

HL 106

Four-way mixing valve training panel



Learning objectives/experiments

- function and operating behaviour of a four-way mixing valve
- effect of the mixing ratio on feed and circulating flow temperature
- effect of mixer setting on the flow rate
- in conjunction with other trainers 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 four-way mixing valve**
- **in conjunction with other trainers in the HL 100 series, the setup of a complete heating system is possible**

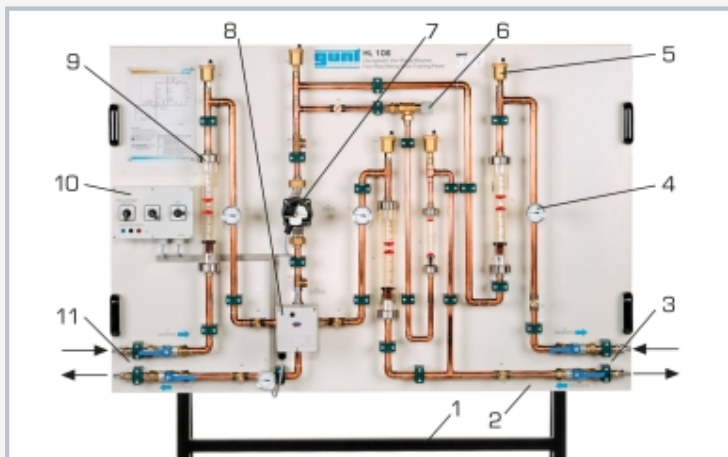
The four-way mixing valve in a heating system controls the circulation and feed flow temperatures of the water flowing in the heating system and the boiler return flow temperature. It is possible to add the hot water required and to connect radiators.

The differential pressure across the pipe system is limited using a relief valve. Bi-metallic thermometers indicate relevant temperatures.

The trainer was designed for heating and plumbing trainees.

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Four-way mixing valve training panel



1 frame, 2 panel, 3 water connections for heating, 4 bimetallic thermometer, 5 bleed valve, 6 differential pressure overflow valve, 7 pump, 8 four-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] 4-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: 60W
- max. flow rate: 60L/min
- max. head: 4m

Four-way mixing valve

- setting angle: 90°
- opening time: 2min

Measuring ranges

- flow rate:
 - ▶ 3x 150...1600L/h
 - ▶ 1x 0...440L/h
- temperature: 0...100°C

230V, 50Hz, 1 phase
 LxWxH: 1660x700x1860mm
 Weight: approx. 112kg

Required for operation

water connection 1700L/h, drain

Scope of delivery

- 1 trainer
- 1 manual

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Optional accessories

Radiators

HL 112 Radiator training panel

or

HL 305 Hydronic balancing of radiators

Heating boiler

HL 350 Oil burner demonstrator

or

HL 351 Domestic heating boiler