Local regulations may restrict the use of this product to below the conditions quoted.
In the interests of development and improvement of the product, we reserve the right to change the specification without notice. © Copyright 2024

SB and SBRA Gunmetal Self-acting Temperature Control Valves

Description

The SB and SBRA range of two-port valve are used in conjunction with Spirax Sarco SA control systems to provide a self-acting temperature control unit.

Available types:

SB	Normally open, single seat valve
SBRA	Normally closed, single seat valve or single seat valve with bleed

Optional extras

Extra bleed hole bypass

Standards

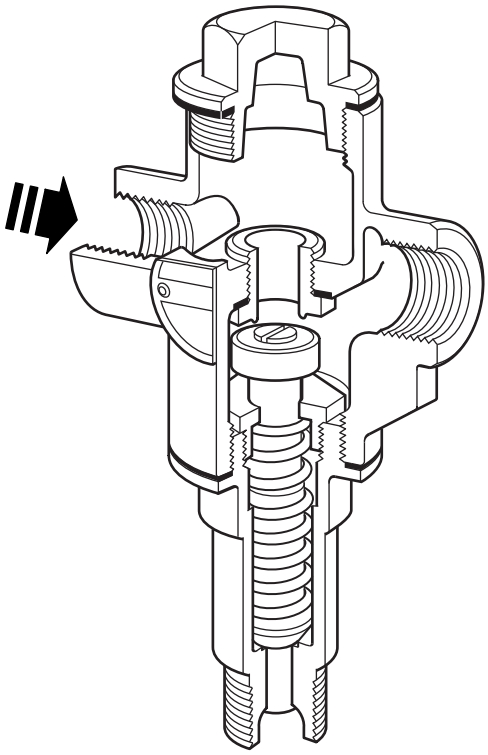
These products fully comply with the requirements of the Pressure Equipment Directive (PED) and carry the CE mark when so required.

Certification

The product is available with manufacturer's Typical Test Report.
Note: All certification / inspection requirements must be stated at the time of order placement.

Sizes and pipe connections

DN15, DN20, and DN25 (1/2", 3/4", and 1") screwed BSP (BS 21 parallel) or NPT.



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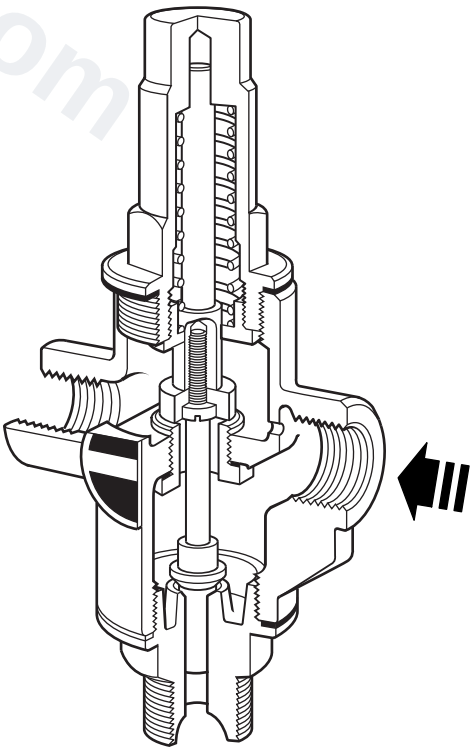

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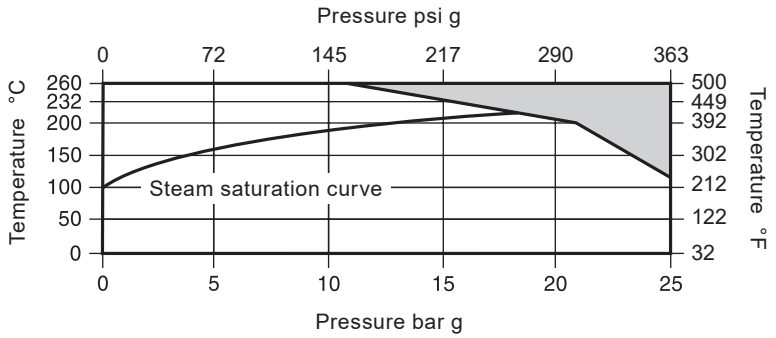
Pressure/temperature limits



The product **must not** be used in this region.

Body design conditions				PN25
Maximum design pressure				25 bar g @ 120 °C (363 psi g @ 248 °F)
Maximum design temperature		Fitted directly to an actuator		232 °C (450 °F)
Minimum design temperature				-10 °C (14 °F)
Maximum operating temperature		Fitted directly to an actuator		232 °C (450 °F)
Minimum operating temperature **Note**: For lower operating temperatures consult Spirax Sarco				0 °C (32 °F)
Maximum differential pressure bar (psi)	**Size**	**DN15 (1/2")**	**DN20 (3/4")**	**DN25 (1")**
	SB	17.2 (250)	10.3 (150)	6.8 (99)
	SBRA	12.0 (174)	7.0 (102)	4.7 (68)
Designed for a maximum cold hydraulic test pressure of				38 bar g (551 psi g)

Kv values

DN15 (1/2")	DN20 (3/4")	DN25 (1")
2.58	3.86	6.80

For conversion:
Cv (UK) = Kv x 0.963
Cv (US) = Kv x 1.156

Capacities

For saturated steam sizing capacities, see TI-GCM-08.
For water sizing capacities, see TI-GCM-09.

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Materials

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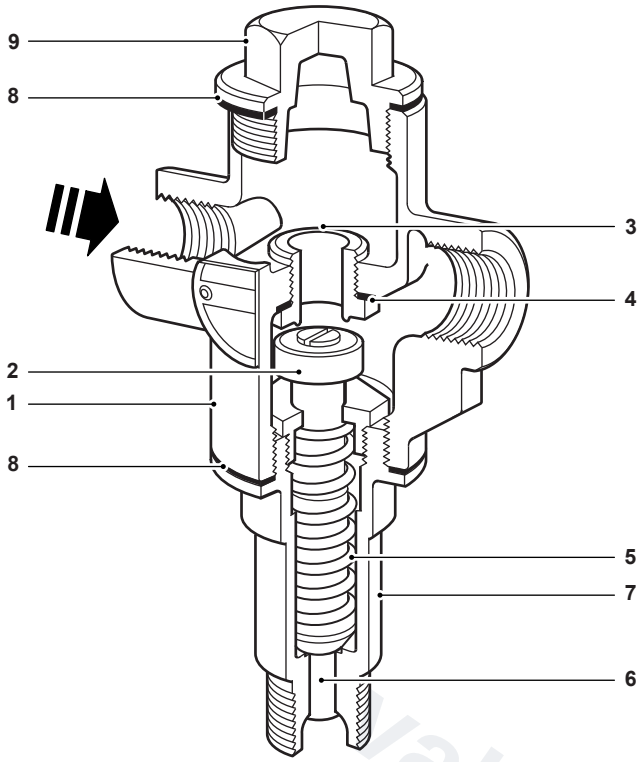

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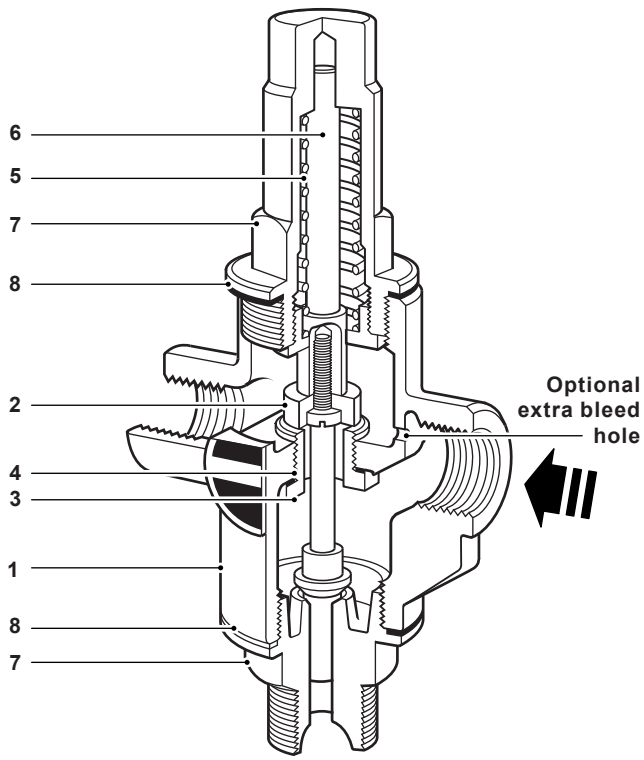

No.	Part	Material	
1	Body	Gunmetal	BS 1400 LG2
2	Valve plug	Stainless steel	BS 970 431 S29
3	Valve seat ring	Stainless steel	BS 970 431 S29
4	Valve seat gasket	Copper	BS 2870 C102
5	Return spring	Stainless steel	BS 2056 302 S26
6	Stem	Brass	BS 2874 CZ 121
7	Bonnet	Brass	BS 2872 CZ 122
8	Bonnet gasket	Reinforced exfoliated graphite	
9	Cap	Brass	BS 2872 CZ 122

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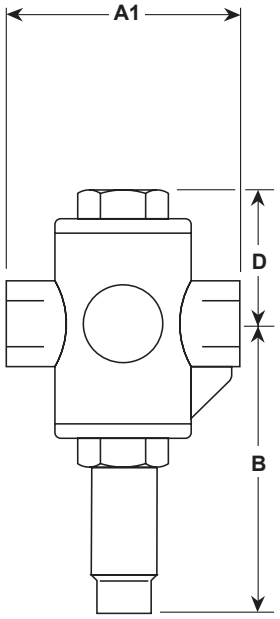
Dimensions/weights (approximate) in mm (inches) and kg (lbs)



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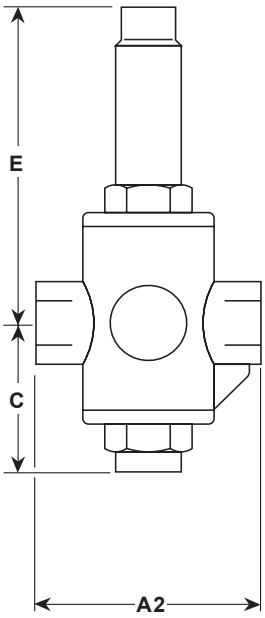

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Size	A1	A2	B	C	D	E	Weight
DN15	79 (3.1)	79 (3.1)	101 (4.0)	66 (2.6)	50 (2.0)	95 (3.7)	1.0 (2.2)
DN20	95 (3.7)	79 (3.1)	101 (4.0)	66 (2.6)	50 (2.0)	95 (3.7)	1.3 (2.9)
DN25	105 (4.1)	79 (3.1)	101 (4.0)	66 (2.6)	50 (2.0)	95 (3.7)	1.5 (3.3)

Safety information, installation and maintenance
For full details see the Installation and Maintenance Instructions supplied with the product.

Installation note:
The valve should be fitted in a horizontal line. The actuator position will depend on the type fitted to the valve.

How to order
Example: 1 off Spirax Sarco 1" SB self-acting temperature control valve with bronze body having screwed BSP connections.

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Spare parts

The spare parts available are shown in heavy outline. Parts drawn in a grey line are not supplied as spares.

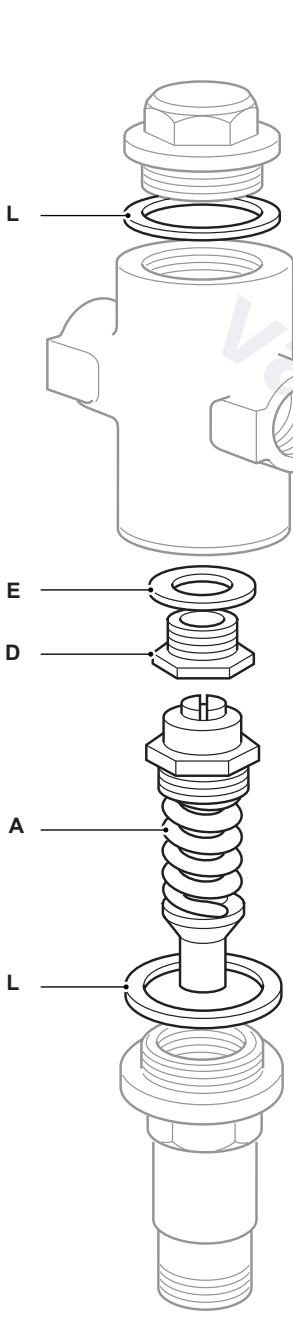
Available spares

Valve seat and stem assembly	SB	**A, D, E, L**
	SBRA	**A1, D1, E, T1, R, S**
Set of all gaskets	SB	**E, L**
	SBRA	**L1, L2, E**

How to order spares

Always order spares by using the description given in the column headed 'Available spares' and state the size and type of valve.

Example: 1 - Valve seat and stem assembly for a ¾" SBRA self-acting temperature control valve.



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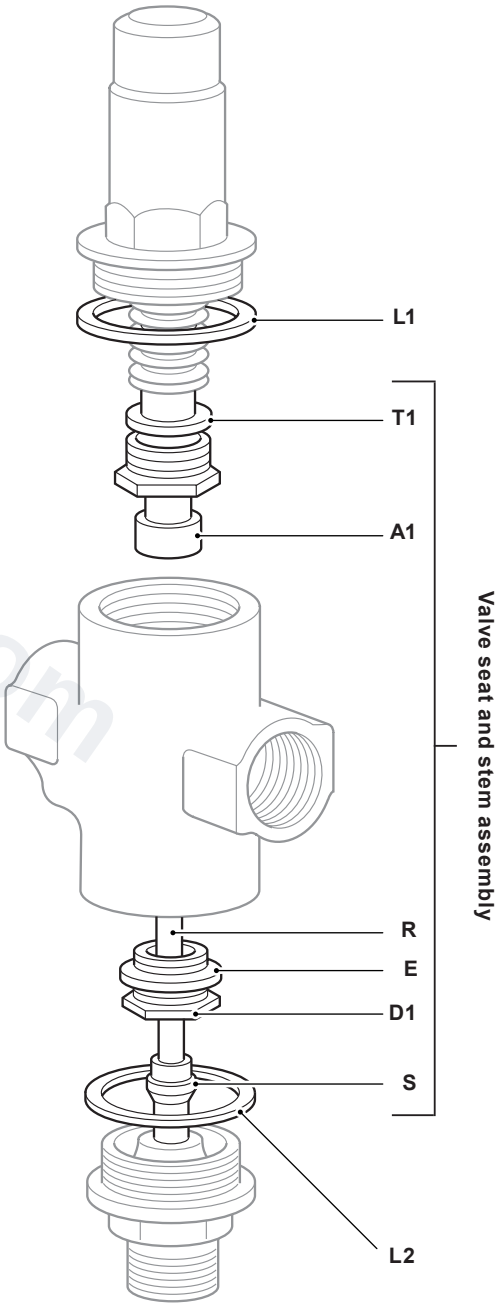

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