

# 2-way Control Valves type G1F

## Nodular cast iron, PN 25, DN 15/4 – 50 mm

2.5.02-I

GB-1

### Characteristics

- Nominal pressure PN 25
- Regulating capability  $\frac{k_{vs}}{k_{vr}} > 25$
- Single-seated, tight closing
- Quadratic characteristic

### Applications

Control valves type G1F are designed for regulating hot water, steam and hot oil systems.

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.

### Dimensioning

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

### Design

The valve components - spindle, seat 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 or ANSI B16.5 Class 150. The thread for the actuator connection is G1B ISO 228.

The valves are single-seated and designed for tight closure. The leakage rate is less than 0.05% of the full flow (according to VDI/VDE 2174).



### 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.

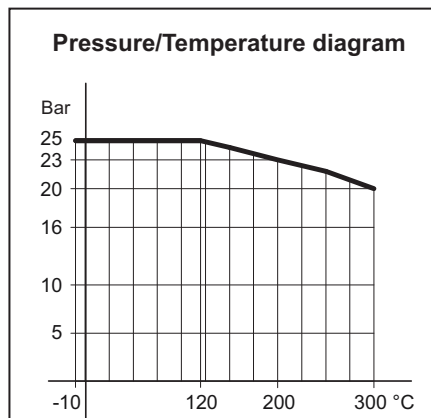
In connection with our thermostats or electronic actuators, the valves will close at rising temperatures. For cooling circuits a reverse acting valve can be used.

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

### 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.



### Technical data

Materials:

- Valve body	Nodular cast iron EN-GJS-400-15
- Components	Stainless steel
- Nuts, bolts	24 CrMo 4/A4
Nominal pressure	PN 25
Seating	Single-seated
Valve characteristic	Quadratic
Regulating capability	$\frac{k_{vs}}{k_{vr}} > 25$
Leakage rate	$\leq 0.05\%$ of $k_{vs}$
Temperature range	See pressure/temperature diagram
Mounting	See page 2
Flanges drilled according to	EN 1092-2 or ANSI B16.5 Class 150
Colour	Blue

Subject to changes without notice.

Specifications					
Type	Flange connection DN in mm	Opening mm	$k_{vs}$ -value m <sup>3</sup> /h	Lifting height mm	Weight kg
15/4 G1F	15	4	0.20	6	3.0
15/6 G1F	15	6	0.45	6	3.0
15/9 G1F	15	9	0.95	6	3.1
15/12 G1F	15	12	1.7	6	3.1
15 G1F	15	15	2.75	6	3.1
20 G1F	20	20	5	6.5	4.2
25 G1F	25	25	7.5	7	5.5
32 G1F	32	32	12.5	8	8.1
40 G1F	40	40	20	9	9.7
50 G1F	50	50	30	10	14.0

# 2-way Control Valves type G1F

## Nodular cast iron, PN 25, DN 15/4 – 50 mm

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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  $m^3/h$  through the fully open valve by a constant differential pressure,  $\Delta p_V$ , 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 actuator/thermostats downwards, and according to the following instructions:

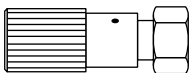
Valve Temperature	Cooling Unit	Suitable for
170°C - 250°C	KS-4	All actuators
250°C - 300°C	KS-5	Thermostats
250°C - 300°C	KS-6	Valve Motors

### Strainer

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

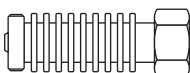
### Accessories

#### Manual Adjusting Device

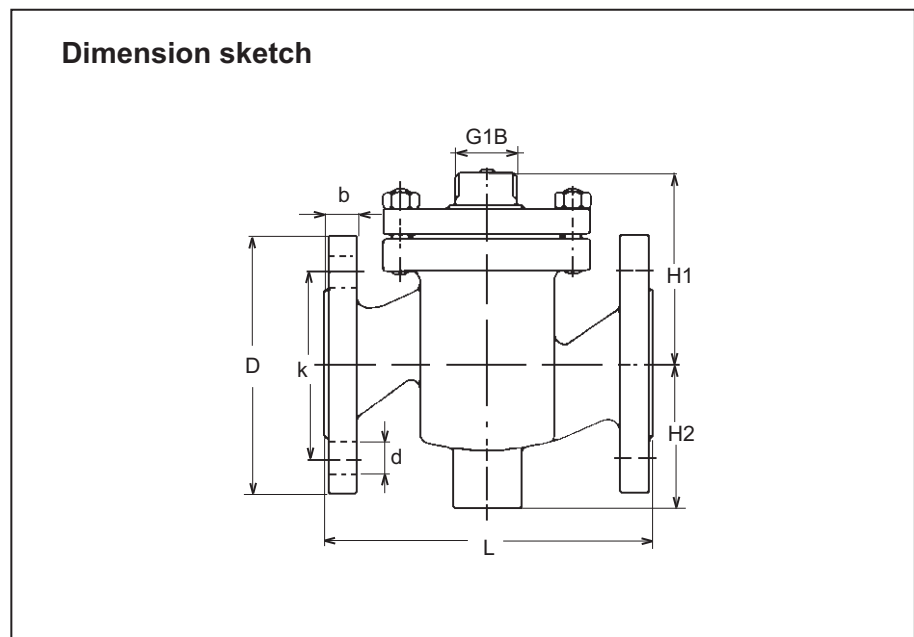


The device has a built-in stuffing box. For sealing and manual operation of valves when an actuator has not been fitted, e.g. during periods of construction.

#### Cooling Unit KS-4



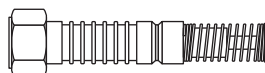
Cooling unit protecting the stuffing box of the motor/thermostat. To be applied at valve temperatures between 170°C and 250°C.



### Dimensions

Type	L	H1	H2	b	EN-1092-2			ANSI B16.5 Class 150		
					D (dia.)	k (dia.)	d mm (number)	D (dia.)	k (dia.)	d mm (number)
	mm	mm	mm	mm	mm	mm	(number)	mm	mm	(number)
15/4 G1F	130	80	60	14	95	65	14x(4)	89	61	16x(4)
15/6 G1F	130	80	60	14	95	65	14x(4)	89	61	16x(4)
15/9 G1F	130	80	60	14	95	65	14x(4)	89	61	16x(4)
15/12 G1F	130	80	60	14	95	65	14x(4)	89	61	16x(4)
15 G1F	130	80	60	14	95	65	14x(4)	89	61	16x(4)
20 G1F	150	85	65	16	105	75	14x(4)	98	70	16x(4)
25 G1F	160	95	70	16	115	85	14x(4)	108	79	16x(4)
32 G1F	180	105	75	18	140	100	18x(4)	118	89	16x(4)
40 G1F	200	110	85	18	150	110	18x(4)	127	98	16x(4)
50 G1F	230	125	95	20	165	125	18x(4)	153	121	19x(4)

#### Cooling Unit KS-5



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

#### Cooling Unit KS-6



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