

# 3-way Control Valve type H3F

Cast steel, PN 16, DN 80 – 150 mm

0-2.4.08-B

Page 1 of 2



## TECHNICAL DATA

<b>Materials:</b>	
- Valve body	Cast steel GP240GH (GS-C25)
- Seats and cone	Alu Bronze CuAL10Fe5Ni5
- Spindle	Stainless steel (W.no. 1.4436)
- Gasket	Reinz-AFM34
- O-ring	90 NBR
Nominal pressure	PN 16
Seating	2 balanced single seats
Flow characteristic	Almost linear
Temperature range	Max. 120 °C (160°C option)
Leakage rate	≤ 0.5% of Kvs
Regulating capability	Kvs/Kvr > 25
Flanges drilled according to	EN 1092-2 PN 16 or ANSI B16.5 Class 150
Counter flanges	DIN 2633

**For regulating of process- and central heating plants**

### Important note

In case the valves are applied as diverting valves, the pressure drop will increase by 35% and the kvs-value will decrease by 14% as against mixing valves.

Subject to change without notice.

## APPLICATIONS

Control valves type H3F are designed for regulating of hot water, lubricating oil and other liquid media and can be mounted in the pipe system as either mixing or diverting valves. However when mounting as a diverting valve the pressure drop is increased, compared with mounting as a mixing valve. See "Important note" under technical data. The valves are used in conjunction with our temperature regulators for controlling industrial processes, district and central heating plants and marine installations.

## DESIGN

The valve components - seats and cone - are made of alu bronze, the spindle is made of stainless steel. The valve body is made of cast steel GP240GH (GS-C25) with flanges drilled according to EN 1092-2 or ANSI B16.5 Class 150. The connection thread for the actuator is G1B ISO 228. The valves have two balanced single seats. The leakage rate is less than 0.5% of the full flow (according to VDI/VDE 2174). Tight between port 1(AB) og 3(B) is optional.

## FUNCTION

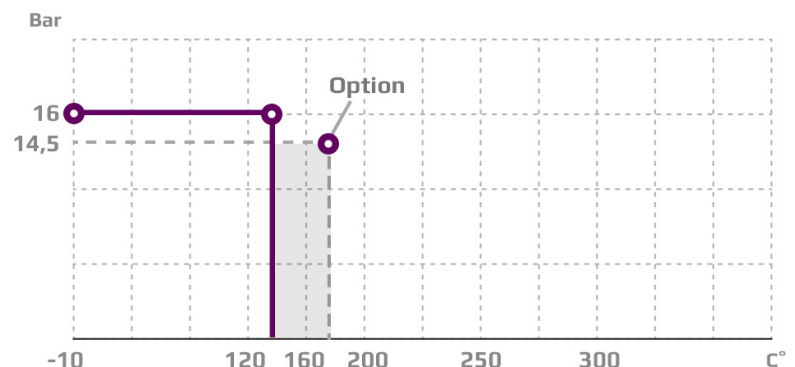
Without an actuator being installed, connection 2-1 is fully open and connection 3-1 completely closed, by means of a spring. By increasing pressure on the spindle, the opening of the ports changes proportionally to the travel of the spindle, and when the spindle is pressed to the bottom, connection 3-1 is fully open and connection 2-1 completely closed.

## FEATURES

- Can be used for both mixing and diverting
- Simple design secures reliable controls and reduces costly downtime.
- Location of the pack box in the actuator makes the valve service friendly

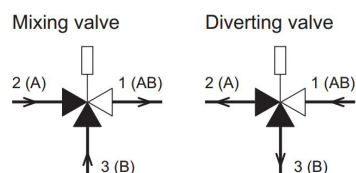
## PRESSURE/TEMPERATURE DIAGRAM

According to DIN 2401



### PORT NUMBERING

The ports of valves type H3F are marked with the figures 1, 2 and 3. The letters in parentheses refer to the corresponding internationally adapted designations.



Port 1(AB)  
Port 2(A)  
Port 3(B)

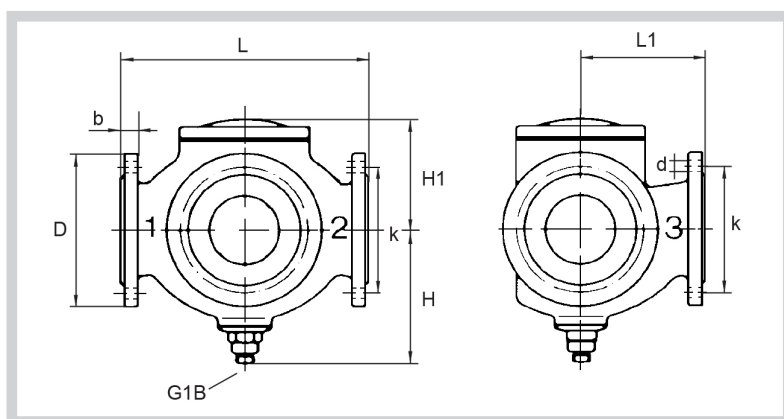
common port always open  
closes at load on spindle  
opens at load on spindle



### MOUNTING

The valve must always be mounted with vertical spindle, preferable with the motorconnection over the valve. Besides, the valve should be mounted so that the valve motor is exposed to a minimum of moisture and unnecessary vibrations. Free height above/below the valve must be minimum 400 mm for mounting and operating of the AVM/AVF 234 motor, otherwise minimum 745 mm for pneumatic actuators.

### DIMENSION SKETCH



Type	L mm	L1 mm	H mm	H1 mm	D (dia.) mm	b mm	k (dia.) mm	d mm dia. (number)
80 H3F	310	155	180	127	200	19	160	19x(8)
100 H3F	350	175	195	141	220	19	180	19x(8)
125 H3F	400	240	245	171	250	21	210	19x(8)
150 H3F	480	270	280	189	285	22	240	23x(8)

### SPECIFICATIONS

Type	Flange connection DN in mm	Opening mm	Mixing value $k_{vs}$ -value $m^3/h$	Diverting value $k_{vs}$ -value $m^3/h$	Lifting height (mm)	Weight (kg)
80 H3F	80	80	80	69	11	35
100 H3F	100	100	125	108	13	44
125 H3F	125	125	215	185	18	72
150H3F	150	150	310	267	20	111