

Balanced 2-way Control Valve type G1FBN

Nodular cast iron, PN 25, DN 15 – 80 mm

O-2.5.03.01-H

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APPLICATIONS

Balanced control valves type G1FBN are designed for regulating hot water, steam and hot oil systems. Balanced valves are used in installations where the system pressure necessitates a closing force greater than available in the actuator programme for a standard single seated valve, and where the leakage rate for a double-seated valve is unacceptable. The valves are used in conjunction with our temperature or pressure differential regulators for controlling industrial processes, district or central heating plants or marine installations.

DESIGN

The valve components - spindle, seat, cone - are made of stainless steel. The valve body is made of nodular cast iron EN-GJS-400-15 with flanges drilled according to EN 1092-2 or ANSI B16.5 Class 150. The thread for the actuator connection is G1B ISO 228. The valves are single-seated. The leakage rate is less than 0.05% of the full flow (according to VDI/VDE 2174).

FUNCTION

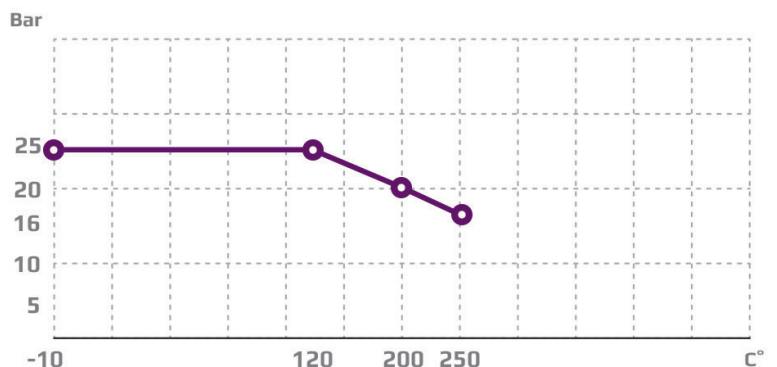
Without an actuator being connected, the valve is held in open position by means of a spring. With force on the spindle the valve will close. In connection with our thermostats, pneumatic or electric actuators, the valves will close at rising temperatures. For cooling circuits the valve can be used in conjunction with a reverse acting electric actuator. Alternatively a reverse acting double seated valve can be used with our self-acting thermostats. The quadratic characteristic will not cease until the flow has dropped below 4% of the full flow.

FEATURES

- Simple design secures reliable controls.
- Location of the pack box in the actuator makes the valve service friendly
- Reliable and secure due to internal parts of stainless steel
- Low leakage rate reduces the risk of overheating

PRESSURE/TEMPERATURE DIAGRAM

According to DIN 2401



TECHNICAL DATA

Materials:

- Valve body	Nodular cast iron EN-GJS-400-15
- Components	Stainless steel
- Nuts, bolts	24 CrMo 5/A4
- Gasket	Stainless steel foil
- O-ring	A75H FEPM 75 CO

Nominal pressure	PN 25
Seating	Single-seated, balanced

Flow characteristic	Quadratic
Leakage rate	$\leq 0,05\%$ of Kvs
Regulating capability	Kvs/Kvr > 25

Flanges drilled according to	EN 1092-2 PN 25 or ANSI B16.5 Class 150
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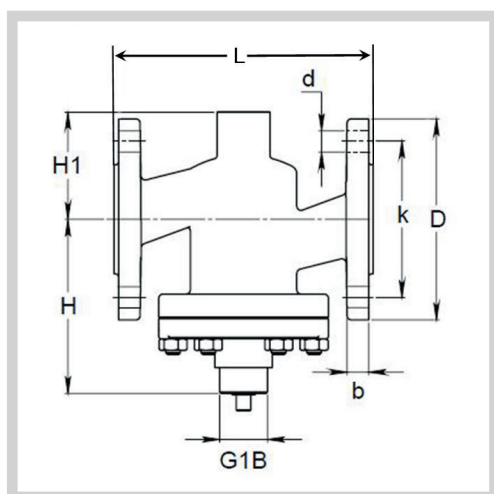
Pressure balanced valve

Subject to change without notice.

MOUNTING

The valve can be installed with vertical as well as horizontal spindles. For valve temperatures of max. 170 °C, the thermostat/ actuator can be fitted below or above the valve. For valve mounted with thermostats in media temperatures above 170 °C, a cooling unit has to be applied with connection downwards (please refer to data sheet for thermostat accessories). For electric actuators a high temperature adaptor must be used (please refer to data sheets for the electric actuators).

DIMENSION SKETCH



Type	L mm	H mm	H1 mm	D (dia.) mm	b mm	k (dia.) mm	d mm dia. (number)
15 G1FBN	130	101	80	95	14	65	14x(4)
20 G1FBN	150	107	85	105	16	75	14x(4)
25 G1FBN	160	112	70	115	16	85	14x(4)
32 G1FBN	180	122	75	140	18	100	18x(4)
40 G1FBN	200	125	85	150	19	110	18x(4)
50 G1FBN	230	140	95	165	19	125	18x(4)
65 G1FBN	290	154	110	185	19	145	18x(4)
80 G1FBN	310	164	115	200	19	160	19x(8)

SPECIFICATIONS

Type	Flange connection DN in mm	Opening mm	k_{vs} -value m^3/h	Lifting height mm	Weight kg
15 G1FBN	15	15	4	7.5	4
20 G1FBN	20	20	6.3	7.5	5
25 G1FBN	25	25	10	9	6
32 G1FBN	32	32	16	10	9
40 G1FBN	40	40	25	11	13
50 G1FBN	50	50	35	11.5	16
65 G1FBN	65	65	58	14.5	23
80 G1FBN	80	80	80	16	38