



FLUID POWER

COURSE MMS-125

Hydraulics and Pneumatics Fundamentals

This three-day course is designed for mechanical technicians and provides information on concepts associated with hydraulics, hydraulic systems and components, fluid principles, hydraulic system design, and hydraulic schematic symbology.

Upon completion of this course, you should be able to:

- Describe the basic principle of fluid dynamics
- State the relationship between force, pressure, and area
- List and describe the major components of a hydraulic system
- Identify the symbols used to identify hydraulic components in a schematic
- List and describe the major components of a pneumatic system
- Identify the symbols used to identify pneumatic components in a schematic

Materials Included

To enhance and facilitate the students' learning experiences, the following materials are provided as part of the course package:

- Student Manual
 - Includes the key concepts, definitions, examples, and activities presented in the course
- Lab Guide which includes the hands-on exercises

**Tuesday, December 2 -
Thursday, December 4**
8 AM - 5 PM

SMC Springfield
585 N Washington Ave
Springfield, MO

Cost: \$2,673
Includes Lunch



**Authorized
Service Provider**

A ROCKWELL AUTOMATION PARTNER

To register, please contact Tyler Perry at tperry@smcelectric.com

Course Agenda

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DAY 1

- Listing the advantages of hydraulics and pneumatics
- Discuss hydraulic and pneumatic components
- Disassembling, cleaning, inspecting, and reassembling a hydraulic and/or pneumatic control valve
- Operating a hydraulic and/or pneumatic cylinder using a given medium

DAY 2

- Operating multiple hydraulic cylinders using a hydraulic medium
- Disassembling, cleaning, inspecting, and reassembling a hydraulic and/or pneumatic control valve



DAY 3

- Operating a pneumatic cylinder using a pneumatic medium
- Operating multiple pneumatic cylinder using a pneumatic medium
- Lab
- Review and exam

PREREQUISITES

To successfully complete this course you must have an understanding of mechanical theory and mechanical systems

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