

# Balanced 2-way Control Valve type H1FB

Cast steel, PN 40, DN 25 – 80 mm

0-2.4.03-I

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## TECHNICAL DATA

<b>Materials:</b>	
- Valve body	Cast steel GP240GH (GS-C25)
- Components	Stainless steel
- Gasket	Copper and graphite Reinz-AFM34
- Bellows	Stainless steel W.1.4541
- Bolts, nuts	24 CrMo 4/A4
Nominal pressure	PN 40
Seating	Single seated, tight closing
Flow characteristic	Quadratic
Leakage rate	$\leq 0.05\%$ of Kvs
Regulating capability	Kvs/Kvr > 25
Flanges	EN 1092-1 PN 40
Pressure balanced	

## APPLICATIONS

The pressure balanced control valves type H1FB are designed for regulating hot water, steam, hot oil etc. and can be used if a single-seated valve is required, but where the system pressure and valve size, out of regard for the pressure force of the actuator, necessitate a pressure balanced valve. The valves are installed combined with one of our temperature regulators in control systems in domestic premises, district heating systems, industrial processes or marine installations.

## DESIGN

The valve components - spindle, seat, cone and bellows - are made of stainless steel. The bellows for balancing the pressure is fitted on the valve spindle and it reduces the power necessary for closing the valve, as the upstream pressure of the medium through the hollow valve spindle acts outside and the pressure after the valve acts inside the bellows system. The valve body is made of cast steel GP240GH (GS-C25) with connection flanges drilled according to EN 1092-1. The connection thread for the actuator is G1B ISO 228. The valves are single seated and tight closing. The leakage is less than 0.05% of full flow (see VDI/VDE 2174).

## FUNCTION

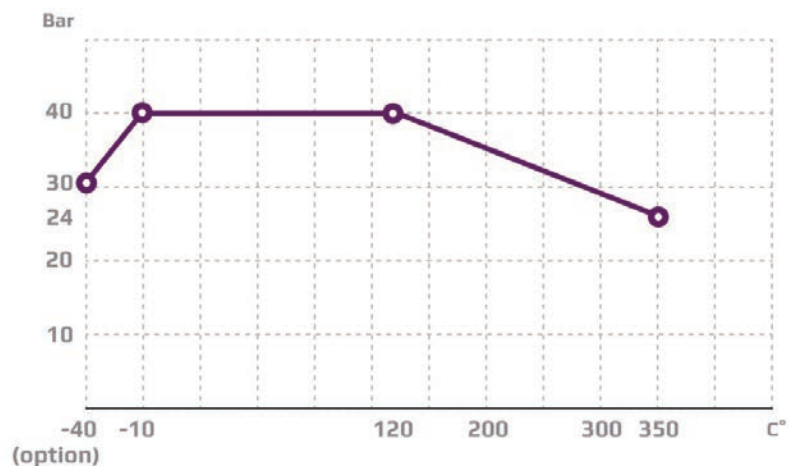
Without an actuator being connected, the valve is held in open position by means of a spring and the bellows system. With pressure on the spindle the valve will close. In connection with our thermostats, the valves will close at rising temperatures. For cooling circuits the valve can be used in conjunction with a reverse acting electric actuator. Alternatively a reverse acting 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



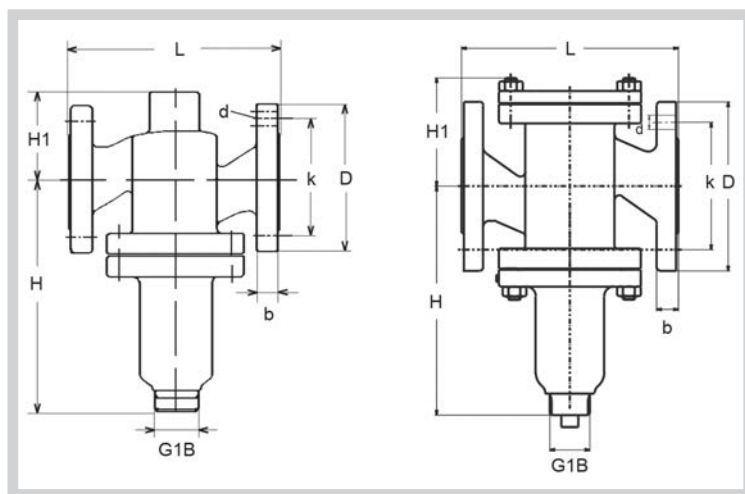
Subject to change without notice.

## 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	b mm	D (dia.) mm	k (dia.) mm	d mm dia. (number)
25 H1FB	160	180	70	18	115	85	14x(4)
32 H1FB	180	195	75	18	140	100	18x(4)
40 H1FB	200	205	85	18	150	110	18x(4)
50 H1FB	230	225	95	20	165	125	18x(4)
65 H1FB	290	260	110	22	185	145	18x(8)
80 H1FB	310	275	115	24	200	160	18x(8)

## SPECIFICATIONS

Type	Flange connection DN in mm	Opening (mm)	$k_{vs}$ -value m <sup>3</sup> /h	Lifting height (mm)	Weight (kg)
25 H1FB	25	25	7.5	7	6
32 H1FB	32	32	12.5	8	9
40 H1FB	40	40	20	9	13
50 H1FB	50	50	30	10	16
65 H1FB	65	65	50	13	23
80 H1FB	80	80	80	16	38