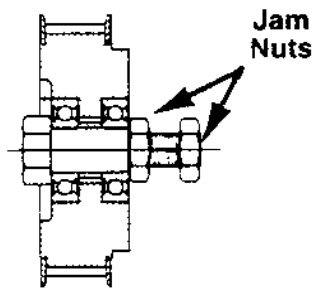




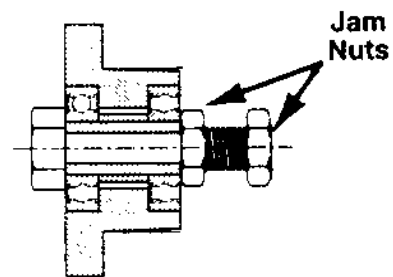
Gates Idler Sprockets And Bushings PA NOTE

Gates Industrial Belt Marketing offers a line of Standard Poly Chain® GT® Idler Sprockets and three types of Idler Bushings. The Idler Sprockets are available in specific diameters in standard 8M and 14M belt widths. The QD Idler Bushings are available in SK, SF and E Types and can be used with the applicable synchronous or V-belt hardware. See Gates Catalogs for details. These components will provide a method of belt installation and tensioning on those drives with fixed or very limited center distance adjustment. There are also two Double Adjustable Tensioners available to use with the idlers or bushings. All hardware must be mated to the appropriate components.

Idler Sprockets



QD Idler Bushings



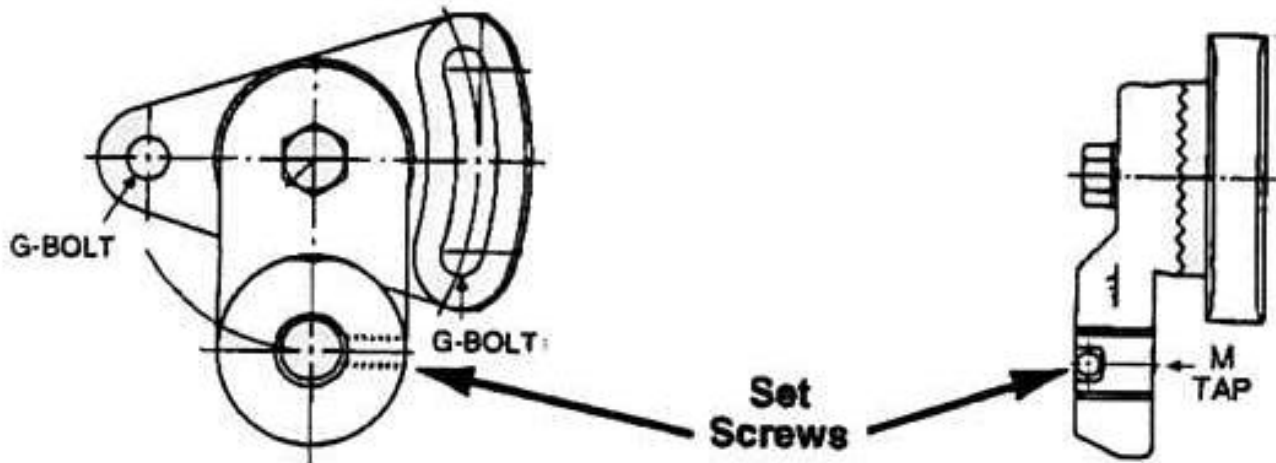
There are several methods of mounting the idler sprockets and bushings. They are supplied as an assembly with integral bearings and a shaft. There are two jam nuts supplied which provide for bearing retension, preload and assembly mounting. The jam nut closest to the bearing (see the two illustrations above) has a specific torque requirement for bearing retension and preload. The second jam nut is supplied to let the assembly be mounted on any frame plate or slotted fixture. Gates offers two sizes of Double Adjustable Tensioners for mounting and tensioning adjustment. See the Poly Chain GT Belt Drives Catalog#17595 for details.

CAUTION: *Anyone familiar with installing belt drives should recognize the need to eliminate misalignment, especially with any idler assembly or mount, by providing adequate strength at the mounting point and a sturdy framework. Misalignment causes additional belt fatigue and wear which could result in premature drive or belt failure.*

The Idler Sprockets or QD Idler Bushing are designed for use with the appropriate Double Adjustable Tensioner. In some cases, the standard pulley will interfere with the Double Adjustable Tensioner pivoting hub when an idler bushing is mounted in a sheave or sprocket. Contact Gates Power Transmission Product Application, Denver, to determine component compatibility.



Belt Drive Tensioners (Double Adjustable)



When a Double Adjustable Tensioner is used, one of the two jam nuts can be eliminated from the threaded shaft. The remaining jam nut retains the bearings and provides preload. The user may also reverse the bolt in the sprocket or bushing assembly for component or machine fit. Be sure to exercise care in preventing bearing damage during this procedure by supporting the bearing races on the ring face. The user should also be sure that the reversed assembly provides adequate component clearance. Upon reassembly, the shaft jam nut should be torqued to the values below:

<u>Thread Size</u>	<u>Torque Range</u>
3/4 - 16UNF	9 - 13 lb-ft
1 - 14NS	13 - 18 lb-ft

This procedure will provide proper preload on the bearings and assure that the idler sprocket or idler bushing-pulley assembly can be correctly mounted.

When using the adjustable tensioner, the assembly can be threaded into the tensioner arm hub, the idler shaft bolt can be torqued up to the following values (sufficient torque should be used to tighten the idler sprocket or bushing/pulley assembly to the tensioner arm hub):

<u>Thread Size</u>	<u>*Torque Maximum</u>
3/4 - 16UNF	40 lb-ft
1 - 14NS	50 lb-ft

* (The 40 lb-ft /50 lb-ft were 175 lb-ft /250 lb-ft but were reduced later to alleviate potential bearing problems.)



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The Gates Rubber Company
 Denver, Colorado USA

After the above procedure, the set screw on the tensioner arm should be tightened to a maximum 13 lb-ft torque for either size tensioner since they both use the same size set screw.

The adjustment afforded by the dual pivot system of the Double Adjustment Tensioners is done two-fold. The tensioner arm should be initially positioned and the large pivot bolt tightened, locking the mating serration. Next, mount the tensioner base to the framework with the mounting bolts tightened securely. The adjustment end bolt should be centered in the middle of the curved, adjusting slot. With the tensioner assembly located initially, the idler arm can be adjusted to provide the recommended tension in the belt drive. Any fine tuning of the adjustment can be done with the pivoting movement of the tensioner base.

When the belt drive tension is correct, tighten all the bolts. The large tensioner arm to base bolt (serrated mating surfaces) should be torqued to the following values:

Tensioner Part No.	Bolt Size	Maximum Torque Recommended
7720-1010	1/2 - 13NC	50 lb-ft
7720-1020	3/4 - 10NC	160 lb-ft

When the installation is complete, all bolts are to be checked for tightness and torque values. Any additional base mounting bolts should be torqued to the recommended value for the bolts selected. If additional bolts are required, minimum Grade 5 bolts are suggested.

Additional application information regarding maximum speed and bearing information of these components follow below these idler components are intended for use in the slackside belt span. Any other use may result in reduced service life of the component.

Idler/Bushing	Maximum Speed (rpm) Speed (rpm)	Bearing Information Quantity and No.
8M32S12, 21/SK	9000	2 - 6304DDU C3
8M36S36, 62/SF, E	6050	2 - 6306DDU C3
14M30S20, 37	4800	2 - 6310DDU C3
14M34S68, 90, 125	3900	2 - 6310DDU C3

As with all standard line hardware, these components will be reviewed periodically. Details which do not affect drive performance can be changed without notification. Any dimensions or details not affecting product function may also be changed. Close fitting or customer modified parts can be made to order for the specific requirement by contacting your Gates representative.