Balanced 2-way Control Valves type L1SBR

Gun Metal, PN 16, DN 15 – 32 mm, Reverse acting

Characteristics

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

Applications

Balanced control valves type L1SBR are designed for regulation of cooling water, sea water and lubricating liquids.
Balanced valves are used in installations where the system pressure necessitates a closing force greater than available in the actuator programme for a standard single seated valve, and where the leakage rate for a double-seated valve is unacceptable.
The valves are installed combined with our self-acting thermostats, pressure differential regulators or electric valve actuators for regulation in central heating plants, industrial plants, industrial processes or marine installations - especially in control systems for cooling.
The reverse acting valves are held in closed position by means of a built-in spring.

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.

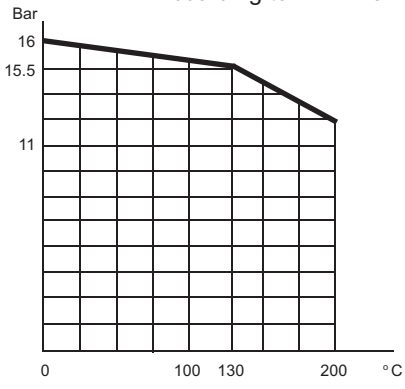
Function

Without the actuator being connected, the valve is held in closed position by means of a spring. With pressure on the spindle the valve opens.
In connection with our thermostats the valves will open 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	≤ 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 L1SBR	Rp ½	15	15	2,75	6	1.0
20 L1SBR	Rp ¾	20	20	5	6.5	1.3
25 L1SBR	Rp 1	25	25	7.5	7	1.6
32 L1SBR	Rp 1¼	32	32	12.5	8	2.9

Subject to change without notice.

Clorius Controls A/S
Tempovej 27 · DK-2750 Ballerup · Denmark
Tel.: +45 77 32 31 30 · Fax: +45 77 32 31 31
E-mail: mail@cloriuscontrols.com
Web: www.cloriuscontrols.com

Balanced 2-way Control Valves type L1SBR

Gun Metal, PN 16, DN 15 – 32 mm, Reverse acting

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

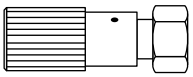
For media temperatures of max. 170ºC, the thermostat/actuator can be fitted below or above the valve. For valve temperatures above 170ºC, a cooling unit of type KS 4 has to be applied and the thermostat/actuator must be fitted below the valve.

Strainer

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

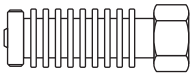
Accessories

Manual Adjusting Device



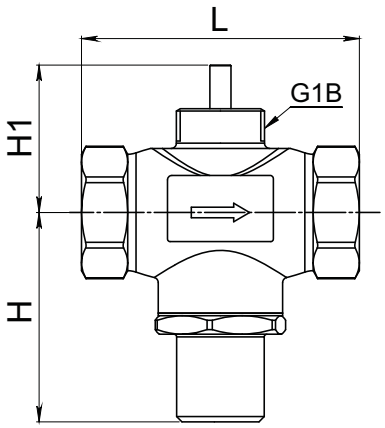
The device has a built-in stuffing box. For sealing and manual operation of valves when an actuator has not been fitted, e.g. during periods of construction (max. 170ºC).

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
15 L1SBR	85	71	40
20 L1SBR	95	79	46
25 L1SBR	105	79	50
32 L1SBR	138	81	64

Dimensioning

Type	Water / Steam			Thermostats		Valve motors	Pressure differential controllers	
				V2	V4	VB/VBA	TD66-4	TD66-8
DN 15	**Water:**	Δp_L & max. p_1	bar	9	16	16	16	16
	Steam:	Δp_L & max. p_1	bar	8				
DN 20	**Water:**	Δp_L & max. p_1	bar	7.5				
	Steam:	Δp_L & max. p_1	bar	6.5				
DN 25	**Water:**	Δp_L & max. p_1	bar	6				
	Steam:	Δp_L & max. p_1	bar	5				
DN 32	**Water:**	Δp_L & max. p_1	bar	7				
	Steam:	Δp_L & max. p_1	bar	6				

Subject to change without notice.

Clorius Controls A/S

Tempovej 27 · DK-2750 Ballerup · Denmark

Tel.: +45 77 32 31 30 · Fax: +45 77 32 31 31

E-mail: mail@cloriuscontrols.com

Web: www.cloriuscontrols.com