# Servo Robotic Assembly Station - Pegasus

87-MS5-P2





Interactive Multimedia Curriculum and Student Reference Guide

# Learning Topics:

- Electrical Sensors
- Mechatronics Introduction
- Station Sequencing
- Screw Thread Engagement Module Sequencing
- Screw Feed Module Sequencing
- Part Insertion Module
  Sequencing
- Automatic Screw Feeder Adjustment
- Parts Feeder with Escapement Adjustment
- Station Operation
- Electrical Pick and Place
- Pneumatic Pick and Place
- Mechatronics Safety
- Control Systems Concepts

Amatrol's Servo Robotic Assembly Station (87-MS5-P2) is the fifth station of the 870 Mechatronics Learning System and allows learners to gain valuable product testing skills used in automated processes practicing the operation, adjustment, and programming of a servo robotic assembly system. This learning system will allow learners to practice and study how products are tested on an automated line, how these skills are integrated within a larger automated process, and an examples of how automated servo-robotic assembly is used in real-world environments. The 87-MS5-P2 requires either an Allen-Bradley CompactLogix or Siemens S7300 Mechatronics Learning System (870-MPC), Torque Assembly (87-MS6), and Inventory Storage (87-MS7) Stations.

This mechatronics learning system features real-world components like pneumatic screw feeders, pick and place assembly, gravity feeders, Servo robotics, and more! Learners will use these and other components to study station operation, actuator adjustment, module sequencing, and station 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

(2) Mobile Workstation with slotted work surfaces Pegasus II Servo Robot with teach pendant **Operator Station Spool Insertion Module** Screw Feed Module Spring / Knob Feed Module Screw / Knob Engagement Module Assembly Shutter Module **Finished Parts Storage Module** Parts Presentation Module Parts Set **Pneumatic Distribution Electrical Distribution Module** Electro-pneumatic Valve Manifold Digital I/O Interface Student Curriculum – Interactive PC-Based Multimedia (Processor Specific) Instructor's Guide (Processor Specific) Installation Guide (Processor Specific) Student Reference Guide (Processor Specific) Additional Requirements: Mechatronics Learning System: Allen-Bradley CompactLogix (870-AB); or Siemens S7300 (870-S7), (870-PS7) Computer, see requirements: http://www.amatrol. com/support/computer-requirements/ **Utilities Required:** Compressed air

#### Adjust Real-World Components on Automation Screw Feeder

The 87-MS5-P2 is a mobile workstation with slotted work surface that contains an operator station, ultrasonic measurement module, proximity gauging module, part transfer module, part reject module, 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: mechatronics safety, adjusting automation screw and parts feeders; sequencing screw thread engagement modules, and more.

### **Curriculum Provides Critical Servo Robotic Assembly 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 skills. The Servo Robotic Assembly Station



feeders, pick and place assembly, pneumatic screw feeders, and part insertion. This station performs the role of assembling a working industrial directional control valve using a combination of Servo robotic and pick and place technologies. 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-MS5-P2 is just one of the world-class mechatronics training options offered by Amatrol. Other mechatronics stations include Pick and Place (87-MS1), Gauging (87-MS2), Orientation Processing (87-MS3), Sorting-Buffering Station (87-MS4), Torque Assembly (87-MS6), Inventory



Storage (87-MS7), and CNC Mill-Denford CNC Micromill (87-MS8M60), and Mechatronics Hydraulic Press Learning System (87-MS9).

Additionally, Amatrol offers Mechatronics PLC training with both Siemens \$7300 and Allen-Bradley CompactLogix PLCs. While an Amatrol Mechatronics line can feature just Allen-Bradley or Siemens PLCs, this automated line also allows for a mix so that learners can train on industry's two most widely-utilized PLCs simultaneously.

## **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 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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