



# HTP® Installation Instruction

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**FORM**  
**8600-AE**  
**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.
- Be sure drive system cannot rotate during installation. Failure to do so can result in serious injury.

### ⚠ CAUTION

- Periodic inspections should be performed. Failure to perform proper maintenance can result in premature product failure and personal injury.
- All electrical work should be performed by qualified personnel and compliant with local and national electrical codes.
- Failure to use the cap screws that came with the Product may lead to an unsafe assembly.

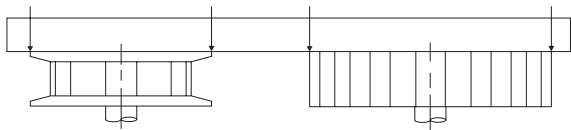
### NOTICE

- To avoid damage, supporting structure including shafts and bearings must be designed to handle transmitted loads and belt tension(s).
- Shaft horizontal drives must have at least one flanged pulley; shaft vertical drives must have all pulleys flanged, otherwise belt may come off.
- Do not pry or otherwise force belts onto sprockets. Doing so can result in permanent damage to the belt.

## HPT Sprocket Alignment

Before installing bushings, refer to EPT Form #F20-23 for QD® Instructions and to Form No. 4013 for Split Taper Instructions. After installing the bushings in the sprockets and the resulting assemblies onto the shafts, use a straight edge, piano wire, or string placed on the outside face of both sprockets to adjust parallel offset and angular alignments. The straight edge, piano wire, or string should be close to the shafts and contact each sprocket 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 sprocket 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 sprocket. This angle is a result of both angular and parallel offset misalignment, and is 1/4 degree.

## HPT Belt Installation

Condition A – One Flanged Sprocket and One Unflanged Sprocket.

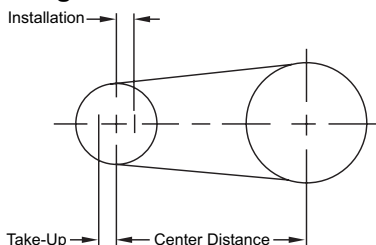
After sprockets have been mounted and aligned, reduce the shaft center distance as shown in Table 1. Put the belt over the flanged sprocket first, then slip onto the unflanged sprocket.

Condition B – Both Sprockets Flanged. After sprockets have been mounted and aligned, reduce the shaft center distance as shown in Table 1. Put the belt over the larger sprocket first, then the smaller sprocket.

Condition C – Minimum Center Distance Adjustment.

1. Mount one sprocket onto the shaft loosely and put the belt on it.
2. Put the other sprocket 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.

Figure 2



### TABLE 1 - CENTER DISTANCE ALLOWANCE

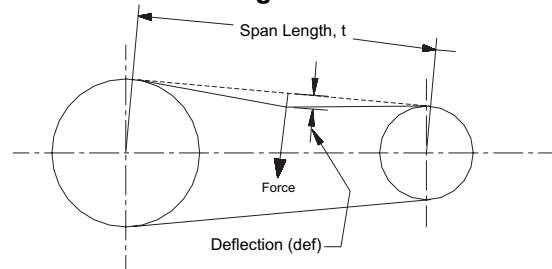
Belt Pitch Length Range (MM)	Allowance for Installation (Inches)					Allowance for Take-Up 8MM and 14MM Belts
	Condition A		Condition B		Condition C	
	8MM Belts	14MM Belts	8MM Belts	14MM Belts	8MM and 14MM Belts	
up to 1440	.7"	1.0"	1.2"	2.2"	.1"	.1"
1441 to 2600	.8"	1.1"	1.3"	2.3"	.2"	.2"
over 2600	.9"	1.2"	1.4"	2.4"	.3"	.3"

## HPT INSTALLATION INSTRUCTIONS

### Tensioning HPT Belts

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  $32 \times 1/64 = 1/2$  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)

Pitch	Width MM	Force LBS
8MM	20	4
	30	6
	50	11
	85	19
14MM	40	11
	55	16
	85	26
	115	37
	170	58

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