

Variable Frequency Drives

How can variable frequency drives help you save money?

According to the U.S. Department of Energy, motor-driven equipment accounts for 64 percent of the electricity consumed by U.S. industry. More often than not, it is equipment that is operating at 100 percent capacity at all times, even though it does not need to be. Incorporating energy efficient motors and variable frequency drives (VFDs) into your facility is a great way to reduce energy costs and boost your bottom line.

VFDs are typically used in fan, pump, chiller, and HVAC system applications as an affordable way to save energy, although they can also be added to most any industrial process that has a motor as well. Typically, these applications



your equipment, increase productivity and minimize the costs required to maintain it. Because the equipment will run at less than its maximum speed, wear can be reduced significantly and time between routine maintenance can be extended.

Some applications for VFDs include:

- To replace outlet dampers or variable inlet vanes (VIVs) in supply fan systems that control variable air volume (VAV) systems
- To control air supply to various zones with different occupancy and operating schedules
- To control pump speed by maintaining a pressure setpoint or temperature differential

The steady decline in their cost, coupled with the increase in energy savings, makes variable frequency drives a viable option for those looking to invest in ways to reduce their operating costs. VFDs must be installed by qualified personnel, and in some instances the labor cost to install them may exceed the cost of the actual drive.

To participate in the Energy Smart program, contact us at 877-NRG-SAV1 (877-674-7281).



have a mechanical device to adjust output, such as valves, dampers, etc., but also tend to waste energy to varying degrees. VFDs have the ability to precisely adjust the motor output electronically to meet the changing demands of the system, thereby matching the motor's speed to the load. Without a variable frequency drive, motors run at a constant speed. VFDs are sometimes called variable-speed drives, adjustable speed drives or adjustable-frequency controllers.

In addition to saving energy, VFDs can lengthen the life of

