Technical Data Sheet

Bypass Valves

VB

14/04/2021

Function

Bypass valves are overpressure valves enabling to avoid that the differential pressure between two points of a circuit exceeds a limit value. Inside them there is an obturator which, under normal working conditions, remains closed thanks to the thrust of a spring. Should it be subject to a force higher than the one exerted by the spring due to a pressure rise, it opens and allows to relieve the pressure in excess, letting the water circulate through the bypass circuit. Bypass valves are essential in all distribution systems with 2-way zone valves or heating bodies with adjustment valves, which enable, under certain circumstances, to bypass a circuit. The recirculation guaranteed by the valve prevents the pump from working under improper conditions, thus avoiding imbalances among circuits operating in parallel and annoying noise caused by the increased speed of the fluid flowing through the adjustment devices.

Technical data

Max. working pressure:	10 bar
Max. differential pressure:	1 bar
Max. working temperature:	120 °C
Adjustment range:	0.2 ÷ 0.7 bar
Thermometer range:	0 ÷ 80 °C
Working fluids:	water in compliance with UNI 8065:2019

Materials

Valve

Valve body:	CW 614 N – DW UNI-EN 12164:2016
Seat:	CW 617 N – DW UNI-EN 12165:2016
Gaskets:	Peroxide cured EPDM
Steel parts:	AISI 302 stainless steel

Accessories

Brass parts:	CW 614 N – DW UNI-EN 12164:2016; CW 617 N – DW UNI-EN 12165:2016
Pipe:	Nickel-plated semi-hard brass
Gaskets:	Peroxide cured EPDM

Thermometer

Case and stem:	Galvanised steel
Cover:	Transparent plastic material
Thermometric element:	Bimetallic spiral spring

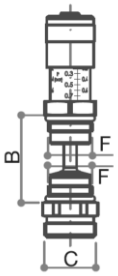
Surface treatment

Nickel-plating

Dimensional Drawings

VB 755

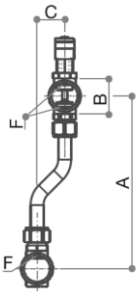
Bypass valve.



Code	Size	A	B	C	D	F
68512109	CD G1”	-	41	W24x19	-	G1/2
68512110	CD G1”1/4	-	51	W24x19	-	G1/2

VB 750

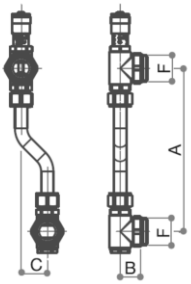
Bypass valve.



Code	Size	A	B	C	D	F
68512101	CD G1”x200mm	200	41	32	-	G1/2
68512115	CD G1”x250mm	250	41	32	-	G1/2
68512102	CD G1”1/4x200mm	200	51	32	-	G1/2

VB 751

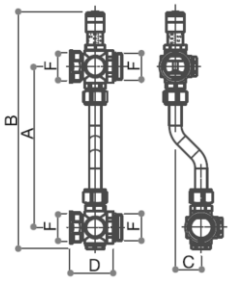
Bypass valve with terminals for manifold.



Code	Size	A	B	C	D	F
68512103	G1”x200mm	200	25	32	-	G1”
68512116	G1”x250mm	250	25	32	-	G1”

VB 752

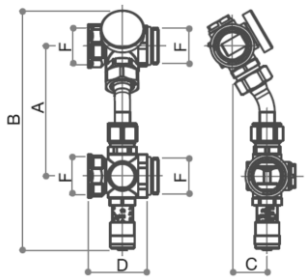
Bypass valve with union fittings for ball valve with or without thermometer.



Code	Size	A	B	C	D	F
68512105	G1”x200mm	200	295	32	54	G1”
68512117	G1”x250mm	250	295	32	54	G1”

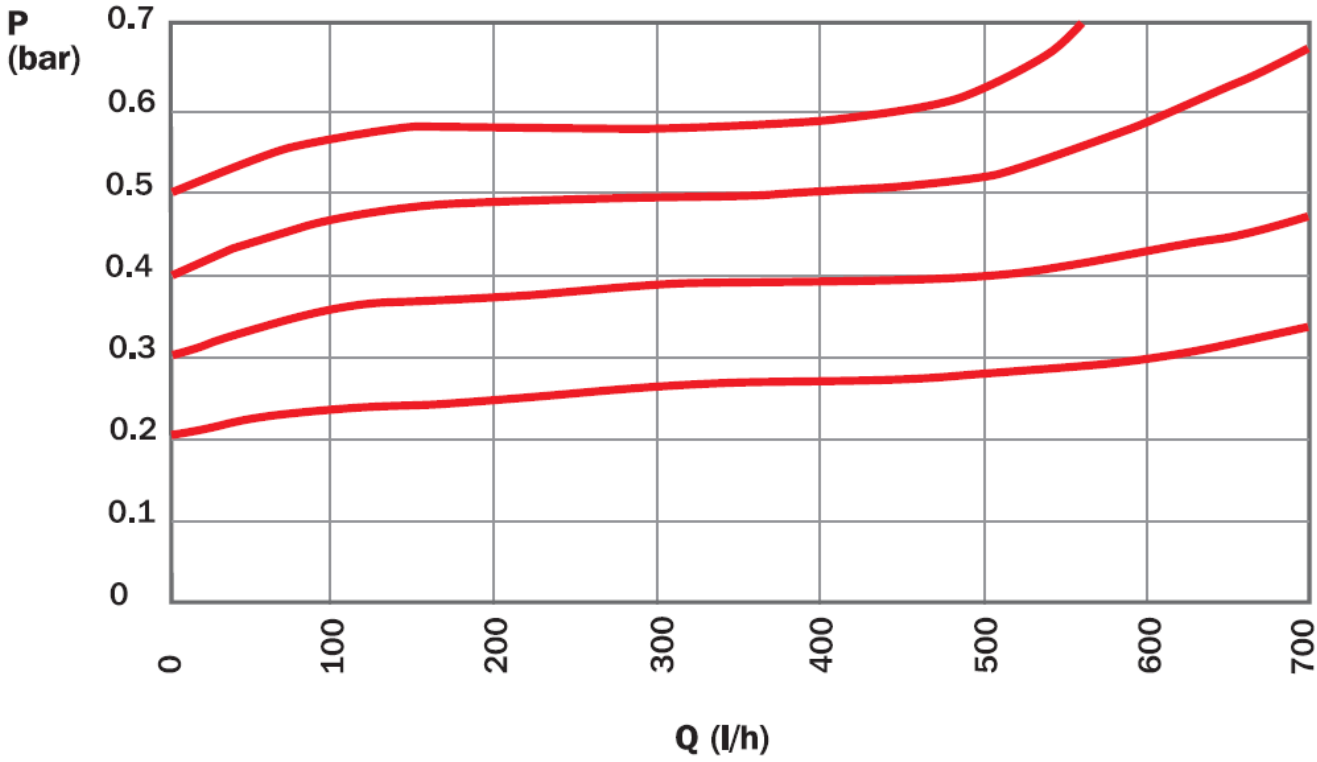
VB 753

Bypass valve for high temperature kit GM 1192.

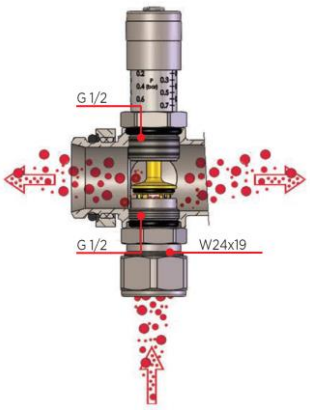


Code	Size	A	B	C	D	F
68512108	G 1”	120	223	32	54	G1”

Flow Rate Diagram



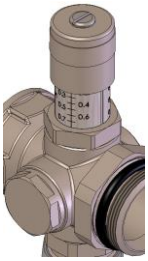
Working Instructions



Insert the bypass valve between the inlet and the outlet pipe downstream of the circulation pump.
As shown in the drawing, the valve consists of two parts:

- Valve seat with inlet fitting;
- Adjusting element with scale from 0.2 to 0.7 bar.

WARNING: the fitting must be exclusively installed on the fluid inlet side.



Adjustment:

- Turn the knob until the edge is aligned with the required value on the graduated scale marked on the valve body: clockwise to increase the opening differential pressure or anticlockwise to decrease it.

Item Specifications

VB 755

Differential bypass valve. G1/2 M connections to manifold. Cod. 68512109 interaxis 41 mm; Cod. 68512110 interaxis 51 mm. Range of adjustment from 0.2 to 0.7 bar. Brass parts in CW614N and CW617N. Gaskets in peroxide cured EPDM. Parts in stainless steel. W24x19 connection. Max. working temperature 120 °C, max. pressure 10 bar, differential pressure 1 bar.

VB 750

Differential bypass valve. G1/2 M connections to manifold. Cod. 68512101 and 68512102 interaxis 200 mm; Cod. 68512115 interaxis 250 mm. Offset 32 mm. Range of adjustment from 0.2 to 0.7 bar. Brass parts in CW614N and CW617N. Gaskets in peroxide cured EPDM. Parts in stainless steel. Nickel-plated copper pipe Ø15 mm. Max. working temperature 120 °C, max. pressure 10 bar, differential pressure 1 bar.

VB 751

Differential bypass valve with G1" M terminals for manifolds. Cod. 68512103 interaxis 200 mm; Cod. 68512116 interaxis 250 mm. Offset 32 mm. Range of adjustment from 0.2 to 0.7 bar. Brass parts in CW614N and CW617N. Gaskets in peroxide cured EPDM. Parts in stainless steel. Nickel-plated copper pipe Ø15 mm. Max. working temperature 120 °C, max. pressure 10 bar, differential pressure 1 bar.

VB 752

Differential bypass valve with G1" M union fittings with locknut for manifolds. Cod. 68512105 interaxis 200 mm; Cod. 68512117 interaxis 250 mm. Offset 32 mm. Range of adjustment from 0.2 to 0.7 bar. Brass parts in CW614N and CW617N. Gaskets in peroxide cured EPDM. Parts in stainless steel. Nickel-plated copper pipe Ø15 mm. Max. working temperature 120 °C, max. pressure 10 bar, differential pressure 1 bar.

VB 753

Differential bypass valve with G1" M union fittings with locknut for manifolds. Interaxis 120 mm. Offset 32 mm. Range of adjustment from 0.2 to 0.7 bar. Brass parts in CW614N and CW617N. Gaskets in peroxide cured EPDM. Parts in stainless steel. Nickel-plated copper pipe Ø15 mm. Thermometer range 0 ÷ 80 °C. Max. working temperature 120 °C, max. pressure 10 bar, differential pressure 1 bar.

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