

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

| | |
|--|---|
| Materials: | |
| - 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

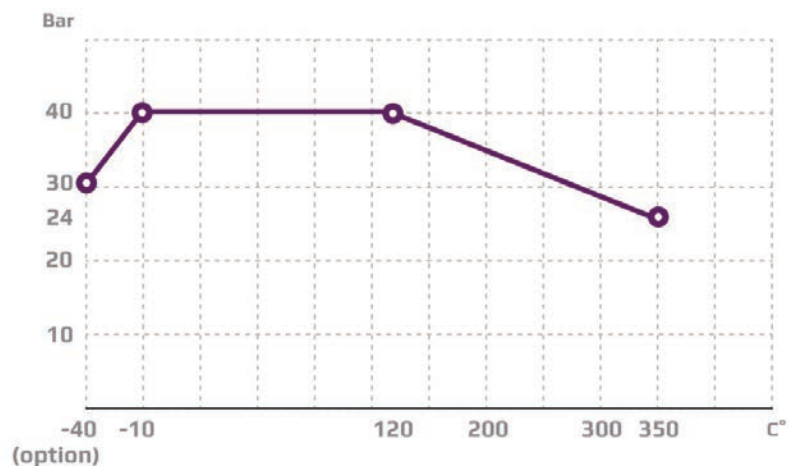
These characteristics ensure constant total flow under almost all pressure conditions and optimum circulation in the individual circuits.

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

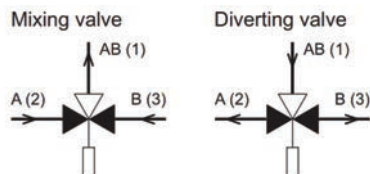
PRESSURE/TEMPERATURE DIAGRAM

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

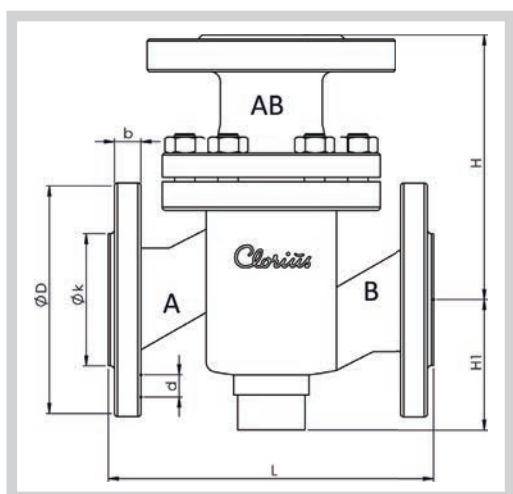
common port always open
closes by activating the spindle
opens by activating the spindle



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