Pneumatics 1 Learning System

96-PNE1





Multimedia Curriculum and Student Reference Guide

Learning Topics:

- Pneumatic Power Systems
- Basic Cylinder Circuits
- Basic Pneumatic Circuits
- Basic Motor Circuits
- Pneumatic Schematics
- Principles of Pneumatic Pressure and Flow
- Air Flow and Resistance
- Pneumatic Speed Control Circuits
- Air Flow Control and Measurement
- Flow Control Valves

Amatrol's Pneumatics 1 Learning System (96-PNE1) covers how to operate and install basic pneumatic systems, analyze performance, and design basic pneumatic circuits. Pneumatic power is a foundation of industry used in applications across fields like agriculture, pharmaceuticals, automation, and many more! The 96-PNE1 requires a compressed air supply of dry, filtered shop air.

The model 96-PNE1 includes a basic pneumatics panel, basic pneumatics instrumentation panel, and a pneumatic hose and fittings set. This system uses industrial quality components for durability and to help learners prepare for what they will encounter on the job. Learners will use these components to study major topic areas such as: pneumatic power systems, basic pneumatic circuits, principles of pneumatic pressure and flow, and pneumatic speed control circuits.

The 96-PNE1 covers basic pneumatic skills and offers the ability to expand the range of pneumatic knowledge and skills, through Amatrol's Pneumatics 2 Learning System.



Technical Data

Complete technical specifications available upon request.

Basic Pneumatics Panel

Air Motor Assembly Spring Return Cylinder Assembly Cylinder Assembly, 1 1/8-in. Flow Control Assembly (2) Lever-Operated Assembly Cylinder Assembly, 1 1/2-in. Rail Assembly, 10-in. Rail Assembly, 11-in.

Basic Pneumatics Instrumentation Panel

Pressure Gauge Assembly (3) Filter Regulator Assembly Rotometer Assembly Manometer Assembly

Pneumatic Hose and Fittings Package (85-PHF)

Hose Assembly, 42-in.
Hose Assembly, 36-in. (2)
Hose Assembly, 24-in. (4)
Hose Assembly, 16-in. (4)
Hose Assembly, 12-in. (2)
Cross Assembly
Basic Pneumatics Coiled Hose Assembly
Tee (2)

Multimedia Curriculum (MB780) Instructors Guide (CB780) Installation Guide (DB780) Student Reference Guide (HB780) Additional Requirements:

With optional multimedia: Computer, see requirements: www.amatrol.com/support/computer-requirements

Recommended Options:

Mobile Technology Workstation (82-610) Utilities:

Conditioned Shop Air, Dry and Filtered (2 CFM @ 100 PSI)

Build Hands-On Pneumatic Skills with Real-World Components



The 96-PNE1 includes an array of pneumatic components including an air motor, cylinders, pressure gauges, filter regulator, rotometer, manometer, and many more! Learners will use these components to practice skills such as: use a cross to connect three circuit branches together; connect and operate a unidirectional pneumatic motor using a 3-way, manually-operated directional control valve; convert between gauge and absolute pressure; connect and



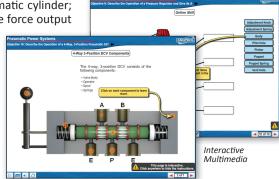
read a flowmeter; and connect and operate a pressure port speed control circuit. Amatrol also recommends a mobile workstation constructed of heavy-duty welded steel that provides storage space for additional panels and a lockable drawer for pneumatic hoses storage.

In-Depth Foundational Pneumatics Curriculum

The 96-PNE1's world-class pneumatics curriculum covers major topics including circuit connections, single-acting cylinder circuits, pneumatic leverage, pressure and volume, and speed con-

trol. Learners will study fundamental knowledge like: the operation of a double-acting pneumatic cylinder; the function of a muffler; calculating the force output

of a cylinder in retraction; and the effect of actuator load changes on flow control valve operation. This multimedia includes stunning 3D graphics and video, audio voiceovers of all text, and interactive quizzes and exercises.



Expand Your Pneumatics Learning Experience



96-PNE2

The 96-PNE1 offers fundamental pneumatics knowledge and skills and offers the ability to expand on those skills with the Pneumatics 2 Learning System (96-PNE2). This system covers pneumatic knowledge like pneumatic directional control valve applications, vacuum systems, and air logic and includes a pushbutton valve assembly, Venturi block assembly, load cylinder assembly, and more! Learners will be able to practice hands-on skills such as connecting and operating an externally air-piloted directional control valve, connecting and operating a vacuum generator, and designing a pneumatic seal-in circuit.

Student Reference Guide

A sample copy of the Pneumatics 1 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.



