

# Balanced 2-way Control Valve type H1FBN

Cast steel, PN 40, DN 15 – 80 mm

0-2.4.03.01-F

Page 1 of 2



## TECHNICAL DATA

### Materials:

- Valve body	Cast steel GP240GH (G5-C25)
- Components	Stainless steel
- Nuts, bolts	24 CrMo 5/A4
- Gasket	Stainless steel foil
- O-ring	A75H FEPM

Nominal pressure PN 40  
Seating Single seated, balanced

Flow characteristic Quadratic  
Leakage rate  $\leq 0.05\%$  of Kvs  
Regulating capability Kvs/Kvr  $> 25$

Flanges drilled according to EN 1092-1 PN 40  
Pressure balanced valve

## APPLICATIONS

Balanced control valves type H1FBN are designed for regulating hot water, steam and hot oil systems. Balanced valves are used in installations where the system pressure necessitates a closing force greater than available in the actuator programme for a standard single seated valve, and where the leakage rate for a double-seated valve is unacceptable. 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.

## DESIGN

The valve components - spindle, seat, cone - are made of stainless steel. The valve body is made of cast steel GP240GH (G5-C25). The thread for the actuator connection is G1B ISO 228. The valves are single-seated. The leakage rate is less than 0.05% of the full flow (according to VDI/VDE 2174).

## FUNCTION

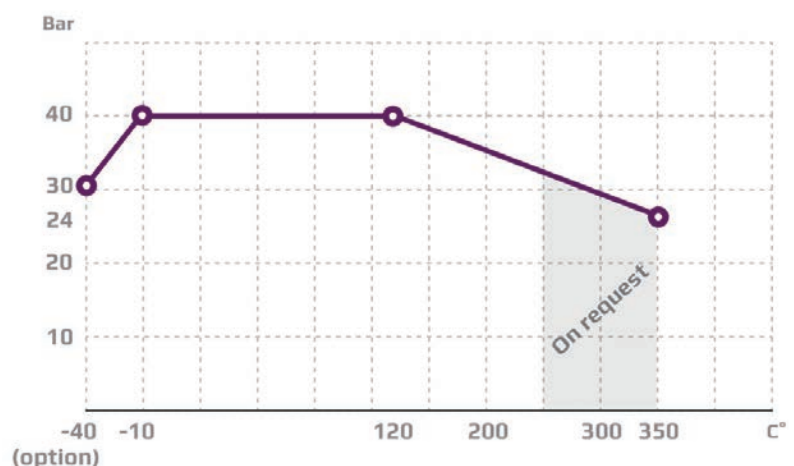
Without an actuator being connected, the valve is held in open position by means of a spring. With force on the spindle the valve will close. In connection with our thermostats, pneumatic or electric actuators, the valves will close at rising temperatures. For cooling circuits the valve can be used in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



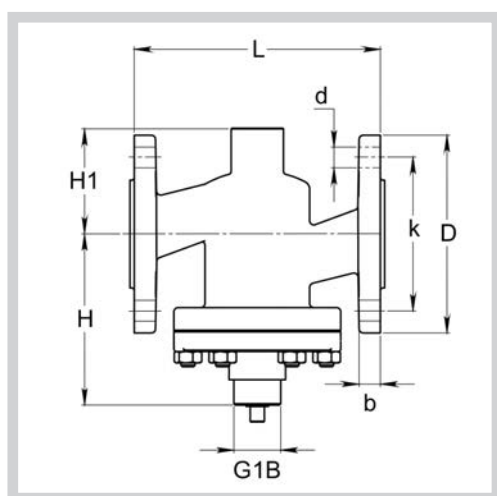
Subject to change without notice.

## 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)
15 H1FB	130	101	80	14	95	65	14x(4)
20 H1FB	150	107	85	16	105	75	14x(4)
25 H1FB	160	112	70	16	115	85	14x(4)
32 H1FB	180	122	75	18	140	100	18x(4)
40 H1FB	200	125	85	19	150	110	18x(4)
50 H1FB	230	140	95	19	165	125	18x(4)
65 H1FB	290	154	110	19	185	145	18x(8)
80 H1FB	310	164	115	19	200	160	19x(8)

## SPECIFICATIONS

Type	Flange connection DN in mm	Opening (mm)	$k_{vs}$ -value $m^3/h$	Lifting height (mm)	Weight (kg)
15 H1FBN	15	15	4	7.5	4
20 H1FBN	20	20	6.3	7.5	5
25 H1FBN	25	25	10	9	6
32 H1FBN	32	32	16	10	9
40 H1FBN	40	40	25	11	13
50 H1FBN	50	50	35	11.5	16
65 H1FBN	65	65	58	14.5	23
80 H1FBN	80	80	80	16	38