

# spirax sarco

## NS and NSRA Gunmetal Self-acting Control Valves

### Description

The NS 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

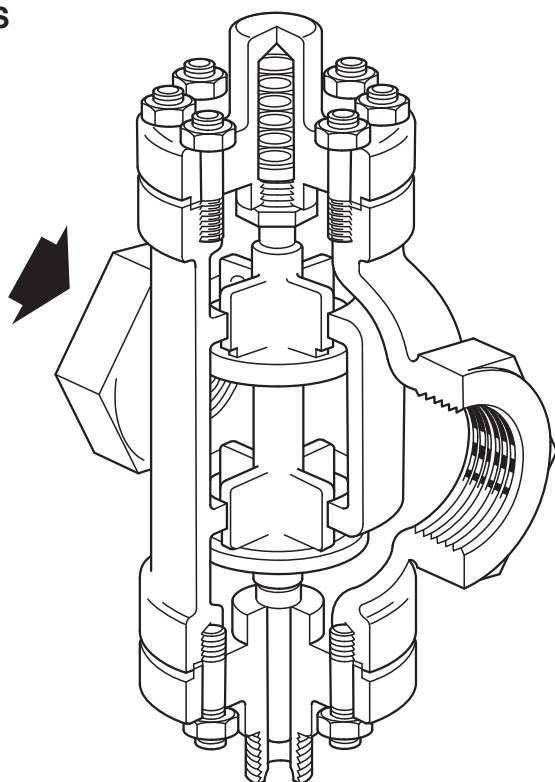
<b>NS</b>	Normally open, double seat
<b>NSRA</b>	Normally closed, double seat

### Sizes and pipe connections

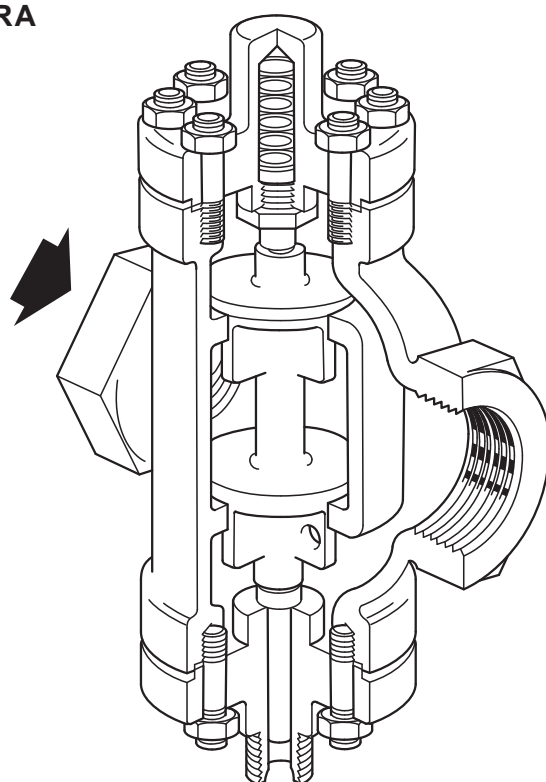
2½" and 3" screwed BSP (BS 21 parallel) (NPT to special order).

DN65 and DN80 flanged EN 1092 PN25 (ASME/ANSI 150 and BS 10 Table 'H', which meets the requirements of Table F, to special order).

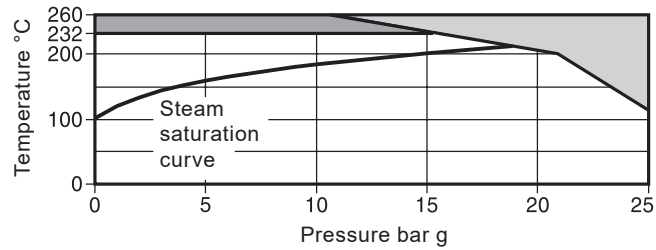
**NS**



**NSRA**



## Pressure/temperature limits



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

A Spirax Sarco spacer is required for use in this region. (see TI-P033-01 for further details).

Body design conditions	PN25		
Maximum design pressure	25 bar g @ 120 °C		
Maximum design temperature	260 °C		
Minimum design temperature	-200 °C		
Maximum operating pressure for saturated steam service	17.5 bar g		
Maximum operating temperature	With spacer	260 °C @ 10.5 bar g	
	Without spacer	232 °C @ 15.5 bar g	
Minimum operating temperature	-10 °C		
<b>Note:</b> For lower operating temperatures consult Spirax Sarco			
Maximum differential pressure	NS	DN65 - 2½"	10.0 bar
		DN80 - 3"	10.0 bar
	NSRA	DN65 - 2½"	2.7 bar
		DN80 - 3"	2.0 bar
Designed for a maximum cold hydraulic test pressure of	38 bar g		
<b>Note:</b> As supplied the test pressure must not exceed	25 bar g		

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

Size	DN65 - 2½"	DN80 - 3"	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>	65.0	94.0	

## Capacities/sizing chart

For saturated steam service see TI-GCM-08.

For water service see TI-GCM-09.

## Safety information, installation and maintenance

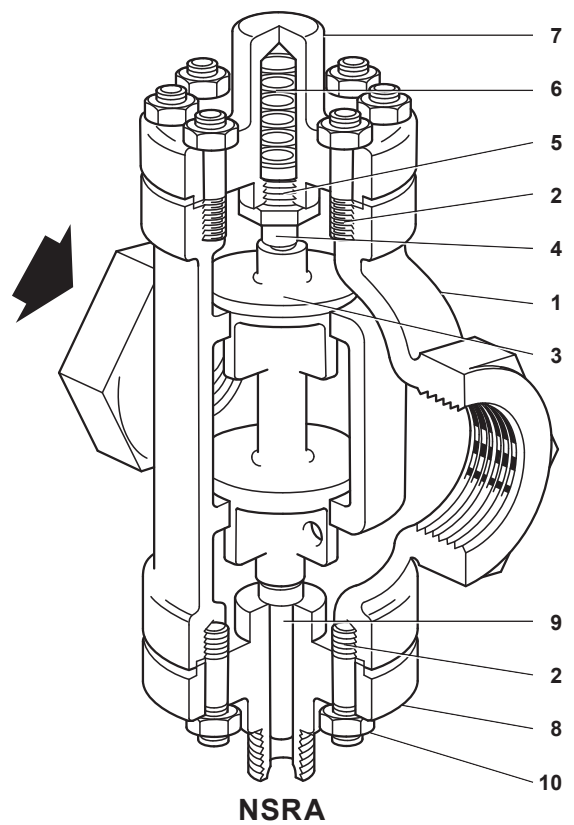
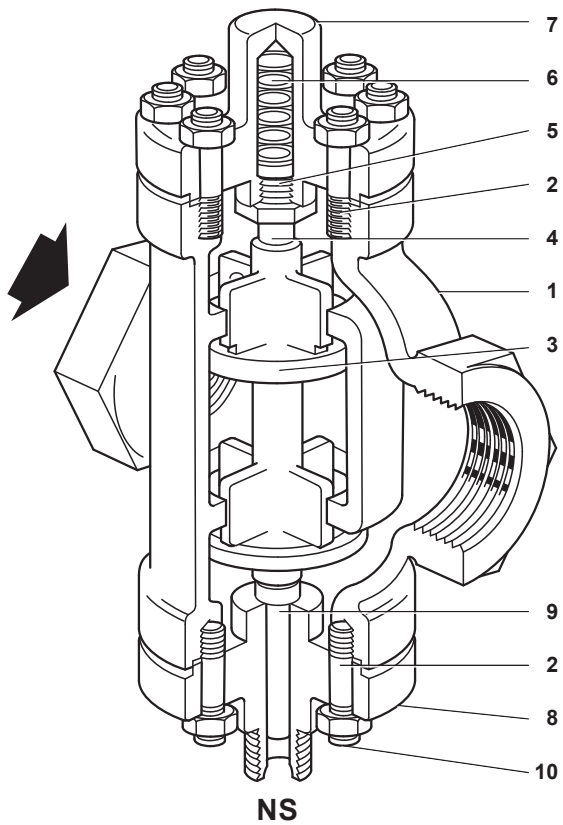
For full details see the Installation and Maintenance Instructions supplied with the product.

## How to order

Example: 1 off Spirax Sarco 2½" NS control valve with gunmetal body and trim. Connections are to be screwed BSP.

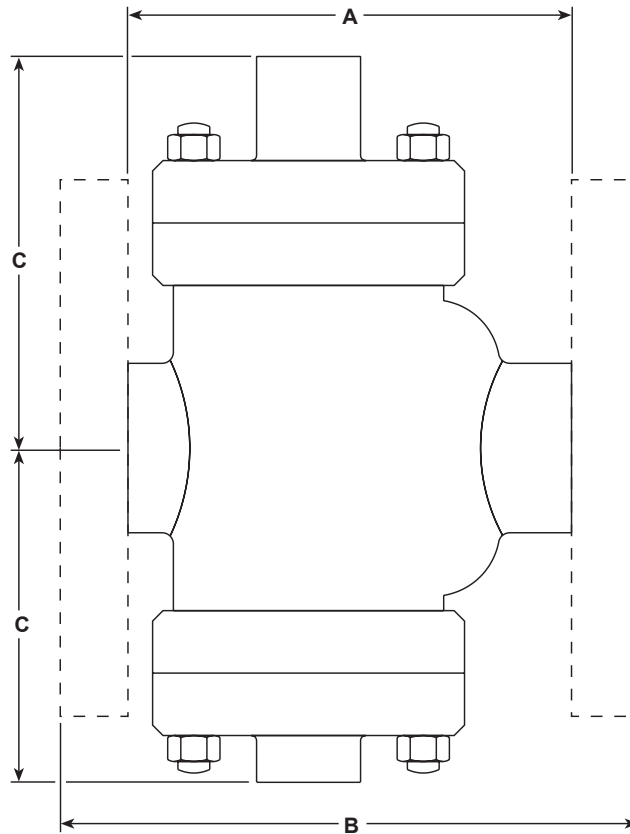
## Materials

No.	Part	Material	
1	Body	Gunmetal	BS 1400 LG2
2	Body gasket	Semi-ridged graphite	BS 2815 Gr. A
3	Valve closure member	Gunmetal	BS 1400 LG2
4	Plunger	Brass	BS 2874 CZ 121
5	Plunger guide	Brass	BS 2874 CZ 121
6	Return spring	Stainless steel	BS 2056 302 S 26
7	Spring housing	Gunmetal	BS 1400 LG 2
8	Bonnet	Gunmetal	BS 1400 LG 2
9	Stem	Brass	BS 2874 CZ 121
10	Body studs	Steel	BS 4439 Gr. 8.8
	Body nuts	Steel	BS 3692 Gr. 8



**Dimensions/weights** (approximate) in mm and kg

Size	BSP or NPT	EN 1092 PN25 ASME 150	BST F/H	Weight		
	A	B	B	C	Screwed	Flanged
DN65 (2½")	171	203	190	150	8.1	17.2
DN80 (3")	194	236	216	160	13.6	22.7



**Spare parts**

The body gaskets (see Materials item 2) are available as spares in packets of 6.

**How to order spares**

**Example:** 1 - Packet of body gaskets for a DN65 Spirax Sarco NS control valve.