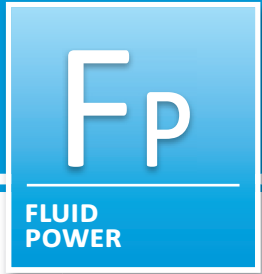
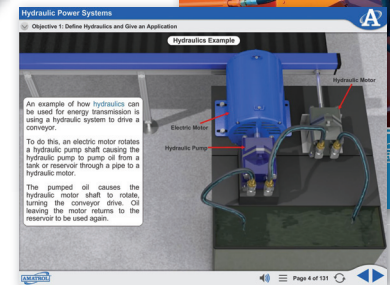
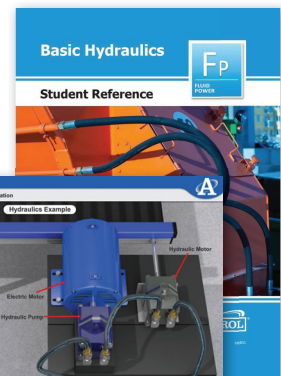


# Basic Hydraulics Learning System – Single Surface Bench with One Hydraulic Manifold

850-H1



850-H1



Interactive Multimedia Curriculum and  
Student Reference Guide

## Learning Topics:

- Hydraulic Power Systems
- Circuit Connections
- Basic Hydraulic Circuits
- Hydraulic Schematics
- Principles of Hydraulic Pressure and Flow
- Fluid Friction
- Hydraulic Speed Control
- Flow Control Valves
- Pressure Control Circuits
- Pressure Reducing Valves

The Basic Hydraulics Learning System – Single Surface Bench with One Hydraulic Manifold (850-H1) introduces learners to a wide variety of fundamental hydraulic principles and teaches basic hydraulic skills relevant throughout industry. For example, learners will study concepts like flow rate versus cylinder speed and pressure versus cylinder force and then gain hands-on experience practicing key skills, such as operating, installing, designing, and troubleshooting basic hydraulic circuits for various applications.

The 850-H1 includes industry-standard equipment, such as gauges, manifolds, cylinders, valves (relief/sequence, pressure reducing, check, directional control), flow meter, hydraulic motor, and hydraulic power unit. These durable, real-world components teach learners hands-on skills using equipment they will encounter on the job. When combined with Amatrol's in-depth multimedia curriculum, the 850-H1 offers a comprehensive learning solution for basic hydraulic concepts and skills.



## Technical Data

Complete technical specifications available upon request.

### Hydraulic Controls Technology Workstation (85-CTB-A)

#### Hydraulic Power Supply (85-HPS)

- Hydraulic Valve Module
  - Directional Control Valve
  - Needle Valve
  - Relief/Sequence Valve
  - Pressure Reducing Valve
  - Check Valves (2)

#### Hydraulic Actuator Module

- Double Acting Cylinders
- Hydraulic Motor with Flywheel
- Flow Controls with Check Valves
- Linear Load Device
- Limit Switch Mounting Tracks
- CAM Operators

#### Hydraulic Instrument Panel

- Flow Meter
- Pressure Gauges (3)

#### Hose and Fittings Package (85-HHF)

- 5-ft. Hose (3)
- 4-ft. Hose (6)
- 3-ft. Hose (2)
- 1.5-ft. Hose
- Open End Plug – Quick Connect
- Tee Assemblies – Quick Connect (3)

#### Bench Manifold Kit (16141)

#### Multimedia Curriculum (NB831)

#### Instructor's Guide (CB831)

#### Installation Guide (DB831)

#### Student Reference Guide (HB831)

#### Additional Requirements:

- Hydraulic Oil (16393 or 16391)
- Hand Tool Package (41220)
- Computer (Visit [www.amatrol.com/support/computer-requirements](http://www.amatrol.com/support/computer-requirements) for details.)

#### Utilities Required:

- Electric (110-120/220 VAC/50-60 Hz/1 phase)

#### Options:

- Intermediate Hydraulics Learning System (85-IH)
- Advanced Hydraulics Learning System (85-AH)
- Electro-Hydraulics Learning System (85-EH)
- Electro-Fluid Power Learning System (85-EF)

## Study Basic Hydraulic Concepts and Practice on Real-World Equipment

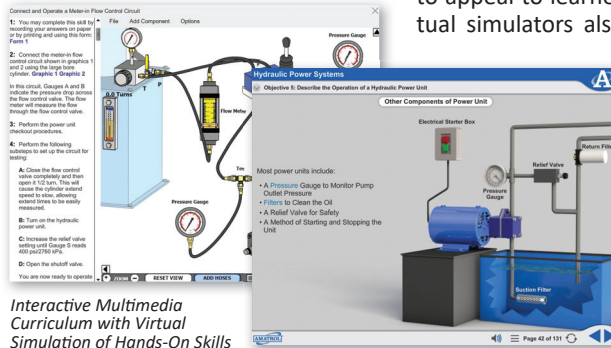
The 850-H1's in-depth curriculum teaches learners about a wide variety of basic hydraulic concepts. For example, learners will study the scientific principles of hydraulics, hydraulic circuits, and the function and operation of various hydraulic components, such as pumps, gauges, motors, cylinders, and valves. In addition to comprehensive curriculum, the system features standard, industrial-grade hydraulic components, allowing learners to gain practical, hands-on experience with real-world equipment as they master basic hydraulic skills.



Sturdy, Durable Workstation Includes Storage Space for Valve Modules and Hydraulic Hoses

## Engaging, Highly-Interactive Multimedia

Amatrol's curriculum features a highly-interactive, multimedia format that includes stunning 3D graphics and videos, voiceovers of all text, and interactive quizzes and exercises designed to appeal to learners with different learning styles. Virtual simulators also replicate hydraulic equipment in

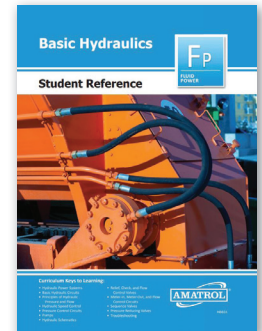


Interactive Multimedia Curriculum with Virtual Simulation of Hands-On Skills

realistic detail to allow learners to practice skills in a virtual environment before transitioning to real equipment. This combination of theoretical knowledge and hands-on skills solidifies understanding and creates a strong basis for pursuing more advanced skills.

## Student Reference Guide

A sample copy of the Basic Hydraulics Student Reference Guide is also included with the system for your evaluation. Sourced from the system's curriculum, the Student Reference Guide takes the entire series' technical content contained in the learning objectives and combines them into one perfectly-bound book. Student Reference Guides supplement this course by providing a condensed, inexpensive reference tool that learners will find invaluable once they finish their training, making it the perfect course takeaway.



## Expand Your System for Additional Learning Opportunities



850-H1 with Optional 85-IH and 85-EF Learning Systems

When you're ready to go beyond basic hydraulics, you can add optional learning systems to the 850-H1 to extend its capabilities to explore more advanced hydraulics concepts, such as Intermediate Hydraulics (85-IH), Advanced Hydraulics (85-AH), Electro-Hydraulics (85-EH), and Electro-Fluid Power (85-EF). These optional systems integrate seamlessly with the 850-H1 and teach intermediate to advanced hydraulic concepts, including electrical relay control of hydraulic systems.



Certified ISO 9001:2015