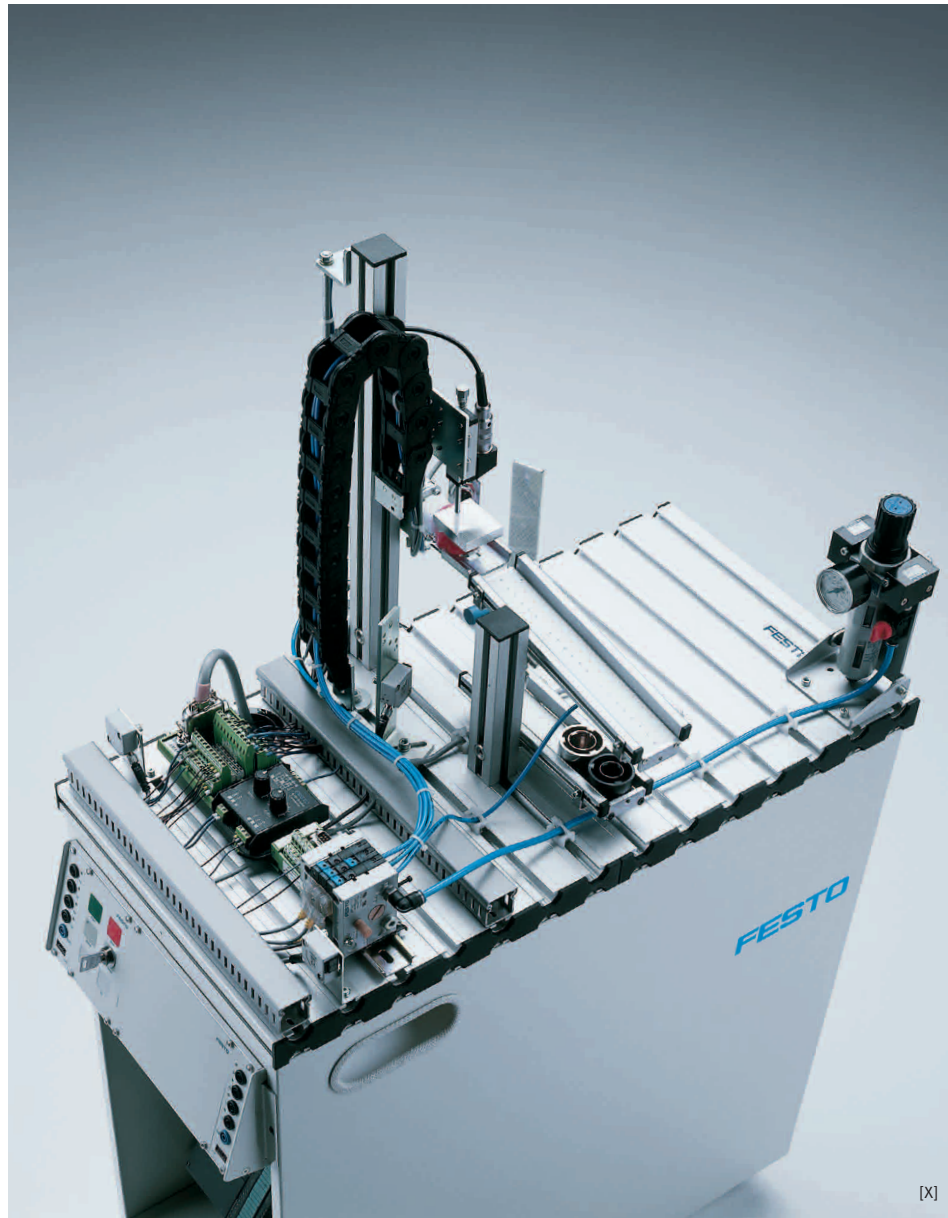


Testing station

Focus on sensors



Function

The Testing station detects the various properties of the workpieces inserted into it. It differentiates workpieces with the aid of an optical and a capacitive sensor. A retro-reflective sensor monitors whether the operating space is free before the workpiece is raised via a linear cylinder. An analogue sensor measures the height of the workpiece. A linear cylinder guides correct workpieces via the upper air slide to the neighbouring station. Faulty workpieces are rejected via the lower air slide.

Top topic:

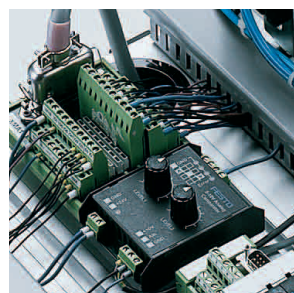
Sensors

The Testing station employs all basic types of industrial sensors in typical applications: optical and capacitive proximity sensors and optical retro-reflective sensors. These are supplemented by various cylinder limit switches (inductive, magnetic).

Option:

Analogue value processing

An analogue sensor detects the height of the workpiece, which is raised from below by a linear cylinder and pressed against the measuring device. A comparator evaluates the sensor signal and passes this on as a digital signal. The analogue signal is also available at a separate terminal – allowing connection to the simulation box or a PLC with an analogue module.



Testing station, mounted	195781
Kit Testing station	526881

Additional equipment, also order:

Trolley	120856
Control console, SysLink	195764
EduTrainer Universal → Pages 342 – 345	

Recommended accessories:

Simulation box, digital/analogue	526863
Workpiece set "Cylinder bodies"	167021

Technical data

- Operating pressure 600 kPa (6 bar)
- Power supply 24 V DC
- 8 digital inputs
- 5 digital outputs

Training aims for project work

Mechanical:

- Mechanical set-up of a station

Pneumatics:

- Application of rodless cylinders

Electrical:

- Correct wiring of electrical components

Sensors:

- Mode of operation and applications of optical and capacitive sensors with digital switching behaviour
- Mode of operation and applications of analogue sensors using the example of an analogue displacement encoder

PLC:

- Programming and application of a PLC
- Analogue signal processing
- Commissioning:
- Commissioning of the entire sequence

Troubleshooting:

- Systematic troubleshooting in a production system

Recommended training media

– Sensor technology 2: WBT



– Mechatronics Assistant



– Design and simulation program

FluidSIM® Pneumatics

– Textbook Programmable logic controllers, Basic level

– Textbook Proximity sensors

– Virtual process environment

CIROS® Mechatronics



Recognition module

The Recognition module comprises two different sensors and a mounting bracket.

Order no. 526850



Lifting module

Lifting of a workpiece by means of a rodless cylinder. In this position the workpiece can be checked by the Measuring module. The workpiece is ejected by a second cylinder.

Order no. 532954



Measuring module

The Measuring module enables the height of a workpiece to be measured by a linear displacement sensor. It can be attached directly to the Lifting module. The linear displacement sensor is connected to a comparator, allowing simple evaluation of the result of the measurement.

Order no. 195779



Pneumatic slide module

The slide is universally mounted on a profile. The slide characteristics can be adjusted by means of the flow control valve on the underside of the slide.

Order no. 526217