BY-PASS VALVE FOR DIFFERENTIAL PRESSURE

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EN
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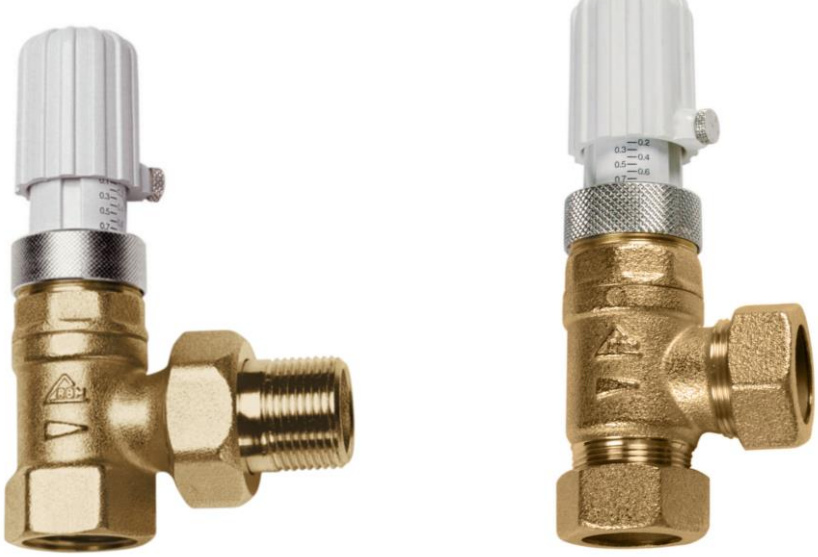


PRODUCTION RANGE

Code	Size	Couplings	Calibration field [bar]
124.05.00	3/4"	MF UNI-EN-ISO 228	0.1 - 0.7
124.06.00	1”		0.1 - 0.7
124.07.00	1”1/4		0.1 - 0.7
124.22.00	Ø 22	Ø 22 mm copper pipe fittings	0.1 - 0.7

DESCRIPTION

THE PURPOSE

Bypass valves are normally used on delivery piping to transfer part of the fluid when the flow is interrupted by one of more motorised and/or self-operated shut-off valves (thermostatic valves, zone and two-way control valves, etc.). The bypass valve eliminates the risk of a gradual increase in speed of the fluid in open utilities and, at the same time, avoids wear and excessive vibrations and noise.

The valves are calibrated by turning the control knob to loosen the compression spring.
The differential pressure can be set to a maximum of 0.7 bar.
The values are shown on a slide with markers (e.g. 0.7 = 70 kPa).

The calibration value must be equal to the sum of the pressure drops between the point where the valve is located and the terminal at the least convenient distance.

In the case of systems with more than one distribution zone, it is advisable to install several bypass valves for the purpose of a more sensitive adjustment.

PRODUCTION RANGE

The bypass valves are available in the 3/4” – 1” – 1”1/4 sizes for iron pipes and in the version with Ø22 connections for copper pipes.

USE

The bypass valves are to be installed:
- Between the uprights for primary distribution;
- On the primary distribution manifolds.

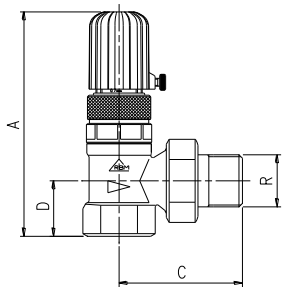
CONSTRUCTION FEATURES

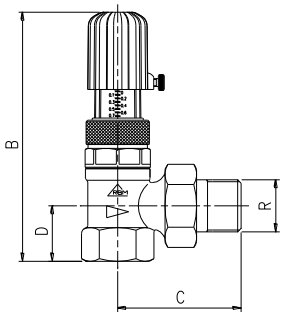
• Body:	Brass
• Seals:	Elastomer
• Hand wheel:	Shockproof ABS
• Calibration spring:	AISI 302 stainless steel
• Connections for copper pipes:	Ø 22 mm
• Connections for steel pipes:	Threaded connections MF UNI-EN-ISO 228

TECHNICAL FEATURES

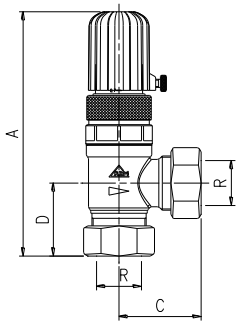
• Usable fluid:	Water, Water + Glycol 50%
• Max operating temperature:	110°C
• Max operating pressure:	10 bar (1000 kPa)
• Calibration field:	0.1 - 0.7 bar.

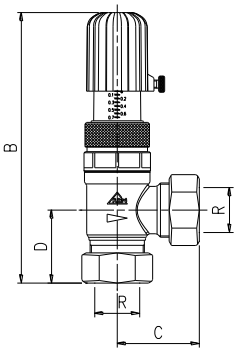
DIMENSIONAL FEATURES





Bypass valve with connections for steel pipe

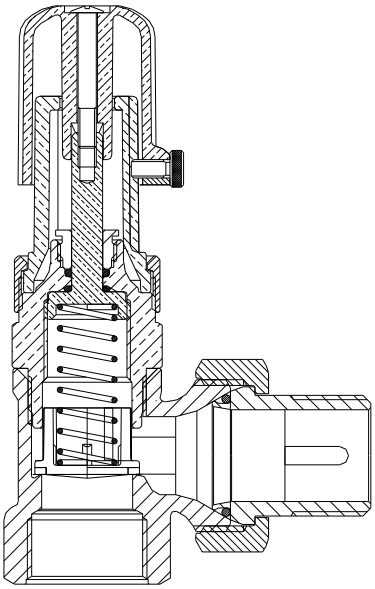




Bypass valve with connections for copper pipe

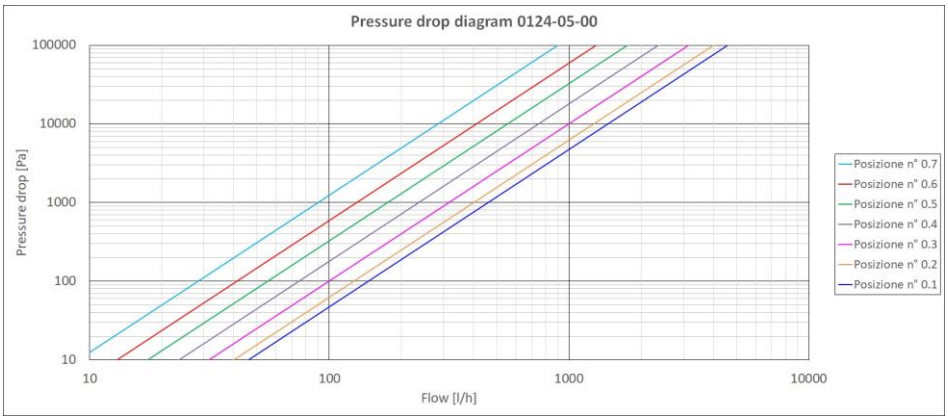
Connections	R [mm]	A* [mm]	B** [mm]	C [mm]	D [mm]
Steel pipes	3/4”	113.0	126.0	62.4	28.5
	1”	119.0	132.0	68.0	33.0
	1”1/4	149.0	172.0	81.0	39.9
Copper pipes	Ø 22	121.0	134.0	40.7	36.2

* Hand wheel fully closed
** Hand wheel fully open



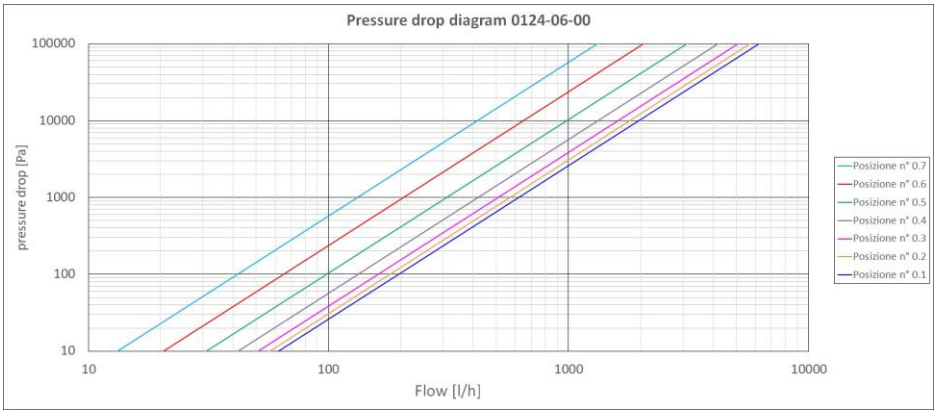
FLUID DYNAMICS FEATURES

Pressure drop diagram



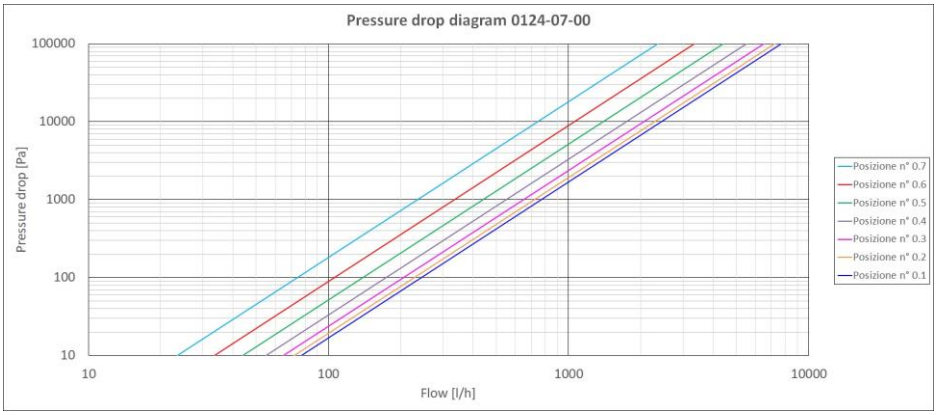
3/4” bypass valve for steel pipes and valve with connections for **Ø22 mm** copper pipe fittings;

Position no.r	Kvs m³/h
0.7	0.90
0.6	1.30
0.5	1.75
0.4	2.36
0.3	3.15
0.2	4.00
0.1	4.60



1” bypass valve for steel pipes.

Position no.r	Kvs m³/h
0.7	1.32
0.6	2.05
0.5	3.11
0.4	4.20
0.3	5.10
0.2	5.70
0.1	6.20

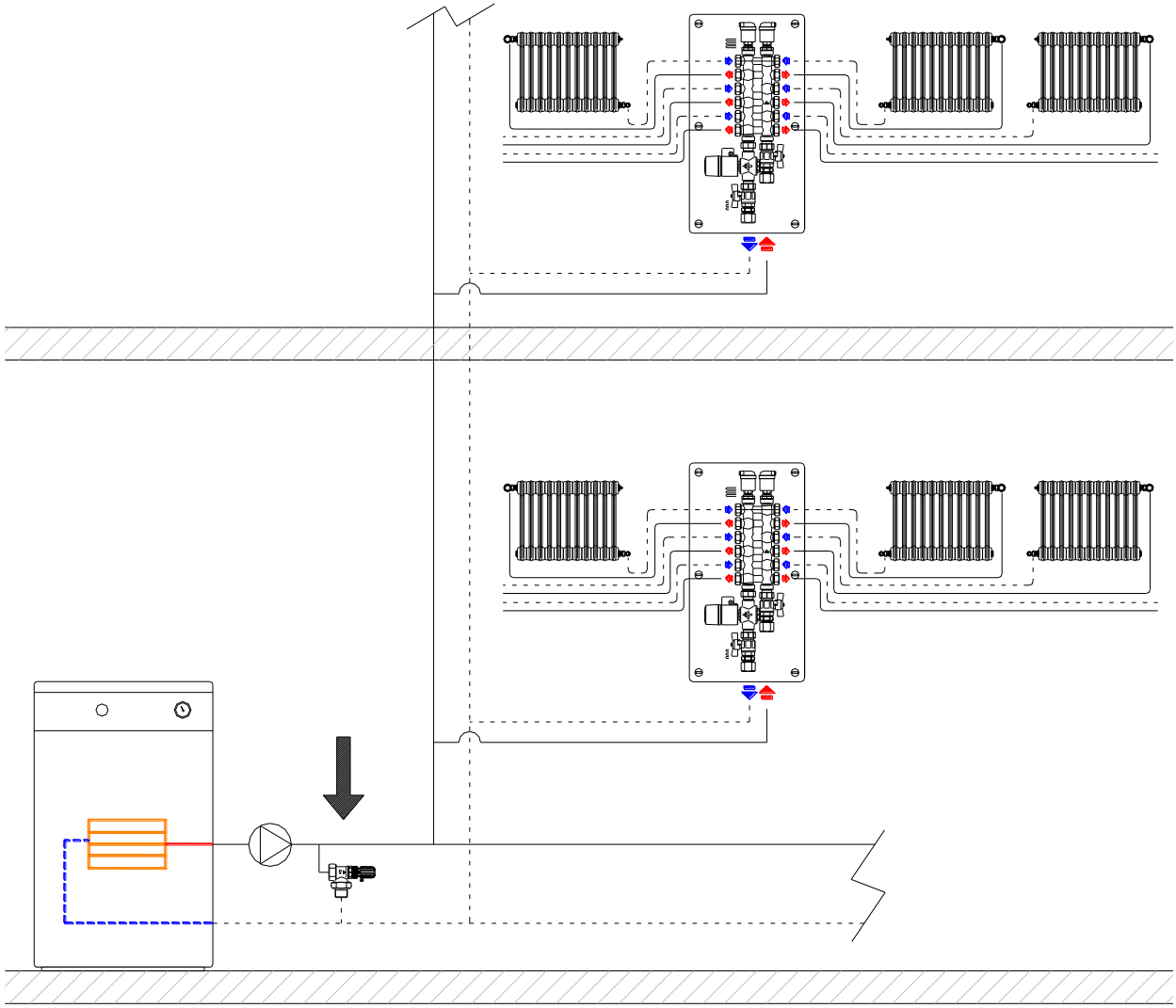


1”1/4 bypass valve for steel pipes.

Position no.r	Kvs m³/h
0.7	2.35
0.6	3.35
0.5	4.40
0.4	5.50
0.3	6.50
0.2	7.20
0.1	7.70

TYPICAL APPLICATIONS

Bypass valve installed in a boiler room to ensure correct circulation of the boiler circuit in the case of total or partial shut-off of the manifold / thermostatic valves.



SPECIFICATIONS

124 SERIES

Settable bypass valve for total or partial overflow of thermal circuits. Brass body. Elastomer seals. AISI 302 stainless steel spring. Shockproof ABS hand wheel. Graduated scale on knob. Threaded connections UNI-EN-ISO 228 (or compression ones for copper pipe). Max operating pressure 110°C. Max. operating pressure 10 bar. Calibration field 0.1-0.7 bar. Setting unit 0.1 bar.
Available sizes 3/4" ÷ 1"1/4 (or compression for Ø 22 copper pipe).

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