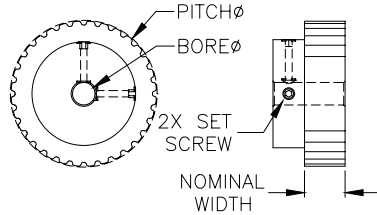




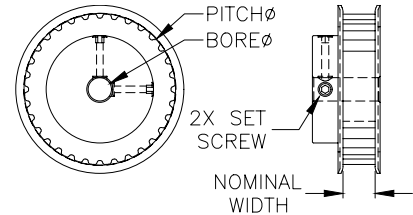
# Synchronous Drive Components

## MXL Synchronous Timing Belt Pulleys

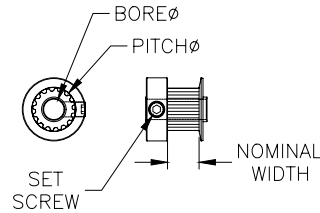
Also referred to as sprockets, SureMotion MXL timing pulleys have a 0.080 inch pitch and 1/4 inch width. Aluminum pulleys are available with a smooth bore and setscrews.



**MXL Pulley with Hub, No Flange**



**MXL Pulley with Hub and Flange**



**MXL Pulley with Oversize Hub and Flange**

### Timing Belt Pulleys – Pitch Designation XL; Plain Bore (With Hub)

Part Number	Price	Weight (lb)	# Grooves (Teeth)	Nominal Width (in)	Flange (Y/N)	Pitch (in)	Pitch Diameter (in)	Bore Diameter	Material*	Part Number	Price	Weight (lb)	# Grooves (Teeth)	Nominal Width (in)	Flange (Y/N)	Pitch (in)	Pitch Diameter (in)	Bore Diameter	Material*
APB10MXL025CF-125	\$7.25	0.1	10	0.25	Y	0.08	0.255	0.125	Al	APB28MXL025BF-250	\$9.00	0.1	28	0.25	Y	0.08	0.713	0.25	Al
APB11MXL025CF-125	\$7.25	0.1	11	0.25	Y	0.08	0.280	0.125	Al	APB30MXL025BF-250	\$9.50	0.1	30	0.25	Y	0.08	0.764	0.25	Al
APB12MXL025CF-125	\$7.50	0.1	12	0.25	Y	0.08	0.306	0.125	Al	APB32MXL025BF-250	\$9.50	0.1	32	0.25	Y	0.08	0.815	0.25	Al
APB14MXL025CF-125	\$7.75	0.1	14	0.25	Y	0.08	0.357	0.125	Al	APB36MXL025BF-250	\$9.75	0.1	36	0.25	Y	0.08	0.917	0.25	Al
APB15MXL025CF-188	\$7.75	0.1	15	0.25	Y	0.08	0.382	0.1875	Al	APB40MXL025BF-250	\$10.50	0.1	40	0.25	Y	0.08	1.019	0.25	Al
APB16MXL025CF-188	\$8.00	0.1	16	0.25	Y	0.08	0.407	0.1875	Al	APB42MXL025BF-250	\$11.00	0.1	42	0.25	Y	0.08	1.070	0.25	Al
APB18MXL025BF-188	\$8.00	0.1	18	0.25	Y	0.08	0.458	0.1875	Al	APB44MXL025BF-250	\$11.00	0.1	44	0.25	Y	0.08	1.120	0.25	Al
APB18MXL025CF-250	\$8.00	0.1	18	0.25	Y	0.08	0.458	0.25	Al	APB48MXL025BF-250	\$12.50	0.1	48	0.25	Y	0.08	1.222	0.25	Al
APB20MXL025BF-188	\$8.00	0.1	20	0.25	Y	0.08	0.509	0.1875	Al	APB60MXL025BF-250	\$14.00	0.1	60	0.25	Y	0.08	1.528	0.25	Al
APB20MXL025CF-250	\$8.50	0.1	20	0.25	Y	0.08	0.509	0.25	Al	APB60MXL025B-250	\$14.00	0.1	60	0.25	N	0.08	1.528	0.25	Al
APB21MXL025BF-188	\$8.00	0.1	21	0.25	Y	0.08	0.535	0.1875	Al	APB72MXL025B-250	\$15.50	0.1	72	0.25	N	0.08	1.833	0.25	Al
APB21MXL025CF-250	\$8.75	0.1	21	0.25	Y	0.08	0.535	0.25	Al	APB80MXL025B-312	\$18.50	0.1	80	0.25	N	0.08	2.037	0.3125	Al
APB22MXL025BF-188	\$8.25	0.1	22	0.25	Y	0.08	0.560	0.1875	Al	APB90MXL025B-312	\$22.00	0.1	90	0.25	N	0.08	2.292	0.3125	Al
APB22MXL025CF-250	\$9.00	0.1	22	0.25	Y	0.08	0.560	0.25	Al	APB100MXL025B-312	\$25.00	0.1	100	0.25	N	0.08	2.546	0.3125	Al
APB24MXL025BF-250	\$8.50	0.1	24	0.25	Y	0.08	0.611	0.25	Al	APB120MXL025B-375	\$28.50	0.1	120	0.25	N	0.08	3.056	0.375	Al
APB25MXL025BF-250	\$8.75	0.1	25	0.25	Y	0.08	0.637	0.25	Al										

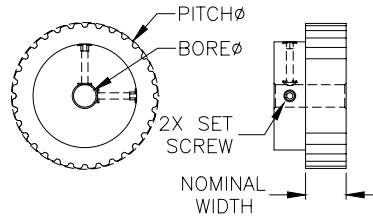
\* Al = Aluminum; S = Steel



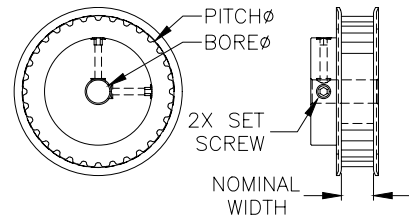
# Synchronous Drive Components

## XL Synchronous Timing Belt Pulleys

Also referred to as sprockets, SureMotion XL timing pulleys have a 1/5 inch pitch and 1/4 or 3/8 inch width. Both aluminum and steel pulleys are available with a smooth bore and setscrews.



**XL Pulley with Hub, No Flange**



**XL Pulley with Hub and Flange**

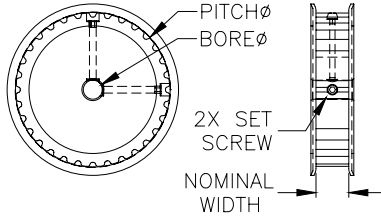
Timing Belt Pulleys – Pitch Designation XL; Plain Bore (With Hub)																			
Part Number	Price	Weight (lb)	# Grooves (Teeth)	Nominal Width (in)	Flange (Y/N)	Pitch (in)	Pitch Diameter (in)	Bore Diameter	Material*	Part Number	Price	Weight (lb)	# Grooves (Teeth)	Nominal Width (in)	Flange (Y/N)	Pitch (in)	Pitch Diameter (in)	Bore Diameter	Material*
APB10XL025BF-250	\$6.00	0.1	10	0.25	Y	0.20	0.637	0.25	Al	APB18XL037BF-250	\$8.50	0.1	18	0.375	Y	0.20	1.146	0.25	Al
APB11XL025BF-250	\$7.00	0.1	11	0.25	Y	0.20	0.700	0.25	Al	APB19XL037BF-250	\$9.00	0.1	19	0.375	Y	0.20	1.210	0.25	Al
APB12XL025BF-250	\$6.25	0.1	12	0.25	Y	0.20	0.764	0.25	Al	APB20XL037BF-250	\$9.25	0.1	20	0.375	Y	0.20	1.273	0.25	Al
APB13XL025BF-250	\$6.75	0.1	13	0.25	Y	0.20	0.828	0.25	Al	APB21XL037BF-250	\$10.50	0.1	21	0.375	Y	0.20	1.337	0.25	Al
APB14XL025BF-250	\$7.25	0.1	14	0.25	Y	0.20	0.891	0.25	Al	APB22XL037BF-250	\$11.00	0.1	22	0.375	Y	0.20	1.401	0.25	Al
APB15XL025BF-250	\$8.50	0.1	15	0.25	Y	0.20	0.955	0.25	Al	APB23XL037BF-250	\$11.50	0.1	23	0.375	Y	0.20	1.464	0.25	Al
APB16XL025BF-250	\$9.00	0.1	16	0.25	Y	0.20	1.019	0.25	Al	APB24XL037BF-250	\$12.00	0.1	24	0.375	Y	0.20	1.528	0.25	Al
APB18XL025BF-250	\$8.25	0.1	18	0.25	Y	0.20	1.146	0.25	Al	APB25XL037BF-250	\$12.50	0.1	25	0.375	Y	0.20	1.592	0.25	Al
APB20XL025BF-250	\$8.75	0.1	20	0.25	Y	0.20	1.273	0.25	Al	APB26XL037BF-250	\$12.50	0.1	26	0.375	Y	0.20	1.655	0.25	Al
APB21XL025BF-250	\$10.00	0.1	21	0.25	Y	0.20	1.337	0.25	Al	APB28XL037BF-250	\$13.00	0.2	28	0.375	Y	0.20	1.783	0.25	Al
APB22XL025BF-250	\$10.50	0.1	22	0.25	Y	0.20	1.401	0.25	Al	APB30XL037BF-250	\$14.50	0.2	30	0.375	Y	0.20	1.910	0.25	Al
APB24XL025BF-250	\$11.00	0.1	24	0.25	Y	0.20	1.528	0.25	Al	APB32XL037BF-312	\$14.50	0.2	32	0.375	Y	0.20	2.037	0.312	Al
APB26XL025BF-250	\$12.00	0.1	26	0.25	Y	0.20	1.655	0.25	Al	APB32XL037B-312	\$16.00	0.2	32	0.375	N	0.20	2.037	0.312	Al
APB28XL025BF-250	\$13.00	0.1	28	0.25	Y	0.20	1.783	0.25	Al	APB36XL037B-312	\$18.50	0.3	36	0.375	N	0.20	2.292	0.312	Al
APB30XL025BF-250	\$14.50	0.2	30	0.25	Y	0.20	1.910	0.25	Al	APB40XL037B-312	\$20.00	0.4	40	0.375	N	0.20	2.546	0.312	Al
APB10XL037BF-250	\$6.25	0.1	10	0.375	Y	0.20	0.637	0.25	Al	APB42XL037B-312	\$20.50	0.4	42	0.375	N	0.20	2.674	0.312	Al
APB11XL037BF-250	\$6.50	0.1	11	0.375	Y	0.20	0.700	0.25	Al	APB44XL037B-312	\$23.00	0.4	44	0.375	N	0.20	2.801	0.312	Al
APB12XL037BF-250	\$6.75	0.1	12	0.375	Y	0.20	0.764	0.25	Al	APB48XL037B-312	\$24.00	0.5	48	0.375	N	0.20	3.056	0.312	Al
APB13XL037BF-250	\$7.25	0.1	13	0.375	Y	0.20	0.828	0.25	Al	APB60XL037B-375	\$27.00	0.6	60	0.375	N	0.20	3.820	0.375	Al
APB14XL037BF-250	\$7.50	0.1	14	0.375	Y	0.20	0.891	0.25	Al	APB72XL037B-375	\$29.50	0.9	72	0.375	N	0.20	4.584	0.375	Al
APB15XL037BF-250	\$7.75	0.1	15	0.375	Y	0.20	0.955	0.25	Al	SPB28XL037BF-250	\$16.00	0.5	28	0.375	Y	0.20	1.783	0.25	S
APB16XL037BF-250	\$8.25	0.1	16	0.375	Y	0.20	1.019	0.25	Al	SPB30XL037BF-312	\$14.50	0.6	30	0.375	Y	0.20	1.910	0.312	S
APB17XL037BF-250	\$8.50	0.1	17	0.375	Y	0.20	1.082	0.25	Al										

\* Al = Aluminum; S = Steel



# Synchronous Drive Components

## XL Synchronous Timing Belt Pulleys Continued



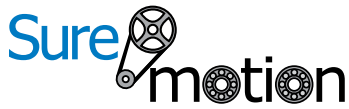
**XL Pulley Hubless,  
With Flange**

*Table continued from previous page.*

**Timing Belt Pulleys – Pitch Designation XL; Hubless**

<i>Part Number</i>	<i>Price</i>	<i>Weight (lb)</i>	<i># Grooves (Teeth)</i>	<i>Nominal Width (in)</i>	<i>Flange (Y/N)</i>	<i>Pitch (in)</i>	<i>Pitch Diameter (in)</i>	<i>Bore Diameter</i>	<i>Material*</i>	<i>Part Number</i>	<i>Price</i>	<i>Weight (lb)</i>	<i># Grooves (Teeth)</i>	<i>Nominal Width (in)</i>	<i>Flange (Y/N)</i>	<i>Pitch (in)</i>	<i>Pitch Diameter (in)</i>	<i>Bore Diameter</i>	<i>Material*</i>
<b>APB10XL037AF-250</b>	\$7.00	0.1	10	0.375	Y	0.20	0.637	0.25	Al	<b>APB20XL037AF-250</b>	\$10.00	0.1	20	0.375	Y	0.20	1.273	0.25	Al
<b>APB11XL037AF-250</b>	\$7.00	0.1	11	0.375	Y	0.20	0.700	0.25	Al	<b>APB21XL037AF-250</b>	\$10.50	0.1	21	0.375	Y	0.20	1.337	0.25	Al
<b>APB12XL037AF-250</b>	\$7.25	0.1	12	0.375	Y	0.20	0.764	0.25	Al	<b>APB22XL037AF-250</b>	\$11.00	0.1	22	0.375	Y	0.20	1.401	0.25	Al
<b>APB14XL037AF-250</b>	\$8.50	0.1	14	0.375	Y	0.20	0.891	0.25	Al	<b>APB24XL037AF-250</b>	\$11.50	0.1	24	0.375	Y	0.20	1.528	0.25	Al
<b>APB15XL037AF-250</b>	\$8.75	0.1	15	0.375	Y	0.20	0.955	0.25	Al	<b>APB28XL037AF-250</b>	\$13.00	0.1	28	0.375	Y	0.20	1.783	0.25	Al
<b>APB16XL037AF-250</b>	\$9.00	0.1	16	0.375	Y	0.20	1.019	0.25	Al	<b>APB30XL037AF-250</b>	\$14.50	0.2	30	0.375	Y	0.20	1.910	0.25	Al
<b>APB18XL037AF-250</b>	\$9.50	0.1	18	0.375	Y	0.20	1.146	0.25	Al	<b>APB32XL037AF-250</b>	\$17.00	0.2	32	0.375	Y	0.20	2.037	0.25	Al

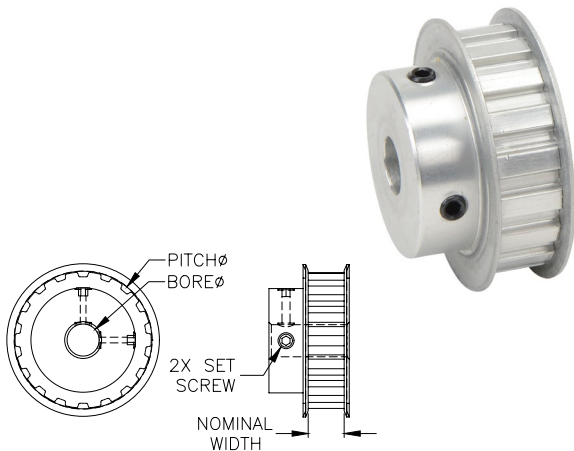
\* Al = Aluminum; S = Steel



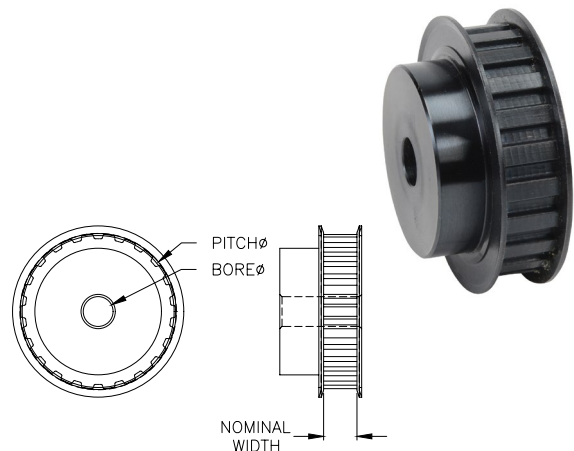
# Synchronous Drive Components

## L Synchronous Timing Belt Pulleys

Also referred to as sprockets, SureMotion L timing pulleys have a 3/8 inch pitch and 1/2 or 1 inch width. Aluminum pulleys are available with a smooth bore and setscrews. Steel plain bore pulleys require machining by the end user for desired shaft mounting (i.e. bore, keyway, setscrews). Steel pulleys also available to fit Taper-Lock or QD style drive bushings. Bushings sold separately.



**L Pulley with Hub, Flange, and Setscrews**



**L Pulley with Hub, Flange, No Setscrews**

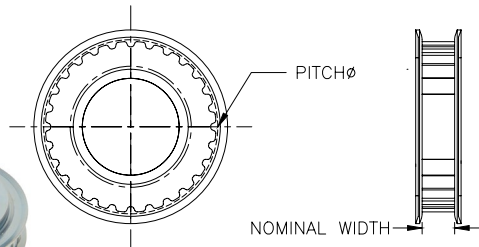
Timing Belt Pulleys – Pitch Designation L; Plain Bore (With Hub)																			
Part Number	Price	Weight (lb)	# Grooves (Teeth)	Nominal Width (in)	Flange (Y/N)	Pitch (in)	Pitch Diameter (in)	Bore Diameter	Material *	Part Number	Price	Weight (lb)	# Grooves (Teeth)	Nominal Width (in)	Flange (Y/N)	Pitch (in)	Pitch Diameter (in)	Bore Diameter	Material *
APB10L050BF-375	\$12.00	0.1	10	0.50	Y	0.375	1.194	0.375	Al	SPB30L050BF-500	\$38.00	2.4	30	0.50	Y	0.375	3.581	0.50	S
APB12L050BF-375	\$13.00	0.2	12	0.50	Y	0.375	1.432	0.375	Al	SPB32L050BF-500	\$39.00	2.8	32	0.50	Y	0.375	3.820	0.50	S
APB13L050BF-375	\$14.00	0.2	13	0.50	Y	0.375	1.552	0.375	Al	SPB36L050BF-500	\$42.00	4.0	36	0.50	Y	0.375	4.297	0.50	S
APB14L050BF-375	\$15.00	0.2	14	0.50	Y	0.375	1.671	0.375	Al	SPB40L050BF-500	\$48.00	4.7	40	0.50	Y	0.375	4.775	0.50	S
APB15L050BF-375	\$18.00	0.3	15	0.50	Y	0.375	1.790	0.375	Al	SPB14L100BF-375	\$17.00	0.8	14	1.0	Y	0.375	1.671	0.375	S
APB16L050BF-500	\$18.50	0.3	16	0.50	Y	0.375	1.910	0.50	Al	SPB16L100BF-500	\$19.50	1.1	16	1.0	Y	0.375	1.910	0.50	S
APB17L050BF-500	\$19.50	0.3	17	0.50	Y	0.375	2.029	0.50	Al	SPB18L100BF-500	\$25.50	1.4	18	1.0	Y	0.375	2.149	0.50	S
APB18L050BF-500	\$20.00	0.4	18	0.50	Y	0.375	2.149	0.50	Al	SPB20L100BF-500	\$28.50	1.7	20	1.0	Y	0.375	2.387	0.50	S
APB19L050BF-500	\$25.50	0.4	19	0.50	Y	0.375	2.268	0.50	Al	SPB22L100BF-625	\$32.00	2.1	22	1.0	Y	0.375	2.626	0.625	S
APB20L050BF-500	\$27.00	0.5	20	0.50	Y	0.375	2.387	0.50	Al	SPB24L100BF-625	\$34.00	2.4	24	1.0	Y	0.375	2.865	0.625	S
APB21L050BF-500	\$29.50	0.5	21	0.50	Y	0.375	2.507	0.50	Al	SPB26L100BF-625	\$38.00	2.8	26	1.0	Y	0.375	3.104	0.625	S
APB22L050BF-500	\$32.00	0.6	22	0.50	Y	0.375	2.626	0.50	Al	SPB28L100BF-625	\$39.00	3.3	28	1.0	Y	0.375	3.342	0.625	S
APB24L050BF-500	\$40.00	0.7	24	0.50	Y	0.375	2.865	0.50	Al	SPB30L100BF-625	\$45.00	3.8	30	1.0	Y	0.375	3.581	0.625	S
SPB22L050BF-500	\$26.50	1.5	22	0.50	Y	0.375	2.626	0.50	S	SPB32L100BF-625	\$53.00	4.5	32	1.0	Y	0.375	3.820	0.625	S
SPB24L050BF-500	\$28.50	1.7	24	0.50	Y	0.375	2.865	0.50	S	SPB36L100BF-625	\$61.00	5.7	36	1.0	Y	0.375	4.297	0.625	S
SPB26L050BF-500	\$29.50	1.9	26	0.50	Y	0.375	3.104	0.50	S	SPB40L100BF-625	\$69.00	6.8	40	1.0	Y	0.375	4.775	0.625	S
SPB28L050BF-500	\$34.00	2.1	28	0.50	Y	0.375	3.342	0.50	S										

\* Al = Aluminum; S = Steel



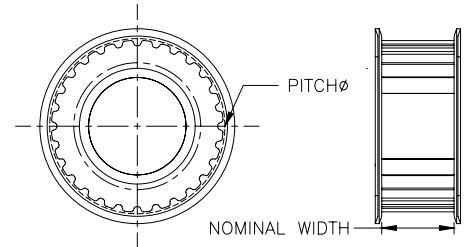
# Synchronous Drive Components

## L Synchronous Timing Belt Pulleys



QD bushing required per table below

**SQD Pulley**



TL bushing required per table below

**STL Pulley**

Timing Belt Pulleys – Pitch Designation L; Plain Bore (Without Hub)																			
Part Number	Price	Weight (lb)	# Grooves (Teeth)	Nominal Width (in)	Flange (Y/N)	Pitch (in)	Pitch Diameter (in)	*QD Type Bushing Required	Material**	Part Number	Price	Weight (lb)	# Grooves (Teeth)	Nominal Width (in)	Flange (Y/N)	Pitch (in)	Pitch Diameter (in)	*Taper-Lock Bushing Required	Material**
SQD20L050AF-JA	\$27.00	0.6	20	0.50	Y	0.375	2.387	JA	S	STL20L050AF-1108	\$33.00	0.6	20	0.50	Y	0.375	2.387	1108	S
SQD20L100AF-JA	\$31.00	1.0	20	1.0	Y	0.375	2.387	JA	S	STL20L100AF-1108	\$39.00	0.8	20	1.0	Y	0.375	2.387	1108	S
SQD22L050AF-JA	\$28.00	0.8	22	0.50	Y	0.375	2.626	JA	S	STL22L050AF-1108	\$38.00	0.8	22	0.50	Y	0.375	2.626	1108	S
SQD22L100AF-JA	\$33.00	1.0	22	1.0	Y	0.375	2.626	JA	S	STL22L100AF-1108	\$41.00	1.2	22	1.0	Y	0.375	2.626	1108	S
SQD24L050AF-SH	\$28.00	0.6	24	0.50	Y	0.375	2.865	SH	S	STL24L050AF-1210	\$39.00	0.8	24	0.50	Y	0.375	2.865	1210	S
SQD24L100AF-SH	\$34.00	1.0	24	1.0	Y	0.375	2.865	SH	S	STL24L100AF-1210	\$43.00	1.1	24	1.0	Y	0.375	2.865	1210	S
SQD26L050AF-SH	\$28.50	0.9	26	0.50	Y	0.375	3.104	SH	S	STL26L050AF-1210	\$42.00	1.1	26	0.50	Y	0.375	3.104	1210	S
SQD26L100AF-SH	\$34.00	1.4	26	1.0	Y	0.375	3.104	SH	S	STL26L100AF-1210	\$49.00	1.4	26	1.0	Y	0.375	3.104	1210	S
SQD28L050AF-SH	\$30.00	1.1	28	0.50	Y	0.375	3.342	SH	DI	STL28L050AF-1210	\$44.00	1.5	28	0.50	Y	0.375	3.342	1210	DI
SQD28L100AF-SH	\$36.00	1.8	28	1.0	Y	0.375	3.342	SH	DI	STL28L100AF-1610	\$55.00	1.4	28	1.0	Y	0.375	3.342	1610	DI
SQD30L050AF-SDS	\$33.00	1.1	30	0.50	Y	0.375	3.581	SDS	DI	STL30L050AF-1610	\$45.00	1.3	30	0.50	Y	0.375	3.581	1610	DI
SQD30L100AF-SDS	\$39.00	1.9	30	1.0	Y	0.375	3.581	SDS	DI	STL30L100AF-1610	\$58.00	1.9	30	1.0	Y	0.375	3.581	1610	DI
SQD32L050AF-SDS	\$33.00	1.4	32	0.50	Y	0.375	3.820	SDS	DI	STL32L050AF-1610	\$48.00	1.7	32	0.50	Y	0.375	3.820	1610	DI
SQD32L100AF-SDS	\$42.00	2.3	32	1.0	Y	0.375	3.820	SDS	DI	STL32L100AF-1610	\$71.00	2.4	32	1.0	Y	0.375	3.820	1610	DI
SQD36L050AF-SDS	\$57.00	2.0	36	0.50	Y	0.375	4.297	SDS	DI	STL36L050AF-1610	\$62.00	2.3	36	0.50	Y	0.375	4.297	1610	DI
SQD36L100AF-SDS	\$65.00	2.6	36	1.0	Y	0.375	4.297	SDS	DI	STL36L100AF-1610	\$78.00	3.4	36	1.0	Y	0.375	4.297	1610	DI
SQD40L050AF-SDS	\$69.00	2.7	40	0.50	Y	0.375	4.775	SDS	DI	STL40L050AF-2012	\$73.00	3.2	40	0.50	Y	0.375	4.775	2012	DI
SQD40L100AF-SDS	\$73.00	3.5	40	1.0	Y	0.375	4.775	SDS	DI	STL40L100AF-2012	\$78.00	3.8	40	1.0	Y	0.375	4.775	2012	DI
SQD44L050AF-SDS	\$65.00	3.4	44	0.50	Y	0.375	5.252	SDS	DI	STL48L050AF-2012	\$90.00	5.5	48	0.50	Y	0.375	5.730	2012	DI
SQD44L100AF-SDS	\$74.00	4.3	44	1.0	Y	0.375	5.252	SDS	DI	STL48L100AF-2012	\$96.00	6.4	48	1.0	Y	0.375	5.730	2012	DI
SQD48L050AF-SDS	\$73.00	4.2	48	0.50	Y	0.375	5.730	SDS	DI	STL60L050A-2012	\$130.00	6.4	60	0.50	N	0.375	7.162	2012	CI
SQD48L100AF-SDS	\$78.00	5.1	48	1.0	Y	0.375	5.730	SDS	DI	STL60L100A-2012	\$147.00	11	60	1.0	N	0.375	7.162	2012	CI
SQD60L050AF-SD	\$76.00	5.5	60	0.50	Y	0.375	7.162	SD	CI	STL72L050A-2012	\$133.00	8.9	72	0.50	N	0.375	8.594	2012	CI
SQD60L100AF-SD	\$79.00	6.6	60	1.0	Y	0.375	7.162	SD	CI	STL72L100A-2012	\$153.00	12.0	72	1.0	N	0.375	8.594	2012	CI
SQD72L050AF-SD	\$78.00	8.5	72	0.50	Y	0.375	8.594	SD	CI	STL84L050A-2517	\$145.00	16.1	84	0.50	N	0.375	10.027	2517	CI
SQD72L100AF-SD	\$82.00	7.3	72	1.0	Y	0.375	8.594	SD	CI	STL84L100A-2517	\$165.00	12.2	84	1.0	N	0.375	10.027	2517	CI
SQD84L050AF-SD	\$84.00	11.9	84	0.50	Y	0.375	10.027	SD	CI										
SQD84L100AF-SD	\$85.00	9.4	84	1.0	Y	0.375	10.027	SD	CI										

\* "QD" is a registered trademark of Emerson Electric, "Taper-Lock" (TL) is a registered trademark of Reliance Electric.

\*\* S = Steel; DI = Ductile Iron; CI = Cast Iron





# Synchronous Drive Components

## Product Overview



**Timing Pulleys**



**Bushings**

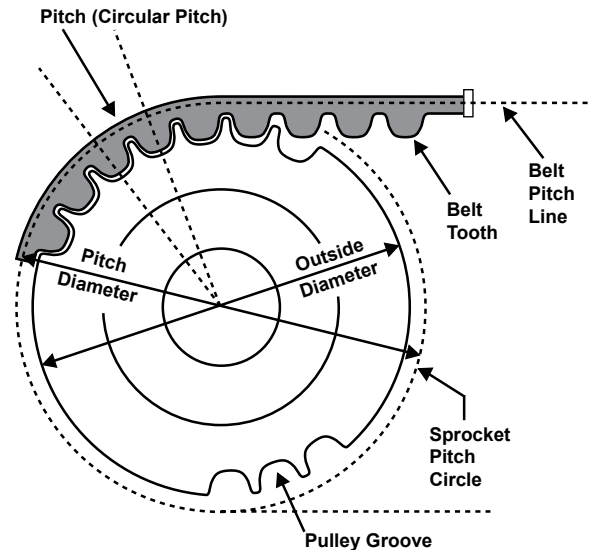


**Timing Belts**

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

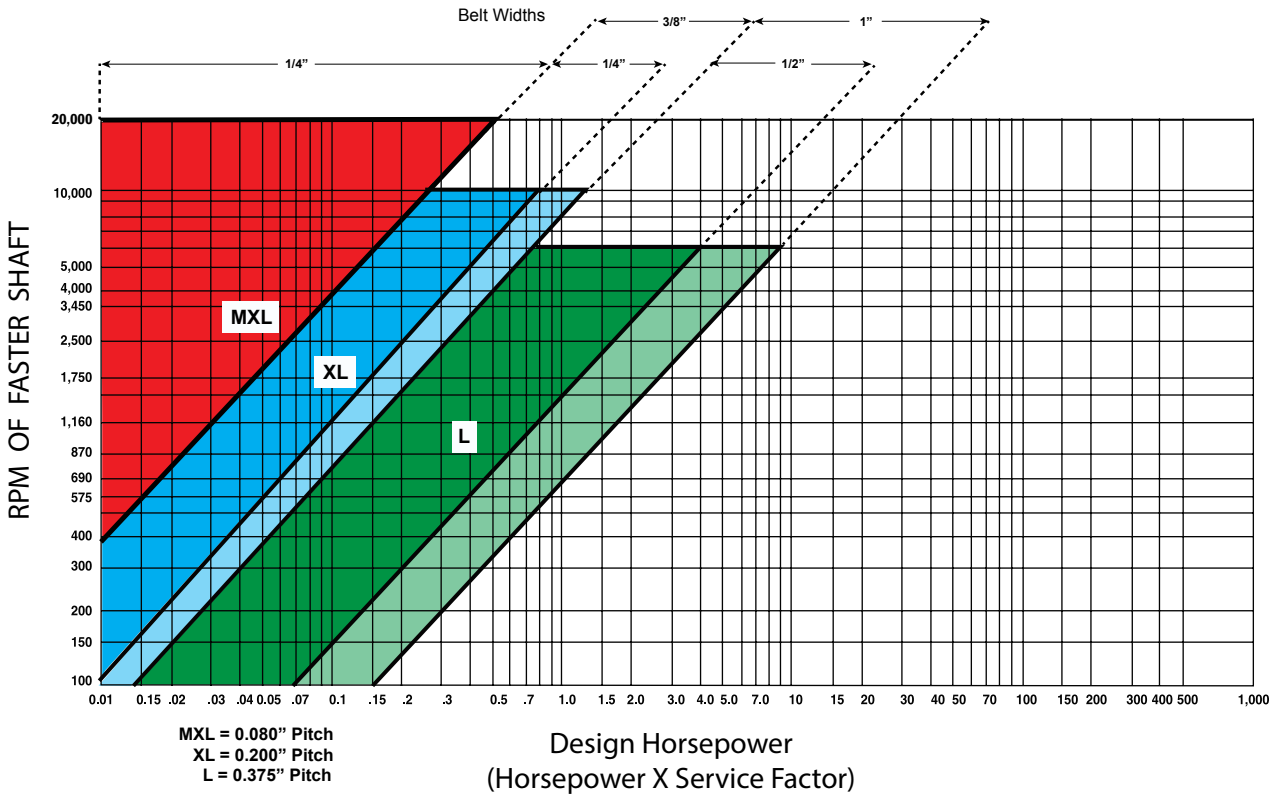
3. Determine Pitch (MXL XL or L) and belt width required by reading Design Horsepower Chart.
4. Select driver and driven pulleys to match desired speed or torque change.
5. Determine belt length per belt length calculation.

Note: AutomationDirect provides an online configuration tool to assist with pulley and belt sizing.  
 See: [www.automationdirect.com/selectors/beltandpulley](http://www.automationdirect.com/selectors/beltandpulley)

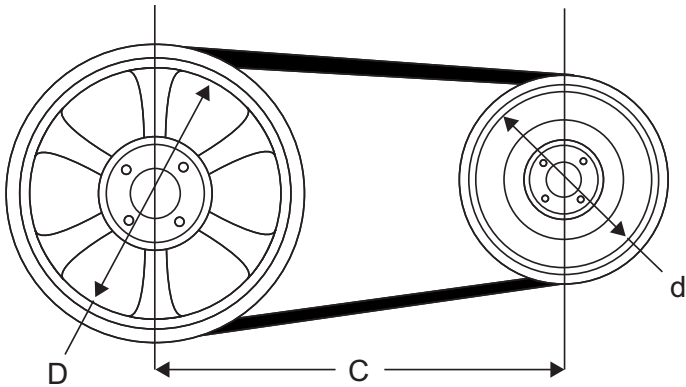


# Synchronous Drive Components

## 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