Basic Pneumatics Learning System -Single Surface Bench 850-P1



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 Basic Pneumatics Learning System (850-P1) 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 pneumatics training system requires a compressed air supply of dry, filtered shop air.

This hands-on pneumatics training system includes a mobile workstation, 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 pneumatic training system covers basic pneumatic skills with the ability to add-on systems, such as Amatrol's Intermediate and Advanced Pneumatics Learning Systems, to expand the range of pneumatic knowledge and skills.



Technical Data

Complete technical specifications available upon request.

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Controls Technology Bench (850-CTB-B)
Basic Pneumatics Panel
   Air Motor Assembly
   Spring Return Cylinder Assembly
  Flow Control Assembly (2)
  Cylinder Assembly, 1 1/8-in.
   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)
Interactive Multimedia Curriculum (MB834)
Instructor's Guide (CB834)
Installation Guide (DB834)
Student Reference Guide (HB834)
Additional Requirements:
  Computer, see requirements; www.amatrol.com/
     support/computer-requirements
Utilities Required:
   Conditioned Shop Air, Dry and Filtered
     (2 CFM @ 100 PSI)
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Build Hands-On Pneumatic Skills with Real-World Components



Pneumatic training 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. This learning system also includes a mobile workstation constructed of heavy-duty welded steel that provides storage space for additional panels and a lockable drawer for pneumatic hoses storage.

Industry Standard Components

In-Depth Foundational Pneumatics Multimedia Curriculum

Pneumatic training's world-class pneumatics curriculum covers major topics including circuit connections, single-acting cylinder circuits, pneumatic leverage, pressure and volume, and speed control. Learners will study fundamental knowl-

edge 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 curriculum includes stunning 3D graphics and video, audio voiceovers of all text, and interactive quizzes and exercises.



Expand Your Pneumatics Learning Experience and Training Capacity



Additional pneumatics learning systems can be added to extend the capabilities of the pneumatics training system to intermediate and advanced levels. The included work-station accommodates three panels at the same time on its work surface and stores an additional four panels under the work surface. Additional Amatrol pneumatics learning systems include Intermediate (85-IP), Advanced (85-AP), and Electro-Pneumatic (85-EP). If you require a larger pneumatics training capacity with limited training space, Amatrol also offers the Controls Technology Learning System – Basic Pneumatics, Double-Sided (850-PD1) that doubles the training capacity of the pneumatics training system without taking up additional space.

Student Reference Guide

A sample copy of the Basic Pneumatics 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.





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