

HL 105

Three-way mixing valve training panel



Learning objectives/experiments

- function and operating behaviour of a three-way mixing valve
- effect of mixing ratio on feed flow or circulating flow temperature
- effect of mixer setting on the flow rate
- in conjunction with other training panels in the HL 100 series, it is possible to set up a complete heating system.

Description

- **trainer on heating systems and plumbing**
- **function of a three-way mixing valve**
- **in conjunction with other trainers in the HL 100 series, the setup of a complete heating system is possible**

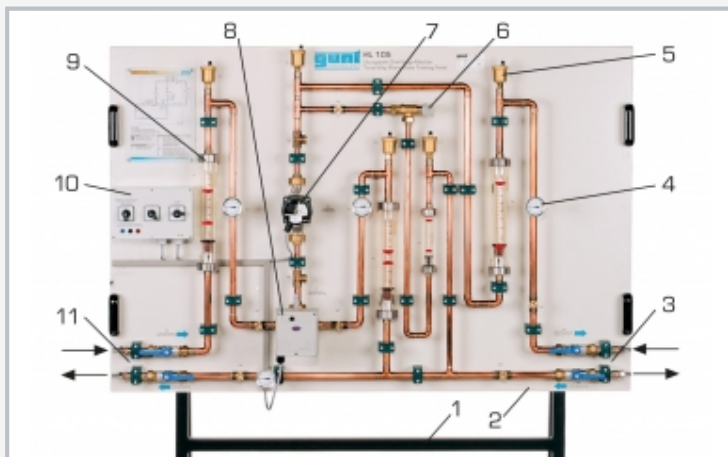
A three-way mixing valve in a heating system controls the circulation and feed flow temperature of the water flowing in the heating system. A pump circulates the water in the pipe system. The differential pressure across the pipe system is limited using a relief valve.

Bimetallic thermometers indicate the temperatures at all relevant points in the heating circuit.

The trainer was designed for heating and plumbing trainees.

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Three-way mixing valve training panel



1 frame, 2 panel, 3 water connections for heating system, 4 bimetallic thermometer, 5 bleed valve, 6 differential pressure overflow valve, 7 pump, 8 three-way mixing valve with actuator motor, 9 rotameter, 10 mixing valve controller switch cabinet, 11 water connections for boiler

Specification

- [1] trainer on heating systems and plumbing
- [2] 3-way mixing valve DN 20
- [3] circulating pump
- [4] 4 rotameters
- [5] 4 bimetallic thermometers
- [6] 2 heating water connections DN 15
- [7] 2 water connections for boiler DN 15
- [8] 1 differential pressure overflow valve
- [9] water connections made using quick-release couplings

Technical data

Pump

- power consumption: 70W
- max. flow rate: 60L/min
- max. head: 4m

Three-way mixing valve

- setting angle: 90°
- opening time: 100s

Measuring ranges

- flow rate:
 - ▶ 3x 150...1700L/h
 - ▶ 1x 40...400L/h
- temperature: 0...100°C

230V, 50Hz, 1 phase

230V, 60Hz, 1 phase

LxWxH: 1650x700x1850mm

Weight: approx. 112kg

Required for operation

hot water supply: 1800L/h, cold water connection, drain

Scope of delivery

- 1 trainer
- 1 manual

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Optional accessories

Radiators		
065.11200	HL 112	Radiator training panel
or		
065.30500	HL 305	Hydronic balancing of radiators
Heating boiler		
065.35000	HL 350	Oil Burner Demonstrator
or		
065.35100	HL 351	Domestic Heating Boiler