

2-way Control Valves type G2F

Nodular cast iron, PN 16, DN 100 – 150 mm

2.5.05-D

GB-1

Characteristics

- Nominal pressure PN 16
- Regulating capability $\frac{k_{vs}}{k_{vr}} > 25$
- Double seated
- Characteristic - almost quadratic

Applications

Control valves type G2F are designed for use in regulating high pressure hot water, steam and heat transfer oil.

The valves are used in conjunction with temperature or pressure differential regulators for controlling district or central heating plants, industrial processes or marine installations.

Dimensioning

For sizing of control valves and selection of actuators please see "Quick Choice" data sheet no. 9.0.00.

Design

The valve components – spindle, seats and 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. The connection thread for the actuator is G1B ISO 228. The valves are double-seated and designed for tight closure. The leakage rate is less than 0.5% of the full flow (according to VDI/VDE 2174).

Quality assurance

All valves are manufactured under an ISO 9001 certification, and are pressure and leakage tested before shipment.

For marine applications the valves can be supplied with relevant test certificates from recognized classification societies.

Function

Without the actuator being connected, the valve is held in open position by means of a spring. With pressure on the spindle the valve will close.

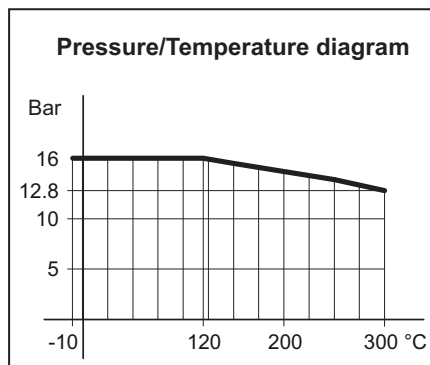
In connection with our thermostats or electronic actuators, the valves will close at rising temperatures. For cooling circuits a reverse acting valve can be used.

The quadratic characteristic will not cease, until the flow has dropped below 4% of the full flow.



Technical data

| | |
|------------------------------|------------------------------------|
| Materials: | |
| - Valve body | Nodular cast iron EN-GJS-400-15 |
| - Components | Stainless steel |
| - Bolts, nuts | 24 CrMo 4/A4 |
| Nominal pressure | PN 16 |
| Seating | Double seated |
| Valve characteristic | Almost quadratic |
| Regulating capability | $\frac{k_{vs}}{k_{vr}} > 25$ |
| Function | Closing with pressure on spindle |
| Leakage rate | $\leq 0.5\%$ of k_{vs} |
| Temperature range | See pressure/temperature diagram |
| Mounting | See page 2 |
| Flanges drilled according to | EN 1092-2 |
| Counter flanges | DIN 2633 |
| Colour | Blue |



Specification

| Type | Flange connection DN in mm | Opening mm | k_{vs} -value m ³ /h | Lifting height mm | Weight kg |
|---------|-------------------------------|---------------|--------------------------------------|----------------------|--------------|
| 100 G2F | 100 | 100 | 125 | 20 | 32 |
| 125 G2F | 125 | 125 | 215 | 20 | 50 |
| 150 G2F | 150 | 150 | 310 | 20 | 70 |

Subject to change without notice.

2-way Control Valves type G2F

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GB-2

Definition of k_{vs} -value

The k_{vs} -value is identical to the IEC flow coefficient k_v and defined as the water flow rate in m³/h through the fully open valve by a constant differential pressure, Δp_v , of 1 bar.

Mounting

Up to 170°C the valve can be installed vertically as well as horizontally. For media temperature above 170°C, a cooling unit of type KS has to be applied. It must then be installed with electric actuator/ thermostat downwards, and according to the following instructions:

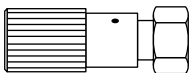
| Valve temperature | Cooling unit | Suitable for |
|-------------------|--------------|---------------|
| 170°C - 250°C | KS-4 | All actuators |
| 250°C - 300°C | KS-5 | Thermostats |
| 250°C - 300°C | KS-6 | El. actuators |

Strainer

It is recommended to use a strainer in front of the control valve if the liquid contains suspended particles.

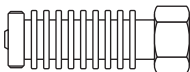
Accessories

Manual adjusting device



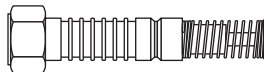
The device has a built-in stuffing box. For sealing and manual operation of valves when an actuator has not been fitted, e.g. during periods of construction.

Cooling unit KS-4



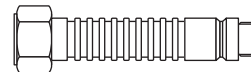
Cooling unit protecting the stuffing box of the electric actuator / thermostat. To be applied at valve temperatures between 170°C and 250°C.

Cooling unit KS-5

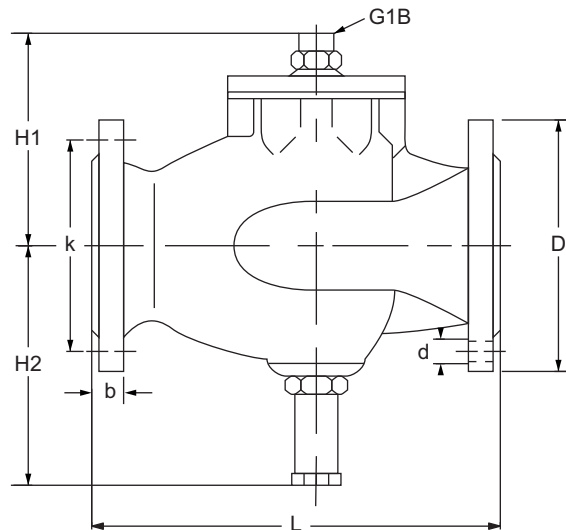


Cooling units with built-in bellow glands, replacing stuffing box of thermostat (KS-5) or electric valve actuator (KS-6). Must be applied at valve temperatures above 250°C.

Cooling unit KS-6



Dimension sketch



Dimensions

| Type | L mm | H1 mm | H2 mm | D (dia.) mm | b mm | k (dia.) mm | d mm dia. (number) |
|---------|---------|----------|----------|----------------|---------|----------------|-----------------------|
| 100 G2F | 350 | 185 | 209 | 220 | 19 | 180 | 19x(8) |
| 125 G2F | 400 | 205 | 224 | 250 | 19 | 210 | 19x(8) |
| 150 G2F | 400 | 240 | 244 | 285 | 19 | 240 | 23x(8) |

Subject to changes without notice.