

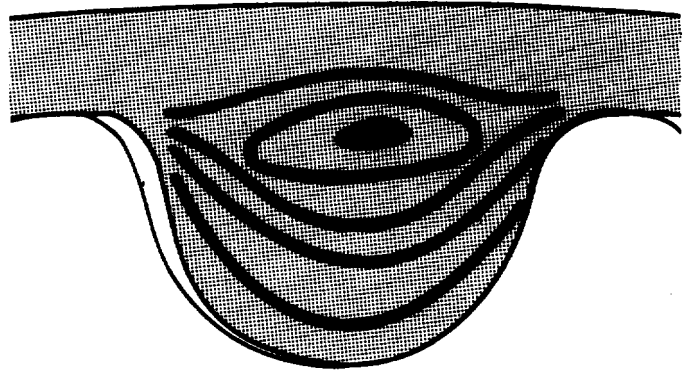
**FENNER HTD**

This development of the original Timing Drive is offered in a range of pitches 5mm, 8mm and 14mm. Comprehensive choice of belt widths and lengths combine with an optimised range of Taper Lock pulleys to suit general industrial needs.

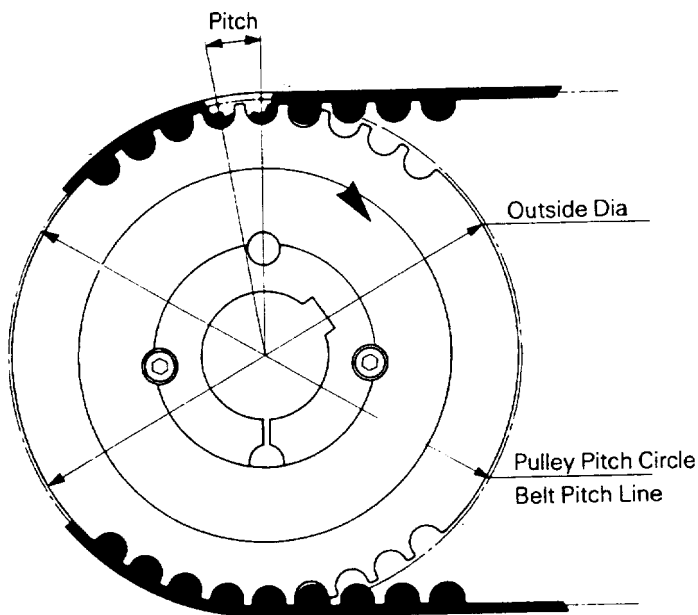
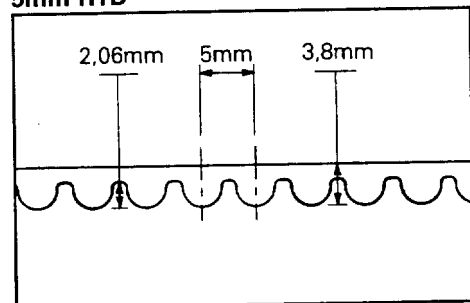
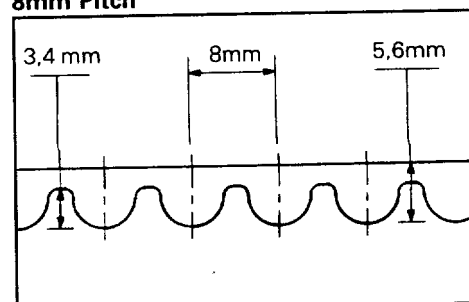
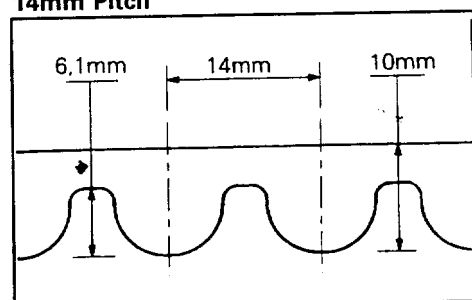
Drives can be designed by simple catalogue selection methods to give more compact drives, less noise and lower bearing loads than with classical Timing Drives.

**Fenner HTD** drives offer the technical and economical benefits of an established product range with proven performance and world wide stocks.

**Fenner HTD** belts have a curvilinear tooth form giving a more uniform distribution of shear stresses within the teeth and a transition of tooth loads to the tensile members in the belt which significantly improves upon classical timing belts.



SYNCHRONOUS  
BELT DRIVES

**5mm HTD****8mm Pitch****14mm Pitch**

# HTD Drives

## ORDERING INSTRUCTIONS

Each complete drive consists of five components: two pulleys, two Taper Lock bushes, and one belt.

(1) **Pulleys.** The eight digit pulley code is given on the dimension pages 78 to 80.

(2) **Taper Lock Bushes.** The eight digit codes are given on the Taper Lock Shaft Fixings pages 118 & 119.

(3) **Belt.** The belt code is given below.

Example: The specification for the drive selected on page 67 would be

|                 |                   |                 |
|-----------------|-------------------|-----------------|
| Driving Pulley  | 38 – 14M – 85mm   | Code 043 R 0038 |
| Taper Lock Bush | 3020/55mm         | Code 029 P 0055 |
| Driven Pulley   | 80 – 14M – 85mm   | Code 043 R 0080 |
| Taper Lock Bush | 3525/55mm         | Code 029 J 0055 |
| Belt            | 1778 – 14M – 85mm | Code 278 R 0177 |

## 5mm PITCH HTD BELTS

| Pitch Length<br>mm | 9mm WIDE*         | 15mm WIDE         |
|--------------------|-------------------|-------------------|
|                    | Catalogue<br>Code | Catalogue<br>Code |
| 305                | 278E0030          | 278F0030          |
| 325                | 032               | 032               |
| 350                | 035               | 035               |
| 400                | 040               | 040               |
| 450                | 045               | 045               |
| 500                | 050               | 050               |
| 575                | 057               | 057               |
| 640                | 064               | 064               |
| 700                | 070               | 070               |
| 800                | 080               | 080               |
| 890                | 089               | 089               |
| 980                | 098               | 098               |
| 1100               | 110               | 110               |
| 1200               | 120               | 120               |
| 1420               | 142               | 142               |
| 1595               | 159               | 159               |
| 1800               | 180               | 180               |
| 2000               | 200               | 200               |
| 2250               | 225               | 225               |
| 2525               | 252               | 252               |

\* 9mm wide belts not carried on stock.

## 8mm PITCH HTD BELTS

| Pitch Length<br>mm | 20mm WIDE         | 30mm WIDE         | 50mm WIDE         | 85mm WIDE         |
|--------------------|-------------------|-------------------|-------------------|-------------------|
|                    | Catalogue<br>Code | Catalogue<br>Code | Catalogue<br>Code | Catalogue<br>Code |
| 480                | 278J0048          | 278K0048          | 278L0048          | 278M0048          |
| 560                | 0056              | 0056              | 0056              | 0056              |
| 600                | 0060              | 0060              | 0060              | 0060              |
| 640                | 0064              | 0064              | 0064              | 0064              |
| 720                | 0072              | 0072              | 0072              | 0072              |
| 800                | 0080              | 0080              | 0080              | 0080              |
| 880                | 0088              | 0088              | 0088              | 0088              |
| 960                | 0096              | 0096              | 0096              | 0096              |
| 1040               | 0104              | 0104              | 0104              | 0104              |
| 1120               | 0112              | 0112              | 0112              | 0112              |
| 1200               | 0120              | 0120              | 0120              | 0120              |
| 1280               | 0128              | 0128              | 0128              | 0128              |
| 1440               | 0144              | 0144              | 0144              | 0144              |
| 1600               | 0160              | 0160              | 0160              | 0160              |
| 1760               | 0176              | 0176              | 0176              | 0176              |
| 1800               | 0180              | 0180              | 0180              | 0180              |
| 2000               | 0200              | 0200              | 0200              | 0200              |
| 2400               | 0240              | 0240              | 0240              | 0240              |
| 2600               | 0260              | 0260              | 0260              | 0260              |
| 2800               | 0280              | 0280              | 0280              | 0280              |

## 14mm PITCH HTD BELTS

| Pitch Length<br>mm | 40mm WIDE         | 55mm WIDE         | 85mm WIDE         | 115mm WIDE*       | 170mm WIDE*       |
|--------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
|                    | Catalogue<br>Code | Catalogue<br>Code | Catalogue<br>Code | Catalogue<br>Code | Catalogue<br>Code |
| 966                | 278N0096          | 278P0096          | 278R0096          | 278S0096          | 278T0096          |
| 1190               | 0119              | 0119              | 0119              | 0119              | 0119              |
| 1400               | 0140              | 0140              | 0140              | 0140              | 0140              |
| 1610               | 0161              | 0161              | 0161              | 0161              | 0161              |
| 1778               | 0177              | 0177              | 0177              | 0177              | 0177              |
| 1890               | 0189              | 0189              | 0189              | 0189              | 0189              |
| 2100               | 0210              | 0210              | 0210              | 0210              | 0210              |
| 2310               | 0231              | 0231              | 0231              | 0231              | 0231              |
| 2450               | 0245              | 0245              | 0245              | 0245              | 0245              |
| 2590               | 0259              | 0259              | 0259              | 0259              | 0259              |
| 2800               | 0280              | 0280              | 0280              | 0280              | 0280              |
| 3150               | 0315              | 0315              | 0315              | 0315              | 0315              |
| 3500               | 0350              | 0350              | 0350              | 0350              | 0350              |
| 3850               | 0385              | 0385              | 0385              | 0385              | 0385              |
| 4326               | 0432              | 0432              | 0432              | 0432              | 0432              |
| 4578               | 0457              | 0457              | 0457              | 0457              | 0457              |

\* 14mm pitch, 115mm and 170mm wide belts and pulleys are non-standard. For availability consult FPT.

## TEMPERATURE

HTD belt performance is generally unaffected in ambient temperatures between  $-34^{\circ}\text{C}$  and  $+100^{\circ}\text{C}$ .

Temperatures beyond these extremes should be referred to FPT.

For storage, belts should be protected from moisture, temperature extremes, direct sunlight and high ozone concentrations.

Belts should be stored in their original packing, avoiding sharp bends or crimping which would damage the belts.

## SELECTION PROCEDURE

### (a) Speed Ratio

Divide the rev/min of the faster shaft by the rev/min of the slower shaft to obtain the speed ratio.

### (b) Service Factor

From the table below select the **service factor** which is applicable to the drive. If the drive is speed increasing an additional factor may be required.

### (c) Design Power

Multiply the normal running power (kW) by the Service factor. This gives the **design power** which is used as the basis for selecting the drive.

### (d) Belt Pitch

Refer to the belt pitch selection chart on page 68. Choose the recommended **belt pitch** according to the point of intersection of the Design Power and the rev/min of the faster shaft.

### (e) Pulley Selection

Refer to the drive tables (pages 70 to 77) for the pitch of belt selected in (d). From the first column select the required Speed Ratio. Reading along the same horizontal line the next two columns give the number of grooves on each pulley. Where more than one combination of pulleys is available consult the Power Ratings tables (page 69) and the list of stock belt widths (page 66). In conjunction with the Design Power found in (c) determine the most suitable drive.

### (f) Centre Distance

Using the relevant drive table read along the same horizontal line as that showing the pulley sizes, and select a **centre distance** nearest to that which is required. The belt required to give this centre distance is shown at the head of the column.

### (g) Belt Length Correction Factor

From the table on page 68 note the **correction factor** for the pitch and length of belt chosen.

### (h) Power Rating

Refer to the Power Ratings on page 69 for the pitch of belt being considered. Read down the left hand column to the speed of the small pulley in rev/min. On this line read across to the column headed by the number of grooves on the small pulley and note the basic power rating. Multiply this figure by the belt length correction factor (g) to obtain the actual power rating.

### (i) Belt Width

Divide the Design Power found in step (c) by the actual power rating found in step (h) to obtain the belt width factor. Using the table below the power ratings, select a belt width which has a width factor equal to or greater than the figure found above.

### (k) Pulley Bores

Refer to the pulley dimensions (pages 78 to 80) and check that the Taper Lock<sup>®</sup> Bush sizes in the pulleys selected can accommodate the shafts they are to fit.

### (l) Pulley Ranges

If standard pulleys are to be used, (i.e. those combinations shown in the selection tables) on the majority of drives it will be found that at least one pulley is flanged as standard. If non-standard pulleys are to be used (i.e. those combinations not shown in the selection tables) one pulley requires to be flanged, and it is usually more economical to flange the smaller one. If the centre distance exceeds 8 times the outside diameter of the small pulley, or if shafts are vertical, both pulleys should be flanged.

## EXAMPLE

An HTD drive is required to drive a rotary pump at 685 rev/min. The prime mover is a 30kW, direct-on-line start AC motor, running at 1440 rev/min. The required centre distance is 450mm, and each shaft diameter is 55mm. Continuous duty.

### (a) Speed Ratio

$$\frac{1440}{685} = 2.10:1.$$

### (b) Service Factor

From table (below) the service factor is 1.9.

### (c) Design Power

$$\text{Design Power} = 30 \times 1.9 = 57\text{kW}.$$

### (d) Belt Pitch

From table on page 68, 14M is the most suitable pitch.

### (e) Pulley Selection

A speed ratio of 2.11 can be found in the drive tables on page 76 utilising pulleys of 38 and 80 grooves.

### (f) Centre Distance

Reading along the same line as the 2.11:1 Speed ratio, a centre distance of 467mm is found, and at the head of the column the belt length given is 1778mm.

### (g) Belt Length Correction Factor

From table on page 68 Belt Length Correction Factor = 0.95.

### (h) Power Rating

From the power rating table the basic capacity of a 38 groove pulley at 1440 rev/min is 25.70kW/40mm width. Actual power rating =  $25.70 \times 0.95 = 24.41$  kW.

### (i) Belt width

$$\text{Belt Width Factor} = \frac{57}{24.41} = 2.33$$

From the width factor table beneath the power rating table it can be seen that the required width is 85mm.

### (k) Pulley Bores

From the pulley dimension tables, both pulleys are fitted with Taper Lock<sup>®</sup> Bushes which will accommodate 55mm bores.

### (l) Pulley Flanges

The 38 groove pulley is flanged as standard.

## DRIVE SPECIFICATION

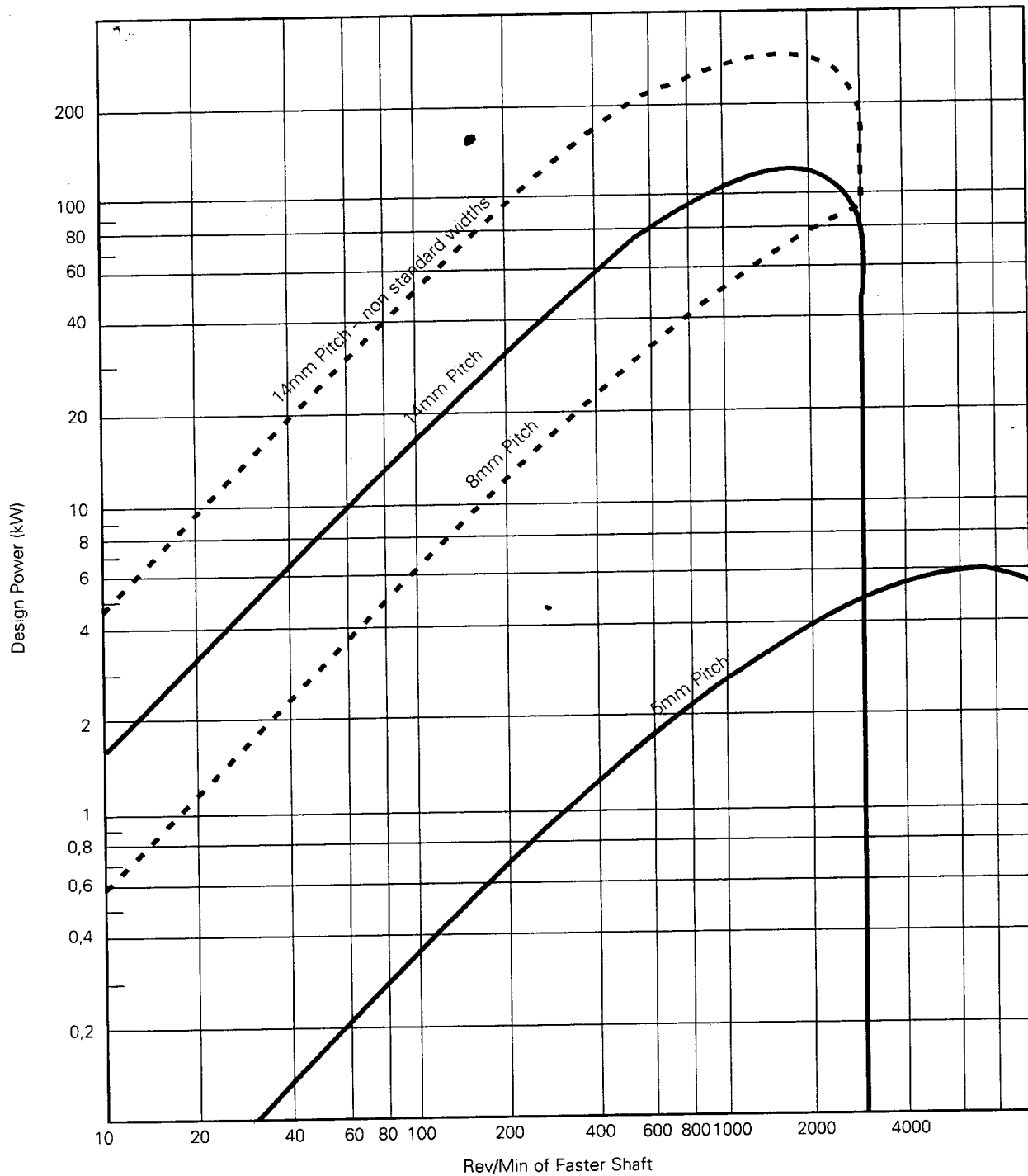
38 – 14M – 85mm  
3020/55mm  
80 – 14M – 85mm  
3525/55mm  
1778 – 14M – 85mm belt giving  
467mm centres.

## SERVICE FACTORS

| - SPECIAL CASES                                                                                                                                                                                                                                                                                                | TYPES OF PRIME MOVER                                                                                                                                                                                                          |               |         |                                                                                                                                                                                          |               |         |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|---------|
|                                                                                                                                                                                                                                                                                                                | 'SOFT' STARTS                                                                                                                                                                                                                 |               |         | 'HEAVY' STARTS                                                                                                                                                                           |               |         |
|                                                                                                                                                                                                                                                                                                                | Electric Motor AC – Star Delta start<br>DC – Shunt wound<br>Internal Combustion Engines with 4 or more cylinders, all prime movers fitted with Centrifugal Clutches, Dry or Fluid couplings or Electronic Soft Start devices. |               |         | Electric motors AC – Direct-on-line start<br>DC – Series & Compound Wound<br>Internal Combustion Engines with less than 4 cylinders.<br>Prime movers not fitted with soft start devices. |               |         |
|                                                                                                                                                                                                                                                                                                                | Hours per day duty                                                                                                                                                                                                            |               |         | Hours per day duty                                                                                                                                                                       |               |         |
| TYPES OF DRIVEN MACHINE                                                                                                                                                                                                                                                                                        | 10 and under                                                                                                                                                                                                                  | Over 10 to 16 | Over 16 | 10 and under                                                                                                                                                                             | Over 10 to 16 | Over 16 |
| <b>LIGHT DUTY</b><br>Agitators (uniform density), Belt Conveyors (uniformly loaded), Blowers, Exhausters and Fans (up to 7.5kW), Centrifugal Compressors and Pumps                                                                                                                                             | 1.2                                                                                                                                                                                                                           | 1.3           | 1.4     | 1.5                                                                                                                                                                                      | 1.6           | 1.7     |
| <b>MEDIUM DUTY</b><br>Agitators and Mixers (variable density), Belt Conveyors (not uniformly loaded), Blowers, Exhausters and Fans (over 7.5kW), Kilns, Laundry machinery, Line Shafts, Machine tools, Printing machinery, Rotary Compressors and Pumps, Sawmills and Woodworking machinery, Screens (rotary). | 1.3                                                                                                                                                                                                                           | 1.4           | 1.6     | 1.6                                                                                                                                                                                      | 1.7           | 1.9     |
| <b>HEAVY DUTY</b><br>Brick machinery, Bucket Elevators, Compressors and Pumps (reciprocating), Conveyors (heavy duty), Hoists, Quarry Plant, Rubber machinery, Screens (vibrating), Textile machinery.                                                                                                         | 1.4                                                                                                                                                                                                                           | 1.6           | 1.7     | 1.7                                                                                                                                                                                      | 1.9           | 2.0     |

# HTD Drive Design

## BELT PITCH SELECTION CHART



## BELT LENGTH CORRECTION FACTORS

|           |                   |                 |         |                 |                   |                                       |
|-----------|-------------------|-----------------|---------|-----------------|-------------------|---------------------------------------|
| 5mm Pitch | Belt Length (mm)  | 305 325 350 400 | 450 500 | 575 640 700 800 | 890 980 1100 1200 | 1270 1595 2000 2525<br>1420 1800 2250 |
|           | Correction Factor | 0,8             | 0,9     | 1,0             | 1,1               | 1,2                                   |

|           |                   |             |                 |                    |                     |                          |
|-----------|-------------------|-------------|-----------------|--------------------|---------------------|--------------------------|
| 8mm Pitch | Belt Length (mm)  | 480 560 600 | 640 720 800 880 | 960 1040 1120 1200 | 1280 1440 1600 1760 | 1800 2000 2400 2600 2800 |
|           | Correction Factor | 0,8         | 0,9             | 1,0                | 1,1                 | 1,2                      |

|            |                   |          |           |           |                |                |                     |
|------------|-------------------|----------|-----------|-----------|----------------|----------------|---------------------|
| 14mm Pitch | Belt Length (mm)  | 966 1190 | 1400 1610 | 1778 1890 | 2100 2310 2450 | 2590 2800 3150 | 3500 3850 4326 4578 |
|            | Correction Factor | 0,8      | 0,9       | 0,95      | 1,0            | 1,05           | 1,1                 |

# HTD Drive Design

## POWER RATINGS (kW) FOR 15mm WIDE 5M BELT

| Rev/min<br>of small pulley | Number of grooves |      |      |      |      |      |      |      |      |      |      |      |
|----------------------------|-------------------|------|------|------|------|------|------|------|------|------|------|------|
|                            | 28                | 32   | 34   | 36   | 38   | 40   | 44   | 48   | 56   | 64   | 72   | 80   |
| 20                         | 0.02              | 0.02 | 0.02 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.06 | 0.06 | 0.06 | 0.08 |
| 40                         | 0.04              | 0.06 | 0.06 | 0.06 | 0.06 | 0.08 | 0.08 | 0.09 | 0.09 | 0.11 | 0.13 | 0.15 |
| 60                         | 0.06              | 0.08 | 0.08 | 0.09 | 0.09 | 0.09 | 0.11 | 0.13 | 0.15 | 0.17 | 0.19 | 0.23 |
| 100                        | 0.09              | 0.11 | 0.13 | 0.13 | 0.15 | 0.17 | 0.19 | 0.21 | 0.25 | 0.28 | 0.32 | 0.36 |
| 200                        | 0.21              | 0.25 | 0.26 | 0.28 | 0.30 | 0.32 | 0.38 | 0.43 | 0.51 | 0.59 | 0.64 | 0.72 |
| 300                        | 0.26              | 0.32 | 0.36 | 0.38 | 0.42 | 0.43 | 0.51 | 0.57 | 0.68 | 0.77 | 0.87 | 0.96 |
| 400                        | 0.34              | 0.40 | 0.43 | 0.47 | 0.51 | 0.55 | 0.62 | 0.70 | 0.83 | 0.95 | 1.06 | 1.17 |
| 500                        | 0.40              | 0.47 | 0.51 | 0.55 | 0.59 | 0.64 | 0.72 | 0.81 | 0.96 | 1.10 | 1.25 | 1.38 |
| 600                        | 0.45              | 0.55 | 0.59 | 0.62 | 0.68 | 0.72 | 0.81 | 0.93 | 1.10 | 1.25 | 1.42 | 1.57 |
| 720                        | 0.51              | 0.62 | 0.66 | 0.72 | 0.77 | 0.81 | 0.95 | 1.06 | 1.25 | 1.42 | 1.61 | 1.78 |
| 800                        | 0.57              | 0.66 | 0.72 | 0.77 | 0.83 | 0.89 | 1.00 | 1.13 | 1.34 | 1.53 | 1.72 | 1.91 |
| 960                        | 0.64              | 0.76 | 0.79 | 0.83 | 0.89 | 0.95 | 1.15 | 1.29 | 1.53 | 1.74 | 1.95 | 2.15 |
| 1000                       | 0.66              | 0.79 | 0.87 | 0.91 | 0.98 | 1.04 | 1.19 | 1.32 | 1.57 | 1.80 | 2.00 | 2.23 |
| 1200                       | 0.76              | 0.89 | 0.96 | 1.04 | 1.12 | 1.19 | 1.34 | 1.49 | 1.78 | 2.02 | 2.27 | 2.46 |
| 1440                       | 0.87              | 1.02 | 1.12 | 1.19 | 1.27 | 1.36 | 1.53 | 1.70 | 2.00 | 2.29 | 2.57 | 2.84 |
| 1600                       | 0.95              | 1.12 | 1.19 | 1.29 | 1.36 | 1.46 | 1.64 | 1.83 | 2.11 | 2.46 | 2.76 | 3.06 |
| 2000                       | 1.12              | 1.30 | 1.40 | 1.49 | 1.61 | 1.70 | 1.91 | 2.14 | 2.51 | 2.85 | 3.19 | 3.52 |
| 2400                       | 1.27              | 1.47 | 1.59 | 1.70 | 1.83 | 1.97 | 2.17 | 2.40 | 2.84 | 3.21 | 3.57 | 3.93 |
| 2880                       | 1.44              | 1.70 | 1.83 | 1.97 | 2.08 | 2.19 | 2.44 | 2.70 | 3.16 | 3.57 | 4.01 | 4.33 |
| 4000                       | 1.81              | 2.12 | 2.27 | 2.40 | 2.55 | 2.70 | 3.01 | 3.31 | 3.80 | 4.23 | 4.61 | 4.91 |
| 5000                       | 2.10              | 2.44 | 2.59 | 2.76 | 2.91 | 3.08 | 3.38 | 3.69 | 4.18 | 4.54 | 4.80 | 4.95 |
| 6000                       | 2.36              | 2.70 | 2.87 | 3.04 | 3.19 | 3.36 | 3.67 | 3.93 | 4.35 | 4.55 | 4.59 | 4.46 |
| 8000                       | 2.76              | 3.10 | 3.25 | 3.38 | 3.52 | 3.65 | 3.84 | 3.97 | 3.97 | 3.55 |      |      |
| 10000                      | 2.99              | 3.23 | 3.31 | 3.40 | 3.44 | 3.48 | 3.44 | 3.27 |      |      |      |      |

|               |      |      |
|---------------|------|------|
| Belt width mm | 9    | 15   |
| Width factor  | 0.53 | 1.00 |

## POWER RATINGS (kW) FOR 20mm WIDE 8M BELT

| Rev/min<br>of small pulley | Number of grooves |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |
|----------------------------|-------------------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|                            | 22                | 24   | 26   | 28   | 30   | 32   | 34   | 36    | 38    | 40    | 44    | 48    | 56    | 64    | 72    | 80    |
| 10                         | 0.02              | 0.02 | 0.02 | 0.03 | 0.03 | 0.04 | 0.04 | 0.05  | 0.05  | 0.06  | 0.06  | 0.07  | 0.08  | 0.09  | 0.10  | 0.11  |
| 20                         | 0.03              | 0.04 | 0.04 | 0.05 | 0.06 | 0.07 | 0.08 | 0.09  | 0.11  | 0.11  | 0.12  | 0.14  | 0.16  | 0.18  | 0.20  | 0.23  |
| 50                         | 0.08              | 0.09 | 0.11 | 0.13 | 0.16 | 0.18 | 0.21 | 0.23  | 0.27  | 0.28  | 0.31  | 0.34  | 0.40  | 0.45  | 0.51  | 0.56  |
| 100                        | 0.16              | 0.19 | 0.22 | 0.27 | 0.31 | 0.36 | 0.41 | 0.47  | 0.54  | 0.56  | 0.62  | 0.68  | 0.79  | 0.90  | 1.02  | 1.13  |
| 200                        | 0.33              | 0.37 | 0.45 | 0.53 | 0.62 | 0.72 | 0.82 | 0.93  | 1.05  | 1.13  | 1.24  | 1.34  | 1.54  | 1.73  | 1.93  | 2.12  |
| 300                        | 0.49              | 0.53 | 0.65 | 0.77 | 0.90 | 1.04 | 1.19 | 1.34  | 1.51  | 1.64  | 1.78  | 1.93  | 2.21  | 2.50  | 2.77  | 3.05  |
| 400                        | 0.65              | 0.71 | 0.84 | 0.99 | 1.16 | 1.34 | 1.54 | 1.74  | 1.96  | 2.12  | 2.31  | 2.50  | 2.87  | 3.23  | 3.59  | 3.94  |
| 500                        | 0.81              | 0.89 | 1.02 | 1.21 | 1.42 | 1.64 | 1.88 | 2.13  | 2.40  | 2.59  | 2.82  | 3.05  | 3.50  | 3.94  | 4.37  | 4.80  |
| 600                        | 0.98              | 1.07 | 1.21 | 1.43 | 1.68 | 1.94 | 2.21 | 2.51  | 2.82  | 3.05  | 3.32  | 3.59  | 4.11  | 4.63  | 5.13  | 5.63  |
| 720                        |                   | 1.28 | 1.42 | 1.69 | 1.98 | 2.28 | 2.61 | 2.94  | 3.32  | 3.59  | 3.90  | 4.22  | 4.83  | 5.43  | 6.02  | 6.60  |
| 800                        |                   | 1.42 | 1.56 | 1.85 | 2.17 | 2.50 | 2.86 | 3.24  | 3.64  | 3.94  | 4.28  | 4.63  | 5.30  | 5.95  | 6.60  | 7.23  |
| 960                        |                   |      |      | 2.18 | 2.55 | 2.94 | 3.36 | 3.81  | 4.28  | 4.62  | 5.03  | 5.43  | 6.21  | 6.97  | 7.72  | 8.44  |
| 1000                       |                   |      |      | 2.26 | 2.64 | 3.05 | 3.49 | 3.95  | 4.44  | 4.80  | 5.22  | 5.63  | 6.44  | 7.23  | 7.99  | 8.74  |
| 1200                       |                   |      |      | 2.65 | 3.11 | 3.59 | 4.09 | 4.63  | 5.21  | 5.63  | 6.12  | 6.60  | 7.53  | 8.44  | 9.32  | 10.17 |
| 1440                       |                   |      |      |      | 3.65 | 4.21 | 4.80 | 5.43  | 6.12  | 6.60  | 7.16  | 7.72  | 8.79  | 9.83  | 10.82 | 11.79 |
| 1600                       |                   |      |      |      |      | 4.61 | 5.26 | 5.95  | 6.70  | 7.23  | 7.84  | 8.44  | 9.61  | 10.72 | 11.79 | 12.80 |
| 2000                       |                   |      |      |      |      | 5.59 | 6.37 | 7.21  | 8.11  | 8.74  | 9.47  | 10.17 | 11.53 | 12.80 | 13.99 | 15.08 |
| 2500                       |                   |      |      |      |      |      | 7.69 | 8.69  | 9.77  | 10.52 | 11.36 | 12.17 | 13.70 | 15.08 | 16.32 | 17.40 |
| 2880                       |                   |      |      |      |      |      | 8.63 | 9.76  | 10.98 | 11.82 | 12.73 | 13.59 | 15.18 | 16.58 | 17.76 | 18.69 |
| 3500                       |                   |      |      |      |      |      |      | 11.36 | 12.75 | 13.70 | 14.68 | 15.60 | 17.20 | 18.47 |       |       |
| 4000                       |                   |      |      |      |      |      |      |       |       | 15.08 | 16.09 | 16.99 | 18.47 |       |       |       |

|               |      |      |      |      |
|---------------|------|------|------|------|
| Belt width mm | 20   | 30   | 50   | 85   |
| Width factor  | 1.00 | 1.58 | 2.73 | 4.29 |

## POWER RATINGS (kW) FOR 40mm WIDE 14M BELT

| Rev/min<br>of small pulley | Number of grooves |       |       |       |       |       |       |       |       |       |
|----------------------------|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|                            | 28                | 29    | 30    | 32    | 34    | 36    | 38    | 40    | 44    | 56    |
| 10                         | 0.20              | 0.20  | 0.20  | 0.20  | 0.30  | 0.30  | 0.30  | 0.40  | 0.40  | 0.50  |
| 20                         | 0.40              | 0.40  | 0.40  | 0.50  | 0.60  | 0.60  | 0.70  | 0.70  | 0.80  | 1.10  |
| 40                         | 0.70              | 0.80  | 0.80  | 1.00  | 1.10  | 1.20  | 1.40  | 1.40  | 1.60  | 2.10  |
| 60                         | 1.10              | 1.20  | 1.30  | 1.50  | 1.70  | 1.90  | 2.00  | 2.20  | 2.40  | 3.20  |
| 100                        | 1.80              | 1.90  | 2.10  | 2.40  | 2.80  | 3.10  | 3.40  | 3.60  | 4.00  | 5.20  |
| 200                        | 3.60              | 3.90  | 4.20  | 4.80  | 5.50  | 6.20  | 6.80  | 7.20  | 8.00  | 10.50 |
| 300                        | 4.90              | 5.30  | 5.70  | 6.60  | 7.50  | 8.50  | 9.20  | 9.70  | 10.80 | 14.20 |
| 400                        | 6.10              | 6.60  | 7.10  | 8.20  | 9.30  | 10.50 | 11.30 | 12.00 | 13.30 | 17.40 |
| 500                        | 7.20              | 7.80  | 8.40  | 9.60  | 11.00 | 12.30 | 13.30 | 14.10 | 15.60 | 20.20 |
| 600                        | 8.20              | 8.90  | 9.50  | 11.00 | 12.50 | 14.00 | 15.10 | 15.90 | 17.60 | 22.70 |
| 720                        | 9.30              | 10.10 | 10.80 | 12.50 | 14.10 | 15.80 | 17.00 | 18.00 | 19.80 | 25.40 |
| 800                        | 10.00             | 10.80 | 11.60 | 13.40 | 15.10 | 17.00 | 18.30 | 19.30 | 21.20 | 27.00 |
| 960                        | 11.30             | 12.20 | 13.10 | 15.00 | 17.00 | 19.10 | 20.50 | 21.60 | 23.70 | 29.80 |
| 1000                       | 11.60             | 12.50 | 13.50 | 15.40 | 17.50 | 19.60 | 21.00 | 22.10 | 24.30 | 30.50 |
| 1200                       | 13.10             | 14.10 | 15.10 | 17.30 | 19.50 | 21.80 | 23.40 | 24.50 | 26.80 | 33.20 |
| 1440                       |                   | 15.70 | 16.80 | 19.20 | 21.60 | 24.10 | 25.70 | 26.90 | 29.30 | 35.50 |
| 1600                       |                   |       | 17.80 | 20.30 | 22.80 | 25.40 | 27.10 | 28.30 | 30.60 | 36.60 |
| 2000                       |                   |       |       | 22.50 | 25.20 | 28.00 | 29.60 | 30.80 | 32.80 | 37.30 |
| 2500                       |                   |       |       |       | 26.90 | 29.70 | 31.20 | 32.00 | 33.40 | 34.40 |
| 2880                       |                   |       |       |       |       | 29.80 | 31.20 | 31.80 | 32.00 | 31.90 |

|               |      |      |      |      |      |
|---------------|------|------|------|------|------|
| Belt width mm | 40   | 55   | 85   | 115  | 170  |
| Width factor  | 1.00 | 1.50 | 2.50 | 3.47 | 5.28 |

Note: The above table covers pulley sizes up to 56 grooves. Combinations are possible with larger sizes giving higher power ratings (to 250kW). Consult FPT.

# CENTRE DISTANCE IN MILLIMETRES

| Speed Ratio | Number of grooves on |               | Belt pitch length in millimetres |          |          |          |          |           |           |           |           |           |           |           |           |           |           |           |           |           |           |  |
|-------------|----------------------|---------------|----------------------------------|----------|----------|----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|--|
|             | Driving Pulley       | Driven Pulley | 480                              | 560      | 600      | 640      | 720      | 800       | 880       | 960       | 1040      | 1120      | 1200      | 1280      | 1440      | 1600      | 1760      | 1800      | 2000      | 2400      | 2600      |  |
|             |                      |               | 60 teeth                         | 70 teeth | 75 teeth | 80 teeth | 90 teeth | 100 teeth | 110 teeth | 120 teeth | 130 teeth | 140 teeth | 150 teeth | 160 teeth | 180 teeth | 200 teeth | 220 teeth | 225 teeth | 250 teeth | 300 teeth | 320 teeth |  |
| 2,50        | 32                   | 80            | -                                | -        | -        | -        | -        | 165       | 207       | 248       | 290       | 330       | 371       | 411       | 492       | 573       | 653       | 673       | 774       | 974       | 1074      |  |
| 2,50        | 36                   | 90            | -                                | -        | -        | -        | -        | -         | -         | 217       | 259       | 300       | 341       | 382       | 463       | 544       | 624       | 644       | 745       | 946       | 1046      |  |
| 2,55        | 44                   | 112           | -                                | -        | -        | -        | -        | -         | -         | -         | -         | 232       | 274       | 316       | 399       | 480       | 561       | 582       | 683       | 884       | 984       |  |
| 2,57        | 28                   | 72            | -                                | -        | -        | -        | 150      | 192       | 233       | 274       | 315       | 356       | 396       | 436       | 517       | 597       | 678       | 698       | 798       | 998       | 1098      |  |
| 2,57        | 56                   | 144           | -                                | -        | -        | -        | -        | -         | -         | -         | -         | -         | -         | -         | 299       | 384       | 467       | 487       | 589       | 792       | 892       |  |
| 2,63        | 64                   | 168           | -                                | -        | -        | -        | -        | -         | -         | -         | -         | -         | -         | -         | -         | -         | 394       | 415       | 519       | 724       | 824       |  |
| 2,65        | 34                   | 90            | -                                | -        | -        | -        | -        | -         | 178       | 220       | 262       | 304       | 345       | 385       | 467       | 547       | 628       | 648       | 749       | 949       | 1050      |  |
| 2,67        | 24                   | 64            | -                                | -        | -        | 134      | 177      | 218       | 259       | 300       | 340       | 381       | 421       | 461       | 542       | 622       | 702       | 722       | 822       | 1023      | 1123      |  |
| 2,67        | 30                   | 80            | -                                | -        | -        | -        | -        | 168       | 210       | 252       | 293       | 334       | 375       | 415       | 496       | 576       | 657       | 677       | 777       | 978       | 1078      |  |
| 2,67        | 72                   | 192           | -                                | -        | -        | -        | -        | -         | -         | -         | -         | -         | -         | -         | -         | -         | -         | -         | 446       | 654       | 754       |  |
| 2,77        | 26                   | 72            | -                                | -        | -        | -        | 153      | 195       | 237       | 278       | 319       | 359       | 400       | 440       | 521       | 601       | 681       | 702       | 802       | 1002      | 1102      |  |
| 2,80        | 40                   | 112           | -                                | -        | -        | -        | -        | -         | -         | -         | 238       | 281       | 323       | 364       | 406       | 487       | 569       | 589       | 690       | 891       | 991       |  |
| 2,81        | 32                   | 90            | -                                | -        | -        | -        | -        | -         | 181       | 224       | 266       | 307       | 348       | 389       | 470       | 551       | 632       | 652       | 752       | 953       | 1053      |  |
| 2,86        | 28                   | 80            | -                                | -        | -        | -        | -        | 171       | 214       | 255       | 297       | 338       | 378       | 419       | 500       | 580       | 661       | 681       | 781       | 982       | 1082      |  |
| 2,95        | 38                   | 112           | -                                | -        | -        | -        | -        | -         | -         | -         | -         | 242       | 284       | 326       | 409       | 491       | 572       | 593       | 694       | 895       | 995       |  |
| 3,00        | 24                   | 72            | -                                | -        | -        | -        | 156      | 199       | 240       | 281       | 322       | 363       | 403       | 444       | 524       | 605       | 685       | 705       | 806       | 1006      | 1106      |  |
| 3,00        | 30                   | 90            | -                                | -        | -        | -        | -        | -         | 184       | 227       | 269       | 311       | 352       | 393       | 474       | 555       | 635       | 656       | 756       | 957       | 1057      |  |
| 3,00        | 48                   | 144           | -                                | -        | -        | -        | -        | -         | -         | -         | -         | -         | -         | -         | 312       | 397       | 480       | 501       | 604       | 807       | 907       |  |
| 3,00        | 56                   | 168           | -                                | -        | -        | -        | -        | -         | -         | -         | -         | -         | -         | -         | -         | 320       | 407       | 428       | 533       | 738       | 838       |  |
| 3,00        | 64                   | 192           | -                                | -        | -        | -        | -        | -         | -         | -         | -         | -         | -         | -         | -         | -         | -         | 350       | 459       | 668       | 768       |  |
| 3,08        | 26                   | 80            | -                                | -        | -        | -        | -        | 174       | 217       | 259       | 300       | 341       | 382       | 422       | 503       | 584       | 664       | 685       | 785       | 986       | 1086      |  |
| 3,11        | 36                   | 112           | -                                | -        | -        | -        | -        | -         | -         | -         | 245       | 288       | 330       | 371       | 413       | 495       | 576       | 596       | 697       | 898       | 998       |  |
| 3,21        | 28                   | 90            | -                                | -        | -        | -        | -        | -         | 187       | 230       | 273       | 314       | 355       | 396       | 477       | 558       | 639       | 659       | 760       | 961       | 1061      |  |
| 3,27        | 44                   | 144           | -                                | -        | -        | -        | -        | -         | -         | -         | -         | -         | -         | -         | 319       | 404       | 487       | 508       | 611       | 814       | 914       |  |
| 3,29        | 34                   | 112           | -                                | -        | -        | -        | -        | -         | -         | -         | 204       | 248       | 291       | 333       | 416       | 498       | 579       | 600       | 701       | 903       | 1003      |  |
| 3,33        | 24                   | 80            | -                                | -        | -        | -        | -        | 178       | 220       | 262       | 304       | 345       | 385       | 426       | 507       | 588       | 668       | 688       | 789       | 989       | 1089      |  |
| 3,43        | 56                   | 192           | -                                | -        | -        | -        | -        | -         | -         | -         | -         | -         | -         | -         | -         | -         | 340       | 363       | 472       | 682       | 782       |  |
| 3,46        | 26                   | 90            | -                                | -        | -        | -        | -        | -         | 191       | 234       | 276       | 318       | 359       | 400       | 481       | 562       | 643       | 663       | 764       | 965       | 1065      |  |
| 3,50        | 32                   | 112           | -                                | -        | -        | -        | -        | -         | -         | -         | 207       | 251       | 294       | 337       | 420       | 502       | 583       | 603       | 705       | 906       | 1006      |  |
| 3,50        | 48                   | 168           | -                                | -        | -        | -        | -        | -         | -         | -         | -         | -         | -         | -         | -         | 333       | 420       | 442       | 547       | 752       | 852       |  |
| 3,60        | 40                   | 144           | -                                | -        | -        | -        | -        | -         | -         | -         | -         | -         | -         | -         | 325       | 411       | 494       | 515       | 618       | 821       | 921       |  |
| 3,73        | 30                   | 112           | -                                | -        | -        | -        | -        | -         | -         | -         | 210       | 255       | 298       | 340       | 423       | 505       | 587       | 607       | 708       | 910       | 1010      |  |
| 3,75        | 24                   | 90            | -                                | -        | -        | -        | -        | -         | 194       | 237       | 279       | 321       | 362       | 403       | 485       | 566       | 647       | 667       | 767       | 968       | 1068      |  |
| 3,79        | 38                   | 144           | -                                | -        | -        | -        | -        | -         | -         | -         | -         | -         | -         | -         | 328       | 414       | 498       | 518       | 621       | 825       | 925       |  |
| 3,82        | 44                   | 168           | -                                | -        | -        | -        | -        | -         | -         | -         | -         | -         | -         | -         | -         | 339       | 427       | 448       | 553       | 760       | 860       |  |
| 4,00        | 28                   | 112           | -                                | -        | -        | -        | -        | -         | -         | -         | 213       | 258       | 301       | 343       | 427       | 509       | 590       | 611       | 712       | 914       | 1014      |  |
| 4,00        | 36                   | 144           | -                                | -        | -        | -        | -        | -         | -         | -         | -         | -         | -         | -         | 331       | 417       | 501       | 522       | 625       | 829       | 929       |  |
| 4,00        | 48                   | 192           | -                                | -        | -        | -        | -        | -         | -         | -         | -         | -         | -         | -         | -         | -         | 352       | 375       | 485       | 696       | 796       |  |
| 4,20        | 40                   | 168           | -                                | -        | -        | -        | -        | -         | -         | -         | -         | -         | -         | -         | -         | 346       | 433       | 455       | 560       | 767       | 867       |  |
| 4,24        | 34                   | 144           | -                                | -        | -        | -        | -        | -         | -         | -         | -         | -         | -         | 244       | 335       | 421       | 505       | 525       | 628       | 832       | 932       |  |
| 4,31        | 26                   | 112           | -                                | -        | -        | -        | -        | -         | -         | -         | 216       | 261       | 304       | 347       | 430       | 512       | 594       | 614       | 716       | 917       | 1017      |  |
| 4,36        | 44                   | 192           | -                                | -        | -        | -        | -        | -         | -         | -         | -         | -         | -         | -         | -         | 358       | 381       | 492       | 703       | 908       | 1008      |  |
| 4,42        | 38                   | 168           | -                                | -        | -        | -        | -        | -         | -         | -         | -         | -         | -         | -         | -         | 349       | 437       | 459       | 564       | 770       | 870       |  |
| 4,50        | 32                   | 144           | -                                | -        | -        | -        | -        | -         | -         | -         | -         | -         | -         | 247       | 338       | 424       | 508       | 529       | 632       | 836       | 936       |  |
| 4,67        | 24                   | 112           | -                                | -        | -        | -        | -        | -         | -         | -         | 219       | 264       | 308       | 350       | 434       | 516       | 597       | 618       | 719       | 921       | 1021      |  |
| 4,67        | 36                   | 168           | -                                | -        | -        | -        | -        | -         | -         | -         | -         | -         | -         | -         | -         | 352       | 440       | 461       | 567       | 774       | 874       |  |
| 4,80        | 30                   | 144           | -                                | -        | -        | -        | -        | -         | -         | -         | -         | -         | -         | 250       | 341       | 427       | 511       | 532       | 635       | 839       | 939       |  |
| 4,80        | 40                   | 192           | -                                | -        | -        | -        | -        | -         | -         | -         | -         | -         | -         | -         | -         | -         | 365       | 388       | 498       | 710       | 810       |  |
| 4,94        | 34                   | 168           | -                                | -        | -        | -        | -        | -         | -         | -         | -         | -         | -         | -         | -         | 355       | 443       | 465       | 570       | 777       | 877       |  |
| 5,05        | 38                   | 192           | -                                | -        | -        | -        | -        | -         | -         | -         | -         | -         | -         | -         | -         | -         | 368       | 391       | 502       | 713       | 813       |  |
| 5,14        | 28                   | 144           | -                                | -        | -        | -        | -        | -         | -         | -         | -         | -         | -         | 253       | 344       | 431       | 515       | 536       | 639       | 843       | 943       |  |
| 5,25        | 32                   | 168           | -                                | -        | -        | -        | -        | -         | -         | -         | -         | -         | -         | -         | -         | 358       | 446       | 468       | 574       | 781       | 881       |  |
| 5,33        | 36                   | 192           | -                                | -        | -        | -        | -        | -         | -         | -         | -         | -         | -         | -         | -         | -         | 371       | 394       | 505       | 716       | 820       |  |
| 5,54        | 26                   | 144           | -                                | -        | -        | -        | -        | -         | -         | -         | -         | -         | -         | 256       | 348       | 434       | 518       | 539       | 642       | 847       | 947       |  |
| 5,60        | 30                   | 168           | -                                | -        | -        | -        | -        | -         | -         | -         | -         | -         | -         | -         | -         | 361       | 450       | 471       | 577       | 784       | 884       |  |
| 5,65        | 34                   | 192           | -                                | -        | -        | -        | -        | -         | -         | -         | -         | -         | -         | -         | -         | -         | 374       | 397       | 508       | 720       | 823       |  |
| 6,00        | 24                   | 144           | -                                | -        | -        | -        | -        | -         | -         | -         | -         | -         | -         | 259       | 351       | 437       | 522       | 542       | 646       | 850       | 952       |  |
| 6,00        | 28                   | 168           | -                                | -        | -        | -        | -        | -         | -         | -         | -         | -         | -         | -         | 269       | 364       | 453       | 475       | 581       | 785       | 889       |  |
| 6,00        | 32                   | 192           | -                                | -        | -        | -        | -        | -         | -         | -         | -         | -         | -         | -         | -         | -         | 377       | 400       | 511       | 723       | 827       |  |
| 6,40        | 30                   | 192           | -                                | -        | -        | -        | -        | -         | -         | -         | -         | -         | -         | -         | -         | -         | 380       | 403       | 515       | 727       | 831       |  |
| 6,46        | 26                   | 168           | -                                | -        | -        | -        | -        | -         | -         | -         | -         | -         | -         | -         | 272       | 368       | 478       | 498       | 594       | 799       | 899       |  |
| 6,86        | 28                   | 192           | -                                | -        | -        | -        | -        | -         | -         | -         | -         | -         | -         | -         | -         | -         | 383       | 406       | 519       | 730       | 834       |  |

All centre distances are rounded values – Consult FPT if centre distance is fixed.

# Fenner Torque Drive PLUS<sup>®</sup> 8MR & HTD 8M Drives

## CENTRE DISTANCE IN MILLIMETRES

| Speed Ratio | Number of grooves on |               | Belt pitch length in millimetres |          |          |          |          |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           | Speed Ratio |
|-------------|----------------------|---------------|----------------------------------|----------|----------|----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-------------|
|             | Driving Pulley       | Driven Pulley | 480                              | 560      | 600      | 640      | 720      | 800       | 880       | 960       | 1040      | 1120      | 1200      | 1280      | 1440      | 1600      | 1760      | 1800      | 2000      | 2400      | 2600      | 2800      |             |
|             |                      |               | 60 teeth                         | 70 teeth | 75 teeth | 80 teeth | 90 teeth | 100 teeth | 110 teeth | 120 teeth | 130 teeth | 140 teeth | 150 teeth | 160 teeth | 180 teeth | 200 teeth | 220 teeth | 225 teeth | 250 teeth | 300 teeth | 325 teeth | 350 teeth |             |
| 1.41        | 64                   | 90            | -                                | -        | -        | -        | -        | -         | -         | -         | 250       | 290       | 330       | 411       | 491       | 571       | 591       | 691       | 891       | 991       | 1091      | 1.41      |             |
| 1.41        | 34                   | 48            | -                                | -        | 135      | 155      | 195      | 235       | 275       | 315       | 356       | 396       | 436       | 476       | 556       | 636       | 716       | 736       | 836       | 1036      | 1136      | 1236      | 1.41        |
| 1.42        | 24                   | 34            | 123                              | 164      | 184      | 204      | 244      | 284       | 324       | 364       | 404       | 444       | 484       | 524       | 604       | 684       | 764       | 784       | 884       | 1084      | 1184      | 1284      | 1.42        |
| 1.43        | 28                   | 40            | 103                              | 143      | 163      | 183      | 223      | 264       | 304       | 344       | 384       | 424       | 464       | 504       | 584       | 664       | 744       | 764       | 864       | 1064      | 1164      | 1264      | 1.43        |
| 1.43        | 56                   | 80            | -                                | -        | -        | -        | -        | -         | -         | 206       | 246       | 286       | 327       | 367       | 447       | 527       | 607       | 627       | 727       | 927       | 1028      | 1128      | 1.43        |
| 1.45        | 44                   | 64            | -                                | -        | -        | -        | -        | 182       | 223       | 263       | 303       | 343       | 383       | 423       | 503       | 583       | 664       | 684       | 784       | 984       | 1084      | 1184      | 1.45        |
| 1.46        | 26                   | 38            | 111                              | 151      | 171      | 191      | 231      | 272       | 312       | 352       | 392       | 432       | 472       | 512       | 592       | 672       | 752       | 772       | 872       | 1072      | 1172      | 1272      | 1.46        |
| 1.47        | 30                   | 44            | -                                | 131      | 151      | 171      | 211      | 251       | 291       | 332       | 372       | 412       | 452       | 492       | 572       | 652       | 732       | 752       | 852       | 1052      | 1152      | 1252      | 1.47        |
| 1.47        | 38                   | 56            | -                                | -        | -        | -        | 170      | 211       | 251       | 291       | 331       | 371       | 411       | 451       | 532       | 612       | 692       | 712       | 812       | 1012      | 1112      | 1212      | 1.47        |
| 1.50        | 24                   | 36            | 119                              | 159      | 179      | 199      | 240      | 280       | 320       | 360       | 400       | 440       | 480       | 520       | 600       | 680       | 760       | 780       | 880       | 1080      | 1180      | 1280      | 1.50        |
| 1.50        | 32                   | 48            | -                                | 118      | 139      | 159      | 199      | 239       | 279       | 319       | 359       | 399       | 440       | 480       | 560       | 640       | 720       | 740       | 840       | 1040      | 1140      | 1240      | 1.50        |
| 1.50        | 48                   | 72            | -                                | -        | -        | -        | -        | 198       | 238       | 278       | 318       | 359       | 399       | 439       | 519       | 599       | 679       | 699       | 799       | 999       | 1099      | 1199      | 1.50        |
| 1.54        | 26                   | 40            | 107                              | 147      | 167      | 187      | 227      | 267       | 307       | 348       | 388       | 428       | 468       | 508       | 588       | 668       | 748       | 768       | 868       | 1068      | 1168      | 1268      | 1.54        |
| 1.56        | 36                   | 56            | -                                | -        | -        | 134      | 174      | 214       | 255       | 295       | 335       | 375       | 415       | 455       | 535       | 615       | 696       | 716       | 816       | 1016      | 1116      | 1216      | 1.56        |
| 1.56        | 72                   | 112           | -                                | -        | -        | -        | -        | -         | -         | -         | -         | -         | -         | 267       | 348       | 429       | 509       | 530       | 630       | 830       | 931       | 1031      | 1.56        |
| 1.57        | 28                   | 44            | -                                | 134      | 155      | 175      | 215      | 255       | 295       | 335       | 375       | 416       | 456       | 496       | 576       | 656       | 736       | 756       | 856       | 1056      | 1156      | 1256      | 1.57        |
| 1.58        | 24                   | 38            | 115                              | 155      | 175      | 195      | 235      | 275       | 315       | 356       | 396       | 436       | 476       | 516       | 596       | 676       | 756       | 776       | 876       | 1076      | 1176      | 1276      | 1.58        |
| 1.60        | 30                   | 48            | -                                | 122      | 142      | 162      | 203      | 243       | 283       | 323       | 363       | 403       | 443       | 483       | 564       | 644       | 724       | 744       | 844       | 1044      | 1144      | 1244      | 1.60        |
| 1.60        | 40                   | 64            | -                                | -        | -        | -        | 149      | 190       | 230       | 270       | 310       | 351       | 391       | 431       | 511       | 591       | 671       | 691       | 791       | 992       | 1092      | 1192      | 1.60        |
| 1.61        | 56                   | 90            | -                                | -        | -        | -        | -        | -         | -         | -         | 224       | 264       | 305       | 345       | 426       | 506       | 586       | 606       | 707       | 907       | 1007      | 1107      | 1.61        |
| 1.64        | 44                   | 72            | -                                | -        | -        | -        | -        | 164       | 205       | 245       | 286       | 326       | 366       | 406       | 487       | 567       | 647       | 667       | 767       | 967       | 1067      | 1167      | 1.64        |
| 1.65        | 34                   | 56            | -                                | -        | -        | 137      | 178      | 218       | 258       | 299       | 339       | 379       | 419       | 459       | 539       | 619       | 699       | 719       | 820       | 1020      | 1120      | 1220      | 1.65        |
| 1.67        | 24                   | 40            | 110                              | 151      | 171      | 191      | 231      | 271       | 311       | 351       | 391       | 432       | 472       | 512       | 592       | 672       | 752       | 772       | 872       | 1072      | 1172      | 1272      | 1.67        |
| 1.67        | 48                   | 80            | -                                | -        | -        | -        | -        | 179       | 220       | 261       | 301       | 342       | 382       | 422       | 502       | 582       | 662       | 682       | 782       | 982       | 1082      | 1182      | 1.67        |
| 1.68        | 38                   | 64            | -                                | -        | -        | -        | 152      | 193       | 234       | 274       | 314       | 354       | 395       | 435       | 515       | 595       | 675       | 695       | 795       | 995       | 1095      | 1195      | 1.68        |
| 1.69        | 26                   | 44            | -                                | 138      | 158      | 179      | 219      | 259       | 299       | 339       | 379       | 419       | 459       | 499       | 580       | 660       | 740       | 760       | 860       | 1060      | 1160      | 1260      | 1.69        |
| 1.71        | 28                   | 48            | -                                | 125      | 146      | 166      | 206      | 247       | 287       | 327       | 367       | 407       | 447       | 487       | 567       | 647       | 728       | 748       | 848       | 1048      | 1148      | 1248      | 1.71        |
| 1.75        | 32                   | 56            | -                                | -        | -        | 141      | 181      | 222       | 262       | 302       | 343       | 383       | 423       | 463       | 543       | 623       | 703       | 723       | 823       | 1024      | 1124      | 1224      | 1.75        |
| 1.75        | 64                   | 112           | -                                | -        | -        | -        | -        | -         | -         | -         | -         | -         | 240       | 281       | 363       | 444       | 524       | 545       | 645       | 846       | 946       | 1046      | 1.75        |
| 1.78        | 36                   | 64            | -                                | -        | -        | -        | 156      | 197       | 237       | 278       | 318       | 358       | 398       | 439       | 519       | 599       | 679       | 699       | 799       | 999       | 1099      | 1199      | 1.78        |
| 1.80        | 40                   | 72            | -                                | -        | -        | -        | -        | 171       | 212       | 253       | 293       | 334       | 374       | 414       | 494       | 575       | 655       | 675       | 775       | 975       | 1075      | 1175      | 1.80        |
| 1.80        | 80                   | 144           | -                                | -        | -        | -        | -        | -         | -         | -         | -         | -         | -         | -         | -         | 342       | 424       | 445       | 546       | 748       | 848       | 948       | 1.80        |
| 1.82        | 44                   | 80            | -                                | -        | -        | -        | -        | -         | 186       | 227       | 268       | 309       | 349       | 389       | 470       | 550       | 630       | 650       | 751       | 951       | 1051      | 1151      | 1.82        |
| 1.83        | 24                   | 44            | -                                | 142      | 162      | 182      | 223      | 263       | 303       | 343       | 383       | 423       | 463       | 503       | 583       | 664       | 744       | 764       | 864       | 1064      | 1164      | 1264      | 1.83        |
| 1.85        | 26                   | 48            | -                                | 129      | 149      | 170      | 210      | 250       | 291       | 331       | 371       | 411       | 451       | 491       | 571       | 651       | 731       | 751       | 852       | 1052      | 1152      | 1252      | 1.85        |
| 1.87        | 30                   | 56            | -                                | -        | -        | 144      | 185      | 226       | 266       | 306       | 346       | 387       | 427       | 467       | 547       | 627       | 707       | 727       | 827       | 1027      | 1128      | 1228      | 1.87        |
| 1.88        | 48                   | 90            | -                                | -        | -        | -        | -        | -         | -         | 197       | 238       | 279       | 320       | 360       | 441       | 521       | 602       | 622       | 722       | 922       | 1023      | 1123      | 1.88        |
| 1.88        | 34                   | 64            | -                                | -        | -        | -        | 159      | 200       | 241       | 281       | 322       | 362       | 402       | 442       | 523       | 603       | 683       | 703       | 803       | 1003      | 1103      | 1203      | 1.88        |
| 1.89        | 38                   | 72            | -                                | -        | -        | -        | -        | 175       | 216       | 256       | 297       | 337       | 378       | 418       | 498       | 578       | 659       | 679       | 779       | 979       | 1079      | 1179      | 1.89        |
| 2.00        | 24                   | 48            | -                                | 132      | 153      | 173      | 214      | 254       | 294       | 335       | 375       | 415       | 455       | 495       | 575       | 655       | 735       | 755       | 855       | 1056      | 1156      | 1256      | 2.00        |
| 2.00        | 28                   | 56            | -                                | -        | 127      | 148      | 189      | 229       | 270       | 310       | 350       | 390       | 431       | 471       | 551       | 631       | 711       | 731       | 831       | 1031      | 1131      | 1231      | 2.00        |
| 2.00        | 32                   | 64            | -                                | -        | -        | -        | 163      | 204       | 245       | 285       | 325       | 366       | 406       | 446       | 526       | 607       | 687       | 707       | 807       | 1007      | 1107      | 1207      | 2.00        |
| 2.00        | 36                   | 72            | -                                | -        | -        | -        | -        | 178       | 219       | 260       | 301       | 341       | 381       | 422       | 502       | 582       | 662       | 682       | 783       | 983       | 1083      | 1183      | 2.00        |
| 2.00        | 40                   | 80            | -                                | -        | -        | -        | -        | -         | 193       | 234       | 275       | 316       | 356       | 397       | 477       | 558       | 638       | 658       | 758       | 959       | 1059      | 1159      | 2.00        |
| 2.00        | 56                   | 112           | -                                | -        | -        | -        | -        | -         | -         | -         | -         | -         | 254       | 295       | 377       | 458       | 539       | 559       | 660       | 861       | 961       | 1062      | 2.00        |
| 2.00        | 72                   | 144           | -                                | -        | -        | -        | -        | -         | -         | -         | -         | -         | -         | -         | -         | 356       | 438       | 459       | 561       | 762       | 863       | 964       | 2.00        |
| 2.05        | 44                   | 90            | -                                | -        | -        | -        | -        | -         | -         | 204       | 245       | 286       | 327       | 367       | 448       | 529       | 609       | 629       | 730       | 930       | 1030      | 1130      | 2.05        |
| 2.10        | 80                   | 168           | -                                | -        | -        | -        | -        | -         | -         | -         | -         | -         | -         | -         | -         | -         | 367       | 388       | 491       | 695       | 796       | 897       | 2.10        |
| 2.11        | 38                   | 80            | -                                | -        | -        | -        | -        | -         | 197       | 238       | 279       | 320       | 360       | 400       | 481       | 561       | 642       | 662       | 762       | 963       | 1063      | 1163      | 2.11        |
| 2.12        | 34                   | 72            | -                                | -        | -        | -        | -        | 182       | 223       | 264       | 304       | 345       | 385       | 425       | 506       | 586       | 666       | 686       | 787       | 987       | 1087      | 1187      | 2.12        |
| 2.13        | 30                   | 64            | -                                | -        | -        | -        | 166      | 207       | 248       | 289       | 329       | 369       | 410       | 450       | 530       | 610       | 691       | 711       | 811       | 1011      | 1111      | 1211      | 2.13        |
| 2.15        | 26                   | 56            | -                                | -        | 130      | 151      | 192      | 233       | 273       | 314       | 354       | 394       | 434       | 474       | 555       | 635       | 715       | 735       | 835       | 1035      | 1135      | 1235      | 2.15        |
| 2.22        | 36                   | 80            | -                                | -        | -        | -        | -        | -         | 200       | 242       | 282       | 323       | 364       | 404       | 485       | 565       | 646       | 666       | 766       | 966       | 1067      | 1167      | 2.22        |
| 2.25        |                      |               |                                  |          |          |          |          |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |             |

# Fenner Torque Drive PLUS<sup>®</sup> 8MR & HTD 8M Drives

## CENTRE DISTANCE IN MILLIMETRES

| Speed Ratio | Number of grooves on |               | Belt pitch length in millimetres |          |          |          |          |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |      |  |  | Speed Ratio |
|-------------|----------------------|---------------|----------------------------------|----------|----------|----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------|--|--|-------------|
|             | Driving Pulley       | Driven Pulley | 480                              | 560      | 600      | 640      | 720      | 800       | 880       | 960       | 1040      | 1120      | 1200      | 1280      | 1440      | 1600      | 1760      | 1800      | 2000      | 2400      | 2600      | 2800      |      |  |  |             |
|             |                      |               | 60 teeth                         | 70 teeth | 75 teeth | 80 teeth | 90 teeth | 100 teeth | 110 teeth | 120 teeth | 130 teeth | 140 teeth | 150 teeth | 160 teeth | 180 teeth | 200 teeth | 220 teeth | 225 teeth | 250 teeth | 300 teeth | 325 teeth | 350 teeth |      |  |  |             |
| 1,00        | 24                   | 24            | 144                              | 184      | 204      | 224      | 264      | 304       | 344       | 384       | 424       | 464       | 504       | 544       | 624       | 704       | 784       | 804       | 904       | 1104      | 1204      | 1304      | 1,00 |  |  |             |
| 1,00        | 26                   | 26            | 136                              | 176      | 196      | 216      | 256      | 296       | 336       | 376       | 416       | 456       | 496       | 536       | 616       | 696       | 776       | 796       | 896       | 1096      | 1196      | 1296      | 1,00 |  |  |             |
| 1,00        | 28                   | 28            | 128                              | 168      | 188      | 208      | 248      | 288       | 328       | 368       | 408       | 448       | 488       | 528       | 608       | 688       | 768       | 788       | 888       | 1088      | 1188      | 1288      | 1,00 |  |  |             |
| 1,00        | 30                   | 30            | 120                              | 160      | 180      | 200      | 240      | 280       | 320       | 360       | 400       | 440       | 480       | 520       | 600       | 680       | 760       | 780       | 880       | 1080      | 1180      | 1280      | 1,00 |  |  |             |
| 1,00        | 32                   | 32            | 112                              | 152      | 172      | 192      | 232      | 272       | 312       | 352       | 392       | 432       | 472       | 512       | 592       | 672       | 752       | 772       | 872       | 1072      | 1172      | 1272      | 1,00 |  |  |             |
| 1,00        | 34                   | 34            | 104                              | 144      | 164      | 184      | 224      | 264       | 304       | 344       | 384       | 424       | 464       | 504       | 584       | 664       | 744       | 764       | 864       | 1064      | 1164      | 1264      | 1,00 |  |  |             |
| 1,00        | 36                   | 36            | -                                | 136      | 156      | 176      | 216      | 256       | 296       | 336       | 376       | 416       | 456       | 496       | 576       | 656       | 736       | 756       | 856       | 1056      | 1156      | 1256      | 1,00 |  |  |             |
| 1,00        | 38                   | 38            | -                                | 128      | 148      | 168      | 208      | 248       | 288       | 328       | 368       | 408       | 448       | 488       | 568       | 648       | 728       | 748       | 848       | 1048      | 1148      | 1248      | 1,00 |  |  |             |
| 1,00        | 40                   | 40            | -                                | 120      | 140      | 160      | 200      | 240       | 280       | 320       | 360       | 400       | 440       | 480       | 560       | 640       | 720       | 740       | 840       | 1040      | 1140      | 1240      | 1,00 |  |  |             |
| 1,00        | 44                   | 44            | -                                | -        | -        | 144      | 184      | 224       | 264       | 304       | 344       | 384       | 424       | 464       | 544       | 624       | 704       | 724       | 824       | 1024      | 1124      | 1224      | 1,00 |  |  |             |
| 1,00        | 48                   | 48            | -                                | -        | -        | -        | 168      | 208       | 248       | 288       | 328       | 368       | 408       | 448       | 528       | 608       | 688       | 708       | 808       | 1008      | 1108      | 1208      | 1,00 |  |  |             |
| 1,00        | 56                   | 56            | -                                | -        | -        | -        | -        | 176       | 216       | 256       | 296       | 336       | 376       | 416       | 496       | 576       | 656       | 676       | 776       | 976       | 1076      | 1176      | 1,00 |  |  |             |
| 1,00        | 64                   | 64            | -                                | -        | -        | -        | -        | -         | 184       | 224       | 264       | 304       | 344       | 384       | 464       | 544       | 624       | 644       | 744       | 944       | 1044      | 1144      | 1,00 |  |  |             |
| 1,00        | 72                   | 72            | -                                | -        | -        | -        | -        | -         | -         | -         | 232       | 272       | 312       | 352       | 432       | 512       | 592       | 612       | 712       | 912       | 1012      | 1112      | 1,00 |  |  |             |
| 1,00        | 80                   | 80            | -                                | -        | -        | -        | -        | -         | -         | -         | -         | 240       | 280       | 320       | 400       | 480       | 560       | 580       | 680       | 880       | 980       | 1080      | 1,00 |  |  |             |
| 1,05        | 38                   | 40            | -                                | 124      | 144      | 164      | 204      | 244       | 284       | 324       | 364       | 404       | 444       | 484       | 564       | 644       | 724       | 744       | 844       | 1044      | 1144      | 1244      | 1,05 |  |  |             |
| 1,06        | 36                   | 38            | -                                | 132      | 152      | 172      | 212      | 252       | 292       | 332       | 372       | 412       | 452       | 492       | 572       | 652       | 732       | 752       | 852       | 1052      | 1152      | 1252      | 1,06 |  |  |             |
| 1,06        | 34                   | 36            | -                                | 140      | 160      | 180      | 220      | 260       | 300       | 340       | 380       | 420       | 460       | 500       | 580       | 660       | 740       | 760       | 860       | 1060      | 1160      | 1260      | 1,06 |  |  |             |
| 1,06        | 32                   | 34            | 108                              | 148      | 168      | 188      | 228      | 268       | 308       | 348       | 388       | 428       | 468       | 508       | 588       | 668       | 748       | 768       | 868       | 1068      | 1168      | 1268      | 1,06 |  |  |             |
| 1,07        | 30                   | 32            | 116                              | 156      | 176      | 196      | 236      | 276       | 316       | 356       | 396       | 436       | 476       | 516       | 596       | 676       | 756       | 776       | 876       | 1076      | 1176      | 1276      | 1,07 |  |  |             |
| 1,07        | 28                   | 30            | 124                              | 164      | 184      | 204      | 244      | 284       | 324       | 364       | 404       | 444       | 484       | 524       | 604       | 684       | 764       | 784       | 884       | 1084      | 1184      | 1284      | 1,07 |  |  |             |
| 1,08        | 26                   | 28            | 132                              | 172      | 192      | 212      | 252      | 292       | 332       | 372       | 412       | 452       | 492       | 532       | 612       | 692       | 772       | 792       | 892       | 1092      | 1192      | 1292      | 1,08 |  |  |             |
| 1,08        | 24                   | 26            | 140                              | 180      | 200      | 220      | 260      | 300       | 340       | 380       | 420       | 460       | 500       | 540       | 620       | 700       | 780       | 800       | 900       | 1100      | 1200      | 1300      | 1,08 |  |  |             |
| 1,09        | 44                   | 48            | -                                | -        | -        | 136      | 176      | 216       | 256       | 296       | 336       | 376       | 416       | 456       | 536       | 616       | 696       | 716       | 816       | 1016      | 1116      | 1216      | 1,09 |  |  |             |
| 1,10        | 40                   | 44            | -                                | -        | 132      | 152      | 192      | 232       | 272       | 312       | 352       | 392       | 432       | 472       | 552       | 632       | 712       | 732       | 832       | 1032      | 1132      | 1232      | 1,10 |  |  |             |
| 1,11        | 36                   | 40            | -                                | 128      | 148      | 168      | 208      | 248       | 288       | 328       | 368       | 408       | 448       | 488       | 568       | 648       | 728       | 748       | 848       | 1048      | 1148      | 1248      | 1,11 |  |  |             |
| 1,11        | 72                   | 80            | -                                | -        | -        | -        | -        | -         | -         | -         | 216       | 256       | 296       | 336       | 416       | 496       | 576       | 596       | 696       | 896       | 996       | 1096      | 1,11 |  |  |             |
| 1,12        | 34                   | 38            | -                                | 136      | 156      | 176      | 216      | 256       | 296       | 336       | 376       | 416       | 456       | 496       | 576       | 656       | 736       | 756       | 856       | 1056      | 1156      | 1256      | 1,12 |  |  |             |
| 1,13        | 32                   | 36            | 104                              | 144      | 164      | 184      | 224      | 264       | 304       | 344       | 384       | 424       | 464       | 504       | 584       | 664       | 744       | 764       | 864       | 1064      | 1164      | 1264      | 1,13 |  |  |             |
| 1,13        | 64                   | 72            | -                                | -        | -        | -        | -        | -         | -         | 208       | 248       | 288       | 328       | 368       | 448       | 528       | 608       | 628       | 728       | 928       | 1028      | 1128      | 1,13 |  |  |             |
| 1,13        | 80                   | 90            | -                                | -        | -        | -        | -        | -         | -         | -         | -         | -         | 260       | 300       | 380       | 460       | 540       | 560       | 660       | 860       | 960       | 1060      | 1,13 |  |  |             |
| 1,13        | 30                   | 34            | 112                              | 152      | 172      | 192      | 232      | 272       | 312       | 352       | 392       | 432       | 472       | 512       | 592       | 672       | 752       | 772       | 872       | 1072      | 1172      | 1272      | 1,13 |  |  |             |
| 1,14        | 28                   | 32            | 120                              | 160      | 180      | 200      | 240      | 280       | 320       | 360       | 400       | 440       | 480       | 520       | 600       | 680       | 760       | 780       | 880       | 1080      | 1180      | 1280      | 1,14 |  |  |             |
| 1,14        | 56                   | 64            | -                                | -        | -        | -        | -        | -         | 200       | 240       | 280       | 320       | 360       | 400       | 480       | 560       | 640       | 660       | 760       | 960       | 1060      | 1160      | 1,14 |  |  |             |
| 1,15        | 26                   | 30            | 128                              | 168      | 188      | 208      | 248      | 288       | 328       | 368       | 408       | 448       | 488       | 528       | 608       | 688       | 768       | 788       | 888       | 1088      | 1188      | 1288      | 1,15 |  |  |             |
| 1,16        | 38                   | 44            | -                                | -        | 136      | 156      | 196      | 236       | 276       | 316       | 356       | 396       | 436       | 476       | 556       | 636       | 716       | 736       | 836       | 1036      | 1136      | 1236      | 1,16 |  |  |             |
| 1,17        | 24                   | 28            | 136                              | 176      | 196      | 216      | 256      | 296       | 336       | 376       | 416       | 456       | 496       | 536       | 616       | 696       | 776       | 796       | 896       | 1096      | 1196      | 1296      | 1,17 |  |  |             |
| 1,17        | 48                   | 56            | -                                | -        | -        | -        | 152      | 192       | 232       | 272       | 312       | 352       | 392       | 432       | 512       | 592       | 672       | 692       | 792       | 992       | 1092      | 1192      | 1,17 |  |  |             |
| 1,18        | 34                   | 40            | -                                | 132      | 152      | 172      | 212      | 252       | 292       | 332       | 372       | 412       | 452       | 492       | 572       | 652       | 732       | 752       | 852       | 1052      | 1152      | 1252      | 1,18 |  |  |             |
| 1,19        | 32                   | 38            | -                                | 140      | 160      | 180      | 220      | 260       | 300       | 340       | 380       | 420       | 460       | 500       | 580       | 660       | 740       | 760       | 860       | 1060      | 1160      | 1260      | 1,19 |  |  |             |
| 1,20        | 30                   | 36            | 108                              | 148      | 168      | 188      | 228      | 268       | 308       | 348       | 388       | 428       | 468       | 508       | 588       | 668       | 748       | 768       | 868       | 1068      | 1168      | 1268      | 1,20 |  |  |             |
| 1,20        | 40                   | 48            | -                                | -        | -        | 144      | 184      | 224       | 264       | 304       | 344       | 384       | 424       | 464       | 544       | 624       | 704       | 724       | 824       | 1024      | 1124      | 1224      | 1,20 |  |  |             |
| 1,21        | 28                   | 34            | 116                              | 156      | 176      | 196      | 236      | 276       | 316       | 356       | 396       | 436       | 476       | 516       | 596       | 676       | 756       | 776       | 876       | 1076      | 1176      | 1276      | 1,21 |  |  |             |
| 1,22        | 36                   | 44            | -                                | 120      | 140      | 160      | 200      | 240       | 280       | 320       | 360       | 400       | 440       | 480       | 560       | 640       | 720       | 740       | 840       | 1040      | 1140      | 1240      | 1,22 |  |  |             |
| 1,23        | 26                   | 32            | 124                              | 164      | 184      | 204      | 244      | 284       | 324       | 364       | 404       | 444       | 484       | 524       | 604       | 684       | 764       | 784       | 884       | 1084      | 1184      | 1284      | 1,23 |  |  |             |
| 1,25        | 24                   | 30            | 132                              | 172      | 192      | 212      | 252      | 292       | 332       | 372       | 412       | 452       | 492       | 532       | 612       | 692       | 772       | 792       | 892       | 1092      | 1192      | 1292      | 1,25 |  |  |             |
| 1,25        | 32                   | 40            | -                                | 136      | 156      | 176      | 216      | 256       | 296       | 336       | 376       | 416       | 456       | 496       | 576       | 656       | 736       | 756       | 856       | 1056      | 1156      | 1256      | 1,25 |  |  |             |
| 1,25        | 64                   | 80            | -                                | -        | -        | -        | -        | -         | -         | -         | 231       | 271       | 311       | 351       | 432       | 512       | 592       | 612       | 712       | 912       | 1012      | 1112      | 1,25 |  |  |             |
| 1,25        | 72                   | 90            | -                                | -        | -        | -        | -        | -         | -         | -         | -         | 235       | 275       | 315       | 395       | 475       | 556       | 576       | 676       | 876       | 976       | 1076      | 1,25 |  |  |             |
| 1,26        | 38                   | 48            | -                                | -        | 127      | 147      | 188      | 228       | 268       | 308       | 348       | 388       | 428       | 468       | 548       | 628       | 708       | 728       | 828       | 1028      | 1128      | 1228      | 1,26 |  |  |             |
| 1,27        | 30                   | 38            | 103                              | 144      | 164      | 184      | 224      | 264       | 304       | 344       | 384       | 424       | 464       | 504       | 584       | 664       | 744       | 764       | 864       | 1064      | 1164      | 1264      | 1,27 |  |  |             |
| 1,27        | 44                   | 56            | -                                | -        | -        | -        | 159      | 199       | 240       | 280       | 320       | 360       | 400       | 440       | 520       | 600       | 680       | 700       | 800       | 1000      | 1100      | 1200      | 1,27 |  |  |             |
| 1,29        | 28                   | 36            | 112                              | 152      | 172      | 192      | 232      | 272       | 312       |           |           |           |           |           |           |           |           |           |           |           |           |           |      |  |  |             |