

Mechatronics Inventory Storage Station

87-MS7



87-MS7, compatible with either
Siemens or Allen Bradley processors

Mechatronics (Siemens S7-300/Step 7)

Student Reference

Parts Storage

Objective 4: Describe How to Adjust an End Cushion on a Rodless Pneumatic Cylinder

Exhausting Air from a Cylinder

The exhaust is regulated through a manually adjusted needle valve.

Tightening the set screw in the needle valve reduces the amount of air exhausted, which slows the piston down quickly.

Loosening the set screw increases the amount of air exhausted, which allows the piston to travel more quickly toward the hard stop.

Click and drag clockwise/counter-clockwise around the screws to adjust the set screws.

Click and hold the DCVs to move the piston.

This page is interactive. Click anywhere to hide the instructions.

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Multimedia Curriculum and Processor Specific
Student Reference Guide

Learning Topics:

- Infrared Sensor Adjustment
- Pneumatic Brake Adjustment
- Pneumatic Gripper Adjustment
- Station Operation
- Electrical Sensors
- Electrical Pick and Place
- Pneumatic Pick and Place
- Mechatronics Safety
- Control Systems Concepts
- Mechatronics Introduction
- Non-Servo Electric Slide Sequencing
- Torque Clamp Module Sequencing
- Station Sequencing

Amatrol's Inventory Storage Station (87-MS7) is the seventh station of the 870 Mechatronics Learning System and allows learners to gain valuable skills used in inventory storage processes by studying operation, adjustment, and programming of an inventory storage system.. This learning system will allow learners to practice and study operating a programmable parts storage station, adjusting a phototransistor optical interrupter switch, and designing a PLC program that provides manual/auto/reset functions for a programmable parts storage station.

This mechatronics learning system features real-world components like infrared sensors, pneumatic grippers and brakes, pick and place storage and more! Learners will use these and other components to practice mechatronics safety, torque clamp module sequencing, station operation, and non-servo electric slide sequencing. 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.

Mobile Workstation

Operator Station

Programmable Position Pneumatic Robot
4-Channel Parts Storage Module
Parts Presentation Module
Pneumatic Distribution Module
Electrical Distribution Module
Electro-Pneumatic Valve Manifold
Digital I/O Interface Module

Acrylic Valve Body, 1 1/4-in. x 1 1/4-in. x 15/16-in. (4)

Lockout/Tagout

Safety Lock Hasp (2)
Lockout Safety Tag (2)
2-Key Padlocks (4)
Cable, DB9 Male-DB9 Male, 3-in.
Power Cord Jumper

Multimedia Student Curriculum (Processor Specific)

Teacher's Assessment Guide (Processor Specific)

Install Guide (Processor Specific)

Student Reference Guide (Processor Specific)

Additional Requirements:

Mechatronics Learning System (870-AB):
Allen-Bradley CompactLogix or (870-PS7)
Siemens S7300

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

Utilities:

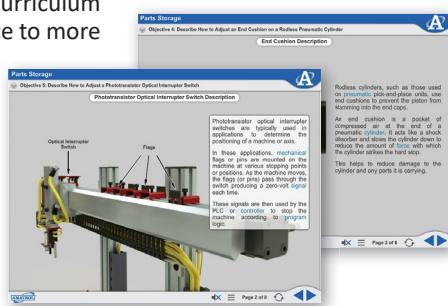
Electricity (120 VAC/60 Hz/1 phase)
Compressed Air

Utilize Industrial Grade Components to Adjust Pneumatic Brakes and Grippers

The 87-MS1 is a mobile workstation with slotted work surface that contains an operator station, powered feed module, pneumatic pick and place manipulator, finished parts storage module, parts set, a pneumatic distribution module as well as an electrical distribution module, an electro-pneumatic valve manifold, and a digital I/O interface module. Learners will use these components to practice vital mechatronics skills, such as: adjusting shock absorbers; operating pneumatic manipulators; sequencing powered parts feeders; and more.

Unmatched Inventory Storage Curriculum and Hands-On Skills

Amatrol's world-class curriculum, which comes with the selected PLC, 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 Inventory Storage station teaches interfacing, problem solving, programming, sequencing and operation for pick and place storage, pneumatic grippers and brakes, infrared sensors, and a programmable pneumatic traverse module. This station sorts the completed assemblies of working industrial directional control valves. Interactive multimedia is included for select Allen Bradley and Siemens processors.



Amatrol's World-Class Mechatronics Training with Siemens and Allen-Bradley PLCs

The 87-MS7 is just one of the world-class mechatronics training options offered by Amatrol. Other mechatronics stations include Pick and Place (87-MS1), Gauging Station (87-MS2), Orientation Processing (87-MS3), Sorting/Buffering (87-MS4), Servo Robotic Assembly (87-MS5-P2), Torque Assembly (87-MS6), and CNC Mill – Densford CNC Micromill (87-MS8M60), and Mechatronics Hydraulic Press Learning System (87-MS9).



Student Reference Guide

A sample copy of the Mechatronics 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.

