

PROPORTIONAL FLOW & DIRECTIONAL CONTROL VALVE MODULE

DESCRIPTION

The MF100 series simulators are designed to grow with your training needs and your training budget.

The MF100-PDCV proportional flow and directional control valve module is just one of the many modules which can be easily attached to the MF100 series simulators to increase its already impressive teaching, and learning, capability.

Once attached to the MF100 series simulator, the proportional flow and directional control valve becomes an integral part of the simulator and operates seamlessly with all the components on the simulator.

The turn-key, “Plug-N-Play,” proportional flow and directional control valve module has everything that a student needs to learn how a proportional flow and directional control valve works, and, how to set all the necessary amplifier parameters.

TYPICAL APPLICATIONS

Process machinery, packaging machines, production machines, plastic injection molding machines, mobile machinery, assembly lines, steel and timber mills, theme and amusement parks, etc.

TARGET CLIENT

Technical colleges, universities, military training facilities, corporate technical training facilities, and owners of existing, FPTI™ and non-FPTI™ brand fluid power trainers/simulators.

TARGET AUDIENCE

Students who plan on a career in servicing, maintaining, repairing, and troubleshooting industrial and mobile hydraulic machinery, component rebuild technicians, field service technicians, and sales personnel



LEARNING OBJECTIVES

The MF100-PDCV training module will aid instructors in teaching students the following:

1. Correct safety practices when working on and around proportional flow and directional control valves.
2. Advantages and disadvantages of proportional flow and directional control valves.
3. Typical industrial and mobile applications for proportional flow and directional control valves.
4. How to properly install a proportional flow and directional control valve and circuit modules (if applicable).
5. Correct bolt torques and tightening sequences for D03, D05, D07, D08, and D10 proportional flow and directional control valves.
6. How to interpret the ISO/ANSI symbols for a typical proportional flow and directional control valve.
7. How to read and understand the hydraulic schematic for a typical flow and proportional flow and directional control valve.
8. How to replace O-rings in a stacked valve assembly.
9. The function and purpose of “gain,” “null,” “offset,” and “lag”.
10. How to use a multi-meter to properly set-up and adjust the “offset,” and “gain” parameters on a proportional flow and directional control valve amplifier.

The MF100-PDCV proportional flow and directional control valve module consists of the following components:

1. A fully-operational 03 size proportional flow and directional control valve with 3-positions; 4-ways; and, closed-center configuration.
2. Amplifier with knob-adjustable potentiometers.
3. Digital voltmeter – panel-mount.
4. Digital multimeter – battery-operated, panel-mount (battery- pack is conveniently located on the rear of the panel to facilitate battery replacement without removing the multimeter).
5. Joystick-controlled linear potentiometer.
6. Fast-acting fuse.
7. All transmission lines are fabricated out of stainless-steel tubing.
8. All connections are stainless-steel Swagelok®-type connectors.
9. Aluminum, self-contained cabinet with removable back-cover. Both are finished with durable powder-coat finish.
10. Integrated oil drip-tray with Dri-dek™ mat and drain-tube (drains into self-drain, oil drip-tray on the MF100 series simulators).
11. All connections are with “zero-leak” flat-face quick-connect/disconnect valves. Connections are compatible with all connections on the MF 100 series simulators.
12. Anodized, brushed aluminum face-plate with screen-printed safety warnings and cautions, component identification, and appropriate hydraulic symbols.
13. ON/OFF switch with illuminated “power-on” light.
14. “Plug-and-play,” color-coded electrical wires with banana-clip type ends.
15. Convenient, color-coded electrical wire storage station.