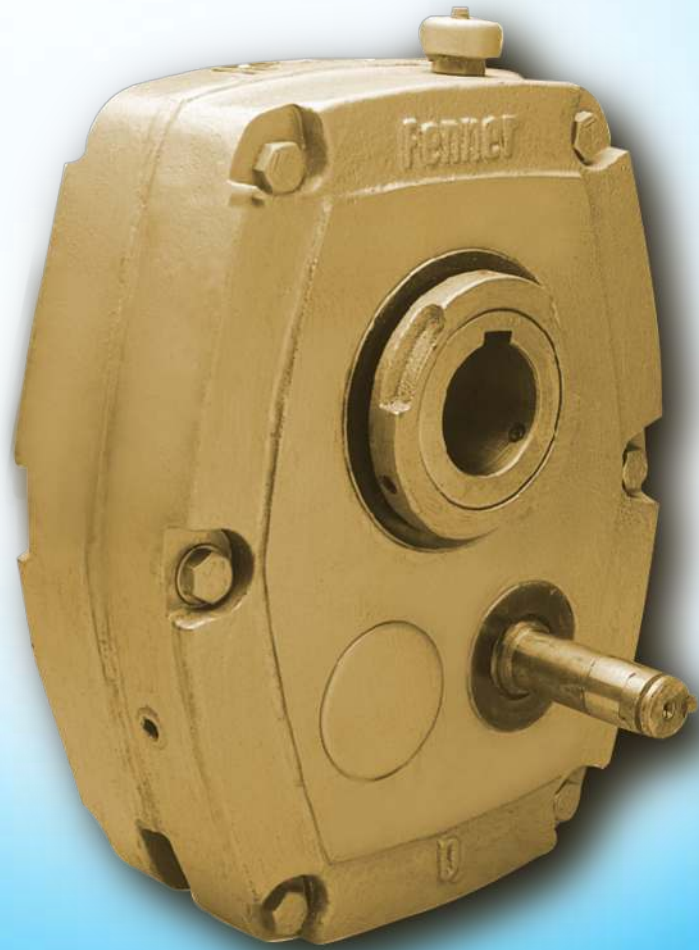


Fenner



Shaft Mounted Speed Reducers

The Fenner Shaft Mounted Speed Reducer is metric in design throughout and conforms to I.S.O. Preferences. A Shaft Mounted Speed Reducer provides a very convenient method of reducing speed, since it is mounted directly on the driven shaft instead of requiring foundations of its own. It eliminates (1) the use of one, and sometimes two, flexible couplings and (2) external belt take-up arrangements.

A torque-arm anchors the Reducer and provides quick, easy adjustment of the V-Belts by means of its turnbuckle.

F Shaft Mounted Speed Reducer

A torque-arm anchors the Reducer and provides quick, easy adjustment of the V-Belts by means of its turnbuckle. Fenner Speed Reducer is manufactured in eight gear case sizes, designated by the letters B through to J. The eight sizes may have any one of three nominal gear ratios, 5: 1, 13: 1 & 20: 1.

A very wide choice of final driven speed can be determined by the use of an appropriate input V -Belt drive. The units will normally be oil lubricated, but they are equally suitable for "lubricated for life" greases.

SELECTION PROCEDURE

(a) Service Factor

From Table 1 select the service factor applicable to the drive.

(b) Design Power

Multiply the absorbed power (or motor power if absorbed power not known) by the service factor chosen in step (a).

Note: Ensure that design power exceeds motor rated power.

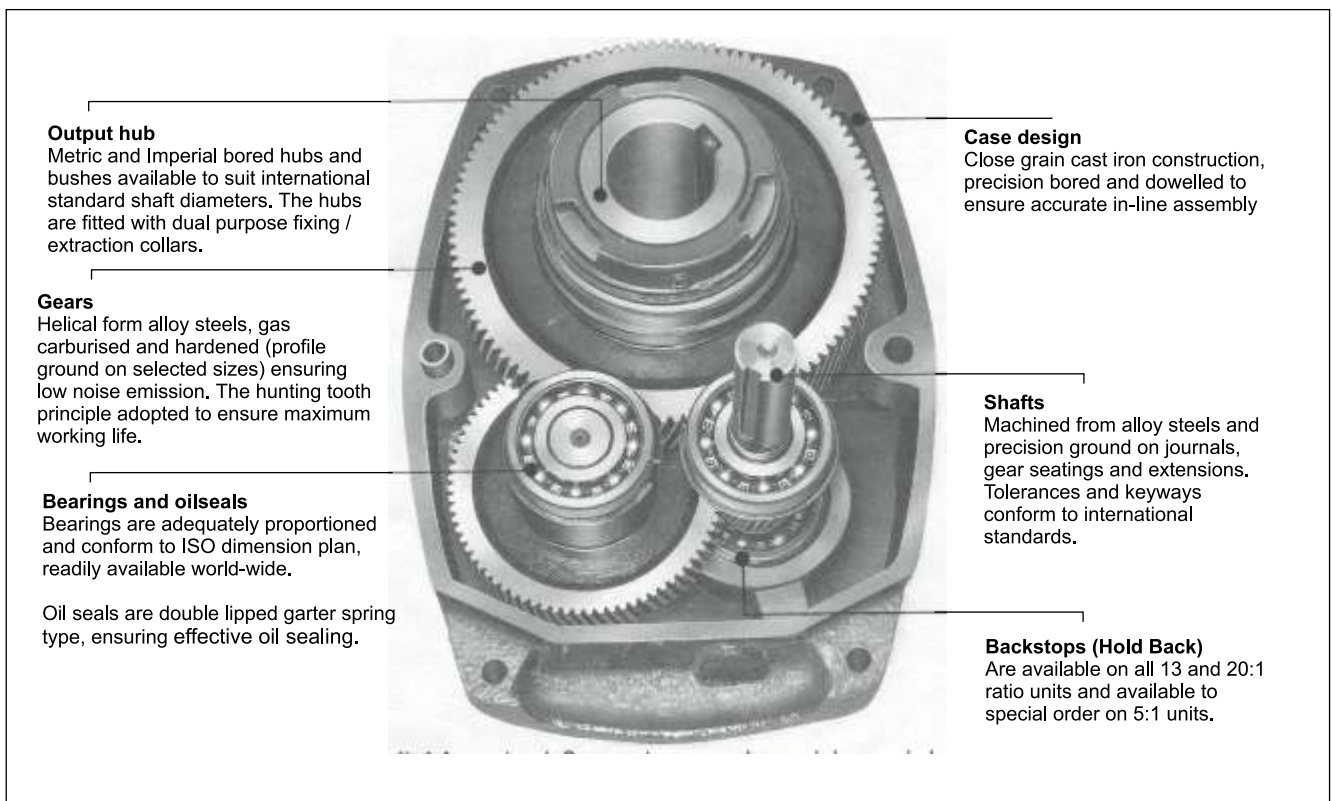
(c) Peak Load

Divide any peak load by two

(d) Unit Selection

Using the greater value of steps (b) and (c) refer to the Power Rating Tables on pages 2 & 3, and select the correct size of unit. The choice of single or double reduction gearbox will be determined by the output speed required. The normal operating speeds for each of the gearboxes may be observed in the Power Rating Tables. For other speeds consult Fenner.

Note: 5:1 units require special selection when fitted with backstops. Consult Fenner.



Shaft Mounted Speed Reducer

Selection of Associated Drive for 1440 rev/min Electric Motors

(e) Output Speed

Refer to the Drive Selection Tables (pages 9 to 20) and under the appropriate gearbox size and ratio read down the column headed 'Output Speed' until an output speed equal or near to that required is found.

(f) Pulley Diameters

Read across from the chosen output speed to obtain both driving and driven pulley pitch diameters and the appropriate number of belts.

(g) Centre Distance

Belt length and centre distance can be found by referring to pages 2 & 4 of Wedge Belt catalogue.

Selection of Associated Drive for Driving Speeds other than 1440 rev/min

(h) Design Power

Obtain from the Power Rating Tables the rated power of the gearbox at the required output speed and use it as the design power for the drive

(i) Gearbox Input Shaft Speed

Multiply the gearbox output speed by the exact gear ratio

(found in Table 5 on page 4) to obtain the gearbox input shaft speed

(j) Selection of V-Drive

By referring to pages 28,29 & 30 of Fenner Drive Design Manual, a suitable belt drive can be chosen. It is advisable not to select a gearbox pulley smaller than that shown in the drive tables for the approximate speed required.

EXAMPLE

A Shaft Mounted Speed Reducer is required for a uniformly loaded elevator which absorbs 3.6 kW at 48 rev/min. The prime mover is a 4 kW, 1440 rev/min direct-on-line start electric motor. A V-Belt drive is required between the motor and the gearbox at approximately 600 mm centres running for upto 24 hours/day.

Solution

(a) Service Factor

From Table I the service factor is 1.25

(b) Design Power

Select on a basis of absorbed power ensuring that the design power exceeds the basic motor power.
Design Power = 1.25 x 3.6 = 4.5 kW

(c) Peak Load

Assuming that a direct-on-line start can exert 240% of full load torque.

$$\begin{aligned} & 4 \times 240 \\ \text{Peak Load} = & \quad = 4.8 \text{ kW} \\ & 2 \times 100 \end{aligned}$$

(d) Unit Selection

Using 4.8 kW as the basis for selection (being the greater value of steps (b) and (c)), reference to the Power Rating Tables pages indicates that an E13 or E20 gear unit will transmit 5.18 kW at 48 rev/min.

(e) Output Speed

A cheaper belt drive will be obtained if the 20: 1 ratio gearbox is selected. and by reference to page 16 in the Gearbox Drive Tables. 48 rev/min is obtainable.

(f) Pulley Diameters

On the line giving the output speed of 48 rev /min, read across and note the driving and driven pulley pitch diameters together with the numbers of belts required, which for this case is 95 mm and 140 mm, using 2 SPZ Wedge Belts

(g) By reference to the Wedge Belt catalogue, SPZ 1600 Belts can be selected to give 615 mm centres.

Note: Wedge Belt drives shown on pages 9 to 20 have been selected to give the most economical total drive package for the speed required. If it is necessary to design a special drive it is advisable not to select a gearbox pulley smaller than that shown in the drive tables for the approximate speed required.

TABLE 1 - SERVICE FACTORS

| Types of Driven Machine | Operational Hours Per Day | | |
|--|---------------------------|----------|-------------|
| | Under 10 | 10 to 16 | 16 and over |
| Uniform Agitators and Mixers-liquid or semi-liquid Blowers -centrifugal Bottling Machines, Conveyors and Elevators - uniformly loaded Cookers, Laundry Washing Machines -non-reversing Line Shafts, Pumps - centrifugal and gear,Wire Drawing Machines | 1.0 | 1.12 | 1.25 |
| Moderate Shock Agitators and Mixers - variable density Conveyors - not uniformly loaded, Cranes-travel, motion and hoisting, Draw bench,Feeders - pulsating load Hoists, Kilns Laundry Tumblers, Lifts, Piston Pumps - with 3 or more cylinders, Pulp and Paper Making Machinery, Rubber Mixer. and Calenders, Rotary Screens, Textile Machinery | 1.0 | 1.12 | 1.25 |
| Heavy Shock Brick Presses, Briquetting Machines, Conveyors - reciprocating and shaker, Crushers, Feeders - reciprocating, Hammer Mills, Piston Pumps - 1 or 2 cylinders, Rubber Masticators, Vibrating Machines | 1.6 | 1.8 | 2.0 |



Shaft Mounted Speed Reducer

TABLE 2 POWER RATINGS (kW)5:1 UNITS

| Output Rev/Min | B 05 | C 05 | D 05 | E 05 | F 05 | G 05 | H 05 | J 05 |
|------------------------|------------|------------|------------|------------|-------------|-------------|-------------|-------------|
| 50 | 1.29 | 1.84 | 3.18 | 5.11 | 7.01 | 12.7 | 17.8 | 31.5 |
| 60 | 1.40 | 2.05 | 3.51 | 5.58 | 7.73 | 13.6 | 19.3 | 37.0 |
| 70 | 1.51 | 2.26 | 3.82 | 6.03 | 8.43 | 14.6 | 20.7 | 42.2 |
| 80 | 1.62 | 2.46 | 4.13 | 6.47 | 9.11 | 15.5 | 22.2 | 47.7 |
| 90 | 1.73 | 2.66 | 4.43 | 6.89 | 9.76 | 16.4 | 23.6 | 53.3 |
| 100 | 1.84 | 2.85 | 4.73 | 7.30 | 10.4 | 17.3 | 25.0 | 59.2 |
| 110 | 1.96 | 3.03 | 5.01 | 7.70 | 11.0 | 18.3 | 26.4 | 64.0 |
| 120 | 2.07 | 3.20 | 5.29 | 8.09 | 11.6 | 19.2 | 27.8 | 69.0 |
| 130 | 2.18 | 3.37 | 5.56 | 8.46 | 12.1 | 20.2 | 29.1 | 73.0 |
| 140 | 2.30 | 3.54 | 5.82 | 8.82 | 12.7 | 21.1 | 30.5 | 75.4 |
| 150 | 2.41 | 3.70 | 6.08 | 9.17 | 13.2 | 22.0 | 31.8 | 78.0 |
| 160 | 2.53 | 3.85 | 6.33 | 9.52 | 13.7 | 22.9 | 33.1 | 81.0 |
| 170 | 2.64 | 4.00 | 6.57 | 9.85 | 14.2 | 23.9 | 34.4 | 84.0 |
| 180 | 2.76 | 4.14 | 6.81 | 10.2 | 14.6 | 24.8 | 35.7 | 86.0 |
| 190 | 2.88 | 4.28 | 7.03 | 10.5 | 15.1 | 25.7 | 36.9 | 89.0 |
| 200 | 2.99 | 4.41 | 7.26 | 10.8 | 15.5 | 26.6 | 38.1 | 92.0 |
| 210 | 3.11 | 4.54 | 7.47 | 11.1 | 15.9 | 27.4 | 39.3 | 94.0 |
| 220 | 3.23 | 4.67 | 7.68 | 11.4 | 16.3 | 28.3 | 40.5 | 97.0 |
| 230 | 3.35 | 4.79 | 7.88 | 11.7 | 16.7 | 29.2 | 41.6 | 99.0 |
| 240 | 3.46 | 4.91 | 8.06 | 11.9 | 17.1 | 30.0 | 42.7 | 102.0 |
| 250 | 3.54 | 5.02 | 8.24 | 12.2 | 17.4 | 30.9 | 43.7 | 104.0 |
| 260 | 3.70 | 5.13 | 8.41 | 12.5 | 17.7 | 31.7 | 44.8 | 106.0 |
| 270 | 3.82 | 5.24 | 8.58 | 12.7 | 18.0 | 32.5 | 45.8 | 108.0 |
| 280 | 3.93 | 5.35 | 8.75 | 13.0 | 18.4 | 33.2 | 46.7 | 110.0 |
| 290 | 4.05 | 5.45 | 8.91 | 13.2 | 18.6 | 34.0 | 47.7 | 111.0 |
| 300 | 4.17 | 5.55 | 9.07 | 13.5 | 18.9 | 34.7 | 48.5 | 113.0 |
| 310 | 4.28 | 5.65 | 9.23 | 13.7 | 19.2 | 35.5 | 49.4 | 117.0 |
| 320 | 4.40 | 5.75 | 9.39 | 14.0 | 19.4 | 36.2 | 50.2 | 118.0 |
| 330 | 4.51 | 5.85 | 9.55 | 14.2 | 19.7 | 36.8 | 51.0 | 119.0 |
| 340 | 4.63 | 5.94 | 9.71 | 14.5 | 19.8 | 37.5 | 51.7 | 119.5 |
| 350 | 4.74 | 6.04 | 9.87 | 14.7 | 20.1 | 38.1 | 52.3 | 120.0 |
| 360 | 4.85 | 6.13 | 10.0 | 14.9 | 20.4 | 38.7 | 53.0 | 122.0 |
| 370 | 4.97 | 6.22 | 10.2 | 15.2 | 20.6 | 39.3 | 53.6 | 123.0 |
| 380 | 5.08 | 6.32 | 10.4 | 15.4 | 20.8 | 39.8 | 54.1 | 124.0 |
| 390 | 5.19 | 6.41 | 10.5 | 15.7 | 20.9 | 40.3 | 54.6 | 125.0 |
| 400 | 5.30 | 6.50 | 10.7 | 15.9 | 21.1 | 40.8 | 55.0 | 127.8 |
| Torque at 50rev/min Nm | 246 | 351 | 607 | 976 | 1339 | 2426 | 3400 | 6017 |

The dotted line shows the speed limitation for 5:1 unit with backstops: For slow speed operation - CONSULT FENNER

Shaft Mounted Speed Reducer

TABLE 3 POWER RATINGS (kW) 13:1 AND 20:1 UNITS

| Output Rev/Min | B13 B20 | C13 C20 | D13 D20 | E13 E20 | F13 F20 | G13 G20 | H13 H20 | J13 J20 |
|----------------------------|------------|------------|------------|-------------|-------------|-------------|-------------|-------------|
| 10 | 0.27 | 0.45 | 0.76 | 1.16 | 1.82 | 2.88 | 4.52 | 7.26 |
| 12 | 0.33 | 0.53 | 0.89 | 1.38 | 2.16 | 3.43 | 5.47 | 8.49 |
| 14 | 0.38 | 0.61 | 1.03 | 1.60 | 2.51 | 3.98 | 6.30 | 9.95 |
| 16 | 0.43 | 0.70 | 1.18 | 1.82 | 2.86 | 4.53 | 7.11 | 11.2 |
| 18 | 0.48 | 0.79 | 1.31 | 2.04 | 3.19 | 5.07 | 8.01 | 12.6 |
| 20 | 0.54 | 0.87 | 1.46 | 2.25 | 3.54 | 5.62 | 8.79 | 14.0 |
| 22 | 0.58 | 0.95 | 1.60 | 2.47 | 3.87 | 6.14 | 9.64 | 15.2 |
| 24 | 0.63 | 1.03 | 1.73 | 2.68 | 4.21 | 6.68 | 10.5 | 16.6 |
| 26 | 0.68 | 1.11 | 1.87 | 2.90 | 4.55 | 7.20 | 11.2 | 17.9 |
| 28 | 0.74 | 1.20 | 2.02 | 3.11 | 4.88 | 7.73 | 12.1 | 19.1 |
| 30 | 0.79 | 1.28 | 2.15 | 3.32 | 5.21 | 8.25 | 12.9 | 20.4 |
| 32 | 0.84 | 1.37 | 2.29 | 3.53 | 5.54 | 8.78 | 13.8 | 21.5 |
| 34 | 0.89 | 1.45 | 2.43 | 3.74 | 5.87 | 9.29 | 14.5 | 22.8 |
| 36 | 0.95 | 1.53 | 2.56 | 3.95 | 6.20 | 9.81 | 15.3 | 23.9 |
| 38 | 1.00 | 1.62 | 2.70 | 4.15 | 6.52 | 10.3 | 16.1 | 25.1 |
| 40 | 1.05 | 1.70 | 2.84 | 4.36 | 6.85 | 10.8 | 16.9 | 26.3 |
| 42 | 1.09 | 1.79 | 2.96 | 4.56 | 7.17 | 11.3 | 17.6 | 27.4 |
| 44 | 1.14 | 1.86 | 3.10 | 4.77 | 7.49 | 11.9 | 18.5 | 28.6 |
| 46 | 1.19 | 1.94 | 3.22 | 4.97 | 7.81 | 12.4 | 19.2 | 29.6 |
| 48 | 1.24 | 2.02 | 3.36 | 5.18 | 8.11 | 12.8 | 20.0 | 30.8 |
| 50 | 1.29 | 2.09 | 3.50 | 5.38 | 8.39 | 13.3 | 20.7 | 31.8 |
| 52 | 1.34 | 2.16 | 3.63 | 5.58 | 8.68 | 13.9 | 21.3 | 33.0 |
| 54 | 1.39 | 2.24 | 3.76 | 5.77 | 8.97 | 14.4 | 22.1 | 34.0 |
| 56 | 1.44 | 2.31 | 3.90 | 5.97 | 9.26 | 14.8 | 22.8 | 35.2 |
| 58 | 1.49 | 2.38 | 4.02 | 6.17 | 9.54 | 15.3 | 23.5 | 36.2 |
| 60 | 1.54 | 2.48 | 4.15 | 6.37 | 9.82 | 15.9 | 24.3 | 37.3 |
| 62 | 1.60 | 2.52 | 4.28 | 6.57 | 10.1 | 16.3 | 25.0 | 38.3 |
| 64 | 1.64 | 2.59 | 4.42 | 6.77 | 10.2 | 16.8 | 25.7 | 39.5 |
| 66 | 1.69 | 2.67 | 4.55 | 6.97 | 10.7 | 17.2 | 26.5 | 40.5 |
| 68 | 1.73 | 2.74 | 4.67 | 7.16 | 10.9 | 17.7 | 27.1 | 41.6 |
| 70 | 1.79 | 2.81 | 4.80 | 7.36 | 11.2 | 18.3 | 27.8 | 42.6 |
| 72 | 1.83 | 2.89 | 4.94 | 7.56 | 11.4 | 18.7 | 28.5 | 43.8 |
| 74 | 1.87 | 2.95 | 5.06 | 7.75 | 11.8 | 19.2 | 29.1 | 44.8 |
| 76 | 1.92 | 3.02 | 5.19 | 7.95 | 12.1 | 19.6 | 29.7 | 45.9 |
| 78 | 1.96 | 3.10 | 5.33 | 8.14 | 12.3 | 20.2 | 30.5 | 46.9 |
| 80 | 2.02 | 3.17 | 5.43 | 8.34 | 12.6 | 20.6 | 31.2 | 47.8 |
| 85 | 2.13 | 3.35 | 5.74 | 8.81 | 13.3 | 21.8 | 32.9 | 50.3 |
| 90 | 2.25 | 3.54 | 6.06 | 9.29 | 13.9 | 23.0 | 34.4 | 52.7 |
| 95 | 2.37 | 3.74 | 6.37 | 9.77 | 14.7 | 24.2 | 36.1 | 55.2 |
| 100 | 2.48 | 3.92 | 6.68 | 10.2 | 15.4 | 25.3 | 37.7 | 57.6 |
| 105 | 2.59 | 4.12 | 6.99 | 10.7 | 16.2 | | | |
| 110 | 2.71 | 4.32 | 7.30 | 11.1 | 16.9 | | | |
| 115 | 2.82 | 4.50 | 7.59 | | | | | |
| 120 | 3.00 | 4.81 | 8.01 | | | | | |
| 140 | 3.48 | 5.30 | 9.35 | | | | | |
| 160 | 3.89 | 5.91 | | | | | | |
| 180 | 4.35 | 6.60 | | | | | | |
| Torque at 10 rev/min Nm | 260 | 431 | 722 | 1103 | 1733 | 2751 | 4316 | 6930 |

The dotted line shows the limit of recommended output speed for reducers with 20: 1 ratio. For higher speeds use a 13: 1 or 5 : 1 reducer.

F Shaft Mounted Speed Reducer

DIMENSIONS - SHAFT MOUNTING SIZES B-J

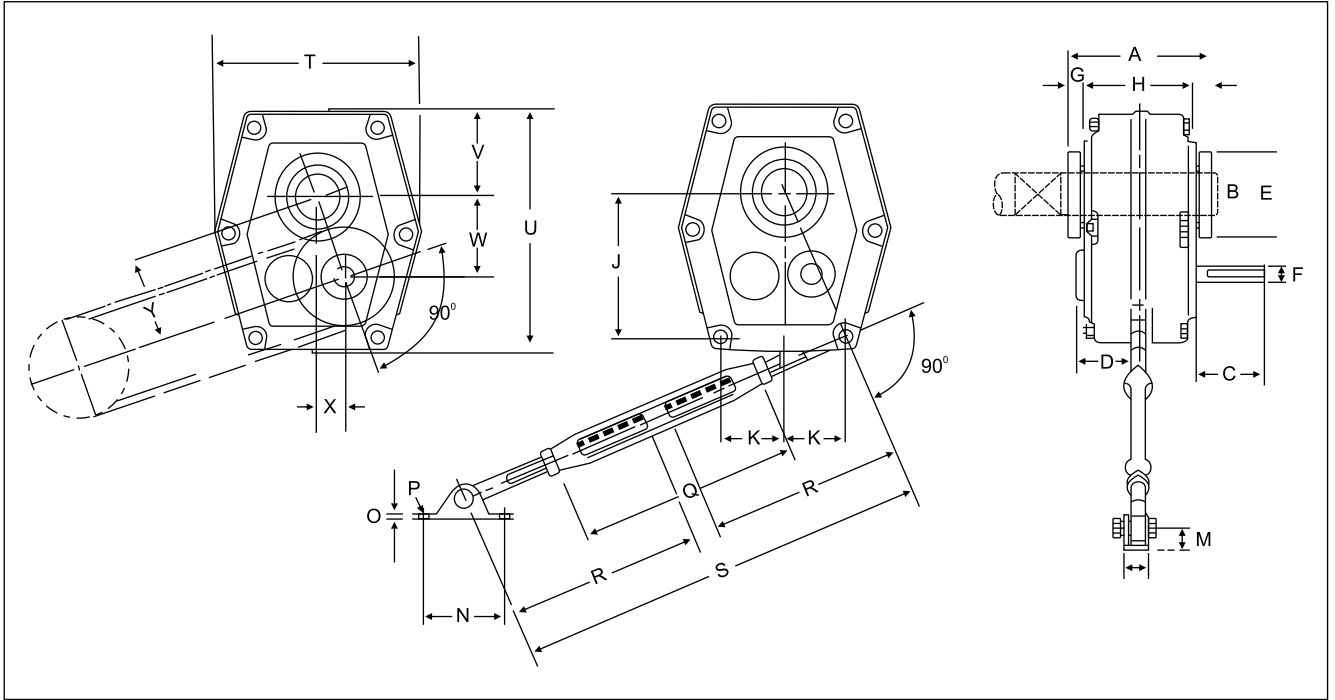


TABLE 4

| SIZES | Approx. Mass Kg. | | A | B | C | D | E | F | Input Shaft Keyway | G | H | J | K | L | M | N | O | P | Q | R | S* | | T | U | V | W | X | Y |
|-------|------------------|--------------|-----|-----|-----|-----|------|------------|--------------------|-----|-----|-----|----|----|-----|------|----|-----|-----|-----|-----|-----|-----|-----|-----|----|-----|---|
| | Ratio 5 | Ratios 13&20 | | | | | | | | | | | | | | | | | | | Min | Max | | | | | | |
| | B | 15 | | | | | | | | | | | | | | | | | | | 16 | 134 | | | | | | |
| C | 21 | 22 | 142 | 72 | 65 | 90 | 22j6 | 6x3.5x56 | 17 | 108 | 156 | 59 | 24 | 20 | 65 | 5 | 10 | 200 | 300 | 600 | 750 | 218 | 270 | 96 | 90 | 31 | 95 | |
| D | 30 | 32 | 152 | 77 | 68 | 100 | 25j6 | 8x4x63 | 17 | 118 | 188 | 76 | 28 | 24 | 75 | 5 | 12 | 216 | 350 | 700 | 850 | 258 | 328 | 117 | 110 | 37 | 116 | |
| E | 41 | 46 | 170 | 85 | 76 | 115 | 28j6 | 8x4x70 | 20 | 130 | 222 | 90 | 28 | 24 | 75 | 5 | 12 | 216 | 350 | 700 | 850 | 278 | 377 | 129 | 125 | 43 | 133 | |
| F | 53 | 58 | 189 | 90 | 87 | 130 | 32k6 | 10x5x70 | 20 | 149 | 242 | 98 | 34 | 30 | 100 | 6 | 16 | 216 | 375 | 750 | 900 | 317 | 414 | 143 | 141 | 50 | 150 | |
| G | 82 | 92 | 212 | 105 | 110 | 145 | 42k6 | 12x5x90 | 20 | 172 | 277 | 110 | 34 | 30 | 100 | 6 | 16 | 216 | 375 | 750 | 900 | 365 | 468 | 162 | 156 | 56 | 166 | |
| H | 133 | 144 | 242 | 116 | 115 | 170 | 48k6 | 14x5.5x100 | 26 | 190 | 330 | 88 | 70 | 50 | 121 | 17.5 | 16 | 222 | 375 | 750 | 900 | 434 | 550 | 195 | 189 | 62 | 200 | |
| J | 194 | 208 | 257 | 135 | 119 | 200 | 55m6 | 16x6x110 | 30 | 197 | 424 | 102 | 70 | 50 | 121 | 17.5 | 16 | 222 | 375 | 750 | 900 | 542 | 700 | 254 | 255 | 75 | 266 | |

All dimensions are subject to alteration without notice.

All dimensions are in millimetres.

• Permits 150mm adjustments to tighten V-Belts. By cutting off threaded end of rods, 'S' may be reduced by up to 300mm on sizes B & C, 350mm on D & E and 395mm on sizes F, G, H & J.

Keyways are British Standard and Indian Standard Metric.

**TABLE 5
EXACT GEAR RATIOS**

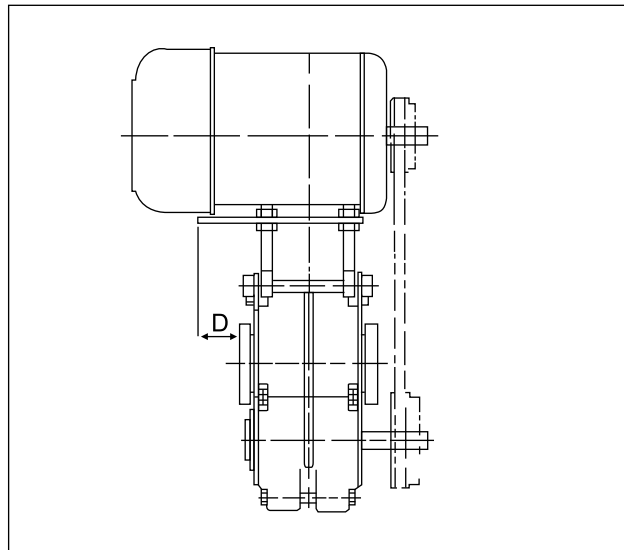
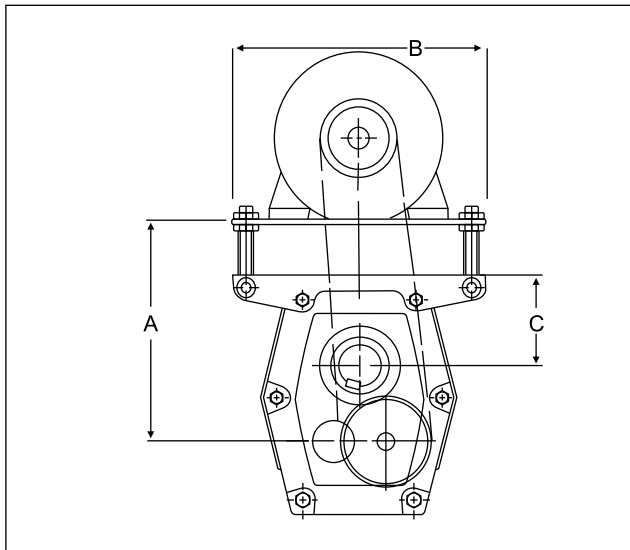
| Nominal Ratio | B | C | D | E | F | G | H | J |
|---------------|--------|--------|--------|--------|--------|--------|--------|--------|
| 5 | 5.05 | 5.05 | 5.047 | 5.047 | 5.047 | 5.047 | 5.047 | 5.047 |
| 13 | 13.984 | 13.596 | 13.589 | 13.589 | 13.589 | 13.589 | 13.589 | 13.589 |
| 20 | 20.997 | 20.466 | 20.456 | 20.456 | 20.456 | 20.456 | 20.456 | 20.456 |

Shaft Mounted Speed Reducer

Motor Mounts

A motor mount is available which is designed to fit directly onto either the long edge or the short edge of the Shaft Mounted Speed Reducer. For fitting of motor mounting onto the long edge of SMSR, CONSULT FENNER. The drive unit can then be located in any position around the shaft to permit easy belt tensioning.

DIMENSIONS-MOTOR MOUNTING



| Size | A | | B | C | D | Accommodates Metric Motor Frame Size |
|------|-----|-----|-----|-----|-----|---|
| | Min | Max | | | | |
| B | 185 | 240 | 240 | 88 | 55 | 63, 71, 80a, 80b, 90S, 90L |
| C | 214 | 267 | 267 | 102 | 86 | 63, 71, 80L, 90S, 90L, 100L |
| D | 252 | 307 | 307 | 122 | 78 | 71, 80, 90S, 90L, 100La, 100Lb, 112M |
| E | 292 | 345 | 345 | 144 | 63 | 80, 90S, 90L, 100L, 112M |
| F | 319 | 391 | 391 | 150 | 110 | 80, 90S, 110La, 100Lb, 112M, 132S, 132M |
| G | 357 | 427 | 427 | 173 | 200 | 90S, 90L, 100L, 112M, 132S, 132M, 160M, 160L |
| H | 427 | 495 | 495 | 208 | 204 | 90L, 100L, 112M, 132S, 132M, 160M, 160L, 180M, 180L |
| J | 563 | 646 | 646 | 269 | 215 | 100L, 112M, 132S, 132M, 160M, 160L, 180M, 200L |

All dimensions are subject to alteration without notice

All dimensions are in millimetres. For dimensions of basic Reducer see page 4. It is recommended that larger frame size motors than those listed for a particular size SMSR should be mounted independently.

'A Max' must include belt tensioning allowances, 'A Min' must include belt fitting allowances.

The Fenner motor mounting assembly provides a rigid base plate which is designed to accommodate a wide range of motor frame sizes.

Each size of motor mount has sufficient adjustment available to ensure that a standard belt can be fitted and re-tensioned as required throughout its working life than 'A' max in the dimension table.

To determine optimum belt length when using a motor mount, first calculate the minimum centre distance as follows:
 'X Min' = Motor Frame Size + 'A Min' + Installation Allowance.

A belt length should be selected from the Fenner Wedge Belt Drives catalogue which gives a centre distance equal to or slightly

larger than the 'X Min' value determined above.

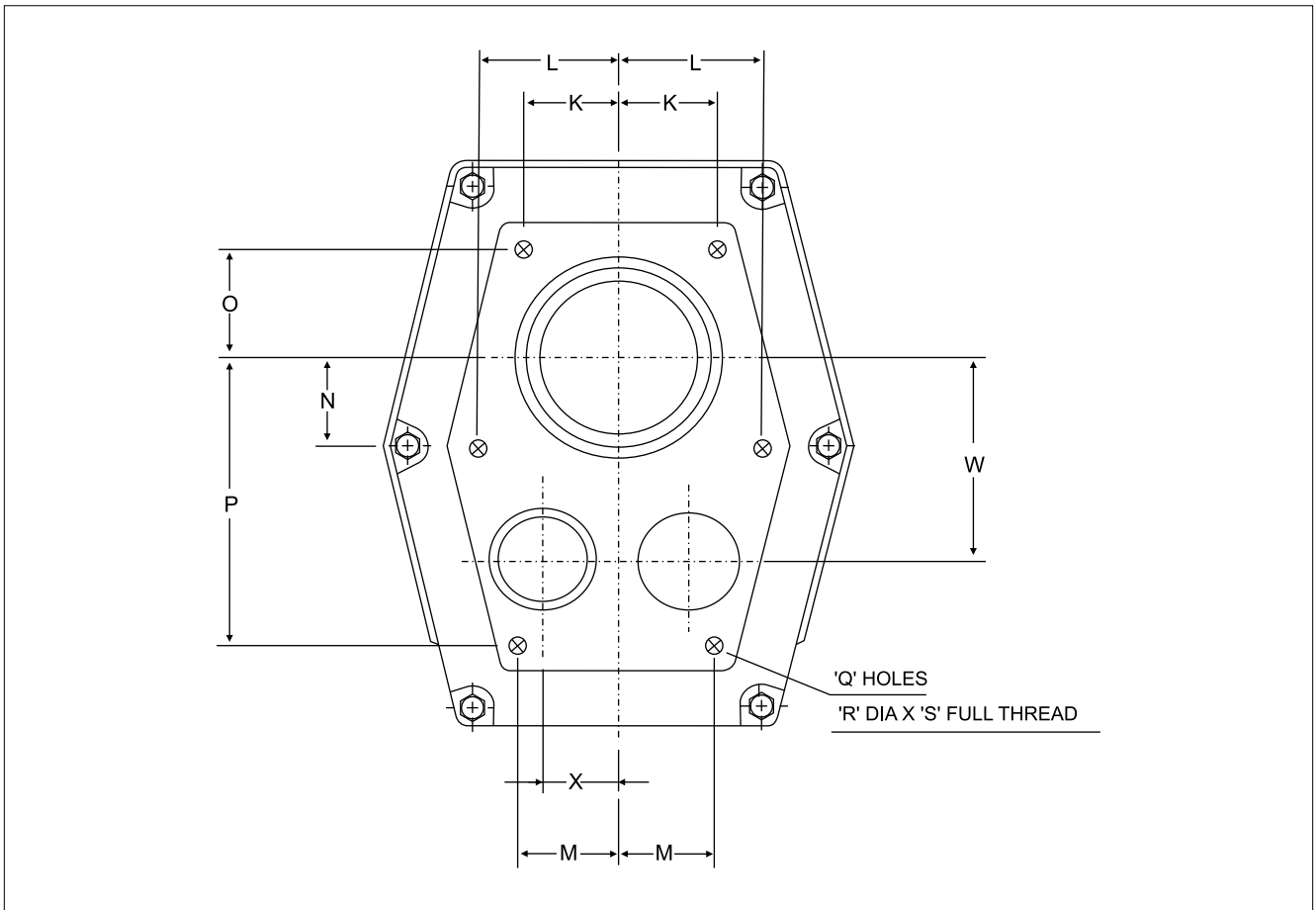
To check that sufficient adjustment is still available for re-tensioning, multiply the actual drive centre distance by 1.01 and subtract the motor frame size. The resulting value should be less than 'A Max' in the dimension table.

BELT INSTALLATION ALLOWANCE

| | |
|-----|-------|
| SPZ | 20 mm |
| SPA | 25 mm |
| SPB | 30 mm |
| SPC | 50 mm |

F Shaft Mounted Speed Reducer

FLANGE MOUNTING SIZES B-J



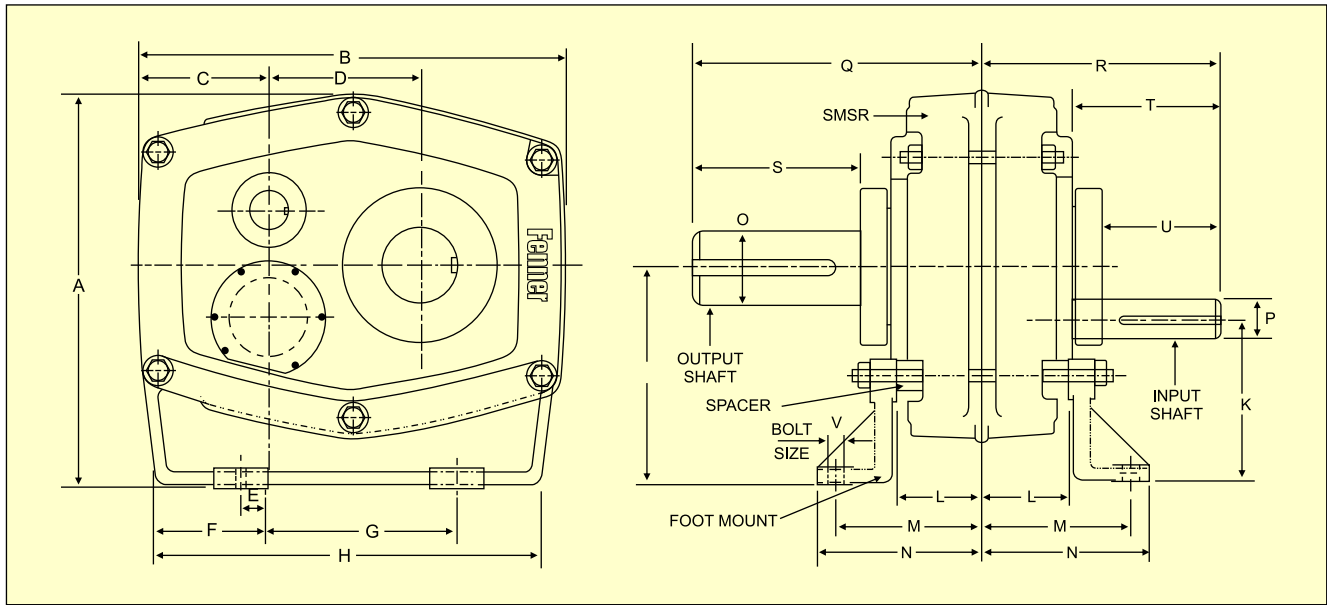
FLANGE MOUNTING DIMENSIONS

| SIZE | K | L | M | N | O | P | Q | R | S | W | X |
|------|----|-----|----|----|-----|-----|---|-----|----|-----|----|
| B | 34 | 53 | - | 33 | 41 | - | 4 | M8 | 15 | 75 | 25 |
| C | 40 | - | 44 | 40 | 52 | 132 | 4 | M12 | 15 | 90 | 31 |
| D | 50 | - | 59 | 48 | 61 | 155 | 4 | M12 | 17 | 110 | 37 |
| E | 57 | 90 | 57 | 64 | 62 | 188 | 6 | M16 | 18 | 125 | 43 |
| F | 67 | 100 | 76 | 64 | 76 | 197 | 6 | M16 | 19 | 141 | 50 |
| G | 74 | 115 | 86 | 74 | 87 | 224 | 6 | M16 | 24 | 156 | 56 |
| H | 64 | 150 | 79 | 81 | 122 | 281 | 6 | M20 | 29 | 189 | 62 |
| J | 74 | 200 | - | 98 | 164 | 330 | 5 | M20 | 32 | 255 | 75 |

All dimensions are subject to alteration without notice. Flange mounting holes may be drilled on either case half.

Shaft Mounted Speed Reducer

FOOT MOUNTING SIZES B-J



FOOT MOUNTING DIMENSIONS

| Dimension | B | C | D | E | F | G | H | J |
|-----------|------|------|------|------|------|------|------|-------|
| A | 208 | 230 | 226 | 295 | 340 | 398 | 459 | 546 |
| B | 226 | 270 | 328 | 377 | 414 | 468 | 550 | 700 |
| C | 70 | 84 | 101 | 123 | 130 | 150 | 164 | 190 |
| D | 75 | 90 | 110 | 125 | 141 | 156 | 189 | 255 |
| E | 13 | 9 | 14 | 26 | 21 | 28 | 82 | 84 |
| F | 45 | 61 | 68 | 70 | 71 | 85 | 50 | 87 |
| G | 110 | 118 | 152 | 180 | 196 | 220 | 380 | 482 |
| H | 200 | 240 | 288 | 320 | 338 | 390 | 480 | 656 |
| J | 115 | 121 | 137 | 156 | 182 | 216 | 242 | 275 |
| K | 90 | 90 | 100 | 112 | 132 | 160 | 180 | 200 |
| L | 49 | 52 | 59 | 59 | 70 | 83 | 94 | 103 |
| M | 83 | 86 | 93 | 95 | 105 | 122 | 133 | 139 |
| N | 96 | 100 | 109 | 110 | 125 | 143 | 153 | 159 |
| O | 38k6 | 45k6 | 50k6 | 55m6 | 60m6 | 75m6 | 90m6 | 100m6 |
| P | 19j6 | 22k6 | 25j6 | 28j6 | 32k6 | 42k6 | 48k6 | 55m6 |
| Q | 147 | 181 | 186 | 225 | 235 | 246 | 291 | 338 |
| R | 115 | 126 | 136 | 150 | 165 | 191 | 211 | 234 |
| S | 80 | 110 | 110 | 140 | 140 | 140 | 170 | 210 |
| T | 63 | 72 | 77 | 85 | 90 | 105 | 116 | 129 |
| U | 48 | 55 | 60 | 65 | 70 | 85 | 90 | 105 |
| V | M8 | M10 | M10 | M12 | M16 | M16 | M16 | M20 |

All dimensions are subject to alteration without notice. All dimensions are in millimeters.



Shaft Mounted Speed Reducer

**TABLE 6
OUTPUT HUBS & BUSHES**

| Reducer Size | Dimension 'B' (See Page 4) | | | |
|-------------------|----------------------------|----------------------------------|----------------------|--------------------------------|
| | Standard Hub Bore | Bush Bores for Standard Hub | Alternative Hub Bore | Bush Bores for Alternative Hub |
| B05 B13 B20 | 30 | 25 1" | 40 | 35 1¼" 32 |
| C05 C13 C20 | 40 | 35 1¼" 32 30 | 50 | 45 1¾" 42 1½" 38 |
| D05 D13 D20 | 50 | 45 1¼" 42 1½" 40 1¼" 38 | 55 | 2" |
| E05 E13 E20 | 55 | 50 2" 45 1¾" 42 1½" | 65 | 60 2¼" |
| F05 F13 F20 | 65 | 60 2¼" 55 50 | 75 | 70 2¾" 2½" |
| G05 G13 G20 | 75 | 70 2¾" 65 2½" 60 2¼" | 85 | 80 3" |
| H05 H13 H20 | 85 | 80 3" 75 2¾" 70 2½" | 100 | 95 3½" 90 |
| J05 J13 | 100 | 95 3½" 90 | 120 | 110 4½" 4" |

All dimensions are subject to alteration without notice:

All dimensions are in millimetres unless otherwise stated.
Metric hubs are bored to F7 limits.
Inch hubs are bored to H7 limits.
Shaft keyways must be to appropriate standard dimensions, i.e. to B.S. 4235/IS : 2048 for metric shafts and B.S. 46 for inch shafts.

OPTIONAL EXTRAS

1. Backstops

A backstop may be incorporated on applications where it is necessary to prevent reversal of rotation. It is quickly installed within the Reducer by simply removing a cover plate.

2. Vertical Shafts

Units suitable for mounting on vertical shafts can be supplied at extra charge. When ordering, please specify whether input shaft is upwards or downwards.

3. Reversing Duty

Shaft Mounted Speed Reducers suitable for reversing duty can be supplied to order.

4. Flange Mounting

The Speed Reducer casing design is such that the Reducer can be bolted direct to supporting framework. This may permit designers to omit a bearing or plummer block but it does, of course, eliminate the easy belt adjustment feature characteristic of the shaft mounting version. See page 7 for dimensions.

**TABLE 7
STANDARD KEYWAYS**

| Shaft Diameter (mm) | Keysize | Shaft Diameter (inches) | Keysize |
|---------------------|---------|-------------------------|-----------|
| 20 | 6 x 6 | ¾" | ⅜" x ⅛" |
| 25 | 8 x 7 | 1" | ¼" x ¼" |
| 30 | 8 x 7 | 1 ¼" | ⅝" x ¼" |
| 32 | 10 x 8 | 1 ½" | ⅜" x ¼" |
| 35 | 10 x 8 | 1 ¾" | ⅞" x ⅜" |
| 38 | 10 x 8 | 2" | ½" x ⅝" |
| 40 | 12 x 8 | 2 ¼" | ⅝" x ⅞" |
| 42 | 12 x 8 | 2 ½" | ⅝" x ⅞" |
| 45 | 14 x 9 | 2 ¾" | ¾" x ½" |
| 50 | 14 x 9 | 3" | ⅞" x ⅝" |
| 55 | 16 x 9 | 4" | 1" x ⅜" |
| 60 | 18 x 11 | 4 ½" | 1" x ⅜" |
| 65 | 18 x 11 | | 1 ¼" x ⅞" |
| 70 | 20 x 12 | | |
| 75 | 20 x 12 | | |
| 80 | 22 x 14 | | |
| 85 | 22 x 14 | | |
| 90 | 25 x 14 | | |
| 95 | 25 x 11 | | |
| 100 | 28 x 16 | | |
| 110 | 28 x 16 | | |
| 120 | 32 x 18 | | |

Keyways for output hubs and bushes are machined in accordance with B.S. 4235/IS .2048 for metric shafts and B.S. 46 for inch shafts.

Keys are supplied with reduction bushes, but not where the output hubs directly fit the shaft.

Reduction bushes may be supplied with two separate keys for hub and shaft or a single stepped key, depending on the bush wall thickness.

The shaft keyway should be machined to suit the standard key size shown below regardless of the hub bore diameter.

Fenner



Shaft Mounted Speed Reducers - Plus Series

11 B

Salient Features of *PLUS* Series SMSR:

- Improved Power Rating
- Backstop removal and assembly made easy
- Separate provision for fixing the Torque arm without opening casing assembly bolts.
- Compact Design results in improved performance of Equipment.



Shaft Mounted Speed Reducer - PLUS Series

TABLE 2 POWER RATINGS (kW)

Ratio 5:1

TABLE 2 POWER RATINGS (kW)

Ratio 13&20:1

| Output Rev/Min | E Plus | F Plus | G Plus | | Output Rev/Min | E Plus | F Plus | G Plus |
|-------------------------|-------------|-------------|-------------|--|---------------------|-------------|-------------|-------------|
| 100 | 10.78 | 15.76 | 27.50 | | 10 | 1.27 | 1.90 | 3.22 |
| 110 | 11.25 | 16.21 | 29.36 | | 12 | 1.52 | 2.35 | 3.95 |
| 120 | 11.95 | 17.10 | 29.10 | | 14 | 1.76 | 2.73 | 4.76 |
| 130 | 12.12 | 17.62 | 31.21 | | 16 | 2.14 | 3.12 | 5.52 |
| 140 | 12.97 | 18.85 | 33.52 | | 18 | 2.45 | 3.65 | 6.34 |
| 150 | 13.25 | 19.32 | 34.25 | | 20 | 2.72 | 4.05 | 7.11 |
| 160 | 13.92 | 20.52 | 34.97 | | 22 | 3.02 | 4.50 | 7.75 |
| 170 | 14.27 | 21.90 | 37.20 | | 24 | 3.27 | 4.95 | 8.62 |
| 180 | 14.80 | 22.12 | 38.23 | | 26 | 3.45 | 5.35 | 9.34 |
| 190 | 15.42 | 22.24 | 39.26 | | 28 | 3.97 | 5.72 | 10.11 |
| 200 | 15.87 | 23.40 | 40.82 | | 30 | 4.12 | 6.10 | 10.97 |
| 210 | 16.82 | 24.12 | 41.22 | | 32 | 4.36 | 6.72 | 11.72 |
| 220 | 16.20 | 24.75 | 42.95 | | 34 | 4.72 | 7.11 | 12.45 |
| 230 | 17.88 | 24.92 | 44.76 | | 36 | 4.97 | 7.30 | 12.65 |
| 240 | 18.27 | 26.45 | 45.84 | | 38 | 5.10 | 7.42 | 13.21 |
| 250 | 18.50 | 27.20 | 47.27 | | 40 | 5.47 | 8.02 | 13.97 |
| 260 | 19.12 | 28.92 | 48.92 | | 42 | 5.65 | 8.45 | 14.72 |
| 270 | 19.75 | 29.12 | 50.02 | | 44 | 5.97 | 8.76 | 15.02 |
| 280 | 20.12 | 29.34 | 51.32 | | 46 | 6.10 | 8.95 | 15.42 |
| 290 | 20.75 | 30.02 | 52.76 | | 48 | 6.22 | 9.10 | 15.98 |
| 300 | 21.27 | 31.10 | 53.87 | | 50 | 6.37 | 9.35 | 16.25 |
| 310 | 21.96 | 31.62 | 55.76 | | 52 | 6.62 | 9.72 | 16.92 |
| 320 | 22.27 | 32.54 | 56.92 | | 54 | 6.96 | 10.15 | 17.72 |
| 330 | 23.13 | 33.20 | 57.77 | | 56 | 7.12 | 10.42 | 18.17 |
| 340 | 23.75 | 34.35 | 58.95 | | 58 | 7.27 | 10.75 | 18.56 |
| 350 | 24.17 | 35.07 | 60.45 | | 60 | 7.35 | 10.82 | 18.92 |
| 360 | 24.82 | 35.82 | 61.76 | | 62 | 7.42 | 11.05 | 19.38 |
| 370 | 25.16 | 36.75 | 63.07 | | 64 | 7.67 | 11.24 | 19.57 |
| | | | | | 66 | 7.82 | 11.35 | 20.12 |
| | | | | | 68 | 7.97 | 11.62 | 20.45 |
| | | | | | 70 | 8.10 | 11.92 | 20.88 |
| | | | | | 72 | 8.25 | 12.17 | 21.34 |
| | | | | | 74 | 8.46 | 12.43 | 21.56 |
| | | | | | 76 | 8.57 | 12.88 | 22.34 |
| | | | | | 78 | 8.92 | 13.27 | 22.95 |
| | | | | | 80 | 9.57 | 14.02 | 24.45 |
| | | | | | 85 | 10.12 | 14.85 | 25.82 |
| | | | | | 90 | 10.67 | 15.64 | 27.12 |
| | | | | | 95 | 11.12 | 16.47 | 28.65 |
| | | | | | 100 | 11.12 | 16.47 | 28.65 |
| Torque at 100rev/min Nm | 1505 | 1505 | 1505 | | Torque at 10 rpm Nm | 1815 | 1815 | 1815 |

Shaft Mounted Speed Reducer - PLUS Series

DIMENSIONS - SMSR PLUS Series SIZES E, F & G

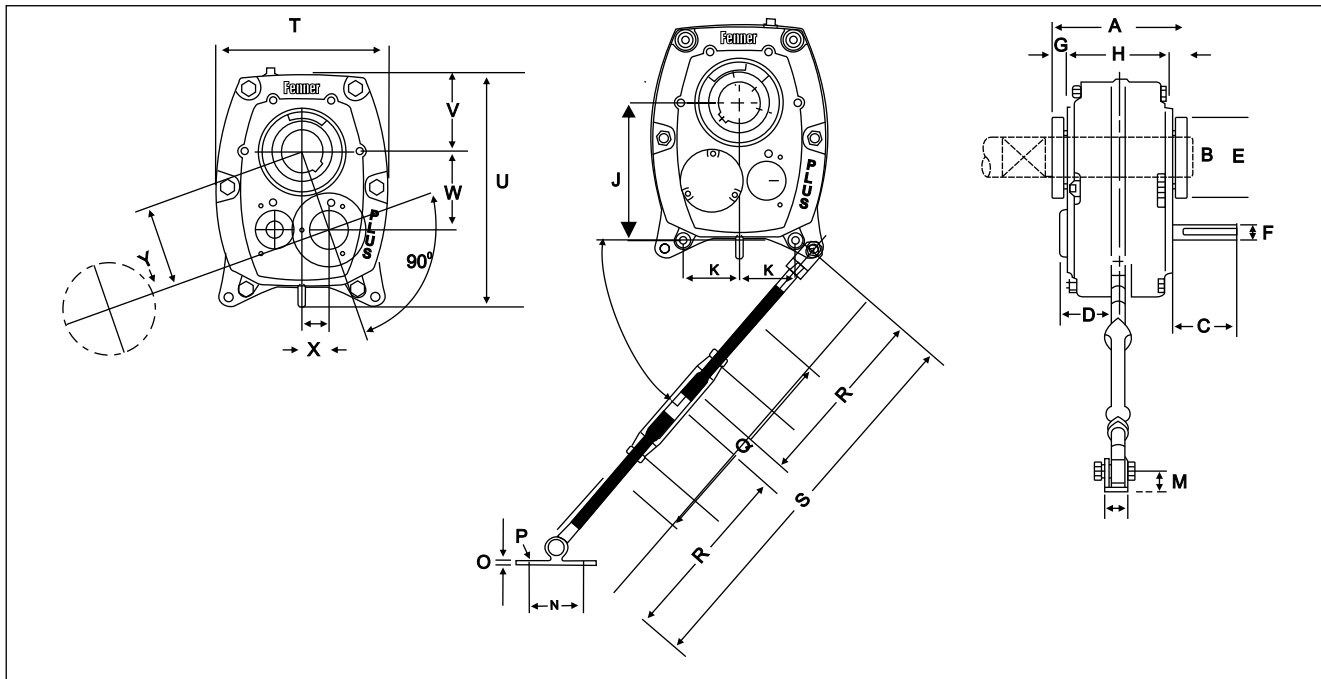


Table 11.4 Dimensions - Shaft Mounted Speed Reducer E, F & G Plus Series

| S i z e s | Approx. Mass Kg. | | A | B | C | D | E | F | Input Shaft Keyway | G | H | J | K | L | M | N | O | P | Q | R | S* | | T | U | V | W | X | Y |
|-----------------------|------------------|--------------|-----|----|----|-----|-----|------|--------------------|----|-----|-----|-----|----|----|-----|---|----|-----|-----|-----|-----|-----|-----|-----|-----|----|-----|
| | Ratio 5 | Ratios 13&20 | | | | | | | | | | | | | | | | | | | Min | Max | | | | | | |
| | E | 53 | | | | | | | | | | | | | | | | | | | 16 | 173 | | | | | | |
| F | 82 | 22 | 195 | 65 | 85 | 97 | 130 | 28j6 | 8x4x70 | 20 | 155 | 222 | 90 | 34 | 30 | 100 | 6 | 16 | 216 | 375 | 750 | 900 | 287 | 386 | 128 | 126 | 44 | 133 |
| G | 133 | 32 | 214 | 75 | 90 | 105 | 145 | 32k6 | 10x5x70 | 20 | 174 | 249 | 102 | 34 | 50 | 100 | 6 | 16 | 216 | 375 | 660 | 900 | 320 | 422 | 141 | 141 | 50 | 150 |
| | 194 | 46 | | | | | | | | | | | | | | | | | | | | | | | | | | |

All dimensions are subject to alteration without notice.

All dimensions are in millimetres.

- Permits 150mm adjustments to tighten V-Belts. By cutting off threaded end of rods, 'S' may be reduced by up to 300mm on sizes B & C, 350mm on D & E and 395mm on sizes F, G, H & J.

Keyways are British Standard and Indian Standard Metric.

Table 11.6 Output Hubs & Bushes

| Reducer Size | Dimension 'B' (See Page 4) | | | |
|-------------------|----------------------------|-----------------------------|----------------------|--------------------------------|
| | Standard Hub Bore | Bush Bores for Standard Hub | Alternative Hub Bore | Bush Bores for Alternative Hub |
| E05 E13 E20 | 55 | 50 2" 45 1¾" 42 1½" | 65 | 60 2¼" |
| F05 F13 F20 | 65 | 60 2¼" 55 50 | 75 | 70 2¾" 2½" |
| G05 G13 G20 | 75 | 70 2¾" 65 2½" 60 2¼" | 85 | 80 3" |

All dimensions are subject to alteration without notice:

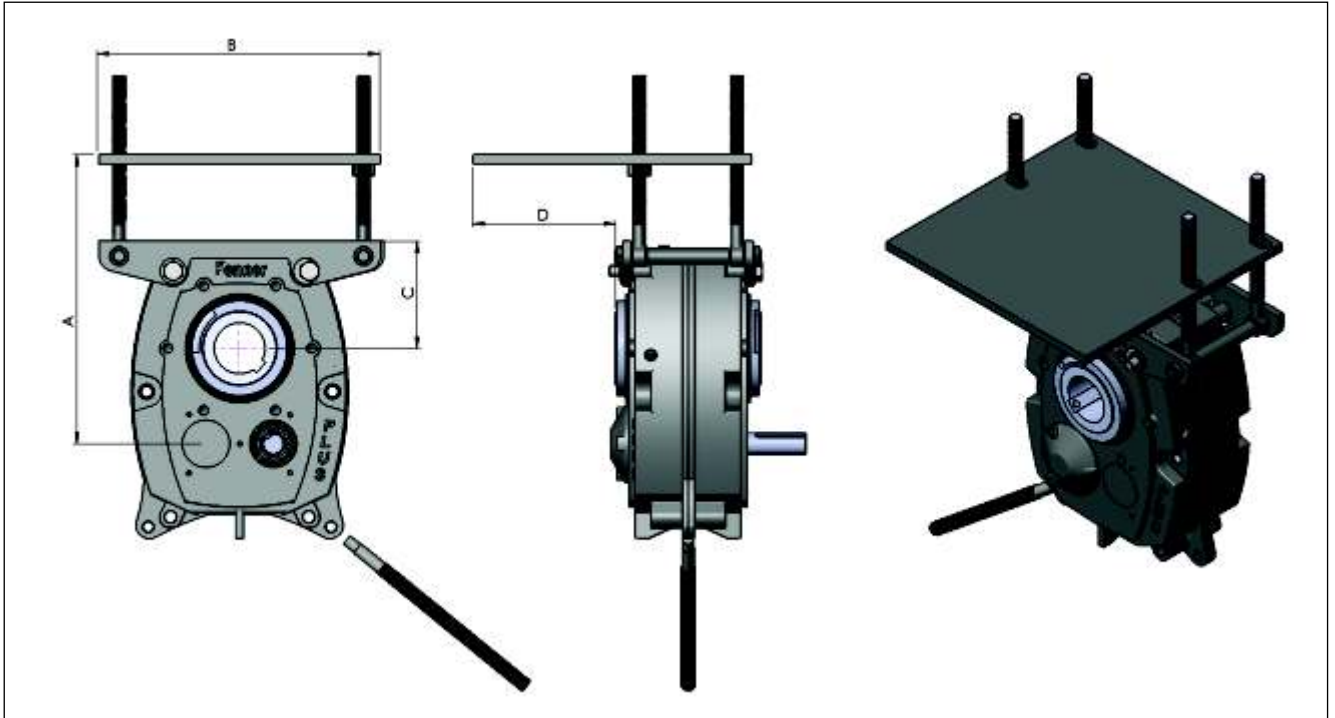
All dimensions are in millimetres unless otherwise stated. Metric hubs are bored to F7 limits.

Inch hubs are bored to H7 limits.

Shaft keyways must be to appropriate standard dimensions, i.e. to B.S. 4235/IS : 2048 for metric shafts and B.S. 46 for inch shafts.

F Shaft Mounted Speed Reducer - PLUS Series

Motor Mounting Assembly



OPTIONAL EXTRAS

1. Backstops

A backstop may be incorporated on applications where it is necessary to prevent reversal of rotation. It is quickly installed within the Reducer by simply removing a cover plate.

2. Vertical Shafts

Units suitable for mounting on vertical shafts can be supplied at extra charge. When ordering, please specify whether input shaft is upwards or downwards.

3. Reversing Duty

Shaft Mounted Speed Reducers suitable for reversing duty can be supplied to order.

4. Flange Mounting

The Speed Reducer casing design is such that the Reducer can be bolted direct to supporting framework. This may permit designers to omit a bearing or plummer block but it does, of course, eliminate the easy belt adjustment feature characteristic of the shaft mounting version. See page 7 for dimensions.

Pulley Selection Chart -SMSR & SMSR Plus Series

BELT DRIVES - 1440 Rev/Min Motor

B 5 : 1

| Output Speed Rev/Min | Pulley Ratio | Pulley Dia (mm) | | Number of Belts |
|----------------------|--------------|-----------------|---------|-----------------|
| | | Motor | Gearbox | |
| 51 | 5.63 | 71 | 400 | 1SPZ* |
| 57 | 5.00 | 80 | 400 | 1SPZ* |
| 64 | 4.44 | 90 | 400 | 1SPZ* |
| 71 | 4.00 | 100 | 400 | 1SPZ* |
| 80 | 3.57 | 112 | 400 | 1SPZ* |
| 86 | 3.32 | 95 | 315 | 1SPZ* |
| 91 | 3.15 | 100 | 315 | 1SPZ* |
| 97 | 2.94 | 85 | 250 | 2SPZ |
| 101 | 2.82 | 71 | 200 | 2SPZ |
| 107 | 2.67 | 75 | 200 | 2SPZ |
| 113 | 2.54 | 71 | 180 | 2SPZ |
| 119 | 2.40 | 75 | 180 | 2SPZ |
| 128 | 2.23 | 112 | 250 | 1SPZ* |
| 134 | 2.13 | 75 | 160 | 2SPZ |
| 137 | 2.09 | 67 | 140 | 3SPZ |
| 145 | 1.97 | 71 | 140 | 3SPZ |
| 151 | 1.89 | 106 | 200 | 1SPZ* |
| 160 | 1.79 | 112 | 200 | 1SPA* |
| 168 | 1.70 | 106 | 180 | 1SPA* |
| 171 | 1.67 | 67 | 112 | 3SPZ |
| 177 | 1.61 | 112 | 180 | 2SPZ |
| 181 | 1.58 | 71 | 112 | 3SPZ |
| 187 | 1.53 | 118 | 180 | 1SPA* |
| 190 | 1.50 | 100 | 150 | 2SPA |
| 200 | 1.43 | 112 | 160 | 1SPA* |
| 205 | 1.39 | 90 | 125 | 2SPZ |
| 210 | 1.36 | 118 | 160 | 1SPA* |
| 216 | 1.32 | 106 | 140 | 2SPA |
| 222 | 1.29 | 140 | 180 | 1SPZ* |
| 228 | 1.25 | 112 | 140 | 1SPA* |
| 235 | 1.21 | 132 | 160 | 1SPA* |
| 242 | 1.18 | 95 | 112 | 2SPZ |
| 250 | 1.14 | 140 | 160 | 1SPA* |
| 256 | 1.12 | 112 | 125 | 1SPA* |
| 266 | 1.07 | 140 | 150 | 1SPA* |
| 270 | 1.06 | 90 | 95 | 3SPZ |
| 285 | 1.00 | 100 | 100 | 2SPZ |
| 302 | 1.06 | 90 | 85 | 3SPZ |
| 306 | 1.07 | 150 | 140 | 1SPA* |
| 319 | 1.12 | 140 | 125 | 1SPA* |
| 324 | 1.14 | 150 | 132 | 1SPA* |
| 336 | 1.18 | 100 | 85 | 3SPZ |
| 342 | 1.20 | 180 | 150 | 1SPA* |
| 355 | 1.24 | 112 | 90 | 3SPZ |
| 362 | 1.27 | 150 | 118 | 1SPZ* |
| 365 | 1.28 | 160 | 125 | 2SPZ |
| 376 | 1.32 | 112 | 85 | 3SPZ |
| 380 | 1.33 | 200 | 150 | 1SPA* |
| 387 | 1.36 | 160 | 118 | 2SPA |
| 396 | 1.39 | 125 | 90 | 3SPZ |

C 5 : 1

| Output Speed Rev/Min | Pulley Ratio | Pulley Dia (mm) | | Number of Belts |
|----------------------|--------------|-----------------|---------|-----------------|
| | | Motor | Gearbox | |
| 51 | 5.63 | 71 | 400 | 2SPZ |
| 61 | 4.70 | 67 | 315 | 2SPZ |
| 64 | 4.44 | 71 | 315 | 2SPZ |
| 71 | 4.00 | 100 | 400 | 1SPA* |
| 76 | 3.77 | 106 | 400 | 1SPA* |
| 80 | 3.57 | 112 | 400 | 1SPZ |
| 86 | 3.33 | 75 | 250 | 3SPZ |
| 89 | 3.20 | 125 | 400 | 1SPZ |
| 94 | 3.03 | 132 | 400 | 1SPA* |
| 100 | 2.86 | 140 | 400 | 1SPZ |
| 107 | 2.67 | 118 | 315 | 1SPA* |
| 113 | 2.52 | 125 | 315 | 1SPA* |
| 120 | 2.39 | 132 | 315 | 1SPA* |
| 127 | 2.25 | 80 | 180 | 3SPZ |
| 134 | 2.13 | 75 | 160 | 3SPZ |
| 143 | 2.00 | 100 | 200 | 2SPZ |
| 151 | 1.89 | 132 | 250 | 1SPA* |
| 160 | 1.79 | 140 | 250 | 1SPA* |
| 168 | 1.70 | 106 | 180 | 2SPA |
| 171 | 1.67 | 150 | 250 | 1SPA* |
| 177 | 1.61 | 112 | 180 | 2SPZ |
| 178 | 1.60 | 125 | 200 | 1SPA* |
| 187 | 1.53 | 118 | 180 | 2SPA |
| 190 | 1.50 | 100 | 150 | 2SPA |
| 200 | 1.43 | 140 | 200 | 1SPA* |
| 205 | 1.39 | 90 | 125 | 3SPZ |
| 209 | 1.36 | 132 | 180 | 2SPA |
| 214 | 1.33 | 150 | 200 | 1SPA |
| 222 | 1.29 | 140 | 180 | 2SPZ |
| 223 | 1.28 | 125 | 160 | 1SPA* |
| 235 | 1.21 | 132 | 160 | 2SPA |
| 242 | 1.18 | 106 | 125 | 2SPA |
| 250 | 1.14 | 140 | 160 | 2SPZ |
| 254 | 1.12 | 80 | 90 | 4SPZ |
| 257 | 1.11 | 180 | 200 | 1SPA* |
| 269 | 1.06 | 118 | 125 | 2SPA |
| 285 | 1.00 | 100 | 100 | 3SPZ |
| 300 | 1.05 | 118 | 112 | 2SPA |
| 306 | 1.07 | 150 | 140 | 2SPA |
| 317 | 1.11 | 200 | 180 | 1SPA* |
| 326 | 1.14 | 160 | 140 | 2SPZ |
| 336 | 1.18 | 100 | 85 | 4SPZ |
| 338 | 1.19 | 140 | 118 | 2SPA |
| 342 | 1.20 | 150 | 125 | 2SPA |
| 355 | 1.24 | 112 | 90 | 4SPZ |
| 363 | 1.27 | 150 | 118 | 2SPA |
| 367 | 1.29 | 180 | 140 | 2SPZ |
| 375 | 1.32 | 125 | 95 | 3SPZ |
| 387 | 1.36 | 160 | 118 | 2SPA |
| 396 | 1.39 | 250 | 180 | 1SPA* |

*Whilst one belt is adequate for power transmission, two belts can be used without overloading the gearbox bearings. For other speeds, consult Fenner.



Shaft Mounted Speed Reducer

BELT DRIVES - 1440 Rev/Min Motor

D 5 : 1

| Output Speed Rev/Min | Pulley Ratio | Pulley Dia (mm) | | Number of Belts |
|----------------------|--------------|-----------------|---------|-----------------|
| | | Motor | Gearbox | |
| 51 | 5.62 | 112 | 630 | 1SPA* |
| 54 | 5.26 | 95 | 500 | 2SPZ |
| 60 | 4.77 | 132 | 630 | 1SPA* |
| 64 | 4.46 | 112 | 500 | 1SPA* |
| 67 | 4.24 | 118 | 500 | 1SPA* |
| 75 | 3.79 | 132 | 500 | 1SPA* |
| 82 | 3.50 | 90 | 315 | 3SPZ |
| 86 | 3.32 | 95 | 315 | 3SPZ |
| 91 | 3.15 | 100 | 315 | 2SPA |
| 101 | 2.81 | 112 | 315 | 2SPZ |
| 107 | 2.67 | 150 | 400 | 1SPA* |
| 113 | 2.52 | 125 | 315 | 2SPZ |
| 120 | 2.39 | 132 | 315 | 2SPA |
| 128 | 2.23 | 112 | 250 | 2SPA |
| 135 | 2.12 | 118 | 250 | 2SPA |
| 143 | 2.00 | 100 | 200 | 3SPZ |
| 151 | 1.89 | 106 | 200 | 3SPA |
| 159 | 1.80 | 100 | 180 | 3SPZ |
| 163 | 1.75 | 180 | 315 | 1SPA* |
| 171 | 1.67 | 150 | 250 | 2SPA |
| 178 | 1.61 | 112 | 180 | 3SPZ |
| 181 | 1.57 | 200 | 315 | 1SPA* |
| 187 | 1.53 | 118 | 180 | 2SPA |
| 190 | 1.50 | 100 | 150 | 3SPA |
| 200 | 1.43 | 112 | 160 | 3SPZ |
| 204 | 1.40 | 100 | 140 | 3SPA |
| 209 | 1.36 | 132 | 180 | 2SPA |
| 216 | 1.32 | 106 | 140 | 3SPA |
| 222 | 1.29 | 140 | 180 | 2SPA |
| 228 | 1.25 | 112 | 140 | 3SPZ |
| 235 | 1.21 | 132 | 160 | 2SPA |
| 242 | 1.18 | 106 | 125 | 3SPA |
| 250 | 1.14 | 140 | 160 | 2SPA |
| 255 | 1.12 | 100 | 112 | 4SPZ |
| 266 | 1.07 | 140 | 150 | 2SPA |
| 269 | 1.06 | 118 | 125 | 3SPA |
| 285 | 1.00 | 140 | 140 | 2SPA |
| 301 | 1.05 | 118 | 112 | 3SPA |
| 306 | 1.07 | 150 | 140 | 2SPA |
| 317 | 1.11 | 100 | 90 | 5SPZ |
| 324 | 1.14 | 150 | 132 | 3SPA |
| 337 | 1.18 | 200 | 170 | 2SPB |
| 342 | 1.20 | 180 | 150 | 2SPA |
| 346 | 1.21 | 160 | 132 | 3SPA |
| 356 | 1.25 | 250 | 200 | 1SPA* |
| 365 | 1.28 | 160 | 125 | 3SPZ |
| 375 | 1.32 | 125 | 95 | 5SPZ |
| 380 | 1.33 | 200 | 150 | 2SPA |
| 387 | 1.36 | 160 | 118 | 3SPA |
| 396 | 1.39 | 125 | 90 | 5SPZ |

E 5 : 1

| Output Speed Rev/Min | Pulley Ratio | Pulley Dia (mm) | | Number of Belts |
|----------------------|--------------|-----------------|---------|-----------------|
| | | Motor | Gearbox | |
| 51 | 5.56 | 90 | 500 | 3SPZ |
| 54 | 5.26 | 95 | 500 | 3SPZ |
| 60 | 4.77 | 132 | 630 | 2SPA |
| 63 | 4.50 | 140 | 630 | 1SPA* |
| 68 | 4.20 | 150 | 630 | 1SPA* |
| 73 | 3.94 | 160 | 630 | 1SPA* |
| 80 | 3.57 | 112 | 400 | 2SPA |
| 84 | 3.39 | 118 | 400 | 2SPA |
| 89 | 3.20 | 125 | 400 | 2SPA |
| 96 | 2.97 | 106 | 315 | 3SPA |
| 101 | 2.81 | 112 | 315 | 3SPZ |
| 107 | 2.67 | 150 | 400 | 2SPA |
| 113 | 2.52 | 125 | 315 | 3SPZ |
| 120 | 2.39 | 132 | 315 | 2SPA |
| 127 | 2.25 | 140 | 315 | 2SPA |
| 136 | 2.11 | 95 | 200 | 5SPZ |
| 143 | 2.00 | 100 | 200 | 4SPA |
| 151 | 1.89 | 95 | 180 | 5SPZ |
| 160 | 1.79 | 112 | 200 | 4SPZ |
| 168 | 1.70 | 106 | 180 | 4SPA |
| 173 | 1.65 | 170 | 280 | 2SPB |
| 178 | 1.60 | 125 | 200 | 3SPA |
| 183 | 1.56 | 160 | 250 | 2SPA |
| 189 | 1.51 | 106 | 160 | 4SPA |
| 198 | 1.44 | 125 | 180 | 4SPZ |
| 204 | 1.40 | 160 | 224 | 2SPB |
| 209 | 1.36 | 132 | 180 | 3SPA |
| 214 | 1.33 | 150 | 200 | 3SPA |
| 223 | 1.28 | 125 | 160 | 3SPA |
| 228 | 1.25 | 200 | 250 | 2SPA |
| 235 | 1.21 | 132 | 160 | 3SPA |
| 240 | 1.19 | 118 | 140 | 4SPA |
| 250 | 1.14 | 140 | 160 | 4SPZ |
| 254 | 1.12 | 160 | 180 | 2SPB |
| 257 | 1.11 | 180 | 200 | 2SPA |
| 266 | 1.07 | 140 | 150 | 3SPA |
| 270 | 1.06 | 125 | 132 | 4SPA |
| 285 | 1.00 | 125 | 125 | 5SPZ |
| 301 | 1.05 | 118 | 112 | 5SPA |
| 304 | 1.07 | 160 | 150 | 3SPA |
| 317 | 1.11 | 200 | 180 | 2SPA |
| 324 | 1.14 | 150 | 132 | 4SPA |
| 336 | 1.18 | 200 | 170 | 2SPB |
| 342 | 1.20 | 180 | 150 | 2SPA |
| 356 | 1.25 | 212 | 170 | 2SPB |
| 365 | 1.28 | 160 | 125 | 5SPZ |
| 376 | 1.32 | 224 | 170 | 2SPB |
| 380 | 1.33 | 200 | 150 | 3SPA |
| 387 | 1.36 | 160 | 118 | 4SPA |
| 396 | 1.39 | 250 | 180 | 2SPA |

*Whilst one belt is adequate for power transmission, two belts can be used without overloading the gearbox bearings. For other speeds, consult Fenner.

Shaft Mounted Speed Reducer

BELT DRIVES - 1440 Rev/Min Motor

F 5 : 1

| Output Speed Rev/Min | Pulley Ratio | Pulley Dia (mm) | | Number of Belts |
|----------------------|--------------|-----------------|---------|-----------------|
| | | Motor | Gearbox | |
| 50 | 5.71 | 140 | 800 | 3SPZ |
| 57 | 5.00 | 100 | 500 | 3SPA |
| 61 | 4.72 | 106 | 500 | 3SPA |
| 68 | 4.21 | 95 | 400 | 5SPZ |
| 73 | 3.94 | 160 | 630 | 2SPA |
| 77 | 3.71 | 170 | 630 | 2SPB |
| 82 | 3.50 | 180 | 630 | 2SPB |
| 86 | 3.32 | 95 | 315 | 6SPZ |
| 91 | 3.15 | 100 | 315 | 5SPZ |
| 97 | 2.94 | 170 | 500 | 2SPB |
| 103 | 2.78 | 180 | 500 | 2SPA |
| 108 | 2.63 | 190 | 500 | 2SPB |
| 113 | 2.52 | 125 | 315 | 4SPZ |
| 121 | 2.35 | 170 | 400 | 2SPB |
| 127 | 2.25 | 140 | 315 | 4SPZ |
| 135 | 2.12 | 118 | 250 | 4SPA |
| 143 | 2.00 | 125 | 250 | 5SPZ |
| 151 | 1.89 | 132 | 250 | 4SPA |
| 160 | 1.79 | 140 | 250 | 5SPZ |
| 168 | 1.69 | 118 | 200 | 5SPA |
| 173 | 1.65 | 170 | 280 | 2SPB |
| 178 | 1.60 | 125 | 200 | 4SPA |
| 181 | 1.56 | 160 | 250 | 2SPB |
| 187 | 1.53 | 118 | 180 | 5SPA |
| 192 | 1.49 | 212 | 315 | 2SPB |
| 200 | 1.43 | 140 | 200 | 5SPZ |
| 205 | 1.39 | 180 | 250 | 2SPB |
| 215 | 1.32 | 160 | 212 | 3SPB |
| 222 | 1.29 | 140 | 180 | 4SPA |
| 226 | 1.26 | 250 | 315 | 2SPB |
| 235 | 1.21 | 132 | 160 | 5SPA |
| 242 | 1.18 | 190 | 224 | 2SPB |
| 250 | 1.14 | 140 | 160 | 6SPZ |
| 255 | 1.12 | 200 | 224 | 2SPB |
| 267 | 1.07 | 150 | 160 | 4SPA |
| 271 | 1.05 | 224 | 236 | 2SPB |
| 285 | 1.00 | 224 | 224 | 2SPB |
| 301 | 1.06 | 224 | 212 | 2SPB |
| 304 | 1.07 | 160 | 150 | 4SPA |
| 317 | 1.11 | 200 | 180 | 3SPA |
| 324 | 1.14 | 150 | 132 | 5SPA |
| 336 | 1.18 | 200 | 170 | 3SPB |
| 342 | 1.20 | 180 | 150 | 4SPA |
| 356 | 1.25 | 212 | 170 | 3SPB |
| 360 | 1.26 | 315 | 250 | 2SPB |
| 365 | 1.28 | 160 | 125 | 6SPA |
| 376 | 1.32 | 224 | 170 | 3SPB |
| 380 | 1.33 | 200 | 150 | 4SPA |
| 387 | 1.36 | 160 | 118 | 6SPA |
| 396 | 1.39 | 250 | 180 | 3SPA |

G 5 : 1

| Output Speed Rev/Min | Pulley Ratio | Pulley Dia (mm) | | Number of Belts |
|----------------------|--------------|-----------------|---------|-----------------|
| | | Motor | Gearbox | |
| 51 | 5.62 | 112 | 630 | 3SPA |
| 54 | 5.26 | 95 | 500 | 5SPZ |
| 60 | 4.77 | 132 | 630 | 3SPA |
| 63 | 4.50 | 140 | 630 | 4SPZ |
| 67 | 4.24 | 118 | 500 | 4SPA |
| 71 | 4.00 | 125 | 500 | 5SPZ |
| 77 | 3.71 | 170 | 630 | 2SPB |
| 84 | 3.39 | 118 | 400 | 5SPA |
| 89 | 3.20 | 125 | 400 | 6SPZ |
| 94 | 3.03 | 132 | 400 | 4SPA |
| 101 | 2.81 | 224 | 630 | 2SPB |
| 107 | 2.67 | 150 | 400 | 4SPA |
| 114 | 2.50 | 160 | 400 | 2SPB |
| 121 | 2.36 | 212 | 500 | 2SPB |
| 127 | 2.25 | 140 | 315 | 5SPA |
| 136 | 2.10 | 150 | 315 | 5SPA |
| 143 | 2.00 | 200 | 400 | 3SPA |
| 151 | 1.89 | 212 | 400 | 3SPB |
| 160 | 1.79 | 140 | 250 | 6SPA |
| 163 | 1.75 | 180 | 315 | 3SPB |
| 168 | 1.69 | 236 | 400 | 2SPB |
| 172 | 1.66 | 190 | 315 | 3SPB |
| 178 | 1.60 | 250 | 400 | 2SPB |
| 183 | 1.56 | 180 | 280 | 3SPB |
| 190 | 1.50 | 236 | 355 | 3SPB |
| 192 | 1.49 | 212 | 315 | 3SPB |
| 200 | 1.43 | 140 | 200 | 6SPA |
| 206 | 1.39 | 170 | 236 | 4SPB |
| 214 | 1.33 | 150 | 200 | 6SPA |
| 225 | 1.27 | 280 | 355 | 2SPB |
| 228 | 1.25 | 200 | 250 | 3SPB |
| 238 | 1.20 | 250 | 300 | 3SPC |
| 242 | 1.18 | 200 | 236 | 3SPB |
| 252 | 1.13 | 265 | 300 | 3SPC |
| 256 | 1.11 | 212 | 236 | 3SPB |
| 266 | 1.07 | 280 | 300 | 3SPC |
| 270 | 1.06 | 212 | 224 | 3SPB |
| 285 | 1.00 | 224 | 224 | 3SPB |
| 301 | 1.05 | 236 | 224 | 3SPB |
| 306 | 1.07 | 300 | 280 | 3SPC |
| 317 | 1.11 | 200 | 180 | 4SPB |
| 322 | 1.13 | 355 | 315 | 2SPB |
| 336 | 1.18 | 200 | 170 | 5SPB |
| 341 | 1.20 | 335 | 280 | 3SPC |
| 355 | 1.24 | 224 | 180 | 4SPB |
| 359 | 1.26 | 315 | 250 | 2SPB |
| 374 | 1.31 | 236 | 180 | 4SPB |
| 381 | 1.33 | 315 | 236 | 3SPB |
| 396 | 1.39 | 250 | 180 | 5SPA |
| 399 | 1.40 | 224 | 160 | 5SPB |

*Whilst one belt is adequate for power transmission, two belts can be used without overloading the gearbox bearings. For other speeds, consult Fenner.



Shaft Mounted Speed Reducer

BELT DRIVES - 1440 Rev/Min Motor

H 5 : 1

| Output Speed Rev/Min | Pulley Ratio | Pulley Dia (mm) | | Number of Belts |
|----------------------|--------------|-----------------|---------|-----------------|
| | | Motor | Gearbox | |
| 50 | 5.71 | 140 | 800 | 5SPZ |
| 54 | 5.26 | 190 | 1000 | 3SPB |
| 60 | 4.77 | 132 | 630 | 5SPA |
| 63 | 4.50 | 140 | 630 | 4SPA |
| 71 | 4.00 | 200 | 800 | 3SPA |
| 82 | 3.50 | 180 | 630 | 3SPA |
| 86 | 3.32 | 190 | 630 | 3SPB |
| 91 | 3.15 | 200 | 630 | 3SPA |
| 96 | 2.97 | 212 | 630 | 3SPB |
| 101 | 2.81 | 224 | 630 | 3SPB |
| 107 | 2.67 | 150 | 400 | 6SPA |
| 113 | 2.52 | 250 | 630 | 2SPB |
| 121 | 2.35 | 170 | 400 | 4SPB |
| 127 | 2.25 | 280 | 630 | 2SPB |
| 136 | 2.11 | 190 | 400 | 4SPB |
| 142 | 2.01 | 236 | 475 | 3SPC |
| 145 | 1.97 | 160 | 315 | 6SPA |
| 150 | 1.91 | 236 | 450 | 3SPC |
| 160 | 1.79 | 224 | 400 | 3SPB |
| 163 | 1.75 | 180 | 315 | 4SPB |
| 168 | 1.69 | 236 | 400 | 3SPB |
| 172 | 1.66 | 190 | 315 | 4SPB |
| 178 | 1.60 | 265 | 425 | 3SPC |
| 181 | 1.57 | 200 | 315 | 5SPA |
| 188 | 1.52 | 280 | 425 | 3SPC |
| 192 | 1.49 | 212 | 315 | 4SPB |
| 200 | 1.43 | 280 | 400 | 3SPB |
| 211 | 1.35 | 315 | 425 | 3SPC |
| 216 | 1.32 | 212 | 280 | 4SPB |
| 225 | 1.27 | 315 | 400 | 2SPB |
| 228 | 1.25 | 224 | 280 | 3SPC |
| 238 | 1.20 | 250 | 300 | 3SPC |
| 242 | 1.18 | 212 | 250 | 4SPB |
| 252 | 1.13 | 265 | 300 | 3SPC |
| 256 | 1.11 | 212 | 236 | 5SPB |
| 266 | 1.07 | 280 | 300 | 3SPC |
| 271 | 1.05 | 224 | 236 | 4SPB |
| 285 | 1.00 | 200 | 200 | 5SPB |
| 300 | 1.05 | 315 | 300 | 3SPC |
| 306 | 1.07 | 300 | 280 | 3SPC |
| 317 | 1.11 | 200 | 180 | 6SPB |
| 323 | 1.13 | 300 | 265 | 3SPC |
| 336 | 1.18 | 212 | 180 | 6SPB |
| 341 | 1.20 | 335 | 280 | 3SPC |
| 357 | 1.25 | 250 | 200 | 6SPA |
| 362 | 1.27 | 355 | 280 | 3SPB |
| 375 | 1.32 | 250 | 190 | 5SPB |
| 381 | 1.33 | 315 | 236 | 3SPC |
| 396 | 1.39 | 250 | 180 | 6SPB |
| 399 | 1.40 | 280 | 200 | 5SPB |

J 5 : 1

| Output Speed Rev/Min | Pulley Ratio | Pulley Dia (mm) | | Number of Belts |
|----------------------|--------------|-----------------|---------|-----------------|
| | | Motor | Gearbox | |
| 51 | 5.56 | 180 | 1000 | 3SPB |
| 54 | 5.26 | 190 | 1000 | 3SPB |
| 57 | 5.00 | 160 | 800 | 4SPB |
| 61 | 4.71 | 170 | 800 | 4SPB |
| 63 | 4.50 | 140 | 630 | 6SPA |
| 68 | 4.21 | 190 | 800 | 4SPB |
| 71 | 4.00 | 200 | 800 | 5SPA |
| 76 | 3.77 | 212 | 800 | 4SPB |
| 80 | 3.57 | 224 | 800 | 3SPB |
| 84 | 3.39 | 236 | 800 | 3SPB |
| 89 | 3.20 | 250 | 800 | 3SPB |
| 96 | 2.97 | 212 | 630 | 4SPB |
| 100 | 2.86 | 280 | 800 | 3SPB |
| 107 | 2.67 | 236 | 630 | 4SPB |
| 112 | 2.54 | 315 | 800 | 3SPB |
| 120 | 2.38 | 265 | 630 | 3SPC |
| 127 | 2.24 | 250 | 560 | 3SPC |
| 134 | 2.13 | 375 | 800 | 3SPC |
| 143 | 2.00 | 250 | 500 | 4SPB |
| 150 | 1.90 | 250 | 475 | 3SPC |
| 159 | 1.79 | 265 | 475 | 3SPC |
| 168 | 1.70 | 280 | 475 | 3SPC |
| 171 | 1.67 | 300 | 500 | 3SPC |
| 178 | 1.60 | 265 | 425 | 3SPC |
| 181 | 1.57 | 400 | 630 | 3SPC |
| 189 | 1.51 | 315 | 475 | 3SPC |
| 201 | 1.42 | 250 | 355 | 4SPC |
| 203 | 1.41 | 355 | 500 | 3SPC |
| 211 | 1.35 | 315 | 425 | 3SPC |
| 215 | 1.32 | 400 | 530 | 3SPC |
| 225 | 1.27 | 315 | 400 | 4SPB |
| 228 | 1.25 | 300 | 375 | 3SPC |
| 238 | 1.20 | 375 | 450 | 3SPC |
| 241 | 1.18 | 300 | 355 | 3SPC |
| 252 | 1.13 | 265 | 300 | 4SPC |
| 255 | 1.12 | 335 | 375 | 3SPC |
| 266 | 1.07 | 280 | 300 | 4SPC |
| 269 | 1.06 | 335 | 355 | 3SPC |
| 285 | 1.00 | 280 | 280 | 4SPC |
| 300 | 1.05 | 315 | 300 | 4SPC |
| 302 | 1.06 | 355 | 335 | 3SPC |
| 306 | 1.07 | 300 | 280 | 4SPC |
| 319 | 1.12 | 375 | 335 | 3SPC |
| 338 | 1.18 | 355 | 300 | 4SPC |
| 341 | 1.19 | 400 | 335 | 3SPC |
| 357 | 1.25 | 375 | 300 | 4SPC |
| 360 | 1.26 | 315 | 250 | 5SPC |
| 362 | 1.27 | 400 | 315 | 3SPC |
| 381 | 1.33 | 315 | 236 | 5SPC |
| 382 | 1.34 | 355 | 265 | 4SPC |

**Whilst one belt is adequate for power transmission, two belts can be used without overloading the gearbox bearings. For other speeds, consult Fenner.*

Shaft Mounted Speed Reducer

BELT DRIVES - 1440 Rev/Min Motor

B 13 : 1

| Output Speed Rev/Min | Pulley Ratio | Pulley Dia (mm) | | Number of Belts |
|----------------------|--------------|-----------------|---------|-----------------|
| | | Motor | Gearbox | |
| 17 | 5.97 | 67 | 400 | 1SPZ* |
| 22 | 4.70 | 67 | 315 | 1SPZ* |
| 24 | 4.20 | 75 | 315 | 1SPZ* |
| 28 | 3.73 | 67 | 250 | 1SPZ* |
| 31 | 3.33 | 75 | 250 | 1SPZ* |
| 34 | 2.99 | 67 | 200 | 1SPZ* |
| 36 | 2.82 | 71 | 200 | 1SPZ* |
| 38 | 2.69 | 67 | 180 | 1SPZ* |
| 41 | 2.54 | 71 | 180 | 1SPZ* |
| 43 | 2.39 | 67 | 160 | 1SPZ* |
| 46 | 2.25 | 71 | 160 | 1SPZ* |
| 48 | 2.13 | 75 | 160 | 1SPZ* |
| 51 | 2.00 | 80 | 160 | 1SPZ* |
| 55 | 1.88 | 85 | 160 | 1SPZ* |
| 59 | 1.75 | 80 | 140 | 1SPZ* |
| 62 | 1.65 | 85 | 140 | 1SPZ* |
| 64 | 1.60 | 100 | 160 | 1SPZ* |
| 66 | 1.56 | 90 | 140 | 1SPZ* |
| 70 | 1.47 | 85 | 125 | 1SPZ* |
| 74 | 1.39 | 90 | 125 | 1SPZ* |
| 78 | 1.32 | 95 | 125 | 1SPZ* |
| 82 | 1.25 | 100 | 125 | 1SPZ* |
| 86 | 1.20 | 71 | 85 | 2SPZ |
| 91 | 1.13 | 71 | 80 | 2SPZ |
| 97 | 1.06 | 100 | 106 | 1SPA* |
| 103 | 1.00 | 106 | 106 | 1SPA* |
| 109 | 1.06 | 112 | 106 | 1SPA* |
| 115 | 1.12 | 125 | 112 | 1SPZ* |
| 117 | 1.13 | 85 | 75 | 2SPZ |
| 121 | 1.18 | 125 | 106 | 1SPA* |
| 123 | 1.20 | 90 | 75 | 2SPZ |
| 125 | 1.21 | 160 | 132 | 1SPA* |
| 129 | 1.25 | 140 | 112 | 1SPZ* |
| 130 | 1.27 | 95 | 75 | 2SPZ |
| 132 | 1.29 | 180 | 140 | 1SPA* |
| 136 | 1.32 | 140 | 106 | 1SPA* |
| 140 | 1.36 | 180 | 132 | 1SPA* |
| 143 | 1.39 | 125 | 90 | 2SPZ |
| 146 | 1.42 | 150 | 106 | 1SPA* |
| 148 | 1.44 | 180 | 125 | 1SPA* |
| 151 | 1.47 | 125 | 85 | 2SPZ |
| 154 | 1.49 | 112 | 75 | 2SPZ |
| 155 | 1.51 | 160 | 106 | 1SPA* |
| 157 | 1.53 | 180 | 118 | 1SPA* |
| 161 | 1.56 | 125 | 80 | 2SPZ |
| 165 | 1.61 | 180 | 112 | 1SPA* |
| 170 | 1.65 | 140 | 85 | 2SPZ |
| 172 | 1.67 | 125 | 75 | 2SPZ |
| 175 | 1.70 | 180 | 106 | 1SPA* |
| 180 | 1.75 | 140 | 80 | 2SPZ |

B 20 : 1

| Output Speed Rev/Min | Pulley Ratio | Pulley Dia (mm) | | Number of Belts |
|----------------------|--------------|-----------------|---------|-----------------|
| | | Motor | Gearbox | |
| 10 | 6.67 | 75 | 500 | 2SPZ |
| 11 | 6.25 | 80 | 500 | 2SPZ |
| 12 | 5.97 | 67 | 400 | 1SPZ* |
| 13 | 5.26 | 95 | 500 | 2SPZ |
| 14 | 5.00 | 80 | 400 | 1SPZ* |
| 15 | 4.70 | 67 | 315 | 1SPZ* |
| 16 | 4.20 | 75 | 315 | 1SPZ* |
| 17 | 3.94 | 80 | 315 | 1SPZ* |
| 18 | 3.73 | 67 | 250 | 1SPZ* |
| 19 | 3.57 | 112 | 400 | 1SPZ* |
| 20 | 3.52 | 71 | 250 | 1SPZ* |
| 21 | 3.33 | 75 | 250 | 1SPZ* |
| 22 | 3.12 | 80 | 250 | 1SPZ* |
| 23 | 2.99 | 67 | 200 | 1SPZ* |
| 24 | 2.82 | 71 | 200 | 1SPZ* |
| 25 | 2.78 | 90 | 250 | 1SPZ* |
| 26 | 2.69 | 67 | 180 | 1SPZ* |
| 27 | 2.54 | 71 | 180 | 1SPZ* |
| 29 | 2.39 | 67 | 160 | 1SPZ* |
| 30 | 2.25 | 71 | 160 | 1SPZ* |
| 32 | 2.13 | 75 | 160 | 1SPZ* |
| 33 | 2.09 | 67 | 140 | 1SPZ* |
| 34 | 2.00 | 80 | 160 | 1SPZ* |
| 35 | 1.97 | 71 | 140 | 1SPZ* |
| 37 | 1.87 | 67 | 125 | 1SPZ* |
| 39 | 1.76 | 71 | 125 | 1SPZ* |
| 40 | 1.70 | 106 | 180 | 1SPA* |
| 41 | 1.67 | 67 | 112 | 1SPZ* |
| 43 | 1.58 | 71 | 112 | 1SPZ* |
| 44 | 1.56 | 90 | 140 | 1SPZ* |
| 45 | 1.53 | 118 | 180 | 1SPA* |
| 46 | 1.49 | 67 | 100 | 1SPZ* |
| 47 | 1.47 | 85 | 125 | 1SPZ* |
| 48 | 1.42 | 67 | 95 | 1SPZ* |
| 49 | 1.39 | 90 | 125 | 1SPZ* |
| 50 | 1.36 | 132 | 180 | 1SPA* |
| 51 | 1.34 | 71 | 95 | 1SPZ* |
| 52 | 1.32 | 85 | 112 | 1SPZ* |
| 54 | 1.27 | 71 | 90 | 1SPZ* |
| 55 | 1.24 | 90 | 112 | 1SPZ* |
| 57 | 1.20 | 75 | 90 | 1SPZ* |
| 58 | 1.18 | 85 | 100 | 1SPZ* |
| 61 | 1.13 | 75 | 85 | 1SPZ* |
| 62 | 1.11 | 90 | 100 | 1SPZ* |
| 64 | 1.07 | 140 | 150 | 1SPA* |
| 65 | 1.06 | 80 | 85 | 1SPZ* |
| 69 | 1.00 | 80 | 80 | 1SPZ* |
| 72 | 1.05 | 100 | 95 | 1SPZ* |
| 73 | 1.07 | 80 | 75 | 2SPZ |
| 76 | 1.11 | 100 | 90 | 1SPZ* |

*Whilst one belt is adequate for power transmission, two belts can be used without overloading the gearbox bearings. For other speeds, consult Fenner.



Shaft Mounted Speed Reducer

BELT DRIVES - 1440 Rev/Min Motor

C 13 : 1

| Output Speed Rev/Min | Pulley Ratio | Pulley Dia (mm) | | Number of Belts |
|----------------------|--------------|-----------------|---------|-----------------|
| | | Motor | Gearbox | |
| 18 | 5.97 | 67 | 400 | 1SPZ* |
| 21 | 5.00 | 80 | 400 | 1SPZ* |
| 25 | 4.20 | 75 | 315 | 1SPZ* |
| 27 | 3.94 | 80 | 315 | 1SPZ* |
| 30 | 3.52 | 71 | 250 | 1SPZ* |
| 34 | 3.12 | 80 | 250 | 1SPZ* |
| 36 | 2.94 | 85 | 250 | 1SPZ* |
| 38 | 2.78 | 90 | 250 | 1SPZ* |
| 40 | 2.63 | 95 | 250 | 1SPZ* |
| 42 | 2.50 | 100 | 250 | 1SPZ* |
| 44 | 2.39 | 67 | 160 | 2SPZ |
| 48 | 2.22 | 90 | 200 | 1SPZ* |
| 50 | 2.11 | 95 | 200 | 1SPZ* |
| 53 | 2.00 | 100 | 200 | 1SPZ* |
| 57 | 1.87 | 75 | 140 | 2SPZ |
| 59 | 1.79 | 112 | 200 | 1SPZ* |
| 63 | 1.67 | 75 | 125 | 2SPZ |
| 66 | 1.61 | 112 | 180 | 1SPZ* |
| 70 | 1.51 | 106 | 160 | 1SPA* |
| 73 | 1.44 | 125 | 180 | 1SPZ* |
| 76 | 1.40 | 80 | 112 | 2SPZ |
| 80 | 1.32 | 85 | 112 | 2SPZ |
| 83 | 1.27 | 118 | 150 | 1SPA* |
| 85 | 1.24 | 90 | 112 | 2SPZ |
| 87 | 1.21 | 132 | 160 | 1SPA* |
| 89 | 1.19 | 118 | 140 | 1SPA* |
| 93 | 1.14 | 132 | 150 | 1SPA* |
| 95 | 1.11 | 90 | 100 | 2SPZ |
| 100 | 1.06 | 125 | 132 | 1SPZ* |
| 106 | 1.00 | 95 | 95 | 2SPZ |
| 112 | 1.06 | 132 | 125 | 1SPA* |
| 119 | 1.12 | 140 | 125 | 1SPA* |
| 125 | 1.18 | 112 | 95 | 2SPZ |
| 127 | 1.20 | 90 | 75 | 3SPZ |
| 132 | 1.24 | 112 | 90 | 2SPZ |
| 134 | 1.27 | 95 | 75 | 3SPZ |
| 136 | 1.29 | 180 | 140 | 1SPA* |
| 139 | 1.32 | 125 | 95 | 2SPZ |
| 141 | 1.33 | 100 | 75 | 3SPZ |
| 144 | 1.36 | 180 | 132 | 1SPA* |
| 147 | 1.39 | 125 | 90 | 2SPZ |
| 152 | 1.44 | 180 | 125 | 1SPA* |
| 156 | 1.47 | 140 | 95 | 2SPZ |
| 158 | 1.49 | 112 | 75 | 3SPZ |
| 161 | 1.53 | 180 | 118 | 1SPA* |
| 165 | 1.56 | 140 | 90 | 2SPZ |
| 169 | 1.60 | 200 | 125 | 1SPA* |
| 174 | 1.65 | 140 | 85 | 3SPZ |
| 176 | 1.67 | 125 | 75 | 3SPZ |
| 179 | 1.69 | 200 | 118 | 1SPA* |

C 20 : 1

| Output Speed Rev/Min | Pulley Ratio | Pulley Dia (mm) | | Number of Belts |
|----------------------|--------------|-----------------|---------|-----------------|
| | | Motor | Gearbox | |
| 10 | 7.04 | 71 | 500 | 2SPZ |
| 11 | 6.25 | 80 | 500 | 2SPZ |
| 12 | 5.97 | 67 | 400 | 1SPZ* |
| 13 | 5.63 | 71 | 400 | 2SPZ |
| 15 | 4.70 | 67 | 315 | 1SPZ* |
| 16 | 4.44 | 71 | 315 | 1SPZ* |
| 17 | 4.20 | 75 | 315 | 1SPZ* |
| 18 | 3.94 | 80 | 315 | 1SPZ* |
| 19 | 3.73 | 67 | 250 | 1SPZ* |
| 20 | 3.52 | 71 | 250 | 1SPZ* |
| 21 | 3.33 | 75 | 250 | 1SPZ* |
| 22 | 3.20 | 125 | 400 | 1SPZ* |
| 23 | 3.12 | 80 | 250 | 1SPZ* |
| 24 | 2.99 | 67 | 200 | 1SPZ* |
| 25 | 2.82 | 71 | 200 | 1SPZ* |
| 26 | 2.69 | 67 | 180 | 1SPZ* |
| 28 | 2.54 | 71 | 180 | 1SPZ* |
| 30 | 2.39 | 67 | 160 | 1SPZ* |
| 31 | 2.25 | 71 | 160 | 1SPZ* |
| 33 | 2.13 | 75 | 160 | 1SPZ* |
| 34 | 2.09 | 67 | 140 | 2SPZ |
| 36 | 1.97 | 71 | 140 | 1SPZ* |
| 37 | 1.89 | 95 | 180 | 1SPZ* |
| 38 | 1.87 | 75 | 140 | 1SPZ* |
| 40 | 1.75 | 80 | 140 | 1SPZ* |
| 41 | 1.70 | 106 | 180 | 1SPA* |
| 42 | 1.68 | 95 | 160 | 1SPZ* |
| 43 | 1.65 | 85 | 140 | 1SPZ* |
| 44 | 1.60 | 100 | 160 | 1SPZ* |
| 45 | 1.56 | 80 | 125 | 1SPZ* |
| 46 | 1.53 | 118 | 180 | 1SPA* |
| 47 | 1.50 | 100 | 150 | 1SPA* |
| 48 | 1.47 | 85 | 125 | 1SPZ* |
| 49 | 1.44 | 125 | 180 | 1SPZ* |
| 50 | 1.42 | 67 | 95 | 2SPZ |
| 51 | 1.39 | 90 | 125 | 1SPZ* |
| 52 | 1.34 | 67 | 90 | 2SPZ |
| 53 | 1.33 | 75 | 100 | 2SPZ |
| 54 | 1.32 | 95 | 125 | 1SPZ* |
| 55 | 1.28 | 125 | 160 | 1SPZ* |
| 56 | 1.27 | 67 | 85 | 2SPZ |
| 57 | 1.24 | 90 | 112 | 1SPZ* |
| 59 | 1.19 | 67 | 80 | 2SPZ |
| 60 | 1.18 | 95 | 112 | 1SPZ* |
| 62 | 1.14 | 140 | 160 | 1SPZ* |
| 63 | 1.12 | 67 | 75 | 2SPZ |
| 66 | 1.07 | 75 | 80 | 2SPZ |
| 67 | 1.06 | 71 | 75 | 2SPZ |
| 70 | 1.00 | 100 | 100 | 1SPA* |
| 74 | 1.05 | 100 | 95 | 2SPZ |

*Whilst one belt is adequate for power transmission, two belts can be used without overloading the gearbox bearings. For other speeds, consult Fenner.

Shaft Mounted Speed Reducer

BELT DRIVES - 1440 Rev/Min Motor

D 13 : 1

| Output Speed Rev/Min | Pulley Ratio | Pulley Dia (mm) | | Number of Belts |
|----------------------|--------------|-----------------|---------|-----------------|
| | | Motor | Gearbox | |
| 11 | 9.40 | 67 | 630 | 3SPZ |
| 14 | 7.46 | 67 | 500 | 2SPZ |
| 18 | 5.97 | 67 | 400 | 2SPZ |
| 19 | 5.63 | 71 | 400 | 1SPZ* |
| 21 | 5.00 | 80 | 400 | 1SPZ* |
| 22 | 4.71 | 85 | 400 | 1SPZ* |
| 25 | 4.21 | 95 | 400 | 1SPZ* |
| 26 | 4.00 | 100 | 400 | 1SPZ* |
| 28 | 3.73 | 67 | 250 | 2SPZ |
| 30 | 3.50 | 90 | 315 | 1SPZ* |
| 34 | 3.15 | 100 | 315 | 1SPZ* |
| 36 | 2.97 | 106 | 315 | 1SPA* |
| 38 | 2.82 | 71 | 200 | 2SPZ |
| 40 | 2.67 | 75 | 200 | 2SPZ |
| 42 | 2.50 | 100 | 250 | 1SPA* |
| 44 | 2.40 | 75 | 180 | 2SPZ |
| 47 | 2.25 | 80 | 180 | 2SPZ |
| 50 | 2.12 | 85 | 180 | 2SPZ |
| 53 | 2.00 | 90 | 180 | 2SPZ |
| 56 | 1.89 | 95 | 180 | 2SPZ |
| 60 | 1.78 | 90 | 160 | 2SPZ |
| 63 | 1.68 | 95 | 160 | 2SPZ |
| 64 | 1.65 | 85 | 140 | 3SPZ |
| 66 | 1.60 | 125 | 200 | 1SPA* |
| 70 | 1.52 | 132 | 200 | 1SPA* |
| 71 | 1.50 | 100 | 150 | 2SPA |
| 72 | 1.47 | 85 | 125 | 3SPZ |
| 74 | 1.43 | 140 | 200 | 1SPA* |
| 76 | 1.39 | 90 | 125 | 3SPZ |
| 79 | 1.33 | 150 | 200 | 1SPA* |
| 80 | 1.32 | 85 | 112 | 3SPZ |
| 82 | 1.29 | 140 | 180 | 1SPA* |
| 85 | 1.25 | 112 | 140 | 2SPZ |
| 88 | 1.20 | 150 | 180 | 1SPA* |
| 90 | 1.18 | 85 | 100 | 4SPZ |
| 92 | 1.14 | 140 | 160 | 2SPZ |
| 94 | 1.12 | 160 | 180 | 1SPA* |
| 100 | 1.06 | 100 | 106 | 3SPA |
| 101 | 1.05 | 112 | 118 | 2SPA |
| 106 | 1.00 | 100 | 100 | 3SPZ |
| 112 | 1.05 | 118 | 112 | 2SPA |
| 118 | 1.11 | 200 | 180 | 1SPA* |
| 120 | 1.14 | 150 | 132 | 2SPA |
| 125 | 1.18 | 132 | 112 | 2SPA |
| 127 | 1.20 | 150 | 125 | 2SPA |
| 128 | 1.21 | 160 | 132 | 2SPA |
| 132 | 1.25 | 200 | 160 | 1SPA* |
| 135 | 1.27 | 150 | 118 | 2SPA |
| 136 | 1.29 | 180 | 140 | 2SPA |
| 139 | 1.32 | 125 | 95 | 3SPZ |

D 20 : 1

| Output Speed Rev/Min | Pulley Ratio | Pulley Dia (mm) | | Number of Belts |
|----------------------|--------------|-----------------|---------|-----------------|
| | | Motor | Gearbox | |
| 10 | 7.04 | 71 | 500 | 2SPZ |
| 11 | 6.25 | 80 | 500 | 2SPZ |
| 12 | 5.97 | 67 | 400 | 1SPZ* |
| 13 | 5.63 | 71 | 400 | 1SPZ* |
| 14 | 5.00 | 80 | 400 | 1SPZ* |
| 15 | 4.70 | 67 | 315 | 1SPZ* |
| 16 | 4.44 | 71 | 315 | 1SPZ* |
| 17 | 4.20 | 75 | 315 | 1SPZ* |
| 18 | 3.94 | 80 | 315 | 1SPZ* |
| 19 | 3.73 | 67 | 250 | 1SPZ* |
| 20 | 3.52 | 71 | 250 | 1SPZ* |
| 21 | 3.33 | 75 | 250 | 1SPZ* |
| 22 | 3.20 | 125 | 400 | 1SPZ* |
| 23 | 3.12 | 80 | 250 | 1SPZ* |
| 24 | 2.94 | 85 | 250 | 1SPZ* |
| 25 | 2.78 | 90 | 250 | 1SPZ* |
| 26 | 2.69 | 67 | 180 | 2SPZ |
| 27 | 2.63 | 95 | 250 | 1SPZ* |
| 28 | 2.50 | 100 | 250 | 1SPZ* |
| 30 | 2.35 | 85 | 200 | 1SPZ* |
| 32 | 2.22 | 90 | 200 | 1SPZ* |
| 33 | 2.13 | 75 | 160 | 2SPZ |
| 34 | 2.09 | 67 | 140 | 2SPZ |
| 35 | 2.00 | 100 | 200 | 1SPZ* |
| 37 | 1.89 | 95 | 180 | 1SPZ* |
| 38 | 1.87 | 67 | 125 | 2SPZ |
| 39 | 1.80 | 100 | 180 | 1SPZ* |
| 40 | 1.75 | 80 | 140 | 2SPZ |
| 41 | 1.70 | 106 | 180 | 1SPA* |
| 42 | 1.67 | 75 | 125 | 2SPZ |
| 44 | 1.61 | 112 | 180 | 1SPZ* |
| 45 | 1.58 | 71 | 112 | 2SPZ |
| 46 | 1.53 | 118 | 180 | 1SPA* |
| 47 | 1.49 | 75 | 112 | 2SPZ |
| 49 | 1.44 | 125 | 180 | 1SPZ* |
| 50 | 1.40 | 80 | 112 | 2SPZ |
| 51 | 1.39 | 90 | 125 | 2SPZ |
| 52 | 1.34 | 67 | 90 | 3SPZ |
| 53 | 1.32 | 106 | 140 | 1SPA* |
| 55 | 1.28 | 125 | 160 | 1SPZ* |
| 56 | 1.27 | 67 | 85 | 3SPZ |
| 58 | 1.21 | 132 | 160 | 1SPA* |
| 59 | 1.20 | 125 | 150 | 1SPA* |
| 60 | 1.18 | 85 | 100 | 2SPZ |
| 62 | 1.14 | 140 | 160 | 1SPZ* |
| 63 | 1.11 | 90 | 100 | 2SPZ |
| 66 | 1.07 | 140 | 150 | 1SPA |
| 67 | 1.06 | 90 | 95 | 2SPZ |
| 70 | 1.00 | 125 | 125 | 1SPA |
| 74 | 1.06 | 132 | 125 | 1SPA |

*Whilst one belt is adequate for power transmission, two belts can be used without overloading the gearbox bearings. For other speeds, consult **Fenner**.



Shaft Mounted Speed Reducer

BELT DRIVES - 1440 Rev/Min Motor

E 13 : 1

| Output Speed Rev/Min | Pulley Ratio | Pulley Dia (mm) | | Number of Belts |
|----------------------|--------------|-----------------|---------|-----------------|
| | | Motor | Gearbox | |
| 11 | 9.40 | 67 | 630 | 3SPZ |
| 13 | 8.40 | 75 | 630 | 2SPZ |
| 14 | 7.46 | 67 | 500 | 2SPZ |
| 16 | 6.67 | 75 | 500 | 2SPZ |
| 18 | 5.97 | 67 | 400 | 2SPZ |
| 19 | 5.63 | 71 | 400 | 2SPZ |
| 21 | 5.00 | 100 | 500 | 1SPA* |
| 24 | 4.44 | 71 | 315 | 2SPZ |
| 25 | 4.20 | 75 | 315 | 2SPZ |
| 26 | 4.00 | 100 | 400 | 1SPA* |
| 28 | 3.77 | 106 | 400 | 1SPA* |
| 31 | 3.39 | 118 | 400 | 1SPA* |
| 33 | 3.20 | 125 | 400 | 1SPA* |
| 35 | 3.03 | 132 | 400 | 1SPA* |
| 36 | 2.94 | 85 | 250 | 2SPZ |
| 38 | 2.78 | 90 | 250 | 2SPZ |
| 40 | 2.63 | 95 | 250 | 2SPZ |
| 42 | 2.52 | 125 | 315 | 1SPA* |
| 44 | 2.39 | 132 | 315 | 1SPA* |
| 45 | 2.35 | 85 | 200 | 3SPZ |
| 47 | 2.25 | 80 | 180 | 3SPZ |
| 50 | 2.12 | 85 | 180 | 3SPZ |
| 53 | 2.00 | 100 | 200 | 2SPA |
| 55 | 1.89 | 95 | 180 | 3SPZ |
| 56 | 1.89 | 106 | 200 | 2SPA |
| 59 | 1.79 | 112 | 200 | 2SPA |
| 60 | 1.75 | 180 | 315 | 1SPA* |
| 62 | 1.70 | 106 | 180 | 2SPA |
| 65 | 1.61 | 112 | 180 | 2SPA |
| 66 | 1.60 | 100 | 160 | 3SPZ |
| 69 | 1.53 | 118 | 180 | 2SPA |
| 71 | 1.50 | 100 | 150 | 3SPA |
| 73 | 1.44 | 125 | 180 | 3SPA |
| 74 | 1.43 | 140 | 200 | 2SPA |
| 76 | 1.39 | 180 | 250 | 2SPA |
| 78 | 1.36 | 132 | 180 | 2SPA |
| 79 | 1.34 | 112 | 150 | 3SPA |
| 80 | 1.32 | 100 | 132 | 3SPA |
| 82 | 1.29 | 140 | 180 | 2SPA |
| 83 | 1.28 | 125 | 160 | 2SPA |
| 85 | 1.25 | 200 | 250 | 1SPA* |
| 87 | 1.21 | 132 | 160 | 2SPA |
| 89 | 1.18 | 112 | 132 | 3SPA |
| 90 | 1.18 | 170 | 200 | 2SPB |
| 93 | 1.14 | 140 | 160 | 2SPA |
| 95 | 1.12 | 125 | 140 | 3SPZ |
| 99 | 1.07 | 140 | 150 | 2SPA |
| 100 | 1.06 | 100 | 106 | 4SPA |
| 101 | 1.05 | 95 | 100 | 5SPZ |
| 106 | 1.00 | 112 | 112 | 4SPZ |

E 20 : 1

| Output Speed Rev/Min | Pulley Ratio | Pulley Dia (mm) | | Number of Belts |
|----------------------|--------------|-----------------|---------|-----------------|
| | | Motor | Gearbox | |
| 10 | 7.04 | 71 | 500 | 2SPZ |
| 11 | 6.25 | 80 | 500 | 2SPZ |
| 12 | 5.97 | 67 | 400 | 1SPZ* |
| 13 | 5.63 | 71 | 400 | 1SPZ* |
| 14 | 5.00 | 80 | 400 | 1SPZ* |
| 15 | 4.71 | 85 | 400 | 1SPZ* |
| 16 | 4.44 | 90 | 400 | 1SPZ* |
| 17 | 4.21 | 95 | 400 | 1SPZ* |
| 18 | 4.00 | 100 | 400 | 1SPZ* |
| 19 | 3.71 | 85 | 315 | 1SPZ* |
| 20 | 3.52 | 71 | 250 | 2SPZ |
| 21 | 3.32 | 95 | 315 | 1SPZ* |
| 22 | 3.15 | 100 | 315 | 1SPZ* |
| 23 | 3.12 | 80 | 250 | 2SPZ |
| 24 | 2.99 | 67 | 200 | 2SPZ |
| 25 | 2.82 | 71 | 200 | 2SPZ |
| 26 | 2.67 | 75 | 200 | 2SPZ |
| 28 | 2.54 | 71 | 180 | 2SPZ |
| 29 | 2.40 | 75 | 180 | 2SPZ |
| 30 | 2.35 | 85 | 200 | 2SPZ |
| 31 | 2.25 | 80 | 180 | 2SPZ |
| 33 | 2.13 | 75 | 160 | 3SPZ |
| 34 | 2.09 | 67 | 140 | 3SPZ |
| 35 | 2.00 | 80 | 160 | 2SPZ |
| 37 | 1.88 | 85 | 160 | 2SPZ |
| 38 | 1.87 | 67 | 125 | 3SPZ |
| 39 | 1.79 | 112 | 200 | 1SPA* |
| 40 | 1.75 | 180 | 315 | 1SPA* |
| 42 | 1.69 | 118 | 200 | 1SPA* |
| 43 | 1.65 | 85 | 140 | 3SPZ |
| 44 | 1.60 | 125 | 200 | 1SPA* |
| 45 | 1.56 | 160 | 250 | 1SPA* |
| 46 | 1.53 | 118 | 180 | 2SPA |
| 47 | 1.52 | 132 | 200 | 1SPA* |
| 48 | 1.47 | 95 | 140 | 2SPZ |
| 49 | 1.44 | 125 | 180 | 1SPA* |
| 50 | 1.40 | 100 | 140 | 2SPZ |
| 52 | 1.36 | 132 | 180 | 1SPA* |
| 53 | 1.33 | 150 | 200 | 1SPA* |
| 54 | 1.32 | 95 | 125 | 3SPZ |
| 55 | 1.27 | 118 | 150 | 2SPA |
| 56 | 1.25 | 100 | 125 | 2SPA |
| 58 | 1.21 | 132 | 160 | 2SPA |
| 59 | 1.20 | 150 | 180 | 1SPA* |
| 60 | 1.18 | 106 | 125 | 2SPA |
| 62 | 1.14 | 140 | 160 | 2SPZ |
| 63 | 1.11 | 90 | 100 | 3SPZ |
| 66 | 1.07 | 140 | 150 | 2SPA |
| 67 | 1.06 | 106 | 112 | 2SPA |
| 70 | 1.00 | 160 | 160 | 1SPA* |

*Whilst one belt is adequate for power transmission, two belts can be used without overloading the gearbox bearings. For other speeds, consult Fenner.

Shaft Mounted Speed Reducer

BELT DRIVES - 1440 Rev/Min Motor

F13 : 1

| Output Speed Rev/Min | Pulley Ratio | Pulley Dia (mm) | | Number of Belts |
|----------------------|--------------|-----------------|---------|-----------------|
| | | Motor | Gearbox | |
| 10 | 10.67 | 75 | 800 | 3SPZ |
| 11 | 9.40 | 67 | 630 | 3SPZ |
| 13 | 8.40 | 75 | 630 | 3SPZ |
| 14 | 7.46 | 67 | 500 | 2SPZ |
| 15 | 7.04 | 71 | 500 | 2SPZ |
| 17 | 6.30 | 100 | 630 | 1SPA* |
| 19 | 5.60 | 112 | 630 | 1SPA* |
| 21 | 5.04 | 125 | 630 | 1SPA* |
| 24 | 4.44 | 90 | 400 | 2SPZ |
| 25 | 4.24 | 118 | 500 | 1SPA* |
| 26 | 4.00 | 125 | 500 | 1SPA* |
| 28 | 3.79 | 132 | 500 | 1SPA* |
| 30 | 3.57 | 140 | 500 | 1SPA* |
| 32 | 3.33 | 150 | 500 | 1SPA* |
| 34 | 3.15 | 100 | 315 | 2SPA |
| 36 | 2.97 | 106 | 315 | 2SPA |
| 38 | 2.81 | 112 | 315 | 2SPA |
| 39 | 2.67 | 118 | 315 | 2SPA |
| 40 | 2.63 | 190 | 500 | 2SPB |
| 42 | 2.50 | 100 | 250 | 3SPZ |
| 45 | 2.36 | 106 | 250 | 3SPA |
| 47 | 2.25 | 140 | 315 | 2SPZ |
| 48 | 2.22 | 180 | 400 | 1SPZ |
| 50 | 2.12 | 118 | 250 | 2SPA |
| 53 | 2.00 | 100 | 200 | 3SPA |
| 55 | 1.89 | 132 | 250 | 2SPA |
| 56 | 1.89 | 106 | 200 | 3SPA |
| 58 | 1.80 | 100 | 180 | 4SPZ |
| 60 | 1.75 | 180 | 315 | 2SPA |
| 63 | 1.68 | 95 | 160 | 5SPZ |
| 66 | 1.61 | 112 | 180 | 3SPA |
| 68 | 1.56 | 160 | 250 | 2SPA |
| 69 | 1.53 | 118 | 180 | 3SPA |
| 71 | 1.50 | 100 | 150 | 4SPA |
| 74 | 1.44 | 125 | 180 | 4SPZ |
| 76 | 1.40 | 100 | 140 | 5SPZ |
| 78 | 1.36 | 132 | 180 | 3SPA |
| 80 | 1.32 | 160 | 212 | 2SPB |
| 81 | 1.32 | 170 | 224 | 2SPB |
| 83 | 1.28 | 125 | 160 | 3SPA |
| 85 | 1.25 | 160 | 200 | 2SPA |
| 88 | 1.21 | 132 | 160 | 3SPA |
| 89 | 1.19 | 118 | 140 | 4SPA |
| 90 | 1.18 | 170 | 200 | 2SPB |
| 93 | 1.14 | 132 | 150 | 3SPA |
| 95 | 1.12 | 118 | 132 | 4SPA |
| 99 | 1.06 | 160 | 170 | 2SPB |
| 100 | 1.06 | 118 | 125 | 4SPA |
| 106 | 1.00 | 140 | 140 | 4SPZ |
| 112 | 1.06 | 170 | 160 | 2SPB |

F 20 : 1

| Output Speed Rev/Min | Pulley Ratio | Pulley Dia (mm) | | Number of Belts |
|----------------------|--------------|-----------------|---------|-----------------|
| | | Motor | Gearbox | |
| 10 | 7.04 | 71 | 500 | 2SPZ |
| 11 | 6.67 | 75 | 500 | 2SPZ |
| 12 | 5.97 | 67 | 400 | 2SPZ |
| 13 | 5.63 | 71 | 400 | 2SPZ |
| 14 | 5.00 | 80 | 400 | 2SPZ |
| 15 | 4.70 | 67 | 315 | 2SPZ |
| 16 | 4.44 | 71 | 315 | 2SPZ |
| 17 | 4.20 | 75 | 315 | 2SPZ |
| 18 | 4.00 | 100 | 400 | 1SPA* |
| 19 | 3.77 | 106 | 400 | 1SPA* |
| 20 | 3.57 | 112 | 400 | 1SPA* |
| 21 | 3.39 | 118 | 400 | 1SPA* |
| 22 | 3.20 | 125 | 400 | 1SPZ* |
| 23 | 3.03 | 132 | 400 | 1SPA* |
| 24 | 2.94 | 85 | 250 | 2SPZ |
| 25 | 2.86 | 140 | 400 | 1SPZ* |
| 26 | 2.67 | 118 | 315 | 1SPA |
| 27 | 2.63 | 95 | 250 | 2SPZ |
| 28 | 2.50 | 80 | 200 | 3SPZ |
| 29 | 2.40 | 75 | 180 | 3SPZ |
| 30 | 2.39 | 132 | 315 | 1SPA* |
| 31 | 2.25 | 80 | 180 | 3SPZ |
| 33 | 2.17 | 85 | 180 | 3SPZ |
| 35 | 2.00 | 100 | 200 | 2SPA |
| 36 | 1.97 | 160 | 315 | 1SPA* |
| 37 | 1.88 | 85 | 160 | 3SPZ |
| 39 | 1.79 | 112 | 200 | 2SPZ |
| 40 | 1.75 | 80 | 140 | 4SPZ |
| 42 | 1.70 | 106 | 180 | 2SPA |
| 43 | 1.65 | 85 | 140 | 4SPZ |
| 44 | 1.60 | 125 | 200 | 2SPZ |
| 45 | 1.56 | 160 | 250 | 1SPA* |
| 46 | 1.53 | 118 | 180 | 2SPA |
| 47 | 1.50 | 100 | 150 | 3SPA |
| 48 | 1.48 | 160 | 236 | 2SPB |
| 49 | 1.43 | 112 | 160 | 2SPA |
| 50 | 1.40 | 100 | 140 | 3SPZ |
| 51 | 1.39 | 180 | 250 | 1SPA* |
| 52 | 1.36 | 118 | 160 | 2SPA |
| 53 | 1.32 | 100 | 132 | 3SPA |
| 55 | 1.29 | 140 | 180 | 2SPZ |
| 56 | 1.25 | 100 | 125 | 3SPA |
| 58 | 1.21 | 132 | 160 | 2SPA |
| 59 | 1.20 | 125 | 150 | 2SPA |
| 60 | 1.18 | 106 | 125 | 3SPA |
| 62 | 1.14 | 132 | 150 | 2SPA |
| 63 | 1.11 | 106 | 118 | 3SPA |
| 66 | 1.06 | 132 | 140 | 2SPA |
| 67 | 1.05 | 112 | 118 | 3SPA |
| 70 | 1.00 | 200 | 200 | 2SPA |

*Whilst one belt is adequate for power transmission, two belts can be used without overloading the gearbox bearings. For other speeds, consult Fenner.



Shaft Mounted Speed Reducer

BELT DRIVES - 1440 Rev/Min Motor

G 13 : 1

| Output Speed Rev/Min | Pulley Ratio | Pulley Dia (mm) | | Number of Belts |
|----------------------|--------------|-----------------|---------|-----------------|
| | | Motor | Gearbox | |
| 11 | 9.40 | 67 | 630 | 3SPZ |
| 12 | 8.87 | 71 | 630 | 3SPZ |
| 13 | 8.40 | 75 | 630 | 3SPZ |
| 14 | 7.41 | 85 | 630 | 3SPZ |
| 15 | 7.04 | 71 | 500 | 3SPZ |
| 16 | 6.63 | 95 | 630 | 3SPZ |
| 17 | 6.30 | 100 | 630 | 2SPA |
| 18 | 5.88 | 85 | 500 | 3SPZ |
| 19 | 5.62 | 112 | 630 | 3SPZ |
| 20 | 5.26 | 95 | 500 | 3SPZ |
| 21 | 5.00 | 80 | 400 | 3SPZ |
| 22 | 4.77 | 132 | 630 | 2SPA |
| 23 | 4.72 | 106 | 500 | 2SPA |
| 24 | 4.46 | 112 | 500 | 2SPZ |
| 25 | 4.21 | 95 | 400 | 3SPZ |
| 27 | 4.00 | 125 | 500 | 2SPZ |
| 28 | 3.77 | 106 | 400 | 2SPA |
| 30 | 3.57 | 140 | 500 | 2SPZ |
| 31 | 3.39 | 118 | 400 | 2SPA |
| 33 | 3.20 | 125 | 400 | 2SPA |
| 34 | 2.15 | 100 | 315 | 3SPA |
| 36 | 2.97 | 106 | 315 | 3SPA |
| 38 | 2.81 | 112 | 315 | 3SPZ |
| 40 | 2.63 | 95 | 250 | 5SPZ |
| 42 | 2.50 | 100 | 250 | 4SPZ |
| 44 | 2.39 | 132 | 315 | 2SPA |
| 45 | 2.36 | 106 | 250 | 3SPA |
| 47 | 2.25 | 140 | 315 | 2SPA |
| 50 | 2.11 | 95 | 200 | 5SPZ |
| 53 | 2.00 | 100 | 200 | 4SPA |
| 56 | 1.89 | 132 | 250 | 3SPA |
| 57 | 1.85 | 170 | 315 | 2SPB |
| 59 | 1.79 | 140 | 250 | 4SPZ |
| 61 | 1.75 | 180 | 315 | 2SPA |
| 63 | 1.69 | 118 | 200 | 4SPA |
| 64 | 1.65 | 170 | 280 | 2SPB |
| 66 | 1.60 | 125 | 200 | 5SPZ |
| 70 | 1.53 | 118 | 180 | 4SPA |
| 72 | 1.48 | 160 | 236 | 2SPB |
| 74 | 1.43 | 140 | 200 | 3SPA |
| 76 | 1.39 | 170 | 236 | 2SPB |
| 80 | 1.33 | 150 | 200 | 3SPA |
| 83 | 1.27 | 118 | 150 | 5SPA |
| 85 | 1.24 | 180 | 224 | 2SPB |
| 87 | 1.21 | 132 | 160 | 4SPA |
| 90 | 1.18 | 180 | 212 | 2SPB |
| 93 | 1.14 | 140 | 160 | 4SPA |
| 95 | 1.11 | 180 | 200 | 3SPA |
| 100 | 1.06 | 212 | 224 | 2SPB |

G 20 : 1

| Output Speed Rev/Min | Pulley Ratio | Pulley Dia (mm) | | Number of Belts |
|----------------------|--------------|-----------------|---------|-----------------|
| | | Motor | Gearbox | |
| 10 | 7.04 | 71 | 500 | 2SPZ |
| 11 | 6.25 | 80 | 500 | 2SPZ |
| 12 | 5.97 | 67 | 400 | 3SPZ |
| 13 | 5.33 | 75 | 400 | 3SPZ |
| 14 | 5.00 | 80 | 400 | 2SPZ |
| 15 | 4.71 | 85 | 400 | 2SPZ |
| 16 | 4.44 | 90 | 400 | 2SPZ |
| 17 | 4.21 | 95 | 400 | 2SPZ |
| 18 | 4.00 | 100 | 400 | 2SPZ |
| 19 | 3.71 | 85 | 315 | 32SPZ |
| 20 | 3.57 | 112 | 400 | 2SPZ |
| 21 | 3.33 | 150 | 500 | 2SPA |
| 22 | 3.20 | 125 | 400 | 2SPZ |
| 23 | 3.03 | 132 | 400 | 2SPA |
| 24 | 2.94 | 85 | 250 | 3SPZ |
| 25 | 2.78 | 90 | 250 | 3SPZ |
| 26 | 2.67 | 150 | 400 | 1SPA* |
| 27 | 2.63 | 95 | 250 | 3SPZ |
| 28 | 2.52 | 125 | 315 | 2SPZ |
| 30 | 2.36 | 106 | 250 | 3SPA |
| 31 | 2.25 | 140 | 315 | 2SPZ |
| 32 | 2.23 | 112 | 250 | 2SPA |
| 33 | 2.12 | 118 | 250 | 2SPA |
| 34 | 2.10 | 150 | 315 | 2SPA |
| 35 | 2.00 | 100 | 200 | 3SPA |
| 36 | 1.97 | 160 | 315 | 2SPA |
| 37 | 1.89 | 95 | 180 | 4SPZ |
| 39 | 1.80 | 100 | 180 | 4SPZ |
| 40 | 1.75 | 180 | 315 | 2SPA |
| 41 | 1.70 | 106 | 180 | 3SPA |
| 42 | 1.67 | 150 | 250 | 2SPA |
| 44 | 1.60 | 125 | 200 | 3SPZ |
| 45 | 1.56 | 160 | 250 | 2SPA |
| 47 | 1.50 | 100 | 150 | 4SPA |
| 48 | 1.47 | 95 | 140 | 5SPZ |
| 49 | 1.43 | 112 | 160 | 4SPZ |
| 50 | 1.40 | 100 | 140 | 4SPA |
| 51 | 1.39 | 180 | 250 | 2SPA |
| 52 | 1.36 | 118 | 160 | 3SPA |
| 53 | 1.33 | 150 | 200 | 2SPA |
| 55 | 1.28 | 125 | 160 | 3SPA |
| 56 | 1.25 | 160 | 140 | 2SPA |
| 58 | 1.21 | 132 | 250 | 3SPA |
| 59 | 1.20 | 125 | 160 | 3SPA |
| 60 | 1.18 | 170 | 200 | 2SPB |
| 62 | 1.14 | 132 | 150 | 3SPA |
| 63 | 1.11 | 180 | 200 | 2SPA |
| 66 | 1.07 | 140 | 150 | 3SPA |
| 67 | 1.05 | 190 | 200 | 2SPB |
| 70 | 1.00 | 180 | 180 | 2SPB |

*Whilst one belt is adequate for power transmission, two belts can be used without overloading the gearbox bearings. For other speeds, consult Fenner.

Shaft Mounted Speed Reducer

BELT DRIVES - 1440 Rev/Min Motor

H 13 : 1

| Output Speed Rev/Min | Pulley Ratio | Pulley Dia (mm) | | Number of Belts |
|----------------------|--------------|-----------------|---------|-----------------|
| | | Motor | Gearbox | |
| 10 | 10.67 | 75 | 800 | 3SPZ |
| 11 | 9.41 | 85 | 800 | 3SPZ |
| 12 | 8.89 | 90 | 800 | 3SPZ |
| 13 | 8.82 | 95 | 800 | 3SPZ |
| 14 | 7.87 | 80 | 630 | 3SPZ |
| 16 | 6.63 | 95 | 630 | 3SPZ |
| 18 | 5.94 | 106 | 630 | 2SPA |
| 19 | 5.62 | 112 | 630 | 2SPA |
| 21 | 5.00 | 100 | 500 | 3SPA |
| 23 | 4.72 | 106 | 500 | 3SPA |
| 25 | 4.21 | 95 | 400 | 5SPZ |
| 27 | 4.00 | 100 | 400 | 4SPZ |
| 28 | 3.77 | 106 | 400 | 4SPA |
| 30 | 3.57 | 140 | 500 | 2SPA |
| 32 | 3.33 | 150 | 500 | 2SPA |
| 34 | 3.15 | 100 | 315 | 5SPZ |
| 35 | 3.03 | 132 | 400 | 3SPA |
| 37 | 2.86 | 140 | 400 | 4SPZ |
| 38 | 2.78 | 180 | 500 | 2SPA |
| 40 | 2.67 | 118 | 315 | 4SPA |
| 42 | 2.50 | 160 | 400 | 2SPB |
| 44 | 2.39 | 132 | 315 | 4SPA |
| 45 | 2.35 | 170 | 400 | 2SPB |
| 47 | 2.25 | 140 | 315 | 5SPZ |
| 48 | 2.22 | 180 | 400 | 2SPB |
| 50 | 2.10 | 150 | 315 | 3SPA |
| 51 | 2.09 | 170 | 355 | 2SPB |
| 54 | 1.97 | 160 | 315 | 2SPB |
| 56 | 1.89 | 132 | 250 | 4SPA |
| 57 | 1.87 | 190 | 355 | 2SPB |
| 59 | 1.79 | 140 | 250 | 4SPA |
| 61 | 1.75 | 180 | 315 | 2SPB |
| 64 | 1.66 | 190 | 315 | 2SPB |
| 67 | 1.60 | 250 | 400 | 2SPB |
| 68 | 1.56 | 160 | 250 | 3SPB |
| 72 | 1.48 | 160 | 236 | 3SPB |
| 74 | 1.43 | 140 | 200 | 5SPA |
| 76 | 1.39 | 180 | 250 | 3SPB |
| 79 | 1.33 | 236 | 315 | 2SPB |
| 80 | 1.33 | 150 | 200 | 5SPA |
| 82 | 1.29 | 140 | 180 | 5SPA |
| 85 | 1.25 | 224 | 280 | 2SPB |
| 90 | 1.18 | 180 | 212 | 3SPB |
| 95 | 1.11 | 180 | 200 | 4SPA |
| 100 | 1.06 | 212 | 224 | 3SPB |
| | | | | |

H 20 : 1

| Output Speed Rev/Min | Pulley Ratio | Pulley Dia (mm) | | Number of Belts |
|----------------------|--------------|-----------------|---------|-----------------|
| | | Motor | Gearbox | |
| 10 | 7.04 | 71 | 500 | 3SPZ |
| 11 | 6.63 | 95 | 630 | 3SPZ |
| 12 | 5.88 | 85 | 500 | 3SPZ |
| 13 | 5.56 | 90 | 500 | 3SPZ |
| 14 | 5.04 | 125 | 630 | 2SPA |
| 15 | 4.71 | 85 | 400 | 3SPZ |
| 16 | 4.44 | 90 | 400 | 3SPZ |
| 17 | 4.24 | 118 | 500 | 2SPA |
| 18 | 4.00 | 125 | 500 | 2SPZ |
| 19 | 3.77 | 106 | 400 | 3SPA |
| 20 | 3.57 | 112 | 400 | 2SPA |
| 21 | 3.39 | 118 | 400 | 2SPA |
| 22 | 3.20 | 125 | 400 | 2SPA |
| 23 | 3.03 | 132 | 400 | 2SPA |
| 24 | 2.97 | 106 | 315 | 3SPA |
| 25 | 2.86 | 140 | 400 | 2SPA |
| 26 | 2.67 | 150 | 400 | 2SPA |
| 27 | 2.63 | 95 | 250 | 5SPZ |
| 28 | 2.52 | 125 | 315 | 4SPZ |
| 30 | 2.36 | 106 | 250 | 4SPA |
| 31 | 2.25 | 140 | 315 | 3SPZ |
| 32 | 2.23 | 112 | 250 | 4SPZ |
| 33 | 2.12 | 118 | 250 | 3SPA |
| 34 | 2.10 | 150 | 315 | 2SPA |
| 35 | 2.00 | 125 | 250 | 3SPA |
| 36 | 1.97 | 160 | 315 | 2SPA |
| 37 | 1.89 | 132 | 250 | 3SPA |
| 38 | 1.85 | 170 | 315 | 2SPB |
| 39 | 1.79 | 140 | 250 | 4SPZ |
| 40 | 1.75 | 180 | 315 | 2SPA |
| 41 | 1.70 | 106 | 180 | 5SPA |
| 42 | 1.69 | 118 | 200 | 4SPA |
| 44 | 1.60 | 125 | 200 | 5SPZ |
| 45 | 1.57 | 200 | 315 | 2SPA |
| 47 | 1.52 | 132 | 200 | 4SPA |
| 48 | 1.47 | 170 | 250 | 2SPB |
| 49 | 1.44 | 125 | 180 | 4SPA |
| 51 | 1.39 | 170 | 236 | 2SPB |
| 52 | 1.36 | 132 | 180 | 4SPA |
| 53 | 1.33 | 150 | 200 | 3SPA |
| 54 | 1.31 | 180 | 236 | 2SPB |
| 55 | 1.27 | 118 | 150 | 5SPA |
| 57 | 1.24 | 180 | 224 | 2SPB |
| 59 | 1.20 | 125 | 150 | 5SPA |
| 60 | 1.18 | 190 | 224 | 2SPB |
| 62 | 1.14 | 140 | 160 | 4SPA |
| 63 | 1.11 | 180 | 200 | 3SPA |
| 66 | 1.07 | 150 | 160 | 4SPA |
| 67 | 1.05 | 190 | 190 | 3SPB |
| 70 | 1.00 | 212 | 212 | 2SPB |

*Whilst one belt is adequate for power transmission, two belts can be used without overloading the gearbox bearings. For other speeds, consult Fenner.



Shaft Mounted Speed Reducer

BELT DRIVES - 1440 Rev/Min Motor

J 13 : 1

| Output Speed Rev/Min | Pulley Ratio | Pulley Dia (mm) | | Number of Belts |
|----------------------|--------------|-----------------|---------|-----------------|
| | | Motor | Gearbox | |
| 11 | 10.00 | 100 | 1000 | 3SPA |
| 12 | 8.89 | 90 | 800 | 4SPZ |
| 13 | 8.00 | 100 | 800 | 3SPA |
| 14 | 7.55 | 106 | 800 | 3SPA |
| 15 | 7.14 | 112 | 800 | 3SPA |
| 16 | 6.63 | 95 | 630 | 5SPZ |
| 17 | 6.40 | 125 | 800 | 3SPZ |
| 18 | 5.94 | 106 | 630 | 4SPA |
| 19 | 5.62 | 112 | 630 | 3SPA |
| 21 | 5.04 | 125 | 630 | 4SPZ |
| 22 | 4.77 | 132 | 630 | 3SPA |
| 23 | 4.72 | 106 | 500 | 4SPA |
| 24 | 4:50 | 140 | 630 | 4SPZ |
| 25 | 4.24 | 118 | 500 | 4SPA |
| 27 | 3.94 | 160 | 630 | 2SPB |
| 29 | 3.71 | 170 | 630 | 2SPB |
| 30 | 3.57 | 140 | 500 | 4SPA |
| 32 | 3.33 | 150 | 500 | 3SPA |
| 34 | 3.12 | 160 | 500 | 3SPA |
| 35 | 3.03 | 132 | 400 | 4SPA |
| 37 | 2.86 | 140 | 400 | 4SPA |
| 38 | 2.78 | 180 | 500 | 3SPA |
| 40 | 2.63 | 190 | 500 | 2SPB |
| 42 | 2.50 | 160 | 400 | 3SPB |
| 44 | 2.39 | 132 | 315 | 5SPA |
| 45 | 2.36 | 212 | 500 | 2SPB |
| 47 | 2.25 | 355 | 800 | 3SPB |
| 48 | 2.22 | 180 | 400 | 3SPB |
| 50 | 2.12 | 224 | 475 | 3SPC |
| 51 | 2.09 | 170 | 355 | 3SPB |
| 53 | 2.00 | 200 | 400 | 3SPA |
| 54 | 1.97 | 160 | 315 | 4SPB |
| 56 | 1.90 | 224 | 425 | 3SPC |
| 57 | 1.87 | 190 | 355 | 3SPB |
| 59 | 1.79 | 140 | 250 | 6SPA |
| 61 | 1.75 | 180 | 315 | 4SPA |
| 64 | 1.66 | 190 | 315 | 3SPB |
| 67 | 1.57 | 200 | 315 | 4SPA |
| 68 | 1.56 | 180 | 280 | 4SPB |
| 71 | 1.49 | 212 | 315 | 3SPB |
| 72 | 1.47 | 170 | 250 | 5SPB |
| 74 | 1.43 | 280 | 400 | 2SPB |
| 76 | 1.39 | 180 | 250 | 5SPA |
| 79 | 1.33 | 236 | 315 | 3SPB |
| 81 | 1.32 | 190 | 250 | 4SPB |
| 83 | 1.27 | 315 | 400 | 2SPB |
| 85 | 1.24 | 190 | 236 | 4SPB |
| 89 | 1.19 | 236 | 280 | 3SPB |
| 95 | 1.12 | 250 | 280 | 3SPB |
| 100 | 1.06 | 212 | 224 | 4SPB |

J 20 : 1

| Output Speed Rev/Min | Pulley Ratio | Pulley Dia (mm) | | Number of Belts |
|----------------------|--------------|-----------------|---------|-----------------|
| | | Motor | Gearbox | |
| 10 | 7.00 | 90 | 630 | 3SPZ |
| 11 | 6.30 | 100 | 630 | 3SPZ |
| 12 | 5.94 | 106 | 630 | 3SPA |
| 13 | 5.62 | 112 | 630 | 3SPZ |
| 14 | 5.00 | 100 | 500 | 3SPA |
| 15 | 4.72 | 106 | 500 | 3SPA |
| 16 | 4.50 | 140 | 630 | 2SPA |
| 17 | 4.21 | 95 | 400 | 5SPZ |
| 18 | 4.00 | 100 | 400 | 4SPA |
| 19 | 3.77 | 106 | 400 | 4SPA |
| 20 | 3.57 | 140 | 500 | 3SPZ |
| 21 | 3.39 | 118 | 400 | 3SPA |
| 22 | 3.20 | 125 | 400 | 3SPA |
| 23 | 3.03 | 132 | 400 | 3SPA |
| 24 | 2.94 | 170 | 500 | 2SPB |
| 25 | 2.78 | 180 | 500 | 2SPA |
| 26 | 2.67 | 118 | 315 | 4SPA |
| 27 | 2.63 | 190 | 500 | 2SPB |
| 28 | 2.52 | 125 | 315 | 5SPZ |
| 30 | 2.35 | 170 | 400 | 2SPB |
| 31 | 2.25 | 140 | 315 | 5SPZ |
| 32 | 2.22 | 180 | 400 | 2SPB |
| 33 | 2.12 | 118 | 250 | 5SPA |
| 34 | 2.09 | 170 | 355 | 3SPB |
| 35 | 2.01 | 236 | 475 | 3SPC |
| 36 | 1.97 | 160 | 315 | 3SPA |
| 37 | 1.91 | 236 | 450 | 3SPC |
| 38 | 1.87 | 190 | 355 | 2SPB |
| 39 | 1.79 | 140 | 250 | 4SPA |
| 40 | 1.75 | 180 | 315 | 3SPA |
| 41 | 1.70 | 250 | 425 | 3SPC |
| 42 | 1.67 | 150 | 250 | 4SPA |
| 43 | 1.65 | 170 | 280 | 3SPB |
| 44 | 1.60 | 125 | 200 | 6SPA |
| 45 | 1.57 | 200 | 315 | 3SPA |
| 47 | 1.49 | 212 | 315 | 2SPB |
| 48 | 1.47 | 190 | 280 | 3SPB |
| 49 | 1.43 | 140 | 200 | 5SPA |
| 51 | 1.39 | 170 | 236 | 3SPB |
| 53 | 1.33 | 150 | 200 | 5SPA |
| 54 | 1.31 | 180 | 236 | 3SPB |
| 55 | 1.29 | 140 | 180 | 6SPA |
| 56 | 1.25 | 200 | 250 | 4SPA |
| 57 | 1.24 | 190 | 236 | 3SPB |
| 59 | 1.19 | 160 | 190 | 4SPB |
| 60 | 1.18 | 200 | 236 | 3SPB |
| 63 | 1.12 | 160 | 180 | 5SPA |
| 66 | 1.06 | 236 | 250 | 3SPB |
| 67 | 1.06 | 170 | 180 | 4SPB |
| 70 | 1.00 | 280 | 280 | 2SPB |

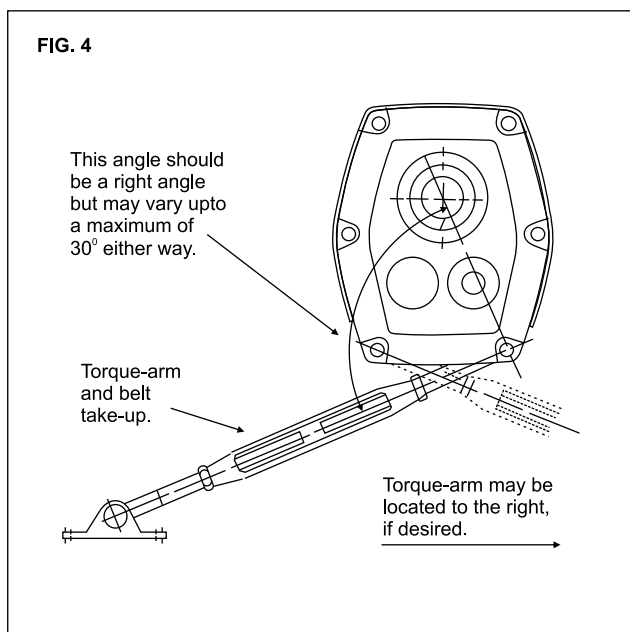
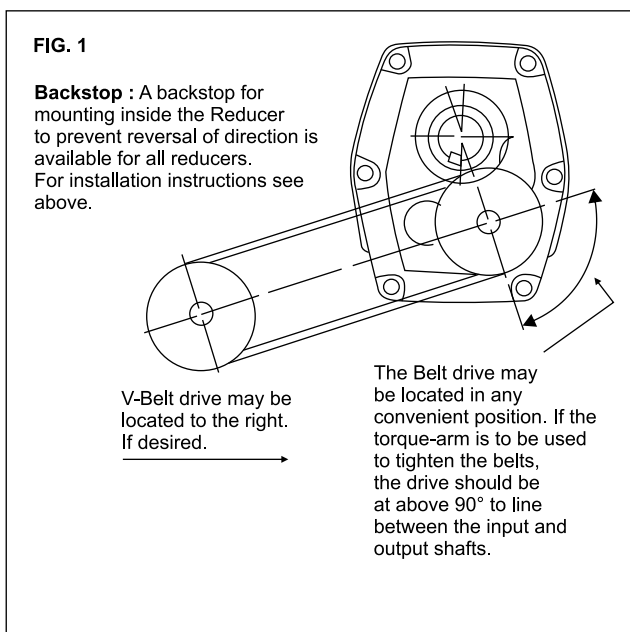
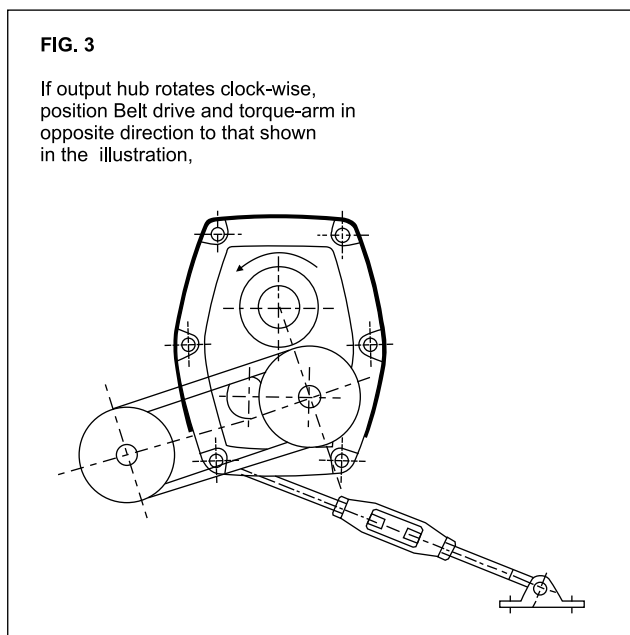
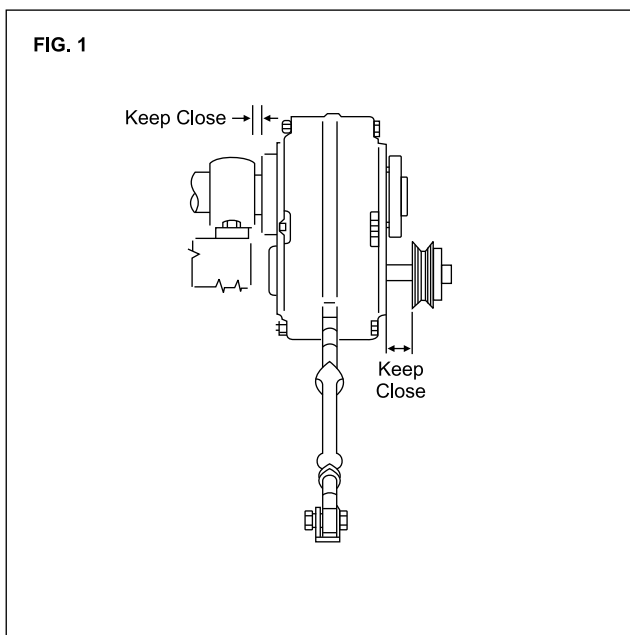
**Whilst one belt is adequate for power transmission, two belts can be used without overloading the gearbox bearings. For other speeds, consult Fenner.*

Shaft Mounted Speed Reducer

GEARBOX INSTALLATION

Note: Satisfactory performance depends on proper installation, lubrication & maintenance. Therefore, it is important that instructions in the Installation & Maintenance manual supplied with each gearbox are followed carefully. Some of the important aspects of belt and torque-arm installation are listed hereunder ;-

1. Install pulley on gearbox input shaft as close to the Reducer as possible. See Fig. 1., Failure to do this will cause excess load on the input shaft bearings leading to their premature failure.
2. Install motor and Wedge Belt drive with the belt pull at approximately 90° to the centre line between driven and input shafts. See Fig. 2. This will permit tensioning of the V-Belt drive with the torque-arm, which should preferably be in tension. If output hub runs anti-clockwise, torque-arm should be positioned to the right. See Fig. 3.
3. Install torque-arm fulcrum on a rigid support so that the torque-arm will be at approximately right angles to the centre line through the driven shaft and the torque-arm case bolt. See Fig. 4. Make sure there is sufficient take-up in the turn-buckle for belt tension adjustment.





Shaft Mounted Speed Reducer

INDIVIDUAL PARTS

| Ref. No. | Description | No. Reqd. |
|----------|--------------------------------------|-----------|
| 2 | Case RH | 1 |
| 3 | Case LH | 1 |
| 4 | Hollow Dowel | 2 |
| 5 | Case Bolt | 6 |
| 6 | Case Nut | 6 |
| 7 | Case Plain Washer | 4 |
| 8 | Case Lockwasher | 6 |
| 9 | Input Shaft & Pinion (13:1) | 1 |
| 9 | Input Shaft & Pinion (20:1) | 1 |
| 9 | Input Shaft & Pinion (5:1) | 1 |
| 10 | Input Shaft bilseal (13:1-20:1) | 1 |
| 11A | Input Shaft Brg. - Shaft Side 13:1 | 1 |
| 11B | Input Shaft Brg. - B.Stop Side 13:1 | 1 |
| 11A | Input Shaft Brg. - Shaft Side 20:1 | 1 |
| 11B | Input Shaft Brg. - B.Stop Side 20:1 | 1 |
| 11A | Input Shaft Brg. - Shaft Side 05:1 | §1 |
| 11B | Input Shaft Brg. - B.Stop Side 05:1 | §1 |
| 12 | Backstop Cover | 1 |
| 13 | Backstop Cover Gasket | 1 |
| 14 | Backstop Cover Screw | 6 |
| 15 | Backstop Cover Lockwasher | 6 |
| 16 | Torque-Arm Case Bolt | 2 |
| 17 | Torque-Arm Case Bolt Nut | 2 |
| 18 | Torque-Arm Case Bolt Lockwasher | 2 |
| 20 | 1st Reduction Gear (13:1) only | 1* |
| 20 | 1st Reduction Gear (20:1) only | 1* |
| 21 | 1st Reduction Gear Key | 1* |
| 22 | Intermediate Pinion (13:1 & 20:1) | 1* |
| 23 | Intermediate Pinion Distance Piece | 1* |
| 24 | Intermediate Bearing | 2* |
| 25 | Intermediate Cover | 2 |
| 26 | 2nd Reduction Gear (13:1 & 20:1) | 1 |
| | Reduction Gear (5:1) | |
| 27 | Gear Key | 1 |
| 28 | Output Hub (Standard Bore) | 1 |
| 28 | Output Hub (Alternative Metric Bore) | 1 |
| 28 | Output Hub (Alternative Inch Bore) | 1 |
| 29 | Output Hub Circlip | 2 |
| 30 | Output Hub Spacer | 1 |
| 31 | Output Hub Collar | 2 |
| 32 | Collar Screw (Std) Over Key | 1 |
| 33 | Collar Screw (Std.) Over Shaft | 3 |
| 32 | Collar Screw (Alt.) Over Key | 1 |
| 33 | Collar Screw (Alt.) Over Shaft | 3 |
| 34 | Output Hub Oilseal | 2 |
| 35 | Output Hub Bearing | 2 |
| 36 | Pipe Plug | 3 |
| 37 | Breather Plug | 1 |
| 38 | Breather Plug Adaptor | 1 |
| 41 | Torque-Arm Rod End | 1 |
| 42 | Rod End Locknut | 1 |
| 43 | Torque-Arm Extension | 1 |
| 44 | Extension Locknut | 1 |
| 45 | Turnbuckle | 1 |
| 46 | Fulcrum | 1 |
| 47 | Fulcrum Bolt | 1 |
| 48 | Fulcrum Bolt Nut | 1 |
| 49 | Fulcrum Bolt Lockwasher | 1 |
| 50 | Input Shaft Spacer (20:1) only | 1 |

When ordering parts for reducer, please specify:

1. Reducer Size No.
2. Reducer Serial No.
3. Part Name
4. Code Numbers
5. Quantity Required

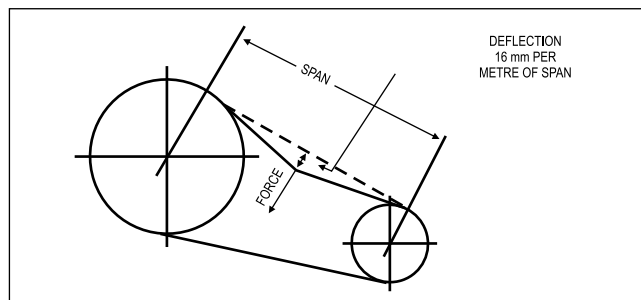
Note: Inclusion of a gearbox size in this leaflet does not imply availability in all markets.

Notes: (*) Not required for 5:1 ratio gear units.
 (§) For 5:1 units fitted with a backstop input shaft bearings are as ref. no.24.

Shaft Mounted Speed Reducer

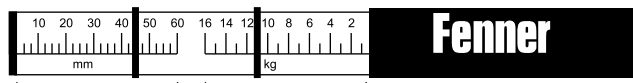
INSTALLATION & OPERATION OF BELT DRIVES USING FENNER BELT TENSION INDICATOR

- Always use a matched set of belts.
- Clean any oil and grease from pulleys; remove any rust or burrs from the grooves.
- Reduce the centre distance until the belts can be put into the pulley grooves without forcing. See table for installation allowance. Make sure the pulleys are correctly aligned and that the shafts are parallel.
- Place the belts into the pulley grooves and tension the drive.



FENNER BELT TENSION INDICATOR

The high performance and efficiency of Fenner Precision Built Wedge Belts require correct tension. We recommend using the Fenner Belt Tension Indicator .



METHOD OF BELT TENSIONING

1. Calculate the deflection distance in mm on a basis of 16mm per metre of span.
Centre Distance (m) x 16 = Deflection (mm).
2. Set the lower marker ring at the deflection distance required in mm on the lower scale.
3. Set the upper marker ring against the bottom edge of the tube.
4. Place the Belt Tension Indicator on top of the belt at the centre of span and apply a force at right angles to the belt deflecting it to the point where the lower marker ring is level with the top of the adjacent belt*.
5. Read off the force value indicated by the top edge of the upper marker ring.
6. Compare this force to the kgf value shown in the table opposite.
7. If a Fenner Belt Tension Indicator is not available, a spring balance and rule will suffice.

***Note:** For single belt drives a straight edge should be placed across the two pulleys to act as a datum for measuring the amount of deflection.

If the measured force falls within the values given, the drive should be satisfactory. A measured force below the lower value indicates under-tensioning.

A new drive should be tensioned to the higher value to allow for the normal drop in tension during the running-in period. After the drive has been running for 30 minutes, the tension should be checked and re-adjusted to the higher value, if necessary.

INSTALLATION AND TAKE-UP ALLOWANCE TABLE

| Belt Pitch Length | Installation Allowance | | | | Take-up Allowance |
|-------------------|------------------------|-----|-----|-----|-------------------|
| | SPZ | SPA | SPB | SPC | |
| 850 to 1160 | | | | | 15 |
| 1170 to 1500 | 20 | | | | 20 |
| 1510 to 1830 | | | | | 25 |
| 1840 to 2170 | | | | | 30 |
| 2180 to 2830 | | | | | 40 |
| 2840 to 3500 | | | 30 | 50 | 50 |
| 3520 to 4160 | | | | | 60 |
| 4170 to 5140 | | | | | 70 |
| 5220 to 6150 | | | | | 85 |
| 6180 to 7420 | | | | | 105 |
| 7600 to 8390 | | | | | 125 |

All dimensions are in millimetres.

STORAGE

V-Belts should be stored in a dry stockroom and contact with hot pipes and direct sunlight carefully avoided.

Wherever possible, handle the belts loosely in single (or triple) coils. Always avoid tying them tightly with thin string.

GUARDS

Where guards are necessary it is desirable to use the wire mesh type to permit adequate ventilation.

ONE SHOT TENSIONING

Fenner PB Belts are built right from the start to ensure totally precise inherent length, to stay matched during storage and on the drive, making "one-shot" tensioning a reality endorsed by satisfied customers.

Simply put the belts around the pulleys, set them to the appropriate tension value stated in the Tension Forces Table (using the Belt Tension Indicator as shown), run the drive under load for 30 minutes, stop the drive, check the tension, re-setting to catalogue value if necessary. On a properly designed drive for the application there will be no need for any further attention during the life of the drive.

Fenner **POLY-F** PLUS PB

TENSIONING FORCES

| Belt Section | Force required to deflect belt 16mm per metre of span | | |
|--------------|---|------------|---------------------|
| | Small Pulley Diameter (mm) | Newton (N) | Kilogramforce (kgf) |
| SPZ | 56 to 95 | 10 to 15 | 1.0 to 1.5 |
| | 100 to 140 | 15 to 20 | 1.5 to 2.0 |
| SPA | 90 to 132 | 20 to 27 | 2.0 to 2.7 |
| | 140 to 200 | 28 to 35 | 2.8 to 3.5 |
| SPB | 160 to 224 | 35 to 50 | 3.5 to 5.1 |
| | 236 to 315 | 50 to 65 | 5.1 to 6.6 |
| SPC | 224 to 355 | 60 to 90 | 6.1 to 9.2 |
| | 375 to 560 | 90 to 120 | 9.2 to 12.2 |

F Shaft Mounted Speed Reducer

LUBRICATION

IMPORTANT: The Shaft Mounted Speed Reducers are despatched without oil. They must be filled as instructed before running. Use high grade oil as shown on lubrication chart supplied attached to breather plug or alternative grades stated below. Fill to level plug when Reducer is not running. Drain, flush and refill every six months of operation. Check oil level regularly. Positions of filler, breather and drain plug for different mounting positions are shown in Fig below.

Normal operating positions are shown in Fig.4. Note that the Reducer is supplied with four plugs. After the Reducer has been mounted in its running position the plugs must be located as shown in Fig.4 for the

appropriate mounting position.

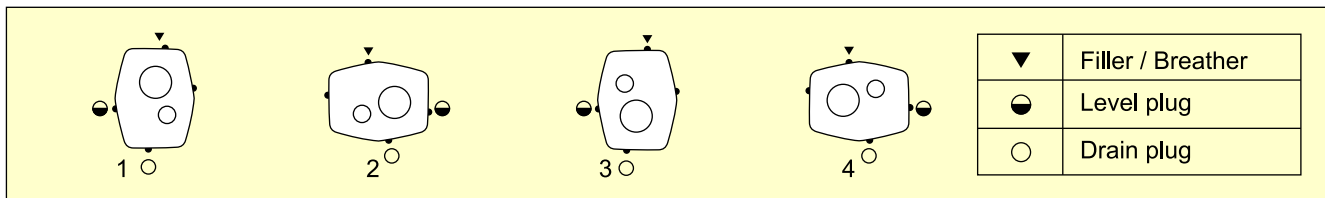
If the Reducer is not within 20° of one of the positions shown, the oil level plug cannot be safely used to check the oil level. This can be overcome by disconnecting the torque-arm and swinging the Reducer around to one of the positions shown.

Because of the many positions of the Reducer it may be necessary or desirable to make special adaptations using the plug holes in the Reducer with standard pipe fittings or oil level gauges.

CAUTION

Too much oil will cause over-heating. Too little oil will cause gear failure.

MOUNTING POSITIONS



RECOMMENDED LUBRICANTS

| | Ambient Temp °C | 13 : 1 and 20 : 1 RATIO GEARBOXES | | | 5 : 1 RATIO GEARBOX | | | |
|---------------------------|-----------------|-----------------------------------|------------------|--------------------|---------------------|---------------------|---------------------|--------|
| | | 0 - 20 rev / min | 21 -50 rev / min | 51 - 120 rev / min | 0 - 100 rev / min | 101 - 200 rev / min | 201 - 400 rev / min | |
| | | BCDEFGHJ | BCDEFGHJ | BCDEFGHJ | BCDEFGHJ | BCDEFGHJ | BC | DEFGHJ |
| Bharat Petroleum (Amocam) | - 10 to + 5 | 220 | 220 | 150 | 100 | 100 | 100 | 68 |
| | 6 to 25 | 460 | 460 | 320 | 460 | 320 | 320 | 220 |
| | 26 to 40 | 680 | 680 | 680 | 800 | 680 | 680 | 460 |
| Indian Oil (Servomesh) | - 10 to + 5 | SP 68 | SP 68 | SP 68 | SP 100 | SP 100 | SP 100 | SP 68 |
| | 6 to 25 | SP 220 | SP 150 | SP 100 | SP 460 | SP 320 | SP 320 | SP 220 |
| | 26 to 40 | SP 460 | SP 320 | SP 320 | SP 800 | SP 680 | SP 680 | SP 460 |

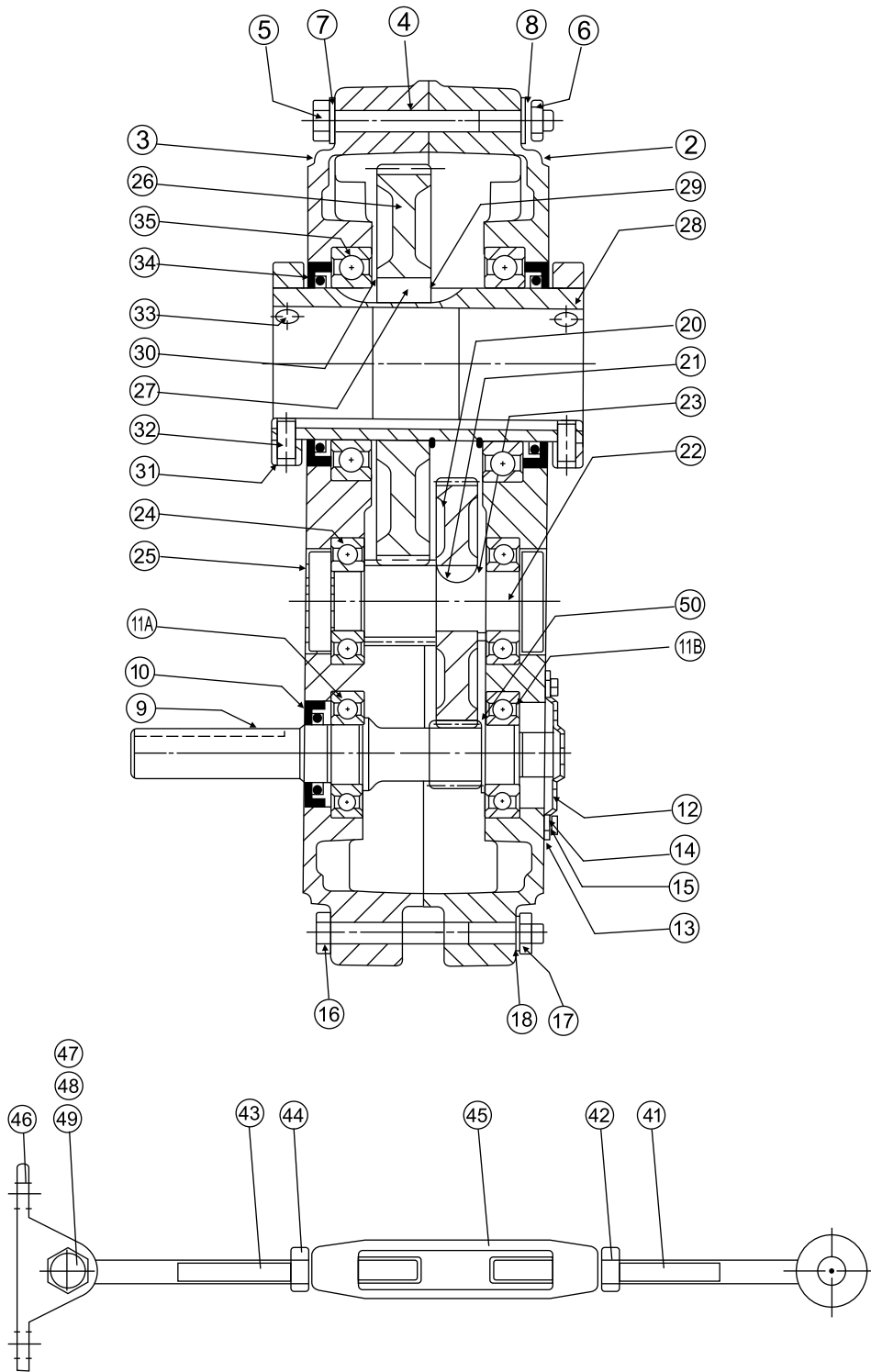
OIL QUANTITIES (Litres)

| Unit size | Approximate Capacity - Litres | | | | | | | |
|-----------|-------------------------------|------|------|------|-------|------|------|------|
| | Mounting Position | | | | | | | |
| | 20 : 1 & 13 : 1 | | | | 5 : 1 | | | |
| | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 |
| B | 0.3 | 0.5 | 0.4 | 0.5 | 0.4 | 0.4 | 0.4 | 0.5 |
| C | 0.5 | 0.7 | 0.6 | 0.7 | 0.6 | 0.7 | 0.6 | 0.8 |
| D | 0.8 | 1.5 | 1.2 | 1.3 | 1.0 | 1.4 | 1.2 | 1.5 |
| E | 1.7 | 2.0 | 1.8 | 1.6 | 1.9 | 2.0 | 1.8 | 1.9 |
| F | 2.3 | 2.5 | 2.5 | 2.5 | 2.6 | 2.5 | 2.5 | 2.6 |
| G | 3.0 | 4.3 | 3.4 | 3.9 | 3.3 | 4.1 | 3.3 | 4.6 |
| H | 4.5 | 7.0 | 5.0 | 6.8 | 4.8 | 7.1 | 5.0 | 7.1 |
| J | 7.5 | 14.0 | 11.0 | 13.0 | 9.3 | 16.0 | 12.0 | 16.0 |

Capacities shown are approximate

Shaft Mounted Speed Reducer

PARTS IDENTIFICATION





Shaft Mounted Speed Reducer

REPLACEMENT OF PARTS

REMOVING REDUCER FROM SHAFT

Loosen screws in both output hub collars. Remove the collar next to end of shaft, turn the collar and replace with the flush side outwards. Replace and tighten screws fully and then slacken off slightly in order to have maximum engagement in the hub but not gripping the shaft. Using any suitable three legged hub drawer engage the feet recesses of the collar and remove the gearbox by screwing down on the shaft.

IMPORTANT

Using tools normally found in the maintenance department, the Reducer can be dismantled and reassembled. Cleanliness is very important to prevent the introduction of dirt into the bearings and other parts of the Reducer. A tank of clean solvent, an arbor press and equipment for heating bearings and gears should be available for shrinking these parts on the shafts.

Rubbing type oilseals are fitted and great care should be taken during dismantling and reassembling to avoid damage to the rubbing surfaces.

The keyseat in the input shaft should be covered with cellotape or other suitable material. Any burrs on shaft or hub surfaces should be carefully removed before fitting seals.

We are prepared to repair reducers for customers who do not have proper facilities or who do for any reason desire factory service. An estimate of the cost will be sent after examination and before the repair is begun.

ORDERING PARTS

When ordering parts for a Reducer, specify reducer size, serial number, part name, code number, and quantity required.

It is strongly recommended that when a pinion or gear is replaced, the mating gear or pinion be replaced also. If the large gear on the output hub must be replaced, it is recommended that an output hub assembly of a gear assembled on a hub be ordered to secure undamaged surfaces on the outer hub where the oilseals rub.

However, if it is desired to use the old output hub, press the gear and bearing off and examine the rubbing surfaces under the oilseal carefully for possible scratching or other damage resulting from the pressing operation. To prevent oil leakage at the shaft oilseals, the smooth surface of the output hub must not be damaged.

If any part must be pressed from a shaft or from the output hub, this should be done before ordering parts to make sure that none of the bearings or other parts are damaged on removal. Do not press against the outer race of any bearing

Because old shaft oilseals and gaskets may be damaged in dismantling, it is advisable to order replacements for these parts.

BOLT TIGHTENING TORQUES

| Reducer Size | B | C&D | E | F&G | H&J |
|---------------|----|-----|----|-----|--------|
| Torque Nm | 16 | 30 | 50 | 80 | 50&80 |
| Torque lbf ft | 12 | 22 | 37 | 59 | 37&59* |

H&J

*Torque-arm case bolts only.

LENGTH

Inches x 25.4 = millimetres

Inches x 0.0254 = metres

Feet x 0.30480 = metres

Yards x 0.91440 = metres

FORCE

Kilogramforce (kgf) x 9.81 = Newtons (N)

Poundsforce (lbf) x 4.45 = Newtons (N)

Note: The kilopond (kp) is an alternative name for the kilogramforce (kgf)

TORQUE

Kilogramforce metre (kgfm) x 9.81 = Newton metre (Nm)

Pounds feet (lbf ft) x 1.36 = Newton metre (Nm)

Pounds inches (lbf in) x 0.113 = Newton metre (Nm)

POWER

Horse power (hp) x 0.746 = kilowatt (kW)

Cheval-vapeur (CV) x 0.735 = kilowatt (kW)

Pferdestärke (PS) x 0.735 = kilowatt (kW)

TORQUE AND POWER EQUIVALENTS

The kilowatt (kW) is the common unit of mechanical power, i.e. the rate of doing work.

Torque is a turning moment or twisting effort and is expressed in Newton metres (Nm)

$$kW = \frac{Nm \times rev/min}{9550} \quad Nm \equiv \frac{kW \times 9550}{rev/min}$$

PRESSURE

Poundsforce per square inch (lbf/in²) x 0.0689 =

bar Kilonewtons per square metre (kN/m²) x 0.01 =

bar Kilogramforce per square centimetre (kgf/cm²) x 0.981 = bar

FLUID VOLUME

Gallons x 4.55 = litres

Cubic inches x 0.0164 = litres

Cubic feet x 28.3 = litres

Cubic metres x 1000 = litres

Shaft Mounted Speed Reducer

BACKSTOPS

To Install Backstop

If Reducer is filled with oil, drain off oil before proceeding further.

Step 1: Remove backstop cover and gasket ref 12 & 13.

Step 2: Determine direction of required shaft rotation.

Size B

The shaft is free to rotate in the direction of the arrow marked on the backstop cage. If the Opposite direction of rotation is required, turn the backstop and outer race end to end. Press assembly into housing.

Sizes C, D, E, & F

With the chamfered face of the backstop facing you, feed the assembly into the housing. Rotating the shaft in its free direction will assist.

If the opposite direction of rotation is required, remove the assembly and turn the sprag assembly through 180°; reassemble. When the outer race is fully home, rotate the shaft in its backstopping direction. If the assembly is correct the outer race will now rotate with the shaft; use this to align the keyways. Slide, in key ref.61.

Sizes G, H & J

With the chamfered end of the backstop outer race facing you, determine the direction of rotation using the inner race. If the opposite direction is required, slide out the sprag assembly and inner race, turn end for end and replace in outer race. Check direction of rotation then remove inner race. Place key(s) into keyway(s) and press inner race onto shaft, insert circlip ref 63 into groove on shaft. Press outer race and sprag assembly into housing. Rotating the input shaft in its free direction will assist. When the outer race is fully home, rotate the input shaft in its backstopping direction. If the assembly is correct the outer race will now rotate with the shaft; use this to align the keyways. Slide in key ref 61.

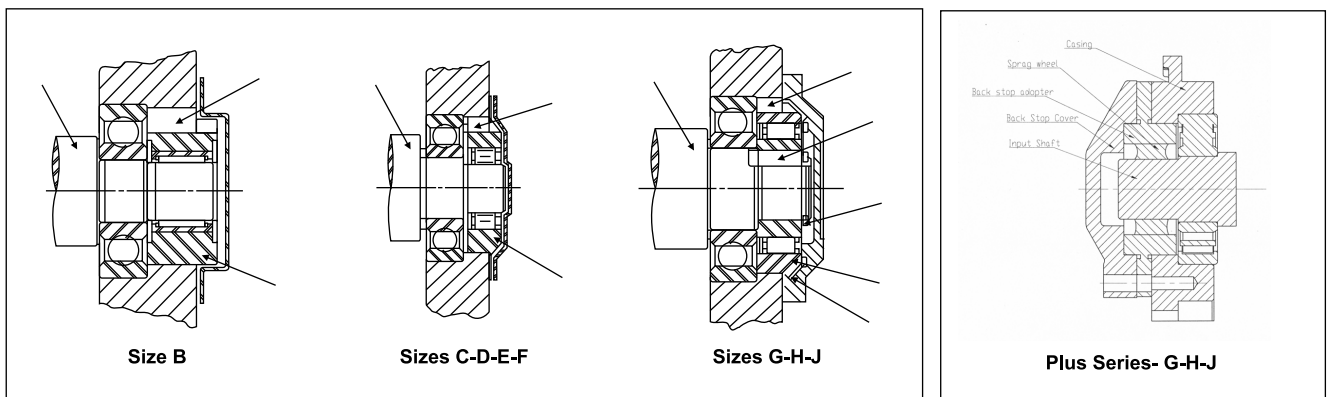
Step 3: Replace gasket ref 13 and cover ref 12.

Step 4: Refill Reducer with correct grade of oil.

IMPORTANT

When pressing the backstop into the housing it is important not to hammer the assembly at any time. The assembly may be tapped gently, if necessary.

To change the backstopping direction at any time, it is necessary to remove the sprag assembly and turn it end for end. Two M3 tapped holes are provided to remove the outer race. On size C no holes are provided; use two bent, pieces of wire to hook and withdraw the sprag, turn end for end and replace.



| Spare Part Ref. No. | Description | No. Reqd. |
|---------------------|-----------------------------|-----------|
| 60 | Backstop Assembly | 1 |
| 61 | Backstop Outer Race Key | 1 |
| 62 | Backstop Inner Race Key | 1 |
| 63 | Backstop Inner Race Circlip | 1 |
| 64 | Backstop Spacer Ring | 1 |



Shaft Mounted Speed Reducer



Cable winding machine



Screw Conveyor



Conveyor Application in a Stone Crusher Plant



Hydro Testing Equipment



SMSR on a Conveyor Belt Drive