

## BSA3T Bellows Sealed Stop Valve

The BSA3T is a low maintenance flanged in-line Bellows Sealed Isolation Valve for use on steam, condensate, gas and other fluid applications where zero emissions from the stem seal are important. BSA3T is fitted with a throttling valve plug that allows close control when opening the valve. Locking screw and stroke limiter maintains correct flow rate once the flow rate is obtained. The "T" version is to be used for regulating duties.

<b>Model</b>	<b>BSA3T</b>
<b>Sizes</b>	1/2" to 8"
<b>Connections</b>	ANSI 150 ANSI 300
<b>Body Design</b>	ANSI Class 300
<b>Construction</b>	Cast Steel
<b>Options</b>	Gland Flange assembly (1/2" to 4") Balancing Disc (6" & 8") R-PTEF Throttling Plug

### Construction Materials

No.	Part	Material	
1	Body	Cast Steel	ASTM A 216 WCB
2	Bonnet	Forged Steel (1/2"-3") Cast Steel (4"-8")	ASTM A 105 ASTM A 216 WCB
3	Seat	Stainless Steel	AISI 420
4	Disc	Stainless Steel	DIN 17440x30Cr13
5	Bellows	Stainless Steel	DIN 17440x6CRNiTi1810
6	Stem	Stainless Steel	AISI 420
7	Handwheel	Pressed Steel	BS1449 CR4
8	Stem Packing	Graphite	
9	Bonnet Studs	Steel	ASTM A 193 B7
	Bonnet Nuts	Steel	ASTM A 192 2 H
10	Body/Bonnet Gasket	Graphite laminated with Stainless Steel insert	

### C<sub>v</sub> Values

Size	1/2"	3/4"	1"	1-1/2"	2"	3"	4"	6"	8"
	4.7	8.2	14	35	55	140	226	480	848

### Sample Specification

1" Spirax Sarco Type BSA3T bellows sealed stop valve, flanged ANSI 300 (Available with optional gland flange assembly up to 4").

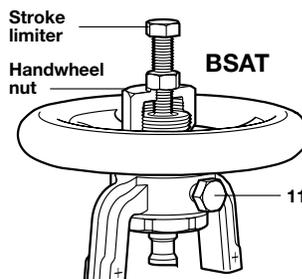
Note: Should the differential pressure exceed those listed against the respective sizes in the table below, then please ensure Balancing discs are specified for use in the valves. (see diagram).

Size	6"	8"
Differential Pressure (psi)	247	145

### Stroke limiter for throttling versions

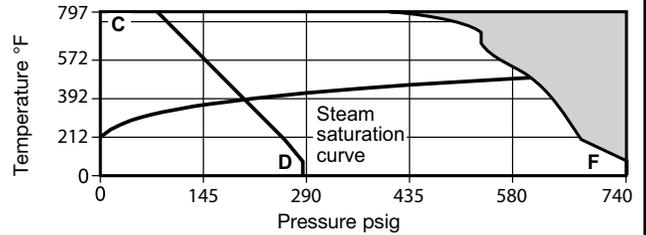
The handwheel nut on the BSA1T, BSA2T and BSA3T has a threaded hole for provision of a stroke limiter. Customer to supply standard nuts and bolts as indicated in the table below.

Size	Hexagon bolt
1/2" to 3"	M8 x 50 mm
4" to 6"	M12 x 75 mm
8"	M12 x 100 mm



### Limiting Operating Conditions

<b>Body design conditions</b>	ANSI 300
<b>Maximum design temperature</b>	797°F
<b>Maximum cold hydraulic test pressure</b>	1116 psig



■ The product must not be used in this region.

C - D Flanged ANSI 150 (optional connection)

C - F Flanged ANSI 300

### Standards

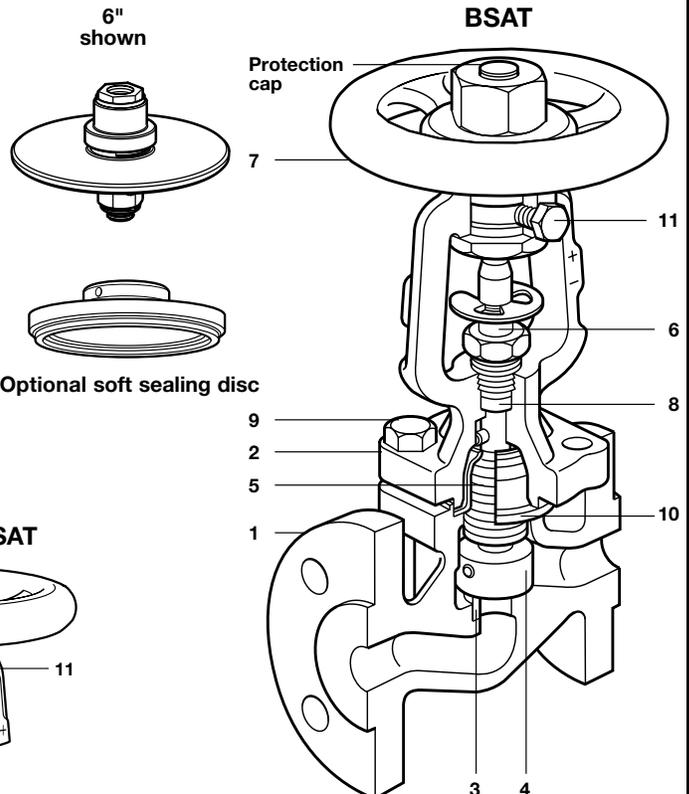
Valve bellows are designed in accordance to MSS SP-117.

### Certification

All valves are EN 10204 (3.1.B) certifiable as standard and certificates are available on request.

### Seat Leakage

Disc to seat shut off conforms to API 598 no leakage.

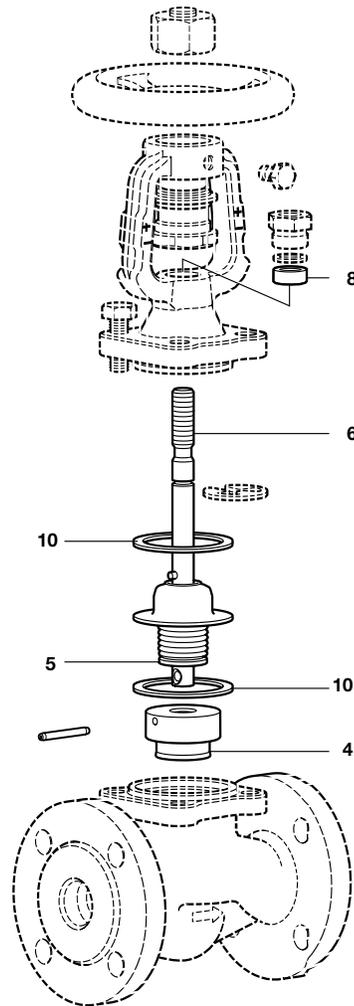
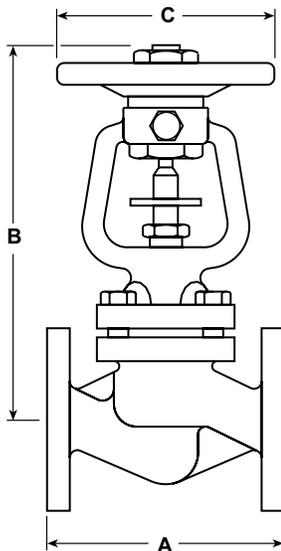


Optional soft sealing disc

# BSA3T Bellows Sealed Stop Valve

## Dimensions/Weights in inches (mm) and pounds (kg)

Size	A		B	C	Weight
	ANSI 150	ANSI 300			
1/2"	4.25 (108)	6.0 (152)	8.07 (205)	4.92 (125)	13.2 (6.0)
3/4"	4.60 (117)	7.0 (178)	8.07 (205)	4.92 (125)	15.4 (7.0)
1"	5.0 (127)	8.0 (203)	8.54 (217)	4.92 (125)	20.0 (9.0)
1 1/2"	6.5 (165)	9.0 (229)	9.56 (243)	4.92 (125)	24.3 (11.0)
2"	9.5 (241)	10.5 (267)	9.56 (243)	7.87 (200)	33.0 (15.0)
3"	11.5 (292)	12.5 (317)	11.29 (287)	7.87 (200)	64.0 (29.0)
4"		14.0 (356)	15.07 (383)	12.4 (315)	108.0 (49.0)
6"		17.5 (445)	17.7 (450)	12.4 (315)	207.0 (94.0)
8"		22.0 (559)	24.48 (622)	12.4 (315)	424.0 (193.0)



## Spare Parts

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

### Available spares

Body/bonnet gasket and stem packing	10, 8 (2 off)
Stem and bellows assembly (state if BSA or BSAT)	5, 6, 8, 10
Disc (and optional disc where fitted) - state full description of the valve	4, 8, 10

Note: The gaskets contain sharp metal reinforcement, please handle with care.

### How to order spares

Please note: for customer convenience spares are supplied in kits to ensure all the appropriate replacement parts are supplied to carry out a specific maintenance task. e.g. when a stem / bellows assembly is ordered, parts (10), (8) and (6, 5) will be included in the kit.

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

**Example: 1** - Body / bonnet gasket and stem packing for a 1/2" Spirax Sarco BSA3T ANSI300 bellows sealed stop valve.

## Installation

Install in the direction of flow given by the arrow on the body with the handwheel in a suitable position. The preferred position is with the spindle vertical. Refer to IM-P137-02 for full installation and maintenance instructions.