



GatesFacts™ Technical Information Library  
Gates Compass™ Power Transmission CD-ROM version 1.2



The Gates Rubber Company  
Denver, Colorado USA

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## **Unbalanced Sprocket Finish Diameter Tolerances**

The accuracy of sprocket finish O.D. is very important for good synchronous belt performance. Finish O.D. is specified by the nominal value and a tolerance on the plus side only. This unbalanced tolerance is important for proper belt functionality over a variety of possible belt/sprocket tolerance combinations. It is important that synchronous belts be “pulled” into proper fit during installation rather than wrapping the sprockets easily without tension, especially if the drive is to be used for power transmission. A positive sprocket O.D. assures this condition. The pitch of a synchronous belt obviously cannot be compressed to fit a sprocket. Even slight compression will result in very poor belt performance. A negative sprocket O.D. could allow a compressed fit.