2-way Control Valves type L2SR, Gun metal PN 16, DN 40 – 50 mm, 2 seats, Reverse acting

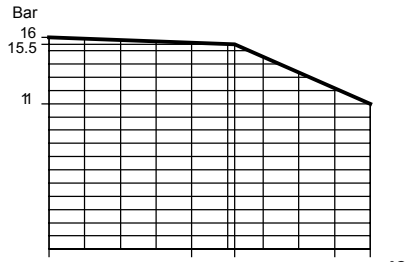
Characteristics

- Nominel pressure PN 16
- Regulating capability $\frac{k_{vs}}{k_{vr}} > 25$
- Reverse acting (normally closed)
- For cooling water and lubricants
- Linear characteristic

Applications

Valves type L2SR are mainly intended for control of cooling water, sea water and lubricating liquids.
The valves are used in conjunction with temperature- or pressure differential regulators in industrial processes or marine installations - especially in control systems for cooling.
As the reverse acting valves are held in closed position by means of a built-in spring, the max. differential pressure, Δp_L, against which a valve can close depends on the spring and when opening the valve, the actuator has to overcome the spring force.

Pressure/Temperature Diagram



Please find the below max. allowable values of Δp_L as well as the max. allowable inlet pressures for opening the valves, p_{1max}, for various actuator forces.

Dimensioning

For sizing of control valves and selection of actuators please see “Quick Choice” datasheet no. 9.0.00.

Design

The valve body, seats and cone – are made of gun metal RG 5 and the stem of stainless steel – the valve body with threaded ends according to ISO 7-1. The thread for the actuator connection is G1B.
The valves are double-seated and designed for tight closure. The leakage rate is less than 0.5% 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 – Reverse Acting

Without an actuator being connected, the valve is held in closed position by means of a spring. With pressure on the spindle the valve opens.
In connection with thermostats or electric valve actuators the valves act as “cooling” valves, i.e. they open at rising temperatures.

Technical Data

Materials:	
- Valve, body, seats and cone	Gun metal RG 5 W.No. 2.1086
- Stem	Stainless Steel W.No. 1.4436
Nominal pressure	PN 16
Seating	Double seated
Flow characteristic	Linear
Regulating capability	$\frac{k_{vs}}{k_{vr}} > 25$
Leakage rate	$\leq 0.5\%$ of k_{vs}
Temperature range	See pressure/ temperature diagram
Mounting	See page 2
Connection threads	ISO 7-1

Specifications

Type	Connection R_P	Opening dia. mm	k_{vs}-value m^3/h	Rated Travel mm	Max. Δp_L bar	Actuator Force N	Corresp. p_{1max} bar	Weight kg
40 L2SR	1 ½"	40	20.00	8	2.7	400	16.0	3.0
50 L2SR	2"	50	30.00	9	1.8	400	16.0	4.0

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

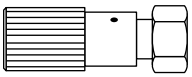
The valves can be installed with vertical as well as horisontal spindles. For valve temperatures of max. 170ºC, the thermostat/actuator can be fitted below or above the valve. For valve temperatures above 170ºC, a cooling unit of type KS4 has to be applied with connection downwards.

Strainer

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

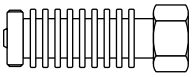
Accessories

Manual Adjusting Device



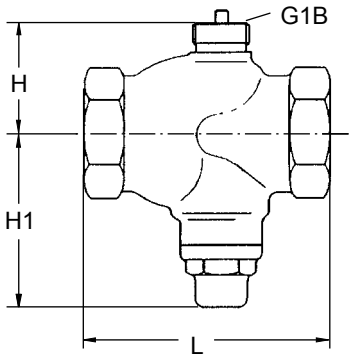
The device has a built-in stuffing box. For tightening and manual operation of valves when an actuator has not been fitted, e.g. during periods of construction (max. 170ºC).

Cooling Unit KS-4



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

Dimension Sketch



Type	L mm	H mm	H1 mm
40 L2SR	129	65	90
50 L2SR	153	70	94

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