

## Drive Alignment

To assure proper drive alignment, you should refer to the information in this section for center distance alignment. The alternative is to change the idler position, so that the belt can be slipped onto the drive easily. When you install the belt, never force it over the flange. This may cause belt tensile damage.

Positive belts are most sensitive to misalignment, so never use this kind of drive in applications where misalignment is prevalent. Inconsistent belt wear and premature tensile failure may result.

The two most common types of misalignment can be seen in the drawings below. Parallel misalignment is caused when the driver and driven shafts are parallel, but the two pulleys lie in different planes. When the two shafts are not parallel, the drive is angularly misaligned.

A fleeting angle shows where the belt enters and exits the sprocket, and equals the sum of the parallel and angular misalignments.

Any degree of pulley misalignment will result in some belt life reduction. Misalignment of all positive belt drives should not exceed 1/4" or 1/16" per foot of center distance. Alignment should be checked with a good straight-edge tool applied to their machined side surfaces from driver to driven and from driven to driver shafts. This way the effect of parallel and angular misalignment can be observed.

Drive misalignment can also cause problems of belt tracking. Some tracking is normal and will not affect performance. However, where center distance is greater than eight times the small pulley diameter, tracking can be a problem. Special adjustment may be needed. You have to correct the parallel position of the two pulleys until one flange guides the belt in the system and the belt tracks fully on all pulleys. Regardless of the drive's center distance, the best operation will be with the belt contacting only one flange in the system.

You will find real application problems when the belt contacts flanges on opposite sides of the sprockets. This traps the belt into undesirable parallel misalignment.

