

POWERGEAR™

ISO 9001-2008 Certified Systems

SHAFT MOUNTED GEAR UNIT

The shaft mounted gear boxes are compact in size, mounting directly onto the driven shaft thus eliminating the use of a foundation and couplings. The gears are helical, hardened and ground of suitable alloy steels. The gear box is suitable for both forward and reverse motion.

The torque arm anchors the gear box and provides an easy, quick method of adjustment of V-belts by means of a turnbuckle.

The gear boxes are currently manufactured in eleven sizes from **A** to **L** with nominal ratios of **5:1**, **13:1** and **20:1**. A wide range of final speed ratios may be achieved by use of pulley combinations.

The gear box has been redesigned by changing the tooth design to give higher power to weight ratios for the same size gear box.

Shaft Mounted Taper Clamp Units are available to have a keyless gear unit.

The taper clamps and the support bushes are manufactured in stainless steels to prevent fretting corrosion and easy removal. Various sizes of bores are available in the taper clamps providing a very easy method for mounting on different shaft sizes.

Shaft Mounted Screw Conveyor Units are available with tapered roller bearings on the output end to take in end thrusts.

The gear units are available in Imperial bores and keyways.

CEMA flanges and drive shafts are available in various sizes.

Three Stage Gear Unit

An additional 'gear-packet' for gear ratios upto 70:1

Accessories: Output hubs in stainless steels, Labyrinth sealing, Extraction collars, reducing bushes, Safety covers, Hydraulic motor mounts, motor mounts, anti roll back bush adapters are available.

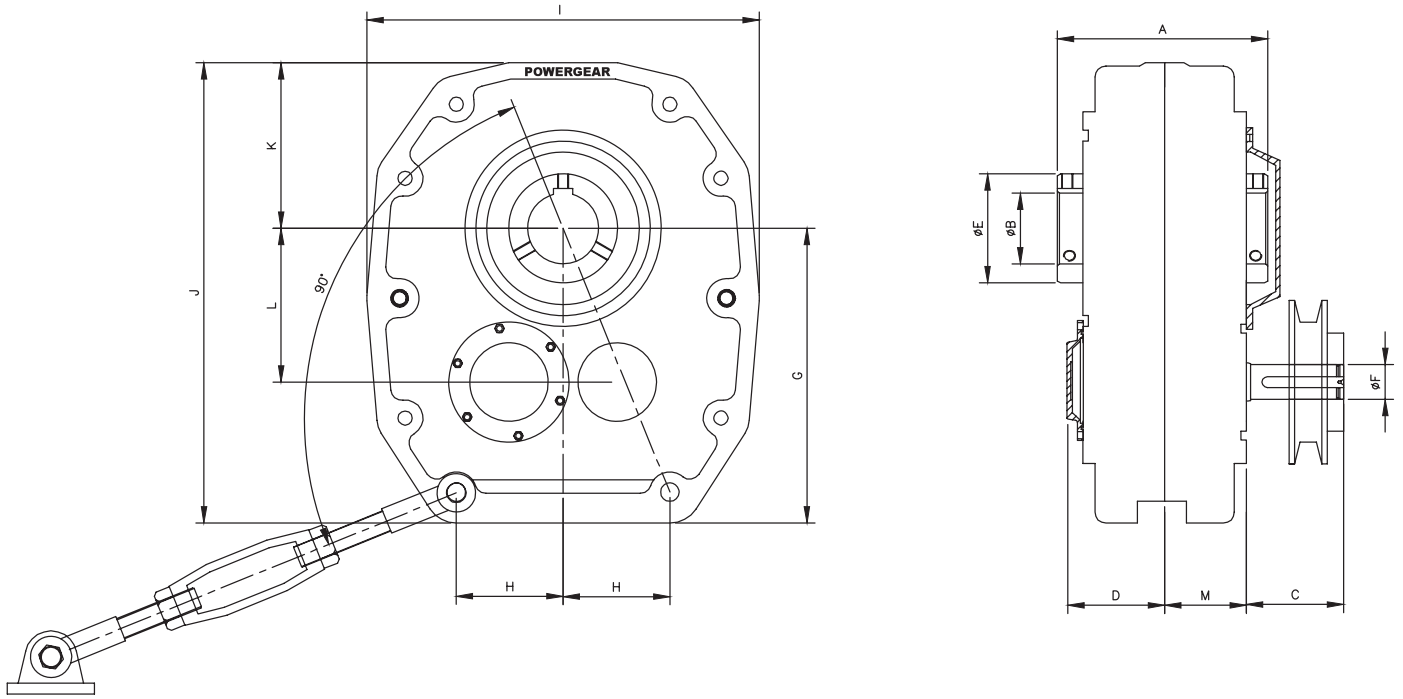
Specials: Modifications to specific customer specifications, ratios, configurations and width of gear units.

A **CD - Disc** is available with outline drawings in dxf format for CAD utilisation. It is also possible to print documents with technical data of the gear unit.



Features

- Redesigned gearing for higher power to weight ratio.
- Available with keyed bores or taper clamps.
- Numerous accessories
- Inter changeable with leading brands.



Dimension Size A-L

| Size | Mass Kg | A | B HUBØ | | C | D | E | F Ø j 6 | F KEY WAY | G | H | I | J | K | L | M |
|------|---------|-----|--------|-----|-----|-----|-----|---------|------------|-----|-----|-----|------|-----|-----|-----|
| | | | STD | ALT | | | | | | | | | | | | |
| A | 13 | 124 | 30 | - | 50 | 50 | 45 | 14 | 5x3x40 | 128 | 51 | 163 | 215 | 75 | 67 | 40 |
| B | 15 | 134 | 30 | 40 | 63 | 59 | 55 | 19 | 6x3.5x50 | 131 | 55 | 185 | 225 | 80 | 75 | 52 |
| C | 22 | 142 | 40 | 50 | 72 | 65 | 65 | 22 | 6x3.5x56 | 155 | 60 | 220 | 270 | 95 | 90 | 55 |
| D | 32 | 152 | 50 | 55 | 77 | 68 | 75 | 25 | 8x4x63 | 188 | 75 | 260 | 325 | 120 | 110 | 61 |
| E | 45 | 170 | 55 | 65 | 85 | 76 | 85 | 28 | 8x4x70 | 221 | 90 | 280 | 370 | 130 | 125 | 66 |
| F | 75 | 189 | 65 | 75 | 90 | 87 | 100 | 32 | 10x5x70 | 242 | 98 | 360 | 430 | 158 | 140 | 75 |
| Fx | 78 | 222 | 65 | 75 | 91 | 102 | 100 | 32 | 10x5x70 | 242 | 98 | 360 | 430 | 158 | 140 | 90 |
| G | 100 | 215 | 75 | 85 | 105 | 110 | 110 | 42 | 12x5x90 | 282 | 110 | 370 | 485 | 180 | 155 | 86 |
| H | 150 | 245 | 85 | 100 | 115 | 115 | 130 | 48 | 14x5.5x100 | 330 | 90 | 440 | 561 | 195 | 190 | 95 |
| J | 280 | 260 | 100 | 120 | 135 | 120 | 150 | 55 | 16x6.0x100 | 425 | 100 | 545 | 702 | 255 | 255 | 105 |
| Jx | 310 | 280 | 100 | 120 | 118 | 130 | 150 | 55 | 16x6x100 | 424 | 100 | 545 | 702 | 255 | 255 | 115 |
| S | 350 | 305 | 120 | 125 | 170 | 140 | 160 | 60 | 18x7x140 | 487 | 90 | 570 | 790 | 283 | 267 | 122 |
| Lss | 600 | 300 | 150 | --- | 195 | 168 | 195 | 65 | 18x7x190 | 550 | 240 | 710 | 1000 | 336 | 327 | 107 |
| Ls | 625 | 320 | 150 | --- | 195 | 178 | 195 | 65 | 18x7x190 | 550 | 240 | 710 | 1000 | 336 | 327 | 127 |
| L | 650 | 340 | 150 | --- | 195 | 188 | 195 | 65 | 18x7x190 | 550 | 240 | 710 | 1000 | 336 | 327 | 147 |

*For Power Rating Refer Page 6 & 7

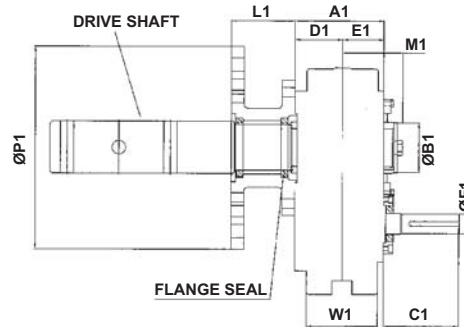
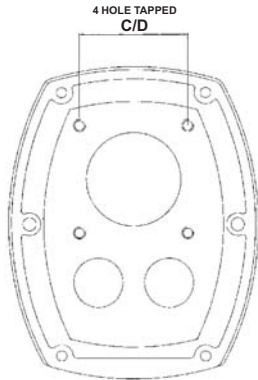
All dimensions in mm

| Nominal Ratio | Exact Gear Ratios | | | | | | | | | | |
|---------------|-------------------|--------|--------|--------|--------|--------|--------|--------|--------|-------|--|
| | B | C | D | E | F | G | H | J | S | L | |
| 5:1 | 5.05 | 5.05 | 5.047 | 5.047 | 5.047 | 5.047 | 5.047 | 5.047 | 5.047 | - | |
| 13:1 | 13.984 | 13.596 | 13.589 | 13.589 | 13.589 | 13.589 | 13.589 | 13.589 | 13.544 | 13.26 | |
| 20:1 | 20.997 | 20.466 | 20.456 | 20.456 | 20.456 | 20.456 | 20.456 | 20.456 | 20.11 | 20.69 | |



Shaft Mounted Screw Conveyor Gear Unit

- The gear units are available with tapered roller bearings on the output end to take in end thrusts.
- The gear units are available in Imperial bores and keyways.
- CEMA flanges and drive shafts are available in various sizes.



| Size | A1 | B1 HUBØ | C1 | D1 | E1 | F1 Ø | F1 KEY WAY | M1 | W1 | L1 |
|--------|------|---------------------------------|------|------|------|--------|-------------|------|------|------|
| B 1107 | 4.45 | 1 ⁷ / ₁₆ | 3.46 | 2.40 | 2.05 | 3/4 | 1/8 x 1/8 | 3.35 | 3.62 | 3.22 |
| C 2115 | 4.65 | 1 ¹⁵ / ₁₆ | 3.66 | 2.48 | 2.17 | 15/16 | 3/16 x 3/16 | 3.54 | 3.82 | 3.56 |
| D 3203 | 5.16 | 2 ³ / ₁₆ | 4.41 | 2.76 | 2.40 | 1 1/8 | 1/4 x 1/4 | 3.94 | 4.13 | 3.62 |
| E 4207 | 5.67 | 2 ⁷ / ₁₆ | 5.70 | 3.07 | 2.60 | 1 1/8 | 1/4 x 1/4 | 4.11 | 4.64 | 4.00 |
| F 5215 | 6.45 | 2 ¹⁵ / ₁₆ | 5.90 | 3.50 | 2.95 | 1 1/4 | 1/4 x 1/4 | 4.60 | 5.04 | 4.00 |
| G 6307 | 7.54 | 3 ⁷ / ₁₆ | 6.14 | 4.00 | 3.54 | 1 3/4 | 3/8 x 3/8 | 5.15 | 5.98 | 5.50 |
| H 7315 | 8.39 | 3 ¹⁵ / ₁₆ | 6.34 | 4.45 | 3.94 | 1 5/16 | 1/2 x 1/2 | 5.78 | 6.69 | 6.47 |
| J 8407 | 8.73 | 4 ⁷ / ₁₆ | 7.28 | 4.60 | 4.13 | 2 1/4 | 1/2 x 1/2 | 6.10 | 7.71 | 6.47 |

all sizes in inches

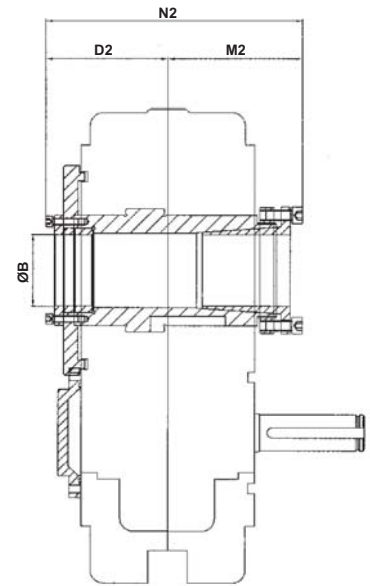
Flange And Drives Shaft Details

| SIZE | C/D | 4 HOLES | FLANGE SEAL SIZE | | | FLANGEØ P1 | DRIVE SHAFT |
|--------|-------|-------------|------------------|------|-------|------------|----------------------------------|
| | | | | | | | |
| B 1107 | 3.225 | 3/8 -16UNC | 1.75 | 2.37 | 0.375 | 7 | 1 1/2, 2 |
| C 2115 | 3.756 | 7/16 -14UNC | 2.25 | 3.00 | 0.375 | 11.5 | 1 1/2, 2, 2 7/16, 3 |
| D 3203 | 4.508 | 1/2 -13UNC | 2.62 | 3.37 | 0.375 | 11.5 | 1 1/2, 2, 2 7/16, 3, 3 3/16 |
| E 4207 | 5.038 | 1/2 -13UNC | 2.75 | 3.50 | 0.375 | 11.5 | 2, 2 7/16, 3, 3 3/16 |
| F 5215 | 5.575 | 5/8 -11UNC | 3.25 | 4.00 | 0.375 | 11.5 | 2, 2 7/16, 3, 3 3/16, 3 15/16 |
| G 6307 | 6.187 | 3/4 -10UNC | 3.87 | 4.87 | 0.500 | 14 | 2 7/16, 3, 3 3/16, 3 15/16 |
| H 7315 | 6.541 | 3/4 -10UNC | 4.25 | 5.00 | 0.500 | 16 | 3, 3 3/16, 3, 3 15/16, 4 7/16 |
| J 8407 | 7.425 | 3/4 -10UNC | 4.75 | 5.75 | 0.500 | 16 | 3 7/16, 3 15/16, 4 7/16, 4 15/16 |

all sizes in inches

Shaft Mounted Taper Clamp Gear Unit

- ◆ Shaft Mounted Taper Clamp Units are available in sizes B-L
- ◆ Suitable for key-less applications on the output end of the gearbox
- ◆ Easy to install and even easier to remove
- ◆ High torque carrying capacity
- ◆ Bushes manufactured in stainless steel
- ◆ Perfect for prevention of fretting corrosion after years of use
- ◆ Bushes in Multiple bore sizes available in Metric and Imperial sizes
- ◆ Labyrinth Seals available for prevention of dust ingestion



| Size | D2 | M2 | N2 | Taper Clamp Bush Sizes | | |
|------|-----|-----|-----|------------------------|----------------|---------------|
| | | | | STD | mm | Inches |
| B | 78 | 84 | 162 | 30 | 25, 20 | ¾", 1" |
| C | 81 | 87 | 168 | 40 | 35, 32, 30 | 1¼" |
| D | 86 | 94 | 180 | 50 | 45, 42, 40, 38 | 1¾", 1½", 1¼" |
| E | 92 | 102 | 194 | 55 | 50, 45, 42 | 2", 1¾", 1½" |
| F | 101 | 115 | 216 | 65 | 60, 55, 50 | 2¼", 2" |
| G | 112 | 123 | 235 | 75 | 70, 65, 60 | 2¾", 2½", 2¼" |
| H | 120 | 134 | 254 | 85 | 80, 75, 70 | 3", 2¾", 2½" |
| J | 130 | 145 | 275 | 100 | 95, 90 | 3½" |
| S | 155 | 169 | 324 | 120 | 110, 100, 90 | 4½", 4, 3½" |
| Lss | 156 | 174 | 330 | 150 | 140, 125, 120 | 5", 4½", 4" |
| Ls | 166 | 184 | 350 | | | |
| L | 176 | 194 | 370 | | | |



T-Series Round Shaft Mounted Speed Reducer



The round shaft mounted speed reducer is a versatile gearbox developed as an alternative to our shaft mounted gear units.

The speed reducer is compact in size mounting directly onto the driven shaft, thus eliminating the need of a foundation & coupling.

The torque arm anchors the speed reducer and provides easy & quick method of adjustment of V-belts by means of a turnbuckle.

The gearbox is available in **4 sizes of TD, TE, TF and TG** with a nominal ratios of **5:1, 13:1 and 20:1** with torque ratings upto **3000 Nm**.

Reduction ratio of **15:1** is available on special request.

A wider range of final speed ratios may be achieved by use of pulley combinations. The gearbox is suitable for both forward and reverse motion.

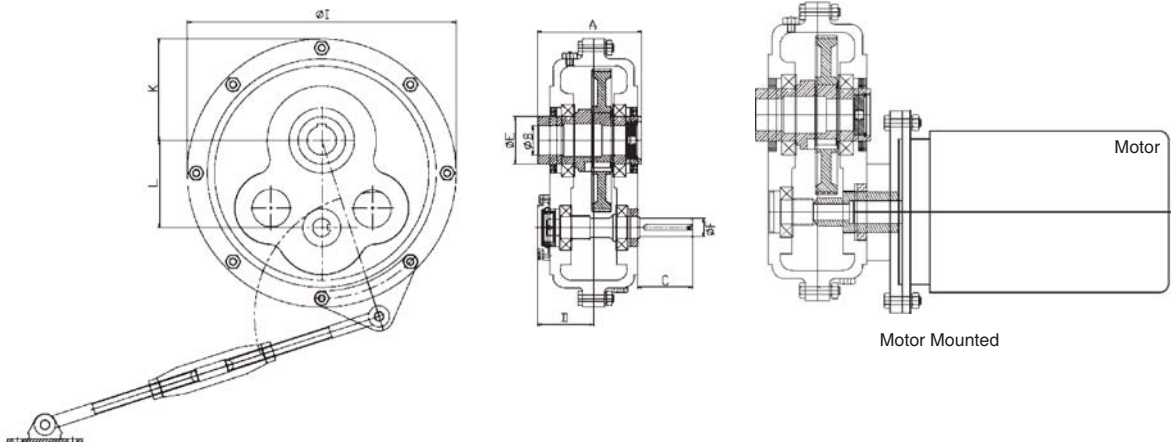
Accessories:

- **Anti-Roll Back Adapters / Backstops:** A simple accessory that prevents reversal of the speed reducer and is ideal for inclined conveyors.
- **Flanged Motor Mounts:** For directly coupling the electric motor to the gearbox.
- **Flanged Hydraulic Mounts:** For directly coupling hydraulic motor.



Benefits:

- Hardened & ground gearing
- Compact and low cost
- High efficiency of 95%
- Multiple bore sizes
- Backstop provision in all models
- Interchangeable with leading brands



Dimension, Size TD - TG

| Size | Mass Kg | A | Keyed Hub øB | | C | D | øE | F ø j6 | F KEYWAY | I | K | L |
|------|---------|-----|-----------------|---------|-----|-----|-----|--------------|-------------|-----|-----|-----|
| | | | STD | ALT | | | | | | | | |
| TD40 | 35 | 143 | 40 | 45 / 50 | 75 | 77 | 65 | 25 | 8x4x63 | 370 | 140 | 120 |
| TE45 | 45 | 157 | 45 | 50 / 55 | 84 | 84 | 75 | 28 | 8x4x70 | 420 | 155 | 135 |
| TF50 | 70 | 175 | 50 | 55 / 60 | 90 | 91 | 85 | 32 | 10x5x70 | 470 | 175 | 150 |
| TG60 | 100 | 199 | 60 | 70 | 105 | 109 | 100 | 42 | 12x5x90 | 550 | 205 | 166 |

*For Power Rating Refer Page 6 & 7

*All Dimensions in mm

Applications : The gearbox is ideal for heavy bulk material handling machines meant for quarrying, mining and ready-mix plants etc. It is a reliable product capable of performing in rough environments.

Selection

SELECTION PROCEDURE

- 1) Determine required output speed
- 2) Determine power absorbed by the drive

$$\text{Absorbed Power (Kw)} = \frac{\text{Absorbed Torque (Nm)} \times \text{Machine Speed (rpm)}}{9550}$$

- 3) Determine Service Factor from table
- 4) Multiply the absorbed power by the service Factor
- 5) Using Table for Power Rating select the smallest gear unit that is suitable for transmitting this power at the output speed

EXAMPLE

A torque of 1000 Nm is required to be transmitted on a conveyor at 70 rpm

The conveyor is not uniformly loaded and operates for 12 hours a day

$$\text{Absorbed power} = 1000 \times 70 / 9550 = 7.32 \text{ kw}$$

Service Factor from table = 1.4

$$\text{Selection Power } 7.32 \times 1.4 = 10.26 \text{ Kw}$$

From Power Rating chart at 70 rpm size "F or TF" double reduction gear unit at 13.2 Kw is the smallest for this application

| Driven Machine Types Service Factors | Daily Operating Hours | | |
|--|-----------------------|------------------------|-------------------|
| | Below 10 hours | Between 10-16 hours | Above 16 hours |
| UNIFORM LOAD Liquid and semi liquid mixers Centrifugal discharged equipments Bottling machine Fixed load carrier Ovens Washing machines Transmission shafts Centrifugal and gear pumps Wire drawing machines | 1.0 | 1.12 | 1.25 |
| MODERATE SHOCK Variable density mixers Variable load conveyors Cranes, movable carriers and lifters Rolling machines Heavy load elevators Drying stove Drying machines Lifting machines Piston pumps with 3 or more cylinders Pulp machines Drying machines Honing cylinders Wet pressing machines Small mixers and calendars Rotary screens Textile machines | 1.25 | 1.4 | 1.5 |
| HEAVY SHOCK Brick press Briquette manufacturing machine Conveyor band moving forward / backward and shaking Breaking machines Hammer mill Piston pumps with 1 or 2 cylinders Extruders Vibrators Forging mills | 1.6 | 1.8 | 2.0 |

Power Rating (kW)

| OUT PUT RPM | A5 | B5 | C5 | D5 | E5 | F5 | FX5 | G5 |
|------------------------|------------|------------|------------|------------|------------|------------|--------------|------------|
| 50 | 1.00 | 1.30 | 2.00 | 3.80 | 5.50 | 8.20 | - | 12.0 |
| 100 | 2.00 | 2.70 | 4.10 | 6.60 | 11.0 | 16.5 | - | 24.2 |
| 150 | 3.10 | 3.80 | 5.70 | 8.80 | 14.3 | 20.9 | - | 35.2 |
| 200 | 3.50 | 4.40 | 6.60 | 10.1 | 15.4 | 23.6 | - | 38.5 |
| 250 | 4.00 | 5.00 | 7.10 | 11.5 | 17.6 | 27.0 | - | 45.1 |
| OUTPUT RPM | A13 A20 | B13 B20 | C13 C20 | D13 D20 | E13 E20 | F13 F20 | FX13 Fx20 | G13 G20 |
| 10 | 0.22 | 0.28 | 0.46 | 0.75 | 1.20 | 1.85 | 2.40 | 3.00 |
| 20 | 0.44 | 0.62 | 0.88 | 1.50 | 2.40 | 3.74 | 4.90 | 6.10 |
| 30 | 0.66 | 0.82 | 1.30 | 2.30 | 3.63 | 5.60 | 7.28 | 9.30 |
| 40 | 0.88 | 1.10 | 1.70 | 3.10 | 4.80 | 7.50 | 9.75 | 12.6 |
| 50 | 1.10 | 1.30 | 2.20 | 3.90 | 5.70 | 9.30 | 12.1 | 15.4 |
| 60 | 1.30 | 1.60 | 2.50 | 4.60 | 7.10 | 11.0 | 14.3 | 18.7 |
| 70 | 1.50 | 2.00 | 3.00 | 5.50 | 8.20 | 13.2 | 17.1 | 22.0 |
| 80 | 1.60 | 2.10 | 3.30 | 6.10 | 9.60 | 14.3 | 18.6 | 24.2 |
| 90 | 1.80 | 2.30 | 3.70 | 7.00 | 11.0 | 15.4 | 20.0 | 26.4 |
| 100 | 2.20 | 2.60 | 4.10 | 7.70 | 11.5 | 17.6 | 22.9 | 29.1 |
| TORQUE AT 70 RPM NM | 200 | 270 | 420 | 742 | 1100 | 1780 | 2340 | 2960 |
| OIL Req'd. Lit. | 0.4 | 0.5 | 0.7 | 1.2 | 1.90 | 2.5 | 3.5 | 4.5 |

For speeds higher than 70 rpm output use 13:1 or 5:1 ratios



Backstops

The simple accessory prevents reversal of the reducer and are ideal for use in conveyors

It is important that the backstop is installed correctly to ensure a safe operation

To install a backstop

- 1) Drain off oil if filled
- 2) Remove backstop cover
- 3) Fit the outer bush in the housing along with the key the bush should fit in snugly in contact with the gear casing
- 4) Determine the direction of shaft rotation
- 5) Fit the backstop, feeding the assembly while rotating the shaft in the direct of rotation

Note : If the opposite direction is required the backstop should be taken out and the sprag assembly inserted in the other direction

For sizes G, H, J, S and L

An inner bush is supplied which has to be inserted on top of the input pinion with keys prior to insertion of the sprag

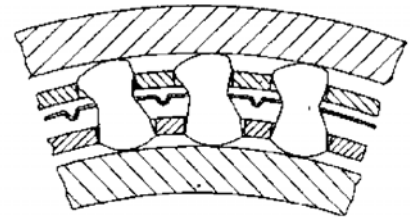
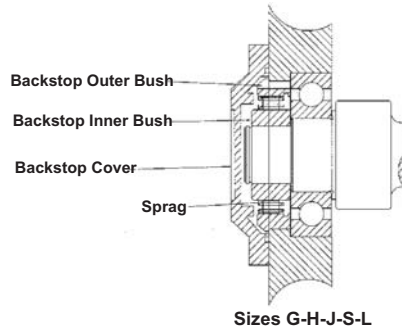
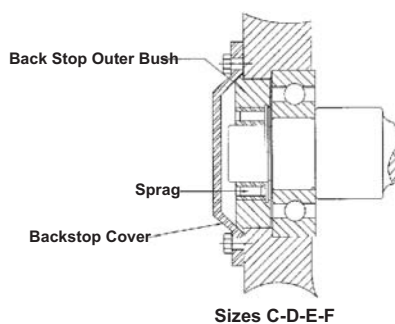
- 6) Replace the backstop cover
- 7) Fill oil before use

IMPORTANT

It is most important that the backstop is pressed into the housing gently and no hammer is used. The assembly maybe tapped in gently if necessary.

To change the direction of stoppage it can be done anytime with the removal of the sprag and turning it end to end in the housing.

The outer adaptor is provided with tapped holes to help in withdrawal of the bush.



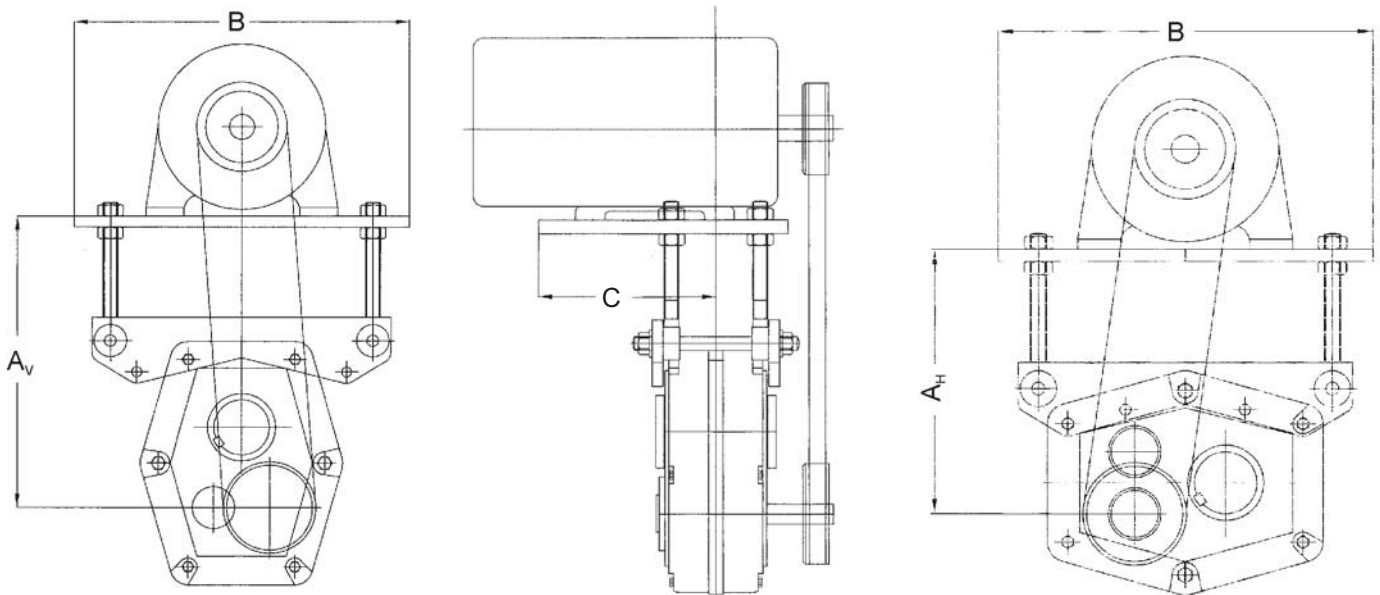
Power Rating (kW)

| OUT PUT RPM | H5 | J5 | Jx | S5 | Lss | Ls | L |
|---------------------|------------|------------|--------------|------------|----------------|--------------|------------|
| 50 | 19.2 | 31.0 | - | 55.0 | - | - | - |
| 100 | 38.5 | 60.0 | - | 93.0 | - | - | - |
| 150 | 50.6 | 88.0 | - | 118.0 | - | - | - |
| 200 | 57.7 | 104.5 | - | 140.0 | - | - | - |
| 250 | 66.0 | 110.0 | - | 153.0 | - | - | - |
| OUTPUT RPM | H13 H20 | J13 J20 | Jx13 Jx20 | S13 S20 | Lss13 Lss20 | Ls13 Ls20 | L13 L20 |
| 10 | 4.60 | 7.40 | 8.90 | 13.2 | 14.2 | 17.8 | 21.4 |
| 20 | 9.20 | 15.4 | 18.5 | 25.6 | 28.5 | 35.7 | 42.8 |
| 30 | 14.3 | 22.0 | 26.4 | 37.4 | 42.8 | 53.5 | 64.2 |
| 40 | 20.3 | 30.8 | 36.9 | 49.0 | 57.1 | 71.4 | 86.4 |
| 50 | 22.0 | 37.4 | 44.8 | 60.1 | 71.4 | 89.2 | 107.1 |
| 60 | 28.6 | 42.9 | 51.4 | 67.3 | 85.6 | 107.1 | 129.6 |
| 70 | 34.0 | 47.0 | 56.4 | 75.5 | 100.0 | 125.0 | 150.0 |
| 80 | 36.3 | 55.0 | 66.0 | 81.2 | 114.2 | 142.8 | 171.3 |
| 90 | 40.7 | 58.8 | 72.5 | - | 128.5 | 160.6 | 192.0 |
| 100 | 44.0 | 63.8 | 80.5 | - | 142.8 | 178.5 | 214.2 |
| TORQUE AT 70 RPM NM | 4500 | 6500 | 7695 | 11600 | 13640 | 17050 | 20460 |
| OIL Req'd. Lit. | 7.0 | 11.5 | 14 | 16.0 | 30 | 32 | 34 |

For speeds higher than 70 rpm output use 13:1 or 5:1 ratios

Motor Mounts

- A motor mount is available to fit on both sides of the gear unit
- A rigid base plate accommodates wide range of motor frame sizes
- Adjustment is available to ensure that the belt can be tensioned with ease.
- Each base plate is predrilled for various motor sizes and no further drilling is required
- Each assembly is electro plated to prevent corrosion and easy disassembly on usage
- It is recommended that larger frame size motors be mounted on an independent base.
- '**A max**' is a dimension which must allow for belt tensioning
- '**A min**' is a dimension which must allow for belt fitting.



| SIZE | A _v | | A _H | | B | C | METRIC MOTOR FRAME SIZE |
|------|----------------|------|----------------|------|-----|-----|--|
| | MIN. | MAX. | MIN. | MAX. | | | |
| B | 210 | 265 | 165 | 220 | 270 | 140 | 63, 71, 80, 90S, 90L |
| C | 260 | 330 | 200 | 270 | 370 | 190 | 63, 71, 80, 90S, 90L, 100L |
| D | 300 | 370 | 235 | 305 | 370 | 165 | 71, 80, 90S, 90L, 100L, 112M |
| E | 325 | 395 | 310 | 380 | 440 | 220 | 80, 90S, 90L, 100L, 112M, 132S, 132M |
| F | 345 | 415 | 300 | 370 | 440 | 345 | 112M, 132S, 132M, 160M, 160L |
| G | 375 | 425 | 300 | 370 | 520 | 340 | 112M, 132S, 132M, 160M, 160L, 180M, 180L |
| H | 470 | 540 | 410 | 480 | 560 | 325 | 132S, 132M, 160M, 160L, 180M, 180L |
| J | 570 | 645 | 465 | 535 | 510 | 365 | 132M, 160M, 160L, 180M, 180L, 200L |
| S | 615 | 685 | 545 | 615 | 590 | 360 | 160M, 160L, 180M, 180L, 200L, 225S, 225M |



Lubrication

- Shaft Mounted Gear Units are supplied **without oil** and must be filled with the required quantity and type of lubricant before use.
- Correct quantity and type of oil is crucial to ensure correct operation and long life of the reducer.
- A breather **must** be used to ensure pressure build up and subsequent seal failure does not occur. A breather is supplied with each gear unit but not fitted.

Viscosity of oil for various ambient temperatures and reducer INPUT speeds are shown below:-

| Ambient Temp deg. C | Viscosity (mm ² /s (cSt) at 40 deg. C) | |
|---------------------|---|-----------------------|
| | Input speed r.p.m. | |
| | 500 to 1,000 r.p.m. | 1,000 to 2,000 r.p.m. |
| -10 to + 5 | VG 100 | VG 100 |
| 0 to + 40 | VG 320 | VG 220 |
| +35 to + 45 | VG 460 | VG 320 |

Recommended Synthetic Oils :-

| BP | Castrol | Esso | Kluber | Mobil | Shell |
|---------|-----------|------|-------------|---------|---------|
| EnerSyn | AlphaSyn | | Klubersynth | SHC / | Tivela |
| HTX | T - range | | GH6 | SHC-XMP | WA / WB |

Recommended Mineral Oils :-

| BP | Castrol | Esso | Kluber | Mobil | Shell |
|---------|---------|---------|-----------|-----------|-------|
| Energol | Alpha | Spartan | Kluberoil | Mobilgear | Omala |
| GR-XP | ZN / SP | EP | GEM | | |

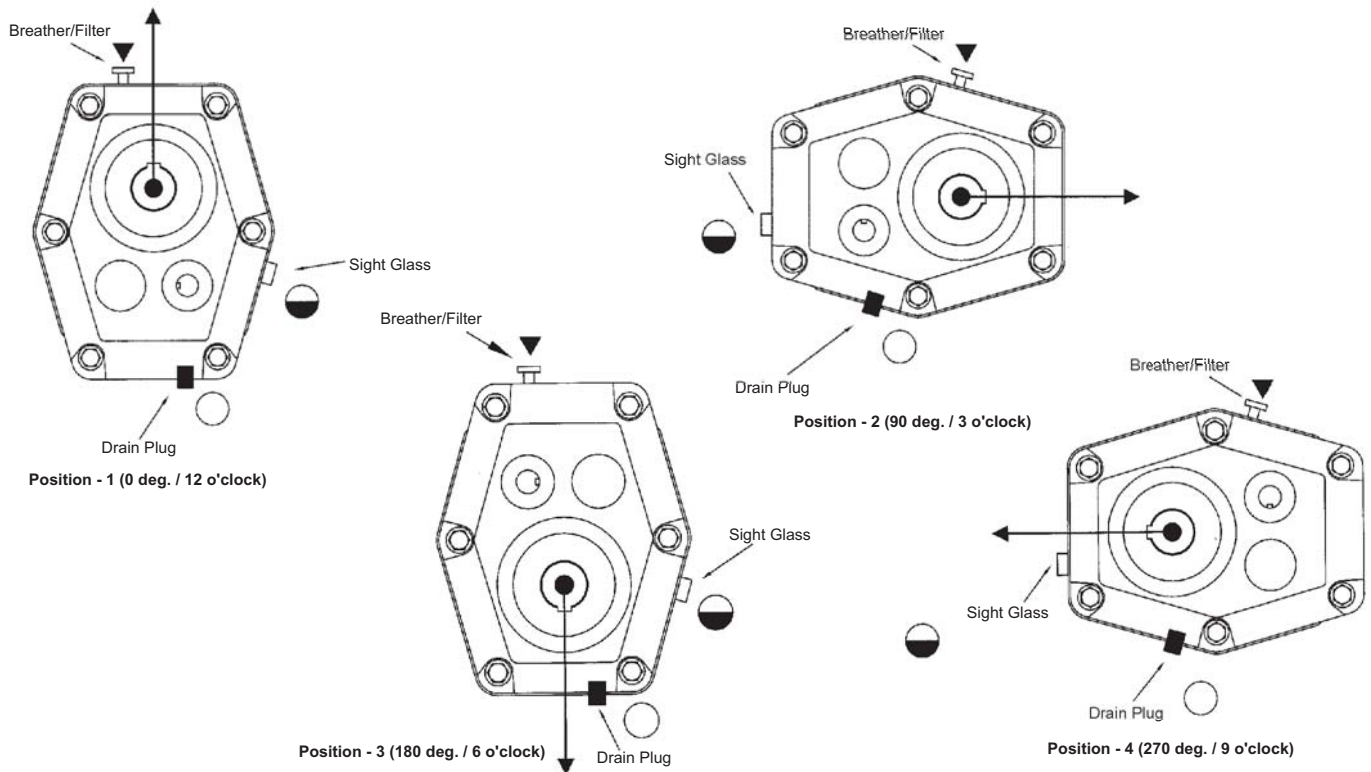
▪ **Maintenance:-**

Running in period : After 500 hours drain oil and refill.

Synthetic Oil : Replace every 12,000 hours use.

Mineral Oil : Replace every 2,500 hours use.

Quantity of lubricant and position of breather, sight glass and drain plug are shown in diagrams and table below:-



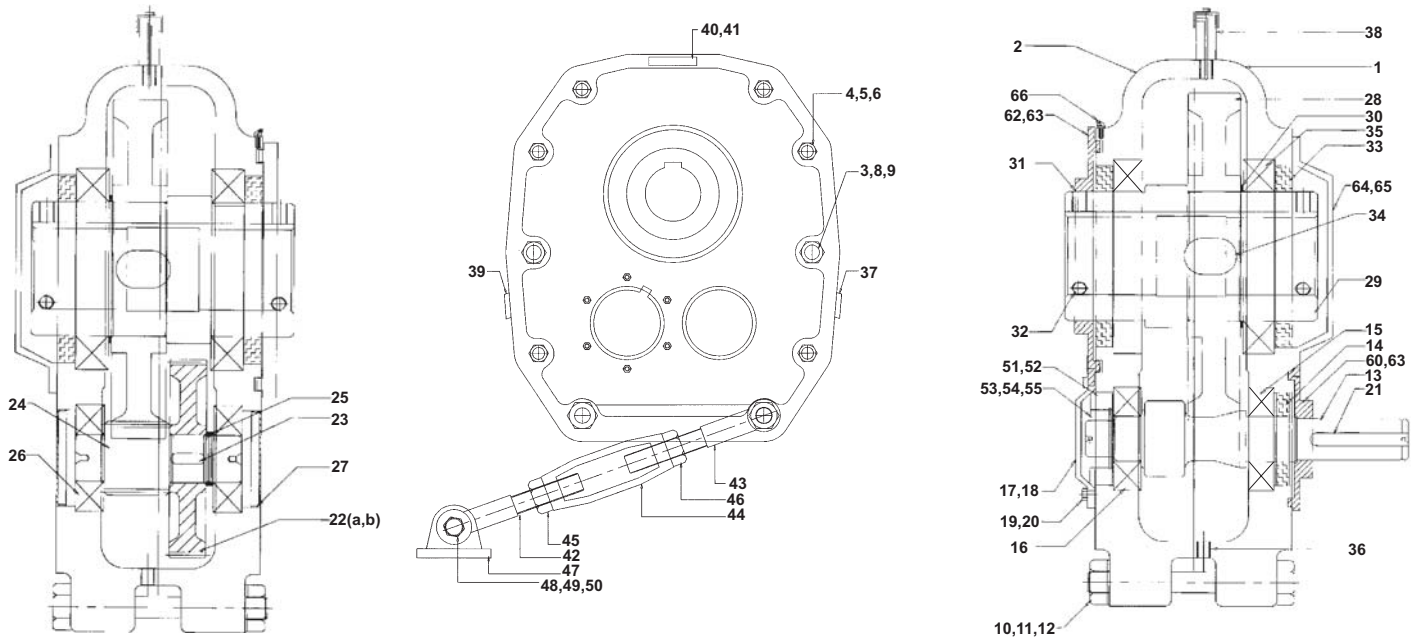
THE SIGHT GLASS CAN ONLY BE USED AS AN OIL LEVEL INDICATOR IN POSITIONS 1,2,3 or 4

FOR ANY OTHER POSITION USE QUANTITY INDICATED AS ORIENTATION NEAREST IN TABLE BELOW :-

Approx. S.M.G.U. size/Oil quantity - LITRES

| Unit Orientation | | B | C | D | E | F | G | H | J | S | L |
|------------------|------------------------|-----|-----|-----|-----|-----|-----|-----|------|----|----|
| Position 1 | 0 deg. / 12 o'clock | 0.4 | 0.6 | 1.1 | 2.0 | 2.5 | 4.0 | 6.7 | 11.5 | | |
| | 30. deg. / 1 o'clock | 0.5 | 0.6 | 1.2 | 1.9 | 2.7 | 4.2 | 6.8 | 11.4 | 14 | 22 |
| | 60. deg. / 2 o'clock | 0.5 | 0.7 | 1.3 | 1.9 | 2.9 | 4.4 | 6.8 | 11.3 | | |
| Position 2 | 90 deg. / 3 o'clock | 0.6 | 0.7 | 1.4 | 1.8 | 3.0 | 4.5 | 6.7 | 11.2 | | |
| | 120. Deg. / 4 o'clock | 0.6 | 0.7 | 1.3 | 2.0 | 2.9 | 4.1 | 6.2 | 10.1 | 21 | 28 |
| | 150. deg. / 5 o'clock | 0.5 | 0.6 | 1.2 | 2.2 | 2.7 | 3.7 | 5.7 | 9.0 | | |
| Position 3 | 180 deg. / 6 o'clock | 0.5 | 0.6 | 1.2 | 2.3 | 2.5 | 3.3 | 5.3 | 7.8 | 17 | 20 |
| | 210. deg. / 7 o'clock | 0.5 | 0.6 | 1.2 | 2.2 | 2.6 | 3.4 | 5.6 | 8.5 | | |
| | 240. deg. / 8 o'clock | 0.6 | 0.7 | 1.3 | 2.0 | 2.6 | 3.4 | 5.9 | 9.1 | | |
| Position 4 | 270 deg. / 9 o'clock | 0.6 | 0.7 | 1.3 | 1.8 | 2.7 | 3.5 | 6.2 | 9.7 | 19 | 21 |
| | 300 deg. / 10 o'clock | 0.5 | 0.7 | 1.2 | 1.9 | 2.6 | 3.7 | 6.4 | 10.3 | | |
| | 330. deg. / 11 o'clock | 0.5 | 0.6 | 1.1 | 1.9 | 2.6 | 3.9 | 6.6 | 10.9 | | |

Shaft Mounted Gear Unit



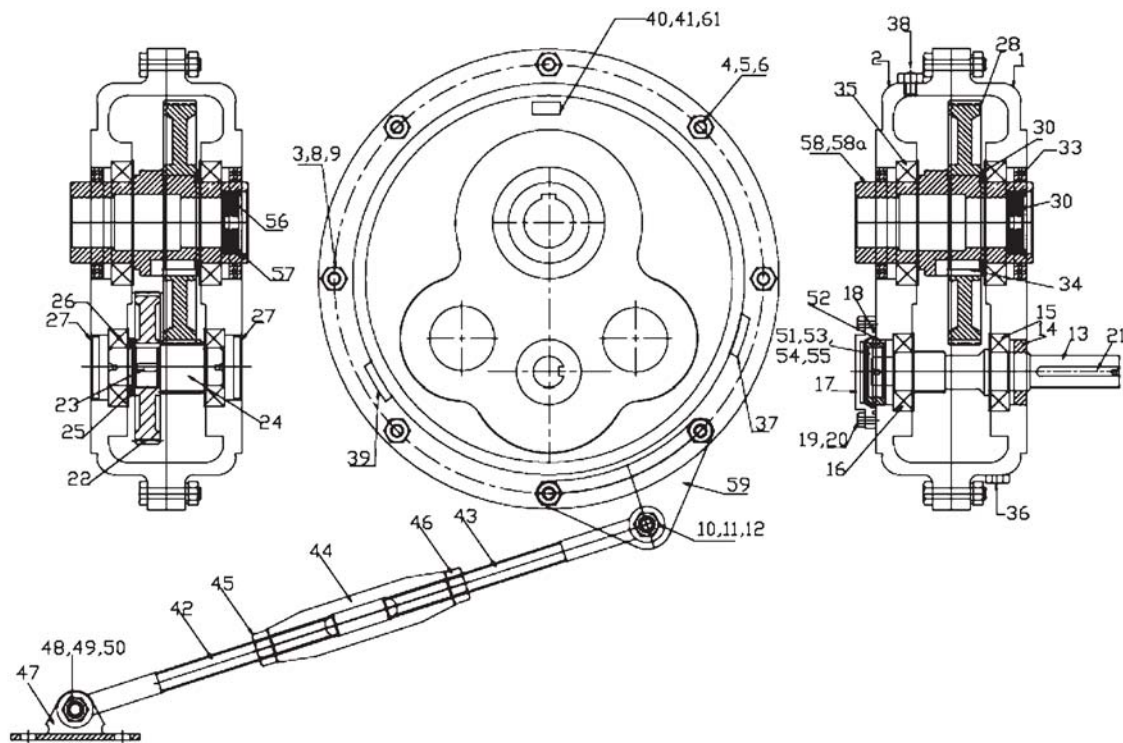
Parts List - SMGU & T-Series

| | | |
|-----------------------------------|-----------------------------|-----------------------------------|
| 1) Casing Half R.H. | 24) Output Pinion | 46) Nut R.H. |
| 2) Casing Half L.H | 25) Spacer For Inter Pinion | 47) Fulcrum |
| 3) Hollow Dowel | 26) Intermediate Bearings | 48) Fulcrum Hex Bolt |
| 4) Hex Bolts | 27) End Covers | 49) Fulcrum Hex Nut |
| 5) Hex Nuts | 28) Output Gear | 50) Fulcrum Lock Washer |
| 6) Lock Washers | 29) Output Hub - STD | 51) Backstop Bush Outer |
| 7) | 29a) Output Hub - ALT | 52) Back Stop Bush - Key |
| 8) Plain Washer | 30) Output Spacer | 53) Back Stop Bush Inner |
| 9) Hex Bolt / Nut / Lock / Washer | 31) Hub Grub Screw on Key | 54) Backstop Bush - Keys |
| 10) Hex Bolt Torque Arm | 32) Hub Grub Screw | 55) Backstop Bush - Circlips |
| 11) Hex Nut Torque Arm | 33) Output Oil Seals | 56) Hub Plate - T Series |
| 12) Lock Washer Torque Arm | 34) Output Gear Key | 57) Hub Circlip - T Series |
| 13) Input Pinion Ratio 5/13/20 | 35) Output Bearings | 58) Hub STD - T Series |
| 14) Oil Seal Input | 36) Drain Plug | 58a) Hub ALT - T Series |
| 15) Bearing Input Front | 37) Sight Glass | 59) Torque Arm Bracket - T Series |
| 16) Bearing Input Back | 38) Breather Assembly | 60) Labyrinth Front |
| 17) Backstop Cover | 39) Hex Oil Plug | 61) Fill Oil - Sticker |
| 18) Backstop O-Ring | 40) Name Plate | 62) Labyrinth Back |
| 19) Backstop Bolts | 41) Name Plate Dowels | 63) Labyrinth Screws |
| 20) Backstop Bolt Washers | 42) Torque Arm L.H. | 64) Hub Cover |
| 21) Input Shaft Key | 43) Torque Arm R.H. | 65) Hub Cover Bolts |
| 22) Intermediate Gear 13/20 | 44) Turnbuckle | 66) Grease Nipple |
| 23) Intermediate Gear Key | 45) Nut L.H. | |

*Improvements in design are continually being made
The dimensions are subject to alternation without notice.



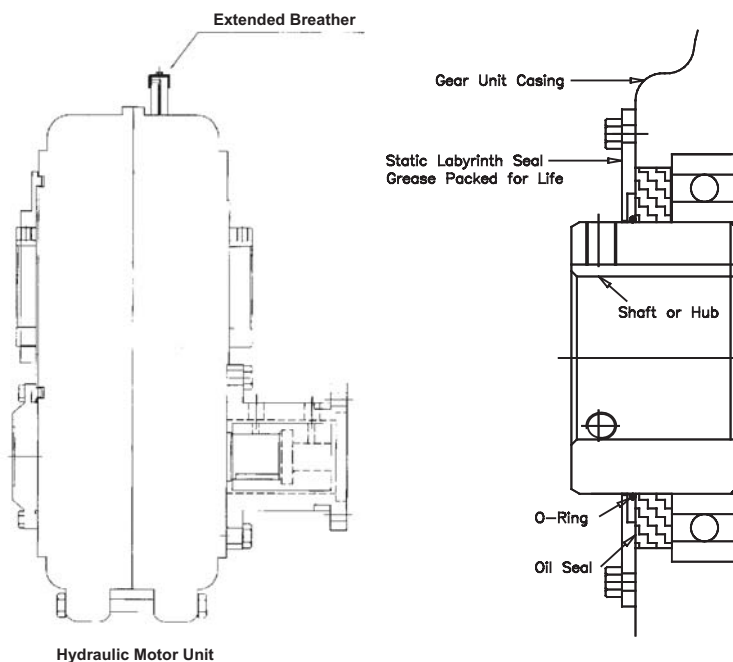
T-Series



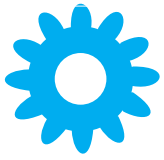
Shaft Mounted Gear Unit - Other Accessories

- **Labyrinth Sealing** is available for protection against abrasive environment.
- **Output Hubs in Stainless Steels** are offered to achieve positive drive with a keyway and no fretting corrosion.
- **Extraction Collars** are available to extract the gear unit from the shaft.
- Shaft mounted units are available with **Hydraulic Motor Mounts**.
- **Reducing Bushes** are available in steels and stainless steels.
- **Safety Covers** available at non-conveyor end.

| Shaft Size | Shaft Keyway Width x Depth |
|------------|----------------------------|
| 20 | 6 x 6 |
| 25 | 8 x 7 |
| 30 | 8 x 7 |
| 35 | 10 x 8 |
| 40 | 12 x 8 |
| 45 | 14 x 9 |
| 50 | 14 x 9 |
| 55 | 16 x 10 |
| 60 | 18 x 11 |
| 65 | 18 x 11 |
| 70 | 20 x 12 |
| 75 | 20 x 12 |
| 80 | 22 x 14 |
| 85 | 22 x 14 |
| 90 | 25 x 14 |
| 95 | 25 x 14 |
| 100 | 28 x 16 |
| 110 | 28 x 16 |
| 120 | 32 x 18 |
| 125 | 32 x 18 |
| 130 | 32 x 18 |
| 140 | 36 x 20 |
| 150 | 36 x 20 |



Hydraulic Motor Unit



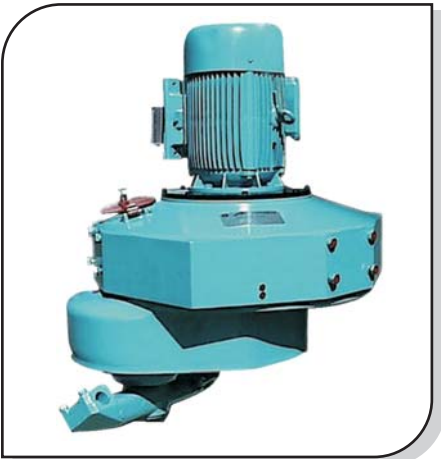
Other Products by Powergear



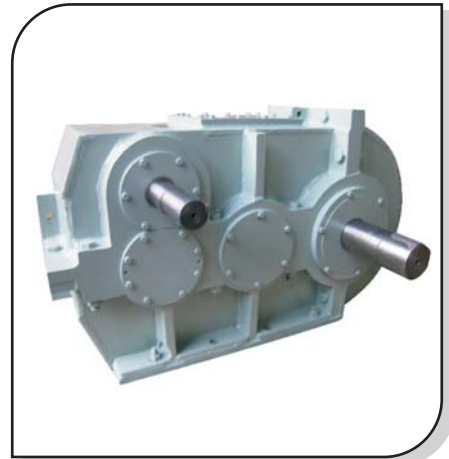
Worm Drive Slewing Rings



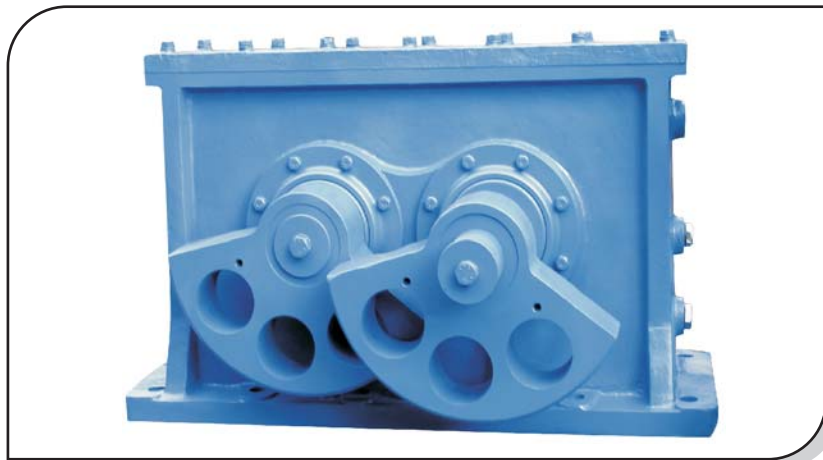
Planetary Gearboxes



Planetary Counterflow Mixer Gearboxes



Helical Gearboxes



Directional Force Geared Exciter

