

Sheave Wear Impacting V-Belt Life

Sheave wear is a common issue in V-Belt Power Transmission Drives. When a belt wears into a sheave, it creates a 'pocket' within the groove the belt is operating in. This 'pocket' over time can force the belt lower into the sheave and create side-to-side movement leading to stress on the belt. This stress results in higher temperature and more inefficient side-to-side wear. Backside kiss idlers on the drive system will also increase in temperature, effecting the belt's life by creating *flex fatigue cracks*, which will appear visually on the belt.

Understanding how sheave wear affects the efficiency and the reliability of power transmission systems can help consumers reduce costly downtime and improve productivity. By keeping the sheave operating conditions within the recommended profile dimensions, you can be sure to get the maximum life out of your belt drive system.



How to tell a worn V-Belt Sheave:

Clear indication of worn sheave is the mirror finish on the walls of the sheave.

How to use a Sheave Gauge:

Pick the sheave gauge that perfectly fits into the sheave with the correct belt profile, diameter, and angle.

- 1. Determine the outside diameter of the sheave
- 2. Identify the belt cross section
- 3. Find the gauge belt cross section
- 4. Insert the sheave point that corresponds to the nominal OD of the sheave



- You should not see any light between the wall of the sheave and the edge of the gauge. This is a worn sheave.
- Check for damage in the shape of a ledge where the metal has worn away in the belt area.
- Check for any damage on the sheave (pits or protrusions) that could cause damage to the belt when running.
- Test the sheave; does the sheave rotate freely and not wobble when rotating one revolution?



To troubleshoot problem drives; please contact *Continental Applications Group* **(402) 313-1733**. Provide drive layout with X/Y coordinates, pulley diameters, and duty cycle.