



## BSA3T Bellows Sealed Stop Valve

### Description

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 and connections</b>	ANSI 150	½"-4"
	ANSI 300	½"-4", 6", 8"
<b>Body design</b>	ANSI Class 300	
<b>Construction</b>	Cast Steel	
<b>Options</b>	Gland Flange assembly (½" to 4")	
	Balancing Disc (6" & 8")	
	R-PTEF Throttling Plug	

### Standards

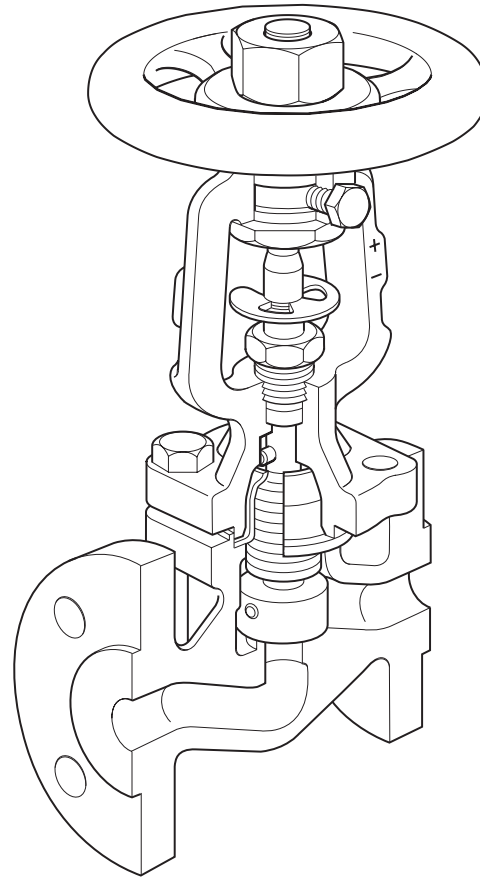
Valve bellows are designed in accordance to MSS SP-117.

### Certification

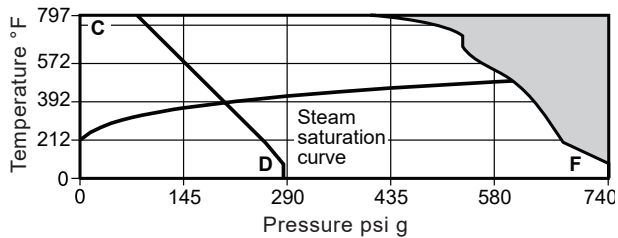
All valves are EN 10204 (3.1.B) certifiable as standard and certificates are available on request.

### Seat Leakage

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



### Pressure/temperature limits



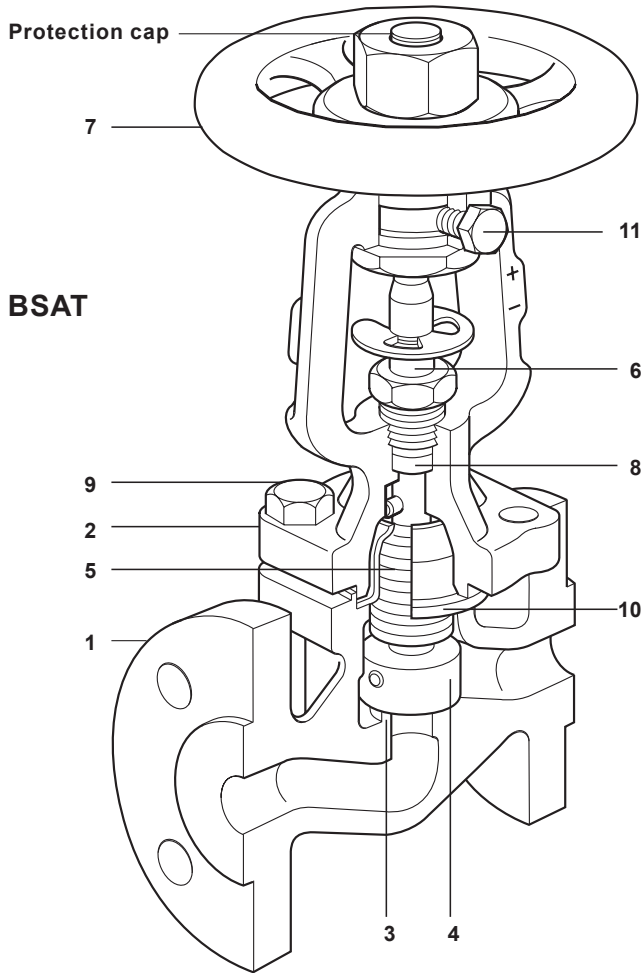
The product **must not** be used in this region.

C - D Flanged ANSI 150 (optional connection)

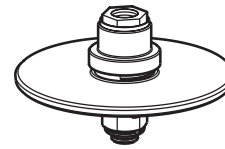
C - F Flanged ANSI 300

Body design conditions	ANSI 300
Maximum design temperature	797 °F
Maximum cold hydraulic test pressure	1116 psi g

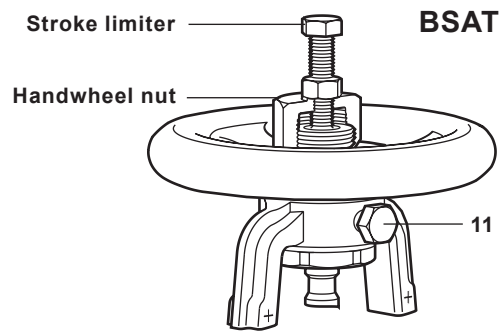
## Construction Materials



6" shown



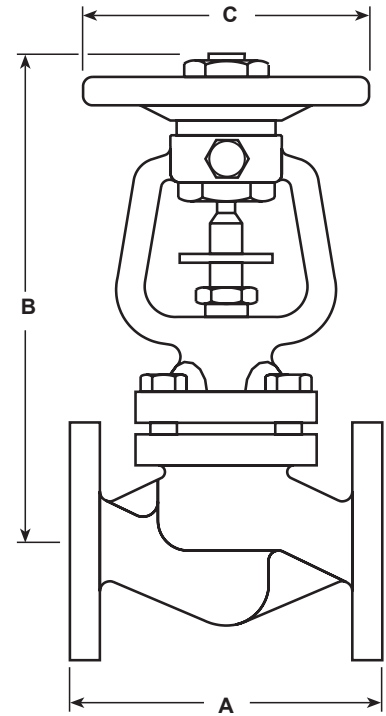
Optional soft sealing disc



No.	Part	Material	
1	Body	Cast Steel	ASTM A 216 WCB
		Forged Steel (½"-3")	ASTM A 105
2	Bonnet	Cast Steel (4"-8")	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
10	Body/Bonnet Gasket	Graphite laminated with Stainless Steel insert	
		DN15 - DN80	Steel M8 x 14 mm BS 3692 Gr. 8.8
11	Locking screw	DN100 - DN150	Steel M8 x 20 mm BS 3692 Gr. 8.8
		DN200 - DN250	Steel M12 x 20 mm BS 3692 Gr. 8.8

## 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"	8.0 (203)	10.5 (267)	9.56 (243)	7.87 (200)	33.0 (15.0)
3"	9.5 (241)	12.5 (317)	11.29 (287)	7.87 (200)	64.0 (29.0)
4"	11.5 (292)	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)



## 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

## 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.

## 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 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

## Spare Parts

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

### Available spares

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

**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.

