



DYNA-SYNC DRIVES

Using Standard Motor Speeds

Step 1—Determine Service Factor from steps on page 362.

Step 2—Compute Design HP. Multiply normal running HP required or nameplate rating by service factor obtained in Step 1.

Step 3—Choose Belt Section. Using Table 1, below, read up from design HP figure obtained in Step 2 and over from the RPM of faster shaft. This intersection indicates belt section.

Step 4—Select the Drive, a). Using the belt section from Step 3, refer to Selection Tables beginning on page 364. **b).** Under appropriate standard full-load motor RPM, find the driven RPM nearest to the desired speed. Trace right to columns headed "Pulley Combination." If more than one is listed, the combination with the largest pulleys usually will offer the best belt life. (Note that one pulley must be flanged on all drives. If center distance exceeds 8 times P.D. of small pulley or shafts are vertical or inclined, both must be flanged.) **c).** On same line trace right to the figure nearest the desired center distance and at top of column note belt number. **d).** Trace back on same line to appropriate column under heading "HP for a 1" Belt..." Divide the design HP obtained in Step 2 by the HP thus found in table. (Divide this value by Teeth in Mesh (T.I.M.) factor when applicable.) The result is the Belt Width Factor. Refer to table below right hand selection table to determine belt width required. If width shown is not stock go to next stock width listed. Add belt code, from table, to belt number found in Step 4c. (If wider stock belt is not shown in table, redesign drive to next larger pitch.) To check drive calculation: HP for a 1" Wide Belt x Belt Width factor x Teeth in Mesh factor = Actual HP rating of

the drive. If actual rating is equal to or greater than Design HP, selection is O.K.

NOTE: Good practice dictates that shaft and bushing system (or alternate shaft mounting method) be verified for adequate rating.

EXAMPLE OF SELECTION

Select a drive for a 3 cylinder reciprocating compressor to run 8 hours a day at about 270 RPM and to be driven by a 5 HP, 1160 RPM Design B squirrel cage motor. Centers are about 25".

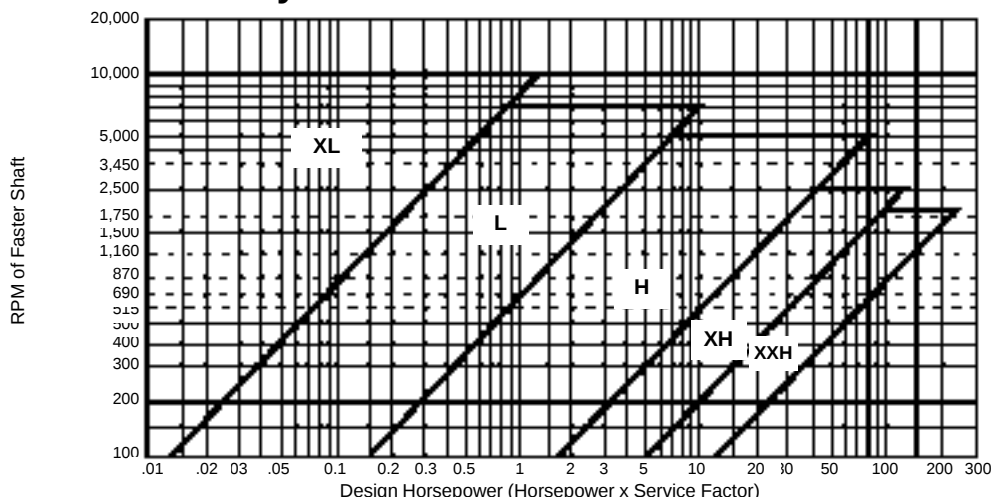
Step 1—Service Factor from page 362 is 2.2.

Step 2—Design HP = 5 x 2.2 = 11 HP.

Step 3—An "H" Cross Section is shown in Table 1 when reading to the right of 1160 RPM of faster shaft and up from 11 design HP.

Step 4—The H-Section drive tables begin on page 364. On page 33, the nearest driven speed for a 1160 RPM motor is 271 RPM. Two possible pulley combinations are listed. The 28H driver/120H driven is preferred. On the same line the nearest center distance to 25" is 25.45". Note the 900 H belt at top of column. Tracing back on the same line, under 1160 RPM, the "HP for a 1" Belt" is 5.68. 11 design HP 5.68 = 1.937 Belt Width Factor. Belt Width Table indicates a 2" wide belt is required. Add code number 200 to belt and pulley number and order the following: (1) TL28H200 DYNA-SYNC Pulley, (1) 2012 Taper-Lock (1) TL120H200 pulley. (1) TAPER-LOCK 3020 bushing. (1) 900H200 DYNA-SYNC Belt. To facilitate delivery, order by part numbers listed in Pulley, Bushing and Belt sections of this catalog.

Table 2 — Synchronous Cross Section Selection Chart



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SELECTION



SERVICE FACTOR

To determine the service factor for a DYNA-SYNC drive follow the three steps below.

Step 1. Determine the class of Driver from Table 2 below.

Step 2. Use Class of Driver and Type of Application in Table 4 at right to find the tentative service factor.

Step 3. Add the Additional Service Factor, when applicable, from Table 3 at bottom of page to the tentative service factor from Step 2 to determine the service factor for the application.

Table 3 — Class of Driver

Driver	Class I	Class II	Class III
A-C Electric Motors, Single Phase			All
Squirrel Cage, NEMA Design A, 3500 RPM	40 HP up	30 HP or less	
1750 RPM	100 HP up	5 to 75 HP	3 HP or less
1160 RPM	15 HP up	10 HP or less	
870 RPM	5 HP up	3 HP or less	
NEMA Design B, 3500 RPM		5 HP up	3 HP or less
1750 RPM		5 HP up	3 HP or less
1160 RPM		5 HP up	3 HP or less
870 RPM		2 HP up	1-1/2 HP or less
NEMA Design C, 1750 RPM		15 HP up	10 HP or less
1160 RPM		7-1/2 HP up	5 HP or less
870 RPM		All	
NEMA Design D			All
NEMA Design F	All		
Wound Rotor,			
1750 RPM		20 HP	15 HP or less
1160 RPM		15 HP	10 HP or less
870 RPM		7-1/2 HP	5 HP or less
Synchronous		Norm. Torque	High Torque
D-C Electric Motors	Shunt	Compound	Series
Engines-Int. Comb	8 Cyl. up	6 Cyl	4 Cyl. or less
Hydraulic Motors			All
Line Shafts			All

Table 4 — Additional Service Factors★

Condition	Additional Factor
24 hour continuous operation	0.2
Use of an idler	0.2
Intermittent or seasonal operation	◆
Speed up drive:	
1 to 1.24 ratio	0.0
1.25 to 1.74 ratio	0.1
1.75 to 2.49 ratio	0.2
2.50 to 3.49 ratio	0.3
Over 3.49 ratio	0.4

★ Additional service factors other than listed here are required for unusual condition such as torque reversal, heavy shock, when current to motor is reversed to either stop the motor rapidly or to run it in opposite direction, or when a brake is to be used. For such applications consult factory.

◆ Subtract 0.2 from tentative service factor.

Table 5 — Service Factors*

Application	Class		
	I	II	III
AGITATORS, MIXERS (Paddle or Propeller)			
Liquid	1.4	1.6	1.8
Semi-liquid	1.5	1.7	1.9
BAKERY MACHINERY DOUGH MIXERS	1.4	1.6	1.8
BRICK AND CLAY MACHINERY			
Augers, Mixers, Granulators	1.5	1.7	1.9
Pug Mills	1.8	2.0	2.2
CENTRIFUGES	1.8	1.9	...
COMPRESSORS			
Reciprocating	2.0	2.2	2.4
Centrifugal	1.8	1.7	1.8
CONVEYORS			
Light-Package Belt, oven	1.3	1.5	1.7
Belt, Ore, Coal, Sand	1.8	1.7	1.8
Apron, Bucket, Elevator, Pan	1.7	1.8	1.9
Flight, Screw	1.7	1.9	2.0
FANS, BLOWERS			
Centrifugal, Induced Draft Exhausters	1.8	1.8	2.0
Propeller, Mine fans, Positive Blowers	1.8	2.0	2.2
GENERATORS AND EXCITERS	1.6	1.8	2.0
HAMMER MILLS	1.7	1.9	2.1
LAUNDRY MACHINERY			
General	1.5	1.6	1.7
Extractors, Washers	1.6	1.8	2.0
LINE SHAFTS	1.5	1.7	1.9
MACHINE TOOLS			
Drill Presses, Lathes, Screw Machines	1.4	1.6	1.8
Boring Mills, Grinders	1.5	1.7	1.9
Milling Machines, Shapers	1.5	1.7	1.9
MILLS			
Ball, Rod, Pebble. etc.	...	2.2	2.5
PAPER MACHINERY			
Agitators, Calenders, Dryers	1.4	1.6	1.8
Beaters, Jordans, Nash Pumps, Pulpers	1.7	1.9	2.1
PRINTING MACHINERY			
Presses: Newspaper, Rotary, Embossing, Flat Bed, Magazine; Linotype Machines; Cutters; Folders	1.4	1.6	1.8
PUMPS			
Centrifugal, Gear, Rotary, Pipeline	1.5	1.7	1.9
Reciprocating	2.0	2.2	2.4
RUBBER PLANT MACHINERY	1.6	1.8	2.0
SAW MILL MACHINERY	1.6	1.8	2.0
SCREENS			
Vibrating (Shakers)	1.5	1.7	...
Drum, Conical	1.4	1.5	...
TEXTILE MACHINERY			
Looms, Spinning Frames, Twisters	1.6	1.8	2.0
Wrappers, Reels	1.5	1.7	...
WOODWORKING MACHINERY			
Lathes, Band Saws	1.3	1.4	...
Jointers, Circular Saws, Planers	1.4	1.6	...

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DYNA-SYNC DRIVES

For Speeds Other Than Standard Motor Speeds and Speed-Up Drives

For Speeds Other than Standard Motor Speeds:

Step 1—Calculate Speed Ratio = $\frac{\text{Driver RPM}}{\text{Driven RPM}}$

Step 2—Determine Service Factor from steps on page 362.

Step 3—Calculate Design HP. Multiply normal running HP required or nameplate rating by service factor obtained in Step 2.

Step 4—Using Table 1 on page 361 read up from design HP obtained in Step 3 and over from RPM of faster shaft. This intersection indicates belt section.

Step 5—Select the Drive. a.) Using the belt section obtained in Step 4, refer to Selection Tables beginning on 16. **b.)** Read down ratio column to the value nearest to one calculated in Step 1. Trace right to columns headed "Pulley Combinations." If more than one is listed, the combination with the largest pulleys usually will offer the best belt life. (Note that one pulley must be flanged on all drives. If center distance exceeds 8 times P.D. of small pulley or shafts are vertical or inclined, both must be flanged.) **c.)** On the same line trace right to figure nearest the desired center distance and at top of column note belt number. **d.)** Now go to the **HP Table** for the appropriate belt section. Reading to the right of the speed of the faster pulley and down from the pulley size, the HP figure for a 1" belt will appear. Divide the design HP from Step 3 by the HP thus found in table. (Divide this value by Teeth in Mesh factor, when applicable.) The result is the Belt Width Factor. Refer to table below the HP Table to determine belt width factor required. If width shown is not in stock go to next stock width listed. Add belt code, from table, to belt number found in Step 5c. (If wider stock belt is not shown in table, redesign drive to next larger pitch).

EXAMPLE OF SELECTION

A printing machine embossing roll runs at 426 RPM, powered from an 800 RPM line shaft. The roll required 7 HP. Machine runs 8-10 hrs. a day. Center distance is approx. 20".

Step 1—Speed Ratio = $\frac{800}{426} = 1.88$

Step 2—Service Factor = 1.8

Step 3—Design HP = $7 \times 1.8 = 12.6$

Step 4—Belt Selection from Table 21 = H

Step 5—The H Section **Drive Tables** begin on page 376. The ratio of 1.88 obtained in Step 1 is found on page D9-18. Two pulley combinations are listed. The 32H driver /60H driven is preferred. On the same line the nearest center distance to 20" is 19.88. Note the 630H belt at top of column. Refer to H section **HP Tables** on page 388. Opposite 800 RPM of faster shaft and under 32H pulley, the HP 4.50 = 2.8. This is the belt width factor. Referring to the H belt width table a 3" wide belt is stock. Add the 300 Code Width to the pulley and belt numbers and order the following:

- (1) TL32H300 DYNA-SYNC Pulley, (1) 2517 TAPER-LOCK bushing (Check to see if bushing will fit equipment shafts). (1) TL60H300 Pulley.
- (1) 3020 bushing
- (1) 630H300 DYNA-SYNC Belt.

To facilitate delivery, use part numbers listed in Pulley, Bushing and Belt sections of this catalog.

Example of a Speed-Up Drive

Select a drive for a continuous duty liquid agitator to run at about 2000 RPM and to be driven by a 10 HP, 1750 RPM squirrel cage motor Centers are about 10".

Step 1—Speed ratio is $2000 \div 1750 = 1.14$.

Step 2—Service factor from page 362 is 1.8

Step 3—Design HP = $10 \times 1.8 = 18$ HP.

Step 4—An "H" Cross Section is shown in Table 1 when reading to the right of 2000 RPM and up from 18 design HP.

Step 5—Speed ratio calculated in Step 1 appears in Selection Table on page 376. Two possible pulley combinations are listed. The 28H driver/32H driven is preferred. In a Speed-Up Drive, the 28H becomes the driven, the 32H, the driver. On the same line the nearest center distance to 10" is 10.5. Note the 360H belt at top of column. Referring to HP table on page 388, the rating for a 1" wide belt is shown as 9.60 for a 28H pulley at 2000 RPM. $18 \text{ design HP} \div 9.601.875 \text{ Belt Width Factor}$ Belt Width Table indicates a 2" wide belt is required. Add code number 200 to belt and pulley number and order the following: (1) TL32H200 DYNA-SYNC Pulley, (1) 2517 TAPER-LOCK Bushing. (Check to see if bushings will fit equipment shafts). (1) TL28H200 Pulley, (1) 2012 bushing (with 2" max. bore). (1) 360H200 DYNA-SYNC belt.

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SELECTION



XL STOCK DRIVE SELECTIONS

Driven Speeds for Motor Speeds of			Speed Ratio	Pulley Combination				HP for a 1 Wide Belt for Motor Speeds of ▲			nominal C.D. Using DYNA-SYNC Belts					
				Driver		Driven										
3500	1750	1160		No. of Teeth	Pitch Diam.	No. of Teeth	Pitch Diam.	3500	1750	1160	60XL	70XL	80XL	90XL	100XL	110XL
3500	1750	1160	1.00	30XL	1.910	30XL	1.910	2.11	1.07	.71	....	....	....	....	....	2.50
3500	1750	1160	1.00	28XL	1.783	28XL	1.783	1.98	1.00	.66	....	....	....	....	2.20	2.70
3500	1750	1160	1.00	24XL	1.528	24XL	1.528	1.71	.86	.56	....	....	....	2.10	2.60	3.10
3500	1750	1160	1.00	22XL	1.401	22XL	1.401	1.57	.79	.52	....	....	1.80	2.30	2.80	3.30
3500	1750	1160	1.00	21XL	1.337	21XL	1.337	1.49	.75	.50	....	....	1.90	2.40	2.90	3.40
3500	1750	1160	1.00	20XL	1.273	20XL	1.273	1.42	.72	.46	....	....	2.00	2.50	3.00	3.50
3500	1750	1160	1.00	18XL	1.146	18XL	1.146	1.28	.64	.42	....	1.70	2.20	2.70	3.20	3.70
3500	1750	1160	1.00	16XL	1.019	16XL	1.019	1.15	.58	.38	1.40	1.90	2.40	2.90	3.40	3.90
3500	1750	1160	1.00	15XL	.955	15XL	.955	1.07	.53	.36	1.50	2.00	2.50	3.00	3.50	4.00
3500	1750	1160	1.00	14XL	.891	14XL	.891	1.00	.50	.33	1.60	2.10	2.60	3.10	3.60	4.10
3500	1750	1160	1.00	12XL	.764	12XL	.764	.86	.43	.28	1.80	2.30	2.80	3.30	3.80	4.30
3500	1750	1160	1.00	11XL	.700	11XL	.700	.79★	.39	.26	1.90†	2.40†	2.90†	3.40†	3.90†	4.40†
3341	1675	1107	1.05	21XL	1.337	22XL	1.401	1.49	.75	.50	....	....	1.85	2.35	2.85	3.35
3333	1667	1105	1.05	20XL	1.273	21XL	1.337	1.42	.72	.46	....	....	1.95	2.45	2.95	3.45
3281	1641	1088	1.07	30XL	1.910	32XL	2.037	2.11	1.07	.71	....	....	....	....	....	2.39
3281	1641	1088	1.07	15XL	.955	16XL	1.019	1.07	.53	.36	1.45	1.95	2.45	2.95	3.45	3.95
3267	1634	1083	1.07	28XL	1.783	30XL	1.910	1.98	1.00	.66	....	....	....	....	2.09	2.59
3267	1634	1083	1.07	14XL	.891	15XL	.955	1.00	.50	.33	1.55	2.05	2.55	3.05	3.55	4.05
3208	1604	1063	1.09	22XL	1.401	24XL	1.528	1.57	.79	.52	....	....	....	2.19	2.69	3.19
3208	1604	1063	1.09	11XL	.700	12XL	.764	.79★	.39	.26	1.85†	2.35†	2.85†	3.35†	3.85†	4.35†
3182	1591	1055	1.10	20XL	1.273	22XL	1.401	1.42	.72	.46	....	....	1.89	2.39	2.89	3.39
3150	1575	1044	1.11	18XL	1.146	20XL	1.273	1.28	.64	.42	....	1.59	2.09	2.59	3.09	3.59
3111	1556	1031	1.13	16XL	1.019	18XL	1.146	1.15	.58	.38	....	1.79	2.29	2.79	3.29	3.79
3063	1532	1015	1.14	28XL	1.783	32XL	2.037	1.98	1.00	.66	....	....	....	....	....	2.49
3063	1532	1015	1.14	21XL	1.337	24XL	1.528	1.49	.75	.50	....	....	1.74	2.24	2.74	3.24
3063	1532	1015	1.14	14XL	.891	16XL	1.019	1.00	.50	.33	1.49	1.99	2.49	2.99	3.49	4.00
3000	1500	994	1.17	24XL	1.528	28XL	1.783	1.71	.86	.56	....	....	....	....	2.39	2.89
3000	1500	994	1.17	18XL	1.146	21XL	1.337	1.28	.64	.42	....	1.54	2.04	2.54	3.04	3.54
3000	1500	994	1.17	12XL	.764	14XL	.891	.86	.43	.28	1.69†	2.19†	2.69†	3.19†	3.69†	4.20†
2917	1458	967	1.20	30XL	1.910	36XL	2.292	2.11	1.07	.71	....	....	....	....	....	....
2917	1458	967	1.20	20XL	1.273	24XL	1.528	1.42	.72	.46	....	....	1.79	2.29	2.79	3.29
2917	1458	967	1.20	15XL	.955	18XL	1.146	1.07	.53	.36	1.34	1.84	2.34	2.84	3.34	3.84
2864	1432	949	1.22	18XL	1.146	22XL	1.401	1.28	.64	.42	....	....	1.99	2.49	2.99	3.49
2800	1400	928	1.25	24XL	1.528	30XL	1.910	1.71	.86	.56	....	....	....	....	2.29	2.79
2800	1400	928	1.25	16XL	1.019	20XL	1.273	1.15	.58	.38	....	1.69	2.19	2.69	3.19	3.69
2800	1400	928	1.25	12XL	.764	15XL	.955	.86	.43	.28	1.64†	2.14†	2.64†	3.14†	3.64†	4.14†
2750	1375	911	1.27	22XL	1.401	28XL	1.783	1.57	.79	.52	....	....	....	1.99	2.49	2.99
2750	1375	911	1.27	11XL	.700	14XL	.891	.79★	.39	.26	1.74†	2.24†	2.74†	3.24†	3.74†	4.24†
2722	1361	902	1.29	28XL	1.783	36XL	2.292	1.98	1.00	.66	....	....	....	....	....	2.28
2722	1361	902	1.29	14XL	.891	18XL	1.146	1.00	.50	.33	1.39	1.89	2.39	2.89	3.39	3.89
2667	1333	884	1.31	16XL	1.019	21XL	1.337	1.15	.58	.38	....	1.64	2.14	2.64	3.14	3.64
2625	1313	870	1.33	30XL	1.910	40XL	2.546	2.11	1.07	.71	....	....	....	....	....	....
2625	1313	870	1.33	24XL	1.528	32XL	2.037	1.71	.86	.56	....	....	1.89	....	2.18	2.68
2625	1313	870	1.33	21XL	1.337	28XL	1.783	1.49	.75	.50	....	....	....	2.03	2.54	3.04
2625	1313	870	1.33	18XL	1.146	24XL	1.528	1.28	.64	.42	....	....	....	2.39	2.89	3.39
2625	1313	870	1.33	15XL	.955	20XL	1.273	1.07	.53	.36	....	1.74	2.24	2.74	3.24	3.74
2625	1313	870	1.33	12XL	.764	16XL	1.019	.86	.43	.28	1.59†	2.09†	2.59†	3.09†	3.59†	4.09†
2567	1283	851	1.36	22XL	1.401	30XL	1.910	1.57	.79	.52	....	....	....	....	2.38	2.88
2567	1283	851	1.36	11XL	.700	15XL	.955	.79★	.38	.26	1.69†	2.19†	2.69†	3.19†	3.69†	4.19†
2545	1273	844	1.38	16XL	1.019	22XL	1.401	1.15	.58	.38	....	1.58	2.09	2.59	3.09	3.59
2500	1250	829	1.40	30XL	1.910	42XL	2.674	2.11	1.07	.71	....	1.68	....	....	....	....
2500	1250	829	1.40	20XL	1.273	28XL	1.783	1.42	.72	.46	....	....	....	2.08	2.58	3.09
2500	1250	829	1.40	15XL	.955	21XL	1.337	1.07	.53	.36	....	....	2.19	2.69	3.19	3.69
2450	1225	812	1.43	28XL	1.783	40XL	2.546	1.98	1.00	.66	....	....	....	....	....	....
2450	1225	812	1.43	21XL	1.337	30XL	1.910	1.49	.75	.50	....	....	....	1.92	2.43	2.93
2450	1225	812	1.43	14XL	.891	20XL	1.273	1.00	.50	.33	....	1.79	2.29	2.79	3.29	3.79
2406	1203	798	1.45	22XL	1.401	32XL	2.037	1.57	.79	.52	....	....	....	....	2.27	2.78
2406	1203	798	1.45	11XL	.700	16XL	1.019	.79★	.39	.26	1.64†	2.14†	2.64†	3.14†	3.64†	4.14†

▲ HP ratings are for conventional speed-reduction drives. For Speed-Up Drives refer to page 363.
 ★ Pulley Diameter is below recommended minimum. A reduction in belt life should be expected. Suggest alternate drive selection, whenever possible.

† See Teeth in Mesh table on opposite page.

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SELECTION



XL STOCK DRIVE SELECTIONS

Nominal Center Distance Using DYNA-SYNC Belts														
120XL	130XL	140XL	150XL	160XL	170XL	180XL	190XL	200XL	210XL	220XL	230XL	240XL	250XL	260XL
3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50	8.00	8.50	9.00	9.50	10.00
3.20	3.70	4.20	4.70	5.20	5.70	6.20	6.70	7.20	7.70	8.20	8.70	9.20	9.70	10.20
3.60	4.10	4.60	5.10	5.60	6.10	6.60	7.10	7.60	8.10	8.60	9.10	9.60	10.10	10.60
3.80	4.30	4.80	5.30	5.80	6.30	6.80	7.30	7.80	8.30	8.80	9.30	9.80	10.30	10.80
3.90	4.40	4.90	5.40	5.90	6.40	6.90	7.40	7.90	8.40	8.90	9.40	9.90	10.40	10.90
4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50	8.00	8.50	9.00	9.50	10.00	10.50	11.00
4.20	4.70	5.20	5.70	6.20	6.70	7.20	7.70	8.20	8.70	9.20	9.70	10.20	10.70	11.20
4.40	4.90	5.40	5.90	6.40	6.90	7.40	7.90	8.40	8.90	9.40	9.90	10.40	10.90	11.40
4.50	5.00	5.50	6.00	6.50	7.00	7.50	8.00	8.50	9.00	9.50	10.00	10.50	11.00	11.50
4.60	5.10	5.60	6.10	6.60	7.10	7.60	8.10	8.60	9.10	9.60	10.10	10.60	11.10	11.60
4.80	5.30	5.80	6.30	6.80	7.30	7.80	8.30	8.60	9.30	9.80	10.30	10.80	11.30	11.80
4.90†	5.40†	5.90†	6.40†	6.90†	7.40†	7.90†	8.40†	8.90†	9.40†	9.90†	10.40†	10.90†	11.40†	11.90†
3.85	4.35	4.85	5.35	5.85	6.35	6.85	7.35	7.85	8.35	8.85	9.35	9.85	10.35	10.85
3.95	4.45	4.95	5.45	5.95	6.45	6.95	7.45	7.95	8.45	8.95	9.45	9.95	10.45	10.95
2.89	3.39	3.89	4.40	4.90	5.40	5.90	6.40	6.90	7.40	7.90	8.40	8.99	9.40	9.90
4.45	4.95	5.45	5.95	6.45	6.95	7.45	7.95	8.45	8.95	9.45	9.95	10.45	10.95	11.45
3.09	3.59	4.10	4.60	5.10	5.60	6.10	6.60	7.10	7.60	8.10	8.60	9.10	9.80	10.10
4.55	5.05	5.55	6.05	6.55	7.05	7.55	8.05	8.55	9.05	9.55	10.05	10.55	11.05	11.55
3.69	4.20	4.70	5.20	5.70	6.20	6.70	7.20	7.70	8.20	8.70	9.20	9.70	10.20	10.70
4.85†	5.35†	5.85†	6.35†	6.85†	7.35†	7.85†	8.35†	8.85†	9.35†	9.85†	10.35†	10.85†	11.35†	11.85†
3.89	4.40	4.90	5.40	5.90	6.40	6.90	7.40	7.90	8.40	8.90	9.40	9.90	10.40	10.90
4.10	4.60	5.10	5.60	6.10	6.60	7.10	7.60	8.10	8.60	9.10	9.60	10.10	10.60	11.10
4.30	4.80	5.30	5.80	6.30	6.80	7.30	7.80	8.30	8.80	9.30	9.80	10.30	10.80	11.30
2.99	3.49	3.99	4.49	4.99	5.49	5.99	6.49	6.99	7.49	7.99	8.49	8.99	9.49	9.99
3.74	4.24	4.74	5.24	5.74	6.24	6.74	7.24	7.74	8.24	8.74	9.25	9.75	10.25	10.75
4.50	5.00	5.50	6.00	6.50	7.00	7.50	8.00	8.50	9.00	9.50	10.00	10.50	11.00	11.50
3.39	3.89	4.39	4.89	5.39	5.89	6.39	6.89	7.39	7.89	8.39	8.89	9.39	9.89	10.39
4.04	4.54	5.04	5.54	6.04	6.54	7.04	7.54	8.04	8.54	9.05	9.55	10.05	10.55	11.05
4.70†	5.20†	5.70†	6.20†	6.70†	7.20†	7.70†	8.20†	8.70†	9.20†	9.70†	10.20†	10.70†	11.20†	11.70†
2.69	3.19	3.69	4.19	4.69	5.19	5.69	6.19	6.69	7.19	7.69	8.19	8.69	9.19	9.69
3.79	4.29	4.79	5.29	5.79	6.29	6.79	7.29	7.79	8.29	8.79	9.29	9.79	10.29	10.79
4.34	4.84	5.34	5.84	6.34	6.84	7.34	7.84	8.34	8.84	9.35	9.85	10.35	10.85	11.35
3.99	4.49	4.99	5.49	5.99	6.49	6.99	7.49	7.99	8.49	8.99	9.49	9.99	10.49	10.99
3.29	3.79	4.29	4.79	5.29	5.79	6.29	6.79	7.29	7.79	8.29	8.79	9.29	9.79	10.29
4.19	4.69	5.19	5.69	6.19	6.69	7.19	7.69	8.19	8.69	9.19	9.69	10.19	10.69	11.19
4.64†	5.14†	5.64†	6.14†	6.64†	7.14†	7.64†	8.14†	8.64†	9.15†	9.65†	10.15†	10.65†	11.15†	11.65†
3.49	3.99	4.49	4.99	5.49	5.99	6.49	6.99	7.49	7.99	8.49	8.99	9.49	9.99	10.49
4.74†	5.24†	5.74†	6.24†	6.74†	7.24†	7.74†	8.24†	8.74†	9.25†	9.75†	10.25†	10.75†	11.25†	11.75†
2.78	3.29	3.79	4.29	4.79	5.29	5.79	6.29	6.79	7.29	7.79	8.29	8.79	9.29	9.79
4.39	4.89	5.39	5.89	6.39	6.89	7.39	7.89	8.39	8.89	9.39	9.89	10.39	10.69	11.39
4.14	4.64	5.14	5.64	6.14	6.64	7.14	7.64	8.14	8.64	9.14	9.64	10.14	10.64	11.14
2.48	2.98	3.48	3.98	4.48	4.98	5.48	5.98	6.48	6.98	7.48	7.98	8.48	8.98	9.48
3.19	3.69	4.19	4.69	5.19	5.69	6.19	6.69	7.19	7.69	8.19	8.69	9.19	9.69	10.19
3.54	4.04	4.54	5.04	5.54	6.04	6.54	7.04	7.54	8.04	8.54	9.04	9.54	10.04	10.54
3.89	4.39	4.89	5.39	5.89	6.39	6.89	7.39	7.89	8.39	8.89	9.39	9.89	10.39	10.89
4.24	4.74	5.24	5.74	6.24	6.74	7.24	7.74	8.24	8.74	9.24	9.74	10.24	10.74	11.24
4.59†	5.09†	5.59†	6.09†	6.59†	7.09†	7.59†	8.09†	8.59†	9.09†	9.59†	10.09†	10.59†	11.09†	11.59†
3.39	3.89	4.39	4.89	5.39	5.89	6.39	6.89	7.39	7.89	8.39	8.89	9.39	9.89	10.39
4.69†	5.19†	5.69†	6.19†	6.69†	7.19†	7.69†	8.19†	8.69†	9.19†	9.69†	10.19†	10.69†	11.19†	11.69†
4.09	4.59	5.09	5.59	6.09	6.59	7.09	7.59	8.09	8.59	9.09	9.59	10.09	10.59	11.09
....	2.87	3.37	3.88	4.38	4.88	5.38	5.88	6.38	6.88	7.39	7.89	8.39	8.69	9.39
3.59	4.09	4.59	5.09	5.59	6.09	6.59	7.09	7.59	8.09	8.59	9.09	9.59	10.09	10.59
4.19	4.69	5.19	5.69	6.19	6.69	7.19	7.69	8.19	8.69	9.19	9.69	10.19	10.69	11.19
2.57	3.07	3.58	4.08	4.58	5.08	5.58	6.08	6.58	7.09	7.59	8.09	8.59	9.09	9.59
3.43	3.84	4.44	4.94	5.44	5.94	6.44	6.94	7.44	7.94	8.44	8.94	9.44	9.94	10.44
4.29	4.79	5.29	5.79	6.29	6.79	7.29	7.79	8.29	8.79	9.29	9.79	10.29	10.79	11.29
3.28	3.78	4.28	4.78	5.29	5.79	6.29	6.79	7.29	7.79	8.29	8.79	9.29	9.79	10.29
4.64†	5.14†	5.64†	6.14†	6.64†	7.14†	7.64†	8.14†	8.64†	9.14†	9.64†	10.14†	10.64†	11.14†	11.64†

XL Belt Width Table

Belt Width Factor	.15	.28	.35	.42	.57	.71	.86	1.00	1.29	1.56
Belt Width	1/4	3/8	7/16	1/2	5/8	3/4	7/8	1	1-1/4	1-1/2
Belt Width Code	025	037	043	050	062	075	087	100	125	150

Teeth in Mesh factor (T.I.M.)

Shaded area indicates stock belt widths.

Table Symbol	No. of Teeth In Mesh In Small Pulley	Factor
None	6 or More	1.00
†	5	.80

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SELECTION



XL STOCK DRIVE SELECTIONS

Driven Speeds for Motor Speeds of			Speed Ratio	Pulley Combination				HP for a 1 Wide Belt for Motor Speeds of ▲			nominal C.D. Using DYNA-SYNC Belts					
				Driver		Driven										
				No. of Teeth	Pitch Diam.	No. of Teeth	Pitch Diam.				3500	1750	1160	60XL	70XL	80XL	90XL	100XL	110XL
2386	1193	791	1.47	15XL	1.901	44XL	2.801	2.11	1.07	.71	....	....	....	....	....	....
2386	1193	791	1.47	30XL	.955	22XL	1.401	1.07	.53	.36	....	1.63	2.13	2.64	3.14	3.64
2334	1167	773	1.50	28XL	1.783	42XL	2.674	1.98	1.00	.66	....	....	....	....	....	....
2334	1167	773	1.50	24XL	1.528	36XL	2.292	1.71	.86	.56	....	....	....	....	....	2.47
2334	1167	773	1.50	20XL	1.273	30XL	1.910	1.42	.72	.46	....	....	....	1.97	2.48	2.98
2334	1167	773	1.50	16XL	1.019	24XL	1.528	1.15	.58	.38	....	....	1.98	2.48	2.98	3.49
2334	1167	773	1.50	14XL	.891	21XL	1.337	1.00	.50	.33	....	1.73	2.23	2.74	3.24	3.74
2334	1167	773	1.50	12XL	.764	18XL	1.146	.86	.43	.28	1.48†	1.99†	2.49†	2.99†	3.49†	3.99†
2297	1148	761	1.52	21XL	1.337	32XL	2.037	1.49	.75	.50	....	....	....	....	2.32	2.82
2250	1125	746	1.56	18XL	1.146	28XL	1.783	1.28	.64	.42	....	....	....	2.17	2.68	3.18
2227	1114	738	1.57	28XL	1.783	44XL	2.801	1.98	1.00	.66	....	....	....	....	....	....
2227	1114	738	1.57	14XL	.891	22XL	1.401	1.00	.50	.33	....	1.68	2.18	2.68	3.19	3.69
2188	1094	725	1.60	30XL	1.910	48XL	3.056	2.11	1.07	.71	....	....	....	....	....	....
2188	1094	725	1.60	20XL	1.273	32XL	2.037	1.42	.72	.46	....	....	....	1.86	2.36	2.87
2188	1094	725	1.60	15XL	.955	24XL	1.528	1.07	.53	.36	....	1.52	2.02	2.53	3.03	3.53
2139	1059	709	1.64	22XL	1.401	36XL	2.292	1.57	.79	.52	....	....	....	....	....	2.56
2139	1069	709	1.64	11XL	.700	18XL	1.146	.79★	.39	.26	1.53†	2.03†	2.54†	3.64†	3.54†	4.04†
2100	1050	696	1.67	24XL	1.528	40XL	2.546	1.71	.86	.56	....	....	....	....	....	....
2100	1050	696	1.67	18XL	1.146	30XL	1.910	1.28	.64	.42	....	....	....	2.06	2.57	3.07
2100	1050	696	1.67	12XL	.764	20XL	1.273	.86	.43	.28	1.37†	1.88†	2.38†	2.88†	3.39†	3.89†
2042	1021	677	1.71	28XL	1.783	48XL	3.056	1.98	1.00	.66	....	....	....	....	....	....
2042	1021	677	1.71	21XL	1.337	36XL	2.292	1.49	.75	.50	....	....	....	....	2.09	2.60
2042	1021	677	1.71	14XL	.891	24XL	1.528	1.00	.50	.33	....	1.56	2.07	2.58	3.08	3.58
2000	1000	663	1.75	24XL	1.528	42XL	2.674	1.71	.86	.56	....	....	....	....	....	....
2000	1000	683	1.75	16XL	1.019	28XL	1.783	1.15	.58	.38	....	....	1.75	2.26	2.77	3.27
2000	1000	663	1.75	12XL	.764	21XL	1.337	.86	.43	.28	1.31†	1.82†	2.33†	2.83†	3.33†	3.83†
1969	984	653	1.78	18XL	1.146	32XL	2.037	1.28	.64	.42	....	....	....	1.94	2.46	2.96
1944	972	644	1.80	20XL	1.273	36XL	2.292	1.42	.72	.46	....	....	....	....	2.13	2.65
1925	963	637	1.82	22XL	1.401	40XL	2.546	1.57	.79	.52	....	....	....	....	....	2.32
1925	963	637	1.82	11XL	.700	20XL	1.273	.79★	.39	.26	1.42†	1.92†	2.43†	2.93†	3.43†	3.94†
1909	955	633	1.83	24XL	1.528	44XL	2.801	1.71	.86	.56	....	....	....	....	....	....
1909	955	633	1.83	12XL	.764	22XL	1.401	.86	.43	.28	....	1.77†	2.27†	2.78†	3.28†	3.78†
1875	937	621	1.87	15XL	.955	28XL	1.783	1.07	.53	.36	....	....	1.80	2.31	2.82	3.32
1867	933	619	1.88	16XL	1.019	30XL	1.910	1.15	.58	.38	....	....	....	2.15	2.66	3.16
1838	919	609	1.90	21XL	1.337	40XL	2.546	1.49	.75	.50	....	....	....	....	....	2.37
1833	917	607	1.91	22XL	1.401	42XL	2.674	1.57	.79	.52	....	....	....	....	....	....
1833	917	607	1.91	11XL	.700	21XL	1.337	.79★	.39	.26	1.36†	1.87†	2.37†	2.88†	3.38†	3.88†
1750	875	580	2.00	30XL	1.910	60XL	3.820	2.11	1.07	.71	....	....	....	....	....	....
1750	875	580	2.00	24XL	1.528	48XL	3.056	1.71	.86	.56	....	....	....	....	....	....
1750	875	580	2.00	22XL	1.401	44XL	2.801	1.57	.79	.52	....	....	....	....	....	....
1750	875	580	2.00	21XL	1.337	42XL	2.674	1.49	.75	.50	....	....	....	....	....	2.25
1750	875	580	2.00	20XL	1.273	40XL	2.546	1.42	.72	.46	....	....	....	....	....	2.41
1750	875	580	2.00	18XL	1.146	36XL	2.292	1.28	.64	.42	....	....	....	....	2.22	2.74
1750	875	580	2.00	16XL	1.019	32XL	2.037	1.15	.58	.38	....	....	....	2.03	2.54	3.05
1750	875	580	2.00	15XL	.955	30XL	1.910	1.07	.53	.36	....	....	1.68	2.19	2.70	3.21
1750	875	580	2.00	14XL	.891	28XL	1.783	1.00	.50	.33	....	....	1.84†	2.35	2.86	3.37
1750	875	580	2.00	12XL	.764	24XL	1.528	.86	.43	.28	....	1.65†	2.16†	2.67†	3.17†	3.68†
1750	875	580	2.00	11XL	.700	22XL	1.401	.79★	.39	.26	1.30†	1.81†	2.32†	2.82†	3.33†	3.83†
1670	835	554	2.10	21XL	1.337	44XL	2.801	1.49	.75	.50	....	....	....	....	....	....
1666	833	552	2.10	20XL	1.273	42XL	2.674	1.42	.72	.46	....	....	....	....	....	2.29
1641	820	544	2.13	15XL	.955	32XL	2.037	1.07	.53	.36	....	....	....	2.07	2.59	3.10
1833	817	542	2.14	28XL	1.783	60XL	3.820	1.98	1.00	.66	....	....	....	....	....	....
1833	817	542	2.14	14XL	.891	30XL	1.910	1.08	.50	.33	....	....	1.72†	2.24†	2.75	3.26
1604	802	532	2.18	22XL	1.401	48XL	3.056	1.57	.79	.52	....	....	....	....	....	....
1604	802	532	2.18	11XL	.700	24XL	1.528	.79★	.39	.26	....	1.69†	2.21†	2.71†	3.22†	3.72†
1591	795	527	2.20	20XL	1.273	44XL	2.801	1.42	.72	.46	....	....	....	....	....	....
1575	788	523	2.22	18XL	1.146	40XL	2.546	1.28	.64	.42	....	....	....	....	....	2.50
1556	778	516	2.25	16XL	1.019	36XL	2.292	1.15	.58	.38	....	....	....	....	2.31	2.82

▲ HP ratings are for conventional speed-reduction drives. For Speed-Up Drives refer to page 363.
 ★ Pulley Diameter is below recommended minimum. A reduction in belt life should be expected. Suggest alternate drive selection, whenever possible.

†† See Teeth in Mesh table on opposite page.
 ♣ Flanges required on both pulleys.

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SELECTION



XL STOCK DRIVE SELECTIONS

Nominal Center Distance Using DYNA-SYNC Belts														
120XL	130XL	140XL	150XL	160XL	170XL	180XL	190XL	200XL	210XL	220XL	230XL	240XL	250XL	260XL
.....	2.76	3.27	3.77	4.27	4.77	5.28	5.78	6.28	6.78	7.28	7.78	8.28	8.78	9.28
4.14	4.64	5.14	5.64	6.14	6.64	7.14	7.64	8.14	8.64	9.14	9.64	10.14	10.64	11.14
2.46	2.96	3.47	3.97	4.47	4.98	5.48	5.98	6.48	6.98	7.48	7.98	8.48	8.98	9.49
2.97	3.47	3.98	4.48	4.98	5.48	5.98	6.48	6.99	7.49	7.99	8.49	8.99	9.49	9.99
3.48	3.98	4.48	4.99	5.49	5.99	6.49	6.99	7.49	7.99	8.49	8.99	9.49	9.99	10.49
3.99	4.49	4.99	5.49	5.99	6.49	6.99	7.49	7.99	8.49	8.99	9.49	9.99	10.49	10.99
4.24	4.74	5.24	5.74	6.24	6.74	7.24	7.74	8.24	8.74	9.24	9.74	10.24	10.74	11.24
4.49†	4.99†	5.49†	5.99†	6.49†	6.99†	7.49†	7.99†	8.49†	8.99†	9.49†	9.99†	10.49†	10.99†	11.49†
3.33	3.83	4.33	4.83	5.33	5.84	6.34	6.84	7.34	7.84	8.34	8.84	9.34	9.84	10.34
3.68	4.18	4.68	5.19	5.69	6.19	6.69	7.19	7.69	8.19	8.69	9.19	9.69	10.19	10.69
.....	2.85	3.36	3.86	4.37	4.87	5.37	5.87	6.38	6.88	7.38	7.88	8.38	8.88	9.38
4.19	4.69	5.19	5.69	6.19	6.69	7.19	7.69	8.19	8.69	9.19	9.69	10.19	10.69	11.19
.....	.....	3.04	3.55	4.06	4.56	5.06	5.57	6.07	6.57	7.07	7.57	8.08	8.58	9.08
3.37	3.88	4.38	4.88	5.38	5.88	6.38	6.88	7.39	7.89	8.39	8.89	9.39	9.89	10.39▲
4.04	4.54	5.04	5.54	6.04	6.54	7.04	7.54	8.04	8.54	9.04	9.54	10.04	10.54	11.04
3.06	3.57	4.07	4.57	5.08	5.58	6.08	6.58	7.08	7.58	8.08	8.58	9.08	9.59	10.09
4.54†	5.04†	5.54†	6.04†	6.54†	7.04†	7.54†	8.04†	8.54†	9.04†	9.54†	10.04†	10.54†	11.04†	11.54†
2.75	3.26	3.76	4.27	4.77	5.27	5.77	6.27	6.78	7.28	7.78	8.28	8.78	9.28	9.78
3.58	4.08	4.58	5.08	5.58	6.08	6.58	7.09	7.59	8.09	8.59	9.09	9.59	10.09	10.59
4.39†	4.89†	5.39†	5.89†	6.39†	6.89†	7.39†	7.89†	8.39†	8.89†	9.39†	9.89†	10.39†	10.89†	11.39†
.....	.....	3.13	3.64	4.15	4.65	5.16	5.66	6.16	6.67	7.17	7.67	8.17	8.67	9.17
3.11	3.61	4.12	4.62	5.12	5.63	6.13	6.63	7.13	7.63	8.13	8.63	9.13	9.63	10.13
4.08	4.58	5.09	5.59	6.09	6.59	7.09	7.59	8.09	8.59	9.09	9.59	10.09	10.59	11.09
2.63	3.14	3.65	4.16	4.66	5.16	5.67	6.17	6.67	7.17	7.67	8.18	8.68	9.18	9.68
3.78	4.28	4.78	5.28	5.78	6.28	6.78	7.29	7.79	8.29	8.79	9.29	9.79	10.29	10.79
4.34†	4.84†	5.34†	5.84†	6.34†	6.84†	7.34†	7.84†	8.34†	8.84†	9.34†	9.84†	10.34†	10.84†	11.34†
3.47	3.97	4.47	4.98	5.48	5.98	6.48	6.98	7.48	7.98	8.48	8.98	9.49▲	9.99▲	10.49▲
3.15	3.66	4.16	4.67	5.17	5.67	6.17	6.68	7.18	7.68	8.18	8.68	9.18	9.68	10.18
2.84	3.35	3.85	4.36	4.86	5.36	5.87	6.37	6.87	7.37	7.87	8.38	8.88	9.38	9.88
4.44†	4.94†	5.44†	5.94†	6.44†	6.94†	7.44†	7.94†	8.44†	8.94†	9.44†	9.94†	10.44†	10.94†	11.44†
2.51	3.03	3.54	4.05	4.55	5.06	5.56	6.06	6.56	7.07	7.57	8.07	8.57	9.07	9.57
4.28†	4.78†	5.29†	5.79†	6.29†	6.79†	7.29†	7.79†	8.29†	8.79†	9.29†	9.79†	10.29†	10.79†	11.29†
3.82	4.33	4.83	5.33	5.83	6.33	6.83	7.33	7.83	8.34	8.84	9.34	9.84	10.34	10.84
3.67	4.17	4.67	5.18	5.68	6.18	6.68	7.18	7.68	8.18	8.68	9.18	9.69	10.19	10.69
2.88	3.39	3.90	4.40	4.91	5.41	5.91	6.42	6.92	7.42	7.92	8.42	8.93	9.43	9.93
2.72	3.23	3.74	4.25	4.75	5.26	5.76	6.26	6.77	7.27	7.77	8.27	8.77	9.27	9.77
4.38†	4.89†	5.39†	5.89†	6.39†	6.89†	7.39†	7.89†	8.39†	8.89†	9.39†	9.89†	10.39†	10.89†	11.39†
.....	.....	.....	.....	3.36	3.88	4.39	4.90	5.41	5.92	6.42	6.93	7.43	7.94	8.44
.....	2.79	3.31	3.82	4.33	4.84	5.34	5.85	6.35	6.85	7.36	7.86	8.38	8.86	9.36
2.60	3.12	3.63	4.14	4.64	5.15	5.65	6.16	6.66	7.16	7.66	8.17	8.67	9.17	9.67
2.76	3.28	3.79	4.29	4.80	5.30	5.81	6.31	6.81	7.31	7.82	8.32	8.82	9.32	9.82
2.93	3.44	3.94	4.45	4.95	5.46	5.96	6.46	6.97	7.47	7.97	8.47	8.97	9.47	9.98
3.24	3.75	4.26	4.76	5.26	5.77	6.27	6.77	7.27	7.77	8.28	8.78	9.28▲	9.78▲	10.28▲
3.56	4.06	4.57	5.07	5.57	6.07	6.58	7.08	7.58	8.08	8.58▲	9.08▲	9.58▲	10.08▲	10.58▲
3.71	4.22	4.72	5.22	5.73	6.23	6.73	7.23	7.73	8.23	8.73	9.23	9.73	10.23	10.73
3.87	4.37	4.88	5.38	5.88	6.38	6.88	7.38	7.88	8.38	8.88	9.38	9.89	10.39	10.89
4.18†	4.68†	5.18†	5.68†	6.18†	6.68†	7.19†	7.69†	8.19†	8.69†	9.19†	9.69†	10.19†	10.69†	11.19†
4.33†	4.83†	5.33†	5.84†	6.34†	6.84†	7.34†	7.84†	8.34†	8.84†	9.34†	9.84†	10.34†	10.84†	11.34†
2.64	3.16	3.67	4.18	4.69	5.19	5.70	6.20	6.71	7.21	7.71	8.21	8.71	9.22	9.72
2.81	3.32	3.83	4.34	4.84	5.35	5.85	6.36	6.86	7.36	7.86	8.37	8.87	9.37	9.87
3.60	4.11	4.61	5.12	5.62	6.12	6.62	7.12	7.63	8.13▲	8.63▲	9.13▲	9.63▲	10.13▲	10.63▲
.....	.....	.....	.....	3.44	3.96	4.48	4.99	5.50	6.01	6.52	7.02	7.53	8.03	8.53
3.76	4.27	4.77	5.27	5.77	6.27	6.78	7.28	7.78	8.28	8.78	9.28	9.78	10.28	10.78
.....	2.88	3.39	3.91	4.42	4.93	5.43	5.94	6.44	6.95	7.45	7.95	8.45	8.96	9.46
4.23†	4.73†	5.23†	5.73†	6.23†	6.73†	7.23†	7.73†	8.24†	8.74†	9.24†	9.74†	10.24†	10.74†	11.24†
2.69	3.20	3.72	4.23	4.73	5.24	5.74	6.25	6.75	7.26	7.76	8.26	8.76	9.26	9.77
3.01	3.53	4.03	4.54	5.05	5.55	6.05	6.56	7.06	7.56	8.07	8.57	9.07	9.57▲	10.07▲
3.33	3.84	4.35	4.85	5.36	5.86	6.36	6.87	7.37	7.87	8.37▲	8.87▲	9.37▲	9.87▲	10.38▲

XL Belt Width Table

Belt Width Factor	.15	.28	.35	.42	.57	.71	.86	1.00	1.29	1.56
Belt Width	1/4	3/8	7/16	1/2	5/8	3/4	7/8	1	1-1/4	1-1/2
Belt Width Code	025	037	043	050	062	075	087	100	125	150

Teeth in Mesh factor (T.I.M.)

Shaded area indicates stock belt widths.

Table Symbol	No. of Teeth In Mesh In Small Pulley	Factor	Table Symbol	No. of Teeth In Mesh In Small Pulley	Factor
None	6 or More	1.00	†	4	.60
†	5	.80			

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SELECTION



XL STOCK DRIVE SELECTIONS

Driven Speeds for Motor Speeds of			Speed Ratio	Pulley Combination				HP for a 1 Wide Belt for Motor Speeds of ▲			nominal C.D. Using DYNA-SYNC Belts					
				Driver		Driven										
3500	1750	1160		No. of Teeth	Pitch Diam.	No. of Teeth	Pitch Diam.	3500	1750	1160	60XL	70XL	80XL	90XL	100XL	110XL
1531	766	508	2.29	21XL	1.337	48XL	3.056	1.49	.75	.50	....	....	....	....	....	....
1531	766	508	2.29	14XL	.891	32XL	2.037	1.00	.50	.33	....	....	....	2.12†	2.63†	3.14
1500	750	498	2.33	18XL	1.146	42XL	2.674	1.28	.64	.42	....	....	....	....	....	2.37
1500	750	498	2.33	12XL	.764	28XL	1.783	.86	.43	.28	....	....	1.93‡	2.44†	2.95†	3.46†
1458	729	483	2.40	30XL	1.910	72XL	4.584	2.11	1.07	.71	....	....	....	....	....	....
1458	729	483	2.40	20XL	1.273	48XL	3.056	1.42	.72	.46	....	....	....	....	....	....
1458	729	483	2.40	15XL	.955	36XL	2.292	1.07	.53	.36	....	....	....	....	2.35	2.87
1432	716	475	2.44	18XL	1.146	44XL	2.801	1.28	.64	.42	....	....	....	....	....	2.24
1400	700	464	2.50	24XL	1.528	60XL	3.820	1.71	.86	.56	....	....	....	....	....	....
1400	700	464	2.50	16XL	1.019	40XL	2.546	1.15	.58	.38	....	....	....	....	2.05	2.58
1400	700	464	2.50	12XL	.764	30XL	1.910	.86	.43	.28	....	....	1.80‡	2.32‡	....	3.35†
1375	688	456	2.55	11XL	.700	28XL	1.783	.79★	.39	.26	....	....	1.97‡	2.49‡	2.84†	3.50†
1361	681	451	2.57	28XL	1.783	72XL	4.584	1.98	1.00	.66	....	....	....	1.86†	3.00†	2.91†
1361	681	451	2.57	14XL	.891	36XL	2.292	1.00	.50	.33	....	....	....	....	2.39†	2.45
1333	666	442	2.63	16XL	1.019	42XL	2.674	1.15	.58	.38	....	....	....	....	....	....
1312	656	435	2.67	18XL	1.146	48XL	3.056	1.28	.64	.42	....	....	....	....	....	....
1312	656	435	2.67	15XL	.955	40XL	2.546	1.07	.53	.36	....	....	....	....	2.09†	2.62†
1312	656	435	2.67	12XL	.764	32XL	2.037	.86	.43	.28	....	....	1.67‡	2.20‡	2.72†	3.23†
1283	642	425	2.73	22XL	1.401	60XL	3.820	1.57	.79	.52	....	....	....	....	....	....
1283	642	425	2.73	11XL	.700	30XL	1.910	.79★	.39	.26	....	....	1.85‡	2.37‡	2.88‡	3.39‡
1273	638	422	2.75	16XL	1.019	44XL	2.801	1.15	.58	.38	....	....	....	....	....	2.32†
1250	625	414	2.80	15XL	.955	42XL	2.674	1.07	.53	.36	....	....	....	....	....	2.50†
1225	613	406	2.86	21XL	1.337	60XL	3.820	1.49	.75	.50	....	....	....	....	....	....
1225	613	406	2.86	14XL	.891	40XL	2.546	1.00	.50	.33	....	....	....	....	2.13†	2.67†
1203	601	399	2.91	11XL	.700	32XL	2.037	.79★	.39	.26	....	....	1.71§	2.25‡	2.78‡	3.28‡
1193	597	396	2.93	15XL	.955	44XL	2.801	1.07	.53	.36	....	....	....	....	....	2.36
1167	583	387	3.00	24XL	1.528	72XL	4.584	1.71	.86	.56	....	....	....	....	....	....
1167	583	387	3.00	20XL	1.273	60XL	3.820	1.42	.72	.46	....	....	....	....	....	....
1167	583	387	3.00	16XL	1.019	48XL	3.056	1.15	.58	.38	....	....	....	....	....	....
1167	583	387	3.00	14XL	.891	42XL	2.874	1.00	.50	.33	....	....	....	....	1.99‡	2.54†
1167	583	387	3.00	12XL	.764	36XL	2.292	.86	.43	.28	....	....	....	1.94‡	2.48‡	3.00‡
1114	557	370	3.14	14XL	.891	44XL	2.801	1.00	.50	.33	....	....	....	....	....	2.40‡
1094	547	363	3.20	15XL	.955	48XL	3.056	1.07	.53	.36	....	....	....	....	....	....
1089	535	355	3.27	22XL	1.401	72XL	4.584	1.57	.79	.52	....	....	....	....	....	....
1089	535	355	3.27	11XL	.700	36XL	2.292	.79★	.39	.26	....	....	....	1.98§	2.52‡	3.04‡
1050	525	348	3.33	18XL	1.146	60XL	3.820	1.28	.64	.42	....	....	....	....	....	....
1050	525	348	3.33	12XL	.764	40XL	2.546	.86	.43	.28	....	....	....	....	2.21‡	2.75‡
1021	510	338	3.43	21XL	1.337	72XL	4.584	1.49	.75	.50	....	....	....	....	....	....
1021	510	338	3.43	14XL	.891	48XL	3.056	1.00	.50	.33	....	....	....	....	....	....
1000	500	331	3.50	12XL	.764	42XL	2.874	.86	.43	.28	....	....	....	....	2.07‡	2.82‡
972	486	322	3.60	20XL	1.273	72XL	4.584	1.42	.72	.46	....	....	....	....	....	....
963	481	319	3.64	11XL	.700	40XL	2.546	.79★	.39	.26	....	....	....	....	2.25§	2.79‡
955	477	316	3.67	12XL	.784	44XL	2.801	.86	.43	.28	....	....	....	....	....	2.48‡
933	467	309	3.75	16XL	1.019	60XL	3.820	1.15	.58	.38	....	....	....	....	....	....
917	458	304	3.82	11XL	.700	42XL	2.674	.79	.39	.26	....	....	....	....	2.11§	2.66‡
875	438	290	4.00	18XL	1.146	72XL	4.584	1.28	.64	.42	....	....	....	....	....	....
875	438	290	4.00	15XL	.955	60XL	3.820	1.07	.53	.36	....	....	....	....	....	....
875	438	290	4.00	12XL	.764	48XL	3.056	.86	.43	.28	....	....	....	....	....	2.19§
875	438	290	4.00	11XL	.700	44XL	2.801	.79★	.39	.26	....	....	....	....	1.96§	2.52§
817	408	270	4.29	14XL	.891	60XL	3.820	1.00	.50	.33	....	....	....	....	....	....
802	401	266	4.36	11XL	.700	48XL	3.056	.79★	.39	.26	....	....	....	....	....	2.23§
778	389	258	4.50	16XL	1.019	72XL	4.584	1.15	.58	.38	....	....	....	....	....	....
730	365	242	4.80	15XL	.955	72XL	4.584	1.07	.53	.36	....	....	....	....	....	....
700	350	232	5.00	12XL	.764	60XL	3.820	.86	.43	.28	....	....	....	....	....	....
681	340	226	5.14	14XL	.891	72XL	4.584	1.00	.50	.33	....	....	....	....	....	....
642	321	213	5.45	11XL	.700	60XL	3.820	.79★	.39	.26	....	....	....	....	....	....
584	292	193	6.00	12XL	.764	72XL	4.584	.86	.43	.28	....	....	....	....	....	....
535	267	177	6.55	11XL	.700	72XL	4.584	.79★	.39	.26	....	....	....	....	....	....

- ▲ HP ratings are for conventional speed-reduction drives. For Speed-Up Drives refer to page 363.
- ★ Pulley Diameter is below recommended minimum. A reduction in belt life should be expected. Suggest alternate drive selection, whenever possible.

- ††§ See Teeth in Mesh table on opposite page.
- ▲ Flanges required on both pulleys.

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XL

Nominal Center Distance Using DYNA-SYNC Belts

Belt Width Factor	.15	.28	.35	.42	.57	.71	.86	1.00	1.29	1.56
Belt Width	1/4	3/8	7/16	1/2	5/8	3/4	7/8	1	1-1/4	1-1/2
Belt Width Code	025	037	043	050	062	075	087	100	125	150

Shaded area indicates stock belt widths.

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SELECTION



XL BASIC HORSEPOWER RATINGS

RPM of Faster Shaft	HP for a 1" Wide Belt for Various Pulleys												
	10XL .637 P.D.	11XL .700 P.D.	12XL .764 P.D.	14XL .891 P.D.	15XL .955 P.D.	16XL 1.019 P.D.	18XL 1.146 P.D.	20XL 1.273 P.D.	21XL 1.337 P.D.	22XL 1.401 P.D.	24XL 1.528 P.D.	28XL 1.783 P.D.	30XL 1.910 P.D.
100	.02	.02	.02	.03	.03	.03	.04	.04	.04	.04	.05	.06	.06
200	.04	.04	.05	.06	.06	.07	.07	.08	.08	.09	.10	.11	.12
300	.06	.07	.07	.09	.09	.10	.11	.12	.13	.13	.14	.17	.18
400	.08	.09	.10	.11	.12	.13	.14	.16	.17	.17	.19	.23	.24
500	.10	.11	.12	.14	.15	.16	.18	.20	.21	.22	.24	.29	.30
600	.12	.13	.14	.17	.18	.19	.22	.24	.26	.27	.29	.34	.37
700	.14	.15	.17	.20	.21	.23	.26	.28	.30	.31	.34	.40	.43
800	.16	.17	.19	.23	.24	.26	.30	.33	.34	.36	.40	.48	.49
900	.18	.20	.22	.26	.27	.30	.33	.37	.39	.40	.44	.51	.55
1000	.20	.22	.24	.29	.31	.33	.37	.41	.43	.45	.49	.57	.62
1100	.22	.25	.26	.31	.34	.36	.40	.45	.47	.49	.54	.63	.68
1160	.23	.26	.28	.33	.36	.38	.42	.46	.50	.52	.56	.66	.71
1200	.24◆	.27	.29	.34	.37	.39	.44	.49	.52	.54	.59	.68	.74
1300	.26◆	.29	.31	.37	.40	.42	.48	.53	.56	.58	.64	.74	.80
1400	.28◆	.31	.34	.40	.43	.46	.52	.57	.60	.63	.69	.80	.86
1500	.30◆	.34	.36	.43	.46	.49	.55	.61	.64	.67	.74	.86	.92
1600	.33◆	.36	.40	.46	.49	.53	.59	.65	.69	.72	.79	.91	.98
1700	.35◆	.38	.42	.49	.52	.56	.63	.67	.73	.77	.83	.97	1.04
1750	.36◆	.39	.43	.50	.53	.58	.64	.72	.75	.79	.86	1.00	1.07
1800	.37◆	.40◆	.44	.51	.55	.59	.66	.74	.77	.81	.88	1.03	1.10
2000	.41◆	.45◆	.49	.57	.62	.65	.74	.82	.86	.90	.98	1.15	1.23
2200	.45◆	.49◆	.54	.63	.68	.72	.81	.90	.94	.99	1.08	1.25	1.34
2400	.49◆	.54◆	.59	.68	.74	.79	.88	.98	1.03	1.07	1.18	1.37	1.46
2600	.53◆	.58◆	.64	.74	.80	.85	.96	1.06	1.12	1.17	1.25	1.48	1.58
2800	.57◆	.63◆	.69	.80	.86	.92	1.03	1.15	1.20	1.26	1.37	1.59	1.71
3000	.61◆	.67◆	.74	.86	.92	.98	1.10	1.23	1.28	1.34	1.46	1.71	1.82
3200	.65◆	.72◆	.79	.91	.98	1.05	1.18	1.30	1.37	1.43	1.56	1.81	1.94
3400	.69◆	.77◆	.83	.97	1.04	1.11	1.25	1.38	1.45	1.52	1.66	1.92	2.05
3500	.72◆	.79◆	.86	1.00	1.07	1.15	1.28	1.42	1.49	1.57	1.71	1.98	2.11
3600	.74◆	.81◆	.88◆	1.03	1.10	1.18	1.32	1.46	1.54	1.61	1.75	2.03	2.16
3800	.78◆	.83◆	.93◆	1.09	1.17	1.24	1.39	1.54	1.62	1.70	1.84	2.13	2.27
4000	.82◆	.90◆	.98◆	1.15	1.23	1.30	1.46	1.63	1.71	1.78	1.94	2.24	2.39
4200	.86◆	.94◆	1.03◆	1.20	1.28	1.37	1.53	1.71	1.76	1.86	2.03	2.35	2.50
4400	.90◆	.99◆	1.08◆	1.25◆	1.34	1.43	1.61	1.78	1.86	1.95	2.12	2.45	2.61
4600	.94◆	1.03◆	1.13◆	1.31◆	1.40	1.50	1.68	1.66	1.95	2.04	2.21	2.55	2.71
4800	.98◆	1.07◆	1.18◆	1.37◆	1.46	1.56	1.75	1.94	2.03	2.13	2.30	2.65	2.82
5000	1.02◆	1.12◆	1.23◆	1.42◆	1.52	1.63	1.82	2.01	2.11	2.20	2.39	2.75	2.92
5500	....	....	....	....	1.67◆	1.78	2.00	2.20	2.30	2.41	2.61	2.99	3.18
6000	....	....	....	....	1.82◆	1.94	2.16	2.39	2.50	2.61	2.82	3.23	3.41
6500	....	....	....	....	1.96◆	2.09	2.34	2.57	2.69	2.80	3.03	3.42	3.64
7000	....	....	....	....	2.11◆	2.24◆	2.50	2.75	2.87	2.99	3.23	3.65	3.84
7500	....	....	....	....	2.25◆	2.39◆	2.66	2.92	3.05	3.18	3.41	3.84	4.03
8000	....	....	....	....	....	....	2.82◆	3.10	3.23	3.34	3.59	4.02	4.21
8500	....	....	....	....	....	....	2.97◆	3.26	3.39	3.52	3.76	4.19	4.37
9000	....	....	....	....	....	....	3.13◆	3.41◆	3.55	3.68	3.92	4.34	4.51
9500	....	....	....	....	....	....	3.28◆	3.56◆	3.70	3.83	4.07	4.47	4.63
10000	....	....	....	....	....	....	3.41◆	3.71◆	3.84	3.97	4.21	4.59	4.72

XL Belt Width Table

Belt Width Factor	.15	.28	.35	.42	.57	.71	.86	1.00	1.29	1.56
Belt Width	1/4	3/8	7/16	1/2	5/8	3/4	7/8	1	1-1/4	1-1/2
Belt Width Code	025	037	043	050	062	075	087	100	125	150

Shaded area indicates stock belt widths.

- ◆ Pulley diameter is below recommended minimum. A reduction in belt life should be expected. Suggest alternate drive, when ever possible.

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