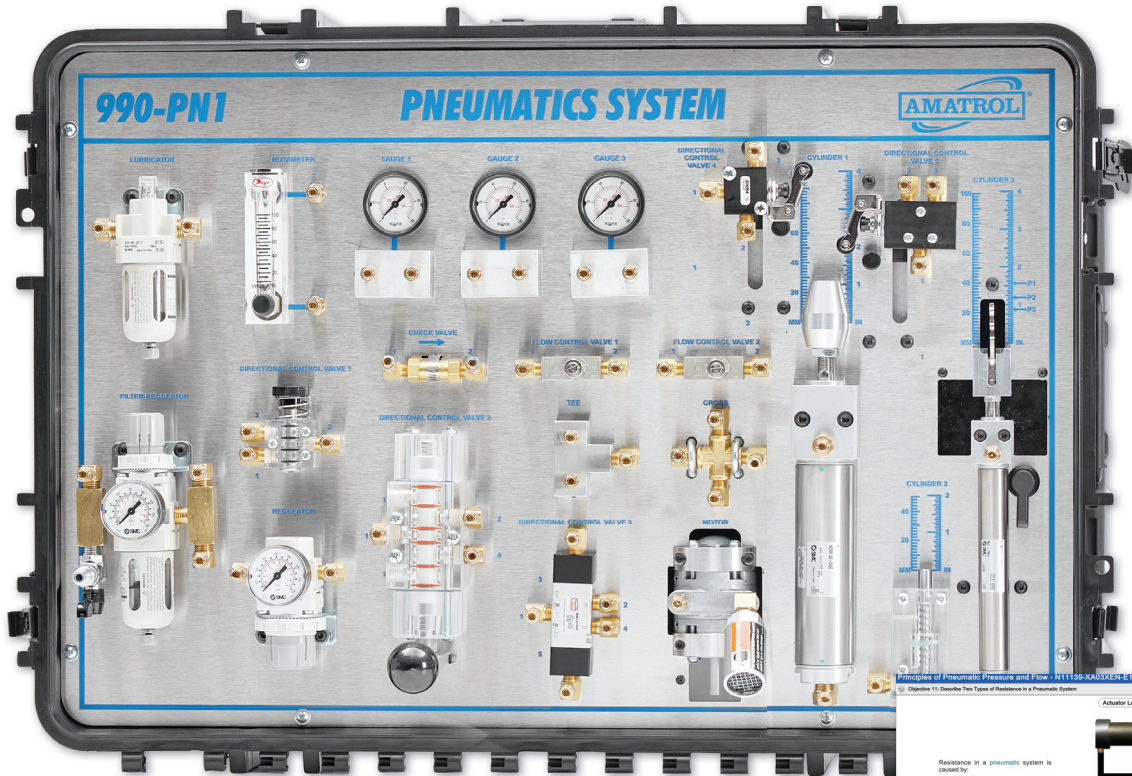


# Portable Pneumatics Learning System

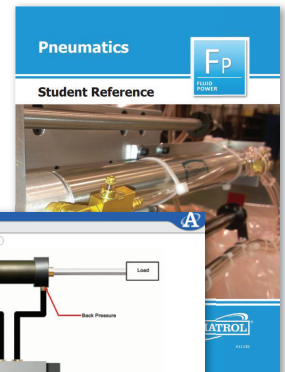
990-PN1

Fp

FLUID  
POWER



990-PN1



Interactive Multimedia Curriculum and Student Reference Guide

## Learning Topics:

- Pneumatic Power Systems
- Pneumatic Circuits
- Pressure and Flow
- Speed Control Circuits
- Directional Control Valves
- Air Logic
- Pneumatic Maintenance
- Schematics
- Air Flow and Resistance
- Flow Control Valves
- Cam Valves

Amatrol's Portable Pneumatics Learning System (990-PN1) teaches basic and intermediate pneumatic concepts. Pneumatic power is a foundation of industry used in many applications across a wide variety of fields, such as agriculture, pharmaceuticals, and automation. Learners will gain critical hands-on experience operating pneumatic cylinders, flow controls, directional control valves, air motors, and pressure gauges. This system requires a compressed air supply, a Hand Tool Package (41221), and a computer.

This portable, highly-durable pneumatic circuit design training system features real-world pneumatic components, including a rotameter, pressure gauges, flow control valves, directional control valves, and much more! Users will learn to use pneumatic hoses included with the system to create working pneumatic circuits from schematics and practice skills, such as connecting and reading a flowmeter and operating a cam-operated sequence circuit. Amatrol's commitment to quality and detail ensures that learners will work with components they'll actually use on the job.



## Technical Data

Complete technical specifications available upon request.

Portable case  
Rotameter  
Pressure Gauges, 0-1000 PSI (3)  
Lubricator  
Pressure Regulator, Non-Relieving  
Filter/Regulator, Manifold  
Check Valve  
Tee  
Cross  
Flow Control Valves (2)  
Air Motor  
Directional Control Valve, Lever  
Directional Control Valve, Pilot  
Directional Control Valve, Push Button  
Directional Control Valve, 3/2 Cam  
Directional Control Valve, 5/2 Cam  
Large Double-Acting Cylinder, 1 1/2" bore  
Small Double-Acting Cylinder, 3/4" bore  
Single-Acting Cylinder  
Loose Components Kit  
Micronic Filter Patch  
Impingement Device  
Syndrome, 10cc  
Filter Element, 5 micron  
Filter Element, 20 micron  
Filter Element, 70 micron  
Lever Arm Link Assembly

### Hose Kit

6" Hose Assembly  
12" Hose Assembly  
18" Hose Assembly  
24" Hose Assembly  
12" Hose with one quick connect

### Multimedia Curriculum (M11139)

#### Virtual Trainer (NB780)

#### Instructor's Guide (C11139)

#### Install Guide (D11139)

#### Student Reference Guide (H11139)

#### Additional Requirements:

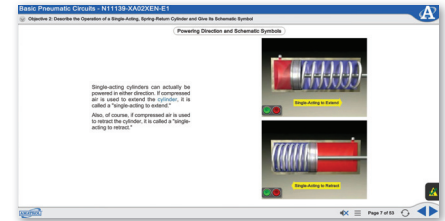
Compressed Air Supply (2 CFM @ 100 PSIG)  
Hand Tool Package (41221)  
Computer (visit [www.amatrol.com/support/computer-requirements](http://www.amatrol.com/support/computer-requirements) for details.)

#### Utilities:

Electricity: 120VAC/60Hz/1 phase

## Study Pneumatic Components and Practice on Real-World Equipment

Amatrol's Portable Pneumatics Learning System packs a full array of basic and intermediate pneumatic theory and skills into a powerful mobile workstation. Major topic areas include various pneumatic and speed control circuits, directional control valves, air flow and resistance, and flow control and cam valves. Learners will study, for example, the applications, schematic symbol, and operation of a 3/2 pneumatic directional control valve (DCV). They will then implement this knowledge by practicing the hands-on skill of using a 3/2 manually-operated DCV to operate a single-acting pneumatic cylinder.



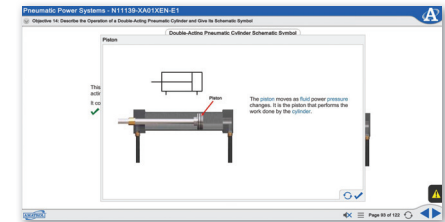
Interactive Multimedia Curriculum

## Learn Pneumatic Circuit Design Maintenance Skills

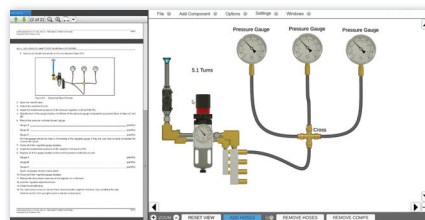
Because air is filled with contaminants, like dirt, pollen, and water vapor, pneumatic equipment may experience rusted pipes, worn parts, and broken seals if not properly and carefully maintained. On the 990-PN1, learners will study common sources of contamination, how the dew point and humidity can affect pneumatic equipment, and why eliminating air leaks is critical. They will also gain hands-on experience with skills like selecting and changing air filters, connecting and adjusting a lubricator, and calibrating gauges.

## 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. The 990-PN1's curriculum teaches learners a variety of basic and intermediate pneumatics concepts. For example, learners will study a variety of different types of speed control circuits and gain experience connecting and operating meter-out flow control circuits, as well as exhaust port, pressure port, and independent speed control circuits. The combination of theoretical knowledge and hands-on skills solidifies understanding and creates a strong basis for pursuing more advanced skills.



## Virtual Trainer for Online Pneumatics Skill-Building



The Portable Pneumatics Training System also features a virtual multimedia trainer! Amatrol's virtual trainers replicate hands-on equipment in such great detail that learners will feel like they are using the actual equipment. Learners will perform essentially the same tasks using virtual trainers that they would perform using equipment hardware. Transition from theory to hands-on is a seamless process.

## Student Reference Guide

A sample copy of the Pneumatics 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.

