

Variable Frequency Drives

You're driving in your car. After about five minutes, you notice smoke billowing from your tires and a peculiar burning odor. Suddenly you exclaim, "I've been driving with my parking brake on!"

You may be thinking, that's ridiculous! Why would anyone use such excessive energy while creating such a punishing condition for the mechanical equipment involved? And yet, when it comes to liquid pumping systems, this scenario is very similar to how some pump motors operate.

The energy required to start a pump motor can be from 5 to 10 times greater than what is required to run it under normal load. Depending on the size of the system, single-speed, full-voltage pump motors suffer a great deal of heat and wear due to high torque and pressure surge during start up. When multiplied over time, motor or pump damage will occur and repairs or replacements may become necessary. If pre-mature wear or excessive energy consumption is suspected or you have a system that requires liquid level or flow control, you should consider using variable frequency motor drives.

A variable frequency drive (VFD) is an electronic controller that provides motor speed control via frequency adjustment. Standard frequency is between 30 and 60 Hz giving an operator the ability to match motor speed to fluctuating workload demand. Not only will the VFD equip the system with a "soft start" (gradually ramping up a motor to operating speed), but it will also reduce energy consumption by allowing pumps to run at lower speeds to match lower demands, drawing less energy while maintaining pumping requirements. If you want to make positive, significant changes to system efficiency and secure long-term savings, consider installing variable frequency drives for the following reasons:



- Increases equipment life and reduces motor stress
- Reduces energy, maintenance and repair costs
- Improves level and system pressure control
- Improves system utilization

Do you want to increase system efficiency and extend motor, pump and equipment life? Then contact EPG. We can help.

Note: Filters or reactors on drive output are required if voltage is 380 or greater and cable from drive to motor is more than 50 feet.

A low-pass filter is preferable. Filters or reactors should be selected in conjunction with the drive manufacturer and must be specifically designed for VFD operation.

Note: Start and Stop - One second maximum ramp-up and ramp-down times between stopped and 30 Hz. Stopping by coast-down is preferable. Drive carrier frequency should be at its lowest possible setting.

EPG Sales Representative Highlights

Pumps Plus, Inc., founded in October 1988, represents EPG Companies in Michigan's lower peninsula and Indiana.

To further support this successful relationship, Pumps Plus has announced the addition of Jack Komarek (pictured) who will be representing EPG in the western areas of Michigan.

Jack Komarek joined Pumps Plus on November 1, 2004. He will call on end users and contractors. Jack has over 25 years of experience in the wastewater industry having been the Mechanical Maintenance Supervisor for the City of Holland. His knowledge and experience will be fully appreciated as he works specifically with customer applications. For more information, call the Pumps Plus office at 248-888-9000 or contact Jack directly at 616-510-0829 or jkomarek@hotmail.com.



If interested in becoming an EPG sales rep, please call us at 1-800-443-7426.