



Pressure Independent Control Valves (PICV)

BS 925 (PICV)

44

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PRESSURE INDEPENDENT CONTROL VALVE

PN 25

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The pressure independent control valve, combines an automatic control of the flow rate with a control of the valve through an actuator. The valve is able to regulate the flow rate and keep it constant as the differential pressure conditions vary within the hydraulic circuit in which it is installed. The valve can be used with two operating modes:

- independent control of the pressure (with actuator installed) in accordance with the thermal load requirements of the circuit section to be controlled;
- limitation of the flow rate and/or shut-off of the fluid (without actuator or with thermo-electric actuator installed).

Versioni e codici

Code	DN Valve Body Size	Connections	Indicator Colour	Handwheel Colour	WORKING FLOW RATE RANGE [l/h]		WORKING DIFFERENTIAL PRESSURE RANGE [kPa]	
					L (LOW)	H (HIGH)	WITH V1100/ V1200 ACTUATORS	WITHOUT ACTUATOR
BS925 0015	15	G 1/2" M with tail pieces	BLUE	SKY-BLUE	150÷380 l/h	180÷630 l/h	25÷400 kPa	25÷800 kPa
BS9250020	20	G 3/4" M with tail pieces	BLACK	SKY-BLUE	320÷910 l/h	700÷1175 l/h	25÷400 kPa	25÷800 kPa
BS9250025	20	G 1" M with tail pieces	GREEN	SKY-BLUE	290÷1000 l/h	860÷1500 l/h	25÷400 kPa	25÷800 kPa
BS9250032	25	G 1-1/4" M with tail pieces	BLACK	SKY-BLUE	400÷4700 l/h		U/A	25÷400 kPa

Accessories:

- V1100 - Thermo-electric Actuator normally closed 230V
- V1200 - Thermo-electric Actuator normally closed 24V

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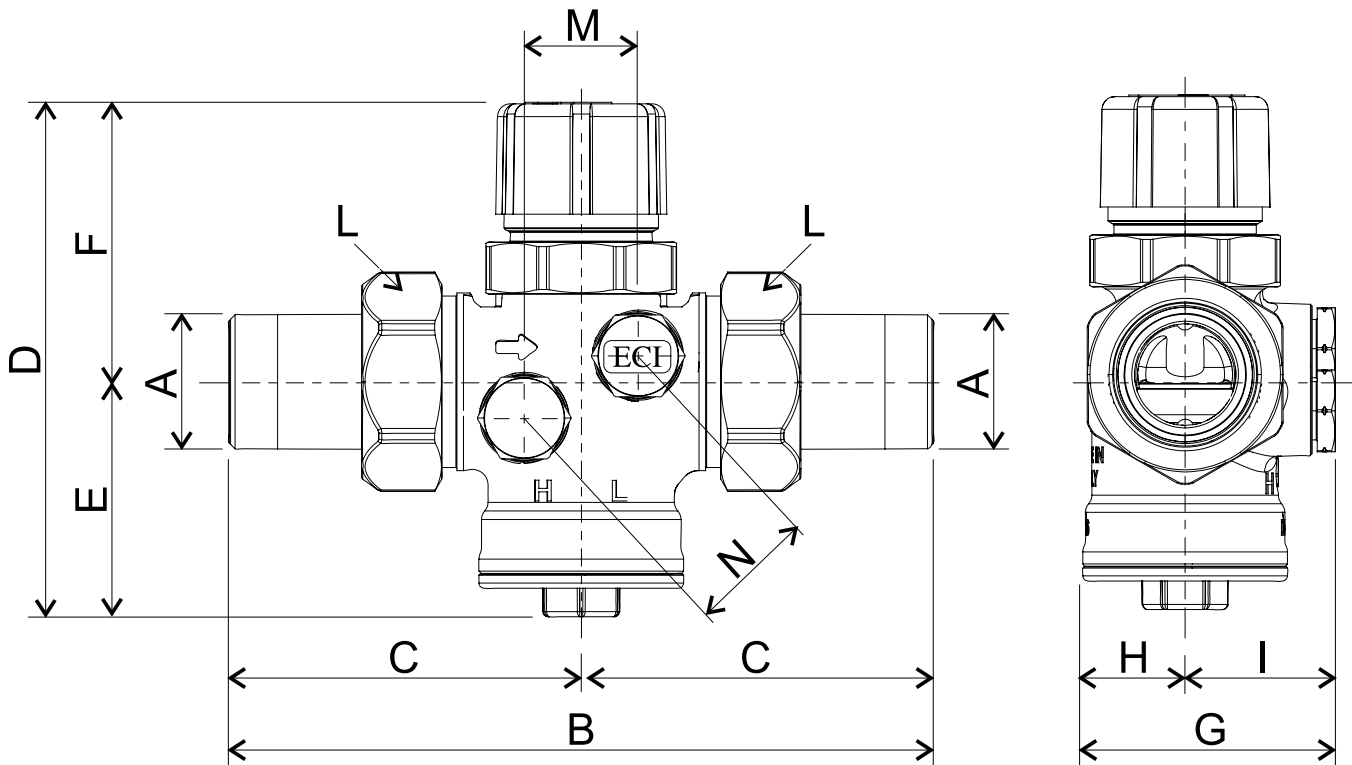
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Dimensions (mm)

DN Valve Body Size	A Connections	B	C	D	E	F	G	H	I	L	M	Weight(KGS)
15	G 1/2" M	128	64	99	45	54	49	20	29	ch.30	22	0.625
20	G 3/4" M	136	68	99	45	54	49	20	29	ch.38	22	0.78
20	G 1" M	142	71	99	45	54	49	20	29	ch.38	22	0.825
25	G 1.1/4" M	165	83	111	52	59	65	30	35	ch.53	27	1.56

Technical data:

- Fluids: water, glycol solutions (max. 50 % glycol)
- Temperature range: 5÷120 °C
- Room temperature range: 1÷50 °C
- Max. working pressure: 25 bar (2,5 MPa)
- Working differential pressure range: see table at pag.1
- Working flow rate range: see table at pag.1
- Regulation precision: ± 10 % regulated value
- Leakage rate (according to ISO 5208): class A, no leakage
- Connections for pressure outlets: G 1/4" F
- Actuator connection: M30 x 1,5 mm

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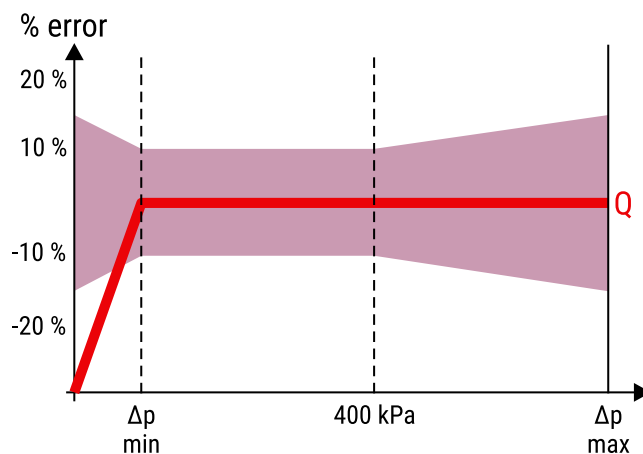
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Materials:	
DESCRIPTION	MATERIAL
Body	Brass CW602n - UNI EN 12165
Bonnet	Brass CW602n - UNI EN 12165
Tail Pieces	Brass CW617N - UNI EN 12165
Regulator Stem & Piston	Stainless Steel AISI 302
Spring	Stainless Steel AISI 302
Membrane	EPDM
Stopper	EPDM
O-Ring	EPDM
Bonnet Seperator	PA66-GF30



Operation

Through the manual handwheel it is possible to isolate the circuit section controlled by the valve. Turn the knob clockwise to close the handwheel;

counterclockwise to open it.

- with handwheel closed the complete flow shut-off is obtained;
- with handwheel open the flow rate limitation function is obtained at the preset value (see paragraph "Flow rate presetting").

The same function can also be obtained automatically by installing a thermoelectric actuator of the ON/OFF type, suitably electrically connected:

- with thermo-electric actuator closed the complete flow shut-off is obtained;
- with thermo-electric actuator open the flow rate stabilization function is obtained at the preset value (see paragraph "Flow rate presetting").

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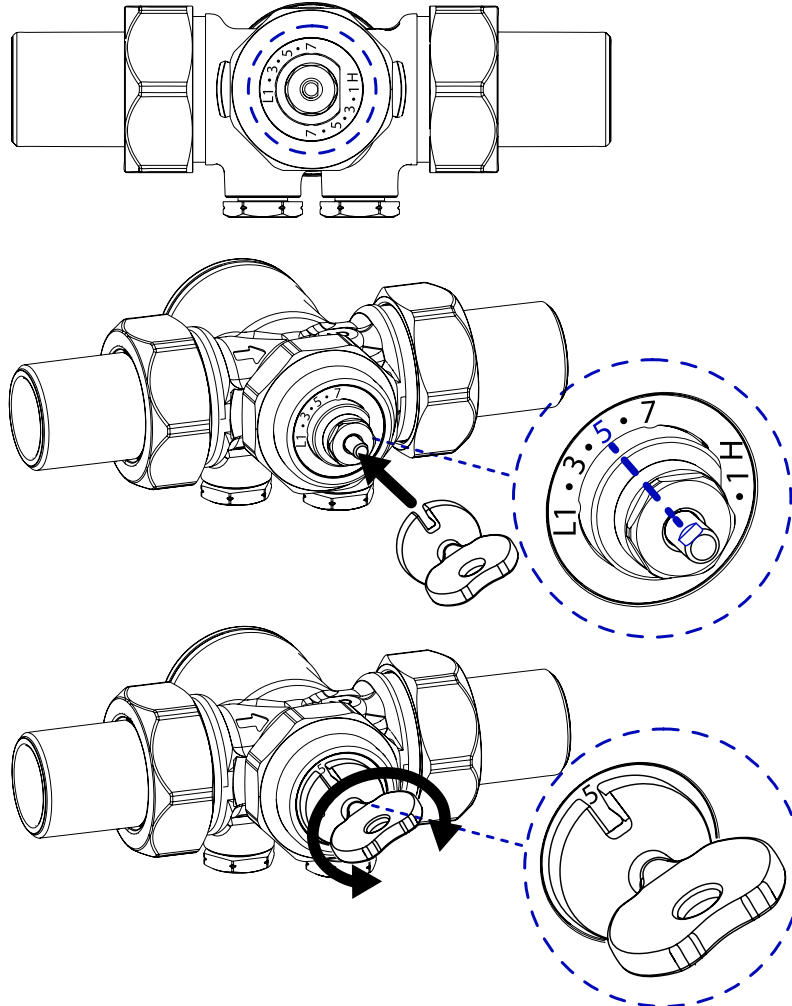
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Flow-rate presetting



The BS9250015/20/25 valves are equipped with a double regulation scale of the flow rate:

- **L (LOW)**: for low flow rate
- **H (HIGH)**: for high flow rate

To set the valve adjustment based on the desired flow rate, use the **regulation key included in the package** and turn the valve stem clockwise or counterclockwise until reaching the desired value printed on the plastic disk of the valve and identifiable through the table below. The transition from one regulation scale to the other is possible at any time, even during the operation of the system; in this way it is possible to choose the desired flow rate value without having to replace the valve.

The BS9250032 valves, instead, are equipped with a single regulation scale of the flow rate.

Example:

Design flow rate: 300 l/h
Piping DN15



Valve required: BS9250015
Regulation scale: L (LOW)
Position: 5

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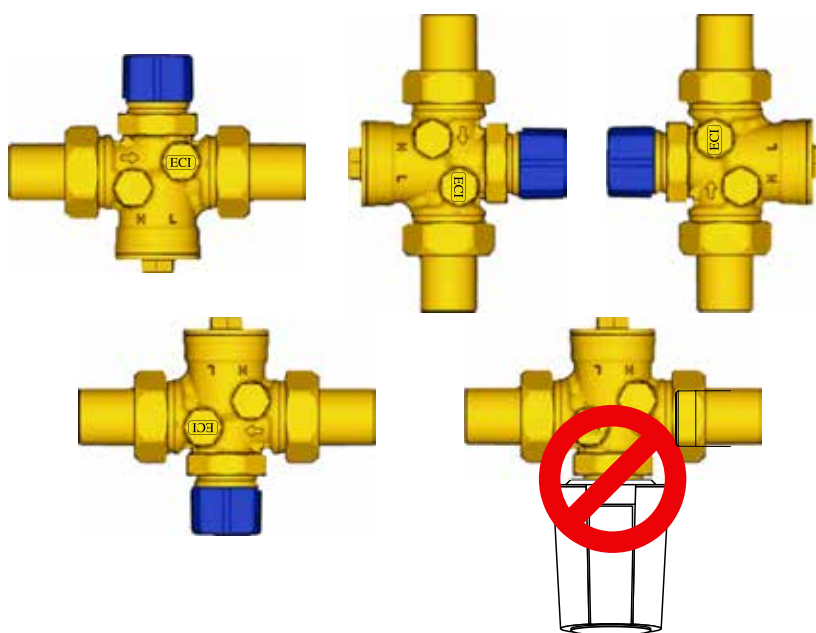
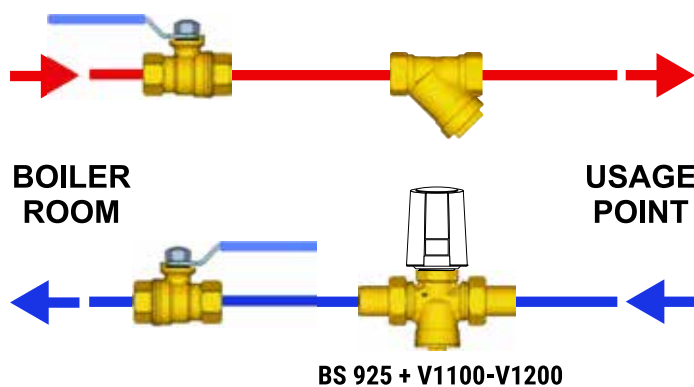
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Flow-rate presetting

Product Code	DN	Connections	WORKING DIFFERENTIAL PRESSURE RANGE [kPa]		WORKING FLOW RATE RANGE [l/h]										
			WITH V1100/V1200 Actuators	Without Actuator	Regulation	MIN	1	2	3	4	5	6	7	8	9
BS925 0015	15	G 1/2"M	25÷400 kPa	25÷800 kPa	L (LOW)	-	150	175	200	250	300	340	380	-	-
					H (HIGH)	-	180	250	350	440	500	570	630	-	-
BS9250020	20	G 3/4"M	25÷400 kPa	25÷800 kPa	L (LOW)	-	320	400	520	640	770	870	910	-	-
					H (HIGH)	-	700	820	910	970	1030	1100	1175	-	-
BS9250025	20	G 1"M	25÷400 kPa	25÷800 kPa	L (LOW)	-	290	400	500	640	730	900	1000	-	-
					H (HIGH)	-	860	900	940	1110	1270	1330	1500	-	-
BS9250032	25	G 1-1/4"M	U/	25÷400 kPa	A	-	400	670	1200	1800	2300	3000	3600	4300	4700

Installation



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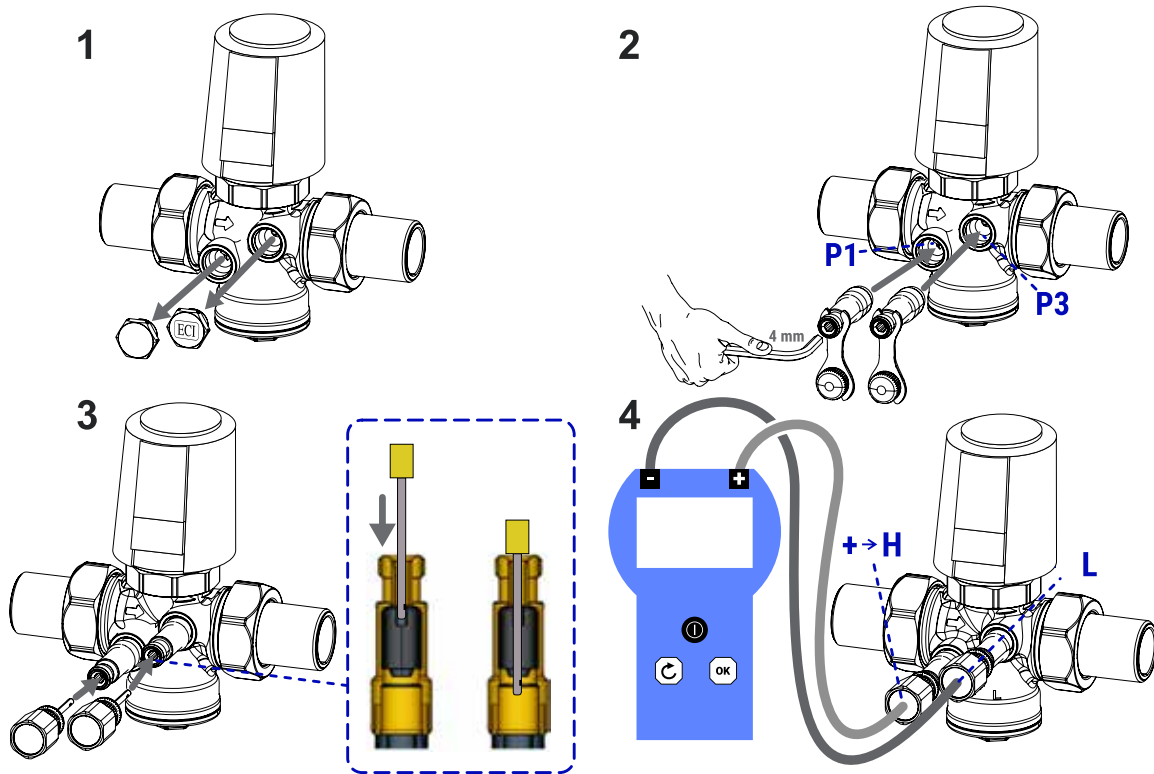
Installation of the pressure outlets and flow rate verification through the differential pressure gauge

The valve is equipped with connections for the pressure outlets to be installed with the system switched off and not under pressure.

Using the differential pressure gauge and its probes suitably housed in the pressure outlets, it is possible to measure the Δp of the valve (P1-P3) during normal operation.

⚠ WARNINGS:

Water leakage may occur through the pressure outlets during the insertion of the probes.
Wear protective clothing and goggles to prevent personal injury during pressure measurement.
Do not use lubricants on the probes to facilitate insertion into the outlets. If necessary, wet the probes with clean water.
Do not leave the probes in the pressure outlet longer than necessary, as this could cause leakage.



⚠ 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 ECI may not be held liable.

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

♻ 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.

ⓘ Additional information. For more information, go to the website www.ecivalve.it or contact us via email info@ecivalve.it. This document provides only general indications. The information included in this technical sheet do not exempt the user from strictly complying with the rules and good practice standards in force.

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