Thermostatically controllable mixing valves art. MR 01/MR 02/MR 03

MR 0x valves are axial mixers controlled by an external thermostatic actuator with remote probe. MR 02 and MR 03 valves differ in the position of the two inlets and the mixed outlet, while MR 01 finds a specific application in radiant floor mixing systems, where it serves as a by-pass valve. The external surface of the valve body is nickel-plated, while the inside is yellow, so that the device can be used in drinking water applications. MR 0x are ready for the installation of either a thermostatic command for fixed point regulation or an axial servomotor for climatic regulation.

TECHNICAL FEATURES

Temperature stability range: ± 3 °C
Max operating static pressure: 10 bar
Max operating dynamic pressure: 1 bar
Max operating temperature: 120 °C

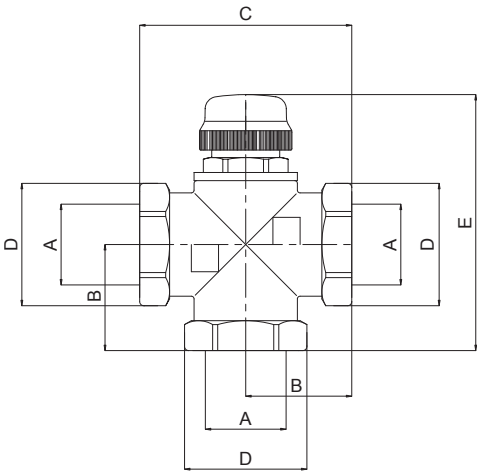
MR 01
Temperature adjustment range: 15÷35 °C
with cold inlet at 15 °C, hot inlet at 65 °C and inlet pressures 1 bar

MR 02/MR 03
Temperature adjustment range: 15÷60 °C
with cold inlet at 15 °C, hot inlet at 65 °C and inlet pressures 1 bar

MATERIALS

Brass parts: CW617N
Spindle: AISI 316L
Gaskets and o-rings: peroxide EPDM
Protecting cover: ABS

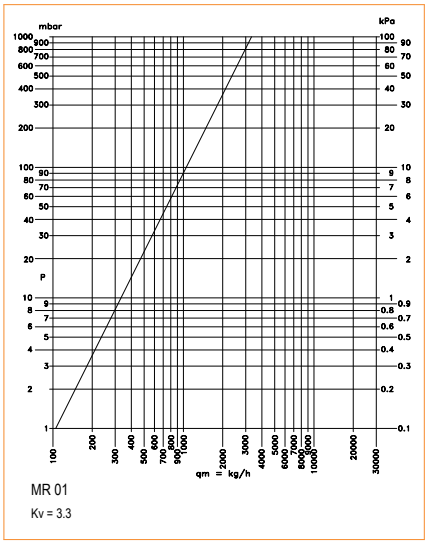
DIMENSIONS



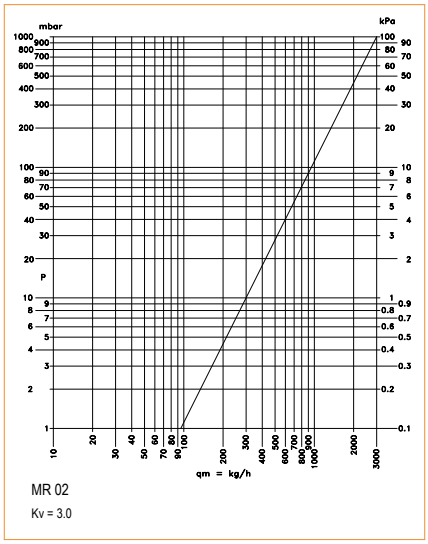
ART.	COD.	A	B	C	D	E
MR 01	501420	1”	38	76	HEX. 40	95
MR 02	501421	1”	38	76	HEX. 40	95
MR 03	501422	1”	38	76	HEX. 40	95

HYDRAULIC FEATURES

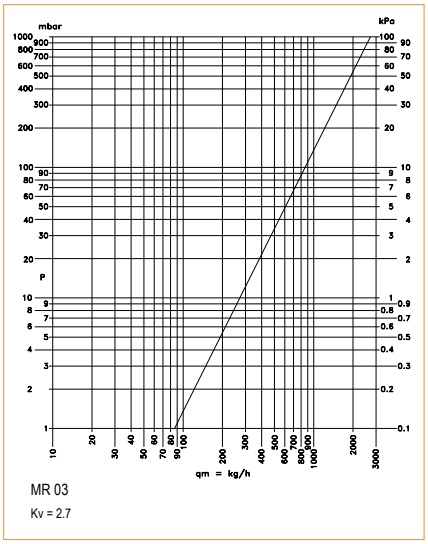
MR 01



MR 02

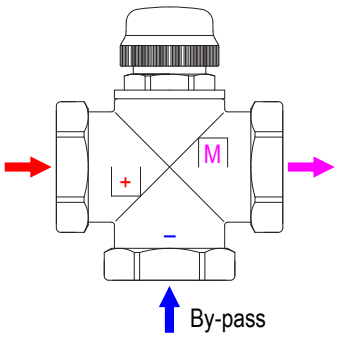


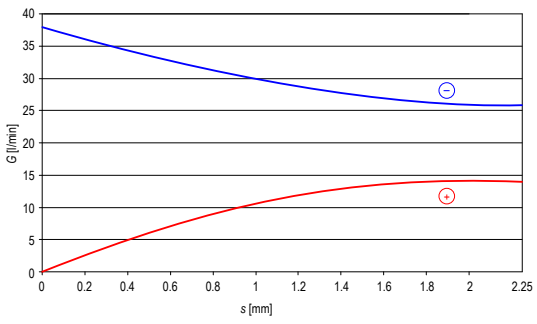
MR 03



Opening curves

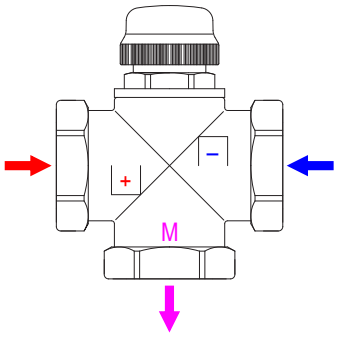
MR 01

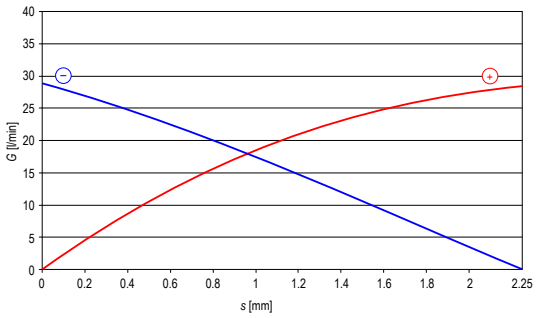




Curves describing hot inlet (+) and cold inlet (-) flow rates G at varying opening positions s, starting from closed hot water inlet. Curves have been obtained with Δp = 0.5 bar at both the inlets.

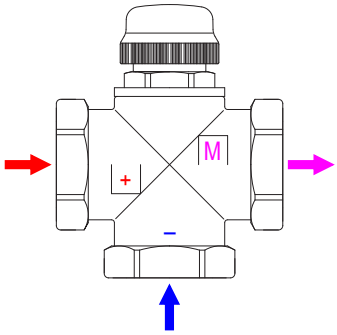
MR 02

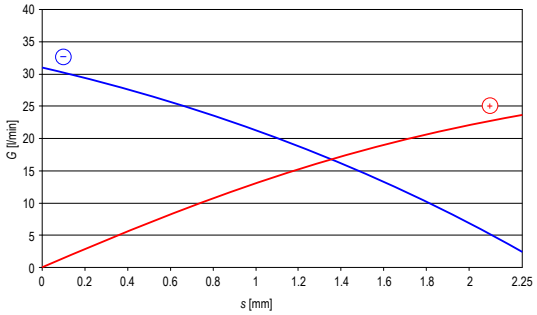




Curves describing hot inlet (+) and cold inlet (-) flow rates G at varying opening positions s, starting from closed hot water inlet. Curves have been obtained with Δp = 0.5 bar at both the inlets.

MR 03





Curves describing hot inlet (+) and cold inlet (-) flow rates G at varying opening positions s, starting from closed hot water inlet. Curves have been obtained with Δp = 0.5 bar at both the inlets.

OPERATING INSTRUCTIONS

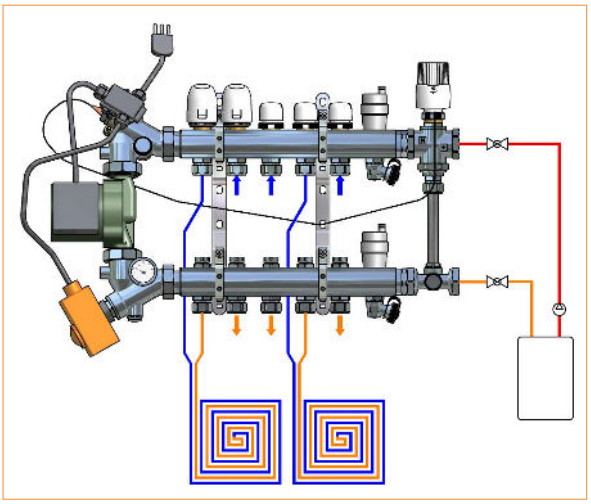
Applications for MR valves

MR 01

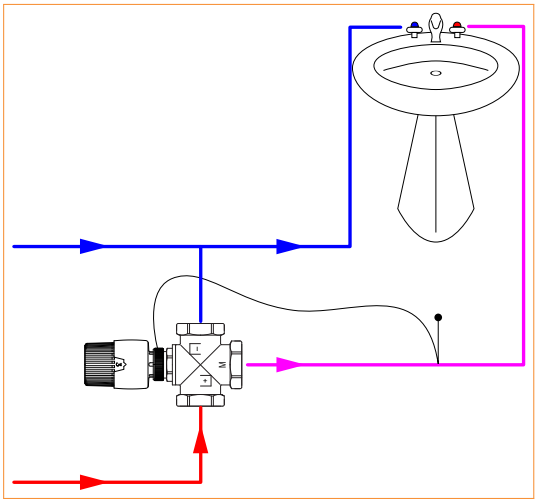
Valve MR 01 is characterised by a peculiar design allowing to throttle only the straight way (+), while keeping the straight way (-) completely open: therefore, the valve controls the mixing hot water flow rate, while the angle way acts as a by-pass. By-pass adjustment can be performed by connecting the cold way (-) to art. AC 662, featuring a lockshield with micrometric screw for flow rate limitation. This device has a specific application in radiant panels mixing systems, where it is used substantially as a thermostatic 2-way valve with the open by-pass in correspondence of radiant panels return. An example of this application is represented by DUALMIX system (Fig.1a).

MR 02/MR 03

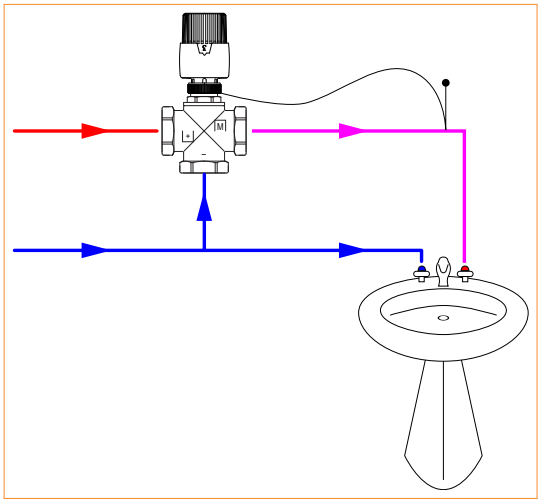
MR 02 and MR 03 valves are true 3-way mixing valves in which the opening of the hot way causes the closure of the cold way, and vice-versa. The two models differ only in the connection positions: mixed outlet on the third way for MR 02 and mixed outlet on one side for MR 03. Therefore, the choice of one model instead of the other depends on more comfortable installation, and not on functional reasons. Installation examples are reported in Fig.1b and Fig.1c.



(a) Application of MR 01 valve in DUALMIX system.



(b) Application of MR 02 valve.



(c) Application of MR 03 valve.

Fig. 1: Installation examples of MR valves.

Actuators

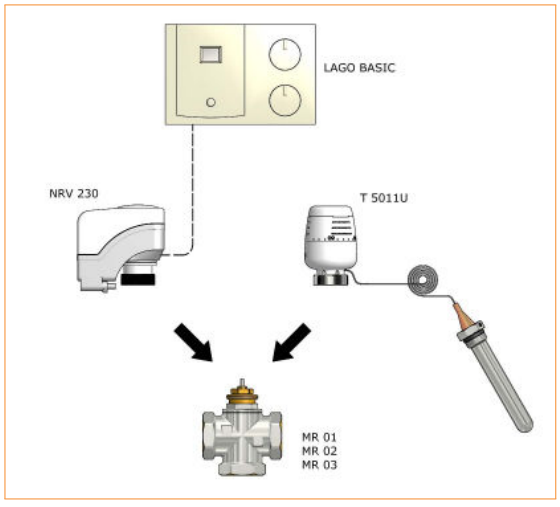


Fig. 2: Actuators for fixed point or climatic regulations.

Every MR valve feature a thermostatically controllable insert that makes it ready for either fixed point or climatic regulation (Fig.2).

- In the first case, which is typically used in sanitary applications, it is possible to use a thermostatic head with remote immersion probe (e.g.: T 3011 cod. 500850 or T 5011U cod. 501175U). The sensor must be immersed in the delivery pipe so to maintain the set delivery temperature.
- In the second case (heating applications), it is possible to mount an axial servomotor with three point regulator NRV 230 (cod. 501008) connected to the LAGO BASIC (cod. 99797309) controller, which is already equipped with delivery temperature probe and external probe.

■ ACCESSORIES

T 3011. Thermostatic head with integrated command and remote immersion probe. Adjustment range 20÷60 °C.

T 5011U. Thermostatic head with integrated command and remote immersion probe. Adjustment range 30÷50 °C.

NRV 230. Axial servomotor, supply voltage 230 VAC, 3-point regulation.

AC 662. Balancing valve for DUALMIX system.

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