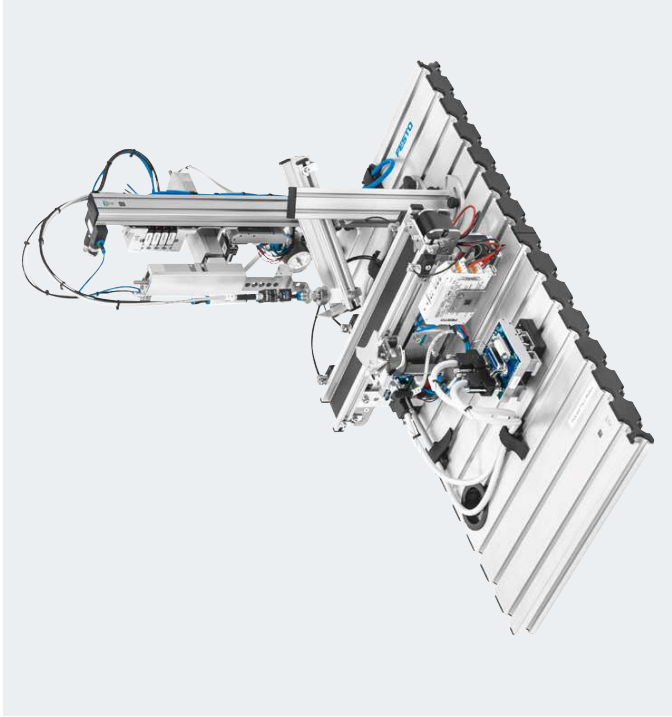


Pick&Place station

Vacuum technology in automated processes



The MPS Pick&Place station D tackles a number of topics, including the basic principles of vacuum technology and how to use it in an automated process. A pneumatic gripper and the conveyor module are used to transport workpieces.

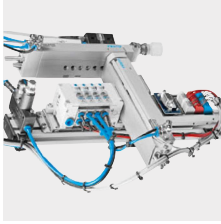
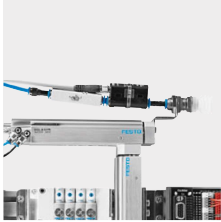
The station has a two-axis Pick&Place module and a conveyor module. Opto sensors, diffuse sensors or light barriers detect a workpiece housings when it is on the conveyor. The conveyor transports the workpiece to the electric feed separator. The Pick&Place module picks up a workpiece insert from the material supply slide and places it in the workpiece housing. The complete workpiece (housing and insert) is passed on by the feed separator. The conveyor module transports the workpiece to the end position.

The MPS Pick&Place station D can be used to perform a number of different handling tasks:

- Feeding workpieces (housings or basic bodies)
- Rejection of workpieces (housing or basic bodies)

It can also be used to perform custom handling tasks. The Festo slide units in the station facilitate the use of variable stops and cushioning mechanisms, as well as mountings that can be adjusted in every direction.

The MPS station provides a clear overview of the main components for the vacuum application: the vacuum generator, the pressure switches, the vacuum filters and the suction cups with connections are harmonized for optimum performance.



Pick&Place station D, mounted	8034567
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	167106
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 Pick&Place module, With vacuum	8031659
1x Start-up valve with filter control valve	540691
1x Cable holder with hook-and-loop fastener (back 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
- 7 digital sensors
- 6 digital actuators



Station Pick&Place with additional equipment

- ### Training content
- Familiarization with the various functions of the MPS Pick&Place station D
 - Gaining insight into common handling processes
 - Familiarization with the key components of a mechatronic system
 - Acquisition of fundamental knowledge on vacuum technology and pneumatic grippers
 - Acquisition of basic PLC programming skills
 - Introduction to pneumatic control systems
 - 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.
 - This station will help students to acquire a basic understanding of vacuum technology and pneumatics in automation processes.



Evaluation

- Basics of Pneumatics



- Basics of GRAFCET Programming

User Guides

- CROS – Installation Instructions

- ### Recommended training media
- #### Courseware
- Complete overview → page 270

For example:

- #### eLearning course
- Pneumatic Fundamentals
 - GRAFCET

- #### eTheory course
- CROS – First steps

- #### eLab course
- CROS – Basics of 3D Simulation

Workbook

- MPS Pick&Place station D