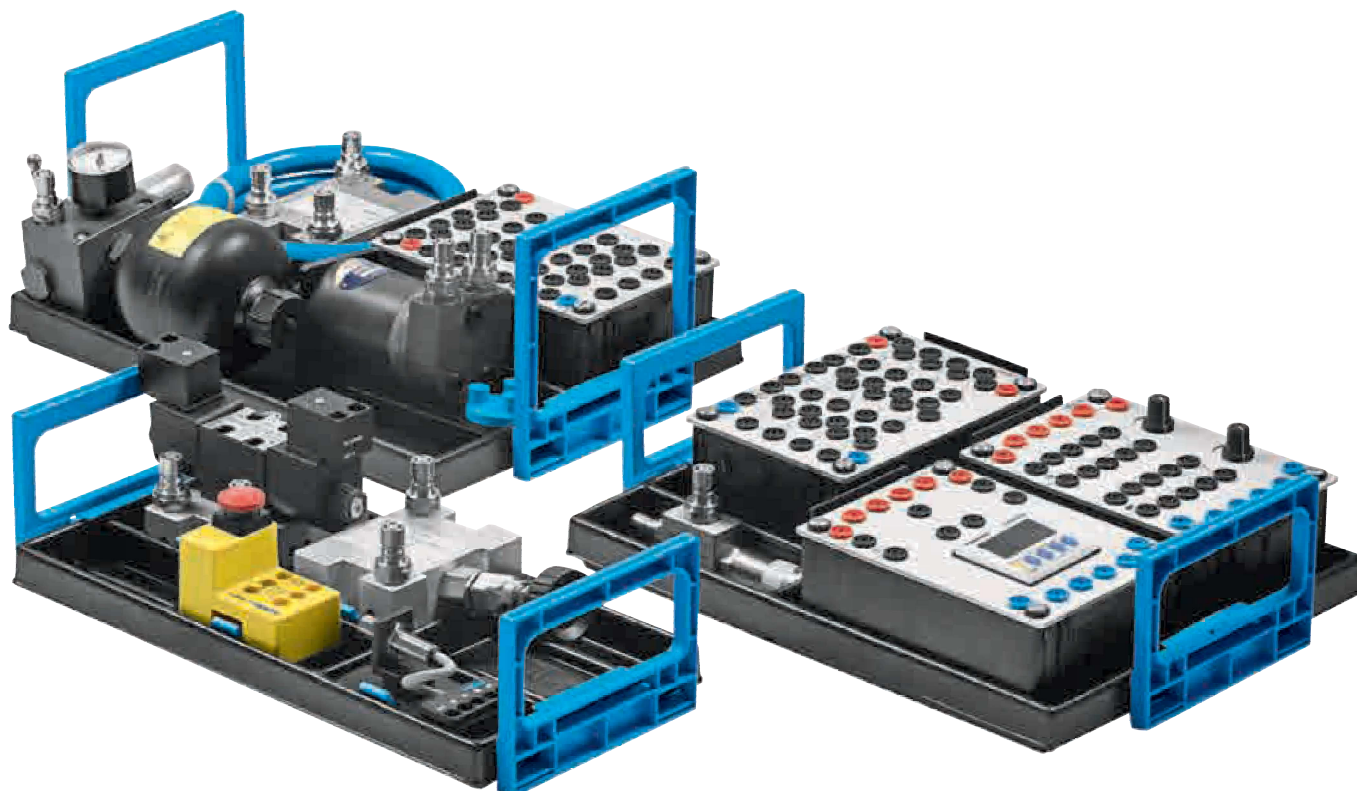


Equipment set TP 602 – Advanced Level

Electrohydraulics for advanced students



The new advanced level

The training package TP 602 builds directly on the material covered in basic principles package TP 601 adding more in-depth projects.

It provides students with advanced knowledge about the basic physical principles of electrical engineering and electrohydraulics, as well as how electrohydraulic and control technology components function and are used.

In order to carry out the projects, users require the components and the necessary accessories from TP 601.

The number and version of the components are specifically adapted to the projects in the workbook. This makes it possible to achieve many important training objectives at little cost.

Training content

Power packs and components:

- Design and mode of operation of different proximity sensors
- Function and possible applications of a time relay with switch-on and switch-off delay
- Design and use of an electrical predetermining counter

Learning objectives for hydraulic circuits:

- Selecting proximity sensors according to the technical control requirements
- Expanding electrohydraulic control systems and adjusting the documentation
- Designing and arranging path- and pressure-dependent sequence controls
- Identifying signal overlaps in a sequence control and taking the appropriate action
- Designing and arranging sequence control as a standing sequencer

- Using memory to implement an emergency operation
- Implementing control systems with the operating modes single cycle and continuous cycle
- Querying time in electrohydraulic control systems
- Getting to know and using further logical connections
- Designing and arranging pressure sequence control
- Knowing safety-related conditions that could be needed for a drive
- Designing and arranging safety functions with a predefined motion sequence for a control system
- Implementing control systems with the operating modes inching and aligning
- Systematically identifying and eliminating errors in complex electrohydraulic control systems
- Creating sequence control as a displacement-step diagram
- Representing procedure descriptions with GRAFCET

Hydraulics plus!

Delivered in practical, Systainer-compatible equipment trays. The trays fit into the drawers in Learnline workstations. The new components, with added training value and relevant project tasks, form the basis for advanced training in fundamental principles.

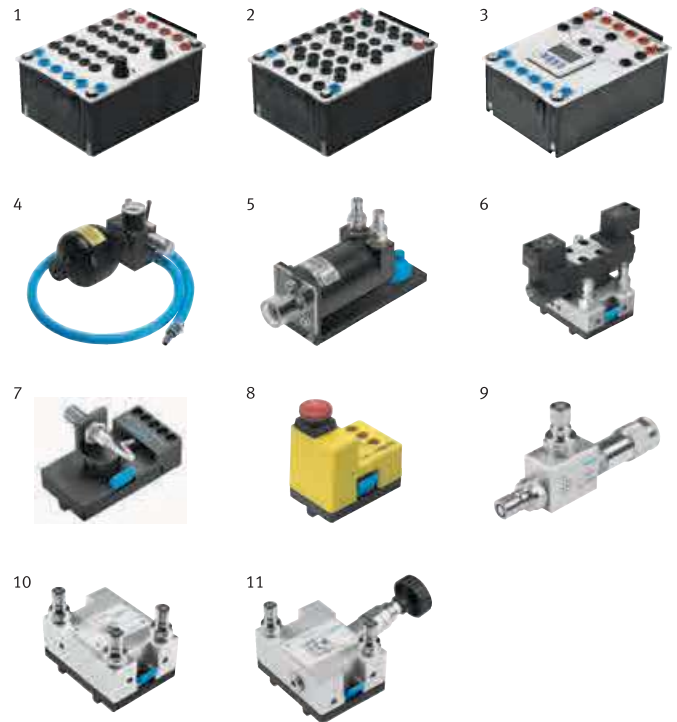
Complete equipment set TP 602 in equipment tray 573038

The most important components at a glance:

1	1x Time relay, two-fold	162243
2	2x Relay, three-fold	162241
3	1x Preset counter, electronic	1677856
4	1x Diaphragm accumulator with shut-off block	152859
5	1x Hydraulic motor	152858
6	1x 4/3-way solenoid valve, relieving mid-position (AB → T)	544348
7	1x Proximity sensor, inductive, M12	548643
8	1x Emergency stop pushbutton, electrical	183347
9	1x T-distributor	152847
10	1x Non-return valve, delockable	544339
11	1x Pressure relief valve, compensated	567237

Necessary accessories, also order:

8x	Hose line with quick release couplings, 600 mm	152960
4x	Hose line with quick release couplings, 1000 mm	152970
2x	Hose line with quick release couplings, 1500 mm	159386
	4 mm Safety laboratory cables → Page 155	
	Digital multimeter	8040005
	Aluminum profile plate → Page 39	
	Hydraulic power pack → Pages 148 – 149	
	Protective cover for weight, 9 kg → Page 143	
	Tabletop power supply unit → www.festo-didactic.com	
	Power supply unit for mounting frame → Page 155	



Also order:

Workbook



The basic practical circuits in electrohydraulics are presented in 12 exercises. In order to carry out the exercises, students require the equipment set of TP 601 Electrohydraulics, Basic Level and Advanced Level TP 602.

The workbook contains:

- Sample solutions
- Training notes
- Multimedia CD-ROM with graphics, photos of industrial applications, animations, and FluidSIM® circuit diagrams
- Worksheets for students

Campus license (→ Page 19):

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en	551153
es	551154
fr	551155

Supplementary media

- Designing and simulating with FluidSIM®
- Measuring and controlling with FluidLab®
- WBT Hydraulics
- WBT Electrohydraulics
- Textbook: Basic principles of Hydraulics and Electrohydraulics
- Hydraulics poster set