



Pump & Motor Systems Webinar Description

Pump and motor systems are the mechanical backbone of water and wastewater treatment, yet many performance issues cannot be traced to a single component. Instead, problems often arise from the interaction between electrical, mechanical, and hydraulic elements within the system. This course focuses on understanding those interactions and diagnosing issues at the system level.

Participants will learn how motors, pumps, and their supporting components—such as starters, relays, windings, shafts, bearings, couplings, seals, and impellers—work together to deliver reliable performance. The course builds a practical understanding of both electrical and mechanical fundamentals, allowing attendees to recognize how failures in one area can impact the entire system.

Key concepts such as pump and system curves, affinity laws, and overall system efficiency are explained in operational terms, helping participants evaluate whether equipment is operating as intended. The course also introduces variable frequency drives (VFDs), including how they control motor performance, common failure points, and how to interpret faults and measurements for troubleshooting.

Emphasis is placed on real-world problem solving—identifying root causes of issues such as vibration, overheating, low flow, and premature equipment failure. Participants will also learn how routine maintenance and proper system setup can prevent many of these problems before they occur.

By the end of the course, attendees will have a clearer understanding of how pump and motor systems function as a whole, enabling them to diagnose problems more effectively, improve efficiency, and extend equipment life.