

Characteristics

- Nominal pressure
DN 200-250 mm:
PN 10, max. 100°C (option 120°C)
DN 300-600 mm:
PN 6, max. 100°C (option 120°C)
- Slide in gun metal

Applications

Control valve type L3FM-T is a three-way control valve with a slide for quarter turn operation designed for regulating of sea water.

The valves are designed for use in conjunction with valve motor type RCEL with handle for manual operation or for use in conjunction with a pneumatic actuator.

Dimensioning

For sizing of control valves the following equation can be used:

$$k_{vs} = \frac{G(m^3/h)}{\sqrt{\Delta p(\text{bar})}}$$

$$\Delta p(\text{bar}) = \left(\frac{G(m^3/h)}{k_{vs}} \right)^2$$

Design

The valve body and the valve slide are made of gun metal.
The valve flanges are drilled according to EN 1092-2.

Quality assurance

All valves are manufactured under an ISO 9001 certification, and are pressure and leakage tested before shipment.
For marine applications the valves can be supplied with relevant test certificates from recognized classification societies.

Function

The slide is firmly connected with the motor spindle. When the slide is in the one extreme position by turning 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.

The valve has a small tolerance between body and slide. To minimize the leakage an O-ring is mounted in a groove on the slide.

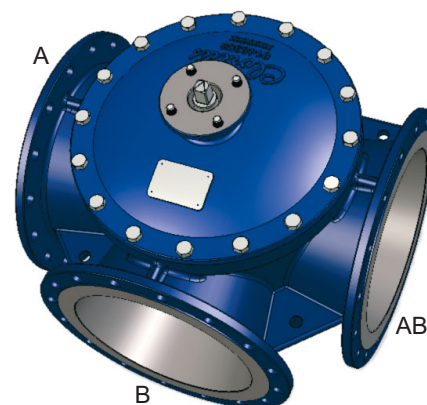
Technical data

Materials:

- Valve body Gun metal RG 5
CuSn5Zn5Pb5-C
- Slide CuAl10Fe5Ni5
- O-ring NBR 70A

Nominal pressure:

- DN 200-250 PN 10
- DN 300-600 PN 6



Valve characteristic	Almost linear
Leakage	Max. 0.5%
Temperature range	Max. 100°C (option 120°C)
Mounting	See page 2
Flanges	EN 1092-2 PN 6/10
Counter flanges (suggested)	DIN 2632 – PN 6 DIN 2633 – PN 10
Max. pressure Δp_L , against which the control can close:	
- DN 200-250	10 bar
- DN 300-600	6 bar

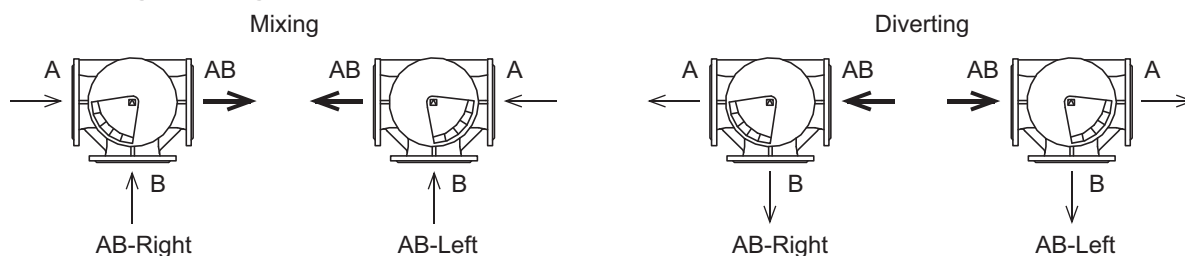
Specifications

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	Weight kg
200 L3FM-T	200	800	1100	530	133
250 L3FM-T	250	1500	2100	450	186
300 L3FM-T	300	2000	2650	700	240
350 L3FM-T	350	2530	3380	780	321
400 L3FM-T	400	3050	3950	535	400
450 L3FM-T	450	3680	4480	1250	501
500 L3FM-T	500	4150	5250	1450	651
600 L3FM-T ²⁾	600	4800	6000	1950	945

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

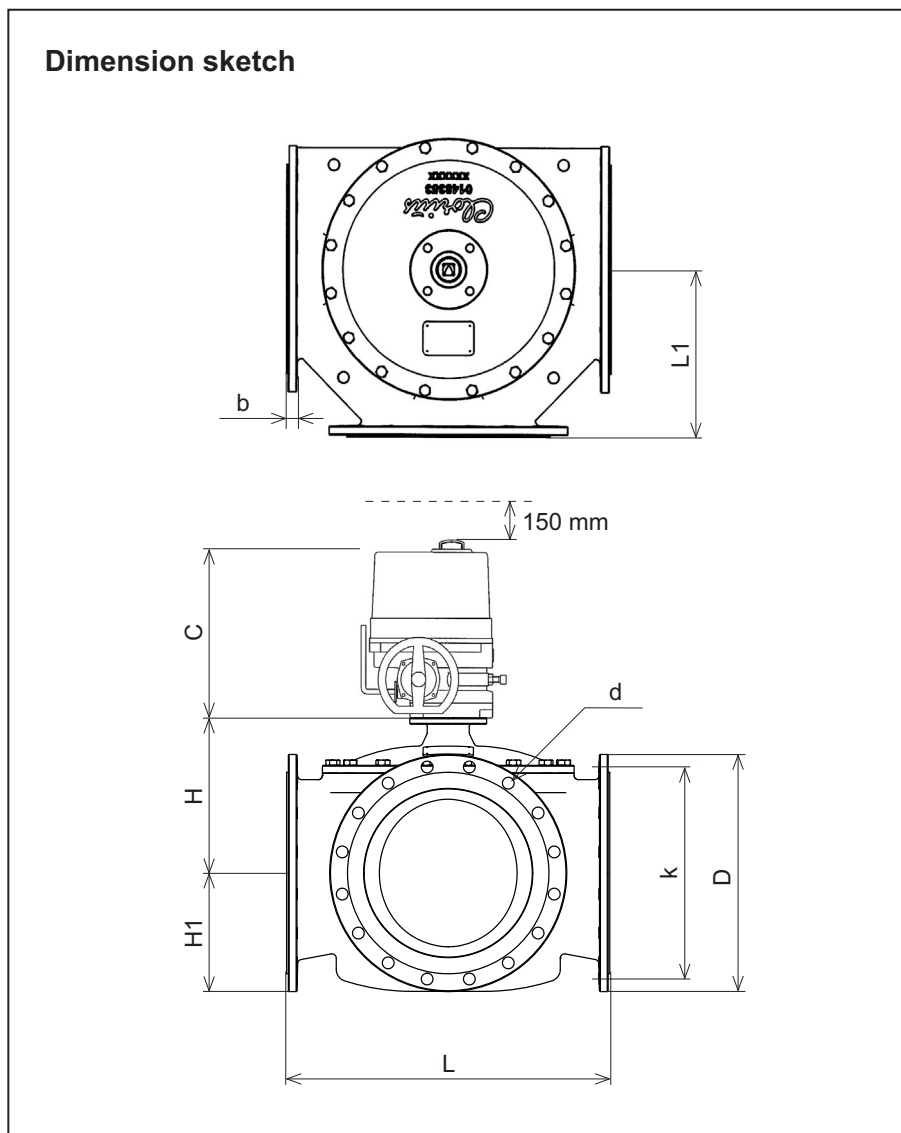
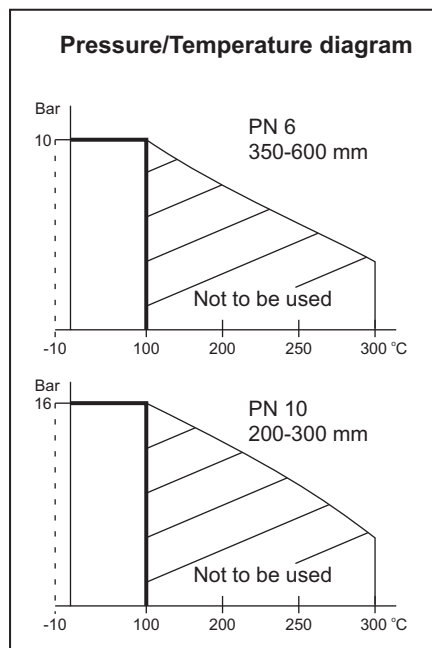
²⁾ Preliminary specifications

Port numbering / Configuration



Further specification for ordering (e.g. 400 L3FM-T, AB-Right)

Subject to change without notice.



Definition of k_{VS} -value

The k_{VS} -value is identical to the IEC flow coefficient k_V and defined as the water flow rate in m^3/h through the fully open valve by a constant differential pressure, Δp_V , of 1 bar.

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.

Valve can be supplied in two different configurations, AB-Right and AB-Left. Please note that the supplied configuration is according to installation.

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.

Strainer

It is recommended to use a strainer in front of the control valve if the liquid contains suspended particles.

Type	L mm	L1 mm	H mm	H1 mm	b mm	C mm	D (dia.) mm	k (dia.) mm	d mm dia. (number)
200 L3FM-T	530	270	236	175	21	361	340	295	23 x (8)
250 L3FM-T	592	300	273	205	23	361	400	350	23 x (12)
300 L3FM-T	649	330	305	230	25.5	361	455	400	23 x (12)
350 L3FM-T	717	360	337	255	25.5	361	490	445	23 x (12)
400 L3FM-T	770	385	375	285	26	361	540	495	23 x (16)
450 L3FM-T	820	410	391	310	26.5	556	595	550	23 x (16)
500 L3FM-T	900	455	425	340	27.5	556	645	600	23 x (20)
600 L3FM-T ²⁾	1000	505	470	393	31.0	556	755	705	28 x (20)

²⁾ Preliminary dimensions

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