2-way Control Valves type L1S
Gun Metal, PN 16, DN 15/6 – 20 mm

Characteristics

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

Applications

Regulating valves type L1S are designed for regulating low, medium and high pressure hot water, steam and lubricating oils.
The valves are installed combined with temperature or pressure differential 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 - 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 valves are single seated and designed for tight closure.
The leakage rate is less than 0.05% of the full flow (according to VDI/VDE 2174).
To obtain an approximate, linear transfer performance, for use in systems with standard existing heat exchangers and pumps, the valve characteristic is made quadratic.

Quality assurance

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

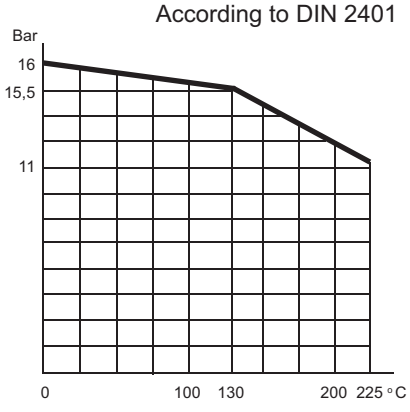
Function

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 thermostats or electronic actuators, the valves will close at rising temperatures. For cooling circuits a reverse acting valve can be used.
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	≤ 0.05% of k_{vs}
Temperature range	See pressure/temperature diagram
Mounting	See page 2
Internal connection threads	ISO 7/1

Pressure/Temperature Diagram
According to DIN 2401



Specifications

Type	Connection threads	DN mm	Opening mm	k_{vs}-value m^3/h	Lifting height mm	Weight kg
15/6 L1S	Rp ½	15	6	0.45	6	0.7
15/9 L1S	Rp ½	15	9	0.95	6	0.7
15/12 L1S	Rp ½	15	12	1.7	6	0.7
15 L1S	Rp ½	15	15	2.75	6	0.7
20 L1S	Rp ¾	20	20	5.00	7	0.8

Subject to change 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 m^3/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. For valve temperatures of max. 170ºC, the thermostat/ actuator can be fitted below or above the valve. For valve temperatures above 170ºC, a cooling unit of type KS 4 has to be applied with connection downwards.

Strainer

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

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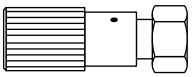
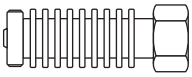
Accessories

Manual Adjusting Device



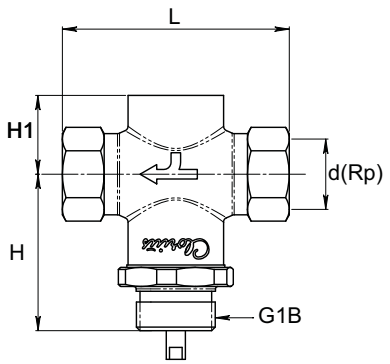
The device has a built-in stuffing box. For sealing and manual operation of valves when an actuator has not been fitted, e.g. during periods of construction (max. 170ºC).

Cooling Unit KS-4



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

Dimension sketch



Type	L mm	H mm	H1 mm	d
15/6 L1S	85	65	20	Rp ½
15/9 L1S	85	65	20	Rp ½
15/12 L1S	85	65	20	Rp ½
15 L1S	85	65	26	Rp ½
20 L1S	95	67	32	Rp ¾

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