

MPS® PA Compact Workstation with level, flow rate, pressure and temperature controlled systems



Function

The four controlled systems in the MPS® PA Compact Workstation can each be operated individually.

Using a corresponding controller, the level and flow rate controlled system can be set up as a cascade control system.

The design of the sensors and valve actuators allows the use of both continuous (e.g. P, I, PI, PID) and discontinuous controllers (e.g. two-point controllers) in testing. The pumps can be controlled using either direct actuation or speed adjustment.

With the flow rate and pressure controlled systems, the manipulated variable of the controller can also be used to operate a proportional directional control valve. A two-way ball valve with pneumatic quarter turn actuator is installed in the return between the elevated tank and the lower reservoir. The two-way ball valve can be used to simulate a "load" for disturbance variable compensation in the level controlled system.

Variants

The MPS® PA Compact Workstation is available in a number of different designs to suit the focus of your training.

The **Process Instrumentation** version is fitted with parameterizable sensors and includes a capacitive level sensor (two-rod probe), a magnetic-inductive flow meter with evaluation unit and HART interface and a configurable pressure and temperature sensor PT100.

The MPS® PA Compact Workstation **Energy** is equipped with current and power meters, and includes the measuring and training software FluidLab®-PA Energy.

MPS PA® Compact Workstation Basic Design

Scope of delivery:

Mechanical components: 2 reservoirs, pressure reservoir, plug-in tube system, filter regulating valve, mounting frame, profile plate

Sensors: 2 capacitive sensors, 2 float switches, ultrasound sensor, flow sensor, pressure sensor, temperature sensor PT100

Actuators: pump, proportional directional control valve, 2-way ball valve with pneumatic quarter turn actuator and end-position sensing, double-acting, heating

Electrical components: I/O connection board with measuring transducer, motor controller, I/O terminal, SysLink, 8I/8O, analog terminal, SysLink, 15-pin

Media: Technical documentation with workbook

MPS PA® Compact Workstation Process Instrumentation

Different scope of delivery to the basic design:

Sensors: capacitive level measurement, two-rod probe for continuous level measurement, magnetic-inductive flow meter with evaluation unit, on-site indicator and HART interface, pressure sensor, configurable with on-site indicator, temperature sensor PT100, configurable with on-site indicator, level vibration limit switch for fluids

Electrical engineering: signal conversion with parameterizable measured-value transducers, includes parameterization software and programming cable

Media: Technical documentation with workbook

MPS PA® Compact Workstation Energy

Different scope of delivery to the basic design:

Electrical engineering: DC Wattmeter, power meter up to 5 A/24 V DC, incl. Ethernet interface, mounted on mounting bracket, AC multi-function meter PAC 4200 for measuring total output incl. Ethernet interface, built into 19" front panel

Software: FluidLab®-PA energy

Media: Technical documentation with workbook

Technical documentation with workbook