

# 2-way Control Valve type G2FR

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

0-2.5.07-E

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## TECHNICAL DATA

### Materials:

- Valve body	Nodular cast iron EN-GJS-400-15
- Trim	Stainless steel
- Bolts, nuts	24 CrMo 4/A4
- Gasket	Stainless steel foil - Copper

Nominal pressure	PN 16
Seating	Double seated
Flow characteristic	Almost quadratic
Function	Opens by pressing the spindle
Leakage rate	$\leq 0.5\%$ of Kvs
Regulating capability	Kvs/Kvr > 25

Flanges	EN 1092-2 PN 16
Counter flanges	DIN 2633

Reverse acting (normally closed)  
For cooling water and lubrications

## APPLICATIONS

Valves type G2FR are mainly intended for control of cooling systems. The valves are used in conjunction with temperature- or pressure differential regulators. As the reverse acting valves are held in closed position by means of a built-in spring, the max. differential pressure,  $\Delta p_L$ , against which a valve can close depends on the spring and when opening the valve, the actuator has to overcome the spring force. On the next page please find the max. allowable values of  $\Delta p_L$  as well as the max. allowable inlet pressures for opening the valves,  $p_{1max}$  for various actuator forces.

## 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).

## FUNCTION

### REVERSE ACTING

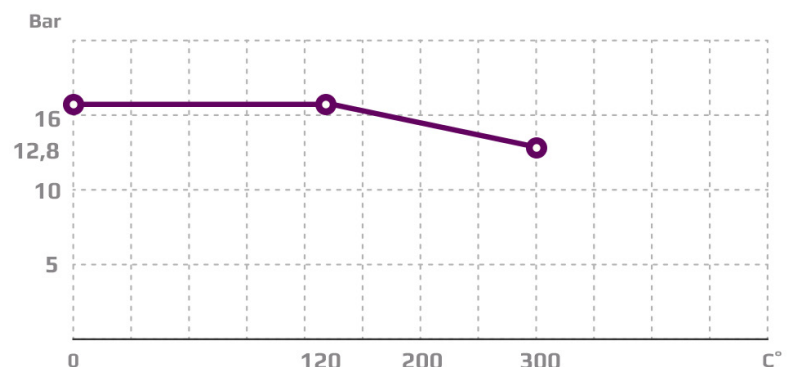
Without an actuator being connected, the valve is held in closed position by means of a spring. With pressure on the spindle the valve opens. In connection with our actuators, the valves act as "cooling" valves, i.e. they open at rising temperatures. The linear characteristic will not cease until the 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

## PRESSURE/TEMPERATURE DIAGRAM

According to DIN 2401



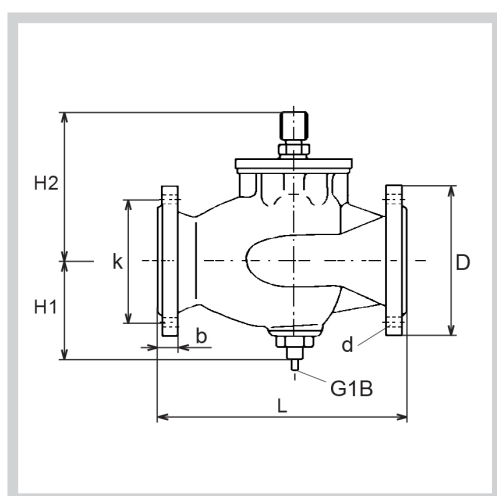
Subject to change without notice.

## 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	H1 mm	H2 mm	D (dia.) mm	b mm	k (dia.) mm	d mm dia. (number)
100 G2FR	350	145	240	220	24	180	18x(8)
125 G2FR	400	160	260	250	26	210	18x(8)
150 G2FR	400	180	293	285	26	240	22x(8)

## SPECIFICATIONS

Type	Flange connection Dn in mm	Opening mm	$k_{vs}$ -value m <sup>3</sup> /h	Lifting height mm	Max. $\Delta p_L$ bar	Actuat. force N	Weight kg
100 G2FR	100	100	125	20	12.1	800	39
125 G2FR	125	125	215	20	9	800	53
150 G2FR	150	150	310	20	7.5	800	73