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Gates Compass™ Power Transmission CD-ROM version 1.2

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Denver, Colorado USA



Groove Designs For Mini Pitch Timing Belt Pulleys

There is much confusion in the timing belt pulley industry regarding groove designs for MXL, 0.0816", and 40DP pulleys. There are probably 5 or 6 different designs used around the world that have been developed over the years.

The most common groove designs are involute and straight sided forms. Involute forms provide the best belt performance, but are the most difficult to work with since there is no equation for an involute curve form. We provide approximate forms that consist of a series of arcs and radii blended together. Involute forms also require hob cutter ranging.

Straight sided groove forms are quite common, and are easy to work with as no special equations or hob ranges are needed. Belts do not, however, perform as well as with involute forms. Customers often complain about short belt life, noise, vibration, poor registration, etc. with this form. It performs reasonably well in non critical and lightly loaded applications.