

Pumping

Application Overview

Electric motors are commonly used to power pumps in applications ranging from turf and irrigation, high rise water pressure control, municipal wastewater and industrial hydraulic systems. In all of these applications, the most damaging and costly condition is water hammer, which occurs when the flow of the fluid is started or stopped quickly. A condition that can impart five times the normal working pressure on the system and can lead to damaged seals, valves and pipes, causing costly downtime. Every pumping application has specific requirements that address the unique challenges each present, but in all cases, proper motor control can eliminate detrimental pressure and flow conditions.

Application Requirements

Control

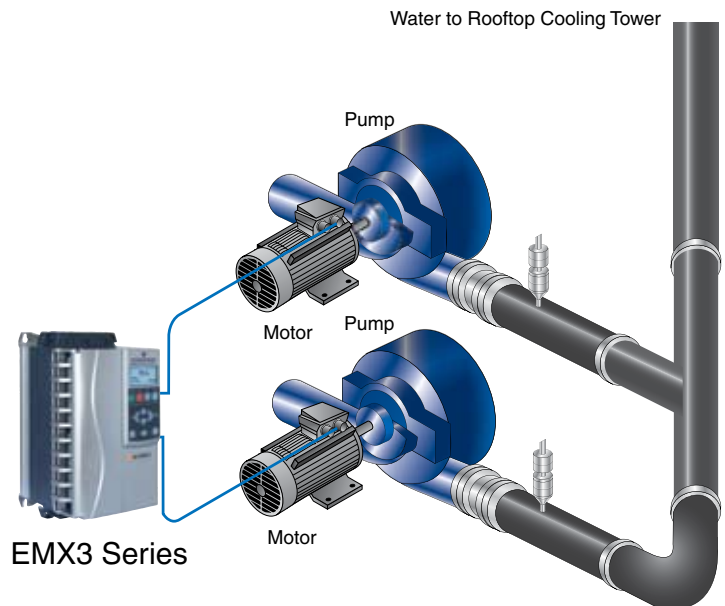
- Smooth accel decel profiles
- Unmanned auto start stop control
- Quick start pump menus

Protection

- Metering and monitoring capabilities
- Complete protection for pumps, pipes, valves, seals and head works

Functionality

- Bypass operation
- Continued operation after SCR failure
- Emergency run capability
- Serial communications



Control Techniques' Solutions

EMX3 the ultimate soft starter

- First Soft Starter in the marketplace with "Power through" technology allowing continued two phase operation after SCR failure
- Proprietary XLR-8 Adaptive Control Technology allows user selection of early, constant or late acceleration and deceleration profiles
- Time & date stamped logs
- Dry well detection
- Customizable protection
- Superior I/O
- LCD keypad
- Easy monitoring & troubleshooting



CONSIDER IT SOLVED™

Pumping Solutions

Control Techniques' Performance Advantages

Starting Stopping Profiles

- XLR-8 adaptive acceleration & deceleration
- Constant current
- Current ramp
- Kickstart
- TVR (Terminal Voltage Ramp) soft stop
- Brake mode
- Coast to stop

Protection

- Metering and Monitoring
- Overcurrent undercurrent
- Motor thermal model
- Excess start time
- Motor overload
- Thermistor or PT100 (RTD) input
- Phase sequence
- Shorted SCR

Control

- Programmable auto start/stop
- LCD removable keypad
- 24 VDC auxiliary power supply
- Real time clock with battery backup
- 99 event log date and time stamped
- Power through*

*Power through - an exclusive feature of our EMX3 that enables the choice of continuous operation despite a power assembly (SCR) failure. Which allows the application to continue running in two phases while long-term repair/replacement action can be taken.

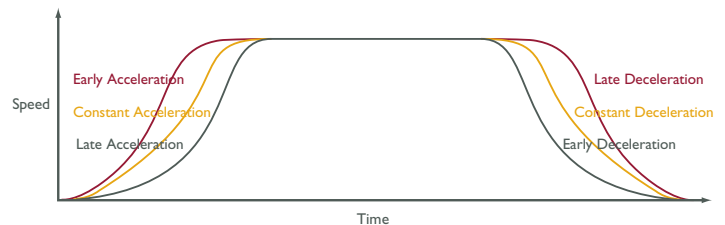
World Class Products & Support

- Worldwide Application & Field Service Network
- 24/7 support line 1-800-893-2321



XLR-8 Adaptive Control Technology

Using our proprietary Adaptive Control Technology, the EMX3 learns your motor's performance during start and stop, then adjusts control to optimize performance. Simply select the profile that best matches your load type and the soft starter automatically ensures the smoothest possible acceleration for your load.



Available as stand alone modules, NEMA-1, 12, 3R or 4 pre-engineered or custom manufactured packages.

