

PCT

Proportional Control Technology – 5 days

Advanced maintenance technicians and hydraulic engineering personnel receive a thorough overview of the function & operation of electro-proportional hydraulic valves and their interface and control electronics – recommended for the mechanical trades and the electrical trades

What you will learn:

- Similarities and differences between on/off directional controls and proportional directional controls
- The principle of speed control (throttling)
- Controlling actuator direction, speed and (de)acceleration with proportional valves
- Proportional valves with and without position control
- Overview of standard proportional directional controls
- High performance and servo-solenoid directional controls
- Proportional pressure control valves
- Proportional flow control valves
- Electronic interface amplifiers for driving proportional valves
- Integrated electronics/on-board electronics (OBE)
- Understanding performance criteria and valve technical data
- Introduction and background to applying and sizing proportional valves
- Principles of typical control requirements (positioning and speed control)
- Introduction to closed loop control principles
- Learn to troubleshoot proportional valve systems and isolate problems

Electro-proportional hydraulic valves have become evermore present in most hydraulic powered and controlled machines and processes. This course offering will bridge the gap between conventional valve technologies and so called continuous control valves through understanding the operation of the valve and control. For this purpose there will be ample time devoted to the actual interconnection and operation of valves and their associated control electronics. Students will configure the electronic interface and place the valve in a circuit to observe the operation. Through this hands-on approach, students will develop their setup and troubleshooting skills. This 5 day training course is also a proper starting point for plant engineering personnel prior to our advanced PSD course.

Prerequisites: MRS or DCH course or equivalent knowledge of hydraulic principles

Approximately 50% lecture and 50% hands on lab exercises and demonstration