

# COURSE DESCRIPTION

## Hydraulics

### SELF-PACED LESSONS

#### *Introduction*

- Basic Functions of Hydraulic Systems
- Basic Principles of Hydraulics

#### *Pumps*

- Pumps Overview
- Gear Pumps
- Vane Pumps
- Piston Pumps

#### *Valves*

- Valves Overview
- Pressure Control Valves
- Flow Control Valves
- Check Valves
- Directional Control Valves

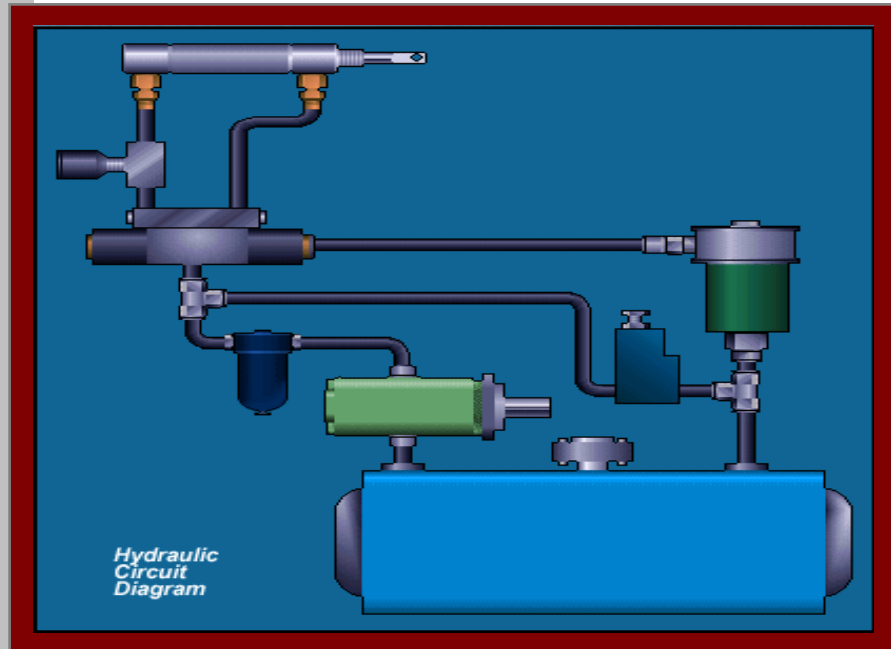
#### *Actuators*

- Actuators Overview
- Linear Actuators
- Rotary Actuators
- Hydraulic Motors

#### *Fluids*

- Fluids Overview
- Hydraulic Fluid Oil Additives
- Auxiliary Equipment
- Contaminants and Filtration
- Conductors and Fittings

## Hydraulics Fundamentals e-Learning Courses



#### *Course Purpose*

This interactive, self-paced training course teaches you the fundamental concepts, principles, and equipment used in hydraulic systems and this course is available in both computer-based and web-based delivery formats.

During the course, you will gain knowledge about pumps, valves, actuators, and fluids that comprise hydraulic systems through example hydraulic simulations. Problem-solving simulations and troubleshooting situations will help you learn about the operation and characteristics of various types of hydraulic equipment.

Helpful animations, background information, and links to other reference materials provide you with a variety of knowledge and learning tools. These tools will provide you with the knowledge required to help perform problem-solving and troubleshooting tasks more efficiently.

You will also be given multiple opportunities to test your knowledge through question and answer sessions. These question and answer sessions will allow you to gauge your knowledge level and help you identify areas for improvement.

LISTEN. THINK. SOLVE.™

**Rockwell  
Automation**

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### ***Intended Audience***

These e-Learning courses are intended for the following audiences:

- Individuals who prefer self-paced instruction
- Individuals who cannot attend classroom training
- Users of hydraulic systems who need refresher training
- Individuals who need to know components, functions, and basic operation of hydraulic systems that include pumping, conducting, filtering, controlling, and actuating

### ***Prerequisites***

To successfully complete this course, you should be able to perform basic Microsoft® Windows® tasks.

### ***Web-Based or Computer-Based Training***

Choose the training delivery method that best suits your needs:

- RA University Online web-based training is stored on a server and accessed across a network via the Internet. Web-based training permits unlimited usage for a single, licensed user.
- The RSTrainer computer-based CD-ROM format permits unlimited usage on a single, licensed computer. Computer-based training does not require an Internet connection; therefore, learning can take place anytime and anywhere a computer is available.

### ***Learning Activities & Features***

Rockwell Automation e-Learning courses include the following features:

- Information overviews
- Discussions of basic principles and/or concepts
- Descriptive and detailed technical explanations
- Animated sequences
- Interactive and integrated practice exercises
- Interactive simulations
- Online help
- Index to locate specific course topics
- Embedded Adobe® Acrobat® PDF files of technical manuals
- Links to useful reference material
- Glossary of terms

In addition, the RA University Online web-based training courses offer the following unique features:

- Pre- and post-testing
- Embedded learning management system
- Administrative features

### ***To Purchase***

To register for this or any other Rockwell Automation training course, contact your local authorized Allen-Bradley Distributor or your local Sales/Support office.

You can also access course information via the Web at <http://www.rockwellautomation.com/services>

### ***Catalog Numbers***

- RSTrainer for *Hydraulics Fundamentals*: **9393-RSTHYD**.
- Web-based *Hydraulics Fundamentals* ePass: **WBT1PACK** (equivalent to 1 course)

**[www.rockwellautomation.com](http://www.rockwellautomation.com)**

### **Power, Control and Information Solutions**

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