

## ZONE VALVES

0373EN November 2014

TWO-WAYS PISTON ZONE VALVE, R291 SERIES  
THREE-WAYS PISTON ZONE VALVE, R292 - R292E SERIES



**GIACOMINI**  
WATER E-MOTION



R291

R292 - R292E

### Description

The zone valves are devices for intercepting the heating fluid which, driven by a servomotor controlled by a thermostat or by a clock, allow for the subdivision of air conditioning systems in sectors which are similar from the point of view of room temperature control.

Zone valves may be of the 3-way type - with an adjustable by-pass, which must produce a pressure drop comparable to that of the system in order to avoid hydraulic failure in the distribution when the flow is deviated on the return to the boiler - or the 2-way type, which generally requires the installation of a differential valve on the primary circuit, for the protection of the boiler circulator.

The R291, R292 and R292E series zone valves use a piston obturator, coupled with the electrothermic actuator heads of the R473 and R473M series, subject to the differential pressure of the flow - the field of application is determined according to the hydraulic characteristics set out below.

### Versions and product codes

Series	Product code	Connections	Nr. of ways	Type	Disc
R291	R291Y004	3/4"	2	Tail piece in axis	A pistone
	R291Y005	1"			
R292	R292Y004	3/4"	3	Tail piece in axis	
	R292Y005	1"			
R292E	R292EY004	3/4"		Eccentric tail piece	
	R292EY005	1"			

### Completion codes

- Electrical actuator R473 or R473M series. With zone valves motor function.
- Eccentric kit pipe, R193K, for installation of three-ways valves with distribution manifolds.

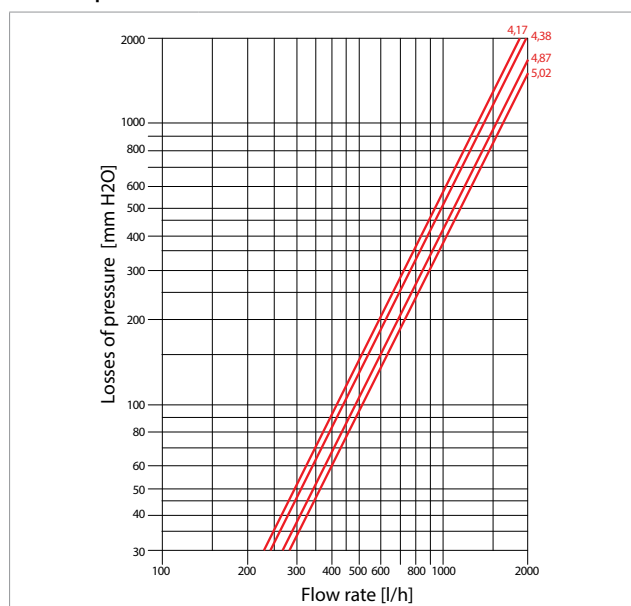
### Main characteristic

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 electrothermic actuator or the electric motor are never turned downwards.

### Technical data

- Heating fluid: water for air-conditioning systems
- Max. working temperature: 110 °C
- Max. working pressure: 10 bar
- Maximum differential pressure: 1,3 bar

### Losses of pressure

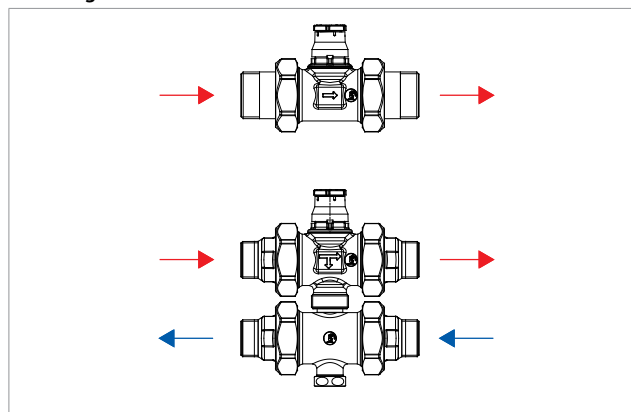


#### Kv values

Kv values	Series	Configuration
4,17	R291, R292 or R292E of 3/4"	All open with R473
4,38	R291, R292 or R292E of 1"	All open with R473
4,87	R291, R292 or R292E of 3/4"	All open, manual
5,02	R291, R292 or R292E of 1"	All open, manual

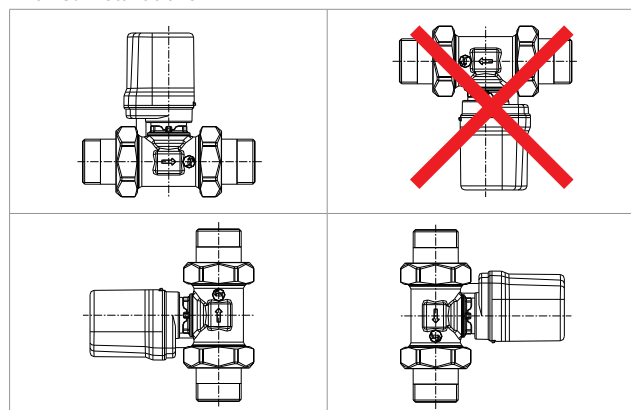
### Operating

#### Flow diagram



### Installation

#### Allowed installations



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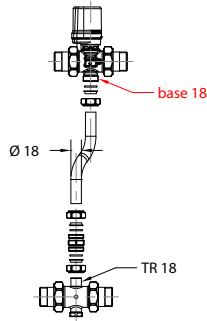


## By-pass connection kit

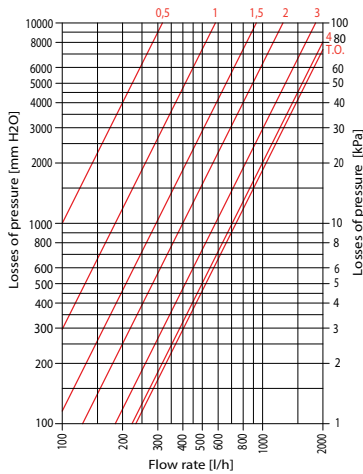
In the three-way valves, the delivery and return elements can be assembled directly (if mounted on dual manifold R587B), or through a by-pass conduit, using the base 18 and TR18 adapter connections.

Product code	Use
R193Y011	Use in combination with R292/R292E zone valves + R553D/R553F manifolds + R588 brackets + R500 cabinets
R193Y021	Use in combination with R292/R292E zone valves + R553D/R553F manifolds + R588Z brackets + R500-2 cabinets

### Connector kit for 3-way zone valves R292, R292E

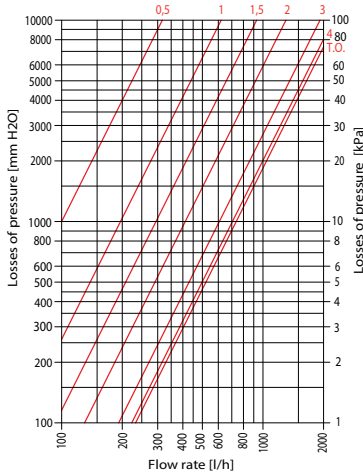


### 3/4" R292, R292E with by-pass



Opening turning	0,5	1	1,5	2	3	4	T.O.
Kv	0,32	0,58	0,91	1,26	1,84	2,14	2,27

### 1" R292, R292E with by-pass



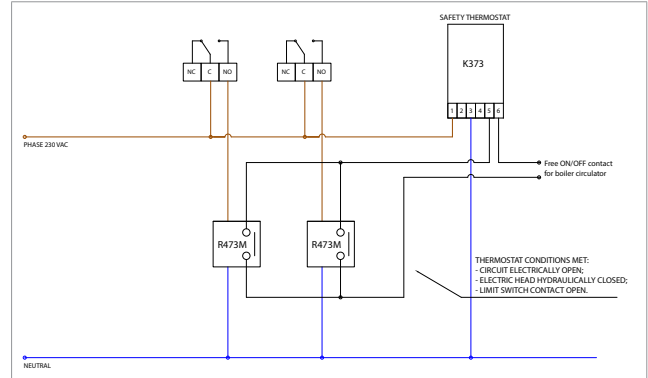
Opening turning	0,5	1	1,5	2	3	4	T.O.
Kv	0,32	0,62	0,91	1,30	1,92	2,23	2,33



### 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.

## Electric connections



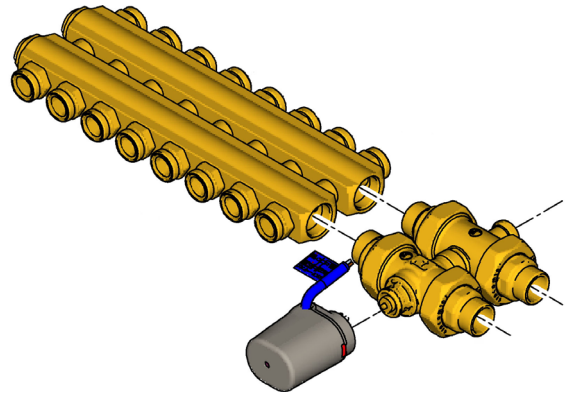
### Warning.

For electrical connections, pay attention to the following colours on the electrothermic actuator heads:

- Brown: phase
- Blue: neutral
- Black and grey: stop microswitch

## Application example

Zone valve R292E (3/4") + compact manifold R587B (3/4")  
+ electrothermic actuator R473M





**Dimensions**

R291 - 2-way				Dimensions in combination with electrothermic actuator R473 - R473M			
Codice	G	H [mm]	L [mm]	A [mm]	B [mm]	H1 [mm]	A1 [mm]
R291Y004	3/4"	88	125	49	39	132	93
R291Y005	1"	88	125	49	39	132	93

R292 - 3-way				Dimensions in combination with electrothermic actuator R473 - R473M					
Codice	G	H [mm]	L [mm]	A [mm]	I [mm]	B [mm]	H1 [mm]	A1 [mm]	
R292Y004	3/4"	138	125	49	55	34	182	93	
R292Y005	1"	138	125	49	55	34	182	93	

R292E - 3-way with eccentric tail piece				Dimensions in combination with electrothermic actuator R473 - R473M					
Codice	G	H [mm]	L [mm]	A [mm]	I [mm]	E [mm]	B [mm]	H1 [mm]	A1 [mm]
R292EY004	3/4"	138	125	49	55	5	34	183	94
R292EY005	1"	138	125	49	55	5	34	183	94



## Product specifications

### R291

2-way zone valve in brass, can be motorized. 3/4" or 1" male-male connection with pipe union in axis. Max. working temperature 110 °C. Max. working pressure 10 bar. Can be motorised through the installation of electrothermic actuators, series R473, R473M.

### R292

3-way zone valve in brass, can be motorized. 3/4" or 1" male-male connection with pipe union in axis. Max. working temperature 110 °C. Max. working pressure 10 bar. Can be motorised through the installation of electrothermic actuators, series R473, R473M.

### R292E

3-way zone valve in brass, can be motorized. 3/4" or 1" male-male connection with eccentric pipe unions. Max. working temperature 110 °C. Max. working pressure 10 bar. Can be motorised through the installation of electrothermic actuators, series R473, R473M.

### P15E

Eccentric pipe union in brass, for zone valve R292.

### R193K

Eccentric kit pipe, for R292, R292E and R278 zone valves. Ø 18 mm.

## Additional information

For additional information please check the website [www.giacomini.com](http://www.giacomini.com) or contact the technical service: ☎ +39 0322 923372 📠 +39 0322 923255 ✉ [consulenza.prodotti@giacomini.com](mailto:consulenza.prodotti@giacomini.com)  
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