

## Spring-Loaded Belt Tensiometer

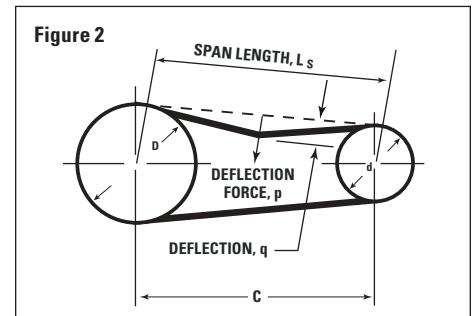
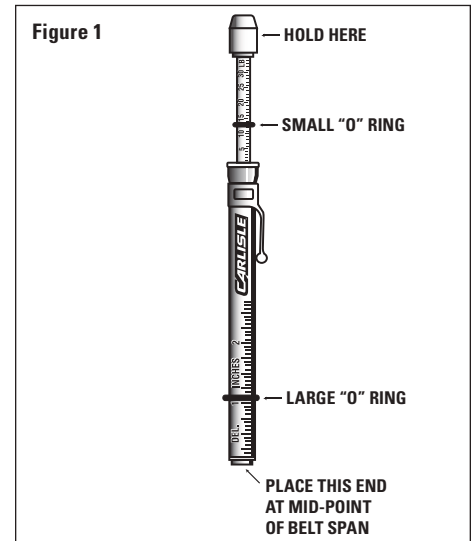
Proper tensioning is one of the most important factors necessary for long, satisfactory operation. This tensioning method is based on the fact that the force required to deflect a given span length by a given amount is related to the tension in the belt.

Matching numbers are indicated on each banded belt next to the brand, e.g. 49, 50, 51, etc. For example, a match limit of 1 in the table below indicates the belts must all have the same matching number. Similarly, a match limit of 2 indicates that a matched set may consist of any two adjacent matching numbers, i.e. 49 and 50 would constitute a matched set.

Product Type and Length Code	Match Limit
<b>Gold-Ribbon® Cog-Band®</b>	
RBX51 – RBX61	1
RBX62 – RBX144	2
RBX158 and longer	3
RCX68 – RCX144	2
RCX158 and longer	3
RDX120 – RDX144	2
RDX158 and longer	3
<b>Wedge-Band®</b>	
R3VX250 – R3VX630	1
R3VX670 – R3VX1400	2
R5VX500 – R5VX630	1
R5VX670 – R5VX1500	2
R5VX1600 and up	3
R8V1000 – R8V1500	2
R8V1600 and up	3
<b>Super Vee-Band®</b>	
RBP35 – RBP60	1
RBP61 – RBP144	2
RBP148 and up	3
RCP51 – RCP60	1
RCP68 – RCP144	2
RCP158 and up	3
RDP120 – RDP144	2
RDP158 and up	3

### Procedure for Using the Tensiometer

1. Measure the span length of the drive. (See Fig. 2). Set the large "O" ring at 1/64" for each inch of belt span. For example, set the large "O" ring at 1/4" for a span length of 16," at 1/2" for a span length of 32," or at 1" for a span length of 64", etc.
2. Set the small "O" ring at zero (See Fig. 1) and press down the Tensiometer at the center of the belt span.
  - a. On a single belt drive, depress the tensiometer until the large "O" ring is even with the bottom of a straight edge placed on the outside rims of the two sheaves.
  - b. On a multiple belt drive, depress the Tensiometer until the large "O" ring is even with the top of the next belt. Measure each belt in the drive and take the average reading of all belt tensions.
3. Remove the Tensiometer and observe that the small "O" ring has moved from its original setting at zero to the number of pounds required to deflect the belt.
4. Check this reading against the value of the deflection force in the V-Belt Tensioning table on reverse side.



Guidelines presented are suggestions to help install and maintain belts properly. Please always follow the recommendations of the original equipment manufacturer.

## Average Tensioning Values (recommended minimum force per belt)

This table shows minimum deflection force values. New belts should be installed at 2.0 times these values.

Used belts should be between 1.0 and 1.5 times these values.

Carlisle Belts	V-Belt Section	Small Sheave		Deflection Force for the Drive Speed Ratio (lbs.)			
		Speed Range	Diameter	1.0	1.5	2.0	4.0 and over
<b>Super II® &amp; Super Blue Ribbon®</b>	A AP	1800-3600	3.0	2.0	2.3	2.4	3.3
		1800-3600	4.0	2.6	2.8	3.0	3.3
		1800-3600	5.0	3.0	3.3	3.4	3.7
		1800-3600	7.0	3.5	3.7	3.8	4.3
	B BP	1200-1800	4.6	3.7	4.3	4.5	5.0
		1200-1800	5.0	4.1	4.6	4.8	5.6
		1200-1800	6.0	4.8	5.3	5.5	6.3
	C CP	1200-1800	8.0	5.7	6.2	6.4	7.2
		900-1800	7.0	6.5	7.0	8.0	9.0
		900-1800	9.0	8.0	9.0	10.0	11.0
		900-1800	12.0	10.0	11.0	12.0	13.0
	DP	700-1500	16.0	12.0	13.0	13.0	14.0
		900-1500	12.0	13.0	15.0	16.0	17.0
		900-1500	15.0	16.0	18.0	19.0	21.0
		700-1200	18.0	19.0	21.0	22.0	24.0
			700-1200	22.0	22.0	23.0	24.0
<b>Gold-Ribbon® Cog-Belt®</b>	AX	1800-3600	3.0	2.5	2.8	3.0	3.3
		1800-3600	4.0	3.3	3.6	3.8	4.2
		1800-3600	5.0	3.7	4.1	4.3	4.6
		1800-3600	7.0	4.3	4.6	4.8	5.3
	BX	1200-1800	4.6	5.2	5.8	6.0	6.9
		1200-1800	5.0	5.4	6.0	6.3	7.1
		1200-1800	6.0	6.0	6.4	6.7	7.7
	CX	1200-1800	8.0	6.6	7.1	7.5	8.2
		900-1800	7.0	10.0	11.0	12.0	13.0
		900-1800	9.0	11.0	12.0	13.0	14.0
		900-1800	12.0	12.0	13.0	13.0	14.0
	DX	700-1500	16.0	13.0	14.0	14.0	15.0
		900-1500	12.0	16.0	18.0	19.0	20.0
		900-1500	15.0	19.0	21.0	22.0	24.0
		700-1200	18.0	22.0	24.0	25.0	27.0
			700-1200	22.0	25.0	27.0	28.0
<b>Power-Wedge® Cog-Belt®</b>	3VX	1200-3600	2.2	2.2	2.5	2.7	3.0
		1200-3600	2.5	2.6	2.9	3.1	3.6
		1200-3600	3.0	3.1	3.5	3.7	4.2
		1200-3600	4.1	3.9	4.3	4.5	5.1
		1200-3600	5.3	4.6	4.9	5.1	5.7
		1200-3600	6.9	5.0	5.4	5.6	6.2
	5VX	1200-3600	4.4	6.5	7.5	8.0	9.0
		1200-3600	5.2	8.0	9.0	9.5	10.0
		1200-3600	6.3	9.5	10.0	11.0	12.0
		1200-3600	7.1	10.0	11.0	12.0	13.0
		900-1800	9.0	12.0	13.0	14.0	15.0
		900-1800	14.0	14.0	15.0	16.0	17.0
	8VX	900-1800	12.5	18.0	21.0	23.0	25.0
		900-1800	14.0	21.0	23.0	24.0	28.0
		700-1500	17.0	24.0	26.0	28.0	30.0
		700-1200	21.2	28.0	30.0	32.0	34.0
		400-1000	24.8	31.0	32.0	34.0	36.0
<b>Super Power-Wedge®</b>	5V	900-1800	7.1	8.5	9.5	10.0	11.0
		900-1800	9.0	10.0	11.0	12.0	13.0
		900-1800	14.0	12.0	13.0	14.0	15.0
		700-1200	21.2	14.0	15.0	16.0	17.0
	8V	900-1800	12.5	18.0	21.0	23.0	25.0
		900-1800	14.0	21.0	23.0	24.0	28.0
		700-1500	17.0	24.0	26.0	28.0	30.0
		700-1200	21.2	28.0	30.0	32.0	34.0
		400-1000	24.8	31.0	32.0	34.0	36.0

# TIMKEN

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