

	Smallest Pulley Diameter Range	RPM Range	Belt Deflection Setting				
			uncogged belts		cogged belts		
			used belt	new belt	used belt	new belt	
4L, A, AX	2.0 - 2.9	1000 - 2500	1.8	2.6	2.0	3.0	
		2501 - 4000	1.4	2.0	1.6	2.4	
	3.0 - 3.6	1000 - 2500	3.6	5.4	4.0	6.0	
		2501 - 4000	2.8	4.1	3.3	4.9	
	3.8 - 4.8	1000 - 2500	4.4	6.6	4.9	7.3	
		2501 - 4000	3.7	5.7	4.3	6.4	
	5.0 - 7.0	1000 - 2500	5.3	7.8	5.7	9.2	
		2501 - 4000	4.6	6.8	5.1	7.6	
5L, B, BX	3.4 - 4.2	860 - 2500			4.8	7.2	
		2501 - 4000			4.1	6.2	
	4.4 - 5.6	860 - 2500	5.2	7.9	7.1	10.5	
		2501 - 4000	4.5	6.6	7.1	9.1	
	5.8 - 8.6	860 - 2500	6.2	9.4	8.4	12.4	
		2501 - 4000	6.0	6.8	7.3	10.7	
C, CX	7.0 - 9.0	500 - 1740	11.3	17.0	14.7	21.9	
		1741 - 3000	9.4	13.6	11.9	17.5	
	9.5 - 16.0	500 - 1740	14.0	20.8	15.8	23.5	
		1741 - 3000	12.5	18.3	14.5	21.6	
D	12.0 - 16.0	200 - 850	24.7	37.1			
		851 - 1500	21.1	31.4			
	18.0 - 20.0	200 - 850	30.4	45.2			
		851 - 1500	25.6	38.0			
3V, 3VX	2.2 - 2.4	1000 - 2500			3.3	4.9	
		2501 - 4000			2.9	4.3	
	2.65 - 3.65	1000 - 2500	3.7	5.1	4.2	6.2	
		2501 - 4000	3.0	4.5	3.8	5.6	
	4.12 - 6.90	1000 - 2500	4.9	7.3	5.3	7.8	
		2501 - 4000	4.3	6.6	4.8	7.3	
	5V, 5VX	4.4 - 6.7	500 - 1749			10	15.2
			1750 - 3000			8.9	13.2
3001 - 4000					5.6	8.5	
7.1 - 10.9		500 - 1740	12.6	18.9	14.8	22.1	
		1741 - 3000	11.2	16.5	13.7	20.1	
11.8 - 16.0		500 - 1740	15.5	23.4	17.1	25.5	
	1741 - 3000	14.5	21.8	16.8	25		
8V	12.5 - 17.0	200 - 850	33	49.5			
		851 - 2100	27	39.9			
	18.0 - 22.4	200 - 850	39.5	59			
		851 - 2100	35.1	52.8			
3VK	2.65 - 3.65	750 - 2500	5.6	8.3			
		2501 - 4000	4.5	6.8			
	4.12 - 6.90	1000 - 2500	7.4	11.0			
		2501 - 4000	6.5	9.7			
5VK	7.1 - 10.9	200 - 500	21.0	31.5			
		500 - 1250	18.0	27.0			
		1251 - 1900	16.8	25.2			
		1901 - 3000	16.0	24.0			
	11.8 - 16.0	200 - 740	26.6	39.9			
		741 - 1250	23.3	34.9			
8VK	12.5 - 20.0	1251 - 2250	21.8	32.6			
		200 - 550	44.8	67.2			
		551 - 800	39.0	58.5			
		851 - 1150	35.6	53.4			
	21.2 - 22.4	1151 - 2100	33.6	50.4			
		200-550	66.0	99.0			
		551-850	62.0	93.0			
		851 - 2100	57.5	86.3			

## optimize your belt drive efficiency

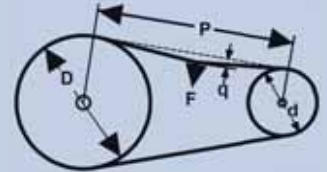
To get the most from your belt drive, it is important that you pay proper attention to your V-Belt tensioning and pulley size.

### Proper V-Belt Tensioning

All belts do not feel the same when properly tensioned. There are two main groups of belts that feel quite different based on the materials and tension cables used in their manufacturing processes. The first group of belts feel spongy or springy when properly tensioned, while the second group of belts feel very rigid and stiff but still aren't properly tensioned. Bestorq and other major high quality manufacturers are in this second group of belts. Rigid belts stretch very little over their life and need to "feel" tighter than spongy belts which will actually stretch far more during their life. When properly tensioned, rigid belts will feel 1.5 to 1.8 times tighter than spongy belts. Although they feel tighter, rigid belts will not place any more load on bearings than spongy belts. The objective is to have the lowest tension to carry the load and yet high enough tension so there is never belt slip. Due to these different belt groups, one should not use "feel" to judge the correct tension of a belt. To more accurately tension V-Belt drives use the Force-Deflection Method shown below.

#### Force-Deflection Method

1. Measure the span length P.
2. At center of the span length apply a force F (using a belt tension gauge) perpendicular to the belt span, large enough to deflect the belt 1/64" for each 1" of belt span, q. So, for a 32" span, the deflection amount would be 32/64" or 1/2".
3. The force F to apply is shown, per belt, in the table to the left. NOTE: The force shown in the table is per rib. So, for a 5-rib belt, you will need to multiply the force shown in the table by five to apply to all five ribs at once.



### Minimum Pulley Diameters

The successful operation of a belt drive is highly dependent on the diameter of the pulleys involved. The Rubber Manufacturers Association (RMA) has published minimum recommended pulley diameters for each belt profile. Using pulleys smaller than these recommended diameters will result in a dramatic increase in belt tension and will substantially decrease the overall belt life.

#### Minimum Recommended Pulley Diameters

Belt Type	Pitch Diameter	Outside Diameter
4L*	2.30	2.50
A	3.00	3.25
AX	2.20	2.45
B	5.40	5.75
BX	4.00	4.35
3V	2.65	2.65
3VX	2.20	2.20
5V	7.10	7.10
5VX	4.40	4.40

\*4L at this diameter has HP rating below 1/2 HP