

Hydraulic Training Systems

Teaching and learning hydraulics in real-time

Plug-and-Play Training Module

Orbitrol Steering Valve with Diagnostics Package

Model number- MF100-OSV-TS



The model MF100-OSV Orbitrol Steering valve “plug-and-play” module features all the hydraulic components utilized in steering systems for articulated vehicles, e.g., front-end loader, off-highway dump truck, forestry, mining, and agricultural equipment, etc.

There’s no easier or more effective way for students to learn how a hydraulic steering system functions than to have them construct the entire system from the ground up.

The model MF100-OSV consists of the following hydraulic components:

- Hydraulic steering valve (orbitrol type)
- Steering wheel
- Priority flow divider
- Main pressure relief valve
- Dual cross-port relief valves
- Hydro-pneumatic accumulator (optional item MF100-ACC-FP)

All components are equipped with zero-leak flat face type quick connect/disconnect valves. All components are mounted on an aluminum panel with removable rear cover. All surfaces are painted using a powder-coat process.

There are two MF100 hydraulic steering modules available: the model MF100-OSV, and the model MF100-OSV-TS. If an instructor simply wants to teach students everything they need to know about hydraulic steering systems, the MF100-OSV is the best choice. However, if an instructor wants to teach students, in addition to hydraulic steering, also troubleshooting hydraulic steering systems, the model MF100-OSV-TS is the best choice.



Every component on the “TS” model is equipped with FPTI™’s exclusive auto-fault technology, which simply means every component can be made to “wear out” in real-time. No need to exchange cartridges.

The model MF100-OSV “plug-and-play” module is specifically designed to adapt to FPTI™’s model MF102 series hydraulic training systems.

However, the model MF100-OSV modules can be adapted to any hydraulic training simulator, which meets the following specifications:

- Variable volume, pressure-compensated pump (1000 PSI [69 bar], 1.0 GPM [3.875 Lpm])
- Double-rod, double-acting cylinder



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LEARNING OUTCOMES:

Upon completion of the Hydraulic Steering course, students will be able to:

- Describe the best practices in order to safely work on and around hydraulic steering systems
- Use a hydraulic schematic and construct a hydraulic steering system for an articulated vehicle
- Describe the function of the following components as they relate to hydraulic steering systems:
 - Hydraulic steering valve (orbitrol type)
 - Priority flow divider
 - Dual cross-port relief valve
 - Hydro-pneumatic accumulator (optional item MF100-ACC-FP)
 - Main pressure relief valve
- Explain the correct procedures in order to set the following components:
 - Priority flow divider
 - Cross-port relief valve
 - Main pressure relief valve
 - Describe what diagnostic instruments are needed in order to set-up, adjust, maintain, and troubleshoot a hydraulic steering system
- Explain how to safely and effectively utilize diagnostic instruments in order to safely and correctly set valves, and perform troubleshooting
- Use the hydraulic schematic to identify components, understand oil flow, and troubleshoot hydraulic steering systems

Course Materials -

- Orbitrol steering valve student activity.
- Instructor's activity answer sheet.
- Student simulator activities workbook and Instructor answerbook available for purchase.

Shipping Specifications -

Shipping weight:

(does not include container and packaging)

22.68 kgs (50 lbs)

Shipping dimensions:

58 cm (23") T x 53 cm (21") W x 33 cm (13") D

Warranty -

FPTI™ warrants its products against defect in materials or workmanship for a period of two (2) years from date of delivery.

Plug-and-Play training modules attach quickly and easily to any MF102 series training simulator



All FPTI™ simulators are available for operation at any voltage or frequency

fluidpower
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www.fpti.org

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