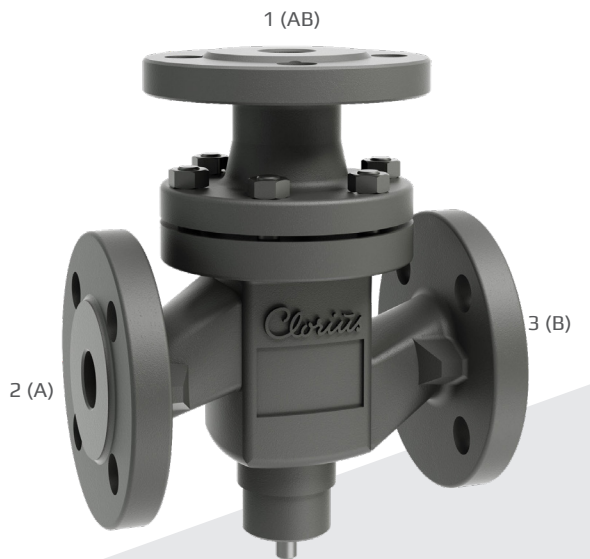


# 3-way Control Valve type H3F

Cast steel, PN 40, DN 20 – 65 mm, Flanged ends

0-2.4.07-L

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## TECHNICAL DATA

<b>Materials:</b>	
- Valve body	Cast steel GP240GH (G5-C25) (W. No. 1.0619)
- Trim	Stainless steel (W. No. 1.4305)
- Bolts, nuts	Steel (24 CrMo 4/A4)
- Gasket	Stainless steel foil and graphite
- O-Ring	70 EPM
Nominal pressure	PN 40
Seating	2 balanced single seats
Flow characteristic	Quadratic/linear
Leakage rate	≤ 0.5% of Kvs
Regulating capability	Kvs/Kvr > 25
Flanges drilled according to	EN 1092-1 PN 40
Counter flanges	DIN 2635
Same Kvs-value as mixing and diverting valve	

Subject to change without notice.

## APPLICATIONS

Control valves type H3F are designed for control of hot oil, water and other liquids and can be installed in pipe systems as mixing or diverting valves. The valves are used in conjunction with our temperature regulators for controlling industrial processes, district or central heating plants or marine installations.

## DESIGN

The valve components - spindle, seats and cone - are made of stainless steel. The valve body is made of cast steel GP240GH (G5-C25) with flanges drilled according to EN 1092-1. The thread for the actuator connection 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).

## FUNCTION

Without an actuator being installed, connection A-AB is fully open and connection B-AB 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 B-AB is fully open and connection A-AB completely closed.

The valve characteristics are as follows:

**Port A-AB and AB-A: quadratic**

**Port B-AB and AB-B: almost linear**

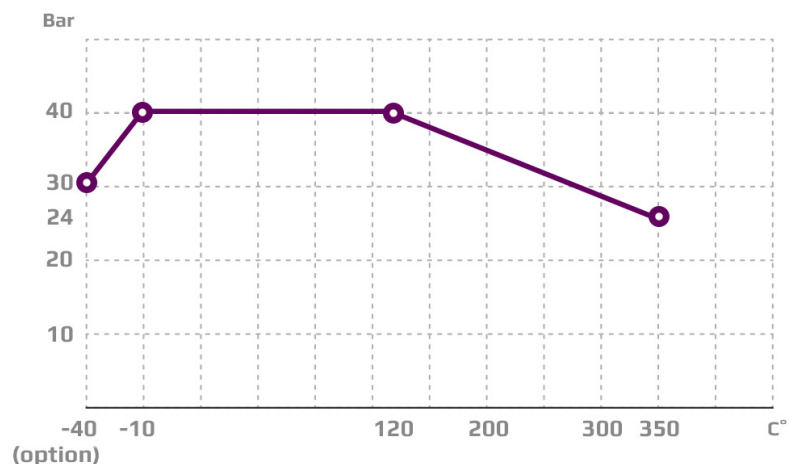
These characteristics ensure constant total flow under almost all pressure conditions and optimum circulation in the individual circuits.

## 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

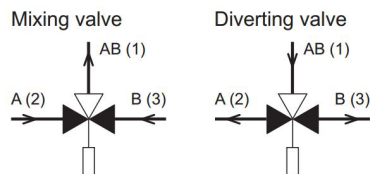
## PRESSURE/TEMPERATURE DIAGRAM

According to DIN 2401



### PORT NUMBERING

Valves type H3F are marked with the internationally recognized port designations: A, B, AB.



Port AB  
Port A  
Port B

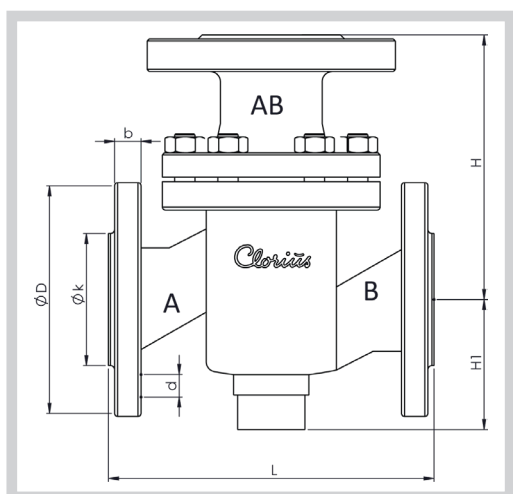
common port always open  
closes by activating the spindle  
opens by activating the spindle



### 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	D (dia.) mm	b mm	k (dia.) mm	d mm dia. (number)
20 H3F	150	115	63	105	16	75	14x(4)
25 H3F	160	130	70	115	18	85	14x(4)
32 H3F	180	150	75	140	18	100	18x(4)
40 H3F	200	160	85	150	18	110	18x(4)
50 H3F	230	190	95	165	20	125	18x(4)
60 H3F	290	220	110	185	20	145	18x(8)

### SPECIFICATIONS

Type	Flange connection DN in mm	Opening (mm)	$k_{vs}$ -value* $m^3/h$	Lifting height (mm)	Weight (kg)
20 H3F	20	20	6.3	7.5	6
25 H3F	25	25	10	9	7
32 H3F	32	32	16	10	10
40 H3F	40	40	25	11	14
50 H3F	50	50	38	11.5	18
65 H3F	65	65	63	14.5	26

\* Same  $k_{vs}$ -values for mixing and diverting valves