

3-way Control Valve type S3FM-TM (AB-Middle)

Stainless Steel, PN25, DN 65 – 125 mm / PN16, DN150 - 300 mm / PN10, DN 350 - 450 mm

O-2.7.03-C

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TECHNICAL DATA

Materials:

- Valve body, slide	Stainless steel - AISI316 (option DUPLEX)
- O-ring	A75H
- U-ring	PTFE
Flow characteristic	Almost linear
Leakage rate	Max. 0.5%
Regulating capability	Kvs/Kvr > 25

Flanges	EN 1092-2 PN 10/16
- Option	JIS B 2210 5K, ANSI, Grooved Victaulic Joints

Counter flanges (suggested for EN 1092-2)	DIN 2632 – PN 10 DIN 2633 – PN 16
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Max. pressure Δp_L , against which the valve can close:

- DN 250	16 Bar
- DN 450	10 Bar

Nominal pressure

- DN 65-125:	PN 25, max. 100 °C (optional 250°C)
- DN 150-300:	PN 16, max. 100 °C (optional 250°C)
- DN 350-450:	PN 10, max. 100 °C (optional 250°C)

APPLICATIONS

Control valve type S3FM-TM is a three way control valve with a slide for quarter turn operation, designed for most industrial fluids and aggressive media.

DESIGN

The valve body and the valve slide are made of stainless steel AISI316. The valve flanges are drilled according to EN 1092-2. Optional: ANSI, JIS and Grooved Victaulic Joints.

Valves can also be supplied in AB-Right configuration (data sheet 0.2.7.01) and AB-Left (data sheet 0.2.7.02)

FUNCTION

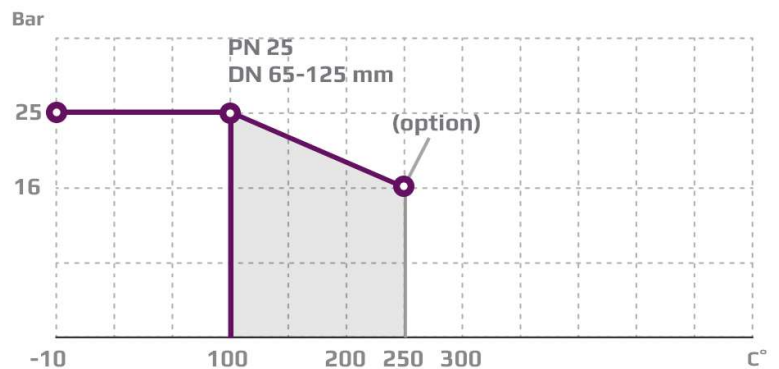
The slide is firmly connected with the actuator spindle. When the slide is in the one outer position by turning the spindle, connection A-AB is fully open and connection B-AB is fully closed. In the other outer position connection A-AB is fully closed and connection B-AB is fully open. In the intermediate positions the opening degrees change proportionally. The valve has a minimum gap between body and slide. To minimize the leakage an O-ring is mounted in a groove on the slide.

FEATURES

- Simple design secures reliable controls and reduces costly downtime.
- Low leakage rate secures energy savings and avoids overheating.
- Flexible choice of port placement
- Corrosion resistance
- Designed for high precision control

PRESSURE/TEMPERATURE DIAGRAM

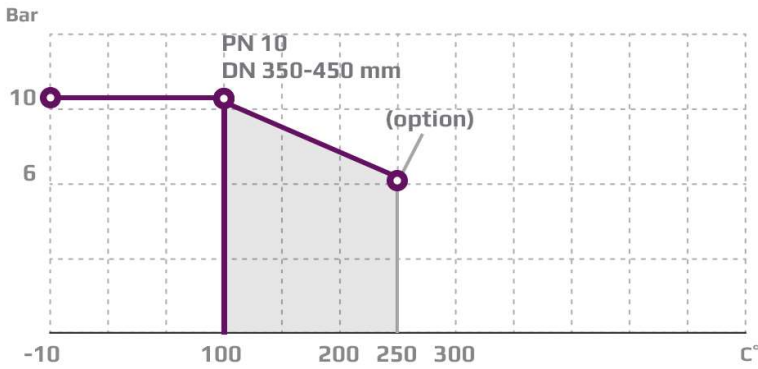
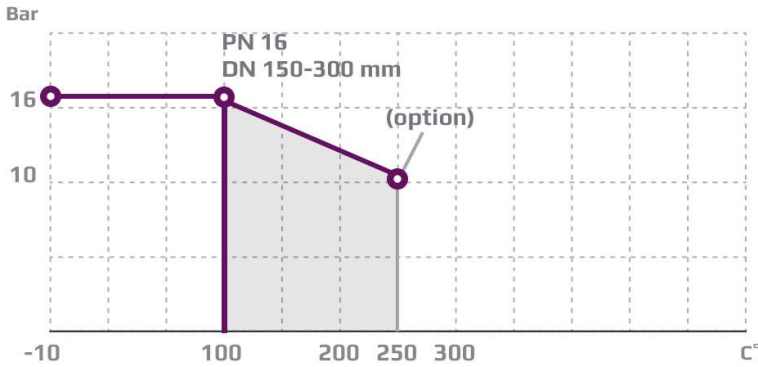
According to DIN 2401



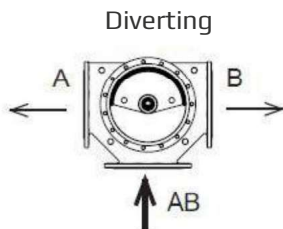
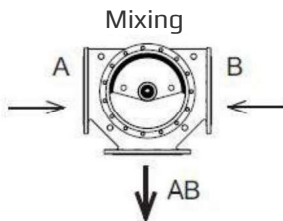
Subject to change without notice.

PRESSURE/TEMPERATURE DIAGRAM

According to DIN 2401



PORT NUMBERING



MOUNTING

The valve connections are marked A, B and AB. The slide is operating between A and B. Check slide position before installation in the pipe. The slide position is marked on the top of the shaft. The valves can be installed with vertical as well as horizontal spindles. The valves must be mounted in a way that the valve actuator will be exposed to a minimum of moisture and unnecessary vibrations.

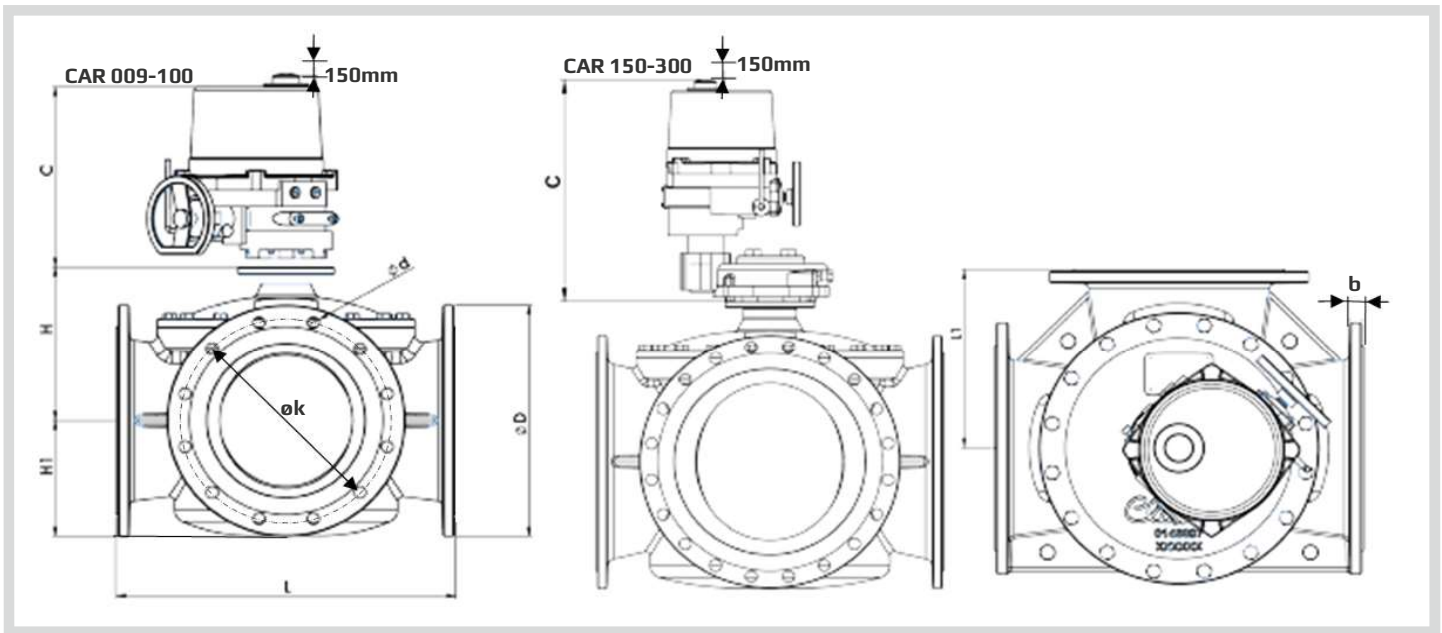
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DIMENSION SKETCH



Type	L (mm)	L1 (mm)	H (mm)	H1 (mm)	b (mm)	C (mm)	EN 1092-2			ANSI Class 150			JIS B 2210 5K			JIS B 2210 10K		
							D (dia.) (mm)	k (dia.) (mm)	d mm dia. (number)	D (dia.) (mm)	k (dia.) (mm)	d mm dia. (number)	D (dia.) (mm)	k (dia.) (mm)	d mm dia. (number)	D (dia.) (mm)	k (dia.) (mm)	d mm dia. (number)
80 S3FM-TM	292	146	140	94	20	273	200	160	19x(8)	190	190.8	19x(8)	180	145	19x(4)	185	150	19x(8)
100 S3FM-TM	350	175	158	112	17	273	235	190	23x(8)	230	190.9	19x(8)	200	165	19x(8)	210	175	19x(8)
125 S3FM-TM	400	200	179	123	19	273	270	220	28x(8)	255	216	22x(8)	235	200	19x(8)	250	210	23x(8)
150 S3FM-TM	437	218,5	196	139	19	276	285	240	23x(8)	280	241	22x(8)	265	230	19x(8)	280	240	23x(8)
200 S3FM-TM	530	265	232	169	20	361	340	295	23x(12)	343	299	23x(8)	320	280	23x(8)	320	290	23x(12)
250 S3FM-TM	592	265	232	169	20	361	400	355	28x(12)	407	362	26x(12)	385	345	23x(12)	400	355	25x(12)
300 S3FM-TM	649	324,5	302	227	25	361	455	410	28x(12)	483	432	26x(12)	430	390	23x(12)	445	400	25x(16)
350 S3FM-TM	717	358,5	334,5	251,5	25	361	505	460	23x(16)	534	477	29x(12)	480	435	25x(12)	490	445	25x(16)
400 S3FM-TM	770	385	370	282	25	361	565	515	28x(16)	597	540	29x(16)	540	495	25x(16)	560	510	27x(16)
450 S3FM-TM	820	410	391	307	26	556	615	565	28x(20)	635	578	32x(16)	605	555	25x(16)	620	565	27x(20)

SPECIFICATIONS

Type	Flange connection DN in mm	k_{vs} -value ⁽¹⁾ Mixing valve m ³ /h	k_{vs} -value ⁽¹⁾ Diverting valve m ³ /h	Torque Nm for inlet P*	Weight kg
65 S3FM-TM	65	95	120	72	22
80 S3FM-TM	80	122	154	85	29
100 S3FM-TM	100	220	248	145	41
125 S3FM-TM	125	369	437	245	58
150 S3FM-TM	150	510	600	259	71
200 S3FM-TM	200	807	1100	435	114
250 S3FM-TM	250	1500	2100	695	159
300 S3FM-TM	300	2000	2650	975	207
350 S3FM-TM	350	2530	3380	1350	278
400 S3FM-TM	400	3050	3950	TBC	346
450 S3FM-TM	450	3680	4480	2100	433

¹⁾ k_{vs} -value for port A and B 50% open.

*Torque calculated at max inlet P for:

DN 65 - 125 = 25 Bar
 DN 150-300 = 16 Bar
 DN 350-450 = 10 Bar