Browning®

Series 7000 In-line Helical Gearmotors and Speed Reducers

EMERSON.
Industrial Automation

EMERSON. CONSIDER IT SOLVED.

Freedom of Choice...

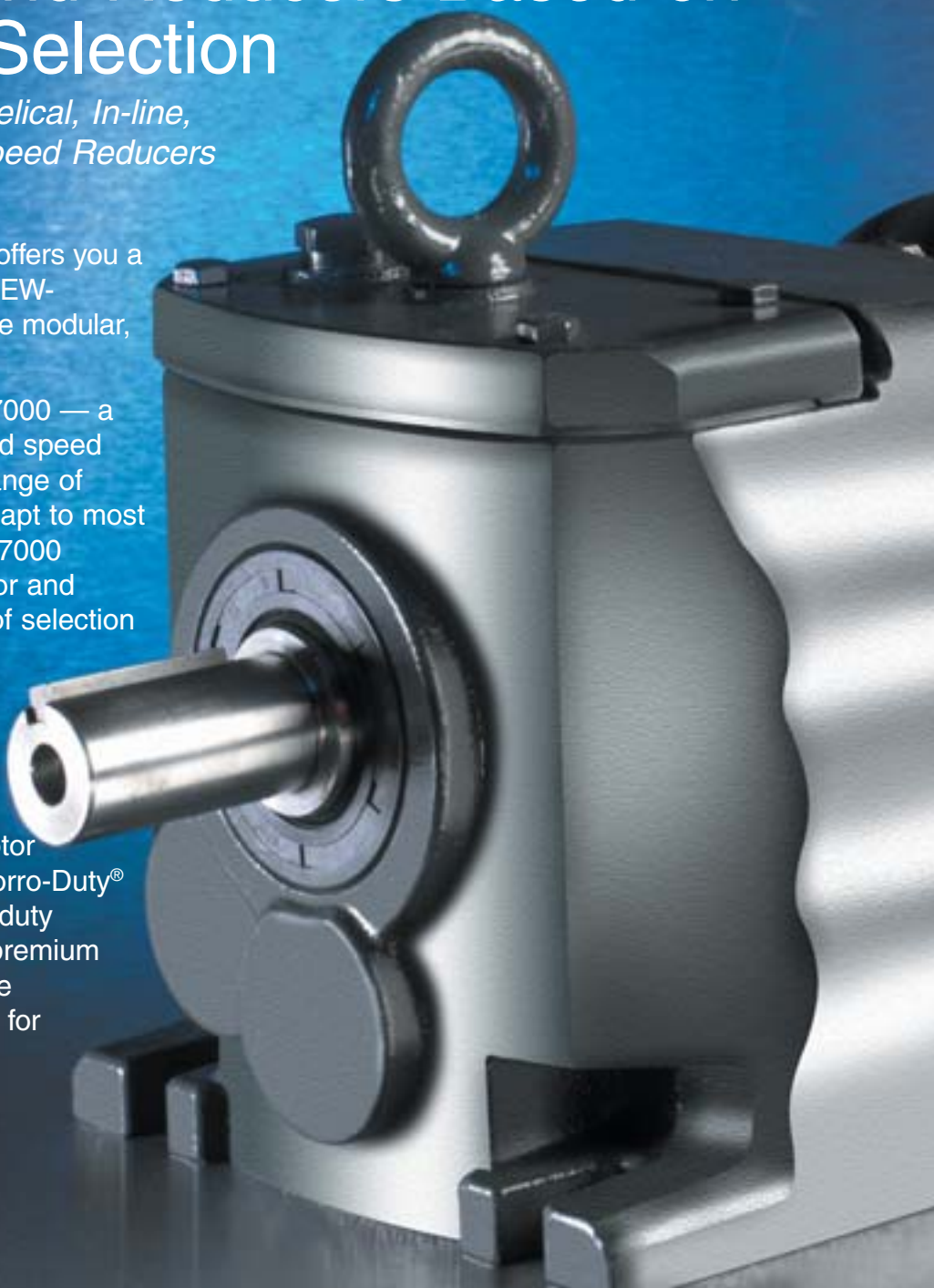
Now You Are Free to Choose Gearmotors and Reducers Based on Easy Fit and Selection

Introducing Series 7000 — Helical, In-line, Enclosed Gearmotors and Speed Reducers

Emerson Power Transmission now offers you a complete interchange solution for SEW-Eurodrive* and other European style modular, in-line helical gear drives.

Introducing the Browning® Series 7000 — a full line of enclosed gearmotors and speed reducers, designed with a broad range of standard input configurations to adapt to most in-line, helical applications. Series 7000 empowers you to choose gearmotor and reducer products, based on ease of selection and ease of use.

Series 7000 utilizes the same motors available on all modular gearmotors from Emerson Power Transmission. This includes the industry's widest variety of gearmotor enclosures and types, including Corro-Duty® Cast Iron, explosionproof, inverter duty (NEMA MG1, part 31 compliant), premium efficiency and more. In addition, the Series 7000 is assembled-to-order for ready availability in a multitude of arrangements.



More Complete Interchange

- Direct interchange with SEW-Eurodrive* and other European style modular in-line helical gear drives, making it highly flexible for adaptation to application requirements
- Simple, size-for-size, drop-in replacement for many, widely used brands – Dodge Quantis*, Falk Ultramite*, Boston Gear 800 Series*, David Brown/Cone**, Sterling*, Nordbloc*, Flender* and Leeson*

Industrial Grade Cast Iron

- Unlike some competitive units that utilize aluminum housings, the Series 7000 is industrial-grade – all gear housings are manufactured from cast iron
- Long lasting durability in wet, corrosive environments
- Units withstand heavy shock and overhung loads for lower maintenance in more severe environments
- The Corro-Duty motor ends are all cast iron (rolled steel in 56/140T frames), while some competitors' similar motors have aluminum frames

Widest Variety of Standard Configurations and Motor Types

Emerson Power Transmission offers the widest variety of standard configurations and motor types available in gearmotors, assembled-to-order for quick delivery and minimized downtime.

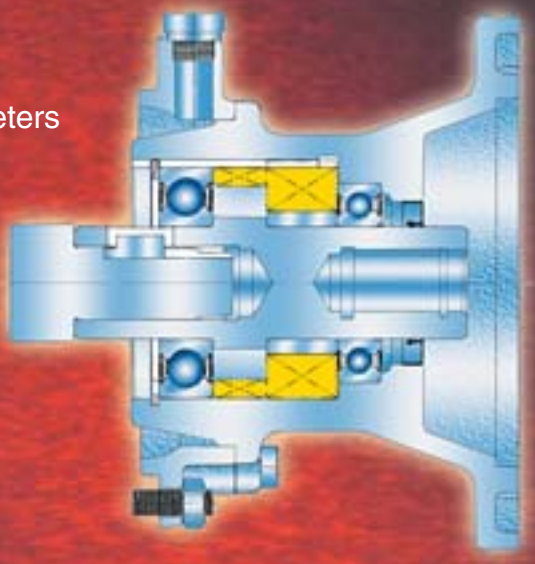
Broadest Line of Motor Ends

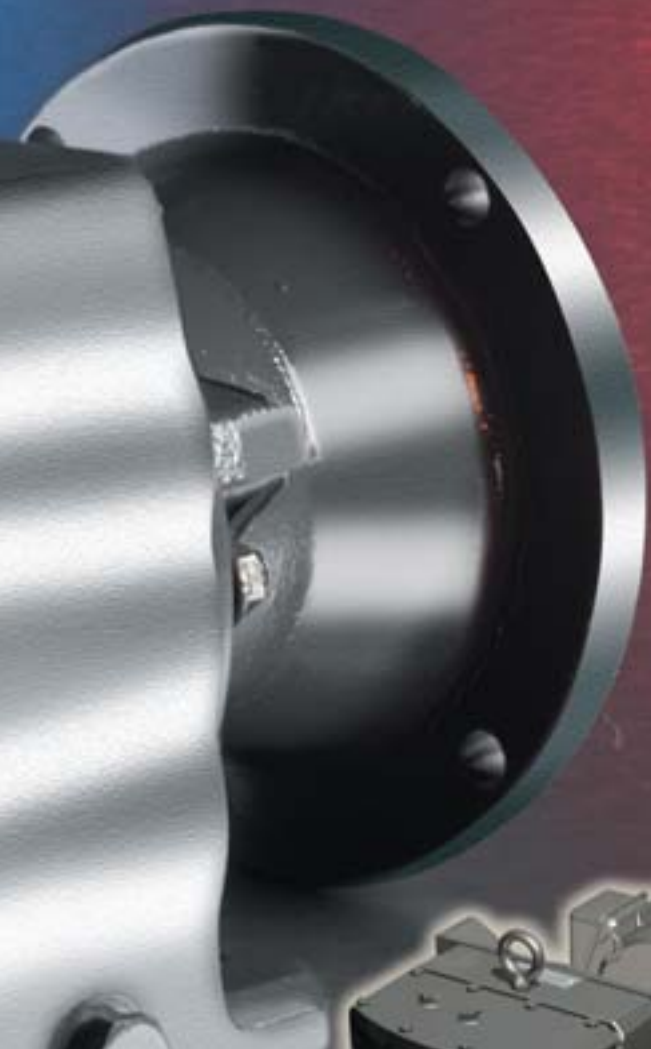
- TEFC
- Explosionproof
- Corro-Duty
- Inverter duty
- Brake motors

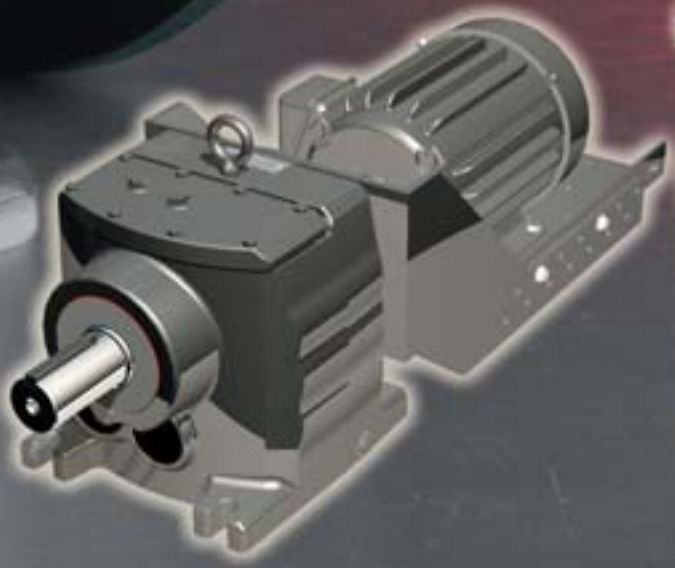
The New Quill Style “C-Face”

C-Face reducers utilize compact quill construction with two bearings for support and a non-metallic liner to eliminate fretting.

- Eliminates coupling wear and replacement
- Shortens overall length
- Allows use with DC and servo motors with like diameters
- Transmits torque through metal key and keyway







Scoop mount

Top mount

Industry's Highest Overall Torque Rating

- Rule of thumb – if the dimensions and ratio match, the torque and hp ratings are where they should be (review catalog for actual ratings)
- Advanced gearing design gives Browning the highest overall torque density per frame size in the industry
- When replacing older series competitive units, the Series 7000 line has **20 to 50 percent higher torque capacity** so a replacement often lasts longer than the original unit sized by the OEM
- For maximum durability, specify Series 7000 for your replacement gearbox

Highly Modular

- Patented, modular, taper connection so that one spare of each motor hp size in the plant will allow replacement of that hp on any frame size of the Series 7000 gearmotor – so users can keep fewer spares in stock
- Taper connection makes motor replacement easy, eliminating the need for draining the oil or breaking open the gearcase

Innovative, self-locking, tapered shaft connection between motor and shaft.

Easy to Select — Find Products Quickly!

Four easy ways to choose the product you need:

1. Logon to Smart Interchange. (www.emerson-ept.com).

2. Use our automated, cross-reference tool (available on CD or via email).

Smart Interchange is an online tool that makes it easy and efficient for distributors to select the Browning Series 7000 units for replacement of competitive units.

Located at www.emerson-ept.com, Smart Interchange takes you through an interactive, step-by-step selection procedure using data from a competitor's nameplate – almost like having an application engineer on your PC.

3. Use the Series 7000 "Selection Cross Reference" below.

4. Call Emerson Application Engineering at 1-800-626-2120.

Browning Series 7000 Selection Cross Reference

Manufacturer								
Browning	**SEW***		**Dodge***	**Falk***	**Nord***	**Boston***	**David Brown/Cone****	
Product Name								
Series 7000	**Pre "7"**	**"7" Series**	**Quantis***	**Ultramite***	**Nordbloc***	**800 Series**	**"M" Series**	
71	32***	17		03**	SK322**	83**	M03**	
					SK17			M0122/M0132
72	40	27			SK27			M0222/M0232
73	42/43	37	38	04	SK37	84	M04	M0322/M0332
74	60/62/63	47	48	06	SK47	86	M06	M0422/M0432
75		57	48†		SK57			M0522/M0532
76		67			SK67			M0622/M0632
77	70/72/73	77	68	07	SK77	87	M07	M0722/M0732
78	80/82/83	87	88	08	SK87		M08††	M0822/M0832
79	92/93	97	108	09	SK97		M09	M0921/M0931

Note: Items highlighted are not available as reducers.

*SEW Eurodrive is a trademark and/or a trade name of SEW-Eurodrive GMBH & Co., *Dodge Quantis is a trademark and/or a trade name of Reliance Electric Company, *Falk Ultramite is a trademark and/or a trade name of The Falk Corporation, *Nord Nordbloc is a trademark and/or a trade name of Nord Gear Corporation, *Boston is a trademark and/or a trade name of IMO Industries Inc.

** The terms David Brown/Cone are used in this brochure for product comparison purposes only and they are not trademarks of Emerson Power Transmission or Emerson Power Transmission Manufacturing, L.P.

These trade names, trademarks and/or registered trademarks of others are used herein for product comparison purposes only, are the property of their respective owners and are not owned or controlled by Emerson Power Transmission Corporation. Emerson Power Transmission does not represent or warrant the accuracy of this document.

*** The dimensions of these sizes are not directly interchangeable with BC71, although ratings are covered.

† HB48 with oversized shaft option (1.375" dia.).

†† Output shaft size doesn't match.

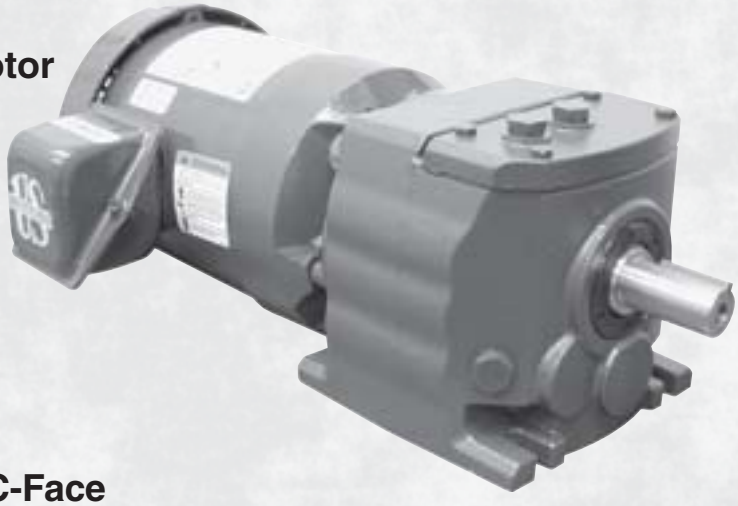
Easy to Install

- Extremely simple to install during replacement – critical dimensions have been sized to provide a mounting of the Series 7000 that is identical to other common brands

Browning®

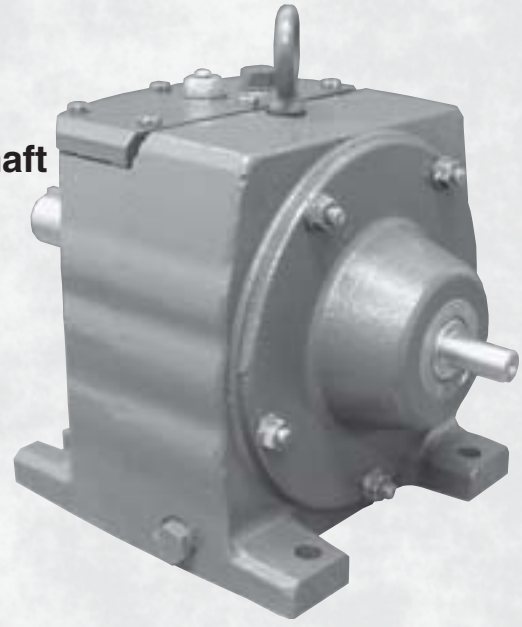
Series 7000 In-line Helical Gearmotors and Speed Reducers

S7000 Gearmotor

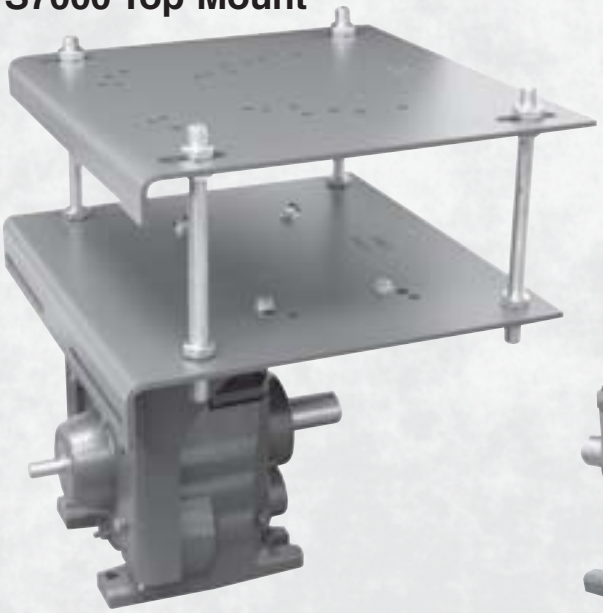


S7000 C-Face

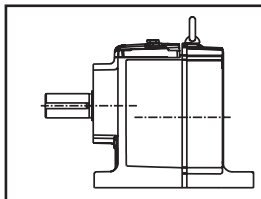
S7000 Input Shaft



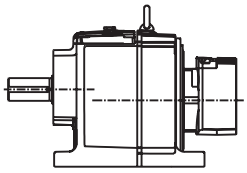
S7000 Top Mount



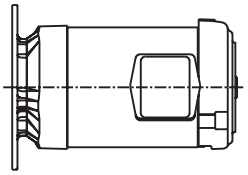
S7000 Scoop Mount



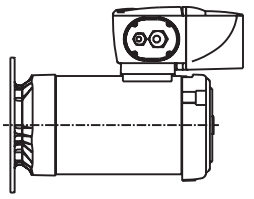
Foot Mount
2, 3 stages
Frames 71 – 79
Max. 26,500 in. lbs.



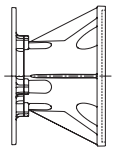
Foot Mount
4, 5 stages
Frames 74 – 79
Max. 27,500 in. lbs.



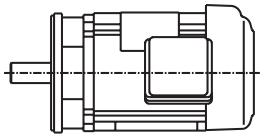
Gearmotors
1/6 - 40 HP



Variable Speed
IntelliGear
1/3 - 10 HP

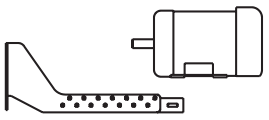


NEMA C-Face
56C to 326TC
Frames 71 – 79

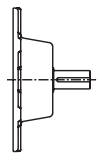


C-Face Motors
Frames 56 - 326TC

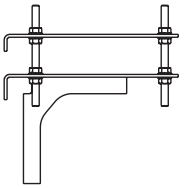
Backstop Option
Frames 72– 79**



Scoop Mount
Frames 74 - 79*
56 to 286T



Input Shaft
Frames 71– 79



Top Mount
Frames 74 - 79*
56 to 326T

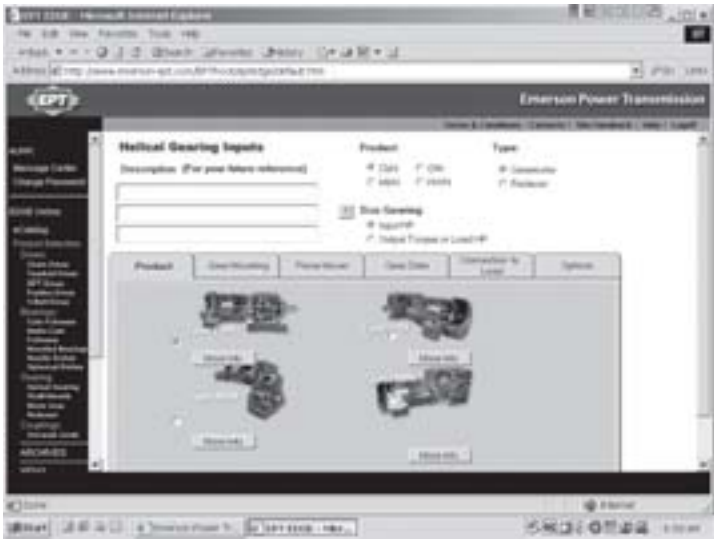
* 2 and 3 stages only.
** 4 and 5 stages, size 78 and 79 only.
For one stage, flange mount or larger sizes up to 150,000 lb. in., refer to USGM CbN Series 2000/3000 in catalog CbN-04.

Experience the Power of EPT Edge® Online

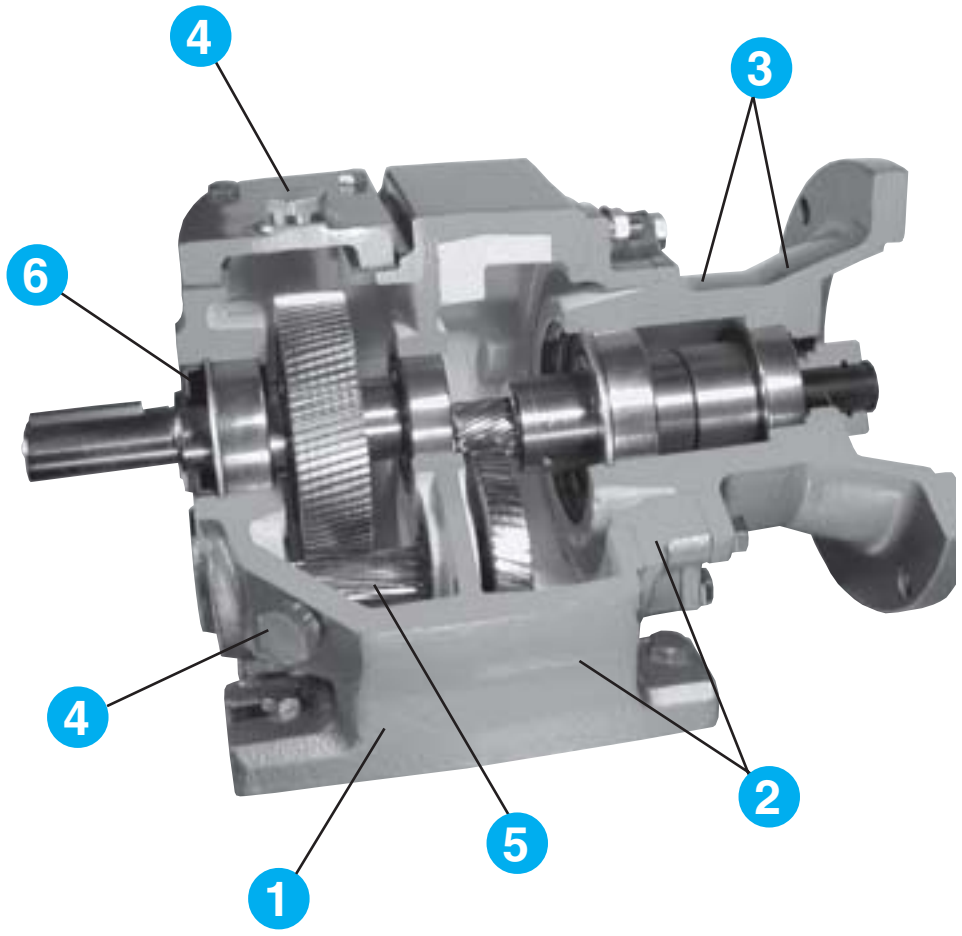
EPT Edge Online is our online technical support center.

Also available "24-7-365," these electronic tools provide for efficient drive design and product selection:

- **eCatalog (an industry first)** - an interactive, robust electronic database with over 100,000 part numbers
- **Product Selection (an industry first)** - selection tools with extensive engineering efficiency benefits
- **Smart Interchange** - a dynamic tool that provides an intelligent interchange for competitive parts
- **Media Library** - electronically (PDF) viewable paper catalogs and documents and downloadable installation and maintenance instructions
- **CAD** - an online service that allows users to view and upload a 2D or 3D CAD template drawing in a number of customer-compatible formats to be integrated into users' AutoCAD drawings (release 12 or newer)



Concentric Helical In-line Series 7000 Speed Reducer Features...



Design Features

1. Gear reducers are delivered factory-filled with synthetic hydrocarbon lubricant.
2. Cast iron, one-piece housing/endshield construction provides added strength and rigidity and corrosion resistance.
3. Series 7000 c-face reducers utilize compact quill construction with two bearings for support and the quill has a non-metallic liner to eliminate fretting.
4. Oversized plugs and magnetic drain plug make normal maintenance easier (gear frames 72-79 only). A normally closed breather is standard for sizes 72 through 79 to prevent contamination of lubricant.
5. All gears are keyed to shafts and finished to provide quiet operation. Gears made of 8620 heat treated, nickel chromium molybdenum steel, heat treated to 58-62 R_C.
6. Oversized bearings are used for longer life.

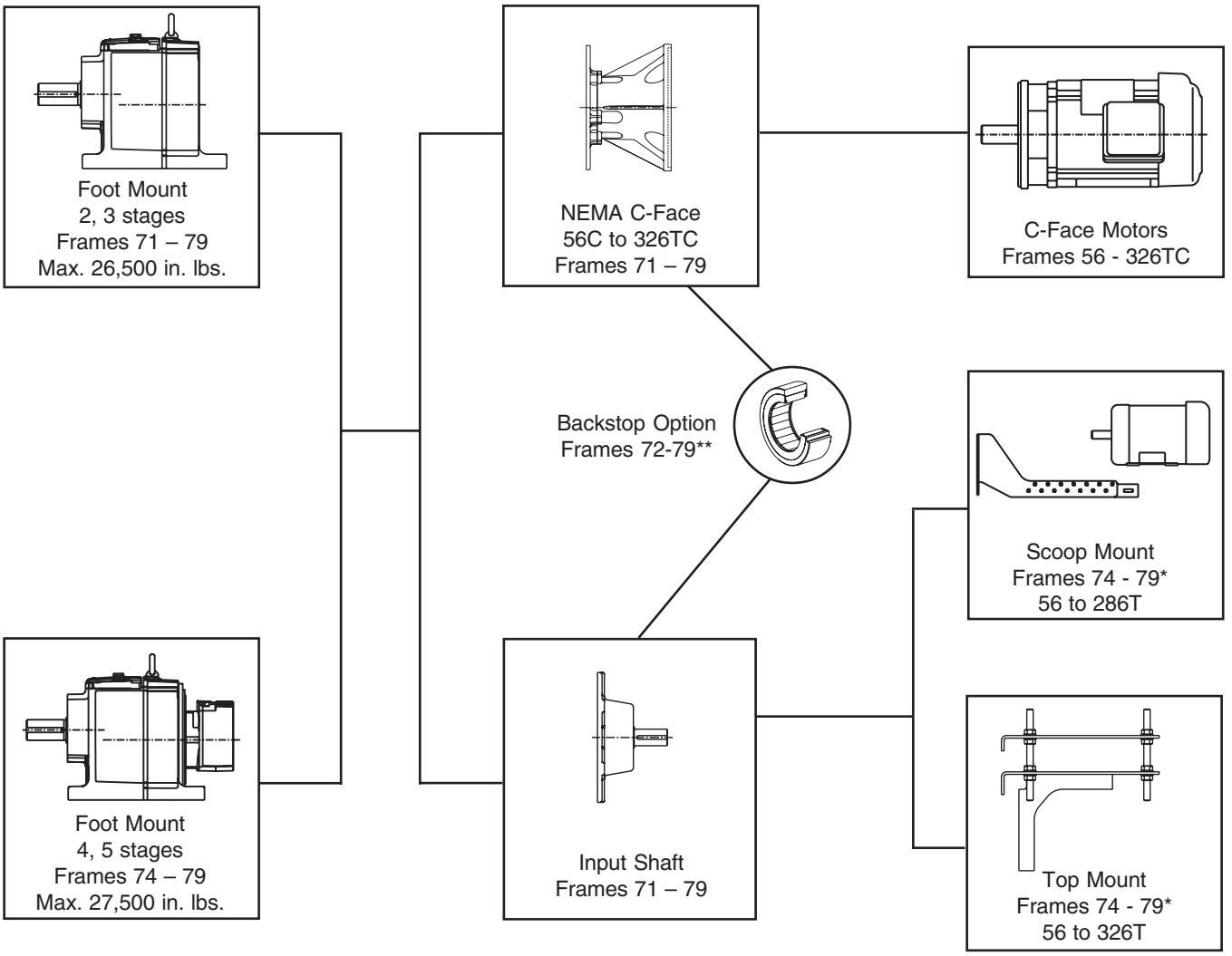
Table of Contents

C-Face

Top Mount

Input Shaft

Mounting Versatility and Size Range



* 2 and 3 stages only.
** 4 and 5 stages, size 78 and 79 only.
For one stage, flange mount or larger sizes up to 150,000 lb. in., refer to USGM CbN Series 2000/3000 in catalog CbN-04.

Selection

1. Dimensional interchange method:
   - Match the dimensions of a competitive unit.
   - For a unit of the same output speed and the same horsepower input, the ratings of the same physical size unit will be sufficient for replacement.
   - Competitive brands suitable for replacement in this manner:
     - SEW-Eurodrive* “R” Series
     - Dodge Quantis*
     - Falk* Ultramite
     - Nord* Nordbloc
     - David Brown/Cone** “M” Series
     - Boston Gear* 800 Series
     - Flender*
     - Sterling*
     - Leeson*

2. Refer to the table below for dimensional interchanges:

3. Select the input type:
   - The input type may be selected to match the original unit that is being replaced. The choices are gearmotor, c-face, input shaft, top mount (frames 74-79 only), or scoop mount (frames 74-79 only).
   - The input style may be changed if desired, since this has no effect on ratings. For example, the user may decide to replace a gearmotor with a c-face reducer and motor.

Manufacturer								
Browning	**SEW***		**Dodge***	**Falk***	**Nord***	**Boston***	**David Brown/Cone****	
Product Name								
Series 7000	**Pre "7"**	**"7" Series**	**Quantis***	**Ultramite***	**Nordbloc***	**800 Series**	**"M" Series**	
71	32***	17		03**	SK322**	83**	M03**	M0122/M0132
					SK17			
72	40	27			SK27			M0222/M0232
73	42/43	37	38	04	SK37	84	M04	M0322/M0332
74	60/62/63	47	48	06	SK47	86	M06	M0422/M0432
75		57	48†		SK57			M0522/M0532
76		67			SK67			M0622/M0632
77	70/72/73	77	68	07	SK77	87	M07	M0722/M0732
78	80/82/83	87	88	08	SK87		M08††	M0822/M0832
79	92/93	97	108	09	SK97		M09	M0921/M0931

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*** The dimensions of these sizes are not directly interchangeable with BC71, although ratings are covered.

† HB48 with oversized shaft option (1.375” dia.).

†† Output shaft size doesn’t match.

Selection Information

1. Input HP
- Based on application data.

2. Speed/Ratio
- Obtain either desired output speed (RPM) or gearbox ratio based on application.

3. Service Factor
- Determine the required service factor using either the AGMA application classification chart (pages 109-111), or the duration of operation, load type, and drive type with the table below:

PRIME MOVER	HOURS OF OPERATION	UNIFORM LOAD U	MODERATE SHOCK LOAD M	HEAVY SHOCK LOAD V
Electric Motor	0 - 3	0.80	1.00	1.50
	3 - 10	1.00	1.25	1.75
	10 - 24	1.25	1.50	2.00
Internal Combustion Engine	0 - 3	1.00	1.25	1.75
	3 - 10	1.25	1.50	2.00
	10 - 24	1.50	1.75	2.25

Size Selection

Step 1
- Locate speed reducer selection tables (pages 116-133) based on input speed to gearbox.

Step 2
- Choose the nominal ratio appropriate for the speeds required.

Step 3
- Select the gear unit size for the chosen ratio and the known input speed so that the mechanical power rating P (hp) satisfies the following:

$$P \geq P_m \bullet SF$$

P = mechanical power rating (hp) of gearbox

P_m = motor power (hp)

SF = required service factor

Note: Size selection based on absorbed power (Pa) or absorbed torque (Ta) at the low speed shaft instead of motor power (Pm) is allowed when the former is known with sufficient accuracy and if the number of start operations is limited. When Ta is applied in size selection, verify if:

$$T \geq T_a \bullet SF$$

T = torque rating (in. lbs.) at low speed shaft

T_a = absorbed torque (in. lbs.) at low speed shaft

SF = required service factor

Size Selection (cont.)

Step 4
- Verify overhung load ratings where required (see page 108).

Example

1. Application Data

Rotary lobe pump, 10+ hours per day, speed reducer direct coupled to load, foot mounted, 1.25 service factor.

Motor rating: TEFC, 230/460 volt, 7 1/2 HP, 1750 RPM, 213TC frame footless.

Output speed: 280 RPM

2. Size Selection

280 RPM required output

Equals 6.3:1 ratio

PM • SF = P

7.5 HP x 1.25 = 9.4 HP

7502 (10.45 HP) ≥ 9.4 pg. 117

Select BC 7502

(There are no thermal or OHL considerations.)

6.1	**7502**
Example	
10.45	2208

3. Catalog Designation

(see "ordering" page 107)

BC • 7502 • S • B3 • 6.3 • U • 213TC

4. Motor Model Number

Refer to motor catalog for complete motor selection, dimensions and characteristics.

Catalog Nomenclature

BC • 7102 • S • B3 • 40 • U • 143TC

See next page prior to ordering

See next page prior to ordering

Series	Gear Frame	Number of Reductions	Mounting Configuration and Shaft of Gear	Mounting Position	Nom. Gear Ratio	Gear Input	Motor Frame
7 = 7000	1	02 or 12 = 2 stages	S = Footed (inch shaft)***	See page 112	Determine from selection pages	AP = Input shaft	Req'd for any order for c-face or scoop reducer
	2	03 = 3 stages	SM = Footed (metric shaft)***			AD = Input shaft w/backstop*	
	3	04 = 4 stages	SBS = Footed flange mount (inch shaft)**			SP = Scoop mount	
	4	05 = 5 stages	SBSM = Footed flange mount (metric shaft)**			SD = Scoop mount w/backstop*	
	5		SBD1 = Alt. footed flange mount (inch shaft)**			U = C-face	
	6		SBDM1 = Alt. footed flange mount (metric shaft)**			UD = C-face w/backstop*	
	7					TM = Top mount	
	8					TD = Top mount w/backstop*	
	9						

* For units with backstops, specify output shaft rotation.
** Frame 71 Only.
*** Frame 71 footed S/SM units include a B14 output face standard.

Overhung Load Capacities

When a sprocket, sheave, pulley or pinion is mounted on any shaft of a reducer, it is necessary to calculate the overhung load. This calculated load must be compared with the gearbox capacity listed to make sure the gearbox will not be overloaded. To calculate the overhung load you need to know the torque or horsepower at the take-off shaft and the location along the shaft at which the load is applied.

A. If torque is known:

$$OHL = \frac{T \times K \times LLF}{r}$$

B. If horsepower is known:

$$OHL = \frac{63025 \times HP \times K \times LLF}{RPM \times r}$$

OHL capacities are calculated at gear capacity rounded to the closest motor HP at mid shaft. For capacity when HP is known, refer to gearmotor selection tables.

Where:
- OHL = Overhung load (pounds)
- T = Torque (in. lbs.)
- r = Radius of driving member (in.)
- HP = Horsepower
- K = Drive type factor
- LLF = Load location factor

DRIVING MEMBER	VALUE OF K
Chain Drive	1.00
Pinion	1.25
Timing Belt	1.25
V-Belt	1.50
Flat Belt	2.50

LOAD LOCATION	VALUE OF LLF
End of shaft extension	1.20
Center of shaft extension	1.00
Shaft extension shoulder	0.80

Overhung Load (lbs.)

Output R.P.M.	SIZE								
	71	72	73	74	75	76	77	78	79
301-450	-	349	349	546	466	1259	1001	1591	1915
201-300	-	452	421	633	545	1507	1143	1825	1976
151-200	230	474	492	719	633	1690	1281	1910	2067
101-150	302	495	548	821	721	1750	1418	1995	2291
51-100	388	632	603	922	935	1810	1699	2547	2697
31-50	600	929	836	1119	1024	1810	2239	3486	3764
16-30	-	1075	1101	1509	1304	1810	2778	3960	4480
<15	-	1345	1345	1610	1786	1810	2905	3960	4480

Minimum OHL capacity based on minimum recommended sheave diameter and unit driven by maximum motor HP.

AGMA Application Classifications

Application	Service Factor		
	Up to 3 hrs/day	Up to 10 hrs/day	Over 10 hrs/day
Agitators (Mixers)			
Pure Liquids	—	1.00	1.25
Liquids & Solids	1.00	1.25	1.50
Liquids - Variable Density	1.00	1.25	1.50
Blowers			
Centrifugal	1.00	1.25	—
Lobe	1.00	1.25	1.50
Vane	—	1.00	1.25
Brewing and Distilling			
Bottling Machinery	—	1.00	1.25
Brew Kettles, Continuous Duty	—	1.00	1.25
Cookers - Continuous Duty	—	1.00	1.25
Mash Tubs - Continuous Duty	—	1.00	1.25
Scale Hoppers, Frequent Starts	1.00	1.25	1.50
Can Filling Machines	—	1.00	1.25
Car Dumpers	1.25	1.50	1.75
Car Pullers	1.00	1.25	1.50
Clarifiers	—	1.00	1.25
Classifiers	1.00	1.25	1.50
Clay Working Industry			
Brick Press	1.25	1.50	1.75
Briquette Machine	1.25	1.50	1.75
Pug Mill	1.00	1.25	1.50
Compactors	1.50	1.75	2.00
Compressors			
Centrifugal	—	1.00	1.25
Lobe	1.00	1.25	1.50
Reciprocating, Multi - Cylinder	1.00	1.25	1.50
Reciprocating, Single - Cylinder	1.25	1.50	1.75
Conveyors - General Purpose			
Uniformly Loaded or Fed	—	1.00	1.25
Not Uniformly Fed	1.00	1.25	1.50
Reciprocating or Shaker	1.25	1.50	1.75
Cranes			
Dry Dock			
Main Hoist	1.25	1.50	1.75
Auxiliary	1.25	1.50	1.75
Boom Hoist	1.25	1.50	1.75
Slewing Drive	1.25	1.50	1.75
Traction Drive	1.50	1.50	1.50
Container			
Main Hoist	Refer to Application Engineering		

Application	Service Factor		
	Up to 3 hrs/day	Up to 10 hrs/day	Over 10 hrs/day
Cranes (Continued)			
Boom Hoist	Refer to Application Engineering		
Trolley Drive	Refer to Application Engineering		
(Gantry Drive)			
(Traction Drive)	Refer to Application Engineering		
Mill Duty			
Main	Refer to Application Engineering		
Auxiliary	Refer to Application Engineering		
Bridge & Trolley Travel	Refer to Application Engineering		
Industrial Duty			
Main	1.25	1.50	1.75
Auxiliary	Refer to Application Engineering		
Bridge & Trolley Travel	Refer to Application Engineering		
Crusher			
Stone or Ore	1.50	1.75	2.00
Dredges			
Cable Reels	1.00	1.25	1.50
Conveyors	1.00	1.25	1.50
Cutter Head Drives	1.25	1.50	1.75
Pumps 1.00	1.25	1.50	
Screen Drives	1.25	1.50	1.75
Stackers	1.00	1.25	1.50
Winches	1.00	1.25	1.50
Elevators			
Bucket	1.00	1.25	1.50
Centrifugal Discharge	—	1.00	1.25
Escalators	Refer to Application Engineering		
Freight	Refer to Application Engineering		
Gravity Discharge	—	1.00	1.25
Extruders			
General	1.25	1.25	1.25
Plastics			
(a) Variable Speed Drive	1.50	1.50	1.50
(b) Fixed Speed Drive	1.75	1.75	1.75
Rubber			
(a) Continuous Screw Operation	1.50	1.50	1.50
(b) Intermittent Screw Operation	1.75	1.75	1.75
Fans			
Centrifugal	—	1.00	1.25
Cooling Towers	Refer to Application Engineering		
Forced Draft	1.25	1.25	1.25
Induced Draft	1.00	1.25	1.50
Industrial & Mine	1.00	1.25	1.50

AGMA Application Classifications

Application	Service Factor		
	Up to 3 hrs/day	Up to 10 hrs/day	Over 10 hrs/day
Feeders			
Apron	—	1.25	1.50
Belt	1.00	1.25	1.50
Disc	—	1.00	1.25
Reciprocating	1.25	1.50	1.75
Screw	1.00	1.25	1.50
Food Industry			
Cereal Cooker	—	1.00	1.25
Dough Mixers	1.00	1.25	1.50
Meat Grinders	1.00	1.25	1.50
Slicers	1.00	1.25	1.50
Generators and Executers	—	1.00	1.25
Hammer Mills	1.50	1.50	1.75
Hoists			
Heavy Duty	1.25	1.50	1.75
Medium Duty	1.00	1.25	1.50
Skip Hoist	1.00	1.25	1.50
Laundry Tumblers	1.00	1.25	1.50
Laundry Washers	1.00	1.25	1.50
Lumber Industry			
Barkers			
- Spindle Feed	1.25	1.25	1.25
- Main Drive	1.50	1.50	1.50
Conveyors			
- Burner	1.25	1.25	1.50
- Main or Heavy Duty	1.50	1.50	1.50
- Main Log	1.50	1.50	1.50
- Re-Saw, Merry-Go-Round	1.25	1.25	1.50
- Slab	1.50	1.50	1.75
- Transfer	1.25	1.25	1.50
Chains			
- Floor	1.50	1.50	1.50
- Green	1.50	1.50	1.50
Cut-Off Saws			
- Chain	1.50	1.50	1.50
- Drag	1.50	1.50	1.50
Debarking Drums	1.50	1.50	1.75
Feeds			
- Edger	1.25	1.25	1.50
- Gang	1.50	1.50	1.50
- Trimmer	1.25	1.25	1.50
Log Deck	1.50	1.50	1.50
Log Hauls - Incline-Well Type	1.50	1.50	1.50
Log Turning Devices	1.50	1.50	1.50
Planner Feed	1.25	1.25	1.25
Planer Tilting Hoists	1.50	1.50	1.50
Rolls - Live-Off Bearing.-Roll Cases	1.50	1.50	1.50
Sorting Table	1.25	1.25	1.50
Tipple Hoist	1.25	1.25	1.50
Transfers			
- Chain	1.50	1.50	1.50
- Causeway	1.50	1.50	1.50
Tray Drives	1.25	1.25	1.50
Veneer Lathe Drives	Refer to Application Engineering		

Application	Service Factor		
	Up to 3 hrs/day	Up to 10 hrs/day	Over 10 hrs/day
Metal Mills			
Draw Bench Carriage & Main Drive	1.00	1.25	1.50
Runout Table			
Non-reversing			
Group Drives	1.00	1.25	1.50
Individual Drives	1.50	1.50	1.75
Reversing	1.50	1.50	1.75
Slab Pushers	1.25	1.25	1.50
Shears	1.50	1.50	1.75
Wire Drawing	1.00	1.25	1.50
Wire Winding Machine	1.00	1.25	1.50
Metal Strip Processing Machinery			
Bridles	1.25	1.25	1.50
Coilers & Uncoilers	1.00	1.00	1.25
Edge Trimmers	1.00	1.25	1.50
Flatteners	1.00	1.25	1.50
Loopers (Accumulators)	1.00	1.00	1.00
Pinch Rolls	1.00	1.25	1.50
Scrap Choppers	1.00	1.25	1.50
Shears	1.50	1.50	1.75
Slitters	1.00	1.25	1.50
Mills, Rotary Type			
Ball & Rod			
Spur Ring Gear	1.50	1.50	1.75
Helical Ring Gear	1.50	1.50	1.50
Direct Connected	1.50	1.50	1.75
Cement Kilns	1.50	1.50	1.50
Dryers & Coolers	1.50	1.50	1.50
Mixers, Concrete	1.00	1.25	1.50
Paper Mills			
Agitator (Mixer)	1.50	1.50	1.50
Agitator for Pure Liquids	1.25	1.25	1.25
Barkers - Mechanical	1.75	1.75	1.75
Barking Drums	1.75	1.75	1.75
Beater	1.50	1.50	1.50
Breaker Stack	1.25	1.25	1.25
❖Calender	1.25	1.25	1.25
Chipper	1.75	1.75	1.75
Chip Feeder	1.50	1.50	1.50
Coating Rolls	1.25	1.25	1.25
Conveyors			
Chip, Bark, Chemical	1.25	1.25	1.25
Log (Including Slab)	1.75	1.75	1.75
Couch Rolls	1.25	1.25	1.25
Cutter	1.75	1.75	1.75
Cylinder Molds	1.25	1.25	1.25
❖Dryers			
Paper Machine	1.25	1.25	1.25
Conveyor Type	1.25	1.25	1.25
Embosser	1.25	1.25	1.25
Extruder	1.50	1.50	1.50
Fourdrinier Rolls (Includes Lump Breaker, Dandy Roll, Wire Turning, and Return Rolls)	1.25	1.25	1.25
Jordan	1.25	1.25	1.25
Kiln Drive	1.50	1.50	1.50
Mt. Hope Roll	1.25	1.25	1.25

AGMA Application Classifications

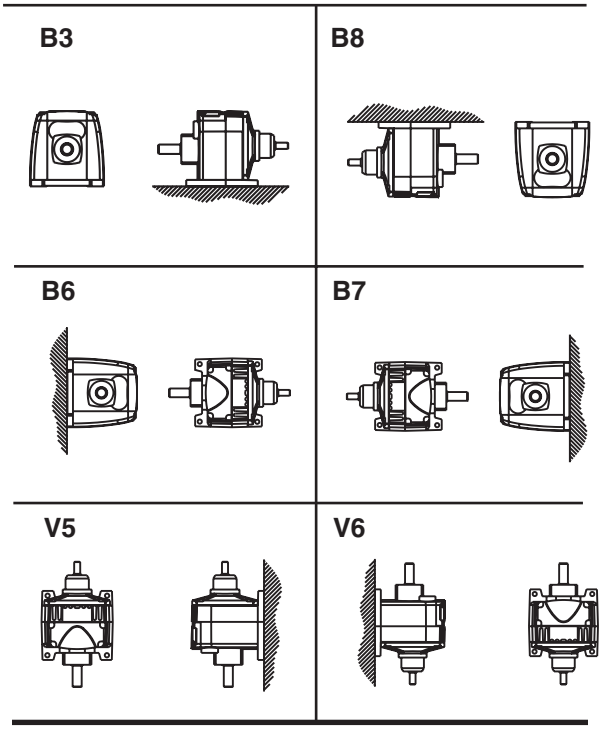
Application	Service Factor		
	Up to 3 hrs/day	Up to 10 hrs/day	Over 10 hrs/day
Paper Mills (Continued)			
Paper Rolls	1.25	1.25	1.25
Platter	1.50	1.50	1.50
Presses - Felt & Suction	1.25	1.25	1.25
Pulper	1.50	1.50	1.75
Pumps - Vacuum	1.50	1.50	1.50
Reel (Surface Type)	1.25	1.25	1.50
Screens			
Chip	1.50	1.50	1.50
Rotary	1.50	1.50	1.50
Vibrating	1.75	1.75	1.75
Size Press	1.25	1.25	1.25
Super Calender (See Note)	1.25	1.25	1.25
Thickner			
(AC Motor)	1.50	1.50	1.50
(DC Motor)	1.25	1.25	1.25
Washer			
(AC Motor)	1.50	1.50	1.50
(DC Motor)	1.25	1.25	1.25
Wind and Unwind Stand	1.00	1.00	1.00
Winders (Surface Type)	1.25	1.25	1.25
❖Yankee Dryers	1.25	1.25	1.25
Plastics Industry - Primary Processing			
Intensive Internal Mixers			
(a) Batch Mixers	1.75	1.75	1.75
(b) Continuous Mixers	1.50	1.50	1.50
Batch Drop Mill - 2 Smooth Rolls	1.25	1.25	1.25
Continuous Feed, Holding & Blend Mill	1.25	1.25	1.25
Compounding Mills	1.25	1.25	1.25
Calenders	1.50	1.50	1.50
Plastics Industry - Secondary Processing			
Blow Molders	1.50	1.50	1.50
Coating	1.25	1.25	1.25
Film	1.25	1.25	1.25
Pipe	1.25	1.25	1.25
Pre-Plasticizers	1.50	1.50	1.50
Rods	1.25	1.25	1.25
Sheet	1.25	1.25	1.25
Tubing	1.25	1.25	1.50
Pullers - Barge Haul	1.00	1.50	1.75
Pumps			
Centrifugal	—	1.00	1.25
Proportioning	1.00	1.25	1.50
Reciprocating			
Single Acting, 3 or more cylinders	1.00	1.25	1.50
Double Acting, 2 or more cylinders	1.00	1.25	1.50
Rotary			
- Gear	—	1.00	1.50
- Lobe	—	1.00	1.25
- Vane	—	1.00	1.25

Application	Service Factor		
	Up to 3 hrs/day	Up to 10 hrs/day	Over 10 hrs/day
Rubber Industry			
Intensive Internal Mixers			
(a) Batch Mixers	1.50	1.75	1.75
(b) Continuous Mixers	1.25	1.50	1.50
Mixing Mill - 2 Smooth Rolls - (If corrugated rolls are used, (then use the same service factors that are used for a Cracker-Warmer)	1.50	1.50	1.50
Batch Drop Mill - 2 Smooth Rolls	1.50	1.50	1.50
Cracker Warmer - 1 Corrugated Roll	1.75	1.75	1.75
Cracker - 2 Corrugated Rolls	1.75	1.75	1.75
Holding, Feed & Blend Mill - 2 Rolls	1.25	1.25	1.25
Refiner - 2 Rolls	1.50	1.50	1.50
Calenders	1.50	1.50	1.50
Sand Miller	1.00	1.25	1.50
Sewage Disposal			
Bar Screens	—	1.00	1.25
Chemical Feeders	—	1.00	1.25
Dewatering Screens	1.00	1.25	1.50
Scum Breakers	1.00	1.25	1.50
Slow or Rapid Mixers	1.00	1.25	1.50
Sludge Collectors	1.00	1.00	1.25
Thickeners	1.00	1.25	1.50
Vacuum Filters	1.00	1.25	1.50
Screens			
Air Washing	—	1.00	1.25
Rotary - Stone or Gravel	1.00	1.25	1.50
Traveling Water Intake	—	1.00	1.25
Sugar Industry			
Beet Slicer	1.50	1.50	1.75
Cane Knives	1.50	1.50	1.50
Crushers	1.50	1.50	1.50
Mills (Low Speed End)	1.50	1.50	1.50
Textile Industry			
Batchers	1.00	1.25	1.50
Calenders	1.00	1.25	1.50
Cards	1.00	1.25	1.50
Dry Cans	1.00	1.25	1.50
Dryers	1.00	1.25	1.50
Dyeing Machinery	1.00	1.25	1.50
Looms	1.00	1.25	1.50
Mangles	1.00	1.25	1.50
Nappers	1.00	1.25	1.50
Pads	1.00	1.25	1.50
Slashers	1.00	1.25	1.50
Soapers	1.00	1.25	1.50
Spinners	1.00	1.25	1.50
Tenter Frames	1.00	1.25	1.50
Washers	1.00	1.25	1.50
Winders	1.00	1.25	1.50

❖ Anti-friction bearings only.

NOTE: A service factor of 1.0 may be applied at the base of a super calender, operating over a speed range where part of the range is constant horsepower and part of the range is constant torque, provided that the constant horsepower part is greater than 1.5 to 1. A service factor of 1.25 is applicable to super calenders operating over the entire speed range at contant torque, or where the constant horsepower speed range is less than 1.5 to 1.

Mounting Positions



Lubrication

The BC7000 series gearing is shipped with one of the following synthetic lubricants per the table below and fitted with a magnetic drain (except frame 71). Each reducer is filled according to the mounting position specified when ordered. Refer to the unit nameplate and the previous page for a mounting position arrangement for your unit.

In the case of synthetic oil, the lubricant does not require changing, but it is recommended that proper oil level be checked periodically.

SYNTHETIC

No Backstop

Manufacturer	-25° F to 125° F (-30° C to 50° C)
Cofran*	Sintogear 125
Mobil*	Mobilgear* SHC 150
Shell*	Omala* HD 150

With Backstop

Manufacturer	-25° F to 125° F (-30° C to 50° C)
Shell*	Omala* RL 100
Mobil*	Mobil* SHC 629

⚠CAUTION

- Never mix synthetic oil and mineral oil.
- Never use extreme pressure (EP) oil in a reducer with a backstop.

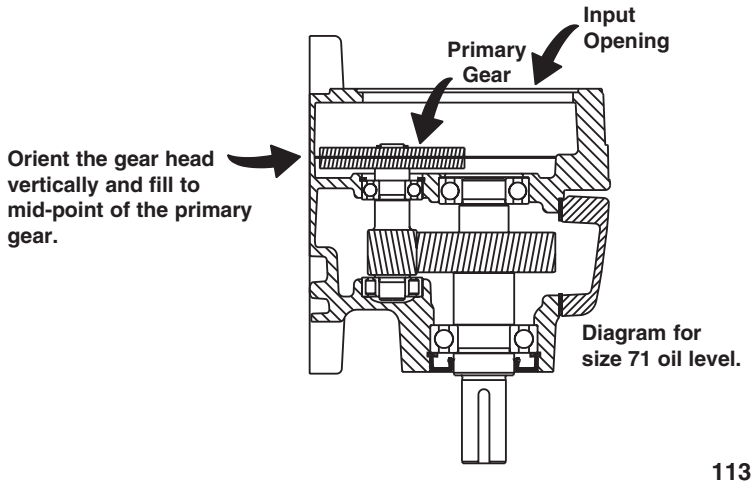
ACCEPTABLE MINERAL OIL LUBRICANTS

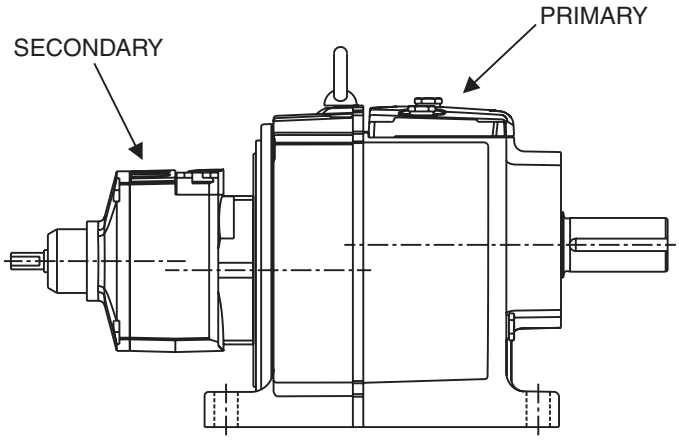
Manufacturer	-4° F to 14° F (-20° C to 10° C)	14° F to 122° F(-10° C to 50° C)				122° F and Above (50° C +)
		NO BACKSTOP			WITH BACKSTOP	
	ISO VG 68	ISO VG 100	ISO VG 150	ISO VG 220	ISO VG 150	ISO VG 320
Cofran*	Mecanep 68 GL	Cofraline Equitex 100	Mecanep 150	Equilux C2000 Super	Cofrapoid 80W 90	Mecanep 320
Mobil*	Mobilgear* 626	Mobilgear* 627	Mobilgear* 629	Mobilgear* 630	DTE* Extra Heavy	Mobilgear* 632
Shell*	Omala* 68	Omala* 100	Omala* 150	Omala* 220	Morlina* 150	Omala* 320

OIL CAPACITIES (U.S. QUARTS)

Reduction Stages	Gear Frame	Mounting Positions					
		B3	B6	B7	B8	V5	V6
Two	71	Refer to illustration below					
	72	.68	1.44	.85	1.31	1.19	1.56
	73	.68	1.44	.85	1.31	1.19	1.56
	74	1.01	2.29	1.50	2.33	2.58	2.65
	75	1.01	2.29	1.50	2.33	2.58	2.65
	76	2.31	5.01	3.06	3.71	4.28	4.66
	77	1.75	4.17	2.68	3.80	4.11	4.41
	78	3.75	7.42	5.09	6.67	7.99	7.87
	79	6.18	15.80	10.42	15.37	17.74	15.58
Three	72	.68	1.14	.85	1.31	1.19	1.56
	73	.68	1.14	.85	1.31	1.19	1.56
	74	1.01	1.71	1.50	2.33	2.58	2.65
	75	1.01	1.71	1.50	2.33	2.58	2.65
	76	2.31	3.90	3.06	3.71	4.28	4.66
	77	1.75	3.04	2.68	3.80	4.11	4.41
	78	3.75	5.84	5.09	6.67	7.99	7.87
	79	6.18	15.18	10.42	15.37	17.74	15.58

* The terms used in the above tables are the trade names, trademarks, and/or registered trademarks of the respective owners, are used herein for comparison or reference, and are not the property of, controlled by, or affiliated with Emerson Power Transmission Manufacturing, L.P.





Foot Mounted Combined Units (U.S. Quarts)

Reduction Stages	Gear Frame	Composition		Mounting Positions											
				B3		B6		B7		B8		V5		V6	
		Prim.	Sec.	Prim.	Sec.	Prim.	Sec.	Prim.	Sec.	Prim.	Sec.	Prim.	Sec.	Prim.	Sec.
Four	**7404**	7402	3012	1.01	*	2.29	*	1.50	*	2.33	*	2.58	*	2.65	*
	7504	7502	3012	1.01	*	2.29	*	1.50	*	2.33	*	2.58	*	2.65	*
	7604	7602	3012	2.31	*	5.01	*	3.06	*	3.71	*	4.28	*	4.66	*
	7704	7702	3012	1.75	*	4.17	*	2.68	*	3.80	*	4.11	*	4.41	*
	7804	7802	3132	3.75	.63	7.42	1.00	5.09	.90	6.67	1.16	7.99	1.22	7.87	1.48
	7904	7902	3132	6.18	.63	15.80	1.00	10.42	.90	15.37	1.16	17.74	1.22	15.58	1.48
Five	**7405**	7403	3012	1.01	*	1.71	*	1.50	*	2.33	*	2.58	*	2.65	*
	7505	7503	3012	1.01	*	1.71	*	1.50	*	2.33	*	2.58	*	2.65	*
	7605	7603	3012	2.31	*	3.90	*	3.06	*	3.71	*	4.28	*	4.66	*
	7705	7703	3012	1.75	*	3.04	*	2.68	*	3.80	*	4.11	*	4.41	*
	7805	7803	3132	3.75	.63	5.84	1.00	5.09	.90	6.67	1.16	7.99	1.22	7.87	1.48
	7905	7903	3132	6.18	.63	15.18	1.00	10.42	.90	15.37	1.16	17.74	1.22	15.58	1.48

* See illustration for oil measurement from product installation manual.

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Exact Ratio RPM, HP and Torque

Nom. RPM	Nom. Ratio	Size of S7000 Reducer							
		71		72		73		74	
438	4			3.91 6.29	**7202** 850	3.91 7.04	**7302** 954	3.87 10.91	**7402** 1460
389	4.5			4.43 5.68	**7202** 870	4.43 6.32	**7302** 969	4.57 9.81	**7402** 1550
350	5			4.99 5.56	**7202** 960	4.99 6.14	**7302** 1061	4.88 9.78	**7402** 1650
313	5.6			5.65 5.38	**7202** 1050	5.65 5.90	**7302** 1155	5.51 9.50	**7402** 1810
278	6.3			6.42 5.18	**7202** 1150	6.42 5.63	**7302** 1251	6.10 8.82	**7402** 1860
246	7.1	6.93 3.06	**7102** 733	7.34 4.57	**7202** 1160	7.34 4.93	**7302** 1251	6.96 8.10	**7402** 1950
219	8	8.16 2.69	**7102** 762	8.28 4.37	**7202** 1252	7.57 5.18	**7312** 1359	7.63 8.11	**7412** 2140
194	9	8.59 2.56	**7102** 763	8.79 4.12	**7202** 1252	8.57 4.79	**7312** 1421	9.02 7.41	**7412** 2310
175	10	10.20 2.17	**7102** 768	10.43 3.47	**7202** 1252	9.67 4.42	**7312** 1480	9.62 7.34	**7412** 2440
156	11.2	10.92 2.03	**7102** 769	11.04 3.28	**7202** 1252	10.94 4.07	**7312** 1542	10.88 7.16	**7412** 2695
140	12.5	12.23 1.82	**7102** 772	12.61 2.87	**7202** 1252	12.43 3.74	**7312** 1609	12.04 6.61	**7412** 2750
125	14	14.24 1.57	**7102** 776	14.08 2.57	**7202** 1252	14.20 3.42	**7312** 1681	13.72 6.01	**7412** 2850
109	16	15.35 1.46	**7102** 777	15.79 2.29	**7202** 1252	16.03 3.15	**7312** 1750	15.82 5.36	**7412** 2930
97	18	18.06 1.25	**7102** 781	18.28 1.98	**7202** 1252	17.01 2.98	**7312** 1753	16.90 5.12	**7412** 2990
88	20	20.24 1.12	**7102** 783	20.07 1.80	**7202** 1252	20.20 2.52	**7312** 1762	19.18 4.51	**7412** 2990
78	22.4	22.76 1.00	**7102** 786	21.36 1.96	**7212** 1450	21.36 2.39	**7312** 1765	21.31 4.21	**7412** 3100
70	25	25.59 0.89	**7102** 787	24.41 1.72	**7212** 1450	24.41 2.09	**7312** 1771	24.20 3.72	**7412** 3110
63	28	28.85 0.79	**7102** 789	27.25 1.54	**7212** 1450	27.25 1.88	**7312** 1776	26.93 3.34	**7412** 3110
56	31.5	32.48 0.70	**7102** 791	30.55 1.37	**7212** 1450	30.55 1.68	**7312** 1780	30.29 2.97	**7412** 3110

Exact ratio	**Gear frame**
Input H.P.	Output torque

Motor RPM 1750 (Continued)

Exact Ratio RPM, HP and Torque

Nom. RPM	Nom. Ratio	Size of S7000 Reducer									
		75		76		77		78		79	
438	4	3.87	**7502**	3.98	**7602**	3.98	**7702**	3.91	**7802**	4.07	**7902**
		16.04	2150	21.44	2950	26.24	3615	38.77	5249	66.63	9371
389	4.5	4.57	**7502**	4.59	**7602**	4.59	**7702**	4.37	**7802**	4.66	**7902**
		13.94	2208	18.59	2950	22.74	3615	41.60	6299	66.63	10727
350	5	4.88	**7502**	5.06	**7602**	5.06	**7702**	4.91	**7802**	5.10	**7902**
		13.07	2208	16.86	2950	20.64	3615	42.14	7168	66.63	11760
313	5.6	5.51	**7502**	5.59	**7602**	5.59	**7702**	5.48	**7802**	5.70	**7902**
		11.57	2208	15.26	2950	18.68	3615	35.76	6786	57.53	11350
278	6.3	6.10	**7502**	6.41	**7602**	6.41	**7702**	6.21	**7802**	6.38	**7902**
		10.45	2208	13.31	2950	16.28	3615	36.63	7883	53.87	11903
246	7.1	6.96	**7502**	7.09	**7602**	7.09	**7702**	6.86	**7802**	7.18	**7902**
		9.17	2208	12.03	2950	14.73	3615	34.35	8160	48.81	12133
219	8	7.63	**7512**	7.85	**7612**	7.85	**7712**	7.69	**7812**	7.92	**7912**
		10.28	2718	17.61	4780	21.22	5767	38.77	10329	66.63	18252
194	9	9.02	**7512**	9.06	**7612**	9.06	**7712**	8.60	**7812**	9.07	**7912**
		9.26	2891	15.26	4780	19.35	6069	38.41	11446	64.65	20305
175	10	9.62	**7512**	9.98	**7612**	9.98	**7712**	9.67	**7812**	9.94	**7912**
		8.84	2947	13.85	4780	18.13	6266	35.65	11933	60.86	20956
156	11.2	10.88	**7512**	11.03	**7612**	11.03	**7712**	10.78	**7812**	11.10	**7912**
		8.18	3082	12.59	4800	16.56	6330	33.16	12381	56.06	21544
140	12.5	12.04	**7512**	12.65	**7612**	12.65	**7712**	12.23	**7812**	12.43	**7912**
		7.64	3186	11.20	4900	15.46	6774	30.33	12844	52.23	22478
125	14	13.72	**7512**	13.98	**7612**	13.98	**7712**	13.50	**7812**	13.98	**7912**
		7.02	3335	10.55	5100	14.12	6839	28.00	13089	47.77	23128
109	16	15.82	**7512**	16.05	**7612**	16.05	**7712**	15.77	**7812**	15.17	**7912**
		6.38	3492	9.59	5320	12.68	7052	24.63	13452	45.28	23788
97	18	16.90	**7512**	18.08	**7612**	18.08	**7712**	17.61	**7812**	17.24	**7912**
		6.10	3571	8.72	5450	11.39	7132	22.21	13540	41.48	24761
88	20	19.18	**7512**	19.64	**7612**	19.64	**7712**	19.77	**7812**	19.07	**7912**
		5.60	3719	8.25	5600	10.49	7132	19.86	13601	36.51	24111
78	22.4	21.31	**7512**	21.89	**7612**	21.89	**7712**	22.37	**7812**	22.06	**7912**
		5.22	3850	7.40	5600	9.41	7132	17.64	13663	33.75	25783
70	25	24.20	**7512**	24.56	**7612**	24.56	**7712**	25.55	**7812**	24.08	**7912**
		4.72	3952	6.59	5600	8.39	7132	15.52	13727	31.03	25876
63	28	26.93	**7512**	27.80	**7612**	27.80	**7712**	27.42	**7812**	27.05	**7912**
		4.25	3964	5.83	5600	7.41	7132	14.49	13760	27.74	25987
56	31.5	30.29	**7512**	30.24	**7612**	30.24	**7712**	31.90	**7812**	30.14	**7912**
		3.79	3977	5.36	5600	6.81	7132	12.52	13826	25.00	26088

If shaded, mechanical H.P. may exceed thermal H.P. limit.
Refer to page 134.

Exact ratio	**Gear frame**
Input H.P.	Output torque

Motor RPM 1750 (Continued)

Exact Ratio RPM, HP and Torque

Nom. RPM	Nom. Ratio	Size of S7000 Reducer							
		71		72		73		74	
49	**35.5**	35.73 0.64	**7102** 793	35.37 1.19	**7212** 1450	35.37 1.46	**7312** 1786	35.51 2.53	**7412** 3110
44	**40**	40.32 0.57	**7102** 794	38.84 1.08	**7212** 1450	38.84 1.33	**7312** 1790	39.20 2.29	**7412** 3110
39	**45**	45.36 0.51	**7102** 796	44.54 0.94	**7212** 1450	44.54 1.00	**7312** 1540	42.98 2.09	**7412** 3110
35	**50**			49.15 0.85	**7212** 1450	49.15 1.00	**7312** 1699	50.19 1.79	**7412** 3110
31	**56**			57.83 0.64	**7203** 1250	57.83 0.69	**7303** 1351	55.70 1.65	**7403** 3105
28	**63**			65.25 0.59	**7203** 1300	65.25 0.63	**7303** 1406	64.20 1.43	**7403** 3105
25	**71**			69.24 0.57	**7203** 1330	69.24 0.61	**7303** 1434	68.61 1.34	**7403** 3105
22	**80**			82.23 0.49	**7203** 1360	82.23 0.54	**7303** 1519	77.86 1.18	**7403** 3105
19	**90**			86.97 0.48	**7203** 1400	86.97 0.52	**7303** 1547	86.48 1.06	**7403** 3105
18	**100**			99.40 0.42	**7203** 1430	99.40 0.48	**7303** 1618	98.24 0.93	**7403** 3105
16	**112**			110.94 0.39	**7203** 1450	110.94 0.45	**7303** 1678	109.30 0.84	**7403** 3105
14	**125**			124.40 0.34	**7203** 1450	124.40 0.41	**7303** 1744	122.96 0.75	**7403** 3105
12.5	**140**			144.02 0.30	**7203** 1450	144.02 0.37	**7303** 1804	144.13 0.64	**7403** 3105
10.9	**160**			158.13 0.27	**7203** 1450	158.13 0.34	**7303** 1804	159.10 0.58	**7403** 3105
9.7	**180**			181.32 0.24	**7203** 1450	181.32 0.29	**7303** 1804	174.46 0.53	**7403** 3105
8.8	**200**			200.11 0.21	**7203** 1450	200.11 0.27	**7303** 1804	203.72 0.45	**7403** 3105

Exact ratio	**Gear frame**
Input H.P.	Output torque

Motor RPM 1750 (Continued)

Exact Ratio RPM, HP and Torque

Nom. RPM	Nom. Ratio	Size of S7000 Reducer									
		75		76		77		78		79	
49	35.5	35.51	**7512**	34.18	**7612**	34.18	**7712**	34.62	**7812**	34.18	**7912**
		3.25	3993	4.74	5600	6.03	7132	11.56	13861	22.14	26199
44	40	39.20	**7512**	39.36	**7612**	39.36	**7712**	38.24	**7812**	39.23	**7912**
		2.95	4002	4.12	5600	5.23	7132	10.50	13901	19.37	26314
39	45	42.98	**7512**	43.98	**7612**	43.98	**7712**	42.46	**7812**	42.67	**7912**
		2.69	4010	3.78	5750	4.68	7132	9.48	13941	17.85	26381
35	50	50.19	**7512**	48.68	**7612**	48.68	**7712**	50.34	**7812**	49.71	**7912**
		2.32	4024	3.40	5720	4.23	7132	8.03	14004	15.39	26496
31	56	55.70	**7503**	57.57	**7603**	57.57	**7703**	54.71	**7803**	56.63	**7903**
		2.13	4032	2.98	5800	3.77	7383	7.55	14033	11.64	22403
28	63	64.20	**7503**	66.10	**7603**	66.10	**7703**	63.93	**7803**	61.44	**7903**
		1.85	4038	2.59	5800	3.29	7389	6.48	14084	11.13	23239
25	71	68.61	**7503**	74.44	**7603**	74.44	**7703**	71.36	**7803**	69.82	**7903**
		1.73	4038	2.30	5800	3.01	7611	5.82	14118	10.32	24473
22	80	77.86	**7503**	80.86	**7603**	80.86	**7703**	80.13	**7803**	77.24	**7903**
		1.53	4038	2.12	5800	2.77	7611	5.20	14152	9.74	25562
19	90	86.48	**7503**	90.12	**7603**	90.12	**7703**	90.66	**7803**	89.35	**7903**
		1.37	4038	1.90	5800	2.49	7611	4.61	14187	8.63	26204
18	100	98.24	**7503**	101.13	**7603**	101.13	**7703**	103.54	**7803**	97.53	**7903**
		1.21	4038	1.71	5850	2.21	7611	4.04	14222	8.03	26602
16	112	109.30	**7503**	114.47	**7603**	114.47	**7703**	111.11	**7803**	109.55	**7903**
		1.09	4038	1.51	5850	1.96	7611	3.77	14240	7.25	26991
14	125	122.96	**7503**	124.53	**7603**	124.53	**7703**	129.28	**7803**	122.06	**7903**
		0.97	4038	1.39	5850	1.80	7611	3.25	14277	6.52	27049
12.5	140	144.13	**7503**	140.74	**7603**	140.74	**7703**	140.31	**7803**	138.42	**7903**
		0.82	4038	1.23	5850	1.59	7611	3.00	14295	5.77	27115
10.9	160	159.10	**7503**	162.06	**7603**	162.06	**7703**	154.98	**7803**	158.87	**7903**
		0.75	4038	1.07	5850	1.38	7611	2.72	14317	5.03	27173
9.7	180	174.46	**7503**	181.09	**7603**	181.09	**7703**	172.09	**7803**	172.82	**7903**
		0.68	4038	0.95	5850	1.24	7611	2.45	14339	4.63	27212
8.8	200	203.72	**7503**	200.44	**7603**	200.44	**7703**	203.99	**7803**	201.34	**7903**
		0.58	4038	0.86	5850	1.12	7611	2.07	14373	3.99	27274

Exact ratio	**Gear frame**
Input H.P.	Output torque

Exact Ratio RPM, HP and Torque

Nom. RPM	Nom. Ratio	Size of S7000 Reducer							
		71		72		73		74	
363	4			3.91 5.21	**7202** 850	3.91 5.83	**7302** 954	3.87 9.04	**7402** 1460
322	4.5			4.43 4.71	**7202** 870	4.43 5.24	**7302** 969	4.57 8.13	**7402** 1550
290	5			4.99 4.61	**7202** 960	4.99 5.09	**7302** 1061	4.88 8.10	**7402** 1650
259	5.6			5.65 4.45	**7202** 1050	5.65 4.89	**7302** 1155	5.51 7.87	**7402** 1810
230	6.3			6.42 4.29	**7202** 1150	6.42 4.66	**7302** 1251	6.10 7.31	**7402** 1860
204	7.1	6.93 2.54	**7102** 733	7.34 3.79	**7202** 1160	7.34 4.08	**7302** 1251	6.96 6.71	**7402** 1950
181	8	8.16 2.23	**7102** 762	8.28 3.62	**7202** 1252	7.57 4.29	**7312** 1359	7.63 6.72	**7412** 2140
161	9	8.59 2.12	**7102** 763	8.79 3.41	**7202** 1252	8.57 3.97	**7312** 1421	9.02 6.14	**7412** 2310
145	10	10.20 1.80	**7102** 768	10.43 2.88	**7202** 1252	9.67 3.66	**7312** 1480	9.62 6.08	**7412** 2440
129	11.2	10.92 1.68	**7102** 769	11.04 2.72	**7202** 1252	10.94 3.37	**7312** 1542	10.88 5.94	**7412** 2695
116	12.5	12.23 1.51	**7102** 772	12.61 2.38	**7202** 1252	12.43 3.10	**7312** 1609	12.04 5.47	**7412** 2750
104	14	14.24 1.30	**7102** 776	14.08 2.13	**7202** 1252	14.20 2.83	**7312** 1681	13.72 4.98	**7412** 2850
91	16	15.35 1.21	**7102** 777	15.79 1.90	**7202** 1252	16.03 2.61	**7312** 1750	15.82 4.44	**7412** 2930
81	18	18.06 1.04	**7102** 781	18.28 1.64	**7202** 1252	17.01 2.47	**7312** 1753	16.90 4.24	**7412** 2990
73	20	20.24 0.93	**7102** 783	20.07 1.49	**7202** 1252	20.20 2.09	**7312** 1762	19.18 3.74	**7412** 2990
65	22.4	22.76 0.83	**7102** 786	21.36 1.63	**7212** 1450	21.36 1.98	**7312** 1765	21.31 3.49	**7412** 3100
58	25	25.59 0.74	**7102** 787	24.41 1.42	**7212** 1450	24.41 1.73	**7312** 1771	24.20 3.08	**7412** 3110
52	28	28.85 0.65	**7102** 789	27.25 1.28	**7212** 1450	27.25 1.56	**7312** 1776	26.93 2.77	**7412** 3110
46	31.5	32.48 0.58	**7102** 791	30.55 1.14	**7212** 1450	30.55 1.39	**7312** 1780	30.29 2.46	**7412** 3110

Exact ratio	**Gear frame**
Input H.P.	Output torque

Motor RPM 1450 (Continued)

Exact Ratio RPM, HP and Torque

Nom. RPM	Nom. Ratio	Size of S7000 Reducer									
		75		76		77		78		79	
363	4	3.87	**7502**	3.98	**7602**	3.98	**7702**	3.91	**7802**	4.07	**7902**
		13.29	2150	17.76	2950	21.74	3615	32.12	5249	55.21	9371
322	4.5	4.57	**7502**	4.59	**7602**	4.59	**7702**	4.37	**7802**	4.66	**7902**
		11.55	2208	15.40	2950	18.84	3615	34.47	6299	55.21	10727
290	5	4.88	**7502**	5.06	**7602**	5.06	**7702**	4.91	**7802**	5.10	**7902**
		10.83	2208	13.97	2950	17.10	3615	34.92	7168	55.21	11760
259	5.6	5.51	**7502**	5.59	**7602**	5.59	**7702**	5.48	**7802**	5.70	**7902**
		9.59	2208	12.65	2950	15.48	3615	29.63	6786	47.67	11350
230	6.3	6.10	**7502**	6.41	**7602**	6.41	**7702**	6.21	**7802**	6.38	**7902**
		8.66	2208	11.03	2950	13.49	3615	30.35	7883	44.64	11903
204	7.1	6.96	**7502**	7.09	**7602**	7.09	**7702**	6.86	**7802**	7.18	**7902**
		7.60	2208	9.97	2950	12.20	3615	28.46	8160	40.44	12133
181	8	7.63	**7512**	7.85	**7612**	7.85	**7712**	7.69	**7812**	7.92	**7912**
		8.52	2718	14.59	4780	17.58	5767	32.12	10329	55.21	18252
161	9	9.02	**7512**	9.06	**7612**	9.06	**7712**	8.60	**7812**	9.07	**7912**
		7.67	2891	12.64	4780	16.03	6069	31.83	11446	53.57	20305
145	10	9.62	**7512**	9.98	**7612**	9.98	**7712**	9.67	**7812**	9.94	**7912**
		7.32	2947	11.48	4780	15.02	6266	29.54	11933	50.43	20956
129	11.2	10.88	**7512**	11.03	**7612**	11.03	**7712**	10.78	**7812**	11.10	**7912**
		6.78	3082	10.43	4800	13.72	6330	27.48	12381	46.45	21544
116	12.5	12.04	**7512**	12.65	**7612**	12.65	**7712**	12.23	**7812**	12.43	**7912**
		6.33	3186	9.28	4900	12.81	6774	25.13	12844	43.28	22478
104	14	13.72	**7512**	13.98	**7612**	13.98	**7712**	13.50	**7812**	13.98	**7912**
		5.82	3335	8.74	5100	11.70	6839	23.20	13089	39.58	23128
91	16	15.82	**7512**	16.05	**7612**	16.05	**7712**	15.77	**7812**	15.17	**7912**
		5.29	3492	7.94	5320	10.51	7052	20.41	13452	37.52	23788
81	18	16.90	**7512**	18.08	**7612**	18.08	**7712**	17.61	**7812**	17.24	**7912**
		5.05	3571	7.22	5450	9.44	7132	18.40	13540	34.37	24761
73	20	19.18	**7512**	19.64	**7612**	19.64	**7712**	19.77	**7812**	19.07	**7912**
		4.64	3719	6.83	5600	8.69	7132	16.46	13601	30.25	24111
65	22.4	21.31	**7512**	21.89	**7612**	21.89	**7712**	22.37	**7812**	22.06	**7912**
		4.33	3850	6.13	5600	7.80	7132	14.62	13663	27.96	25783
58	25	24.20	**7512**	24.56	**7612**	24.56	**7712**	25.55	**7812**	24.08	**7912**
		3.91	3952	5.46	5600	6.95	7132	12.86	13727	25.71	25876
52	28	26.93	**7512**	27.80	**7612**	27.80	**7712**	27.42	**7812**	27.05	**7912**
		3.52	3964	4.83	5600	6.14	7132	12.01	13760	22.98	25987
46	31.5	30.29	**7512**	30.24	**7612**	30.24	**7712**	31.90	**7812**	30.14	**7912**
		3.14	3977	4.44	5600	5.64	7132	10.37	13826	20.71	26088

If shaded, mechanical H.P. may exceed thermal H.P. limit.
Refer to page 134.

Exact ratio	**Gear frame**
Input H.P.	Output torque

Motor RPM 1450 (Continued)

Exact Ratio RPM, HP and Torque

Nom. RPM	Nom. Ratio	Size of S7000 Reducer							
		71		72		73		74	
41	**35.5**	35.73 0.53	**7102** 793	35.37 0.98	**7212** 1450	35.37 1.21	**7312** 1786	35.51 2.10	**7412** 3110
36	**40**	40.32 0.47	**7102** 794	38.84 0.89	**7212** 1450	38.84 1.10	**7312** 1790	39.20 1.90	**7412** 3110
32	**45**	45.36 0.42	**7102** 796	44.54 0.78	**7212** 1450	44.54 0.83	**7312** 1540	42.98 1.73	**7412** 3110
29	**50**			49.15 0.71	**7212** 1450	49.15 0.83	**7312** 1699	50.19 1.49	**7412** 3110
26	**56**			57.83 0.53	**7203** 1250	57.83 0.57	**7303** 1351	55.70 1.36	**7403** 3105
23	**63**			65.25 0.49	**7203** 1300	65.25 0.52	**7303** 1406	64.20 1.18	**7403** 3105
20	**71**			69.24 0.47	**7203** 1330	69.24 0.51	**7303** 1434	68.61 1.11	**7403** 3105
18	**80**			82.23 0.40	**7203** 1360	82.23 0.45	**7303** 1519	77.86 0.98	**7403** 3105
16	**90**			86.97 0.39	**7203** 1400	86.97 0.43	**7303** 1547	86.48 0.88	**7403** 3105
15	**100**			99.40 0.35	**7203** 1430	99.40 0.40	**7303** 1618	98.24 0.77	**7403** 3105
13	**112**			110.94 0.32	**7203** 1450	110.94 0.37	**7303** 1678	109.30 0.70	**7403** 3105
12	**125**			124.40 0.29	**7203** 1450	124.40 0.34	**7303** 1744	122.96 0.62	**7403** 3105
10	**140**			144.02 0.25	**7203** 1450	144.02 0.31	**7303** 1804	144.13 0.53	**7403** 3105
9.1	**160**			158.13 0.22	**7203** 1450	158.13 0.28	**7303** 1804	159.10 0.48	**7403** 3105
8.1	**180**			181.32 0.20	**7203** 1450	181.32 0.24	**7303** 1804	174.46 0.44	**7403** 3105
7.3	**200**			200.11 0.18	**7203** 1450	200.11 0.22	**7303** 1804	203.72 0.37	**7403** 3105

Exact ratio	**Gear frame**
Input H.P.	Output torque

Motor RPM 1450 (Continued)

Exact Ratio RPM, HP and Torque

Nom. RPM	Nom. Ratio	Size of S7000 Reducer									
		75		76		77		78		79	
41	**35.5**	35.51	**7512**	34.18	**7612**	34.18	**7712**	34.62	**7812**	34.18	**7912**
		2.69	3993	3.93	5600	5.00	7132	9.58	13861	18.34	26199
36	**40**	39.20	**7512**	39.36	**7612**	39.36	**7712**	38.24	**7812**	39.23	**7912**
		2.44	4002	3.41	5600	4.33	7132	8.70	13901	16.05	26314
32	**45**	42.98	**7512**	43.98	**7612**	43.98	**7712**	42.46	**7812**	42.67	**7912**
		2.23	4010	3.13	5750	3.88	7132	7.85	13941	14.79	26381
29	**50**	50.19	**7512**	48.68	**7612**	48.68	**7712**	50.34	**7812**	49.71	**7912**
		1.92	4024	2.82	5720	3.50	7132	6.65	14004	12.75	26496
26	**56**	55.70	**7503**	57.57	**7603**	57.57	**7703**	54.71	**7803**	56.63	**7903**
		1.76	4032	2.47	5720	3.12	7383	6.26	14033	9.64	22403
23	**63**	64.20	**7503**	66.10	**7603**	66.10	**7703**	63.93	**7803**	61.44	**7903**
		1.53	4038	2.15	5800	2.73	7389	5.37	14084	9.22	23239
20	**71**	68.61	**7503**	74.44	**7603**	74.44	**7703**	71.36	**7803**	69.82	**7903**
		1.43	4038	1.91	5800	2.49	7611	4.82	14118	8.55	24473
18	**80**	77.86	**7503**	80.86	**7603**	80.86	**7703**	80.13	**7803**	77.24	**7903**
		1.27	4038	1.76	5800	2.30	7611	4.31	14152	8.07	25562
16	**90**	86.48	**7503**	90.12	**7603**	90.12	**7703**	90.66	**7803**	89.35	**7903**
		1.14	4038	1.58	5800	2.06	7611	3.82	14187	7.15	26204
15	**100**	98.24	**7503**	101.13	**7603**	101.13	**7703**	103.54	**7803**	97.53	**7903**
		1.00	4038	1.42	5850	1.83	7611	3.35	14222	6.65	26602
13	**112**	109.30	**7503**	114.47	**7603**	114.47	**7703**	111.11	**7803**	109.55	**7903**
		0.90	4038	1.25	5850	1.62	7611	3.12	14240	6.01	26991
12	**125**	122.96	**7503**	124.53	**7603**	124.53	**7703**	129.28	**7803**	122.06	**7903**
		0.80	4038	1.15	5850	1.49	7611	2.69	14277	5.40	27049
10	**140**	144.13	**7503**	140.74	**7603**	140.74	**7703**	140.31	**7803**	138.42	**7903**
		0.68	4038	1.02	5850	1.32	7611	2.49	14295	4.78	27115
9.1	**160**	159.10	**7503**	162.06	**7603**	162.06	**7703**	154.98	**7803**	158.87	**7903**
		0.62	4038	0.88	5850	1.14	7611	2.25	14317	4.17	27173
8.1	**180**	174.46	**7503**	181.09	**7603**	181.09	**7703**	172.09	**7803**	172.82	**7903**
		0.56	4038	0.79	5850	1.03	7611	2.03	14339	3.84	27212
7.3	**200**	203.72	**7503**	200.44	**7603**	200.44	**7703**	203.99	**7803**	201.34	**7903**
		0.48	4038	0.71	5850	0.93	7611	1.72	14373	3.31	27274

Exact ratio	**Gear frame**
Input H.P.	Output torque

Exact Ratio RPM, HP and Torque

Nom. RPM	Nom. Ratio	Size of S7000 Reducer							
		71		72		73		74	
290	4			3.91 4.17	**7202** 850	3.91 4.67	**7302** 954	3.87 7.23	**7402** 1460
258	4.5			4.43 3.77	**7202** 870	4.43 4.19	**7302** 969	4.57 6.50	**7402** 1550
232	5			4.99 3.69	**7202** 960	4.99 4.07	**7302** 1061	4.88 6.48	**7402** 1650
207	5.6			5.65 3.56	**7202** 1050	5.65 3.91	**7302** 1155	5.51 6.30	**7402** 1810
184	6.3			6.42 3.43	**7202** 1150	6.42 3.73	**7302** 1251	6.10 5.85	**7402** 1860
163	7.1	6.93 2.03	**7102** 733	7.34 3.03	**7202** 1160	7.34 3.27	**7302** 1251	6.96 5.37	**7402** 1950
145	8	8.16 1.78	**7102** 762	8.28 2.90	**7202** 1252	7.57 3.43	**7312** 1359	7.63 5.38	**7412** 2140
129	9	8.59 1.70	**7102** 763	8.79 2.73	**7202** 1252	8.57 3.18	**7312** 1421	9.02 4.91	**7412** 2310
116	10	10.20 1.44	**7102** 768	10.43 2.30	**7202** 1252	9.67 2.93	**7312** 1480	9.62 4.86	**7412** 2440
104	11.2	10.92 1.35	**7102** 769	11.04 2.17	**7202** 1252	10.94 2.70	**7312** 1542	10.88 4.75	**7412** 2695
93	12.5	12.23 1.21	**7102** 772	12.61 1.90	**7202** 1252	12.43 2.48	**7312** 1609	12.04 4.38	**7412** 2750
83	14	14.24 1.04	**7102** 776	14.08 1.70	**7202** 1252	14.20 2.27	**7312** 1681	13.72 3.98	**7412** 2850
73	16	15.35 0.97	**7102** 777	15.79 1.52	**7202** 1252	16.03 2.09	**7312** 1750	15.82 3.55	**7412** 2930
64	18	18.06 0.83	**7102** 781	18.28 1.31	**7202** 1252	17.01 1.98	**7312** 1753	16.90 3.39	**7412** 2990
58	20	20.24 0.74	**7102** 783	20.07 1.20	**7202** 1252	20.20 1.67	**7312** 1762	19.18 2.99	**7412** 2990
52	22.4	22.76 0.66	**7102** 786	21.36 1.30	**7212** 1450	21.36 1.58	**7312** 1765	21.31 2.79	**7412** 3100
46	25	25.59 0.59	**7102** 787	24.41 1.14	**7212** 1450	24.41 1.39	**7312** 1771	24.20 2.46	**7412** 3110
41	28	28.85 0.52	**7102** 789	27.25 1.02	**7212** 1450	27.25 1.25	**7312** 1776	26.93 2.21	**7412** 3110
37	31.5	32.48 0.46	**7102** 791	30.55 0.91	**7212** 1450	30.55 1.11	**7312** 1780	30.29 1.97	**7412** 3110

Exact ratio	**Gear frame**
Input H.P.	Output torque

Motor RPM 1160 (Continued)

Exact Ratio RPM, HP and Torque

Nom. RPM	Nom. Ratio	Size of S7000 Reducer									
		75		76		77		78		79	
290	4	3.87	**7502**	3.98	**7602**	3.98	**7702**	3.91	**7802**	4.07	**7902**
		10.63	2150	14.21	2950	17.39	3615	25.70	5249	44.17	9371
258	4.5	4.57	**7502**	4.59	**7602**	4.59	**7702**	4.37	**7802**	4.66	**7902**
		9.24	2208	12.32	2950	15.07	3615	27.57	6299	44.17	10727
232	5	4.88	**7502**	5.06	**7602**	5.06	**7702**	4.91	**7802**	5.10	**7902**
		8.66	2208	11.18	2950	13.68	3615	27.93	7168	44.17	11760
207	5.6	5.51	**7502**	5.59	**7602**	5.59	**7702**	5.48	**7802**	5.70	**7902**
		7.67	2208	10.12	2950	12.38	3615	23.70	6786	38.13	11350
184	6.3	6.10	**7502**	6.41	**7602**	6.41	**7702**	6.21	**7802**	6.38	**7902**
		6.93	2208	8.82	2950	10.79	3615	24.28	7883	35.71	11903
163	7.1	6.96	**7502**	7.09	**7602**	7.09	**7702**	6.86	**7802**	7.18	**7902**
		6.08	2208	7.98	2950	9.76	3615	22.77	8160	32.35	12133
145	8	7.63	**7512**	7.85	**7612**	7.85	**7712**	7.69	**7812**	7.92	**7912**
		6.81	2718	11.67	4780	14.07	5767	25.70	10329	44.17	18252
129	9	9.02	**7512**	9.06	**7612**	9.06	**7712**	8.60	**7812**	9.07	**7912**
		6.14	2891	10.12	4780	12.83	6069	25.46	11446	42.85	20305
116	10	9.62	**7512**	9.98	**7612**	9.98	**7712**	9.67	**7812**	9.94	**7912**
		5.86	2947	9.18	4780	12.02	6266	23.63	11933	40.34	20956
104	11.2	10.88	**7512**	11.03	**7612**	11.03	**7712**	10.78	**7812**	11.10	**7912**
		5.42	3082	8.34	4800	10.98	6330	21.98	12381	37.16	21544
93	12.5	12.04	**7512**	12.65	**7612**	12.65	**7712**	12.23	**7812**	12.43	**7912**
		5.06	3186	7.43	4900	10.25	6774	20.10	12844	34.62	22478
83	14	13.72	**7512**	13.98	**7612**	13.98	**7712**	13.50	**7812**	13.98	**7912**
		4.65	3335	6.99	5100	9.36	6839	18.56	13089	31.66	23128
73	16	15.82	**7512**	16.05	**7612**	16.05	**7712**	15.77	**7812**	15.17	**7912**
		4.23	3492	6.35	5320	8.41	7052	16.33	13452	30.01	23788
64	18	16.90	**7512**	18.08	**7612**	18.08	**7712**	17.61	**7812**	17.24	**7912**
		4.04	3571	5.78	5450	7.55	7132	14.72	13540	27.50	24761
58	20	19.18	**7512**	19.64	**7612**	19.64	**7712**	19.77	**7812**	19.07	**7912**
		3.71	3719	5.47	5600	6.95	7132	13.16	13601	24.20	24111
52	22.4	21.31	**7512**	21.89	**7612**	21.89	**7712**	22.37	**7812**	22.06	**7912**
		3.46	3850	4.90	5600	6.24	7132	11.69	13663	22.37	25783
46	25	24.20	**7512**	24.56	**7612**	24.56	**7712**	25.55	**7812**	24.08	**7912**
		3.13	3952	4.37	5600	5.56	7132	10.29	13727	20.57	25876
41	28	26.93	**7512**	27.80	**7612**	27.80	**7712**	27.42	**7812**	27.05	**7912**
		2.82	3964	3.86	5600	4.91	7132	9.60	13760	18.39	25987
37	31.5	30.29	**7512**	30.24	**7612**	30.24	**7712**	31.90	**7812**	30.14	**7912**
		2.51	3977	3.55	5600	4.51	7132	8.30	13826	16.57	26088

Exact ratio	**Gear frame**
Input H.P.	Output torque

Motor RPM 1160 (Continued)

Exact Ratio RPM, HP and Torque

Nom. RPM	Nom. Ratio	Size of S7000 Reducer							
		71		72		73		74	
33	**35.5**	35.73 0.42	**7102** 793	35.37 0.79	**7212** 1450	35.37 0.97	**7312** 1786	35.51 1.68	**7412** 3110
29	**40**	40.32 0.38	**7102** 794	38.84 0.72	**7212** 1450	38.84 0.88	**7312** 1790	39.20 1.52	**7412** 3110
26	**45**	45.36 0.34	**7102** 796	44.54 0.62	**7212** 1450	44.54 0.66	**7312** 1540	42.98 1.39	**7412** 3110
23	**50**			49.15 0.57	**7212** 1450	49.15 0.66	**7312** 1699	50.19 1.19	**7412** 3110
21	**56**			57.83 0.42	**7203** 1250	57.83 0.46	**7303** 1351	55.70 1.09	**7403** 3105
18	**63**			65.25 0.39	**7203** 1300	65.25 0.42	**7303** 1406	64.20 0.95	**7403** 3105
16	**71**			69.24 0.38	**7203** 1330	69.24 0.40	**7303** 1434	68.61 0.89	**7403** 3105
15	**80**			82.23 0.32	**7203** 1360	82.23 0.36	**7303** 1519	77.86 0.78	**7403** 3105
13	**90**			86.97 0.32	**7203** 1400	86.97 0.34	**7303** 1547	86.48 0.70	**7403** 3105
12	**100**			99.40 0.28	**7203** 1430	99.40 0.32	**7303** 1618	98.24 0.62	**7403** 3105
10	**112**			110.94 0.26	**7203** 1450	110.94 0.30	**7303** 1678	109.30 0.56	**7403** 3105
9.3	**125**			124.40 0.23	**7203** 1450	124.40 0.27	**7303** 1744	122.96 0.49	**7403** 3105
8.3	**140**			144.02 0.20	**7203** 1450	144.02 0.25	**7303** 1804	144.13 0.42	**7403** 3105
7.3	**160**			158.13 0.18	**7203** 1450	158.13 0.23	**7303** 1804	159.10 0.38	**7403** 3105
6.4	**180**			181.32 0.16	**7203** 1450	181.32 0.19	**7303** 1804	174.46 0.35	**7403** 3105
5.8	**200**			200.11 0.14	**7203** 1450	200.11 0.18	**7303** 1804	203.72 0.30	**7403** 3105

Exact ratio	**Gear frame**
Input H.P.	Output torque

Motor RPM 1160 (Continued)

Exact Ratio RPM, HP and Torque

Nom. RPM	Nom. Ratio	Size of S7000 Reducer									
		75		76		77		78		79	
33	**35.5**	35.51	**7512**	34.18	**7612**	34.18	**7712**	34.62	**7812**	34.18	**7912**
		2.15	3993	3.14	5600	4.00	7132	7.66	13861	14.68	26199
29	**40**	39.20	**7512**	39.36	**7612**	39.36	**7712**	38.24	**7812**	39.23	**7912**
		1.96	4002	2.73	5600	3.47	7132	6.96	13901	12.84	26314
26	**45**	42.98	**7512**	43.98	**7612**	43.98	**7712**	42.46	**7812**	42.67	**7912**
		1.78	4010	2.51	5750	3.10	7132	6.28	13941	11.83	26381
23	**50**	50.19	**7512**	48.68	**7612**	48.68	**7712**	50.34	**7812**	49.71	**7912**
		1.54	4024	2.25	5720	2.80	7132	5.32	14004	10.20	26496
21	**56**	55.70	**7503**	57.57	**7603**	57.57	**7703**	54.71	**7803**	56.63	**7903**
		1.41	4032	1.97	5720	2.50	7383	5.00	14033	7.72	22403
18	**63**	64.20	**7503**	66.10	**7603**	66.10	**7703**	63.93	**7803**	61.44	**7903**
		1.23	4038	1.72	5800	2.18	7389	4.30	14084	7.38	23239
16	**71**	68.61	**7503**	74.44	**7603**	74.44	**7703**	71.36	**7803**	69.82	**7903**
		1.15	4038	1.53	5800	2.00	7611	3.86	14118	6.84	24473
15	**80**	77.86	**7503**	80.86	**7603**	80.86	**7703**	80.13	**7803**	77.24	**7903**
		1.01	4038	1.40	5800	1.84	7611	3.45	14152	6.46	25562
13	**90**	86.48	**7503**	90.12	**7603**	90.12	**7703**	90.66	**7803**	89.35	**7903**
		0.91	4038	1.26	5800	1.65	7611	3.06	14187	5.72	26204
12	**100**	98.24	**7503**	101.13	**7603**	101.13	**7703**	103.54	**7803**	97.53	**7903**
		0.80	4038	1.13	5850	1.46	7611	2.68	14222	5.32	26602
10	**112**	109.30	**7503**	114.47	**7603**	114.47	**7703**	111.11	**7803**	109.55	**7903**
		0.72	4038	1.00	5850	1.30	7611	2.50	14240	4.81	26991
9.3	**125**	122.96	**7503**	124.53	**7603**	124.53	**7703**	129.28	**7803**	122.06	**7903**
		0.64	4038	0.92	5850	1.19	7611	2.15	14277	4.32	27049
8.3	**140**	144.13	**7503**	140.74	**7603**	140.74	**7703**	140.31	**7803**	138.42	**7903**
		0.54	4038	0.81	5850	1.05	7611	1.99	14295	3.82	27115
7.3	**160**	159.10	**7503**	162.06	**7603**	162.06	**7703**	154.98	**7803**	158.87	**7903**
		0.50	4038	0.71	5850	0.91	7611	1.80	14317	3.33	27173
6.4	**180**	174.46	**7503**	181.09	**7603**	181.09	**7703**	172.09	**7803**	172.82	**7903**
		0.45	4038	0.63	5850	0.82	7611	1.62	14339	3.07	27212
5.8	**200**	203.72	**7503**	200.44	**7603**	200.44	**7703**	203.99	**7803**	201.34	**7903**
		0.38	4038	0.57	5850	0.74	7611	1.37	14373	2.64	27274

Exact ratio	**Gear frame**
Input H.P.	Output torque

Exact Ratio RPM, HP and Torque

Nom. RPM	Nom. Ratio	Size of S7000 Reducer							
		71		72		73		74	
218	4			3.91 3.13	**7202** 850	3.91 3.50	**7302** 954	3.87 5.42	**7402** 1460
193	4.5			4.43 2.82	**7202** 870	4.43 3.14	**7302** 969	4.57 4.88	**7402** 1550
174	5			4.99 2.77	**7202** 960	4.99 3.05	**7302** 1061	4.88 4.86	**7402** 1650
155	5.6			5.65 2.67	**7202** 1050	5.65 2.93	**7302** 1155	5.51 4.72	**7402** 1810
138	6.3			6.42 2.58	**7202** 1150	6.42 2.80	**7302** 1251	6.10 4.38	**7402** 1860
123	7.1	6.93 1.52	**7102** 733	7.34 2.27	**7202** 1160	7.34 2.45	**7302** 1251	6.96 4.03	**7402** 1950
109	8	8.16 1.34	**7102** 762	8.28 2.17	**7202** 1252	7.57 2.58	**7312** 1359	7.63 4.03	**7412** 2140
97	9	8.59 1.27	**7102** 763	8.79 2.05	**7202** 1252	8.57 2.38	**7312** 1421	9.02 3.68	**7412** 2310
87	10	10.20 1.08	**7102** 768	10.43 1.73	**7202** 1252	9.67 2.20	**7312** 1480	9.62 3.65	**7412** 2440
78	11.2	10.92 1.01	**7102** 769	11.04 1.63	**7202** 1252	10.94 2.02	**7312** 1542	10.88 3.56	**7412** 2695
70	12.5	12.23 0.90	**7102** 772	12.61 1.43	**7202** 1252	12.43 1.86	**7312** 1609	12.04 3.28	**7412** 2750
62	14	14.24 0.78	**7102** 776	14.08 1.28	**7202** 1252	14.20 1.70	**7312** 1681	13.72 2.99	**7412** 2850
54	16	15.35 0.73	**7102** 777	15.79 1.14	**7202** 1252	16.03 1.57	**7312** 1750	15.82 2.66	**7412** 2930
48	18	18.06 0.62	**7102** 781	18.28 0.98	**7202** 1252	17.01 1.48	**7312** 1753	16.90 2.54	**7412** 2990
44	20	20.24 0.56	**7102** 783	20.07 0.90	**7202** 1252	20.20 1.25	**7312** 1762	19.18 2.24	**7412** 2990
39	22.4	22.76 0.50	**7102** 786	21.36 0.98	**7212** 1450	21.36 1.19	**7312** 1765	21.31 2.09	**7412** 3100
35	25	25.59 0.44	**7102** 787	24.41 0.85	**7212** 1450	24.41 1.04	**7312** 1771	24.20 1.85	**7412** 3110
31	28	28.85 0.39	**7102** 789	27.25 0.77	**7212** 1450	27.25 0.93	**7312** 1776	26.93 1.66	**7412** 3110
28	31.5	32.48 0.35	**7102** 791	30.55 0.68	**7212** 1450	30.55 0.84	**7312** 1780	30.29 1.48	**7412** 3110

Exact ratio	**Gear frame**
Input H.P.	Output torque

Motor RPM 870 (Continued)

Exact Ratio RPM, HP and Torque

Nom. RPM	Nom. Ratio	Size of S7000 Reducer									
		75		76		77		78		79	
218	4	3.87	**7502**	3.98	**7602**	3.98	**7702**	3.91	**7802**	4.07	**7902**
		7.97	2150	10.66	2950	13.05	3615	19.27	5249	33.12	9371
193	4.5	4.57	**7502**	4.59	**7602**	4.59	**7702**	4.37	**7802**	4.66	**7902**
		6.93	2208	9.24	2950	11.31	3615	20.68	6299	33.12	10727
174	5	4.88	**7502**	5.06	**7602**	5.06	**7702**	4.91	**7802**	5.10	**7902**
		6.50	2208	8.38	2950	10.26	3615	20.95	7168	33.12	11760
155	5.6	5.51	**7502**	5.59	**7602**	5.59	**7702**	5.48	**7802**	5.70	**7902**
		5.75	2208	7.59	2950	9.29	3615	17.78	6786	28.60	11350
138	6.3	6.10	**7502**	6.41	**7602**	6.41	**7702**	6.21	**7802**	6.38	**7902**
		5.20	2208	6.62	2950	8.09	3615	18.21	7883	26.78	11903
123	7.1	6.96	**7502**	7.09	**7602**	7.09	**7702**	6.86	**7802**	7.18	**7902**
		4.56	2208	5.98	2950	7.32	3615	17.08	8160	24.27	12133
109	8	7.63	**7512**	7.85	**7612**	7.85	**7712**	7.69	**7812**	7.92	**7912**
		5.11	2718	8.76	4780	10.55	5767	19.27	10329	33.12	18252
97	9	9.02	**7512**	9.06	**7612**	9.06	**7712**	8.60	**7812**	9.07	**7912**
		4.60	2891	7.59	4780	9.62	6069	19.10	11446	32.14	20305
87	10	9.62	**7512**	9.98	**7612**	9.98	**7712**	9.67	**7812**	9.94	**7912**
		4.39	2947	6.89	4780	9.01	6266	17.72	11933	30.26	20956
78	11.2	10.88	**7512**	11.03	**7612**	11.03	**7712**	10.78	**7812**	11.10	**7912**
		4.07	3082	6.26	4800	8.23	6330	16.49	12381	27.87	21544
70	12.5	12.04	**7512**	12.65	**7612**	12.65	**7712**	12.23	**7812**	12.43	**7912**
		3.80	3186	5.57	4900	7.69	6774	15.08	12844	25.97	22478
62	14	13.72	**7512**	13.98	**7612**	13.98	**7712**	13.50	**7812**	13.98	**7912**
		3.49	3335	5.25	5100	7.02	6839	13.92	13089	23.75	23128
54	16	15.82	**7512**	16.05	**7612**	16.05	**7712**	15.77	**7812**	15.17	**7912**
		3.17	3492	4.77	5320	6.30	7052	12.24	13452	22.51	23788
48	18	16.90	**7512**	18.08	**7612**	18.08	**7712**	17.61	**7812**	17.24	**7912**
		3.03	3571	4.33	5450	5.66	7132	11.04	13540	20.62	24761
44	20	19.18	**7512**	19.64	**7612**	19.64	**7712**	19.77	**7812**	19.07	**7912**
		2.78	3719	4.10	5600	5.22	7132	9.87	13601	18.15	24111
39	22.4	21.31	**7512**	21.89	**7612**	21.89	**7712**	22.37	**7812**	22.06	**7912**
		2.60	3850	3.68	5600	4.68	7132	8.77	13663	16.78	25783
35	25	24.20	**7512**	24.56	**7612**	24.56	**7712**	25.55	**7812**	24.08	**7912**
		2.35	3952	3.28	5600	4.17	7132	7.72	13727	15.43	25876
31	28	26.93	**7512**	27.80	**7612**	27.80	**7712**	27.42	**7812**	27.05	**7912**
		2.11	3964	2.90	5600	3.68	7132	7.20	13760	13.79	25987
28	31.5	30.29	**7512**	30.24	**7612**	30.24	**7712**	31.90	**7812**	30.14	**7912**
		1.88	3977	2.66	5600	3.39	7132	6.22	13826	12.43	26088

Exact ratio	**Gear frame**
Input H.P.	Output torque

Motor RPM 870 (Continued)

Exact Ratio RPM, HP and Torque

Nom. RPM	Nom. Ratio	Size of S7000 Reducer							
		71		72		73		74	
25	**35.5**	35.73 0.32	**7102** 793	35.37 0.59	**7212** 1450	35.37 0.73	**7312** 1786	35.51 1.26	**7412** 3110
22	**40**	40.32 0.28	**7102** 794	38.84 0.54	**7212** 1450	38.84 0.66	**7312** 1790	39.20 1.14	**7412** 3110
19	**45**	45.36 0.25	**7102** 796	44.54 0.47	**7212** 1450	44.54 0.50	**7312** 1540	42.98 1.04	**7412** 3110
17	**50**			49.15 0.42	**7212** 1450	49.15 0.50	**7312** 1699	50.19 0.89	**7412** 3110
16	**56**			57.83 0.32	**7203** 1250	57.83 0.34	**7303** 1351	55.70 0.82	**7403** 3105
14	**63**			65.25 0.29	**7203** 1300	65.25 0.31	**7303** 1406	64.20 0.71	**7403** 3105
12	**71**			69.24 0.28	**7203** 1330	69.24 0.30	**7303** 1434	68.61 0.66	**7403** 3105
11	**80**			82.23 0.24	**7203** 1360	82.23 0.27	**7303** 1519	77.86 0.59	**7403** 3105
10	**90**			86.97 0.24	**7203** 1400	86.97 0.26	**7303** 1547	86.48 0.53	**7403** 3105
8.7	**100**			99.40 0.21	**7203** 1430	99.40 0.24	**7303** 1618	98.24 0.46	**7403** 3105
7.8	**112**			110.94 0.19	**7203** 1450	110.94 0.22	**7303** 1678	109.30 0.42	**7403** 3105
7.0	**125**			124.40 0.17	**7203** 1450	124.40 0.20	**7303** 1744	122.96 0.37	**7403** 3105
6.2	**140**			144.02 0.15	**7203** 1450	144.02 0.18	**7303** 1804	144.13 0.32	**7403** 3105
5.4	**160**			158.13 0.13	**7203** 1450	158.13 0.17	**7303** 1804	159.10 0.29	**7403** 3105
4.8	**180**			181.32 0.12	**7203** 1450	181.32 0.14	**7303** 1804	174.46 0.26	**7403** 3105
4.4	**200**			200.11 0.11	**7203** 1450	200.11 0.13	**7303** 1804	203.72 0.22	**7403** 3105

Exact ratio	**Gear frame**
Input H.P.	Output torque

Motor RPM 870 (Continued)

Exact Ratio RPM, HP and Torque

Nom. RPM	Nom. Ratio	Size of S7000 Reducer									
		75		76		77		78		79	
25	35.5	35.51	**7512**	34.18	**7612**	34.18	**7712**	34.62	**7812**	34.18	**7912**
		1.62	3993	2.36	5600	3.00	7132	5.75	13861	11.01	26199
22	40	39.20	**7512**	39.36	**7612**	39.36	**7712**	38.24	**7812**	39.23	**7912**
		1.47	4002	2.05	5600	2.60	7132	5.22	13901	9.63	26314
19	45	42.98	**7512**	43.98	**7612**	43.98	**7712**	42.46	**7812**	42.67	**7912**
		1.34	4010	1.88	5750	2.33	7132	4.71	13941	8.87	26381
17	50	50.19	**7512**	48.68	**7612**	48.68	**7712**	50.34	**7812**	49.71	**7912**
		1.15	4024	1.69	5720	2.10	7132	3.99	14004	7.65	26496
16	56	55.70	**7503**	57.57	**7603**	57.57	**7703**	54.71	**7803**	56.63	**7903**
		1.06	4032	1.48	5720	1.87	7383	3.75	14033	5.79	22403
14	63	64.20	**7503**	66.10	**7603**	66.10	**7703**	63.93	**7803**	61.44	**7903**
		0.92	4038	1.29	5800	1.64	7389	3.22	14084	5.53	23239
12	71	68.61	**7503**	74.44	**7603**	74.44	**7703**	71.36	**7803**	69.82	**7903**
		0.86	4038	1.14	5800	1.50	7611	2.89	14118	5.13	24473
11	80	77.86	**7503**	80.86	**7603**	80.86	**7703**	80.13	**7803**	77.24	**7903**
		0.76	4038	1.05	5800	1.38	7611	2.59	14152	4.84	25562
10	90	86.48	**7503**	90.12	**7603**	90.12	**7703**	90.66	**7803**	89.35	**7903**
		0.68	4038	0.95	5800	1.24	7611	2.29	14187	4.29	26204
8.7	100	98.24	**7503**	101.13	**7603**	101.13	**7703**	103.54	**7803**	97.53	**7903**
		0.60	4038	0.85	5850	1.10	7611	2.01	14222	3.99	26602
7.8	112	109.30	**7503**	114.47	**7603**	114.47	**7703**	111.11	**7803**	109.55	**7903**
		0.54	4038	0.75	5850	0.97	7611	1.87	14240	3.60	26991
7.0	125	122.96	**7503**	124.53	**7603**	124.53	**7703**	129.28	**7803**	122.06	**7903**
		0.48	4038	0.69	5850	0.89	7611	1.62	14277	3.24	27049
6.2	140	144.13	**7503**	140.74	**7603**	140.74	**7703**	140.31	**7803**	138.42	**7903**
		0.41	4038	0.61	5850	0.79	7611	1.49	14295	2.87	27115
5.4	160	159.10	**7503**	162.06	**7603**	162.06	**7703**	154.98	**7803**	158.87	**7903**
		0.37	4038	0.53	5850	0.69	7611	1.35	14317	2.50	27173
4.8	180	174.46	**7503**	181.09	**7603**	181.09	**7703**	172.09	**7803**	172.82	**7903**
		0.34	4038	0.47	5850	0.62	7611	1.22	14339	2.30	27212
4.4	200	203.72	**7503**	200.44	**7603**	200.44	**7703**	203.99	**7803**	201.34	**7903**
		0.29	4038	0.43	5850	0.56	7611	1.03	14373	1.98	27274

Exact ratio	**Gear frame**
Input H.P.	Output torque

Combined - Motor RPM 1750

Exact Ratio RPM, HP and Torque

Nom. RPM	Nom. Ratio	Size of S7000 Reducer											
		74		75		76		77		78		79	
7.8	224	223.5	**7404**	223.5	**7504**	223.2	**7604**	223.2	**7704**	229.4	**7804**	228.2	**7904**
		0.419	3105	0.545	4038	0.791	5850	0.964	7132	1.869	14206	3.556	26890
7.0	250	247.2	**7404**	247.2	**7504**	246.8	**7604**	246.8	**7704**	241.5	**7804**	258.3	**7904**
		0.379	3105	0.493	4038	0.715	5850	0.872	7132	1.775	14206	3.142	26890
6.3	280	260.2	**7404**	260.2	**7504**	259.8	**7604**	259.8	**7704**	273.4	**7804**	291.5	**7904**
		0.360	3105	0.468	4038	0.680	5850	0.829	7132	1.568	14206	2.784	26890
5.6	315	308.9	**7404**	308.9	**7504**	308.4	**7604**	308.4	**7704**	308.5	**7804**	329.7	**7904**
		0.303	3105	0.395	4038	0.573	5850	0.698	7132	1.390	14206	2.462	26890
4.9	355	330.8	**7404**	330.8	**7504**	330.2	**7604**	330.2	**7704**	349.0	**7804**	374.5	**7904**
		0.283	3105	0.368	4038	0.535	5850	0.652	7132	1.229	14206	2.167	26890
4.4	400	370.4	**7404**	370.4	**7504**	369.8	**7604**	369.8	**7704**	396.5	**7804**	428.0	**7904**
		0.253	3105	0.329	4038	0.477	5850	0.582	7132	1.081	14206	1.896	26890
3.9	450	431.3	**7404**	431.3	**7504**	430.6	**7604**	430.6	**7704**	453.0	**7804**	483.1	**7904**
		0.217	3105	0.283	4038	0.410	5850	0.500	7132	0.946	14206	1.680	26890
3.5	500	465.0	**7404**	465.0	**7504**	464.2	**7604**	464.2	**7704**	511.4	**7804**	512.7	**7904**
		0.202	3105	0.262	4038	0.380	5850	0.464	7132	0.838	14206	1.583	26890
3.1	560	547.0	**7404**	547.0	**7504**	546.1	**7604**	546.1	**7704**	542.6	**7804**	608.8	**7904**
		0.171	3105	0.223	4038	0.323	5850	0.394	7132	0.790	14206	1.333	26890
2.8	630	613.1	**7404**	613.1	**7504**	612.1	**7604**	612.1	**7704**	644.4	**7804**	643.8	**7904**
		0.153	3105	0.199	4038	0.288	5850	0.352	7132	0.665	14206	1.261	26890
2.5	710	689.4	**7404**	689.4	**7504**	688.3	**7604**	688.3	**7704**	681.4	**7804**	735.7	**7904**
		0.136	3105	0.177	4038	0.257	5850	0.313	7132	0.629	14206	1.103	26890
2.2	800	775.1	**7404**	775.1	**7504**	773.8	**7604**	773.8	**7704**	778.7	**7804**	821.3	**7904**
		0.121	3105	0.157	4038	0.228	5850	0.278	7132	0.551	14206	0.988	26890
1.9	900	873.9	**7404**	873.9	**7504**	872.4	**7604**	872.4	**7704**	869.3	**7804**	920.8	**7904**
		0.107	3105	0.139	4038	0.202	5850	0.247	7132	0.493	14206	0.881	26890
1.8	1000	983.8	**7404**	983.8	**7504**	982.2	**7604**	982.2	**7704**	974.5	**7804**	1066.1	**7904**
		0.095	3105	0.124	4038	0.180	5850	0.219	7132	0.440	14206	0.761	26890
1.6	1120	1082.3	**7404**	1082.3	**7504**	1080.5	**7604**	1080.5	**7704**	1128.3	**7804**	1170.6	**7904**
		0.087	3105	0.113	4038	0.163	5850	0.199	7132	0.380	14206	0.693	26890
1.4	1250	1221.3	**7404**	1221.3	**7504**	1219.3	**7604**	1219.3	**7704**	1239.0	**7804**	1342.4	**7904**
		0.077	3105	0.100	4038	0.145	5850	0.177	7132	0.346	14206	0.605	26890
1.3	1400	1374.0	**7405**	1374.0	**7505**	1371.7	**7605**	1371.7	**7705**	1420.8	**7804**	1481.4	**7904**
		0.070	3105	0.091	4038	0.132	5850	0.171	7611	0.302	14206	0.548	26890

Exact ratio	**Gear frame**
Input H.P.	Output torque

Combined - Motor RPM 1750 (Continued)

Exact Ratio RPM, HP and Torque

Nom. RPM	Nom. Ratio	Size of S7000 Reducer											
		74		75		76		77		78		79	
1.1	1600	1498.6	**7405**	1498.6	**7505**	1555.6	**7605**	1555.6	**7705**	1567.9	**7804**	1536.3	**7905**
		0.064	3105	0.083	4038	0.116	5850	0.151	7611	0.273	14206	0.554	27563
0.97	1800	1779.5	**7405**	1779.5	**7505**	1847.1	**7605**	1847.1	**7705**	1695.5	**7805**	1738.0	**7905**
		0.054	3105	0.070	4038	0.098	5850	0.127	7611	0.264	14507	0.489	27563
0.88	2000	1905.1	**7405**	1905.1	**7505**	1977.5	**7605**	1977.5	**7705**	1926.4	**7805**	1974.8	**7905**
		0.050	3105	0.065	4038	0.091	5850	0.119	7611	0.232	14507	0.431	27563
0.78	2240	2133.6	**7405**	2133.6	**7505**	2214.7	**7605**	2214.7	**7705**	2200.7	**7805**	2256.0	**7905**
		0.045	3105	0.058	4038	0.081	5850	0.106	7611	0.203	14507	0.377	27563
0.70	2500	2484.3	**7405**	2484.3	**7505**	2578.7	**7605**	2578.7	**7705**	2484.3	**7805**	2546.7	**7905**
		0.039	3105	0.050	4038	0.070	5850	0.091	7611	0.180	14507	0.334	27563
0.63	2800	2678.0	**7405**	2678.0	**7505**	2779.7	**7605**	2779.7	**7705**	2636.2	**7805**	2702.4	**7905**
		0.036	3105	0.047	4038	0.065	5850	0.084	7611	0.170	14507	0.315	27563
0.56	3150	3150.7	**7405**	3150.7	**7505**	3270.5	**7605**	3270.5	**7705**	3130.6	**7805**	3209.2	**7905**
		0.030	3105	0.040	4038	0.055	5850	0.072	7611	0.143	14507	0.265	27563
0.49	3550	3531.1	**7405**	3531.1	**7505**	3665.3	**7605**	3665.3	**7705**	3310.4	**7805**	3393.5	**7905**
		0.027	3105	0.035	4038	0.049	5850	0.064	7611	0.135	14507	0.251	27563
0.44	4000	3970.7	**7405**	3970.7	**7505**	4121.6	**7605**	4121.6	**7705**	3783.1	**7805**	3878.0	**7905**
		0.024	3105	0.031	4038	0.044	5850	0.057	7611	0.118	14507	0.219	27563
0.39	4500	4464.4	**7405**	4464.4	**7505**	4634.1	**7605**	4634.1	**7705**	4223.2	**7805**	4329.2	**7905**
		0.021	3105	0.028	4038	0.039	5850	0.051	7611	0.106	14507	0.196	27563
0.35	5000	5033.2	**7405**	5033.2	**7505**	5224.4	**7605**	5224.4	**7705**	4734.6	**7805**	4853.5	**7905**
		0.019	3105	0.025	4038	0.035	5850	0.045	7611	0.095	14507	0.175	27563
0.31	5600	5666.5	**7405**	5666.5	**7505**	5881.8	**7605**	5881.8	**7705**	5481.6	**7805**	5619.2	**7905**
		0.017	3105	0.022	4038	0.031	5850	0.040	7611	0.082	14507	0.151	27563
0.28	6300	6233.5	**7405**	6233.5	**7505**	6470.3	**7605**	6470.3	**7705**	6019.4	**7805**	6170.5	**7905**
		0.015	3105	0.020	4038	0.028	5850	0.036	7611	0.074	14507	0.138	27563

Exact ratio	**Gear frame**
Input H.P.	Output torque

Thermal Power Rating (Pt)

Nominal Ratio	Gear Frame
	79
	Pt (hp)
3.15	-
3.55	-
4	46
4.5	46
5	46
5.6	46
6.3	46
7.1	45
8	45
9	44
10	43
11.2	43
12.5	43
14	43
16	43
18	-
20	-
22.4	-
25	-
28	-
31.5	-
35.5	-
40	-

Gear Modifications

M11 Corro-Duty
Corro-Duty gear reducers are designed for applications in food processing, chemical, poultry and any other industries that will be subjected to extreme humidity, washdown, steam, detergents and mild acids. Construction of the Corro-Duty reducer includes the normally closed breather in the gear case. The exterior of the entire unit is then painted in one of the two options chosen at order entry:

Option #1 - Corro-Duty grey
- 3 step paint system using 316 stainless steel paint
- Light grey semigloss finish
- USDA and FDA approved

Option #2 - Corro-Duty white
- 2 step paint system using epoxy paint
- White gloss finish
- USDA and FDA approved

M13 NPT Adapter
These adapters convert metric threads of breather, drain and/or oil level holes in the reducer to standard NPT threads. They are required for customer additions of site glasses, sight tubes, special breathers and other plumbing accessories. The adapter(s) is supplied loose for mounting by others.

Frame	Size	Part Number
71	N/A	N/A
72 - 79	1/4" NPFT	0436216

Face and Flanged Output
Footed flanged version available in size 71. For other sizes refer to USGM CbN Series 2000/3000 in catalog CbN-04.

Synthetic Oil
BC7000 gear reducers are supplied factory-filled with a premium synthetic oil. Refer to page 113 for complete details of lubricants.

Normally Closed Breather
A normally closed breather is standard on frames 72 through 79. This breather protects against lubricant contamination in applications with flying dust, lint or washdown.

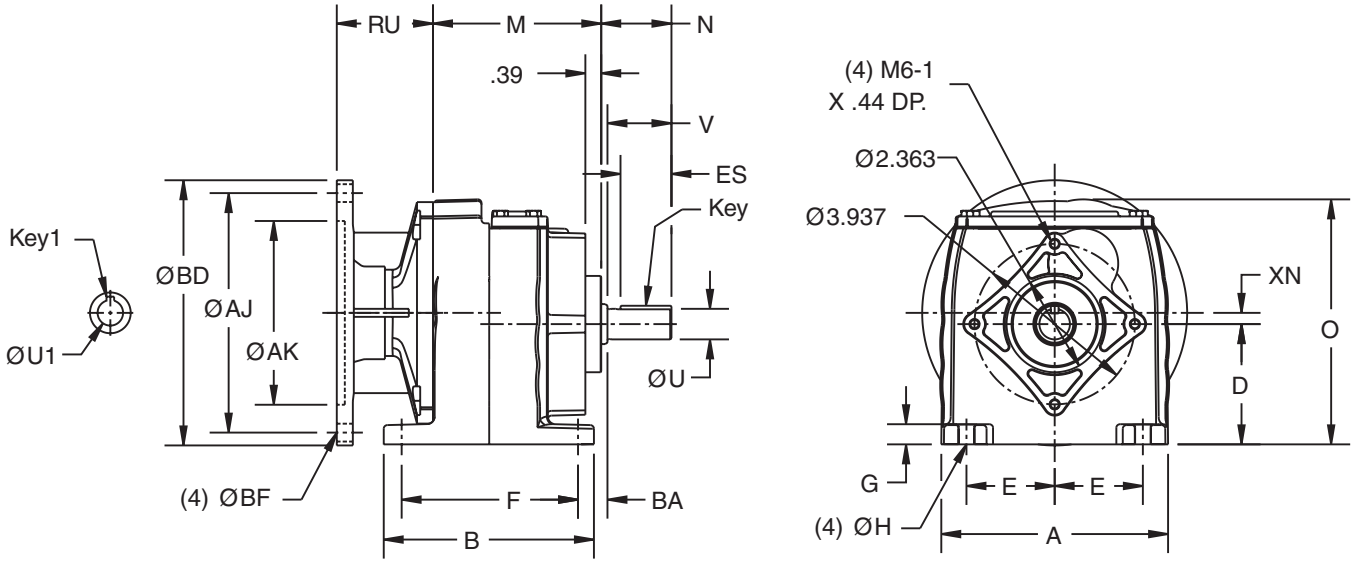
Modifications

M15 Export Boxing
Export boxing can be provided for "underdeck" transport. When the quantity of BC7000 gear reducers exceeds five(s) units, refer to the Sales Department for the most economical accommodations.

M16 Special Nameplate
Units can be provided with limited, additional special information on the standard product nameplate. When requested, a special nameplate may be provided, stamped with custom markings.

M17 Coupling Guards
For scoop series, kit includes cover, base and hardware.

Gear Frame 71 - Double Reduction

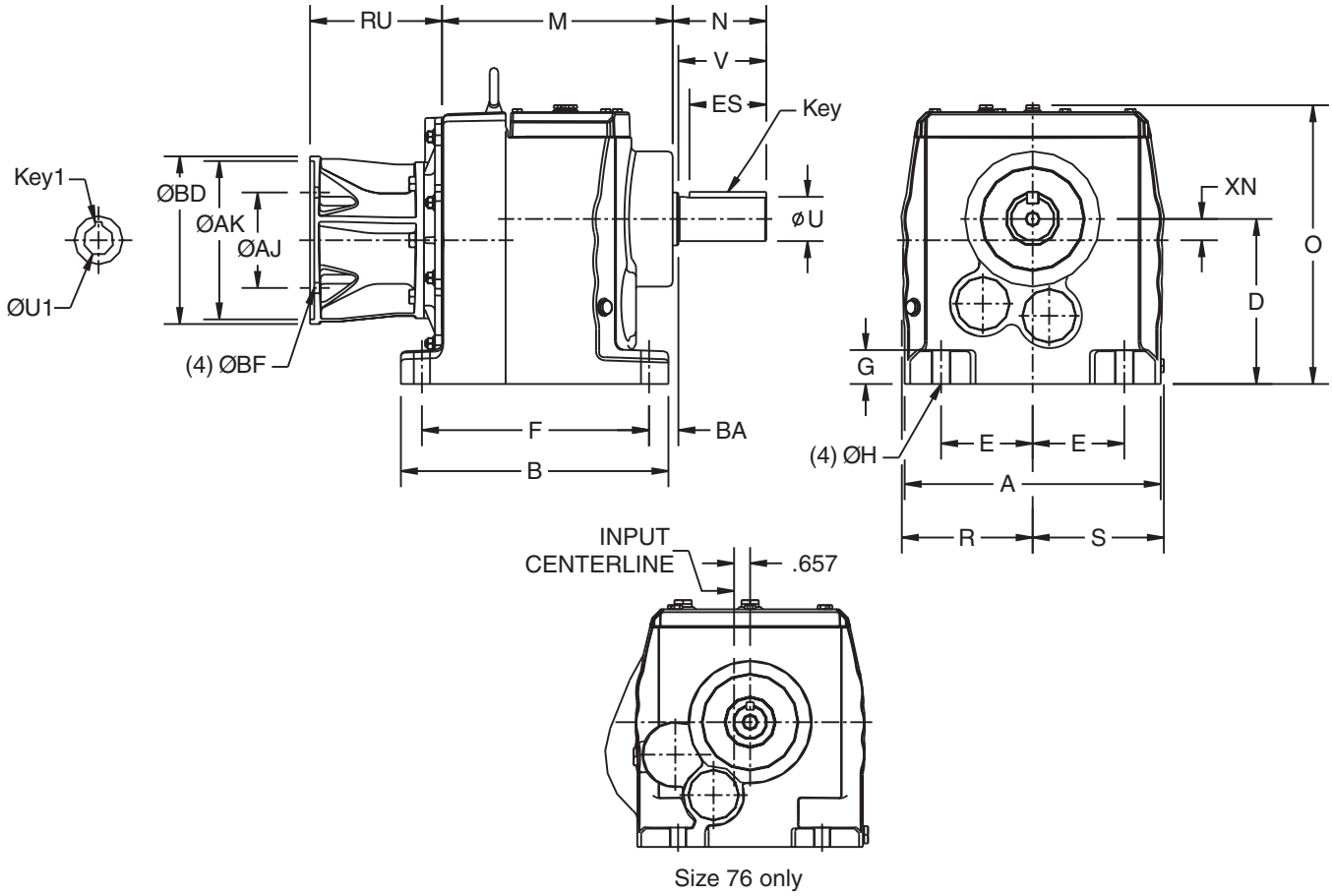


Gear Frame	A	B	D [1]	E	F	G	H	M	N	O	U [3]	V	BA	ES	XN	KEY
71	5.62	5.16	2.95	2.165	4.33	.47	.35	4.13	1.72	6.01	.750	1.57	.72	1.25	.276	3/16 Sq.

Motor Frame	AJ	AK	BD	BF	RU	U1	KEY1
56C	5.875	4.50	6.50	.44	3.33	.625	3/16 Sq.
140TC [4]	5.875	4.50	6.50	.44	3.33	.875	3/16 Sq.

[1] Dimension "D" represents the maximum value; shims up to .03" may be necessary for more precise control of this dimension.
[2] All rough casting dimensions may vary by .25" due to casting variations.
[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".
[4] Not available for ratios 31.5 to 45:1.

Gear Frames 72 - 79 - Double/Triple Reduction



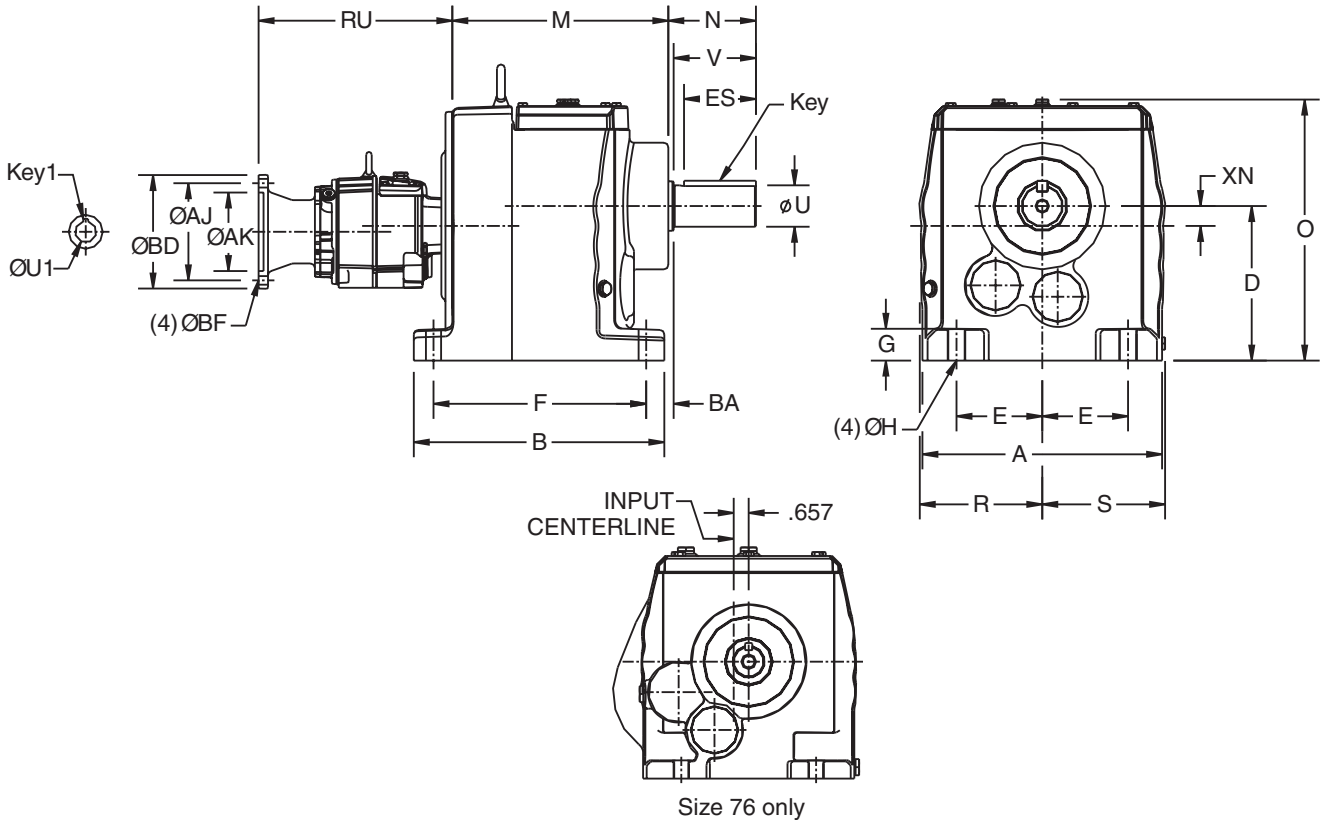
Size 76 only

Gear Frame	A	B	D [1]	E	F	G	H	M	N	O	R	S	U [3]	V	BA	ES	XN	KEY
72, 73	6.50	6.33	3.54	2.165	5.12	.63	.35	5.39	2.11	6.71	3.35	3.47	1.000	1.97	.98	1.50	.335	1/4 Sq.
74	7.63	7.68	4.53	2.655	6.50	.77	.53	6.61	2.54	8.32	4.49	4.02	1.250	2.36	1.18	2.00	.394	1/4 Sq.
75	7.63	7.68	4.53	2.655	6.50	.77	.53	6.61	2.94	8.32	4.49	4.02	1.375	2.76	1.18	2.38	.394	5/16 Sq.
76	9.26	9.05	5.12	2.955	7.68	.79	.55	7.64	2.84	10.13	5.95	4.84	1.375	2.76	1.18	2.41	N/A	5/16 Sq.
77	9.26	9.65	5.51	3.345	8.07	1.04	.69	7.86	3.36	9.74	4.81	4.81	1.625	3.15	1.38	2.80	.768	3/8 Sq.
78	11.42	11.68	7.09	4.23	10.24	1.29	.69	10.18	4.12	11.81	5.87	5.91	2.125	3.94	1.57	3.31	1.02	1/2 Sq.
79	13.75	14.37	8.86	4.92	12.20	1.81	.87	12.39	5.03	14.96	7.03	7.05	2.375	4.72	1.58	4.06	1.14	5/8 Sq.

Motor Frame	AJ	AK	BD	BF	RU							U1	Key1
					72, 73	74	75	76	77	78	79		
56C	5.875	4.50	6.50	.44	4.48	4.48	4.48	4.32	4.32	4.50	4.14	.625	3/16 Sq.
140TC	5.875	4.50	6.50	.44	4.48	4.48	4.48	4.32	4.32	4.50	4.14	.875	3/16 Sq.
180TC [4 5]	7.25	8.50	9.00	.57	6.20	6.20	6.20	6.04	6.04	6.22	5.87	1.125	1/4 Sq.
210TC [4 5]	7.25	8.50	9.00	.57	-	6.20	6.20	6.04	6.04	6.22	5.87	1.375	5/16 Sq.
250TC [4 5]	7.25	8.50	9.00	.57	-	-	-	6.67	6.67	7.43	7.09	1.625	3/8 Sq.
280TC [4 5]	9.00	10.50	11.25	.57	-	-	-	-	-	8.40	8.06	1.875	1/2 Sq.
320TC [4 5]	11.00	12.50	13.38	.69	-	-	-	-	-	-	8.79	2.125	1/2 Sq.

[1] Dimension "D" represents the maximum value; shims up to .03" may be necessary for more precise control of this dimension.
[2] All rough casting dimensions may vary by .25" due to casting variations.
[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".
[4] Use foot mounted motor, utilizing separate support of motor feet for these gear and motor frames: 72 - 73 180TC, 74 - 75 210TC, 76 - 77 250TC, 78 280TC and 79 320TC.
[5] Not available in all ratios for all gear frames and motor frames.

Gear Frames 74 - 79 - Combined Reduction



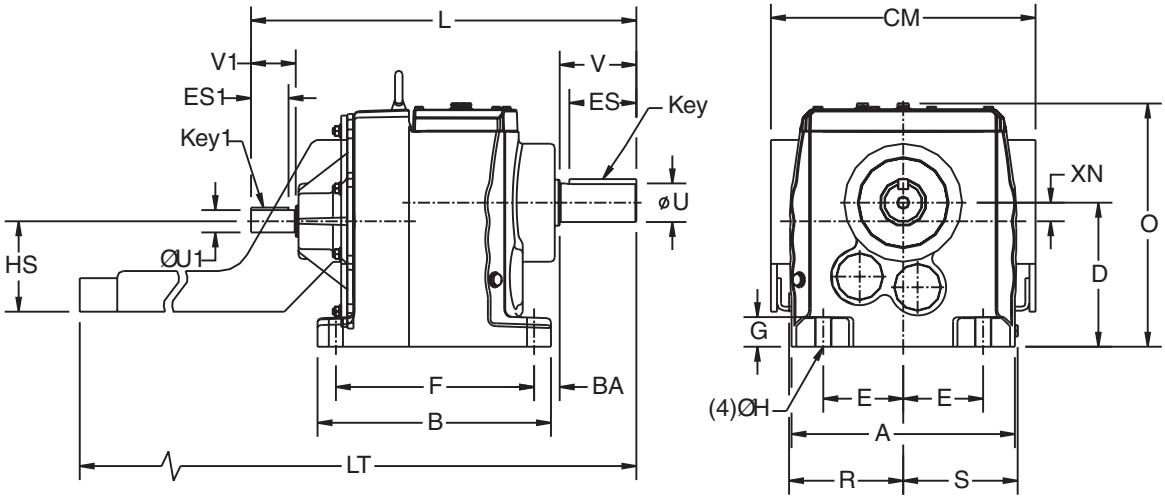
Size 76 only

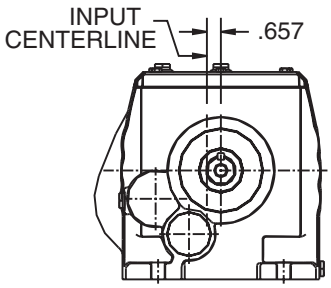
Gear Frame	A	B	D [1]	E	F	G	H	M	N	O	R	S	U [3]	V	BA	ES	XN	KEY
74	7.63	7.68	4.53	2.655	6.50	.77	.53	6.61	2.54	8.32	4.49	4.02	1.250	2.36	1.18	2.00	.118	1/4 Sq.
75	7.63	7.68	4.53	2.655	6.50	.77	.53	6.61	2.94	8.32	4.49	4.02	1.375	2.76	1.18	2.38	.118	5/16 Sq.
76	9.26	9.05	5.12	2.955	7.68	.79	.55	7.64	2.84	10.13	5.95	4.84	1.375	2.76	1.18	2.41	.276	5/16 Sq.
77	9.26	9.65	5.51	3.345	8.07	1.04	.69	7.86	3.36	9.74	4.81	4.81	1.625	3.15	1.38	2.80	.492	3/8 Sq.
78	11.42	11.68	7.09	4.23	10.24	1.29	.69	10.18	4.12	11.81	5.87	5.91	2.125	3.94	1.57	3.31	1.355	1/2 Sq.
79	13.75	14.37	8.86	4.92	12.20	1.81	.87	12.39	5.03	14.96	7.03	7.05	2.375	4.72	1.58	4.06	1.475	5/8 Sq.

Motor Frame	AJ	AK	BD	BF	RU						U1	Key1
					74	75	76	77	78	79		
56C	5.875	4.50	6.50	.44	7.79	7.79	7.62	7.62	11.47	11.11	.625	3/16 Sq.
140TC	5.875	4.50	6.50	.44	7.79	7.79	7.62	7.62	11.47	11.11	.875	3/16 Sq.
180TC [4] [5]	7.25	8.50	9.00	.57	-	-	-	-	-	12.83	1.125	1/4 Sq.

[1] Dimension "D" represents the maximum value; shims up to .03" may be necessary for more precise control of this dimension.
[2] All rough casting dimensions may vary by .25" due to casting variations.
[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".
[4] Gear frame 79 with 180TC input is not available for 1000:1 to 1400:1 or 5600:1 to 6300:1.
[5] Use foot mounted motor, utilizing separate support of motor feet for this motor frame.

Gear Frames 74 - 79 - Double/Triple Reduction





Size 76 only

Gear Frame	A	B	D [1]	E	F	G	H	L	O	R	S	U [3]	U1 [3]	V	V1	BA	ES	ES1	XN	KEY	KEY1
74	7.63	7.68	4.53	2.655	6.50	.77	.53	12.32	8.32	4.49	4.02	1.250	.625	2.36	1.25	1.18	2.00	1.00	.394	1/4 Sq.	3/16 Sq.
75	7.63	7.68	4.53	2.655	6.50	.77	.53	12.72	8.32	4.49	4.02	1.375	.625	2.76	1.25	1.18	2.38	1.00	.394	5/16 Sq.	3/16 Sq.
76	9.26	9.05	5.12	2.955	7.68	.79	.55	15.23	10.13	5.95	4.84	1.375	1.125	2.76	2.25	1.18	2.41	1.94	N/A	5/16 Sq.	1/4 Sq.
77	9.26	9.65	5.51	3.345	8.07	1.04	.69	15.97	9.74	4.81	4.81	1.625	1.125	3.15	2.25	1.38	2.80	1.94	.768	3/8 Sq.	1/4 Sq.
78	11.42	11.68	7.09	4.23	10.24	1.29	.69	19.33	11.81	5.87	5.91	2.125	1.125	3.94	2.25	1.57	3.31	1.94	1.02	1/2 Sq.	1/4 Sq.
79	13.75	14.37	8.86	4.92	12.20	1.81	.87	23.72	14.96	7.03	7.05	2.375	1.375	4.72	2.75	1.58	4.06	2.31	1.14	5/8 Sq.	5/16 Sq.

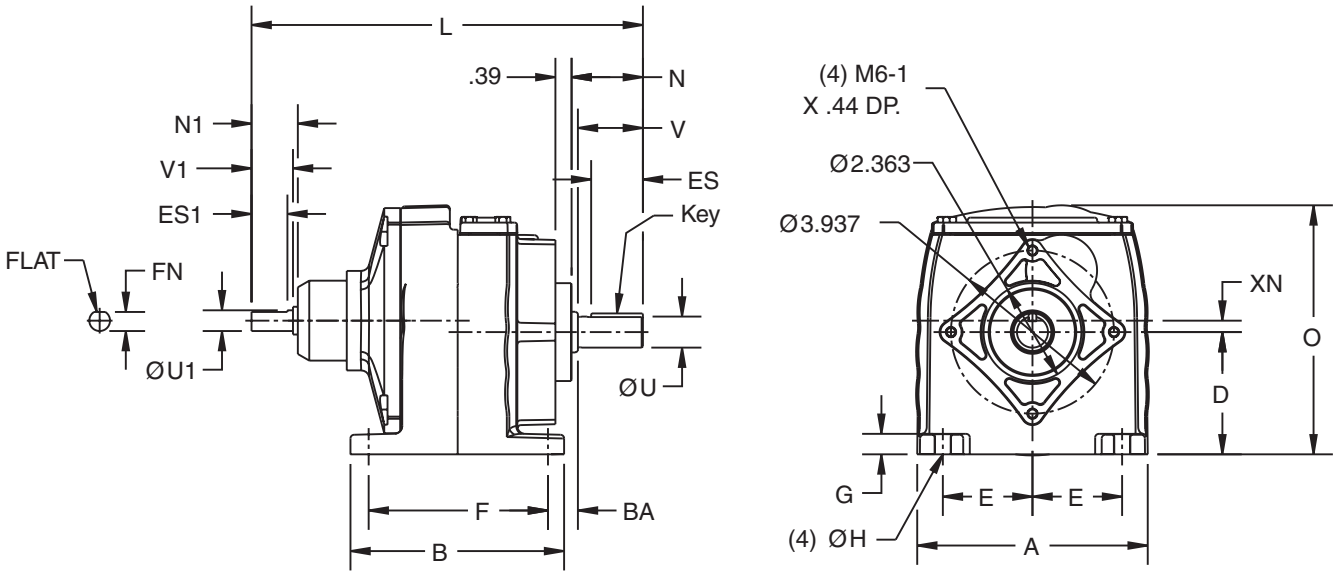
Gear Frame	Scoop Size	Motor Frame														
		56, 145T			182/184T			213/215T			254/256T			284/286T		
		CM	HS	LT	CM	HS	LT	CM	HS	LT	CM	HS	LT	CM	HS	LT
74	0	11.38	3.75	27.43	-	-	-	-	-	-	-	-	-	-	-	-
75	0	11.38	3.75	27.83	-	-	-	-	-	-	-	-	-	-	-	-
76	1	12.38	4.74	36.27	12.38	4.74	36.83	-	-	-	-	-	-	-	-	-
77	1	12.38	4.74	37.01	12.38	4.74	37.57	-	-	-	-	-	-	-	-	-
78	2	12.75	5.56	40.96	12.75	5.56	39.96	12.75	5.56	40.33	-	-	-	-	-	-
79	2	12.75	5.56	45.34	12.75	5.56	44.34	12.75	5.56	44.80	-	-	-	-	-	-
79	4	-	-	-	-	-	-	17.00	7.44	48.17	17.00	7.44	49.09	17.00	7.44	49.22

[1] Dimension "D" represents the maximum value; shims up to .03" may be necessary for more precise control of this dimension.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

Gear Frame 71 - Double Reduction



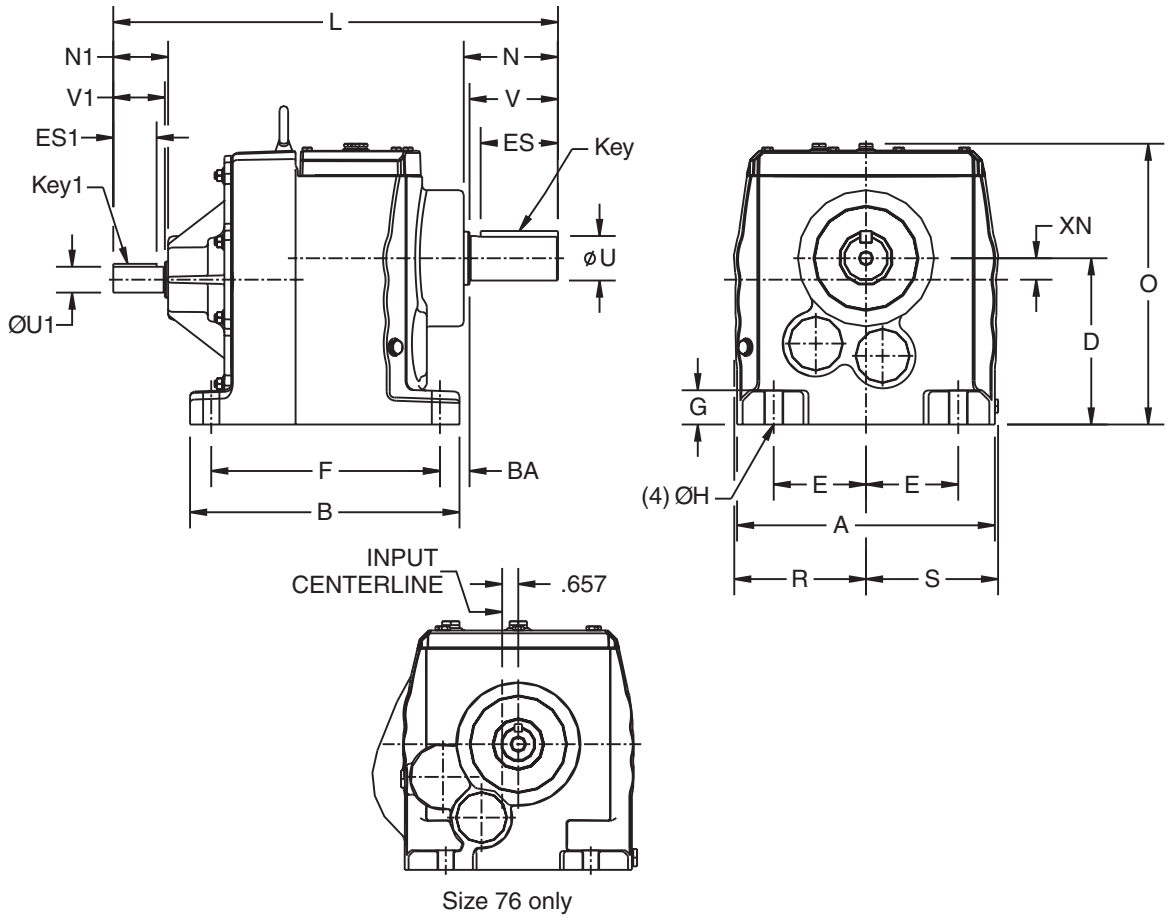
Gear Frame	A	B	D [1]	E	F	G	H	L	N	N1	O
71	5.62	5.16	2.95	2.165	4.33	.47	.35	9.45	1.72	1.12	6.01

Gear Frame	U [3]	U1 [3]	V	V1	BA	ES	ES1	FN	XN	Key
71	.750	.500	1.57	1.00	.72	1.25	.87	.455	.276	3/16 Sq.

[1] Dimension "D" represents the maximum value; shims up to .03" may be necessary for more precise control of this dimension.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".



Size 76 only

Gear Frame	A	B	D [1]	E	F	G	H	L	N	N1	O	R	S
72, 73	6.50	6.33	3.54	2.165	5.12	.63	.35	10.68	2.11	1.29	6.71	3.35	3.47
74	7.63	7.68	4.53	2.655	6.50	.77	.53	12.32	2.54	1.29	8.32	4.49	4.02
75	7.63	7.68	4.53	2.655	6.50	.77	.53	12.72	2.94	1.29	8.32	4.49	4.02
76	9.26	9.05	5.12	2.955	7.68	.79	.55	15.23	2.84	2.31	10.13	5.95	4.84
77	9.26	9.65	5.51	3.345	8.07	1.04	.69	15.97	3.36	2.31	9.74	4.81	4.81
78	11.42	11.68	7.09	4.23	10.24	1.29	.69	19.33	4.12	2.37	11.81	5.87	5.91
79	13.75	14.37	8.86	4.92	12.20	1.81	.87	23.72	5.03	2.92	14.96	7.03	7.05

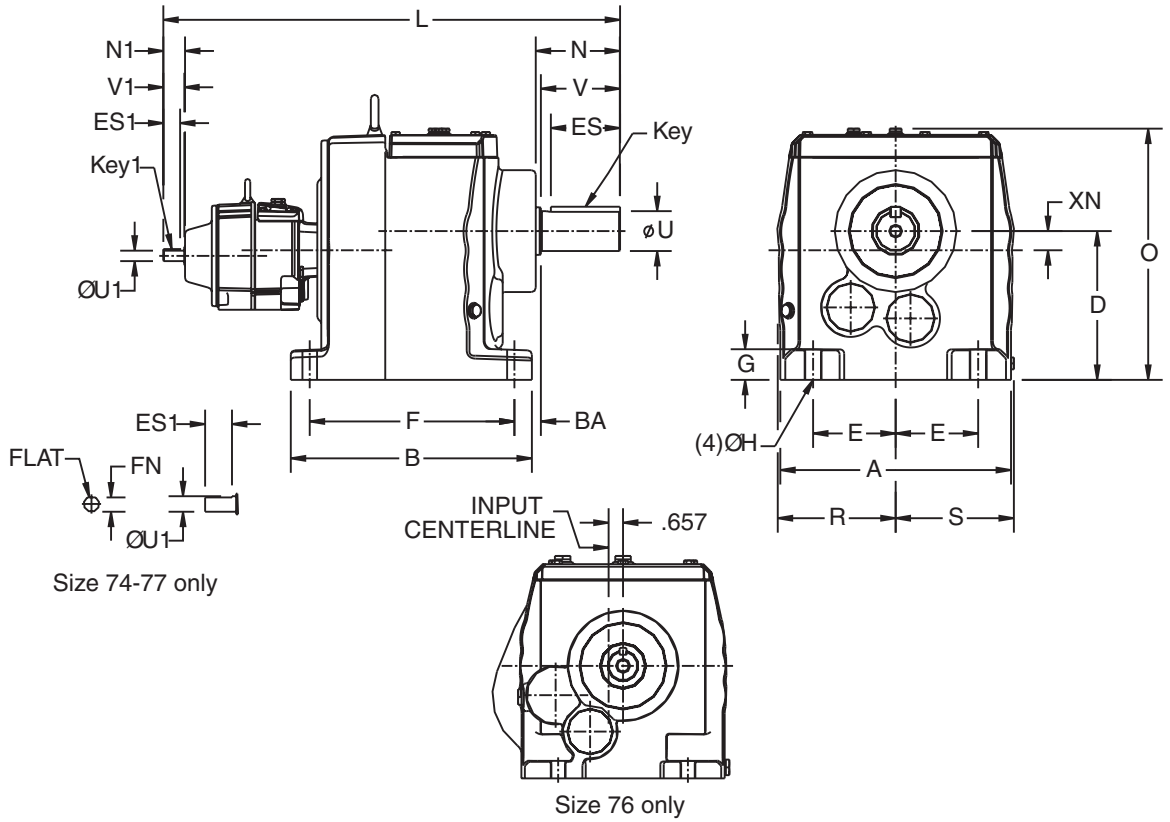
Gear Frame	U [3]	U1 [3]	V	V1	BA	ES	ES1	XN	Key	Key1
72, 73	1.000	.625	1.97	1.25	.98	1.50	1.00	.335	1/4 Sq.	3/16 Sq.
74	1.250	.625	2.36	1.25	1.18	2.00	1.00	.394	1/4 Sq.	3/16 Sq.
75	1.375	.625	2.76	1.25	1.18	2.38	1.00	.394	5/16 Sq.	3/16 Sq.
76	1.375	1.125	2.76	2.25	1.18	2.41	1.94	N/A	5/16 Sq.	1/4 Sq.
77	1.625	1.125	3.15	2.25	1.38	2.80	1.94	.768	3/8 Sq.	1/4 Sq.
78	2.125	1.125	3.94	2.25	1.57	3.31	1.94	1.02	1/2 Sq.	1/4 Sq.
79	2.375	1.375	4.72	2.75	1.58	4.06	2.31	1.14	5/8 Sq.	5/16 Sq.

[1] Dimension "D" represents the maximum value; shims up to .03" may be necessary for more precise control of this dimension.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

Gear Frames 74 - 79 - Combined Reduction



Gear Frame	A	B	D [1]	E	F	G	H	L	N	N1	O	R	S
74	7.63	7.68	4.53	2.655	6.50	.77	.53	17.20	2.54	1.12	8.32	4.49	4.02
75	7.63	7.68	4.53	2.655	6.50	.77	.53	17.60	2.94	1.12	8.32	4.49	4.02
76	9.26	9.05	5.12	2.955	7.68	.79	.55	18.53	2.84	1.12	10.13	5.95	4.84
77	9.26	9.65	5.51	3.345	8.07	1.04	.69	19.11	3.36	1.12	9.74	4.81	4.81
78	11.42	11.68	7.09	4.23	10.24	1.29	.69	24.46	4.12	1.29	11.81	5.87	5.91
79	13.75	14.37	8.86	4.92	12.20	1.81	.87	27.22	5.03	1.29	14.96	7.03	7.05

Gear Frame	U [3]	U1 [3]	V	V1	BA	ES	ES1	FN	XN	Key	Key1
74	1.250	.500	2.36	1.00	1.18	2.00	.87	.46	.118	1/4 Sq.	N/A
75	1.375	.500	2.76	1.00	1.18	2.38	.87	.46	.118	5/16 Sq.	N/A
76	1.375	.500	2.76	1.00	1.18	2.41	.87	.46	.276	5/16 Sq.	N/A
77	1.625	.500	3.15	1.00	1.38	2.80	.87	.46	.492	3/8 Sq.	N/A
78	2.125	.625	3.94	1.25	1.57	3.31	1.00	N/A	1.355	1/2 Sq.	3/16 Sq.
79	2.375	.625	4.72	1.25	1.58	4.06	1.00	N/A	1.475	5/8 Sq.	3/16 Sq.

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

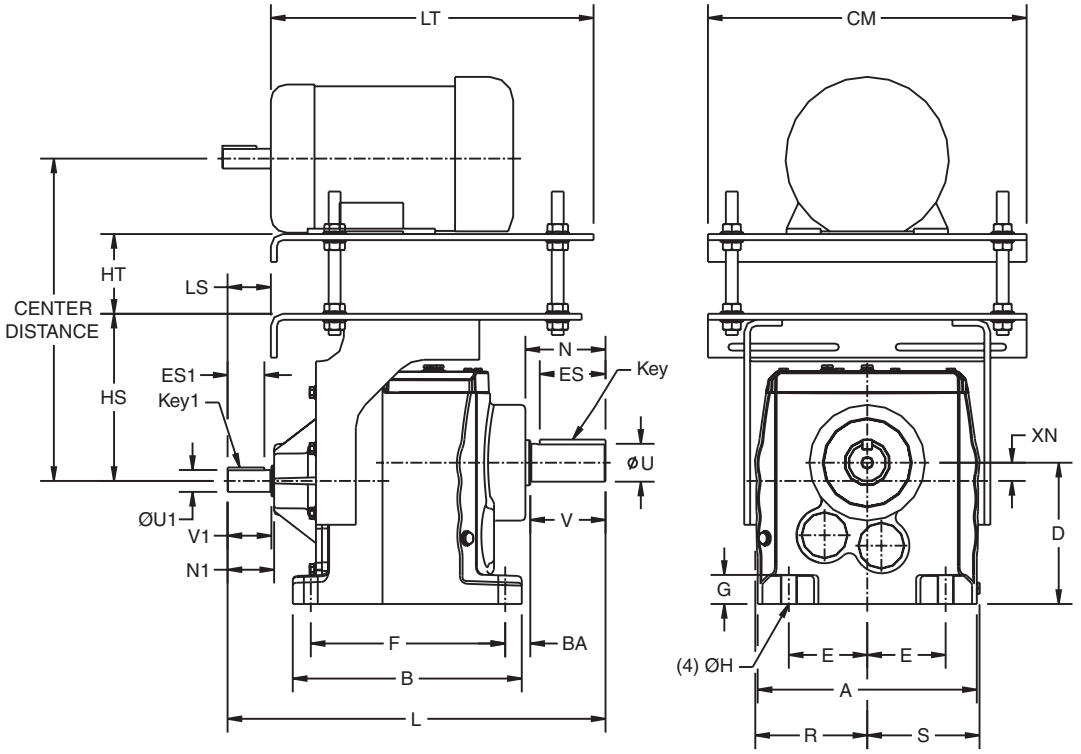
[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

Browning®

Top Mount Reducer

Gear Frames 74 - 79 - Double/Triple Reduction

Concentric SERIES 7000



Gear Frame	A	B	D [1]	E	F	G	H	L	N	N1	R	S	U [3]	U1 [3]
74	7.63	7.68	4.53	2.655	6.50	.77	.53	12.32	2.54	1.29	4.49	4.02	1.250	.625
75	7.63	7.68	4.53	2.655	6.50	.77	.53	12.72	2.94	1.29	4.49	4.02	1.375	.625
77	9.26	9.65	5.51	3.345	8.07	1.04	.69	15.97	3.36	2.31	4.81	4.81	1.625	1.125
78	11.42	11.68	7.09	4.23	10.24	1.29	.69	19.33	4.12	2.37	5.87	5.91	2.125	1.125
79	13.75	14.37	8.86	4.92	12.20	1.81	.87	23.72	5.03	2.92	7.03	7.05	2.375	1.375

Gear Frame	V	V1	BA	ES	ES1	CM	HS	HT		LS	LT	XN	KEY	KEY1
								Min.	Max.					
74	2.36	1.25	1.18	2.00	1.00	16.50	7.14	1.64	7.61	1.29	15.50	.394	1/4 Sq.	3/16 Sq.
75	2.76	1.25	1.18	2.38	1.00	16.50	7.14	1.64	7.61	1.29	15.50	.394	5/16 Sq.	3/16 Sq.
77	3.15	2.25	1.38	2.80	1.94	16.50	7.17	1.64	7.61	2.31	15.50	.768	3/8 Sq.	1/4 Sq.
78	3.94	2.25	1.57	3.31	1.94	16.50	8.48	1.89	7.36	2.35	15.50	1.02	1/2 Sq.	1/4 Sq.
79	4.72	2.75	1.58	4.06	2.31	20.00	10.48	1.89	7.36	2.72	20.25	1.14	5/8 Sq.	5/16 Sq.

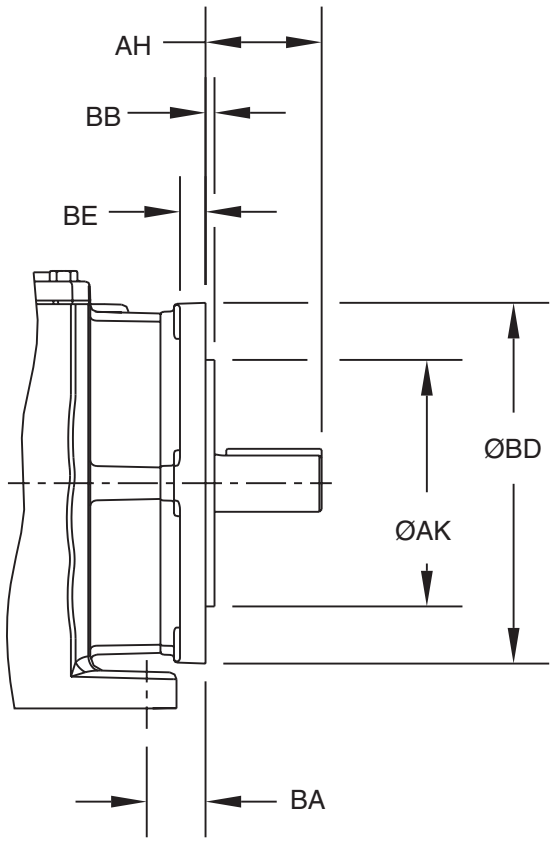
Motor Frame	Center Distance				Center Distance			
	74, 75		77		78		79	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
56	12.28	18.25	12.31	18.28	13.87	19.34	-	-
143T, 145T	12.28	18.25	12.31	18.28	13.87	19.34	15.87	21.34
182T, 184T	13.28	19.25	13.31	19.28	14.87	20.34	16.87	22.34
213T, 215T	-	-	14.06	20.03	15.62	21.09	17.62	23.09
254T, 256T	-	-	-	-	16.62	22.09	18.62	24.09
284T, 286T	-	-	-	-	-	-	19.37	24.84

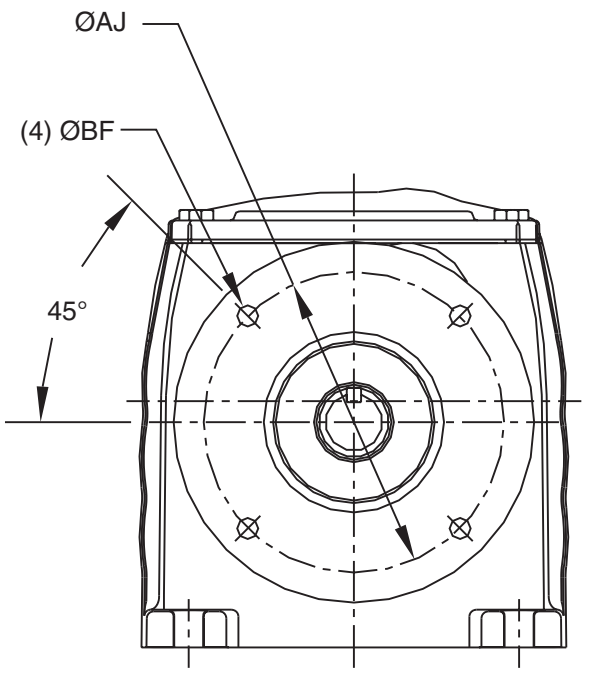
[1] Dimension "D" represents the maximum value; shims up to .03" may be necessary for more precise control of this dimension.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

Gear Frame 71 Flange Dimensions





Flange Type	AH	AJ	AK	BA	BB	BD	BE	BF
BD1	1.52	3.94	3.15	.65	.12	4.72	.28	.28
BS	1.52	4.53	3.74	.65	.12	5.51	.31	.35

[2] All rough casting dimensions may vary by .25" due to casting variations.

Product Weights (Lbs.)

Foot Mounted Multiple Reduction

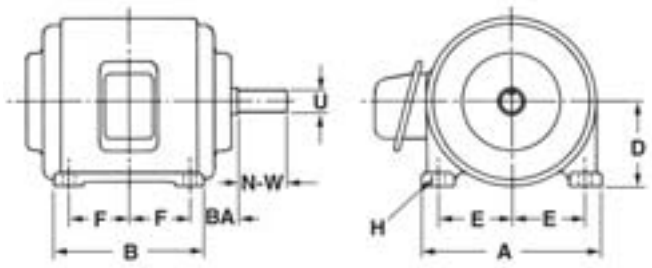
C-Face Reducers

Gear Frame	Stages	Input Size				
		56/140TC	180/210TC	250TC	280TC	320TC
71	2	21	-	-	-	-
72	2,3	47	58	-	-	-
73	2,3	47	58	-	-	-
74	2,3	54	63	-	-	-
	4,5	60	-	-	-	-
75	2,3	54	63	-	-	-
	4,5	60	-	-	-	-
76	2,3	85	94	101	-	-
	4,5	90	-	-	-	-
77	2,3	85	94	101	-	-
	4,5	90	-	-	-	-
78	2,3	93	95	98	100	-
	4,5	130	-	-	-	-
79	2,3	160	163	166	168	178
	4,5	197	205	-	-	-

Input Shaft

Gear Frame	Stages	Style		
		AP	Scoop	Top Mt.
71	2	19	-	-
72	2,3	39	-	-
73	2,3	39	-	-
74	2,3	47	72	94
	4,5	52	-	-
75	2,3	47	72	94
	4,5	52	-	-
76	2,3	80	113	-
	4,5	85	-	-
77	2,3	82	115	129
	4,5	87	-	-
78	2,3	103	155	173
	4,5	153	-	-
79	2,3	201	253	175
	4,5	238	-	-

A Guide to NEMA Motor Frames and Shaft Dimensions



Motor ratings and dimensions shown in Table No. 1, below, are for general purpose motors as indicated. Frames for the 1952 - 1953 and the 1964 rerates are shown. All dimensions are subject to change without notice. Those shown are intended as a guide only. Certified dimension drawings from the motor manufacturer should be used.

Table No. 1 **Specifications**

Frame No.	Dimensions									Keyseat		Key Length	HP for Various Motor RPM			
	A Max.	B Max.	D	E	F	H	BA	N-W	U	Width	Depth		3600	1800	1200	900
Fractional Horsepower Motors																
48	5 3/8"	3 1/2"	3"	2 1/8"	1 3/8"	11/32 "s ▲	2 1/2"	1 1/2"	1/2"	Flat	3/64"	-	1/8-1/2	1/8-1/3	1/6	-
56	6 1/2	4 1/2	3 1/2	2 7/16	1 1/2	11/32 ▲	2 3/4	17/8	5/8	3/16"	3/32	1 3/8"	3/4-1	1/3-1	1/8-1/2	-
1952-53 Rerate -- Designs A, B and C -- Open Type -- Squirrel Cage -- Integral H.P. Motors																
182	9	6 1/2	4 1/2	3 3/4	2 1/4	13/32	2 3/4	2 1/4	7/8	3/16	3/32	1 3/8	1 1/2	1	3/4	1/2
184	9	7 1/2	4 1/2	3 3/4	2 3/4	13/32	2 3/4	2 1/4	7/8	3/16	3/32	1 3/8	3,2	2,1 1/2	1 1/2,1	3/4
213	10 1/2	7 1/2	5 1/4	4 1/4	2 3/4	13/32	3 1/2	3	1 1/8	1/4	1/8	2	5	3	2	1 1/2,1
215	10 1/2	9	5 1/4	4 1/4	3 1/2	13/32	3 1/2	3	1 1/8	1/4	1/8	2	7 1/2	5	3	2
254U	12 1/2	10 3/4	6 1/4	5	4 1/8	17/32	4 1/4	3 3/4	1 3/8	5/16	5/32	2 3/4	10	7 1/2	5	3
256U	12 1/2	12 1/2	6 1/4	5	5	17/32	4 1/4	3 3/4	1 3/8	5/16	5/32	2 3/4	15	10	7 1/2	5
284U	14	12 1/2	7	5 1/2	4 3/4	17/32	4 3/4	4 7/8	1 5/8	3/8	3/16	3 3/4	20	15	10	7 1/2
286U	14	14	7	5 1/2	5 1/2	17/32	4 3/4	4 7/8	1 5/8	3/8	3/16	3 3/4	25	20	-	10
324U	16	14	8	6 1/4	5 1/4	21/32	5 1/4	5 5/8	1 7/8	1/2	1/4	4 1/4	-	25	15	-
324S*	16	14	8	6 1/4	5 1/4	21/32	5 1/4	3 1/4	1 5/8	3/8	3/16	1 7/8	30	-	-	-
326U	16	15 1/2	8	6 1/4	6	21/32	5 1/4	5 5/8	1 7/8	1/2	1/4	4 1/4	-	30	20	15
326S*	16	15 1/2	8	6 1/4	6	21/32	5 1/4	3 1/4	1 5/8	3/8	3/16	1 7/8	40	-	-	-
364U	18	15 1/4	9	7	5 5/8	21/32	5 7/8	6 3/8	2 1/8	1/2	1/4	5	-	40	25	20
364US*	18	15 1/4	9	7	5 5/8	21/32	5 7/8	3 3/4	1 7/8	1/2	1/4	2	50	-	-	-
365U	18	16 1/4	9	7	6 1/8	21/32	5 7/8	6 3/8	2 1/8	1/2	1/4	5	-	-	30	25
365US*	18	16 1/4	9	7	6 1/8	21/32	5 7/8	3 3/4	1 7/8	1/2	1/4	2	60	50	-	-
404U	20	16 1/4	10	8	6 1/8	13/16	6 5/8	7 1/8	2 3/8	5/8	5/16	5 1/2	-	-	40	30
404US*	20	16 1/4	10	8	6 1/8	13/16	6 5/8	4 1/4	2 1/8	1/2	1/4	2 3/4	75	60	-	-
405U	20	17 3/4	10	8	6 7/8	13/16	6 5/8	7 1/8	2 3/8	5/8	5/16	5 1/2	-	-	50	40
405US*	20	17 3/4	10	8	6 7/8	13/16	6 5/8	4 1/4	2 1/8	1/2	1/4	2 3/4	100	75	-	-
444U	22	1	11	9	7 1/4	13/16	7 1/2	8 5/8	2 3/8	3/4	3/8	7	-	-	60	50
444US*	22	18 1/2	11	9	7 1/4	13/16	7 1/2	4 1/4	2 1/8	1/2	1/4	2 3/4	125	100	-	-
445U	22	20 1/2	11	9	8 1/4	13/16	7 1/2	8 5/8	2 3/8	3/4	3/8	7	-	-	75	60
445US*	22	20 1/2	11	9	8 1/4	13/16	7 1/2	4 1/4	2 1/8	1/2	1/4	2 3/4	150	125	-	-
1964 Rerate -- Designs A, B and C -- Open Type -- Squirrel Cage -- Integral H.P. Motors																
H143T	7	6	3 1/2	2 3/4	2	11/32	2 1/4	2 1/4	7/8	3/16	3/32	1 3/8	1 1/2	1	3/4	1/2
H145T	7	6	3 1/2	2 3/4	2 1/4	11/32	2 1/4	2 1/4	7/8	3/16	3/32	1 3/8	-	1 1/2	1	3/4
K145T	7	6	3 1/2	2 3/4	2 1/2	11/32	2 1/4	2 1/4	7/8	3/16	3/32	1 3/8	3,2	2	-	-
182T	9	6 1/2	4 1/2	3 3/4	2 1/4	13/32	2 3/4	2 3/4	1 1/8	1/4	1/8	1 3/4	5	3	1 1/2	1
184T	9	7 1/2	4 1/2	3 3/4	2 3/4	13/32	2 3/4	2 3/4	1 1/8	1/4	1/8	1 3/4	7 1/2	5	2	1 1/2
213T	10 1/2	7 1/2	5 1/4	4 1/4	2 3/4	13/32	3 1/2	33/8	1 3/8	5/16	5/32	2 3/8	10	7 1/2	3	2
215T	10 1/2	9	5 1/4	4 1/4	3 1/2	13/32	3 1/2	33/8	1 3/8	5/16	5/32	2 3/8	15	10	5	3
254T	12 1/2	10 3/4	6 1/4	5	41/8	17/32	4 1/4	4	1 5/8	3/8	3/16	2 7/8	20	15	7 1/2	5
256T	12 1/2	12 1/2	6 1/4	5	5	17/32	4 1/4	4	1 5/8	3/8	3/16	2 7/8	25	20	10	7 1/2
284T	14	12 1/2	7	5 1/2	4 3/4	17/32	4 3/4	4 5/8	1 7/8	1/2	1/4	3 1/4	-	25	15	10
284TS*	14	12 1/2	7	5 1/2	4 3/4	17/32	4 3/4	3 1/4	1 5/8	3/8	3/16	1 7/8	30	-	-	-
286T	14	14	7	5 1/2	5 1/2	17/32	4 3/4	4 5/8	1 7/8	1/2	1/4	3 1/4	-	30	20	15
286TS*	14	14	7	5 1/2	5 1/2	17/32	4 3/4	3 1/4	1 5/8	3/8	3/16	1 7/8	40	-	-	-
324T	16	14	8	6 1/4	5 1/4	21/32	5 1/4	5 1/4	2 1/8	1/2	1/4	3 7/8	-	40	25	20
324TS*	16	14	8	6 1/4	5 1/4	21/32	5 1/4	3 3/4	1 7/8	1/2	1/4	2	50	-	-	-
326T	16	15 1/2	8	6 1/4	6	21/32	5 1/4	5 1/4	2 1/8	1/2	1/4	3 7/8	-	50	30	25
326TS*	16	15 1/2	8	6 1/4	6	21/32	5 1/4	3 3/4	1 7/8	1/2	1/4	2	60	-	-	-
364T	18	15 1/4	9	7	5 5/8	21/32	5 7/8	5 7/8	2 3/8	5/8	5/16	4 1/4	-	60	40	30
364TS*	18	15 1/4	9	7	5 5/8	21/32	5 7/8	3 3/4	1 7/8	1/2	1/4	2	75	-	-	-
365T	18	16 1/4	9	7	6 1/8	21/32	5 7/8	5 7/8	2 3/8	5/8	5/16	4 1/4	-	75	50	40
365TS*	18	16 1/4	9	7	6 1/8	21/32	5 7/8	3 3/4	1 7/8	1/2	1/4	2	100	-	-	-
404T	20	16 1/4	10	8	6 1/8	13/16	6 5/8	7 1/4	2 7/8	3/4	3/8	5 5/8	-	100	60	50
404TS*	20	16 1/4	10	8	6 1/8	13/16	6 5/8	4 1/4	2 1/8	1/2	1/4	2 3/4	125	-	-	-
405T	20	17 3/4	10	8	6 7/8	13/16	6 5/8	7 1/4	2 7/8	3/4	3/8	5 5/8	-	125	75	60
405TS*	20	17 3/4	10	8	6 7/8	13/16	6 5/8	4 1/4	2 1/8	1/2	1/4	2 3/4	150	-	-	-
444T	22	18 1/2	11	9	7 1/4	13/16	7 1/2	8 1/2	3 3/8	7/8	7/16	6 7/8	-	-	100	75
444TS*	22	18 1/2	11	9	7 1/4	13/16	7 1/2	4 3/4	2 3/8	5/8	5/16	3	200	150	-	-
445T	22	20 1/2	11	9	8 1/4	13/16	7 1/2	8 1/2	3 3/8	7/8	7/16	6 7/8	-	-	125	100
445TS*	22	20 1/2	11	9	8 1/4	13/16	7 1/2	4 3/4	2 3/8	5/8	5/16	3	250	200	-	-

* These motors are for direct coupled service only.
▲ Slots.

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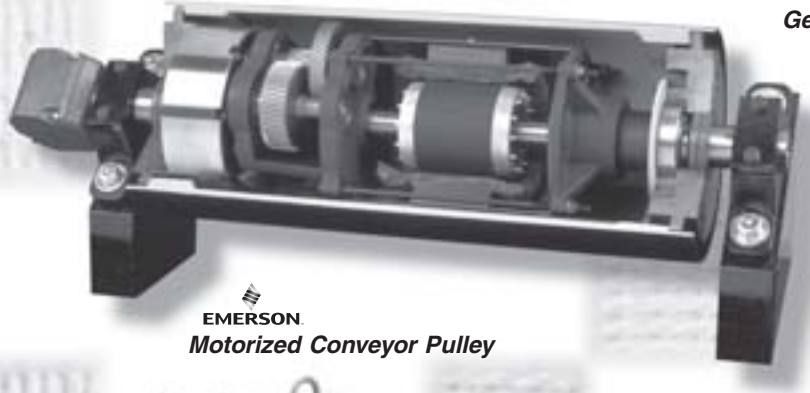

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- Emerson motors and controls
- Browning belt drives and accessories
- Morse® clutches and chain drives
- Kop-Flex® couplings
- Sealmaster® bearings

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All sales are made on our STANDARD TERMS AND CONDITIONS OF SALE in effect at the time a customer's order is accepted. The current Terms and Conditions are set forth below:

STANDARD TERMS AND CONDITIONS OF SALE (August 15, 2001)

These Terms and Conditions, the attendant quotation or acknowledgment and all documents incorporated by specific reference therein, will be the complete and exclusive statement of the terms of the agreement governing the sale of goods ("Goods") by **Emerson Power Transmission Corporation** and its divisions and subsidiaries ("Seller") to Customer ("Buyer"). Buyer's acceptance of the Goods will manifest Buyer's assent to these Terms and Conditions. If these Terms and Conditions differ in any way from the terms and conditions of Buyer's order, or other documentation, this document will be construed as a counteroffer and will not be deemed an acceptance of Buyer's terms and conditions which conflict herewith.

1. PRICES: Unless otherwise specified in writing by Seller, Seller's price for the goods shall remain in effect for thirty (30) days after the date of Seller's quotation or acknowledgment of Buyer's order for the Goods, whichever occurs first, provided an unconditional, complete authorization for the immediate shipment of the Goods is received and accepted by Seller within such time period. If such authorization is not received by Seller within such thirty (30) day period, Seller shall have the right to change the price for the Good to Seller's price for the Goods at the time of shipment.

2. TAXES: Any tax or governmental charge or increase in same hereafter becoming effective increasing the cost to Seller of producing, selling or delivering the Goods or of procuring material used therein, and any tax now in effect or increase in same payable by the Seller because of the manufacture, sale or delivery of the Goods, may at Seller's option, be added to the price.

3. TERMS OF PAYMENT: Subject to the approval of Seller's Credit Department, terms are net thirty (30) days from date of Seller's invoice in U.S. currency. If any payment owed to Seller is not paid when due, it shall bear interest, at a rate to be determined by Seller, which shall not exceed the maximum rate permitted by law, from the date on which it is due until it is paid. Seller shall have the right, among other remedies, either to terminate the Agreement or to suspend further performance under this and/or other agreements with Buyer in the event Buyer fails to make any payment when due. Buyer shall be liable for all expenses, including attorneys' fees, relating to the collection of past due amounts.

4. SHIPMENT AND DELIVERY: Shipments are made F.O.B. Seller's shipping point. Any claims for shortages or damages suffered in transit shall be submitted by the Buyer directly to the carrier. While Seller will use all reasonable commercial efforts to maintain the delivery date acknowledged or quoted by Seller, all shipping dates are approximate. Seller reserves the right to make partial shipments and to segregate "specials" and made-to-order Goods from normal stock Goods. Seller shall not be bound to tender delivery of any Goods for which Buyer has not provided shipping instructions.

5. QUANTITY: Buyer agrees to accept overruns of up to ten percent (10%) of the order on "made-to-order" Goods, including parts. Any such additional items shall be priced at the price per item charged for the specific quantity ordered.

6. LIMITED WARRANTY: Subject to the limitations of Section 7, Seller warrants that the Goods will be free from defects in material and workmanship under normal use, service and maintenance for a period of one year (unless otherwise specified by Seller in writing) from the date of shipment of the Goods by Seller. **THIS IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY SELLER WITH RESPECT TO THE GOODS AND IS IN LIEU OF AND EXCLUDES ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, ARISING BY OPERATION OF LAW OR OTHERWISE, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WHETHER OR NOT THE PURPOSE OR USE HAS BEEN DISCLOSED TO SELLER IN SPECIFICATIONS, DRAWINGS OR OTHERWISE, AND WHETHER OR NOT SELLER'S PRODUCTS ARE SPECIFICALLY DESIGNED AND/OR MANUFACTURED BY SELLER FOR BUYER'S USE OR PURPOSE.**

This warranty does not extend to any losses or damages due to misuse, accident, abuse, neglect, normal wear and tear, unauthorized modification or alteration, use beyond rated capacity, or improper installation, maintenance or application. To the extent that Buyer or its agents has supplied specifications, information, representation of operating conditions or other data to Seller in the selection or design of the Goods and the preparation of Seller's quotation, and in the event that actual operating conditions or other conditions differ from those represented by Buyer, any warranties or other provisions contained herein which are affected by such conditions shall be null and void. If within thirty (30) days after Buyer's discovery of any warranty defects within the warranty period, Buyer notifies Seller thereof in writing, Seller shall, at its option, repair or replace F.O.B. point of manufacture, or refund the purchase price for, that portion of the goods found by Seller to be defective. Failure by Buyer to give such written notice within the applicable time period shall be deemed an absolute and unconditional waiver of Buyer's claim for such defects. Goods repaired or replaced during the warranty period shall be covered by the foregoing warranty for the remainder of the original warranty period or ninety (90) days, whichever is longer. Buyer assumes all other responsibility for any loss, damage, or injury to persons or property arising out of, connected with, or resulting from the use of Goods, either alone or in combination with other products/components.

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7. LIMITATION OF REMEDY AND LIABILITY: **THE SOLE AND EXCLUSIVE REMEDY FOR BREACH OF ANY WARRANTY HEREUNDER (OTHER THAN THE WARRANTY PROVIDED UNDER SECTION 13) SHALL BE LIMITED TO REPAIR, REPLACEMENT OR REFUND OF THE PURCHASE PRICE UNDER SECTION 6. SELLER SHALL NOT BE LIABLE FOR DAMAGES CAUSED BY DELAY IN PERFORMANCE AND IN NO EVENT, REGARDLESS OF THE FORM OF THE CLAIM OR CAUSE OF ACTION (WHETHER BASED IN CONTRACT, INFRINGEMENT, NEGLIGENCE, STRICT LIABILITY, OTHER TORT OR OTHERWISE), SHALL SELLER'S LIABILITY TO BUYER AND/OR ITS CUSTOMERS EXCEED THE PRICE TO BUYER OF THE SPECIFIC GOODS PROVIDED BY SELLER GIVING RISE TO THE CLAIM OR CAUSE OF ACTION. BUYER AGREES THAT IN NO EVENT SHALL SELLER'S LIABILITY TO BUYER AND/OR ITS CUSTOMERS EXTEND TO INCLUDE INCIDENTAL, CONSEQUENTIAL OR PUNITIVE DAMAGES. THE TERM "CONSEQUENTIAL DAMAGES" SHALL INCLUDE, BUT NOT BE LIMITED TO, LOSS OF ANTICIPATED PROFITS, LOSS OF USE, LOSS OF REVENUE, COST OF CAPITAL AND DAMAGE OR LOSS OF OTHER PROPERTY OR EQUIPMENT.**

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GOODS AND/OR SERVICES SOLD HEREUNDER ARE NOT FOR USE IN ANY NUCLEAR AND RELATED APPLICATIONS. Buyer accepts goods and/or services with the foregoing understanding, agrees to communicate the same in writing to any subsequent purchaser or users and to defend, indemnify and hold harmless Seller from any claims, losses, suits, judgments and damages, including incidental and consequential damages, arising from such use, whether the cause of action be based in tort, contract or otherwise, including allegations that the Seller's liability is based on negligence or strict liability.

8. EXCUSE OF PERFORMANCE: Seller shall not be liable for delays in performance or for non-performance due to acts of God, acts of Buyer, war, riot, fire, flood, other severe weather, sabotage, or epidemics; strikes or labor disturbances; governmental requests, restrictions, laws, regulations, orders or actions; unavailability of or delays in transportation; default of suppliers; or unforeseen circumstances or any events or causes beyond Seller's reasonable control. Deliveries may be suspended for an appropriate period of time as a result of the foregoing. If Seller determines that its ability to supply the total demand for the Goods, or to obtain material used directly or indirectly in the manufacture of the Goods, is hindered, limited or made impracticable due to causes addressed in this Section 8, Seller may allocate its available supply of the Goods or such material (without obligation to acquire other supplies of any such Goods or material) among itself and its purchasers on such basis as Seller determines to be equitable without liability for any failure of performance which may result therefrom. Deliveries suspended or not made by reason of this section may be canceled by Seller upon notice to Buyer without liability, but the balance of the agreement shall otherwise remain unaffected.

9. CANCELLATION: The Buyer may cancel orders only upon written notice and upon payment to Seller of cancellation charges which include, among other things, all costs and expenses incurred and commitments made by the Seller and a reasonable profit thereon.

10. CHANGES: Buyer may request changes or additions to the Goods consistent with Seller's specifications and criteria. In the event such changes or additions are accepted by Seller, Seller may revise the price and delivery schedule. Seller reserves the right to change designs and specifications for the Goods without prior notice to Buyer, except with respect to Goods being made-to-order for Buyer.

11. TOOLING: Tool, die, and pattern charges, if any, are in addition to the price of the Goods and are due and payable upon completion of the tooling. All such tools, dies and patterns shall be and remain the property of Seller. Charges for tools, dies, and patterns do not convey to Buyer, title, ownership interests in, or rights to possession or removal, nor prevent their use by Seller for other purchasers, except as otherwise expressly provided by Seller and Buyer in writing with reference to this provision.

12. ASSIGNMENT: Buyer shall not assign its rights or delegate its duties hereunder or any interest therein or any rights hereunder without the prior written consent of the Seller, and any such assignment, without such consent, shall be void.

13. PATENTS AND COPYRIGHTS: Subject to Section 7, Seller warrants that the Goods sold, except as are made specifically for Buyer according to Buyer's specifications, do not infringe any valid U.S. patent or copyright in existence as of the date of delivery. This warranty is given upon the condition that Buyer promptly notify Seller of any claim or suit involving Buyer in which such infringement is alleged, and, that Buyer cooperate fully with Seller and permit Seller to control completely the defense or compromise of any such allegation of infringement. Seller's warranty as to use only applies to infringements arising solely out of the inherent operation (i) of such Goods, or (ii) of any combination of Goods in a system designed by Seller. In the event such Goods, singularly or in combination, are held to infringe a U.S. patent or copyright in such suit, and the use of such Goods is enjoined, or in the case of a compromise by Seller, Seller shall have the right, at its option and expense, to procure for Buyer the right to continue using such Goods, or replace them with non-infringing Goods; or modify same to become non-infringing; or grant Buyer a credit for the depreciated value of such Goods and accept return of them.

14. MISCELLANEOUS: These terms and conditions set forth the entire understanding and agreement between Seller and Buyer, and supersede all other communications, negotiations and prior oral or written statements regarding the subject matter of these terms and conditions. No change, modification, rescission, discharge, abandonment, or waiver of these terms and conditions of Sale shall be binding upon the Seller unless made in writing and signed on its behalf by an officer of the Seller. No conditions, usage or trade, course of dealing or performance, understanding or agreement purporting to modify, vary, explain, or supplement these Terms and Conditions shall be binding unless hereafter made in writing and signed by the party to be bound, and no modification shall be affected by the acceptance of purchase orders or shipping instruction forms containing terms at variance with or in addition to those set forth herein. Any such modifications or additional terms are specifically rejected by Seller. No waiver by Seller with respect to any breach or default or any right or remedy and no course of dealing, shall be deemed to constitute a continuing waiver of any other breach or default or of any other right or remedy, unless such waiver be expressed in writing and signed by the party to be bound. Seller is not responsible for typographical or clerical errors made in any quotation, orders or publications. All such errors are subject to correction. The validity, performance, and all other matters relating to the interpretation and effect of this contract shall be governed by the law of the state of New York. The United Nations Convention on the International Sale of Goods shall not apply to any transaction hereunder.

Industry's Highest Overall Torque Rating

- Rule of thumb – if the dimensions and ratio match, the torque and hp ratings are where they should be (review catalog for actual ratings)
- Advanced gearing design gives Browning the highest overall torque density per frame size in the industry
- When replacing older series competitive units, the Series 7000 line has **20 to 50 percent higher torque capacity** so a replacement often lasts longer than the original unit sized by the OEM
- For maximum durability, specify Series 7000 for your replacement gearbox

Highly Modular

- Patented, modular, taper connection so that one spare of each motor hp size in the plant will allow replacement of that hp on any frame size of the Series 7000 gearmotor – so users can keep fewer spares in stock
- Taper connection makes motor replacement easy, eliminating the need for draining the oil or breaking open the gearcase

Innovative, self-locking, tapered shaft connection between motor and shaft.

Helical Speed Reducers & Gearmotors

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