

MIXING VALVES

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THREE-WAY MIXING VALVE WITH BONNET R298



GIACOMINI
WATER E-MOTION



R298

Description

The R298 mixing valve allows for the interception and mixing of heating fluid in radiant heating and cooling systems for floors or ceilings and in medium-size radiator heating systems that require precise control of water delivery temperature.

The R298 valve is equipped with a handwheel for manual operation, or alternatively, it can be coupled to a K281/K282 actuator for automatic control.

Versions and product codes

Product code	Connections	Actuator connection	Center distance [mm]
R298Y001	1 1/2" M x 1 1/2" F	M28 x 1,5 mm (blue handwheel)	120
R298Y027	1 1/2" M x 1 1/2" F	M30 x 1,5 mm (red handwheel)	

Completion codes

- Actuators K281 or K282

Accessories

- P19Y001: ring nut M30x1,5 mm for adapting valve R298 M28x1,5 mm threading.
- P19Y002: ring nut M28x1,5 mm for adapting valve R298 M30x1,5 mm threading.

Technical data

- Heating fluid: water for air-conditioning systems
- Max. working temperature: 90 °C
- Max. working pressure: 10 bar
- Maximum differential pressure: 1,2 bar
- Center distance: 120 mm
- Connections: 1 1/2" flat seat
- Mixing: by bonnet DN20, which is normally closed on the primary side

Materials

- Body, bonnet and nut in brass CW617N - UNI EN12165
- EPDM sealing rings

Losses of pressure

In Table 1, values in Kv and mixing percentage ratios (between the by-pass "QBP" flow rate and the primary side "Qp") corresponding to the various opening positions are displayed.

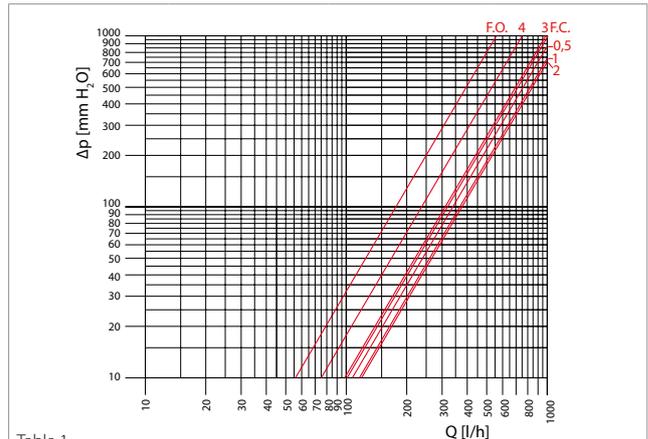
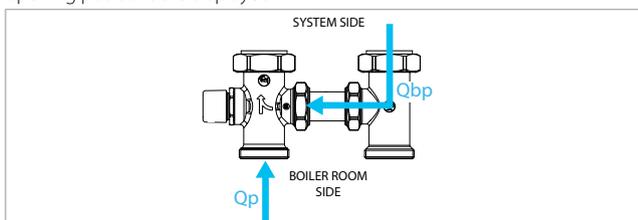


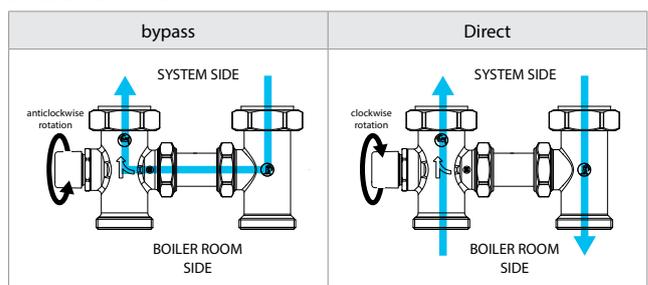
Table 1

Opening Shutter	Kv (direct + by-pass)	Primary side flow rate Qp	By-pass flow rate Qbp
F.C.	3,25	0 %	100 %
0,5 mm	3,48	11 %	89 %
1 mm	3,79	18 %	82 %
2 mm	3,78	29 %	71 %
3 mm	3,12	44 %	56 %
4 mm	2,35	74 %	26 %
F.O.	1,78	100 %	0 %

Operation

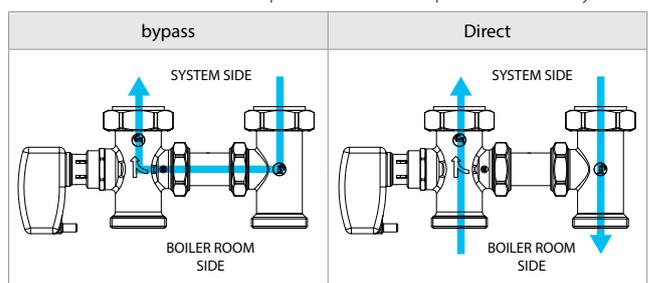
R298 + handwheel for manual operation

The three-way R298 mixing valve is equipped with a handwheel to allow for manual operation, which are carried out via a simple clockwise rotation for the valve opening and anticlockwise for closure. Total opening of the bonnet, and therefore of the primary side supply, is obtained by screwing down the handwheel, while unscrewing it fully frees the thread for the drive actuator connection.



R298 + K281/K282 actuator for automatic operation

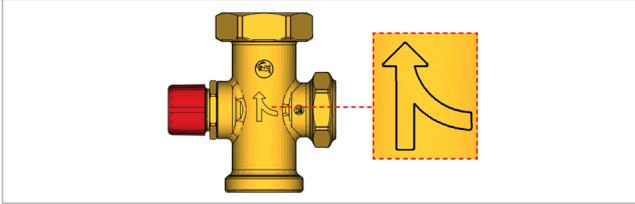
The handwheel can be replaced with a K281/K282 actuator for automatic mixing adjustment, in combination with electronic thermoregulation. The K281/K282 actuator is mounted manually, by screwing the brass ring nut in a clockwise direction until it stops. This does not require the use of any tools.



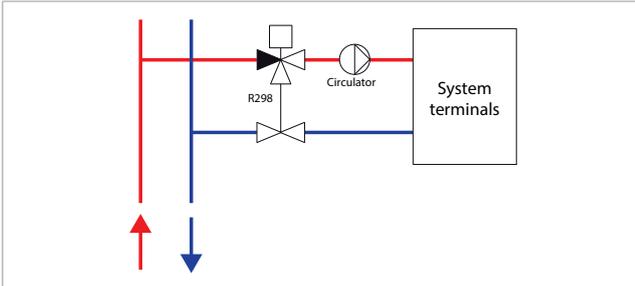


Installation

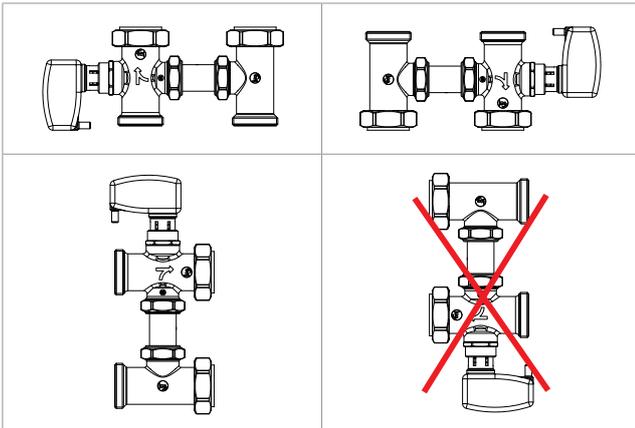
• The R298 valve must be installed according to the direction of flow as indicated by the arrow present on the valve body.



• The R298 valve must be installed on the delivery side. The circulator on the secondary circuit must be installed downstream from the mixing valve.

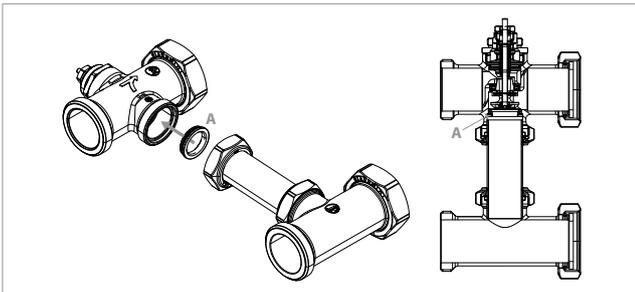


• The R298 valve can be installed in a vertical position with the actuator to the right or left, or in a horizontal position with the actuator above. Horizontal downward facing installation of the valve is not permitted.

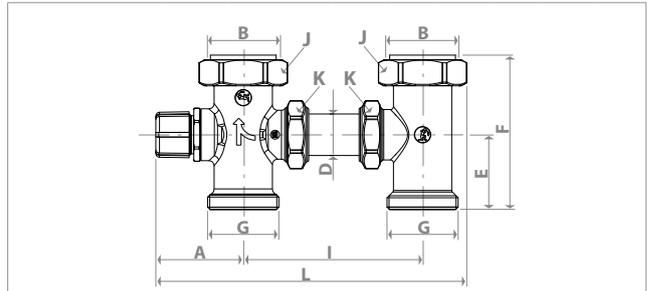


• Application with low temperature water: should you expect the realization of installations where the primary circuit is characterised by low temperature (i.e. condensig boilers operating at low temperature) on the by-pass way the calibrated diaphragm (A) shall be inserted.

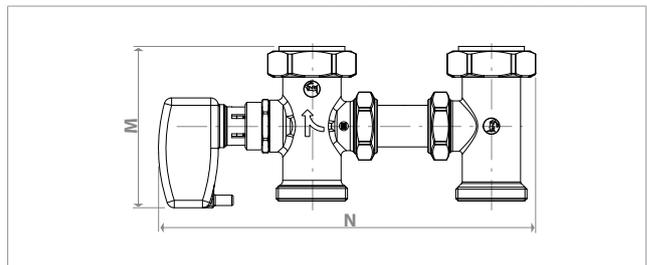
In these applications, the presence of this element is fundamental for the correct balance of the deliveries of the primary and secondary circuits, characterised by a reduced temperature difference.



Dimensions



Product code	G	B	A [mm]	I [mm]	L [mm]	D [mm]	E [mm]	F [mm]	K [mm]	J [mm]
R298Y001	1 1/2" M	1 1/2" F	59	120	209	28	50	104	41	53
R298Y027										



Product code	M [mm]	N [mm]
R298Y001/K298Y027 + K281X002/K282X002	113	255
R298Y001/K298Y027 + K281X012/K281X022	115	265

Product specifications

R298

Three-way mixing valve with bonnet, with 1 1/2" flat seat connections and by-pass. Body, bonnet and nut in brass UNI EN 12165 CW617N. Handwheel with protection and manual operation functions. Max. working temperature 90 °C. Max. working pressure 10 bar. Center distance of 120 mm. Can be motorized by installing the K281 or K282 series actuator.

Additional information

For additional information please check the website: www.giacomini.com or contact the technical service: ☎ +39 0322 923372 📠 +39 0322 923255 ✉ consulenza.prodotti@giacomini.com
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