\$79.50
#1	0.30	810-1254*	1.10	.91	810-1301	79.50
#2	0.35	810-1256*	1.10	.91	810-1302	79.50
#3	0.40	810-1258*	1.10	.91	810-1303	79.50
#4	0.45	810-1260*	1.10	.91	810-1304	79.50
#5	0.50	810-1262*	1.10	.91	810-1305	79.50
#6	0.55	810-1264*	1.10	.91	810-1306	79.50
#7	0.60	810-1266*	1.10	.91	810-1307	79.50
#8	0.65	810-1268*	1.10	.91	810-1308	79.50
#9	0.70	810-1270*	1.10	.91	810-1309	79.50
#10	0.75	810-1272*	1.10	.91	810-1310	79.50
#11	0.80	810-1274*	1.10	.91	810-1311	79.50
#12	0.85	810-1276*	1.10	.91	810-1312	79.50
#13	0.90	810-1278*	1.10	.91	810-1313	79.50
#14	0.95	810-1280*	1.10	.91	810-1314	79.50
#15	1.00	810-1282*	1.10	.91	810-1315	79.50
#16	1.05	810-1284*	1.10	.91	810-1316	79.50
#17	1.10	810-1286*	1.10	.91	810-1317	79.50
#18	1.15	810-1288*	1.10	.91	810-1318	79.50
#19	1.20	810-1290*	1.10	.91	810-1319	79.50
#20	1.25	810-1292*	1.10	.91	810-1320	79.50
#21	1.30	810-1294*	1.10	.91	810-1321	79.50
#22	1.35	810-1296*	1.10	.91	810-1322	79.50
Description	Item#		Each			
D. 12-Piece Set (sizes 5-16 listed above)	810-1250		\$19.80			
E. 23-Piece Set (one each of above)	810-1298		25.95			

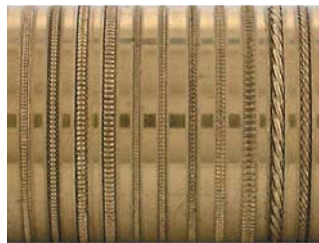
\*Three-piece minimum; please order in multiples of three.

**F - H Beading Tool Accessories**

Hardened, tempered and polished steel plates for sharpening or reshaping worn beading tools and a comfortable tool holder.

Description	Item#	Each
F. 12-Bead Plate	810-1450	\$23.30
G. 40-Bead Plate	810-1500	79.00
H. Beading Tool Holders, pkg. of 3	816-3095	7.95

Samples of patterns



**A B C D E F G H I J**



Large Millgrain Wheel

**For GRS  
Setting Machines  
see pp. 221-224.**

**A - J Large Millgrain Wheels**

Create decorative borders around edges of rings or bracelets. To use, mount ring on lathe, use turning tool to cut flat shoulder into each ring edge, and bring wheel onto shoulder. Wheels measure 6mm dia. on 1/8" sq. x 2 1/2"L steel shanks. Male wheels have raised beads.

Description	Approx. Design Width (mm)	Item#	Each
A. Female 8	0.65	820-5000	\$59.85
B. Female 10	0.85	820-5002	59.85
C. Female 12	1.05	820-5004	59.85
D. Female 14	1.20	820-5006	59.85
E. Male 8	0.65	820-5008	59.85
F. Male 10	0.85	820-5010	59.85
G. Male 12	1.05	820-5012	59.85
H. Male 14	1.20	820-5013	59.85
I. Rope 1 (medium)	1.25	820-5014	59.85
J. Rope 2 (small)	0.95	820-5016	59.85

**K, L French Millgrain Wheels**

Cup-shaped wheels with equally spaced depressions for making uniform beaded imprints on jewelry. Mounted on steel shafts. Can be used by hand or with GRS power engravers.



French Millgrain Wheel



**K**



**L**

Size	Depression	Shank	Item#	EACH Prices	
				1-9	10+
0	Oval	Round	820-6050	\$9.95	\$8.29
		Square	820-6060	9.95	8.29
1	Oval	Square	820-6100	9.95	8.29
2	Oval	Square	820-6150	9.95	8.29
		Round	820-6175	9.95	8.29
3	Oval	Square	820-6200	9.95	8.29
		Round	820-6230	9.95	8.29
4	Oval	Square	820-6250	9.95	8.29
5	Oval	Square	820-6300	9.95	8.29
5R	Round	Square	820-6325	9.95	8.29
6	Oval	Square	820-6350*	9.95	8.29
6R	Round	Square	820-6375	9.95	8.29
7	Oval	Square	820-6400*	9.95	8.29
7R	Round	Square	820-6425	9.95	8.29
8	Oval	Square	820-6450*	9.95	8.29
		Round	820-6460	9.95	8.29
8R	Round	Square	820-6455	9.95	8.29
9	Oval	Square	820-6500*	9.95	8.29
		Round	820-6510	9.95	8.29
9R	Round	Square	820-6505	9.95	8.29
10	Oval	Square	820-6550*	9.95	8.29
		Round	820-6560	9.95	8.29
10R	Round	Square	820-6551	9.95	8.29
11	Oval	Square	820-6552	9.95	8.29
		Round	820-6570	9.95	8.29
11R	Round	Square	820-6555	9.95	8.29
12	Oval	Square	820-6650*	9.95	8.29
13	Oval	Square	820-6651	9.95	8.29
14	Oval	Square	820-6660	9.95	8.29
15	Oval	Square	820-6662	9.95	8.29
K. 7-Piece Set (asterisked wheels and holder #840-4350)			820-6655	56.95	-
L. Millgrain Wheel Holder			840-4350	7.95	-

**A Millgrain Machine**

Cold-forms designs on rings without stripping away any precious metal. Features contoured handle and precision spindle for easy rotation and four mounting holes in base for bolting to your workbench. Includes 10 collets for ring sizes 2–13, millgrain wheel and Allen key.

Description	Item#	Each
Millgrain Machine	820-6700	\$550.00

**A****B - D Bezel Mandrels**

Although primarily used to form bezels, these mandrels are also used to shape decorative ornaments and to make chain links. Made of hardened and polished steel. Measure 11" overall length. Mandrel portions measure approximately 8" long with  $\frac{1}{2}$ "- $\frac{1}{8}$ " taper.

Description	Item#	EACH Prices	
		1-9	10+
B. Round Mandrel	841-1310	\$18.75	\$16.88
C. Oval Mandrel	841-1305	18.75	16.88
D. Square Mandrel	841-1300	20.45	18.41

**B****C****D****E Bezel Block and Punch Sets**

Each includes precision-machined block and punch. Used to punch and form bezels from flat stock. Made of hardened, tempered, polished steel.

Description	Holes	Punch Angle	Item#	Each
E. Round Set	20 (5–20mm)	17°	815-2050	\$97.50
		28°	815-2055	97.50
Oval Set	11 (4–14mm)	17°	815-2060	121.00
Heart Set	11 (5–15mm)	17°	815-3000	312.00

**E****F High-Speed 17° Bezel Cone Bur**

Use to drill an angled hole that matches the 17° angle on many settings, most notably bezel settings. Solves the problem of inserting a standard tapered prong or bezel setting into a standard shank.

Size	Dia. (mm)	Item#	EACH Prices	
			1-5	6+
30	8.00	123-2301	\$5.30	\$4.45

**F****G Bezel Roller**

Has a half-round, highly polished steel head for rolling bezels around stones in rings, pendants and broaches. Measures approximately 4" long.

Description	Item#	EACH Prices	
		1-2	3+
Bezel Roller	816-0120	\$3.05	\$2.75

**G****H Ear Post Protectors**

These silicone rubber sleeves protect ear posts when setting, tumbling or plating. Sold by the gross.

Description	Item#	Each
Red Protectors, gross	852-1150	\$3.49

**H****I, J Beeswax**

A very pliable wax often used to pick up stones when setting. Also can be used as a lubricant for burs and saws and when wire drawing. Rubbed on a surface, beeswax leaves a film on which designs can be marked.

Description	Item#	Each
I. Beeswax, 1 oz. cake	816-2405	\$1.75
J. Beeswax, 1 oz. tube	816-2450	1.95
Beeswax, $\frac{1}{2}$ lb. bar	816-2401	9.95

**I****J**



A



B



C



D



E



F

G

H

I



J

### A Attack Epoxy Solvent

Dissolves cured epoxy and polyester resins without affecting surrounding material. Excellent for separating misaligned bonded items. For use on metal, glass, wood and more. Not recommended for use on imitation pearls. Sold in 8 fl. oz. cans.

Description	Item#	EACH Prices	
		1-2	3+
Attack Epoxy Solvent, 8 fl. oz can	821-2800	\$11.40	\$10.26

### B Epoxy 330

A perfectly clear, fast-curing two-part adhesive. When equal parts are mixed, it thickens in 15 minutes and hardens in 2 hours without heat. Hardens in 10 minutes under heat lamp.

Description	Item#	EACH Prices	
		1-2	3+
1 fl. oz. (one each 1/2 fl. oz. resin and hardener)	821-2900	\$5.35	\$4.71
8 fl. oz. (one each 4 fl. oz. resin and hardener)	821-2910	19.85	17.47

### C Epoxy 220

Has slower setting time for production bonding of gem materials to metal findings. Provides ultimate tensile strength and resists thermal shock. Thickens in 1 hour and hardens in 8 hours without heat. Hardens in 30 minutes under heat lamp. Color: clear amber.

Description	Item#	EACH Prices	
		1-2	3+
1 fl. oz. (one each 1/2 fl. oz. resin and hardener)	821-2850	\$5.35	\$4.71
8 fl. oz. (one each 4 fl. oz. resin and hardener)	821-2860	19.85	17.47

### D, E Devcon® 5-Minute Epoxy

High-strength two-part epoxy that sets in just 5 minutes. Achieves full bond strength in 1 hour. Works on metal, wood, glass, stones, crystal and ceramic. Clear, nonshrink formula—great for jewelry. Resistant to most chemicals. Available in traditional Dual Pak (one tube each of resin and hardener) with mixing instructions. Also available in convenient Dev-Tube applicator, which dispenses equal portions of resin and hardener with one easy push of the plunger—a quick mix and it's ready to use.

Description	Net Wt.	Item#	Each
D. Dual Pak, 1/2 oz. tubes	1 oz.	811-2650	\$4.35
E. Dev-Tube	1 oz.	811-2651	4.75

### F - H Devcon® 2-Ton Epoxy

Industrial-strength two-part epoxy designated for heavier items that require an extra-high-strength bond. Works on metal, stones, ceramic, crystal, china and wood. Waterproof and resistant to most chemicals. Strong enough to fill gaps. Sets in 30 minutes. Cures in 12-16 hours to a clear transparent finish. Excellent for jewelry. Available in traditional Dual Pak (one tube each of resin and hardener) with mixing instructions. Also available in convenient Dev-Tube applicator, which dispenses equal portions of resin and hardener with one easy push of the plunger—a quick mix and it's ready to use.

Description	Net Wt.	Color	Item#	EACH Prices	
				1-2	3+
F. Dual Pak, 1/2 oz. tubes	1 oz.	Clear	811-2652	\$3.75	\$3.56
G. Dual Pak, 1 oz. tubes	2 oz.	White	811-2654	4.35	4.13
H. Dev-Tube	1 oz.	Clear	811-2653	4.35	4.13

### I, J Devcon® Plastic Steel Epoxy

Steel-filled heavy-duty epoxy for forming a protective backing on turquoise and other stones. Offers extremely high bond strength. Can be used to fill holes and gaps. Sets in 2 hours. Reaches full bond strength in 16 hours. Hardens to a rigid metallic mass. Sandable, chemical-resistant and waterproof. Color: metallic gray.

Description	Net Wt.	Item#	EACH Prices	
			1-2	3+
I. Dual Pak	2 oz.	811-2655	\$4.35	\$4.13
J. Dev-Tube	1 oz.	811-2656	4.95	4.70

**A - E Regular and Qwik-Dry Super Glues**

Transparent, high-strength, quick-setting adhesives. No mixing required. Excellent for stone and pearl setting and jewelry repair. Regular Super Glue dries in 45-60 seconds. Qwik-Dry sets up in just 10-20 seconds. Maximum strength is reached after 12 hours.

Description	Item#	EACH Prices		
		1-4	5-9	10+
A. Regular, 2g tube	811-2300	\$2.40	\$2.16	\$2.04
B. Regular, 2g pen	811-2305	2.50	2.38	2.13
C. Regular, 20g bottle	811-2400	8.40	7.98	7.14
D. Qwik-Dry, 2g tube	811-2310	2.40	2.16	2.04
E. Qwik-Dry, 20g bottle	811-2312	8.20	7.79	6.97

**F Debonder**

A solvent cleaner for all instant glues. Debonder breaks bonds and removes hardened glue from all surfaces—including skin. Removes acrylic, enamel and epoxy paint overspray. Can also be used to prepare surfaces by removing grease and oil prior to application of Super Glue. Sold in 10ml (1/3 fl. oz.) tubes.

Description	Item#	EACH Prices	
		1-4	5+
Debonder, 10ml tube	811-2550	\$2.45	\$2.33

**G Mascot Instant Adhesive Gel**

This high-performance, extended-range cyanoacrylate adhesive bonds metal, plastic, rubber, ceramic and glass in just seconds! Sets in about 30 seconds, depending on the objects being joined. Spreads easily and is perfect for close-fitting surfaces. No-drip formula makes it ideal for applying on vertical surfaces and filling gaps. Bonds colorless. Made in USA.

Description	Item#	EACH Prices		
		1-4	5-9	10+
Mascot Gel, 10 oz. (3g) tube	811-2415	\$3.05	\$2.75	\$2.59

**H Crystal Cement**

Provides a strong, durable bond between plastic or glass watch crystals and the bezel. Will not flake off or crack plastic. Sold in convenient 1/3 fl. oz. tubes with pinpoint applicator tip.

Description	Item#	EACH Prices	
		1-2	3+
Crystal Cement, 1/3 fl. oz tube	811-2540	\$4.40	\$3.96

**I Opticon® Fracture Sealer/Hardener #224**

A two-part epoxy resin that fills fractures invisibly in cabs, slabs or specimens. Easy to use: just clean stone with acetone, apply a coating of Sealer to the surface, and put it into a 150°F oven for one hour. Allow stone to cool, then paint with a mixture of Sealer and Hardener. Fifteen minutes later, just wipe off the excess resin. The fracture is now filled cleanly and invisibly. (Caution: some fractures contain other mineral materials and cannot be filled invisibly.) Includes 8 fl. oz. Sealer and 1 fl. oz. Hardener.

Description	Item#	Each
Opticon Fracture Sealer/Hardener #224	821-2820	\$21.50

**J, K Syringe Dispensers**

Plastic syringes with 18-gauge stainless steel needle for pinpoint delivery of adhesive or paste solder to the exact place you want. Plunger works smoothly and slides evenly to prevent accidental flooding and sputtering. Constructed of polyethylene and polypropylene. Use with Epoxy 330 or 220, Devcon Epoxies, Opticon Fracture Sealer/Hardener #224 and similar adhesives. Available in three sizes: 5cc, 10cc and 30cc. Each syringe includes tip sheath and cover.

Description	Item#	EACH Prices	
		1-3	4+
J. 5cc Dispenser, pkg. of 6	811-2450	\$7.95	\$6.36
K. 10cc Dispenser, pkg. of 6	811-2451	9.95	7.96





### A Precision Guillotine Shears

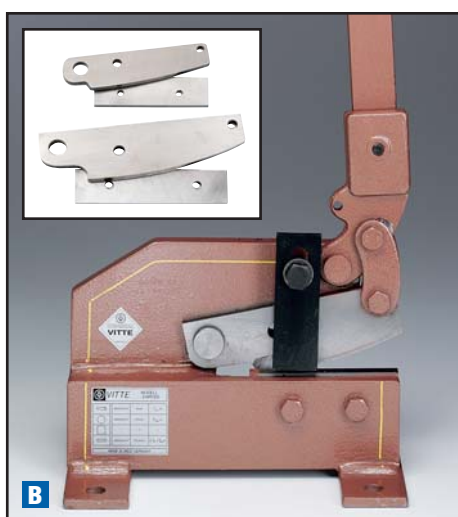
These heavy-duty shears speed up production and reduce waste by allowing the operator to cut sheets neatly to exact sizes required. Use exclusive lever-action locking bars to hold material securely, which helps prevent accidents. Feature precision-ground, hardened high-carbon steel blades that can be resharpened as needed. Cut up to 14-gauge (1.6mm thick) mild steel and 10-gauge (2.4mm thick) mild nonferrous metal sheet of any length. Must be bolted to table or bench for safety. Made in Europe.

Specifications:	Small	Large
Blade Width	6"	12"
Required Space	11½"W x 30½"D	19¾"W x 39¼"D
Ship. Wt.	58 lbs.	99 lbs.

#### Features:

- Squared work surface
- Easy-to-read adjustable ruler with cutting guide
- Open back with receiving table for catching cut metal
- All-steel construction

Description	Item#	Each
Small Guillotine Shears	<b>819-0275</b>	<b>\$695.00</b>
Large Guillotine Shears	<b>819-0280</b>	<b>765.00</b>



### B Bench Shears

Shears for cutting flat bars, sheets or rods, such as the center rod of a sprue tree. Features precision-machined blades, hold-down bar for accurate cutting and long handle for leverage. Made in Europe.

Specifications:	4R	6R
Blade Length	6 <sup>3</sup> / <sub>32</sub> "	8"
Cutting Capacity	2 <sup>3</sup> / <sub>8</sub> " x <sup>3</sup> / <sub>16</sub> " flat bar, <sup>5</sup> / <sub>32</sub> " sheet, <sup>7</sup> / <sub>16</sub> " rod	2 <sup>3</sup> / <sub>4</sub> " x <sup>1</sup> / <sub>4</sub> " flat bar, <sup>3</sup> / <sub>16</sub> " sheet, <sup>1</sup> / <sub>2</sub> " rod
Ship. Wt.	31 lbs.	60 lbs.

Description	Item#	Each
4R Bench Shears	<b>819-0350</b>	<b>\$495.00</b>
6R Bench Shears	<b>819-0355</b>	<b>695.00</b>
Replacement 4R Blade Set	819-0357	145.00
Replacement 6R Blade Set	819-0358	225.00
Replacement 4R Handle	819-0361	119.00
Replacement 6R Handle	819-0354	139.00



### C Precision Scissors

Lightweight, maneuverable scissors for easy cutting in tight spaces. Great for bead stringing work. Feature small pointed blades made of high-quality stainless steel, large contoured ABS plastic handles and high-impact rivet and nylon washer assembly for smooth action and long life. Measure 4¼" long with 1¼" long blades.

Description	Item#	Each
Precision Scissors	<b>819-0110</b>	<b>\$8.95</b>



### D Crown Scissors

Stainless steel scissors with small blades and large looped handles. Can be used on soft wire and very light metals. Great for cutting around bezels. Measure 4½" long with 1" long blades.

Description	Item#	Each
Crown Scissors	<b>819-0115</b>	<b>\$4.20</b>



### E Short-Blade Scissors

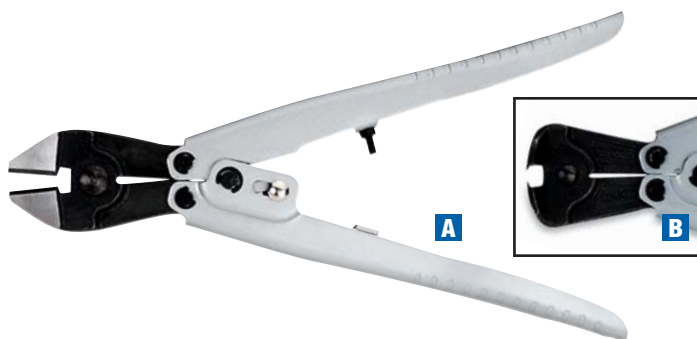
Feature small, sharp blades with fine points for easy cutting in the tightest spaces. Excellent for cutting thread, ribbon and bead cord. Measure 3½" long with 1" long blades.

Description	Item#	Each
Short-Blade Scissors	<b>819-0125</b>	<b>\$3.35</b>

**A, B Bergeon Heavy-Duty Cutters – Cut sprues up to 3mm.**

Top-quality cutters with specially engineered linkage that multiples hand pressure many times to provide full, clean cuts. Helps reduce fatigue from constant cutting. Feature hardened steel jaws with 7/8" (22mm) long cutting edges, extra-long handles for more leverage and locking system for protection of cutting edges. Side cutter has pointed ends for improved access to tight areas. Measures 10" long. End cutter measures 9½" long. Both styles cut sprues up to 3mm. Made in Switzerland.

Description	Item#	Each
A. Side Cutter	181-4075	\$167.00
B. End Cutter	181-4070	159.00

**C Power Sprue Cutter – Cuts sprues up to 3mm.**

Cuts sprues and soft wire up to 3mm and hard wire up to 1mm. Makes a semi-flush cut. Features compound joint construction for reduced cutting effort, hardened chrome vanadium steel head and steel handles with plastic nonslip grips. Measures 9½" long with 1½" (18mm) long jaws. Made in Italy.

Description	Item#	Each
Power Sprue Cutter	181-4061	\$110.00

**D, E 3-Peaks Sprue Cutters – Cut sprues up to 4mm.**

These compound sprue cutters feature 60–65 HRC hardened alloy steel construction with 15mm long jaws and comfortable handles. Both cut up to 4mm copper or 1.5mm steel. Side cutter is angled for better access to tight areas. Measure 8½" long. Imported.

Description	Item#	Each
D. Standard Cutter	181-4081	\$25.65
E. Side Cutter	181-4082	27.60

**F, G Lightweight Metal Snips**

For cutting templates and patterns from medium-hard metal sheet up to B&S 20 or from soft sheet up to B&S 16. Available with either straight blades for making straight cuts or curved blades for cutting circular shapes. Also choose between looped and plain handles. Measure 7" long with 1½" long blades.

Description	Item#	Each
F. Straight Snips with Looped Handles	819-0150	\$12.25
Straight Snips with Plain Handles	819-0100	13.75
Curved Snips with Looped Handles	819-0200	12.25
G. Curved Snips with Plain Handles	819-0050	13.45

**H Snips with Coil Springs**

Coiled springs make these snips very easy to handle and return the blades to the cutting position. Plastic locks keep them closed when not in use. Made from durable hot drop-forged steel. Cut patterns from up to 26-gauge sheet. Measure 7" long with 1½" long blades.

Description	Item#	Each
H. Straight Snips	819-0055	\$19.00
Curved Snips	819-0060	19.65







**A**

**A Solder Pastes**

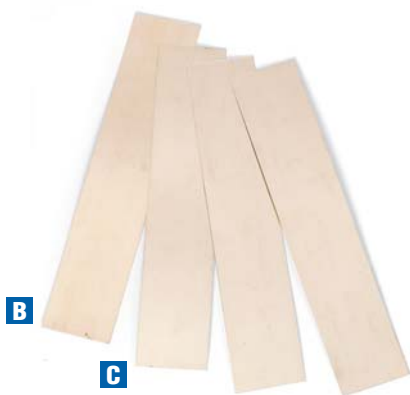
Excellent for soldering fine chains and intricate jewelry items where precise application of solder is critical. Alloy and flux are premixed in paste form and packaged in convenient dispensing syringes. Alloy will not settle to the bottom of the syringe tube. Syringes eliminate waste and improve the appearance of the joint area. Silver solders are cadmium-free. Gold solders are plumb, contain 1 dwt gold per 1cc syringe.

Description	Melting Point	Item#	Dwt
Yellow 10K Easy	1,195°F	831-1007	\$22.98
Yellow 14K Hard	1,330°F	831-1002	31.50
Yellow 14K Medium	1,255°F	831-1000	31.50
Yellow 14K Easy	1,185°F	831-1001	31.50
Yellow 18K Easy	1,170°F	831-1008	39.55
White 14K Hard	1,335°F	831-1006	31.50
White 14K Easy	1,220°F	831-1005	31.50
White Silver Hard	1,125°F	831-1010	29.65
White Silver Easy (less silver content)	425°F	831-1030	25.90

**B N-Brand Sheet Repair Solder**

Within each color there are variations in the exact tone in order to match the karat of the piece to be soldered. All flow easily and uniformly and provide a joint that is as strong and permanent as the metal itself. Sold per dwt.

Description	Melting Point	Item#	Dwt
Yellow Low	1,325°F	830-1900	\$2.55
Yellow for 8K	1,385°F	830-1903	14.85
Yellow for 10K	1,320°F	830-1906	22.35
Yellow for 14K	1,315°F	830-1909	29.95
Yellow for 18K	1,450°F	830-1912	39.95
White Low	1,390°F	830-1921	2.50
White for 10K	1,410°F	830-1924	22.25
White for 14K	1,430°F	830-1927	29.95
White for 18K	1,525°F	830-1930	39.15



**B**

**C**

**C Silver Sheet Solder**

Available in three grades. Each package contains one troy oz.

Description	Melting Point	Item#	Troy Oz.
Easy Flow	1,145°F	830-2050	\$16.42
Medium	1,360°F	830-2100	17.10
Hard	1,450°F	830-2150	17.93



**D**

**D Palladium Sheet Solders**

950 palladium jewelry is a rapidly growing trend, and palladium solders are ideal color matches for it. 950 Hard is 95% palladium and 5% patented solder alloy; it's plumb and a perfect color match for your 950 palladium jewelry. Sold in 1 dwt sheets.

Description	Approx. Flow Pt.	Item#	Each
950 Plumb Palladium Hard Solder	1,450°C	830-1960	\$42.75



**E**

**E Silver Solder Wire**

Round 20-gauge (0.032" dia.) silver solder wire. Cadmium-free. Sold in 1/2 oz. packages.

Description	Silver Percentage	Melting Point (°F)	Flow Point (°F)	Item#	1/2 oz. Pkg.
Extra-Easy	56	1,145	1,207	830-2151	\$7.63
Easy	65	1,240	1,325	830-2152	8.20
Medium	70	1,275	1,360	830-2153	8.65
Hard	75	1,365	1,450	830-2154	8.96



**F**

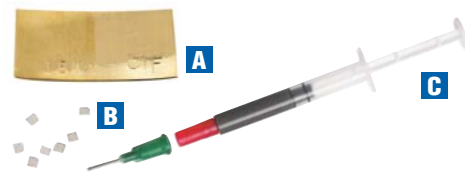
**F Solder Cutting Pliers**

These special pliers can be used to consistently cut both sheet and wire solder. Sheet is cut in 1/16" (1.6 mm) squares and wire, up to 18-gauge (1.02 mm), in 1/16" lengths. Cut is consistent time after time, Measure 5 1/2" overall length with plastic comfort grips.

Description	Item#	Each
Solder Cutting Pliers	180-0279	\$13.20

**A - C Gesswein® Plumb Solders – Cadmium/indium-free!**

Manufactured for Gesswein under strict quality guidelines so that composition, temperature and color are consistent and uniform from lot to lot. Contains no cadmium, no indium. Available in sheet, chips and paste. Sheet is sold by the dwt. Chips measure 1 x 1mm and are packaged 1 dwt per vial. Paste is sold in 1 dwt per 1cc syringe. Prices are subject to change with market prices.



Description	Flow Point °F (°C)	Melting Point °F (°C)	A. Sheet		B. Chips		C. Paste	
			Item#	Dwt	Item#	Dwt	Item#	Dwt
Yellow 18KY Hard	1,530 (832)	1,440 (782)	<b>830-2172</b>	<b>\$56.67</b>	<b>831-1062</b>	<b>\$57.23</b>	<b>831-1042</b>	<b>\$39.66</b>
Yellow 18KY Medium	1,435 (779)	1,350 (732)	<b>830-2171</b>	<b>56.67</b>	<b>831-1061</b>	<b>57.23</b>	<b>831-1041</b>	<b>39.66</b>
Yellow 18KY Soft	1,360 (738)	1,300 (704)	<b>830-2170</b>	<b>56.67</b>	<b>831-1060</b>	<b>57.23</b>	<b>831-1040</b>	<b>39.66</b>
Yellow 14KY X-Hard	1,555 (846)	1,420 (771)	<b>830-2176</b>	<b>44.58</b>	<b>831-1066</b>	<b>45.14</b>	<b>831-1046</b>	<b>31.63</b>
Yellow 14KY Hard	1,440 (782)	1,400 (760)	<b>830-2175</b>	<b>44.58</b>	<b>831-1065</b>	<b>45.14</b>	<b>831-1045</b>	<b>31.63</b>
Yellow 14KY Medium	1,390 (754)	1,330 (721)	<b>830-2174</b>	<b>44.58</b>	<b>831-1064</b>	<b>45.14</b>	<b>831-1044</b>	<b>31.63</b>
Yellow 14KY Soft	1,285 (696)	1,265 (685)	<b>830-2173</b>	<b>44.58</b>	<b>831-1063</b>	<b>45.14</b>	<b>831-1043</b>	<b>31.63</b>
White 18KW Soft	1,580 (860)	1,575 (857)	<b>830-2180</b>	<b>56.70</b>	<b>831-1070</b>	<b>57.26</b>	<b>831-1050</b>	<b>39.66</b>
White 14KW Hard	1,445 (785)	1,335 (724)	<b>830-2182</b>	<b>44.68</b>	<b>831-1071</b>	<b>45.24</b>	<b>831-1051</b>	<b>31.63</b>
White 14KW Soft	1,295 (702)	1,290 (699)	<b>830-2181</b>	<b>44.68</b>	<b>831-1072</b>	<b>45.24</b>	<b>831-1052</b>	<b>31.63</b>

**D Platinum Plumb Solders**

The first solders that actually contain 90-95% platinum for a perfect color match and no visible seams. Solves many of the problems associated with traditional platinum solders such as porosity, poor color and a simple lack of platinum. Sold in 1 dwt sheets.

Description	Pt%	Melting Point	Item#	Dwt
Easy	90%	1,400°F	<b>830-1950</b>	<b>\$180.00</b>

**E Platinum Solders**

Sold in 1 dwt sheets.

Description	Melting Point	Item#	Dwt
1700	2,910°F	<b>830-2162</b>	<b>\$41.80</b>
1400	2,660°F	<b>830-2161</b>	<b>48.29</b>
1200	2,190°F	<b>830-2160</b>	<b>45.03</b>

**F Platinum Solder Paste**

Paste solder is ideal for soldering chain and intricate jewelry items where precise application of solder is critical. Now paste solder is available for platinum! Use 1000 for hidden joints (color is a bit too dark to use on visible joints). Use 1300 for production and for a good color match on joints that will be visible in the finished product.

Description	Item#	Each
Platinum Solder Paste 1000, 1 dwt syringe	<b>831-1031</b>	<b>\$18.69</b>
Platinum Solder Paste 1300, 1 dwt syringe	<b>831-1032</b>	<b>32.54</b>

**G Yellow Ochre**

Mix with water or alcohol to create a paste that may be brushed onto a workpiece to prevent solder from flowing where you don't want it to. Helps to protect previously soldered areas, moving parts of a catch, etc. Net Wt. 1/2 lb.

Description	Item#	Each
Yellow Ochre	<b>821-2750</b>	<b>\$9.30</b>

**H Quick-Charge Soldering Iron Set**

Easily solder in the tightest places with no restricting electric cord. The soldering iron is cordless and rechargeable. A built-in work light enhances visibility in hard-to-reach areas and dark corners. Set comes with two quick-change tips (one fine and one heavy-duty). Will solder up to 125 joints before it is necessary to recharge. High-rate charge takes 3-4 1/2 hours. A partially discharged battery may be charged in only 1-2 hours. Set contains the soldering iron, charging stand with wall plug transformer, battery, fine and heavy-duty tips and instructions. 110V.

Description	Item#	Each
Quick-Charge Soldering Iron Set	<b>816-1920</b>	<b>\$53.75</b>



A



B



C

B



D



E



F



G



H

**A Tix® Solder**

Considered to be one of the “hardest” soft solders available. Melts at 275°F and has a holding power of 4,300 lbs. per square inch. Adheres to all ordinary solderable materials and may be used with a soldering gun or torch. Stays white and does not tarnish. Package of 20 rods (3" length, 19-gauge).

Description	Item#	Each
Tix Solder, 20 rods	<b>830-2000</b>	<b>\$14.95</b>

**B Tix® Flux**

A noncorrosive liquid flux that works with any soft solder. Harmless to skin and clothing. Washes off with water, even when dry. 1/2 oz.

Description	Item#	Each
Tix Flux, 1/2 oz.	<b>830-2340</b>	<b>\$4.45</b>

**C Tix® Anti-Flux**

Liquid that brushes on to prevent solder from flowing to unwanted areas. Can be used for hard or soft soldering. 1/2 oz.

Description	Item#	Each
Tix Anti-Flux, 1/2 oz.	<b>830-2345</b>	<b>\$4.45</b>

**D Stay Bright Soldering Set**

Cadmium-free, nontoxic silver bearing solder with a melting point of 430°F. May be used with soldering gun or torch. Includes 1/2 oz. of solder and 1/2 fluid oz. Stay Clean Flux.

Description	Item#	Each
D. Stay Bright Soldering Set	<b>830-2300</b>	<b>\$18.05</b>
Stay Clean Flux refill	<b>830-2350</b>	<b>10.30</b>

**E Soft Soldering Flux**

For use with solders with melting points under 450°F. Will not flame.

Description	Item#	Each
4 oz.	<b>830-4050</b>	<b>\$8.20</b>
1 pint	<b>830-4100</b>	<b>11.45</b>
E. 1 quart	<b>830-4150</b>	<b>14.95</b>

**F Pinpoint Dispenser**

This handy plastic squeeze dispenser has a needle-point applicator for precise application of flux. No more mess—eliminates dried up flux brushes and dripping flux. An excellent applicator for applying flux to small areas where a flux brush will usually cause a mess; ideal for soldering earring posts, building up prongs, sizing rings and making many similar small repairs. 2 oz. capacity.

Description	Item#	Each
Pinpoint Dispenser	<b>830-4520</b>	<b>\$4.79</b>
Pinpoint Dispenser w/16 oz. Anti-Oxidizing Flux	<b>830-4515</b>	<b>15.95</b>

**G Dispenser Bottle with Pump**

Plastic bottle holds flux, solvents or other liquids. Special stainless steel lid allows pumping of solution into shallow well on top of bottle. One-way valve keeps solution in well, prevents contamination and eliminates odors. Ideal for dispensing solutions that would otherwise evaporate. 4 oz. capacity.

Description	Item#	Each
Dispenser Bottle with Pump	<b>830-4525</b>	<b>\$21.70</b>

**H Superior Flux #6**

This paste flux for silver brazing and soldering stays exactly where you want it and helps hold solder in place. Contains no potassium bifluoride and will not release boron trifluoride gases during brazing. Gentle on metals. Easier on the hands than regular silver fluxes. Conforms to AMS 3410, AWS A5.31-91 and Type FB3A. Temperature range: 900-1600°F (485-870°C).

Description	Item#	Each
4 oz. Jar	<b>830-4200</b>	<b>\$5.45</b>
H. 8 oz. Jar	<b>830-4201</b>	<b>6.95</b>

**A - D Gesswein® Hard Soldering Flux**

Yellowish-green self-pickling flux for brazing and annealing gold, silver, platinum and other metals with high melting points. Holds solder chips in place. Preserves color and temper of metal. Temp. range: 1,100-1,600°F.

Size	Item#	Each	
A. 4 oz.	830-4250	\$3.50	
B. 1 pint	830-4300	6.25	
C. 1 quart	830-4350	9.25	
D. 1 gallon	830-4400	24.90	

**E - G Handy® Flux**

A white paste flux used for hard soldering of silver, gold, platinum, copper, nickel and other nonferrous metals. Apply with borax brush. Holds solder chips in place for easier soldering. Withstands prolonged heating without breaking down. Temp. range: 1,100-1,500°F.

Size	Item#	EACH Prices	
		1-2	3+
E. 8 oz.	830-4465	\$6.50	–
F. 1 lb.	830-4470	10.15	\$9.14
G. 5 lbs.	830-4475	33.95	30.56

**H Borax**

Specially prepared for making flux for jewelry soldering. Dissolves easily to make a paste. Inhibits the formation of oxides on metal surfaces and allows solder to flow more easily. Helps prolong the life of melting crucibles. Powder is finer than granular. Borax has pH of 6-7. More alkaline than boric acid (pH 3-4).

Size	Item#	Each
8 oz. Powder	811-0700	\$4.75
5 lbs. Powder	811-0701	19.95
50 lbs. Powder	811-0702	165.00
8 oz. Granular	811-0712	4.75
5 lbs. Granular	811-0711	16.80
50 lbs. Granular	811-0710	135.00

**I - K Gesswein® Anti-Oxidizing Flux**

Completely protects the finish of the piece being soldered from firescale, reducing the need for time-consuming pickling, stripping and, in some cases, sanding and filing. Repolishing becomes easy after soldering. Prevents discoloration and oxidation of all metals that contain copper. Especially recommended for soldering silver. Makes hard soldering tasks easier than ever before. Nonhazardous and nontoxic. Temp. range: 1,100-1,500°F.

Size	Item#	EACH Prices	
		1-2	3+
I. 1 gal.	830-4510	\$69.50	–
J. 16 oz.	830-4505	13.75	\$13.06
K. 4 oz. spray bottle	830-4500	5.75	5.46

**L Gesswein® Rectifying Solution**

Alcohol-based flux for soldering and annealing. Inhibits firescale. Dip part into Rectifying Solution, set on soldering block and ignite. Alcohol will burn off and leave white borax residue. Part is now ready to be soldered or annealed. Temp. range: 1,100-1,600°F.

Size	Item#	EACH Prices	
		1-3	4+
1 quart	830-4551	\$20.95	\$16.76

**M Boric Acid Powder**

Technical grade. Dissolve in Denatured Alcohol in our Glass Alcohol Cup (below) to make soldering flux. Boric acid has pH of 3-4. More acidic than borax (pH 6-7).

Size	Item#	Each
1 lb.	830-4569	\$7.65
5 lbs.	830-4570	16.65
25 lbs.	830-4572	73.25

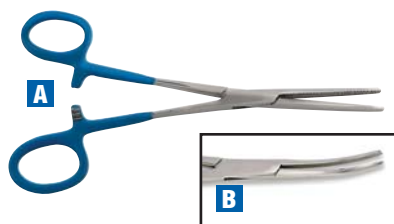
**N Glass Alcohol Cup**

For alcohol, solvents, flux or other solutions. Cover fits tightly to protect against evaporation or contamination. Cut glass container. Measures 2 7/8" dia. x 1 7/8" H, capacity 1 1/2 oz.

Description	Item#	Each
Glass Alcohol Cup	830-2320	\$14.40





**A, B Hemostats**

Precision tools ideal for holding small items for soldering. Feature box-joint construction, serrated pointed jaws and heat-resistant two-position self-locking handles. Available in two styles: straight and curved. Made of highly polished stainless steel. Measure 6" long.

Description	Item#	EACH Prices	
		1-2	3+
A. Straight	181-5005	\$6.50	\$5.85
B. Curved	181-5000	6.50	5.85

**C Third Hand**

Cross-locking tweezers, 6½"L, mounted on heavy, nontipping round base. Base's ball joint attachment permits positioning of work at any angle. Handy for positioning pieces to be joined by solder or adhesive, freeing hands from work.

Description	Item#	EACH Prices	
		1-2	3+
Third Hand	816-1800	\$11.65	\$11.07
Replacement Tweezers	195-1400	2.95	2.66

**D Magnetic Third Hands**

This remarkable third hand features incredibly flexible positioning and ease of use to speed up your soldering jobs. A strong magnet in the base holds the ball joint with attached tweezers. Twist and turn the ball joint to any position and it stays fixed *without slipping*—no screws or wing nuts to adjust. Base is the heaviest we've seen for secure positioning without tipping even when soldering heavy jewelry items. Holds up to 5 oz. at the end of the 6" self-locking insulated tweezers (included). Base measure 3" dia. x 3½"H. Net Wt. 2 lbs.

Description	Item#	Each
Single	816-1820	\$29.00

**E Double Third Hand**

Round weighted base with cross bar, two spring-loaded clips, and multiple ball joints for infinite positioning ability. Frees both hands for work. Other accessories such as cross-locking tweezers may be added to increase the versatility of this convenient holding tool.

Description	Item#	Each
Double Third Hand	816-1900	\$15.85

**F GRS® Soldering Stations**

Compact benchtop fixturing devices for handling all your soldering jobs. Available in two styles: short-arm features double-jointed arms with spring-loaded third hands, and deluxe features triple-jointed arms with spring-loaded third hands and rear tabs for mounting on GRS BenchMate (see p. 440). Have 6" x 6" nonasbestos soldering boards and metal frames with rubber feet. Made in USA.

Description	Item#	Each
Short-Arm Soldering Station	816-1914	\$69.00
F. Deluxe Soldering Station	816-1915	99.95

**G Platinum Soldering Station**

Platinum soldering must be carried out in an area separate from other metals or solders to prevent contamination of the platinum. Tweezers and solder picks must be made of a non-contaminating material such as tungsten carbide. Our Platinum Soldering Station includes: GRS Soldering Station (above), 2 pairs of GRS Tungsten Carbide Tweezer Tips (to replace tips in soldering station), 4" x 4" Wesgo Soldering Board (sits on top of GRS board) and Tungsten Solder Pick for worry-free platinum soldering.

Description	Item#	Each
Platinum Soldering Station	816-1916	\$185.00

**A Improved Adjustable Scraper**

Hollow three-square blade measures 3½" long; the length can be adjusted to fit the job. Blade is double-ended. A simple adjustment knob on the knurled handle allows the blade to slip inside both for safety and for maintaining the tool edge when not in use. Handle has a highly polished finish. Measures 3½" long.

Description	Item#	Each
Improved Adjustable Scraper	816-0130	\$39.45

**B Bench Knife**

An all-purpose bench knife for opening watch cases, scraping and cutting. Has 1¾" thick steel blade mounted in a hardwood handle. Measures 5¼" long.

Description	Item#	Each
Bench Knife	260-3059	\$3.60

**C, D Wood Handle Scrapers**

High-quality, chrome alloy steel three-square blades are securely mounted in hardwood handles. Blades measure 2½" long.

Description	Item#	Each
C. Hollow-Blade Scraper	816-0150	\$7.25
D. Solid-Blade Scraper	816-0160	9.00

**E Titanium Solder Pick**

Features a Titanium rod to which solder cannot adhere and a nonconductive handle with hexagonal head so pick won't roll away when you put it down. For gold and silver—do not use on platinum. Measures 6¾" long.

Description	Item#	EACH Prices		
		1-2	3-9	10+
Titanium Solder Pick	830-2212	\$4.20	\$3.99	\$3.78

**F Tungsten Solder Pick – Ideal for platinum.**

For spreading molten solder and maneuvering it to just the place you want it. Solder will not adhere. Made of a special high melting point tungsten. Will not contaminate or discolor molten gold or silver solder. Wood will not heat up. Measures 6½" long.

Description	Item#	EACH Prices		
		1-2	3-9	10+
Tungsten Solder Pick	830-2210	\$5.65	\$5.09	\$4.71

**G Niobium Solder Pick**

For high-temperature soldering jobs, our Niobium Solder Pick withstands temperatures up to 4,470°F. Noncontaminating for platinum soldering and welding. Can be bent to the desired angle without breaking. Wooden handle. Measures 6½" long.

Description	Item#	EACH Prices		
		1-2	3-9	10+
Niobium Solder Pick	830-2216	\$6.25	\$5.94	\$5.63

**H Solder Pick**

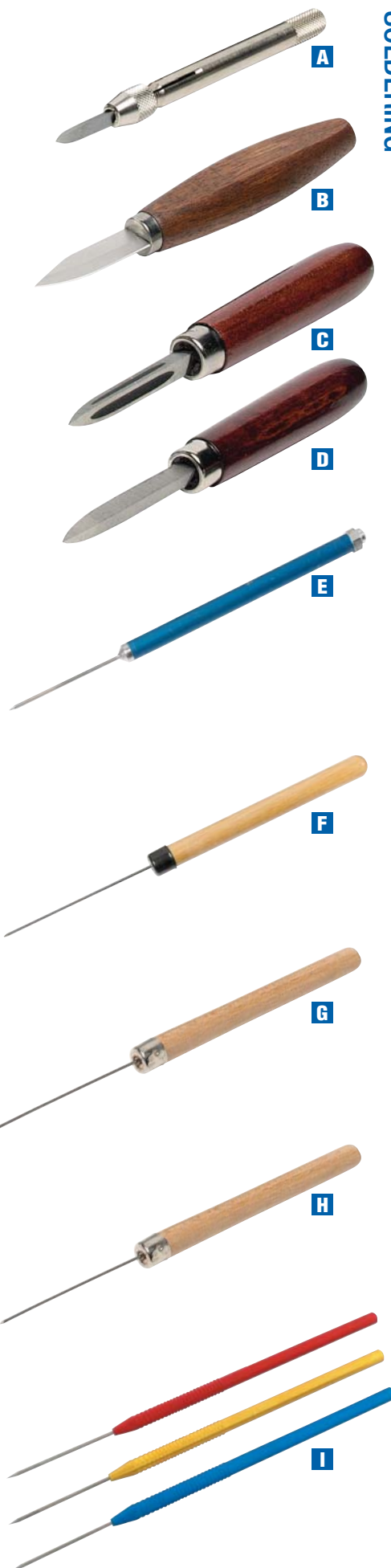
Made with a special alloy, the point can be bent to any shape without breaking. Hardwood handle insulates. Metal ferrule. For gold and silver. Measures 6½" long.

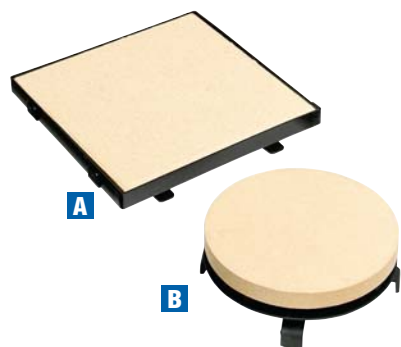
Description	Item#	Each
Solder Pick	830-2211	\$2.95

**I Titanium Soldering Picks**

Feature long-lasting extra-fine titanium tips that collect exact amounts of solder for precise application. Grooved aluminum handles dissipate heat quickly to protect user. Hexagonal heads prevent rolling. Available in three colors to help prevent metal contamination. Measure 6¼" long. For use with gold, silver and other metals; not for use with platinum.

Description	Item#	Each
Red Pick	830-2213	\$3.50
Gold Pick	830-2214	3.50
Blue Pick	830-2215	3.50
Set of three (one each)	830-2219	8.50



**A, B Rotating Solder Tables**

Solder and anneal single or multiple parts without having to move your torch.

These handy rotating tables permit 360° access to your parts so that you can work without having to move your torch. Bearings in the base provide smooth, easy movement. The tables are only 1" high, which makes it comfortable to use them on a bench top. Square table is supplied with one 6" x 6" Ceramic Soldering Pad (#830-2222) and also accommodates our Solderite Soldering Pad (#810-0100). Round table is supplied with grooved 4½" diameter ceramic soldering disc (#830-2238).

Description	Item#	Each
A. Square Table	<b>830-2228</b>	<b>\$30.95</b>
B. Round Table	<b>830-2237</b>	<b>19.95</b>
Solderite Pad, 6" x 6"	<b>810-0100</b>	<b>7.85</b>
Replacement Ceramic Pad, 6" x 6"	830-2222	11.95
Replacement Ceramic Disc, 4½" dia.	830-2238	6.00

**C Two-Way Ceramic Soldering Board**

Hard ceramic soldering board that is flat on one side and deeply fluted on the other side. Fluted side is ideal for soldering fine chains because air is allowed to circulate under the area not being soldered, reducing the diffusion of heat. Excellent thermal shock resistance. Measures 7"L x 6"W. Can be heated to 2,000°F.

Description	Item#	EACH Prices	
		1-2	3+
Two-Way Board	<b>830-2220</b>	<b>\$24.10</b>	<b>\$21.69</b>

**D, E Annealing Pans with Pumice**

Allows positioning of work while annealing or soldering on heat-reflecting pumice. Pans rotate 360° on ball bearings. Each pan comes with 2½ lbs. of lump pumice. Ship. Wt. 6 lbs.

Description	Item#	Each
D. 12" dia. Annealing Pan	<b>830-4000</b>	<b>\$59.35</b>
E. 7" dia. Annealing Pan	<b>830-3995</b>	<b>30.60</b>
Pumice, 2½ lbs.	830-4001	12.60

**F Ceramic Soldering Boards**

All are nonasbestos and hard. Retain heat nicely and can be easily cleaned. Rubber feet raise boards above work surface. Very durable and smooth. Can be heated up to 2,000°F.

Size (L x W x H)	Item#	EACH Prices	
		1-2	3+
6" x 6" x ½"	<b>830-2222</b>	<b>\$11.95</b>	<b>\$10.76</b>
6" x 12" x ½"	<b>830-2224</b>	<b>15.95</b>	<b>14.36</b>
12" x 12" x ½"	<b>830-2227</b>	<b>26.50</b>	<b>23.85</b>

**G Wesgo® Soldering Boards**

Made from the same super refractory material as our popular high-temperature Wesgo crucibles for demanding thermal shock environments. Great for high-temperature soldering jobs such as platinum soldering. The material can be used at 2,642°F (1,450°C) for intermittent service (for platinum soldering, etc.) or at 2,012°F (1,100°C) for more continuous duty. Free of metal-contaminating impurities; contains no readily reducible oxides. Wesgo Soldering Boards offer extremely low thermal conductivity and no loss of strength at high temperatures.

Size (L x W X H)	Item#	Each
4" x 4" x ⅜"	<b>830-2400</b>	<b>\$84.00</b>
4" x 12" x ⅜"	<b>830-2410</b>	<b>219.00</b>

**A Solderite™ Hard and Soft Soldering Pads**

Nonasbestos soldering pads which are durable, smooth, and heat-reflective. Fairly hard so that they will not flake or crumble. Highly flame-resistant and noncombustible, these long-lasting, all-purpose pads can be used to protect surfaces from burning. Measure 1/2" thick. Our popular Solderite Pad is now available in a soft version. You can easily push pins, heads or components into Solderite Soft for quick and easy alignment. Composed of the same material as original Solderite and will provide the same superior heat reflection, insulating qualities and fast cool-down time. It won't break, crack or crumble as so many other soft products will. Asbestos-free, OSHA approved. Measure 3/4" thick.

Size (L x W)	Hard Item#	EACH Prices		Soft Item#	EACH Prices	
		1-2	3+		1-2	3+
6" x 6"	810-0100	\$8.70	\$7.83	810-0335	\$8.70	\$7.83
6" x 12"	810-0200	13.60	12.24	810-0336	13.60	12.24
12" x 12"	810-0300	23.35	21.02	810-0337	23.35	21.02



A

**B Honeycomb Blocks**

Very popular ceramic soldering block that contains hundreds of tiny holes to accelerate heat loss from parts being soldered. Holes also provide anchor points for pins or wires used to hold parts in place on the surface. Withstands heat up to 3,000°F.

Size	Item#	Each
5 1/4" L x 3 3/4" W x 1/2" H	830-2230	\$9.80
5 1/2" L x 7 3/4" W x 1/2" H	830-2235	10.75
5 1/2" dia. x 1/2" H	830-2236	12.85



B

**C Charcoal Soldering Blocks**

Made from select, close-grained, knot-free wood. Creates a reducing atmosphere and reflects heat back onto workpiece for effective soldering conditions. Soft enough to allow work to be pinned or pressed into its surface. Available in three sizes. Wrapping binding wire around the perimeter of the blocks will help them last longer.

Size (L x W x H)	Item#	EACH Prices	
		1-2	3+
3 3/4" x 2 1/4" x 1 1/4"	810-2300	\$7.65	\$6.89
4 1/2" x 3" x 1 1/4"	810-2200	11.80	10.62
7" x 4" x 1 1/4"	810-2100	23.95	21.56



C

**D Premium Charcoal Blocks**

Extra-fine grain charcoal is compressed for a denser charcoal block that holds up better and lasts longer than standard blocks. Our Premium Small Block is 3 times heavier than a standard block of the same size. Our Premium Medium Block weighs almost twice as much as a standard medium block. No chemicals added. Imported.

Size (L x W x H)	Item#	EACH Prices		
		1-2	3-9	10+
3 1/8" x 2 5/16" x 1 1/8"	810-2404	\$10.40	\$9.36	\$8.32
5 1/2" x 2 3/4" x 1 1/4"	810-2405	14.95	13.46	11.96



D

**E Magnesia Block**

Porous, fibrous, fireproof material used as a surface for soldering. Reflects heat. Soft enough to allow work to be pinned or pressed into its surface. Longer lasting than charcoal. Nonasbestos.

Size (L x W x H)	Item#	EACH Prices	
		1-2	3+
6" x 3" x 2"	810-2400	\$3.95	\$3.36



E

**F Hi-Temp Soldering Boards**

This aluminum oxide board is designed specifically for the high temperatures required when working with platinum. Safe for temperatures up to 3,500°.

Size (L x W x H)	Item#	Each
4" x 4" x 1/2"	830-2240	\$29.50
6" x 6" x 1/2"	830-2245	35.00



F



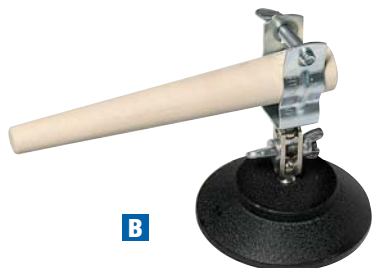


A

### A Carbon Ring Soldering Stand

Tapered carbon rod mounted in one position on a heat-resistant nonasbestos base. Prevents collapse or movement when fitting shank sections together. Heat is concentrated so rapidly that rings can often be soldered without removing stones. Rod measures 5<sup>3</sup>/<sub>4</sub>" long.

Description	Item#	EACH Prices	
		1-2	3+
A. Carbon Ring Soldering Stand	<b>816-0400</b>	<b>\$22.30</b>	<b>\$20.07</b>
Replacement Carbon Rod	816-0300	9.65	7.24



B

### B Round Ceramic Ring Soldering Stand

Make repairs and assembly easier by positioning your work exactly where you want it. Tapered, hard, 5<sup>3</sup>/<sub>4</sub>" long ceramic rod holds rings for soldering. Two pivot joints allow rod to be positioned vertically, horizontally or anywhere in between. Round heavyweight base will not tip.

Description	Item#	EACH Prices	
		1-2	3+
B. Round Ceramic Ring Soldering Stand	<b>816-0406</b>	<b>\$18.40</b>	<b>\$13.80</b>
Replacement Ceramic Rod	816-0305	10.50	9.45



C

### C Ceramic Ring Soldering Stand

Tapered, hard ceramic rod is mounted in one position on a heat-resistant nonasbestos base. Prevents collapse or movement when fitting shank sections together. Cleaner to use than carbon and holds heat better. Rod measures 5<sup>3</sup>/<sub>4</sub>" long.

Description	Item#	EACH Prices	
		1-2	3+
C. Ceramic Ring Soldering Stand	<b>816-0405</b>	<b>\$21.95</b>	<b>\$16.46</b>
Replacement Ceramic Rod	816-0305	10.50	9.45

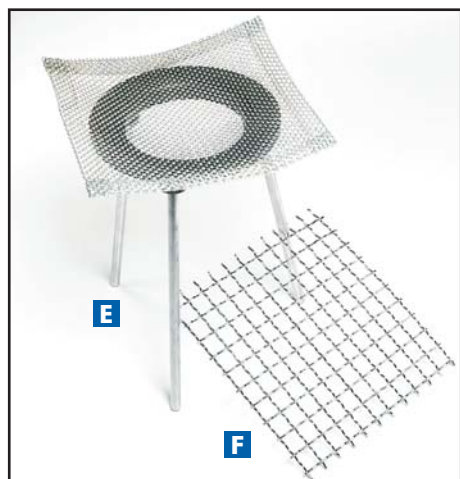


D

### D Iron Binding Wire

Available in 10 different sizes for holding workpieces together for soldering or cementing. Also used for binding charcoal blocks in order to retard cracking.

No.	Approx. B & S	Dia.	Item#	EACH Prices	
				1-2	3+
12	24	.020"	<b>820-2050</b>	<b>\$6.15</b>	<b>\$5.54</b>
14	25	.018"	<b>820-2100</b>	<b>6.50</b>	<b>5.85</b>
16	26	.016"	<b>820-2150</b>	<b>6.90</b>	<b>6.21</b>
18	27	.014"	<b>820-2200</b>	<b>8.25</b>	<b>7.43</b>
20	28	.0125"	<b>820-2250</b>	<b>8.55</b>	<b>7.70</b>
22	29	.011"	<b>820-2300</b>	<b>11.35</b>	<b>10.22</b>
24	30	.010"	<b>820-2350</b>	<b>11.75</b>	<b>10.58</b>
26	31	.009"	<b>820-2400</b>	<b>12.50</b>	<b>11.25</b>
28	32	.008"	<b>820-2450</b>	<b>16.20</b>	<b>14.58</b>



E

F

### E Tripod with Mesh Screen

Complete with Fine Mesh Heating Screen to heat work from below while welding, soldering, brazing or enameling. Can be placed over an alcohol lamp or Bunsen burner for heating operations. Complete with 6<sup>1</sup>/<sub>2</sub>" legs. Ring diameter measures 4<sup>3</sup>/<sub>4</sub>". Mesh screen is 6" square. Use with #830-1290 Heavy-Duty Mesh Screen (below) when working on heavier items.

Description	Item#	EACH Prices	
		1-2	3+
E. Tripod & Screen	<b>830-1295</b>	<b>\$12.50</b>	—
Replacement Screen only	830-1293	4.70	\$4.47

### F Mesh Heating Screens

Use on a tripod for soldering or heating work from below. Also for placing enameled pieces for firing. Available in fine or heavy-duty wire. Measure 6" x 6". Ship. Wt. 8 oz.

Description	Item#	EACH Prices	
		1-2	3+
F. Heavy-Duty	<b>830-1290</b>	<b>\$5.95</b>	<b>\$4.76</b>
Fine	<b>830-1293</b>	<b>4.70</b>	<b>4.47</b>

**A Place-It – The soldering fixture.**

Safe, asbestos-free material that holds parts together during soldering, welding and brazing. A putty-like material that quickly hardens in any desired form or shape. Will not shrink on setting. Will not rob heat from joints. Ready to use. Withstands heat up to 3,200°F.

Description	Item#	Each
4 oz. Jar	810-0360	\$25.00

**B Heat Stop**

Our most popular nonasbestos, nontoxic paste that protects precious metals, gems, glass, wood, etc. from heat damage during soldering. Protects up to 1,500°F. Effective up to 2,400°F. May be removed with water after soldering. Net Wt. 14 oz.

Description	Item#	Each
Heat Stop, 14 oz.	813-1850	\$18.00

**C Gem Shield Putty**

Protects gemstones, metal, glass and other sensitive materials during soldering and welding up to 3,500°F. Requires no predrying. Best of all, Gem Shield Putty is easy to remove: washes off quickly with water, even from underneath stones. Sold in a 12cc syringe with removable curved tip for precise placement.

Description	Item#	Each
Gem Shield Putty, 12cc syringe	810-0365	\$14.99

**D Heat Shield**

Protects jewelry components under direct flame so that it's not necessary to remove stones before soldering. Protects up to 5,000°F. Prevents oxidation. Odorless and nontoxic. Washes off with water. Net Wt. 1 lb.

Description	Item#	Each
Heat Shield, 1 lb.	813-1822	\$12.30

**E Cold Shield Thermal Paste**

Environmentally safe, nontoxic, noncorrosive paste that protects precious and ferrous metals, gems, plastic, organics, and any other material from heat damage during soldering or welding. Effective up to 3,000°F. Washes off easily with water.

Description	Item#	Each
Cold Shield, 1 lb.	813-1861	\$10.98
Cold Shield, 2 lb.	813-1860	14.98

**F Kool Jool**

Protects against heat while soldering. Lets you solder without removing stones (except opal, turquoise, emerald and other sensitive stones). Thick gel stays where you place it. So easy to use, it's also nontoxic and odorless. Rinses off with water. Net Wt. 8 oz.

Description	Item#	Each
Kool Jool, 8 oz.	813-1855	\$7.30

**G Soldering Grain**

Irregularly shaped grains used to hold items for soldering. Acts like a third hand. The granular form allows objects otherwise difficult to position for soldering to be embedded with only the part to be soldered left exposed. Will not discolor gold or silver. Reusable and odorless. May be used wet or dry. If used wet, place in a heat-resistant, nonrusting container. Net Wt. 12 oz.

Description	Item#	Each
Soldering Grain, 12 oz.	830-2310	\$13.50





**A - C Picklers**

Provide a safe and convenient way to heat Gesswein Pickling Solution. All three picklers achieve pickling temperature in minutes and maintain it without boiling. For removing oxides from the surface of silver, gold, copper and most other nonferrous metals. All are supplied with one polypropylene basket for retrieving cleaned workpieces.

Model	Electrical	Capacity	Dimensions (D x H)		Item#	Each
			Inside	Outside		
A. 400	115V, 125W, 50/60Hz	12 oz.	3" x 4 1/4"	4 7/8" x 5 1/2"	<b>821-2450</b>	<b>\$115.30</b>
400	240V, 1 Ph, 50Hz	12 oz.	3" x 4 1/4"	4 7/8" x 5 1/2"	<b>821-2456</b>	<b>118.00</b>
B. 00	115V, 125W, 50/60Hz	1 pt.	3 3/4" x 5 1/4"	5 3/4" x 7"	<b>821-2351</b>	<b>162.80</b>
00	240V, 1 Ph, 50Hz	1 pt.	3 3/4" x 5 1/4"	5 3/4" x 7"	<b>821-2356</b>	<b>167.60</b>
C. 70	115V, 125W, 50/60Hz	1 1/2 qts.	6 1/2" x 3"	8 1/2" x 5"	<b>821-2370</b>	<b>229.00</b>
70	240V, 1 Ph, 50Hz	1 1/2 qts.	6 1/2" x 3"	8 1/2" x 5"	<b>821-2376</b>	<b>232.00</b>
Description			Dimensions (D x H)		Item#	Each
Replacement 400 Basket			2 5/8" x 4"		821-2600	\$17.10
Replacement 00 Basket			3 1/2" x 4 1/2"		821-2501	43.65
Replacement 70 Basket			6" x 3 1/2"		821-2550	54.55



**D Gesswein® Pickling Compound**

A dry granular acid compound for cleaning and removing surface oxidation and incrustation from silver, gold, copper and most other nonferrous metals. Produces a clean, smooth, bright surface without affecting the tolerance of metals. Long-lasting compound withstands heat up to 300°F (150°C). Use 5 lbs. to make up to 2 gallons.

Description	Item#	Each
D. Gesswein Pickling Compound, 5 lbs.	<b>821-2650</b>	<b>\$13.50</b>
Gesswein Pickling Compound, 25 lbs.	<b>821-2652</b>	<b>44.95</b>

**E Citpic – The safer pickling compound.**

Citpic is safer to use than standard pickling compound yet just as effective for removing firescale and flux after soldering applications. Citpic is a mild organic acid, colorless and odorless. It's gentle on skin and fabrics but tough on firescale and flux residue.

Heat Citpic in your pickle pot for fast, safe, effective cleaning of platinum, gold, silver and steel. You can even use steel tweezers and binding wire—Citpic won't cause copper contamination. Citpic is long-lasting and retains its effectiveness even after repeated use.

Description	Item#	Each
Citpic, 2 lbs.	<b>821-2675</b>	<b>\$12.50</b>



**F Acid Neutralizer**

Dissolve approx. 2 oz. in 1 cup of warm water to make neutralizer solution. After removing items from pickling solution, place them into neutralizer solution to stop the pickling process. Wait 30 seconds, remove and rinse well. Do not heat. Sold in 6 oz. container.

Description	Item#	Each
Acid Neutralizer	<b>821-2685</b>	<b>\$3.85</b>



**G, H Firescoff™**

Revolutionary heat-activated ceramic spray coating. Combines a scale preventer and high-performance nonfluorinated flux for both hard and soft solder in one formula. Leading jewelers and jewelry manufacturers have switched from boric acid, paste flux and pickle solution to Firescoff because it's faster, provides more gemstone protection and cleans up easier. It's also alcohol- and fluoride-free, offering a real safety improvement over traditional methods. Cleans up easily in warm water, less than two minutes in an ultrasonic cleaner. 1 oz. size protects approx. 60–75 rings.

Description	Item#	Each
G. 1 oz. Spray Bottle	<b>830-4537</b>	<b>\$7.25</b>
H. 4.25 oz. Spray Bottle	<b>830-4538</b>	<b>24.95</b>



**I, J Copper Tongs**

Designed especially for use with pickling and acid solutions. Will not contaminate solutions nor corrode. Fishtail tips are thinner to pick up small or flat items. Measure 9" long.

Description	Item#	EACH Prices	
		1-2	3+
I. Copper Tongs	<b>195-0100</b>	<b>\$8.85</b>	<b>\$7.52</b>
J. Copper Fishtail Tongs	<b>195-0110</b>	<b>6.25</b>	<b>5.31</b>

## A G-TEC Torch Boosters

G-Tec Torch Boosters supply high-pressure natural gas for soldering, brazing and melting, completely eliminating the need for pressurized gas cylinders. Has easy-to-use power-on switch and compressor start switch. Just turn on at the start of the workday and off at the end. Provides 25 PSI natural gas at 15-60 cubic feet per hour for as long as you need it. Can provide lower pressures when used with a Harris natural gas regulator (sold separately).

A standard flashback arrestor can help prevent torch flashbacks, but it can't be used alone on a city gas line because the pressure is too low—an arrestor used on its own actually blocks gas flow to torches! G-TEC Torch Boosters elevate city gas line pressure so that gas flows through the arrestor at the pressure torches require for superior performance. Standard arrestors tested with G-TEC Torch Boosters have proven to be 100% effective in stopping flashback before it reaches the gas meter.

Supplies gas to a single torch or connects to a building distribution system to supply multiple torches. Select between the TB-15 – recommended for up to 3 jewelers torches; the TB-30 – recommended for up to 6 jewelers torches or one small casting torch; and the TB-60 – recommended for up to 12 jewelers torches – or 6 jewelers torches and one small casting torch. For NYC installations please contact Gesswein for FDNY regulations. Runs in virtual silence and has a very small footprint. Includes complete instructions. Can be easily installed in any facility. Requires about 45 minutes downtime per year for preventive maintenance. Readily approved by fire marshals and other inspectors. Certified by CSA International.

Specifications:	TB-15	TB-30	TB-60
Electrical	110V, 15A	110V, 15A	110V, 15A
Gas Supply	1/4-1 PSI	1/4-1 PSI	1/4-1 PSI
Gas Pressure	25 PSI	25 PSI	25 PSI
Gas Flow	15 cu.ft./hr.	30 cu.ft./hr.	60 cu.ft./hr.
W x D x H	12" x 16" x 12"	12" x 16" x 12"	20" x 18" x 16"
Net Wt.	48 lbs.	50 lbs.	75 lbs.

Description	Item#	Each
TB-15 Torch Booster, FOB Buffalo NY	830-0817	\$1,100.00
TB-30 Torch Booster, FOB Buffalo NY	830-0818	1,650.00
TB-60 Torch Booster, FOB Buffalo NY	830-0819	3,100.00
Harris Natural Gas Regulator	830-1014	157.50
Smith Flashback Arrestors, set of 2, for regulator	830-0812	66.20
Smith Flashback Arrestors, set of 2, for torch	830-0816	64.20
Maintenance Kit	830-0827	165.00



A



Fitted with regulator and flashback arrestor

## B Airsep Oxygen Generator AS-12 – A safe alternative to oxygen cylinders.

Provides all your oxygen for soldering, brazing, melting and welding. Can be used with most jeweler's torches. Instant oxygen is available with the flick of a switch. No longer necessary to store highly pressurized and volatile tanks on premises; no more waiting for outside delivery or transporting a fully pressurized tank in your car. The AirSep generates 90+% pure oxygen at less than half the cost of cylinder or liquid oxygen and is safe and efficient to operate.

AirSep separates oxygen and nitrogen. As compressed air is passed through a molecular sieve, nitrogen and moisture are absorbed, allowing the oxygen to pass through. The molecular sieve is completely regenerative and under normal operating conditions will last indefinitely.

The AS-12 requires minimum maintenance, limited to cleaning and semiannual replacement of air filter. It is quiet-running and has an electronic timer. Lifetime service labor warranty. One-year warranty on parts.

Complete with built-in air compressor. Simply plug it in and it's ready for use. Can be shipped UPS. Note: larger units available—consult our Technical Services Department for specifics.

### Specifications:

Electrical	120V, 4A, 1 Ph, 60Hz*
Dimensions	17 1/4"W x 10"D x 26 3/4"H
Oxygen Output	12 SCHF/hr. @ 0.90 PSIG
Oxygen Purity	90% ± 5%
Sound Levels	55 dBA @ 1 meter, open field conditions (with enclosure)
Ship. Wt.	65 lbs.

Description	Item#	Each
Airsep Oxygen Generator AS-12	830-0026	\$1,910.00

\*220V, 50Hz also available.



B










Internal view



## The Little Torch™

When you pick up The Little Torch, you know immediately that you are holding a superbly balanced torch that will enable you to extend your skills far beyond all previous limits. Whether you are in the first stages of learning your craft or have mastered it completely with more limited tools, The Little Torch will open a new world of possibilities for you. Features a rugged aluminum alloy body that weighs only 1.5 ounces and a thin, flexible, lightweight hose that provides added maneuverability.

Offers unmatched versatility—can be used with several fuels, including acetylene, hydrogen, propane, propylene, MAPP and natural gas. Produces a perfectly controlled, completely stable flame hot enough to melt gold, silver, platinum, glass and even ceramic. Can also be used with special heating tips to melt up to 3 oz. of gold or silver.

Tip Size	Gas Pressures (PSI)	
	Oxygen	Fuel Gas
1 	2	2
2 	2	2
3 	4	4
4 	4	4
5 	6	6
6 	6	6
7 	8	8

Flame drawings are not actual size. Each tip is capable of a variety of settings, with flame sizes larger and smaller than those shown.



### A, B The Little Torch™ Deluxe Sets

Each set includes The Little Torch handpiece, five brazing tips, 8' oxygen and 8' fuel gas twin hose with 1/16" connectors, two single-stage regulators (one for oxygen, one for fuel gas), one (empty) oxygen tank, one (empty) fuel gas tank (except 830-1017) and a carrier.

Description	Item#	Set
A. For Oxy/Acetylene, plastic carrier	830-1020	\$687.00
B. For Oxy/Propane, metal carrier with 5 lb. tank	830-1018	630.00
For Oxy/Propane, plastic carrier (required 1.9 lb. prefilled disposable tank)	830-1017	492.00
Replacement Green (oxygen) hose with connector	830-1043	27.20
Replacement Red (fuel gas) hose with connector	830-1044	27.20
Replacement Twin Line hose with connector	830-1042	51.50



### C The Little Torch™ Medium Sets

Each set includes The Little Torch handpiece, 8' oxygen and 8' fuel gas twin hose with 1/16" connectors, five brazing tips and two single-stage regulators (one for oxygen and one for fuel gas).

Description	Item#	Set
For Propane or Natural Gas with tips 3-7	830-1002	\$115.00
C. For Oxy/Acetylene (MC tanks)	830-1010	325.00
For Oxy/Acetylene (B tanks)	830-1011	325.00
For Oxy/Propane	830-1015	325.00



### D The Little Torch™ Set for Disposable Cylinders

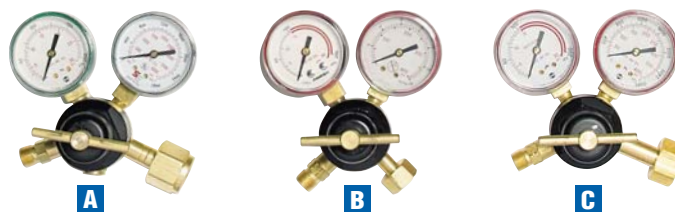
Perfect for locations where larger compressed air tanks are not permitted. Includes The Little Torch handpiece, #5 tip, 8' oxygen hose, 8' fuel gas hose, preset oxygen regulator, preset propane regulator, wire stand for disposable oxygen and MAPP/LP cylinders and instruction manual. Disposable gas cylinders not included but readily available at most home improvement centers.

Description	Item#	Each
D. The Little Torch Set for Disposable Cylinders	830-1245	\$199.00
Replacement Oxygen Regulator	830-1027	45.70
Replacement Propane Regulator	830-1029	45.70

**A - E Little Torch™ Regulators**

For single torch use. Compact regulators provide accurate control of oxygen and acetylene or propane for welding, soldering, brazing and heating operations. Contain protective check valves and maintain uniform pressure. Easy-turning T-bars.

Description	Item#	Each
A. For Oxygen	830-1021	\$115.65
B. For Acetylene MC Tank	830-1022	115.65
C. For Acetylene B Tank	830-1024	115.65
D. For Propane	830-1023	115.65
E. For Hydrogen	830-1016	123.95

**F - K Little Torch™ Brazing Tips**

Because of their extraordinarily small orifices, tips 1, 2 and 3 are fitted with synthetic sapphires to assure accurate performance and control.

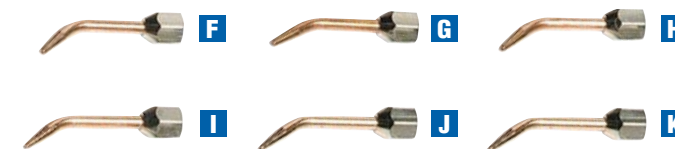
Tip	Oxygen Pressure (PSI)	Fuel Gas Pressure (PSI)	Item#	EACH Prices	
				1-2	3+
F. 2*	2	2	830-1102	\$21.50	\$19.35
G. 3	3	3	830-1103	21.50	19.35
H. 4	4	4	830-1104	21.50	19.35
I. 5	6	6	830-1105	21.50	19.35
J. 6	6	6	830-1106	21.50	19.35
K. 7	8	8	830-1107	21.50	19.35

\*For acetylene or hydrogen only.

**L - R Uniweld Tips**

Curved torch tips. Tips 1 and 2 are for use with acetylene or hydrogen only. Feature sapphire inserts for superior flame control. Tips 3-7 are for use with all fuel gases: acetylene, hydrogen, propane, MAPP, propylene and natural gas.

Description	Oxy/Fuel PSI	Item#	Each
L. #1 Tip	2/2	830-1445	\$17.50
M. #2 Tip	2/2	830-1446	19.99
N. #3 Tip	3/3	830-1447	19.99
O. #4 Tip	4/4	830-1448	19.99
P. #5 Tip	6/6	830-1449	19.99
Q. #6 Tip	6/6	830-1450	19.99
R. #7 Tip	8/8	830-1451	19.99

**S, T Little Torch™ Heating Tips**

For melting up to 3 oz. gold or silver and other work. These tips are specially designed with 4 orifices to produce 4 flames that come together to form one flame. Equal in size to tip 4. Maximum temperature is 3,600°F for propane, 6,000°F for all other fuels.

For	Item#	Each
S. Propane or Natural Gas	830-1116	\$46.30
T. All other fuels	830-1115	38.50

**U Holder for The Little Torch™**

Holds The Little Torch at the perfect angle, making it handy and safe to use. Keeps up to six tips conveniently organized. Made with a sturdy cast base and heavy-duty (4mm) steel rod, this torch holder is virtually indestructible. Made in USA.

Description	Item#	Each
Holder for The Little Torch	830-1307	\$11.75

**V Magnetic Torch Stand and Tip Organizer**

Solid metal stand with weighted base. Includes holes drilled and numbered for tips 2-7. Just a twist of the wrist removes the torch from the magnet. Magnetic clip mounts easily on The Little Torch body (torch and tips sold separately). Measures 4½" high.







Description	Item#	Each
Magnetic Stand	830-1250	\$37.25



## The Small Torch™ by Gentec

This lightweight, durable torch features user-friendly control knobs for quick, precise, one-handed flame adjustments and nickel-plated brass handle with stainless steel inner gas tubes for superior strength. Designed specifically for brazing and soldering at the bench as well as melting small amounts of metal. Provides stable, concentrated feather flames up to 6,000°F. Compatible with accessories listed below and other popular brands of accessories. Backed by a two-year manufacturer's limited warranty.

*Flame drawings are not actual size. Each tip is capable of a variety of settings, with flame sizes larger and smaller than those shown.*

Tip Size	Gas Pressures (PSI)	
	Oxygen	Fuel Gas
2 	2	2
3 	4	4
4 	4	4
5 	6	6
6 	6	6
7 	8	8



### A The Small Torch™ Kits

Each kit includes The Small Torch handle, torch tip(s) and 12' dual oxygen and fuel hose with "B" (3/16") fittings and adapter for "A" (3/8") fittings. Oxy/Acetylene Caddy Kit also includes regulators, a convenient carrying caddy and reusable oxygen and fuel tanks, Oxy/Propane Caddy Kit includes a convenient carrying caddy and oxygen tank (only for use with disposable propane tanks). Oxy/Propane Disposable Tank Kit includes regulators for disposable tanks only.

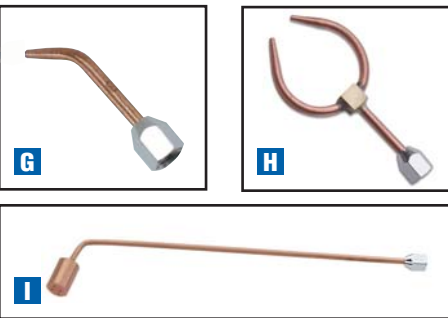
Description	Tips	Item#	Each
A. Oxy/Acetylene Caddy Kit	#2, 3, 4, 5, 6	<b>830-1604</b>	<b>\$399.00</b>
Oxy/Propane Disposable Tank Caddy Kit	#3, 4, 5, 6, 7	<b>830-1603</b>	<b>299.00</b>
Oxy/Propane Disposable Tank Kit (no tanks)	#4	<b>830-1602</b>	<b>129.00</b>
Oxy/Acetylene Basic Kit (no tanks)	#2, 3, 4, 5, 6	<b>830-1601</b>	<b>94.85</b>
Oxy/Propane Torch Kit (no regulators/tanks)	#3, 4, 5, 6, 7	<b>830-1600</b>	<b>94.85</b>



### B - F The Small Torch™ Regulators

Single-stage regulators manufactured using state-of-the-art equipment. Feature chrome-plated housing caps and bodies machined from class "A" brass bar stock. Single-stage, rear-entry design ensures safe, neat fit in caddy systems. Internal safety pressure relief valve and stem-type seat assembly promote reliable seating.

Description	Item#	Each
B. Oxygen Regulator	<b>830-1607</b>	<b>\$63.35</b>
C. Propane Regulator	<b>830-1608</b>	<b>59.10</b>
D. Acetylene Regulator	<b>830-1609</b>	<b>59.10</b>
E. Oxygen Regulator for Disposable Tanks	<b>830-1610</b>	<b>31.10</b>
F. Fuel Gas Regulator for Disposable Tanks	<b>830-1611</b>	<b>31.10</b>



### G - I The Small Torch™ Tips

Rosebud melting tips are 6" long and multi-orifice tips for melting up to 3 oz. of gold, silver or bronze.

Description	Item#	Each
G. #2 Tip (oxy/acetylene use only)	<b>830-1614</b>	<b>\$14.99</b>
#3 Tip	<b>830-1615</b>	<b>14.99</b>
#4 Tip	<b>830-1616</b>	<b>14.99</b>
#5 Tip	<b>830-1617</b>	<b>14.99</b>
#6 Tip	<b>830-1618</b>	<b>14.99</b>
#7 Tip	<b>830-1619</b>	<b>14.99</b>
H. Twin #3 Tip	<b>830-1620</b>	<b>22.90</b>
I. Propane Rosebud Melting Tip	<b>830-1612</b>	<b>20.75</b>
Acetylene Rosebud Melting Tip	<b>830-1613</b>	<b>20.75</b>



### J The Small Torch™ Dual Hoses

Each includes flexible green (oxygen) hose and red (fuel) hose with 3/16" fittings.

Description	Item#	Each
6' Dual Hose	<b>830-1605</b>	<b>\$29.90</b>
12' Dual Hose	<b>830-1606</b>	<b>39.90</b>



**A Prest-O-Lite® 4-in-1 Torch Set**

Operates on acetylene and air—no oxygen tank required. Includes the Prest-O-Lite torch handpiece with comfortable sure-grip handle, four torch tips for fine to heavy soldering and annealing jobs, an acetylene regulator for your B tank and 12½' of ¾" hose. A special locking collar on the handpiece allows you to change tips in seconds and lock them securely in place without tools. Adjustable regulator provides steady gas delivery and stable flames.

Description	Item#	Each
Prest-O-Lite Torch Set	<b>830-0736</b>	<b>\$210.00</b>
Replacement Tips		
Size	Flame Size	Item#
1A	Fine	830-0743
3	Light	830-0744
4	Medium	830-0747
5	Heavy	830-0748

**B SilverSmith™ Air-Acetylene Torch Kit**

Delivers the ultimate in quality and flame control. Produces a soft, consistent flame. Ideal for silversmithing and for melting small amounts of metal for casting. Includes durable Nickel-plated brass handle with Teflon-packed knobs, precision #00 tip with jeweled orifice, 12' grade-R hose, acetylene regulator with CGA 520 fitting for acetylene B tank and torch lighter. Available with or without tank. Comes complete with #1, #0 and #00 tips. Optional tips sold separately. UL listed. Made in USA.

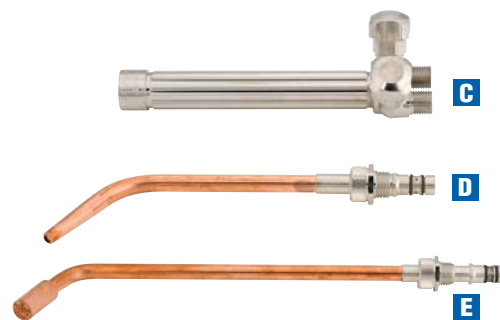
Description	Item#	Each
<b>B. Torch Set</b>	<b>830-0732</b>	<b>\$218.75</b>
SilverSmith Torch Kit with tank	<b>830-0752</b>	<b>360.00</b>
SilverSmith Torch Kit without tank	<b>830-0742</b>	<b>271.90</b>
SilverSmith Torch Handle only	<b>830-0998</b>	<b>59.40</b>
Description	Orifice Size	Item#
#4 Extra-Large Melting Tip	¾"	<b>830-1465</b>
#3 Large Melting Tip	¼"	<b>830-1464</b>
#2 Medium Tip	⅜"	<b>830-1463</b>
#1 Small Tip	0.147"	<b>830-1462*</b>
#0 Fine Tip	0.095"	<b>830-1461*</b>
#00 Super-Fine Tip	0.066"	<b>830-1460*</b>

\*Included in kits.

**C - E Smith Casting Torch**

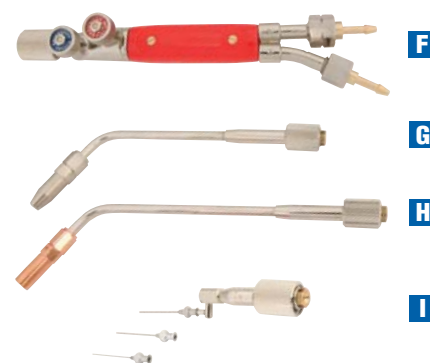
Whether you need to melt 1 oz. or 12 oz., this versatile torch does the job. Consists of handle and your choice of two different heavy-duty copper 63.5°-angle tips (sold separately). Handle features rugged two-tube silver-brazed construction, forged brass butt and precision-machined brass head. Threaded and soldered inner tube for prevention of cross-leaking. Ball-type needle valves resist uneven wear and allow easy flame adjustment. Drag nut adjustment on knobs for preferred valve resistance. Measures 1⅝" dia. x 7"L. Weighs 14 oz. Backed by a lifetime warranty. UL listed. Made in USA.

Description	Item#	Each		
<b>C. Torch Handle only (choose a tip below)</b>	<b>830-0999</b>	<b>\$182.80</b>		
Description	Melts up to	Oxy/Fuel PSI	Item#	Each
<b>D. Oxy/Propane Tip</b>	3 oz. platinum	11/11	<b>830-1456</b>	<b>\$68.50</b>
<b>E. Oxy/Acetylene Tip</b>	12 oz. gold/silver	10/10	<b>830-1455</b>	<b>110.00</b>

**F - I Ti-Research Euro Torch**

Euro Torch can be used with oxygen and propane for gold and platinum melting. Features stainless steel handle with nonslip plastic handgrip and conveniently placed knobs that can be easily operated with one hand. Tips sold separately. Au Tip provides 25,500 BTU for melting gold, silver and similar metals. Pt/Au Tip provides 36,000 BTU for melting platinum and other high-temperature metals, as well as silver, gold and similar metals. Optional Micro Tip Set includes adapter and three tiny torch tips that generate pinpoint flames for precision work.

Description	Item#	Each
<b>F. Euro Torch Handle only (choose a tip below)</b>	<b>830-1550</b>	<b>\$70.80</b>
<b>G. Au Tip</b>	<b>830-1552</b>	<b>89.60</b>
<b>H. Pt/Au Tip</b>	<b>830-1551</b>	<b>86.60</b>
<b>I. Micro Tip Set</b>	<b>830-1553</b>	<b>110.95</b>







**A Harris® Melting Torch**

Ideal for melting large amounts of gold, silver and other jewelry metals and is powerful enough to melt small amounts of platinum very quickly! Lightweight and well-balanced, only 15" long (including tip). Includes a check valve feature which prevents reverse flow and dangerous mixing of gases in the torch handle. This is a good-looking brass torch with easy-to-turn valves that remain securely in the position you set. UL listed. Hydrogen torch comes with Rosebud tip. All others include a #9 large copper melting tip. Oxygen Propane kits come with or without tanks and include torch, Rosebud and #9N tips, regulators, hose, carrier, torch lighter and wrench.



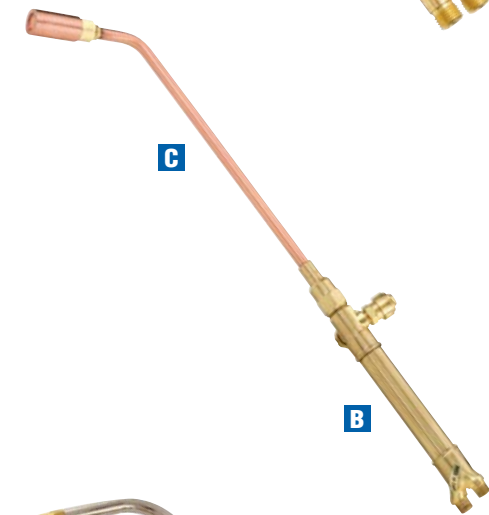
Description	Item#	Set
A. Oxy/Natural Gas	<b>830-1405</b>	<b>\$235.50</b>
Oxy/Hydrogen	<b>830-1391</b>	<b>250.00</b>
Oxy/Propane	<b>830-1390</b>	<b>235.50</b>
Oxy/Propane Kit with Tanks	<b>830-0706</b>	<b>669.10</b>
Oxy/Propane Kit without Tanks	<b>830-0707</b>	<b>468.75</b>

Tips Acet. and Hydrogen	Oxygen Pressure (PSI)	Fuel Gas Pressure (PSI)	Item#	Each
Tip #8	8	8	<b>830-1401</b>	<b>\$22.40</b>
Tip #9	9	9	<b>830-1402</b>	<b>24.90</b>
Tip #10	10	10	<b>830-1403</b>	<b>24.90</b>

Tips Propane and Nat. Gas	Oxygen Pressure (PSI)	Fuel Gas Pressure (PSI)	Item#	Each
Tip #8N	30	4 oz. to 2 PSI	<b>830-1406</b>	<b>\$22.40</b>
Tip #9N	35	4 oz. to 2 PSI	<b>830-1407</b>	<b>22.40</b>
Tip #10N	40	4 oz. to 2 PSI	<b>830-1408</b>	<b>27.40</b>
Set of 3 tips (8N, 9N, 10N)	—	—	<b>830-1409</b>	<b>68.50</b>
Rosebud Tip N	50	4 oz. to 2 PSI	<b>830-1420</b>	<b>29.99</b>

**B, C Gentec Casting Torch**

Casting torch for use with oxygen/propane or oxygen/natural gas. Features a high-quality forged brass handle with “tube-in-a-tube” design for high strength. Combine with Heating Tip to create a versatile casting, soldering and melting torch. Handle measures 6" long.



Description	Item#	Each
B. Casting Torch Handle only	<b>830-1621</b>	<b>\$74.35</b>
C. #6 Heating Tip with Tube	<b>830-1622</b>	<b>33.38</b>

**D, E Original HOKE®-JEWEL Torch**

For soldering, brazing, welding and melting. All parts are machined from solid brass stock and seamless brass tubing and completely nickel-plated. Tip tube (neck) is fixed and non-adjustable. Valves are easily and smoothly operated by fingertip. Uses standard ¼" hose (not included). Includes tips ranging in size from pinpoint to large brush. Measures 9" long. Adapter set includes six micro-tips which produce a nonoxidizing flame so less time is needed in the pickler. Not recommended for use with acetylene



Description	No. of Tips	Item#	Each
D. Natural Gas	3	<b>830-0221</b>	<b>\$31.95</b>
Propane/Butane	4	<b>830-0222</b>	<b>31.95</b>
Acetylene	4	<b>830-0210</b>	<b>31.95</b>
Artificial Gas*	4	<b>830-0220</b>	<b>31.95</b>
E. Adapter Set for HOKE-JEWEL Torches	6	<b>830-1240</b>	<b>23.50</b>

Replacement Tips for Natural Gas and Oxygen Size	Max. Oxygen PSI	Flame Size	Item#	Each
35-1	2 to 3	Fine	830-1200	\$2.45
35-2	3 to 4	Medium	830-1205	2.45
35-3	4 to 5	Broad	830-1210	2.45

Replacement Tips for Propane or Butane and Oxygen Size	Max. Oxygen PSI	Flame Size	Item#	Each
1	2 to 4	Pinpoint	830-1220	\$2.45
2	2 to 4	Fine	830-1225	2.45
3	6 to 10	Medium	830-1230	2.45
5	15 to 20	Broad	830-1235	2.45



\*Includes pilot that provides continuous flow of gas for quick ignition.

**A Harris® Check Valves for Regulators**

Oxygen and fuel gas kept separately are not explosive. When mixed in a hose or regulator and then ignited, they can explode. Check valves prevent backup of gases into regulator so they cannot mix. Harris Check Valves may be installed on any regulator outlets with standard  $\frac{1}{16}$ "-18 tpi. connections.

Model	Item#	Each
A. Oxygen	<b>830-1417</b>	<b>\$10.50</b>
Fuel Gas	<b>830-1416</b>	<b>9.75</b>

**B - E Harris® Single-Stage Regulators with Check Valve**

For general use when using one torch. Features all-brass construction to hold up even in corrosive atmospheres. Extra-large  $2\frac{3}{4}$ " pressure gauges so you can easily read PSI even when you are at a distance from the cylinder. Large  $2\frac{3}{4}$ " diaphragm ensures constant delivery pressure. A check valve is installed on all regulators. Oxygen Regulator is equipped with a Harris Surge Guard for protection against sudden overflow of oxygen into the regulator. Standard  $\frac{1}{16}$ " connections. UL listed.

Model	CGA	Item#	Each
B. Oxygen	540	<b>830-1412</b>	<b>\$136.90</b>
C. Acetylene for B tanks	200	<b>830-1432</b>	<b>83.25</b>
D. Acetylene for large tanks	510	<b>830-1389</b>	<b>126.75</b>
E. Propane	510	<b>830-1411</b>	<b>136.90</b>

**F - H Harris® Two-Stage Regulators with Check Valve**

Especially useful when operating more than one torch from the same cylinder. The first stage reduces the inlet gas pressure to relatively constant levels. The second stage further reduces the gas pressure and delivers the gas to the work precisely at the set point pressure. Helps to provide flame stability as the pressure levels change. Features chrome body with large, brass, easy-to-read  $2\frac{1}{4}$ " pressure gauges. All regulators include a check valve. Oxygen Regulator is equipped with safety Surge Guard to prevent sudden overflow of oxygen into the regulator. Standard  $\frac{1}{16}$ " connections. UL listed.

Model	CGA	Item#	Each
F. Oxygen	540	<b>830-1415</b>	<b>\$210.00</b>
G. Acetylene	300	<b>830-1413</b>	<b>210.00</b>
H. Propane	510	<b>830-1414</b>	<b>210.00</b>

**I Smith Flashback Arrestors**

Flashback arrestors with built-in check valves for preventing flashback fires and reverse gas flows. Feature sintered stainless steel filter, high-quality brass construction and rugged corrosion-resistant case. Easy to install on any torch with standard B ( $\frac{1}{16}$ ") fittings or regulator. Sold in sets of two: one for oxygen and one for fuel gas. UL listed.

Description	Item#	Each
Flashback Arrestors, set of 2, for torch	<b>830-0816</b>	<b>\$64.20</b>
Flashback Arrestors, set of 2, for regulator	<b>830-0812</b>	<b>66.20</b>

**J Flashback Arrestors**

Flashback arrestors with built-in check valves for preventing accidents caused by flashback fires and reverse gas flows. Feature sintered stainless steel filter, high-quality brass construction and rugged corrosion-resistant case. Easy to install on any torch with standard B ( $\frac{1}{16}$ ") fittings. Sold in sets of two: one for oxygen and one for fuel gas. UL listed.

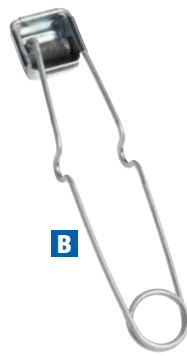
Description	Item#	Each
Flashback Arrestors, set of 2, for torch	<b>830-0811</b>	<b>\$59.65</b>

**K Y-Connectors**

For multiple torch hookups. Complete with shutoff valves. All connections  $\frac{1}{16}$ ".

Model	Item#	Each
K. Oxygen	<b>830-0780</b>	<b>\$38.75</b>
Fuel Gas	<b>830-0785</b>	<b>38.75</b>





**A, B Electric Torch Mate**

Electric Torch Mate simply and automatically lights any torch—using only one hand. Rest the torch on the lighter's ignition switch, and small spark from the electrode immediately lights the torch. This handy benchtop accessory comes complete with two AA batteries. Torch lighter produces a spark by friction, supplied with one flint.

Description	Item#	EACH Prices	
		1-2	3+
A. Electric Torch Mate	<b>830-0407</b>	<b>\$32.50</b>	<b>\$29.25</b>
B. Torch Lighter	<b>830-0410</b>	<b>3.99</b>	—
Flints, pkg. of 5	<b>830-0411</b>	<b>3.45</b>	—



**C Magic Torch**

Built-in piezoelectric ignition is activated with one push. Gas flow is easily adjusted to provide a variety of flame sizes from a maximum length of about 3½" down to a pinpoint. The 26-gram fuel chamber provides heat up to 2,500°F for 90 minutes. Easy-to-grip size. Stores conveniently on a wide base. Unit can be refilled.

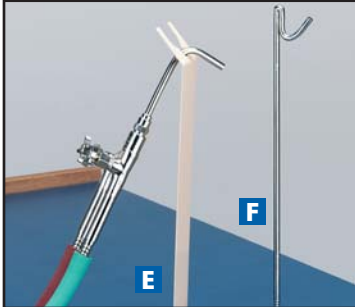
Description	Item#	Each
Magic Torch	<b>830-0010</b>	<b>\$55.50</b>
Replacement Butane Refill Cartridge, 9 fl. oz.	830-0012	4.75



**D Harris® Torch Tip Cleaners**

Set of 13 tip cleaners with individual tip cleaner numbers and drill sizes embossed in case. Covers drill sizes 49 to 77.

Description	Item#	Each
Harris Torch Tip Cleaners	<b>830-1418</b>	<b>\$9.99</b>



**E, F Torch Holders**

Convenient and safe way for hanging your torch when it is not in use. Mount anywhere on workbench and accommodate most torches except The Little Torch.

Description	Item#	Each
E. Bracket-Type Holder	<b>830-1305</b>	<b>\$5.60</b>
Short Bracket-Type Holder	<b>830-1301</b>	<b>6.70</b>
F. Hook-Type Holder	<b>830-1300</b>	<b>2.99</b>



**G Soldering Glasses**

Made of black lightweight plastic. Feature adjustable earpieces for comfortable fit and easily replaceable polycarbonate lenses. Lens #7 is approved by the Platinum Guild for platinum soldering. Lens #10 is used for casting. Lens #5 can be used for gold and silver. CE approved. Meet ANSI Z87.1 requirements.

Description	Item#	Each
#5 Lens	<b>816-1784</b>	<b>\$14.50</b>
#7 Lens	<b>816-1785</b>	<b>15.20</b>
#10 Lens	<b>816-1786</b>	<b>15.20</b>



**H Eyecup-Style Welding Goggles**

The soft flanged edges of these goggles make them comfortable to wear even during prolonged periods of soldering and welding. Two types of 50mm diameter, optically correct, impact-resistant lenses are included: #5 for soldering or melting gold or silver; #6 for platinum soldering. Meets ANSI Z87.1 standards.

Description	Item#	Each
Eyecup Welding Goggles	<b>816-1782</b>	<b>\$20.25</b>

**A Tuline Hose**

Prevents tangling of torch hoses. Consists of two color-coded reinforced hoses (green for oxygen and red for fuel gas) that are uniquely coupled to prevent tangling and can be separated by simply pulling them apart. 1/4" I.D. Measures 25' long. Complete with fittings.

Description	Fittings	Fuel Gas	Item#	Each
A. Premium Grade T	9/16"	All fuel gases	830-0805	\$119.45
Economy Grade R	9/16"	Acetylene only	830-0806	30.45

**A****B Slip-On Hose Connectors**

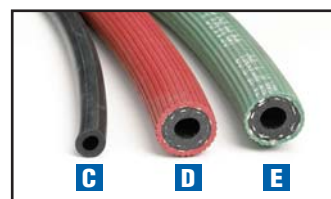
All consist of a nut with stem for use with standard I.D. hoses.

Description	Gas	Item#	Each
9/16" LH nut & stem for 3/16" I.D. hose	Fuel	830-0352	\$2.79
9/16" RH nut & stem for 1/4" I.D. hose	Oxygen	830-0353	2.05
9/16" LH nut & stem for 1/4" I.D. hose	Fuel	830-0354	2.40

**B****C Low-Pressure Rubber Hose**

Slip-on hose for Bunsen burners, compressors, vacuum pumps and more. *For low pressures only.* 3/16" I.D. Sold by the foot. Please specify minimum continuous length.

Description	Item#	Per Foot
Low-Pressure Rubber Hose	816-2300	\$1.99

**C****D****E****D, E Reinforced Rubber Hose**

Available in Grade T red for propane, acetylene or natural gas. Also available in Grade R green for oxygen. 1/4" I.D. Sold by the foot. Please specify minimum continuous length.

Description	Item#	Per Foot
D. Red Hose	816-2351	\$1.95
E. Green Hose	816-2350	1.25

**F - I Tanks and Cylinders (empty)**

Description	Capacity	Overall Ht.	Item#	Each
F. Oxygen Tank	60 cu. ft.	23 1/2"	830-0755	\$195.85
G. Oxygen Cylinder	20 cu. ft.	18"	830-0756	114.00
H. Acetylene B Tank	40 cu. ft.	23 1/4"	830-0760	132.50
Acetylene MC Tank	10 cu. ft.	16"	830-0761	68.00
I. Propane Cylinder #5	5 lbs.	12 1/2"	830-0766	87.90

**F****G****H****I****J Carrier for Oxy/Acetylene Tanks**

Makes it easy to move entire torch outfit from one place to another. Wheels and single handle provide excellent maneuverability. Built-in box holds wrench, extra tips, and other small accessories so that they are within easy reach. Hose wrap keeps lines neat. Holds our #830-0760 Acetylene B Tank and #830-0755 Oxygen Tank. Measures 19"W x 37 1/2"H. Ship. wt: 20 lbs.

Description	Item#	Each
Carrier for Oxy/Acetylene Tanks	830-0750	\$105.50

**J****K****K Carrier for Oxy/Propane Tanks**

Holds our #830-0766 Propane Tank and our #830-0756 Oxygen Cylinder. Measures approximately 26"H with handle. Includes bracket for storing torch hose.

Description	Item#	Each
Carrier for Oxy/Propane Tanks	830-0751	\$91.10

**L Torch Wrench**

A multi-use wrench for nuts on torches, regulators and tanks.

Description	Item#	Each
Torch Wrench	830-0790	\$15.99

**L**





**A - C PUK 3 High-Precision Welding Systems**

PUK 3 spot welders carry the technological advancements of previous-generation PUK spot welders to a whole new level. PUK 3 Professional boasts modeled impulses with intelligent energy distribution for welding “softly” and prolonging your electrode life. When fusing metals in angles and deep areas, a special setting shortens impulse times to increase weld quality and strength significantly. Micro mode helps with delicate tasks, enabling microwelding on sheet metal as thin as 0.10mm. Increased controller performance and gas preflow period that automatically adjusts to your working speed allow you to operate twice as fast as before. PUK 3 Professional Plus offers all the features of PUK 3 Professional as well as more controller power, finer setting ranges and five program slots in which you can save frequently used setting combinations.

Each creates 0.3–3.0mm diameter welding points with very low heat, allowing you to manipulate workpieces by hand for more control and handle otherwise difficult welding projects quickly and easily without removing stones or shielding adjacent areas. Discharges a quick burst of argon gas around the electrode tip and work surface while welding to prevent oxidation, yielding welds with maximum homogeneity and a smooth-as-silk feel. Eliminates the need for pickling; a rubber wheel is all you need for cleanup. Ideal for permanent welding and tack welding prior to soldering. Welding is simple: touch the electrode tip to the work surface, take a second or two to position it precisely where you want it, and the weld is generated. If repositioning is needed, simply lift the tip slightly off the work surface to break contact.

PUK 3 spot welders both include stainless steel controller and Mezzo Stereomicroscope, welding handpiece, 10 reversible electrode tips, cross-locking electrode tweezers, flat electrode pliers, electrode clamp, diamond disc for cleaning tips, 10' gas hose and instructions. Manufactured according to stringent VDE guidelines. CE approved. Made in Germany.

Specifications:	Professional	Professional Plus
Power Range	10–240A	9–320A
Power Settings, Std./Micro	10/10	12/10
Impulse Range, Std./Micro	4–24ms/4–8ms	4–30ms/4–12ms
Impulse Settings	5	9
Welding Speed	0.8 sec.	0.8 sec.
Electrical	110V, 50/60Hz	110V, 50/60Hz
Dimensions		
Controller	10"W x 11"D x 6"H	10"W x 11"D x 6"H
Handpiece	5" long	5" long
Inert Gas	Requires argon gas tank	Requires argon gas tank

Description	Item#	Each
PUK 3 Professional with Mezzo	<b>830-0995</b>	<b>\$4,515.00</b>
<b>A.</b> PUK 3 Professional Plus with Mezzo	<b>830-0990</b>	<b>4,995.00</b>
<b>B.</b> Optional Argon Gas Regulator	<b>830-0974</b>	<b>159.00</b>
<b>C.</b> Optional Third-Hand Assistant	<b>830-0986</b>	<b>185.00</b>

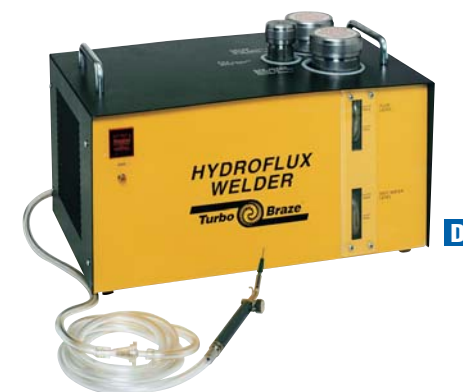
**D Hydroflux Welder System****The cleaner, safer way to solder your jewelry.**

Hydroflux is a complete torch system that manufactures its own fuel from distilled water. Uses hypodermic-type tips to create flames ranging from a pinpoint for fine soldering up to a broad flame for sizing large men's rings.

Hydroflux's hydrogen/oxygen mix produces a clean noncontaminating flame ideal for platinum soldering and welding. Produces flame temperatures up to 4,850°F (2,675°C). Ideal for malls, homes and anywhere compressed gas and oxygen tanks are a concern.

Hydroflux comes complete with one torch with 4' flexible hose, eight-piece tip set, chemicals and in-line dryer. Sight gauges indicate when additional flux and water are needed. Hydroflux is easy to use and easy to set up with complete instructions included. Cabinet measures 16"W x 9"D x 10"H. Ship. wt: 45 lbs. Made in USA.

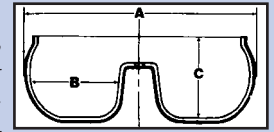
Description	Item#	Each
Complete System, 110V	<b>830-0830</b>	<b>\$1,250.00</b>
<b>Replacement Parts</b>	<b>Item#</b>	<b>Each</b>
Electrolyte Solution, 1 qt.	830-0833	\$30.50
Flux Solution, 1 qt.	830-0834	19.50
Torch Handpiece with 4' hose	830-0835	108.50
8-Piece Tip Set	830-0836	4.65
Cotton Fiber Filter	830-0837	5.55



## Vibratory Tumblers

Vibratory tumbling can dramatically reduce or even eliminate costly hand-finishing time and, at the same time, maintain the high-quality finish that you require on your parts. Parts are evenly distributed throughout a cascading media, producing an even, identical finish on each piece. There is never any distortion of your parts.

All of our tumblers are heavy-duty for continuous use. Each comes equipped with a drain and hose for flow-through system operation except model #5. Each unit is individually inspected prior to shipping and is backed by a one-year guarantee. Whether your polishing or deburring needs are for an occasional small quantity or for thousands of parts daily, Gesswein has a wide choice of top-quality vibratory tumblers for your exact application.



### Specifications:

Model No.	Working Capacity* (cu. ft./gals.)	Max. No. Ladies' Rings**	Vibrations per Min. (60Hz/50Hz)	Bowl Dimensions		
				A	B	C
75	0.75/6	375	1,725/1,450	21"	7"	9½"
40	0.35/2.3	200	1,725/1,450	17"	4¼"	7"
25	0.22/1.3	125	1,500/1,250	14"	3½"	5¾"
18	0.15/0.9	90	2,000/1,700	12"	6"	5¼"
10	0.10/0.65	50	3,000/2,500	10"	3½"	5"
5	0.05/0.4	25	3,000/2,500	8"	3"	3¾"

### Media Capacities for Vibratory Tumblers

Vibratory Tumblers must be filled with the correct amount of media in order to achieve the proper tumbling action. Underfilling will result in diminished performance of media. Overfilling, especially with Steel Shot, can strain the tumbler motor. Use the following chart as a guide. All media capacities are listed in pounds.

Model	Ceramic Medias		Plastic Medias			Dri-Shine		Steel Shot
	Heavy	Light	Brown	Green	White	I	III	
75	56	56	40	32	40	30	20	100
40	30	30	22	18	22	16	13	100
25SS	17	17	12	10	12	10	6	50
18	13	9	8	8	8	4	3	25
10	7	7	5	4	5	4	2.5	0
5	3.5	3.5	2.5	2.5	2.5	2	1.25	0

\*Media plus parts. A proper ratio of media to parts (approx. 10 to 1) must be maintained in order to cushion the parts and protect them from striking each other.

\*\*Approximately 1" diameter.



**B** Tumbler #75 shown with Flow-Through (see facing page)

Tumbler #25 shown with Flow-Through (see facing page)

### A Vibratory Tumbler #75

A real workhorse. Adjustable counterweights allow control of amplitude (strength of vibration). Comes with 21" diameter cross-linked polyethylene bowl, capacity .75 cu. ft. (6 gals.) Will tumble 375 average size ladies' rings. To run Steel Shot, use the optional Shot Bowl, #852-0918, which holds 100 lbs. of shot plus parts. Tilt version (pictured) features a hinged bowl with handle to allow forward tilting and easy removal of parts and media with no heavy lifting. Measures 28" overall height. Ship. Wt. 48 lbs. (Tilt version 57 lbs.)

Description	Item#	Each
115V, 50/60Hz	<b>852-0730</b>	<b>\$1,019.00</b>
230V, 1 Ph, 50Hz	<b>852-0703</b>	<b>1,120.00</b>
<b>A.</b> 115V with Tilt	<b>852-0732</b>	<b>1,255.00</b>
230V with Tilt	<b>852-0704</b>	<b>1,355.00</b>
Optional Steel Shot Bowl & Cover*, 0.35 cu. ft.	<b>852-0918</b>	<b>283.00</b>
Replacement Bowl & Cover, 0.75 cu. ft.	852-0925	311.25

\*Not for use with tilt version

### B Deluxe #75 Tilt Tumbler Package

#75 Deluxe Tilt Tumbler with Flow-Through System. Ship. Wt. 129 lbs. Can be shipped by UPS in 2 packages.

Description	Item#	Each
<b>B.</b> 110V, 50/60Hz	<b>852-0731</b>	<b>\$1,650.00</b>
220V, 1 Ph, 50Hz	<b>852-0705</b>	<b>1,890.00</b>

**A Vibratory Tumbler #40**

Adjustable counterweights allow you to control the amplitude (strength of vibration) from a gentle cascade for delicate parts up to a brisk, aggressive tumbling action for rough castings. Includes a 17" diameter, cross-linked polyethylene bowl with a .35 cu. ft. (2.3 gals.) capacity. Will tumble 200 average size ladies' rings. To run Steel Shot, use the optional Shot Bowl, which holds 100 lbs. of shot plus parts. Tilt version features a hinged bowl with handle to allow forward tilting and easy removal of parts and media. Measures 24" overall height. Ship. Wt. 51 lbs. (Tilt version 56 lbs.)

Description	Item#	Each
A. 115V, 50/60Hz	<b>852-0726</b>	<b>\$855.00</b>
230V, 1 Ph, 50Hz	<b>852-0727</b>	<b>955.00</b>
115V with Tilt	<b>852-0728</b>	<b>1,089.00</b>
230V with Tilt	<b>852-0729</b>	<b>1,390.00</b>
Optional Steel Shot Bowl & Cover, 0.35 cu. ft.	<b>852-0918</b>	<b>283.00</b>
Replacement Bowl & Cover, 0.35 cu. ft.	852-0922	229.00



**A**

**B Vibratory Tumbler #25SS**

For use with all medias including steel shot. Designed with a heavy-duty drive and suspension system. Action is infinitely adjustable through a full range of speed: from a gentle cascade for delicate parts up to a brisk, aggressive tumbling action for rough castings. Will tumble 125 average size ladies' rings. Bowl diameter is 14" with a capacity of .22 cu. ft. (5.25 qts.). Tumbler #25SS includes a discharge port for easy unloading. Measures 16" overall height. Ship. Wt. 22 lbs.

Description	Item#	Each
B. #25SS, 115V, 50/60Hz	<b>852-0723</b>	<b>\$496.00</b>
#25SS, 230V, 1 Ph, 50Hz	<b>852-0722</b>	<b>675.00</b>
Replacement Bowl & Cover #25SS, 0.22 cu. ft.	852-0919	217.00



**B**

**C Flow-Through Systems**

A Flow-Through System automates your Vibratory Tumbler by automatically dispensing a solution of water and burnishing compound into the tumbler bowl. All plastic, ceramic and steel medias require a slow, steady drip of water and burnishing compound in order to keep parts and media clean, cool and lubricated and to assure a bright, clean finish on the parts. Upper container of Flow-Through gravity-feeds solution into the tumbler bowl by means of an adjustable needle valve. Spent water drains out of tumbler into lower container. An integral 0-5 hour timer/outlet box allows Tumbler to be plugged into the Flow-Through base. Timer can also be bypassed for continuous operation. Complete with two containers for solution and a heavy-duty steel base with brackets to lock Tumbler in place. Base raises Tumbler to convenient working height. Ship. wt: 65 lbs.

Description	Item#	Each
C. For Tumblers #10/#18/#25, 115V, 50/60Hz	<b>852-0932</b>	<b>\$375.00</b>
For Tumblers #10/#18/#25, 230V, 50Hz	<b>852-0933</b>	<b>465.00</b>
For Tumblers #40/#75, 115V, 50/60Hz	<b>852-0937</b>	<b>496.00</b>
For Tumblers #40/#75 w/o timer, 230V, 50Hz	<b>852-0934</b>	<b>625.00</b>
Replacement Buckets for Flow-Through #10/#25*	852-0936	37.50

\*Includes both upper and lower buckets.



**C**





A

**A Vibratory Tumbler #18**

All the features of the larger tumblers in a mid-sized unit. Ideal for running small production lots. Strong enough to tumble 25 lbs. of steel shot. Will accommodate up to 90 average size ladies' rings. Flow-Through System (see previous page) is recommended in order to keep parts clean and bright. Bowl diameter is 12" with a capacity of .15 cu. ft. (3.5 qts.). Measures 16" overall height. Ship. Wt. 13 lbs.

Description	Item#	Each
A. 115V, 50/60Hz	<b>852-0751</b>	<b>\$395.00</b>
230V, 1 Ph, 50Hz	<b>852-0752</b>	<b>420.00</b>
Replacement Bowl & Cover	852-0917	175.00



B

**B Vibratory Tumbler #10**

Our smallest heavy-duty tumbler will tumble 50 average size ladies' rings. Can be used with Flow-Through System. Bowl diameter is 10" with a .10 cu. ft. (2.6 qts.) capacity. Measures 15½" overall height. Ship. Wt. 14 lbs.

Description	Item#	Each
B. 115V, 50/60Hz	<b>852-0720</b>	<b>\$219.95</b>
230V, 1 Ph, 50Hz	<b>852-0701</b>	<b>244.95</b>
Replacement Bowl & Cover	852-0915	76.50



C

**C Dri-Polisher Vibratory Tumbler**

The Dri-Polisher Vibratory Tumbler imparts a bright, high shine on smooth jewelry surfaces. Polishes bracelets, rings, earrings and medium to heavy chains. Comes complete with Dri-Shine III, a crushed cob media treated with red rouge, suitable for gold, gold alloys, silver and silver alloys. Easy to operate: just fill with media, insert jewelry and turn on. Use with dry medias only. Holds 60 small ladies' rings. Measures 10" dia. x 11½"H.

Description	Item#	Each
C. 115V, 50/60Hz	<b>852-0746</b>	<b>\$139.95</b>
230V, 1 Ph, 50Hz	<b>852-0749</b>	<b>149.95</b>
Replacement Bowl & Cover	852-0747	39.00



D

**D Vibratory Tumbler #5**

Ideal for small sample test batches as well as for finishing of small parts. Complete with bowl and cover. Will tumble approx. 25 average size ladies' rings. Bowl diameter is 8" with a .05 cu. ft. (3 pts.) capacity. Measures 9" overall height. Cannot be used with Flow-Through System. TV-5 Stone Finishing Kit includes all you need to start finishing agate and similar hard stones (not recommended for soft stones): extra bowl and four-step finishing media (100/120 grit silicon carbide for rough grinding, 700 grit silicon carbide for fine grinding, Iolox 50 for prepolishing and Raybrite TL for final polishing). Finishes 8–10 lbs.

Description	Item#	Each
D. 115V, 50/60Hz	<b>852-0710</b>	<b>\$90.00</b>
230V, 50Hz	<b>852-0700</b>	<b>115.00</b>
TV-5 Stone Finishing Kit	<b>852-0715</b>	<b>119.95</b>
Replacement Bowl & Cover	852-0905	21.75



E

**E Separating Screens**

Molded plastic 16" diameter pans with square holes for separating media from parts. Fit on top of bucket.

Description	Item#	Each
Media Screen, ¼" sq. mesh	<b>852-0893</b>	<b>\$18.40</b>
Media Screen, ⅜" sq. mesh	<b>852-0894</b>	<b>18.40</b>
Media Screen, ½" sq. mesh	<b>852-0895</b>	<b>18.40</b>
Media Screen, ¾" sq. mesh	<b>852-0897</b>	<b>18.40</b>
Media Screen, 1" sq. mesh	<b>852-0898</b>	<b>18.40</b>
Bucket only	<b>852-0899</b>	<b>24.30</b>
E. Set of all five media screens plus bucket	<b>852-0901</b>	<b>87.85</b>

### A, B Motorized Rotary Tumblers

The primary advantage of rotary tumbling is that it can carry heavy pieces and heavy media such as steel shot. Although the process of rotary tumbling can be longer than that of vibratory tumbling, rotary tumbling is an excellent application for work hardening.

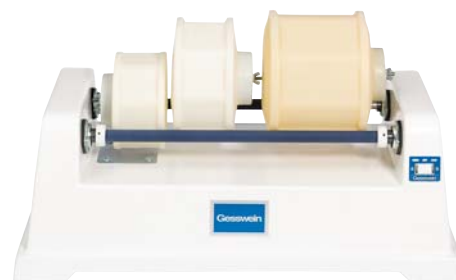
Our high quality rotary tumblers have been designed for heavy-duty use as well as for flexibility, with interchangeable barrels of different sizes. Each model features a high/low speed switch for a choice of aggressive or milder tumbling action. All barrels are constructed of tough, heavy-duty plastic. Leakproof, plug-type lid is located on side of barrel for easy access. Barrels have no linings to corrode or rust. You'll save time and money on expensive relining charges.

Barrels are available in 5 capacities from .02 to 1 cu. ft., but not all barrels can be used on every tumbler. Our rotary tumblers are sold without barrels; this way, you can choose only the barrels that will meet your specific requirements. See Rotary Tumbler Barrel Chart (below) for restrictions. All units listed are 110V, 6A, 690W, 60Hz.



Shown with two #2 barrels (not included).

A



Shown with #2, #3 and #4 barrels (not included).

B

#### Motorized Rotary Tumblers (barrels not included)

Style	A. Mini 2-Bar	B. 2-Bar
Dimensions (without barrels)	23½"L x 16"W x 13"H	36"L x 19"W x 13"H
Length of rotary bars	9¼"	24"
Distance between bars	4½"	7½"
Ship. Wt.	43 lbs.	63 lbs.
Item#	<b>852-0102</b>	<b>852-0100</b>
Each (base only, no barrels)	<b>\$674.00</b>	<b>\$817.00</b>

220V, 50Hz and 220V, 60Hz available by special order.

#### Rotary Tumbler Barrels (shown on tumblers above)

Style	#1	#2	#3	#4	#6
Capacity	.02 cu. ft.	.12 cu. ft.	.2 cu. ft.	.5 cu. ft.	1.0 cu. ft.
Steel Shot Capacity*	3 lbs.	15 lbs.	30 lbs.	50 lbs.	150 lbs.
Dimensions (W x dia.)	4¾" x 4¾"	4¾" x 8¼"	7" x 10"	10½" x 10¾"	15" x 16"
Barrel Opening (dia.)	3"	4"	4"	4"	7"
RPMs, low/high	90/127	52/80	40/56	38/53	25/40
Max. that will fit Mini 2-bar	2	2	1	1	0
Max. that will fit 2-bar model	0	3	3	2	1
Item#	<b>852-0120</b>	<b>852-0121</b>	<b>852-0125</b>	<b>852-0130</b>	<b>852-0135</b>
Each	<b>\$51.00</b>	<b>\$85.50</b>	<b>\$105.00</b>	<b>\$134.00</b>	<b>\$236.00</b>

\*The amount of shot listed fills each barrel about 50%. Optimal working capacity of each barrel should be approximately 60-65% full, including shot and jewelry items.

### C Auto-Reversing Rotary Tumbler

This tumbler allows you to clean or polish a large amount of different jewelry at once. Features auto-reversing function for thorough processing and separate controls for cycle speed and duration. Holds up to 30 rings. Easy to use: fill barrel to roughly 50% capacity with your choice of steel shot, add water to roughly 75% capacity, add 1ml of cleaning or polishing compound, place jewelry in barrel and run tumbler. Remove jewelry from barrel when done and rinse with water. Capacity: 4½ lbs. Electrical: 120V, 5A, 25W, 50/60Hz. Measures 10⅞"W x 9⅞"D x 11⅞"H with 8" dia. x 7½"W clear barrel that has a 4" opening. Weighs approx. 17½ lbs.

Description	Item#	Each
C. Auto-Reversing Rotary Tumbler	<b>852-0110</b>	<b>\$430.00</b>
Replacement Barrel	852-0112	129.00



C

### D Economy Rotary Tumblers – Three sizes from which to choose!

Each of our economical rotary tumblers has a sturdy steel base, continuous-duty fan-cooled motor with overload protection, and watertight black rubber barrel with snap-on lid. All 3 sizes are perfect for rock tumbling and for tumble polishing jewelry with steel shot. All are 115V, 1/75 HP, .54A, 60Hz.

Tumbler	# of Barrels	Barrel Capacity (Shot + Parts)	Barrel Shape	Item#	Each
Mini-Econo	1	3 lbs.	Round	<b>852-0020</b>	<b>\$90.50</b>
D. Dual-Econo	2	3 lbs. per barrel	Round	<b>852-0025</b>	<b>109.00</b>
Large-Econo	1	12 lbs.	Hexagonal	<b>852-0050</b>	<b>167.00</b>



D

## How Disc Finishers Work

A disc rotates at a set speed in a container that is open at the top. The grinding and polishing media in the container are brought to a highly energetic and whirlpool-like flow by centrifugal force of the spinning disc. The main advantage of this is that the toroidal flow rapidly generates a very smooth surface. Processing time is much faster than that of barrel or vibratory finishing: 2-6 hours for grinding and 1-4 hours for polishing. Resulting finish is equivalent to that obtained from hand polishing. ECO Mini Disc Finishers are compact but just as effective as larger industrial versions. These professional units are ideal for both small shops and retail stores. Use them for cleaning up rough castings, polishing hand-fabricated jewelry and restoring the shine to tarnished showcase displays.



### A ECO Mini Dry Disc Finisher – For dry polishing.

Polishing results can be optimized through the use of different grain sizes. For example, an already worn piece of jewelry can first be prepolished with ECO Regular Walnut Shell to remove light scratches, then polished with ECO Extra-Fine Walnut Shell to obtain a brilliant gloss. Unit includes 12-hour timer and start-up kit with Extra-Fine Walnut Shells and Polishing Paste. Measure 9"W x 9"D x 14"H. Capacity: 3 liters. Max. load: 20-30 ladies' rings. Lightweight walnut shell media offers little support for heavy items such as men's rings. As a result, these items tend to sink to the bottom of the bowl and remain unpolished. The ECO Ring Holder supports heavy items and rotates them in the opposite direction of media so they are uniformly polished to a high gloss. Holds eight rings.

Description	Item#	Each
A. ECO Dry 110V	<b>852-2336</b>	<b>\$900.00</b>
ECO Dry 230V, 50Hz	<b>852-2337</b>	<b>Please Call</b>
ECO Ring Holder	<b>852-2342</b>	<b>390.00</b>



### B ECO Mini Wet Disc Finisher – For wet grinding.

Used for wet grinding with plastic medias of rough, unprocessed jewelry castings. Soft abrasive effect inhibits hardening of jewelry surfaces and the formation of orange skin. In addition, the continuous flow-through of water and compound washes out the grinding abrasives to prevent them from being hammered into the workpiece. Generates clean, light surface finishes, which are conducive to the polishing process that follows. Unit includes a 12-hour timer and a compound container with submersible pump to recirculate solution. Comes complete with start-up kit that contains White Plastic Prepolishing Media and SC-5 Compound. Measure 9"W x 9"D x 14"H. Capacity: 3 liters. Max. load: approx. 20-30 ladies' rings.

Description	Item#	Each
B. ECO Wet 110V	<b>852-2338</b>	<b>\$1,270.00</b>
ECO Wet 230V, 50Hz	<b>852-2339</b>	<b>Please Call</b>



### C ECO Maxi Disc Finisher – Provides three finishing methods in one unit!

Features an innovative modular design that provides three surface processing methods in just one unit for easy adaptability to any application. Yields perfect results and eliminates time-consuming hand polishing. Includes base and interchangeable wet, dry and magnetic process bowls, each with a 6-liter capacity (double the capacity of an ECO Mini Disc Finisher bowl). The dry bowl uses dry medias to impart a brilliant high shine comparable to that obtained from hand polishing. The wet bowl uses abrasive media to remove file marks and surface imperfections. And the octagonal acrylic magnetic bowl uses stainless steel shot rods for imparting a high shine in filigree, undercuts and other hard-to-reach areas. Base measures 15"W x 12"D x 20"H. Weighs 55 lbs. Electrical: 110V or 230V, 50/60Hz.

#### Features:

- Quick-release bowl design
- Turning plate with flow-optimized drive (dry and wet bowls only)
- Recirculating pump and container (wet bowl only)
- Auto-reverse rotation every four minutes (magnetic bowl only)
- Adjustable 6-hour timer

Specifications:	Dry Bowl	Wet Bowl	Magnetic Bowl
Volume	6 liters	6 liters	6 liters
Part Capacity	200g	300g	300g
Media Capacity	2.2kg ECO Walnut Shells*	3kg ECO Plastic Media*, 4kg porcelain medias	160g stainless steel shot rods (included)
Inner Diameter	9"	9"	8.5"

Description	Item#	Each
ECO Maxi Disc Finisher, 110V	<b>852-2346</b>	<b>\$6,350.00</b>
ECO Maxi Disc Finisher, 230V	<b>852-2344</b>	<b>Please Call</b>

\*Sold separately—see p. 413.



**A ECO Blue Plastic Grinding Media**

Consists of a mixture of cone and pyramid shapes. Use as a first step in processing rough, unfinished jewelry castings. Must be used in an ECO wet bowl with a solution of water and SC-5 Compound. Supplied in packages of 11 lbs. (5kg); 4 lbs. fills one ECO Mini bowl.

Description	Avg. Processing Time	Item#	Each
ECO Blue Plastic Grinding Media	2-3 hours	852-1563	\$95.00

**B ECO White Plastic Prepolishing Media**

Consists of a mixture of cone and pyramid shapes. Use as a second step in processing hand-fabricated jewelry or castings that have been sanded or previously run in ECO Blue Plastic Grinding Media. Must be used in an ECO wet bowl with a solution of water and SC-5 Compound. Supplied in packages of 11 lbs. (5kg); 4 lbs. fills one ECO Mini bowl.

Description	Avg. Processing Time	Item#	Each
ECO White Plastic Prepolishing Media	2-4 hours	852-1564	\$108.00

**C ECO Regular Walnut Shell Media**

These high-quality, impregnated walnut shell granules remove light scratches from previously worn jewelry and produce a bright finish. Must be pretreated with ECO Polishing Paste and should be recharged with half a teaspoon of paste every four working hours. Supplied in packages of 11 lbs. (5kg); 2.2 lbs. (1kg) fills one ECO Mini bowl.

Description	Avg. Processing Time	Item#	Each
ECO Regular Walnut Shell Media	2-4 hours	852-1560	\$52.95

**D ECO Extra-Fine Walnut Shell Media**

These highest quality impregnated walnut shell granules produce a high-gloss shine equivalent to that obtained from hand polishing. Must be pretreated with ECO Polishing Paste and should be recharged with half a teaspoon of paste every eight working hours. Supplied in packages of 11 lbs. (5kg); 2.2 lbs. (1kg) fills one ECO Mini bowl.

Description	Avg. Processing Time	Item#	Each
ECO Extra-Fine Walnut Shell Media	30 minutes	852-1561	\$52.95

**E ECO SC-13 Burnishing Compound**

A concentrated burnishing compound with mild 7.7 pH for use with ECO plastic medias. Acts as foam buffer that prevents damage from impact. Produces a clean, bright shine on jewelry and other workpieces. Leaves behind a protective antirust barrier. Easy to split in the waste-water treatment process because it does not contain strong complexing agents. Typical working concentration: 3% for most applications. Sold in 4L bottles.

Description	Item#	Each
SC-13 Burnishing Compound, 4L	852-1569	\$29.95

**F ECO Polishing Paste – P1**

Paste made of a blend of fine oils and polishing powder for a high shine on jewelry metals when using ECO walnut medias. Sold in 2.2 lb. jars.

Description	Item#	Each
ECO P1 Polishing Paste, 2.2 lbs.	852-1562	\$32.50

**G ECO Polishing Paste – P6**

A water-based polishing paste for use with ECO walnut medias. Produces a mirror shine on both white and yellow jewelry metals. Emits virtually no odor. Typical working concentration: 1 teaspoon per 5kg polishing media. Sold in 110g tubes.

Description	Item#	Each
P6 Polishing Paste, 110g	852-1568	\$17.95







**A Metal Finishing Sets for Vibratory Tumbling**

There isn't a better or more complete set of everything you need to handle most of your vibratory finishing needs for raw castings and most jewelry parts. Our Metal Finishing Sets include a complete supply of our three most popular medias—Green and Light Green Plastic Pyramids and Dri-Shine III—plus a supply of Burnishing Soap B.

Use Green Pyramids (below) for first cut, Light Green Pyramids (facing page) for second cut and Dri-Shine III (p. 415) for a bright, high finish on gold and yellow metals. A complete tumbling cycle takes an average of 24 hours—5 hours with Green Pyramids, 3 hours with White Pyramids, and 16 hours with Dri-Shine III.

For Tumbler	Item#	Pkg.
#5	<b>852-0830</b>	<b>\$40.90</b>
#10	<b>852-0835</b>	<b>72.90</b>
#25SS	<b>852-0838</b>	<b>156.00</b>
#40	<b>852-0841</b>	<b>198.00</b>
#75	<b>852-0845</b>	<b>460.00</b>



**B Stone Finishing Kits**

A variety of media to take stones from rough state to smooth, high polish. ASV Kit is for all stones, hard and soft. HSV Kit is designed for hard stones such as agate and jasper.

Kit	For Stones	For Tumbler	Finishes	No. of Medias	Item#	Each
ASV	Hard & Soft	Vibratory	8-15 lbs.	7	<b>852-1601</b>	<b>\$39.95</b>
HSV	Hard	Vibratory	8-15 lbs.	4	<b>852-1600</b>	<b>27.95</b>



**C Ceramic Media for Heavy Bur Removal**

Aggressive aluminum oxide in ceramic bond for fast removal of heavy burrs and flashing. Excellent for deburring both soft and hard metals such as aluminum and steel. Unique angle-cut ends reach into grooves, corners and small openings, yet resist jamming in holes. Density: 85 lbs. per cu. ft. Shape: tri-star, 5/8".

Qty.	Item#	Pkg.
5 lbs.	<b>852-0429</b>	<b>\$20.95</b>
10 lbs.	<b>852-0430</b>	<b>36.85</b>
50 lbs.	<b>852-0431</b>	<b>125.95</b>



**D Ceramic Media for Light Bur Removal**

Efficient, long-life aluminum oxide in a hard ceramic bond for light bur removal and smoothing of rough castings. Deburs both soft and hard metals such as aluminum and steel. 30° ends reach into grooves, corners and openings. Density: 100 lbs. per cu. ft. Shape: 30° cylinders, 5/16" x 1/16".

Qty.	Item#	Pkg.
5 lbs.	<b>852-0432</b>	<b>\$16.95</b>
10 lbs.	<b>852-0433</b>	<b>31.50</b>



**E Blue Plastic Pyramids**

Aluminum oxide (approx. 220 grit) in a plastic bond. Aggressive cutting media with good but minimum stock removal. Excellent as a first cut-down step for rough castings, stampings, etc. More aggressive than Green Media. Density: 62 lbs. per cu. ft. Shape: pyramid, 1/4".

Qty.	Item#	Pkg.
5 lbs.	<b>852-0435</b>	<b>\$23.35</b>
10 lbs.	<b>852-0436</b>	<b>46.00</b>
50 lbs.	<b>852-0437</b>	<b>191.00</b>



**F Green Plastic Pyramids**

Plastic bond impregnated with fine silica (approx. 320 grit). Provides a light cutting action. Often used as a first cut-down step for delicate and intricate parts, for castings, and for removing sharp edges on stampings. Leaves a smooth, matte finish. Included in all Metal Finishing Sets. Density: 56 lbs. per cu. ft. Shape: pyramid, 1/4".

Qty.	Item#	Pkg.
5 lbs.	<b>852-0438</b>	<b>\$19.50</b>
10 lbs.	<b>852-0439</b>	<b>41.00</b>
50 lbs.	<b>852-0440</b>	<b>165.00</b>

**A Light Green Plastic Pyramids**

Plastic bond with super fine silica (approx. 400 grit). Provides an extra-fine cutting action for smoothing surfaces. A prepolish media that leaves a very smooth, matte finish ready for the final polish. Included in all Metal Finish Sets. Density: 62 lbs. per cu. ft. Shape: pyramid, 1/4".

Qty.	Item#	Pkg.
5 lbs.	852-0441	\$25.95
10 lbs.	852-0442	49.95
50 lbs.	852-0443	186.00



**B Dri-Shine I**

Crushed walnut shells with red rouge. Excellent for gold and other metals. Imparts a rouge powder to the surface of the workpiece, which helps to prevent tarnish. Density: 35 lbs. per cu. ft. Shape: irregular particle, 2mm.

Qty.	Item#	Pkg.
5 lbs.	852-0444	\$8.50
10 lbs.	852-0445	17.95
50 lbs.	852-0446	75.00



**C Dri-Shine III**

Crushed corncob with stain-free rouge. Our most versatile formula for obtaining final finish on gold and other metals. A clean media which leaves no residue. Polishes only—does not remove metal. Run dry for 16 to 48 hours to achieve a bright luster that is close to a hand-buffed finish. Recharge as needed with Simichrome Polish (see p. 44). Included in all Metal Finish Sets. Density: 30 lbs. per cu. ft. Shape: irregular particle, 2mm.

Qty.	Item#	Pkg.
5 lbs.	852-0447	\$8.50
10 lbs.	852-0448	17.95
50 lbs.	852-0449	75.00



**D, E Wood Peg Polishing Media**

Use with JGM-1 Polishing Compound, Simichrome Polish (see p. 44) or Liquid Rouge for a bright, high shine on any jewelry metal, white or yellow. For Disc Finishers or Vibratory Tumblers. Use the larger size for smooth-surfaced jewelry parts. The smaller size is designed to reach into holes and slots without lodging. Wood Pegs can be combined with Dri-Shine if desired for finishing of mixed jewelry styles. Sold in 5 lb. packages.

Description	Item#	PKG. of 5 lbs.			
		1	2-3	4-5	6+
D. Large Pegs, 1/8" sq. x 1/2"L	852-0854	\$17.50	\$16.63	\$15.75	\$14.88
E. Small Pegs, 1/11" sq. x 1/2"L	852-0855	49.00	46.55	44.10	41.65



**F JGM-1 Polishing Compound**

Charge your wood pegs with JGM-1 Polishing Compound to polish gold, silver, brass, bronze and other jewelry metals. JGM-1 is absorbed into the wood pegs. Recharge as needed. Combine with Liquid Rouge to really bring out the color and luster of yellow metals. Sold in gallon cans.

Description	Item#	Each
JGM-1 Polishing Compound	852-0857	\$49.95



**G, H Liquid Rouge**

Standard jeweler's red rouge in a new paste form! Wonderful for charging wood pegs for finishing gold and yellow metals to an almost hand-buffed luster. Should be combined with JGM-1 Polishing Compound for best results.

Qty.	Item#	Each
G. 1 pint	852-0859	\$14.95
H. 1 gallon	852-0856	69.95



**I Ground Cob**

High quality, pure refined ground cob. For drying jewelry parts. Absorbs moisture and prevents water stains.

Description	Item#	Each
3 lb. Box	812-0800	\$6.80
40 lb. Bag	812-0700	54.25







**A - G Steel Shot – Small shapes for intricate burnishing.**

Media for rotary (barrel) and vibratory tumblers. Burnishes your jewelry to a bright high luster without scratching. Corrosion-resistant stainless steel shot requires no special rust inhibitors or cleaners. Economical carbon steel shot requires rust-preventive compounds for use and storage. Available in packages of individual shapes and two mixtures: rotary and vibratory. Rotary mixture works in rotary tumblers. Contains 20% round balls, 40% diagonals, 20% ball cones and 20% pins. Vibratory mixture works in vibratory tumblers. Contains 40% diagonals, 30% ball cones, 20% round balls and 10% oval balls. Note: 2 lb. packages have 1/2 lb. of each shape. Density: 330 lbs. per cu. ft.

Description	Pkg. Size	Stainless Item#	Each	Carbon Item#	Each
A. Round Balls, 1/8"	2 lbs.	<b>852-1071</b>	<b>\$48.00</b>	<b>852-1045</b>	<b>\$15.50</b>
	10 lbs.	<b>852-1080</b>	<b>214.00</b>	<b>852-1040</b>	<b>69.00</b>
B. Diagonals, 1/8"	2 lbs.	<b>852-1072</b>	<b>32.00</b>	<b>852-1046</b>	<b>16.95</b>
	10 lbs.	<b>852-1079</b>	<b>142.00</b>	<b>852-1041</b>	<b>76.00</b>
C. Ball Cones, 1/8"	2 lbs.	<b>852-1073</b>	<b>35.25</b>	<b>852-1047</b>	<b>16.95</b>
	10 lbs.	<b>852-1078</b>	<b>153.50</b>	<b>852-1042</b>	<b>76.00</b>
D. Pins, 1/16" x 9/32"*	2 lbs.	<b>852-1074</b>	<b>69.00</b>	<b>852-1048</b>	<b>36.00</b>
	10 lbs.	<b>852-1077</b>	<b>338.00</b>	<b>852-1043</b>	<b>175.00</b>
E. Oval Balls, 5/32"	2 lbs.	<b>852-1075</b>	<b>38.95</b>	<b>852-1049</b>	<b>16.95</b>
	10 lbs.	<b>852-1076</b>	<b>168.00</b>	<b>852-1044</b>	<b>76.00</b>

Assorted Shot	For	Pkg. Size	Item#	EACH Prices	
				1-2	3+
F. Stainless Steel	Rotary	2 lbs.	<b>852-1086</b>	<b>\$45.00</b>	–
		10 lbs.	<b>852-1085</b>	<b>210.00</b>	–
G. Stainless Steel	Vibratory	2 lbs.	<b>852-1087</b>	<b>35.00</b>	–
		10 lbs.	<b>852-1090</b>	<b>165.00</b>	–
Carbon Steel	Rotary	2 lbs.	<b>852-1051</b>	<b>21.00</b>	–
		10 lbs.	<b>852-1050</b>	<b>94.60</b>	<b>\$89.87</b>
Carbon Steel	Vibratory	2 lbs.	<b>852-1052</b>	<b>16.95</b>	–
		10 lbs.	<b>852-1070</b>	<b>74.00</b>	<b>70.30</b>

\*Not recommended for use in Vibratory Tumblers.



**H Powder Compounds – For Steel Shot Tumbling**

Formulated for use with carbon steel shot in rotary tumblers, these powders are nonhazardous and lighter in weight than liquids, reducing shipping costs. Compound #750 is designed to clean shot that has darkened due to oxidation. Contains a rust inhibitor that protects shot during storage. Compound #910 is used during tumbling to keep shot clean and to brighten gold and silver jewelry. Recommended for use in a rotary tumbler, barrel tumbler or vibratory tumbler with flow-through system (premix powder in water for flow-through system). Mixing ratio: 2-3 oz. powder per gallon of water.

Description	Qty.	Item#	Each
H. Compound #750	5 lbs.	<b>852-1291</b>	<b>\$11.95</b>
	50 lbs.	<b>852-1290</b>	<b>110.00</b>
Compound #910	5 lbs.	<b>852-1296</b>	<b>19.95</b>
	50 lbs.	<b>852-1295</b>	<b>159.95</b>



**I Magnetic Separator Gun – For Magnetic Tumblers**

Quickly and easily separates metal media from parts—a great time-saver. Eliminates the tedious task of picking media off parts by hand. The gun comes with a collection bowl that holds the media until the job is completed. May be used dry or with media in water.

Description	Item#	Each
Magnetic Separator Gun	<b>852-0320</b>	<b>\$83.10</b>



**J Earring Post Protectors**

Made of red rubber. Slip onto the posts of earrings to be tumbled to prevent damaging metal loss from posts. Sold by the gross.

Description	Item#	Gross
Earring Post Protectors	<b>852-1150</b>	<b>\$3.49</b>

**A Steel Shot Cleaner for Carbon Steel Shot**

Discolored Carbon Steel Shot can discolor the jewelry you tumble in it. Gesswein Steel Shot Cleaner restores your shot to its original shiny luster. Even if your shot has turned gray or black, in most cases Gesswein Steel Shot Cleaner can brighten it again. Keep a gallon on hand and use it at the first sign of discoloration. Sold in gallon containers. Not recommended for use with Stainless Steel Shot.

Description	Item#	Each
Steel Shot Cleaner for Carbon Steel Shot	852-1032	\$24.95



A

**B Steel Shot Compound #50**

Specially designed for Carbon Steel Shot, this burnishing compound contains a rust preventative to keep your shot (and jewelry) clean and bright. A unique feature of Compound #50 is that it may be used to protect your shot from rust and corrosion after tumbling. Simply empty excess water and add Compound #50 directly to shot. Compound #50 leaves a protective coating you can feel. Your shot is protected for weeks at a time without storing it underwater! Sold in quart containers. Not recommended for use with Stainless Steel Shot.

Description	Item#	EACH Prices	
		1-3	4+
Steel Shot Compound #50	852-1033	\$9.60	\$8.16



B

**C Burnishing Compound 70L**

For use with Carbon Steel Shot tumbling. Contains an excellent rust preventative that can also be used with other media when workpieces are in danger of rusting. Also for steel shot storage. Not recommended for use in rubber-lined barrels or with Stainless Steel Shot.

Qty.	Item#	EACH Prices	
		1	2+
C. 1 quart	852-1030	\$12.50	\$10.00
1 gallon	852-1034	37.50	—



C

**D Cutting/Burnishing Soap Liquid B**

Excellent viscous soap for all of our cutting media. Resists formation of insoluble soap scum. Contains a rust preventative and can be used with Carbon Steel Shot. Recommended for Flow-Through Systems, in which powders are not suitable. Supplied with all Metal Finishing Sets. Not recommended for use with Stainless Steel Shot.

Qty.	Item#	Each
D. 1 pint	852-0875	\$5.30
1 gallon	852-0880	23.75



D

**E Soap Detergent Powder for Rotary Tumbling**

Gesswein Soap Detergent Powder acts as a lubricant as well as a cleaner. 3 lb. jar. Recommended for use with Carbon Steel Shot. Not for use with Stainless Steel Shot. Not recommended for use in Flow-Through Systems.

Description	Item#	Each
Soap Detergent Powder	852-1250	\$15.99



E

**F, G Soap Powder A**

Recommended for fine finishing and burnishing brass, bronze and similar materials with plastic and ceramic media. This soap has grease cutter for oil-coated workpieces. Not for use with Stainless Steel Shot. Not recommended for use in Flow-Through Systems.

Qty.	Item#	Each
F. 1 lb.	852-0870	\$7.50
G. 8 oz.	852-0865	4.95



F



G

**H Compound 20L**

Concentrated, all-purpose liquid compound for all cutting media. Specifically designed for tumbling systems to condition water, clean and lubricate plastic and ceramic media and parts, and suspend grit. Not for use with Stainless Steel Shot.

Qty.	Item#	EACH Prices	
		1-3	4+
H. 1 quart	852-1020	\$7.95	\$7.16
5 gallons (ship. wt: 47 lbs.)	852-1021	78.50	—



H





A

**A ECO-MI Magnetic Tumbler**

Features strong AC motor for dependable, maintenance-free operation (no carbon brushes to change) and built-in 0-60 minute timer. Includes heavyweight plastic bowl and cover, stainless steel shot, sample of burnishing soap, spare fuse and complete instructions. Backed by a one-year warranty.

**Specifications:**

Dimensions	
Overall	9"W x 11"D x 17.5"H
Bowl	5.9" dia. x 3.9"H
Capacity	20-30 rings
Operating Speed	2,500 RPM
Included Shot	14 oz.
Net Wt.	40 lbs.

Description	Electrical	Item#	Each
ECO-MI Magnetic Tumbler	110V	<b>851-9984</b>	<b>\$1,350.00</b>



B

**B, C Raytech Magnetic Tumblers**

Top-quality units from Raytech, the leading maker of jewelry tumbling equipment. Feature compact, reliable construction, direct-drive, fan-cooled AC motors, 2-hour timers and auto-shutoff function. All units offer programmable controls for variable-speed and forward/reverse operation. Run ultra-quiet with fast cycle times. Each includes heavy-duty plastic bowl, cover and complete instructions. CMF-410 and 610 also come complete with stainless steel shot and small sample of burnishing soap. Backed by a one-year warranty.

Purchase the CMF-410 or CMF-610 Wet and Dry Bowls to go from prefinish to final finish in less time than vibratory tumblers. (Use Plastic Pyramids in wet bowls, Dri-Shine VII or Dri-Buff in dry bowls). As a complete finishing system the CMF-410 and 610 are offered with all three bowls.

To prevent heavy rings from settling to the bottom of wet and dry bowls, use Parts Holder. The CMF-410 Parts Holder has four tiers, the CMF-610 six; each tier holds 2-3 rings.

<b>Specifications:</b>	<b>CMF-410</b>	<b>CMF-610</b>	<b>CMF-900</b>	<b>CMF-1200</b>
Dimensions				
Overall				
(W x D x H)	7" x 7" x 11"	10" x 10" x 14"	13" x 13" x 18"	16" x 16" x 20"
Bowl	4" dia.	6" dia.	9" dia.	12" dia.
Capacity	12 rings	30 rings	100 rings	225 rings
Operating Speed				
Speed	2,000 RPM (fixed)	0-2,000 RPM (variable)	0-2,200 RPM (variable)	0-2,200 RPM (variable)
Included Shot	4 oz. (approx.)	8 oz. (approx.)	-	-
Ship. Wt.	17 lbs.	25 lbs.	55 lbs.	85 lbs.

Description	Electrical	Item#	Each
CMF-410	110V	<b>852-0352</b>	<b>\$640.00</b>
CMF-410 (with three bowls)	110V	<b>852-0354</b>	<b>895.00</b>
CMF-410	220V	<b>852-0353</b>	<b>695.00</b>
CMF-410 Optional Parts holder		<b>852-0288</b>	<b>44.00</b>
CMF-410 Optional Wet Bowl		<b>852-0286</b>	<b>149.95</b>
CMF-410 Optional Dry Bowl		<b>852-0285</b>	<b>139.95</b>
CMF-410 Replacement SS Bowl		852-0319	45.95
<b>B. CMF-610</b>	110V	<b>852-0301</b>	<b>1,095.00</b>
CMF-610 (with three bowls)	110V	<b>852-0296</b>	<b>1,395.00</b>
CMF-610	220V	<b>852-0302</b>	<b>1,145.00</b>
CMF-610 Optional Parts holder		<b>852-0294</b>	<b>55.00</b>
CMF-610 Optional Wet Bowl		<b>852-0292</b>	<b>189.95</b>
CMF-610 Optional Dry Bowl		<b>852-0291</b>	<b>179.95</b>
CMF-610 Replacement SS Bowl		852-0318	56.95
<b>C. CMF-900</b>	110V	<b>852-0342</b>	<b>1,575.00</b>
CMF-900	220V	<b>852-0343</b>	<b>2,050.00</b>
CMF-900 Replacement SS Bowl		852-0344	99.95
CMF-1200	220V	<b>852-0345</b>	<b>2,060.00</b>
CMF-1200 Replacement SS Bowl		852-0346	129.00



C

**A Stainless Steel Shot – For Magnetic Tumblers**

Rods in two diameters for reaching into and polishing the tiniest details and settings without lodging. All 5mm long. Blunt ends.

Diameter	Item#	Each
0.5mm Shot, 0.5 lb.	<b>852-1094</b>	<b>\$15.95</b>
0.5mm Shot, 2.2 lbs.	<b>852-1097</b>	<b>55.00</b>
<b>A.</b> 0.3mm Shot, 0.5 lb.	<b>852-1096</b>	<b>29.90</b>
0.3mm Shot, 2.2 lbs.	<b>852-1099</b>	<b>99.95</b>



**A**

**B Magnetic Separator Gun – For Magnetic Tumblers**

Quickly and easily separates metal media from parts—a great time-saver. Eliminates the tedious task of picking media off parts by hand. The gun comes with a collection bowl that holds the media until the job is completed. May be used dry or with media in water.

Description	Item#	Each
Magnetic Separator Gun	<b>852-0320</b>	<b>\$87.75</b>



**B**

**C Soap Powder for Magnetic Tumblers – For Magnetic Tumblers**

Mild acid-based soap powder is specifically formulated for magnetic tumblers. It keeps stainless steel shot and jewelry clean.

Description	Item#	Each
4 lbs. Soap Powder	<b>852-1037</b>	<b>\$80.50</b>
<b>C.</b> 1 lb. Soap Powder	<b>852-1039</b>	<b>24.50</b>



**C**



**D**

**D Burnishing Compound #44S – For Magnetic Tumblers**

Specially formulated chemistry for use with stainless steel shot. Use just 1/2 tsp. per 6" diameter bowl in Magnetic Tumbler. Nontoxic, nonhazardous—can be disposed directly to sewer system. Supplied in 1 qt. plastic bottle.

Description	Item#	EACH Prices	
		1-3	4+
Burnishing Compound #44S	<b>852-1038</b>	<b>\$28.00</b>	<b>\$25.20</b>

**E CMF-410 and 610 Media Set**

Use Wet Bowls with our Plastic Pyramids for scratch removal and prepolishing. Use Dry Bowls with our Dri-Shine VII for polishing to a high shine. Set includes Green (240 grit, scratch removal) and White (400 grit, prepolishing) Plastic Pyramids, Burnishing Soap 20L and Dri-Shine VII (polishing to a high shine).

Description	CMF-410		CMF-610	
	Item#	Each	Item#	Each
Media Set	<b>852-0323</b>	<b>\$19.50</b>	<b>852-0324</b>	<b>\$31.95</b>



**E**

**F, G Medias for Raytech CMF-410 and 610 Dry Bowls**

Dri-Shine VII is crushed, finely graded nutshell media precharged with enhancers for a bright final finish. Recharge every four to six cycles with Dri-Shine VII Recharger. Dri-Buff is very soft, finely graded cob-based media for a high-shine mirror finish. Use after shot or Dri-Shine VII cycles.

Description	Item#	Each
<b>F.</b> Dri-Shine VII, 5 lbs.	<b>852-0450</b>	<b>\$39.95</b>
Dri-Shine VII Recharger, 1 lb.	<b>852-0451</b>	<b>22.95</b>
<b>G.</b> Dri-Buff, 4 lbs.	<b>852-0452</b>	<b>22.95</b>



**F**

**G**

## Dumont® High-Tech Tweezers

Manufactured by the original Swiss Dumont factory. Forged from premium-grade stainless steel unless otherwise noted and machined to a smooth satin finish. Extensive hand operations are used in shaping, adjusting and finishing the points.



**A**



**B**



**C**



**D**



**E**



**F**



**G**



**H**



**I**



**J**

### **A** Dumont® 3C

For handling all miniature and micro-miniature parts. They have tapered shanks with bevel edges; points have been honed and are very sharp. Measure approximately 4¼" long. Stainless steel.

Description	Item#	EACH Prices		
		1-2	3-9	10+
Style 3C	195-0400	\$22.10	\$19.89	\$18.79

### **B** Dumont® 5

Very narrow, needle-like points have been extra-honed to extreme sharpness. Ideally suited for handling microscopic parts and delicate work. Indented shanks with bevel edges. Measure approximately 4¼" long. Stainless steel.

Description	Item#	EACH Prices		
		1-2	3-9	10+
Style 5	195-0392	\$23.00	\$20.70	\$19.55

### **C** Dumont® 7

Excellent tweezers for handling all miniature and micro-miniature parts and components. The curved shanks permit the user to rest active hand on the bench during assembly operations. Points have a plain finish and are very sharp. Measure approximately 4½" long. Stainless steel.

Description	Item#	EACH Prices		
		1-2	3-9	10+
Style 7	195-0395	\$25.20	\$22.68	\$21.42

### **D, E** Dumont® PP and SS

Style PP is for sorting, assembling and handling miniature parts. Have tapered shanks with bevel edges. Points are sharp. Style SS is similar to PP but is very slim. Measure approximately 5⅜" long. Stainless steel.

Description	Item#	EACH Prices		
		1-2	3-9	10+
D. Style PP	195-0410	\$21.00	\$18.90	\$17.85
E. Style SS	195-0405	21.00	18.90	17.85

### **F** Dumont® P

Have extremely hard regular points for general work. Good when rust and corrosion are not significant factors. Measure approximately 4¾" long. Carbon steel.

Description	Item#	EACH Prices		
		1-2	3-9	10+
Style P	195-0340	\$28.90	\$26.01	\$24.57

### **G - I** Dumont® Titanium Tweezers

These 100% nonmagnetic tweezers are made of titanium, which is 60% stronger and 40% lighter than steel, for superior durability and a more delicate touch. Feature finely honed tips.

Description	Length	Item#	Each
G. Style 1	4¾"	195-3280	\$23.00
H. Style 3	4¾"	195-3281	28.00
I. Style AA	4⅞"	195-3282	23.40

### **J** Dumont® Grooved Diamond Tweezers

A groove runs down the center of the serrated tips to provide a secure grip on the girdle of large stones. Medium points, stainless steel. Measure 5⅞" long.

Description	Item#	EACH Prices		
		1-2	3-9	10+
Grooved Diamond Tweezers	195-0356	\$25.30	\$22.77	\$21.51

### A - H Dumont® Serrated Tip Diamond Tweezers

The finest in the industry. Precision-made with perfect alignment at the tips. Tips are serrated at a perpendicular angle for the best grip possible. Available in either medium (M) or fine (F) points, with or without a locking mechanism. Made in Switzerland. All measure 6½" long.

	Points	Locking	Finish	Item#	EACH Prices		
					1-2	3-9	10+
A.	F	No	Stainless	195-0350	\$16.55	\$14.90	\$14.07
B.	F	No	Black	195-0370	19.80	17.82	16.83
C.	M	No	Stainless	195-0355	21.20	19.08	18.02
D.	M	No	Black	195-0375	19.80	17.82	16.83
E.	F	Yes	Stainless	195-0360	24.20	21.78	20.57
F.	F	Yes	Black	195-0380	23.75	21.38	20.19
G.	M	Yes	Stainless	195-0365	25.30	22.77	21.51
H.	M	Yes	Black	195-0385	23.75	21.38	20.19



### I - N Economical Diamond Tweezers

Value-engineered for precision work. Available in locking or non-locking, fine (F) or medium (M) points. All have serrated tips and measure 6¾" long.

	Points	Locking	Finish	Item#	EACH Prices		
					1-2	3-9	10+
I.	F	No	Stainless	195-0334	\$7.80	\$7.02	\$6.63
J.	F	No	Black	195-0335	8.95	8.06	7.61
K.	M	No	Stainless	195-0336	7.80	7.02	6.63
L.	M	No	Black	195-0337	8.95	8.06	7.61
M.	F	Yes	Stainless	195-0330	9.95	8.96	8.46
N.	M	Yes	Stainless	195-0332	9.95	8.96	8.46



### O, P Dumont® Boley Style Tweezers AA and GG

Superbly machined Swiss tweezers. Made of stainless steel for very fine sorting, inspection and handling of miniature parts. The sharp points have received some finishing at the tips. Excellent for use under low-power magnification. Style AA is for general use. Style GG has pointed indented shanks. Measure approximately 5" long.

Description	Item#	EACH Prices		
		1-2	3-9	10+
O. Style AA	195-1050	\$21.00	\$18.90	\$17.85
P. Style GG	195-1150	22.90	20.61	19.47



### Q, R Boley Style Tweezers RR and MM

These stainless steel general-utility tweezers are excellent general utility tweezers for handling miniature parts. All shanks are tapered and have bevel edges. The sharp points have received some finishing at the tips. Style RR is a hefty, heavy-duty tweezers with wide shanks. Style MM is for general use.

Description	Length	Item#	EACH Prices		
			1-2	3-9	10+
Q. Style RR	5½"	195-1300	\$5.85	\$5.27	\$4.97
R. Style MM	5"	195-1200	5.85	5.27	4.97



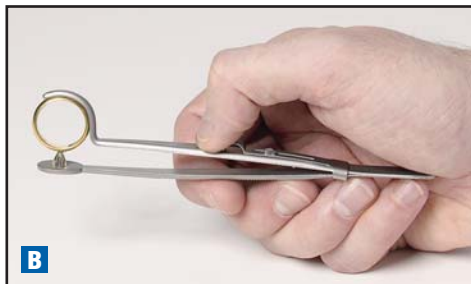
### S Economical Tweezers

Economical steel tweezers. Hand-finished, pointed tips. Good for working with miniature parts under low magnification. Measure 5" long.

Description	Item#	EACH Prices		
		1-2	3-9	10+
Economical Tweezers	195-1350	\$2.95	\$2.66	\$2.51







**A LaVaque Head & Shank Tweezers with Visual Alignment**

If you've ever soldered a head onto a shank only to find it misaligned by a few degrees, you'll love these tweezers. Feature patented LaVaque visual alignment for soldering settings accurately the first time, every time. Curved, grooved tip securely holds the shank in place while the transparent glass base secures the head, allowing you to see from the top and all sides for perfect alignment. Replaceable high-temperature glass withstands direct flame and soldering temperatures required for gold and silver, lasting for dozens of jobs. Not recommended for platinum and other metals that require higher soldering temperatures.

Description	Item#	Each
LaVaque Head & Shank Tweezers	195-3500	\$49.95
LaVaque Replacement Glass	195-3505	9.95

**B Head-and-Shank Tweezers**

Position setting and shank for easy soldering of solitaires. Curved, grooved tip securely holds shank; flat serrated base prevents slippage. Slide-locking. Made of stainless steel. Measure 5½" long. Made in Switzerland.

Description	Item#	Each
H&S Tweezers	195-3000	\$39.95

**C Econo Head-and-Shank Tweezers**

Use these slide-locking tweezers to hold rings for easy soldering of solitaires. Curved, grooved tip securely holds ring shank while flat serrated base prevents slippage. Made of steel. Measure 5½" long.

Description	Item#	EACH Prices		
		1-2	3-9	10+
Econo H&S Tweezers	195-3005	\$7.59	\$6.83	\$6.45

**D Ring Set Soldering Tweezers**

Hold two rings being soldered together as a set. Ideal for wedding band sets. Measure 5¾" long.

Description	Item#	Each
Ring Set Tweezers	195-0320	\$4.70

**E Split Ring Tweezers**

Easy-to-use tweezers for opening small to medium split rings. Just put the split ring under the claw and squeeze—it's simple and fast. Made of stainless steel. Measure 4½" long.

Description	Item#	Each
Split Ring Tweezers	816-4080	\$6.10

**F Long-Reach Tweezers**

Made of stainless steel. Ideal for holding pieces while they are being cleaned. Heat-resistant plastic-covered tips for firm grip on workpiece without scratching. Chrome-plated. Measure 10" long.

Description	Item#	EACH Prices		
		1-2	3-9	10+
Long-Reach Tweezers	195-1900	\$7.95	\$7.16	\$6.76

**G Plastic Tweezers**

Synthetic nonconductive tweezers ideal for changing watch batteries. Measure 5" long.

Description	Item#	EACH Prices		
		1-2	3-9	10+
Plastic Tweezers	195-3262	\$0.99	\$0.89	\$0.84

**H, I Stone Holders**

Ideal for picking up small stones and beads. Just press plunger to open, then release to grasp item securely. Available in four-prong and loop-end styles. Made of stainless steel. Measure 4½" long.

Description	Item#	EACH Prices		
		1-2	3-9	10+
H. Four-Prong Stone Holder	840-4451	\$5.95	\$5.65	\$5.36
I. Loop-End Stone Holder	840-4452	4.50	4.28	4.05

### A Plain Tweezers

Nickel-plated steel. Measure 5" long with squared, serrated tips. Good soldering tweezers.

Description	Item#	EACH Prices		
		1-2	3-9	10+
Plain Tweezers	195-3050	\$4.75	\$4.28	\$4.04



### B Screw-Holding Tweezers

Ideal for battery clamps and screws. Measure 4½" long.

Description	Item#	EACH Prices		
		1-2	3-9	10+
Screw-Holding Tweezers	195-3260	\$9.95	\$8.96	\$8.46



### C Stand-Up Cross-Locking Tweezers

Free hands for soldering. Tweezers lie flat to hold piece about 1" off soldering board. Tips are serrated. Made of stainless steel. Measure 6¼" long.

Description	Item#	EACH Prices		
		1-2	3-9	10+
Stand-Up Cross-Locking Tweezers	195-0325	\$4.15	\$3.74	\$3.53



### D - F Cross-Locking Tweezers

Tips close automatically when pressure is released from the handles. Most often used to hold objects for soldering; however, also used in a variety of general applications. Excellent heat sink when soldering. Nickel-plated.

Points	Length	Item#	EACH Prices		
			1-2	3-9	10+
D. Pointed	4¾"	195-1375	\$2.89	\$2.60	\$2.46
E. Blunt	6½"	195-1400	2.95	2.66	2.51
F. Pointed	6½"	195-1450	2.95	2.66	2.51



### G, H Insulated Cross-Locking Tweezers

Similar to standard cross-locking tweezers, but handles are insulated to protect hands from heat of soldering flame. Stainless steel with serrated tips.

Points	Length	Item#	EACH Prices		
			1-2	3-9	10+
G. Straight	6¾"	195-2050	\$4.15	\$3.74	\$3.53
H. Curved	6¾"	195-2075	4.15	3.74	3.53



### I, J Ceramic Tip Tweezers

**Won't contaminate your platinum.**

These lightweight tweezers feature zirconia ceramic tips attached to an aluminum body. Perfect for working with platinum and for all soldering jobs. Extremely smooth surface. Both 100% nonmagnetic, nonrusting and nonstatic. Acid-resistant. Six times harder than stainless steel, twice as hard as carbon steel. Tips measure 1¼" long.

Description	Length	Item#	Each
I. Fine	5¼"	195-3286	\$89.00
J. X-Fine	5½"	195-3285	89.00





A



B



C



D



E



F



G

**A Cup-Shaped Pearl Tweezers**

Tweezers with cup-shaped ends for holding pearls, beads and more. Coated tips prevent scratching of delicate surfaces. Measure 5¾" long.

Description	Item#	Each
Cup-Shaped Pearl Tweezers	195-0310	\$9.95

**B Pearl-Holding Tweezers**

Use these tweezers to sort and handle delicate beads and pearls. Nylon tips prevent scratches. Stainless steel textured handles provide light touch and excellent grip. Measure 6¼" long, 1" tip length.

Description	Item#	Each
Pearl-Holding Tweezers	195-0312	\$7.65

**C Diamond Tweezers with Shovel**

Stainless steel nonlocking tweezers with medium serrated tips and shovel attached to end for better handling of stones and beads. Measure 7⅞" long.

Description	Item#	EACH Prices		
		1-2	3-9	10+
Diamond Tweezers with Shovel	195-0331	\$4.95	\$4.46	\$4.21

**D, E Vacuum Tweezers Set**

Offers more precision and speed than standard tweezers.

Picks up cabochons, faceted stones and small parts without damaging them. Allows easier, faster, more precise stone placement. Ideal for setting small stones and stones in wax. Includes mini vacuum generator with in-line on/off switch, anodized aluminum handpiece, five stainless steel handpiece tips and 4' of flexible air tubing with in-line filter.

Vacuum generator can be adjusted from 1" to 15" Hg for working with anything from the tiniest melee to very large stones. Airflow: 125 cu. in./min. Measures just 2¾" dia. x 4½"H. Comfortable pencil-thin handpiece weighs just ½ oz. Creates vacuum when finger is placed over hole in back; breaks vacuum when finger is lifted off hole. Five stainless steel tips of various diameters pick up small, medium and large stones.

Eight-piece neoprene rubber cup set made for picking up larger items. Vacuum cups fit onto the probe tips. Cup diameters range from ⅜" to ⅝" by ⅛" increments.

Description	Item#	Each
D. Vacuum Tweezers Set, 110V	195-3300	\$136.00
Vacuum Tweezers Set, 220V, 50Hz	195-3305	199.90
E. Rubber Cup Accessory Set	195-3301	26.20

**F Third Hand**

Ideal for soldering difficult pieces. Leaves hands free. Heavy cast-iron base securely holds a cross-locking tweezers. Tweezers may be angled in any direction for most convenient working position. Comes complete with Cross-Locking Tweezers #195-1400 (see p. 423).

Description	Item#	Each
Third Hand	816-1800	\$11.65

**G Half-Shank Tweezers**

Designed specifically for the difficult task of holding half- and quarter-shanks securely in place while soldering. Eliminate fumbling and misalignment. Feature movable top arm that can be swung out of the way when not in use. Work well for other applications in which a gentle but firm hold is necessary. Available with or without base. Tweezers are made of stainless steel, base of steel.

Description	Item#	Each
G. Half-Shank Tweezers w/ base	816-1810	\$21.00
Half-Shank Tweezers w/o base	195-0389	16.95

### A - I Pin Vises

A wide selection of pin vises for holding small drills, wires, taps, screwdriver blades and more.

Description	Length	Item#	EACH Prices		
			1-2	3-5	6+
A. 5/8" wide jaws, hollow handle opens to 1/4", 3/16" gap.	4 1/2"	820-4150	\$26.25	\$24.94	-
B. Dog-nosed, hollow handle, 5/16" jaw, opens to 1/4", 3/16" gap.	4 1/2"	820-4050	27.50	26.13	-
C. Extra screw and nut for #820-4150 and #820-4050.	-	820-4100	6.15	5.84	\$5.23
D. Double-ended with different size steel collets mounted in both ends of hollow handle. Capacity: 0"-0.099".	4 1/4"	820-4650	10.15	9.64	9.14
E. Double-ended with reversible steel collets. Capacity: 0"-0.125".	4 1/4"	820-4350	7.95	7.55	7.16
F. Two steel chucks with hollow brass handle. Capacity: 0"-0.079".	3 3/4"	820-4300	6.98	6.63	6.28
G. Steel chuck with hollow wooden handle. Capacity: 0"-0.064".	4 1/4"	820-4250	7.00	6.65	6.30
H. Swivel head pin vise for drilling or tapping. Two double-ended chucks. Capacity: 0"-0.125".	3 1/2"	820-4355	5.95	5.65	5.36
I. Sliding pin vise for one-hand operation. Single end has knurled slide. Capacity: 0"-0.032".	4 1/2"	820-4260	4.55	4.32	4.10



### J Precision Pin Vise Set

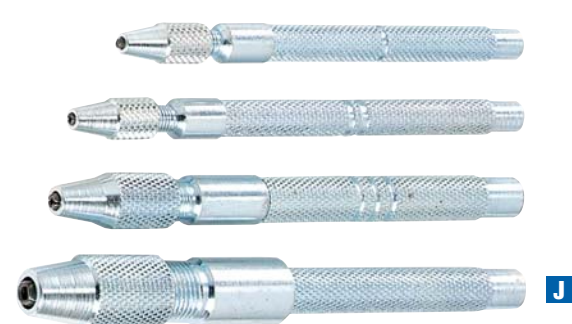
Includes four precision pin vises for holding a wide variety of items. Tool steel collets and hollow chromium-plated handles accommodate long wires and rods. Specially designed stepped bodies allow vises to be held securely in a lathe or drill press or used by hand. Made in USA.

#### Specifications:

Collet Capacity

3" Vise	0"-0.040"
3 1/4" Vise	0.025"-0.062"
3 7/8" Vise	0.050"-0.125"
4 1/4" Vise	0.115"-0.188"

Description	Item#	Each
Precision Pin Vise Set	820-4175	\$29.25



### K - N Precision Pin Vises

Durable hardened steel pin vises with hollow handles for accommodating long wires. Black finish. Sold individually and in a money-saving set of all four.

Length	Collet Capacity	Item#	Each
K. 76mm	0-1.0mm	820-4186	\$3.50
L. 86mm	0-1.5mm	820-4187	3.95
M. 96mm	1.5-3.0mm	820-4188	3.95
N. 105mm	2.7-4.5mm	820-4189	3.95
4-Piece Set (one of each)		820-4185	12.50







**A**



**B**

**C**

**D**



**E**



**F**



**G**



**H**

**A Setting Bur Chuck with Swivel Handle**

For holding burs, reamers and taps. Ball-shaped wooden swivel handle fits in palm of hand. Comes with two chucks (one installed) for 3/32" and 1/8" shanks. Measures 4" long.

Description	Item#	Each
Setting Bur Chuck	840-4200	\$15.50

**B - D Adapter Chucks – 3/32" Shank**

Allow you to use tools with small shanks in standard flex shaft handpieces. Threads are right-hand.

Description	Item#	Each
B. 1.00mm Chuck	840-3210	\$12.50
C. 2.62mm Chuck	840-3220	12.65
D. 2.77mm Chuck	840-3230	14.50

**E Econo 4-Collet Adapter Chuck – 3/32" Shank**

Works in standard flex shaft handpieces. Threads are right-hand. Includes a collet that completely closes for holding smallest of tools as well as 1.50, 2.50 and 3.00mm collets.

Description	Item#	Each
Econo 4-Collet Adapter Chuck	840-3240	\$6.95

**F Steel Hand Vice**

Has spring action in handle to keep jaws open. Serrated jaws are 1/4" wide and open to 1". Measures 4" long.

Description	Item#	EACH Prices	
		1-2	3+
Steel Hand Vice	820-4500	\$23.75	\$22.56

**G Foredom® Mini Vice**

Securely holds small parts. Has 1 3/4" slotted grooves in the base for mounting on a drill press or workbench. Stationary jaw has a perpendicular V-groove, and moveable jaw has a horizontal V-groove for holding round stock or tube. Glare-free black finish.

**Specifications:**

Jaw Width	1 3/4"
Jaw Opening	1 3/4"
Dimensions	4"L x 2 3/8"W x 1 1/2"H
Ship. Wt.	1/2 lb.

Description	Item#	Each
Mini Vice	820-4700	\$19.00

**H Mini Bench Vice**

Great for small, precision work. Jaws are 1" wide and open to 1". C-clamps to bench or tabletop up to 1 1/8" thick. Body is cast iron with heavy red enamel coating. Ship. wt: 1 lb.

Description	Item#	Each
Mini Bench Vice	820-4052	\$7.40

**A Panavise Model 301**

An all-purpose vise that tilts, turns and rotates. Vise head can be turned 360°, tilted 90° and locked in any position. When head is locked in desired position, stem can be rotated or locked in place. All movement is controlled by one convenient variable pressure knob. Nonmarring nylon jaws open to 2½".

Description	Item#	Each
A. Panavise Model 301	<b>814-0200</b>	<b>\$49.95</b>
Replacement Nylon Jaws, set of 2	814-0805	2.95



**A**

**B Base Mount #311 for Panavise Model 301**

Platform base mount for attaching Panavise Model 301 securely to the edge of a workbench or counter. Attaches with a clamp screw that opens to a maximum of 3½" (89mm). Comes with three screws for securing Panavise to base mount.

Description	Item#	Each
Base Mount #311 for Panavise Model 301	<b>814-0700</b>	<b>\$49.95</b>



**B**

**C Panavise Model 381**

An all-purpose vise with the same features as Model 301—with the added benefit of portability. A half-turn of the mount lever permits easy mounting of the vise on any smooth, nonporous surface. Suction holds vise to surface until lever is released.

Description	Item#	Each
C. Panavise Model 381	<b>814-0190</b>	<b>\$69.95</b>
Replacement Nylon Jaws, set of 2	814-0805	2.95

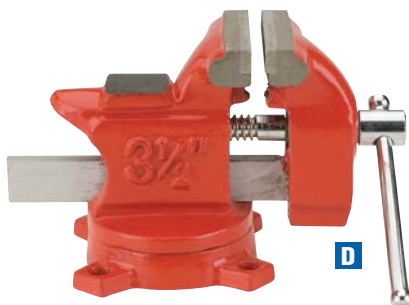


**C**

**D Heavy-Duty Swivel Bench Vise**

Rugged vise with enamel-coated cast-iron body, hardened steel serrated jaws and anvil top and solid steel guide bar. Rotates up to 220° and locks into position. Includes four holes in base for permanent mounting on your benchtop. Jaws are 3½" wide and open to 3½".

Description	Item#	Each
Heavy-Duty Swivel Bench Vise	<b>820-4055</b>	<b>\$59.00</b>



**D**

**E Swivel Bench Vise**

Dual guide rods ensure parallel closing of jaws, rigidity and steady action. Smooth jaws help prevent marring of soft metal. Features sturdy construction with anvil top and enamel-finished body. Fits benchtops up to 2" thick. Can be rotated laterally 360° and locked into position. Jaws are 2½" wide and open to 2½". Ship. wt: 5½ lbs.

Description	Item#	Each
Swivel Bench Vise	<b>820-4054</b>	<b>\$48.40</b>

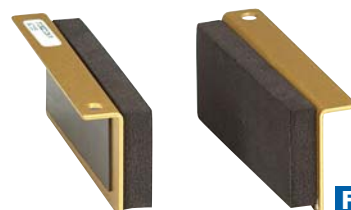


**E**

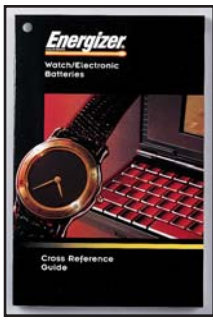
**F Freedom® Soff Jaws**

Attach to any 3" or 4" bench vise via built-in magnetic strips. Available with pads made of leather or resilient ethylene vinyl acetate (soft rubber-like material). Grip odd shapes with ease. Prevent marring of polished and painted surfaces and threaded parts. Measure 3½" long.

Description	Item#	Each
F. Rubber Soff Jaws, pair	<b>820-4705</b>	<b>\$7.95</b>
Leather Soff Jaws, pair	<b>820-4706</b>	<b>7.95</b>



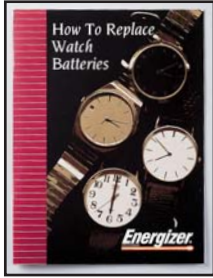
**F**



Battery cross-reference guide



60-drawer cabinet with Energizer watch batteries



Training video and booklet



**A** Energizer watch battery tester



Energizer counter sign



Battery size checker

**A Energizer® Watch Battery Starter Kit**

Energizer enjoys brand recognition that few others can match, and for good reason: their batteries are among the most reliable in the world. Offer Energizer watch batteries to show your customers that you put quality first and to turn a quick profit. This affordable kit includes essential items that will help you get started. Use with optional Battery Changing Set #820-9040 (see facing page) to change batteries like a pro in no time. Made in USA.

**Includes:**

- 60-drawer storage cabinet stocked with 130 assorted silver oxide and lithium Energizer watch batteries
- Energizer watch battery tester
- Training video and booklet
- Battery cross-reference guide
- Battery size checker
- Energizer counter sign

Description	Item#	Each
Energizer Watch Battery Starter Kit	<b>808-0285</b>	<b>\$145.00</b>

**B Energizer® Silver Oxide Watch Batteries**

Battery#	Item#	Each*	Item#	Pkg. of 20
309	<b>808-0309</b>	<b>\$1.12</b>	-	-
315	<b>808-0315</b>	<b>.89</b>	<b>808-1315</b>	<b>\$15.45</b>
317	<b>808-0317</b>	<b>.98</b>	<b>808-1317</b>	<b>15.45</b>
319	<b>808-0319</b>	<b>.73</b>	<b>808-1319</b>	<b>11.41</b>
321	<b>808-0321</b>	<b>.58</b>	<b>808-1321</b>	<b>9.58</b>
329	<b>808-0329</b>	<b>.96</b>	-	-
335	<b>808-0335</b>	<b>1.15</b>	-	-
337	<b>808-0337</b>	<b>1.89</b>	-	-
339	<b>808-0339</b>	<b>1.63</b>	-	-
341	<b>808-0341</b>	<b>1.39</b>	-	-
344	<b>808-0344</b>	<b>1.25</b>	-	-
346	<b>808-0346</b>	<b>1.43</b>	-	-
357	<b>808-0357</b>	<b>1.18</b>	-	-
362	<b>808-0362</b>	<b>.54</b>	<b>808-1362</b>	<b>9.25</b>
364	<b>808-0364</b>	<b>.32</b>	<b>808-1364</b>	<b>5.93</b>
365	<b>808-0365</b>	<b>1.18</b>	-	-
366	<b>808-0366</b>	<b>1.17</b>	-	-
371	<b>808-0371</b>	<b>.56</b>	<b>808-1371</b>	<b>9.72</b>
373	<b>808-0373</b>	<b>.79</b>	<b>808-1373</b>	<b>13.65</b>
377	<b>808-0377</b>	<b>.51</b>	<b>808-1377</b>	<b>8.69</b>
379	<b>808-0379</b>	<b>.63</b>	<b>808-1379</b>	<b>10.08</b>
386	<b>808-0386</b>	<b>1.16</b>	-	-
390	<b>808-0390</b>	<b>.75</b>	-	-
391	<b>808-0391</b>	<b>.66</b>	-	-
392	<b>808-0392</b>	<b>.46</b>	<b>808-1392</b>	<b>7.22</b>
393	<b>808-0393</b>	<b>1.04</b>	-	-
394	<b>808-0394</b>	<b>.86</b>	<b>808-1394</b>	<b>13.78</b>
395	<b>808-0395</b>	<b>.56</b>	<b>808-1395</b>	<b>9.47</b>
397	<b>808-0397</b>	<b>.58</b>	<b>808-1397</b>	<b>9.86</b>

\*Five-piece minimum; please order in multiples of five.



**B**

**C**

**C Energizer® Lithium Watch Batteries – 3V, Low Drain**

Battery#	Item#	Each*
2016	<b>808-2016</b>	<b>\$.45</b>
2025	<b>808-2025</b>	<b>.55</b>
2032	<b>808-2032</b>	<b>.55</b>

\*Five-piece minimum; please order in multiples of five.





**A Battery Changing Set**

A handy set for changing watch batteries. Includes everything needed to do the job quickly: bench knife for pop-off case backs, spring bar changing tool, scratch brush for cleaning battery cavities, plastic tweezers for handling batteries, screw-back case-opening wrench, 1.0mm flat-head screwdriver and 1.5mm Phillips screwdriver. Convenient roll-and-tie pouch keeps items together.

Description	Item#	Each
Battery Changing Set	820-9040	\$20.95

**A****B Battery and Pulse Tester**

A great jeweler's aid. Tests a watch to see whether the step motor is not working or the battery is dead—without opening the watch. Also tests the coil. Just rest the watch across the sensor and watch the readout. Requires no training. Includes 9V battery.

Description	Item#	Each
Battery and Pulse Tester	820-9047	\$39.95

**B****C Energizer® Battery Tester**

Tests a full range of miniature silver, mercury, manganese dioxide and lithium watch and calculator batteries. Compact and easy to use. Includes testing instructions printed on bottom. Not for use on hearing aid batteries. Measures 4½"L x 2⅛"W x 1¾"H.

Description	Item#	Each
Energizer Battery Tester	820-9051	\$23.75

**C****D Battery Tester**

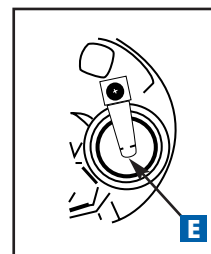
An economical yet accurate tester for checking batteries under design and load conditions. Tests alkaline, carbon zinc, silver oxide, lithium, nickel cadmium and mercury batteries. Includes easy-to-follow instructions.

Description	Item#	Each
Battery Tester	820-9048	\$10.95

**D****E Battery Clamp Assortment**

This assortment contains 50 clamps for many of the most popular watches. Allows you to replace worn or broken clamps in minutes.

Description	Item#	Each
Battery Clamp Assortment	820-9045	\$25.20

**E****F Battery Clamp Screw Assortment**

This assortment contains 100 screws that will fit most watch brands.

Description	Item#	Each
Battery Clamp Screw Assortment	820-9046	\$26.40

**F****G Screw-Holding Tweezers**

Ideal for battery clamps and screws. Measure 4½" long.

Description	Item#	Each
Screw-Holding Tweezers	195-3260	\$9.95

**G**





A



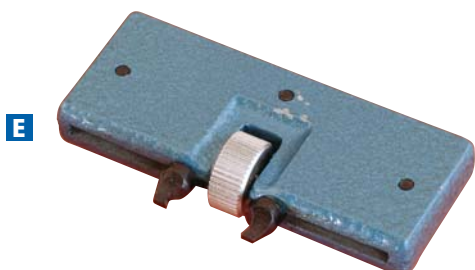
B



C



D



E

### A L-G Watchcase Wrench

For waterproof cases. Opens any size and shape case. Features knurled polygon for any number of slots, notches or holes. Tight, nonslip grip will not scratch. Cover can be left in wrench, ready for replacing. Includes four sets of interchangeable jaw pins. Made in USA.

Description	Item#	Each
A. L-G Watchcase Wrench	<b>820-9020</b>	<b>\$41.00</b>
Replacement Pins, set of 12	820-9021	11.50
Replacement Screw	820-9022	.50

### B Waterproof Watchcase Wrench

This JAXA-style case wrench meets the highest standards. Includes four sets of pins (three of each style). Packaged in a hardwood box. Imported.

Description	Item#	Each
B. Waterproof Watchcase Wrench	<b>820-9025</b>	<b>\$12.95</b>
Replacement Round Pins, set of 3	820-9026	1.04
Replacement Flat, set of 3	820-9027	1.04
Replacement Square, set of 3	820-9028	1.04
Replacement Curved, set of 3	820-9029	1.04

### C Case Wrench for Rolex® Cases

Specially designed to open Rolex Oyster cases. Features six interlocking tempered rings that fit every existing size and resist slipping. Sturdy cast frame fits in your bench vise, and small bar gives you the torque needed for stubborn case backs. Built-in adjustable case holder fits all size watches. Can also be used in conjunction with our Watchcase Wrench (see above). Ring sizes: 18.5, 20.2, 22.5, 26.5, 28.3 and 29.5mm.

Description	Item#	Each
Case Wrench for Rolex Cases	<b>820-9100</b>	<b>\$69.60</b>

### D Watchcase Holder

Metal base with four plastic pins for securely holding watchcases without marring.

Description	Item#	Each
Watchcase Holder	<b>820-9030</b>	<b>\$5.75</b>

### E Pocket Case Wrench

Compact, convenient wrench for waterproof cases. Features tempered pins and easy-to-use adjusting wheel. Measures 2<sup>5</sup>/<sub>8</sub>" x 1<sup>1</sup>/<sub>8</sub>" x 1<sup>1</sup>/<sub>2</sub>".

Description	Item#	Each
Pocket Case Wrench	<b>820-9095</b>	<b>\$6.50</b>

**A Snap-Back Case Opener**

The ultimate in a snap-back case opener. This tool will open even the stubborn friction-fit or snap-back watch cases with a simple turn of the threaded thumb screw. User control of blade alignment and depth ensures no damage to delicate watch inner workings. Replaceable blade.

Description	Item#	Each
Snap-Back Case Opener	<b>820-9058</b>	<b>\$89.95</b>
Replacement Blade	820-9059	12.95

**A****B Snap-Back Case Knife**

Special Swiss case knife with hard plastic handle and fixed tempered blade (does not fold into handle. Measures 4" long.

Description	Item#	Each
Snap-Back Case Knife	<b>260-3058</b>	<b>\$20.95</b>

**B****C Snappy Watchcase Opener**

Makes watchcase opening a snap! Just position the point between the case back and the case, and push slowly to lift off the back. Easily controlled so blade will not pop into watch movement. Spring-loaded for easy operation. Made of steel with red plastic handle. Measures 5" long. For watchcase closing, use Case Closing Pliers #820-9065 (see p. 432).

Description	Item#	Each
Snappy Watchcase Opener	<b>820-9060</b>	<b>\$10.35</b>

**C****D Medium-Duty Bench Knife**

Has slim 1 $\frac{3}{4}$ " long blade set firmly in hardwood handle. Measures 5" long.

Description	Item#	Each
Medium-Duty Bench Knife	<b>260-3057</b>	<b>\$11.90</b>

**D****E Case Knife**

Features universally popular shape that gives watchmakers the proper grip for prying open snap-on case backs. Hardwood handle and precisely beveled, tempered steel blade make case opening easier. Measures 4 $\frac{1}{2}$ " long.

Description	Item#	Each
Case Knife	<b>820-9055</b>	<b>\$4.40</b>

**E****F Heavy-Duty Bench Knife**

An all-purpose bench knife for opening watchcases, scraping and cutting. Has 1 $\frac{3}{4}$ " long steel blade mounted in hardwood handle. Measures 5 $\frac{1}{4}$ " long.

Description	Item#	Each
Heavy-Duty Bench Knife	<b>260-3059</b>	<b>\$3.60</b>

**F****G Victorinox Original Swiss Army Knife**

**The first and finest!**

Includes a cutting blade, scissors, file, tweezers, pick and key ring attachment. Made of stainless steel. Has royal blue enamel handle inlaid with metal Gesswein logo.

Description	Item#	Each
Victorinox Original Swiss Army Knife	<b>827-1000</b>	<b>\$16.95</b>

**G**



A



B



C



D



E



F

### A Watchcase Press

The best inexpensive case closer available. Includes seven pairs of snap-on nylon dies for 16-36mm diameter cases. Will not scratch or mar crystals. Made of sturdy cast metal. Works with watch lying facedown so user can see case back being closed.

Description	Item#	Each
Watchcase Press	820-9050	\$26.30

### B Case Closing Pliers

A handy tool for safely closing watchcases. Parallel closing jaws with hinged, rubber-padded discs prevent damage to the watchcase and crystal. Measure 7½" long.

Description	Item#	Each
Case Closing Pliers	820-9065	\$17.85

### C Flat Case Back Gasket Assortment

This 54-piece assortment includes three pieces each of 18 sizes (15.00-32.00mm ID in 1mm increments). Gaskets measure 2mmW x 0.5mm thick. Each size comes in its own envelope.

Description	Item#	Each
Flat Case Back Gasket Assortment	808-0010	\$24.95

### D Watch Gasket Assortments

Available in four different thicknesses. Each 144-piece assortment includes four pieces each of 36 sizes (14.50-32.00mm ID). Fits Citizen, Seiko and most modern quartz watches.

Description	Thickness	Item#	Each
Watch Gasket Assortment	0.40mm	808-0001	\$14.95
	0.50mm	808-0002	14.95
	0.60mm	808-0003	14.95
	0.70mm	808-0004	14.95

### E Thin O-Ring Assortment

This 144-piece assortment includes four pieces each of 36 sizes (14.50-32.00mm ID) in three thicknesses: 0.40, 0.50 and 0.60mm. Envelopes are color-coded by thickness.

Description	Item#	Each
Thin O-Ring Assortment	808-0005	\$59.95

### F Cotter Pin Assortment

This comprehensive kit gives the jeweler 180 cotter pins (5 each of 36 different sizes) to adjust metal bands either during the sale or for aftermarket service. Many watches need links added or removed to customize size, and this process requires replacement cotter pins such as these to ensure proper strength of the band.

Description	Item#	Each
Cotter Pin Assortment	820-9220	\$29.95

**A, B Double-Shoulder Spring Bars**

Available in 100-piece plastic boxes of individual diameters and lengths, 200-piece extra-thin, thin and regular sets of assorted lengths and 400-piece extra-thin/regular combination set of assorted lengths. Each set includes 20-piece plastic bottles of each length.

Description	Length	Item#	Box of 100
Extra-Thin, 1.30mm	1/4"	820-9120	\$3.95
	5/16"	820-9122	3.95
	3/8"	820-9124	3.95
	7/16"	820-9126	3.95
	1/2"	820-9128	3.95
	9/16"	820-9130	3.95
	5/8"	820-9132	3.95
	11/16"	820-9134	3.95
	3/4"	820-9136	3.95
	13/16"	820-9138	3.95
Thin, 1.45mm	1/4"	820-9140	3.95
	5/16"	820-9142	3.95
	3/8"	820-9144	3.95
	7/16"	820-9146	3.95
	1/2"	820-9148	3.95
	9/16"	820-9150	3.95
	5/8"	820-9152	3.95
	11/16"	820-9154	3.95
	3/4"	820-9156	3.95
	13/16"	820-9158	3.95
Regular, 1.78mm	1/4"	820-9164	2.95
	5/16"	820-9166	2.95
	3/8"	820-9168	2.95
	7/16"	820-9170	2.95
	1/2"	820-9172	2.95
	9/16"	820-9174	2.95
	5/8"	820-9176	2.95
	11/16"	820-9178	2.95
	3/4"	820-9180	2.95
	13/16"	820-9182	2.95
	7/8"	820-9184	2.95
	15/16"	820-9186	2.95
	1"	820-9188	2.95

Description	Item#	Each
A. 400-Piece Extra-Thin/Regular Combination Set	820-9215	\$29.95
B. 200-Piece Extra-Thin Set	820-9200	16.95
200-Piece Thin Set	820-9205	14.95
200-Piece Regular Set	820-9210	14.95

**C Spring Bar Changing Tool**

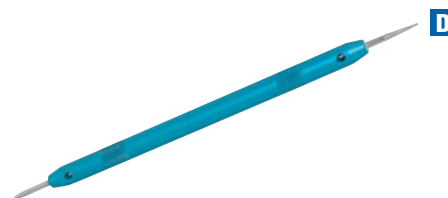
Tempered tips make this bar changing tool a twin of the famous brand—at a price savings with no loss in quality. Measures 5" long.

Description	Item#	Each
C. Spring Bar Changing Tool	820-9195	\$4.30
Replacement Round Blade	820-9196	.95
Replacement Forked Blade	820-9197	.95

**D Metal Spring Bar Tool**

Tips are stronger than those of conventional spring bar tools but have the same thread for interchangeability. Measures 5 1/8" long.

Description	Item#	Each
D. Metal Spring Bar Tool	820-9192	\$6.65
Replacement Straight Tip	820-9193	1.30
Replacement Forked Tip	820-9194	1.30







### A Spring Bar Bending Pliers

These unique and practical spring bar bending pliers delicately bend spring bars of any size to the proper shape. Feature stainless steel box-joint construction with high-impact grooved nylon jaws that hold the spring bar in place while bending. Measure 5" long.

Description	Item#	Each
Spring Bar Bending Pliers	<b>180-0294</b>	<b>\$14.95</b>



### B Clip Spring Removing Pliers

Use for adjusting the length of Seiko style watch bands. The flat jaw rests atop the link, and the pointed tip fits under the clip spring. Gently squeeze the handles, and the clip spring pops up, ready for easy removal. Measure 5½" long.

Description	Item#	Each
Clip Spring Removing Pliers	<b>820-9069</b>	<b>\$9.45</b>



### C Hole Punching Pliers

Punch precise 1.5mm holes in leather watchbands. Feature return spring for smooth action and comfort handles for secure grip. Made of the finest steel for durability. Measure 5¾" long.

Description	Item#	Each
Hole Punching Pliers	<b>820-9074</b>	<b>\$9.20</b>



### D Watch Bracelet Screw Remover

Removes double-ended screws quickly and easily. Features one fixed screwdriver blade and one turnable blade perfectly aligned with each other. Eliminates the hassle of removing stubborn double-ended screws with ordinary screwdrivers. Has high-impact glass-filled nylon body and easy-to-replace tempered steel blades. Made in Switzerland.

Description	Item#	Each
Watch Bracelet Screw Remover	<b>820-9085</b>	<b>\$17.40</b>
Replacement 0.80mm Blade	820-9086	2.40
Replacement 1.00mm Blade	820-9087	2.40



### E Demagnetizer/Magnetizer

Electric tool perfect for demagnetizing and magnetizing tweezers, screwdrivers and other small tools and parts. Features high power-to-weight ratio and unbreakable plastic housing. Electrical: 120V, 300W. Opening measures 3"W x 1½"H.

Description	Item#	Each
Demagnetizer/Magnetizer	<b>813-2100</b>	<b>\$63.50</b>

**A Mesh Bracelet Cutter**

A beveled-cylinder cutting tool useful for cutting not only mesh bands but also solder wire and small pieces of sheet metal. Provides maximum cutting leverage with its long handle. Cuts much faster than hand saws. Measures 6"L x 4"W.

Description	Item#	Each
Bracelet Cutter	840-4215	\$65.00



A

**B Link and Spring Bar Remover**

An indispensable tool to the watchmaker. Ideal for removing stubborn links and Westar-type spring bars. Includes 0.40, 0.60, 0.80, 1.00, 1.50 and 2.00mm pins for use in all bracelet types. Also includes screwdriver with 2.50mm tip for screw-type spring bar removal. Weighs just over 1 lb.

Description	Item#	Each
B. Link and Spring Bar Remover	820-9275	\$25.50
Replacement Pin Set	820-9276	6.50



B

**C Pin Removing Set**

Perfect for removing friction pins from watch bracelets. Includes grooved wooden block for holding bracelets securely without marring, small ball-peen hammer and 0.80mm and 1.00mm pin removing punches. Just tap punches lightly to remove pins.

Description	Item#	Each
C. Pin Removing Set	820-9075	\$14.85
Replacement 0.80mm Punch Tip	820-9076	.86
Replacement 1.00mm Punch Tip	820-9077	.86



C

**D Pin Remover**

Handy tool for removing pins from metal link bands. Keltec II glass-filled nylon body will not scratch or mar gold or silver. Pusher pin is made of hardened tool steel. Large screw with knurled handle guides the pusher pin into place.

Description	Item#	Each
Pin Remover	820-9071	\$15.30



D

**E Pin Pusher**

Handy for pushing stubborn pins out of watch bracelets when changing links for sizing. Slightly flattened tip prevents slipping. Made of hardened tool steel with hardwood handle. Measures 4<sup>3</sup>/<sub>4</sub>" long.

Description	Item#	Each
Pin Pusher	820-9070	\$4.20



E



A



B



C



D



E

### A Screwdriver Set in Rotating Stand

Includes nine color-coded setscrew screwdrivers, 19 spare blades, two extra setscrews and rotating stand for easy access and compact storage. Made in France.

Description	Item#	Each
A. Screwdriver Set in Rotating Stand	<b>820-9010</b>	<b>\$53.80</b>
Description	Item#	Pkg. of 3
0.60mm Blades	820-9011	\$1.29
0.80mm Blades	820-9012	1.29
1.00mm Blades	820-9013	1.29
1.20mm Blades	820-9014	1.29
1.40mm Blades	820-9015	1.71
1.60mm Blades	820-9016	1.71
2.00mm Blades	820-9017	1.71
2.50mm Blades	820-9018	1.83
3.00mm Blades	820-9019	1.83

### B Screwdriver Set in Wooden Stand

Includes six color-coded screwdrivers with reversible blades in 0.60, 0.70, 0.80, 1.00, 1.20 and 1.30mm sizes. Tempered and finely ground blades are held in place by collets, not setscrews. Hardwood stand keeps screwdrivers at just the right angle for easy selection. Has a storage compartment on top for a set of spare blades (included). Screwdrivers made in France.

Description	Item#	Each
Screwdriver Set in Wooden Stand	<b>820-9090</b>	<b>\$32.00</b>

### C Screwdriver Set

Includes six precision screwdrivers with replaceable blades that are held firmly in the handles by means of screw chucks. Blades are made of the finest tool steel, which has been heat-treated for toughness and long wear. The hexagonal heads will not roll on bench. Bodies are plated and have a knurled grip for nonslip holding. Screwdrivers measure approximately 4" long. Made in USA.

Description	Item#	Each
C. Screwdriver Set	<b>820-9000</b>	<b>\$19.60</b>
0.100" Blade	820-9001*	2.03
0.080" Blade	820-9002*	2.03
0.070" Blade	820-9003*	2.03
0.055" Blade	820-9004*	2.03
0.040" Blade	820-9005*	2.03
0.025" Blade	820-9006*	2.03

\*Three-piece minimum; please order in multiples of three.

### D JIS Screwdriver Set

Includes four color-coded screwdrivers with hex heads, knurled handles and hardened steel blades with 90°-cornered tips designed for use on watches. Screwdrivers measure 4½" long. Made in Europe.

Description	Item#	Each
D. JIS Screwdriver Set	<b>820-9023</b>	<b>\$17.40</b>
1.20mm Gray Screwdriver	820-9024	4.35
1.50mm Violet Screwdriver	820-9032	4.35
2.00mm Green Screwdriver	820-9033	4.35
2.50mm Blue Screwdriver	820-9034	4.35

### E Combo Screwdriver Set

Includes four flat-head screwdrivers (1.0, 1.20, 1.80 and 2.40mm) and two Phillips screwdrivers (#0 and #1) with hexagonal swivel heads. Packaged in a hard plastic box.

Description	Item#	Each
Combo Screwdriver Set	<b>820-8900</b>	<b>\$2.95</b>

**A V-Slot Anvil**

Steel anvil used as a base for staking, riveting and drilling small parts. Case-hardened and ground flat and smooth. Features V-slot for removing pinions and other small items. Has nine graduated holes (one for stumps) and five milled slots. Measures 1¾"L x 1¼"W x ½"H.

Description	Item#	Each
V-Slot Anvil	814-1015	\$17.30

**B Screwdriver Sharpener**

Stop throwing out screwdriver blades. This handy little device keeps your screwdriver blade locked in place so you can reshape and resharpen. Steel wheels on each end are carefully set into the body to provide even action when wheeled over a stone. Use with our sharpening stones to produce a precision-edged blade that's as good as new. Measures less than 2" wide.

Description	Item#	Each
Screwdriver Sharpener	820-8390	\$10.75

**C Watch Tissue**

Lint-free anti-tarnish tissue for wrapping and cleaning watch parts, jewelry and much more. Measures 4" x 4". Sold in boxes of 1,000 sheets.

Description	Item#	EACH Prices	
		1-2	3+
Watch Tissue, box of 1,000	813-1725	\$5.75	\$5.18

**D Dust Remover – Ozone-safe!**

Sprays microscopically pure gas to remove grit and dust without abrading or scratching sensitive surfaces. Reaches into the most inaccessible areas to remove dust instantly. Leaves no residue. Ideal for watchmakers, jewelers and craftsmen. Noncorrosive and safe for all materials. Sold in 12 oz. spray can with trigger nozzle.

Description	Item#	Each
Dust Remover, 12 oz. spray can	820-9080	\$11.95

**E Dust Blower**

This rubber dust blower removes specks and lint from hard-to-reach areas. Keeps moisture away from delicate parts. Measures 3¾"L x 1¾"W.

Description	Item#	Each
Dust Blower	820-9078	\$3.95

**F C-Clear Watch Crystal Compound**

Removes scuffs and scratches to make old plastic watch crystals look new again. Sold in ¼ lb. bars.

Description	Item#	Each
C-Clear Watch Crystal Compound	215-0041	\$5.45

**G Crystal Cement**

Provides a strong, durable bond between plastic and glass watch crystals and the bezel. Will not flake off or crack plastic. Sold in convenient ⅓ fl. oz. tube with pinpoint applicator tip.

Description	Item#	EACH Prices	
		1-2	3+
Crystal Cement, ⅓ fl. oz.	811-2540	\$4.40	\$3.96







**A**



**B**



**C**



**D**



**E**



**F**

**A Double Workbench**

Built-to-last double workbench. Features MDF top with 1½" railing, heavy-duty metal legs braced for stability with holes for bolting to floor, two drawers and two metal-lined pans for catching bench sweeps. Includes pullout armrest, bench pin and two mandrel holes for each station. Assembly required (all hardware supplied). Measures 61½"W x 16½"D x 33⅝"H. Ship. wt: 104 lbs. *Ships via BAX or truck only.*

Description	Item#	Each
Double Workbench	<b>810-1761</b>	<b>\$431.90</b>

**B Watchmaker's Workbench**

A classic, high-quality workbench for watchmakers, jewelers and engravers. Constructed of the finest hardwood, making it perfectly suitable for storefront use. Features solid wood top with railing, full-length side and back panels, fifteen drawers in a range of heights for keeping tools organized and a handy 18" wide cloth tray for catching bench sweeps. Measures 38½"W x 20"D x 38"H. Ship. wt: 140 lbs. *Ships via BAX or truck only.*

Description	Item#	Each
Watchmaker's Workbench	<b>810-1601</b>	<b>\$590.00</b>

**C Solid Ash Workbench**

Manchurian ash workbench with beautiful polished natural finish. Features ¾" thick solid wood top with railing, two-tier tool tray, three metal-lined side drawers and metal-lined pan for catching bench sweeps. Includes two pullout armrests, bench pin and two mandrel holes. Assembly required (all hardware supplied). Measures 37"W x 20¾"D x 40½"H. Ship. wt: 119 lbs. *Ships via BAX or truck only.*

Description	Item#	Each
Solid Ash Workbench	<b>810-1770</b>	<b>\$445.00</b>

**D Solid Wood Workbench**

A fine workbench with a natural finish at an affordable price. Features sturdy wood top with 1" railing, full-length side and back panels, two-tier tool tray, three side drawers and metal-lined pan for catching bench sweeps. Includes two pullout armrests, bench pin and two mandrel holes. Assembly required (instructions supplied). Measures 38¾"W x 19½"D x 39"H. Ship. wt: 84 lbs. *Ships in two boxes via UPS.*

Description	Item#	Each
Solid Wood Workbench	<b>810-1785</b>	<b>\$315.00</b>

**E SmartStool 61™**

The high-quality swiveling chair with ergonomic, adjustable design for unmatched comfort and convenience. Boasts separate controls for seat and backrest height and angle, ultra-soft seat cushions for superior comfort, adjustable foot-ring for lower leg support and steel base with anti-scuff nubs. Measures 18½"W x 20¼"D x 34¼"-39½"H. Seat height from floor: 16"-21¼". Ship. wt: 47 lbs.

Description	Item#	Each
SmartStool 61	<b>810-1808</b>	<b>\$475.00</b>

**F Adjustable Bench Chair**

An economical yet sturdy swiveling chair. Provides ample support for reduced fatigue. Features separate controls for making seat and spring back adjustments, Naugahyde cushions and durable casters for smooth rolling. Seat height from floor: 16"-24".

Description	Item#	Each
Adjustable Bench Chair	<b>810-1800</b>	<b>\$165.00</b>

### A Bench Pin

Standard reversible wooden bench pin for both single and double workbenches. Made to fit tightly but may require some minor adjustments. Used for support when filing or sawing. Measures 6¼"L x 2⅝"W x 1⅞" thick. Tang measures approx. 1½"L x 2⅝"W x ½" thick.

Description	Item#	EACH Prices		
		1-11	12-143	144+
Bench Pin	814-1000	\$2.95	\$2.51	\$2.07



### B Bench Pin and Holder

Can be easily screwed into edge of workbench. Bench pin measures 4"L x 2¼"W x 1" thick with 1¼"L x 2¼"W x ¾" tang. Holder measures 4" wide with 2¼"W x ¾"H opening and thumb screw for securing bench pin firmly in place.

Description	Item#	Each
B. Bench Pin and Holder	814-1005	\$8.95
Replacement Bench Pin	814-1006	2.70



### C Bench Pin and Anvil

A portable, versatile device for hammering, sawing, filing and flattening. Securely attaches to bench or table with 1½" overhang up to 1¾" thick. Anvil area measures 2¾" x 3". Wooden bench pin measures 4"L x 2¼"W. Tang measures approx. 1½"L x 2¼"W x ⅜" thick.

Description	Item#	Each
C. Bench Pin and Anvil	814-1010	\$15.65
Replacement Bench Pin	814-1011	2.70



### D Master Ring Sizing Vise Set

Designed by a goldsmith, this set makes ring sizing faster and safer. Yields outstanding results each and every time. Includes two wooden bench pins: one with measuring gauge, middle long slot for cutting shapes, two rubber posts for cutting rings, locking posts for holding delicate items, front slot for cutting stock and front pin for sanding; the other with a single upright nonslip peg for bracing rings during the cleanup phase of sizing.

Description	Item#	Each
Master Ring Sizing Vise Set	814-0980	\$62.00



### E Ring Sizing Bench Pin

Screws to top of bench. Shaped especially to hold rings. Has channel for guiding sawblade. Measures 5½"L x ¾"W x ⅜" thick.

Description	Item#	Each
Ring Sizing Bench Pin	814-0990	\$2.65



### F Slotted Bench Pin with Clamp

This reversible wooden bench pin clamps to the edge of any workbench with a surface up to 1⅞" thick. Has a deep V-slot and a straight slot for drilling, sawing and securing ring clamps. Measures 7½"L x 2¼"W x ½" thick.

Description	Item#	Each
Slotted Bench Pin with Clamp	814-0995	\$5.90



### G Rubber Bench Filing Block

Provides a 3¼" extension off the workbench. Consists of rubber block, iron frame and steel anvil. Rubber block serves as a rest for work to be filed, prevents work from slipping and protects objects from being marred. Measures 5"L x 2¼"W.

Description	Item#	Each
G. Filing Block	814-0985	\$16.20
Replacement Rubber Block	814-0986	3.40



**GRS® BenchMate™ – A unique work holding system that no jeweler should be without!**

The BenchMate complete holding system makes jewelry fabrication and repair faster and easier. Mounts on the front of the workbench at a convenient height to provide support for workpieces, reducing slippage and user fatigue. Completely adjustable pivoting holder positions workpiece and holds it securely while engraving, setting, soldering and more. Removable handrest provides extra stability, helping you do better work with less effort. Precision-machined steel construction ensures longevity. Tough plastic jaw inserts help prevent marring. Can be used with both hand and power tools. Made in USA.



**A GRS® BenchMate™ Basic Package**

Includes ring clamp and holder, removable handrest, extra jaw inserts (two pairs), fixed mounting plate, shellac pad, mounting hardware and tools.

Description	Item#	Each
A. Right-Hand Basic Package	<b>856-0182</b>	<b>\$198.00</b>
Left-Hand Basic Package	<b>856-0183</b>	<b>198.00</b>



**B GRS® BenchMate™ Deluxe Package**

Includes ring clamp and holder, removable handrest, extra jaw inserts (two pairs), fixed mounting plate, shellac pad, third hand tweezers, bench pin with mount, two soldering clamps (narrow and wide), mounting hardware and tools.

Description	Item#	Each
B. Right-Hand Deluxe Package	<b>856-0184</b>	<b>\$269.00</b>
Left-Hand Deluxe Package	<b>856-0185</b>	<b>269.00</b>



**C GRS® BenchMate™ Plus Package**

Includes ring clamp and holder, removable handrest, extra jaw inserts (two pairs), fixed mounting plate, shellac pad, two third hand tweezers, bench pin with mount, two soldering clamps (narrow and wide), soldering pad assembly, mounting hardware and tools.

Description	Item#	Each
C. Right-Hand Plus Package	<b>856-0181</b>	<b>\$328.00</b>
Left-Hand Plus Package	<b>856-0187</b>	<b>328.00</b>



**D GRS® BenchMate™ Setter's Package**

Includes ring clamp and holder, removable handrest, extra jaw inserts (two pairs), fixed mounting plate, shellac pad, bench pin with mount, inside ring holder, mounting hardware and tools.

Description	Item#	Each
D. Right-Hand Setter's Package	<b>856-0213</b>	<b>\$289.00</b>
Left-Hand Setter's Package	<b>856-0214</b>	<b>289.00</b>

**GRS® BenchMate™ Replacement Parts**

Description	Item#	Each
Jaw Inserts, 5 pairs	856-0197	\$13.80
Fixed Mounting Plate	856-0196	15.98
Shellac Pad	856-0186	4.30
Third Hand Tweezers	856-0190	33.95
Bench Pin with Mount	856-0192	23.95

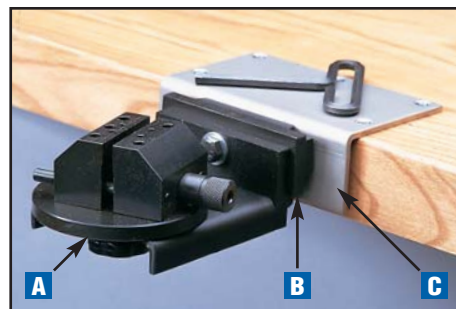
Description	Item#	Each
Narrow Soldering Clamp	856-0188	\$8.85
Wide Soldering Clamp	856-0194	8.85
Soldering Pad Assembly (4" x 4" nonasbestos soldering surface)	856-0195	28.95
Friction Washers, pkg. of 6	856-0199	2.86



**A - C GRS® BenchMate™ Multipurpose Vise**

Attaches to BenchMate or directly to your bench. Tilts left and right and rotates on vertical axis so you can find the best working angle. Features holes in top for holding pins or the padded ring clamp from GRS 30-Piece Attachment Set #856-0277 (see p. 220). Made of satin-finished steel. To mount, fit in Fixed Mounting Plate, secure to Benchtop Mounting Adapter, then screw into bench.

Description	Item#	Each
A. Multipurpose Vise	<b>856-0172</b>	<b>\$118.95</b>
B. Fixed Mounting Plate	<b>856-0196</b>	<b>15.98</b>
C. Benchtop Mounting Adapter	<b>856-0193</b>	<b>23.00</b>



**D GRS® BenchMate™ Inside Ring Mandrel – Expands to hold rings securely.**

A valuable, timesaving addition to the workbench. Holds rings from the inside to provide improved access for a variety of applications, especially setting. Easily handles hard-to-hold tapered and delicate designs that can be crushed by ordinary ring clamps. Includes seven different mandrels for holding ring sizes 4–13 without marring. Select the closest mandrel for each ring, then expand it by turning the screw until the ring is secure. Fits into any BenchMate collar or can be used by itself. Made of solid steel.

Description	Item#	Each
Inside Ring Mandrel	<b>856-0210</b>	<b>\$69.00</b>



**E, F GRS® BenchMate™ Engraver's Block Shelves**

Two different heavy-gauge metal shelves for securely holding your engraver's block at the absolute perfect working height. Let you maintain correct posture for minimizing fatigue throughout the workday. Use Standard Shelf for any engraver's block (see pp. 220, 221). Use the Large Shelf with Height Adjustment Bracket for GRS Positioning Vise #271-3025 (see p. 280). Height Adjustment Bracket also sold separately (see below) for retrofit onto Standard Shelf to give you better flexibility.

Description	Item#	Each
E. Standard Shelf	<b>856-0198</b>	<b>\$36.95</b>
F. Large Shelf with Height Adjustment Bracket	<b>856-0173</b>	<b>68.00</b>



**G GRS® BenchMate™ Height Adjustment Bracket**

Simply attach this sturdy steel bracket to your Standard Shelf (see above) for improved range of height adjustment.

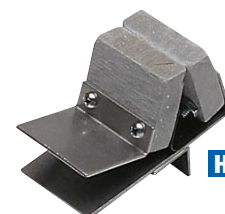
Description	Item#	Each
Height Adjustment Bracket	<b>856-0174</b>	<b>\$42.95</b>



**H GRS® BenchMate™ Insulated Solder Clamp – Won't absorb heat!**

Features unique jaws made of nonasbestos solder board material. Perfect for gripping items securely without marring. Keeps heat isolated within the workpiece—where it belongs for maximum safety. One jaw is stationary, and the other opens and swivels for conforming to uneven surfaces.

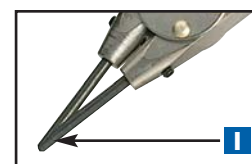
Description	Item#	Each
Insulated Solder Clamp	<b>856-0212</b>	<b>\$48.95</b>



**I GRS® BenchMate™ Tungsten Tweezer Tips**

Replace the standard tips of your BenchMate third hand for soldering platinum without risk of contamination. Medium points. Sold by the pair.

Description	Item#	Each
Tungsten Tweezer Tips, pair	<b>856-0191</b>	<b>\$17.80</b>







A

Representative items pictured; actual items may vary.

**A Professional Jeweler's Bench Tool Set**

A money-saving set of basic tools and supplies needed by each bench worker. Includes all items listed below except additional items in bottom-right corner. All items can also be purchased individually—refer to specific page numbers given for detailed product information.

Description	Item#	Each
Professional Jeweler's Bench Tool Set	<b>810-0050</b>	<b>\$1,435.00</b>

**Bench Items:**

Bench Brush	243	Ring Mandrel	288	HS Flat Gravers (2 pcs.)	217
Stiff Hand Brush	74	Chasing Hammer	246	Graver Handle #5	223
Selvyt Cloth	89	Rawhide Mallet	244	Soft Arkansas Bench Stone	60
Mandrels (6 pcs.)	15	Brass/Nylon Mallet	245	Diamond D Cement (4 oz. Cake)	374
SUPRA Brushes (1 dz.)	68	Lube-Stik	366	Milgrain Holder	380
GK-10 Pumice Wheel (100 pcs.)	12	Automatic Center Punch	186	French Milgrain Wheels (2 pcs.)	380
Safety Goggles	360	Needle Scriber	225	Diamond Tweezers	421
Swiss Half-Round Ring File, 6"	228	Prong Lifter	376		
File Handle #4	242	Adjustable Scraper	391	<b>Soldering Items:</b>	<b>Page</b>
Swiss Needle Files (set of 12)	237	Divider	285	Solderite Soft Soldering Pad, 6" x 6"	393
File Card	231	Blue Ribbon Drill Set A	184	Solder Pick	391
Emery Hand Buffs (2 pcs.)	39	Degree Gauge #5	284	Borax Brush #3	75
Bobbing Compound (1 lb. bar)	48	Pin Vise	425	Hard Soldering Flux	389
Red Rouge (1 lb. bar)	48	<i>Jewelry Making Book</i>	453	Optivisor	276
Wire and Sheet Gauge	297	<b>Stone Setting Items:</b>	<b>Page</b>	Electric Pickler	396
Baker Diamond Gauge	297	HS Hart Burs (set of 33)	96	Pickling Compound	396
Pocket Vernier Caliper	283	Krause Burs (6 pcs.)	92	Copper Tongs	396
Ruler, 6"	285	Cup Burs (set of 12)	94	Economical Tweezers	421
Flat Sawframe	367	Stone Setting Pliers	309	Cross-Locking Tweezers	423
SUPRA Sawblades (4 gross, assorted)	369	Swiss Beading Tools (set of 12)	379	Ring Set Soldering Tweezers	422
Curved Snips	385	Beading Plate (holds 12 beads)	379	Head and Shank Tweezers	422
Shears	385	Beeswax (1 oz. cake)	381		
Chain Pliers, 5¼"	302	Curved Burnisher	378	<b>Additional Items You'll Need</b>	<b>Pages</b>
Flat Pliers, 5¼"	302	Setting Tool	376	for Setting up a New Shop:	
Round Pliers, 5¼"	302	Prong Pusher	376	Workbench and Chair	438
Diagonal Cutting Pliers, 5¼"	302	Bezel Roller	381	Work Lamp	266-271
Ring Bending Pliers	310	Ring Clamp	334	Torch Kit	398-401
Ring Forming Pliers	310	Hastings 10X Triplet Loupe	272	Flexible Shaft	340-342
Ring Holding Pliers	310	HS Round Graver	217	Steam Cleaner	170
Bench Block	253	HS Knife Gravers (2 pcs.)	217	Ultrasonic Cleaner	166-168
				Rolling Mill	336-338
				Polishing Equipment	318, 322-323

### A Three-Drawer Storage Cabinet

The perfect storage solution for tight areas, this cabinet is also an attractive addition to your work area. Features drawers that are deep enough to hold a variety of tools close at hand. Fits under your existing workbench. Made of hardwood for longevity and good looks. Measures 11¼"W x 15⅝"D x 22½"H. Net wt: 35 lbs.

Description	Item#	Each
Three-Drawer Storage Cabinet	810-1595	\$132.00



A

### B Tool Chest

A lightweight, rugged polypropylene tool chest with six drawers for easy tool organization. Four of the drawers include adjustable dividers that allow compartment reconfiguration. Retractable front door panel latches firmly to hold drawers in place during transport. Padlock tab gives you the ability to add another level of security if desired. Dark gray with light gray drawers. Measures 19½"W x 10⅜"D x 15"H.

Description	Item#	Each
Tool Chest	811-2702	\$139.00



B

### C Toolbox with Cantilevered Trays

A lightweight, rugged polypropylene tool box with six trays for easy tool organization. Cantilevered trays with dividers keep tools separated and protected. Draw-tight latches and tongue-and-groove construction provide a secure seal. Trays are supported to resist tipping. Dark gray with light gray trays. Measures 18½"W x 10¾"D x 8¾"H with 4½" deep open bottom storage compartment.

Description	Item#	Each
Toolbox with Cantilevered Trays	811-2701	\$46.50

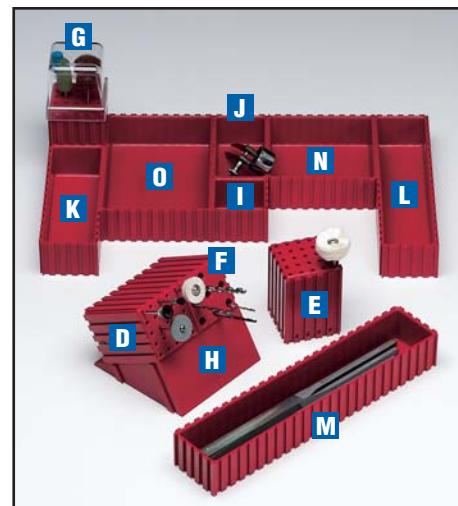


C

### D - O Modular Tool Holder System

Consists of completely modular bur and tool holders that you interlock to form the most efficient configuration for your bench. Lets you design a tool holder for any work surface, no matter how small. Modules slide together and apart neatly for easy reconfiguration. Made of hard, thick plastic durable enough to withstand years of wear and tear.

Description	Item#	Each
D. 2" Square w/ 25 holes, 2.35mm (3/32")	840-0150	\$4.45
E. 2" Square w/ 25 holes, 3.5mm (1/8")	840-0155	3.75
F. 2" Square w/ 9 holes, 6.7mm (1/4")	840-0160	3.00
G. Clear Plastic Cover (fits over Square)	840-0165	1.00
H. Wedge (holds Squares/Trays at good working angle)	840-0170	5.60
I. 2" x 2" Tray	840-0185	1.90
J. 2" x 4" Tray	840-0190	3.40
K. 2" x 5⅞" Tray	840-0175	3.00
L. 2" x 7¾" Tray	840-0180	3.50
M. 2" x 9¾" Tray	840-0195	4.00
N. 4" x 4" Tray	840-0200	4.45
O. 4" x 6" Tray	840-0205	5.70



### P Plier and Tool Organizer

Beautifully made yet practical wooden organizer with seven open compartments for pliers, open space below for various small tools and a drawer for those small parts so essential to every bench. Made of hardwood (except pressboard plier spacers) with dovetailed joints and varnished finish. Measures 7½"W x 6½"D x 3¾"H.

Description	Item#	Each
Plier and Tool Organizer	816-4057	\$16.75

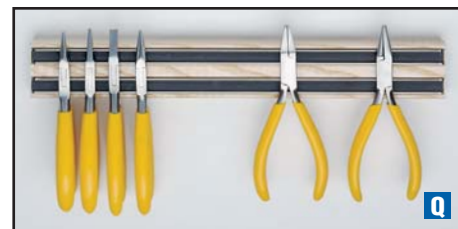


P

### Q Magnetic Tool Holder

A handy 12" strip with permanent magnets for holding pliers, screwdrivers, tweezers and other tools. Helps keep bench clutter-free. Allows easy access to tools. Screws into surface for sturdiness.

Description	Item#	Each
Magnetic Tool Holder	840-0008	\$21.75



Q



**A**

**A 64-Drawer Storage Cabinet**

One-piece cabinet made of high-impact plastic. Features strong, flexible, chemical-resistant, translucent polypropylene drawers for fast content identification, finger-grip drawer pulls for easy access and rear stop tabs for prevention of spills. Can be stacked securely one on top of another or wall-mounted via rear keyhole slots. Measures 20"W x 6<sup>3</sup>/<sub>8</sub>"D x 15<sup>7</sup>/<sub>8</sub>"H with 2<sup>1</sup>/<sub>8</sub>"W x 5<sup>3</sup>/<sub>8</sub>"D x 1<sup>1</sup>/<sub>2</sub>"H drawers. Made in USA.

Description	Item#	Each
64-Drawer Storage Cabinet	<b>810-0495</b>	<b>\$44.95</b>



**B**

**B 18-Compartment Tray**

An 18-compartment plastic tray great for storing small items. Slide-on lid keeps parts secure even if tray is dropped. Compartments have rounded fronts for easy retrieval of beads, stones or findings. Light blue color makes items easy to see. Measures 10<sup>1</sup>/<sub>2</sub>"L x 6<sup>3</sup>/<sub>4</sub>"W with 2"L x 1<sup>5</sup>/<sub>8</sub>"W x 1<sup>1</sup>/<sub>2</sub>"H compartments.

Description	Item#	Each
18-Compartment Tray	<b>807-1200</b>	<b>\$7.65</b>



**C**



**D**

**C - E Plastic Storage Boxes**

These handy boxes keep findings, gems, sawblades, solders, chuck keys and countless other small items organized at your bench so you can find them when you need them. Made of translucent plastic except #807-1201, which is clear plastic. Hinged tops.

Description	Dimensions (L x W x H)	Item#	EACH Prices		
			1-2	3-5	6+
C. Box w/ 7 nonadjustable compartments	4 <sup>5</sup> / <sub>8</sub> " x 3 <sup>5</sup> / <sub>8</sub> " x 7 <sup>7</sup> / <sub>8</sub> "	<b>807-1201</b>	<b>\$1.85</b>	<b>\$1.67</b>	<b>\$1.57</b>
D. Box w/ 18 nonadjustable compartments	7 <sup>7</sup> / <sub>8</sub> " x 4 <sup>1</sup> / <sub>8</sub> " x 1 <sup>1</sup> / <sub>4</sub> "	<b>807-1202</b>	<b>2.48</b>	<b>2.23</b>	<b>2.11</b>
E. Box w/ 15 adjustable dividers	10 <sup>3</sup> / <sub>4</sub> " x 6 <sup>1</sup> / <sub>2</sub> " x 1 <sup>5</sup> / <sub>8</sub> "	<b>807-1203</b>	<b>8.29</b>	<b>7.46</b>	<b>7.05</b>
Box w/ 20 radiused compartments and adjustable dividers	13" x 8 <sup>3</sup> / <sub>4</sub> " x 2 <sup>1</sup> / <sub>8</sub> "	<b>807-1204</b>	<b>13.35</b>	<b>12.02</b>	<b>11.35</b>
Box w/ 24 compartments and three removable dividers, each with tab on one end	8" x 4" x 1 <sup>1</sup> / <sub>4</sub> "	<b>807-1205</b>	<b>16.85</b>	<b>15.17</b>	<b>14.32</b>



**E**



**F**

**G**

**F, G Stackable Round Tray Sets**

These convenient tray sets help you unclutter your bench by making efficient use of vertical space. Let you organize small parts, beads, stones and other small objects. Each tray has a threaded bottom that securely screws to the tray below it, allowing access to any tray at any level. Made of transparent plastic, so contents are always visible. Available in two diameters: 1<sup>1</sup>/<sub>4</sub>" and 2".

Description	Item#	Each
F. Small Tray Set (seven 1 <sup>1</sup> / <sub>4</sub> " dia. trays)	<b>816-4062</b>	<b>\$1.75</b>
G. Large Tray Set (five 2" dia. trays)	<b>816-4060</b>	<b>2.50</b>



**H**

**H 12-Compartment Gem Tray**

Handy round tray with 12 extra-deep compartments for more storage and easy access. Rotating lid opens just one compartment at a time. Measures 3<sup>1</sup>/<sub>4</sub>" dia. x 5<sup>8</sup>/<sub>16</sub>"H.

Description	Item#	Each
12-Compartment Gem Tray	<b>816-4070</b>	<b>\$2.95</b>



**A Work Processing Tray**

A heavy-duty, rigid cardboard tray with 1" high sides for holding work in progress. Can be used alone for large parts or with either of two included plastic round or rectangular inserts for small parts. Inserts are covered in nonmarring, nonscratching material. Round insert has 50 round depressions, each measuring approximately 1" dia. x 1/2"H. Rectangular insert has 32 rectangular depressions, each measuring approximately 1 3/4"L x 1 1/2"W x 1/2"H.

Description	Item#	EACH Prices	
		1-9	10+
A. Work Processing Tray	<b>807-1170</b>	<b>\$3.75</b>	<b>\$3.38</b>
Optional Round Insert	<b>807-1175</b>	<b>5.35</b>	<b>4.82</b>
Optional Rectangular Insert	<b>807-1179</b>	<b>3.90</b>	<b>3.51</b>



**A**

**B Bib Apron**

Protects clothing and holds most frequently used tools close at hand. Includes extra-long waist strings for front tying. Made of machine-washable heavyweight cotton. Available with or without pockets. Comes in royal blue with white screen-printed Gesswein logo. Measures 17 1/4"W x 24"L. Made in USA.

Description	Item#	Each
B. Bib Apron with pockets	<b>827-1201</b>	<b>\$19.99</b>
Bib Apron without pockets	<b>827-1200</b>	<b>14.50</b>



**B**

**C Suede Bib Apron**

This durable, comfortable apron protects clothing while you work with power equipment and hand tools. Has no pockets in which debris can be trapped. Made of tanned, split, rust-colored heavyweight suede. Includes adjustable ties with brass grommet reinforcements. One size fits all. Measures 24"W x 36"L.

Description	Item#	Each
Suede Bib Apron	<b>827-1507</b>	<b>\$41.95</b>



**C**

**D Fire-Resistant Apron**

Made of fire-resistant fabric ideal for welding applications. Features full-coverage design for protection of neck, chest and lap, small chest pocket, large waist pocket, bottom flap for catching runaway parts, comfortable neckband and extra-long waist strings for front tying. Comes in navy blue. One size fits all. Measures 27"W x 36"L.

Description	Item#	Each
Fire-Resistant Apron	<b>827-1508</b>	<b>\$24.95</b>



**D**

**E Lab Coat**

Full-length coat with long sleeves, notched lapel, hemmed cuffs and bottom. Includes two breast pockets, two hip pockets and reinforced side slit for easy access to inside pocket. Made of permanent-press, washable polyester/cotton blend. Comes in white with royal blue embroidered Gesswein logo. Can be burned to reclaim precious metals. Made in USA.

Description	Fits Sizes	Item#	Each
Small Men's Coat	36-38	<b>827-1500</b>	<b>\$37.50</b>
E. Medium Men's Coat	40-44	<b>827-1501</b>	<b>37.50</b>
Large Men's Coat	46+	<b>827-1502</b>	<b>43.50</b>



**E**





**A**



**B**



**C**



**D**



**E**



**F**



**G**

**I**



**H**

**J**



**K**

**A - C Work Processing Tray**

A heavy-duty, rigid cardboard tray with 1" high sides for holding work in progress. Can be used alone for large parts or with either of two plastic inserts (round or rectangular) for small parts. Inserts are covered in nonmarring, nonscratching material. Round insert has 50 round depressions, each measuring approximately 1" dia. x 1/2" deep. Rectangular insert has 32 rectangular depressions, each measuring approximately 1 3/4"L x 1 1/2"W x 1/2"D.

Description	L x W x H	Item#	EACH Prices	
			1-9	10+
A. Work Processing Tray	14 3/4" x 8 1/4" x 1"	807-1170	\$3.75	3.38
B. Square Insert (32)		807-1179	3.90	3.51
C. Round Insert (50)		807-1175	5.35	4.82

**D Shop Work Tray**

This large stackable tray is made of flexible yet strong .025" thick plastic. Measures approx. 21 1/2"L x 12 1/8"W x 1"H. The 100 compartments measure 1 5/8"L x 3/4"W x 5/8"H.

Description	L x W x H	Item#	EACH Prices	
			1-9	10+
Shop Work Tray	21 1/2" x 12 1/8" x 1"	807-1066	\$6.95	\$6.26

**E Black Tray with 50 Gem Jars**

Black tray with foam insert to firmly hold 50 gem jars. Each jar contains foam to securely hold gems in place.

Description	L x W x H	Item#	Each
Black Tray	14 3/4" x 8 3/8" x 1"	807-1190	\$16.45

**F Compartment Tray**

An 18-compartment plastic tray perfect for storing small items. Slide-on lid keeps parts secure even if tray is dropped. Compartments have rounded fronts for easy retrieval of beads, stones or findings. Light blue color makes items easy to see. Measures 10 1/2"L x 6 3/4"W with 2"L x 1 5/8"W x 1 1/2"H compartments.

Description	L x W	Item#	Each
Compartment Tray	10 1/2" x 6 3/4"	807-1200	\$7.65

**G - J Round Metal Boxes**

Tin boxes for storing small stones. Sold in packages of 12 and by the gross.

Size	Qty.	Item#	Each
G. 15/16"	12	807-1215	\$9.45
	144	807-1210	94.00
H. 1 1/2"	12	807-1216	9.75
	144	807-1211	125.00
I. 2"	12	807-1217	9.75
	72	807-1212	64.45
J. 2 3/8"	12	807-1218	12.15
	144	807-1213	151.75

**K Sorting Trays**

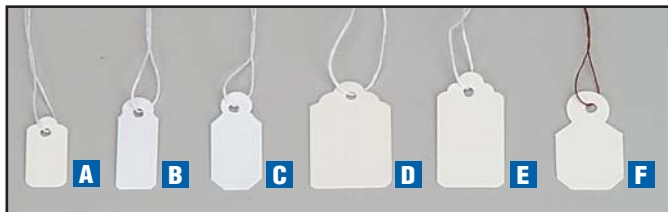
Each has four grooves on one side and assorted sizes of holes on the other for sorting diamonds, colored stones, pearls or beads. Measures 7 1/8"L x 3 3/4"W.

Description	L x W	Item#	EACH Prices	
			1-2	3+
K. Black Sorting Tray	7 1/8" x 3 3/4"	816-2100	\$3.95	\$3.56
White Sorting Tray	7 1/8" x 3 3/4"	816-2105	3.95	3.56

### A - F Paper String Tags

Available in white only. Imported version is heavyweight paper. Sold in boxes of 1,000.

Size	Item#	Box of 1,000
A. 5/16" x 1/2"	807-1300	\$18.75
B. 5/16" x 5/8"	807-1310	18.75
C. 3/8" x 3/4"	807-1320	18.75
D. 1/2" x 3/4"	807-1330	20.35
E. 5/8" x 7/8"	807-1340	20.35
F. 5/8" x 1/2", Imported	810-0478	5.75



### G, H Arch Crown® Plastic Button Tags

Easy to close by hand or with pen barrel. For security purposes, they cannot be reapplied to other merchandise. Made of solid plastic to withstand repeated ultrasonic cleaning. Use with fine-tip indelible ink marker. Sold in packages of 1,000.

Size	White Item#	Gold Item#	Pkg. of 1,000
G. 1 3/8" x 1/2"	807-1105	807-1110	\$52.75
H. 2" x 5/8"	807-1115	807-1100	56.90

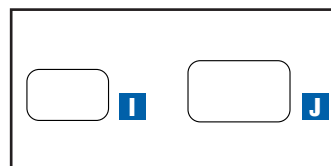
Description	Item#	Each
Fine-Tip Indelible Black Marker	807-1120	\$4.95



### I, J PSA Labels

Easily pull off without damaging or leaving residue on metal, wood, plastic and other materials. Use with special marking pen #810-0420. Shapes shown in half scale at left.

Size	Qty.	Item#	Each
I. 5/16" x 1/2"	1,000	807-1253	\$7.45
J. 3/8" x 5/8"	1,000	807-1254	8.50



### K Sharkskin™ Tags

White tags for repair and identification. Have pressure-sensitive adhesive backing. Centers are free of adhesive, so they will not mar or soil your jewelry. Allow you to size and fit rings without removing tags. Withstand repeated ultrasonic cleaning and retain shape and color. Use with indelible ink marker. Sold in bags of 500 (large, 1 7/8" x 1/2") and 1,000 (small, 1 3/8" x 1/2"). Both are long-neck style and include free marking pen.

Size	Qty.	Item#	Each
1 7/8" x 1/2"	Bag of 500	810-0470	\$3.95
1 3/8" x 1/2"	Bag of 1,000	810-0475	5.45

Description	Item#	Each
Special Marking Pen	810-0420	\$7.70



### L White Cotton Gloves

Keep your jewelry and silverware fingerprint-free to maintain high-luster finish. Very good for handling merchandise for packing.

Description	Item#	DOZEN Prices		
		1-2	3-11	12+
Small Gloves, 12 pairs	805-1030	\$5.00	\$4.50	\$4.00
Regular Gloves, 12 pairs	805-1032	5.25	4.73	4.20
Large Gloves, 12 pairs	805-1033	7.40	6.66	5.92



### M Latex Gloves

Disposable latex gloves for everyday use. Prevent skin problems that arise from chemical reactions caused by constant exposure to soaps, solvents and other mild chemicals. Powdered to go on easily.

Description	Item#	Box of 100
Small Gloves	805-1043	\$14.95
Medium Gloves	805-1041	14.95
Large Gloves	805-1042	14.95





**A Anti-Tarnish Tissue Roll**

The finest quality white bleached tissue for wrapping silverware, jewelry and other gifts. Will not tarnish merchandise. Measures 7<sup>3</sup>/<sub>8</sub>" wide.

Description	Item#	EACH Prices	
		1-2	3+
Anti-Tarnish Tissue Roll	813-1750	\$12.75	\$11.48

**B Cutter for Tissue Roll or Gift Wrap**

Has steel frame and cutter with wood base that can be screwed to table. For 7<sup>3</sup>/<sub>8</sub>" wide rolls.

Description	Item#	Each
Cutter for Tissue Roll or Gift Wrap	813-1755	\$11.25



**C Watch Tissue**

Lint-free anti-tarnish tissue for wrapping and cleaning watch parts, jewelry and much more. Measures 4" x 4". Sold in boxes of 1,000 sheets.

Description	Item#	Box of 1,000	
		1-2	3+
Watch Tissue	813-1725	\$5.75	\$5.18



**D High-Quality Diamond Parcel Paper**

Unmatched in sensitivity and protection for handling loose polished or rough diamonds and precious stones. Made of the finest paper stock, then hand-finished for the right touch. Specially developed with the best blue and white flute colors to enhance D-H color diamonds and reflect them in the best light. Measures 3<sup>1</sup>/<sub>4</sub>" x 1<sup>3</sup>/<sub>4</sub>". Sold in packages of 25 sheets.

Description	Item#	Pkg. of 25
High-Quality Diamond Parcel Paper	810-0460	\$8.50



**E Economy Diamond Parcel Paper**

White three-ply paper for protecting stones and showing them off at their best. Measures 7" x 5<sup>3</sup>/<sub>4</sub>". Sold in boxes of 100 sheets.

Description	Item#	Box of 100
Economy Diamond Parcel Paper	810-0465	\$11.90



**F Triple-Duty Repair Envelopes**

**A foolproof system against loss.**

Each numbered envelope has two numbered detachable stubs: one for the customer and one for filing. Made of strong buff paper. Sold in packages of 1,000. Ship. wt: 8 lbs.

L x W	Series Numbers	Item#	Pkg. of 1,000
5 <sup>3</sup> / <sub>4</sub> " x 3 <sup>1</sup> / <sub>8</sub> "	1 to 1,000	810-0400	\$49.85
	1,001 to 2,000	810-0401	49.85
	2,001 to 3,000	810-0402	49.85
	3,001 to 4,000	810-0403	49.85
	4,001 to 5,000	810-0404	49.85



**G, H Job Envelopes**

Blank for general use. Manila colored with gummed flaps. Sold in boxes of 500.

L x W	Ship. Wt.	Item#	Box of 500	
			1-2	3+
G. 4 <sup>1</sup> / <sub>4</sub> " x 2 <sup>1</sup> / <sub>2</sub> "	2 lbs., 2 oz.	810-0418	\$19.10	\$17.19
H. 5 <sup>1</sup> / <sub>2</sub> " x 3 <sup>1</sup> / <sub>8</sub> "	3 lbs., 12 oz.	810-0419	19.60	17.64

**A Economy Clear Zip Bags**

Affordable transparent polybags.

L x W	Item#	Pkg. of 1,000
2" x 2"	810-0500	\$4.75
3" x 2"	810-0501	5.15
4" x 3"	810-0502	7.60
5" x 3"	810-0503	7.90
6" x 4"	810-0504	13.65



**B Economy Clear Zip Bags with White Write-On Area**

Have white block that accepts grease pencil, pen, marker or rubber stamp.

L x W	Item#	Pkg. of 1,000
3" x 2"	810-0524	\$6.20
4" x 3"	810-0525	8.45
5" x 3"	810-0526	10.35
6" x 4"	810-0527	15.00



**C Clear Zip Bags with Red Line**

These bags seal and reseal easily and can be used over and over again. Stronger closure than economy clear bags.

L x W	Item#	Pkg. of 1,000
2" x 2"	810-0530	\$10.80
3" x 2"	810-0531	13.10
4" x 3"	810-0532	18.39
5" x 3"	810-0533	18.50
6" x 4"	810-0534	20.50



**D Clear Zip Bags with Red Line and White Write-On Area**

Offer same strong closure and easy sealing and resealing as clear bags with red line. Also have white block that accepts grease pencil, pen, marker or rubber stamp.

L x W	Item#	Pkg. of 1,000
3" x 2"	810-0550	\$15.50
4" x 3"	810-0551	18.20
5" x 3"	810-0552	22.25
6" x 4"	810-0553	29.90



**E Clear Zip Bags 2ML**

Clear plastic bags with standard closure available in a variety of sizes.

L x W	Item#	Pkg. of 1,000
2" x 5"	810-0498	\$24.85
2" x 8"	810-0505	36.80
6" x 6"	810-0499	37.10
8" x 10"	810-0506	32.50
10" x 12"	810-0507	80.60





**A**



**B**



**C**



**D**



**E**

**F**



**G**



**H**

**A Black Ring Cases**

Wooden cases with black velvet foam inserts for providing excellent contrast to your sparkling jewelry. Cases feature black vinyl exterior, satin interior and locking lid latches.

Description	L x W x H	Item#	Each
12-Ring Case	8 <sup>1</sup> / <sub>4</sub> " x 3 <sup>1</sup> / <sub>2</sub> " x 1 <sup>1</sup> / <sub>2</sub> "	<b>807-1083</b>	<b>\$15.45</b>
24-Ring Case	8 <sup>1</sup> / <sub>4</sub> " x 4 <sup>3</sup> / <sub>4</sub> " x 2"	<b>807-1082</b>	<b>23.90</b>
36-Ring Case	8 <sup>1</sup> / <sub>4</sub> " x 7 <sup>1</sup> / <sub>4</sub> " x 2"	<b>807-1081</b>	<b>27.95</b>
72-Ring Case	14 <sup>3</sup> / <sub>4</sub> " x 8 <sup>1</sup> / <sub>4</sub> " x 2"	<b>807-1080</b>	<b>41.75</b>

**B Black Ring Trays**

Wooden trays with black velvet foam inserts for providing excellent contrast to your sparkling jewelry. Trays have decorative hand tooling around their edges.

Description	L x W x H	Item#	Each
12-Ring Tray	8 <sup>1</sup> / <sub>4</sub> " x 3 <sup>1</sup> / <sub>2</sub> " x 1"	<b>807-1078</b>	<b>\$7.10</b>
24-Ring Tray	8 <sup>1</sup> / <sub>4</sub> " x 4 <sup>3</sup> / <sub>4</sub> " x 1"	<b>807-1077</b>	<b>7.25</b>
36-Ring Tray	8 <sup>1</sup> / <sub>4</sub> " x 7 <sup>1</sup> / <sub>4</sub> " x 1"	<b>807-1076</b>	<b>7.50</b>
72-Ring Tray	14 <sup>3</sup> / <sub>4</sub> " x 8 <sup>1</sup> / <sub>4</sub> " x 1"	<b>807-1075</b>	<b>9.50</b>

**C, D Display Trays and Velvet Pads**

Black wooden trays and vibrant velvet pads for holding and providing contrast to your jewelry. Trays available in 1<sup>1</sup>/<sub>2</sub>" and 2" heights. Pads available in white and black.

Description	L x W x H	Item#	Each
<b>C.</b> Display Tray	14 <sup>3</sup> / <sub>4</sub> " x 8 <sup>1</sup> / <sub>4</sub> " x 1 <sup>1</sup> / <sub>2</sub> "	<b>807-1059</b>	<b>\$2.48</b>
Display Tray	14 <sup>3</sup> / <sub>4</sub> " x 8 <sup>1</sup> / <sub>4</sub> " x 2"	<b>807-1058</b>	<b>3.90</b>
White Velvet Pad	14 <sup>3</sup> / <sub>4</sub> " x 8 <sup>1</sup> / <sub>4</sub> "	<b>807-1071</b>	<b>2.70</b>
<b>D.</b> Black Velvet Pad	14 <sup>3</sup> / <sub>4</sub> " x 8 <sup>1</sup> / <sub>4</sub> "	<b>807-1070</b>	<b>2.70</b>

**E, F Jewelry Pins**

Yellow and white jewelry pins with long, sharp points for pinning all types of jewelry to beds, trays or easels. Sold in packages of 100 and boxes of 1,000.

Description	Item#	Pkg. of 100		Item#	Box of 1,000	
		1-2	3+		1-2	3+
<b>E.</b> Yellow	<b>807-1181</b>	<b>\$4.50</b>	<b>\$4.23</b>	<b>807-1180</b>	<b>\$28.15</b>	<b>\$26.46</b>
<b>F.</b> White	<b>807-1183</b>	<b>4.50</b>	<b>4.23</b>	<b>807-1182</b>	<b>29.20</b>	<b>27.45</b>

**G Swinger® Suspended Retractable Mirror System**

This innovative hanging mirror system frees up valuable counter space. Works easily with quick pull-down and push-up motion for out-of-the-way storage. Adjustable from 9' ceiling all the way down to countertop. Spring-loaded for neutral buoyancy so it stays at desired level. Can be mounted on any drywall or drop ceiling (hardware included).

Large 9" dia. reversible mirror features true-view optics on both sides. Heavyweight handles help stabilize mirror. Varnished birch handles can be used as is or painted with your desired color of latex or enamel paint.

Description	Item#	Each
Varnished Birch	<b>807-0700</b>	<b>\$119.00</b>
Black Acrylic	<b>807-0704</b>	<b>119.00</b>
Chrome	<b>807-0702</b>	<b>119.00</b>
Brushed Nickel	<b>807-0703</b>	<b>119.00</b>

**H Turntable Displays**

Perfect for displaying jewelry as well as for imaging. Choose from solar-powered and battery-powered styles. Latter requires two AA batteries (not included).

Description	Item#	Each
Solar-Powered	<b>820-8715</b>	<b>\$35.95</b>
Battery-Powered	<b>820-8716</b>	<b>39.95</b>

### A Anti-Tarnish Filtration Unit

#### Never polish your showcase jewelry again!

This simple, effective unit prevents tarnish on sterling silver and all other metals. Used by NASA, the Guggenheim Museum and the British Royal Mint, to name a few. Place just one in a 4' showcase or two in a 6' showcase, especially if opened frequently. If you move your jewelry to a safe each night, place one or two units in there, as well. Includes one filter. Runs 24/7 on two "D" batteries (not included). Measures 3 1/4"W x 3 1/2"D x 4"H. Filter and batteries should be changed once every three months.

Not designed for open areas. Note that cabinets and cases with wooden bases may require extra protection from Anti-Tarnish Foil Barrier Film to reduce outgassing common to wood, which greatly contributes to tarnishing if left unchecked.

#### Features:

- Safe for all jewelry
- Leaves no residue or deposit
- Nontoxic and environmentally safe
- Hides easily behind a necklace stand
- Operates silently



Description	Item#	Each
Anti-Tarnish Filtration Unit	<b>813-1745</b>	<b>\$99.95</b>
Replacement Filters, pkg. of 3	813-1746	33.25

Description	Item#	Foot
Anti-Tarnish Foil Barrier Film, 18"W	<b>813-1747</b>	<b>\$3.00</b>

### B 3M™ Tarni-Shield™ Strips

Designed to inhibit corrosive gases from tarnishing or staining metal items in transit or storage. Work on silver, copper, gold, brass and solder by absorbing and trapping atmospheric pollutants such as hydrogen sulfide, sulfur dioxide and acetic acid. Easy to use: just add a strip to the container. Available in two sizes: small and large. Small strips protect little containers. Sold in packages of 3,000. Large strips protect big containers (one large strip protects up to 300 cu. in. of container space). Sold in packages of 10 and 1,000.



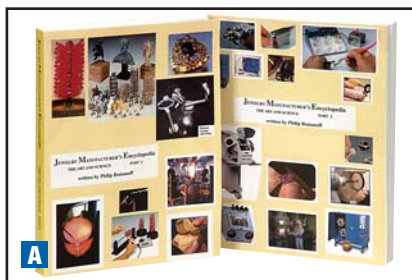
Description	Size	Item#	Each
Small Strips, pkg. of 3,000	1" x 1"	<b>813-1790</b>	<b>\$110.00</b>
Large Strips, pkg. of 10	2" x 5"	<b>813-1780</b>	<b>2.95</b>
Large Strips, pkg. of 1,000	2" x 5"	<b>813-1785</b>	<b>210.00</b>

### C Jewelry Appraisal Form

Official insurance appraisal form for jewelers and appraisers. Three-part, carbonless format. Sold in packages of 50. Ship. wt: 1 lb.

Size	Item#	Pkg. of
8 1/2" x 11"	<b>810-0430</b>	<b>50</b>
		<b>\$17.90</b>



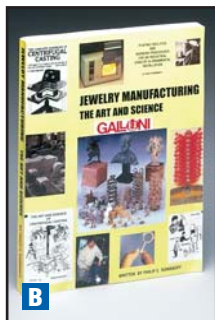


**A Jewelry Manufacturer's Encyclopedia: The Art and Science**

By Philip E. Romanoff

Offers a comprehensive look at the many facets of jewelry manufacturing, placing particular emphasis on casting. Covers characteristics of metals and materials used in manufacturing, disposal of waste material, removal of precious metal content from waste, effluent treatment, ventilation, tumbling, sandblasting and much more. Includes analysis of suggested individual room and factory setups. Softcover, two volumes, 906 pages.

Description	Item#	Each
Jewelry Manufacturer's Encyclopedia: The Art and Science	811-0207	\$112.00

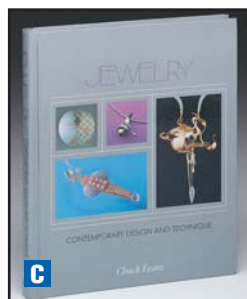


**B Jewelry Manufacturing: The Art and Science – By Philip E. Romanoff**

An excellent troubleshooting guide for any jewelry manufacturer, large or small. Thoroughly describes, complete casting and finishing processes. Outlines machinery and tools necessary to complete all steps. Includes charts, temperature tables, thermal properties of metals and various other data. Contains black-and-white photos and line drawings. Softcover, 348 pages.

The author has been setting up jewelry manufacturing sites around the world for the past 40 years. He details everything to prevent errors before they happen.

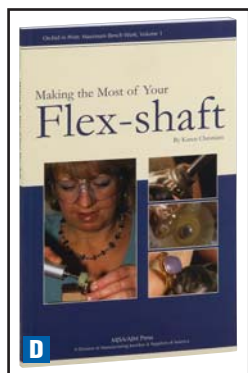
Description	Item#	Each
Jewelry Manufacturing: The Art and Science	811-0206	\$53.00



**C Jewelry: Contemporary Design and Technique – By Chuck Evans**

A lavishly illustrated book offering all the information needed to create handmade jewelry and other metal objects. Covers more than 65 metalworking techniques in detail. Includes a comprehensive, detailed appendix of safety information with a guide on hazardous materials. Contains more than 365 technical photos and line illustrations. Hardcover, 267 pages.

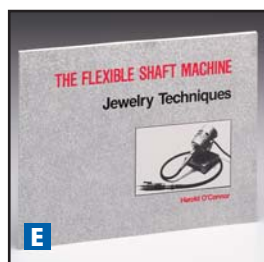
Description	Item#	Each
Jewelry: Contemporary Design and Technique	811-0270	\$49.30



**D Making the Most of Your Flex-shaft – By Karen Christians**

The first volume of the "Orchid in Print" series on basic bench practices. Explores all aspects of selecting, maintaining and using the most common tool on the jeweler's bench: the flex shaft. Covers the process of choosing the proper motor, foot pedal, handpiece and rotary tool; cutting drills and discs; abrasives and grinding wheels; and finishing. Includes a "Tips from the Orchid Library" section of helpful bench tips and tricks. Illustrated with full-color images. Softcover, 96 pages.

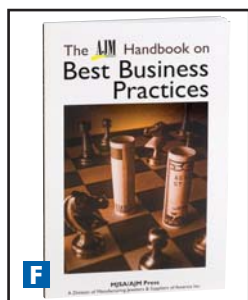
Description	Item#	Each
Making the Most of Your Flex-shaft	811-0266	\$34.95



**E The Flexible Shaft Machine: Jewelry Techniques – By Harold O'Connor**

The flexible shaft machine is probably used more often than any other by the practicing craftsman. This book provides information in chart form on the various burs and abrasives available for use with flex shafts. Also covers many other flex shaft accessories. Contains clear line drawings and instructional black-and-white photos. Softcover, 47 pages.

Description	Item#	Each
The Flexible Shaft Machine: Jewelry Techniques	811-0265	\$16.00



**F The AJM Handbook on Best Business Practices – By MJSA/AJM Press**

An invaluable collection of classic articles from AJM Magazine written by leaders in the jewelry industry. Covers essential topics such as maintaining profitability in good times and bad, establishing solid credit practices, researching equipment before purchasing, weighing pros and cons of leasing, anticipating and gearing up for production increases, improving metal management, implementing your own "5S" organizational program and creating a business plan for a career in jewelry design. Softcover, 96 pages.

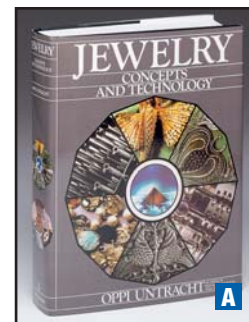
Description	Item#	Each
The AJM Handbook on Best Business Practices	811-0061	\$19.00



**A Jewelry Concepts and Technology – By Oppi Untracht**

The definitive guide and handbook for any jewelry maker, regardless of skill level. One of the most comprehensive books available on the subject of jewelry making. Thoroughly describes every jewelry process you have—and haven't!—heard of. Contains 900 photos and 377 illustrations. Hardcover, 840 pages.

Description	Item#	Each
Jewelry Concepts and Technology	811-0275	\$123.55

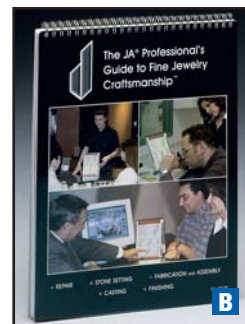


**B The JA® Professional's Guide to Fine Jewelry Craftsmanship**

By Jewelers of America, Inc.

An invaluable counter reference that helps bench jewelers, sales associates and store managers communicate clearly with each other and with customers. Helps the store team identify needed repairs, enhance sales and clearly explain problems and repairs to customers. Serves as a teaching tool to train new personnel. Helps standardize and maintain performance. Includes chapters on repair, stone setting, fabrication and assembly, casting and finishing. Features easy-to-read text. Essential for every retail store, repair center and jeweler who deals directly with end customers. Contains clear illustrations for clarification. Spiral-bound to lie flat or stand upright on an easel. Softcover 17 pages.

Description	Item#	Each
The JA Professional's Guide to Fine Jewelry Craftsmanship	811-0028	\$65.00



**C Robert Lee Morris: The Power of Jewelry – By Robert Lee Morris**

Robert Lee Morris has been long noted for his distinctive fusion of primal forms, stunning hand workmanship and cutting-edge sensibility. His organic pieces are sought after by fashionistas around the world. This engrossing book, written by the artist and illustrated with examples of work he's done in metal and stone over the course of his career, presents an astonishing scope of design genius. A truly beautiful gift for collectors, designers and students alike. Exquisitely conveys the magic and power of jewelry with 285 magnificent photos (250 in full color). Hardcover, 180 pages.

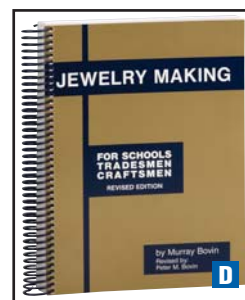
Description	Item#	Each
The Power of Jewelry	811-0070	\$60.00



**D Jewelry Making – By Murray Bovin, Revised by Peter M. Bovin**

Explains the most practical and contemporary methods of making handmade jewelry for beginners and advanced craftsmen. Describes traditional jewelry making techniques as well as techniques developed or expanded by the author through his many years of work in the jewelry industry. Use hundreds of black-and-white photos and line drawings to illustrate the processes described. Softcover or hardcover, 287 pages.

Description	Item#	Each
D. Softcover Version	811-0100	\$27.25
Hardcover Version	810-2900	29.95

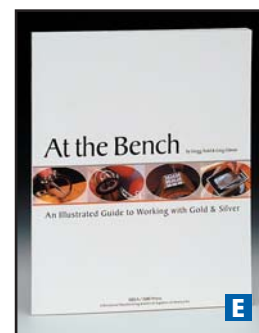


**E At the Bench: An Illustrated Guide to Working with Gold & Silver**

By Gregg Todd and Greg Gilman

*At the Bench* offers step-by-step instructions on the repair and fabrication of gold and silver jewelry, as well as insights into bench preparation, safe practices for bench jewelers and tips for taking in repairs. Chapters include Sizing Up a Ring Using a Butt Joint, Dovetail Sizing, Sizing Down a Gold Two-Tone Ring, Rebuilding a Channel Setting, Three Retipping Techniques for Gold or Silver Prongs, Pavé Setting, Fabricating Silver Filigree, Basic Chasing and Repoussé, Detailing a Wax Pattern for Lost-Wax Casting, Dos and Don'ts for Polishing Success and others. Contains over 200 full-color photograph Hardcover, 116 pages.

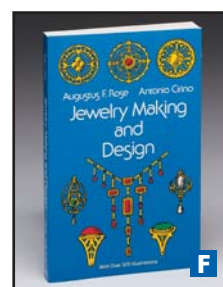
Description	Item#	Each
At the Bench: An Illustrated Guide to Working with Gold & Silver	811-0002	\$28.50



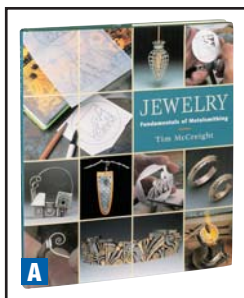
**F Jewelry Making and Design – By Augustus F. Rose and Antonio Cirino**

Written for both beginning and experienced craftsmen, this book takes you through a series of problems, progressing from simple to complex pieces. Explains how to design jewelry using natural objects such as flowers, leaves and insects as models. Contains over 325 illustrations. Softcover, 306 pages.

Description	Item#	Each
Jewelry Making and Design	811-0009	\$10.95



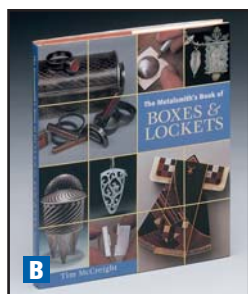




**A Jewelry: Fundamentals of Metalsmithing – By Tim McCreight**

Provides information, photos and drawings that take beginner and intermediate jewelers through various jewelry making projects step-by-step. Explains fabricating, surface treatments, joining, finishing, stone setting, chain making, mechanisms and casting. Shows finished pieces of contemporary jewelry resulting from each technique. Hardcover 143 pages. The author is an experienced craftsman and teacher, having published six books about working with metals. He is currently head of the Department of Metalsmithing & Jewelry at the Maine College of Art in Portland. His best-known book, *The Complete Metalsmith*, has become a standard text for students around the world.

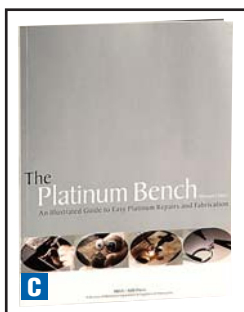
Description	Item#	Each
Jewelry: Fundamentals of Metalsmithing	810-2910	\$29.95



**B The Metalsmith's Book of Boxes & Lockets – By Tim McCreight**

A must-have in any jeweler's library. Introduces a variety of metalworking techniques for box construction, hinges and closing devices. Offers meticulous instructions to prepare even novice metalworkers for the challenges of designing their own boxes. Uses hundreds of full-color photos to inspire the reader's creativity. Hardcover, 144 pages.

Description	Item#	Each
The Metalsmith's Book of Boxes & Lockets	811-0252	\$29.95



**C The Platinum Bench – By Jurgen J. Maerz**

This illustrated guide to common bench techniques shows how easy platinum repair and fabrication can be. Includes step-by-step instructions on resizing rings, replacing heads, retipping prongs and making components, among other projects. Features guides for selecting platinum alloys, preparing for bench work and casting in a small shop. A valuable addition to every jeweler's bench. Contains more than 200 photos. Softcover, 112 pages.

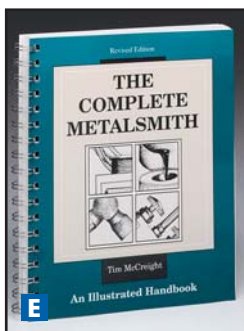
Description	Item#	Each
The Platinum Bench	811-0017	\$22.95



**D Form Emphasis for Metalsmiths – By Heikki Seppa**

Written by a master artist and teacher of metalwork, this book offers a bold approach to creative expression in metal. Urges artists to free themselves from the functional forms that have dominated the metalsmith's craft. Shows craftsmen how to create in terms of pure form. Includes an extensive glossary of illustrated terms. Assumes working knowledge of metalworking tools and techniques. Softcover, 146 pages.

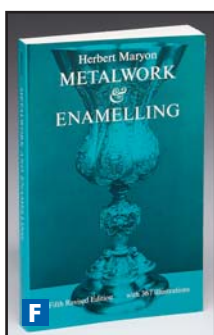
Description	Item#	Each
Form Emphasis for Metalsmiths	811-0027	\$18.00



**E The Complete Metalsmith – By Tim McCreight**

A unique resource for the beginning student, teacher and working craftsperson. Devotes each page to a single technique, explaining it in text and with numerous line illustrations. Provides more information, more illustrations and a larger reference section than the previous edition. Covers basic metalworking techniques such as stone setting, soldering, polishing and casting, paying particular attention to safety. Contains over 2,500 illustrations. Spiral-bound to lie flat. Softcover, 197 pages. Also available on video (see p. 463).

Description	Item#	Each
The Complete Metalsmith	811-0250	\$18.95



**F Metalwork & Enameling – By Herbert Maryon**

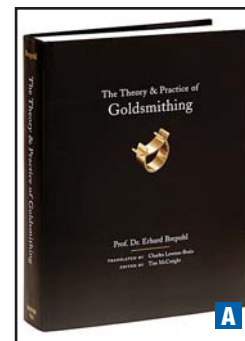
A professional handbook ideal for those concerned with goldsmithing, silversmithing, repair or restoration. Covers all topics in great depth. Contains over 300 photos and line drawings for clarification. Softcover, 335 pages.

Description	Item#	Each
Metalwork & Enameling	811-0011	\$12.95

**A The Theory & Practice of Goldsmithing – By Prof. Dr. Erhard Brepohl**

Since the first printing of this book in 1961, "The Brepohl" has become a standard text for the training of goldsmiths and a recognized general reference book for professional workshop practice. Discusses materials in early chapters, focusing on gold, silver and platinum. Covers the chemistry and physics of material usage as well as the mechanisms of soldering, eutectic bonding and electroplating, silversmithing, chain making, findings, gems, stone setting and jewelry repair. A must-have for the serious jeweler. Contains ample photos, drawings and charts. Hardcover, 536 pages.

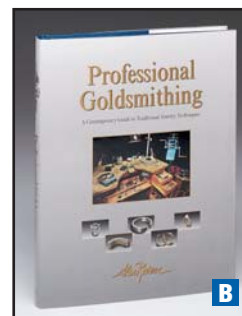
Description	Item#	Each
The Theory & Practice of Goldsmithing	811-0208	\$70.00



**B Professional Goldsmithing – By Alan Revere**

Fills a long-standing need for clear and descriptive documentation of handcrafting gold jewelry. Reveals many trade secrets and tricks that are rarely taught in schools. Presents projects in a graduated format beginning with basic procedures and progressing through intermediate and advanced techniques. Includes an extensive compendium of formulas, tables, weights, conversions and other valuable information. Contains numerous instructional diagrams and photos. Hardcover, 226 pages.

Description	Item#	Each
Professional Goldsmithing	811-0029	\$69.95



**C Practical Goldsmith Series – By Rühle Diebener-Verlag**

#2 *Modeling* covers techniques of RTV mold making as well as methods of wax modeling and the making of settings out of wax and plastic film. Softcover, 70 pages.

#3 *Mounting—Settings* covers the making of gold alloys, wire settings, basket settings, jump rings, strip settings and round, trillion, marquise, rectangular, octagon and tapered bezels. Softcover, 70 pages.

#4 *Mounting—Joints—Electroplating* covers the making of bracelets with seamless tube settings, clasps and joints, tube hinges and round and square settings as well as basic methods of electroplating. Softcover, 74 pages.

#11 *Colorit—Design* is split into two parts: Part I focuses on Colorit ceramic-reinforced composite coloring material and jewelry-coloring concepts; Part II focuses on tips and techniques, covering topics such as tools, ultrasound technology and surface treatment. Softcover, 80 pages.

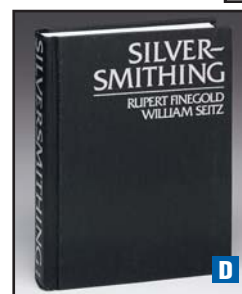
Description	Item#	Each
#2 Modeling	811-0022	\$54.00
#3 Mounting—Settings	811-0023	54.00
#4 Mounting—Joints—Electroplating	811-0024	54.00
C. #11 Colorit—Design	811-0059	59.00



**D Silversmithing – By Rupert Finegold and William Seitz**

The result of a collaboration of an old-world master and his accomplished apprentice. Discloses hundreds of little details that make the difference between a merely adequate work and a splendid one. Moves step-by-step through all procedures, from designing to translating designs to metal by various techniques. Contains 700 photographs and drawings that show work in progress. Hardcover, 460 pages.

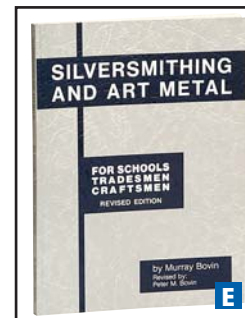
Description	Item#	Each
Silversmithing	811-0031	\$53.25



**E Silversmithing and Art Metal – By Murray Bovin, Revised by Peter M. Bovin**

Drawing from the author's extensive experience as a craftsman, this book explains contemporary methods of hand-forming silver, copper and related metals into useful and decorative objects. Includes information on tools and equipment, metalworking techniques, forming techniques, decorative processes and more. Contains hundreds of black-and-white photos and sketches, many of which are of the author's own finished pieces. Softcover, 176 pages.

Description	Item#	Each
Silversmithing and Art Metal	811-0032	\$28.25

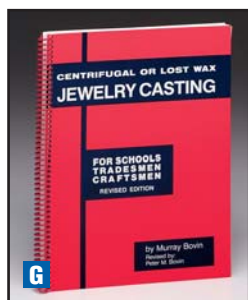
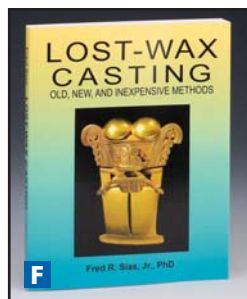
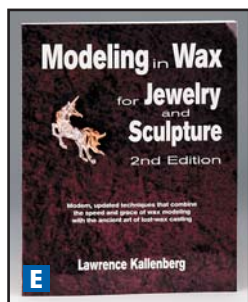
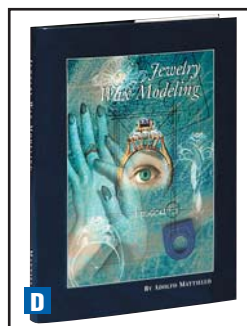
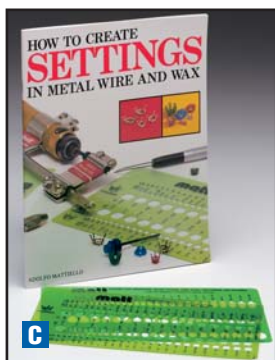
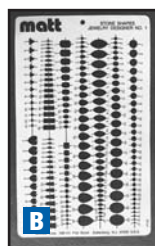
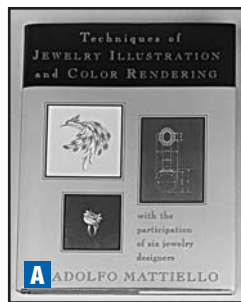


**F Flatware Manual – By Gesswein**

Outlines the step-by-step processes for making handwrought flatware from both bar metal and blanked metal. Includes patterns for a 10-piece dinner set. Spiral-bound to lie flat. Printed on one side only. Softcover, 14 pages.

Description	Item#	Each
Flatware Manual	810-2700	\$9.50





**A, B Matt™ Design Book and Template Set – By Adolfo Mattiello**

Designed to work with the Matt Design Template Set, *Techniques of Jewelry Illustration and Color Rendering* offers the talents, expertise and individuality of six outstanding jewelry designers in one volume. Presents full instruction on jewelry illustration and rendering. Features step-by-step guidelines and clear instructions for each process. A valuable resource for beginners and professionals alike.

The Matt Design Template Set includes five plastic templates that provide numerous shapes and curves, including French curves, as well as specific ring designs in sizes appropriate for jewelry rendering. Allows you to visualize and create variations of any design.

Description	Item#	Each
Matt Design Book and Template Set	<b>265-2430</b>	<b>\$92.30</b>
A. Techniques of Jewelry Illustration and Color Rendering	<b>265-2431</b>	<b>43.25</b>
B. Matt Design Template Set (five templates)	<b>265-2432</b>	<b>49.95</b>

**C How to Create Settings in Metal Wire and Wax – By Adolfo Mattiello**

A clearly written and illustrated book by the popular jewelry designer and manufacturer of specialty tools for wax working. Features step-by-step instructions for making 10 of the most commonly used wire settings. Also includes comprehensive instructions on joining and creating wax settings and special settings for more than one stone. Contains over 250 diagrams. Softcover, 33 pages. Comes complete with two flexible plastic templates: one is for round settings and stones; the other is for marquise, pear and oval settings and stones.

Description	Item#	Each
How to Create Settings in Metal Wire and Wax	<b>810-2955</b>	<b>\$49.35</b>

**D Jewelry Wax Modeling – By Adolfo Mattiello**

Written by an experienced wax modeling instructor, this book progressively teaches the wax modeling process. Emphasizes developing of hand skills, working from perspective illustrations, making sketches and creating layouts with stones. Features meticulous step-by-step instructions and drawings. Includes stone setting considerations, instructions for creating templates, answers to frequently asked questions and a list of institutions that offer jewelry wax carving classes. Hardcover, 161 pages.

Description	Item#	Each
Jewelry Wax Modeling	<b>265-2429</b>	<b>\$41.30</b>

**E Modeling in Wax for Jewelry and Sculpture – By Lawrence Kallenberg**

A complete text on the subject of modeling in wax. Pays keen attention to the details of each step in carving out a design for casting. Contains clear, simple line drawings that show methods, waxes and tools involved. Covers specialized wax techniques for more advanced modeling. Includes some color plates. Hardcover, 252 pages.

Description	Item#	Each
Modeling in Wax for Jewelry and Sculpture	<b>810-2950</b>	<b>\$46.50</b>

**F Lost-Wax Casting: Old, New, and Inexpensive Methods  
By Fred R. Sias Jr., Ph.D.**

Designed to be used as both a textbook and a reference book, this work is directed primarily at beginners. Places heavy emphasis on understanding the processes involved rather than simply presenting a set of unexplained rules. Includes chapters on spruing, investing, wax elimination, centrifugal casting, vacuum casting, alloys, finishing and more. Contains black-and-white photos and diagrams. Softcover, 201 pages.

Description	Item#	Each
Lost Wax Casting	<b>810-2956</b>	<b>\$22.95</b>

**G Centrifugal or Lost Wax Jewelry Casting  
By Murray Bovin, Revised by Peter M. Bovin**

Explains the entire casting process in step-by-step detail. An excellent reference source for any caster and an invaluable learning tool for those new to casting. Covers different methods of casting, describing all processes involved plus tools and equipment. Includes dozens of charts that detail burnout programs, investing procedures, metal and casting temperatures and much more. Uses black-and-white photos to show work in progress. Softcover, 143 pages.

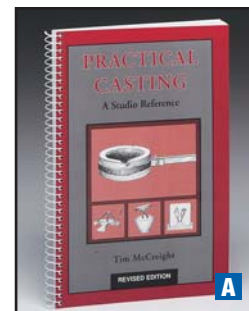
Description	Item#	Each
Centrifugal or Lost Wax Jewelry Casting	<b>810-2800</b>	<b>\$21.00</b>



**A Practical Casting – By Tim McCreight**

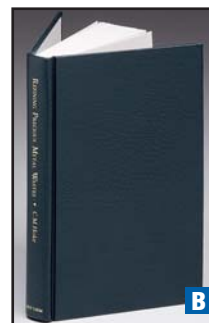
From the author of *The Complete Metalsmith*, this easy-to-read book devotes six full chapters to the lost wax casting procedure. Discusses alternative casting techniques that utilize sand and cuttlefish bone in later chapters. Also provides information about casting equipment. Contains dozens of invaluable charts, graphs and tables. Spiral-bound to lie flat. Softcover, 122 pages.

Description	Item#	Each
Practical Casting	811-0035	\$13.95

**B Refining Precious Metal Wastes – By C.M. Hoke**

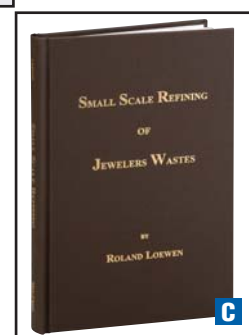
This book is the result of many years of teaching jewelers and others how to refine their precious metal wastes. Starts with tasks that are easy to understand and perform, assuming that the reader has never seen the refining process. Continues through more complicated methods of handling various types of waste. Hardcover, 362 pages.

Description	Item#	Each
Refining Precious Metal Wastes	811-0286	\$54.75

**C Small Scale Refining of Jewelers Wastes – By Roland Loewen**

The definitive book on recovering and refining jewelry metals for the uninitiated. Focuses on gold recovering and refining. Also provides information on silver, platinum and palladium recovering and refining. Includes detailed chapters on all aspects of small-scale sampling and assaying, refining jeweler's sweeps, refining low-grade wastes, safety and pollution matters and much more. Features easy-to-read, understandable text. An invaluable resource for any jeweler who does in-house refining or who wants to make good business decisions concerning scrap. Contains black-and-white photos and explanatory illustrations. Hardcover, 257 pages.

Description	Item#	Each
Small Scale Refining of Jewelers Wastes	811-0043	\$43.75

**D Safety Solutions – By MJSA**

Every jewelry operation poses numerous hazards that, if overlooked, could lead to injury, illness or even death. This manual provides jewelers with easy-to-understand guidelines to avoid such outcomes. Explains how to properly store and work with chemicals, dispose of hazardous waste, establish safe working conditions and comply with all federal, state and local codes. Softcover, 64 pages.

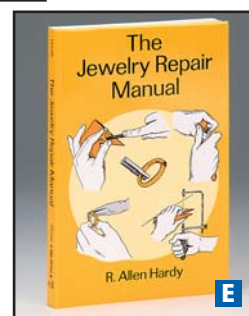
Description	Item#	Each
Safety Solutions	811-0393	\$28.99

**E The Jewelry Repair Manual – 2nd Edition Republication, By R. Allen Hardy**

Written for jewelers who wish to expand their jewelry repair businesses, this manual helps both novices and experienced craftspeople. Provides clear step-by-step instructions for jewelry cleaning and repair and stone setting, as well as descriptions of necessary tools and equipment and directions for their proper use and care.

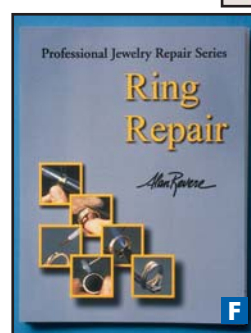
Offers newcomers detailed explanations of basic procedures, such as filing, soldering, buffing and mounting. Teaches jewelers to perform a wide range of repairs on-site, enabling them to offer customers faster, better service. Helps increase repair volume as well as sales. Features a thorough index and an extensive appendix with FAQs reprinted from *American Horologist and Jeweler*, for which the author worked as technical editor for 16 years. Contains 268 black-and-white illustrations. Softcover, 304 pages.

Description	Item#	Each
The Jewelry Repair Manual	811-0291	\$12.95

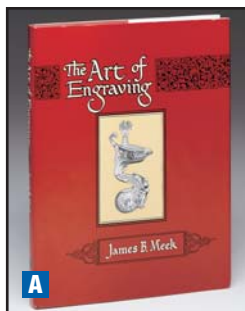
**F Ring Repair – By Alan Revere**

The only book devoted solely to ring repair. Documents the repair, alteration and restoration of gold, silver and platinum rings. Visually documents 15 of the most common repair jobs. Discusses topics such as tool requirements and safety precautions. Excellent for students and repair jewelers alike. Comes complete with a laminated copy of the *Quality Assurance Guide to Ring Repairs*, published by Jewelers of America. Contains over 140 close-up photos and 90 black-and-white sketches. Softcover, 125 pages.

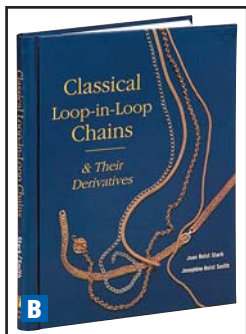
Description	Item#	Each
Ring Repair	811-0030	\$44.95



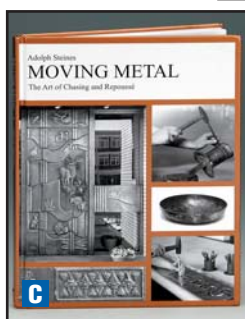




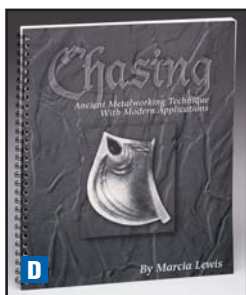
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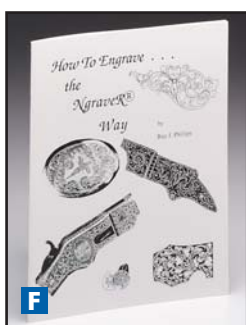
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**A The Art of Engraving – By James B. Meek**

A complete, authoritative and imaginative book on the art of gun engraving. Tells you in layman's terms how to engrave. Excellent for both beginners and accomplished engravers who wish to broaden their knowledge of the art. Includes numerous drawings, photographs, illustrations, designs, layouts, technical information and instructions. Bound to lie flat. Hardcover, 196 pages.

Description	Item#	Each
The Art of Engraving	810-2600	\$47.75

**B Classical Loop-in-Loop Chains and Their Derivatives**

**By Jean Reist Start and Josephine Reist Smith**

A comprehensive book on making chain using the ancient and beautiful loop-in-loop technique. Features detailed and thorough instruction that takes the student through a variety of projects to introduce new techniques. Covers ancient and modern variations of each basic chain type in its own chapter. Describes construction of simple, appropriate clasps for each chain type in the final chapter. Reflects the author's 25+ years of combined experience in teaching these techniques to individuals and in workshops. Contains numerous photos and diagrams. Bound to lie flat. Hardcover, 190 pages.

Description	Item#	Each
Classical Loop-in-Loop Chains and Their Derivatives	811-0025	\$34.95

**C Moving Metal: The Art of Chasing and Repoussé – By Adolph Steines**

Painstakingly translated from German, this book is a valuable resource for professionals and hobbyists alike. Covers chasing and repoussé in greater depth than any other volume available in the English language. Demonstrates Adolf Steines' creativity, knowledge, skill and experience as a master metalworker. A must-have for jewelers, blacksmiths, sculptors and metalwork artists.

Thoroughly addresses workrooms, tools, materials, working surfaces (including carpets and pitches), design transferring, sinking, raising, stamping, chasing, repoussé, engraving, soldering and etching, as well as coloring and protecting metal surfaces. Illustrates numerous examples of the author's works, including large-scale doors, fountains, memorials, wall sculptures and portraits, as well as many delicate jewelry pieces. Reveals tricks and special techniques, such as using air-powered hammers for forming and chasing. Contains over 200 detailed photographs and drawings. Softcover, 132 pages.

Description	Item#	Each
Moving Metal: The Art of Chasing and Repoussé	811-0005	\$32.95

**D Chasing: Ancient Metalworking Technique with Modern Applications**

**By Marcia Lewis**

Designed to be kept on the workbench along with chasing tools, this book serves as a convenient student reference. Presents the equivalent of a specialized workshop on metal chasing. Contains more than 150 representative photos and self-explanatory illustrations. Includes lists of resources and suppliers. Spiral-bound to lie flat. Softcover, 72 pages.

Description	Item#	Each
Chasing: Ancient Metalworking Technique with Modern Applications	811-0114	\$19.95

**E Tumble Finishing for Handmade Jewelry: Mass Finishing on a Small Scale – 4th Edition, By Judy Hoch**

This handbook shows jewelers how to save time and money while mass finishing handmade jewelry. Provides descriptions of basic equipment and supplies, including rotary and vibratory tumblers, magnetic and centrifugal disc finishers, medias and compounds. Helps readers choose the right process for each application, ensuring optimal results. Passes along the author's firsthand knowledge about preventing disasters and solving problems, all in an easy-to-read informal style. Contains black-and-white photos. A great book for novices. Softcover, 47 pages.

Description	Item#	Each
Tumble Finishing for Handmade Jewelry: Mass Finishing on a Small Scale	811-0041	\$12.00

**F How to Engrave the NgraveR Way – By Ray J. Phillips**

A series of *Gems & Minerals* magazine article reprints on engraving with the NgraveR, an impact tool developed by the author. Shows how to begin by making practice strokes and how to lay out and execute designs suitable for gun engraving and for decorating belt buckles, money clips and keychain ornaments. Spiral-bound to lie flat. Softcover, 26 pages.

Description	Item#	Each
How to Engrave the NgraveR Way	811-0295	\$6.50

**A Moods in Wire – By Ed Sinclair**

The most comprehensive book available on wire wrapping. Serves as an invaluable guide to anyone interested in the art. Contains hundreds of illustrations. Spiral-bound to lie flat. Softcover, 111 pages.

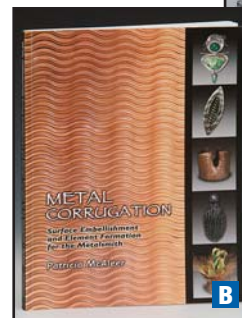
Description	Item#	Each
Moods in Wire	810-0289	\$29.95



**B Metal Corrugation: Surface Embellishment and Element Formation for the Metalsmith – By Patricia McAleer**

Shows you how to create surface textures and elements that capture the imagination and provide inspiration. Offers detailed instructions, tips and tricks that guide you through choosing the right tools and using them to create a wide variety of beautiful corrugated effects, including waves, honeycomb, diagonal and cross corrugation, dapped corrugation, pattern crimped, pattern alternation and more. Helps you produce anything from a hard-edged industrial look to a natural organic look. A must-have for all metalsmiths. Softcover, 137 pages.

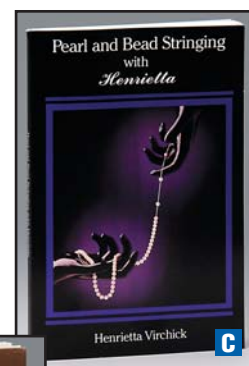
Description	Item#	Each
Metal Corrugation: Surface Embellishment and Element Formation for the Metalsmith	811-0121	\$29.95



**C Pearl and Bead Stringing with Henrietta – By Henrietta Virchick**

Reveals the secrets of a pearl and bead stringing master. Adapted from Henrietta's successful craft series, this book takes you step-by-step through many different bead knotting techniques, including finger knotting. Lists sources for materials and explains how to get started in your own business. Also covers tools of the trade, hand knotting, attaching clasps, making necklaces without clasps, cleaning and stringing pearls, bead weaving and much more. Includes clear line drawings of all techniques and color photos of finished pieces. A must-have for every bead stringing professional and anyone who aspires to be one. Softcover, 78 pages.

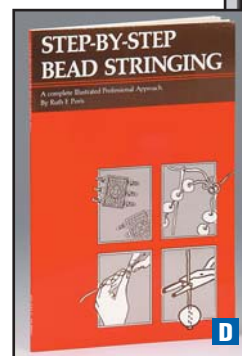
Description	Item#	Each
Pearl and Bead Stringing with Henrietta	811-0047	\$11.70



**D Step-by-Step Bead Stringing – By Ruth F. Poris**

An indispensable book for beginners. Lists tools and supplies needed for stringing and restringing. Teaches knotting between beads, finishing with French wire, stringing on a chain, standard terminology and much more. A classic in its field, hundreds of thousands of copies of this handbook have been sold since its first publication in 1985. Includes instructions and illustrations drawn from many years of experience and expertise. Softcover, 45 pages.

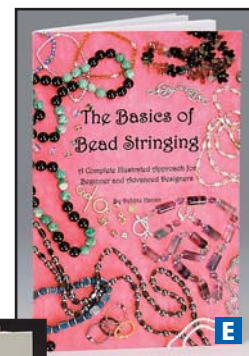
Description	Item#	Each
Step-by-Step Bead Stringing	811-0046	\$9.65



**E The Basics of Bead Stringing – By Debbie Kanan**

Presents bead stringing fundamentals in simple terms and with plenty of grayscale illustrations, making it a great book for novices as well as a valuable reference tool for experienced bead stringers. Covers knotting, wire techniques, using leather or satin cord, seed beads and rocailles, tools and materials, design fundamentals and much more. Includes a dozen full-page color photos that show real-life examples of techniques outlined in the book. Softcover, 82 pages.

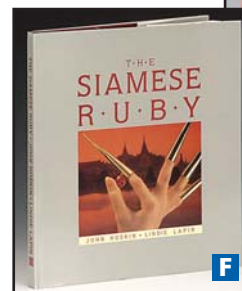
Description	Item#	Each
The Basics of Bead Stringing	811-0048	\$8.50

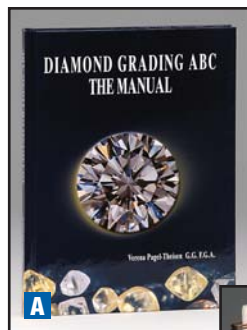


**F The Siamese Ruby – By John Hoskin and Lindie Lapin**

Most of the world's best rubies come from Thailand (Siam as the country was formerly named). This book deals exclusively with Siamese rubies—from the gem diggers hunting the elusive stones in the forests, through the traders and cutters, to the eager buyers around the globe. Describes the history, legend and lore surrounding rubies in Thailand. Contains beautiful color photographs. A thoughtful gift for anyone interested in rubies. Hardcover, 119 pages.

Description	Item#	Each
The Siamese Ruby	811-0299	\$17.99

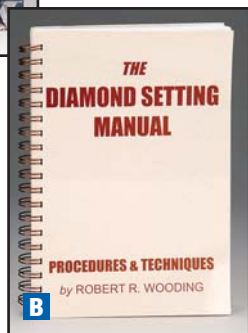




**A Diamond Grading ABC: The Manual**  
**9th Edition, By Verena Pagel-Theisen, G.G., F.G.A**

Provides in-depth information not found in previous editions on some of the latest developments in the field of diamond grading. Covers laser inscription of the certificate number on the girdle in response to increasing security concerns, treatment methods such as fracture filling, color enhancement methods, improved simulants, moissanite and synthetic diamonds. Describes natural and artificially colored diamonds and methods of detection and differentiation in detail. Serves as a practical grading guide, helping assess stone color, clarity, cut and weight. Deserves a place in every diamond grader's reference library. Hardcover, 320 pages.

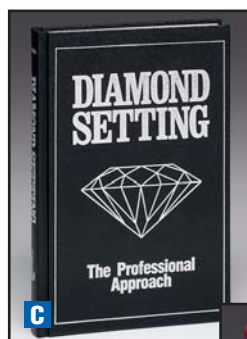
Description	Item#	Each
Diamond Grading ABC: The Manual	811-0019	\$69.00



**B The Diamond Setting Manual: Procedures & Techniques**  
**By Robert R. Wooding**

An invaluable reference intended for experienced diamond setters and students under the supervision of a diamond setting instructor. Covers basic, intermediate and advanced types of setting in 17 progressive chapters. Provides detailed step-by-step instructions with easy-to-follow illustrations and helpful tool recommendations. Includes an extended appendix of tools and techniques that covers basics of graver preparation, bur use, drilling, filing, sawing, hammering, burnishing and more. Spiral-bound to lie flat. Softcover, 233 pages.

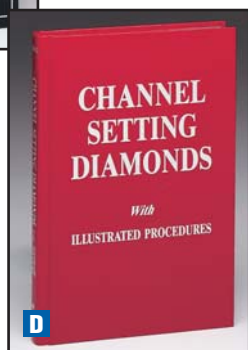
Description	Item#	Each
The Diamond Setting Manual: Procedures & Techniques	811-0038	\$39.95



**C Diamond Setting: The Professional Approach – By Robert R. Wooding**

Written to teach diamond setting, this book is basic enough to be understood by an inexperienced apprentice yet sufficient in depth to benefit a seasoned diamond setter. Strives to teach setting perfection. Starts with descriptions of tools and their uses and concludes with an advanced chapter on bead setting. Uses many clear line drawings to illustrate the text. Hardcover, 178 pages.

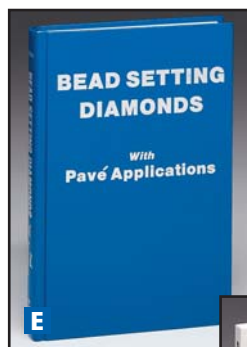
Description	Item#	Each
Diamond Setting: The Professional Approach	811-0288	\$29.95



**D Channel Setting Diamonds with Illustrated Procedures – By Robert R. Wooding**

This book is divided into two general sections: Section I describes basic channel setting techniques in phases, and Section II details a series of channel setting procedures. Provides step-by-step instructions graduated from basic to advanced in each section. Covers inspection, layout, cutting channels, cutting bearings, inlaid channels, finishing, basic closed channels, basic open channels, curved channels, tapered channels, angular channels and securing diamonds. Contains over 120 illustrations. Hardcover, 136 pages.

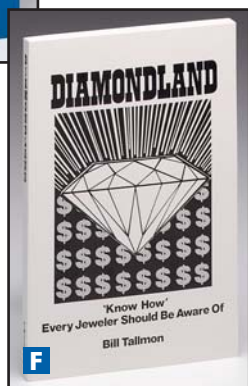
Description	Item#	Each
Channel Setting Diamonds with Illustrated Procedures	811-0039	\$29.95



**E Bead Setting Diamonds with Pavé Applications – By Robert R. Wooding**

A well-organized step-by-step instruction book on bead setting. Describes everything from simple setting with one stone to pavé setting with many stones. Includes a concise guide on proper tool selection, usage and care. Takes the student through each phase of operation with clear text and black-and-white photos. Hardcover, 192 pages.

Description	Item#	Each
Bead Setting Diamonds with Pavé Applications	811-0037	\$29.95



**F Diamondland: “Know How” Every Jeweler Should Be Aware Of**  
**By Bill Tallmon**

A retail jeweler's 30 years of successful experience condensed into one book. Features amusing anecdotes that advise the reader how to run a jewelry business. Covers startup, image, product knowledge, inventory, publicity, sales, growth, service and appraisal. Informative for both aspiring and existing jewelry store owners. Softcover, 139 pages.

Description	Item#	Each
Diamondland: “Know How” Every Jeweler Should Be Aware Of	811-0110	\$24.95

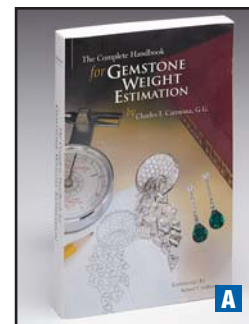


**A The Complete Handbook of Gemstone Weight Estimation**

By Charles I. Carmona, G.G.

"[A] remarkably comprehensive set of weight estimation formulae for mounted diamonds, colored stones and pearls...Those who appraise, buy, sell, insure, or loan on used or estate jewelry...should consider such detailed tables a major resource for their estimating process" (from the foreword by Richard T. Liddicoat). Charles I. Carmona, G.G., is a working gemologist and appraiser who, over decades of experience, has compiled this guide to estimating the weights of all shapes and varieties of mounted gemstones. Includes hundreds of black-and-white diagrams and charts. Softcover, 434 pages.

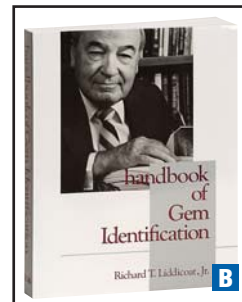
Description	Item#	Each
The Complete Handbook of Gemstone Weight Estimation	811-0020	\$59.95



**B Handbook of Gem Identification – By Richard T. Liddicoat, Jr.**

Written by one of the world's foremost gemologists, this book has become the standard of reference in the field for retail jewelers and gemologists alike. Covers cleavage, fracture, hardness, specific gravity, refractive index, characteristic inclusions, color filters and fluorescence, essential instruments for gem testing, procedures for identifying gemstones and their substitutes and much more. Includes helpful charts and diagrams. Contains hundreds of color photos. Softcover, 364 pages.

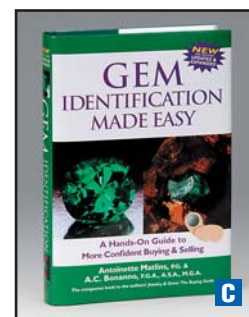
Description	Item#	Each
Handbook of Gem Identification	811-0013	\$37.50



**C Gem Identification Made Easy: A Hands-On Guide to More Confident Buying & Selling – 3rd Edition, By Antoinette Matlins and A.C. Bonanno**

A must-have for the novice gem buyer and seller, this revised and expanded edition tells you everything you need to know to identify most gemstones with ease and make wiser buying decisions. Provides the latest information on new gems and explains instruments and techniques for spotting treatments, synthetics and look-alikes. Shows you how three simple, pocket-size instruments costing under \$200 total can help you identify about 85% of all gemstones. Offers detailed instructions on how to use everything from basic tools such as the loupe and microscope to more advanced tools such as the refractometer and polariscope. Includes dozens of black-and-white photos and line drawings as well as color plates. Hardcover, 330 pages.

Description	Item#	Each
Gem Identification Made Easy	811-0014	\$36.95

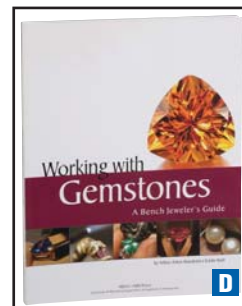


**D Working with Gemstones: A Bench Jeweler's Guide**

By Arthur Anton Skuratowicz & Julie Nash

Offers insights into how best to work on gem-set jewelry. Explains all common enhancements and treatments, how various gems react to heat and pressure, how to modify mountings to accommodate a gem's characteristics and what tools you should always have close at hand. Also has a handy glossary, a listing of tool-specific dangers and easy-to-read charts on how gems react to abrasives, chemicals and heat. An invaluable resource for helping you avoid damaging expensive—and sometimes irreplaceable—gems. Illustrated in full color with gorgeous photos. Softcover, 128 pages.

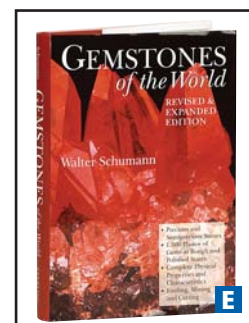
Description	Item#	Each
Working with Gemstones	811-0062	\$35.00



**E Gemstones of the World – By Walter Schumann**

The definitive guide to gems for over 20 years. Details over 1,400 precious and semiprecious gemstones, outlining history, geographic origins, physical properties and the ways they are formed, structured and mined. Offers in-depth coverage of optical features, densities, chemical compositions, classifications, cutting and polishing methods, synthetic and imitation gems and much more. Contains 1,500 beautiful color photos. Hardcover, 280 pages.

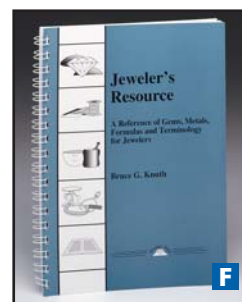
Description	Item#	Each
Gemstones of the World	811-0015	\$24.95



**F Jeweler's Resource: A Reference of Gems, Metals, Formulas and Terminology for Jewelers – By Bruce G. Knuth**

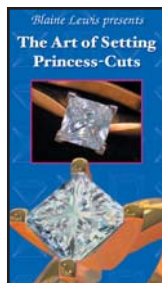
Ideal for jewelry students and bench jewelers alike. Also serves as the most complete counter reference available to retail jewelers. Features easy-to-follow text and illustrations that allow explanation of many aspects of gems and jewelry to consumers. Includes mathematical and chemical formulas, measurement conversion and comparison tables, an extensive listing of gems and gem properties, diagrams of over 40 gem cutting styles, legal standards for diamond and much, much more. Spiral-bound to lie flat. Softcover, 112 pages.

Description	Item#	Each
Jeweler's Resource	810-2760	\$23.25





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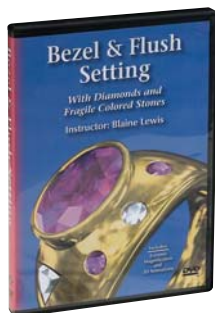


**A The Art of Setting Princess Cuts Video Package – By Blaine Lewis**

Covers safe and efficient techniques for setting princess-cut and fancy-cut stones into both common and V-prong heads. Includes practice mountings and CZ stones, large precut V-prong and common-prong models that guide you through all processes and the three essential burs needed for bearing-cutting procedures. Purchase entitles user to free technical support via phone or the Blaine Lewis Web site. DVD or VHS format, 150 minutes.

Description	Item#	Each
A. DVD Format	811-0053	\$179.00
VHS Format	811-0052	179.00

B

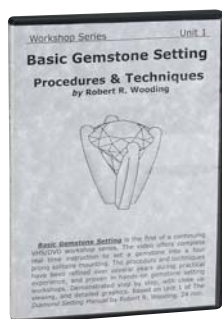


**B Bezel and Flush Setting Video Package – By Blaine Lewis**

Clarifies even the most difficult stone setting procedures. Presents literally hundreds of techniques for setting colored stones and diamonds quickly and efficiently. Demonstrates multiple layout procedures, proper bearing cutting techniques for irregularly shaped stones, enhanced securing methods, tool making, cleanup tricks and much more. Includes videos, practice mountings (made of a special alloy that closely simulates the working properties of yellow gold) and CZ stones. Purchase entitles user to free technical support via phone or the Blaine Lewis Web site. DVD format, 150 minutes.

Description	Item#	Each
Bezel and Flush Setting Video Package	811-0066	\$179.00

C

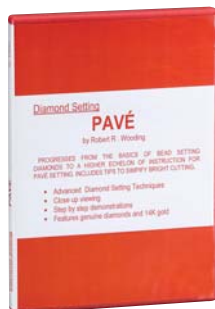


**C Basic Gemstone Setting: Procedures & Techniques – By Robert R. Wooding**

Basic Gemstone Setting is the first of a continuing video workshop series. Offers complete real-time instruction on setting a gemstone into a four-prong solitaire mounting, with procedures and techniques refined over many years of practical experience and proven in hands-on gemstone setting workshops. Demonstrated step-by-step with close-up photography and detailed graphics. Based on Unit 1 of The Diamond Setting Manual, also by Robert R. Wooding. DVD format, 24 minutes.

Description	Item#	Each
Basic Gemstone Setting: Procedures and Techniques	811-0310	\$29.95

D

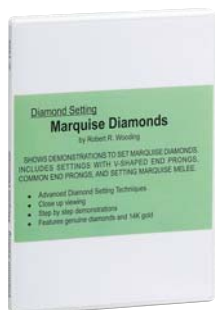


**D Pavé Diamond Setting – By Robert R. Wooding**

A well-produced instructional video by master setter Robert R. Wooding. Shows all the details of pavé setting with beautiful close-ups of all steps. Enables you to pavé set with supreme confidence. Assumes understanding of basic setting techniques. DVD format, 60 minutes.

Description	Item#	Each
Pavé Diamond Setting	811-0391	\$39.95

E



**E Diamond Setting: Marquise Diamonds – By Robert R. Wooding**

Another masterpiece in the *Diamond Setting* series by the renowned Robert R. Wooding. Clearly presents step-by-step procedures and techniques for setting marquise diamonds. Covers inspection, layout, basic setting, advanced setting, finishing and many special procedures. DVD format, 40 minutes.

Description	Item#	Each
Diamond Setting: Marquise Diamonds	811-0296	\$39.95

F



**F The Expert's Guide to Graver Sharpening – By Sam Alfano**

Created by Sam Alfano, master engraver with over 25 years of experience. Offers step-by-step instructions on how to use the GRS Sharpening System. Covers sharpening of square, 120°, flat, round, brightcut, script lettering, modified flat and Italian bulino engravers, as well as liners. Includes dozens of timesaving tips and tricks. DVD format, 60 minutes.

Description	Item#	Each
The Expert's Guide to Graver Sharpening	811-0051	\$49.00

**A Channel Setting Diamonds with Illustrated Procedures – By Robert R. Wooding**

Presents channel setting procedures and techniques in step-by-step sequence from basic to advanced. Covers inspection, layout, basic open channels, cutting channels and bearings, curved channels, securing diamonds, finishing and inlaid channels. DVD format, 60 minutes.

Description	Item#	Each
Channel Setting Diamonds with Illustrated Procedures	811-0040	\$39.95

**B The Complete Metalsmith – By Tim McCreight**

A companion to the book offered on p. 454. Shows basic metalworking techniques such as stone setting, soldering, polishing and casting, paying particular to safety. DVD or VHS format, 70 minutes.

Description	Item#	Each
DVD Format	811-0256	\$39.95
B. VHS Format	811-0255	39.95

**C Small Scale Photography: How to Take Great Shots of Your Work**

By Charles Lewton-Brain

A comprehensive package that provides in-depth information on setting up your own jewelry photography studio. Video offers insightful details on camera choice, film types, lights and lighting, photo booth setup, holding devices for jewelry, F-stops, light metering, drop-shadow effects and much more. Provides solutions to common problems. VHS format, 112 minutes. Softcover companion book is a handy resource usable on its own.

Description	Item#	Each
Small Scale Photography Video/Book Package	811-0044	\$59.95

**D Mokume Gane in the Small Shop – By Steve Midgett**

Takes the mystery out of mokume gane, the beautiful art of combining two or more metals to create a wood grain effect. Provides exact, easy-to-follow instructions for using this wonderful method to create your own unique designs. Details minimal equipment needed. VHS format, 138 minutes.

Description	Item#	Each
Mokume Gane in the Small Shop	811-0067	\$49.95

**E Basic Wax Carving, Volume I**

Teaches the basic steps and skills necessary to carve your own wax models. Demonstrates proper setup of bench environment, proper use of tools, the act of squaring up a rough block of wax and accurate design transfer. Intended for serious students who want to learn professional wax carving. VHS format, 60 minutes.

Description	Item#	Each
Basic Wax Carving, Volume I	810-3000	\$39.95

**F Diamond Setting: Fancy Cut Diamonds – By Robert R. Wooding**

An excellent video that demonstrates advanced techniques for setting fancy cut diamonds into standard prong and V-prong ring mountings. Gives clear and concise start-to-finish instructions on setting oval, pear, heart, marquise, triangular and emerald shapes. Divided into seven separate segments for fast, easy access. A great tool for learning advanced diamond setting in your own home. VHS format, 110 minutes.

Description	Item#	Each
Diamond Setting: Fancy Cut Diamonds	811-0300	\$39.95

**G GRS® Engraving Methods And Techniques**

Teaches an exciting course in engraving methods and techniques. Gives detailed instructions on design, making basic cuts, scroll engraving and script lettering, showing how best to use the mechanical assist of GraverMax or Gravermeister. Presents examples of superior pieces engraved by masters. Covers setup, practice and design transfer onto a metal workpiece. Reveals many technical secrets of successful engravers throughout the world. VHS format, 240 minutes (two tapes).

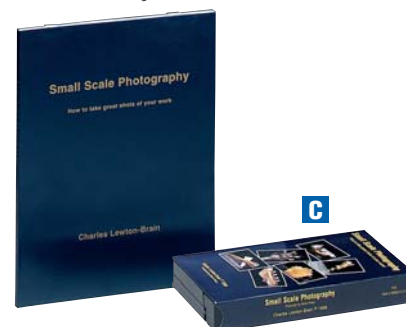
Description	Item#	Each
GRS Engraving Methods And Techniques	856-0057	\$59.00



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## Measurement Comparison Chart

inch	mm	B&S Gauge	Stubb's Steel Wire	Drill#
.0030	0.076	-	-	-
.0040	0.102	-	-	-
.0050	0.127	-	-	-
.0059	0.150	-	-	97
.0060	0.152	-	-	-
.0063	0.160	-	-	96
.0067	0.170	-	-	95
.0070	0.178	-	-	-
.0071	0.180	-	-	94
.0075	0.190	-	-	93
.0079	0.200	-	-	92
.0080	0.203	-	-	-
.0083	0.210	-	-	91
.0087	0.220	-	-	90
.0090	0.229	-	-	-
.0091	0.230	-	-	89
.0095	0.241	-	-	88
.0100	0.254	-	-	87
.0105	0.267	-	-	86
.0110	0.279	-	-	85
.0115	0.292	-	-	84
.0120	0.305	-	-	83
.0125	0.320	-	-	82
.0130	0.330	-	80	81
.0135	0.343	-	-	80
.0140	0.356	-	79	-
.0142	0.361	27	-	-
.0145	0.369	-	-	79
.0150	0.381	-	78	-
.0159	0.404	26	-	-
.0160	0.406	-	77	78
.0179	0.455	25	-	-
.0180	0.457	-	76	77
.0200	0.508	-	75	76
.0201	0.511	24	-	-
.0210	0.533	-	-	75
.0220	0.559	-	74	-
.0225	0.572	-	-	74
.0226	0.574	23	-	-
.0230	0.584	-	73	-
.0240	0.610	-	72	73
.0250	0.635	-	-	72
.0253	0.643	22	-	-
.0260	0.660	-	71	71
.0270	0.685	-	70	-
.0280	0.712	-	-	70
.0285	0.724	21	-	-
.0290	0.737	-	69	-
.02925	0.743	-	-	69
.0300	0.762	-	68	-
.0310	0.787	-	67	68
.0320	0.813	20	66	67
.0330	0.838	-	65	66
.0350	0.889	-	64	65
.0359	0.912	19	-	-
.0360	0.914	-	63	64
.0370	0.940	-	62	63
.0380	0.965	-	61	62
.0390	0.990	-	60	61
.0400	1.016	-	59	60

inch	mm	B&S Gauge	Stubb's Steel Wire	Drill#
.0403	1.024	18	-	-
.0410	1.041	-	58	59
.0420	1.067	-	57	58
.0430	1.092	-	-	57
.0450	1.143	-	56	-
.0453	1.151	17	-	-
.0465	1.181	-	-	56
.0500	1.270	-	55	-
.0508	1.290	16	-	-
.0520	1.321	-	-	55
.0550	1.397	-	54	54
.0571	1.450	15	-	-
.0580	1.473	-	53	-
.0595	1.512	-	-	53
.0630	1.600	-	52	-
.0635	1.613	-	-	52
.0641	1.629	14	-	-
.0660	1.676	-	51	-
.0670	1.702	-	-	51
.0690	1.753	-	50	-
.0700	1.778	-	-	50
.0720	1.829	13	49	-
.0730	1.854	-	-	49
.0750	1.905	-	48	-
.0760	1.930	-	-	48
.0770	1.956	-	47	-
.0785	1.994	-	-	47
.0790	2.007	-	46	-
.0808	2.052	12	-	-
.0810	2.057	-	45	46
.0820	2.083	-	-	45
.0850	2.159	-	44	-
.0860	2.184	-	-	44
.0880	2.235	-	43	-
.0890	2.261	-	-	43
.0907	2.304	11	-	-
.0920	2.337	-	42	-
.0935	2.378	-	-	42
.0950	2.413	-	41	-
.0960	2.438	-	-	41
.0970	2.464	-	40	-
.0980	2.489	-	-	40
.0990	2.515	-	39	-
.0995	2.528	-	-	39
.1010	2.565	-	38	-
.1015	2.578	-	-	38
.1019	2.588	10	-	-
.1030	2.616	-	37	-
.1040	2.642	-	-	37
.1060	2.692	-	36	-
.1065	2.705	-	-	36
.1080	2.743	-	35	-
.1100	2.794	-	34	35
.1110	2.819	-	-	34
.1120	2.845	-	33	-
.1130	2.870	-	-	33
.1144	2.906	9	-	-
.1150	2.921	-	32	-
.1160	2.946	-	-	32

inch	mm	B&S Gauge	Stubb's Steel Wire	Drill#
.1200	3.048	-	31	31
.1270	3.226	-	30	-
.1285	3.264	8	-	30
.1340	3.404	-	29	-
.1360	3.454	-	-	29
.1390	3.531	-	28	-
.1405	3.573	-	-	28
.1430	3.636	-	27	-
.1440	3.662	-	-	27
.1443	3.670	7	-	-
.1460	3.712	-	26	-
.1470	3.758	-	-	26
.1480	3.763	-	25	-
.1495	3.802	-	-	25
.1510	3.835	-	24	-
.1520	3.861	-	-	24
.1530	3.886	-	23	-
.1540	3.912	-	-	23
.1550	3.937	-	22	-
.1570	3.988	-	21	22
.1590	4.039	-	-	21
.1610	4.085	-	20	20
.1620	4.111	6	-	-
.1640	4.162	-	19	-
.1660	4.212	-	-	19
.1680	4.263	-	18	-
.1695	4.302	-	-	18
.1720	4.371	-	17	-
.1730	4.396	-	-	17
.1750	4.447	-	16	-
.1770	4.498	-	-	16
.1780	4.523	-	15	-
.1800	4.570	-	14	15
.1819	4.618	5	-	-
.1820	4.621	-	13	14
.1850	4.697	-	12	13
.1880	4.773	-	11	-
.1890	4.799	-	-	12
.1910	4.855	-	10	11
.1935	4.919	-	-	10
.1940	4.932	-	9	-
.1960	4.982	-	-	9
.1970	5.008	-	8	-
.1990	5.059	-	7	8
.2010	5.105	-	6	7
.2040	5.182	-	5	6
.2043	5.189	4	-	-
.2055	5.220	-	-	5
.2070	5.258	-	4	-
.2090	5.309	-	-	4
.2120	5.381	-	3	-
.2130	5.406	-	-	3
.2190	5.559	-	2	-
.2210	5.615	-	-	2
.2270	5.768	-	1	-
.2280	5.793	-	-2	1
.2294	5.829	3	-	-
.2576	6.543	2	-	-
.2893	7.346	1	-	-

## Fraction, Inch and Millimeter Conversion Chart

Fraction	inch	mm
1/64	.0156	0.3969
1/32	.0313	0.7937
3/64	.0469	1.1906
1/16	.0625	1.5875
5/64	.0781	1.9843
3/32	.0937	2.3812
7/64	.1094	2.7781
1/8	.1250	3.1750
9/64	.1406	3.5718
5/32	.1562	3.9687
11/64	.1719	4.3656
3/16	.1875	4.7624
13/64	.2031	5.1593
7/32	.2187	5.5562
15/64	.2344	5.9530
1/4	.2500	6.3499

Fraction	inch	mm
17/64	.2656	6.7468
9/32	.2812	7.1437
19/64	.2969	7.5405
5/16	.3125	7.9374
21/64	.3281	8.3343
11/32	.3438	8.7312
23/64	.3594	9.1280
3/8	.3750	9.5249
25/64	.3906	9.9217
13/32	.4062	10.3186
27/64	.4219	10.7155
7/16	.4375	11.1124
29/64	.4531	11.5092
15/32	.4687	11.9061
31/64	.4844	12.3030
1/2	.5000	12.6999

Fraction	inch	mm
33/64	.5156	13.0968
17/32	.5313	13.4936
35/64	.5469	13.8905
9/16	.5625	14.2874
37/64	.5781	14.6842
19/32	.5938	15.0811
39/64	.6094	15.4780
5/8	.6250	15.8749
41/64	.6406	16.2717
21/32	.6563	16.6686
43/64	.6719	17.0655
11/16	.6875	17.4623
45/64	.7031	17.8592
23/32	.7188	18.2561
47/64	.7344	18.6529
3/4	.7500	19.0498

Fraction	inch	mm
49/64	.7656	19.4467
25/32	.7813	19.8436
51/64	.7969	20.2404
13/16	.8125	20.6373
53/64	.8281	21.0342
27/32	.8438	21.4311
55/64	.8594	21.8279
7/8	.8750	22.2248
29/32	.9063	23.0185
59/64	.9219	23.4154
15/16	.9375	23.8123
61/64	.9531	23.2091
31/32	.9688	24.6060
63/64	.9844	25.0029
1	1.0000	25.3998

## Metal Thicknesses in Millimeters and B&S Gauge

RING BLANK LENGTHS

Ring Size	Circumference in mm	2.1mm 12ga.	1.6mm 14ga.	1.3mm 18ga.	1mm 18ga.	0.8mm 20ga.	0.6mm 22ga.	0.5mm 24ga.
1	39.0	45.5	44.2	43.0	42.1	41.5	40.9	40.5
1¼	39.6	46.2	44.6	43.6	42.7	42.1	41.5	41.1
1½	40.2	46.9	45.2	44.3	43.3	42.7	42.1	41.8
1¾	40.8	47.7	45.8	44.9	44.0	43.3	42.7	42.4
2	41.5	48.0	46.5	45.5	44.6	44.0	43.3	43.0
2¼	42.1	48.7	47.1	46.2	45.2	44.6	44.0	43.6
2½	42.7	49.3	47.7	46.8	45.8	45.2	44.6	44.3
2¾	43.4	49.9	48.4	47.4	46.5	45.8	45.2	44.9
3	44.0	50.6	49.0	48.0	47.1	46.5	45.8	45.6
3¼	44.6	51.2	49.6	48.7	47.7	47.1	46.5	46.2
3½	45.2	51.8	50.2	49.3	48.4	47.7	47.1	46.8
3¾	45.9	52.4	50.9	49.9	49.0	48.4	47.7	47.4
4	46.5	53.1	51.5	50.6	49.6	49.0	48.3	48.0
4¼	47.1	53.7	52.1	51.2	50.2	49.6	49.0	48.7
4½	47.8	54.3	52.8	51.8	50.9	50.2	49.6	49.3
4¾	48.4	55.0	53.4	52.4	51.5	50.9	50.2	49.9
5	49.0	55.6	54.0	53.1	52.1	51.5	50.9	50.6
5¼	49.6	56.2	54.6	53.7	52.8	52.1	51.5	51.2
5½	50.3	56.8	55.3	54.3	53.4	52.7	52.1	51.8
5¾	50.9	57.5	55.9	55.0	54.0	53.4	52.8	52.4
6	51.5	58.1	56.5	55.6	54.6	54.0	53.4	53.1
6¼	52.2	58.7	57.1	56.2	55.3	54.6	54.0	53.7
6½	52.8	59.3	57.8	56.8	55.9	55.3	54.6	54.3
6¾	53.4	60.0	58.4	57.5	56.5	55.9	55.3	55.0
7	54.0	60.6	59.0	58.1	57.1	56.5	55.9	55.6
7¼	54.7	61.2	59.7	58.7	57.8	57.1	56.5	56.2
7½	55.3	61.9	60.3	59.3	58.4	57.8	57.1	56.8
7¾	55.9	62.5	60.9	60.0	59.0	58.4	57.8	57.5
8	56.6	63.1	61.5	60.6	59.7	59.0	58.4	58.1
8¼	57.2	63.7	62.2	61.2	60.3	59.7	59.0	58.7
8½	57.8	64.4	62.8	61.9	60.9	60.3	59.7	59.3
8¾	58.4	65.0	63.4	62.5	61.5	60.9	60.3	60.0
9	59.1	65.6	64.1	63.1	62.2	61.5	60.9	60.6
9¼	59.7	66.3	64.7	63.7	62.8	62.2	61.5	61.2
9½	60.3	66.9	65.3	64.4	63.4	62.8	62.2	61.9
9¾	60.9	67.5	65.9	65.0	64.1	63.4	62.8	62.5
10	61.6	68.1	66.6	65.6	64.7	64.1	63.4	63.1
10¼	62.2	68.8	67.2	66.3	65.3	64.7	64.1	63.7
10½	62.8	69.4	67.8	66.9	65.9	65.3	64.7	64.4
10¾	63.5	70.0	68.5	67.5	66.6	65.9	65.3	65.0
11	64.1	70.7	69.1	68.1	67.2	66.6	65.9	65.6
11¼	64.7	71.3	69.7	68.8	67.8	67.2	66.6	66.3
11½	65.3	71.9	70.3	69.4	68.5	67.8	67.2	66.9
11¾	66.0	72.5	71.0	70.0	69.1	68.5	67.8	67.5
12	66.6	73.2	71.6	70.7	69.7	69.1	68.5	68.1
12¼	67.2	73.8	72.2	71.3	70.3	69.7	69.1	68.8
12½	67.9	74.4	72.8	71.9	71.0	70.3	69.7	69.4
12¾	68.5	75.0	73.5	72.5	71.6	71.0	70.3	70.0
13	69.1	75.7	74.1	73.2	72.2	71.6	71.0	70.7



## Conversion Chart

### VOLUME (LIQUID)

To convert the following to:	fluid ounces (fl. oz.)	U.S. gallons (gals.)	milliliters (ml)	liters (L)
Multiply number of	By	By	By	By
fluid ounces	1	0.0078125	29.57353	0.02957353
U.S. gallons	128	1	3,785	3.785
milliliters	0.03381402	0.000264172	1	0.001
liters	33.81402	0.2641720	1,000	1

### MASS

To convert the following to:	ounces (oz.)	pounds (lbs.)	grams (g)	kilograms (kg)
Multiply number of	By	By	By	By
ounces	1	0.0625	28.34952	0.02834952
pounds	16	1	453.5924	0.4535924
grams	0.03527397	0.002204623	1	0.001
kilograms	35.273952	2.204622	1,000	1

### LENGTH

To convert the following to:	meters (m)	centimeters (cm)	millimeters (mm)	inches (in.)	feet (ft.)
Multiply number of	By	By	By	By	By
meters	1	100	1,000	39.37	3.28
centimeters	0.01	1	10	0.394	0.0328
millimeters	0.001	0.1	1	0.0394	0.00328
inches	0.0254	2.540	25.40	1	0.0833
feet	0.3048	30.48	304.8	12	1

### AREA

To convert the following to:	square meters (m <sup>2</sup> )	square inches (in. <sup>2</sup> )	square feet (ft. <sup>2</sup> )	sq. centimeters (cm <sup>2</sup> )	sq. millimeters (mm <sup>2</sup> )
Multiply number of	By	By	By	By	By
square meters	1	1,550	10.76	10,000	10 <sup>6</sup>
square inches	6.452 x 10 <sup>-4</sup>	1	6.94 x 10 <sup>-3</sup>	6.452	645.2
square feet	0.0929	144	1	929	92,903
square centimeters	0.0001	0.155	0.001	1	100
square millimeters	10 <sup>-6</sup>	0.00155	0.00001	0.01	1

### PACKAGING CONVERSIONS

1 kPa = 0.1450377 PSI	625cc ≈ 21 fl. oz.
1 kPa = 7.5mm Hg	950cc ≈ 32 fl. oz.
1 psi = 6.9 kPa	1,000cc = 1 liter ≈ 33.8 fl. oz.

Multiply	By	To Calculate
Centimeters	0.3937	Inches
Centimeters	0.0328	Feet
Cubic centimeters	0.0610	Cubic inches
Cubic centimeters	3.531 x 10 <sup>-5</sup>	Cubic feet
Cubic feet	1728	Cubic inches
Cubic feet	0.0283	Cubic meters
Cubic feet	7.4805	Gallons
Cubic feet	28.32	Liters
Cubic feet	59.84	Pints (liq)
Cubic feet	29.92	Quarts (liq)
Cubic inches	0.004329	Gallons
Cubic inches	0.01639	Liters
Cubic inches	0.0346	Pints (liq)
Cubic inches	0.0173	Quarts (liq)
Cubic inches	16.387	Cubic centimeters
Drams	27.34	Grains
Drams	0.0625	Ounces
Drams	1.7718	Grams
Feet	30.48	Centimeters
Gallons	3785	Cubic centimeters
Gallons	3.785	Liters
Gallons	8	Pints (liq)
Gallons	4	Quarts (liq)
Gallons	0.1337	Cubic feet
Gallons	231	Cubic inches
Gallons	0.0038	Cubic meters
Grams	15.4324	Grains
Grams	0.03527	Ounces
Grams	0.03215	Troy ounces
Grams	5	Carats
Inches	2.540	Centimeters
Kilograms	2.2046	Pounds
Liters	2.1133	Pints
Liters	1.0567	Quarts
Liters	0.2642	Gallons
Millimeters	0.03937	Inches
Ounces	0.0625	Pounds
Pints	0.4732	Liters
Pounds	0.4536	Kilograms
Quarts	0.9464	Liters
Square centimeters	0.1550	Square inches
Square centimeters	0.001076	Square feet
Square feet	929.0	Square centimeters
Square feet	92,903.04	Square millimeters
Square inches	6.452	Square centimeters
Square inches	645.2	Square millimeters
Square millimeters	00.153	Square inches

### Troy Weight

24 grains	1 pennyweight
20 pennyweights	1 ounce
12 ounces	1 pound

The troy ounce is about 10% heavier than the avoirdupois ounce.  
Troy ounce x 1.0971 = avoirdupois ounce.

### Weight Relationships

1 carat	1/5 gram	3,086 grains
1 avoird lb.	14.58 troy oz.	7,000 grains
1 troy lb.	13.17 avoird oz.	5,760 grains
1 gram	5 carats	15.432 grains
1 avoird oz.	.911 troy oz.	28.25 grams
1 troy oz.	1.097 avoird oz.	31.10 grams

### Douzieme Gauge

The gauge is divided into 72 sections or douziemes.

1 douzieme =	1 gauge =	.0074 inch
1 ligne =	12 douzieme =	.0888 inch

### Avoirdupois Weight

27 1/3 grams	1 dram
16 drams	1 ounce
16 ounces	1 pound

The avoirdupois pound is about 21 1/2% heavier than the troy pound.  
Avoirdupois ounce x 0.91146 = troy ounce.

### To convert from Celsius to Fahrenheit:

$$(^{\circ}\text{C} \times 1.8) + 32 = ^{\circ}\text{F}$$

### To convert from Fahrenheit to Celsius:

$$(^{\circ}\text{F} - 32) \div 1.8 = ^{\circ}\text{C}$$

### Volume

(Cubic measure calculation)

Cylinder	$\pi r^2 h$
Cube/Rectangle	L x W x H
Cone	$\frac{1}{3} \pi r^2 h$
Sphere	$\frac{4}{3} \pi r^3$

### Area Calculations

Circle	$\pi r^2$ ( $2\pi r$ = circumference)
Square	L x W
Triangle	W x 1/2H

### TEMPERATURE CONVERSION TABLE

Read the reference temperature in boldfaced type in the center column. The corresponding Celsius temperature is at the left, and the corresponding Fahrenheit temperature is at the right.

Temperature Conversion Formulas:      °C =  $\frac{5}{9}(\text{°F} - 32)$       °F =  $\frac{9}{5}\text{°C} + 32$

°C	Ref.	°F	°C	Ref.	°F	°C	Ref.	°F	°C	Ref.	°F	°C	Ref.	°F	°C	Ref.	°F	°C	Ref.	°F			
-17.9	<b>0</b>	32	24.4	<b>76</b>	168.8	321	<b>610</b>	1130	743	<b>1370</b>	2498	1166	<b>2130</b>	3866	1588	<b>2890</b>	5234	2010	<b>3650</b>	6602	2432	<b>4410</b>	7970
-17.2	<b>1</b>	33.8	25.0	<b>77</b>	170.6	327	<b>620</b>	1148	749	<b>1380</b>	2516	1171	<b>2140</b>	3884	1593	<b>2900</b>	5252	2016	<b>3660</b>	6620	2438	<b>4420</b>	7988
-16.7	<b>2</b>	35.6	25.6	<b>78</b>	172.4	332	<b>630</b>	1166	754	<b>1390</b>	2534	1177	<b>2150</b>	3902	1599	<b>2910</b>	5270	2021	<b>3670</b>	6638	2443	<b>4430</b>	8006
-16.1	<b>3</b>	37.4	26.1	<b>79</b>	174.2	338	<b>640</b>	1184	760	<b>1400</b>	2552	1182	<b>2160</b>	3920	1604	<b>2920</b>	5288	2027	<b>3680</b>	6656	2449	<b>4440</b>	8024
-15.6	<b>4</b>	39.2	26.7	<b>80</b>	176.0	343	<b>650</b>	1202	766	<b>1410</b>	2570	1188	<b>2170</b>	3938	1610	<b>2930</b>	5306	2032	<b>3690</b>	6674	2454	<b>4450</b>	8042
-15.0	<b>5</b>	41.0	27.2	<b>81</b>	177.8	349	<b>660</b>	1220	771	<b>1420</b>	2588	1193	<b>2180</b>	3956	1616	<b>2940</b>	5324	2038	<b>3700</b>	6692	2460	<b>4460</b>	8060
-14.4	<b>6</b>	42.8	27.8	<b>82</b>	179.6	354	<b>670</b>	1238	777	<b>1430</b>	2606	1199	<b>2190</b>	3974	1621	<b>2950</b>	5342	2043	<b>3710</b>	6710	2466	<b>4470</b>	8078
-13.9	<b>7</b>	44.6	28.3	<b>83</b>	181.4	360	<b>680</b>	1256	782	<b>1440</b>	2624	1204	<b>2200</b>	3992	1627	<b>2960</b>	5360	2049	<b>3720</b>	6728	2471	<b>4480</b>	8096
-13.3	<b>8</b>	46.4	28.9	<b>84</b>	183.2	366	<b>690</b>	1274	788	<b>1450</b>	2642	1210	<b>2210</b>	4010	1632	<b>2970</b>	5378	2054	<b>3730</b>	6746	2477	<b>4490</b>	8114
-12.8	<b>9</b>	48.2	29.4	<b>85</b>	185.0	371	<b>700</b>	1292	793	<b>1460</b>	2660	1216	<b>2220</b>	4028	1638	<b>2980</b>	5396	2060	<b>3740</b>	6764	2482	<b>4500</b>	8132
-12.2	<b>10</b>	50.0	30.0	<b>86</b>	186.8	377	<b>710</b>	1310	799	<b>1470</b>	2678	1221	<b>2230</b>	4046	1643	<b>2990</b>	5414	2066	<b>3750</b>	6782	2488	<b>4510</b>	8150
-11.7	<b>11</b>	51.8	30.6	<b>87</b>	188.6	382	<b>720</b>	1328	804	<b>1480</b>	2696	1227	<b>2240</b>	4064	1649	<b>3000</b>	5432	2071	<b>3760</b>	6800	2493	<b>4520</b>	8168
-11.1	<b>12</b>	53.6	31.1	<b>88</b>	190.4	388	<b>730</b>	1346	810	<b>1490</b>	2714	1232	<b>2250</b>	4082	1654	<b>3010</b>	5450	2077	<b>3770</b>	6818	2499	<b>4530</b>	8186
-10.6	<b>13</b>	55.4	31.7	<b>89</b>	192.2	393	<b>740</b>	1364	816	<b>1500</b>	2732	1238	<b>2260</b>	4100	1660	<b>3020</b>	5468	2082	<b>3780</b>	6836	2504	<b>4540</b>	8204
-10.0	<b>14</b>	57.2	32.2	<b>90</b>	194.0	399	<b>750</b>	1382	821	<b>1510</b>	2750	1243	<b>2270</b>	4118	1666	<b>3030</b>	5486	2088	<b>3790</b>	6854	2510	<b>4550</b>	8222
-9.44	<b>15</b>	59.0	32.8	<b>91</b>	195.8	404	<b>760</b>	1400	827	<b>1520</b>	2768	1249	<b>2280</b>	4136	1671	<b>3040</b>	5504	2093	<b>3800</b>	6872	2516	<b>4560</b>	8240
-8.89	<b>16</b>	60.8	33.3	<b>92</b>	197.6	410	<b>770</b>	1418	832	<b>1530</b>	2786	1254	<b>2290</b>	4154	1677	<b>3050</b>	5522	2099	<b>3810</b>	6890	2521	<b>4570</b>	8258
-8.33	<b>17</b>	62.6	33.9	<b>93</b>	199.4	416	<b>780</b>	1436	838	<b>1540</b>	2804	1260	<b>2300</b>	4172	1682	<b>3060</b>	5544	2104	<b>3820</b>	6908	2527	<b>4580</b>	8276
-7.78	<b>18</b>	64.4	34.4	<b>94</b>	201.2	421	<b>790</b>	1454	843	<b>1550</b>	2822	1266	<b>2310</b>	4190	1688	<b>3070</b>	5568	2110	<b>3830</b>	6926	2532	<b>4590</b>	8294
-7.22	<b>19</b>	66.2	35.0	<b>95</b>	203.0	427	<b>800</b>	1472	849	<b>1560</b>	2840	1271	<b>2320</b>	4208	1693	<b>3080</b>	5576	2116	<b>3840</b>	6944	2538	<b>4600</b>	8312
-6.67	<b>20</b>	68.0	35.6	<b>96</b>	204.8	432	<b>810</b>	1490	854	<b>1570</b>	2858	1277	<b>2330</b>	4226	1699	<b>3090</b>	5594	2121	<b>3850</b>	6962	2543	<b>4610</b>	8330
-6.11	<b>21</b>	69.8	36.1	<b>97</b>	206.6	438	<b>820</b>	1508	860	<b>1580</b>	2876	1282	<b>2340</b>	4244	1704	<b>3100</b>	5612	2127	<b>3860</b>	6980	2549	<b>4620</b>	8348
-5.58	<b>22</b>	71.6	36.7	<b>98</b>	208.4	443	<b>830</b>	1526	866	<b>1590</b>	2894	1288	<b>2350</b>	4262	1710	<b>3110</b>	5630	2132	<b>3870</b>	6998	2554	<b>4630</b>	8366
-5.00	<b>23</b>	73.4	37.2	<b>99</b>	210.2	449	<b>840</b>	1544	871	<b>1600</b>	2912	1293	<b>2360</b>	4280	1716	<b>3120</b>	5648	2138	<b>3880</b>	7016	2560	<b>4640</b>	8384
-4.44	<b>24</b>	75.2	37.8	<b>100</b>	212.0	454	<b>850</b>	1562	877	<b>1610</b>	2930	1299	<b>2370</b>	4298	1721	<b>3130</b>	5666	2143	<b>3890</b>	7034	2566	<b>4650</b>	8402
-3.89	<b>25</b>	77.0	43	<b>110</b>	230	460	<b>860</b>	1580	882	<b>1620</b>	2948	1304	<b>2380</b>	4316	1727	<b>3140</b>	5684	2149	<b>3900</b>	7052	2571	<b>4660</b>	8420
-3.33	<b>26</b>	78.8	49	<b>120</b>	248	466	<b>870</b>	1598	888	<b>1630</b>	2966	1310	<b>2390</b>	4334	1732	<b>3150</b>	5702	2154	<b>3910</b>	7070	2577	<b>4670</b>	8438
-2.78	<b>27</b>	80.6	54	<b>130</b>	266	471	<b>880</b>	1616	893	<b>1640</b>	2984	1316	<b>2400</b>	4352	1738	<b>3160</b>	5720	2160	<b>3920</b>	7088	2582	<b>4680</b>	8456
-2.22	<b>28</b>	82.4	60	<b>140</b>	284	477	<b>890</b>	1634	899	<b>1650</b>	3002	1321	<b>2410</b>	4370	1743	<b>3170</b>	5738	2166	<b>3930</b>	7106	2588	<b>4690</b>	8474
-1.67	<b>29</b>	84.2	66	<b>150</b>	302	482	<b>900</b>	1652	904	<b>1660</b>	3020	1327	<b>2420</b>	4388	1749	<b>3180</b>	5756	2171	<b>3940</b>	7124	2593	<b>4700</b>	8492
-1.11	<b>30</b>	86.0	71	<b>160</b>	320	488	<b>910</b>	1670	910	<b>1670</b>	3038	1332	<b>2430</b>	4406	1754	<b>3190</b>	5774	2177	<b>3950</b>	7142	2599	<b>4710</b>	8510
-0.56	<b>31</b>	87.8	77	<b>170</b>	338	493	<b>920</b>	1688	916	<b>1680</b>	3056	1338	<b>2440</b>	4424	1760	<b>3200</b>	5792	2182	<b>3960</b>	7160	2604	<b>4720</b>	8528
0	<b>32</b>	89.6	82	<b>180</b>	356	499	<b>930</b>	1706	921	<b>1690</b>	3074	1343	<b>2450</b>	4442	1766	<b>3210</b>	5810	2188	<b>3970</b>	7178	2610	<b>4730</b>	8546
0.56	<b>33</b>	91.4	88	<b>190</b>	374	504	<b>940</b>	1724	927	<b>1700</b>	3092	1349	<b>2460</b>	4460	1771	<b>3220</b>	5828	2193	<b>3980</b>	7196	2616	<b>4740</b>	8564
1.11	<b>34</b>	93.2	93	<b>200</b>	392	510	<b>950</b>	1742	932	<b>1710</b>	3110	1354	<b>2470</b>	4478	1777	<b>3230</b>	5846	2199	<b>3990</b>	7214	2621	<b>4750</b>	8582
1.67	<b>35</b>	95.0	99	<b>210</b>	410	516	<b>960</b>	1760	938	<b>1720</b>	3128	1360	<b>2480</b>	4496	1782	<b>3240</b>	5864	2204	<b>4000</b>	7232	2627	<b>4760</b>	8600
2.22	<b>36</b>	96.8	100	<b>212</b>	413	521	<b>970</b>	1778	943	<b>1730</b>	3146	1366	<b>2490</b>	4514	1788	<b>3250</b>	5882	2210	<b>4010</b>	7250	2632	<b>4770</b>	8618
2.78	<b>37</b>	98.6	104	<b>220</b>	428	527	<b>980</b>	1796	949	<b>1740</b>	3164	1371	<b>2500</b>	4532	1793	<b>3260</b>	5900	2216	<b>4020</b>	7268	2638	<b>4780</b>	8636
3.33	<b>38</b>	100.4	110	<b>230</b>	446	532	<b>990</b>	1814	954	<b>1750</b>	3182	1377	<b>2510</b>	4550	1799	<b>3270</b>	5918	2221	<b>4030</b>	7286	2643	<b>4790</b>	8654
3.89	<b>39</b>	102.2	116	<b>240</b>	464	538	<b>1000</b>	1832	960	<b>1760</b>	3200	1382	<b>2520</b>	4568	1804	<b>3280</b>	5936	2227	<b>4040</b>	7304	2649	<b>4800</b>	8672
4.44	<b>40</b>	104.0	121	<b>250</b>	482	543	<b>1010</b>	1850	966	<b>1770</b>	3218	1388	<b>2530</b>	4586	1810	<b>3290</b>	5954	2232	<b>4050</b>	7322	2654	<b>4810</b>	8690
5.00	<b>41</b>	105.8	127	<b>260</b>	500	549	<b>1020</b>	1868	971	<b>1780</b>	3236	1393	<b>2540</b>	4604	1816	<b>3300</b>	5972	2238	<b>4060</b>	7340	2660	<b>4820</b>	8708
5.56	<b>42</b>	107.6	132	<b>270</b>	518	554	<b>1030</b>	1886	977	<b>1790</b>	3254	1399	<b>2550</b>	4622	1821	<b>3310</b>	5990	2243	<b>4070</b>	7358	2666	<b>4830</b>	8726
6.11	<b>43</b>	109.4	138	<b>280</b>	536	560	<b>1040</b>	1904	982	<b>1800</b>	3272	1404	<b>2560</b>	4640	1827	<b>3320</b>	6008	2249	<b>4080</b>	7376	2671	<b>4840</b>	8744
6.67	<b>44</b>	111.2	143	<b>290</b>	554	566	<b>1050</b>	1922	988	<b>1810</b>	3290	1410	<b>2570</b>	4658	1832	<b>3330</b>	6026	2254	<b>4090</b>	7394	2677	<b>4850</b>	8762
7.22	<b>45</b>	113.0	149	<b>300</b>	572	571	<b>1060</b>	1940	993	<b>1820</b>	3308	1416	<b>2580</b>	4676	1838	<b>3340</b>	6044	2260	<b>4100</b>	7412	2682	<b>4860</b>	8780
7.78	<b>46</b>	114.8	154	<b>310</b>	590	577	<b>1070</b>	1958	999	<b>1830</b>	3326	1421	<b>2590</b>	4694	1843	<b>3350</b>	6062	2266	<b>4110</b>	7430	2688	<b>4870</b>	8798
8.33	<b>47</b>	116.6	160	<b>320</b>	608	582	<b>1080</b>	1976	1004	<b>1840</b>	3344	1427	<b>2600</b>	4712	1849	<b>3360</b>	6080	2271	<b>4120</b>	7448	2693	<b>4880</b>	8816
8.89	<b>48</b>	118.4	166	<b>330</b>	626	588	<b>1090</b>	199															

# Ordering from Gesswein is Easy!

**Phone Orders: 1-800-243-4466 (Monday–Friday, 9am–5pm EST)**

**Fax Orders: 1-888-454-4377 (24 hours a day, toll-free)**

**E-mail Orders: [sales@gesswein.com](mailto:sales@gesswein.com)**

**Web Orders: [www.gesswein.com](http://www.gesswein.com)**

**For fastest ordering, please use our 7-digit item numbers.**

**For in-stock items, we will make every effort to ship the same day.**

## Opening an Account

If you wish to open an account with us and you have a good rating with Dun & Bradstreet (D&B) or the Jewelers Board of Trade (JBT), we will immediately establish an open account with 1% 10, net 30 day terms. If you are not listed with either agency, please send us three trade references and one bank reference or request an account application and return it to our office in Bridgeport, CT. We will immediately contact your references and inform you of our decision as soon as they respond.

## Prices

For your convenience, we have included prices for all of our cataloged products. *Please use as a guide only.* Fluctuations in raw material costs, manufacturing costs or foreign currency exchange rates may require price adjustments without notice. Our buyers constantly seek better prices without sacrificing the quality for which Gesswein is known. When successful, we pass the savings on to our customers, adjusting prices accordingly. Our prices do not include shipping and handling charges. All prices are in U.S. funds. Please feel free to call or fax for price quotes. We collect appropriate state and local sales taxes as required by the current laws of each state.

## Credit Cards

We accept Visa, MasterCard, American Express, Discover or Diners Club cards for payment. For your security, credit card transactions are verified with the credit card company and/or issuing bank. Card number, expiration date and billing address are checked for your safety.



## Terms of Payment

### Open Accounts

Our terms are 1% 10, net 30 days. We reserve the right to impose a service charge of 1½% (18% APR) on all accounts not paid within 30 days.

### Credit Card Accounts

Our terms are net, payable in advance by check, money order, bank wire transfer, Visa, MasterCard, Discover, Diners Club or American Express. Payments accepted in U.S. funds only.

### Leasing Options Available

For equipment purchases totaling \$5,000.00 or more, you might want to consider leasing options. While Gesswein does not operate an in-house leasing program, we are certainly happy to work closely with your leasing firm of choice or we can suggest one that we work with regularly. Contact our Credit Department for details at 1-203-366-5400.

## Sales & Customer Service (9am–5pm EST)

To place an order, check prices or make inquiries:

**☎ 1-800-243-4466 or 1-203-366-5400**

**FAX 1-203-366-3953 E-mail: [sales@gesswein.com](mailto:sales@gesswein.com)**

## Technical Services (9am–5pm EST)

For technical service or product information:

**☎ 1-800-544-2043 or 1-203-366-5400**

**FAX 1-203-335-0300 E-mail: [ecorwin@gesswein.com](mailto:ecorwin@gesswein.com)**

## Credit (9am–5pm EST)

For credit or billing inquiries:

**☎ 1-203-366-5400**

**FAX 1-203-331-8870 E-mail: [info@gesswein.com](mailto:info@gesswein.com)**



## Shipping Policy

Shipping and handling charges are all F.O.B. shipping point. A small handling fee is presently charged on all original orders. The method of shipment will be left to our discretion unless you request a specific method. If timing is critical, we can often provide same-day delivery to most major cities. Please ask for a price quote.

### Truck Shipments

All shipping and handling charges are F.O.B. shipping point. If you request a specific carrier, we will be happy to send your shipment collect via that carrier. Otherwise, we have negotiated lower rates with select carriers and will pass savings on to you. Orders are shipped freight prepaid, and the freight appears on your invoice. If the trucker will have to off-load your shipment to your door because of a narrow alleyway, there may be a delay in delivery. Please make us aware of any potential problems so we can take steps to minimize delays. We will phone you the day the shipment is picked up at our facility in Bridgeport, CT, and provide you with the PRO (tracking) number, trucking charge and estimated delivery date.

#### Truck Shipment Charges – In Addition to the Freight Charge

(as of January 2009—subject to change)

The following services can generate extra charges above the normal trucking rates:

- Residential delivery (minimum \$35.00 to \$50.00).
- Liftgate service (minimum \$25.00 to \$75.00).
- Inside delivery (minimum \$18.50).
- Hazardous goods surcharge (minimum \$10.00).
- Redelivery due to customer unavailability (minimum \$25.00).

### USPS Shipments

All postage and handling charges are F.O.B. shipping point. Orders are shipped postage prepaid, and the postage appears on your invoice. No hazardous goods accepted.

### Shipping Hazardous Materials

When shipping of hazardous materials is prohibited by specific means, we will ship by the best method possible. UPS Ground and most trucking firms charge an additional fee for the transport of hazardous materials, including but not limited to acids and corrosive materials. UPS limits the quantity and type of hazardous items that may be shipped in one carton. Therefore, multiple cartons may have to be used for your order. UPS assesses their hazardous surcharges per carton. Most trucking firms charge per shipment. No hazardous items may be shipped via FedEx or USPS.

**Hazardous goods can only be shipped by those companies authorized to do so. Therefore, a return of hazardous items to Gesswein can be made only if your company is an authorized shipper of such goods. Call tags and pickups cannot be issued.**

### UPS Shipments

All shipping and handling charges are F.O.B. shipping point. Orders are shipped freight prepaid, and the freight appears on your invoice along with your UPS tracking number.

#### UPS Charges – In Addition to the Freight Charge

(as of January 2009—subject to change)

- \$15.00 charge for Saturday delivery.
- \$9.00 charge for each C.O.D. package.
- \$22.50 charge for each hazardous carton via ground.
- \$8.00 charge for any changes to ground shipments after pickup (no changes allowed for C.O.D. shipments).
- \$10.00 charge for any changes to air shipments after pickup.
- \$7.50 special handling charge for items in drums.

UPS also charges surcharges for residential deliveries, for commercial shipments to remote ZIP codes and for packages that are considered oversized. These vary based on the ZIP code, length of package and method of shipment. UPS offers a wide range of guaranteed delivery options to fit your needs. However, not all areas have every service available. Check [www.ups.com](http://www.ups.com) or ask your Inside Sales representative to confirm your ZIP code for a specific time-of-day delivery commitment.

**UPS Express Critical** – Next-flight-out service can be same-day if conditions are met.

**UPS Next Day Air Early A.M.<sup>SM</sup>** – Delivery by 8:00, 8:30, 9:00 or 10:00am depending on location.

**UPS Next Day Air<sup>®</sup> (aka UPS RED)** – Delivery to every address coast-to-coast and Puerto Rico by 10:30am, noon or end of day depending on location. Alaska and Hawaii may require additional days.

**UPS Next Day Air Saver<sup>SM</sup>** – Delivery to specific destinations throughout continental U.S. by 3:00pm, 4:00pm or end of day.

**UPS 2nd Day Air A.M.<sup>SM</sup>** – Morning delivery on the second business day to most metro-commercial addresses throughout U.S., depending on location.

**UPS 2nd Day Air<sup>®</sup> (aka UPS BLUE)** – Delivery by the second business day to every address coast-to-coast and Puerto Rico.

**UPS 3-Day Select<sup>®</sup>** – Delivery within three business days throughout 48 contiguous states.

### FedEx Shipments

Simply provide us with your FedEx account number, advise how you want your order shipped, and we'll bill your FedEx account. No hazardous items may be shipped via FedEx.

#### FedEx Charges – In Addition to the Freight Charge

(as of January 2009—subject to change)

- \$12.50 charge for Saturday delivery.
- \$10.00 charge for any changes to shipments after pickup.

## Shipping Damage

Orders always leave our facility in excellent condition. Please check the contents of the box immediately. If damage is found, please call us at 1-800-243-4466. All boxes and packaging materials must be saved. Even if the box does not appear damaged, there may be “concealed damage” within the box, and the carrier will need to inspect all packaging.

- If you see any obvious outside damage to a shipping carton, you must write “Damaged” on the carrier’s delivery sheet.
- Save all cartons and packing materials. Do not return shipment.
- If you discover concealed damage after initial inspection of the shipment, please call us immediately at 1-800-243-4466.
- Gesswein will not assume responsibility for any losses that occur due to your failure to follow these steps.

## Truck Shipments

All carriers are liable for any damages that occur during transit. Please be sure all cartons that are listed on your freight bill have actually been delivered. If you find a shortage or suspect a carton might have been damaged during transit, you or the trucker must make a notation of this on the delivery receipt. Do not sign the receipt without a notation. *Retain all cartons and packing materials* until after the inspection is completed.

If shortages or damages are discovered after the packages are opened (concealed loss or damage), notify the carrier within 15 days and request an inspection. *Also retain all cartons and packing materials* until after the inspection is completed. Gesswein will not assume responsibility for any losses that occur due to your failure to follow all of these steps.

## UPS Shipments

United Parcel Service is liable for any loss or damage that occurs during transit. If a shipment is not delivered to you in proper order, write “damaged” near your signature on the drivers signature pad. Contact us within 10 days at 1-800-243-4466. *Save all cartons and packing materials* until after the inspection is completed.

If shortages or damages are discovered after the packages are opened (concealed loss or damage), notify us within 10 days. *Also save all cartons and packing materials* until after the inspection is completed. Gesswein will not assume responsibility for any losses that occur due to your failure to follow all of these steps.

## FedEx Shipments

FedEx is liable for losses or damages that occur during transit. If the shipping cartons are obviously damaged, you must write this on the driver’s copy of the delivery receipt. You have 10 days to inspect for hidden damage, so don’t delay. *In either case, all cartons and packing materials have to be available for inspection.* Please keep in mind that FedEx requires written notification of possible claims within 10 days of shipment. Gesswein will not assume responsibility for any losses that occur due to your failure to follow all of these steps. Hazardous items can not be shipped by air.

## Product Design and Modifications

The photographs and descriptions in this catalog are based on the products offered when this catalog was printed. We reserve the right to make changes in design and specifications without any notice.

## Material Safety Data Sheets

Material Safety Data Sheets are available at your request for all products that contain hazardous ingredients. MSDS contain important user information such as safety recommendations and emergency procedures.

The fastest way to access our MSDS information is via our Web site, [www.gesswein.com](http://www.gesswein.com). You can also call us Monday through Friday from 9am–5pm EST at 1-203-366-5400.

## Returns

If for any reason you wish to return merchandise, simply refer to the back of your packing slip. If you require assistance, contact our Customer Service associates at 1-800-243-4466, and they will be happy to help. Please have your packing slip or invoice handy. All returns must be shipped prepaid and be in unused and resellable condition. Please make sure you carefully package the merchandise to avoid damage during shipment. We do not accept collect nor C.O.D. shipments. Any items we authorize to be returned at our expense should be via the carrier that we specify.

### Additional Restrictions:

- We reserve the right to charge a re-stocking fee for cataloged products returned after 30 days.
- Nonstock items ordered specially for you are subject to a re-stocking charge.
- Items made to your specifications are not returnable.
- Returns will be credited in the same manner as paid.
- **Hazardous items can be returned only if you are an authorized hazardous goods shipper.**

## Important Warning – Please Read!

All products sold by Gesswein are restricted for use by professional tradespeople only. Additional documentation may be required before shipment can be made. Our products are not intended for use by the general public. Those not knowledgeable in the usage of hazardous materials and equipment should not purchase these products since noncompliance with safety regulations can be dangerous to health and property.

# Distribution from Coast to Coast and Around the World



## Worldwide Hassle-Free Service

Our international sales staff are ready and waiting to serve you: they routinely schedule shipments to customers all over the world. Coordinating their efforts with expert knowledge of customs regulations, they ensure orders are expedited and delivered on time. Our service goes well beyond the point of sale. We pack shipments with care, arrange for letters of credit, prepare all necessary documentation and select the most affordable shipping—all to make orders hassle-free. Once your order is placed, let us worry about the mundane details.

## Gesswein Represents:

**Quality and Value** – We offer distinguished products of the best quality as well as affordable products of great value.

**Service** – A philosophy and way of life. It cannot be attributed to a single department, program or policy, but rather to all the things we do to ensure customers are satisfied. Service means giving customers more than they expect, responding to their needs immediately and shipping their orders the same day we take them.

**Honesty** – To our customers, ourselves and each other. We are in the business of earning and safeguarding trust, so we must always act honorably.

**Respect** – We demand respect for our customers, each other and the company. Mutual respect leads to understanding, which in turn leads to efficiency.

**Teamwork** – Our people are totally committed to working together as a team to reach our common goals.

**Investment** – We invest resources back into the company in order to keep inventory at optimal levels, to fund a technical support staff and to educate our people so they can better serve our customers.

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## **An Important Note About Our Products**

All products sold by Gesswein are intended for use by professional tradespeople, not the general public. Additional documentation may be requested before shipment can be made. Those not knowledgeable in the usage of hazardous equipment and materials should not purchase these products since noncompliance with safety regulations can be dangerous to health and property.

## **Material Safety Data Sheets**

Material Safety Data Sheets (MSDSs) are available upon request for all products that contain hazardous ingredients. MSDSs contain important information such as safety recommendations and emergency procedures. The fastest way to access MSDS information is through our Web site, [www.gesswein.com](http://www.gesswein.com). Click on the Tech/MSDS button found on our home page, select MSDS and search alphabetically for the product. You can also call us Monday–Friday, 9am–5pm EST at 1-800-544-2043 or 1-203-366-5400.

## **Eye Protection**

Goggles or safety glasses with shields are recommended when using abrasive products for polishing, grinding or cutting.

## **Hand Protection**

Gloves are recommended but not required when using most abrasive products. Follow the manufacturer's guidelines.

## **Hearing Protection**

Earmuffs or earplugs may be required when using some abrasive products. See OSHA 29 CFR 1910.95 for statutory noise limits and requirements.

## **Respiratory Protection**

Consider the abrasive product and material to be ground, then select and use equipment in accordance with OSHA 29 CFR 1910.134 in the USA or CSA Z94.4-M1982 in Canada.

## **Engineering Controls**

Provide process enclosure or local ventilation to keep dust below applicable limits and to meet hearing protection requirements.

## **Operating Practices**

- Safe operating practices must be a part of every operation.
- Be sure to read all safety information provided with applicable products.
- Always check products for damage before use.
- Before mounting wheels, use a tachometer to measure spindle speed.
- Ensure that the mounting flanges, backplate or adapter supplied by the machine manufacturer are used and kept in good condition. ANSI Safety Requirements B7.1 provide wheel mounting requirements. Check mounting flanges for equal, correct diameter, and use blotters when supplied.
- Always mount, true and dress wheels in conformance with the guidelines published in ANSI Safety Requirements B7.1.
- Never exceed the maximum operating speed for any product.
- Avoid dropping or bumping wheels.
- When not using wheels, store in their original packaging materials to prevent chips and cracks and to allow easy wheel identification.

## **Vibrating and Reciprocating Tools**

Prolonged use of vibrating or reciprocating tools may result in vibration-induced circulation problems in the hands. Always follow safe operating procedures. The use of hand protection (i.e., insulated gloves) and taking frequent breaks can help minimize but not guarantee against injury. Operating these types of tools in cold weather or with a tight grip will reduce the period of operation before risking potential injury. Individuals with a tendency to suffer from poor circulation, frequently cold fingers or itchy hands should closely monitor the condition of their hands. If symptoms appear, seek medical advice immediately.

## **Bench and Pedestal Wheels**

### **Do's**

- Check all wheels for cracks or damage before use.
- Always use a safety guard and ensure work rest is properly adjusted.
- Always handle and store wheels in a careful manner.
- Check mounting flanges for equal, correct diameter, and use blotters when supplied.
- Check machine speed against established safe operating speed marked on wheel.

### **Don'ts**

- Don't use a cracked wheel or one that has been dropped or damaged.
- Don't exceed recommended operating speeds.
- Don't tighten the mounting nut excessively.
- Don't jam work into the wheel.
- Don't sand wood, plastic or any other nonmetallic material on bench or pedestal grinders.



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