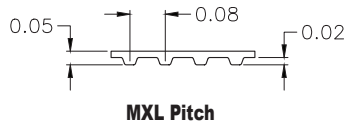




Synchronous Drive Belts (MXL)

Synchronous Drive Timing Belts Neoprene with Fiberglass Reinforcement

SureMotion timing belts are an excellent choice for many industrial applications. Belts are neoprene with fiberglass reinforcement. Neoprene belts have excellent resilience and are flame resistant.



xxMXL025NG Tensile Rating: 103 lbf [458 N]

Neoprene with Fiberglass Reinforcement Timing Belts															
Part Number	Price Per 3pc Pkg	Weight (lb)	# Teeth	Pitch Designation	Pitch (in)	Circumference (in)	Width (in)	External ID	listprice	Weight (lb)	# Teeth	Pitch Designation	Pitch (in)	Circumference (in)	Width (in)
36MXL025NG		0.1	36	MXL	0.08	2.88	0.25	85MXL025NG		0.1	85	MXL	0.08	6.80	0.25
40MXL025NG		0.1	40	MXL	0.08	3.20	0.25	87MXL025NG		0.1	87	MXL	0.08	6.96	0.25
42MXL025NG		0.1	42	MXL	0.08	3.36	0.25	88MXL025NG		0.1	88	MXL	0.08	7.04	0.25
44MXL025NG		0.1	44	MXL	0.08	3.52	0.25	90MXL025NG		0.1	90	MXL	0.08	7.20	0.25
45MXL025NG		0.1	45	MXL	0.08	3.60	0.25	91MXL025NG		0.1	91	MXL	0.08	7.28	0.25
47MXL025NG		0.1	47	MXL	0.08	3.76	0.25	95MXL025NG		0.1	95	MXL	0.08	7.60	0.25
48MXL025NG		0.1	48	MXL	0.08	3.84	0.25	98MXL025NG		0.1	98	MXL	0.08	7.84	0.25
50MXL025NG		0.1	50	MXL	0.08	4.00	0.25	100MXL025NG		0.1	100	MXL	0.08	8.00	0.25
52MXL025NG		0.1	52	MXL	0.08	4.16	0.25	101MXL025NG		0.1	101	MXL	0.08	8.08	0.25
53MXL025NG		0.1	53	MXL	0.08	4.24	0.25	104MXL025NG		0.1	104	MXL	0.08	8.32	0.25
54MXL025NG		0.1	54	MXL	0.08	4.32	0.25	106MXL025NG		0.1	106	MXL	0.08	8.48	0.25
55MXL025NG		0.1	55	MXL	0.08	4.40	0.25	112MXL025NG		0.1	112	MXL	0.08	8.96	0.25
56MXL025NG		0.1	56	MXL	0.08	4.48	0.25	115MXL025NG		0.1	115	MXL	0.08	9.20	0.25
57MXL025NG		0.1	57	MXL	0.08	4.56	0.25	120MXL025NG		0.1	120	MXL	0.08	9.60	0.25
58MXL025NG		0.1	58	MXL	0.08	4.64	0.25	122MXL025NG		0.1	122	MXL	0.08	9.76	0.25
59MXL025NG		0.1	59	MXL	0.08	4.72	0.25	124MXL025NG		0.1	124	MXL	0.08	9.92	0.25
60MXL025NG		0.1	60	MXL	0.08	4.80	0.25	130MXL025NG		0.1	130	MXL	0.08	10.40	0.25
61MXL025NG		0.1	61	MXL	0.08	4.88	0.25	132MXL025NG		0.1	132	MXL	0.08	10.56	0.25
62MXL025NG		0.1	62	MXL	0.08	4.96	0.25	134MXL025NG		0.1	134	MXL	0.08	10.72	0.25
63MXL025NG		0.1	63	MXL	0.08	5.04	0.25	136MXL025NG		0.1	136	MXL	0.08	10.88	0.25
64MXL025NG		0.1	64	MXL	0.08	5.12	0.25	140MXL025NG		0.1	140	MXL	0.08	11.20	0.25
65MXL025NG		0.1	65	MXL	0.08	5.20	0.25	146MXL025NG		0.1	146	MXL	0.08	11.68	0.25
67MXL025NG		0.1	67	MXL	0.08	5.36	0.25	150MXL025NG		0.1	150	MXL	0.08	12.00	0.25
68MXL025NG		0.1	68	MXL	0.08	5.44	0.25	156MXL025NG		0.1	156	MXL	0.08	12.48	0.25
69MXL025NG		0.1	69	MXL	0.08	5.52	0.25	160MXL025NG		0.1	160	MXL	0.08	12.80	0.25
70MXL025NG		0.1	70	MXL	0.08	5.60	0.25	166MXL025NG		0.1	166	MXL	0.08	13.28	0.25
72MXL025NG		0.1	72	MXL	0.08	5.76	0.25	170MXL025NG		0.1	170	MXL	0.08	13.60	0.25
74MXL025NG		0.1	74	MXL	0.08	5.92	0.25	177MXL025NG		0.1	177	MXL	0.08	14.16	0.25
75MXL025NG		0.1	75	MXL	0.08	6.00	0.25	180MXL025NG		0.1	180	MXL	0.08	14.40	0.25
76MXL025NG		0.1	76	MXL	0.08	6.08	0.25	184MXL025NG		0.1	184	MXL	0.08	14.72	0.25
80MXL025NG		0.1	80	MXL	0.08	6.40	0.25	192MXL025NG		0.1	192	MXL	0.08	15.36	0.25
81MXL025NG		0.1	81	MXL	0.08	6.48	0.25	195MXL025NG		0.1	195	MXL	0.08	15.60	0.25
82MXL025NG		0.1	82	MXL	0.08	6.56	0.25	200MXL025NG		0.1	200	MXL	0.08	16.00	0.25
84MXL025NG		0.1	84	MXL	0.08	6.72	0.25								



Synchronous Drive Belts (MXL)

Synchronous Drive Timing Belts Neoprene with Fiberglass Reinforcement

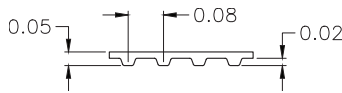
Neoprene with Fiberglass Reinforcement Timing Belts															
Part Number	Price Per 3pc Pkg	Weight (lb)	# Teeth	Pitch Designation	Pitch (in)	Circumference (in)	Width (in)	Part Number	Price Per 3pc Pkg	Weight (lb)	# Teeth	Pitch Designation	Pitch (in)	Circumference (in)	Width (in)
208MXL025NG		0.1	208	MXL	0.08	16.64	0.25	310MXL025NG		0.1	310	MXL	0.08	24.80	0.25
212MXL025NG		0.1	212	MXL	0.08	16.96	0.25	320MXL025NG		0.1	320	MXL	0.08	25.60	0.25
220MXL025NG		0.1	220	MXL	0.08	17.60	0.25	330MXL025NG		0.1	330	MXL	0.08	26.40	0.25
224MXL025NG		0.1	224	MXL	0.08	17.92	0.25	343MXL025NG		0.1	343	MXL	0.08	27.44	0.25
230MXL025NG		0.1	230	MXL	0.08	18.40	0.25	355MXL025NG		0.1	355	MXL	0.08	28.40	0.25
236MXL025NG		0.1	236	MXL	0.08	18.88	0.25	372MXL025NG		0.1	372	MXL	0.08	29.76	0.25
240MXL025NG		0.1	240	MXL	0.08	19.20	0.25	390MXL025NG		0.1	390	MXL	0.08	31.20	0.25
250MXL025NG		0.1	250	MXL	0.08	20.00	0.25	400MXL025NG		0.1	400	MXL	0.08	32.00	0.25
260MXL025NG		0.1	260	MXL	0.08	20.80	0.25	440MXL025NG		0.1	440	MXL	0.08	35.20	0.25
280MXL025NG		0.1	280	MXL	0.08	22.40	0.25	480MXL025NG		0.1	480	MXL	0.08	38.40	0.25
300MXL025NG		0.1	300	MXL	0.08	24.00	0.25	500MXL025NG		0.1	500	MXL	0.08	40.00	0.25



Synchronous Drive Belts (MXL)

Synchronous Drive Timing Belts Urethane with Polyester Reinforcement

SureMotion timing belts are an excellent choice for many industrial applications. Belts are urethane with polyester reinforcement. Urethane belts have excellent wear resistance as well as oil and ozone resistance.



MXL Pitch

xxMXL025PP Tensile Rating: 80 lbf [356 N]

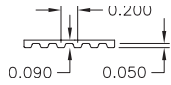
Urethane with Polyester Reinforcement Timing Belts															
Part Number	Price Per 3pc Pkg	Weight (lb)	# Teeth	Pitch Designation	Pitch (in)	Circumference (in)	Width (in)	Part Number	Price Per 3pc Pkg	Weight (lb)	# Teeth	Pitch Designation	Pitch (in)	Circumference (in)	Width (in)
36MXL025PP		0.1	36	MXL	0.08	2.88	0.25	106MXL025PP		0.1	106	MXL	0.08	8.48	0.25
40MXL025PP		0.1	40	MXL	0.08	3.20	0.25	112MXL025PP		0.1	112	MXL	0.08	8.96	0.25
45MXL025PP		0.1	45	MXL	0.08	3.60	0.25	115MXL025PP		0.1	115	MXL	0.08	9.20	0.25
48MXL025PP		0.1	48	MXL	0.08	3.84	0.25	120MXL025PP		0.1	120	MXL	0.08	9.60	0.25
50MXL025PP		0.1	50	MXL	0.08	4.00	0.25	122MXL025PP		0.1	122	MXL	0.08	9.76	0.25
52MXL025PP		0.1	52	MXL	0.08	4.16	0.25	130MXL025PP		0.1	130	MXL	0.08	10.40	0.25
54MXL025PP		0.1	54	MXL	0.08	4.32	0.25	132MXL025PP		0.1	132	MXL	0.08	10.56	0.25
55MXL025PP		0.1	55	MXL	0.08	4.40	0.25	140MXL025PP		0.1	140	MXL	0.08	11.20	0.25
56MXL025PP		0.1	56	MXL	0.08	4.48	0.25	150MXL025PP		0.1	150	MXL	0.08	12.00	0.25
58MXL025PP		0.1	58	MXL	0.08	4.64	0.25	156MXL025PP		0.1	156	MXL	0.08	12.48	0.25
59MXL025PP		0.1	59	MXL	0.08	4.72	0.25	160MXL025PP		0.1	160	MXL	0.08	12.80	0.25
60MXL025PP		0.1	60	MXL	0.08	4.80	0.25	170MXL025PP		0.1	170	MXL	0.08	13.60	0.25
61MXL025PP		0.1	61	MXL	0.08	4.88	0.25	180MXL025PP		0.1	180	MXL	0.08	14.40	0.25
62MXL025PP		0.1	62	MXL	0.08	4.96	0.25	184MXL025PP		0.1	184	MXL	0.08	14.72	0.25
64MXL025PP		0.1	64	MXL	0.08	5.12	0.25	195MXL025PP		0.1	195	MXL	0.08	15.60	0.25
65MXL025PP		0.1	65	MXL	0.08	5.20	0.25	200MXL025PP		0.1	200	MXL	0.08	16.00	0.25
68MXL025PP		0.1	68	MXL	0.08	5.44	0.25	212MXL025PP		0.1	212	MXL	0.08	16.96	0.25
70MXL025PP		0.1	70	MXL	0.08	5.60	0.25	220MXL025PP		0.1	220	MXL	0.08	17.60	0.25
75MXL025PP		0.1	75	MXL	0.08	6.00	0.25	230MXL025PP		0.1	230	MXL	0.08	18.40	0.25
76MXL025PP		0.1	76	MXL	0.08	6.08	0.25	236MXL025PP		0.2	236	MXL	0.08	18.88	0.25
80MXL025PP		0.1	80	MXL	0.08	6.40	0.25	240MXL025PP		0.1	240	MXL	0.08	19.20	0.25
81MXL025PP		0.1	81	MXL	0.08	6.48	0.25	250MXL025PP		0.2	250	MXL	0.08	20.00	0.25
82MXL025PP		0.1	82	MXL	0.08	6.56	0.25	260MXL025PP		0.1	260	MXL	0.08	20.80	0.25
84MXL025PP		0.1	84	MXL	0.08	6.72	0.25	280MXL025PP		0.2	280	MXL	0.08	22.40	0.25
85MXL025PP		0.1	85	MXL	0.08	6.80	0.25	300MXL025PP		0.1	300	MXL	0.08	24.00	0.25
87MXL025PP		0.1	87	MXL	0.08	6.96	0.25	310MXL025PP		0.2	310	MXL	0.08	24.80	0.25
88MXL025PP		0.1	88	MXL	0.08	7.04	0.25	320MXL025PP		0.1	320	MXL	0.08	25.60	0.25
90MXL025PP		0.1	90	MXL	0.08	7.20	0.25	330MXL025PP		0.2	330	MXL	0.08	26.40	0.25
91MXL025PP		0.1	91	MXL	0.08	7.28	0.25	390MXL025PP		0.1	390	MXL	0.08	31.20	0.25
95MXL025PP		0.1	95	MXL	0.08	7.60	0.25	400MXL025PP		0.2	400	MXL	0.08	32.00	0.25
100MXL025PP		0.1	100	MXL	0.08	8.00	0.25								



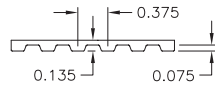
Synchronous Drive Belts (XL and L)

Synchronous Drive Timing Belts Neoprene with Fiberglass Reinforcement

SureMotion timing belts are an excellent choice for many industrial applications. Several pitches and widths are available to cover a wide range of power transmission requirements. Belts are neoprene with fiberglass reinforcement. Neoprene belts have excellent resiliences and are flame resistant.



XL Pitch



L Pitch

xxXL025NG Tensile Rating: 226 lbf [1005 N]
xxXL037NG Tensile Rating: 338 lbf [1503 N]
xxxL050NG Tensile Rating: 500 lbf [2224 N]
xxxL100NG Tensile Rating: 1000 lbf [4448 N]



Neoprene with Fiberglass Reinforcement Timing Belts															
Part Number	Price	Weight (lb)	# Teeth	Pitch Designation	Pitch (in)	Circumference (in)	Width (in)	External ID	Price	Weight (lb)	# Teeth	Pitch Designation	Pitch (in)	Circumference (in)	Width (in)
60XL025NG		0.1	30	XL	0.200	6	0.25	150L050NG		0.1	40	L	0.375	15	0.50
60XL037NG		0.1	30	XL	0.200	6	0.375	150L100NG		0.1	40	L	0.375	15	1.0
70XL037NG		0.1	35	XL	0.200	7	0.375	187L050NG		0.1	50	L	0.375	18.75	0.50
80XL025NG		0.1	40	XL	0.200	8	0.25	187L100NG		0.1	50	L	0.375	18.75	1.0
80XL037NG		0.1	40	XL	0.200	8	0.375	210L050NG		0.1	56	L	0.375	21	0.50
90XL025NG		0.1	45	XL	0.200	9	0.25	210L100NG		0.1	56	L	0.375	21	1.0
90XL037NG		0.1	45	XL	0.200	9	0.375	225L050NG		0.1	60	L	0.375	22.5	0.50
100XL025NG		0.1	50	XL	0.200	10	0.25	225L100NG		0.1	60	L	0.375	22.5	1.0
100XL037NG		0.1	50	XL	0.200	10	0.375	240L050NG		0.1	64	L	0.375	24	0.50
110XL025NG		0.1	55	XL	0.200	11	0.25	240L100NG		0.1	64	L	0.375	24	1.0
110XL037NG		0.1	55	XL	0.200	11	0.375	244L100NG		0.1	65	L	0.375	24.375	1.0
120XL037NG		0.1	60	XL	0.200	12	0.375	255L050NG		0.1	68	L	0.375	25.5	0.50
130XL025NG		0.1	65	XL	0.200	13	0.25	255L100NG		0.1	68	L	0.375	25.5	1.0
130XL037NG		0.1	65	XL	0.200	13	0.375	270L050NG		0.1	72	L	0.375	27	0.50
140XL025NG		0.1	70	XL	0.200	14	0.25	270L100NG		0.1	72	L	0.375	27	1.0
140XL037NG		0.1	70	XL	0.200	14	0.375	285L050NG		0.1	76	L	0.375	28.5	0.50
150XL025NG		0.1	75	XL	0.200	15	0.25	300L050NG		0.1	80	L	0.375	30	0.50
150XL037NG		0.1	75	XL	0.200	15	0.375	300L100NG		0.1	80	L	0.375	30	1.0
160XL025NG		0.1	80	XL	0.200	16	0.25	322L050NG		0.1	86	L	0.375	32.25	0.50
160XL037NG		0.1	80	XL	0.200	16	0.375	322L100NG		0.2	86	L	0.375	32.25	1.0
170XL025NG		0.1	85	XL	0.200	17	0.25	345L050NG		0.1	92	L	0.375	34.5	0.50
170XL037NG		0.1	85	XL	0.200	17	0.375	345L100NG		0.2	92	L	0.375	34.5	1.0
180XL037NG		0.1	90	XL	0.200	18	0.375	367L050NG		0.1	98	L	0.375	36.75	0.50
190XL025NG		0.1	95	XL	0.200	19	0.25	367L100NG		0.2	98	L	0.375	36.75	1.0
190XL037NG		0.1	95	XL	0.200	19	0.375	390L050NG		0.1	104	L	0.375	39	0.50
200XL025NG		0.1	100	XL	0.200	20	0.25	390L100NG		0.2	104	L	0.375	39	1.0
200XL037NG		0.1	100	XL	0.200	20	0.375	420L050NG		0.1	112	L	0.375	42	0.50
210XL037NG		0.1	105	XL	0.200	21	0.375	420L100NG		0.2	112	L	0.375	42	1.0
220XL037NG		0.1	110	XL	0.200	22	0.375	450L050NG		0.1	120	L	0.375	45	0.50
230XL025NG		0.1	115	XL	0.200	23	0.25	450L100NG		0.2	120	L	0.375	45	1.0
230XL037NG		0.1	115	XL	0.200	23	0.375	480L050NG		0.1	128	L	0.375	48	0.50
240XL037NG		0.1	120	XL	0.200	24	0.375	480L100NG		0.2	128	L	0.375	48	1.0
250XL025NG		0.1	125	XL	0.200	25	0.25	510L050NG		0.1	136	L	0.375	51	0.50
250XL037NG		0.1	125	XL	0.200	25	0.375	510L100NG		0.2	136	L	0.375	51	1.0
260XL025NG		0.1	130	XL	0.200	26	0.25	540L050NG		0.1	144	L	0.375	54	0.50
260XL037NG		0.1	130	XL	0.200	26	0.375	540L100NG		0.3	144	L	0.375	54	1.0
124L050NG		0.1	33	L	0.375	12.375	0.50	600L050NG		0.2	160	L	0.375	60	0.50
124L100NG		0.1	33	L	0.375	13.375	1.0	600L100NG		0.3	160	L	0.375	60	1.0



Synchronous Drive Components

Timing (Toothed) Belts

SureMotion timing belts are an excellent choice for many industrial applications. Several pitches and widths are available to cover a wide range of power transmission requirements.

- Neoprene with fiberglass reinforcement
- Polyurethane with polyester reinforcement (MXL pitch only)
- MXL (Mini Xtra Light) pitch = 0.080"
- XL (Xtra Light) pitch = 0.200"
- L (Light) pitch = 0.375"
- Range from 30 - 160 teeth
- 0.25, 0.375, 0.50 and 1.0-inch widths
- Timing belts start at (60XL025NG)

Timing Pulleys

Both aluminum and steel pulleys (sprockets) are available with a smooth bore and setscrew. Steel pulleys also available to fit Taper-Lock or QD style drive bushings. Bushings sold separately.

- Aluminum, steel, cast iron, or ductile iron
- MXL pitch = 0.080" with 1/4" width
- XL pitch = 0.200" with 1/4 or 3/8 inch width
- L pitch = .375" with 1/2 or 1 inch width
- Plain bores and TL or QD type bore

Tapered Drive Bushings

Bushings allow the connection of pulleys to different sized shafts.

- TL (Taper-Lock) and QD (quick detach) types are available
- Steel
- Standard bore sizes from 0.50 to 1.375 inch

"Taper-Lock" is a registered trademark of Reliance Electric
"QD" is a registered trademark of Emerson Electric





Synchronous Drive Components

Product Overview



Timing Pulleys



Bushings

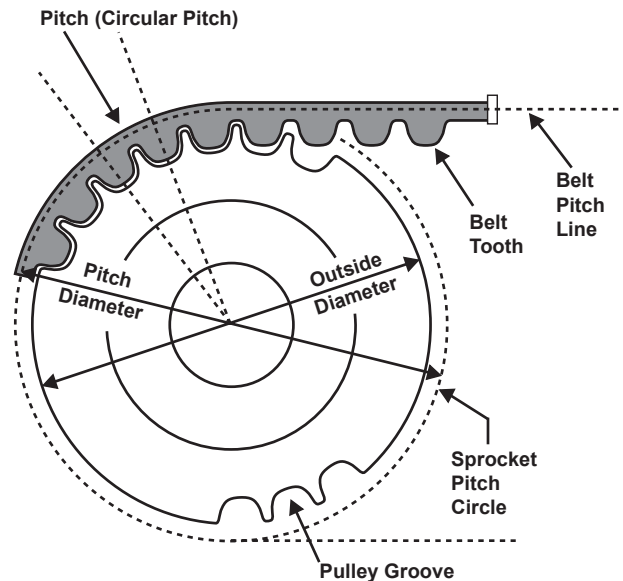


Timing Belts

Timing pulleys, bushings, and belts allow you to change speed and torque while connecting mechanically rotating components.

- Select pulley sizes in order to accomplish the speed or torque change that you need.
- Bushings allow you to connect the same pulleys to different sized shafts, or vice versa.
- Synchronous drive belts and pulleys utilize teeth to prevent slippage and unwanted speed variations.

Note: For pulley speeds in excess of 6,000 RPM, pulleys should be dynamically balanced.



Drive Component Selection

1. Determine required torque (ft·lbs) and rpm of driven shaft.
2. Determine design horsepower:

$$DHP = \frac{T \cdot N \cdot sf}{5,252}$$

Where: T = torque (ft·lb)
 N = rpm
 sf = service factor per table

Service Factors			
Machine Type	<8hr per day	8-16 hr per day	Continuous
Smooth Running	1.0	1.2	1.4
Light Shock Loads	1.3	1.5	1.7
Heavy Shock Loads	1.7	1.9	2.1

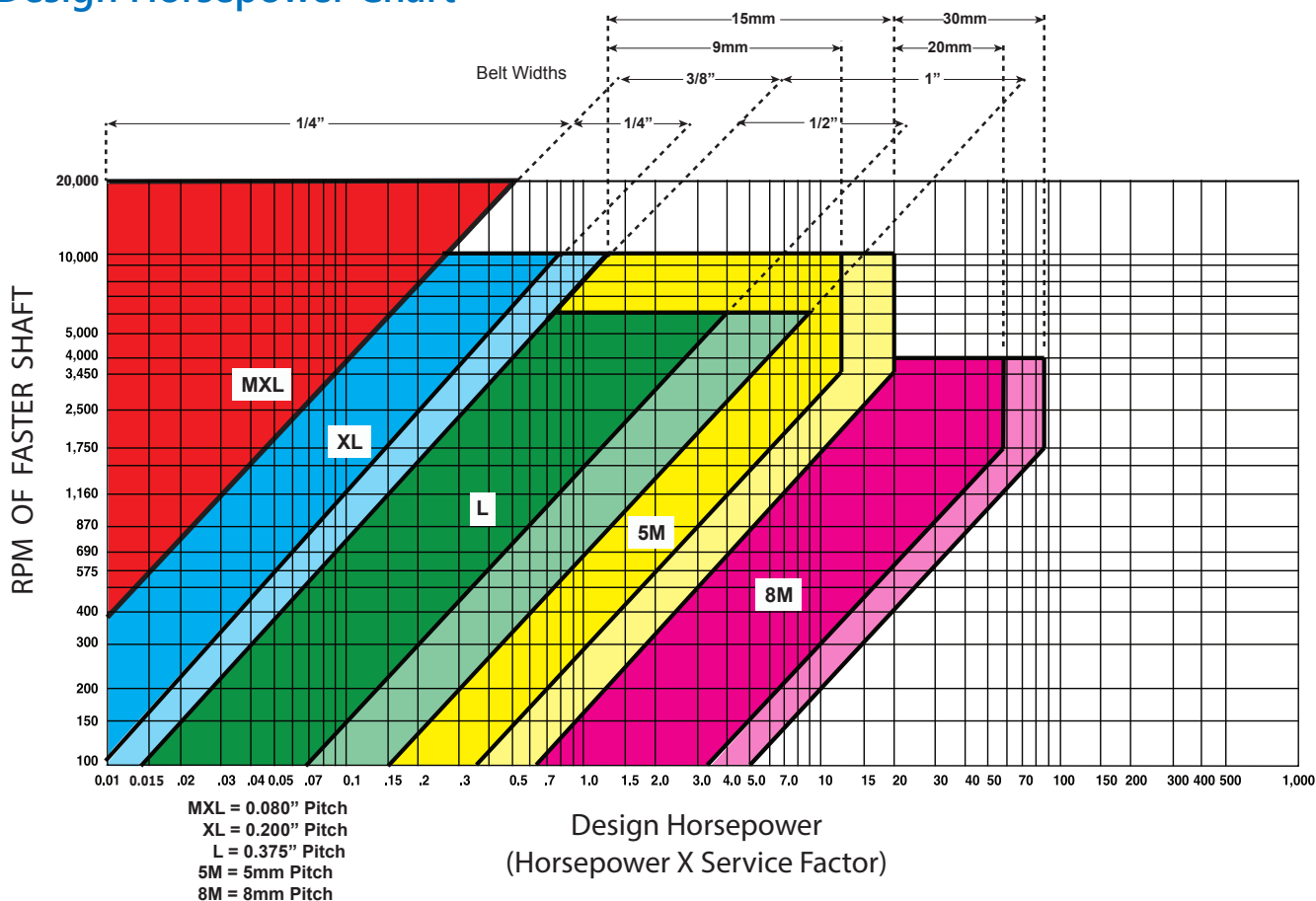
3. Determine Pitch (MXL XL or L) and belt width required by reading Design Horsepower Chart.
4. Select driver and driven pulleys to match desired speed or torque change.
5. Determine belt length per belt length calculation.

*Note: AutomationDirect provides an online configuration tool to assist with pulley and belt sizing.
 See: www.automationdirect.com/selectors/beltandpulley*

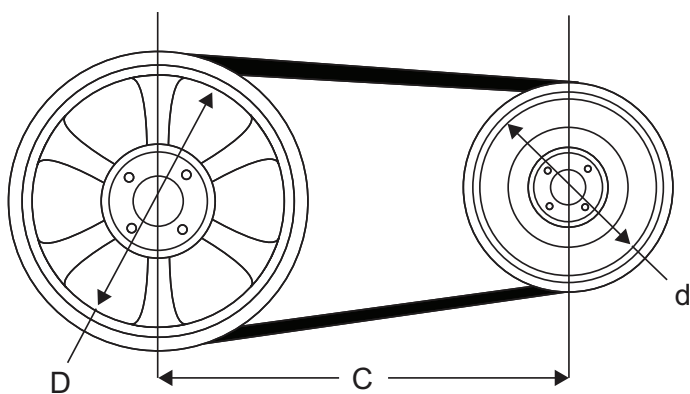


Synchronous Drive Components

Design Horsepower Chart



Drive Component Selection Continued



Belt Length Calculations

$$L = 2C + 1.57 (D + d) + \frac{(D-d)^2}{4C}$$

Where:

- L = Length of belt at pitch line (in inches)
- C = Center distance (in inches)
- D = Pitch diameter (in inches) of large sprocket
- d = Pitch diameter (in inches) of small sprocket