3-way control valve type M3FA

PN 10, DN 80 – 300 mm, except DN 200/175 and 200 mm - PN 16

APPLICATIONS

Control valves type M3FA are designed for regulating of fresh water, lubricating oil and other liquid media. The valves are designed for use in conjunction with large industrial processes, district heating and marine installations, e.g. cooling of main and auxiliary engines. The valve Is designed for use in conjunction with Clorius valve motor type AVM234 or AVF234.

DESIGN

The valve components (seats and cone) are made of alu bronze, the spindle of stainless steel. The valve body is made of cast iron and the valve flanges are drilled according to EN 1092-2. Tight between port 1(AB) og 3(B) is optional.

FUNCTION

The valve cone is firmly connected with the motor spindle. When the valve cone is in the one extreme position by draw on the spindle, connection A-AB is kept fully open and connection B-AB is fully closed. In the other extreme position connection A-AB is fully closed and connection B-AB is fully open. In the intermediate positions the opening degrees change proportionally.

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

TECHNICAL DATA

Materials:	
- Valve body	
80 – 300 M3FA	Nodular cast iron EN-GJS-400-15
- Trim	Alu bronze, CuAL10Fe5Ni5
- Valve spindle	Stainless steel (W.no. 1.4436)
- O-ring	AFLAS A75H
- Gasket	Reinz-AFM34
Nominal pressure PN 10	
- 80-150 mm	PN 10 max. 120°C
- 200/175-200 mm	PN 16 max. 120°C
- 300/250-300 mm	PN 10 max. 120°C
Seals	2 balanced single seats
Flow characteristic	Almost linear
Leakage rate	0.5%
Regulating capability	Kvs/Kvr > 25
Temperature range	Max. 120° C
Flanges	EN 1092-2 PN 10/16

Note !
Valve type 200/175 M3FA has outer measures and flanges drilled as valve type 200 M3FA. Valve type 300/250 M3FA has outer measures and flanges drilled as valve type 300 M3FA.

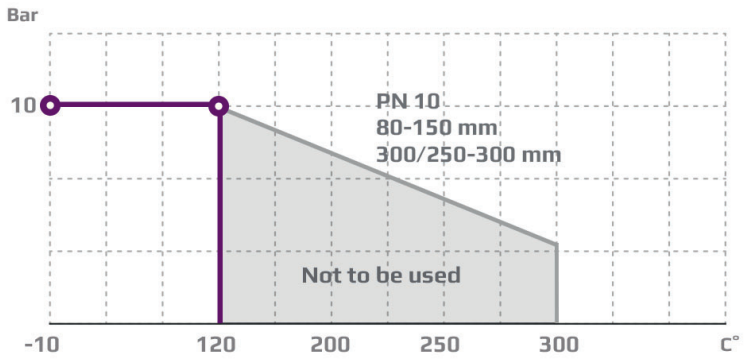
Counter flanges (suggested)
80 – 150 M3FA: DIN 2632 – PN 10
200/175 – 200 M3FA: DIN 2633 – PN 16
300/250 – 300 M3FA: DIN 2632 – PN 10

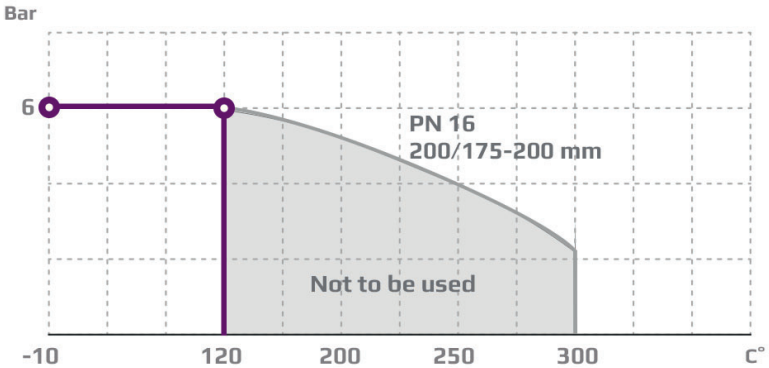
For cooling and heating purposes
Important note
In case the valves are applied as diverting valves, the pressure drop will increase by 35% and the the k_{vs}-value will decrease by 14% as against mixing.

Subject to change without notice.

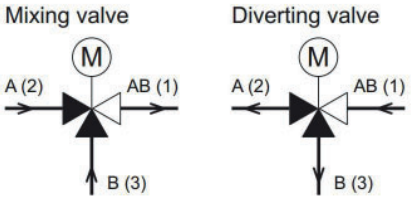
PRESSURE/TEMPERATURE DIAGRAM

According to DIN 2401





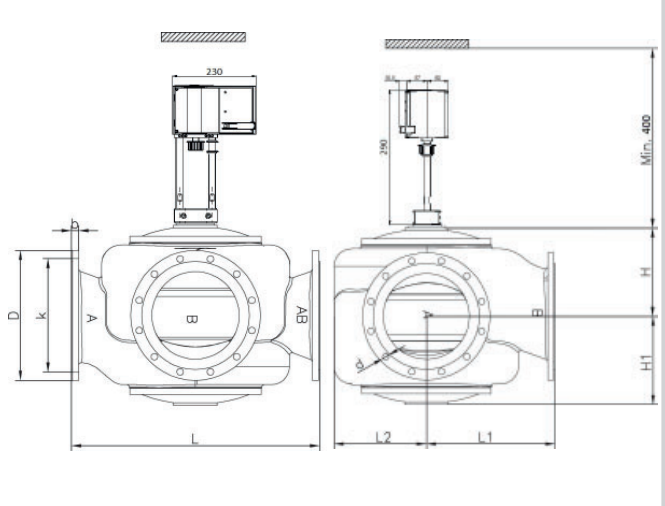
PORT NUMBERING



Port AB	common port always open
Port A	closes at load on spindle
Port B	opens at load on spindle

The valves can be installed with vertical as well as horizontal spindles. The valves must be mounted in a way that the valve motor will be exposed to a minimum of moisture and unnecessary vibrations. Free height above / below the valve must be minimum 400 mm for mounting and operation of the AFM 234 or AVF234 motor. See drawing.

DIMENSION SKETCH



Type	L mm	L1 mm	H mm	H1 mm	b mm	D (dia.) mm	k (dia.) mm	d mm dia. (number)
80 M3FA	310	155	117	127	20	200	160	18x(8)
100 M3FA	350	175	132	141	22	220	180	18x(8)
125 M3FA	400	240	181	171	24	250	210	18x(8)
150 M3FA	480	270	216	189	24	285	240	23x(8)
200/175 M3FA	600	325	238	238	20	340	295	23x(12)
200 M3FA	600	325	238	238	20	340	295	23x(12)
300/250 M3FA	850	450	305	305	25	445	400	23x(12)
300 M3FA	850	340	305	305	25	445	400	23x(12)

SPECIFICATIONS

Type	Flange connection DN in mm	Opening mm	k_{vs}-value[1] mixing m^3/h	k_{vs}-value[1] diverting m^3/h	Lifting height mm	Weight kg
80 M3FA	80	80	80	69	11	35
100 M3FA	100	100	125	108	13	44
125 M3FA	125	125	215	185	18	72
150 M3FA	150	150	310	267	20	111
200/175 M3FA	200	200	425	366	22	165
200 M3FA	200	200	555	477	28	160
300/250 M3FA	300	300	865	744	28	306
300 M3FA	300	300	1250	1075	45	290

[1] The stated k_{vs} values apply for mixing valves. Diverting valves: 0.86 x (k_{vs}-values for mixing valves).