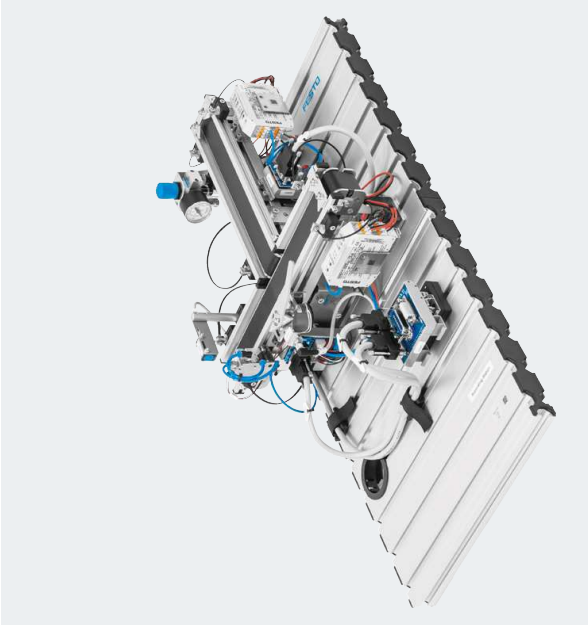


Separating station

Basic principles of mechatronic systems



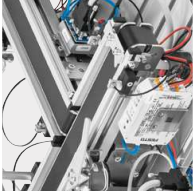
The MPS separating station D tackles a number of topics, including the use of digital sensors and actuators. The station controls a distribution process based on workpiece properties. The workpiece dimensions measured by the sensors are used to determine the subsequent process.

The workpieces on the conveyor are transported to the depth measurement point. An analog diffuse sensor checks the depth of a drilled hole. If the hole is deep enough, the conveyor carries the workpieces to the end position. An electric deflector with a quarter turn actuator guides workpieces that are skewed or do not have sufficient hole depth to a collection point via the second conveyor.

Fiber-optic through-beam sensors and opto sensors monitor the material flow on both conveyors. The workpieces on the conveyors can transport workpieces in both directions.

The diffuse sensor supplies either an analog or a digital output signal, as required. The module can thus be used for various levels of training. The binary switching output can be adapted to the measurement requirement and the signal type by means of teach-in programming.

The MPS separating station D enables users to set up flexible assembly lines using a variety of stations. Downstream stations can be added to the station in two directions. Combined assembly processes such as cylinder assembly and installation of workpiece inserts in housings can be performed using the separating station.



Separating station, mounted	8038802
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
I/O data cable with SysLink connectors (IEEE 488), crossover	162106
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, 300 x 40 mm, DC motor	8033135
1x Conveyor module, 350 x 40 mm, DC motor	8032692
1x Diffuse sensor, analog	541120
1x Stopper, simple, with valve	8046324
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
- Round workpiece dimensions: max. 40 mm
- 6 digital sensors
- 4 digital actuators



Separating station with additional equipment

Training content

- Familiarization with the various functions of the MPS separating station D
- Gaining insight into common distribution processes
- Familiarization with the key components of a mechatronic system

- Acquisition of basic PLC programming skills
- Introduction to pneumatic control systems
- Introduction to flow sensors and actuators work and are used
- Controlling a DC motor using a motor controller
- Preparation and commissioning of a mechatronic system



Recommended training media

Courseware

- Complete overview → page 270

For example:

eLearning course

- PLC Programming

GRAFECT

theory course

- CIROS – First steps

eLab course

- CIROS – Basics of 3D Simulation

Workbook

- Basic level PLC programming



- Advanced level PLC programming

Evaluation

- Basics of PLC Programming
- Basics of GRAFECT Programming

User Guides

- CIROS – Installation Instructions