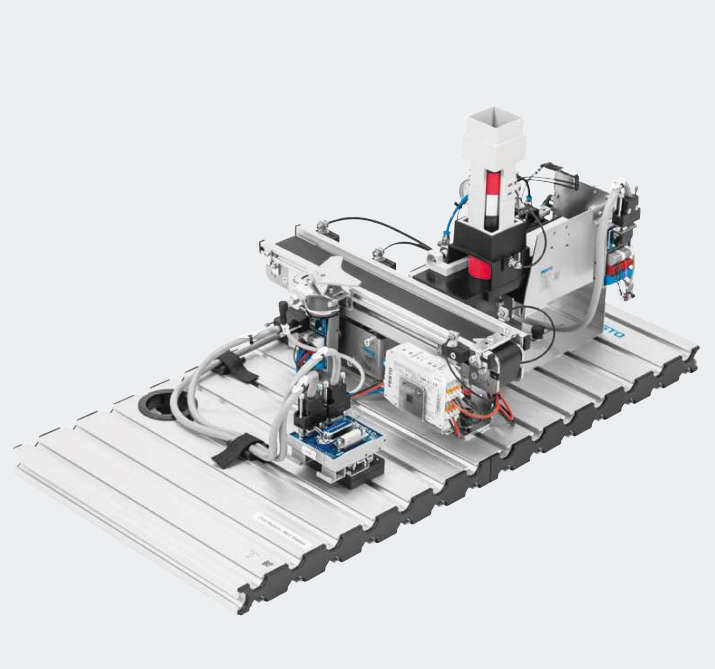
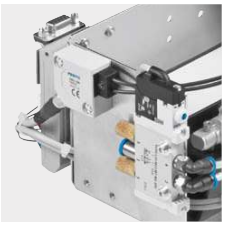
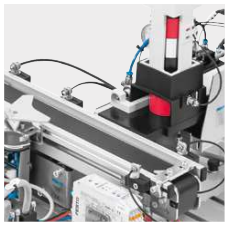
Learning factory kit > Single workpiece flow > MPS stations

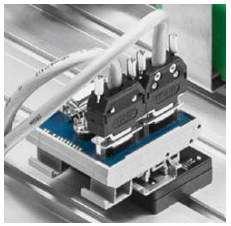
Distributing station

Basic principles of mechatronic systems









The MPS distributing station D tackles a number of topics, including the basic principles of PLC programming and sensor technology. In addition to this, the station provides an introduction to conveyor control using motor controllers and the associated transport of materials.

The station separates individual workpieces in a stacking magazine. A double-acting cylinder pushes the workpieces out one at a time. The conveyor module transports the workpiece to the right or left. The conveyor can be stopped in order to separate the workpiece. The simple setup process for the MPS Station makes it easy to create a workflow program for the handling process. Different workpieces can be used in the stacking magazine module.

Distributing/Conveyor station, mounted	**8034566**

Additional equipment, also order:

MPS trolley 700 x 350	8033590
Control console, SysLink	195764
EduTrainer Universal → Pages 166 – 167	
2x I/O data cable with SysLink connectors IEEE 488	34031

Recommended accessories:

Simulation box, digital	170643
PA workpiece set	554301

The most important components at a glance:

1x Aluminum profile plate, 700 x 350 mm, with cable guide	170395
1x Conveyor module, 350 x 40 mm, DC motor	8032692
1x Stacking magazine module, without workpiece holder	8032172
1x Start-up valve with filter control valve	540691
1x Cable holder with hook-and-loop fastener (pack of 10)	8034300
1x C interface	8025738
1x Quick-Fix clamping adapter	8026327

Technical data
- Operating pressure: 600 kPa (6 bar)
- Power supply: 24 V DC
- Square/round workpiece dimensions: max. 40 mm
- 6 digital sensors
- 4 digital actuators

Distributing station with additional equipment

Training content
- Familiarization with the stacking magazine and conveyor belt modules
- Gaining insight into common separation and distribution processes
- Introduction to pneumatic control systems
- Acquisition of basic PLC programming skills
- Introduction to how sensors and actuators work and are used
- Controlling a DC motor using a motor controller
- Preparation and commissioning of a mechatronic system

Benefits
- The highly modular nature of the station makes it incredibly versatile and allows it to be used for many different types of project work.
- The station can be used individually or together with other stations at various points in a system or process.
- With the aid of this station, students will develop basic knowledge of common separation and distribution processes and of how to control a conveyor.

Recommended training media

Courseware
Complete overview → page 270

For example:

eLearning course
- Sensors for Object Sensing

- Electric drives 1
- Actuators – DC motor
- GRAFCET

eTheory course
- CIROS – First steps

eLab course
- Basics of Sensors and Actuators

- CIROS – Basics of 3D Simulation

Workbook
- MPS Distributing station D

Evaluation
- Basics of GRAFCET Programming

User Guides
- CIROS – Installation Instructions