



# Belt Tensioning Instruction

**Power Transmission Solutions**  
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**FORM**  
**8082E**  
**Revised**  
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## ⚠ WARNING

- Read and follow all instructions carefully.
- Disconnect and lock-out power before installation and maintenance. Working on or near energized equipment can result in severe injury or death.
- Do not operate equipment without guards in place. Exposed equipment can result in severe injury or death.

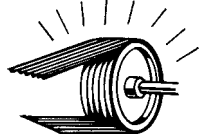
## ⚠ CAUTION

- Periodic inspections should be performed. Failure to perform proper maintenance can result in premature product failure and personal injury.

### How to increase Belt Life

#### Keep sheaves and belts clean.

Abrasive dust, rust, oil and acids reduce service life.



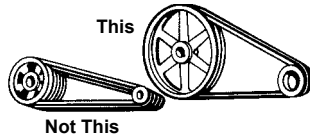
#### Give drives elbow room.

Never let belts run against belt guards or other obstructions.



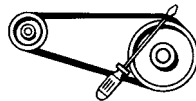
#### Use large diameter sheaves and fewer belts.

You save money and increase drive life.



#### Never force belts.

Move motor on adjustable base so belts can go on easily.



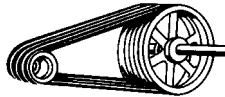
#### Eliminate slack.

Adjust motor and tighten belts in position. Slack belts wear excessively, cause slippage and deliver less power.



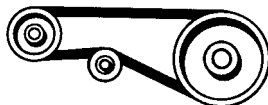
#### Use matched belts.

Matched belts run smoother and last longer because the load is evenly distributed. Never replace just part of a set of belts.



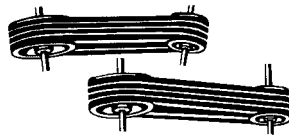
#### Avoid belt idlers.

Belt idlers decrease belt life! Always maintain proper tension through motor adjustment.



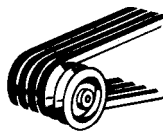
#### Mount belts straight.

Shafts must be parallel and sheave grooves in alignment to prevent unnecessary belt wear.



#### Don't overload.

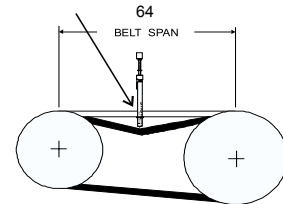
An overloaded belt drive is like a one-ton truck with a two-ton load — both are sure to break down. Always use ample capacity.



1. Measure the belt span.
2. Calculate deflection
3. See tables below for correct deflection force.
4. Apply force at right angles to the center of the span (see diagram below). The BROWNING belt tension checker, shown at left, is ideal for this procedure.
5. Check the tension after jog start of 1-3 minutes of operation, at 8 hours, 24 hours, 100 hours, and periodically thereafter.

$$\text{DEFLECTION} = \frac{\text{BELT SPAN}}{64}$$

Be sure — use the inexpensive BROWNING Belt Tension Checker See Form 5453 for more detail.



The capacity of the BROWNING belt tension checker is 35 lbs. Other means of applying force must be used if force requirement is greater than this.

### SHEAVE DIAM - INCHES DEFLECTION FORCE - LBS.

Belt Cross Section	Smallest Sheave Diameter Range	RPM Range	Belt Deflection Force			
			Super Gripbelts and Unnotched Gripbands		Gripnotch Belts and Notched Gripbands	
			Used Belt	New Belt	Used Belt	New Belt
A, AX	3.0 - 3.6	1000 - 2500 2501 - 4000	3.7 2.8	5.5 4.2	4.1 3.4	6.1 5.0
	3.8 - 4.8	1000 - 2500 2501 - 4000	4.5 3.8	6.8 5.7	5.0 4.3	7.4 6.4
	5.0 - 7.0	1000 - 2500 2501 - 4000	5.4 4.7	8.0 7.0	5.7 5.1	8.4 7.6
B, BX	3.4 - 4.2	860 - 2500 2501 - 4000	-	-	4.9 4.2	7.2 6.2
	4.4 - 5.6	860 - 2500 2501 - 4000	5.3 4.5	7.9 6.7	7.1 6.1	10.5 9.1
	5.8 - 8.6	860 - 2500 2501 - 4000	6.3 6.0	9.4 8.9	8.5 7.3	12.6 10.9
C, CX	7.0 - 9.0	500 - 1740 1741 - 3000	11.5 9.4	17.0 13.8	14.7 11.9	21.8 17.5
	9.5 - 16.0	500 - 1740 1741 - 3000	14.1 12.5	21.0 18.5	15.9 14.6	23.5 21.6
D	12.0 - 16.0	200 - 850 851 - 1500	24.9 21.2	37.0 31.3	-	-
	18.0 - 20.0	200 - 850 851 - 1500	30.4 25.6	45.2 38.0	-	-
3V, 3VX	2.2 - 2.4	1000 - 2500 2501 - 4000	-	-	3.3 2.9	4.9 4.3
	2.65 - 3.65	1000 - 2500 2501 - 400	3.6 3.0	5.1 4.4	4.2 3.8	6.2 5.6
	4.12 - 6.90	1000 - 2500 2501 - 4000	4.9 4.4	7.3 6.6	5.3 4.9	7.9 7.3
5V, 5VX	4.4 - 6.7	500 - 1749 1750 - 3000 3001 - 4000	- - -	- - -	10.2 8.8 5.6	15.2 13.2 8.5
	7.1 - 10.9	500 - 1740 1741 - 3000	12.7 11.2	18.9 16.7	14.8 13.7	22.1 20.1
	11.8 - 16.0	500 - 1740 1741 - 3000	15.5 14.6	23.4 21.8	17.1 16.8	25.5 25.0
8V	12.5 - 17.0	200 - 850 851 - 1500	33.0 26.8	49.3 39.9	-	-
	18.0 - 22.4	200 - 850 851 - 1500	39.6 35.3	59.2 52.7	-	-

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# Do Not Install These Matched Belts Until You Read This

Fill in the information below —  
detach and tie to machine or file for handy reference  
when belts need to be replaced.

These **BROWNING BELTS**  
were installed:

Machine Description \_\_\_\_\_ Date \_\_\_\_\_  
Factory Location \_\_\_\_\_  
Gripbelt Size \_\_\_\_\_  
Number of Belts \_\_\_\_\_  
Reorder From: \_\_\_\_\_

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The Regal logo consists of the word "REGAL" in a bold, italicized, sans-serif font, centered within a dark gray trapezoidal shape that tapers to the right.

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[www.regalbeloit.com](http://www.regalbeloit.com)