

3-way control valve type M3F

Cast iron, PN 16, DN 20 – 65 mm, Flanged ends

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TECHNICAL DATA

Materials:

- Valve body	Cast iron EN-GJS-400-15
- seats and cone	ST.ST.1.4305 DIN/EN 1982 CC491K
- spindle	Stainless steel (W.No.1.4305
- bolts, nuts	24 CrMo 4/A4
- Gasket	Graphite
- O-ring	80 FPM

Nominal pressure PN 16
Seating 2 balanced single seats

Flow characteristic Quadratic/linear

Leakage rate $\leq 0,5\%$ of Kvs

Regulating capability Kvs/Kvr > 25

Flanges - drilled according to EN 1092-2 PN 16
Counter flanges DIN 2633

Same Kvs-value as mixing and diverting valve
Ideal for controlling process and central heating plants

Subject to change without notice.

APPLICATIONS

Control valves type M3F are designed for lubricants, hot 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 - seats, cone and stem are made of stainless steel. The valve body is made of cast iron EN-GJS-400 -15 with flanges drilled according to EN 1092-2 PN 16. 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

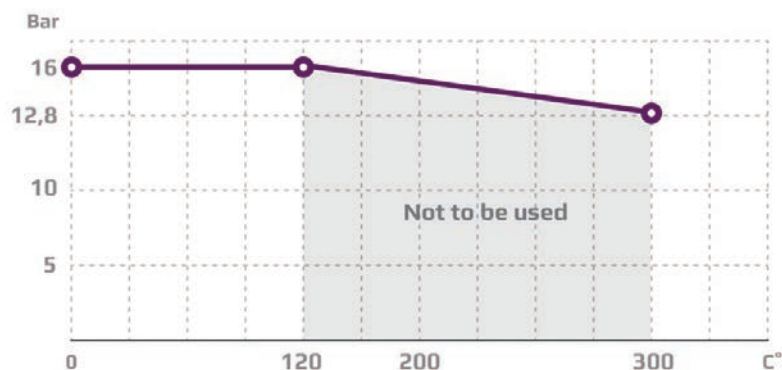
These characteristics ensure constant total flow under almost all pressure conditions and optimum circulation in the individual circuits.

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

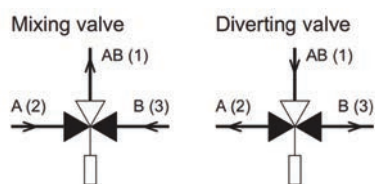
PRESSURE/TEMPERATURE DIAGRAM

According to DIN 2401



PORT NUMBERING

Valves type M3F are marked with the internationally recognized port designations: A, B, AB



Port AB
Port A
Port B

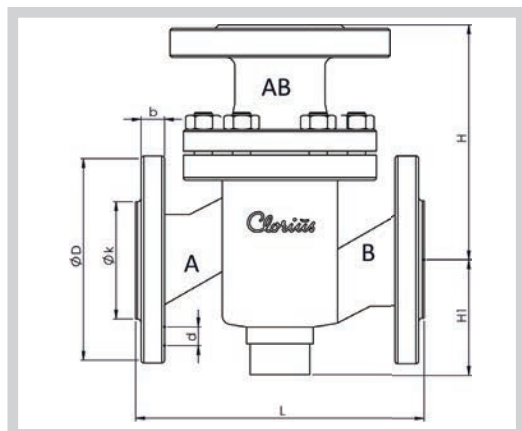
common port always open
closes by activating the spindle
opens by activating the spindle



MOUNTING

The valves can be installed with vertical as well as horizontal spindles.

DIMENSION SKETCH



Type	L mm	H mm	H1 mm	D (dia.) mm	b mm	k (dia.) mm	d mm dia. (number)
20 M3F	150	115	63	105	16	75	14x(4)
25 M3F	160	130	70	115	16	85	14x(4)
32 M3F	180	150	75	140	18	100	18x(4)
40 M3F	200	160	85	150	18	110	18x(4)
50 M3F	230	190	95	165	20	125	18x(4)
65 M3F	290	220	110	185	20	145	18x(4)

SPECIFICATIONS

Type	Flange connection DN in mm	Opening mm	k_{vs} -value* m^3/h	Lifting height mm	Weight kg
20 M3F	20	20	6.3	7.5	6
25 M3F	25	25	10	9	7
32 M3F	32	32	16	10	10
40 M3F	40	40	25	11	14
50 M3F	50	50	38	11.5	18
65 M3F	65	65	63	14.5	26

*Same kvs-values for mixing and diverting valves