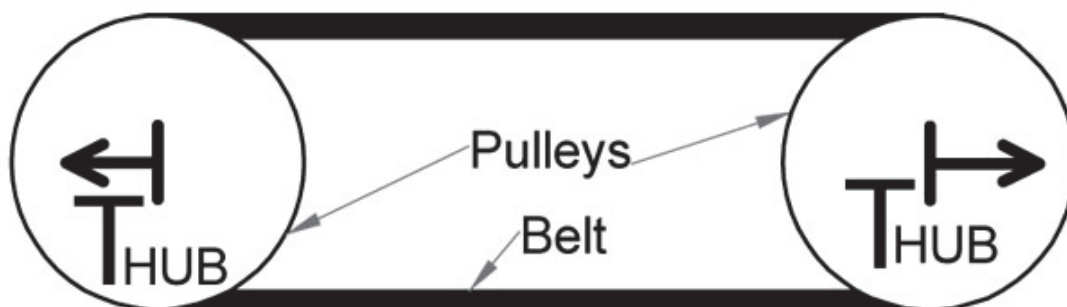


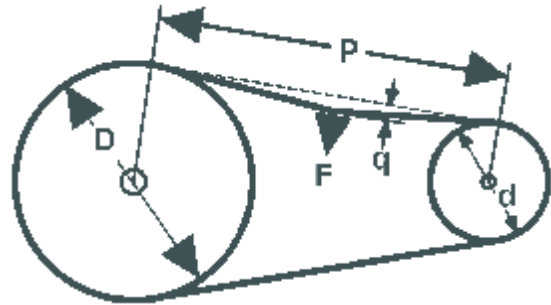
BESTORQ V-Belt Tensioning BASIC INFORMATION

Critical Information on proper tensioning of single and banded V-Belt drives

1. All belts do not feel the same when properly tensioned. Some brands of belts feel somewhat spongy even when properly tensioned. Some feel very rigid and yet are still not properly tensioned. The difference is the materials and the tension member used in the manufacture of the belts. Belts made with tensile members commonly referred to as “higher modulus” may feel tight and yet be too loose and not tensioned correctly.
2. BESTORQ belts have a very high modulus and therefore to be properly tensioned they have to “FEEL” tighter than some manufacturer’s belts made with “spongy” constructions. Following instructions in this flyer will set T hub force correctly. (T Hub is shown below.)
3. The objective in tensioning any V-Belt drive is to correctly separate the pulleys to have the correct tension for the drive to operate in an optimal condition of lowest tension to carry the load and yet high enough tension so there is no belt slip.
4. The BESTORQ belts will place no more load on bearings than any other manufacturer as T hub will end up the same, they just need to “FEEL” tighter.
5. It is a relatively common practice to just use “FEEL” to tension belt drives. This is not ideal, but can be adequate. To more accurately tension v-belt drives the FORCE-DEFLECTION method is commonly used. The next pages provides detail for this method.
6. BESTORQ belts are in the group of manufacturers whose belts will need to “FEEL” from 1.5 to 1.8 times as tight as some of the “spongy” belts from some manufacturers.
7. The next pages demonstrates the commonly used V-belt industry practice for accurate tensioning of V-belts.



Belt Cross Section	Smallest Pulley Diameter Range	RPM Range	Belt Deflection Setting			
			Uncogged Single V-Belts and Uncogged Banded V-Belts		Cogged V-Belts and Cogged Banded V-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	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 - 16.10	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	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		

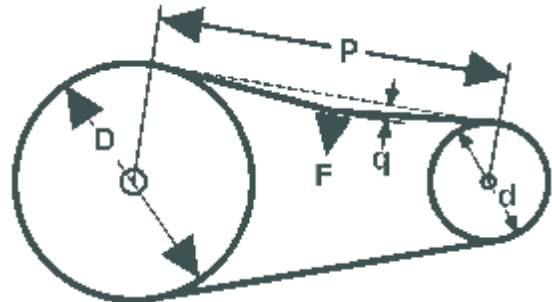


SIMPLIFIED PROCEDURE FOR TENSIONING STANDARD 2-PULLEY V-BELT DRIVES

1. Measure the span length "P".
2. At the center of the span length apply a force "F", perpendicular to the belt span, large enough to deflect the belt 1/64 inch for every 1 inch of belt span, "q". If the span was 32 inches the deflection amount would be 32/64 inches or 1/2 inch.
3. The force "F" you apply should be what is shown, per belt, in the table.

For banded V-belts please remember that the force given is per rib, i.e. for a 5-rib belt multiply the force to apply to all five ribs at once by the amount for the single belt shown in the table.

SIMPLIFIED PROCEDURE FOR TENSIONING STANDARD 2-PULLEY V-BELT DRIVES WITH A COMPRESSION TENSION GAGE



1. Measure the span length "P".
2. Set the large O-Ring on the number of inches obtained by dividing the span length "P" inches by 64. For example if "P" measures 16" then the setting is 16/64" (1/4") of deflection.
3. Set the small O ring on the deflection force scale to zero.
4. Place the tension gage directly on one belt at the center of the span. Push down on the gage until the large O-Ring lines up with the straight edge laid across the back of the belt pulley-to-pulley.
5. Remove the tension gage and read the force applied by looking at the position of the small O-Ring.
6. The tension force should match the table amount. If not then the belt will need to be tightened or loosened until the force is correct.

For banded V-belts the force given is per rib, i.e. for a 5-rib belt multiply the force to apply to all five ribs at once by the amount for the single belt shown in the table.

