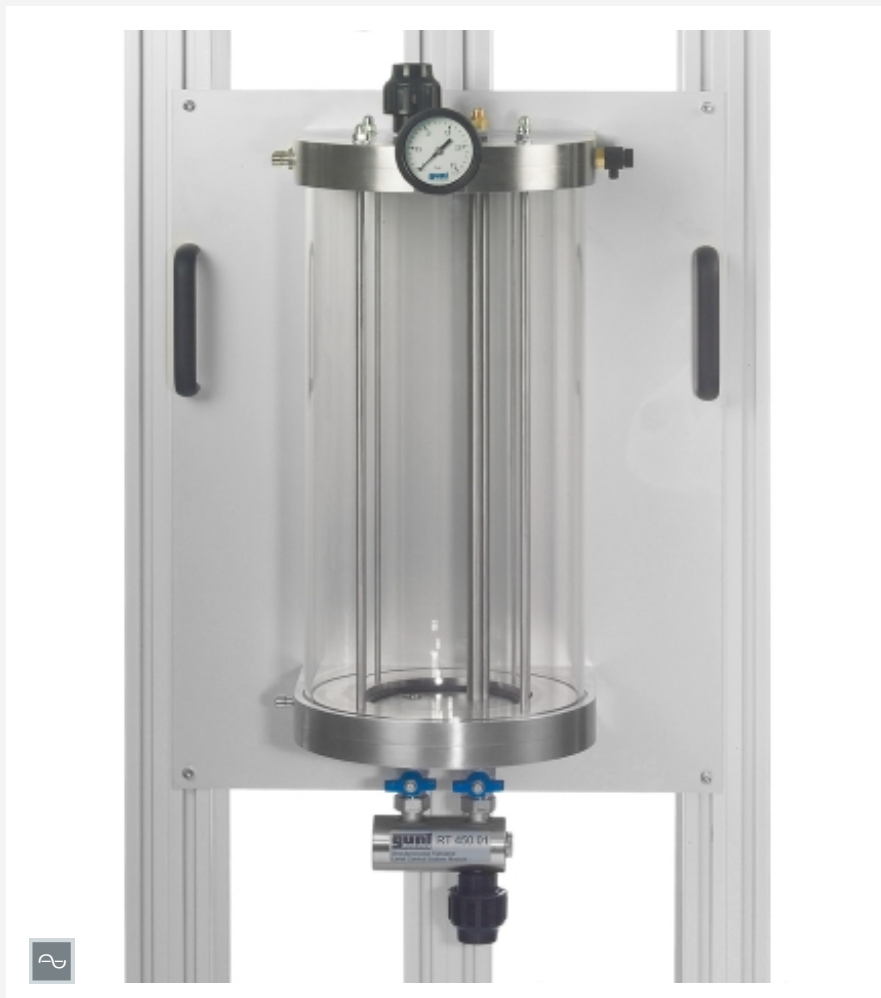


# RT 450.01

## Controlled system module: level



### Description

#### ■ main element in constructing a level control loop

The RT 450.01 consists of a clear plastic level tank as the principle element and uses water as the working medium. The tank is set up in such a way that it is hermetically sealed if all taps and valves are closed. This enables experiments to be performed with the tank under internal pressure. For safety, the level tank is fitted with a safety valve and is enclosed in a transparent plastic protective sleeve. The tank includes fittings for the attachment of a pressure sensor (RT 450.31) or a level sensor (RT 450.35). It is installed in the base module RT 450.

A control valve (e.g. RT 450.21) and a controller (RT 450.10) complete the control loop.

### Learning objectives/experiments

- setting up a level control loop
- comparison of different sensors for level measurement
- level control against trapped-air cushion
- level / flow cascade control (with RT 450.02)

### Specification

- [1] level control loop setup (in conjunction with other modules from the RT 450 series)
- [2] ready-to-install compact panel assembly
- [3] transparent glass tank with overflow, drain valve and manometer
- [4] glass tank can be hermetically sealed
- [5] plexiglass protective sleeve
- [6] PVC tank base and cover
- [7] adjustable safety valve
- [8] fitting for attaching pressure sensor or level sensor
- [9] water as the working medium, supply via base module RT 450
- [10] cascade control option in conjunction with RT 450.02

### Technical data

#### Tank

- capacity: max. 7L
- filling level: max. 475mm
- operating pressure: max. 2bar

Manometer: 0...2,5bar

Safety valve: 1...4bar adjustable

LxWxH: 510x330x800mm

Weight: approx. 30kg

### Scope of delivery

- 1 level tank mounted on panel, complete with valves, taps, rapid action couplings for fitting sensors, protective sleeve and manometer

# RT 450.01

## Controlled system module: level

### Required accessories

RT 450	Process automation training system: base module
Control with pneumatically driven control valve	
RT 450.21	Control valve, pneumatically driven, Kvs 1,0
RT 450.10	Continuous controller module
or	
RT 450.42	PLC module with software
Control with electrically driven control valve	
RT 450.24	Control valve, electrically driven, Kvs 1,0
RT 450.11	Switching controller module
or	
RT 450.42	PLC module with software
Sensor	
RT 450.35	Level sensor, capacitive
or	
RT 450.32	Pressure sensor, 0...100mbar
RT 450.31	Pressure sensor, 0...2bar

### Optional accessories

RT 450.12	Paperless recorder module
RT 450.13	Digital display
RT 450.40	Visualisation software
with	
RT 450.41	Ethernet module for controller
Additionally required for level / flow cascade control	
RT 450.02	Controlled system module: flow
RT 450.10	Continuous controller module
RT 450.34	Flow rate sensor: electromagnetic
or	
RT 450.33	Orifice with differential pressure sensor