

# spirax sarco

## KY51

### Bronze

## Self-acting Control Valves

### Description

The KY51 range of two-port valves are used in conjunction with Spirax Sarco SA control systems to provide a self-acting temperature control unit.


### Available types

Normally closed - The valve incorporates a pressure balancing bellows, which enables the valve to operate against higher differential pressures.

### Optional extras

Fixed bleed bypass for water systems.

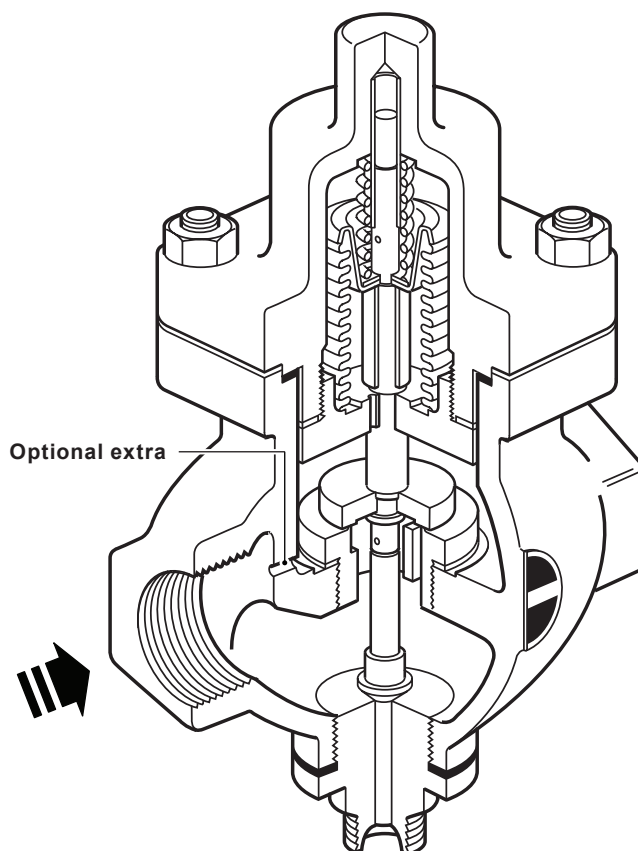
### Standards

These products fully comply with the requirements of the European Pressure Equipment Directive 2014/68/EU and carry the  mark when so required.

### Certification

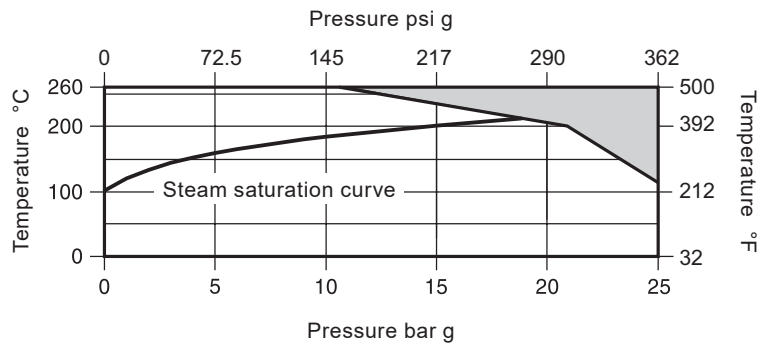
As standard these products are available with a manufacturers' Typical Test Report.

**Note:** All certification/inspection requirements must be stated at the time of order placement.



Sizes and pipe connections
1¼", 1½", 2" Screwed BSP T Rp (ISO 7-1) or NPT

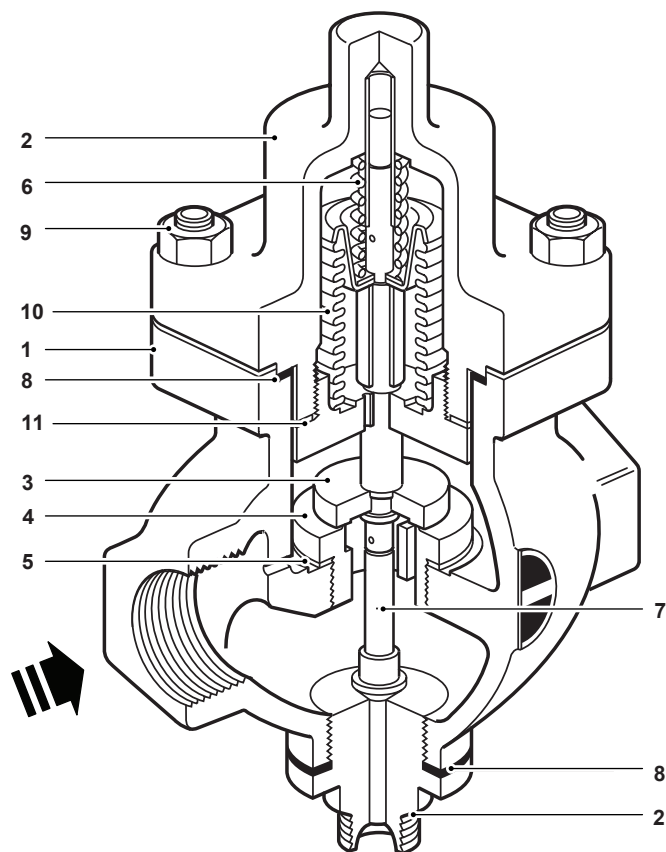
Pressure/temperature limits



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

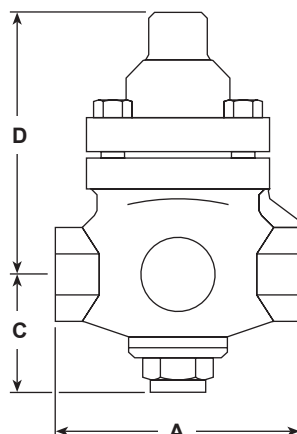
Body design conditions						PN25	
Maximum design pressure						25 bar g @ 120 °C 363 psi g @ 248 °F	
Maximum design temperature						260 °C @ 10.5 bar g 500 °F @ 152 psi g	
Minimum design temperature						-10 °C 14 °F	
Maximum operating pressure for saturated steam service						17.5 bar g 254 psi g	
Maximum operating temperature						260 °C @ 10.5 bar g 500 °F @ 152 psi g	
Minimum operating temperature						0 °C 32 °F	
Maximum differential pressure	Size	1¼"		1½"		2"	
		bar	psi	bar	psi	bar	psi
		9.0	131	8.2	119	6.9	100
Designed for a maximum cold hydraulic test pressure of						38 bar g 551 psi g	

## Materials



No.	Part	Material	
1	Body	Bronze	CC491 KM
2	Bonnet	Bronze	CC491 KM
3	Valve head	Stainless steel	BS 970 431 S 29
4	Valve seat ring	Stainless steel	BS 970 431 S 29
5	Valve seat gasket	1"	Mild steel BS 1449 CS 4
		1¼ - 2"	Reinforced exfoliated graphite
6	Return spring	Stainless steel	BS 2056 302 S 26
7	Stem	Brass	BS 2874 CZ 121
8	Bonnet gaskets	Reinforced exfoliated graphite	
	Bonnet studs	Steel	BS 4439 Gr. 8.8
9	Bonnet nuts	1¼ and 1½"	M10 x 35 mm (1.38") BS 3692 Gr. 8
		2"	M12 x 35 mm (1.38") BS 3692 Gr. 8
10	Bellows	Phosphor bronze	EN 12449 Cu Sn 6
11	Bellows gasket	Reinforced exfoliated graphite	

## Dimensions/weights (approximate) in mm (inches) and kg (pounds)



Size	A	C	D	Weights
1¼"	144 (5.7)	80 (3.1)	154 (6.1)	7.25 (16.0)
1½"	150 (5.9)	90 (3.5)		8.57 (19.0)
2"	180 (7.1)	100 (3.9)		10.60 (23.4)

## K<sub>v</sub> values

Size	1¼"	1½"	2"	For conversion: C <sub>v</sub> (UK) = K <sub>v</sub> x 0.963 C <sub>v</sub> (US) = K <sub>v</sub> x 1.156
K <sub>v</sub>	16.48	23.70	34.0	

## Capacities

For saturated steam sizing capacities see TI-GCM-08.

For water valve sizing capacities see TI-GCM-09.

## 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 with the actuator vertically below the pipeline.

## How to order

**Example:** 1 off Spirax Sarco 2", KY51 self-acting control valve with bronze body having screwed BSP connections.

## Spare parts

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

### Available spares

Valve seat assembly	A1, B, C, D1, E, L1, U
Bellows and stem assembly	H, G, L1, B, C, U
Set of all gaskets	B, C, U, E, G, L1, L2
Set of bonnet studs and nuts (set of 4)	S

### 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 assembly for a Spirax Sarco 1½" KY51 self-acting control valve.

