

3-way Control Valves type L3S

Gun metal, PN 10, DN 15 – 50 mm

2.2.07-J

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 L3S are designed for regulating fresh water, cold and hot sea-water and lubricating liquids.

The valves are used in conjunction with temperature regulators in control systems for heating of domestic premises, district heating, 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 and cone - are made of sea-water resistant gun metal RG 5.

The valves are single seated and designed for tight closure. The leakage rate is less than 0.5% of the full flow (according to VDI/VDE 2174).

Note: The design of the sizes DN 15 (1/2") and DN 20 (3/4") is different from the bigger ones.

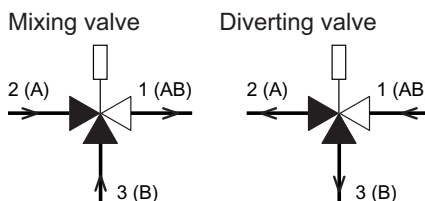
Quality assurance

All valves are manufactured under an ISO 9001 certification and are pressure and leakage tested before shipment.

Port numbering

The ports of valves type L3S are marked with the figures 1, 2 and 3.

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



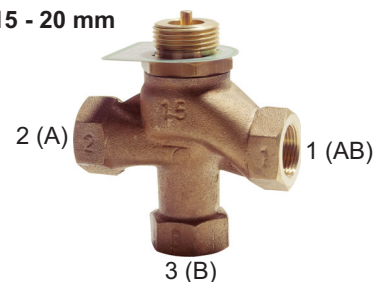
Port 1(AB) common port always open
 Port 2(A) closes at load on spindle
 Port 3(B) opens at load on spindle

Function

Without an actuator being installed, connection 2-1 is fully open and connection 3-1 completely closed by means of a spring.

On 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.

DN 15 - 20 mm



DN 25 - 50 mm



Technical data

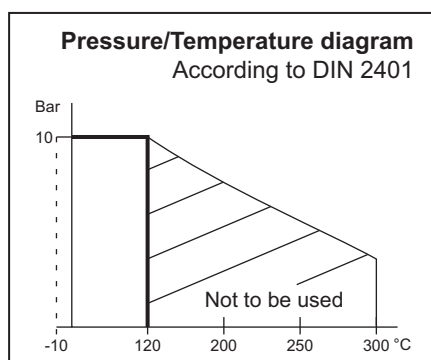
Materials:

- Valve body, seats and cone Gun metal RG 5
 Nominal pressure PN 10 (max. 120°C)
 Seating Two single seats
 15-20 mm unbalanced
 25-50 mm balanced

Valve characteristic Almost linear
 Leakage rate $\leq 0.5\%$ of k_{vs}
 Way of operation When spindle is actuated:
 Gate 1-2 closes
 Gate 1-3 opens
 See page 2

Mounting

Internal connection threads ISO 7/1



Specification							
Type	Connection threads	DN mm	Opening mm	k_{vs} -value mixing valve m ³ /h	k_{vs} -value diverting valve m ³ /h	Lifting height mm	Weight kg
15 L3S	Rp 1/2	15	15	2.75	2.4	3	1
20 L3S	Rp 3/4	20	20	5	4.3	4	1
25 L3S	Rp 1	25	25	7.5	6.4	4	4.4
32 L3S	Rp 1 1/4	32	32	12.5	10.7	6	4.4
40 L3S	Rp 1 1/2	40	40	20	17.2	6	8.3
50 L3S	Rp 2	50	50	30	25.8	8	7.7

Subject to changes without notice.

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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 m³/h through the fully open valve by a constant differential pressure, Δp_v , of 1 bar.

Mounting

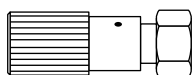
The valves can be installed with vertical as well as horizontal spindles. The thermo-stat/actuator can be fitted below or above the valve.

Strainer

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

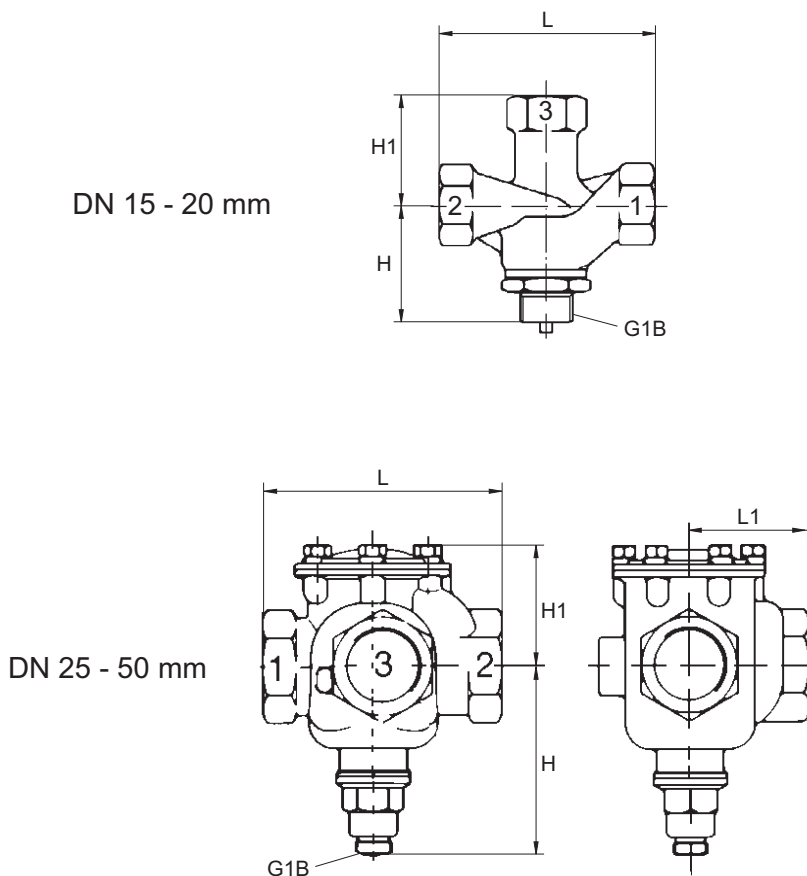
Accessories

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).

Dimension sketch



Type	L mm	L1 mm	H mm	H1 mm
15 L3S	110	-	60	55
20 L3S	110	-	60	55
25 L3S	140	70	145	80
32 L3S	140	70	145	80
40 L3S	185	95	150	105
50 L3S	185	95	150	105

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