Browning®

GearBelt Installation Instructions

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FORM
8704E
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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.

Gearbelt Pulley Alignment

Before installing bushings, refer to EPT Form #F20-23 for Q-D® Instructions and to Form No. 4013 for Split Taper Instructions. After installing the bushings in the pulleys and the resulting assemblies onto the shafts, use a straight edge, piano wire, or string placed on the outside face of both pulleys to adjust parallel offset and angular alignments. The straight edge, piano wire, or string should be close to the shafts and contact each pulley in two places on the flanges (or on the face of an unflanged pulley). The objective is to have the shafts parallel and the center lines of the two pulley faces in line. See Figure 1 below.

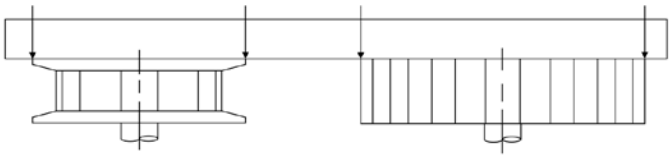

Figure 1

Belt drives should be aligned as perfect as possible to maximize drive life. The practical maximum misalignment is stated as the angle at which the belt enters the pulley. This angle is a result of both angular and parallel offset misalignment, and is 1/4 degree.

GearBelt Installation

Condition A – One Flanged Pulley and One Unflanged Pulley.

After pulleys have been mounted and aligned, reduce the shaft center distance as shown in Table 1. Put the belt over the flanged pulley first, then slip onto the unflanged pulley.

Condition B – Both Pulleys Flanged.

After pulleys have been mounted and aligned, reduce the shaft center distance as shown in Table 1. Put the belt over the larger pulley first, then the smaller pulley.

Condition C – Minimum Center Distance Adjustment.

1. Mount one pulley onto the shaft loosely and put the belt on it.
2. Put the other pulley into the belt loop and slip it onto the other shaft (bushing loosely installed).
3. Align the drive and tighten the bushings.

Timing belts have been designed to have proper pitch dimensions under correct tensions. Belts may not fully seat
in large diameter pulleys without applying proper tension to the belt.

Table 1 - Installation and take-up allowances (Inches)

Belt Pitch	Allowance for Installation (Inches)			Allowance for Take-Up
	Condition A	Condition B	Condition C	
XL	.5	.6	.1	.1
L	.6	.7	.14	.14
H	.7	.8	.16	.16
XH	1.3	1.5	.40	.40
XXH	1.8	2.0	.50	.50

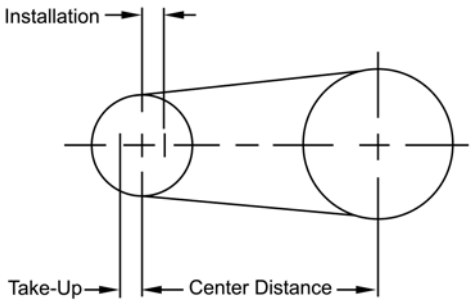

Figure 2

Tensioning GearBelts

Calculate or measure the belt span length as shown in Figure 3. Calculate the required deflection by multiplying this number by 1/64. For example, if the belt span is 32 inches, 32 x 1/64 = 1/2 inch deflection. Increase the belt tension by increasing the center distance (or adjusting the idler, if present). Apply the force listed in Table 2 evenly across the width of the belt at the center of the belt span. A strip of keystock or similar material may be used to help distribute the force evenly across the belt width. Drives with shock loading or other unusual conditions may require increased tension. Always check to be sure bearings can handle the loads.

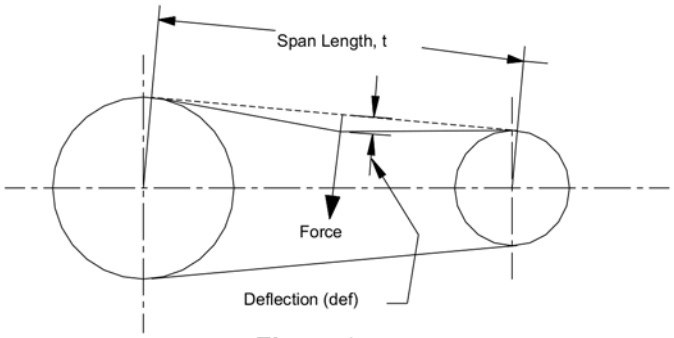

Figure 3

TABLE 2 - Deflection force for HPT belts (Lbs)

Cross Section	belt widths (inches)									
	1/4	3/8	1/2	3/4	1	1 1/2	2	3	4	5
XL	0.4	0.5								
L			1.0	1.6	2.2					
H				4.0	6.0	9.0	12.0	19.0		
XH							17.0	26.0	37.0	
XXH							20.0	32.0	45.0	58.0

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