

# spirax sarco

## Direct Operated Pressure Regulator BRV2S

<b>Model</b>	BRV2S (Stainless Steel Bellows)
<b>Sizes</b>	1/2", 3/4", 1"
<b>Connections</b>	NPT
<b>Construction</b>	Ductile Iron

The BRV2 is a direct acting pressure reducing valve suitable for steam or gases, such as compressed air.

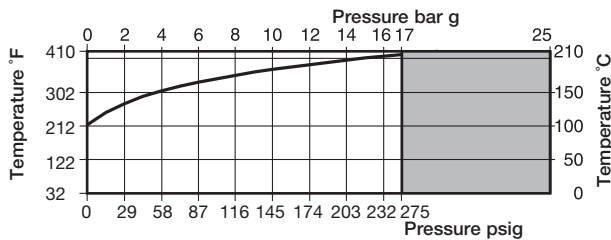
### Construction Materials

No.	Part	Material	Material Spec.
1	Spring Housing	Aluminum Epoxy Coated	LM 24
2	Adjustment Hand Wheel	Mineral Reinforced Nylon	
3	Top Spring Plate	Cast Iron	DIN 1691 GG 20
4	Pressure Adjustment Spring	Silicone Chrome Spring Steel	BS 2803 685 A55 Range 2
5	Bellows Assembly Option:	Stainless Steel Phosphor Bronze/Brass	316TI/316L BS 2872 C2122
6	Bellows Assembly Gasket	Stainless Steel Reinforced Exfoliated Graphite	
7	Spring Housing Bolts	Steel-Zinc plated M8 x 25 mm	BS 3692 Gr 8.8
8	Body - Screwed & Flanged	SG Iron	DIN 1693 GGG40.3
9	Guide Bush	Graphite Filled PTFE	
10	Pushrod	Stainless Steel	ASTM A276 Gr 316L
11	Valve Seat	Stainless Steel	BS 970 431 S29
12	Valve Seat Gasket	Stainless Steel	BS 1449 316 S11
13	Valve	Stainless Steel	AISI 420
14	Valve Return Spring	Stainless Steel	BS 20056 316 S42
15	Strainer Screen	Stainless Steel	BS 1449 316 SH
16	Spring Range Identification Disc	Polypropylene	
17	Bulkhead Plate	Stainless Steel	316L
18	Tamperproof Pin	Mild Steel - Copper Plated	
19	Blanking Plug	Stainless Steel	BS970 431 S29
20	Compression Fitting	Brass	

### Limiting Operating Conditions - steam or gas

<b>Max. Upstream Pressure</b>	275 psig (19 barg)
<b>Max. Downstream Pressure</b>	125 psig (8.0 barg)
<b>Max. Operating Temperature</b>	410°F (210°C)
<b>Max. Cold Hydraulic Test</b>	550 psig (38 barg)
<b>Max. Recommended Turndown Ratio</b>	10:1 psig at Maximum Flow
<b>Shutoff ANSI Class</b>	Class IV

### Pressure/temperature limits

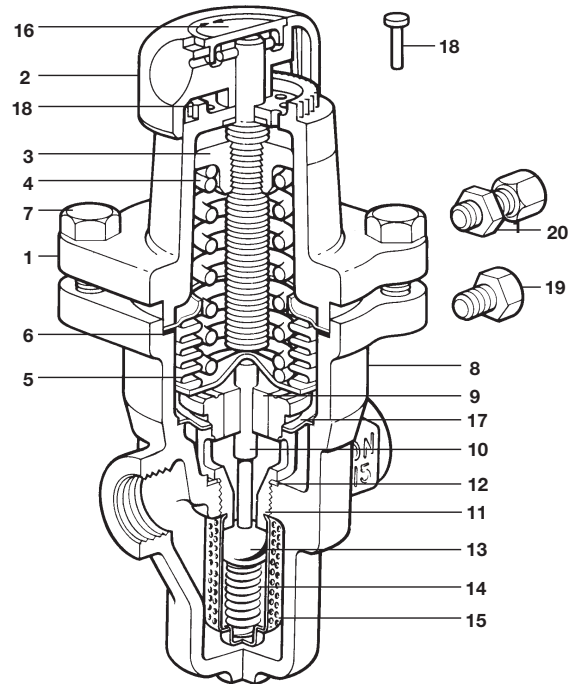


### Downstream Pressure Ranges

For the following downstream pressures, three color-coded springs are available. Where the pressures overlap, use the lowest pressure spring to give the downstream pressure required:

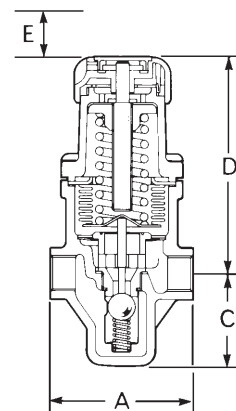
<b>Grey:</b> 2 to 25 psig 0.14 to 1.7 barg	<b>Green:</b> 20 to 60 psig 1.4 to 4.0 barg	<b>Orange:</b> 50 to 125 psig 3.5 to 8.6 barg
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*Local regulation may restrict the use of this product below the conditions quoted. Limiting conditions refer to standard connections only.  
In the interests of development and improvement of the product, we reserve the right to change the specification.*



### Typical Applications

Small steam or gas pressure reducing applications.



### Dimensions (nominal) in inches and millimeters

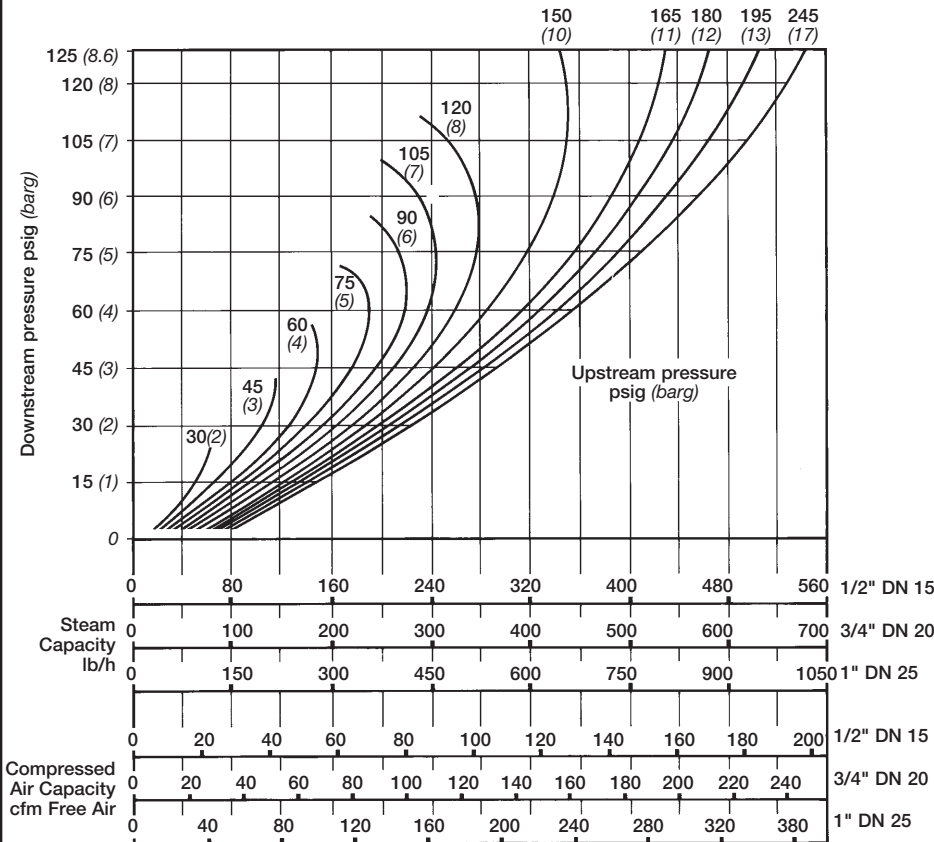
Size	A	C	D	E	Weight
				Withdrawal Distance	
1/2" DN15	3.3 83	2.2 55	5.0 126.5	1.0 25	3.4 lb 1.55 kg
3/4" DN20	3.8 96	2.2 55	5.0 126.5	1.0 25	3.6 lb 1.65 kg
1" DN25	4.25 108	2.2 55	5.0 126.5	1.0 25	4.2 lb 1.90 kg

# Direct Operated Pressure Regulator BRV2S

## Capacities – Saturated steam capacities in lb/h

Full lift capacities for safety valve sizing are shown below:

$C_v$ ( $K_v$ )	1/2" (DN15)	3/4" (DN20)	1" (DN25)
	1.8 (1.5)	2.9 (2.5)	3.5 (3.0)



## How to use the chart

The curved lines labelled 30, 45, 60, etc., represent upstream pressures. Downstream pressures are read along the vertical line on the left hand side of the chart.

### Example:

Required, a reducing valve to pass 160 lb/h reducing from 150 to 60 psi. From the downstream pressure of 60 on the left hand side of the chart extend out horizontally until the line meets the curved 150 psi upstream line. At this point, read vertically downward where it will be seen that 1/2" BRV2S will be required.

## Installation and Maintenance

The valve should be installed in a horizontal pipeline with the direction of flow as indicated by the arrow on the valve body.

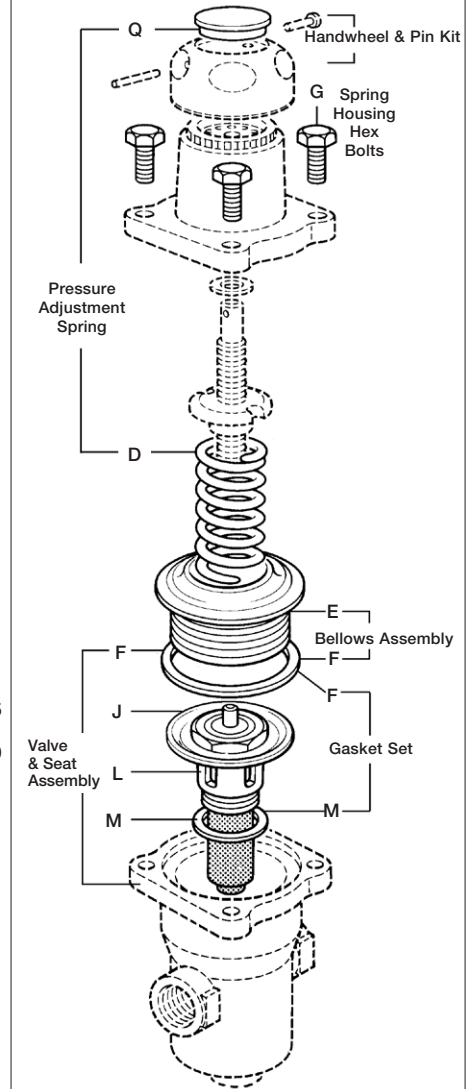
When the required set pressure has been achieved, the tamper proof pin may be used to prevent further pressure adjustments.

Any strainer fitted upstream of the BRV2S, and the strainer screen fitted inside the valve should be cleaned regularly so that the flow to the valve is not restricted. Full Installation and Maintenance Instructions are supplied with each product. (IM-P045-10)

### BRV2SP/BRV2BP

When external pressure sensing is used, remove the blanking plug (19) and fit the 1/8"/6mm O/D compressing fitting (20-supplied). The other end of the 6mm sensing pipe should be connected into the downstream pipework at least 1m downstream from the valve. For more detail, see Installation and Maintenance Instructions.

## Spare Parts



### Spare Parts

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

#### AVAILABLE SPARES

Valve and seat assembly	F,M,L,J
* Bellows Assembly (Stainless Steel)	E,F
Option Phosphor Bronze/Brass	
* Spring Housing Hex bolts (set of 4)	G
* Pressure Adjustment Spring	D,Q
Grey 2-25 psig • Green 20-60 psig	
Orange 50-125 psig	
* Gasket set	F,M
* Common to all sizes.	

#### How to order

Always order spares by using the description given in the column headed Available Spare and stating the size, type and pressure range of the reducing valve.

Example: Pressure Adjustment Spring, pressure range 50-125 psig (orange) for 1/2" Spirax Sarco Type BRV2S Reducing Valve.

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