



*Greater efficiency supports patient care.*

## Replace Standard Motor Belts with Notched V-Belts

*All ECM content was independently developed and reviewed to be vendor-, product-, and service provider-neutral.*

### Description

Installing Notched V-Belts, also called cogged V-Belts, will increase motor efficiency for motors used to drive various hospital HVAC equipment.

### Project Talking Points

- Standard belt efficiency for a motor is approximately 95% new (however, slippage over time will bring it closer to 92%). Notched V-Belts operate with a 97% efficiency, run cooler and last longer while using the same pulleys.
- Notched V-Belts have shown to have paybacks in the 6-month range.
- Engage those responsible for purchasing to avoid any confusion
- Synchronous V-Belts can also be considered, as they are even more efficient than notched V-Belts, however they may require a pulley change

### Triple Bottom Line Benefits

- **Cost Benefits:** Notched V-Belts are a low-cost item with a 6-month payback
- **Environmental Benefits:** A reduction in energy and longer service life will reduce waste and decrease energy use
- **Social Benefits:** Reductions in hospital operating costs will result in a decreased cost to consumers and more funding for patient care. Longer service life will decrease maintenance burden and reduce interruptions to patient care.

### Purchasing Considerations

- Ensure new belts will not require a change in pulley as this could add significantly to the first cost. Update inventory logs and notify purchasing of the change. If the facility uses a CMMS software, ensure this is updated to reflect the change.

### How-To

1. Engage stakeholders responsible for purchasing general maintenance items. If the facility changes their own belts, this could be the maintenance manager or the hospital's purchasing department. It could also be an outside contractor if they are the ones performing the equipment maintenance.
2. Make a selection of the appropriate Notched V-Belt based on the specifications of the existing belt (this could simply be replenishing stock as existing stock of standard belts are used as not to waste current stock).
3. Replace existing V-Belts with a notched version as needed.

## Case Studies

- [NREL Study on Notched V-Belts](#)

## ECM Synergies

- Practice preventive maintenance of major HVAC Equipment

## More Resources

- [Cogged V-Belt Pilot Program](#)

## ECM Descriptors

### Energy

#### Category List:

- Building and Maintenance
- Controls
- HVAC

#### ECM Attributes:

- Basic Device Upgrades
- System Upgrades

#### Improvement Type:

- Retrofit/Renovations
- New Buildings
- Operations and Maintenance

#### Department:

- Engineering/Facilities Management

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