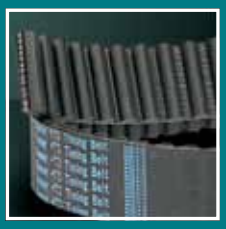
Section 4:

Synchronous Belt Drives

Offering high power transmission combined with accurate positioning in a compact drive envelope, Fenner synchronous drives continue to push out performance boundaries utilising the latest materials and production technology.

- Comprehensive range of belt styles including Classical Timing Belts, HTD belts and Torque Drive PLUS 3 (TDP3)
- Torque Drive PLUS 3 (TDP3) anti-static as standard to ISO 9563 (1990)
- Absolute drive synchronism - no slippage
- Stock sizes to suit all applications
- ISO compliance

Synchronous Belt Drives: Design Data Required	
Type of prime mover, or driving machine	
Electric motor starting arrangement	
Rotational speed of prime mover	
Power rating of prime mover	
Type of driven machine	
Rotational speed of driven machine	
Power absorbed by driven machine	
Hours/day duty & start/stop frequency	
Both driven & driver machine shaft diameters	
Centre distance & space restraints:	> fixed centres?
Any environmental issues:	> ambient temperature > noise limits > water, oil mist, solvents etc.

Visit www.fptgroup.com for the Drive Design Assistant

Drive Package Comparison

Torque drive PLUS 3 belts allow the design of lighter, more compact, more cost effective drive packages.

Drive condition:
Driver is a 45kW motor, 1460rev/min at 16hrs per day.
Driven machine is rotary gear pump 730rev/min ±5%.

Torque Drive PLUS 3

Premium synchronous belt

The Compact, Quiet, Powerful Solution

- > Delivers the highest power rating from a rubber/glass fibre construction
- > Compact drive pacakages
- > Offers minimum backlash for precise positioning
- > Operates with minimum noise levels
- > Runs optimally on standard HTD pulleys

Fenner®

THE MARK OF ENGINEERING EXCELLENCE

www.fptgroup.com

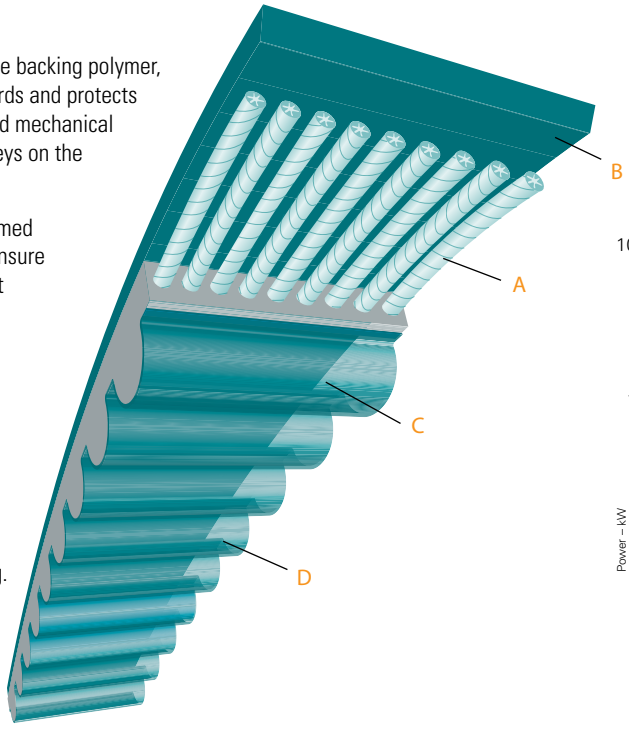
Torque Drive PLUS 3 Belts

A Helically wound glass-fibre tensile member gives high tensile modulus and excellent fatigue life.

B Flexible, durable chloroprene backing polymer, encapsulates the tensile cords and protects them from contaminants and mechanical damage e.g. from idler pulleys on the back of the belt.

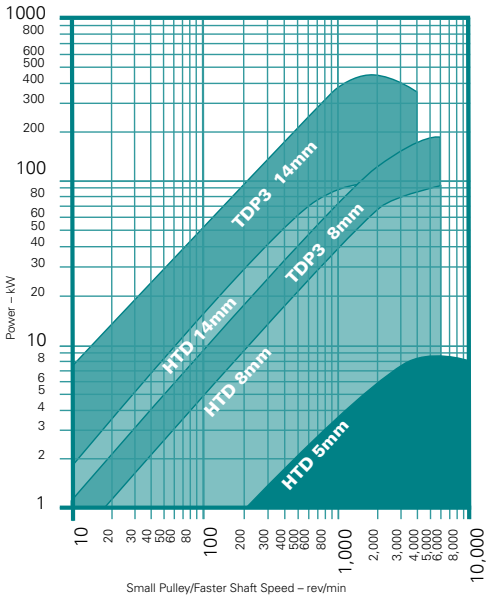
C Belt teeth are precisely formed and accurately spaced to ensure quiet, efficient engagement with pulley grooves. They are made of medium hardness chloroprene and are bonded integrally with the belt backing.

D Low friction woven nylon facing protects tooth surfaces from wear and aids quiet, efficient running.



Torque Drive PLUS® 3

COMPARISON OF HTD, TORQUE DRIVE PLUS3 DRIVE POWER RATINGS



Torque Drive PLUS 3 Belts

The three principal dimensions of a belt are:

pitch **pitch length** **width**

and are used in this order as a designation e.g. 8MXP-1120-30.

Belt pitch is the distance in millimetres between two adjacent tooth centres as measured on the pitch line of the belt.

Belt pitch length is the total length of the belt (circumference) in millimetres as measured along the pitch line. The theoretical pitch line of a belt lies within the tensile member.

TEMPERATURE

Torque Drive Plus 3 belt performance is generally unaffected in ambient temperatures between –25°C and +100°C. Temperatures beyond these extremes should be referred to your local Authorised Distributor.

ANTI-STATIC AS STANDARD

Fenner Torque Drive PLUS 3 belts are static conductive to the definitive ISO 9563 (1990) as standard.

8mm PITCH (8MXP) Belts

Pitch Length mm	20mm WIDE Cat. Code	30mm WIDE Cat. Code	50mm WIDE Cat. Code	85mm WIDE Cat. Code
480	286J0048	286K0048	286L0048	286M0048
560	286J0056	286K0056	286L0056	286M0056
600	286J0060	286K0060	286L0060	286M0060
640	286J0064	286K0064	286L0064	286M0064
720	286J0072	286K0072	286L0072	286M0072
800	286J0080	286K0080	286L0080	286M0080
880	286J0088	286K0088	286L0088	286M0088
960	286J0096	286K0096	286L0096	286M0096
1040	286J0104	286K0104	286L0104	286M0104
1120	286J0112	286K0112	286L0112	286M0112
1200	286J0120	286K0120	286L0120	286M0120
1280	286J0128	286K0128	286L0128	286M0128
1440	286J0144	286K0144	286L0144	286M0144
1600	286J0160	286K0160	286L0160	286M0160
1760	286J0176	286K0176	286L0176	286M0176
1800	286J0180	286K0180	286L0180	286M0180
2000	286J0200	286K0200	286L0200	286M0200
2400	286J0240	286K0240	286L0240	286M0240
2600	286J0260	286K0260	286L0260	286M0260
2800	286J0280	286K0280	286L0280	286M0280

14mm PITCH (8MXP) Belts

Pitch Length mm	40mm WIDE Cat. Code	55mm WIDE Cat. Code	85mm WIDE Cat. Code	115mm WIDE Cat. Code	170mm WIDE Cat. Code
966	286N0096	286P0096	286R0096	286S0096	286T0096
1190	286N0119	286P0119	286R0119	286S0119	286T0119
1400	286N0140	286P0140	286R0140	286S0140	286T0140
1610	286N0161	286P0161	286R0161	286S0161	286T0161
1778	286N0177	286P0177	286R0177	286S0177	286T0177
1890	286N0189	286P0189	286R0189	286S0189	286T0189
2100	286N0210	286P0210	286R0210	286S0210	286T0210
2310	286N0231	286P0231	286R0231	286S0231	286T0231
2450	286N0245	286P0245	286R0245	286S0245	286T0245
2590	286N0259	286P0259	286R0259	286S0259	286T0259
2800	286N0280	286P0280	286R0280	286S0280	286T0280
3150	286N0315	286P0315	286R0315	286S0315	286T0315
3500	286N0350	286P0350	286R0350	286S0350	286T0350
3850	286N0385	286P0385	286R0385	286S0385	286T0385
4326	286N0432	286P0432	286R0432	286S0432	286T0432
4578	286N0457	286P0457	286R0457	286S0457	286T0457

Fenner Torque Drive PLUS 3 Drive Design

TDP3 DRIVE SELECTION PROCEDURE

1) Determine Drive Requirements

a) The nature of the driving machine (usually the prime mover) and the driven machine and the duty cycle in hrs./day.

b) The rotational speeds of the driving and driven machines.

c) The power capability and starting arrangements of the prime mover and the power absorbed by the driven machines.

d) The required drive centre distance and the machine shaft diameters.

2) Calculate Design Power

Select a service factor from the table – page 92. Include an additional factor if the drive is speed increasing.

Multiply normal running (absorbed) power by the service factor to give design power – kW.

3) Belt Pitch

Use the belt pitch selection guide - page 91 to select 8mm or 14mm pitch according to the point of intersection of the small pulley (faster shaft) rotational speed and the design power.

If the intersection lies close to the 8/14mm pitch boundary, either pitch may be appropriate, attempt the design procedure on 8mm pitch first but be aware that later criteria may make 14mm necessary.

4) Speed Ratio

Divide the rotational speed of the faster shaft (rev/min) by that of the slower shaft to determine speed ratio.

5) Pulley Selection

Refer to the drive tables (pages 96-103) for the appropriate belt pitch. From the first column select the required speed ratio and consult the next two columns for appropriate pulley groove numbers.

Where alternative groove number pairs are available be aware that criteria in steps 6 & 7 may influence the ultimate selection.

Consider any drive dimensional limitations by reference to pulley dimension tables on pages 104-106, noting that pulleys with up to 72 grooves may have flanges that determine the o/dia.

6) Belt Length & Centre Distance

Read along the line in the drive table for the selected pulley groove number pair and select the centre distance closest to that required. The standard belt length giving that centre distance is at the head of the column.

If centre distance is critical, be aware that alternative groove number pairs may offer a closer value with standard belt lengths.

7) Power Rating & Belt Width

Refer to the power rating table on page 91 for the chosen belt pitch, locate the small pulley groove number/rotational speed combination, and note the power rating (for the narrowest standard belt width).

Multiply this rating by the belt length factor for the chosen belt length, from the listing beneath the main table.

Divide the design power by the length corrected power rating, to give required belt width factor. Refer to the width factors below the rating table and select the belt width with a factor equal to or greater than required.

8) Shaft Sizes

Check the bore capacity of the chosen pulleys against the pulley dimension tables on pages 104-106.

If the pulleys will not accomodate the drive shafts it will be necessary to consider other pulley combinations, possibly using an alternative belt pitch.

NOTE

An optimum drive will use a belt of width factor just greater than that required. If alternative groove number pairs can give close to the required speed ratio, slightly larger pulley groove numbers may allow a narrower belt, or slightly smaller groove numbers may be possible with the same belt width. Larger diameter pulleys typically reduce bearing and shaft loads. Avoid drives where the belt width exceeds the small pulley diameter.

EXAMPLE

1) Drive Requirements

a) AC cage rotor electric motor driving to a rotary gear pump. 24 hr/day.

b) 1450 rev/min motor, pump to run at 740rev/min +/–5%.

c) 60 kW motor, soft start – no pump absorbed power given.

d) Centres 800/850mm, motor shaft 60mm, pump shaft 75mm.

2) Design Power

Service factor for medium duty, soft start, 24 hr/day = 1.7.

Design power = 1.7 x 60 = 102 kW.

3) Belt Pitch

Pitch selection chart shows intersection of 1450 rev/min and 102 kW to be within the capability of 14mm pitch.

4) Speed Ratio

1450/740 = 1.97:1

A 2:1 ratio satisfies the +/–5% criterion.

5) Pulley Selection

From page 102, 32 to 64 grooves is one combination giving 2:1 ratio.

6) Belt Length & Centre Distance

A belt length of 2310mm gives centres of 816mm.

7) Power Rating & Belt Width

The power rating table shows a value of 46.74 kW for a 32 groove pulley at 1450 rev/min for a 40mm wide belt.

Belt length factor for a 2310mm belt = 1.0 - no change to power ratings.

102/46.74 = 2.18. Next larger standard width factor = 2.31 for 85mm wide belt.

8) Shaft Sizes

The 32-14M-85 pulley uses a 2517 Taper Lock bush, max. bore 60mm – OK.

The 64-14M-85 pulley uses a 3525 Taper Lock bush, max. bore 100mm – OK.

DRIVE SPECIFICATION

Motor pulley:	32-14M-85 HTD pulley.
Taper Lock bush:	2517/60mm.
Driven pulley:	64-14M-85 HTD pulley.
Taper Lock bush:	3525/75mm.
Belt:	14MXP - 2310-85 Torque Drive PLUS 3 belt.

DRIVE ORDERING INSTRUCTIONS

A complete drive usually consists of five components:

Two pulleys, two Taper Lock bushes and one belt.

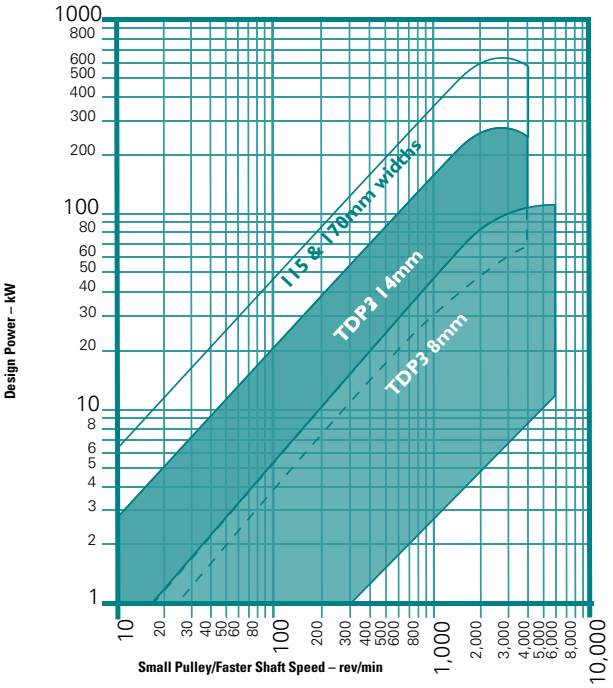
1. Pulleys. Standard HTD pulleys. Codes are shown on the dimension tables, pages 104-106.
2. Taper Lock bushes. Bush sizes are shown on the pulley dimension tables. Bush codes are on Shaft Fixings pages 129-130.
3. Belts. Belt codes are shown on page 105-106.

The drive selection above would be ordered as:

Driving pulley	32-14M-85	Code 043R0032
Taper Lock bush	2517/60mm	Code 029M0060
Driven pulley	64-14M-85	Code 043R0064
Taper Lock bush	3525/75mm	Code 029J0075
Belt	14MXP-2310-85	Code 286R0231

Torque Drive PLUS 3 Drive Design

Torque Drive PLUS® 3



BELT LENGTH CORRECTION FACTORS (Multipler)

Belt length mm	384 - 600	640 - 880	960 - 1200	1280 - 1760	1800 - 4400
Length factor	0.8	0.9	1.0	1.1	1.2

BELT WIDTH FACTORS

Belt width mm	20	30	50	85
Width factor	1.00	1.58	2.73	4.76

POWER RATINGS (KW) FOR 20MM WIDE 8MXP BELT

Rev/min of small pulley	Number of grooves														
	22	24	26	28	30	32	34	36	38	40	44	48	56	64	72
100	0.43	0.50	0.57	0.65	0.73	0.81	0.89	0.97	1.06	1.14	1.30	1.45	1.71	1.88	1.94
200	0.83	0.97	1.11	1.26	1.41	1.57	1.72	1.88	2.04	2.19	2.50	2.79	3.27	3.59	3.71
300	1.23	1.43	1.64	1.85	2.07	2.30	2.53	2.76	2.99	3.21	3.66	4.07	4.76	5.22	5.37
400	1.61	1.88	2.15	2.43	2.72	3.01	3.31	3.61	3.91	4.20	4.78	5.31	6.21	6.78	6.97
500	1.99	2.32	2.65	3.00	3.35	3.71	4.08	4.44	4.81	5.17	5.87	6.52	7.60	8.29	8.51
600	2.37	2.75	3.14	3.55	3.97	4.40	4.83	5.26	5.69	6.11	6.93	7.69	8.96	9.76	9.99
720	**2.82**	**3.27**	**3.73**	**4.22**	**4.71**	**5.21**	**5.73**	**6.23**	**6.74**	**7.24**	**8.20**	**9.09**	**10.57**	**11.49**	**11.74**
800	3.10	3.60	4.11	4.64	5.19	5.74	6.29	6.85	7.40	7.95	8.99	9.96	11.56	12.54	12.79
960	**3.65**	**4.23**	**4.83**	**5.45**	**6.08**	**6.72**	**7.37**	**8.01**	**8.65**	**9.28**	**10.50**	**11.62**	**13.44**	**14.54**	**14.80**
1000	3.82	4.42	5.05	5.70	6.36	7.03	7.71	8.38	9.05	9.71	10.97	12.13	14.02	15.16	15.41
1200	4.52	5.23	5.97	6.73	7.50	8.29	9.08	9.86	10.64	11.40	12.86	14.20	16.36	17.63	17.85
1450	**5.38**	**6.21**	**7.08**	**7.98**	**8.89**	**9.81**	**10.73**	**11.64**	**12.55**	**13.43**	**15.12**	**16.66**	**19.11**	**20.51**	**20.67**
1600	5.57	6.43	7.33	8.25	9.18	10.12	11.07	12.00	12.93	13.83	15.55	17.12	19.58	20.95	21.07
1800	6.54	7.55	8.59	9.66	10.75	11.84	12.94	14.02	15.09	16.13	18.10	19.89	22.67	24.17	24.21
2000	7.18	8.29	9.43	10.59	11.77	12.96	14.15	15.32	16.47	17.59	19.71	21.62	24.56	26.08	26.02
2500	8.74	10.07	11.43	12.82	14.22	15.62	17.01	18.39	19.73	21.02	23.46	25.60	28.82	30.30	29.91
2850	**9.79**	**11.26**	**12.76**	**14.29**	**15.83**	**17.37**	**18.89**	**20.38**	**21.83**	**23.24**	**25.84**	**28.11**	**31.42**	**32.79**	**32.10**
3000	10.23	11.76	13.32	14.91	16.50	18.09	19.66	21.20	22.70	24.14	26.80	29.12	32.44	33.74	32.91
3500	11.65	13.36	15.10	16.87	18.63	20.38	22.10	23.78	25.40	26.94	29.77	32.18	35.46	36.43	35.06
4000	13.00	14.88	16.78	18.70	20.61	22.49	24.34	26.12	27.83	29.45	32.37	34.79	37.88	38.39	36.37
4500	14.28	16.31	18.36	20.41	22.44	24.44	26.37	28.23	30.00	31.66	34.61	36.98	39.71	39.63	36.86
5000	15.50	17.66	19.83	22.00	24.13	26.21	28.21	30.12	31.92	33.59	36.49	38.73	40.98	40.16	36.55
5500	16.65	18.93	21.21	23.47	25.68	27.81	29.86	31.79	33.58	35.23	38.02	40.06	41.68	40.00	35.44
6000	17.74	20.12	22.49	24.82	27.08	29.26	31.31	33.24	35.00	36.60	39.21	40.98	41.82	39.16	33.56

POWER RATINGS (KW) FOR 40MM WIDE 14MXP BELT

Rev/min of small pulley	Number of grooves											
	28	29	30	32	34	36	38	40	44	48	56	64
10	0.44	0.47	0.50	0.55	0.60	0.65	0.69	0.74	0.88	0.92	1.10	1.29
20	0.85	0.90	0.96	1.06	1.15	1.24	1.33	1.42	1.69	1.78	2.13	2.48
50	1.99	2.12	2.24	2.48	2.71	2.92	3.14	3.35	3.98	4.20	5.03	5.87
100	3.77	4.03	4.27	4.73	5.16	5.58	5.99	6.40	7.60	8.00	9.59	11.18
200	7.09	7.58	8.04	8.91	9.72	10.52	11.29	12.06	14.30	15.06	18.02	20.95
300	10.19	10.91	11.57	12.82	14.00	15.13	16.25	17.34	20.55	21.61	25.78	29.88
400	13.13	14.06	14.92	16.52	18.04	19.50	20.92	22.31	26.40	27.73	32.98	38.10
500	15.93	17.06	18.11	20.05	21.88	23.64	25.34	27.02	31.89	33.48	39.68	45.67
600	18.61	19.93	21.16	23.42	25.54	27.58	29.55	31.48	37.06	38.87	45.91	52.63
720	**21.78**	**23.34**	**24.77**	**27.40**	**29.87**	**32.22**	**34.50**	**36.72**	**43.13**	**45.20**	**53.17**	**60.71**
800	23.65	25.33	26.88	29.73	32.38	34.90	37.34	39.71	46.51	48.69	57.04	64.84
960	**27.20**	**29.20**	**30.90**	**34.20**	**37.20**	**40.00**	**42.70**	**45.33**	**52.90**	**55.30**	**64.30**	**72.60**
1000	28.30	30.30	32.14	35.50	38.60	41.55	44.38	47.11	54.64	57.29	66.51	74.85
1200	32.59	34.88	36.97	40.78	44.28	47.57	50.70	53.71	62.11	64.73	74.38	82.77
1450	**37.49**	**40.10**	**42.46**	**46.74**	**50.62**	**54.24**	**57.65**	**60.90**	**69.77**	**72.47**	**82.07**	**89.83**
1600	40.20	42.97	45.47	49.98	54.04	57.81	61.34	64.66	73.62	76.30	85.57	92.58
1800	43.54	46.50	49.72	53.93	58.18	62.08	65.69	69.07	77.83	80.50	88.95	94.56
2000	46.59	49.71	52.51	57.46	61.84	65.80	69.43	72.78	81.29	83.66	90.90	94.63
2200	49.35	52.61	55.51	60.59	65.02	68.99	72.57	75.81	83.74	85.81	91.44	92.82
2500	52.95	56.35	59.33	64.49	68.89	72.72	76.09	79.04	85.59	87.06	89.47	86.40
2850	**56.46**	**59.94**	**62.96**	**68.05**	**72.25**	**75.77**	**78.71**	**81.12**	**85.46**	**85.99**	**83.65**	
3000	57.70	61.20	64.20	69.21	73.26	76.58	79.26	81.37	84.54	84.58	79.82	
3500	60.83	64.23	67.06	71.55	74.87	77.27	78.85	79.68	77.95	76.02		
4000	62.41	65.54	68.03	71.64	73.86	74.94	75.01	74.12	66.07			

BELT LENGTH CORRECTION FACTORS (Multipler)

Belt length mm	966-1190	1400-1610	1778-1890	2100-2450	2590-3360	3500-6860
Length factor	0.80	0.90	0.95	1.00	1.05	1.10

BELT WIDTH FACTORS

Belt width mm	40	55	85	115	170
Width factor	1.00	1.44	2.31	3.18	4.78

Fenner Torque Drive PLUS 3 and HTD Drives

SERVICE FACTORS - for selecting both Torque Drive PLUS 3 and HTD drives.

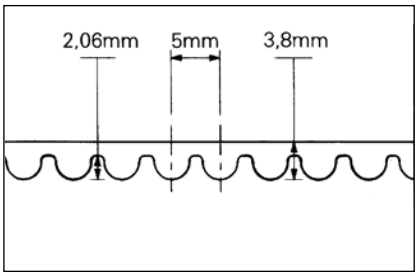
SPECIAL CASES

For speed increasing drives of:
1.00 - 1.24 - no additional factor
1.25 - 1.74 - add 0.1
1.75 - 2.49 - add 0.2
2.50 - 3.49 - add 0.3
3.50 and greater - add 0.4
Seasonal / intermittent use - subtract 0.2
Idler pulley used on drive - add 0.2

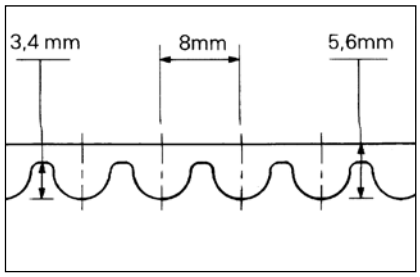
	TYPES OF PRIME MOVER					
	'Soft' Starts			'Heavy' Starts		
	AC electric motors – star / delta start – synchronous – split wound – inverter control; DC electric motors – shunt wound – stepper motors. I/C engines with 4 or more cylinders. Prime movers with centrifugal clutches or fluid couplings.			AC electric motors – DOL start – single phase – slip ring; DC electric motors – series wound – compound – servo motors. I/C engines with < 4 cylinders		
	Hours per Day Duty			Hours Per Day Duty		
TYPE OF DRIVEN MACHINE	**10 and under**	**Over 10 to 16**	**Over 16**	**10 and under**	**Over 10 to 16**	**Over 16**
LIGHT DUTY Agitators (uniform density), Bakery machinery: Dough mixers, Blowers except positive displacement. Centrifugal pumps and compressors. Belt conveyors, (uniformly loaded). Exhausters. Fans up to 7.5 kW. Paper machinery: Agitators, calenders, dryers, Printing machinery: Linotype machines, cutters, folders. Screens: Drum, conical. Woodworking machinery: Lathes, band saws.	1.2	1.4	1.6	1.6	1.8	2.0
MEDIUM DUTY Agitators and Mixers (variable density), Belt conveyors (not uniformly loaded), Brick and clay machinery, augers, mixers, granulators. Fans over 7.5 kW. Generators, Line shafts. Laundry machinery. Punches, presses, shears. Printing machinery: Presses, newspaper, rotary embossing, flat bed magazine. Pumps: Positive displacement, rotary. Screens, vibrating. Machine tools.	1.3	1.5	1.7	1.7	1.9	2.1
HEAVY DUTY Blowers, positive displacement. Bucket elevators Centrifuges. Conveyors: Drag, pan, screw. Paper machinery: Beaters, jordans, mash pumps, pulpers. Pumps, piston. Pulverizers. Woodworking machinery. Textile machinery. Exiters.	1.5	1.7	1.9	1.9	2.1	2.3
EXTRA HEAVY DUTY Brick machinery, pug mills. Compressors, piston. Crushers: Gyratory, jaw roll. Hoists. Mills: Ball, rod, tube, rubber. Rubber machinery: Calenders, extruders, mills.	1.7	1.9	2.1	2.1	2.3	2.5

BELT DIMENSIONS

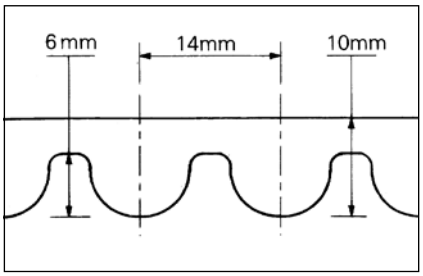
5M HTD

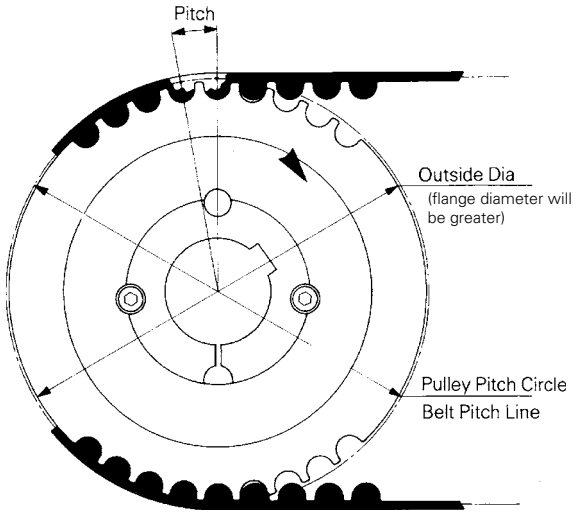


8MXP & 8M HTD



14MXP & 14M HTD





PULLEYS

The three principal dimensions of a pulley are:

number of grooves pitch width

and are used in this order as a designation e.g. 72-8M-50.

On the pulley, pitch is the distance between groove centres and is measured on the pulley pitch circle.

The pitch circle of the pulley coincides with the pitch line of the belt running in it. The pulley pitch diameter is always greater than its outer diameter.

Torque Drive PLUS 3 belts run with standard Fenner Taper Lock HTD pulleys.

Standard pulley dimensions are listed in the tables on pages 104-106.

HTD Drives

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.

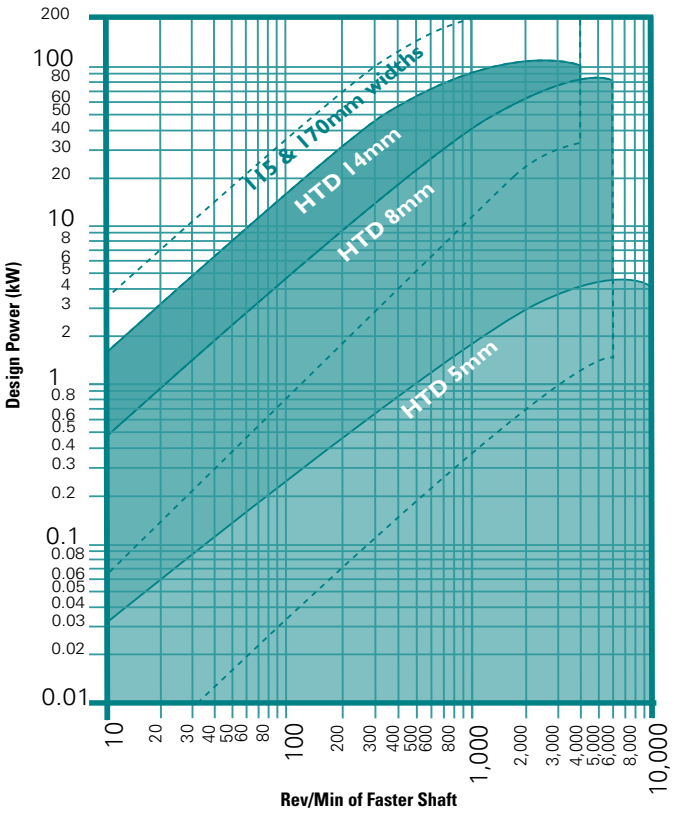
Drives can be designed by simple catalogue selection methods to give more compact drives, less noise and lower bearing loads than with classical Timing Drives.

The Fenner HTD drive system conforms to the ISO 13050 standard

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

Fenner HTD belts have a curvlinear 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.

BELT PITCH SELECTION CHART



5MM (5M) PITCH HTD BELTS

Pitch Length mm	Catalogue Code	
	9mm WIDE	15mm WIDE
305	278E0030	278F0030
325	278E0032	278F0032
350	278E0035	278F0035
400	278E0040	278F0040
450	278E0045	278F0045
500	278E0050	278F0050
575	278E0057	278F0057
640	278E0064	278F0064
700	278E0070	278F0070
800	278E0080	278F0080
890	278E0089	278F0089
980	278E0098	278F0098
1100	278E0110	278F0110
1200	278E0120	278F0120
1420	278E0142	278F0142
1595	278E0159	278F0159
1800	278E0180	278F0180
2000	278E0200	278F0200
2250	278E0225	278F0225
2525	278E0252	278F0252

TEMPERATURE

HTD belt performance is generally unaffected in ambient temperatures between –25^{0}C and +100^{0}C.

Temperatures beyond these extremes should be referred to your local Authorised Distrbutor.

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

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

8MM (8M) PITCH HTD BELTS

Pitch Length mm	Catalogue Code			
	20mm WIDE	30mm WIDE	50mm WIDE	85mm WIDE
480	278J0048	278K0048	278L0048	278M0048
600	278J0060	278K0060	278L0060	278M0060
640	278J0064	278K0064	278L0064	278M0064
720	278J0072	278K0072	278L0072	278M0072
800	278J0080	278K0080	278L0080	278M0080
880	278J0088	278K0088	278L0088	278M0088
960	278J0096	278K0096	278L0096	278M0096
1040	278J0104	278K0104	278L0104	278M0104
1120	278J0112	278K0112	278L0112	278M0112
1200	278J0120	278K0120	278L0120	278M0120
1280	278J0128	278K0128	278L0128	278M0128
1440	278J0144	278K0144	278L0144	278M0144
1600	278J0160	278K0160	278L0160	278M0160
1760	278J0176	278K0176	278L0176	278M0176
1800	278J0180	278K0180	278L0180	278M0180
2000	278J0200	278K0200	278L0200	278M0200
2400	278J0240	278K0240	278L0240	278M0240
2600	278J0260	278K0260	278L0260	278M0260
2800	278J0280	278K0280	278L0280	278M0280

14MM (14M) PITCH HTD BELTS

Pitch Length mm	Catalogue Code				
	40mm WIDE	55mm WIDE	85mm WIDE	115mm WIDE	170mm WIDE
966	278N0096	278P0096	278R0096	278S0096	278T0096
1190	278N0119	278P0119	278R0119	278S0119	278T0119
1400	278N0140	278P0140	278R0140	278S0140	278T0140
1610	278N0161	278P0161	278R0161	278S0161	278T0161
1778	278N0177	278P0177	278R0177	278S0177	278T0177
1890	278N0189	278P0189	278R0189	278S0189	278T0189
2100	278N0210	278P0210	278R0210	278S0210	278T0210
2310	278N0231	278P0231	278R0231	278S0231	278T0231
2450	278N0245	278P0245	278R0245	278S0245	278T0245
2590	278N0259	278P0259	278R0259	278S0259	278T0259
2800	278N0280	278P0280	278R0280	278S0280	278T0280
3150	278N0315	278P0315	278R0315	278S0315	278T0315
3500	278N0350	278P0350	278R0350	278S0350	278T0350
3850	278N0385	278P0385	278R0385	278S0385	278T0385
4326	278N0432	278P0432	278R0432	278S0432	278T0432
4578	278N0457	278P0457	278R0457	278S0457	278T0457

HTD Drive Design

HTD 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 (page 92) 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 93. 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 96 to 103) 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 95) and the list of stock belt widths (page93). In conjunction with the design power found in (c) determine the most suitable pulley pair.

(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 95 note the correction factor for the pitch and length of belt chosen.

(h) Power Rating

Refer to the Power Ratings on page 95 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.

(j) 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 98 to 100) and check that the Taper Lock® 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. 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 (page 92) the service factor is 1.9.

(c) Design Power

Design Power = 30 x 1.9 = 57kW.

(d) Belt Pitch

From table on page 93, 14M is the most suitable pitch.

(e) Pulley Selection

A speed ratio of 2.11 can be found in the drive tables on page 102 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 95 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 x 0.95 = 24.41 kW.

(j) Belt width

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® 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 HTD belt giving 467mm centres.

ORDERING INSTRUCTIONS

A complete drive usually 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 96-103.

(2) Taper Lock Bushes. The eight digit codes are given on the Taper Lock Shaft Fixings pages 129-130

(3) Belt. The belt code is given on page 93.

Example: The drive selection above would be ordered as :

Driving Pulley	38–14M–85mm	Code 043R0038
Taper Lock Bush	3020/55mm	Code 029P0055
Driven Pulley	80–14M–85mm	Code 043R0080
Taper Lock Bush	3525/55mm	Code 029J0055
Belt	1778–14M–85mm	Code 278R0177

HTD Drive Design

POWER RATINGS (KW) FOR 15MM WIDE 5M BELT

Rev/min 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 LENGTH CORRECTION FACTORS (Mutliplier)

Belt length mm	305-400	450-500	575-800	890-1200	1270-2250
Length factor	0.8	0.9	1.0	1.1	1.2

BELT WIDTH FACTORS

Belt width mm	9	15
Width factor	0.53	1.00

POWER RATINGS (KW) FOR 20MM WIDE 8M BELT

Rev/min 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	3.22	3.59	4.11	4.63	5.13	5.64
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 LENGTH CORRECTION FACTORS (Mutliplier)

Belt length mm	480-600	640-880	960-1200	1280-1760	1800-2800
Length factor	0.8	0.9	1.0	1.1	1.2

BELT WIDTH FACTORS

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 of small pulley	Number of grooves										
	28	29	30	32	34	36	38	40	44	48	56
10	0.20	0.20	0.20	0.20	0.30	0.30	0.30	0.40	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	0.90	1.10
40	0.70	0.80	0.80	1.00	1.10	1.20	1.40	1.40	1.60	1.80	2.10
60	1.10	1.20	1.30	1.50	1.70	1.90	2.00	2.20	2.40	2.70	3.20
100	1.80	1.90	2.10	2.40	2.80	3.10	3.40	3.60	4.00	4.40	5.20
200	3.60	3.90	4.20	4.80	5.50	6.20	6.80	7.20	8.00	8.90	10.50
300	4.90	5.30	5.70	6.60	7.50	8.50	9.20	9.70	10.80	12.00	14.20
400	6.10	6.60	7.10	8.20	9.30	10.50	11.30	12.00	13.30	14.70	17.40
500	7.20	7.80	8.40	9.60	11.00	12.30	13.30	14.10	15.60	17.20	20.20
600	8.20	8.90	9.50	11.00	12.50	14.00	15.10	15.90	17.60	19.40	22.70
720	**9.30**	**10.10**	**10.80**	**12.50**	**14.10**	**15.80**	**17.00**	**18.00**	**18.80**	**21.80**	**25.40**
800	10.00	10.80	11.60	13.40	15.10	17.00	18.30	19.30	21.20	23.20	27.00
960	**11.30**	**12.20**	**13.10**	**15.00**	**17.00**	**19.10**	**20.50**	**21.60**	**23.70**	**25.80**	**29.80**
1000	11.60	12.50	13.50	15.40	17.50	19.60	21.00	22.10	24.30	26.50	30.50
1200	13.10	14.10	15.10	17.30	19.50	21.80	23.40	24.50	26.80	29.10	33.20
1440		**15.70**	**16.80**	**19.20**	**21.60**	**24.10**	**25.70**	**26.90**	**29.30**	**31.60**	**35.50**
1600			17.80	20.30	22.80	25.40	27.10	28.30	30.60	32.90	36.60
2000				22.50	25.20	28.00	29.60	30.80	32.80	34.70	37.30
2500					26.90	29.70	31.20	32.00	33.40	34.40	34.40
2880						**29.80**	**31.20**	**31.80**	**32.00**	**31.90**	

BELT LENGTH CORRECTION FACTORS (Mutliplier)

Belt length mm	966-1190	1400-1610	1778-1890	2100-2450	2590-3150	3500-4578
Length factor	0.8	0.9	0.95	1.0	1.05	1.1

BELT WIDTH FACTORS

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. Consult your local Authorised Distributor.

HTD 5M Drive

CENTRE DISTANCE IN MILLIMETRES

Speed Ratio	Number of grooves on		Belt pitch in millmetres																			Speed Ratio
	Driving Pulley	Driven Pulley	305	325	350	375	400	425	450	475	500	575	600	640	700	800	890	980	1100	1200	1420	
			61 teeth	65 teeth	70 teeth	75 teeth	80 teeth	85 teeth	90 teeth	95 teeth	100 teeth	115 teeth	120 teeth	128 teeth	140 teeth	160 teeth	178 teeth	196 teeth	220 teeth	240 teeth	284 teeth	
1.00	**28**	**28**	83	93	105	118	130	143	155	168	180	218	230	250	280	330	375	420	480	530	640	1.00
1.00	**32**	**32**	73	83	95	108	120	133	145	158	170	208	220	240	270	320	365	410	470	520	630	1.00
1.00	**34**	**34**	–	78	90	103	115	128	140	153	165	203	215	235	265	315	360	405	465	515	625	1.00
1.00	**36**	**36**	–	–	85	98	110	123	135	148	160	198	210	230	260	310	355	400	460	510	620	1.00
1.00	**38**	**38**	–	–	80	93	105	118	130	143	155	193	205	225	255	305	350	395	455	505	615	1.00
1.00	**40**	**40**	–	–	–	88	100	113	125	138	150	188	200	220	250	300	345	390	450	500	610	1.00
1.00	**44**	**44**	–	–	–	78	90	103	115	128	140	178	190	210	240	290	335	380	440	490	600	1.00
1.00	**48**	**48**	–	–	–	–	–	93	105	118	130	168	180	200	230	280	325	370	430	480	590	1.00
1.00	**56**	**56**	–	–	–	–	–	–	–	98	110	148	160	180	210	260	305	350	410	460	570	1.00
1.00	**64**	**64**	–	–	–	–	–	–	–	–	–	128	140	160	190	240	285	330	390	440	550	1.00
1.00	**72**	**72**	–	–	–	–	–	–	–	–	–	–	120	140	170	220	265	310	370	420	530	1.00
1.00	**80**	**80**	–	–	–	–	–	–	–	–	–	–	–	–	150	200	245	290	350	400	510	1.00
1.05	**38**	**40**	–	–	–	90	102	115	127	140	152	190	203	222	252	302	347	392	452	502	612	1.05
1.06	**36**	**38**	–	–	82	95	107	120	132	145	157	195	208	227	257	307	352	397	457	507	617	1.06
1.06	**34**	**36**	–	75	87	100	112	125	137	150	162	200	213	232	262	312	357	402	462	512	622	1.06
1.06	**32**	**34**	70	80	92	105	117	130	142	155	167	205	218	237	267	317	362	407	467	517	627	1.06
1.09	**44**	**48**	–	–	–	–	–	98	110	123	135	172	185	205	235	285	330	375	435	485	595	1.09
1.10	**40**	**44**	–	–	–	82	95	108	120	133	145	182	195	215	245	295	340	385	445	495	605	1.10
1.11	**36**	**40**	–	–	80	92	105	118	130	143	155	192	205	225	255	305	350	395	455	505	615	1.11
1.11	**72**	**80**	–	–	–	–	–	–	–	–	–	–	–	–	160	210	255	300	360	410	520	1.11
1.12	**34**	**38**	–	–	85	97	110	123	135	148	160	197	210	230	260	310	355	400	460	510	620	1.12
1.13	**32**	**36**	–	77	90	103	115	128	140	153	165	202	215	235	265	315	360	405	465	515	625	1.13
1.13	**64**	**72**	–	–	–	–	–	–	–	–	–	–	130	150	180	230	275	320	380	430	540	1.13
1.13	**80**	**90**	–	–	–	–	–	–	–	–	–	–	–	–	–	187	232	277	337	387	497	1.13
1.14	**28**	**32**	77	87	100	113	125	135	150	163	175	212	225	245	275	325	370	415	475	525	635	1.14
1.14	**56**	**64**	–	–	–	–	–	–	–	–	–	137	150	170	200	250	295	340	400	450	560	1.14
1.16	**38**	**44**	–	–	–	85	97	110	122	135	147	185	197	217	247	297	342	387	447	497	607	1.16
1.17	**48**	**56**	–	–	–	–	–	–	–	107	120	157	170	190	220	270	315	360	420	470	580	1.17
1.18	**34**	**40**	–	–	82	95	107	120	132	145	157	195	207	227	257	307	352	397	457	507	617	1.18
1.19	**32**	**38**	–	75	87	100	112	125	137	150	162	200	212	232	262	312	357	402	462	512	622	1.19
1.20	**40**	**48**	–	–	–	77	90	102	115	127	140	177	190	210	240	290	335	380	440	490	600	1.20
1.21	**28**	**34**	75	85	97	110	122	135	147	160	172	210	222	242	272	322	367	412	472	522	632	1.21
1.22	**36**	**44**	–	–	–	87	100	112	125	137	150	187	200	220	250	300	345	390	450	500	610	1.22
1.25	**32**	**40**	–	–	85	97	110	122	135	147	160	197	210	230	260	310	355	400	460	510	620	1.25
1.25	**64**	**80**	–	–	–	–	–	–	–	–	–	–	119	139	170	220	265	310	370	420	530	1.25
1.25	**72**	**90**	–	–	–	–	–	–	–	–	–	–	–	–	147	197	242	287	347	397	507	1.25
1.26	**38**	**48**	–	–	–	80	92	105	117	130	142	180	192	212	242	292	337	382	442	492	602	1.26
1.27	**44**	**56**	–	–	–	–	–	87	100	112	125	162	175	195	225	275	320	365	425	475	585	1.29
1.29	**28**	**36**	72	82	95	107	120	132	145	157	170	207	220	240	270	320	465	410	470	520	630	1.29
1.29	**56**	**72**	–	–	–	–	–	–	–	–	–	127	139	159	190	240	285	330	390	440	550	1.29
1.29	**34**	**44**	–	–	–	90	102	115	127	140	152	190	202	222	252	302	347	392	452	502	612	1.29
1.33	**36**	**48**	–	–	–	82	95	107	120	132	145	182	195	215	245	295	340	385	445	495	605	1.33
1.33	**48**	**64**	–	–	–	–	–	–	–	97	109	147	160	180	210	260	305	350	410	460	570	1.33
1.36	**28**	**38**	70	80	92	105	117	130	142	155	167	205	217	237	267	317	362	407	467	517	627	1.36
1.38	**32**	**44**	–	–	79	92	105	117	130	142	155	192	205	225	255	305	350	395	455	505	615	1.38
1.40	**40**	**56**	–	–	–	–	–	92	104	117	129	167	180	200	230	280	325	370	430	480	590	1.40
1.40	**80**	**112**	–	–	–	–	–	–	–	–	–	–	–	–	–	–	203	249	309	359	469	1.40
1.41	**64**	**90**	–	–	–	–	–	–	–	–	–	–	–	–	156	206	252	297	357	407	517	1.41
1.41	**34**	**48**	–	–	–	84	97	109	122	135	147	185	197	217	247	297	342	387	447	497	607	1.41
1.43	**28**	**40**	–	77	89	102	115	127	140	152	165	202	215	235	265	315	360	405	465	515	625	1.43
1.43	**56**	**80**	–	–	–	–	–	–	–	–	–	–	129	149	179	229	274	319	380	430	540	1.43
1.45	**44**	**64**	–	–	–	–	–	–	–	101	114	152	164	194	214	265	310	355	415	465	575	1.45
1.47	**38**	**56**	–	–	–	–	–	94	107	119	132	169	182	202	232	282	327	372	432	482	592	1.47
1.50	**32**	**48**	–	–	–	87	99	112	124	137	149	187	200	220	250	300	345	390	450	500	610	1.50
1.50	**48**	**72**	–	–	–	–	–	–	–	–	–	136	149	169	199	249	294	339	400	450	560	1.50
1.56	**36**	**56**	–	–	–	–	–	96	109	122	134	172	184	204	234	283	330	375	435	485	595	1.56
1.56	**72**	**112**	–	–	–	–	–	–	–	–	–	–	–	–	–	167	213	238	319	369	475	1.56
1.57	**28**	**44**	–	–	84	97	109	122	134	147	159	197	210	230	260	310	355	400	460	510	620	1.57
1.60	**40**	**64**	–	–	–	–	–	–	–	106	118	156	169	189	219	269	314	359	420	470	580	1.60
1.61	**56**	**90**	–	–	–	–	–	–	–	–	–	–	–	135	165	216	261	306	367	417	527	1.61
1.64	**44**	**72**	–	–	–	–	–	–	–	–	–	141	153	174	204	254	299	344	404	454	565	1.64
1.65	**34**	**56**	–	–	–	–	–	98	111	124	136	174	187	207	237	297	332	377	437	487	597	1.65
1.67	**48**	**80**	–	–	–	–	–	–	–	–	–	125	138	158	198	239	284	329	389	439	549	1.67
1.68	**38**	**64**	–	–	–	–	–	–	–	108	121	159	171	191	222	272	317	362	422	472	582	1.68
1.70	**80**	**136**	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	215	276	327	438	1.70

All centre distances are rounded values – Consult your local Authorised Distributor if centre distance is fixed.

HTD 5M DRIVES

CENTRE DISTANCE IN MILLIMETRES

Speed Ratio	Number of grooves on		Belt pitch in millmetres																		Speed Ratio
	Driving Pulley	Driven Pulley	305	325	350	375	400	425	450	475	500	575	600	640	700	800	890	980	1100	1200	1420	
			61 teeth	65 teeth	70 teeth	75 teeth	80 teeth	85 teeth	90 teeth	95 teeth	100 teeth	115 teeth	120 teeth	128 teeth	140 teeth	160 teeth	178 teeth	196 teeth	220 teeth	240 teeth	284 teeth	
1.71	**28**	**48**	–	–	78	91	104	116	129	142	154	192	204	224	255	305	350	395	455	505	615	1.71
1.75	**32**	**56**	–	–	–	75	88	101	113	126	139	176	189	209	239	289	334	380	440	490	600	1.75
1.75	**64**	**112**	–	–	–	–	–	–	–	–	–	–	–	–	–	176	222	267	328	378	489	1.75
1.78	**36**	**64**	–	–	–	–	–	85	97	110	123	161	174	194	224	274	319	364	424	474	585	1.78
1.80	**40**	**72**	–	–	–	–	–	–	–	94	107	145	158	178	208	259	304	349	409	459	569	1.80
1.82	**44**	**80**	–	–	–	–	–	–	–	–	–	129	142	162	193	243	289	334	394	444	554	1.82
1.88	**48**	**90**	–	–	–	–	–	–	–	–	–	–	123	144	174	225	270	316	376	426	536	1.88
1.88	**34**	**64**	–	–	–	–	–	–	100	113	125	163	176	196	226	276	322	367	427	477	587	1.88
1.89	**72**	**136**	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	224	285	336	447	1.89
1.89	**38**	**72**	–	–	–	–	–	–	–	–	109	148	160	180	211	261	306	351	412	462	572	1.89
2.00	**28**	**56**	–	–	–	79	92	105	118	131	143	181	194	214	244	294	339	384	444	494	605	2.00
2.00	**32**	**64**	–	–	–	–	–	89	102	115	127	166	178	198	229	279	324	369	429	479	589	2.00
2.00	**36**	**72**	–	–	–	–	–	–	–	98	111	150	163	183	213	263	309	354	414	464	574	2.00
2.00	**40**	**80**	–	–	–	–	–	–	–	–	–	134	147	167	197	248	293	339	399	449	559	2.00
2.00	**56**	**112**	–	–	–	–	–	–	–	–	–	–	–	–	–	185	231	276	337	387	498	2.00
2.05	**44**	**90**	–	–	–	–	–	–	–	–	–	–	127	148	179	230	275	320	381	431	541	2.05
2.11	**38**	**80**	–	–	–	–	–	–	–	–	–	136	149	169	200	250	296	341	401	451	562	2.11
2.12	**34**	**72**	–	–	–	–	–	–	–	–	113	152	165	185	215	266	311	356	416	467	577	2.12
2.13	**64**	**136**	–	–	–	–	–	–	–	–	–	–	–	–	–	–	186	233	294	345	456	2.13
2.22	**36**	**80**	–	–	–	–	–	–	–	–	–	138	151	171	202	253	298	343	403	454	564	2.22
2.25	**32**	**72**	–	–	–	–	–	–	–	103	116	154	167	187	218	268	313	359	419	469	579	2.25
2.25	**40**	**90**	–	–	–	–	–	–	–	–	–	–	132	152	183	234	280	325	385	436	546	2.25
2.29	**28**	**64**	–	–	–	–	–	93	106	119	132	170	183	203	233	284	329	374	434	484	594	2.29
2.33	**48**	**112**	–	–	–	–	–	–	–	–	–	–	–	–	–	193	240	285	346	397	507	2.33
2.35	**34**	**80**	–	–	–	–	–	–	–	–	–	140	153	174	204	255	300	346	406	456	566	2.35
2.37	**38**	**90**	–	–	–	–	–	–	–	–	–	120	134	154	185	236	282	327	388	438	548	2.37
2.43	**56**	**136**	–	–	–	–	–	–	–	–	–	–	–	–	–	–	195	242	303	354	466	2.43
2.50	**32**	**80**	–	–	–	–	–	–	–	–	–	142	155	176	206	257	303	348	408	458	569	2.50
2.50	**36**	**90**	–	–	–	–	–	–	–	–	–	122	136	157	188	239	284	330	390	440	551	2.50
2.55	**44**	**112**	–	–	–	–	–	–	–	–	–	–	–	–	145	198	244	290	351	401	512	2.55
2.57	**28**	**72**	–	–	–	–	–	–	–	107	120	159	171	192	222	273	318	363	424	474	584	2.57
2.65	**34**	**90**	–	–	–	–	–	–	–	–	–	125	137	159	190	241	287	332	392	443	553	2.65
2.80	**40**	**112**	–	–	–	–	–	–	–	–	–	–	–	–	149	202	248	294	355	406	517	2.80
2.81	**32**	**90**	–	–	–	–	–	–	–	–	–	127	140	161	192	243	289	334	395	445	556	2.81
2.83	**48**	**136**	–	–	–	–	–	–	–	–	–	–	–	–	–	–	203	250	312	363	475	2.83
2.86	**28**	**80**	–	–	–	–	–	–	–	93	107	147	160	180	211	262	307	353	413	463	574	2.86
2.95	**38**	**112**	–	–	–	–	–	–	–	–	–	–	–	–	151	204	251	297	358	408	519	2.95
3.09	**44**	**136**	–	–	–	–	–	–	–	–	–	–	–	–	–	–	207	254	317	368	479	3.09
3.11	**36**	**112**	–	–	–	–	–	–	–	–	–	–	–	–	153	206	253	299	360	411	521	3.11
3.21	**28**	**90**	–	–	–	–	–	–	–	–	–	131	144	165	196	248	293	339	399	450	560	3.21
3.29	**34**	**112**	–	–	–	–	–	–	–	–	–	–	–	–	155	208	255	301	362	413	524	3.29
3.40	**40**	**136**	–	–	–	–	–	–	–	–	–	–	–	–	–	162	211	259	321	372	484	3.40
3.50	**32**	**112**	–	–	–	–	–	–	–	–	–	–	–	–	157	210	257	303	364	415	526	3.50
3.58	**38**	**136**	–	–	–	–	–	–	–	–	–	–	–	–	–	164	213	261	323	374	486	3.58
3.78	**36**	**136**	–	–	–	–	–	–	–	–	–	–	–	–	–	166	215	263	325	377	489	3.78
4.00	**28**	**112**	–	–	–	–	–	–	–	–	–	–	–	127	161	215	261	308	369	420	531	4.00
4.00	**34**	**136**	–	–	–	–	–	–	–	–	–	–	–	–	–	168	217	265	327	379	491	4.00
4.25	**32**	**136**	–	–	–	–	–	–	–	–	–	–	–	–	–	170	219	267	330	381	493	4.25
4.86	**28**	**136**	–	–	–	–	–	–	–	–	–	–	–	–	–	174	223	271	334	385	498	4.86

All centre distances are rounded values – Consult your local Authorised Distributor if centre distance is fixed.

Fenner Torque Drive PLUS 3 8MXP & HTD 8M Drives

CENTRE DISTANCE IN MILLIMETRES

Speed Ratio	Number of grooves on		Belt pitch in millmetres																				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	352	392	432	472	512	592	672	752	772	872	1072	1172	1272	1.29
1.29	56	72	–	–	–	–	–	–	183	223	263	303	343	383	464	544	624	644	744	944	1044	1144	1.29
1.29	34	44	–	123	143	164	204	244	284	324	364	404	444	484	564	644	724	744	844	1044	1144	1244	1.29
1.31	26	34	120	160	180	200	240	280	320	360	400	440	480	520	600	680	760	780	880	1080	1180	1280	1.31
1.33	24	32	128	168	188	208	248	288	328	368	408	448	488	528	608	688	768	788	888	1088	1188	1288	1.33
1.33	30	40	–	139	159	180	220	260	300	340	380	420	460	500	580	660	740	760	860	1060	1160	1260	1.33
1.33	36	48	–	–	131	151	191	231	272	312	352	392	432	472	552	632	712	732	832	1032	1132	1232	1.33
1.33	48	64	–	–	–	–	–	175	215	255	295	335	375	416	496	576	656	676	776	976	1076	1176	1.33
1.36	28	38	107	147	168	188	228	268	308	348	388	428	468	508	588	668	748	768	868	1068	1168	1268	1.36
1.38	32	44	–	127	147	167	207	248	288	328	368	408	448	488	568	648	728	748	848	1048	1148	1248	1.38
1.38	26	36	115	155	176	196	236	276	316	356	396	436	476	516	596	676	756	776	876	1076	1176	1276	1.38
1.40	40	56	–	–	–	–	167	207	247	287	327	367	407	448	528	608	688	708	808	1008	1108	1208	1.40
1.40	80	112	–	–	–	–	–	–	–	–	–	–	–	–	334	414	494	514	615	815	915	1015	1.40

All centre distances are rounded values – Consult your local Authorised Distributor if centre distance is fixed.

Fenner Torque Drive PLUS 3 8MXP & HTD 8M Drives

CENTRE DISTANCE IN MILLIMETRES

Speed Ratio	Number of grooves on		Belt pitch in millmetres																			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	319	359	399	479	559	639	659	759	960	1060	1160	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	1956	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	462	542	623	643	743	943	1043	1143	1.67
1.68	**38**	**64**	–	–	–	–	152	193	234	274	314	354	395	435	515	595	675	695	795	995	1095	1196	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	**32**	**72**	–	–	–	–	–	185	226	267	308	348	389	429	509	590	670	690	790	991	1091	1191	2.25
2.25	**40**	**90**	–	–	–	–	–	–	–	210	252	293	334	375	456	536	617	637	737	938	1038	1138	2.25
2.25	**64**	**144**	–	–	–	–	–	–	–	–	–	–	–	–	286	370	453	473	575	777	878	979	2.25
2.29	**28**	**64**	–	–	–	–	170	211	252	292	333	373	413	454	534	614	694	715	815	1015	1115	1215	2.29
2.33	**24**	**56**	–	–	134	155	196	236	277	317	358	398	438	478	559	639	719	739	839	1039	1139	1239	2.33
2.33	**48**	**112**	–	–	–	–	–	–	–	–	–	225	268	309	392	473	554	574	675	876	977	1077	2.33
2.33	**72**	**168**	–	–	–	–	–	–	–	–	–	–	–	–	–	–	380	401	505	709	811	912	2.33
2.35	**34**	**80**	–	–	–	–	–	161	204	245	286	327	367	408	488	569	649	669	770	970	1070	1171	2.35
2.37	**38**	**90**	–	–	–	–	–	–	–	214	255	297	338	378	459	540	620	641	741	942	1042	1142	2.37
2.40	**30**	**72**	–	–	–	–	146	188	230	271	311	352	392	433	513	594	674	694	794	995	1095	1195	2.40
2.40	**80**	**192**	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	432	640	742	844	2.40
2.46	**26**	**64**	–	–	–	131	173	215	255	296	337	377	417	457	538	618	698	718	819	1019	1119	1219	2.46

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Fenner Torque Drive PLUS 3 8MXP & HTD 8M Drives

CENTRE DISTANCE IN MILLIMETRES

Speed Ratio	Number of grooves on		Belt pitch in millmetres																				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	
2.50	**32**	**80**	–	–	–	–	–	165	207	248	290	330	371	411	492	573	653	673	774	974	1074	1174	2.50
2.50	**36**	**90**	–	–	–	–	–	–	–	217	259	300	341	382	463	544	624	644	745	946	1046	1146	2.50
2.55	**44**	**112**	–	–	–	–	–	–	–	–	–	232	274	316	399	480	561	582	683	884	984	1085	2.55
2.57	**28**	**72**	–	–	–	–	150	192	233	274	315	356	396	436	517	597	678	698	798	998	1099	1199	2.57
2.57	**56**	**144**	–	–	–	–	–	–	–	–	–	–	–	–	299	384	467	487	589	792	893	994	2.57
2.63	**64**	**168**	–	–	–	–	–	–	–	–	–	–	–	–	–	–	394	415	519	724	825	927	2.63
2.65	**34**	**90**	–	–	–	–	–	–	178	220	262	304	345	385	467	547	628	648	749	949	1050	1150	2.65
2.67	**24**	**64**	–	–	–	134	177	218	259	300	340	381	421	461	542	622	702	722	822	1023	1123	1223	2.65
2.67	**30**	**80**	–	–	–	–	–	168	210	252	293	334	375	415	496	576	657	677	777	978	1078	1178	2.67
2.67	**72**	**192**	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	446	654	757	858	2.67
2.77	**26**	**72**	–	–	–	–	153	195	237	278	319	359	400	440	521	601	681	702	802	1002	1102	1203	2.77
2.80	**40**	**112**	–	–	–	–	–	–	–	–	–	238	281	323	406	487	569	589	690	891	992	1092	2.80
2.81	**32**	**90**	–	–	–	–	–	–	181	224	266	307	348	389	470	551	632	652	752	953	1053	1154	2.81
2.86	**28**	**80**	–	–	–	–	–	171	214	255	297	338	378	419	500	580	661	681	781	982	1082	1182	2.86
2.95	**38**	**112**	–	–	–	–	–	–	–	–	–	242	284	326	409	491	572	593	694	895	996	1096	2.95
3.00	**24**	**72**	–	–	–	–	156	199	240	281	322	363	403	444	524	605	685	705	806	1006	1106	1206	3.00
3.00	**30**	**90**	–	–	–	–	–	–	184	227	269	311	352	393	474	555	635	656	756	957	1057	1157	3.00
3.00	**48**	**144**	–	–	–	–	–	–	–	–	–	–	–	–	312	397	480	501	604	807	908	1009	3.00
3.00	**56**	**168**	–	–	–	–	–	–	–	–	–	–	–	–	–	320	407	428	533	738	840	941	3.00
3.00	**64**	**192**	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	350	459	668	771	873	3.00
3.08	**26**	**80**	–	–	–	–	–	174	217	259	300	341	382	422	503	584	664	685	785	986	1086	1186	3.08
3.11	**36**	**112**	–	–	–	–	–	–	–	–	–	245	288	330	413	495	576	596	697	899	999	1100	3.11
3.21	**28**	**90**	–	–	–	–	–	–	187	230	273	314	355	396	477	558	639	659	760	961	1061	1161	3.21
3.27	**44**	**144**	–	–	–	–	–	–	–	–	–	–	–	–	319	404	487	508	611	814	915	1016	3.27
3.29	**34**	**112**	–	–	–	–	–	–	–	–	204	248	291	333	416	498	579	600	701	903	1003	1104	3.29
3.33	**24**	**80**	–	–	–	–	–	178	220	262	304	345	385	426	507	588	668	688	789	989	1090	1190	3.33
3.43	**56**	**192**	–	–	–	–	–	–	–	–	–	–	–	–	–	–	340	363	472	682	785	887	3.43
3.46	**26**	**90**	–	–	–	–	–	–	191	234	276	318	359	400	481	562	643	663	764	985	1065	1165	3.46
3.50	**32**	**112**	–	–	–	–	–	–	–	–	207	251	294	337	420	502	583	603	705	906	1007	1107	3.50
3.50	**48**	**168**	–	–	–	–	–	–	–	–	–	–	–	–	–	333	420	442	547	752	854	956	3.50
3.60	**40**	**144**	–	–	–	–	–	–	–	–	–	–	–	–	325	411	494	515	618	821	922	1023	3.60
3.73	**30**	**112**	–	–	–	–	–	–	–	–	210	255	298	340	423	505	587	607	708	910	1011	1111	3.73
3.75	**24**	**90**	–	–	–	–	–	–	194	237	279	321	362	403	485	566	647	667	767	968	1069	1169	3.75
3.79	**38**	**144**	–	–	–	–	–	–	–	–	–	–	–	–	328	414	498	518	621	825	926	1027	3.79
3.82	**44**	**168**	–	–	–	–	–	–	–	–	–	–	–	–	–	339	427	448	553	760	862	963	3.82
4.00	**28**	**112**	–	–	–	–	–	–	–	–	213	258	301	343	427	509	590	611	712	914	1014	1115	4.00
4.00	**36**	**144**	–	–	–	–	–	–	–	–	–	–	–	–	331	417	501	522	625	829	930	1031	4.00
4.00	**48**	**192**	–	–	–	–	–	–	–	–	–	–	–	–	–	–	352	375	485	696	799	901	4.00
4.20	**40**	**168**	–	–	–	–	–	–	–	–	–	–	–	–	–	346	433	455	560	767	869	970	4.20
4.24	**34**	**144**	–	–	–	–	–	–	–	–	–	–	–	244	335	421	505	525	628	832	933	1035	4.24
4.31	**26**	**112**	–	–	–	–	–	–	–	–	216	261	304	347	430	512	594	614	716	917	1018	1119	4.31
4.36	**44**	**192**	–	–	–	–	–	–	–	–	–	–	–	–	–	–	358	381	492	703	806	908	4.36
4.42	**38**	**168**	–	–	–	–	–	–	–	–	–	–	–	–	–	349	437	459	564	770	872	974	4.42
4.50	**32**	**144**	–	–	–	–	–	–	–	–	–	–	–	247	338	424	508	529	632	836	937	1038	4.50
4.67	**24**	**112**	–	–	–	–	–	–	–	–	219	264	308	350	434	516	597	618	719	921	1022	1122	4.67
4.67	**36**	**168**	–	–	–	–	–	–	–	–	–	–	–	–	–	352	440	461	567	774	876	978	4.67
4.80	**30**	**144**	–	–	–	–	–	–	–	–	–	–	–	250	341	427	511	532	635	839	941	1042	4.80
4.80	**40**	**192**	–	–	–	–	–	–	–	–	–	–	–	–	–	–	365	388	498	710	813	916	4.90
4.94	**34**	**168**	–	–	–	–	–	–	–	–	–	–	–	–	–	355	443	465	570	777	879	981	4.94
5.05	**38**	**192**	–	–	–	–	–	–	–	–	–	–	–	–	–	–	368	391	502	713	816	919	5.05
5.14	**28**	**144**	–	–	–	–	–	–	–	–	–	–	–	253	344	431	515	536	639	843	944	1046	5.14
5.25	**32**	**168**	–	–	–	–	–	–	–	–	–	–	–	–	–	358	446	468	574	781	883	995	5.25
5.33	**36**	**192**	–	–	–	–	–	–	–	–	–	–	–	–	–	–	371	394	505	716	820	923	5.33
5.54	**26**	**144**	–	–	–	–	–	–	–	–	–	–	–	256	348	434	518	539	642	847	948	1049	5.54
5.60	**30**	**168**	–	–	–	–	–	–	–	–	–	–	–	–	–	361	450	471	577	784	887	988	5.60
5.65	**34**	**192**	–	–	–	=	–	–	–	–	–	–	–	–	–	–	374	397	508	720	823	926	5.65
6.00	**24**	**144**	–	–	–	–	–	–	–	–	–	–	–	259	351	437	522	542	646	850	952	1053	6.00
6.00	**28**	**168**	–	–	–	–	–	–	–	–	–	–	–	–	269	364	453	475	581	785	890	992	6.00
6.00	**32**	**192**	–	–	–	–	–	–	–	–	–	–	–	–	–	–	377	400	511	723	827	930	6.00
6.40	**30**	**192**	–	–	–	–	–	–	–	–	–	–	–	–	–	–	380	403	515	727	830	933	6.40
6.46	**26**	**168**	–	–	–	–	–	–	–	–	–	–	–	–	272	368	478	456	584	791	894	996	6.46
6.86	**28**	**192**	–	–	–	–	–	–	–	–	–	–	–	–	–	–	383	406	519	730	834	937	6.86

All centre distances are rounded values – Consult your local Authorised Distributor if centre distance is fixed.

Fenner Torque Drive PLUS 3 14MXP & HTD 14M Drives

CENTRE DISTANCE IN MILLIMETRES

Speed Ratio	Number of grooves on		Belt pitch in millmetres																Speed Ratio
	Driving Pulley	Driven Pulley	966	1190	1400	1610	1778	1890	2100	2310	2450	2590	2800	3150	3500	3850	4326	4578	
			69 teeth	85 teeth	100 teeth	115 teeth	127 teeth	135 teeth	150 teeth	165 teeth	175 teeth	185 teeth	200 teeth	225 teeth	250 teeth	275 teeth	309 teeth	327 teeth	
1.00	**28**	**28**	287	399	504	609	693	749	854	959	1029	1099	1204	1379	1554	1729	1967	2093	1.00
1.00	**29**	**29**	280	392	497	602	686	742	847	952	1022	1092	1197	1372	1547	1722	1960	2086	1.00
1.00	**30**	**30**	273	385	490	595	679	735	840	945	1015	1085	1190	1365	1540	1715	1953	2079	1.00
1.00	**32**	**32**	259	371	476	581	665	721	826	931	1001	1071	1176	1351	1526	1701	1939	2065	1.00
1.00	**34**	**34**	245	357	462	567	651	707	812	917	987	1057	1162	1337	1512	1687	1925	2051	1.00
1.00	**36**	**36**	231	343	448	553	637	693	798	903	973	1043	1148	1323	1498	1673	1911	2037	1.00
1.00	**38**	**38**	217	329	434	539	623	679	784	889	959	1029	1134	1309	1484	1659	1897	2023	1.00
1.00	**40**	**40**	203	315	420	525	609	665	770	875	945	1015	1120	1295	1470	1645	1883	2009	1.00
1.00	**44**	**44**	–	287	392	497	581	637	742	847	917	987	1092	1267	1442	1617	1855	1981	1.00
1.00	**48**	**48**	–	259	364	469	553	609	714	819	889	959	1064	1239	1414	1589	1827	1953	1.00
1.00	**56**	**56**	–	–	308	413	497	553	658	763	833	903	1008	1183	1358	1533	1771	1897	1.00
1.03	**29**	**30**	276	388	493	598	682	738	843	948	1018	1088	1193	1368	1543	1718	1956	2082	1.00
1.04	**28**	**29**	283	395	500	605	689	745	850	955	1025	1095	1200	1375	1550	1725	1963	2089	1.04
1.05	**38**	**40**	210	322	427	532	616	672	777	882	952	1022	1127	1302	1477	1652	1890	2016	1.05
1.06	**36**	**38**	224	336	441	546	630	686	791	896	966	1036	1141	1316	1491	1666	1904	2030	1.06
1.06	**34**	**36**	238	350	455	560	644	700	805	910	980	1050	1155	1330	1505	1680	1918	2044	1.06
1.06	**32**	**34**	252	364	469	574	658	714	819	924	994	1064	1169	1344	1519	1694	1932	2058	1.06
1.07	**30**	**32**	266	378	483	588	672	728	833	938	1008	1078	1183	1358	1533	1708	1946	2072	1.07
1.07	**28**	**30**	280	392	497	602	686	742	847	952	1022	1092	1197	1372	1547	1722	1960	2086	1.07
1.09	**44**	**48**	–	273	378	483	567	623	728	833	903	973	1078	1253	1428	1603	1841	1967	1.09
1.10	**40**	**44**	–	301	406	511	595	651	756	861	931	1001	1106	1281	1456	1631	1869	1995	1.10
1.10	**29**	**32**	269	381	486	591	675	731	836	941	1011	1081	1186	1361	1536	1711	1949	2075	1.10
1.11	**36**	**40**	217	329	434	539	623	679	784	889	959	1029	1134	1309	1484	1659	1897	2023	1.11
1.12	**34**	**38**	231	343	448	553	637	693	798	903	973	1043	1148	1323	1498	1673	1911	2037	1.12
1.13	**32**	**36**	245	357	462	567	651	707	812	917	987	1057	1162	1337	1512	1687	1925	2051	1.13
1.13	**30**	**34**	259	371	476	581	665	721	826	931	1001	1071	1176	1351	1526	1701	1939	2065	1.13
1.14	**28**	**32**	273	385	490	595	679	735	840	945	1015	1085	1190	1365	1540	1715	1953	2079	1.14
1.14	**56**	**64**	–	–	–	385	469	525	630	735	805	875	980	1155	1330	1505	1743	1869	1.14
1.16	**38**	**44**	–	308	413	518	602	658	763	868	938	1008	1113	1288	1463	1638	1876	2002	1.16
1.17	**48**	**56**	–	–	336	441	525	581	686	791	861	931	1036	1211	1386	1561	1799	1925	1.17
1.17	**29**	**34**	262	374	479	584	668	724	829	934	1004	1074	1179	1354	1529	1704	1942	2068	1.17
1.18	**34**	**40**	224	336	441	546	630	686	791	896	966	1036	1141	1316	1491	1666	1904	2030	1.18
1.19	**32**	**38**	238	350	455	560	644	700	805	910	980	1050	1155	1330	1505	1680	1918	2044	1.19
1.20	**30**	**36**	252	364	469	574	658	714	819	924	994	1064	1169	1344	1519	1694	1932	2058	1.20
1.20	**40**	**48**	–	286	392	497	581	637	742	847	917	987	1092	1267	1442	1617	1855	1981	1.20
1.21	**28**	**34**	266	378	483	588	672	728	833	938	1008	1078	1183	1358	1533	1708	1946	2072	1.21
1.22	**36**	**44**	202	314	420	525	609	665	770	875	945	1015	1120	1295	1470	1645	1883	2009	1.22
1.24	**29**	**36**	255	367	472	577	661	717	822	927	997	1067	1172	1347	1522	1697	1935	2061	1.24
1.25	**32**	**40**	230	343	448	553	637	693	798	903	973	1043	1148	1323	1498	1673	1911	2037	1.25
1.26	**38**	**48**	–	293	398	504	588	644	749	854	924	994	1099	1274	1449	1624	1862	1988	1.26
1.27	**30**	**38**	244	357	462	567	651	707	812	917	987	1057	1162	1337	1512	1687	1925	2051	1.27
1.27	**44**	**56**	–	244	349	454	538	594	699	805	875	945	1050	1225	1400	1575	1813	1939	1.27
1.29	**28**	**36**	258	371	476	581	665	721	826	931	1001	1071	1176	1351	1526	1701	1939	2065	1.29
1.29	**56**	**72**	–	–	–	355	440	496	601	706	776	846	951	1126	1302	1477	1715	1841	1.29
1.29	**34**	**44**	209	321	426	532	616	672	777	882	952	1022	1127	1302	1477	1652	1890	2016	1.29
1.31	**29**	**38**	248	360	465	570	654	710	815	920	990	1060	1165	1340	1515	1690	1928	2054	1.31
1.33	**30**	**40**	237	349	454	560	644	700	805	910	980	1050	1155	1330	1505	1680	1918	2044	1.33
1.33	**36**	**48**	–	300	405	510	594	650	756	861	931	1001	1106	1281	1456	1631	1869	1995	1.33
1.33	**48**	**64**	–	–	306	411	496	552	657	762	832	902	1007	1182	1358	1533	1771	1897	1.33
1.36	**28**	**38**	251	363	468	574	658	714	819	924	994	1064	1169	1344	1519	1694	1932	2058	1.36
1.38	**32**	**44**	215	328	433	538	622	678	784	889	959	1029	1134	1309	1484	1659	1897	2023	1.38
1.38	**29**	**40**	240	353	458	563	647	703	808	913	983	1053	1158	1333	1508	1683	1921	2047	1.38
1.40	**40**	**56**	–	257	362	468	552	608	713	818	888	958	1063	1238	1414	1589	1827	1953	1.40
1.41	**34**	**48**	–	306	412	517	601	657	762	867	937	1008	1113	1288	1463	1638	1876	2002	1.41
1.43	**28**	**40**	244	356	461	566	650	706	812	917	987	1057	1162	1337	1512	1687	1925	2051	1.43

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Fenner Torque Drive PLUS 3 14MXP & HTD 14M Drives

CENTRE DISTANCE IN MILLIMETRES

Speed Ratio	Number of grooves on		Belt pitch in millmetres																Speed Ratio
	Driving Pulley	Driven Pulley	966	1190	1400	1610	1778	1890	2100	2310	2450	2590	2800	3150	3500	3850	4326	4578	
			69 teeth	85 teeth	100 teeth	115 teeth	127 teeth	135 teeth	150 teeth	165 teeth	175 teeth	185 teeth	200 teeth	225 teeth	250 teeth	275 teeth	309 teeth	327 teeth	
1.43	**56**	**80**	–	–	–	325	410	466	571	677	747	817	922	1098	1273	1448	1686	1812	1.43
1.45	**44**	**64**	–	–	319	425	509	565	671	776	846	916	1021	1196	1371	1546	1784	1910	1.45
1.47	**30**	**44**	222	335	440	545	629	685	790	895	965	1036	1141	1316	1491	1666	1904	2030	1.47
1.47	**38**	**56**	–	263	369	474	559	615	720	825	895	965	1070	1245	1420	1595	1834	1960	1.47
1.50	**32**	**48**	200	313	418	524	608	664	769	874	944	1014	1119	1295	1470	1645	1883	2009	1.50
1.50	**48**	**72**	–	–	–	381	466	522	628	733	803	873	979	1154	1329	1504	1742	1868	1.50
1.52	**29**	**44**	225	338	443	548	633	689	794	899	969	1039	1144	1319	1494	1669	1907	2033	1.52
1.56	**36**	**56**	–	269	375	481	565	621	727	832	902	972	1077	1252	1427	1602	1840	1966	1.56
1.57	**28**	**44**	228	341	447	552	636	692	797	902	972	1042	1147	1323	1498	1673	1911	2037	1.57
1.60	**30**	**48**	206	319	425	530	615	671	776	881	951	1021	1126	1301	1476	1652	1890	2016	1.60
1.60	**40**	**64**	–	–	332	438	522	579	684	789	859	929	1035	1210	1385	1560	1798	1924	1.60
1.61	**56**	**90**	–	–	–	–	370	427	534	640	710	780	886	1061	1237	1412	1650	1776	1.61
1.64	**44**	**72**	–	–	287	394	479	535	641	746	817	887	992	1167	1343	1518	1756	1882	1.64
1.65	**34**	**56**	–	276	382	488	572	628	733	839	909	979	1084	1259	1434	1609	1847	1973	1.65
1.66	**29**	**48**	209	323	428	534	618	674	779	884	955	1025	1130	1305	1480	1655	1893	2019	1.66
1.67	**48**	**80**	–	–	–	350	435	492	598	703	774	844	949	1125	1300	1475	1714	1840	1.67
1.68	**38**	**64**	–	–	338	444	529	585	691	796	866	936	1041	1217	1392	1567	1805	1931	1.68
1.71	**28**	**48**	212	326	432	537	621	678	783	888	958	1028	1133	1308	1483	1658	1896	2023	1.71
1.75	**32**	**56**	–	282	388	494	579	635	740	845	915	986	1091	1266	1441	1616	1854	1980	1.75
1.78	**36**	**64**	–	–	344	451	535	592	697	803	873	943	1048	1223	1399	1574	1812	1938	1.78
1.80	**40**	**72**	–	–	300	407	492	548	654	760	830	900	1005	1181	1356	1531	1770	1896	1.80
1.82	**44**	**80**	–	–	–	362	448	505	611	717	787	857	963	1138	1314	1489	1727	1853	1.82
1.87	**30**	**56**	–	288	395	501	585	641	747	852	922	992	1097	1273	1448	1623	1861	1987	1.87
1.88	**48**	**90**	–	–	–	–	395	452	559	665	736	807	912	1088	1264	1439	1677	1804	1.88
1.88	**34**	**64**	–	243	351	457	542	598	704	809	879	950	1055	1230	1405	1581	1819	1945	1.88
1.89	**38**	**72**	–	–	306	413	498	555	661	766	837	907	1012	1188	1356	1538	1776	1902	1.89
1.93	**29**	**56**	–	291	389	504	588	645	750	855	926	996	1101	1276	1451	1626	1865	1991	1.93
2.00	**28**	**56**	–	294	401	507	592	648	753	859	929	999	1104	1279	1455	1630	1868	1994	2.00
2.00	**32**	**64**	–	249	357	464	548	605	710	816	886	956	1062	1237	1412	1587	1826	1952	2.00
2.00	**36**	**72**	–	–	312	419	505	561	667	773	843	913	1019	1194	1370	1545	1783	1909	2.00
2.00	**40**	**80**	–	–	–	374	460	517	624	730	800	870	976	1152	1327	1502	1741	1867	2.00
2.00	**56**	**112**	–	–	–	–	–	–	444	553	625	696	802	979	1155	1331	1570	1696	2.00
2.05	**44**	**90**	–	–	–	320	407	465	572	678	749	820	925	1101	1277	1452	1691	1817	2.05
2.11	**38**	**80**	–	–	–	380	467	524	630	736	807	877	983	1158	1334	1509	1747	1874	2.11
2.12	**34**	**72**	–	–	318	426	511	568	674	779	850	920	1026	1201	1376	1552	1790	1916	2.12
2.13	**30**	**64**	–	255	363	470	555	611	717	823	893	963	1068	1244	1419	1594	1832	1959	2.13
2.21	**29**	**64**	–	258	366	473	558	615	720	826	896	966	1072	1247	1422	1598	1836	1962	2.21
2.22	**36**	**80**	–	–	–	387	473	530	636	743	813	884	989	1165	1340	1516	1754	1880	2.22
2.25	**32**	**72**	–	–	324	432	517	574	680	786	856	927	1032	1208	1383	1558	1797	1923	2.25
2.25	**40**	**90**	–	–	–	331	419	477	584	691	762	833	938	1114	1290	1466	1704	1831	2.25
2.29	**28**	**64**	–	261	369	476	561	618	724	829	899	970	1075	1250	1426	1601	1839	1965	2.29
2.33	**48**	**112**	–	–	–	–	–	–	468	577	649	721	828	1005	1181	1358	1597	1723	2.33
2.35	**34**	**80**	–	–	282	393	479	536	643	749	820	890	996	1172	1347	1523	1761	1887	2.35
2.37	**38**	**90**	–	–	–	337	425	483	591	697	768	839	945	1121	1297	1472	1711	1837	2.37
2.40	**30**	**72**	–	–	330	438	524	580	687	792	863	933	1039	1214	1390	1565	1804	1930	2.40
2.48	**29**	**72**	–	–	333	441	527	584	690	796	866	937	1042	1218	1393	1569	1807	1933	2.48
2.50	**32**	**80**	–	–	288	399	485	542	649	755	826	897	1002	1178	1354	1529	1758	1894	2.50
2.50	**36**	**90**	–	–	–	343	431	489	597	704	775	845	951	1128	1303	1479	1718	1844	2.50
2.55	**44**	**112**	–	–	–	–	–	368	480	590	662	733	840	1018	1194	1371	1610	1736	2.55
2.57	**28**	**72**	–	–	336	444	530	587	693	799	869	940	1045	1221	1397	1572	1810	1937	2.57
2.57	**56**	**144**	–	–	–	–	–	–	–	–	485	561	671	852	1031	1209	1450	1577	2.57
2.65	**34**	**90**	–	–	–	349	437	495	603	710	781	852	958	1134	1310	1486	1724	1851	2.65
2.67	**30**	**80**	–	–	294	405	491	549	656	762	833	903	1009	1185	1360	1536	1775	1901	2.67
2.76	**29**	**80**	–	–	297	408	494	552	659	765	836	906	1012	1188	1364	1539	1778	1904	2.76
2.80	**40**	**112**	–	–	–	–	–	379	492	602	674	746	853	1031	1207	1384	1623	1750	2.80

All centre distances are rounded values – Consult your local Authorised Distributor if centre distance is fixed.

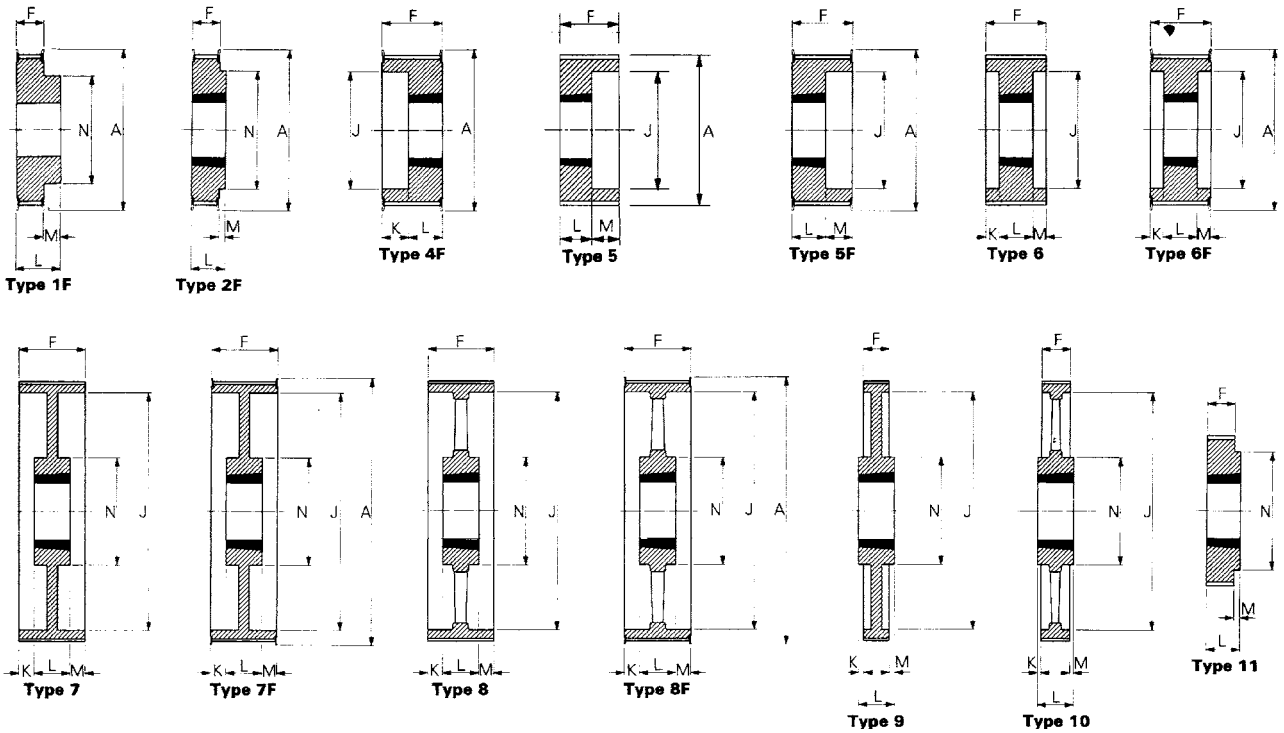
Fenner Torque Drive PLUS 3 14MXP & HTD 14M Drives

CENTRE DISTANCE IN MILLIMETRES

Speed Ratio	Number of grooves on		Belt pitch in millmetres															Speed Ratio
	Driving Pulley	Driven Pulley	966	1190	1400	1610	1778	1890	2100	2310	2450	2590	2800	3150	3500	3850	4326	4578	
			69 teeth	85 teeth	100 teeth	115 teeth	127 teeth	135 teeth	150 teeth	165 teeth	175 teeth	185 teeth	200 teeth	225 teeth	250 teeth	275 teeth	309 teeth	327 teeth	
2.81	**32**	**90**	–	–	–	354	443	501	609	716	787	858	964	1141	1317	1492	1731	1858	2.81
2.86	**28**	**80**	–	–	300	411	498	555	662	768	839	910	1015	1191	1367	1543	1781	1907	2.86
2.95	**38**	**112**	–	–	–	–	–	385	498	608	680	752	859	1037	1214	1390	1630	1756	2.95
3.00	**30**	**90**	–	–	–	360	449	507	615	723	794	865	971	1147	1323	1499	1738	1864	3.00
3.00	**48**	**144**	–	–	–	–	–	–	–	–	508	584	695	877	1056	1234	1475	1603	3.00
3.00	**56**	**168**	–	–	–	–	–	–	–	–	–	–	560	749	933	1113	1356	1484	3.00
3.10	**29**	**90**	–	–	–	363	452	510	619	726	797	868	974	1150	1327	1502	1741	1868	3.10
3.11	**36**	**112**	–	–	–	–	–	390	504	614	686	758	865	1043	1220	1397	1636	1763	3.11
3.21	**28**	**90**	–	–	–	366	455	513	622	729	800	871	977	1154	1330	1506	1745	1871	3.21
3.27	**44**	**144**	–	–	–	–	–	–	–	441	519	595	707	889	1069	1247	1488	1616	3.27
3.29	**34**	**112**	–	–	–	–	–	396	509	620	692	764	872	1050	1227	1403	1643	1769	3.29
3.43	**56**	**192**	–	–	–	–	–	–	–	–	–	–	–	635	826	1012	1259	1388	3.43
3.50	**32**	**112**	–	–	–	–	–	401	515	626	698	770	878	1056	1233	1410	1649	1776	3.50
3.50	**48**	**168**	–	–	–	–	–	–	–	–	–	–	583	773	957	1138	1381	1509	3.50
3.60	**40**	**144**	–	–	–	–	–	–	–	452	530	607	719	901	1081	1260	1501	1629	3.60
3.73	**30**	**112**	–	–	–	–	343	407	521	632	704	777	884	1062	1240	1416	1656	1783	3.73
3.79	**38**	**144**	–	–	–	–	–	–	–	457	536	612	725	907	1087	1266	1507	1635	3.79
3.82	**44**	**168**	–	–	–	–	–	–	–	–	–	–	594	784	969	1150	1394	1522	3.82
3.86	**29**	**112**	–	–	–	–	346	410	524	635	707	780	887	1065	1243	1419	1659	1786	3.86
4.00	**28**	**112**	–	–	–	–	349	413	527	638	710	783	890	1069	1246	1423	1662	1789	4.00
4.00	**36**	**144**	–	–	–	–	–	–	–	462	542	618	730	913	1094	1272	1514	1641	4.00
4.00	**48**	**192**	–	–	–	–	–	–	–	–	–	–	–	654	849	1035	1283	1413	4.00
4.20	**40**	**168**	–	–	–	–	–	–	–	–	–	–	605	796	981	1162	1406	1534	4.20
4.24	**34**	**144**	–	–	–	–	–	–	–	488	547	624	736	919	1100	1279	1520	1648	4.24
4.36	**44**	**192**	–	–	–	–	–	–	–	–	–	–	–	668	861	1047	1295	1425	4.36
4.42	**38**	**168**	–	–	–	–	–	–	–	–	–	488	610	802	986	1168	1412	1541	4.42
4.50	**32**	**144**	–	–	–	–	–	–	–	473	553	630	742	925	1106	1285	1527	1654	4.50
4.67	**36**	**168**	–	–	–	–	–	–	–	–	–	493	616	807	992	1174	1419	1547	4.67
4.80	**30**	**144**	–	–	–	–	–	–	–	479	558	635	748	931	1112	1291	1533	1661	4.80
4.80	**40**	**192**	–	–	–	–	–	–	–	–	–	–	–	678	872	1059	1307	1437	4.80
4.94	**34**	**168**	–	–	–	–	–	–	–	–	–	499	621	813	998	1180	1425	1553	4.94
4.97	**29**	**144**	–	–	–	–	–	–	–	481	561	638	751	934	1115	1294	1536	1664	4.97
5.05	**38**	**192**	–	–	–	–	–	–	–	–	–	–	–	684	878	1065	1313	1443	5.05
5.14	**28**	**144**	–	–	–	–	–	–	–	484	564	641	754	937	1118	1297	1539	1667	5.14
5.25	**32**	**168**	–	–	–	–	–	–	–	–	–	504	627	819	1004	1186	1431	1560	5.25
5.33	**36**	**192**	–	–	–	–	–	–	–	–	–	–	–	689	884	1071	1319	1449	5.33
5.60	**30**	**168**	–	–	–	–	–	–	–	–	–	509	632	825	1010	1192	1437	1566	5.60
5.65	**34**	**192**	–	–	–	–	–	–	–	–	–	–	–	695	889	1076	1325	1455	5.65
5.79	**29**	**168**	–	–	–	–	–	–	–	–	–	512	635	828	1013	1195	1440	1569	5.79
6.00	**28**	**168**	–	–	–	–	–	–	–	–	–	514	638	830	1016	1198	1443	1572	6.00
6.00	**32**	**192**	–	–	–	–	–	–	–	–	–	–	–	700	895	1082	1331	1462	6.00
6.40	**30**	**192**	–	–	–	–	–	–	–	–	–	–	–	706	901	1088	1337	1468	6.40
6.62	**29**	**192**	–	–	–	–	–	–	–	–	–	–	–	708	904	1091	1340	1471	6.62
6.86	**28**	**192**	–	–	–	–	–	–	–	–	–	–	–	711	906	1094	1343	1474	6.86

All centre distances are rounded values – Consult your local Authorised Distributor if centre distance is fixed.

Fenner Torque Drive PLUS 3 HTD Pulleys



5MM PITCH (5M) HTD PULLEYS (FOR USE WITH HTD BELTS ONLY)

Catalogue Code	No. of Grooves	Pulley Designation	Pulley Type	Bush No.	Max Bore		Pitch Dia.	Outside Dia.	A	F	J	K	L	M	N
					Metric	Inch									
043F0028	28	28–5M–15	1F	6mm*	19	3/4	44.56	43.42	49	22	–	–	30	8	31
043F0032	32	32–5M–15	1F	8mm*	22	7/8	50.93	49.79	56	22	–	–	30	8	38
043F0034	34	34–5M–15	2F	1008	25	1	54.11	52.97	57	22	–	–	22	0	0
043F0036	36	36–5M–15	2F	1108	28	1 1/8	57.30	56.15	60	22	–	–	22	0	0
043F0038	38	38–5M–15	2F	1108	28	1 1/8	60.48	59.34	67	22	–	–	22	0	0
043F0040	40	40–5M–15	2F	1108	28	1 1/8	63.66	62.52	71	22	–	–	22	0	0
043F0044	44	44–5M–15	2F	1108	28	1 1/8	70.03	68.89	75	22	–	–	22	0	0
043F0048	48	48–5M–15	2F	1210	32	1 1/4	76.39	75.25	83	22	–	–	25	3	59
043F0056	56	56–5M–15	2F	1210	32	1 1/4	89.13	87.98	93	22	–	–	25	3	75
043F0064	64	64–5M–15	2F	1210	32	1 1/4	101.86	100.72	106	22	–	–	25	3	80
043F0072	72	72–5M–15	11	1610	42	1 5/8	114.59	113.45	–	22	–	–	25	3	92
043F0080	80	80–5M–15	11	1610	42	1 5/8	127.32	126.18	–	22	–	–	25	3	92
043F0090	90	90–5M–15	10	1610	42	1 5/8	143.24	142.10	–	20.5	–	–	25	2.3	92
043F0112	112	112–5M–15	10	1610	42	1 5/8	178.25	177.11	–	20.5	–	–	25	2.3	110
043F0136	136	136–5M–15	10	2012	50	2	216.45	215.31	–	20.5	–	–	32	5.8	110

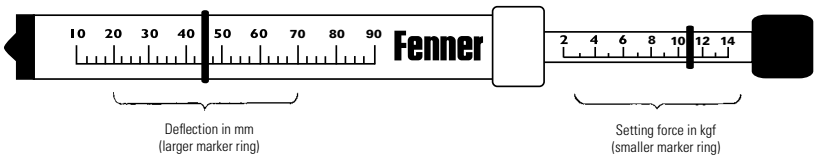
These pulleys are used for both 15mm wide and 9mm wide belts.
Dimensions in millimetres unless otherwise stated.
* Pilot bore only

Prime functional dimensions are correct at the time of publication.
Pulley types and non-functional dimensions may vary.

FENNER BELT TENSION INDICATOR

The high performance and efficiency of Fenner Synchronous belts requires correct tension. We recommend using the Fenner Belt Tension Indicator.

NOTE: To measure tension in synchronous belts, place a piece of rigid material across the belt width at mid-span, before applying the gauge.



Fenner Torque Drive PLUS 3 8MXP & HTD 8M Pulleys

8MM PULLEYS (20MM WIDE BELT)

Catalogue Code	No. of Grooves	Pulley Designation	Pulley Type	Bush No.	Max Bore		Pitch Dia.	Outside Dia.	A	F	J	K	L	M	N
					Metric	Inch									
043J0022	22	22–8M–20	4F	1108	25	1	56.02	54.65	60	28	37	6	22	–	–
043J0024	24	24–8M–20	4F	1108	28	1 1/8	61.12	59.75	66	28	44	6	22	–	–
043J0026	26	26–8M–20	4F	1108	28	1 1/8	66.21	64.84	70	28	45	6	22	–	–
043J0028	28	28–8M–20	4F	1108	28	1 1/8	71.30	70.08	75	28	50	6	22	–	–
043J0030	30	30–8M–20	4F	1108	28	1 1/8	76.39	75.13	83	28	58	6	22	–	–
043J0032	32	32–8M–20	4F	1610	42	1 5/8	81.49	80.16	87	28	63	3	25	–	–
043J0034	34	34–8M–20	4F	1610	42	1 5/8	86.58	85.22	91	28	64	3	25	–	–
043J0036	36	36–8M–20	4F	1610	42	1 5/8	91.67	90.30	97	28	68	3	25	–	–
043J0038	38	38–8M–20	4F	1610	42	1 5/8	96.77	95.39	102	28	72	3	25	–	–
043J0040	40	40–8M–20	4F	1610	42	1 5/8	101.86	100.49	106	28	76	3	25	–	–
043J0044	44	44–8M–20	2F	2012	50	2	112.05	110.67	120	28	0	–	32	4	92
043J0048	48	48–8M–20	2F	2012	50	2	122.23	120.86	128	28	0	–	32	4	96
043J0056	56	56–8M–20	2F	2012	50	2	142.60	141.23	150	28	0	–	32	4	110
043J0064	64	64–8M–20	2F*	2012	50	2	162.97	161.60	168	28	137	–	32	4	110
043J0072	72	72–8M–20	2F*	2012	50	2	183.35	181.97	192	28	158	–	32	4	110
043J0080	80	80–8M–20	9	2012	50	2	203.72	202.35	–	28	180	0	32	4	110
043J0090	90	90–8M–20	9	2012	50	2	229.18	227.81	–	28	204	0	32	4	110

* These pulleys are recessed to a plate centre – under rim diameter J.

8MM PULLEYS (30MM WIDE BELT)

Catalogue Code	No. of Grooves	Pulley Designation	Pulley Type	Bush No.	Max Bore		Pitch Dia.	Outside Dia.	A	F	J	K	L	M	N
					Metric	Inch									
043K0022	22	22–8M–30	4F	1008	25	1	56.02	54.65	60	38	37	16	22	0	–
043K0024	24	24–8M–30	4F	1108	28	1 1/8	61.12	59.75	66	38	44	16	22	0	–
043K0026	26	26–8M–30	4F	1108	28	1 1/8	66.21	64.84	70	38	44	16	22	0	–
043K0028	28	28–8M–30	4F	1210	32	1 1/4	71.30	70.08	75	38	50	13	25	0	–
043K0030	30	30–8M–30	2F	1615	42	1 5/8	76.39	75.13	83	38	0	0	38	0	–
043K0032	32	32–8M–30	2F	1615	42	1 5/8	81.49	80.16	87	38	0	0	38	0	–
043K0034	34	34–8M–30	2F	1615	42	1 5/8	86.58	85.22	91	38	0	0	38	0	–
043K0036	36	36–8M–30	2F	1615	42	1 5/8	91.67	90.30	97	38	0	0	38	0	–
043K0038	38	38–8M–30	2F	1615	42	1 5/8	96.77	95.39	102	38	0	0	38	0	–
043K0040	40	40–8M–30	2F	1615	42	1 5/8	101.86	100.49	106	38	0	0	38	0	–
043K0044	44	44–8M–30	4F	2012	50	2	112.05	110.67	120	38	86	6	32	0	–
043K0048	48	48–8M–30	4F	2012	50	2	122.23	120.86	128	38	90	6	32	0	–
043K0056	56	56–8M–30	6F	2012	50	2	142.60	141.23	150	38	110	3	32	3	–
043K0064	64	64–8M–30	2F*	2517	60	2 1/2	162.97	161.60	168	38	0	0	45	7	125
043K0072	72	72–8M–30	2F*	2517	60	2 1/2	183.35	181.97	192	38	158	0	45	7	125
043K0080	80	80–8M–30	9	2517	60	2 1/2	203.72	202.35	–	38	180	0	45	7	125
043K0090	90	90–8M–30	9	2517	60	2 1/2	229.18	227.81	–	38	204	0	45	7	125
043K0112	112	112–8M–30	9	2517	60	2 1/2	285.21	283.83	–	38	254	0	45	7	125
043K0144	144	144–8M–30	8	2517	60	2 1/2	366.69	365.32	–	38	336	0	45	7	125

8MM PULLEYS (50MM WIDE BELT)

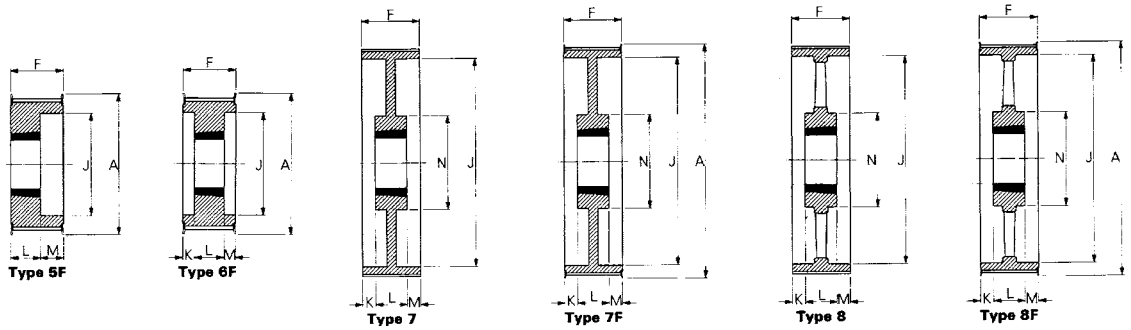
Catalogue Code	No. of Grooves	Pulley Designation	Pulley Type	Bush No.	Max Bore		Pitch Dia.	Outside Dia.	a	f	j	k	l	m	n
					Metric	Inch									
043L0028	28	28–8M–50	4F	1210	32	1 1/4	71.30	70.08	75	60	50	35.0	25	0.0	–
043L0030	30	30–8M–50	4F	1615	42	1 5/8	76.39	75.13	83	60	58	22.0	38	0.0	–
043L0032	32	32–8M–50	4F	1615	42	1 5/8	81.49	80.16	87	60	63	22.0	38	0.0	–
043L0034	34	34–8M–50	4F	1615	42	1 5/8	86.58	85.22	91	60	65	22.0	38	0.0	–
043L0036	36	36–8M–50	4F	1615	42	1 5/8	91.67	90.30	97	60	68	22.0	38	0.0	–
043L0038	38	38–8M–50	4F	1615	42	1 5/8	96.77	95.39	102	60	72	22.0	38	0.0	–
043L0040	40	40–8M–50	6F	2012	50	2	101.86	100.49	106	60	80	14.0	32	14.0	–
043L0044	44	44–8M–50	6F	2012	50	2	112.05	110.67	120	60	86	14.0	32	14.0	–
043L0048	48	48–8M–50	6F	2012	50	2	122.23	120.86	128	60	95	14.0	32	14.0	–
043L0056	56	56–8M–50	6F	2517	60	2 1/2	142.60	141.23	150	60	116	7.5	45	7.5	–
043L0064	64	64–8M–50	6F	2517	60	2 1/2	162.97	161.60	168	60	136	7.5	45	7.5	–
043L0072	72	72–8M–50	7F	2517	60	2 1/2	183.35	181.97	192	60	158	7.5	45	7.5	125
043L0080	80	80–8M–50	6	3020	75	3	203.72	202.35	–	60	180	4.5	51	4.5	–
043L0090	90	90–8M–50	7	3020	75	3	229.18	227.81	–	60	204	4.5	51	4.5	160
043L0112	112	112–8M–50	7	3020	75	3	285.21	283.83	–	60	254	4.5	51	4.5	170
043L0144	144	144–8M–50	8	3020	75	3	366.69	365.32	–	60	336	4.5	51	4.5	170
043L0168	168	168–8M–50	10	3525	100	4	427.81	426.44	–	60	395	2.5	65	2.5	198
043L0192	192	192–8M–50	10	3525	100	4	488.92	487.55	–	60	455	2.5	65	2.5	198

8MM PULLEYS (85MM WIDE BELT)

Catalogue Code	No. of Grooves	Pulley Designation	Pulley Type	Bush No.	Max Bore		Pitch Dia.	Outside Dia.	A	F	J	K	L	M	N
					Metric	Inch									
043M0034	34	34–8M–85	6F	1615	42	1 5/8	86.58	85.22	91	95	65	28	38	28	–
043M0036	36	36–8M–85	6F	1615	42	1 5/8	91.67	90.30	97	95	68	28	38	28	–
043M0038	38	38–8M–85	6F	1615	42	1 5/8	96.77	95.39	102	95	72	28	38	28	–
043M0040	40	40–8M–85	6F	2012	50	2	101.86	100.49	106	95	80	31	32	31	–
043M0044	44	44–8M–85	6F	2012	50	2	112.05	110.67	120	95	86	31	32	31	–
043M0048	48	48–8M–85	6F	2517	60	2 1/2	122.23	120.86	128	95	97	25	45	25	–
043M0056	56	56–8M–85	6F	2517	60	2 1/2	142.60	141.23	150	95	116	25	45	25	–
043M0064	64	64–8M–85	6F	2517	60	2 1/2	162.97	161.60	168	95	136	25	45	25	–
043M0072	72	72–8M–85	6F	3020	75	3	183.35	181.97	192	95	150	22	51	22	–
043M0080	80	80–8M–85	6	3020	75	3	203.72	202.35	–	95	180	22	51	22	–
043M0090	90	90–8M–85	6	3020	75	3	229.18	227.81	–	95	204	22	51	22	–
043M0112	112	112–8M–85	7	3020	75	3	285.21	283.83	–	95	254	22	51	22	170
043M0144	144	144–8M–85	7	3525	100	4	366.69	365.32	–	95	336	15	65	15	198
043M0168	168	168–8M–85	8	3525	100	4	427.81	426.44	–	95	395	15	65	15	198
043M0192	192	192–8M–85	8	3525	100	4	488.92	487.55	–	95	455	15	65	15	198

Dimensions in millimetres unless otherwise stated.
Prime functional dimensions are correct at the time of publication. Pulley types and non-functional dimensions may vary.

Fenner Torque Drive PLUS 3 14MXP & HTD 14M Pulleys



14MM PULLEYS (40MM WIDE BELT)

Catalogue Code	No. of Grooves	Pulley Designation	Pulley Type	Bush No.	Max Bore		Pitch Dia.	Outside Dia.	A	F	J	K	L	M	N
					Metric	Inch									
043N0028	28	28–14M–40	6F	2012	50	2	124.78	122.12	128	54	94	11.0	32	11.0	–
043N0029	29	29–14M–40	6F	2012	50	2	129.23	126.57	138	54	98	11.0	32	11.0	–
043N0030	30	30–14M–40	6F	2012	50	2	133.69	130.99	138	54	98	11.0	32	11.0	–
043N0032	32	32–14M–40	6F	2012	50	2	142.60	139.88	154	54	108	11.0	32	11.0	–
043N0034	34	34–14M–40	6F	2517	60	2½	151.51	148.79	160	54	110	4.5	45	4.5	–
043N0036	36	36–14M–40	6F	2517	60	2½	160.43	157.68	168	54	120	4.5	45	4.5	–
043N0038	38	38–14M–40	6F	2517	60	2½	169.34	166.60	183	54	130	4.5	45	4.5	–
043N0040	40	40–14M–40	6F	2517	60	2½	178.25	175.49	188	54	138	4.5	45	4.5	–
043N0044	44	44–14M–40	6F	3020	75	3	196.08	193.28	211	54	155	1.5	51	1.5	–
043N0048	48	48–14M–40	6F	3020	75	3	213.90	211.11	226	54	170	1.5	51	1.5	–
043N0056	56	56–14M–40	6F	3020	75	3	249.55	246.76	256	54	208	1.5	51	1.5	–
043N0064	64	64–14M–40	7F	3020	75	3	285.21	282.41	296	54	240	1.5	51	1.5	170
043N0072	72	72–14M–40	7	3020	75	3	320.86	318.06	–	54	280	1.5	51	1.5	170
043N0080	80	80–14M–40	8	3020	75	3	356.51	353.71	–	54	315	1.5	51	1.5	170
043N0090	90	90–14M–40	8	3020	75	3	401.07	398.28	–	54	360	1.5	51	1.5	170
043N0112	112	112–14M–40	8	3020	75	3	499.11	496.32	–	54	457	1.5	51	1.5	170
043N0144	144	144–14M–40	8	3020	75	3	641.71	638.92	–	54	600	1.5	51	1.5	170
043N0168	168	168–14M–40	8	3020	75	3	748.66	745.87	–	54	706	1.5	51	1.5	170
043N0192	192	192–14M–40	8	3020	75	3	855.62	852.82	–	54	813	1.5	51	1.5	170

14MM PULLEYS (55MM WIDE BELT)

Catalogue Code	No. of Grooves	Pulley Designation	Pulley Type	Bush No.	Max Bore		Pitch Dia.	Outside Dia.	A	F	J	K	L	M	N
					Metric	Inch									
043P0028	28	28–14M–55	6F	2012	50	2	124.78	122.12	128	70	94	19.0	32	19.0	–
043P0029	29	29–14M–55	6F	2012	50	2	129.23	126.57	138	70	100	19.0	32	19.0	–
043P0030	30	30–14M–55	6F	2517	60	2½	133.69	130.99	138	70	100	12.5	45	12.5	–
043P0032	32	32–14M–55	6F	2517	60	2½	142.60	139.88	154	70	108	12.5	45	12.5	–
043P0034	34	34–14M–55	6F	2517	60	2½	151.51	148.79	160	70	110	12.5	45	12.5	–
043P0036	36	36–14M–55	6F	2517	60	2½	160.43	157.68	168	70	120	12.5	45	12.5	–
043P0038	38	38–14M–55	6F	2517	60	2½	169.34	166.60	183	70	130	12.5	45	12.5	–
043P0040	40	40–14M–55	6F	2517	60	2½	178.25	175.49	188	70	138	12.5	45	12.5	–
043P0044	44	44–14M–55	6F	3020	75	3	196.08	193.28	211	70	155	9.5	51	9.5	–
043P0048	48	48–14M–55	6F	3020	75	3	213.90	211.11	226	70	170	9.5	51	9.5	–
043P0056	56	56–14M–55	6F	3020	75	3	249.55	246.76	256	70	208	9.5	51	9.5	–
043P0064	64	64–14M–55	7F	3020	75	3	285.21	282.41	296	70	240	9.5	51	9.5	170
043P0072	72	72–14M–55	8	3020	75	3	320.86	318.06	–	70	280	9.5	51	9.5	170
043P0080	80	80–14M–55	8	3020	75	3	356.51	353.71	–	70	315	9.5	51	9.5	170
043P0090	90	90–14M–55	8	3020	75	3	401.07	398.28	–	70	360	9.5	51	9.5	170
043P0112	112	112–14M–55	8	3020	75	3	499.11	496.32	–	70	457	9.5	51	9.5	170
043P0144	144	144–14M–55	8	3020	75	3	641.71	638.92	–	70	600	9.5	51	9.5	170
043P0168	168	168–14M–55	8	3020	75	3	748.66	745.87	–	70	706	9.5	51	9.5	170
043P0192	192	192–14M–55	8	3020	75	3	855.62	852.82	–	70	813	9.5	51	9.5	170

14MM PULLEYS (85MM WIDE BELT)

Catalogue Code	No. of Grooves	Pulley Designation	Pulley Type	Bush No.	Max Bore		Pitch Dia.	Outside Dia.	A	F	J	K	L	M	N
					Metric	Inch									
043R0028	28	28–14M–85	6F	2517	60	2½	124.78	122.12	128	102	98	28.5	45	28.5	–
043R0029	29	29–14M–85	6F	2517	60	2½	129.33	126.57	138	102	60	28.5	45	28.5	–
043R0030	30	30–14M–85	6F	2517	60	2½	133.69	130.99	138	102	100	28.5	45	28.5	–
043R0032	32	32–14M–85	6F	2517	60	2½	142.60	139.88	154	102	108	28.5	45	28.5	–
043R0034	34	34–14M–85	6F	2517	60	2½	151.51	148.79	160	102	110	28.5	45	28.5	–
043R0036	36	36–14M–85	6F	3020	75	3	160.43	157.68	168	102	125	25.5	51	25.5	–
043R0038	38	38–14M–85	6F	3020	75	3	169.34	166.60	183	102	130	25.5	51	25.5	–
043R0040	40	40–14M–85	6F	3020	75	3	178.25	175.49	188	102	138	25.5	51	25.5	–
043R0044	44	44–14M–85	6F	3030	75	3	196.08	193.28	211	102	155	13.0	76	13.0	–
043R0048	48	48–14M–85	6F	3030	75	3	213.90	211.11	226	102	170	13.0	76	13.0	–
043R0056	56	56–14M–85	6F	3525	100	4	249.55	246.76	256	102	210	18.5	65	18.5	–
043R0064	64	64–14M–85	7F	3525	100	4	285.21	282.41	296	102	240	18.5	65	18.5	–
043R0072	72	72–14M–85	7	3525	100	4	320.86	318.06	–	102	280	18.5	65	18.5	178
043R0080	80	80–14M–85	7	3525	100	4	356.51	353.71	–	102	315	18.5	65	18.5	178
043R0090	90	90–14M–85	8	3525	100	4	401.07	398.28	–	102	360	18.5	65	18.5	178
043R0112	112	112–14M–85	8	3525	100	4	499.11	496.32	–	102	457	18.5	65	18.5	178
043R0144	144	144–14M–85	8	3525	100	4	641.71	638.92	–	102	600	18.5	65	18.5	206
043R0168	168	168–14M–85	8	3525	100	4	748.66	745.87	–	102	706	18.5	65	18.5	206
043R0192	192	192–14M–85	8	4040	115	4½	855.62	852.82	–	102	813	0.0	102	0.0	216

Dimensions in millimetres unless otherwise stated
Prime functional dimensions are correct at the time of publication.

Taper Lock pulleys for use with 14MXP and 14M belts of 115mm and 170mm widths are available.
Pulley types and non-functional dimensions may vary.

Classical Timing Drives and Belts

CLASSICAL TIMING DRIVES

Components for the original Timing Drive system are still available.

Belts and pulleys for L (Light or 3/8" pitch) and H (Heavy or 1/2" pitch) drives are available from stock as listed on pages 106 to 107 whilst the table below includes XL (eXtra Light) and XH (eXtra Heavy) belts which are readily available but not always from stock.

H pitch belts of 3" width are available but not from stock.

Order by catalogue codes shown on the following tables.

Fenner Timing Belt drive components conform to ISO 5296 and to BS 4548.

Drive powers of up to 50 kW can be accommodated and most of the pulleys use Taper Lock bushes for shaft fixing.

It is anticipated that the great majority of new drive requirements can best be satisfied with one of the more modern synchronomous drive systems. Should drive design details be required – consult your local Authorised Distributor

(XL) EXTRA LIGHT*

1/4" (6,5mm) WIDE BELT				3/8" (9,5mm) WIDE BELT			
Catalogue Code	Belt Designation	Catalogue Code	Belt Designation	Catalogue Code	Belt Designation	Catalogue Code	Belt Designation
275S0006	60XL025	275S0017	170XL025	275S2006	60XL037	275S2017	170XL037
275S0007	70XL025	275S0018	180XL025	275S2007	70XL037	275S2018	180XL037
275S0008	80XL025	275S0019	190XL025	275S2008	80XL037	275S2019	190XL037
275S0009	90XL025	275S0020	200XL025	275S2009	90XL037	275S2020	200XL037
275S0010	100XL025	275S0021	210XL025	275S2010	100XL037	275S2021	210XL037
275S0011	110XL025	275S0022	220XL025	275S2011	110XL037	275S2022	220XL037
275S0012	120XL025	275S0023	230XL025	275S2012	120XL037	275S2023	230XL037
275S0013	130XL025	275S0024	240XL025	275S2013	130XL037	275S2024	240XL037
275S0014	140XL025	275S0025	250XL025	275S2014	140XL037	275S2025	250XL037
275S0015	150XL025	275S0026	260XL025	275S2015	150XL037	275S2026	260XL037
275S0016	160XL025			275S2016	160XL037		

(L) LIGHT

1/2" (13mm) WIDE BELT				3/4" (19mm) WIDE BELT				1" (25mm) WIDE BELT			
Catalogue Code	Belt Designation	Catalogue Code	Belt Designation	Catalogue Code	Belt Designation	Catalogue Code	Belt Designation	Catalogue Code	Belt Designation	Catalogue Code	Belt Designation
275L3012	124L050	275L3034	345L050	275L4012	124L075	275L4034	345L075	275L5012	124L100	275L5034	345L100
275L3015	150L050	275L3037	367L050	275L4015	150L075	275L4037	367L075	275L5015	150L100	275L5037	367L100
275L3019	187L050	275L3039	390L050	275L4019	187L075	275L4039	390L075	275L5019	187L100	275L5039	390L100
275L3021	210L050	275L3042	420L050	275L4021	210L075	275L4042	420L075	275L5021	210L100	275L5042	420L100
275L3022	225L050	275L3045	450L050	275L4022	225L075	275L4045	450L075	275L5022	225L100	275L5045	450L100
275L3024	240L050	275L3048	480L050	275L4024	240L075	275L4048	480L075	275L5024	240L100	275L5048	480L100
275L3025	255L050	275L3051	510L050	275L4025	255L075	275L4051	510L075	275L5025	255L100	275L5051	510L100
275L3027	270L050	275L3054	540L050	275L4027	270L075	275L4054	540L075	275L5027	270L100	275L5054	540L100
275L3028	285L050	275L3060	600L050	275L4028	285L075	275L4060	600L075	275L5028	285L100	275L5060	600L100
275L3030	300L050			275L4030	300L075			275L5030	300L100		
275L3032	322L050			275L4032	322L075			275L5032	322L100		

(H) HEAVY

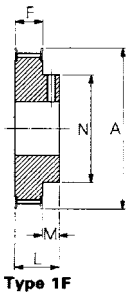
3/4" (19mm) WIDE BELT		1" (25mm) WIDE BELT		1 1/2" (38mm) WIDE BELT		2" (51mm) WIDE BELT		3" (76mm) WIDE BELT	
Catalogue Code	Belt Designation	Catalogue Code	Belt Designation	Catalogue Code	Belt Designation	Catalogue Code	Belt Designation	Catalogue Code	Belt Designation
275H4024	240H075	275H5024	240H100	275H6024	240H150	275H7024	240H200	275H8024	240H300
275H4027	270H075	275H5027	270H100	275H6027	270H150	275H7027	270H200	275H8027	270H300
275H4030	300H075	275H5030	300H100	275H6030	300H150	275H7030	300H200	275H8030	300H300
275H4033	330H075	275H5033	330H100	275H6033	330H150	275H7033	330H200	275H8033	330H300
275H4036	360H075	275H5036	360H100	275H6036	360H150	275H7036	360H200	275H8036	360H300
275H4039	390H075	275H5039	390H100	275H6039	390H150	275H7039	390H200	275H8039	390H300
275H4042	420H075	275H5042	420H100	275H6042	420H150	275H7042	420H200	275H8042	420H300
275H4045	450H075	275H5045	450H100	275H6045	450H150	275H7045	450H200	275H8045	450H300
275H4048	480H075	275H5048	480H100	275H6048	480H150	275H7048	480H200	275H8048	480H300
275H4051	510H075	275H5051	510H100	275H6051	510H150	275H7051	510H200	275H8051	510H300
275H4054	540H075	275H5054	540H100	275H6054	540H150	275H7054	540H200	275H8054	540H300
275H4057	570H075	275H5057	570H100	275H6057	570H150	275H7057	570H200	275H8057	570H300
275H4060	600H075	275H5060	600H100	275H6060	600H150	275H7060	600H200	275H8060	600H300
275H4063	630H075	275H5063	630H100	275H6063	630H150	275H7063	630H200	275H8063	630H300
275H4066	660H075	275H5066	660H100	275H6066	660H150	275H7066	660H200	275H8066	660H300
275H4070	700H075	275H5070	700H100	275H6070	700H150	275H7070	700H200	275H8070	700H300
275H4075	750H075	275H5075	750H100	275H6075	750H150	275H7075	750H200	275H8075	750H300
275H4080	800H075	275H5080	800H100	275H6080	800H150	275H7080	800H200	275H8080	800H300
275H4085	850H075	275H5085	850H100	275H6085	850H150	275H7085	850H200	275H8085	850H300
275H4090	900H075	275H5090	900H100	275H6090	900H150	275H7090	900H200	275H8090	900H300
275H4100	1000H075	275H5100	1000H100	275H6100	1000H150	275H7100	1000H200	275H8100	1000H300
275H4110	1100H075	275H5110	1100H100	275H6110	1100H150	275H7110	1100H200	275H8110	1100H300
275H4125	1250H075	275H5125	1250H100	275H6125	1250H150	275H7125	1250H200	275H8125	1250H300
275H4140	1400H075	275H5140	1400H100	275H6140	1400H150	275H7140	1400H200	275H8140	1400H300
275H4170	1700H075	275H5170	1700H100	275H6170	1700H150	275H7170	1700H200	275H8170	1700H300

(XH) EXTRA HEAVY*

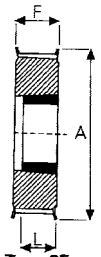
2" (51mm) WIDE BELT				3" (76mm) WIDE BELT				4" (102mm) WIDE BELT			
Catalogue Code	Belt Designation	Catalogue Code	Belt Designation	Catalogue Code	Belt Designation	Catalogue Code	Belt Designation	Catalogue Code	Belt Designation	Catalogue Code	Belt Designation
275X7050	507XH200	275X7098	980XH200	275X8050	507XH300	275X8098	908XH300	275X9050	507XH400	275X9098	980XH400
275X7056	560XH200	275X7112	1120XH200	275X8056	560XH300	275X8112	1120XH300	275X9056	560XH400	275X9112	1120XH400
275X7063	630XH200	275X7126	1260XH200	275X8063	630XH300	275X8126	1260XH300	275X9063	630XH400	275X9126	1260XH400
275X7070	700XH200	275X7140	1400XH200	275X8070	700XH300	275X8140	1400XH300	275X9070	700XH400	275X9140	1400XH400
275X7077	770XH200	275X7154	1540XH200	275X8077	770XH300	275X8154	1540XH300	275X9077	770XH400	275X9154	1540XH400
275X7084	840XH200	275X7175	1750XH200	275X8084	840XH300	275X8175	1750XH300	275X9084	840XH400	275X9175	1750XH400

* MXL, XL, XH and XXH belts available for replacement only – pulleys are not available from stock.

Classical Timing Pulley Dimensions - Light (L) Pitch



Type 1F



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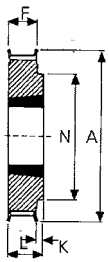

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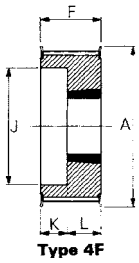
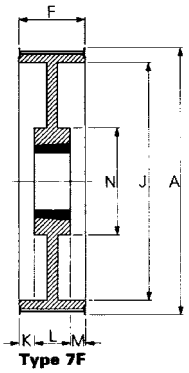
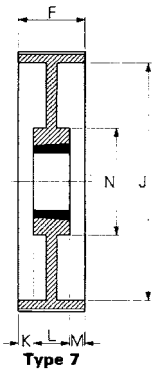


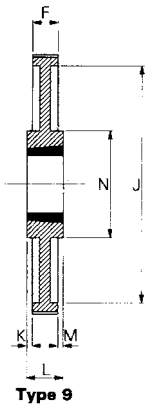
Type 4F



Type 7F



Type 7



Type 9

L050 – 1/2" (13mm) WIDE BELTS

Catalogue Code	Pulley Designation	Pitch dia.	No. of Teeth	Bush No.	Max Bore		Pulley Type	A	F	J	K	L	M	N
					Met.	Imp.								
023C0014	14L050	42.45	14	pilot bore	19	3/4	1F	49	19	–	–	30	11.0	32
023C0015	15L050	45.48	15	pilot bore	22	7/8	1F	52	19	–	–	30	11.0	35
023C0016	16L050	48.51	16	pilot bore	25	1	1F	56	19	–	–	30	11.0	38
023C0017	17L050	51.54	17	pilot bore	25	1	1F	57	19	–	–	30	11.0	38
023C0018	18L050	54.57	18	1108	28	1 1/8	3F	60	19	–	–	22	3.0	43
023C0019	19L050	57.61	19	1108	28	1 1/8	3F	64	19	–	–	22	3.0	43
023C0020	20L050	60.64	20	1108	28	1 1/8	3F	67	19	–	–	22	3.0	48
023C0021	21L050	63.67	21	1108	28	1 1/8	3F	70	19	–	–	22	3.0	48
023C0022	22L050	66.70	22	1108	28	1 1/8	3F	75	19	–	–	22	3.0	51
023C0023	23L050	69.73	23	1108	28	1 1/8	3F	79	19	–	–	22	3.0	54
023C0024	24L050	72.77	24	1108	28	1 1/8	3F	79	19	–	–	22	3.0	54
023C0025	25L050	75.80	25	1108	28	1 1/8	3F	83	19	–	–	22	3.0	56
023C0026	26L050	78.83	26	1108	28	1 1/8	3F	86	19	–	–	22	3.0	60
023C0027	27L050	81.86	27	1108	28	1 1/8	3F	86	19	–	–	22	3.0	62
023C0028	28L050	84.89	28	1108	28	1 1/8	3F	91	19	–	–	22	3.0	65
023C0030	30L050	90.96	30	1108	28	1 1/8	3F	98	19	–	–	22	3.0	70
023C0032	32L050	97.02	32	1108	28	1 1/8	3F	103	19	–	–	22	3.0	74
023C0036	36L050	109.15	36	1108	28	1 1/8	3F	115	19	–	–	22	3.0	85
023C0040	40L050	121.28	40	1610	42	1 5/8	3F	128	19	–	–	25	3.0	97
023C0048	48L050	145.53	48	1610	42	1 5/8	3F*	151	19	120	6.0	25	–	88
023C0060	60L050	181.91	60	1610	42	1 5/8	9	–	19	165	3.0	25	3.0	92
023C0072	72L050	218.30	72	1610	42	1 5/8	9#	–	19	202	3.0	25	3.0	92
023C0084	84L050	254.68	84	1610	42	1 5/8	9#	–	19	238	3.0	25	3.0	92
023C0096	96L050	291.06	96	2012	50	2	9#	–	19	275	6.5	32	6.5	106
023C0120	120L050	363.83	120	2012	50	2	9#	–	19	344	6.5	32	6.5	106

L075 – 3/4" (19mm) WIDE BELTS

Catalogue Code	Pulley Designation	Pitch dia.	No. of Teeth	Bush No.	Max Bore		Pulley Type	A	F	J	K	L	M	N
					Met.	Imp.								
023D0014	14L075	42.45	14	pilot bore	19	3/4	1F	49	25	–	–	37	12.0	32
023D0015	15L075	45.48	15	pilot bore	22	7/8	1F	52	25	–	–	37	12.0	35
023D0016	16L075	48.51	16	pilot bore	25	1	1F	56	25	–	–	37	12.0	38
023D0017	17L075	51.54	17	pilot bore	25	1	1F	57	25	–	–	37	12.0	38
023D0018	18L075	54.57	18	1108	28	1 1/8	2F	60	25	–	3.0	22	–	–
023D0019	19L075	57.61	19	1108	28	1 1/8	2F	64	25	–	3.0	22	–	–
023D0020	20L075	60.64	20	1108	28	1 1/8	2F	67	25	–	3.0	22	–	–
023D0021	21L075	63.67	21	1108	28	1 1/8	2F	70	25	–	3.0	22	–	–
023D0022	22L075	66.70	22	1108	28	1 1/8	2F	75	25	–	3.0	22	–	–
023D0023	23L075	69.73	23	1108	28	1 1/8	2F	79	25	–	3.0	22	–	–
023D0024	24L075	72.77	24	1108	28	1 1/8	2F	79	25	–	3.0	22	–	–
023D0025	25L075	75.80	25	1108	28	1 1/8	2F	83	25	–	3.0	22	–	–
023D0026	26L075	78.83	26	1108	28	1 1/8	2F	86	25	–	3.0	22	–	–
023D0027	27L075	81.86	27	1108	28	1 1/8	2F	86	25	–	3.0	22	–	–
023D0028	28L075	84.89	28	1108	28	1 1/8	2F	91	25	–	3.0	22	–	–
023D0030	30L075	90.96	30	1108	28	1 1/8	2F	98	25	–	3.0	22	–	–
023D0032	32L075	97.02	32	1108	28	1 1/8	2F	103	25	–	3.0	22	–	–
023D0036	36L075	109.15	36	1610	42	1 5/8	2F	115	25	–	0.0	25	–	–
023D0040	40L075	121.28	40	1610	42	1 5/8	2F	128	25	–	0.0	25	–	–
023D0048	48L075	145.53	48	1610	42	1 5/8	3F*	151	25	120	–	25	–	92
023D0060	60L075	181.91	60	1610	42	1 5/8	7	–	25	166	0.0	25	0.0	92
023D0072	72L075	218.30	72	1610	42	1 5/8	7#	–	25	202	0.0	25	0.0	92
023D0084	84L075	254.68	84	2012	50	2	9#	–	25	236	3.5	32	3.5	106
023D0096	96L075	291.06	96	2012	50	2	9#	–	25	270	3.5	32	3.5	106
023D0120	120L075	363.83	120	2012	50	2	9#	–	25	343	3.5	32	3.5	106

L100 – 1" (25mm) WIDE BELTS

Catalogue Code	Pulley Designation	Pitch dia.	No. of Teeth	Bush No.	Max Bore		Pulley Type	A	F	J	K	L	M	N
					Met.	Imp.								
023E0014	14L100	42.45	14	pilot bore	19	3/4	1F	49	32	–	–	43	11.0	32
023E0015	15L100	45.48	15	pilot bore	22	7/8	1F	52	32	–	–	43	11.0	35
023E0016	16L100	48.51	16	pilot bore	25	1	1F	56	32	–	–	43	11.0	38
023E0017	17L100	51.54	17	pilot bore	25	1	1F	57	32	–	–	43	11.0	38
023E0018	18L100	54.57	18	1108	28	1 1/8	4F	60	32	38	9.0	22	–	–
023E0019	19L100	57.61	19	1108	28	1 1/8	4F	64	32	38	9.0	22	–	–
023E0020	20L100	60.64	20	1108	28	1 1/8	4F	67	32	45	9.0	22	–	–
023E0021	21L100	63.67	21	1108	28	1 1/8	4F	70	32	45	9.0	22	–	–
023E0022	22L100	66.70	22	1108	28	1 1/8	4F	75	32	48	9.0	22	–	–
023E0023	23L100	69.73	23	1108	28	1 1/8	4F	79	32	52	10.0	22	–	–
023E0024	24L100	72.77	24	1108	28	1 1/8	4F	79	32	52	10.0	22	–	–
023E0025	25L100	75.80	25	1108	28	1 1/8	4F	83	32	54	10.0	22	–	–
023E0026	26L100	78.83	26	1108	28	1 1/8	4F	86	32	60	10.0	22	–	–
023E0027	27L100	81.86	27	1108	28	1 1/8	4F	86	32	60	10.0	22	–	–
023E0028	28L100	84.89	28	1108	28	1 1/8	4F	91	32	65	10.0	22	–	–
023E0030	30L100	90.96	30	1210	32	1 1/4	4F	98	32	71	7.0	25	–	–
023E0032	32L100	97.02	32	1210	32	1 1/4	4F	103	32	75	7.0	25	–	–
023E0036	36L100	109.15	36	1610	42	1 5/8	4F	115	32	86	7.0	25	–	–
023E0040	40L100	121.28	40	1610	42	1 5/8	7F	128	32	96	7.0	25	0.0	90
023E0048	48L100	145.53	48	1610	42	1 5/8	7F	151	32	110	7.0	25	0.0	92
023E0060	60L100	181.91	60	1610	42	1 5/8	7	–	32	166	3.5	25	3.5	92
023E0072	72L100	218.30	72	2012	50	2	9#	–	32	202	0.0	32	0.0	106
023E0084	84L100	254.68	84	2012	50	2	9#	–	32	236	0.0	32	0.0	106
023E0096	96L100	291.06	96	2012	50	2	9#	–	32	270	0.0	32	0.0	106
023E0120	120L100	363.83	120	2012	50	2	9#	–	32	343	0.0	32	0.0	106

Dimensions in millimetres unless otherwise stated.
* These pulleys are recessed to a plate centre under rim diameter J.
\# These pulleys have spokes instead of plate web centres.
Prime functional dimensions are correct at the time of publication. Pulley types and non-functional dimensions may vary.

Classical Timing Pulley Dimensions - Heavy (H) Pitch

H100– 3/4" (19mm) and 1" (25mm) WIDE BELTS

Catalogue Code	Pulley Designation	Pitch dia.	No. of Teeth	Bush No.	Max Bore		Pulley Type	A	F	J	K	L	M	N
					Met.	Imp.								
023F0018	18H100	72.77	18	1210	32	1 1/4	4F	79	32	52	7.0	25	–	–
023F0019	19H100	76.81	19	1210	32	1 1/4	4F	83	32	56	7.0	25	–	–
023F0020	20H100	80.95	20	1210	32	1 1/4	4F	87	32	60	7.0	25	–	–
023F0021	21H100	84.89	21	1210	32	1 1/4	4F	91	32	64	7.0	25	–	–
023F0022	22H100	88.94	22	1210	32	1 1/4	4F	95	32	67	7.0	25	–	–
023F0023	23H100	92.98	23	1610	42	1 5/8	4F	98	32	70	7.0	25	–	–
023F0024	24H100	97.02	24	1610	42	1 5/8	4F	103	32	74	7.0	25	–	–
023F0025	25H100	101.06	25	1610	42	1 5/8	4F	106	32	77	7.0	25	–	–
023F0026	26H100	105.11	26	1610	42	1 5/8	4F	112	32	82	7.0	25	–	–
023F0027	27H100	109.15	27	1610	42	1 5/8	4F	115	32	85	7.0	25	–	–
023F0028	28H100	113.19	28	1610	42	1 5/8	4F	120	32	90	7.0	25	–	–
023F0030	30H100	121.28	30	1610	42	1 5/8	4F	128	32	98	7.0	25	–	–
023F0032	32H100	129.36	32	1610	42	1 5/8	7F	135	32	106	7.0	25	–	80
023F0036	36H100	145.53	36	1610	42	1 5/8	7F	151	32	121	7.0	25	–	92
023F0040	40H100	161.70	40	1610	42	1 5/8	7F	168	32	138	7.0	25	–	92
023F0048	48H100	194.04	48	2012	50	2	7F	200	32	152	0.0	32	0.0	106
023F0060	60H100	242.55	60	2012	50	2	9	–	34	169	1.0	32	0.0	106
023F0072	72H100	291.06	72	2012	50	2	9#	–	34	270	1.0	32	0.0	106
023F0084	84H100	339.57	84	2012	50	2	9#	–	34	318	1.0	32	0.0	106
023F0096	96H100	388.08	96	2517	60	2 1/2	9#	–	34	366	5.5	45	5.5	119
023F0120	120H100	485.10	120	2517	60	2 1/2	9#	–	34	462	5.5	45	5.5	119

H150– 1 1/2" (38mm) WIDE BELTS

Catalogue Code	Pulley Designation	Pitch dia.	No. of Teeth	Bush No.	Max Bore		Pulley Type	A	F	J	K	L	M	N
					Met.	Imp.								
023G0018	18H150	72.77	18	1210	32	1 1/4	4F	79	45	52	20.0	25	–	–
019	19H150	76.81	19	1210	32	1 1/4	4F	83	45	56	20.0	25	–	–
020	20H150	80.85	20	1210	32	1 1/4	4F	87	45	60	20.0	25	–	–
021	21H150	84.89	21	1210	32	1 1/4	4F	91	45	64	20.0	25	–	–
022	22H150	88.94	22	1210	32	1 1/4	4F	95	45	67	20.0	25	–	–
023	23H150	92.98	23	1610	42	1 5/8	4F	98	45	70	20.0	25	–	–
024	24H150	97.02	24	1610	42	1 5/8	4F	103	45	74	20.0	25	–	–
025	25H150	101.06	25	1610	42	1 5/8	4F	106	45	77	20.0	25	–	–
026	26H150	105.11	26	1610	42	1 5/8	4F	112	45	82	20.0	25	–	–
027	27H150	109.15	27	1610	42	1 5/8	4F	115	45	85	20.0	25	–	–
028	28H150	113.19	28	1610	42	1 5/8	4F	120	45	91	20.0	25	–	–
030	30H150	121.28	30	1610	42	1 5/8	4F	128	45	98	20.0	25	–	–
032	32H150	129.36	32	1610	42	1 5/8	7F	135	45	106	20.0	25	–	80
036	36H150	145.53	36	1610	42	1 5/8	7F	151	45	121	20.0	25	–	92
040	40H150	161.70	40	1610	42	1 5/8	7F	168	45	138	20.0	25	–	92
048	48H150	194.04	48	2012	50	2	7F	200	45	169	13.0	32	0.0	106
060	60H150	242.55	60	2012	50	2	7#	–	46	223	7.0	32	7.0	106
072	72H150	291.06	72	2012	50	2	7#	–	46	270	7.0	32	7.0	106
084	84H150	339.57	84	2012	50	2	7#	–	46	320	7.0	32	7.0	106
096	96H150	388.08	96	2517	60	2 1/2	7#	–	46	366	0.5	45	0.5	119
120	120H150	485.10	120	2517	60	2 1/2	7#	–	46	462	0.5	45	0.5	119

H200– 2" (51mm) WIDE BELTS

Catalogue Code	Pulley Designation	Pitch dia.	No. of Teeth	Bush No.	Max Bore		Pulley Type	A	F	J	K	L	M	N
					Met.	Imp.								
023H0018	18H200	72.77	18	1210	32	1 1/4	4F	79	58	52	33.0	25	–	–
023H0019	19H200	76.81	19	1210	32	1 1/4	4F	83	58	56	33.0	25	–	–
023H0020	20H200	80.85	20	1610	42	1 5/8	4F	87	58	60	33.0	25	–	–
023H0021	21H200	84.89	21	1610	42	1 5/8	4F	91	58	64	33.0	25	–	–
023H0022	22H200	88.94	22	1610	42	1 5/8	4F	95	58	67	33.0	25	–	–
023H0023	23H200	92.98	23	1610	42	1 5/8	4F	98	58	70	33.0	25	–	–
023H0024	24H200	97.02	24	1610	42	1 5/8	4F	103	58	74	33.0	25	–	–
023H0025	25H200	101.06	25	1610	42	1 5/8	4F	106	58	77	33.0	25	–	–
023H0026	26H200	105.11	26	1610	42	1 5/8	4F	112	58	82	33.0	25	–	–
023H0027	27H200	109.15	27	1610	42	1 5/8	4F	115	58	85	33.0	25	–	–
023H0028	28H200	113.19	28	1610	42	1 5/8	4F	120	58	91	33.0	25	–	–
023H0030	30H200	121.28	30	1610	42	1 5/8	4F	128	58	98	33.0	25	–	–
023H0032	32H200	129.36	32	2012	50	2	4F	135	58	106	26.0	32	–	–
023H0036	36H200	145.53	36	2012	50	2	7F	151	58	121	26.0	32	–	102
023H0040	40H200	161.70	40	2012	50	2	7F	168	58	138	26.0	32	–	106
023H0048	48H200	194.04	48	2517	60	2 1/2	7F	200	58	169	13.0	45	0.0	119
023H0060	60H200	242.55	60	2517	60	2 1/2	7#	–	60	223	7.5	45	7.5	119
023H0072	72H200	291.06	72	2517	60	2 1/2	7#	–	60	270	7.5	45	7.5	119
023H0084	84H200	339.57	84	2517	60	2 1/2	7#	–	60	320	7.5	45	7.5	119
023H0096	96H200	388.08	96	2517	60	2 1/2	7#	–	60	366	7.5	45	7.5	119
023H0120	120H200	485.10	120	2517	60	2 1/2	7#	–	60	462	7.5	45	7.5	119

Dimensions in millimetres unless otherwise stated. #These pulleys have spokes instead of plate web centres.
Prime functional dimensions are correct at the time of publication.
Pulley types and non-functional dimensions may vary.

Installation Instructions - All Drives

INSTALLATION TENSION

Synchronous belt drives operate by positive meshing and do not require high installed belt tensions.

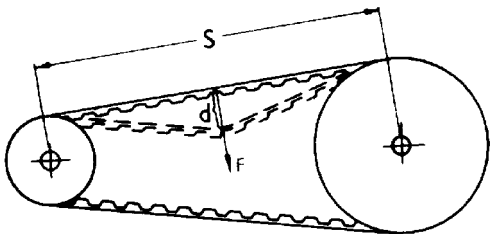
For optimum performance, however, belts should be installed with a pre-tension suitable for the envisaged drive duty, derived from the formulae below.

Where a range is indicated, the lower value will be suitable for lightly loaded, smooth running drives, whereas drives subject to high shock loads and/or frequent starts should be tensioned to the higher level. Belt pre-tension is usually achieved by drive centre distance extension and checked by applying a setting force F (N) at mid belt span sufficient to deflect the belt a distance d (mm) related to the length of the span S (metres).

It is necessary to ensure that the force is applied at right angles to the belt span, and evenly across the belt width.

A Fenner Belt Tension Indicator may be used, in conjunction with a piece of rigid bar laid across the face of the belt at mid-span

An electronic, sonic tension indicator is also available.



TORQUE DRIVE PLUS 3 & HTD DRIVES

(Deflection – d 20mm/metre span length - S)

Calculate the force F from the formulae below.

$$F(max) = \frac{kW \times 955{,}000}{d.n} \qquad F(min) = \frac{kW \times 477{,}500}{d.n} \quad (N)$$

where kW = Motor power, or absorbed power if known

d = Pitch diameter of either pulley (mm).

n = Rev/min of same pulley.

TIMING DRIVES

(Deflection – d 20 mm/metre span length - S)

Use force F from the table below.

Belt	F (Newtons)
L050	2.7
L075	4.3
L100	6.1
H075	11.0
H100	15.6
H150	24.3
H200	33.4

NOTE: Excessive belt tension will reduce belt and bearing lives and may increase drive noise levels. For fixed centre applications tension may be applied by an idler pulley (see note on Idler Pulleys) or consult your local Authorised Distributor for precise fixed centre dimensions. Drive support frameworks must be rigid to avoid flexure resulting in centre distance reduction and consequent tooth jumping, particularly on high torque starts.

BELT CARE

Avoid 'crimping' belts.

Folding belts such that they are tightly bent, e.g. for storage, damages the belt cords and will lead to premature failure.

BELT INSTALLATION

Provision should be made for adjustment of the drive centre distance to allow for installation of the belt around the pulleys without damage, and subsequent pre-tensioning. A belt should never be forced over pulley flanges as internal belt damage will result.

The following tables offer guidance as to the necessary adjustments for installation and also for applying appropriate pre-tension.

Centre Distance Allowance (installation on flangeless pulleys, tensioning) mm			Additional Centre Distance Allowance (installation over flanged pulleys) mm		
Belt Lenth (mm)	Installation	Tensioning Allowance (any drive)	Belt Pitch	One pulley flanged (mm)	Both pulleys flnaged (mm)
<1000	1.8	0.8	5mm	14	19
1001 - 1780	2.8	0.8	8mm	22	33
1781 - 2540	3.3	1.0	14mm	36	58
2541- 3300	4.1	1.0	L	25	35
>3300	5.3	1.3	H	32	48

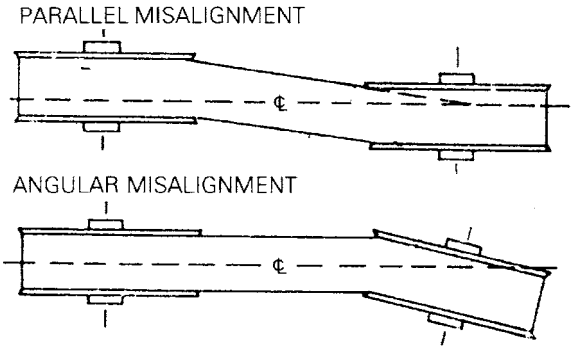
PULLEY ALIGNMENT

Misalignment of drive pulleys results in unequal tension across the belt width and extreme edge wear. Pulley alignment should be proved using a straight-edge or laser device, and shafts checked for parallelism.

Misalignment on any synchronous drive should not exceed $1/4^0$ angular or 5mm/metre centre distance parallel.

Drive support frameworks must be rigid to avoid flexure causing shaft misalignment under drive forces.

Flexure can result in tooth jumping during high torque starts, particularly if misalignment is present.



IDLER PULLEYS

Grooved idler pulleys can be used on the inside of all synchronous belts.

Flat (not crowned) idlers can be used on the outer surface of Classical Timing, HTD and TDP3 belts.

Wherever possible, idlers should operate on the slack span of a belt, and arc of contact should be kept to a minimum.

Idler pulleys should be of equal or greater diameter than the smaller of the drive pulleys.

Spring loaded idler pulleys are not normally recommended.

TAPER LOCK

Most of the synchronous pulleys/sprockets featured in this section use Taper Lock shaft fixing.

For detailed instructions on the fitting and dismounting of Taper Lock products see Shaft Fixings page 129, or view the on-line video at www.fptgroup.com.