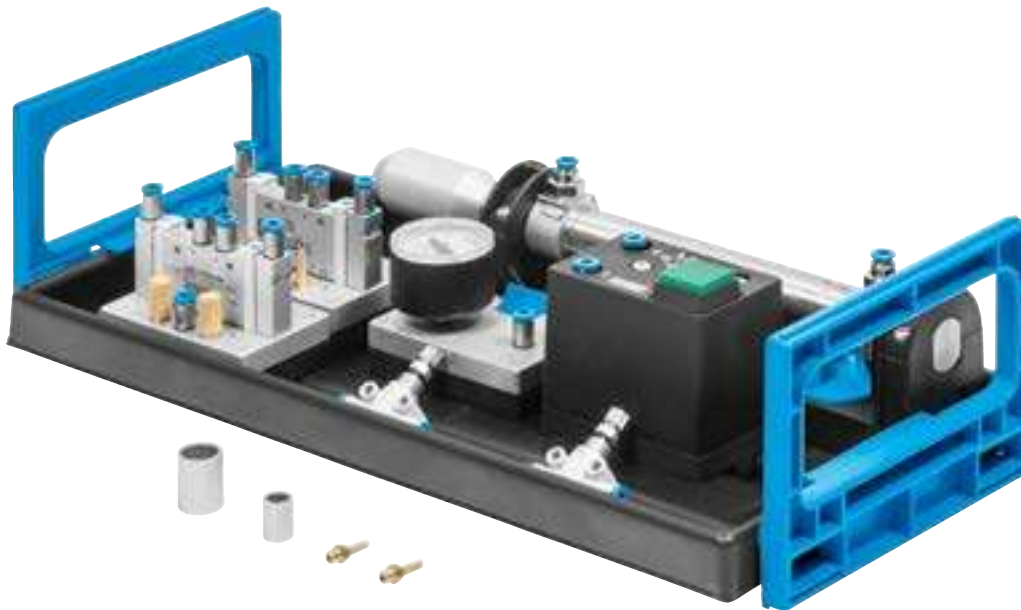


# Systematic Troubleshooting

## Equipment Set TP 101+



### Systematic troubleshooting and competent fault rectification

Components with specific, realistic faults are included in the Systematic Troubleshooting Equipment Set TP 101+. This is how pneumatic control systems can be set up using the components of the Pneumatics Basic Level Equipment Set TP 101, and individual components can be replaced with faulty ones. This makes teaching and learning about systematic troubleshooting professional and realistic.

Each component of the equipment set has a detailed description and instructions for systematic troubleshooting, allowing the basics of systematic troubleshooting to be taught.

Without needing tools and using just one hand, the components can be flexibly arranged on a profile plate with 50 mm slot spacing to create a wide variety of pneumatic control systems. All pneumatic connections are on the top of the components so they are easily accessible. The pneumatic components are equipped with push-in fittings for plastic tubing with O.D. 4 mm.

All components are of industrial quality.

The components are supplied in practical equipment trays. The equipment trays not only fit in the drawers of the laboratory furniture but also in a Systainer.

Adhesive symbols for clearly labeling where components are stored in the equipment trays are included in the scope of delivery.

Components from the Pneumatics Basic Level Equipment Set TP 101 are required to carry out the project tasks.

### Objectives

- Optimization of control systems through error analysis
- Systematic troubleshooting of pneumatic control systems
- Locating and rectifying faults

### Benefits

- Components with predefined, realistic errors
- Errors are observable without special measurement technology
- Everything is supplied in an organized equipment tray for systainer and drawer

Complete Equipment Set TP 101+ in organizer	<b>8060284</b>
---	----------------

The most important components at a glance:

1x Double-acting cylinder, defective	5042759
1x Pressure gauge, defective	4977328
1x Filter sleeves for start-up valve with filter control valve, clogged	8064260
1x 3/2-way valve with pushbutton actuator, defective	4978036
1x 5/2-way double pilot valve, defective	4977795
1x 5/3-way valve, mid-position pressurized	576305
1x Flow control valve	193972
1x Silencer M5, clogged	4977506

Accessories, order at the same time:

Aluminum profile plate → Page 11, 17

Compressor → Page 130

## Recommended learning materials

### Workbook



Campus license (→ Page 170)

de	540671
en	541088
es	542503
fr	542507

### eLearning courses

→ [Basic Principles of Pneumatics](#)



→ [Simple Pneumatic Circuits](#)

→ [Pneumatic Actuators](#)

→ [Pneumatic Valves](#)

→ [Pneumatic Air Treatment](#)

### eLab Course

→ [Basics of Pneumatics](#)



### Recommended simulation software

– FluidSIM Pneumatics

→ Page 166



From vocational training...



... to industrial reality