

AN INTRODUCTION TO OUR PRODUCT

Timing belt pulleys are used in applications where positive drive and/or precise positioning is desired. Also known as synchronous belt pulleys, timing belt pulleys have a high mechanical efficiency by eliminating belt slippage. Other advantages of using timing belt pulleys include low operating noise, low heat build-up and ease of maintenance.

Components are items added to the timing belt pulley to perform a designed function. They are used depending on the specifications of your drive system. The major components include:

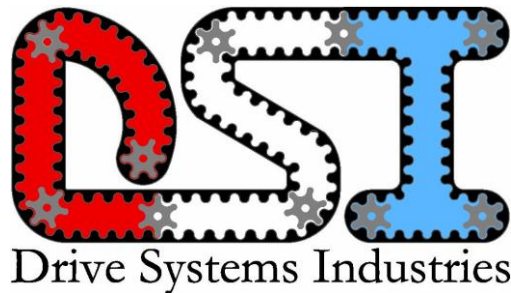
COMPONENTS

	Flanges - Also called guide rings, flanges ensure the belt remains in-line with the pulley. Flanges are installed using a staking process. Flanges included on a timing pulley are designated with an "F" in the part number.
	Caps - A cap is used to act as a flange and provide material for setscrews. The cap is pressed over the pulley hub for installation. A cap included on a timing pulley is designated with a "C" in the part number.
	Setscrews - Setscrews are used to secure the pulley to a shaft. The length is determined by the amount of material where the setscrew is installed. No part of the setscrew should stick out of either end of the setscrew hole. Setscrews are installed in all stock items by DSI.

Features define the timing belt pulley shape and specify the precise dimensions to be measured. Features, just as the components above, are used depending on the specifications of your drive system. The features include:

FEATURES

	Bore Diameter - The bore is a thru hole that slips over a shaft. To ensure the pulley bore fits over the shaft, a GO/NO GO gage is used for inspection. Pulley bore diameters are designated by a fraction (Ex: 3/16, 1/4, etc.) in the part number. If the bore diameter is not a fraction (Ex: .3314"), a four place decimal is used in the part number instead.
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FEATURES (Con't)

	<p>The hub is used to add stability to the pulley on the shaft and provide an area for setscrews. The hub is machined with the pulley body as one piece. A hub is designated with an "H" in the part number.</p>
	<p>Web - The web design reduces the weight of larger pulleys without sacrificing the durability. A web design is designated with a "W" in the part number.</p>

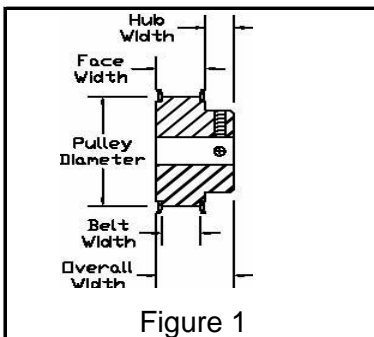


Figure 1

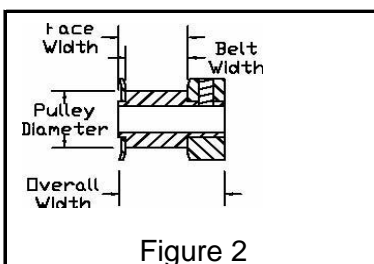


Figure 2

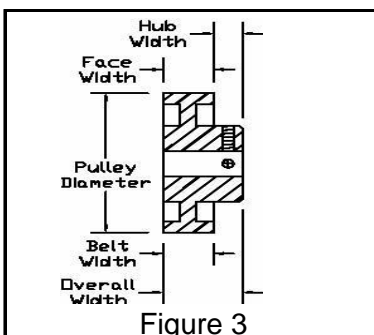


Figure 3

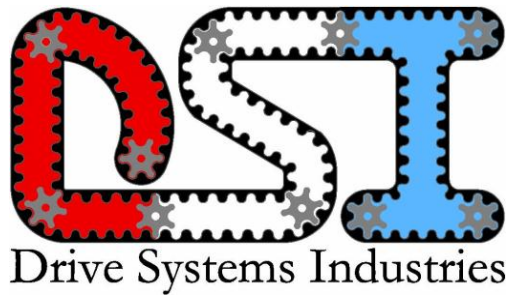
Overall Width - The overall width is measured from the edge of one side to the edge on the opposite side of the pulley. It does not take into account any flanges staked to the pulley.

Belt Width - Belt width is the length of the grooved area between the flanges (fig 1), between a cap and flange (fig 2), or from one face to the opposite face (fig 3). When flanges are not used, the belt width and face width have the same value (fig 3). The belt width is designated using three digits in the part number (Ex: .012 = 1/8", 06M = 6MM)

Face Width - Face width is measured between the faces outside the flanges (fig 1), between the cap and face outside the flange (fig 2), or from one face to the opposite face (fig 3). It does not take into account any flanges staked to the pulley. As mentioned above, when flanges are not used, the belt width and face width have the same value (fig 3).

Hub Width - Hub width is measured from the face width to the edge of the pulley. Setscrews are installed centered in the hub width.

Pulley Diameter - The pulley diameter is measured from the top of one tooth to the top of the tooth 180 degrees on the opposite side. If there is an odd number of teeth, a pin gage equal to the working depth is placed in the groove 180 degrees from the tooth used for measuring.



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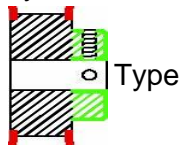
Knowing the components and features of a timing belt pulley will make it easier to understand the types of pulleys offered by DSI. The type of pulley used is designated in the part number. There are six (6) basic types of timing pulleys, which are:

TIMING PULLEY TYPES

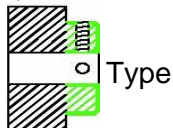
CF - Pulley includes a **cap** (in blue) and a **flange** (in red).



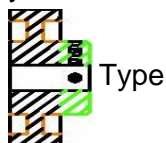
HF - Pulley includes a **hub** (in green) and two **flanges** (in red).



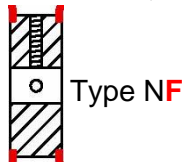
H - Pulley includes a **hub** (in green).



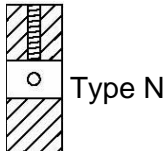
WH - Pulley includes a **web** (in orange) and a **hub** (in green).

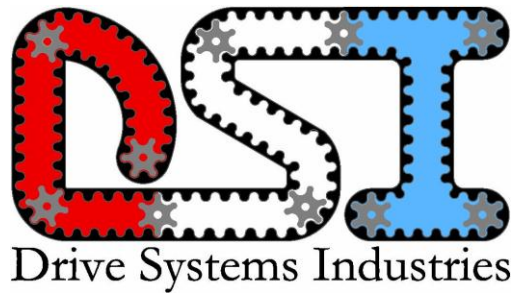


NF - Pulley has no hub, but includes two **flanges** (in red).



N - Pulley has no hub or flanges.





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All that is left is to construct a part number. All of the information required is located on each page for the pulley you need. The Part Number Construction formula below is also listed near the bottom of each page for reference. DSI part numbers are constructed using the following formula:

Part Number = (Code Number) (Bore Diameter) (Pulley Type)(Material Code)

Code Number - The code number contains three specifications:

- Number of Teeth **10**-MXL-012
- Pulley Pitch 10-**MXL**-012
- Belt Width 10-MXL-**012**

Ex 1 10-MXL-012 = 10 teeth, MXL pitch
for a 1/8" wide belt.

Bore Diameter - The bore diameter is given as a fraction (Ex. 1) or a four place decimal for custom parts (Ex 2) following the code number.

Ex 1 10-MXL-012 **1/8**

Ex 2 10-MXL-012 **.1260**

Pulley Type - The pulley type comes after the bore diameter.

Ex 1 10-MXL-012 1/8 **CF**

Ex 2 10-MXL-012 .1260 **CF**

Material Code - The material code finishes the part number. The material codes are:

A = Aluminum

S = Steel

Ex 1 10-MXL-012 1/8 **CFA**

Ex 2 10-MXL-012 .1260 **CFS**

You now know the basic components and features of a timing belt pulley and how to construct a DSI part number. You are ready to place an order! Determine the requirements you desire and match them with our standard timing belt pulleys listed in the following pages. You can also call or fax with your specifications and DSI will let you know if your timing belt pulleys are standard or custom. We hope to hear from you soon!