

## V-Belt Installation Check List

1. **Disconnect and lock out power source**
2. **Observe all safety procedures**
  - Be sure to review and comply with all safety codes
3. **Follow recommendations of the equipment manufacturer**
4. **Remove belt guard**
5. **Loosen motor mounts**
6. **Shorten center distance**
  - Loosen the drive take-up and move the sheaves closer together to facilitate the removal of the old belts and to insure installation of the new belts without damage
7. **Remove old belts**
8. **Inspect belt wear patterns for possible troubleshooting**
9. **Inspect and clean drive elements**
  - Inspect and replace faulty or damaged machine elements such as worn bearings or bent shafts
10. **Inspect sheave grooves for wear and clean – replace if necessary**
  - Sheave condition and alignment are vital to v-belt life and performance
  - Never install new belts without a thorough inspection of the sheaves
  - Look for worn groove sidewalls, shiny sheave groove bottom, wobbling sheaves and damaged sheaves
  - Sheaves should be mounted as close to the bearing as possible to reduce overhung load
  - Sheaves should be cleaned of rust and foreign material
  - Cleaning sheaves will reduce sheave wear
11. **Check sheave alignment (preliminary)**
  - V-belt sheave alignment should be within a tolerance of 1/16" per 12" of drive center distance
  - Use a string, straight edge or Laser-Align™ alignment tool to check alignment
12. **Select proper replacement belts**
  - Never mix new and used belts on a drive
  - Never mix belts from more than one manufacturer
  - Always replace with the right type of belt
  - Always observe belt matching limits
13. **Install new belts**
  - Place the new belts on the sheaves
    - Do not force the belts on the sheaves
    - Do not use a pry bar
    - Do not roll belts onto the sheaves
      - ◆ The above will damage the cords and lead to premature belt failure
  - Move sheaves apart until the belts are seated in the grooves
  - Pull slack to the same side or rotate the drive by hand a few revolutions
14. **Tension belts**
  - Proper tensioning is the single most important factor necessary for long, satisfactory operation
  - Too little tension will result in slippage, causing rapid belt and sheave wear and loss of productivity
  - Too much tension can result in excessive stress on the belts, bearings and shafts
  - Use a device like the Tension-Finder® tensioning tool to properly install the belt
  - Never apply belt dressing. It may damage the belt and cause early failure
15. **Recheck the alignment and continue rechecking tension and alignment until both are properly set AFTER the motor has been locked down.**
  - The Laser-Align™ alignment tool and Tension-Finder® tensioning device can be used at the same time to make the process quicker and easier
  - Along with proper tensioning, alignment is critical to satisfactory belt life and performance
  - Properly aligned drives reduce wear, reduce vibration and increases energy savings
16. **Replace belt guard, connect power source, start drive and observe**
  - Operate the drive for a few minutes to seat the belts in the sheave grooves
  - Observe the operation of the drive under the highest load condition (usually starting)
  - Look and listen for any unusual noise or vibration
  - A slight bowing of the slack side of the drive is normal
  - If the slack side remains taut during the peak load, re-check the tension with a tensioning device
17. **Re-tension after 24 hours**
  - Check the tension on a new drive after 24 hours of operation
  - Belts relax after seating fully into the pulleys. Checking them after 24 hours can often expose installation issues that were not obvious after they were first installed.



### WARNING

*Failure to observe the following warnings could create a risk of death or serious injury.*

Static electricity created by a belt in operation can ignite an explosive atmosphere. Special care must be taken in the utilization of belts in or near locations which may contain explosive concentrations of combustible gases or accumulations of dust such as grain, coal, or other combustible materials.

Proper dissipation of such potential static electricity discharge must be assured to prevent any such explosion.



### CAUTION

*Failure to observe the following cautions could create a risk of serious physical injury or property damage.*

Proper selection and installation of drive belts are critical tasks. Belts must be properly selected and installed to assure proper performance. Follow all of the equipment manufacturer's safety recommendations, installation procedures and specifications.

# TIMKEN

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