



RELIABILITY IN EVERY REVOLUTION

TECH TIPS

Idlers and Placement

On power transmission belt drives, a two-pulley system with adjustable centers is the preferred method for tensioning. One shaft, usually the motor, is able to move, allowing slack for belt removal as well as applying tension to the belt.

However, such a system is not always possible.

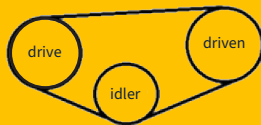
Idlers may also be required to: allow installation and tension when the shafts are fixed, clear obstructions, turn corners, support long spans, avoid belt whip, maintain tension via a spring or weighted idler, increase belt wrap on a pulley, or for clutching.



Idler positions:

Inside:

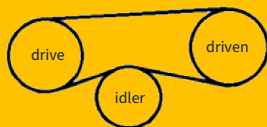
An idler used on the inside of a belt will have the least effect on the service life of the belt. The inside idler will decrease the amount of belt wrap on the pulleys, increasing the possibility of slipping.



--OR--

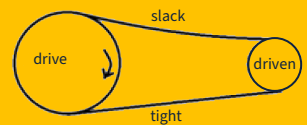
Outside:

An idler used on the outside of the belt will have a greater effect on the service life of the belt. The outside idler will increase the amount of belt wrap on the pulleys, decreasing the possibility of slipping.



Slack:

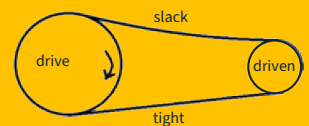
Placing an idler on the slack side of a belt drive imposes less stress on the belt and idler than the tight side placement.



--OR--

Tight:

Placing an idler on the tight side of a belt drive imposes more stress on the idler and belt than one placed on the slack side.



AND

General Information:

Idlers in a Span:

It is ideal to position a grooved idler so it is centered on the span, creating the same angle to both pulleys.

When using a flat idler, place it as close to the proceeding pulley as is feasible. This increased distance to the next pulley will help avoid misalignment.

Idler Size:

Keep an idler no smaller than the smallest loaded pulley in the drive. Ideally, the idler diameter should be at least equal for inside idlers, and 1.5 times larger for outside idlers.

Idler Design:

When using grooved v-belt idlers, it is important that the idlers are made to the applicable specifications for the belt being used. Flat idlers should not be used on the inside of timing belts, or cogged belts. Flat pulleys should be truly flat, not crowned.