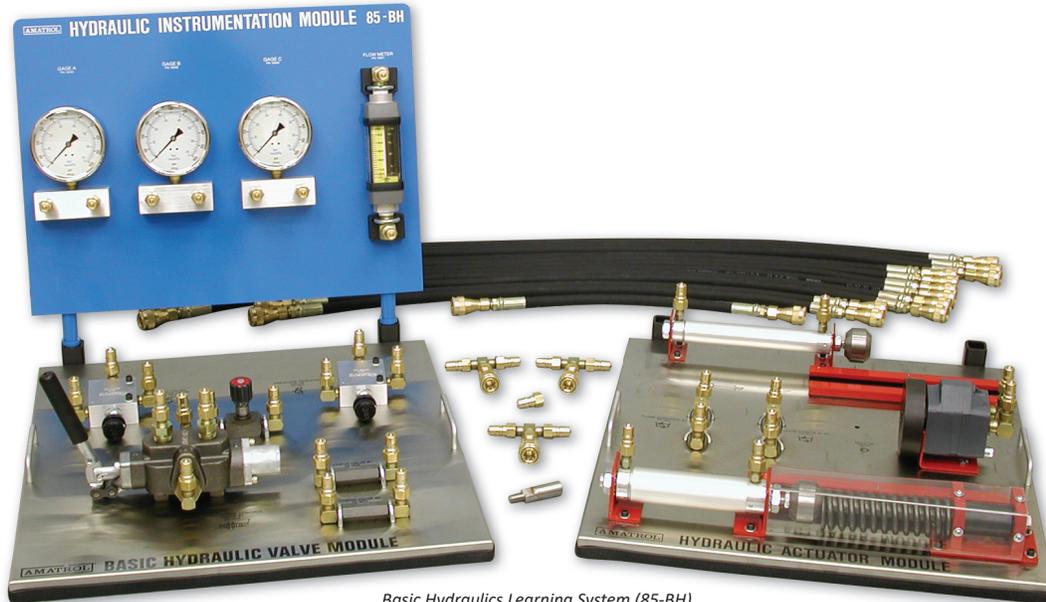
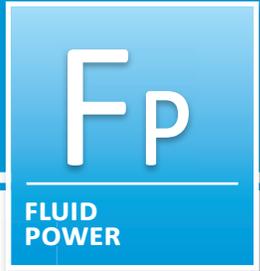
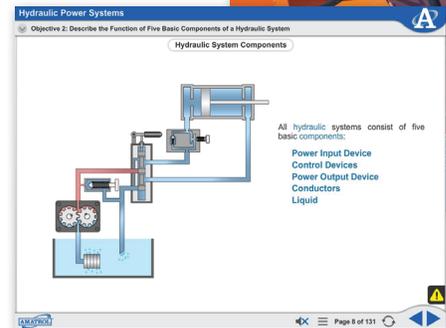
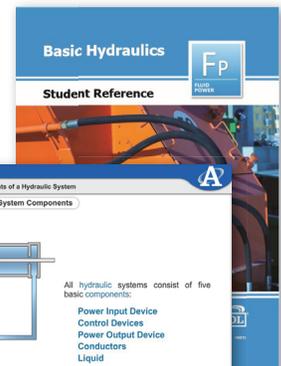


# Basic Hydraulics Learning System

85-BH



Basic Hydraulics Learning System (85-BH)



Interactive Multimedia and Student Reference Guide

## Learning Topics:

- Hydraulic Power Systems
- Circuit Connections
- Basic Hydraulic Circuits
- Hydraulic Schematics
- Principles of Hydraulic Pressure and Flow
- Hydraulic Leverage
- Fluid Friction
- Hydraulic Speed Control
- Flow Control Valves
- Pressure Control Circuits
- Sequence Valve Applications

Because hydraulic power is used in everything from automotive brakes to industrial robots, the skills taught by Amatrol's Basic Hydraulics Learning System (85-BH) can open the doors to careers in various fields, such as manufacturing, transportation, agricultural, and construction. Basic Hydraulics training introduces the fundamental hydraulic principles, such as pressure and flow, while simultaneously teaching industry-relevant hydraulic skills. This signature Amatrol approach to curriculum reinforces both theory and practice, which produces a well-rounded understanding of the topic. After completing this training system, for example, learners will not only be able to operate, install, design, and troubleshooting basic hydraulics for various applications, but also understand concepts like flow rate versus cylinder speed and pressure versus cylinder force.

The 85-BH Basic Hydraulic training includes gauges, manifolds, cylinders, valves (relief/sequence, pressure reducing, check, directional control), flow meter, and hydraulic motor. These components are all industrial quality to ensure durability and help learners become better prepared for what they will encounter on the job. All Amatrol products are made from top-notch materials and carefully crafted (hand-welded, painted, and silk-screened) to create tough, attractive, well designed industrial training systems that facilitate learning and will serve teachers and students for years.



## Technical Data

Complete technical specifications available upon request.

### Basic Hydraulic Valves Panel

- Relief/Sequence Valve
- Pressure Reducing Valve Assembly
- Needle Valve Assembly
- Check Valve Assembly (2)
- Directional Control Valve Assembly

### Basic Hydraulic Actuator Panel

- CAM Operator, 1-1/2-in.
- CAM Operator, 1-1/8-in.
- Shaft w/ Extension
- Load Device
- Friction Coupling
- Hydraulic Motor Assembly
- Double Acting Cylinder Assembly, 1-1/2-in.
- Double Acting Cylinder Assembly, 1-1/8-in.
- Flow Control Assembly (2)
- Spring, Load
- Flywheel w/ key
- Rail Assembly, 11-in.
- Rail Assembly, 12-3/4-in.

### Basic Hydraulic Instrumentation Panel

- Flow Meter Assembly
- Gauge and Manifold Assembly (3)

### Hydraulic Hose and Fitting Package (85-HHF)

- Hose Assembly, 5-ft. (3)
- Hose Assembly, 4-ft. (6)
- Hose Assembly, 3-ft. (2)
- Hose Assembly, 1-1/2-ft.
- Open End Plug – Quick Connect
- Tee Assembly – Quick Connect (3)

### Interactive Multimedia Curriculum w/ Virtual Trainer (NB831)

#### Instructor's Guide (CB831)

#### Installation Guide (DB831)

#### Student Reference Guide (HB831)

#### Additional Requirements:

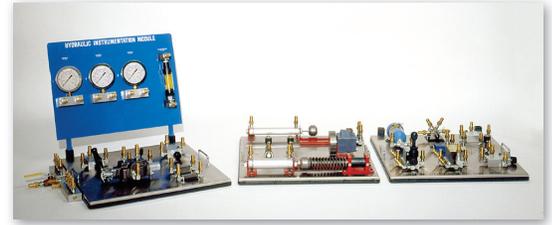
- Hand Tool Package (41220)
- Controls Technology Workstation (850-CTB-A)
- Hydraulic Power Supply (85-HPS) or equivalent
- Hydraulic Satellite Kit (16137)

#### Utilities Required:

- Electric (120 VAC/60 Hz/1 phase)

## Industrial Standard Fluid Power Components

Each Basic Hydraulics system features standard industrial grade components. This attention to quality gives learners experience they would normally only get on the job by helping them recognize industrial components and how to troubleshoot them more effectively. Components included with Basic Hydraulics are pre-mounted on circuit panels with silk-screened labels next to each, which facilitates ease of use and identification. Additionally, the system's orderly, user-friendly design helps learners to easily recognize how each component fits into a hydraulic circuit.

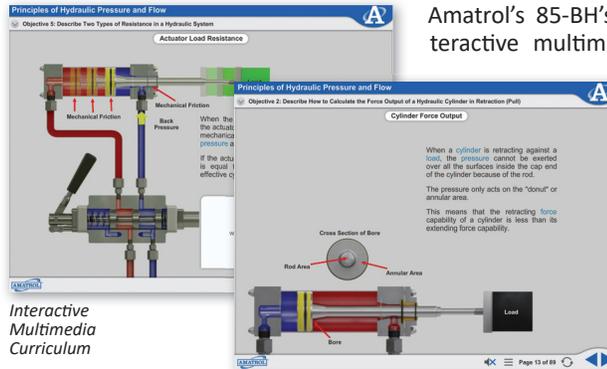


Components Used in 85-BH

## Real World Industrial Hydraulic Applications

Within the Basic Hydraulics curriculum, learners begin by studying about the physical principles of hydraulics, and how hydraulic mechanisms are used in real world applications. From this building block, learners begin hydraulic circuit construction, which gradually increases in difficulty and number of industry-standard components as the curriculum goes along. By taking this approach, learners will understand each component's function in a circuit, which makes hydraulic troubleshooting easier in later lessons and on more advanced training systems. Learners will also study about pumps, gauges, hydraulic motors, cylinders, and numerous valves, including schematic symbols for each component, creating the ability to read and draw their own hydraulic schematics.

## Interactive Multimedia and Virtual Trainer



Interactive Multimedia Curriculum

Amatrol's 85-BH's curriculum is presented in an interactive multimedia format. This format features stunning 3D animations, videos, voiceovers, and interactive quizzes. This multimedia also includes the 85-BH virtual trainer, which recreates hydraulic equipment in such realistic detail that learners can seamlessly transition to actual hands-on equipment.

## Expanded Teaching Options

Learners can build on the skills they have acquired from Basic Hydraulics by moving onto the Intermediate (85-IH) and Advanced (85-AH) Amatrol Hydraulics, as well as the Electro-Hydraulics (85-EH). For convenience, Amatrol offers Basic Hydraulics (85-BH) as part of the Basic Hydraulics package (850-H1), which also includes an Amatrol workstation (850-CTB) that features welded-steel frame construction for durability, lockable casters for mobility, slide-in storage racks, and the 85-HPS Hydraulic Power Unit.

## Complimentary Student Reference Guide

A sample copy of the Basic Hydraulics Student Reference Guide is included with the learning system. Sourced from the system's multimedia curriculum, the Student Reference Guide takes the entire series' technical content contained in the learning objectives and combines them into one perfectly-bound book. If you would like to inquire about purchasing additional Student Reference Guides for your program, contact your local Amatrol Representative for more information.

