

# 3-way Control Valves type L3F

## Gun metal, PN 10, DN 65 – 150 mm

2.2.08-K

GB-1

### Characteristics

- Nominal pressure PN 10
- Characteristic almost linear
- Regulating capability  $\frac{k_{vs}}{k_{vr}} > 25$
- Two single seats

### Applications

Control valves type L3F are designed for regulating low, medium and high pressure hot water - and cold and hot sea water. The valves are used in connection with one of our temperature regulators in control systems for industrial processes or marine installations.

### Dimensioning

For sizing of control valves and selection of actuators please see "Quick Choice" leaflet no. 9.0.00.

### Design

The valve components - valve body, seats, cone and spindle - are made of sea water resistant materials with connection flanges drilled according to DIN 86021.

The connection thread for the actuator is G1B.

### Quality assurance

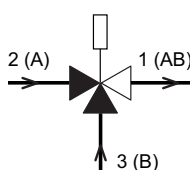
All valves are manufactured under an ISO 9001 certification and are pressure and leakage tested before shipment. For marine applications the valves can be supplied with relevant test certificates from recognized classification societies.

### Port Numbering

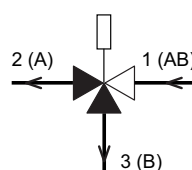
The ports of valves type L3F are marked with the figures 1, 2 and 3.

The letters in parentheses refer to the corresponding internationally adapted designations.

#### Mixing valve



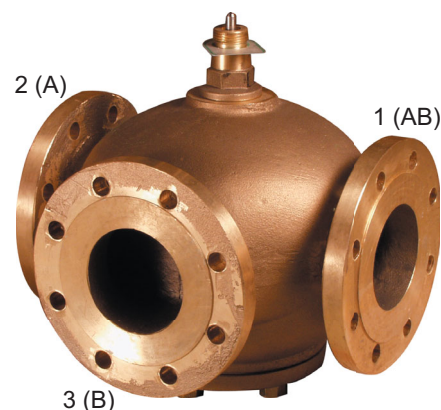
#### Diverting valve



Port 1(AB) common port always open  
Port 2(A) closes at load on spindle  
Port 3(B) opens at load on spindle

### Function

Without an actuator being installed, connection 2-1 is fully open and connection 3-1 completely closed, by means of a spring. By increasing pressure on the spindle, the opening of the ports changes

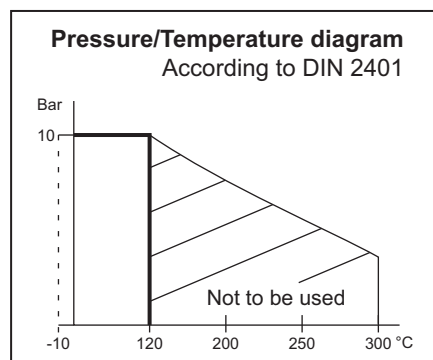


proportionally to the travel of the spindle, and when the spindle is pressed to the bottom, connection 3-1 is fully open and connection 2-1 completely closed.

### Technical Data

#### Materials:

- Valve body, seats and cone	CuSn5Zn5Pb5-C
- Spindle	W.no. 1.4436
Nominal pressure	PN 10
Seating	2 balanced seats
Valve characteristic	Almost linear
Leakage	$\leq 0.5\%$ of $k_{vs}$
Temperature range	See pressure/temperature diagram
Mounting	With spindle vertical
Flanges drilled according to	DIN 86021



Specification						
Type	Flange connection DN in mm	Opening mm	Mixing valve $k_{vs}$ -value m³/h	Diverting valve $k_{vs}$ -value m³/h	Lifting height mm	Weight kg
65 L3F	65	65	50	43	10.5	22.5
80 L3F	80	80	80	69	11	40
100 L3F	100	100	125	108	13	55
125 L3F	125	125	215	185	18	91
150 L3F	150	150	310	267	21	131

Subject to changes without notice.

# 3-way Control Valves type L3F

## Gun metal, PN 10, DN 65 – 150 mm

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GB-2

### 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<sup>3</sup>/h through the fully open valve by a constant differential pressure,  $\Delta p_v$ , of 1 bar.

### Important note

In case the valves are applied as diverting valves, the pressure drop will increase by 35% and the  $k_{VS}$ -value will decrease by 14% as against mixing valves.

### Mounting

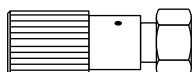
The valves can be installed with vertical as well as horizontal spindles. The valves must be mounted in a way that the valve motor will be exposed to a minimum of moisture and unnecessary vibrations. Free height above / below the valve must be minimum 645 mm for mounting and operation of the MT90 Marine motor. See drawing.

### Strainer

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

### Accessories

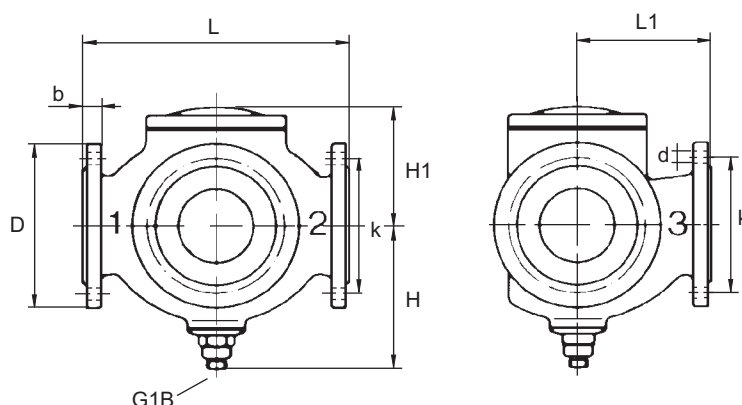
#### Manual adjusting device



The device has a built-in stuffing box. For tightening and manual operation of valves when an actuator has not been fitted, e.g. during periods of construction (max. 170°C).

Subject to changes without notice.

### Dimensions



Type	L mm	L1 mm	H mm	H1 mm	D (dia.) mm	b mm	k (dia.) mm	d mm dia. (number)
65 L3F	240	120	175	120	185	20	145	18x(4)
80 L3F	310	155	180	127	200	22	160	18x(8)
100 L3F	350	175	195	145	220	22	180	18x(8)
125 L3F	400	240	245	180	250	24	210	18x(8)
150 L3F	480	270	280	189	285	24	240	22x(8)