

# 2-way Control Valves type L1SB

## Gun Metal, PN 16, DN 20 – 25 mm

2.2.04-E

GB-1

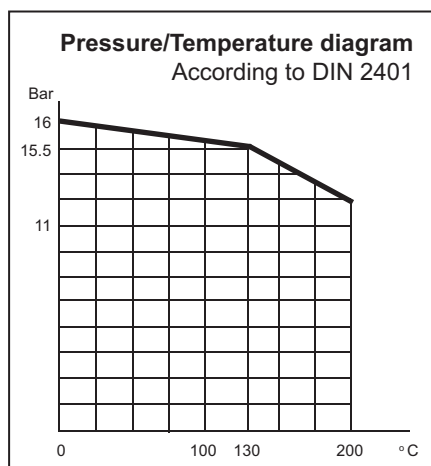
### Characteristics

- Nominal pressure PN 16
- Regulating capability  $\frac{k_{vs}}{k_{vr}} > 25$
- Single seated, balanced
- Quadratic characteristic

### Applications

Control valves type L1SB are designed for regulation of hot water, steam and lubricating oils.

The valves are installed combined with our self-acting thermostats, pressure differential regulators or valve motors for regulation in central heating plants, industrial plants, industrial processes or marine installations.



### Design

The valve components - spindle, seats and cone - are made of stainless steel. The valve body is made of gun metal RG 5.

The thread for the actuator connection is G1B ISO 228. The valve is single seated, balanced. The leakage rate is less than 0.05% of the full flow (according to VDI/VDE 2174).

### Quality assurance

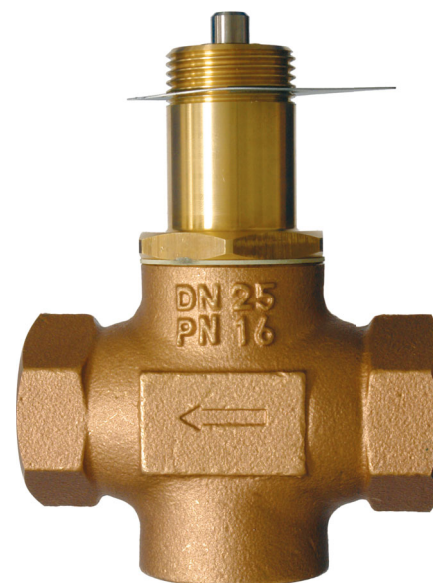
All valves are manufactured under an ISO 9001 certification, and are pressure and leakage tested before shipment.

### Function

Without the actuator being connected, the valve is held in open position by means of a spring. With pressure on the spindle the valve will close.

In connection with our thermostats the valves will close at rising temperatures. In connection with our valve motors the valves will either close or open depending on the application.

The quadratic characteristic will not cease, until the flow has dropped below 4% of the full flow.



### Technical data

Materials:	
- valve body	Gun metal RG 5
- components	Stainless steel
Nominal pressure	PN 16
Seating	Single seated
Valve characteristic	Quadratic
Leakage	$\leq 0.05\%$ of $k_{vs}$
Temperature range	See pressure/temperature diagram
Mounting	See page 2
Internal connection threads	ISO 7/1

Specifications						
Type	Connection threads	DN mm	Opening mm	$k_{vs}$ -value $m^3/h$	Lifting height mm	Weight kg
20 L1SB	Rp $\frac{3}{4}$	20	20	5	6.5	1.3
25 L1SB	Rp 1	25	25	7.5	7	1.6

Subject to change without notice.

# 2-way Control Valves type L1SB

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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  $m^3/h$  through the fully open valve by a constant differential pressure,  $\Delta p_v$ , of 1 bar.

### Mounting

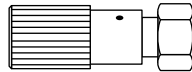
For valve temperatures of max. 170°C, the thermostat/actuator can be fitted below or above the valve. For valve temperatures above 170°C, a cooling unit of type KS 4 has to be applied and the thermostat/actuator must be fitted below the valve.

### Strainer

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

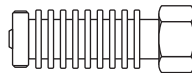
### Accessories

#### Manual Adjusting Device



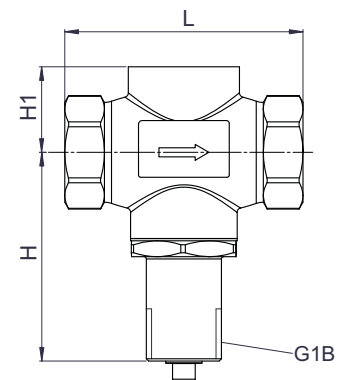
The device has a built-in stuffing box. For sealing and manual operation of valves when an actuator has not been fitted, e.g. during periods of construction (max. 170°C).

#### Cooling Unit KS-4



Cooling unit protecting the stuffing box of the motor/thermostat. To be applied at valve temperatures between 170°C and 250°C.

### Dimension sketch



Type	L mm	H mm	H1 mm
20 L1SB	95	94	35
25 L1SB	105	94	53

### Dimensioning

Type	Water / Steam		Thermostats		Valve motors VB/VBA	Pressure differential controllers	
			V2	V4		TD66-4	TD66-8
DN 20	Water:	$\Delta p_L$ & max. $p_1$	bar	7.5	16	16	16
	Steam:	$\Delta p_L$ & max. $p_1$	bar	6.5			
DN 25	Water:	$\Delta p_L$ & max. $p_1$	bar	6	16	16	16
	Steam:	$\Delta p_L$ & max. $p_1$	bar	5			

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