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Ball zone valves Art.772 – 773 – 774 - 776



100% MADE IN ITALY

Function Pintossi + C motorized zone ball valves with full flow can be used in heating and cooling systems, as well as for sanitary water applications. They are the perfect solution to be used when a thermal regulation divided in more environments is needed, shutting-off or diverting the flow. The regulation can be done connecting the valve to a room thermostat, giving the information of opening/closing, depending on the set temperature.

Besides the valves can be used in central heating systems, solid fuels generators, heat pumps and hybrid systems. Pintossi + C zone valves guarantee high performance levels: reduced dimension and ease of use during installation allow to automatically intercept the fluid in hydraulic water systems and zone heating systems. All the valves are equipped with pipe unions for an easy installation.

Main features:

- No seepage

- Short opening and closing times
- Operational capacity with high differential pressures
- Low head losses thanks to the full bore flow

Product	00 772 10034	3/4''	2 way
range	00 772 10100	1″	2 way
	00 773 10034	3/4''	3 way with by-pass
	00 773 10100	1''	3 way with by-pass
	00 774 10034	3/4''	4 way with by-pass
	00 774 10100	1"	4 way with by-pass
	00 776 10034	3/4''	3 way diverting
	00 776 10100	1''	3 way diverting

Technical	Zone Valve		
	Fluids:	Water or glycol solutions	
specifications	Max. glycole:	30%	
	Max. working temp.:	110°C	
	Max. working pressure:	10 bar	
	Actuator		
	Feed voltage:	230V (50Hz) - 24V (50Hz)	
	Electric control:	2 noints	
	Absorbed nower:	4W	
	Functioning	ON/OFF	
	Protection level	IP 54	
	Rotation time:	45 sec	
	Rotation ande:	90° clockwise	
	Torque.	8Nm	
	Room temperature range:	-10 ÷ 55°C	
	Cable lenght:	80 cm	
Matoriale	Body:	Brass CW617N	
IVIALEITAIS	Ball:	Brass CW617N chromed	
	Stem:	Brass CW614N	
	Unions:	Brass CW617N	
	Seats:	Teflon	
	Gasket:	NBR/EPDM	
Flow direction		I	
	ART. 772	ART. 773	
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ART. 776





Dimensions

ART.	VIE	Ø	Α	В	CH
772	2	3/4''	130	40,5	37
	2	1"	145	40,5	37



ART.	WAY	Ø	Α	B-C	D	E	F	G	CH
773	3 by-pass	³ /4″	135	67,5	70	40	110	12	37
	3 by-pass	1″	145	72,5	75	40	115	15	37
776	3 DEV	³ /4″	135	67,5	70	40	110	12	37
	3 DEV	1″	145	72,5	75	40	115	15	37



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ART.	VIE	Ø	C	
774	4 by-pass	3/4''	133	
	4 by-pass	1"	143	





Actuator Pintossi + C actuator art.770 allows automatic opening/closing operations of the zone valves.

They are available in 230V or 24V versions to meet different system requirements.

The actuator can be very easily installed on all Pintossi+C zone valves by simply inserting the actuator pin on the valve's stem housing and locking it using the dedicated elastic steel clip by pushing the two parts together until they click into place.



Manual mode Pintossi + C valves can be manually open and closed removing the actuator and using a screwdriver. When the screwdriver pin is parallel to the body, the valve is open. When the screwdriver pin in perpendicular to the body, the valve is closed or in by-pass operation.

Installation The actuator can be installed in every position. It's anyway suggested to not install the actuator in upside-down position, due to condensation that may damage the internal electrical components. When the valve is installed inside a small cabinet it is recommended to leave some space between the actuator and the frame of the cabinet in order to grant air circulation and avoid excessive temperature increases.



Flow rate changes



In circuits with zone control in which are installed 2 way zone valves and thermostatic radiator valves on the heating terminals, it is essential to keep under control the flow rate changes and related differential pressure, caused by terminals valves closing. These changes might reach levels that prevents the system to work properly, resulting in pump and boiler problems.

Using a 3 or 4 way valve with by-pass represents an optimal solution for such situations, offsetting the simultaneous closure of many valves at the same time. Alternatively it can be installed a differential pressure by-pass valve, as Pintossi+C art.554.

Utilizzo Gli adattatori Pintossi + C sono raccordi di collegamento per la connessione tra un filetto e un tubo.

In base alla tipologia di adattatore prescelto il collegamento può avvenire verso le seguenti tipologie di tubo:

Art. 690 per collegamento con rame ricotto

Art. 699 per collegamento con rame duro

Art. 691 per collegamento con tubo plastica (PEX)

Art. 696 per collegamento con tubo multistrato (PEX-AL-PEX)

Finitura nichelata o cromata.

	Art.	Direzione	Immagine	Kv (m³/h)
	772	Standard		11,3
	773	Standard		10,5
		By-pass		1,7
	774	Standard	→ → → → → → ← ← ←	10,5
		By-pass		1,4
	776	A		8,8
		В		8,8



Head loss



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domestic water system. The actuator assembled on the stem opens or closes the fluid flow in response to signals received from the room

Pintossi + C 2-way motorized zone valves is a shutting off

valve to control the flow in air conditioning, hydraulic or

thermostat or other devices. 2-way valves can be installed both on the delivery pipe or on the return pipe being **bi-directional** valves

Pintossi + C 3-way motorized zone valve with by-pass can be 3-way valve by-pass

2-way valve

used in traditional heating system together with coplanar manifolds without the need to additionally install a by-pass valve.

When the valve is open all the flow goes in the supply manifold.

When the valve is closed the flow is diverted, through the bypass, in the return line to the boiler, in order to maintain the design system head and avoid damages to the pump.

3-way valves must be installed on the delivery pipe.



Pintossi + C 3-way motorized diverting zone valve can be used in several applications. This valve can be for example installed in thermal solar systems. When the fluid coming from the storage tank has a lower temperature than required the valve diverts the fluid to the boiler. Otherwise can be installed in heat pumps systems or solid fuel heat generator systems. The fluid from the central way can be alternatively directed to one output or the other.

With a 90° rotation the ball diverts the flow of the fluid. During the rotation all 3 ways are connected to each other. At the end of the rotation the diversion is complete.

On the control lever there are two points that show which of the 2 ways is in communication with the common one.







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4-way valve with by-pass

Pintossi + C 4-way motorized zone valve can be used in traditional heating system together with coplanar manifolds without the need to additionally install a by-pass valve. The valve is equipped with a **T fitting** for connecting the by-pass flow to the return circuit. The **adjustable interaxis** of the by-pass connection can be adjust using a CH 27 wrench from 50mm to 60mm, making the valve suitable with most of the manifolds available on the market.



VALVOLA APERTA





Il by-pass può essere facilmente regolato con l'ausilio di un cacciavite a taglio, nella parte inferiore della valvola.

Quando la valvola è aperta tutto il flusso è direzionata nel collettore di mandata.

Quando la valvola è chiusa il flusso viene direzionato nella tubazione di ritorno in caldaia per mantenere la corretta prevalenza e non sottoporre il circolatore a carichi eccessivi o danni permanenti.

Fluid characteristcs

Reference standard for water treatments in heating systems is Norm UNI 8065:2019 which regulates the parameters that must be observed to avoid scale and corrosion phenomena.

In order to grant product warranty, the fluid characteristics must comply with the rules in force in the country of relevance or at least present features not less to the ones prescribed by the Norm UNI 8065:2019.

In particular, minimum standards necessary but not sufficient to control are the following:

Fluid asp	oect: Li	mpid
	PH: B	etween 7 and 8
Iron	(FE): <	: 0,5 mg/kg (< 0,1 mg/kg for steam)
Copper (CU): <	: 0,1 mg/kg (< 0,05 mg/kg for steam)
Antifre	eze: P	assiveted Propylene Glycol

Conditioning: as indicated by the producer

In any case when using antifreeze and conditioning solutions, is required to control and verify the correct compatibility between these substances and the construction materials stated in Pintossi+C technical datasheet.