

Corporate Office

7042 Fairfield Business Dr.
Fairfield, OH 45014-5480
(513) 874-3225
(513) 874-3229 Fax



Cartridge Slip-in and Screw-in Logic Valve Technology

Course Description: This course covers the fundamentals and principles of slip-in cartridge valves. The basic functions of flow, pressure, and directional control are the focus of the class. The unusual graphic fluid power symbols for this new technology is explained and compared to conventional hydraulic symbols. Required filtration requirements are included as well as electro-hydraulic proportional controls. Design considerations, applications, and safety concerns are discussed.

Prerequisites: Basic hydraulic fundamentals

Textbook: Eaton/Vickers hardback book plus hand-outs

Learning Objectives:

- Discuss the benefits of using logic valves
- Explain the four (4) main poppet designs and how they differ
- Identify directional, pressure, and flow applications
- Compare the effects of different orifice sizes used for control
- Explain how to read and identify the different symbols
- Recognize typical applications and utilize diagnostic procedures
- Identify the causes of shock and how to correct it
- Identify different types of filtration and understand contamination levels
- Discuss the leakage considerations and how to use to your advantage
- Identify response times and the effect on systems
- Distinguish the different covers and their control of the cartridge valve
- Practice safe procedures to insure trapped fluids have been relieved
- Describe the function of the proportional control on the element
- Explain electro-hydraulic control inputs needed by the proportional amplifier cards