

R298



Energy
Management

3-way mixing valve with bonnet

Datasheet
0529EN 06/2025



R298

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 supply temperature.

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

► Versions and codes

PRODUCT CODE	CONNECTIONS	ACTUATOR CONNECTION	CENTER DISTANCE [mm]
R298Y027	G 1-1/2" M x G 1-1/2" F	M30 x 1,5 mm (red handwheel)	120

Completion codes

- K281X012: proportional actuator 0..10 V, power supply 24 V
- K281X014: fast actuator (4 s), proportional 0..10 V, power supply 24 V
- K281X022: 3-point floating actuator, power supply 24 V

Accessories

- P19Y001: ring nut M30 x 1,5 mm for adapting valve R298 M28 x 1,5 mm threading
- P19Y002: ring nut M28 x 1,5 mm for adapting valve R298 M30 x 1,5 mm threading

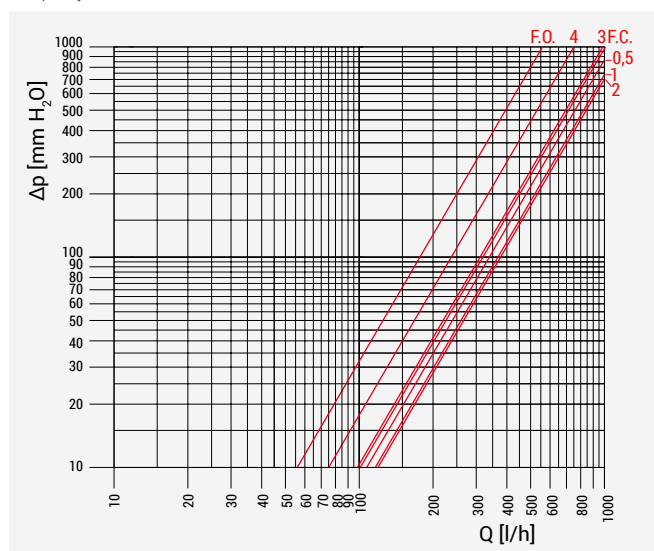
Technical data

Characteristics

- Fluids of use: water, glycol solutions (max. 50%)
- Temperature range: 5÷90 °C
- Max. working pressure: 10 bar
- Maximum differential pressure: 1,2 bar
- Center distance: 120 mm
- Connections: 1-1/2" flat seat
- Mixing: through bonnet DN20, which is normally closed on the primary side

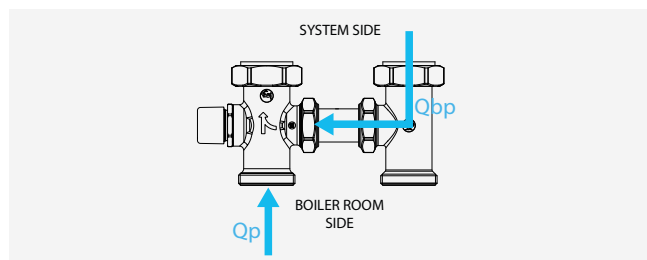
Losses of pressure

In Table, 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.



Materials

- Body, bonnet and nut: CW617N - EN 12165 brass
- Gaskets: EPDM



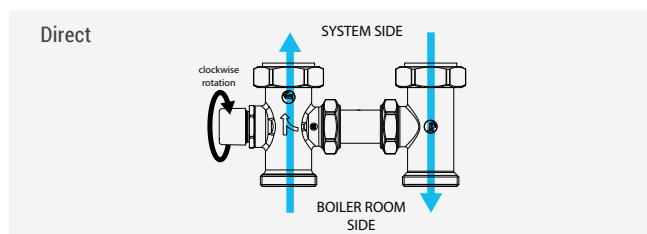
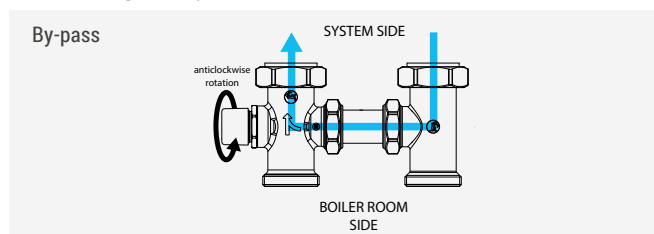
OPENING STOPPER	Kv (direct + bypass)	PRIMARY SIDE FLOW RATE Q_p	BY-PASS FLOW RATE Q_{bp}
Fully closed (F.C.)	3,25	0%	100%
0,5 mm	3,48	11%	89%
1 mm	3,79	18%	82%
2 mm	3,78	29%	71%
3 mm	3,12	44%	56%
4 mm	2,35	74%	26%
Fully open (T.O.)	1,78	100%	0%

Operation

R298 + handwheel for manual operation

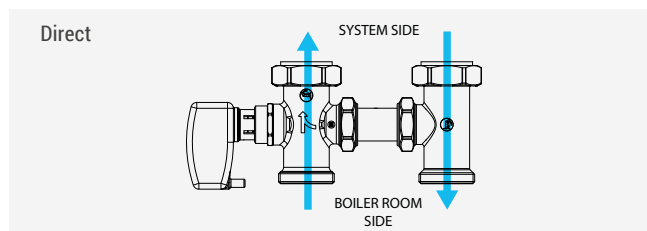
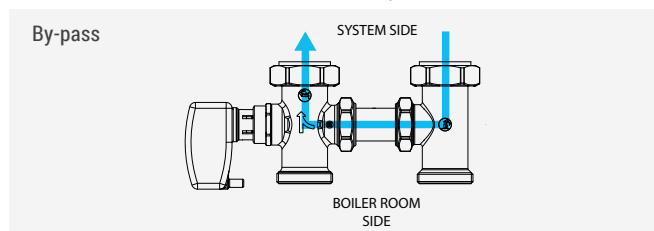
The 3-way R298 mixing valve is equipped with a handwheel to allow for manual operation, which are carried out via a simple clockwise rotation for the valve opening and anticlockwise for closure.

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.



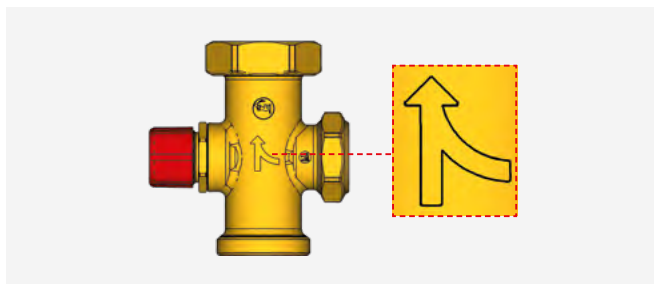
R298 + K281 actuator for automatic operation

The handwheel can be replaced with a K281 actuator for automatic mixing adjustment, in combination with electronic thermoregulation. The K281 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.

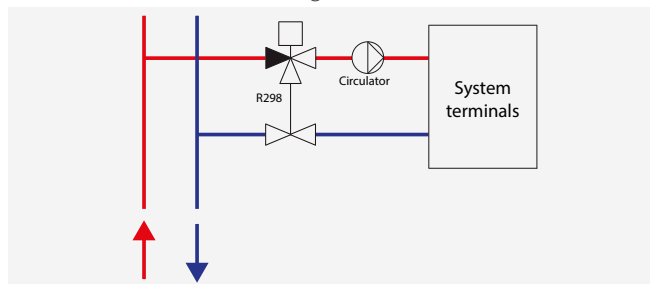


► Installation

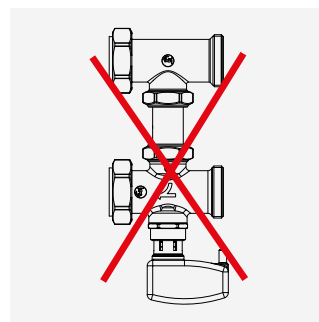
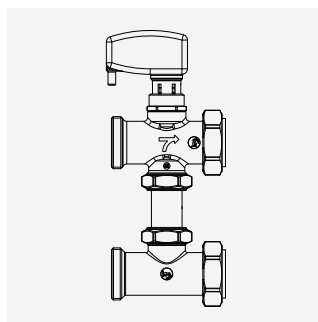
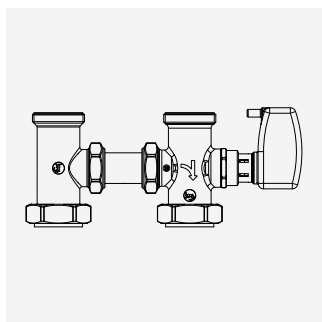
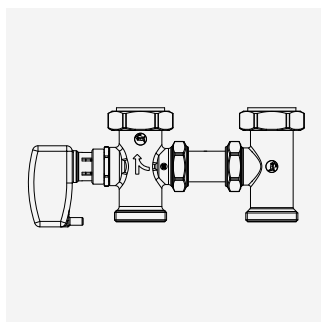
The R298 valve must be installed according to the direction of flow as indicated by the arrow present on the valve body.



The valve must be installed on the supply side. The pump on the secondary circuit must be installed downstream from the mixing valve.

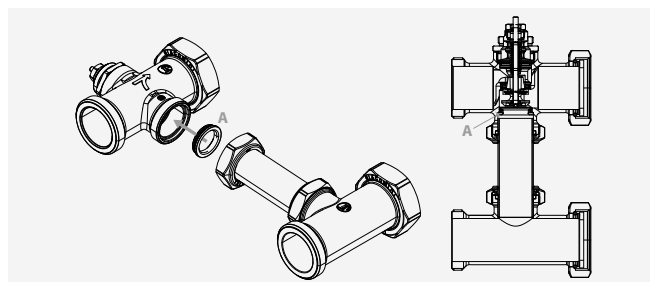


The R298 valve can be installed in a vertical position with the actuator to the right or left, or in a horizontal position with the actuator above. Horizontal downward facing installation of the valve is not permitted.



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.

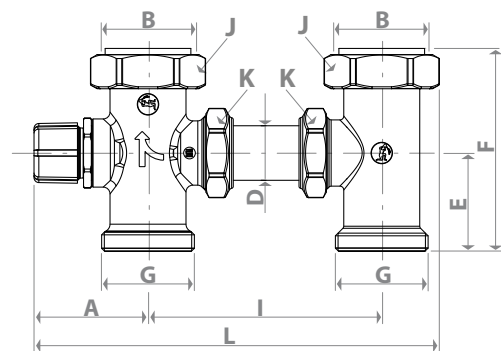


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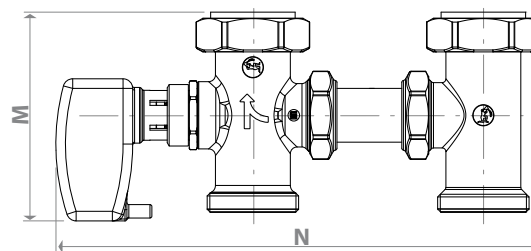
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➤ Dimensions



PRODUCT CODE	G [inch.]	B [inch.]	A [mm]	I [mm]	L [mm]	D [mm]	E [mm]	F [mm]	K [mm]	J [mm]
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R298Y027	G 1-1/2"M	G 1-1/2"F	59	120	209	28	50	104	41	53
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PRODUCT CODE	M [mm]	N [mm]
K298Y027 + K281	115	265

➤ Product specifications

R298

3-way mixing valve with bonnet, with 1-1/2" flat seat connections and by-pass. Body, bonnet and nut in CW617N - EN 12165 brass. Handwheel with protection and manual operation functions. Fluids of use: water, glycol solutions (max. 50%). Temperature range: 5÷90 °C. Max. working pressure 10 bar. Center distance of 120 mm. Can be motorized by installing the K281 series actuator.

⚠ Safety Warning. Installation, commissioning and periodical maintenance of the product must be carried out by qualified operators in compliance with national regulations and/or local standards. A qualified installer must take all required measures, including use of Individual Protection Devices, for his and others' safety. An improper installation may damage people, animals or objects towards which Giacomini S.p.A. may not be held liable.

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