

Fine Tools, Equipment and Supplies Since 1914







### Gesswein® Power Carver The system of choice for award-winning woodcarvers!

Some of the best woodcarvers in the world have relied on the Gesswein Power Carver for years to provide the exceptional results they expect. Isn't it time you treated yourself to the finest rotary system available?

You'll be so amazed at the productivity boost afforded by Power Carver, you may wonder how you did without one. Whether you're shaping, feathering, detailing or texturing, Power Carver can't be beat!

Available with standard or dual controller (read on for details), Z-55X lightweight high-speed rotary handpiece (see facing page for details),  $\frac{3}{32}$  and  $\frac{1}{8}$  collets, collet wrenches, replacement motor brushes, safety goggles and instructions. Just purchase the appropriate rotary tools for your creation, and you're ready to carve your next masterpiece. For further enhancing your system, we also offer additional heads, motors, handpieces and accessories shown on this page and the next. Mix and match to suit your needs.

Both controllers allow you to add a second handpiece to your system, eliminating the need for time-consuming tool changes. Run in forward or reverse with slide rheostats for precise speed adjustment. Ruggedly constructed with thermal sensor to avoid controller overload,

cutoff switch to protect against handpiece overload and electronic feedback circuitry for maintaining high torque at constant speed. Electrical: 115V, 50/60Hz. Output voltage: 3-30V DC (continuously variable). Made in Japan.

Standard controller has a switch for redirecting power so you can easily alternate between handpieces. Operates from 10% of maximum up to maximum handpiece speed. Includes a side-mounted rotary handpiece holder, flip-up stand and retractable handle. Measures 33/8"W x 73/4"D x 53/4"H. Weighs 5.5 lbs.

Dual controller allows simultaneous independent use of both handpieces, making it a perfect choice for teaching tricky new techniques to beginners. Operates from zero to maximum handpiece speed. Includes handpiece cradle rest and carrying handle. Measures 81/4"W x 8"D x 7"H. Weighs 9 lbs

| g 5 1.25.             |          |          |
|-----------------------|----------|----------|
| Standard Power Carver | 510-2000 | \$899.00 |
| Dual Power Carver     | 510-2010 | 999.00   |





### **Handpiece Holder and Cradle Rest**

Handpiece holder mounts on either side of the Power Carver standard controller. Purchase an extra one in addition to one supplied with the controller to hold two Power Carver handpieces at once. Handpiece cradle rest keeps Power Carver rotary handpieces stationary on the bench. Made of hard rubber. Measures 4"L x 23/8"W.

| Handpiece Holder      | 510-3130 | \$9.95 |
|-----------------------|----------|--------|
| Handpiece Cradle Rest | 510-1130 | 14.60  |

## **Power Carver Motors & Heads**

Motor Head



Purchase parts separately or build your own.



### **Power Carver Motors**

The Z-M08X motor offers highest torque. Can be used with all heads. The Z-M15X motor has moderate torque and speed for general-purpose applications. Can be used with all heads except mini filer heads. The Z-M30X motor offers highest speed. Can be used with heavyduty, standard and slender heads. Measure 31/8"L x 11/4" dia.

| Description  | Max. RPM | ltem#    | Each     |
|--------------|----------|----------|----------|
| Z-M08X Motor | 8,000    | 510-2258 | \$345.00 |
| Z-M15X Motor | 15,000   | 510-2275 | 320.00   |
| Z-M30X Motor | 30,000   | 510-2285 | 395.00   |



### **Z-HDX Heavy-Duty Rotary Head**

Use with 1/4" shank tools for much faster stock removal. Works with all three motors (see below). Includes  $^{1}/_{4}$ " collet;  $^{3}/_{32}$ ",  $^{1}/_{8}$ " and 6.0mm collets also available. Measures  $3^{3}/_{4}$ "L x 1" tapering to  $\frac{7}{8}$ " dia.

| Z-HDX Head | 510-2230 | \$399.00  |
|------------|----------|-----------|
| 7-HIX HEAD | 210-7730 | 7344 1111 |
|            |          |           |



### **Z-STX Standard Rotary Head**

Ideal for general-purpose carving. Works with all three motors (see below). Includes <sup>3</sup>/<sub>32</sub>" collet;  $\frac{1}{8}$ " and 3mm collets also available. Measures  $\frac{31}{4}$ "L x 1" dia. tapering to  $\frac{5}{8}$ " dia.

Z-STX Head 510-2200 \$295.00



### **Z-SLX Slender Rotary Head**

Features pencil-like design at the finger grips. Provides much better access to undersides of feathers and other tight areas. Works best with Z-M15X and Z-M30X motors (see above). Includes 1/8" collet; 3/32" collet also available. Measures 43/4"L x 1" dia. tapering to 5/16" dia.

Z-SLX Head 510-2220 \$399.00

# HANDPIECES FIT ALL MICROMOTORS EXCEPT MINI MOBILE



Supplied with Power Carver, this is our lightest, fastest handpiece. Ideal for high-speed carving with very fine tools. Includes <sup>3</sup>/<sub>32</sub>" and <sup>1</sup>/<sub>8</sub>" collets, collet wrenches and replacement motor brushes. Measures  $5^{1}/4$ "L x  $5^{1}/4$ "L

| Description     | Max. RPM | ltem#    | Each     |
|-----------------|----------|----------|----------|
| Z-55X Handpiece | 55,000   | 510-2290 | \$625.00 |



### **Z-08X Highest-Torque Rotary Handpiece**

Our most powerful, aggressive handpiece. Provides more than 2½ times the torque of our Z-55X. Features two-piece construction consisting of Z-M08X motor and Z-STX head. Includes <sup>3</sup>/<sub>32</sub>" and <sup>1</sup>/<sub>8</sub>" collets, collet wrenches and replacement motor brushes. Measures  $6^{1/2}$ "L x 5/8" dia. at the finger grips. Weighs 9.5 oz.

| Description     | Max. RPM | ltem#    | Each     |
|-----------------|----------|----------|----------|
| Z-08X Handpiece | 8.000    | 510-2257 | \$595.00 |



### Z-15X High-Torque Rotary Handpiece

A very powerful handpiece for rough shaping. Provides more than 2½ times the torque of our Z-55X. Features two-piece construction consisting of Z-M15X motor and Z-STX head. Includes 3/32" and 1/8" collets, collet wrenches and replacement motor brushes. Measures  $6^{1/2}$ "L x  $^{5/8}$ " dia. at the finger grips. Weighs 9.5 oz.

| Description     | Max. RPM | ltem#    | Each     |
|-----------------|----------|----------|----------|
| Z-15X Handpiece | 15,000   | 510-2270 | \$599.00 |



### **Z-30X All-Purpose Rotary Handpiece**

A versatile handpiece for shaping and detailing. Provides more than twice the torque of our Z-55X. Features two-piece construction consisting of Z-M30X motor and Z-STX head. Includes <sup>3</sup>/<sub>32</sub>" and <sup>1</sup>/<sub>8</sub>" collets, collet wrenches and replacement motor brushes. Measures  $6^{1}/2$ "L x  $^{5}/8$ " dia. at the finger grips. Weighs 9.5 oz.

| Description     | Max. RPM | ltem#    | Each     |
|-----------------|----------|----------|----------|
| Z-30X Handpiece | 30,000   | 510-2280 | \$645.00 |



### **Z-35XS Slimline Rotary Handpiece**

A small, lightweight one-piece handpiece well-suited for general-purpose carving applications. Runs a bit faster but offers less torque than our Z-30X. Includes 3/32" and 1/8" collets, collet wrenches and replacement motor brushes. Measures 5<sup>3</sup>/<sub>4</sub>"L x <sup>5</sup>/<sub>8</sub>" dia. at the finger grips. Weighs 8 oz.

| Description      | Max. RPM | Item#    | Each     |
|------------------|----------|----------|----------|
| Z-35XS Handpiece | 35,000   | 510-2287 | \$645.00 |



### **BZX Belt Sander**

Ideal for a wide variety of precision finishing applications. Use for sanding flat and curved surfaces and narrow slots. Operates with minimal vibration and has flexible power cord for easy reach. Supplied with straight and 45°-angle arms for 6mm and 8mm wide abrasive belts. Arms are spring-loaded for rapid belt changes. Belt speed: 10-39 feet/sec. with Standard Controller, 0-39 feet/sec. with Dual Controller. Measures 6"L x  $4^{1}/2$ "H. Weighs 1 lb.

| Description     |      | Item#    | Each       |
|-----------------|------|----------|------------|
| BZX Belt Sander |      | 510-2130 | \$945.00   |
| Description     | Grit | Item#    | Pkg. of 10 |
| 6mm Belt        | 80   | 510-0520 | \$20.50    |
|                 | 120  | 510-0525 | 20.50      |
|                 | 180  | 510-0527 | 20.50      |
|                 | 320  | 510-0530 | 20.50      |
| 8mm Belt        | 80   | 510-0535 | 20.50      |
|                 | 120  | 510-0540 | 20.50      |
|                 | 180  | 510-0545 | 20.50      |
|                 | 320  | 510-0550 | 20.50      |



### **Z-20XS Slimline Rotary Handpiece**

A small, lightweight one-piece handpiece well-suited for a wide variety of carving applications. Runs a bit faster but offers less torque than our Z-15X. Includes <sup>3</sup>/<sub>32</sub>" and <sup>1</sup>/<sub>8</sub>" collets, collet wrenches and replacement motor brushes. Measures 5<sup>3</sup>/<sub>4</sub>"L x <sup>5</sup>/<sub>8</sub>" dia. at the finger grips. Weighs 8 oz.

| Description      | Max. RPM | ltem#    | Each     |
|------------------|----------|----------|----------|
| Z-20XS Handpiece | 20,000   | 510-2277 | \$525.00 |



for extra reach. Quickly connects to either Power Carver controller. Handpiece Extension Cord 510-1120 \$59.00



### **Reducing Collets**

Just slip one into your Power Carver rotary handpiece collet to hold tools with smaller shanks. Do not run before verifying full insertion, and avoid excessively high operating speeds.

| 1/8"—3/32" Reducing Collet  | 816-1501 | \$14.90 |
|-----------------------------|----------|---------|
| 1/8"—1/16" Reducing Collet  | 816-1502 | 14.90   |
| 3/32"—1/16" Reducing Collet | 816-1503 | 14.90   |



"Max 80 has higher torque, did not slow down and is good for heavy removal in high torque. Also, smoother texturing plus improved detailing in low/medium torque so I like the new advanced design of the adjustable system."

Bob Hand — Master Woodcarver and Judge at the World Show

### Maxima 80 Micromotor System — Adjustable torque!

The Maxima 80 system features adjustable torque, with much more power than conventional models. Handles a wide variety of applications, such as deburring, grinding, polishing, engraving, finishing and more. Increase or decrease torque as needed with a simple screw to tune your Maxima 80 for every job. Provides 30% more power due to improved controller circuitry and powerful neodymium handpiece magnet.

Complete system consists of controller, choice of high-torque PHP35 handpiece or high-speed PHP40 handpiece with  $^3/_{32}$ ",  $^1/_{8}$ " or 3mm collet (all three are interchangeable and sold separately for maximum tool compatibility), variable-speed foot rheostat, handpiece cradle rest, replacement set of carbon brushes and collet chuck wrenches. As a bonus, Maxima 80 also accepts our Power Carver brush-type micromotor handpieces (see p. 3).

### Features:

- Torque adjustment screw
- · Speed adjustment dial
- Forward/reverse switch
- · Overload protection

### **Specifications:**

Controller

Electrical 120V, 1 Ph, 50/60Hz Dimensions 3.4"W x 5.9"D x 6.2"H

Net Wt. 5.5 lbs.

 Handpiece
 PHP35
 PHP40

 Speed Range
 0-35,000rpm
 0-40,000rpm

 Max. Torque
 6.5 N-cm
 6.0 N-cm

 Dimensions
 1" dia. x 5.9"L
 1" dia. x 5.5"L

Net Wt. 7 oz. 6 oz.

| 1100 110           | 7 02.    | 0 02.  |          |          |
|--------------------|----------|--------|----------|----------|
| Description        | Max. RPM | Collet | ltem#    | Each     |
| Maxima 80 w/ PHP35 | 35,000   | 3/32"  | 510-5115 | \$895.00 |
|                    |          | 1/8"   | 510-5110 | 895.00   |
|                    |          | 3mm    | 510-5120 | 895.00   |
| Maxima 80 w/ PHP40 | 40,000   | 3/32"  | 510-5130 | 895.00   |
|                    |          | 1/8"   | 510-5125 | 895.00   |
|                    |          | 3mm    | 510-5135 | 895.00   |



### Mini Mobile Micromotor System

The truly portable, rechargeable system!

If you need a system!

If you need a system for light jobs on the go, look no further than the Mini Mobile, our first and only battery-operated micromotor system. Features a built-in environmentally friendly rechargeable NiMH (nickel-metal hydride) battery that provides up to a full 140 minutes of continuous operation on one charge, which takes only 3 hours. Also runs while charging if you need to use it for longer stretches.

Complete system consists of

compact controller, high-speed handpiece with <sup>3</sup>/<sub>32</sub>" collet, on/off foot switch, handpiece cradle,

AC adapter and attractive aluminum carrying case with fitted foam insert.

### Features:

- Rechargeable NiMH battery
- · Speed adjustment dial
- Overload protection
- Aluminum carrying case

### **Specifications:**

Controller

Working Time 140 minutes Charging Time 3 hours

Electrical 100–240V, 50/60Hz

Dimensions 2.9"W x 6.7"D x 1.3"H with 13.8"W x 11.3"D x 3.8"H case

Net Wt. 9.5 oz.

Handpiece

Speed Range 0–33,000rpm Dimensions 1" dia. x 5.6"L Net Wt. 5.2 oz.

| Description        | Max. RPM | Collet | ltem#    | Each     |
|--------------------|----------|--------|----------|----------|
| Mini Mobile System | 33,000   | 3/32"  | 510-2905 | \$480.00 |
|                    |          | 1/8"   | 510-2900 | 480.00   |

"I have been using Gesswein power hand tools many years and there isn't anything that allows me as much artistic freedom. Also, the system is full of power and allows for texturing perfectly."

Tim Bourque — Winner World Championship



### **Marathon Handy 700 Micromotor System**

The Marathon Handy 700 system features an advanced controller and a 50,000rpm, 230W brushless rotary handpiece for incredible power, even at low speeds. Controller also accepts our Power Carver brush-type micromotor handpieces (see p. 3).

Provides ample torque at all times to ensure fast and smooth wood removal. Ideal for shaping, feathering, detailing, texturing and more. Use with Power Hand 2X handpieces for tasks that require normal torque.

In addition to the Handy 700 controller with integral carrying handle and BH-60 rotary handpiece with quick-tool-change mechanism, system includes 3/32" or 1/8" collet, variable-speed foot rheostat, handpiece cradle rest, detachable handpiece holder and an extra fuse. CE approved. Backed by a two-year handpiece warranty.

### Features:

- · Low vibration, low noise.
- Brushless, sealed handpiece that eliminates hassle of replacing carbon brushes.
- Dial or foot rheostat speed control.
- Auto-cruise function for fixed-speed operation with foot rheostat.
- Easy-to-read digital speed display for precise speed and torque settings.
- Maximum torque mode.
- Forward/reverse rotation.
- Error-checking/troubleshooting system with digital display.
- Overload protection.

### **Specifications:**

### Controller

Electrical 100–120V, 40W, 50/60Hz Dimensions  $5\frac{3}{6}$ "W x  $9\frac{1}{16}$ "D x  $7\frac{1}{16}$ "H

Net Wt. 6 lbs.

Handpiece

Speed Range 1,000–50,000rpm

Max. Power 230W Max. Torque 7.8 N-cm

Dimensions  $6^{5/16}$ "L x  $^{3/4}$ " dia. at finger grips

Net Wt. 8.4 oz.

| Description      | Max. RPM | Collet | ltem#    | Each     |
|------------------|----------|--------|----------|----------|
| Handy 700 System | 50,000   | 3/32"  | 510-2920 | \$995.00 |
|                  |          | 1/8"   | 510-2925 | 995.00   |



### Marathon Micromotor System

This affordable rotary micromotor system performs a wide range of shaping, feathering, detailing and texturing operations. Provides fine control and freedom of movement you need to create natural-looking works of art. Includes the compact Marathon controller, lightweight high-speed rotary handpiece, 3/32" or 1/8" collet, variable-speed foot rheostat, handpiece cradle rest and safety glasses.

Controller features a voltage selector switch for 110/220V operation, dial speed control and forward/reverse handpiece switch. Output voltage: 0–30V DC (continuously variable). Measures  $4^1$ /z"W x  $5^3$ /4"D x  $3^3$ /4"H. Weighs 2.6 lbs. The well-balanced handpiece features well-balanced ergonomic design that fits well in your hand, quick-tool-change mechanism and flexible curl cord. Measures 6"L x 5/8" dia. at the finger grips. Weighs 7.5 oz. Max. operating speed: 35,000rpm.

### **Specifications:**

Controller

Electrical 110/220V, 50/60Hz Dimensions  $4^{1}/_{2}$ "W x  $5^{3}/_{4}$ "D x  $3^{3}/_{4}$ "H

Net Wt. 2.6 lbs.

Handpiece

Speed Range 0–35,000rpm

Dimensions  $6^{\text{"L}} \times \frac{5}{8}^{\text{"}}$  dia. at finger grips

Net Wt. 7.5 oz

| Description     | Max. RPM | Collet | ltem#    | Each     |
|-----------------|----------|--------|----------|----------|
| Marathon System | 35,000   | 3/32"  | 510-2955 | \$339.00 |
|                 |          | 1/8"   | 510-2945 | 339.00   |



### ECO-Torque 280 Micromotor System

For the economically minded, we offer the ECO-Torque 280 System, which can handle a wide range of light-duty finishing applications. Whatever your woodcarving needs, ECO-Torque 280 provides the most affordable solution. Includes ECO-Torque 280 controller, lightweight rotary handpiece with <sup>3</sup>/<sub>32</sub>" collet, on/off foot switch, handpiece cradle rest and a replacement pair of carbon brushes.

Controller features a voltage selector switch for 110/220V operation, dial speed control and forward/reverse handpiece switch. Output voltage: 3–30V DC (continuously variable). Measures  $4^1/4^{\text{\tiny HW}}$  x  $5^3/4^{\text{\tiny H}}$ D x 3"H. Weighs 2.8 lbs. The well-balanced handpiece features well-balanced ergonomic design that fits well in your hand, quick-tool-change mechanism and flexible curl cord. Measures  $6^{\text{\tiny HL}}$  x  $^3/4^{\text{\tiny H}}$  dia. at the finger grips. Weighs 7.3 oz. Max. operating speed: 35,000rpm.

### **Specifications:**

Controller

Electrical 110/220V, 50/60Hz Dimensions  $4^{1}/_{4}$ "W x  $5^{3}/_{4}$ "D x 3"H

Net Wt. 2.8 lbs.

Handpiece

Speed Range 0–35,000rpm

Dimensions  $6^{\text{"L}} \times {}^{3}\!/{}_{4}^{\text{"}}$  dia. at finger grips

Net Wt. 7.3 oz.

 Description
 Max. RPM
 Collet
 Item#
 Each

 ECO-Torque 280 System
 35,000
 3/32"
 510-2975
 \$199.95



### Foredom® SR Woodcarving Set

Contains everything you need to get started. Takes the guesswork out of product selection, offering smart tool combinations for specific woodcarving applications. Electrical: 110V.

### Components:

- SR 1/6 HP, ball-bearing, hanging-style flex shaft motor that operates up to 18,000rpm. Runs in forward and reverse for added versatility.
- #44T collet-style rotary handpiece with tapered design for working closely and safely. Includes  $\frac{3}{32}$ ",  $\frac{1}{8}$ " and  $\frac{1}{4}$ " collets.
- FCT foot rheostat with solid-state electronics and heavy-duty plastic housing.
- #53 accessory kit, a large 47-piece assortment of popular <sup>3</sup>/<sub>32</sub>", <sup>1</sup>/<sub>8</sub>" and <sup>1</sup>/<sub>4</sub>" shank tools, including Typhoon Burs, Cubitron Ceramic Sanding Bands and Discs, V Stones, CeramCut Blue Stones, Scotch-Brite Bobs, Radial Bristle Discs and more.
- Large rotating tool holder for  $\frac{3}{32}$ ",  $\frac{1}{8}$ " and  $\frac{1}{4}$ " shank tools.
- Small tool holder with Lid for 3/32" and 1/8" shank tools.
- Pin and Wrench for changing handpiece collets and flexshaft grease.
- Fur, Feathers and Fins Instructional DVD Set.

SR Woodcarving Set 850-0491 \$318.00



### Foredom® Bench Motor — Perfect for small areas!

This 1/6 HP high-torque permanent-magnet motor offers 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 <sup>3</sup>/<sub>32</sub>" and <sup>1</sup>/<sub>4</sub>" collets. Electrical: 110V, 2A, 50/60Hz. Measures 13" wide from spindle to spindle with 6"W x 5"D base. Motor height: 51/8". Shaft height: 33/4". Shaft diameter: 5/16". Operating speed: 500–7,000rpm.

| Description | ltem#    | Each     |
|-------------|----------|----------|
| Bench Motor | 850-0619 | \$188.00 |



### Foredom® #30 Handpiece

Our top-selling handpiece for all-purpose use. Features prelubricated ball bearings and geared Jacobs chuck that accepts up to 5/32" shanks. Includes chuck key with handle. Measures 5"L x 1" dia. Weighs 6 oz.

850-1350 \$49.95 #30 Handpiece



### Foredom® #28 Handpiece

A lightweight handpiece for general carving applications, including intricate work. Features tapered grip for comfort and prelubricated ball bearings. Includes 3/32" and 1/8" collets. Measures  $5^{3}/8$ "L x  $^{3}/4$ " dia. Weighs 2.9 oz.

850-1348 #28 Handpiece \$47.00



designed to stay cool, tapered molded plastic grip on front end for secure handling and prelubricated ball bearings. Includes 3/32" collet. Measures 55/8"L (without duplex)  $\times$  1  $\frac{1}{8}$  dia. tapering to  $\frac{3}{8}$  dia. Weighs 4 oz.

| #20 Handpiece                     | 850-1280 | \$78.00 |
|-----------------------------------|----------|---------|
| #20D Handpiece with Duplex Spring | 850-1285 | 98.00   |



Features push lever for fast tool changes, slender metal body, molded plastic grip on front end for secure handling and prelubricated ball bearings. Includes <sup>3</sup>/<sub>32</sub>" collet. Measures 7"L (without duplex) x 5/8" dia. Weighs 3.5 oz.

| #18 Handpiece                     | 850-1325 | \$101.25 |
|-----------------------------------|----------|----------|
| #18D Handpiece with Duplex Spring | 850-1320 | 115.00   |



### Foredom® Filter Hood The portable dust collector for your bench motor!

This compact, powerful unit collects particles from grinding and polishing. Works with Bench Motor #850-0619 (see left) as well as flex shaft and micromotor systems. Offers strong suction for collecting both dust and precious metal. Features a variable-speed motor with voltage selector switch, removable watertight metal tray, LED gooseneck lamp and acrylic safety shield. Includes three replaceable filters. Electrical: 110/220V. Measures 6"W x 12<sup>3</sup>/<sub>4</sub>"D x 7<sup>1</sup>/<sub>2</sub>"H. Backed by a one-year warranty. CE approved.

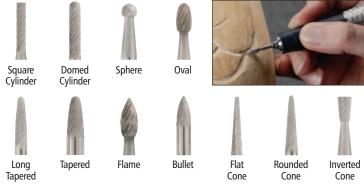
| Description               | ltem#    | Each     |
|---------------------------|----------|----------|
| Filter Hood               | 850-0640 | \$295.00 |
| Replacement Filter 5-pack | 850-0641 | 4.95     |



### Gesswein® Large Solid Carbide Burs – 1/8" shank.

Each consists of a carbide head securely brazed onto a heat-treated steel shank. Available with single-cut or double-cut flutes. Single-cut burs provide aggressive cutting action for fast stock removal, leaving a slightly rough finish. Can be run in forward direction only. Double-cut burs make small chips for efficient stock removal, leaving a better finish than single-cut burs. Can be run in forward and reverse directions. Both styles can be resharpened. Measure  $1\frac{1}{2}$  long with  $\frac{1}{8}$  shank.

| Shape     | Head Dia. x L | Single-Cut | Each    | Double-Cut | Each    |
|-----------|---------------|------------|---------|------------|---------|
| Ball Nose | 1/4" x 1/2"   | 129-1770   | \$10.02 | 129-1775   | \$11.08 |
| Sphere    | 1/4" x 1/4"   | 129-1780   | 10.02   | 129-1785   | 11.08   |
| Bullet    | 1/4" x 1/2"   | 129-1800   | 10.02   | 129-1805   | 11.08   |
| Tapered   | 1/4" x 3/8"   | 129-1810   | 10.02   | 129-1815   | 11.08   |



### **Gesswein<sup>®</sup> Solid Carbide Burs** − 1/8" shank.

Each features one-piece construction, meaning head and shank are fashioned from a single piece of carbide. Available with single-cut or double-cut flutes. Single-cut burs provide aggressive cutting action for fast stock removal, leaving a slightly rough finish. Can be run in forward direction only. Double-cut burs make small chips for efficient stock removal, leaving a better finish than single-cut burs. Can be run in forward and reverse directions. Both styles can be resharpened. Measure 1½" long with 1½" shank.

| ancedons. Both | styles call be les                    | naipenea. meas | are 172 1011g | , with 70 Shank. |        |
|----------------|---------------------------------------|----------------|---------------|------------------|--------|
| Shape          | Head Dia. x L                         | Single-Cut     | Each          | Double-Cut       | Each   |
| Square Cyl.    | <sup>3</sup> /32" X <sup>7</sup> /16" | 129-1020       | \$5.59        | 129-1025         | \$6.12 |
| Square Cyl.    | <sup>1</sup> /8" x <sup>9</sup> /16"  | 129-1030       | 5.59          | 129-1035         | 6.12   |
| Domed Cyl.     | <sup>1</sup> /8" x <sup>9</sup> /16"  | 129-1050       | 5.59          | 129-1055         | 6.12   |
| Sphere         | 1/8" x 1/8"                           | 129-1070       | 5.59          | 129-1075         | 6.12   |
| Oval           | 1/8" x <sup>7</sup> /32"              | 129-1080       | 5.59          | 129-1085         | 6.12   |
| Long Tapered   | 1/8" x 1/2"                           | 129-1090       | 5.59          | 129-1095         | 6.12   |
| Tapered        | 1/8" x 1/4"                           | 129-1100       | 5.59          | 129-1105         | 6.12   |
| Flame          | 1/8" x 1/4"                           | 129-1110       | 5.59          | 129-1115         | 6.12   |
| Bullet         | 1/8" x 1/4"                           | 129-1120       | 5.59          | 129-1125         | 6.12   |
| Flat Cone      | 1/8" x 5/8"                           | 129-1170       | 5.59          | 129-1175         | 6.12   |
| Rounded Cone   | 2 1/8" x 1/2"                         | 129-1180       | 5.59          | 129-1185         | 6.12   |
| Inverted Cone  | <sup>1</sup> /8" x <sup>3</sup> /16"  | 129-1200       | 5.59          | 129-1205         | 6.12   |



# Gesswein® Solid Carbide Bur Sets – 1/8" shank.

Each set includes one each of the 12 respective burs listed above. Packaged in a sturdy hardwood box.

| Single-Cut Set | 129-1000 | \$63.50 |
|----------------|----------|---------|
| Double-Cut Set | 129-1005 | 69.95   |



### Gesswein<sup>®</sup> Solid Carbide Burs – <sup>3</sup>/<sub>32</sub>" shank.

Each features one-piece construction, meaning head and shank are fashioned from a single piece of carbide. Available with single-cut or double-cut flutes. Single-cut burs provide aggressive cutting action for fast stock removal, leaving a slightly rough finish. Can be run in forward direction only. Double-cut burs make small chips for efficient stock removal, leaving a better finish than single-cut burs. Can be run in forward and reverse directions. Both styles can be resharpened. Measure 1½4" long with 3/32" shank.

| Shape         | Head Dia. x L  | Single-Cut | Each   | Double-Cut | Each   |
|---------------|--|------------|--------|------------|--------|
| Square Cyl.   | 1/16" x 1/4"   | 129-1400   | \$8.39 | 129-1405   | \$9.28 |
| Square Cyl.   | <sup>3</sup> / <sub>32</sub> " x <sup>3</sup> / <sub>8</sub> " | 129-1410   | 8.39   | 129-1415   | 9.28   |
| Domed Cyl.    | <sup>3</sup> / <sub>32</sub> " x <sup>3</sup> / <sub>8</sub> " | 129-1420   | 8.39   | 129-1425   | 9.28   |
| Sphere        | <sup>3</sup> /32" X <sup>3</sup> /32"                          | 129-1430   | 8.39   | 129-1435   | 9.28   |
| Oval          | <sup>3</sup> / <sub>32</sub> " x <sup>1</sup> / <sub>8</sub> " | 129-1440   | 8.39   | 129-1445   | 9.28   |
| Tapered       | <sup>3</sup> / <sub>32</sub> " x <sup>1</sup> / <sub>4</sub> " | 129-1450   | 8.39   | 129-1455   | 9.28   |
| Bullet        | <sup>3</sup> / <sub>32</sub> " x <sup>1</sup> / <sub>4</sub> " | 129-1460   | 8.39   | 129-1465   | 9.28   |
| Flat Cone     | <sup>3</sup> / <sub>32</sub> " x <sup>1</sup> / <sub>4</sub> " | 129-1470   | 8.39   | 129-1475   | 9.28   |
| Inverted Cone | <sup>3</sup> / <sub>32</sub> " x <sup>1</sup> / <sub>8</sub> " | 129-1480   | 8.39   | 129-1485   | 9.28   |



# Gesswein® Solid Carbide Bur Sets – 3/32" shank.

Each set includes one each of the nine respective burs listed above. Packaged in a sturdy hardwood box.

| Single-Cut Set | 129-0940 | \$72.50 |
|----------------|----------|---------|
| Double-Cut Set | 129-0945 | 79.95   |



### **Wooden Bur Boxes**

For <sup>3</sup>/<sub>32</sub>" shanks.

Sturdy, attractive wooden boxes for holding burs or tools with  $\frac{3}{22}$ " shanks.

| 200-Hole Box | 814-1200 | \$25.75 |
|--------------|----------|---------|
| 100-Hole Box | 814-1205 | 13.50   |
| 36-Hole Box  | 814-1210 | 7 95    |



### **Handy Block**

For <sup>3</sup>/<sub>32</sub>" or <sup>1</sup>/<sub>8</sub>" shanks.

A block of cured hardwood for organizing burs, needle files, brushes and more. Holds up to 88 tools with  $^3/_{32}$ " or  $^1/_{8}$ " shanks. Slanted design allows you to see all tools at a glance. Rubber pads prevent sliding. Measures 6"W x  $4^1/_2$ "D.

Handy Block **814-1215 \$14.95** 



### Busch® Saws $-\frac{3}{32}$ " shank.

Great for making cuts. Much safer than knives. Made of tungsten vanadium steel for good strength and durability. All have <sup>3</sup>/<sub>32</sub>" shanks.

| Head Dia. (mm) | ltem#    | Each   |
|----------------|----------|--------|
| 2.30           | 121-8025 | \$2.10 |
| 5.00           | 121-8050 | 5.35   |
| 10.00          | 121-8100 | 11.70  |



### Busch<sup>®</sup> Knife-Edge Routers − <sup>3</sup>/<sub>32</sub>" shank.

Use for lifting and flipping feathers, undercutting tail feathers and making stop cuts. Much safer than knives. Made of tungsten vanadium steel for good strength and durability. All have 3/32" shanks.

| Head Dia. (mm) | ltem#    | Each    |
|----------------|----------|---------|
| 7.00           | 121-7070 | \$15.55 |
| 10.00          | 121-7100 | 21.90   |
| 12.00          | 121-7120 | 21.90   |
| 14.00          | 121-7140 | 25.35   |



### **High-Speed Steel** Square-Edge Wheels – 3/32" shank.

Great for making wide cuts. Made of extremely rugged high-speed steel, which cuts faster and lasts longer than vanadium steel. All have 3/32" shanks. Made in USA.

| Dia.  |  | EAC  | H Prices  |
|-------|--|--|---|
| (mm)  | ltem#  | 1-5  | 6+  |
| 1.70  | 124-3050   | \$3.50   | \$2.94  |
| 2.30  | 124-3080   | 3.50   | 2.94  |
| 3.30  | 124-3130   | 5.30   | 4.45  |
| 4.00  | 124-3160   | 5.30   | 4.45  |
| 4.70  | 124-3190   | 6.05   | 5.08  |
| 6.30  | 124-3260   | 6.30   | 5.29  |
| 8.00  | 124-3300   | 6.30   | 5.29  |
| 11.10 | 124-3340   | 8.40   | 7.06  |
|       | (mm)<br>1.70<br>2.30<br>3.30<br>4.00<br>4.70<br>6.30<br>8.00 | (mm)         Item#           1.70         124-3050           2.30         124-3080           3.30         124-3130           4.00         124-3160           4.70         124-3190           6.30         124-3260           8.00         124-3300 | (mm)         Item#         1-5           1.70         124-3050         \$3.50           2.30         124-3080         3.50           3.30         124-3130         5.30           4.00         124-3160         5.30           4.70         124-3190         6.05           6.30         124-3260         6.30           8.00         124-3300         6.30 |



### **High-Speed Steel** Round-Edge Wheels $-\frac{3}{32}$ " shank.

Use for making parallel rounded channels. Made of extremely rugged high-speed steel, which cuts faster and lasts longer than vanadium steel. All have 3/32" shanks. Made in USA.

|      | Dia.  |          | EAC    | H Prices |
|------|-------|----------|--------|----------|
| Size | (mm)  | ltem#    | 1-5    | 6+       |
| 5    | 1.70  | 123-9050 | \$3.50 | \$2.94   |
| 8    | 2.30  | 123-9080 | 3.50   | 2.94     |
| 13   | 3.30  | 123-9130 | 5.30   | 4.45     |
| 16   | 4.00  | 123-9160 | 5.30   | 4.45     |
| 19   | 4.70  | 123-9190 | 6.05   | 5.08     |
| 26   | 6.30  | 123-9260 | 6.30   | 5.29     |
| 30   | 8.00  | 123-9300 | 6.30   | 5.29     |
| 34   | 11.10 | 123-9340 | 8.40   | 7.06     |



### **High-Speed Steel Sphere Burs** $-\frac{3}{32}$ " shank.

Made of extremely rugged high-speed steel, which cuts faster and lasts longer than vanadium steel. Can be resharpened. All have <sup>3</sup>/<sub>32</sub>" shanks. Made in USA.

|      | _                                     |          |        |          |
|------|---------------------------------------|----------|--------|----------|
| C:   | Dia.                                  | 1. //    |        | H Prices |
| Size | (mm)                                  | Item#    | 1-5    | 6+       |
| 1    | 0.90                                  | 123-8010 | \$3.00 | \$2.52   |
| 2    | 1.10                                  | 123-8020 | 3.00   | 2.52     |
| 3    | 1.30                                  | 123-8030 | 3.00   | 2.52     |
| 4    | 1.50                                  | 123-8040 | 3.00   | 2.52     |
| 5    | 1.70                                  | 123-8050 | 3.00   | 2.52     |
| 6    | 1.90                                  | 123-8060 | 3.00   | 2.52     |
| 7    | 2.10                                  | 123-8070 | 3.00   | 2.52     |
| 8    | 2.30                                  | 123-8080 | 3.00   | 2.52     |
| 9    | 2.50                                  | 123-8090 | 3.80   | 3.19     |
| 10   | 2.70                                  | 123-8100 | 3.80   | 3.19     |
| 11   | 2.90                                  | 123-8110 | 3.80   | 3.19     |
| 12   | 3.10                                  | 123-8120 | 3.80   | 3.19     |
| 13   | 3.30                                  | 123-8130 | 4.45   | 3.74     |
| 14   | 3.50                                  | 123-8140 | 4.45   | 3.74     |
| 15   | 3.80                                  | 123-8150 | 4.45   | 3.74     |
| 16   | 4.00                                  | 123-8160 | 4.45   | 3.74     |
| 17   | 4.30                                  | 123-8170 | 4.45   | 3.74     |
| 18   | 4.50                                  | 123-8180 | 4.45   | 3.74     |
| 19   | 4.70                                  | 123-8190 | 5.40   | 4.54     |
| 20   | 5.00                                  | 123-8200 | 5.40   | 4.54     |
| 22   | 5.20                                  | 123-8220 | 5.40   | 4.54     |
| 23   | 5.40                                  | 123-8230 | 5.40   | 4.54     |
| 24   | 5.60                                  | 123-8240 | 5.40   | 4.54     |
| 25   | 5.90                                  | 123-8250 | 5.40   | 4.54     |
| 26   | 6.30                                  | 123-8260 | 6.90   | 5.80     |
| 27   | 6.70                                  | 123-8270 | 6.90   | 5.80     |
| 28   | 7.20                                  | 123-8280 | 6.90   | 5.80     |
| 29   | 7.60                                  | 123-8290 | 6.90   | 5.80     |
| 30   | 8.00                                  | 123-8300 | 6.90   | 5.80     |
| 31   | 8.90                                  | 123-8310 | 7.75   | 6.51     |
| 32   | 9.60                                  | 123-8320 | 7.75   | 6.51     |
| 33   | 10.40                                 | 123-8330 | 8.35   | 7.01     |
| 34   | 11.10                                 | 123-8340 | 8.35   | 7.01     |
|      | · · · · · · · · · · · · · · · · · · · |          |        |          |



### **High-Speed Steel** Sphere Bur Sets $-\frac{3}{32}$ " shank.

The set of 18 burs contains sizes 1–18; the set of 25 burs contains sizes 1-26; the set of 29 burs contains sizes 1-30; the set of 33 burs contains sizes 1-34, and the set of 36 burs includes three each of sizes 1-12. Each set includes an attractive wooden box.

| 18-Bur Set | 124-4111 | \$67.05 |
|------------|----------|---------|
| 25-Bur Set | 124-4112 | 95.65   |
| 29-Bur Set | 124-4113 | 116.50  |
| 33-Bur Set | 124-4114 | 130.85  |
| 36-Bur Set | 124-4115 | 113.25  |



### **High-Speed Steel** Bud Burs $-\frac{3}{32}$ " shank.

Made of extremely rugged high-speed steel, which cuts faster and lasts longer than vanadium steel. Can be resharpened. All have 3/32" shanks. Made in USA.

|      | Dia.  |          | EAC    | H Prices |
|------|-------|----------|--------|----------|
| Size | (mm)  | ltem#    | 1-5    | 6+       |
| 2    | 1.10  | 123-1020 | \$3.00 | \$2.52   |
| 3    | 1.30  | 123-1030 | 3.00   | 2.52     |
| 4    | 1.50  | 123-1040 | 3.00   | 2.52     |
| 5    | 1.70  | 123-1050 | 3.00   | 2.52     |
| 6    | 1.90  | 123-1060 | 3.00   | 2.52     |
| 7    | 2.10  | 123-1070 | 3.00   | 2.52     |
| 8    | 2.30  | 123-1080 | 3.00   | 2.52     |
| 9    | 2.50  | 123-1090 | 3.80   | 3.19     |
| 10   | 2.70  | 123-1100 | 3.80   | 3.19     |
| 11   | 2.90  | 123-1110 | 3.80   | 3.19     |
| 12   | 3.10  | 123-1120 | 3.80   | 3.19     |
| 13   | 3.30  | 123-1130 | 4.55   | 3.82     |
| 14   | 3.50  | 123-1140 | 4.55   | 3.82     |
| 16   | 4.00  | 123-1160 | 4.55   | 3.82     |
| 18   | 4.50  | 123-1180 | 4.55   | 3.82     |
| 20   | 5.00  | 123-1200 | 5.40   | 4.54     |
| 22   | 5.20  | 123-1220 | 5.40   | 4.54     |
| 24   | 5.60  | 123-1240 | 5.40   | 4.54     |
| 26   | 6.30  | 123-1260 | 6.30   | 4.83     |
| 28   | 7.20  | 123-1280 | 6.30   | 5.29     |
| 30   | 8.00  | 123-1300 | 6.30   | 5.29     |
| 32   | 9.60  | 123-1320 | 8.40   | 7.06     |
| 34   | 11.10 | 123-1340 | 8.40   | 7.06     |



### **High-Speed Steel** Cone Burs $-\frac{3}{32}$ " shank.

Have fine flute design perfect for finishing. Made of extremely rugged high-speed steel, which cuts faster and lasts longer than vanadium steel. Can be resharpened. All have 3/32" shanks. Made in USA.

| - 101 | ]     |          |        |          |
|-------|-------|----------|--------|----------|
|       | Dia.  |          | EAC    | H Prices |
| Size  | (mm)  | ltem#    | 1-5    | 6+       |
| 2     | 1.10  | 123-2020 | \$3.00 | \$2.52   |
| 3     | 1.30  | 123-2030 | 3.00   | 2.52     |
| 4     | 1.50  | 123-2040 | 3.00   | 2.52     |
| 5     | 1.70  | 123-2050 | 3.00   | 2.52     |
| 6     | 1.90  | 123-2060 | 3.00   | 2.52     |
| 7     | 2.10  | 123-2070 | 3.00   | 2.52     |
| 8     | 2.30  | 123-2080 | 3.00   | 2.52     |
| 9     | 2.50  | 123-2090 | 3.80   | 3.19     |
| 10    | 2.70  | 123-2100 | 3.80   | 3.19     |
| 11    | 2.90  | 123-2110 | 3.80   | 3.19     |
| 12    | 3.10  | 123-2120 | 3.80   | 3.19     |
| 13    | 3.30  | 123-2130 | 4.45   | 3.74     |
| 14    | 3.50  | 123-2140 | 4.45   | 3.74     |
| 16    | 4.00  | 123-2160 | 4.45   | 3.74     |
| 18    | 4.50  | 123-2180 | 4.45   | 3.74     |
| 20    | 5.00  | 123-2200 | 5.40   | 4.54     |
| 22    | 5.20  | 123-2220 | 5.40   | 4.54     |
| 24    | 5.60  | 123-2240 | 5.40   | 4.54     |
| 26    | 6.30  | 123-2260 | 6.30   | 5.29     |
| 28    | 7.20  | 123-2280 | 6.30   | 5.29     |
| 30    | 8.00  | 123-2300 | 6.30   | 5.29     |
| 32    | 9.60  | 123-2320 | 7.75   | 6.51     |
| 34    | 11.10 | 123-2340 | 8.40   | 7.06     |
|       |       |          |        |          |



### **High-Speed Steel** Bud Bur Sets $-\frac{3}{32}$ " shank.

The set of 19 burs contains sizes 2-26, and the set of 23 burs contains sizes 2-34. Each set includes an attractive wooden box.

| 19-Bur Set | 124-4221 | \$83.55 |
|------------|----------|---------|
| 23-Bur Set | 124-4222 | 97.85   |



### **High-Speed Steel** Cone Bur Sets $-\frac{3}{32}$ " shank.

The set of 19 burs contains sizes 2–26, and the set of 23 burs contains sizes 2-34. Each set includes an attractive wooden box.

| 19-Bur Set | 124-4331 | \$83.55 |
|------------|----------|---------|
| 23-Bur Set | 124-4332 | 104.50  |



### **High-Speed Steel** Reamers $-\frac{3}{32}$ " shank.

Have wide flute design that resists clogging. Made of extremely rugged high-speed steel, which cuts faster and lasts longer than vanadium steel. Can be resharpened. All have 3/32" shanks. Made in USA.

|      | Dia.  |          | EAC    | H Prices |
|------|-------|----------|--------|----------|
| Size | (mm)  | ltem#    | 1-5    | 6+       |
| 26   | 6.30  | 123-7260 | \$6.30 | \$5.29   |
| 30   | 8.00  | 123-7300 | 6.30   | 5.29     |
| 34   | 11.10 | 123-7340 | 8.40   | 7.06     |



### **High-Speed Steel** Slim Reamers – 3/32" shank.

Excellent for accessing tight areas. Made of extremely rugged high-speed steel, which cuts faster and lasts longer than vanadium steel. Can be resharpened. All have 3/32" shanks. Made in USA.

|      | Dia. |          | EAC    | H Prices |
|------|------|----------|--------|----------|
| Size | (mm) | ltem#    | 1-5    | 6+       |
| 9    | 2.50 | 124-1090 | \$4.10 | \$3.44   |
| 13   | 3.30 | 124-1130 | 5.30   | 4.45     |
| 19   | 4.70 | 124-1190 | 6.05   | 5.08     |



### **Diamond Cutters** $-\frac{3}{32}$ " shank.

Some of the best tools available for texturing and detailing. Feature medium grit diamond particles electroplated onto stainless steel for unsurpassed quality and durability. Make quick work of creating lifelike feather anatomy, inserting contour lines, raising feathers and hollowing out eye sockets. Measure 13/4" long with 3/32" shank. Max. operating speed: 30,000rpm.

| Shape       | Head Dia. x L (mm)             | ltem#    | Each   |
|-------------|--------------------------------|----------|--------|
|             | 2 x 1.5                        | 226-1161 | \$3.75 |
|             | 2.7 x 1.5                      | 226-1162 | 3.75   |
|             | 4 x 1.5                        | 226-1163 | 4.20   |
|             | 6 x 2                          | 226-1164 | 5.49   |
|             | 1.5 x 4                        | 226-1165 | 3.75   |
|             | 2 x 8                          | 226-1166 | 3.75   |
|             | 3 x 10                         | 226-1167 | 4.45   |
|             | 7 x 12                         | 226-1168 | 10.51  |
|             | 6 x 7                          | 226-1169 | 7.87   |
|             | 1.5 x 10                       | 226-1170 | 3.75   |
|             | 2 x 12                         | 226-1171 | 4.08   |
| 2000000     | 3 x 12                         | 226-1172 | 4.45   |
|             | 3.5 x 6                        | 226-1181 | 5.49   |
|             | 1.5 x 10                       | 226-1182 | 3.75   |
|             | 0.9 x 4                        | 226-1183 | 3.75   |
|             | 2 x 5                          | 226-1184 | 3.75   |
|             | 6 x 10                         | 226-1185 | 7.87   |
| - design    | 2.5 x 7                        | 226-1186 | 4.35   |
|             | 2 x 7                          | 226-1187 | 4.35   |
| 1000        | 1 x 1                          | 226-1188 | 3.75   |
| 1700        | 2 x 2                          | 226-1189 | 3.75   |
|             | 3 x 3                          | 226-1190 | 4.20   |
|             | 4 x 4                          | 226-1191 | 4.91   |
|             | 4 x 0.8                        | 226-1192 | 4.20   |
| Set #1 (one | each of first 12 listed above) | 226-1160 | 45.50  |
| Set #2 (one | each of last 12 listed above)  | 226-1180 | 43.70  |
|             |                                |          |        |



### **Diamond Cutter Master Set**

<sup>3</sup>/<sub>32</sub>" shank.

A large 20-piece assortment of the most popular diamond cutters listed above (all except #226-1165, #226-1187 and #226-1191) in a plastic stand.

| Diamond Cutter Master Set | 226-1159 | \$79.00 |
|---------------------------|----------|---------|



### **Diamond Bit Sets**

<sup>3</sup>/<sub>32</sub>" or <sup>1</sup>/<sub>8</sub>" shank.

Economical yet fully functional sets perfect for the novice or hobbyist. Each includes 20 bits in several shapes and sizes in a handy plastic organizer. Bits measure 13/4" long with 3/32" or 1/8" shank. Max. operating speed: 30,000rpm.

| Diamond Bit Set, <sup>3</sup> / <sub>32</sub> " shank | 226-1220 | \$8.45 |
|---|----------|--------|
| Diamond Bit Set, 1/8" shank                           | 226-1221 | 8.45   |

### **High-Speed Mini Diamond Points** − ½16" shank.

Superb tools for creating fine details such as feathers and eye sockets. Feature coarse or fine diamond particles electroplated onto surgical-grade steel. Measure approx.  $^{3}/_{4}$ " long with  $^{1}/_{16}$ " shank. Use with appropriate reducing collet (see p. 3). Max. operating speed: 80,000rpm.

| ,               |       |                     |        |           |        |
|-----------------|-------|---------------------|--------|-----------|--------|
| Shape           | Style | Coarse              | Each   | Fine      | Each   |
| Tildian.        | А     | 226-1602*           | \$2.90 | 226-1632* | \$2.90 |
|                 | В     | 226-1603            | 2.90   | 226-1633  | 2.90   |
|                 | С     | 226-1604*           | 2.90   | 226-1634* | 2.90   |
|                 | D     | 226-1605*           | 2.90   | 226-1635* | 2.90   |
|                 | Е     | 226-1606*           | 2.90   | 226-1636* | 2.90   |
|                 | F     | 226-1607            | 2.90   | 226-1637  | 2.90   |
|                 | G     | 226-1608*           | 2.90   | 226-1638* | 2.90   |
|                 | Н     | 226-1609            | 2.90   | 226-1639  | 2.90   |
|                 | 1     | 226-1610*           | 2.90   | 226-1640* | 2.90   |
| 70.00           | J     | 226-1611            | 2.90   | 226-1641  | 2.90   |
|                 | K     | 226-1612            | 2.90   | 226-1642  | 2.90   |
| - 12 Marin      | L     | 226-1613            | 2.90   | 226-1643  | 2.90   |
| 1520797         | M     | 226-1614            | 2.90   | 226-1644  | 2.90   |
|                 | N     | 226-1615            | 2.90   | 226-1645  | 2.90   |
|                 | 0     | 226-1616*           | 2.90   | 226-1646* | 2.90   |
|                 | Р     | 226-1617            | 2.90   | 226-1647  | 2.90   |
| -               | Q     | 226-1618*           | 2.90   | 226-1648* | 2.90   |
| -               | R     | 226-1619            | 2.90   | 226-1649  | 2.90   |
|                 | S     | 226-1620*           | 2.90   | 226-1650* | 2.90   |
| - 3             | T     | 226-1621            | 2.90   | 226-1651  | 2.90   |
|                 | U     | 226-1622*           | 2.90   | 226-1652* | 2.90   |
|                 | V     | 226-1623*           | 2.90   | 226-1653* | 2.90   |
|                 | W     | 226-1624            | 2.90   | 226-1654  | 2.90   |
|                 | Χ     | 226-1625*           | 2.90   | 226-1655* | 2.90   |
| Civ ninco minin |       | in multiples of six |        |           |        |

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





### **High-Speed Mini Diamond Point Sets** – 1/16" shank.

Choose from 12-piece and 24-piece sets of mini diamond points listed above.

| endage main 12 piece and 2 i                | prece sets or | a.aoa pe | mits iisted daorei |         |
|---|---------------|----------|--------------------|---------|
| Description                                 | Coarse        | Each     | Fine               | Each    |
| 12-Piece Set (one of each asterisked shape) | 226-1601      | \$32.25  | 226-1631           | \$32.25 |
| 24-Piece Set (one of each)                  | 226-1600      | 64.50    | 226-1630           | 64.50   |



### **Wet Stick Diamond Dresser**

Use this dressing stone with water for cleaning diamond tools. Measures  $2"L \times \sqrt[3]{4}"W \times \sqrt[1]{2}"H$ . Wet Stick Diamond Dresser **380-1022 \$2.45** 



### Busch® High-Speed Steel Twist Drills

3/32" shank.

Allow you to drill the tiniest holes with ease. Made of extremely rugged high-speed steel, which cuts faster and lasts longer than vanadium steel. All have <sup>3</sup>/<sub>32</sub>" shanks. Made in USA.

| Dia. |          |        | EACH Price | 2S     |
|------|----------|--------|------------|--------|
| (mm) | ltem#    | 1-71   | 72-143     | 144+   |
| 0.50 | 122-6992 | \$5.95 | \$5.06     | \$4.76 |
| 0.60 | 122-6993 | 5.95   | 5.06       | 4.76   |
| 0.70 | 122-6994 | 5.95   | 5.06       | 4.76   |
| 0.80 | 122-6995 | 5.95   | 5.06       | 4.76   |
| 0.90 | 122-6996 | 5.95   | 5.06       | 4.76   |
| 1.00 | 122-6997 | 5.95   | 5.06       | 4.76   |
| 1.10 | 122-6998 | 5.95   | 5.06       | 4.76   |
| 1.20 | 122-6999 | 5.95   | 5.06       | 4.76   |
| 1.30 | 122-7000 | 5.95   | 5.06       | 4.76   |
| 1.40 | 122-7001 | 5.95   | 5.06       | 4.76   |
| 1.50 | 122-7002 | 5.95   | 5.06       | 4.76   |
| 1.60 | 122-7003 | 5.95   | 5.06       | 4.76   |



### Mini Drill Chuck − 3/32" shank.

Holds miniature drills that won't fit in a regular rotary handpiece collet or chuck. Can also be used by hand to locate eye sockets and nostrils. Holds drills from smallest to  $\frac{3}{32}$ " dia.  $\frac{3}{32}$ " shank. Max. operating speed: 10,000rpm.

Mini Drill Chuck **840-3220** \$12.99



### **Ceramic Texturing Rods**

Extremely long-lasting abrasive stones made of thermoset ceramic fibers that will not break or dull, even when dressed to a very fine point. Perfect for detailing and feathering because they create sharp, clean lines. Can be entirely consumed. Sharpen one end, or just use in the shape as supplied. For best results, operate at 35,000–55,000rpm. Dress with rod dresser (see below).

| Dia. x L                            | Color     | Grit | Item#    | Each    |
|-------------------------------------|-----------|------|----------|---------|
| <sup>3</sup> / <sub>32</sub> " x 2" | Emerald   | 120  | 351-0318 | \$18.55 |
|                                     | Gold      | 180  | 351-0156 | 18.55   |
|                                     | Lt. Brown | 300  | 351-0261 | 18.55   |
|                                     | Orange    | 400  | 351-0262 | 18.55   |
|                                     | Brown     | 600  | 351-0263 | 18.55   |
|                                     | Blue      | 800  | 351-0264 | 18.55   |
|                                     | White     | 1000 | 351-0265 | 18.55   |
| <sup>1</sup> /8" x 2"               | Emerald   | 120  | 351-0319 | 25.65   |
|                                     | Gold      | 180  | 351-0158 | 25.65   |
|                                     | Lt. Brown | 300  | 351-0217 | 25.65   |
|                                     | Orange    | 400  | 351-0218 | 25.65   |
|                                     | Brown     | 600  | 351-0211 | 25.65   |
|                                     | Blue      | 800  | 351-0212 | 25.65   |
|                                     | White     | 1000 | 351-0213 | 25.65   |
|                                     | Red       | 1200 | 351-0214 | 25.65   |
|                                     |           |      |          |         |



Use for dressing ceramic texturing rods (see above). Measures 4"L x 1"W x  $^{1}/_{8}$ "H.

Rod Dresser **351-0300 \$13.45** 



### Cera Cylinders – 3/32" shank.

Synthetic rubber cylinders with ceramic abrasive. Cut safely and smoothly. Great for smoothing surfaces before painting. Work with light pressure. Choose from five color-coded grits. Max. operating speed: 30,000rpm.

|              |        | and the second s |          |        |         |
|--------------|--------|--|----------|--------|---------|
| Dia. x Thick |        | Approx.  |          | PKG    | . of 10 |
| (mm)         | Color  | Grit   | ltem#    | 1-4    | 5+      |
| 5 x 15       | Red    | 80   | 351-0600 | \$4.35 | \$3.92  |
|              | Blue   | 120  | 351-0601 | 4.35   | 3.92    |
|              | Green  | 220  | 351-0603 | 4.35   | 3.92    |
|              | Purple | 320  | 351-0604 | 4.35   | 3.92    |
|              | Orange | 500  | 351-0605 | 4.35   | 3.92    |
| 8 x 20       | Red    | 80   | 351-0606 | 4.35   | 3.92    |
|              | Blue   | 120  | 351-0607 | 4.35   | 3.92    |
|              | Green  | 220  | 351-0609 | 4.35   | 3.92    |
|              | Purple | 320  | 351-0610 | 4.35   | 3.92    |
|              | Orange | 500  | 351-0611 | 4.35   | 3.92    |
| 10 x 20      | Red    | 80   | 351-0612 | 4.85   | 4.37    |
|              | Blue   | 120  | 351-0613 | 4.85   | 4.37    |
|              | Green  | 220  | 351-0615 | 4.85   | 4.37    |
|              | Purple | 320  | 351-0616 | 4.85   | 4.37    |
|              | Orange | 500  | 351-0617 | 4.85   | 4.37    |
| 10 x 22      | Red    | 80   | 351-0624 | 5.80   | 5.22    |
|              | Blue   | 120  | 351-0625 | 5.80   | 5.22    |
|              | Green  | 220  | 351-0626 | 5.80   | 5.22    |
|              | Purple | 320  | 351-0627 | 5.80   | 5.22    |
|              | Orange | 500  | 351-0628 | 5.80   | 5.22    |
|              |        |  |          |        |         |



### Cera Wheels $-\frac{1}{16}$ " arbor hole.

Synthetic rubber wheels with ceramic abrasive. Cut safely and smoothly. Work with light pressure. Available in three thicknesses for smoothing knife cuts. Choose from four color-coded grits. Use with screw mandrels (see p. 17). Max. operating speed: 18,000rpm.

| Dia. x Thick |        | Approx. |          | PKC     | 6. of 10 |
|--------------|--------|---------|----------|---------|----------|
| (mm)         | Color  | Grit    | ltem#    | 1-4     | 5+       |
| 18 x 1       | Blue   | 120     | 352-0114 | \$21.50 | \$19.35  |
|              | Green  | 220     | 352-0115 | 21.50   | 19.35    |
|              | Orange | 500     | 352-0117 | 21.50   | 19.35    |
| 18 x 2       | Blue   | 120     | 352-0108 | 21.50   | 19.35    |
|              | Green  | 220     | 352-0109 | 21.50   | 19.35    |
|              | Orange | 500     | 352-0111 | 21.50   | 19.35    |
| 18 x 3       | Red    | 80      | 352-0101 | 21.50   | 19.35    |
|              | Blue   | 120     | 352-0102 | 21.50   | 19.35    |
|              | Green  | 220     | 352-0103 | 21.50   | 19.35    |
|              | Orange | 500     | 352-0104 | 21.50   | 19.35    |



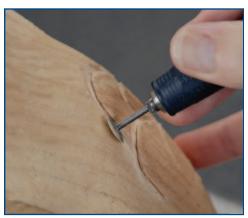
### **Diamond Dressing Block**

Solid steel block with diamond coating for fast dressing and shaping of our rubberized abrasives. Features flat side for dressing square-edge wheels and grooved side for shaping rods, points and knife-edge wheels. Measures  $3\frac{1}{2}$ " long.

Diamond Dressing Block 145-1315 \$48.45

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# The System Award-Winning Versatile, Relia



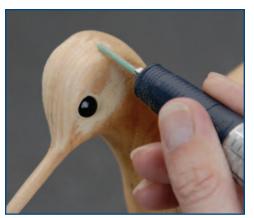
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**Standard Power Carver** 



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# of Choice for g Woodcarvers able, Powerful



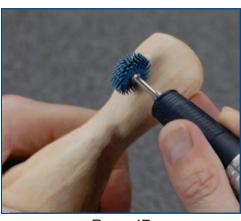
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**Dual Power Carver** 



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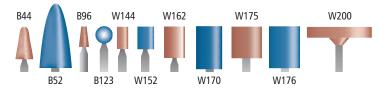
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### Gesswein® Mounted Stones — 1/8" shank.

Superior stones made of aluminum oxide bonded with porcelain-type clays, which provide great strength and rigidity for fast stock removal and long stone life. Great for smoothing after cutting with carbide and diamond tools. Feature a ceramic bond that controls the release of abrasive grains: as each particle begins to dull, the ceramic bond discharges it, allowing new abrasive to surface with fresh, sharp cutting edges. Securely bonded to 1/8" nickel-plated steel shanks and guaranteed to run true.

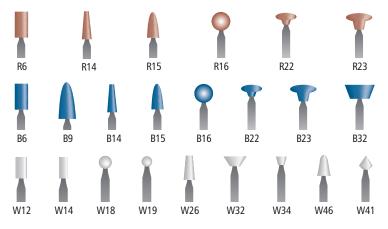
Choose from 60-80 grit red stones and 120 grit blue stones. Former cut faster, latter hold shape better. Dress both types with our Tru-Stone (see below). For recommended speeds of vitrified mounted wheels, please consult ANSI (American National Standard Institute). Before using any abrasive, follow all safe operating guidelines. Also read the Material Safety Data Sheet (MSDS) to be aware of any inherent hazards or cautions.

|           |     | Head Dia. x L                         | ltem#    | Pkg. of 12 |
|-----------|-----|---------------------------------------|----------|------------|
| Red B44   | 60  | <sup>7</sup> /32" x <sup>3</sup> /8"  | 309-0440 | \$16.00    |
| Red B52   | 60  | <sup>3</sup> /8" x <sup>3</sup> /4"   | 309-0520 | 17.00      |
| Red B96   | 60  | 1/8" x 1/4"                           | 309-0960 | 14.00      |
| Red B123  | 80  | <sup>3</sup> /16" X <sup>3</sup> /16" | 309-1230 | 14.00      |
| Red W144  | 80  | 1/8" x 1/4"                           | 309-1440 | 11.00      |
| Red W152  | 80  | <sup>3</sup> /16" x <sup>1</sup> /4"  | 309-1520 | 11.00      |
| Red W162  | 80  | 1/4" x 3/8"                           | 309-1620 | 13.00      |
| Red W170  | 60  | <sup>5</sup> /16" x <sup>1</sup> /2"  | 309-1700 | 13.00      |
| Red W175  | 60  | 3/8" x 3/8"                           | 309-1750 | 13.00      |
| Red W176  | 60  | <sup>3</sup> /8" x <sup>1</sup> /2"   | 309-1760 | 13.00      |
| Red W200  | 60  | <sup>3</sup> /4" x <sup>1</sup> /8"   | 301-2000 | 13.00      |
| Blue B44  | 120 | <sup>7</sup> /32" x <sup>3</sup> /8"  | 304-0440 | 16.00      |
| Blue B96  | 120 | 1/8" x 1/4"                           | 304-0960 | 14.00      |
| Blue B52  | 120 | <sup>3</sup> /8" x <sup>3</sup> /4"   | 304-0520 | 17.00      |
| Blue B123 | 120 | <sup>3</sup> /16" X <sup>3</sup> /16" | 304-1230 | 14.00      |
| Blue W144 | 120 | 1/8" x 1/4"                           | 304-1440 | 12.00      |
| Blue W152 | 120 | <sup>3</sup> /16" x <sup>1</sup> /4"  | 304-1520 | 12.00      |
| Blue W162 | 120 | 1/4" x 3/8"                           | 304-1620 | 13.00      |
| Blue W170 | 120 | <sup>5</sup> /16" x <sup>1</sup> /2"  | 304-1700 | 12.00      |
| Blue W175 | 120 | 3/8" x 3/8"                           | 304-1750 | 13.00      |
| Blue W176 | 120 | <sup>3</sup> /8" x <sup>1</sup> /2"   | 304-1760 | 13.00      |
| Blue W200 | 120 | <sup>3</sup> /4" x <sup>1</sup> /8"   | 300-2000 | 11.00      |



Choose from convenient red and blue sets of 48 and 100 pieces comprising our most popular shapes (see above), offering a stone for virtually every application. The 48-piece sets include six each of these eight shapes: B44, B52, B123, W144, W152, W162, W176 and W200. The 100-piece sets include ten each of these ten shapes: B44, B52, B96, B123, W144, W152, W162, W170, W175 and W200.

| Red 48-Piece Set   | 310-3010 | \$46.00 |
|--------------------|----------|---------|
| Red 100-Piece Set  | 310-3000 | 95.00   |
| Blue 48-Piece Set  | 305-3010 | 46.00   |
| Blue 100-Piece Set | 305-3000 | 95.00   |



### Gesswein® Texturing Stones — 3/32" shank.

Made of the same material as our Gesswein Mounted Stones (see left). Ideal for simulating individual feathers and hair, creating feather groupings, detailing beaks and bills, texturing and more. Cut fast but don't grab, making them a pleasure to use because they offer excellent control. Long-lasting and guaranteed to run true. Max. operating speed: 55,000rpm with  $\frac{1}{8}$ " distance between head and end of collet. All have  $\frac{3}{32}$ " shanks.

Choose from 100-120 grit red, 120 grit blue and 400 grit white stones. Red stones cut fastest of the three. Great for heavier carving. Blue stones hold shapes best for making sharper edges. Cut faster than white stones. White stones feature extra-fine grit for detailing and texturing. Dress all types with our Tru-Stone (see below). For recommended speeds of vitrified mounted wheels, please consult ANSI (American National Standard Institute). Before using any abrasive, follow all safe operating guidelines. Also read the Material Safety Data Sheet (MSDS) to be aware of any inherent hazards or cautions.

| Bata Silect (IVISE | by to be arraic | or any minerent mazara  | or caations. |            |
|--------------------|-----------------|---|--------------|------------|
| Description        | Grit            | Head Dia. x L   | ltem#        | Pkg. of 12 |
| Red R6             | 120             | 1/8" x 1/4"   | 321-0060     | \$13.00    |
| Red R14            | 120             | <sup>3</sup> /32" x <sup>17</sup> /64"                          | 321-0140     | 13.00      |
| Red R15            | 120             | <sup>7</sup> /64" x <sup>7</sup> /32"                           | 321-0150     | 13.00      |
| Red R16            | 100             | <sup>3</sup> /16" X <sup>3</sup> /16"                           | 321-0160     | 13.00      |
| Red R22            | 100             | <sup>3</sup> /16" X <sup>3</sup> /64"                           | 321-0220     | 13.00      |
| Red R23            | 120             | 1/4" x 1/16"  | 321-0230     | 13.00      |
| Blue B6            | 120             | 1/8" x 1/4"   | 316-0060     | 14.00      |
| Blue B9            | 120             | <sup>13</sup> /64" X <sup>11</sup> /32"                         | 316-0090     | 14.00      |
| Blue B14           | 120             | <sup>3</sup> /32" x <sup>17</sup> /64"                          | 316-0140     | 14.00      |
| Blue B15           | 120             | 7,64" x 7,32"   | 316-0150     | 14.00      |
| Blue B16           | 120             | <sup>3</sup> /16" X <sup>3</sup> /16"                           | 316-0160     | 14.00      |
| Blue B22           | 120             | <sup>3</sup> /16" X <sup>3</sup> /64"                           | 316-0220     | 17.00      |
| Blue B23           | 120             | 1/4" x 1/16"  | 316-0230     | 17.00      |
| Blue B32           | 120             | <sup>17</sup> /64" x <sup>1</sup> /8"                           | 316-0320     | 17.00      |
| White W12          | 400             | 1/8" x 1/4"   | 326-0120     | 20.00      |
| White W14          | 400             | <sup>5</sup> /64" x <sup>1</sup> /4"                            | 326-0140     | 20.00      |
| White W18          | 400             | 1/8" x 1/8"   | 326-0180     | 20.00      |
| White W19          | 400             | <sup>3</sup> / <sub>32</sub> " x <sup>3</sup> / <sub>32</sub> " | 326-0190     | 20.00      |
| White W26          | 400             | <sup>1</sup> /8" x <sup>9</sup> /32"                            | 326-0260     | 20.00      |
| White W32          | 400             | <sup>17</sup> /64" x <sup>1</sup> /8"                           | 326-0320     | 20.00      |
| White W34          | 400             | <sup>3</sup> /32" x <sup>1</sup> /8"                            | 326-0340     | 20.00      |
| White W46          | 400             | <sup>7</sup> /64" x <sup>7</sup> /32"                           | 326-0460     | 20.00      |
| White W41          | 400             | <sup>9</sup> /64" x <sup>5</sup> /32"                           | 326-0410     | 20.00      |
|                    |                 |   |              |            |

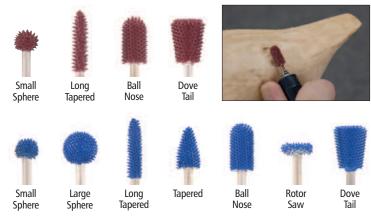
**Tru-Stone Dressing Stone** 

A very hard, coarse silicon carbide stone with 1/16", 1/8", <sup>3</sup>/<sub>16</sub>" and <sup>1</sup>/<sub>4</sub>" half-round grooves on one side for dressing, cleaning and shaping stones. Measures  $3^{1}/2^{1}L \times 1^{3}/8^{1}W \times 5^{5}/8^{1}H$ .

\$5.60 Tru-Stone Dressing Stone 380-1030

**Gesswein®** 

1/8" shank.



### Typhoon<sup>®</sup> Carbide Burs – ½" shank.

These unique burs feature structurally aligned tungsten carbide teeth that make cutting against the grain and through knots as easy as cutting with the grain. Cut faster, leave a smoother finish and load less quickly than other tungsten carbide burs. Ideal for use on hard and soft woods. Available in red (coarse) and blue (fine). Use coarse for aggressive roughing and shaping of body muscles and feather groups, fine for texturing heads and wing pockets of gunning birds. <sup>1</sup>/<sub>8</sub>" shank. Max. operating speed: 35,000rpm.

| Shape       | Head Dia. x L                         | Red (Coarse) | Each    | Blue (Fine) | Each    |
|-------------|---------------------------------------|--------------|---------|-------------|---------|
| Sm. Sphere  | <sup>5</sup> /16" x <sup>5</sup> /16" | 128-4500     | \$15.99 | 128-4505    | \$15.99 |
| Lg. Sphere  | <sup>7</sup> ∕16" x <sup>7</sup> ∕16" | _            | _       | 128-4510    | 15.99   |
| Lg. Tapered | <sup>3</sup> /16" X <sup>3</sup> /4"  | 128-4515     | 15.99   | 128-4520    | 15.99   |
| Tapered     | <sup>5</sup> /16" x <sup>1</sup> /2"  | _            | _       | 128-4525    | 15.99   |
| Ball Nose   | <sup>5</sup> /16" x <sup>1</sup> /2"  | 128-4530     | 15.99   | 128-4535    | 15.99   |
| Rotor Saw   | <sup>7</sup> /16" X <sup>3</sup> /16" | _            | _       | 128-4540    | 15.99   |
| Dove Tail   | <sup>7</sup> /16" x <sup>1</sup> /2"  | 128-4545     | 15.99   | 128-4550    | 15.99   |



### Ruby Carvers $-\frac{3}{32}$ " shank.

Long-lasting carvers with ruby crystals firmly bonded to metal shanks for cutting wood quickly against and with the grain. Dissipate heat very well and resist clogging. Outlast steel cutters. All fine grit. Use for feather building, contouring and texturing. <sup>3</sup>/<sub>32</sub>" shank. Max. operating speed: 35,000rpm

| iviax. Operating spee | eu. 55,0001piii.   |          |         |
|-----------------------|--------------------|----------|---------|
| Shape                 | Head Dia. x L (mm) | ltem#    | Each    |
| Small Sphere          | 4.5 x 4.5          | 128-4570 | \$10.40 |
| Small Bud             | 3.5 x 4.5          | 128-4575 | 10.40   |
| Medium Bud            | 4.5 x 6.5          | 128-4565 | 10.40   |
| Cylinder              | 3.3 x 5.5          | 128-4560 | 10.40   |
| Small Flame           | 3.3 x 8.0          | 128-4580 | 10.40   |
| Medium Flame          | 4.0 x 10.0         | 128-4583 | 10.40   |
| Large Sphere          | 7.5 x 7.5          | 128-4590 | 12.70   |
| Pear                  | 5.5 x 10.0         | 128-4600 | 12.70   |
| Large Flame           | 6.5 x 12.6         | 128-4605 | 12.70   |
| Inverted              | 8.5 x 12.0         | 128-4610 | 12.70   |
|                       |                    |          |         |



# **Paper Bullets and Cones**

Economical paper bullets and cones for sanding and blending in those hard-to-reach areas that woodcarvers encounter on a regular basis. Expose new grit as they wear. Use at low speeds for better control and longer life. Designed for fast, easy changing. Use bullets and small cones with threaded mandrel (see below), large cones with split mandrel (see below).

| Description           | Dia. x L                              | Color  | Grit   | Item#    | Pkg. of 10 |
|-----------------------|---------------------------------------|--------|--------|----------|------------|
| Bullet                | 1/4" x 5/8"                           | Yellow | Coarse | 107-1058 | \$5.45     |
|                       |                                       | Red    | Medium | 107-1057 | 5.45       |
|                       |                                       | Green  | Fine   | 107-1056 | 5.45       |
| Small Cone            | <sup>1</sup> /4" x <sup>9</sup> /16"  | Yellow | Coarse | 107-1055 | 5.45       |
|                       |                                       | Red    | Medium | 107-1054 | 5.45       |
|                       |                                       | Green  | Fine   | 107-1053 | 5.45       |
| Large Cone 5/8" x 15/ | <sup>5</sup> /8" x <sup>15</sup> /16" | Yellow | Coarse | 107-1052 | 4.95       |
|                       |                                       | Red    | Medium | 107-1051 | 4.95       |
|                       |                                       | Green  | Fine   | 107-1050 | 4.95       |
|                       |                                       |        |        |          |            |



### **Paper Bullet and** Cone Mandrels – 3/32" shank.

Use threaded mandrel with both bullets and small cones (see above), split mandrel with large cones (see above).

|                  | 5        |        |
|------------------|----------|--------|
| Threaded Mandrel | 840-3040 | \$1.00 |
| Split Mandrel    | 840-3407 | 2.40   |



### **Paper Cone Set**

Perfect for sanding and blending in tight areas. Includes 10 yellow, 10 red and 10 green small cones, 10 yellow, 10 red and 10 green large cones, threaded tapered mandrel for small cones and split tapered mandrel for large cones.

| Paper Cone Set | 107-1060 | \$45.95 |
|----------------|----------|---------|



### **Tapered Cartridge Rolls**

Consist of aluminum oxide resin-bonded onto layered cloth backing. Self-renewing design uncovers a fresh layer of cloth as the layer above wears. Ideal for sanding curved and irregular surfaces. Use with tapered cartridge roll mandrel (see below). Max. operating speed: 25,000rpm.

| Description           | Dia. x L               | Grit     | Item#    | Box of 100 |
|-----------------------|------------------------|----------|----------|------------|
| Tapered Mandrel 3/16" | <sup>3</sup> /16" x 1" | 80       | 107-1150 | \$33.45    |
|                       |                        | 120      | 107-1250 | 33.45      |
|                       |                        | 180      | 107-1350 | 33.45      |
|                       | 240                    | 107-1400 | 33.45    |            |
|                       |                        | 320      | 107-1450 | 33.45      |



Use with tapered cartridge rolls (see above).

| Tananad Mandual | 040 2020 | \$4.95 |
|-----------------|----------|--------|
| Tapered Mandrel | 840-2030 | 34.93  |



### **Propel-Loc Sanding System**

Features a patented locking system that lets you change abrasive bands in seconds—without wrenches or other tools. Consists of aluminum oxide abrasive bands with cushioned lining and a lightweight polyamide drum roller with gripping teeth.

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, 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.

| 4-Piece Starter Kit     |           | 101-0985 | \$5.45 |
|-------------------------|-----------|----------|--------|
| 9-Piece Abrasive Band A | ssortment | 101-0986 | 5.25   |



### 3M™ Aluminum Oxide Abrasive Bands

Resin-bonded aluminum oxide abrasive bands with resilient cloth backing. Offer fast, consistent cut. Ideal for curved surfaces. Use wet or dry. Mount on drum arbors (see right). Max. operating speed: 10,000rpm.

| Dia. x H                            | Grit | ltem#    | Pkg. of 100 |
|-------------------------------------|------|----------|-------------|
| 1/4" x 1/2"                         | 80   | 101-0905 | \$9.35      |
|                                     | 120  | 101-0910 | 9.35        |
|                                     | 180  | 101-0915 | 9.35        |
|                                     | 240  | 101-0920 | 9.35        |
|                                     | 320  | 101-0925 | 9.35        |
| <sup>3</sup> /8" x <sup>1</sup> /2" | 80   | 101-0930 | 10.25       |
|                                     | 120  | 101-0935 | 10.25       |
|                                     | 180  | 101-0940 | 10.25       |
|                                     | 240  | 101-0945 | 10.25       |
|                                     | 320  | 101-0950 | 10.25       |
| 1/2" x 1/2"                         | 80   | 101-0955 | 12.75       |
|                                     | 120  | 101-0960 | 12.75       |
|                                     | 180  | 101-0965 | 12.75       |
|                                     | 240  | 101-0970 | 12.75       |
|                                     | 320  | 101-0975 | 12.75       |
|                                     |      |          |             |



### **Aluminum Oxide Sanding Bands**

Resin-bonded aluminum oxide abrasive bands with resilient cloth backing. Use for chatter-free sanding, smoothing and finishing. Mount on drum arbors (see right). Max. operating speed: 30,000rpm.

| Grit | ltem#  | Pkg. of 100  |
|------|--|--|
| 80   | 101-0208   | \$8.35   |
| 120  | 101-0212   | 8.35   |
| 180  | 101-0218   | 8.35   |
| 240  | 101-0224   | 8.35   |
| 320  | 101-0232   | 8.35   |
| 80   | 101-0308   | 9.45   |
| 120  | 101-0312   | 9.45   |
| 180  | 101-0318   | 9.45   |
| 240  | 101-0324   | 9.45   |
| 320  | 101-0332   | 9.45   |
| 80   | 101-0408   | 11.50  |
| 120  | 101-0412   | 11.50  |
| 180  | 101-0418   | 11.50  |
| 240  | 101-0424   | 11.50  |
| 320  | 101-0432   | 11.50  |
|      | 80<br>120<br>180<br>240<br>320<br>80<br>120<br>180<br>240<br>320<br>80<br>120<br>180<br>240<br>240 | 80     101-0208       120     101-0212       180     101-0218       240     101-0224       320     101-0332       80     101-0318       120     101-0312       180     101-0318       240     101-0324       320     101-0332       80     101-0408       120     101-0412       180     101-0418       240     101-0424 |



### **3M<sup>™</sup> Trizact<sup>™</sup> Sanding Bands**

Provide powerful stock removal. Feature uniformly distributed large structures for repeatable finishing results from one piece to the next. Mount on drum arbors (see below). Max. operating speed: 10,000rpm.

| Dia. x H    | Grit | ltem#    | Pkg. of 10 |
|-------------|------|----------|------------|
| 1/2" x 1/2" | 80   | 101-1080 | \$4.30     |
|             | 120  | 101-1085 | 4.30       |
|             | 180  | 101-1090 | 4.30       |
|             | 240  | 101-1095 | 4.30       |
|             | 400  | 101-1100 | 4.30       |
| 3/4" x 1/2" | 80   | 101-1105 | 6.10       |
|             | 120  | 101-1110 | 6.10       |
|             | 180  | 101-1115 | 6.10       |
|             | 240  | 101-1120 | 6.10       |
|             | 400  | 101-1125 | 6.10       |



### 3M<sup>™</sup> Cubitron<sup>™</sup> Sanding Bands

Cut like aluminum oxide bands but last twice as long and impart a better finish. Made of ceramic aluminum oxide. Mount on drum arbors (see below). Max. operating speed: 20,000rpm.

| Dia. x H    | Grit | ltem#    | Pkg. of 10 |
|-------------|------|----------|------------|
| 1/2" x 1/2" | 80   | 101-1239 | \$3.15     |
|             | 120  | 101-1237 | 3.15       |
|             | 220  | 101-1242 | 3.15       |
| 1/2" x 1/2" | 80   | 101-1252 | 4.50       |
|             | 120  | 101-1262 | 4.50       |
|             | 220  | 101-1267 | 4.50       |
| 3/4" x 1/2" | 80   | 101-1277 | 5.70       |
|             | 120  | 101-1282 | 5.70       |
|             | 220  | 101-1287 | 5.70       |



### **3M<sup>™</sup> Flex Diamond Bands**

Incredibly durable, nonloading bands for shaping and finishing. Coated with micron-graded diamond abrasive in a honeycomb pattern for fast cutting. Won't gouge or catch. Use wet or dry. Mount on drum arbors (see below). Max. operating speed: 20,000rpm.

| Dia. x H                            | Grit | ltem#    | Each   |
|-------------------------------------|------|----------|--------|
| <sup>1</sup> /4" x <sup>1</sup> /2" | 120  | 101-1310 | \$4.15 |
|                                     | 220  | 101-1315 | 4.15   |
|                                     | 400  | 101-1320 | 3.50   |
|                                     | 800  | 101-1325 | 3.50   |
| 1/2" x 1/2"                         | 120  | 101-1335 | 5.80   |
|                                     | 220  | 101-1340 | 4.95   |
|                                     | 400  | 101-1345 | 4.95   |
|                                     | 800  | 101-1350 | 4.95   |
|                                     |      |          |        |



### **Drum Arbors** – 1/8" shank

Expand to hold sanding bands (see above). Provide cushioned backing so bands cut smoothly and uniformly.

| Dia. x H  | Shank | ltem#    | Each   |
|---|-------|----------|--------|
| 1/4" x 1/2"   | 3/32" | 840-1045 | \$3.45 |
|   | 1/8"  | 840-1055 | 3.45   |
| <sup>3</sup> /8" x <sup>1</sup> /2"                           | 3/32" | 840-1035 | 3.45   |
|   | 1/8"  | 840-1040 | 3.45   |
| 1/2" x 1/2"   | 3/32" | 840-1055 | 3.45   |
|   | 1/8"  | 840-1060 | 3.45   |
| <sup>3</sup> / <sub>4</sub> " x <sup>1</sup> / <sub>2</sub> " | 1/8"  | 840-1030 | 3.45   |



# 3M<sup>™</sup> Scotch-Brite<sup>™</sup> Unitized Wheels – ½" arbor hole.

Long-lasting synthetic fiber and resin wheels for texturing. Follow contours well and eliminate undercutting and gouging. Resist heat buildup. See right for mandrels. Max. operating speeds: 35,100rpm for coarse and medium; 30,100rpm for fine.

| Dia. x Thick                       | Grit   | Item#    | Each   |
|------------------------------------|--------|----------|--------|
| 1" x ½"                            | Coarse | 845-1060 | \$2.54 |
| 1" x ½"                            | Medium | 845-1059 | 2.28   |
| 1" x <sup>1</sup> / <sub>4</sub> " | Fine   | 845-1061 | 2.30   |

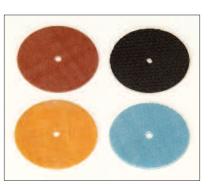




### **Texturing Disc** $-\frac{1}{16}$ " arbor hole.

An extra-thin resin-bonded aluminum oxide disc. Stack three or more on a mandrel with shims in between to make several texturing lines in just one pass. See right for mandrels. Max operating speed: 25,000rpm.

| Dia. x Thick | ltem#    | Box of 100 |
|--------------|----------|------------|
| 1" x .025"   | 845-1022 | \$8.10     |



# Super Ceramic Wheels 1/16" arbor hole.

Wheel-shaped Super Ceramic Stones that are fully usable due to solid construction. Made of thermoset ceramic fibers that do not dull. Use for fine sanding, detailing and feathering. Available in four color-coded grits. See right for mandrels. Max. operating speed: 27,000rpm.

| Dia. x Thick | Color     | Grit | Item#    | 1-4     | 5+      |
|--------------|-----------|------|----------|---------|---------|
| 22 x 0.6mm   | Lt. Brown | 300  | 351-0287 | \$24.95 | \$22.46 |
|              | Orange    | 400  | 351-0288 | 24.95   | 22.46   |
|              | Brown     | 600  | 351-0289 | 24.95   | 22.46   |
|              | Blue      | 800  | 351-0290 | 24.95   | 22.46   |



### Adalox/Paper Snap-On Discs

Consist of red aluminum oxide resin-bonded onto thin paper backing with quick-change brass center. Perfect for following contours due to their flexibility. Long-lasting and water-resistant, with edges that wear along with the abrasive. Use with Snap-On Mandrels (see below). Max. operating speed: 30,000rpm.

|      |        | BOX of 50 |        |        | 0      |
|------|--------|-----------|--------|--------|--------|
| Dia. | Grit   | ltem#     | 1-5    | 6-11   | 12 +   |
| 3/4" | Coarse | 845-2600  | \$3.95 | \$3.56 | \$3.36 |
|      | Medium | 845-2650  | 3.95   | 3.56   | 3.36   |
|      | Fine   | 845-2700  | 3.95   | 3.56   | 3.36   |
| 7/8" | Coarse | 845-2715  | 3.95   | 3.56   | 3.36   |
|      | Medium | 845-2710  | 3.95   | 3.56   | 3.36   |
|      | Fine   | 845-2705  | 3.95   | 3.56   | 3.36   |



### Snap-On Mandrel $-\frac{3}{32}$ " shank.

Use with Adalox/Paper Snap-On Discs (see above).

|                 | <br>     | ,      |
|-----------------|----------|--------|
| Snap-on Mandrel | 840-3200 | \$1.95 |





### **3M<sup>™</sup> Scotch-Brite<sup>™</sup> Radial Bristle Discs**

Inexpensive, resilient plastic discs for removing scratches and fuzz from wood. Use just one disc for detailing, or gang together up to three discs for greater coverage. Color-coded for easy grit identification. Max. operating speed: 30,000rpm. For best finishing results and longest tool life, run from 15,000–25,000rpm.

| Dia. x AH                             | Color             | Grit     | ltem#    | Pkg. of 12 |
|---------------------------------------|-------------------|----------|----------|------------|
| <sup>9</sup> /16" X <sup>1</sup> /16" | White             | 120      | 145-1520 | \$10.05    |
|                                       | Red               | 220      | 145-1525 | 9.40       |
|                                       | Blue              | 400      | 145-1530 | 9.40       |
|                                       | Pink              | Pumice   | 145-1535 | 9.40       |
|                                       | Peach             | 6 Micron | 145-1545 | 9.40       |
|                                       | Lt. Green         | 1 Micron | 145-1540 | 9.40       |
| <sup>3</sup> /4" x <sup>1</sup> /16"  | Yellow            | 80       | 145-1500 | 10.05      |
|                                       | Red               | 220      | 145-1505 | 10.05      |
|                                       | Blue              | 400      | 145-1510 | 10.05      |
|                                       | Pink              | Pumice   | 145-1515 | 10.05      |
|                                       | Peach             | 6 Micron | 145-1492 | 10.05      |
|                                       | Lt. Green         | 1 Micron | 145-1495 | 10.05      |
| 1" x <sup>1</sup> /8"                 | Brown             | 36       | 145-1550 | 12.25      |
|                                       | Green             | 50       | 145-1555 | 12.25      |
|                                       | Yellow            | 80       | 145-1560 | 12.25      |
|                                       | White             | 120      | 145-1565 | 12.25      |
|                                       | ree of each disc, |          |          |            |
| 3/32" mandrel a                       | nd two ½" mandr   | els)     | 145-1670 | 45.50      |



### **Screw Mandrels**

Use for holding wheels up to 1/4" thick.

| For Hole | Shank | ltem#    | Each   |
|----------|-------|----------|--------|
| 1/16"    | 3/32" | 840-3170 | \$1.15 |
|          | 1/8"  | 840-3150 | 1.35   |
| 1/8 "    | 1/8"  | 840-3100 | 2.05   |
|          | 1/8"  | 840-3110 | 2.90   |

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



# Abrasive Belt Sticks and Belts

Economical, versatile belt sticks and belts for sanding and smoothing hard-to-reach areas. Belt sticks feature spring-loaded tensioning device that allows quick belt changes and 360° belt rotation for full usage. Can be used dry or with water, oil or solvents. Made of impact-resistant polypropylene. Measure  $^{1}\!/a$ "W x  $6^{1}\!/a$ "L,  $^{1}\!/z$ "W x 8"L and  $^{3}\!/a$ "W x 10"L. Accommodate  $^{1}\!/a$ ",  $^{1}\!/z$ " and  $^{3}\!/a$ "W belts. Belts consist of aluminum oxide resinbonded onto cloth backing. Color-coded for easy grit identification.

|                   |        | 101  | casy grit identification. | •          |
|-------------------|--------|------|---------------------------|------------|
| Stick w/ Belt     | Color  | Grit | ltem#                     | Each       |
| 1/4"W             | Red    | 120  | 107-3610                  | \$1.85     |
|                   | Blue   | 240  | 107-3612                  | 1.85       |
|                   | Green  | 320  | 107-3614                  | 1.85       |
|                   | Yellow | 400  | 107-3616                  | 1.85       |
|                   | Black  | 600  | 107-3618                  | 1.85       |
| <sup>1</sup> /2"W | Red    | 120  | 107-3640                  | 3.25       |
|                   | Blue   | 240  | 107-3642                  | 3.25       |
|                   | Green  | 320  | 107-3644                  | 3.25       |
| 3/4"W             | Red    | 120  | 107-3670                  | 4.35       |
|                   | Blue   | 240  | 107-3672                  | 4.35       |
|                   | Green  | 320  | 107-3674                  | 4.35       |
| Extra Belts       |        |      |                           | Pkg. of 10 |
| 1/4"W             | Red    | 120  | 107-3621                  | \$5.65     |
|                   | Blue   | 240  | 107-3625                  | 5.65       |
|                   | Green  | 320  | 107-3627                  | 5.65       |
|                   | Yellow | 400  | 107-3628                  | 5.65       |
|                   | Black  | 600  | 107-3629                  | 5.65       |
| 1/2"W             | Red    | 120  | 107-3651                  | 7.85       |
|                   | Blue   | 240  | 107-3655                  | 7.85       |
|                   | Green  | 320  | 107-3657                  | 7.85       |
| <sup>3</sup> /4"W | Red    | 120  | 107-3681                  | 10.35      |
|                   | Blue   | 240  | 107-3685                  | 10.35      |
|                   | Green  | 320  | 107-3687                  | 10.35      |
|                   |        |      |                           |            |



# Mitchell's Abrasive Tapes and Cords

Tapes and cords impregnated with aluminum oxide or silicon carbide. Effective on hard and soft woods. Can be used by hand and in small sawframes, hand drills and power tools. Won't tear or fray and can be cut to any length. Supplied in convenient 50' spool dispensers.

| Таре | Style | W x Thick     | Grit | ltem#    | 50' Spool |
|------|-------|---------------|------|----------|-----------|
| AlO  | 56    | .093" x .037" | 180  | 102-1095 | \$11.85   |
|      | 57    | .125" x .037" | 180  | 102-1100 | 11.85     |
| Cord | Style | Dia.          | Grit | ltem#    | 50' Spool |
| AlO  | 49    | .082"         | 120  | 102-1000 | \$19.85   |
|      | 50    | .070"         | 180  | 102-1005 | 19.85     |
|      | 51    | .055"         | 120  | 102-1010 | 19.85     |
|      | 53    | .040"         | 180  | 102-1020 | 19.85     |
|      | 54    | .030"         | 200  | 102-1025 | 19.85     |
| SiC  | 54-H  | .025"         | 200  | 102-1030 | 19.85     |
|      | 55    | .018"         | 200  | 102-1035 | 13.00     |
|      | 60    | .015"         | 200  | 102-1040 | 13.00     |
|      | 66    | .012"         | 280  | 102-1045 | 31.50     |



### Lightning Metalite Cloth

Long-lasting abrasive cloth for predictable sanding. Consists of aluminum oxide glue-bonded onto resilient cloth backing. Use with Sanding Sticks or Split Mandrels (see below). Sold in 1"W x 150"L rolls.

| Description     | Grit | ltem#    | Roll    |
|-----------------|------|----------|---------|
| Lightning Cloth | 100  | 109-5150 | \$42.50 |
|                 | 120  | 109-5200 | 42.50   |
|                 | 180  | 109-5300 | 42.50   |
|                 | 240  | 109-5350 | 42.50   |
|                 | 320  | 109-5400 | 42.50   |



### **Abrasive Belt Stick and Belt Sets**

Choose from four sets: **21-Piece Set** includes  $^{1}\sqrt{4}^{"}$  red, blue and green belt sticks with one belt each, plus 15 extra belts (five each in 120, 240 and 320 grit); **36-Piece Set** includes  $^{1}\sqrt{4}^{"}$  red, blue and green belt sticks with one belt each, plus 30 extra belts (ten each in 120, 240 and 320 grit); **60-Piece Set** includes  $^{1}\sqrt{4}^{"}$  red, blue, green, yellow and black belt sticks with one belt each, plus 50 extra belts (ten each in 120, 240, 320, 400 and 600 grit); and **42-Piece Large Set** includes  $^{1}\sqrt{2}^{"}$  and  $^{3}\sqrt{4}^{"}$  red, blue and green belt sticks with one belt each, plus 30 extra belts (five each of  $^{1}\sqrt{2}^{"}$  and  $^{3}\sqrt{4}^{"}$  in 120, 240 and 320 grit).

| 107-3603 | \$12.65              |
|----------|----------------------|
| 107-3605 | 19.95                |
| 107-3606 | 33.25                |
| 107-3660 | 57.00                |
|          | 107-3605<br>107-3606 |



### **Sanding Sticks**

Use these tools with 1" x 11" strips of abrasive cloth or paper to sand and smooth. Allow easy insertion and removal of strips yet hold them securely. Made of high-impact, solvent-resistant plastic. Measure 1"W x 10"L with 5" long sanding surface. Work great with Lightning Metalite Cloth (see above).

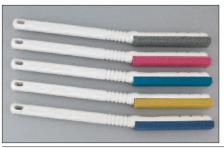
| Flat Stick       | 813-1950 | \$14.95 |
|------------------|----------|---------|
| Half-Round Stick | 813-1951 | 14.95   |



### **Split Mandrels** $-\frac{3}{32}$ " shank.

Hold strips of abrasive paper or cloth to create flap wheels for sanding tiny areas.

| Description   | Dia.    | ltem#    | Each   |
|---------------|---------|----------|--------|
| Split Mandrel | 9/64"   | 840-3406 | \$2.40 |
|               | 11/64 " | 840-3405 | 2.40   |



### **Cera Sticks**

Use to seal wood before painting. Consist of a block of Cera abrasive mounted on a plastic holder. Conform well to irregular surfaces and hard-to-reach areas. Colorcoded for easy grit identification. Measure 7"L with  $2^{3}/_{4}$ "L x  $^{3}/_{8}$ "W x 1/4" thick block. Sold individually or in a set of all five grits.

| Description        | Color    | Grit | ltem#    | 1-4     | 5+      |
|--------------------|----------|------|----------|---------|---------|
| Cera Stick         | Gray     | 46   | 352-0150 | \$12.50 | \$11.25 |
|                    | Red      | 80   | 352-0151 | 12.50   | 11.25   |
|                    | Blue     | 120  | 352-0152 | 12.50   | 11.25   |
|                    | Yellow   | 220  | 352-0153 | 12.50   | 11.25   |
|                    | Purple   | 320  | 352-0154 | 12.50   | 11.25   |
| 5-Piece Set (one c | of each) |      | 352-0155 | 54.00   | _       |

Large half-round files with open teeth for final shaping of wood. Choose from high-quality Swiss and Econo versions. Have two different ends: coarse and medium. Measure 8" long.



### **SUPRA®** "MM" Mounted Brushes

Miniature mounted wheel brushes for cleaning texturing lines and removing carbon buildup from burning. Allow easy access into hard-to-reach areas. Features bristles anchored around a solid steel ring for durability and uniformly distributed for even wear. Max. operating speed: 25,000rpm. Made in USA.

| Dia. x Trim                          | Shank | Bristles | Item#    | Dozen  |
|--------------------------------------|-------|----------|----------|--------|
| <sup>3</sup> /4" x <sup>3</sup> /16" | 3/32" | Hard     | 112-7110 | \$6.75 |
|                                      |       | Soft     | 112-7010 | 6.75   |
|                                      | 1/8"  | Hard     | 112-7130 | 11.50  |
|                                      |       | Soft     | 112-7030 | 13.95  |



### **SUPRA® Intro Brush Sets**

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

| Description | Shank | Ferrule Type(s) | ltem#    | Each    |
|-------------|-------|-----------------|----------|---------|
| Set #1      | 3/32" | Metal           | 112-8000 | \$14.85 |
| Set #2      | 1/8"  | Plastic/Metal   | 112-8003 | 20.75   |



**Shaping Files** 

Swiss Shaping File

Econo Shaping File

# Match each job perfectly!

704-0010

704-0020

\$36.00

10.85

Set of six smooth cut American pattern files with wooden handles: hand (rectangular, one side safe), warding (rectangular, tapered), halfround, three-square, square and round. Includes a hanging pouch. Files measure 7" long with approx. 3" long cut.



# **Tool Organizer**

Great for storing tools and parts!

Hardwood rack with seven top compartments, open space directly below for tools and bottom drawer for loose parts. Measures 71/2"W  $\times 6^{1/2}$ "D  $\times 3^{3/4}$ "H.

| TI O           | 046 4057 | ¢46.75  |
|----------------|----------|---------|
| Tool Organizer | 816-4057 | \$16.75 |



### **Needle Rasp Sets**

Two sets of six miniature rasps for intricate shaping: crochet, equalling, half-round, round, square and three-square. Choose from high-quality Swiss and Econo versions. Rasps measure 5½" long.

| Swiss Needle Rasp Set | 265-2335 | \$60.90 |
|-----------------------|----------|---------|
| Econo Needle Rasp Set | 265-2315 | 9.95    |



### File Card

Features steel wire bristles for removing fine wood particles caught in the teeth of your files. Has wooden handle. Measures 8" long.

| File Card | 816-2800 | \$6.05 |
|-----------|----------|--------|
| riie Calu | 010-2000 | 30.US  |

### **Toolbox with Cantilevered Trays**

A lightweight, rugged polypropylene toolbox with six trays for easy organization of tools. 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 in color with light gray trays. Measures  $18^{1/2}$ "W x  $10^{3/4}$ "D x  $8^{3/4}$ "H with  $4^{1}/2^{11}$  deep bottom storage compartment.

| Toolbox with Cantilevered Travs | 811-2701 | \$71.00 |
|---------------------------------|----------|---------|
|                                 |          |         |

Provue Magnifying Lamp

Offers illumination and magnification in one lamp. Features an ultra-bright 22W circular fluorescent bulb, a crystal-clear 3-diopter (1.75X) magnifying lens for 360° distortion-free viewing, 45" spring-balanced arm that locks in place via smooth-glide thumb-screws and all-metal construction in powder-coated beige. Two optional add-on lenses sold separately: 3-diopter auxiliary lens adds another 1.75X, and 5-diopter swing-away lens adds another 2.25X. Includes C-clamp for benchtops up to 2" thick and 5' power cord. Lamp head measures 9" dia. with 5" dia. lens.

| ProVue Magnifying Lamp                      | 821-5040 | \$94.00 |
|---|----------|---------|
| Optional 3-Diopter Auxiliary Lens (+1.75X)  | 821-5043 | 26.25   |
| Optional 5-Diopter Swing-Away Lens (+2.25X) | 821-5042 | 8.95    |
| Replacement 22W Circular Bulb               | 821-5044 | 14.05   |

Electrical: 115V, 60Hz. UL listed.



This compact, energy-efficient fluorescent lamp directs light where you need it. Produces an asymmetric light pattern to help reduce eyestrain. Features powerful 18W fluorescent tube in head and 34" friction arm with three tension controls for precise positioning and black finish. Includes on/off rocker switch in head, weighted base, C-clamp for mounting on benchtops up to 2½" thick and 7' grounded power cord. Electrical: 115V, 60Hz. UL listed. Backed by a five-year warranty.

| Asymmetria Lamp      | 821-5543 | \$69.85 |
|----------------------|----------|---------|
| Replacement 18W Tube | 821-5305 | 19.95   |



### **Econo 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 and help you work faster. Features a flexible  $11^1/2^{\text{\tiny H}}$  gooseneck for easy positioning, weighted metal base with nonslip pad for stability and flip-up cover that protects lens from dust when not in use. Lamp head measures  $5^1/4^{\text{\tiny H}}$  dia. with  $3^1/4^{\text{\tiny H}}$  dia. lens. Electrical: 120V, 60Hz with 5' cord and polarized plug. UL listed.

| Econo Magnifying Lamp | 821-5010 | \$34.95 |
|-----------------------|----------|---------|
|                       |          |         |



### Flip Lamp

Compact 13W fluorescent lamp ideal for the portable workshop. Features a unique swivel arm with  $180^\circ$  range that 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 with small footprint. Measures  $10^1\!/\!2^{\text{H}}$  high with  $3^1\!/\!4^{\text{H}}$  square base. Electrical: 120V, 60Hz with 6' cord and polarized plug.

| Flip Lamp | 821-5006 | \$19.95 |
|-----------|----------|---------|
|-----------|----------|---------|



### **Eschenbach MaxDetail**

From Eschenbach, premier magnification specialists, this lightweight yet sturdy headset offers a unique Galilean design that allows magnification and focus to be adjusted separately for each lens, providing outstanding clarity for each eye. Magnifies objects two times (comparable to a DA-4 Optivisor). Includes protective carrying case and head strap. Made in Germany.

### Features:

- Wide field of view (20°) and separately adjustable magnification and focus for each lens.
- Individually focusable objective lenses for  $\pm 3$ -diopter spherical correction.
- Lightweight optics, flexible temples and molded bridge for comfort.
- Frosted objective housing for eliminating distracting reflections.

| MaxDetail | 272-3280 | \$95.00 |
|-----------|----------|---------|
|-----------|----------|---------|



### **Optivisor® Magnifiers**

Feature interchangeable binocular lens plates made of high-quality optical glass, ground and polished to precision standards, and lightweight, impact-resistant visor assemblies available in blue or black (shown in blue). Each includes visor pivot assembly and adjustable leather headband for comfortable extended wear. Can be worn over prescription glasses.

| Power | Focal Distance | Blue     | Black    | Each    |
|-------|----------------|----------|----------|---------|
| 1.5X  | 20"            | 270-1020 | 270-1120 | \$35.70 |
| 1.75X | 14"            | 270-1030 | 270-1130 | 35.70   |
| 2X    | 10"            | 270-1040 | 270-1140 | 35.70   |
| 2.5X  | 8"             | 270-1050 | 270-1150 | 35.70   |
| 2.75X | 6"             | 270-1070 | 270-1170 | 36.20   |
| 3.5X  | 4"             | 270-1100 | 270-1180 | 36.20   |

### **Optivisor® Lens Plates**

Perfect if you already own an Optivisor (see above) and want more magnification powers.

| Terrece in you directly own an optivisor (see above) and waite more magnification powers. |                |          |         |
|---|----------------|----------|---------|
| Power   | Focal Distance | ltem#    | Each    |
| 1.5X  | 20"            | 270-2020 | \$24.80 |
| 1.75X   | 14"            | 270-2030 | 24.80   |
| 2X  | 10"            | 270-2040 | 24.80   |
| 2.5X  | 8"             | 270-2050 | 24.80   |
| 2.75X   | 6"             | 270-2070 | 26.15   |
| 3.5X  | 4"             | 270-2100 | 26.15   |





### **Optivisor® Accessories**

Optional loupe attaches to Optivisor for extra 2.5X magnification power in one eye. Optional lights clip onto Optivisor to illuminate the viewing area. Feature 6,000-candlepower xenon bulb. Swivel for optimal coverage. Run up to 6 hours on just two AA batteries (not included).

| Swing-Away 2.5X Loupe                | 270-2200 | \$11.25 |
|--------------------------------------|----------|---------|
| Light LT-06, headband clip, 10" cord | 270-2150 | 23.20   |
| Light LT-42, belt clip, 42" cord     | 270-2151 | 23.20   |



### Clip-On Telesights®

Clip-on magnifiers for use with your prescription glasses, including bifocals. Use tension clamps for fast, easy attachment and release. Simply flip up when not in use.

| Power | Focal Distance*     | ltem#    | Each    |
|-------|---------------------|----------|---------|
| 1.75X | 13 <sup>1</sup> /2" | 270-0530 | \$30.95 |
| 2X    | 10"                 | 270-0540 | 30.95   |
| 2.25X | 8"                  | 270-0550 | 30.95   |
| 2.5X  | 6 <sup>2</sup> /3"  | 270-0560 | 30.95   |
| 3X    | 5"                  | 270-0580 | 33.45   |

<sup>\*</sup>Measured from eye.



### **Rotating Bench Vise**

Sturdy high-quality vise suitable for securing a wide variety of items. Features vise head that can be rotated a full 360° and tilted from 180° horizontal to 90° vertical, then locked securely in place, allowing your workpiece to be easily swiveled and angled into the best position. Boasts rugged steel jaws, one side of which have two V-shaped grooves for holding wire and additional round stock. Uses a brass guide for smooth action and jaw clamping screw and joint locking screw with bronze lead nuts.

Includes base mount with screw clamp for fast, easy mounting on the edge of a benchtop up to 3" thick. Can also be attached with screws directly to benchtop after removal of base mount. Jaw width: 1<sup>13</sup>/16". Clamping range: 3". Optional nylon jaws also available (see below).

| Rotating Bench Vise | 820-4056 | \$250.00 |
|---------------------|----------|----------|
| Optional Nylon Jaws | 820-4060 | 59.95    |



### **Swivel Bench Vise**

Features smooth jaws that prevent marring, rigid dual guide rods for steady, parallel closing of jaws, sturdy cast-iron body with anvil top and long-lasting enamel finish. Attaches to benchtops up to 2" thick. Can be rotated 360° laterally and locked firmly in position. Jaw width:  $2\frac{1}{2}$ ". Clamping range:  $2\frac{1}{2}$ ".

Swivel Bench Vise **820-4054 \$50.80** 



### Panavise #301

An all-purpose vise that tilts, turns and rotates. Features vise head that can be turned 360°, tilted 90° and locked in any position. Also allows stem to be rotated or locked in place once head is locked in desired position. Uses one convenient variable pressure knob to control all movement. Includes nonmarring nylon jaws. Clamping range:  $2^1/2^n$ .

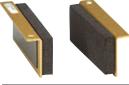
Panavise #301 **814-0200 \$49.95** 



### Panavise #301 Base Mount

Platform base mount for securing Panavise #301 to the edge of a workbench or counter. Attaches with a clamp screw that opens to a maximum of  $3^1/2^n$ .

Panavise #301 Base Mount **814-0700 \$49.95** 



### Foredom® Soff Jaws

Attach to any 3" or 4" bench vise via built-in magnetic strips. Available with soft rubber-like or leather pads. Grip odd shapes with ease. Prevent marring of textured and painted surfaces. Measure  $3^{1}/_{2}$ " long. Sold in pairs.

| Rubber-like Soff Jaws, pair | 820-4705 | \$7.95 |
|-----------------------------|----------|--------|
| Leather Soff Jaws, pair     | 820-4706 | 7.95   |



This convenient holding tool consists of round weighted base with cross bar, two spring-loaded alligator clips and multiple ball joints for infinite positioning capability. Frees up both your hands for doing work. Accepts other accessories such as cross-locking tweezers for increased versatility.

Double Third Hand **816-1900 \$15.85** 



# **GRS® Soldering Stations**

Compact fixturing devices for holding small pieces when soldering.

Available in two styles: short-arm features double-jointed arms with spring-loaded third hands, and deluxe (pictured) features triple-jointed arms with spring-loaded third hands. Have 6" x 6" nonasbestos soldering boards and metal frames with rubber feet.

Made in USA.

| Short-Arm Soldering Station | 816-1914 | \$69.00 |
|-----------------------------|----------|---------|
| Deluxe Soldering Station    | 816-1915 | 99.95   |



### **Cross-Locking Tweezers**

Nickel-plated tweezers with tips that close automatically when pressure is released from the handles. Ideal for a variety of general applications. Choose from blunt and pointed styles. Measure  $6^{1/2}$ " long.

| Blunt Tweezers   | 195-1400 | \$2.95 |
|------------------|----------|--------|
| Pointed Tweezers | 195-1450 | 2.95   |



### **Eve Holders**

Ideal for picking up and placing eyes. Just press the plunger to open, and release it to grasp. Choose from four-prong and loop-end styles. Made of stainless steel. Measure  $4\frac{1}{2}$ " long.

|                |         |    | <br>, |          |        |
|----------------|---------|----|-------|----------|--------|
| Four-Prong Eye | e Holde | er |       | 840-4451 | \$5.95 |
| Loop-End Eye   | Holder  |    |       | 840-4452 | 4.50   |



### **German Dividers**

Well-balanced, precision-machined steel dividers with ground and hardened points. Use for measuring between points, marking items for sizing, scribing circles and more. Available in three sizes. Made in Germany.

| 3" Divider | 812-1706 | \$10.20 |
|------------|----------|---------|
| 4" Divider | 812-1805 | 10.95   |
| 6" Divider | 812-1905 | 12.95   |



# 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 a plastic case. Measuring range:  $4^{\circ}/100$ mm. Accuracy:  $\pm 0.001^{\circ}/0.01$ mm.

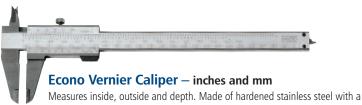
Mini Digital Thickness Gauge **825-1620 \$59.95** 



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 with a plastic case. Measuring range: 4"/100mm. Accuracy: ±0.001"/0.01mm.

Pocket Digital Caliper 825-1625 \$35.00



Measures inside, outside and depth. Made of hardened stainless steel with a fine satin chrome finish. Includes setscrew that keeps jaws in place. Comes with a plastic case. Graduated in 0.001" and 0.02mm. Measuring range: 6"/150mm. Jaw depth: 1.6".

Econo Vernier Caliper 825-1725 \$39.95



Measures inside, outside, depth and step. Made of durable superpolyamide plastic and fiberglass. Comes with a plastic case. Has dial graduated in 0.1mm. Measuring range: 150mm. Made in Switzerland.

Plastic/Fiberglass Dial Caliper 825-1660 \$39.95



Measures inside, outside, depth and step. Made of tough reinforced plastic. Includes fraction conversion table on reverse. Comes with a plastic case. Has dial graduated in 0.01" and  $1/\!\!\!/ 64$ ". Measuring range: 6". Made in Switzerland.

Plastic Dial Caliper **825-1815 \$34.50** 

### **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 heavyweight suede. Includes adjustable ties with brass grommet reinforcements. One size fits all. Measures 24"W x 36"L.

Suede Bib Apron **827-1507 \$41.95** 



### 3M™ Half-Facepiece Respirator

Protects you from dust, mist and airborne contaminants. Features a soft, pliable silicone face seal for a secure, gapless fit on most every face shape. Very comfortable to wear, especially for extended periods. Offers roomy nose chamber and special cool flow valve to ensure easy breathing while reducing heat and condensation in the facepiece. Includes facepiece, two deluxe cartridges, two deluxe prefilters and two retainer rings. NIOSH approved.

Half-Facepiece Respirator 805-1035 \$48.95



### **Dust and Mist Respirator**

Disposable mask with strengthened outer shell for great 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 comfort. Lightweight, formable nosepiece and inner foam seal permit a safe, effective fit. Compact design fits well with glasses, goggles and face shields. NIOSH/MSHA approved for dusts and mists.

| Pkg. of 5 | 805-1015 | \$5.95 |
|-----------|----------|--------|
| Box of 20 | 805-1010 | 22.25  |



### **Face Shield**

This lightweight plastic shield is a must for entire face and neck protection against flying wood chips and sawdust while shaping, drilling and sanding. Fits over dust masks, respirators and glasses without obstructing your view. Features pivoting visor for easy raising and lowering, molded visor edge for reinforcement, cushioned vinyl comfort band and pin-and-hole adjustable headband. Does not eliminate the need for safety goggles. Visor measures 12"W x 8"L x .040" thick.

Face Shield **270-0210** \$16.25



### **Safety Glasses**

Comfortable, lightweight safety glasses with high-impact lenses for full eye protection while shaping, drilling and sanding. One size fits all.

Safety Glasses **270-0205 \$4.30** 



### **3M**<sup>™</sup> Vetrap Bandage Tape

Maintain your sense of touch with this comfortable and cool tape. Easy to use and stays in place on fingers. Available in five colors. Sold in 2"W x 15'L rolls.

| Description | ltem#    | 1-4    | 5+     |
|-------------|----------|--------|--------|
| Blue        | 816-0214 | \$1.85 | \$1.73 |
| Green       | 816-0215 | 1.85   | 1.73   |
| Pink        | 816-0216 | 1.85   | 1.73   |
| Red         | 816-0217 | 1.85   | 1.73   |
| White       | 816-0218 | 1.85   | 1.73   |



### **JoolTool Finishing System**

### The space-saving do-it-all system!

Provides first-rate lapping, polishing, grinding and sharpening results. Reduces 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 2<sup>1</sup>/<sub>2</sub>" Buff & Polish Felt Disc, tapered spindle, Allen wrench, 5A fuse and demo CD. The JoolTool power tool has an 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 speeds. Accepts up to 3" dia. discs and wheels. Flex shaft attachment also

available for using smaller tools with flex shaft handpieces (see p. 5). Electrical: 110/220V. Measures 8" dia. x 12"H with  $1^{1}/2$ " dia. vent for 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. Disc backpad and cushion hold 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#    | Each      |
|---------------------------|----------|-----------|
| JoolTool Finishing System | 854-1775 | \$279.99  |
| Flexible Shaft Attachment | 854-1819 | 39.99     |
|                           |          | Pkg. of 3 |
| Disc Backpad              | 854-1777 | \$38.99   |
| Disc Cushion              | 854-1798 | 32.99     |



### **3M<sup>™</sup> Ninja<sup>™</sup> 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 and tool sharpening. Measure 3" diameter. Max. operating speed: 3,650rpm.

| Description                  | Grit | ltem#    | Pkg. of 6 |
|------------------------------|------|----------|-----------|
| Purple Disc                  | 80   | 854-1778 | \$16.99   |
|                              | 120  | 854-1779 | 16.99     |
|                              | 220  | 854-1788 | 16.99     |
| 9-Piece Set (3 of each grit) |      | 854-1791 | 26.99     |



### 3M<sup>™</sup> Ninja<sup>™</sup> Trizact<sup>™</sup> Discs

Self-adhesive Trizact discs for use on a variety of metals and materials, including platinum, gold, silver, brass, copper, acrylics and more. Also excellent for sharpening chisels, gravers, knives and other tools. Measure 3" diameter. Max. operating speed: 3,650rpm.

| Description        | Color      | Micron | ltem#    | Pkg. of 6 |
|--------------------|------------|--------|----------|-----------|
| Trizact Disc       | Green      | 35     | 854-1784 | \$17.99   |
|                    | Red        | 20     | 854-1785 | 17.99     |
|                    | Blue       | 10     | 854-1786 | 17.99     |
|                    | Orange     | 5      | 854-1787 | 17.99     |
| 12-Piece Set (3 of | each grit) |        | 854-1793 | 27.99     |



### Ninja<sup>™</sup> Buff & Polish Felt Disc

Self-adhesive felt disc for use with cutting and polishing compounds to bring your metal pieces to a mirror shine while maintaining perfect geometry. Measures 3" diameter. Max. operating speed: 3,650rpm.

| Buff and Polish Felt Disc | 854-1837 | \$17.99 |
|---------------------------|----------|---------|
|                           |          |         |



# Sealed Polishing Motor #15

A 1/2 HP sealed double-spindle motor with 5/8" shafts. Supplied with two tapered spindles. Electrical: 110V, 50/60Hz. Shaft height: 5". Ship. wt: 29 lbs. Operating speed: 3,450rpm (3,000rpm at 50Hz). Imported.

Motor #15 **854-1265 \$198.00** 



### **Mini Bench Motor**

### Perfect for light work near your bench!

A compact unit with small footprint for easy placement near your bench. Ideal for light grinding, buffing and polishing jobs. Features 1/6 HP enclosed prelubricated ball-bearing motor with variable-speed control, two hoods with  $2^1/2^{\circ}$  outlets for connection to your dust collector or shop-vac, splatter shield with LED light, storage drawer with dividers and two tapered spindles for buffs up to 4" in diameter.

Optional arbor available for use with  $^{1}/_{4}$ " arbor hole wheels on right side only (abrasive grinding wheels can't exceed 2" in diameter; rubber-bonded wheels can't exceed 3" in diameter). Optional spring chuck also available for use with  $^{3}/_{32}$ " shank tools. Electrical: 110V, 50/60Hz. Measures  $14^{1}/_{2}$ "W x 6"D x  $73^{1}/_{4}$ "H (height measured without light) with 5"W x  $43^{1}/_{4}$ "D x  $6^{1}/_{4}$ "H hoods. Shaft height:  $5^{1}/_{4}$ ". Shaft diameter:  $^{5}/_{16}$ ". Operating speed: 500-5,000rpm.

| Mini Bench Motor      | 850-0630 | \$245.00 |
|-----------------------|----------|----------|
| Optional Arbor        | 850-0631 | 15.00    |
| Optional Spring Chuck | 850-0632 | 19.25    |



### EZE-LAP® Diamond Lappers

Hand lappers suitable for honing the edges of a wide variety of cutting tools. Available in five grits for matching different finishing requirements. Feature comfortable grips designed for accurate control and color-coded for easy grit identification. Measure 6"L x <sup>3</sup>/4"W with 2"L x <sup>3</sup>/4"W diamond face.

| Description    | Color  | Grit     | ltem#    | Each    |
|----------------|--------|----------|----------|---------|
| Diamond Lapper | Green  | X-Coarse | 349-6009 | \$10.95 |
|                | Black  | Coarse   | 349-6010 | 8.75    |
|                | Purple | Medium   | 349-6012 | 7.15    |
|                | Red    | Fine     | 349-6014 | 5.45    |
|                | Blue   | X-Fine   | 349-6018 | 5.45    |
|                |        |          |          |         |



☎ 1-203-366-5400 FAX 1-203-366-3953 E-mail: info@gesswein.com

Orders only:

☎ 1-800-243-4466 FAX 1-888-454-4377

Prices subject to change without notice. \$25.00 minimum order.

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VAC







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 1<sup>1</sup>/<sub>2</sub>" 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). Airflow:

6–8 months). Airflow: 110 CFM. Noise level: 56 dB. Electrical: 110V, 4.5A, 50/60Hz. Measures 10"W x 15<sup>1</sup>/<sub>4</sub>"D x 14"H. Backed by a one-year warranty.

| Under-Bench Vacuum System   | 854-1762 | \$497.00 |
|-----------------------------|----------|----------|
| Optional Vacuum Bench Pin   | 854-1769 | 49.95    |
| Replacement Bag Filters (6) | 854-1763 | 29.95    |
| Replacement Charcoal Filter | 854-1764 | 29.95    |

### **GemOro® Brilliant Spa™ Steam Cleaner**

A compact steam cleaner for cleaning tools and more. 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 just five 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.





P.O. Box 3998
Bridgeport, CT 06605, USA



### **Digital Ultrasonic**

### For small to medium loads!

A moderately sized ultrasonic for removing dirt and compounds from tools and more. Provides 42kHz of cleaning power. Features integral heater with radiator fan, quiet solid-state circuitry, five timer settings from 1.5–8 minutes with auto-shutoff, isolated electronics for moisture protection, heavy-duty wipe-clean plastic housing with detachable see-through lid and durable stainless steel tank. Includes jewelry cleaning basket and free sample of ultrasonic cleaning solution. Capacity: 2½ qts. Electrical: 115V, 160W, 50/60Hz. Measures 13³/8"W x 10"D x 87/8"H with 10³/8"W x 6¹/2"D x 3¹/8"H tank. Weighs 5¹/2 lbs. CE, GS, NRTL and PSE approved.

Digital Ultrasonic **851-4906 \$119.95** 



# Sonic Wave Deluxe Ultrasonic Compact yet advanced!

This digital ultrasonic safely and quietly removes grime from tools and more. Provides 42kHz of cleaning power with three settings for gentle, normal and tough jobs. Features five timer settings from 1.5–8 minutes with auto-shutoff, enclosed circuit board for leak protection, high-impact plastic housing with seethrough lid, detachable stainless steel tank and handle for easy filling and emptying. Includes three stands for holding different articles and free sample of ultrasonic cleaning solution. Capacity:  $^{3}$ /4 qt. Electrical: 110V. Measures  $^{81}$ /4"W x  $^{73}$ /4"D x  $^{51}$ /2"H. CE, TUV, GS, ETL and PSE approved.

Sonic Wave Deluxe Ultrasonic

851-4902

\$39.95



### **Gesswein® Ultrasonic Cleaning Solution**

Improves performance of your ultrasonic cleaner, reducing cleaning time. Cleans without using harsh chemicals that can damage the ultrasonic tank, such as ammonia. In fact, it inhibits rust, so it actually helps protect your tools and tank. Contains no phosphates, which thicken with use and shorten solution life. Gives you a long-lasting supply for your money with its 40:1 concentration. Won't irritate eyes or nose. Complies with water treatment regulations for direct disposal into sewage. Meets OSHA standards.

| 1 Pint  | 851-5303 | \$14.80 |
|---------|----------|---------|
| 1 Quart | 851-5300 | 23.60   |