

Basic Pneumatics Learning System

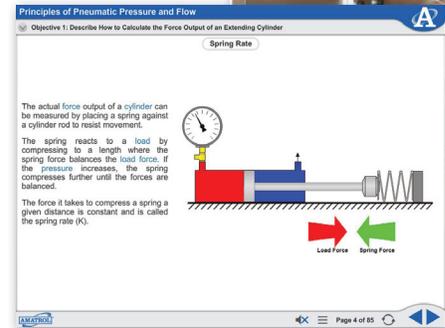
85-BP

Fp

FLUID
POWER



Basic Pneumatics Learning System (85-BP)



Interactive Multimedia and Student Reference Guide



Learning Topics:

- Pneumatic Power Systems
- Circuit Connections
- Basic Cylinder Circuits
- Basic Pneumatic Circuits
- Single-Acting Cylinder Circuits
- Pneumatic Schematics
- Principles of Pneumatic Pressure and Flow
- Pressure vs. Cylinder Force
- Air Flow and Resistance
- Pneumatic Speed Control Circuits
- Air Flow Control and Measurement
- Speed Control

Amatrol's Basic Pneumatics Learning System (85-BP) introduces pneumatic principles through a combination of Amatrol's topflight curriculum with hands-on skills; this attention to marrying the "how" and "why" of pneumatics will reinforce both concepts and theory, resulting in a thorough understanding of the topic. Topics covered in this learning system include basic motor circuits, pressure vs. cylinder force, and flow control valves, while the panels can be used to practice skills such as connecting and operating a needle valve to control actuator speed.

The 85-BP features pneumatic cylinders, flow controls, directional control valve, air motor, pressure gauges, rotameter, manometer and air filters. These components are mounted onto Amatrol panels that are carefully crafted (hand-welded and painted) to provide a durable, well-designed learning experience that will serve both teachers and students for years.

The skills acquired by successfully completing the 85-BP will prepare learners for more advanced systems, including Amatrol's Intermediate Pneumatics (85-IP) and Advanced Pneumatics (85-AP). The 85-IP covers topics including cam-operated valves, cylinder sequencing and shuttle valves, while the 85-AP ranges from pneumatic cylinder loads to quick exhaust valves.



Technical Data

Complete technical specifications available upon request.

Basic Pneumatics Instrumentation Panel

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

Basic Pneumatics Actuator/Valve Module

- 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.

Pneumatic Hose and Fittings Package

- 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 Pneumatic Coiled Hose, 25-ft.
- Tee (2)

Student Curriculum – Interactive PC-Based Multimedia (MB834)

Instructor's Guide (CB834)

Installation Guide (DB834)

Student Reference Guide (HB834)

Additional Requirements:

- Mobile Technology Workstation – 6-ft. (82-610, 850-CTB-B, or equivalent.)

Utilities Required:

- Pneumatic power supply or conditioned (dry and filtered) shop air.

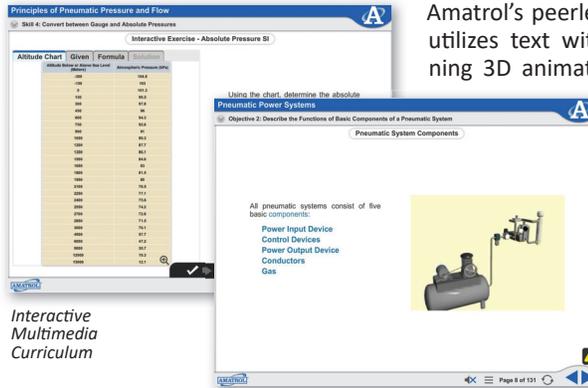
Industrial Components

Amatrol's commitment to using industry-standard components provides learners with an opportunity to train on mechanisms that they will see on the job. Components included with the pneumatics training system are pre-mounted in an orderly, user-friendly design on stainless steel circuit panels, with hand-painted shadow labels that makes it easy to identify and inventory components.



Pneumatic Application

Amatrol's curriculum explains how basic pneumatic components are integrated into real-world applications such as robots, rock drills, and truck brakes. As an example, learners will practice on a pneumatic motor and study the principles behind how it works, while also reading about how it is utilized on pneumatic drills and small winches. Learners will study pneumatic gauges, valves, cylinders, and motors, including schematic symbols for each component.



Interactive Multimedia Curriculum

Amatrol's peerless interactive multimedia curriculum utilizes text with voiceovers, pictures, videos, stunning 3D animations, and interactive quizzes and reviews that engage learners in theoretical knowledge and concepts. This thorough, detailed curriculum begins with the basics and advances to complex concepts. Through partnerships with key industry leaders and leading educators, Amatrol developed the right balance of knowledge to train learners to work in their chosen field.

Expanded Options & Add-Ons

Alternately, Amatrol conveniently offers the Basic Pneumatics training system as part of the separate 850-P1 Basic Pneumatics Learning System (850-P1) or Controls Technology Learning System (850-PD1). The 850-P1 is a single-sided workstation that allows up to three learners at a time to practice pneumatics skills, and the 850-PD1 is a double-sided workstation that allows for six learners to work simultaneously. If there is a need to teach both pneumatics and hydraulics, the Basic Pneumatics (85-BP) is also included with the Basic Fluid Power – Double Sided A-Frame Bench with Two Hydraulic Manifolds (850-CD1) or Basic Fluid Power – Double Sided A-Frame Bench with One Hydraulic Manifold (850-CD2).

Complimentary Student Reference Guide

A sample copy of the Basic Pneumatics Student Reference Guide is included with the learning system. Sourced from the 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.

