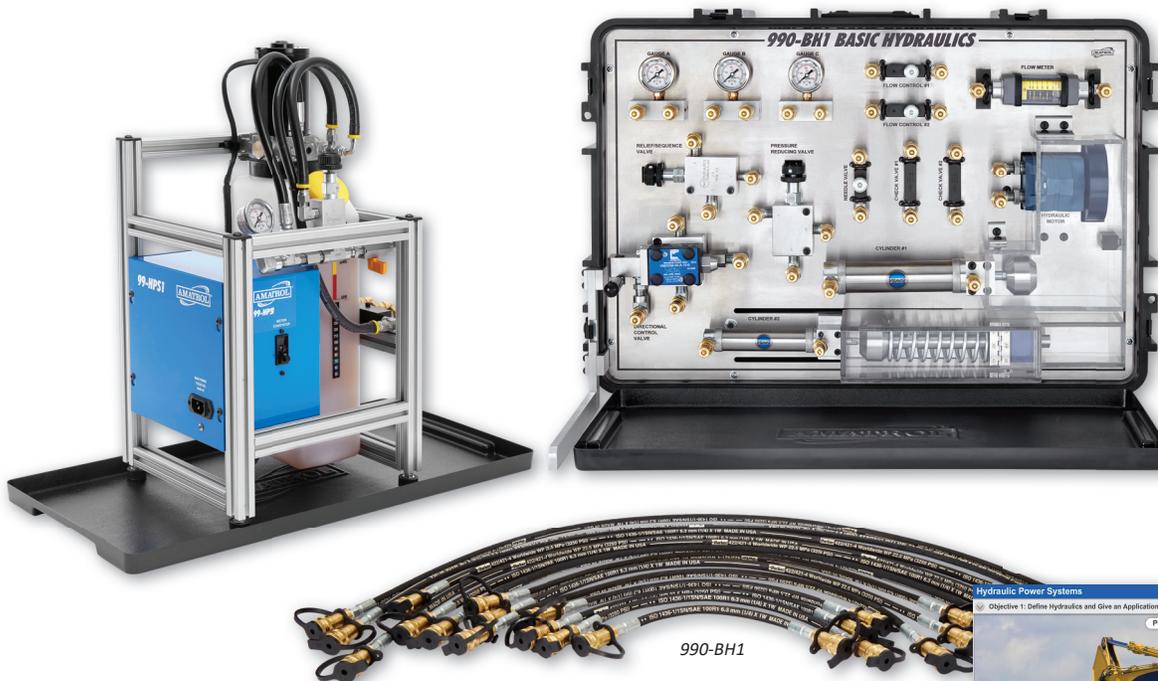


# Portable Basic Hydraulics Learning System

990-BH1

FP

FLUID  
POWER



990-BH1



Interactive Multimedia Curriculum and Student Reference Guide

## Learning Topics:

- Hydraulic Power Systems
- Basic Hydraulic Circuits
- Principles of Hydraulic - Pressure and Flow
- Hydraulic Speed Control
- Pressure Control Circuits
- Pumps
- Hydraulic Schematics
- Relief, Check, and Flow Control Valves
- Meter-In, Meter-Out, and Flow Control Circuits
- Sequence Valves
- Pressure Reducing Valves
- Troubleshooting

Amatrol's Portable Basic Hydraulics Learning System (990-BH1) allows learners to gain skills by studying topics like basic hydraulic circuits, pressure control circuits, hydraulic schematics, and sequence valves. Also, given the compact nature of the 990-BH1, for the first time you can teach hydraulics in a limited space. This learning system will allow learners to study and practice how to read a pressure gauge, as well as liquid level and temperature in the reservoir, connecting hydraulic circuits, operating a bi-directional hydraulic motor, converting between absolute and gauge pressure, and connecting and adjusting the pressure setting of a pressure relief valve (PRV).

This 990-BH1 includes gauges, manifolds, cylinders, valves (relief/sequence, pressure reducing, check, directional control), flow meter, and hydraulic motor. The components of this portable trainer are all industrial quality, not only to ensure durability, but also to 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 to create tough, attractive, well designed learning systems that facilitate learning and will serve teachers and students for years. Amatrol uses components that learners will find on-the-job in order to give the best opportunity to build confidence and industrial competencies.



## Technical Data

Complete technical specifications available upon request.

Portable Console  
99-HHF Hydraulic Hose and Fittings Package  
99-HPS1 Compact Hydraulic Power Unit  
Drip Pan  
Bracket Stabilizer  
Instructor Guide (C19144)  
Multimedia Curriculum (M19144)  
Install Guide (D19144)  
Student Reference Guide (H19144)

### Additional Requirements:

Computer: see requirements <http://www.amatrol.com/support/computer-requirements>

### Utilities:

Electricity (115/230 VAC, 50/60 Hz, Single Phase)

## Real-World Applications for Hydraulics Principles

The 990-BH1 has a remarkably small footprint, allowing hydraulics to be taught in spaces that precluded that training previously. Its components are all industrial quality, not only to ensure durability, but also to help learners become better prepared for what they will encounter on the job. Learners will use these components to practice vital hydraulics skills, such as: connecting and adjusting a flow control valve to control the speed of an actuator; designing an independent speed control circuit and two-speed actuator circuit; and operating a double-acting cylinder, and operating of an integral check valve.

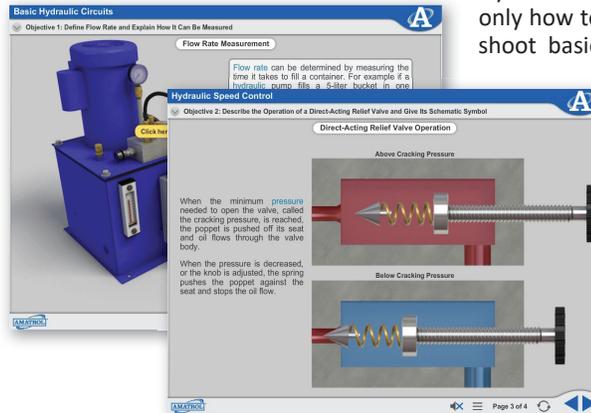


## Interactive Curriculum and Hands-On Skills

This learning system also includes Amatrol's world-class Multimedia curriculum, which combines strong theoretical knowledge and concepts with hands-on skills for the best industrial competency-building on the market. This thorough, exceptionally detailed curriculum is built to begin with the basics and steadily advance to more complex concepts and skill. The Basic

Hydraulics Learning System teaches learners not only how to operate, install, design, and troubleshoot basic hydraulics for various applications,

but also to understand concepts like flow rate versus cylinder speed and pressure versus cylinder force. The 990-BH1 curriculum covers major objectives like 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.



## Student Reference Guide

A sample copy of the Portable Basic Hydraulics Student Reference Guide is also included with the system for your evaluation. 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. 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.

