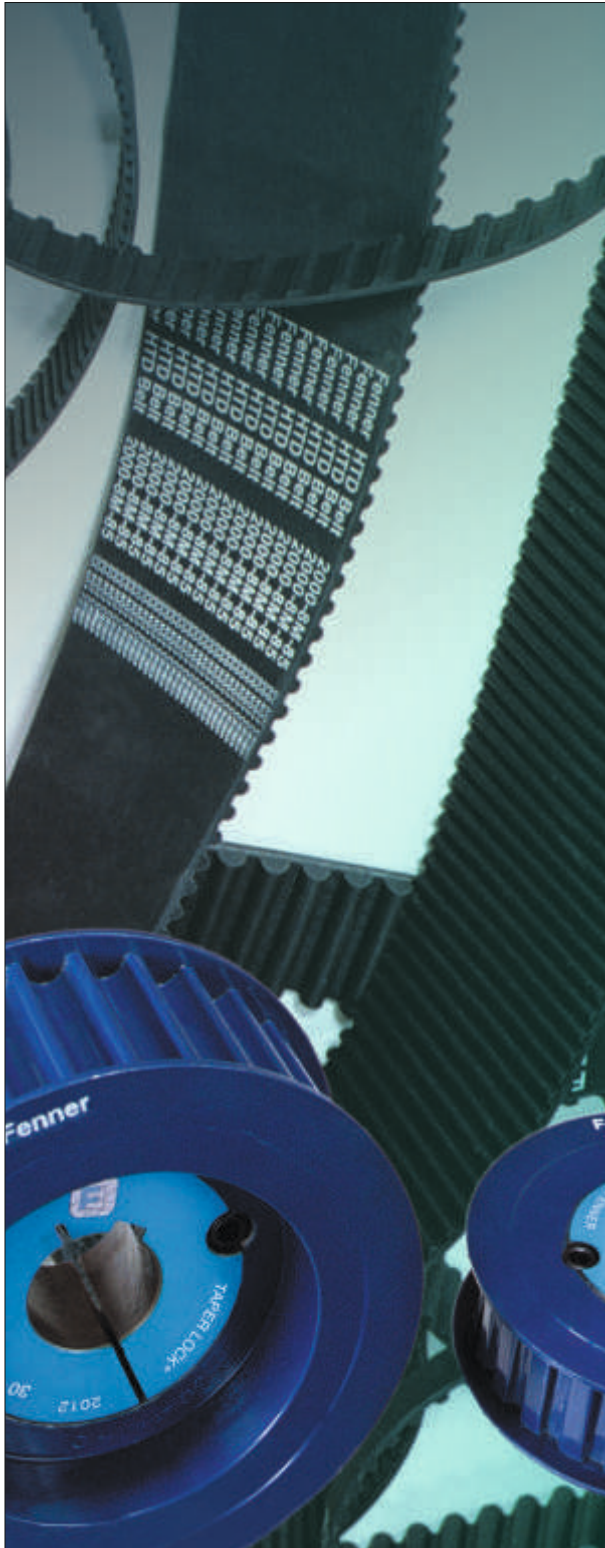


# Synchronous Belts



Fenner Synchronous Belt Drives offer a comprehensive and integrated package of Belts of the highest quality and power capacity along with a versatile selection of standard Taper Lock Pulleys covering a variety of applications in the area of power transmission.

Fenner Synchronous belt range comprises Timing, High Torque Drive (HTD) and Fenner Extra Torque (FXT) belts covering drives upto 50 kW, 200 kW & 500 kW respectively.

The original trapezoidal cross section of timing belt has undergone considerable development culminating first in the introduction of High Torque Drive belts and then Torque Drive Plus belts with their associated pulleys. The HTD & FXT belts have curvilinear tooth profile which enables the strength of high tensile load bearing cords to be fully utilised. The shape of teeth gives more uniform stress distribution and allows higher overall loading. The belt teeth are precisely formed and accurately spaced to ensure correct engagement with teeth on the pulleys. Tooth root lines lie substantially on pitch line, thus circular pitch is not altered while flexing.

Accurately spaced polychloroprene teeth ensure smooth engagement with the pulley grooves. HTD & FXT Belt Drives do not depend on the thickness to develop high tensile strength. Being thin, heat build up is minimised without sacrificing inherent power transmission capacity. Synchronous Belt Drives work over a range of shaft speeds maintaining a high transmission efficiency and constant angular velocity. Fenner Synchronous Drives extend these advantages to higher powers and torques, making possible designing of more compact drives.

Fenner Synchronous Belt Drives use Fenner Timing Pulleys provided with the unique Taper Lock System used widely the world over for fixing pulleys on shafts.

## Features

- Positive non-slip drive maintains exact speed ratio without creep or slip.
- Minimum heat build up results in cooler operations.
- Do not stretch in use and are corrosion free, clean operation makes them ideal for contamination sensitive applications.
- Moderate oil and heat resistant
- Can withstand temperatures between - 20° C to 100° C.

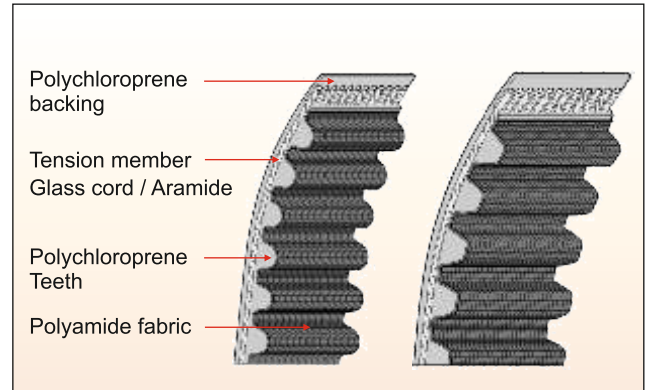
## Advantages

- No maintenance, no lubrication is required. No re-tensioning. No need for adjustable motor bases. Reduced operating cost.
- Wide range of applications from FHP to 500 kW, speeds up to 20,000 rpm, speed ratio up to 20:1.
- Compact design with lesser weight. High flexibility allows the use of very small pulleys.
- Positioning accuracy at constant driven speeds with efficiencies up to 99%.
- Smooth operation and constant angular velocity with no jerk or vibration.
- Reduced belt tension. Longer drive bearing life.
- Optimized tooth design providing optimum meshing efficiency, energy loss reduced to an absolute minimum.
- Reduced noise levels.

## Construction

**Backing:** A durable flexible backing made from polychloroprene that encases the load carrying tensile member. It protects the cords from oil, moisture also from frictional wear if power is transmitted from back of belt.

**Tensile member:** Fibreglass cord tensile member for high tensile strength exhibits excellent flex life and high resistance to elongation.



**Teeth:** Teeth moulded with backing made of shear resistant resistant polychloroprene compound. Precisely formed and accurately spaced to assure correct engagement with the pulley grooves.

**Tooth Facing:** Tough, wear resistant nylon fabric protects the tooth and gives low co-efficient of friction for smooth pulley interaction.

## Range

- **Timing Belts:** Available in standard pitch MXL, XL, L, H, XH & XXH.
- **High Torque Drive Belts (HTD):** Available in standard pitch 3M, 5M, 8M, 14M & 20M.
- **Fenner Extra Torque Belts (TDP):** Available in standard pitch 8 M FXT & 14 M FXT.
- **Other ranges include :**
  - T2.5, T5, T10 & T20 series belts.
  - Double sided Timing and HTD Belts.



## Timing Belts Range

'XL' Pitch 1/5"			'L' Pitch 3/8"			'H' Pitch 1/2"			'XH' Pitch 7/8"		
Standard widths :			Standard widths :			Standard widths :			Standard widths :		
1/4" (Code 025)			1/2" (Code 050)			3/4" (Code 075)			2" (Code 200)		
5/16" (Code 031)			3/4" (Code 075)			1" (Code 100)			3" (Code 300)		
3/8" (Code 037)			1" (Code 100)			1 1/2" (Code 150)			4" (Code 400)		
1/2" (Code 050)			1 1/2" (Code 150)			2" (Code 200)			5" (Code 500)		
3/4" (Code 075)			2" (Code 200)			3" (Code 300)					
Length Code	Pitch Length (inch)	No.of Teeth	Length Code	Pitch Length (inch)	No.of Teeth	Length Code	Pitch Length (inch)	No.of Teeth	Length Code	Pitch Length (inch)	No.of Teeth
60XL	6.0	30	124L	12.375	33	200H	20.0	40	464XH	46.375	53
70XL	7.0	35	150L	15.000	40	220H	22.0	44	507XH	50.75	58
80XL	8.0	40	154L	15.375	41	240H	24.0	48	560XH	56.00	64
90XL	9.0	45	165L	16.500	44	255H	25.5	51	630XH	63.00	72
94XL	9.4	47	173L	17.250	46	270H	27.0	54	700XH	70.00	80
100XL	10.0	50	187L	18.750	50	300H	30.0	60	770XH	77.00	88
110XL	11.0	55	191L	19.125	51	330H	33.0	66	840XH	84.00	96
120XL	12.0	60	203L	20.250	54	340H	34.0	68	980XH	98.00	112
128XL	12.8	64	210L	21.000	56	350H	35.0	70	1120XH	112.00	128
130XL	13.0	65	225L	22.500	60	360H	36.0	72	1260XH	126.00	144
140XL	14.0	70	240L	24.000	64	375H	37.5	75	1400XH	140.00	160
142XL	14.2	71	244L	24.375	65	390H	39.0	78	1540XH	154.00	176
150XL	15.0	75	255L	25.500	68	395H	39.5	79	1750XH	175.00	200
160XL	16.0	80	270L	27.000	72	400H	40.0	80			
170XL	17.0	85	285L	28.500	76	420H	42.0	84			
180XL	18.0	90	300L	30.000	80	450H	45.0	90			
190XL	19.0	95	322L	32.250	86	465H	46.5	93			
200XL	20.0	100	337L	33.750	90	480H	48.0	96			
210XL	21.0	105	345L	34.500	92	510H	51.0	102			
212XL	21.2	106	367L	36.750	98	540H	54.0	108			
220XL	22.0	110	390L	39.000	104	570H	57.0	114			
230XL	23.0	115	420L	42.000	112	600H	60.0	120			
240XL	24.0	120	439L	43.875	117	630H	63.0	126			
250XL	25.0	125	450L	45.000	120	660H	66.0	132			
260XL	26.0	130	480L	48.000	128	700H	70.0	140			
280XL	28.0	140	510L	51.000	136	725H	72.5	145			
290XL	29.0	145	540L	54.000	144	750H	75.0	150			
300XL	30.0	150	600L	60.000	160	800H	80.0	160			
390XL	39.0	195	660L	66.000	176	810H	81.0	162			
424XL	42.4	212	720L	72.000	192	830H	83.0	166			
450XL	45.0	225	765L	76.500	204	850H	85.0	170			
						900H	90.0	180			
						980H	98.0	196			
						1000H	100.0	200			
						1100H	110.0	220			
						1140H	114.0	228			
						1200H	120.0	240			
						1250H	125.0	250			
						1400H	140.0	280			

## High Torque Drive (HTD) and Fenner Extra Torque (FXT) Belts

3M			5M			8M			14M		
3 mm Pitch Standard widths 6mm, 9mm, 15mm, 20mm & 30mm			5 mm Pitch Standard widths 9mm, 15mm, 20mm, 25mm & 30mm			8 mm Pitch Standard widths 20mm, 30mm, 50mm & 85mm			14 mm Pitch Standard widths 40mm, 55mm, 85mm, 115mm & 170mm.		
Length Code	Pitch Length (mm)	No. of Teeth	Length Code	Pitch Length (mm)	No. of Teeth	Length Code	Pitch Length (mm)	No. of Teeth	Length Code	Pitch Length (mm)	No. of Teeth
150-3M	150	50	210-5M	210	42	424-8M	424	53	966-14M	966	69
174-3M	174	58	245-5M	245	49	480-8M	480	60	1050-14M	1050	75
177-3M	177	59	280-5M	280	56	512-8M	512	64	1190-14M	1190	85
201-3M	201	67	305-5M	305	61	536-8M	536	67	1400-14M	1400	100
210-3M	210	70	400-5M	400	80	560-8M	560	70	1540-14M	1540	110
225-3M	225	75	450-5M	450	90	600-8M	600	75	1610-14M	1610	115
255-3M	255	85	500-5M	500	100	624-8M	624	78	1610-14M	1610	115
264-3M	264	88	550-5M	550	110	632-8M	632	79	1778-14M	1778	127
276-3M	276	92	575-5M	575	115	640-8M	640	80	1890-14M	1890	135
300-3M	300	100	600-5M	600	120	680-8M	680	85	2100-14M	2100	150
312-3M	312	104	635-5M	635	127	720-8M	720	90	2310-14M	2310	165
384-3M	384	128	670-5M	670	134	760-8M	760	95	2450-14M	2450	175
405-3M	405	135	710-5M	710	142	800-8M	800	100	2590-14M	2590	185
495-3M	495	165	835-5M	835	167	840-8M	840	105	2660-14M	2660	190
510-3M	510	170	925-5M	925	185	880-8M	880	110	2800-14M	2800	200
555-3M	555	185	950-5M	950	190	960-8M	960	120	3150-14M	3150	225
633-3M	633	211				1000-8M	1000	125	3360-14M	3360	240
						1040-8M	1040	130	3500-14M	3500	250
						1120-8M	1120	140	3850-14M	3850	275
						1152-8M	1152	144	4326-14M	4326	309
						1200-8M	1200	150	4578-14M	4578	327
						1224-8M	1224	153	4760-14M	4760	340
						1264-8M	1264	158			
						1272-8M	1272	159			
						1280-8M	1280	160			
						1360-8M	1360	170			
						1440-8M	1440	180			
						1520-8M	1520	190			
						1600-8M	1600	200			
						1760-8M	1760	220			
						1800-8M	1800	225			
						2000-8M	2000	250			
						2104-8M	2104	263			
						2240-8M	2240	280			
						2400-8M	2400	300			
						2600-8M	2600	325			
						2800-8M	2800	350			
						3200-8M	3200	400			
						4400-8M	4400	550			
						5600-8M	5600	700			



For sizes in MXL, XXH, 20M, T2.5, T5, T10, T20 & Double sided Timing & HTD Belts and Fenner Extra Torque belts, please consult Fenner.

Sizes not listed can also be supplied subject to minimum order Quantity.