

R291, R292, R292E

2- and 3-way piston zone valves



Energy
Management

Datasheet
0373EN 03/2024



R291



R292, R292E

Zone valves are devices for shutting off the heat transfer fluid which, activated by an actuator, allow the subdivision of air conditioning systems into homogeneous sectors from the point of view of room temperature control.

The R291, R292 and R292E zone valves are equipped with a piston stopper and can be of the 3-way type, equipped with an adjustable by-pass, or 2-way, which generally requires the installation of a differential valve on the main circuit.

➤ Versions and product codes

SERIES	PRODUCT CODE	CONNECTIONS	N° OF WAYS	TYPE	STOPPER
R291	R291Y004	G 3/4"M	2-way	Tail piece in axis	Piston
	R291Y005	G 1"M			
R292	R292Y004	G 3/4"M	3-way	Tail piece in axis	
	R292Y005	G 1"M			
R292E	R292EY004	G 3/4"M		Eccentric tail piece	
	R292EY005	G 1"M			

Completion codes

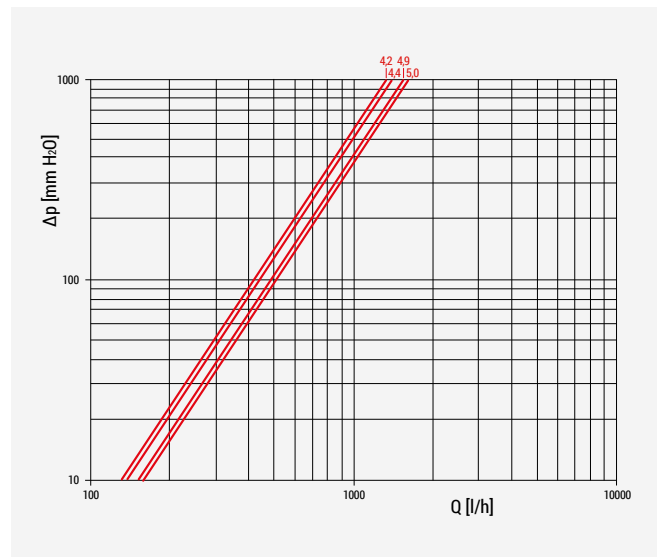
- R473, R473M: thermo-electric actuator with zone valves motor function.
- R193K: eccentric kit pipe for installation of 3-ways valves with distribution manifolds.

Technical data

Performance

- Fluids: water, glycol solutions (max. 50 %)
- Temperature range: 5÷110 °C
- Max. working pressure: 10 bar
- Maximum differential pressure: 1,3 bar

Loss of pressure



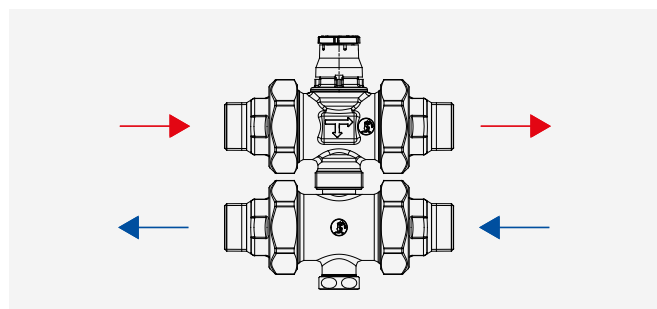
Materials

- Body, bonnet and nuts: UNI EN 12165 CW617N brass
- Stem: stainless steel AISI 304
- Gaskets: EPDM

VALVE POSITION	VALVE SIZE	Kv
Fully open without thermo-electric actuator	3/4"	4,9
	1"	5,0
Fully open with R473/R473M thermo-electric actuator	3/4"	4,2
	1"	4,4

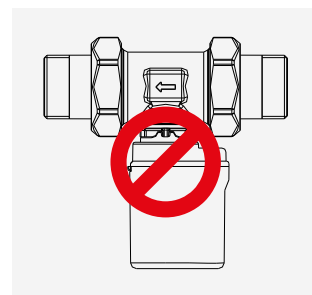
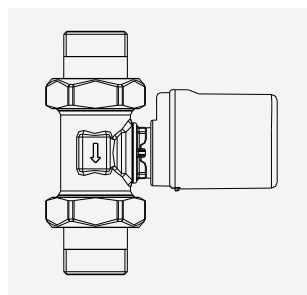
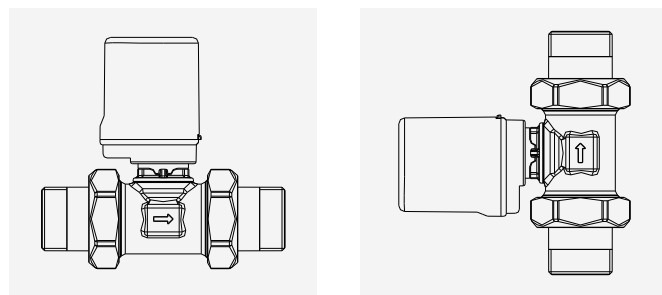
Installation

Flow diagram



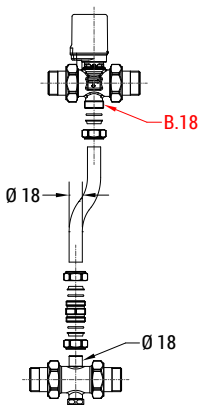
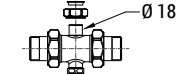
The attachments with cap and pipe union allow easy connection to the system, which must always be carried out according to the direction of flow indicated by the arrows printed on the bodies and by placing the valve so that the thermo-electric actuator or the electric motor are never turned downwards.

Allowed installations

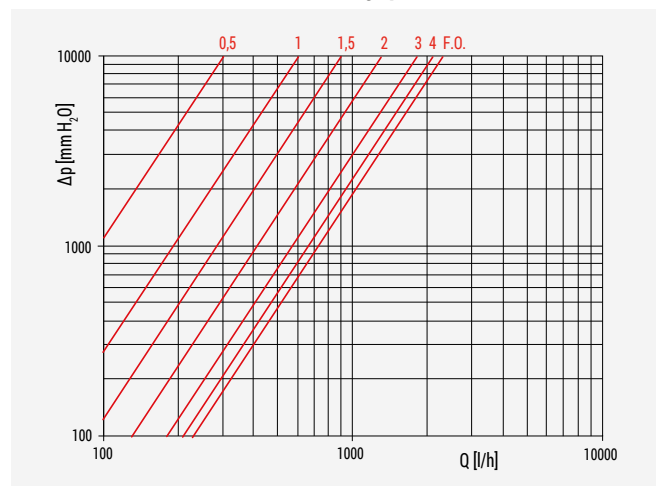


R193K by-pass connection kit for R292/R292E 3-way zone valves

In the 3-way valves, the supply and return elements can be assembled directly (if mounted on dual manifold R587B), or through a by-pass conduit, using the Base 18 and TR18 adapter connections.

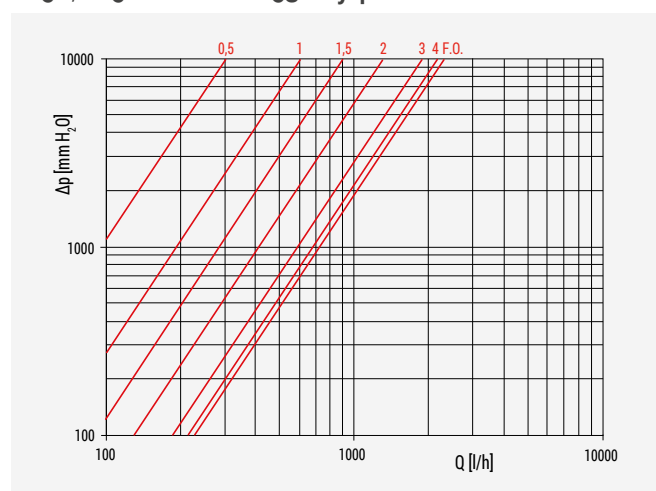
R193K KIT CODE	USE	INSTALLATION
 R193Y011	Use in combination with R292/R292E zone valves + R553D/R553F manifolds + R588 brackets + R500 cabinets	 B.18 Ø 18
 R193Y021	Use in combination with R292/R292E zone valves + R553D/R553F manifolds + R588Z brackets + R500-2 cabinets	 Ø 18

R292, R292E 3/4" with R193K by-pass kit



LOCKSHIELD OPENING TURNS	Kv
0,5	0,3
1	0,6
1,5	0,9
2	1,3
3	1,8
4	2,1
F.O.	2,2

R292, R292E 1" with R193K by-pass kit

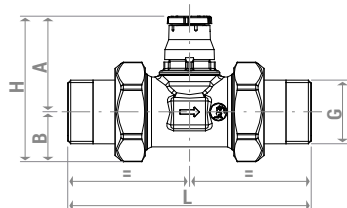


LOCKSHIELD OPENING TURNS	Kv
0,5	0,3
1	0,6
1,5	0,9
2	1,3
3	1,9
4	2,2
F.O.	2,3

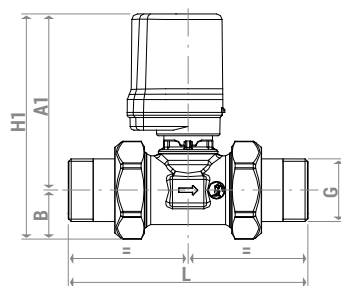
NOTE. The lockshield valve on the by-pass conduit must be adjusted using an 8 mm Allen key, to reproduce a pressure drop comparable to that of the system and to avoid hydraulic failure in the distribution when the flow is deviated on the return to the boiler.

Dimensions

R291

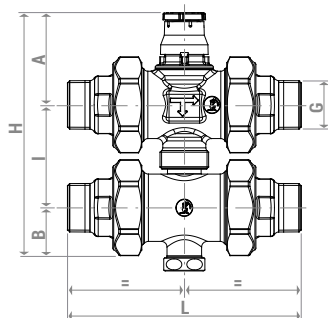


R291 + R473/R473M

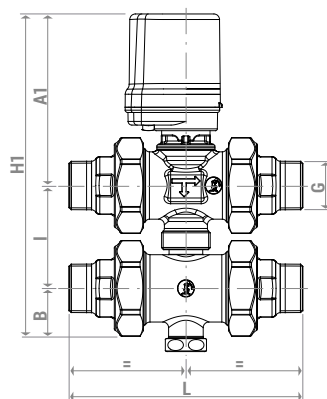


PRODUCT CODE	CONNECTIONS, G	H [mm]	L [mm]	A [mm]	B [mm]	H1 [mm]	A1 [mm]
R291Y004	G 3/4"M	88	125	49	39	133	94
R291Y005	G 1"M	88	125	49	39	133	94

R292



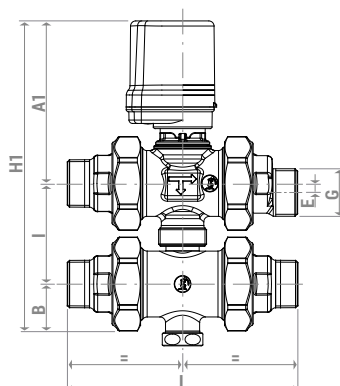
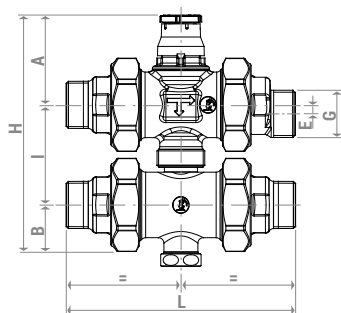
R292 + R473/R473M



PRODUCT CODE	CONNECTIONS, G	H [mm]	L [mm]	A [mm]	I [mm]	B [mm]	H1 [mm]	A1 [mm]
R292Y004	G 3/4"M	138	125	49	55	34	183	94
R292Y005	G 1"M	138	125	49	55	34	183	94

R292E

R292E + R473/R473M



PRODUCT CODE	CONNECTIONS, G	H [mm]	L [mm]	A [mm]	I [mm]	E [mm]	B [mm]	H1 [mm]	A1 [mm]
R292EY004	G 3/4"M	138	125	49	55	5	34	183	94
R292EY005	G 1"M	138	125	49	55	5	34	183	94

Product specifications

R291

2-way zone valve, made of brass. G 3/4"M or G1"M connections with tail piece in axis. Fluids: water, glycol solutions (max. 50 %). Temperature range: 5÷110 °C. Max. working pressure: 10 bar. Can be motorized through the installation of R473, R473M thermo-electric actuators.

R292

3-way zone valve, made of brass. G 3/4"M or G1"M connections with tail piece in axis. Fluids: water, glycol solutions (max. 50 %). Temperature range: 5÷110 °C. Max. working pressure: 10 bar. Can be motorized through the installation of R473, R473M thermo-electric actuators.

R292E

3-way zone valve, made of brass. G 3/4"M or G1"M connections with eccentric tail piece. Fluids: water, glycol solutions (max. 50 %). Temperature range: 5÷110 °C. Max. working pressure: 10 bar. Can be motorized through the installation of R473, R473M thermo-electric actuators.

 **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.

 **Package Disposal.** Carton boxes: paper recycling. Plastic bags and bubble wrap: plastic recycling.

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 **Product Disposal.** Do not dispose of product as municipal waste at the end of its life cycle. Dispose of product at a special recycling platform managed by local authorities or at retailers providing this type of service.