

3-way Control Valve type G3F

Nodular cast iron, PN 16, DN 80 – 150 mm

0-2.5.09-E

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APPLICATIONS

Control valves type G3F are designed for regulating of water, lubricating oil and other liquid media and can be mounted in the pipe system as either mixing or diverting valves. However when mounting as a diverting valve the pressure drop is increased, compared with mounting as a mixing valve. See "Important note" under technical data. The valves are used in conjunction with our temperature regulators for controlling industrial processes, district and central heating plants and marine installations.

DESIGN

The valve components - seats and cone - are made of alubronze, the spindle is 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 connection thread for the actuator is G1B ISO 228. The valves have two balanced single seats and are designed for tight closure. The leakage rate is less than 0.5% of the full flow (according to VDI/VDE 2174). [Tight between port 1(AB) og 3(B) is optional.]

FUNCTION

Without an actuator being installed, connection 2-1 is fully open and connection 3-1 completely closed, by means of a spring. By increasing pressure on the spindle, the opening of the ports changes proportionally to the travel of the spindle, and when the spindle is pressed to the bottom, connection 3-1 is fully open and connection 2-1 completely closed.

TECHNICAL DATA

Materials:

- Valve body	Nodular cast iron EN-GJS-400-15
- Seats and cone	Alu Bronze CuAL10Fe5Ni5
- Spindle	Stainless steel
- O-ring	90 NBR
- Gasket	Reinz-AFM34
Nominal pressure	PN 16
Seating	Two balanced single seats
Flow characteristic	Almost linear
Flanges drilled according to	EN 1092-2 PN 16 or ANSI B16.5 Class 150
Counter flanges	DIN 2633
Regulating capability	Kvs/Kvr > 25

For regulating of process- and central heating plants

Important note

In case the valves are applied as diverting valves, the pressure drop will increase by 35% and the k_{vs} -value will decrease by 14% as against mixing valves.

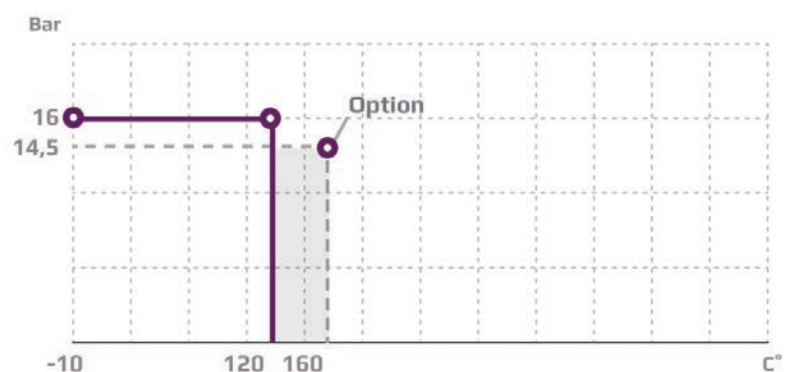
Subject to change without notice.

FEATURES

- Can be used for both mixing and diverting
- Simple design secures reliable controls and reduces costly downtime.
- Location of the pack box in the actuator makes the valve service friendly

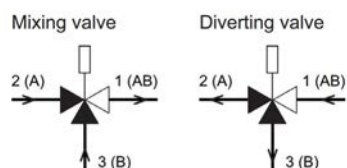
PRESSURE/TEMPERATURE DIAGRAM

According to DIN 2401



PORT NUMBERING

The ports of valves type G3F are marked with the figures 1, 2 and 3. The letters in parentheses refer to the corresponding internationally adapted designations.



Port 1(AB)
Port 2(A)
Port 3(B)

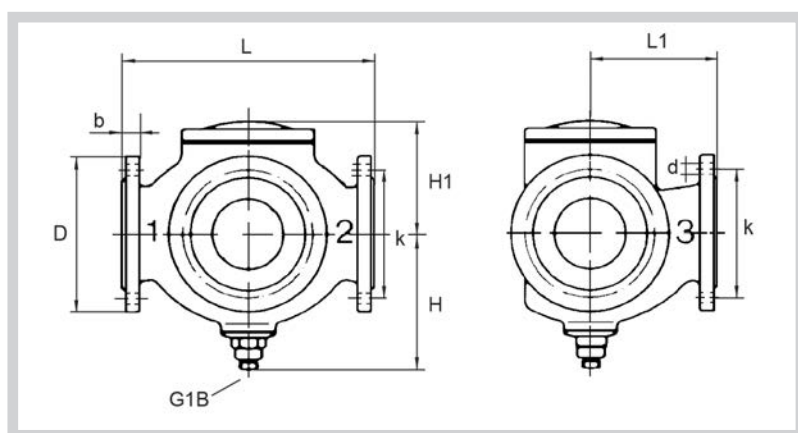
common port always open
closes at load on spindle
opens at load on spindle



MOUNTING

The valves can be installed vertical as well as horizontal. The valves must be mounted in a way that the valve motor will be exposed to a minimum of moisture and unnecessary vibrations. Free height above / below the valve must be minimum 400 mm for mounting and operation of the AVM/AVF 234 motor, otherwise minimum 745 mm for pneumatic actuators.

DIMENSION SKETCH



Type	L mm	L1 mm	H mm	H1 mm	D (dia.) mm	b mm	k (dia.) mm	d mm dia. (number)
80 G3F	310	155	180	127	200	19	160	19x(8)
100 G3F	350	175	195	141	220	19	180	19x(8)
125 G3F	400	240	245	171	250	19	210	19x(8)
150 G3F	480	270	280	189	285	24	240	23x(8)

SPECIFICATIONS

Type	Flange connection DN in mm	Opening mm	Mixing valve k_{vs} -value m^3/h	Divertng valve k_{vs} -value m^3/h	Lifting height mm	Weight kg
80 G3F	80	80	80	69	11	35
100 G3F	100	100	125	108	13	44
125 G3F	125	125	215	185	18	72
150 G3F	150	150	310	267	20	111