




BSA3-BD and BSA6-BD Bellows Sealed Stop Valves

Description

BSA3-BD and **BSA6-BD** are in-line stop valves having tri-ply bellows as standard throughout the range. These valves have been designed for use on steam, gas, liquid, thermal oils, condensate and water systems.

Both **BSA3-BD** and **BSA6-BD** are fitted with a flat, balanced pressure plug as standard.

Standards

The product fully complies with the requirements of the EU Pressure Equipment Directive/UK Pressure Equipment (Safety) Regulations and carries the  mark when so required.

Certification

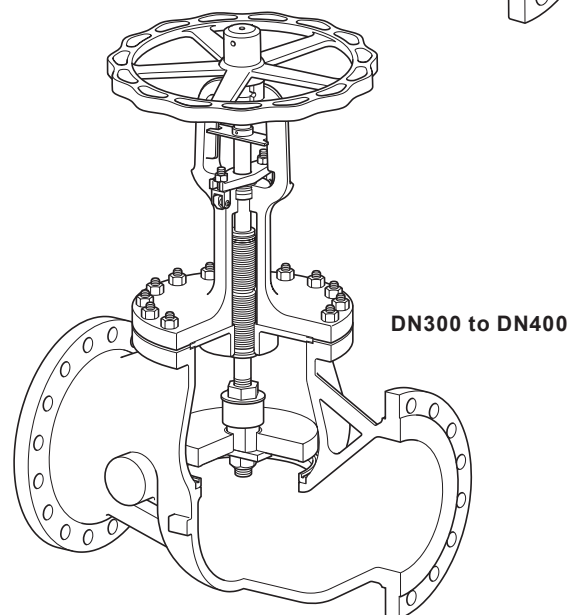
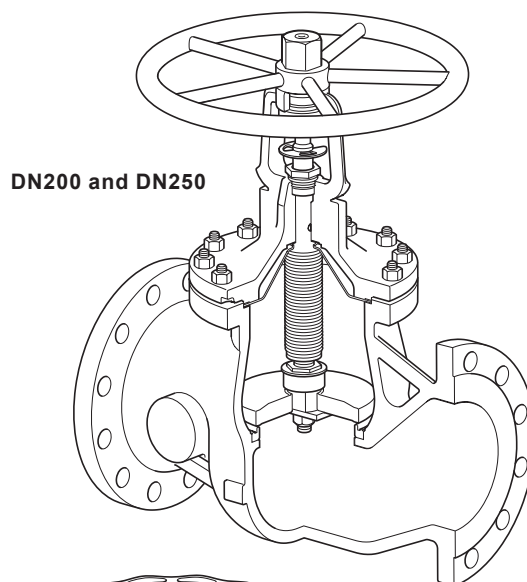
The **BSA3-BD** and **BSA6-BD** body and bonnet are available with certification to EN 10204 3.1.

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

Range and options

Standard BSA-BD range - complete with balance disc.

Model and connections	BSA3-BD			BSA6-BD	
	PN16	PN25	PN40	PN16	PN25
DN125				•	•
DN150				•	•
DN200	•	•	•	•	•
Sizes	DN250	•	•		
	DN300	•	•		
	DN350	•	•		
	DN400	•	•		



Seat leakage

Disc to seat shut-off conforms to EN 12266-1 Rate A leakage.

Kv values

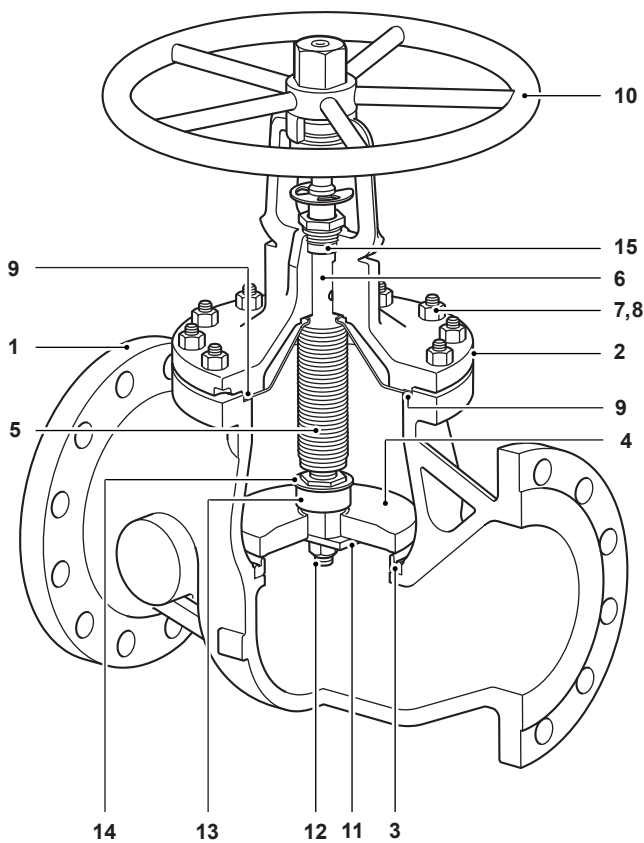
All **BSA3-BD** and **BSA6-BD** valves will be supplied with a balanced disc.

BSA3-BD				
DN200	DN250	DN300	DN350	DN400
593	935	1264	1804	2362

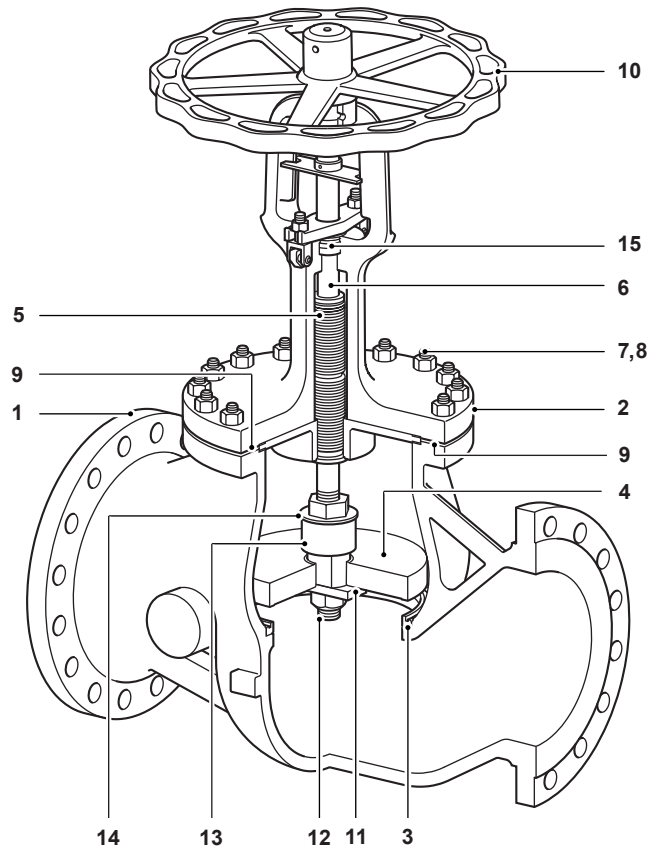
BSA6-BD		
DN125	DN150	DN200
205	295	562

For conversion:
 $C_v (UK) = K_v \times 0.963$
 $C_v (US) = K_v \times 1.156$

Materials for BSA3-BD



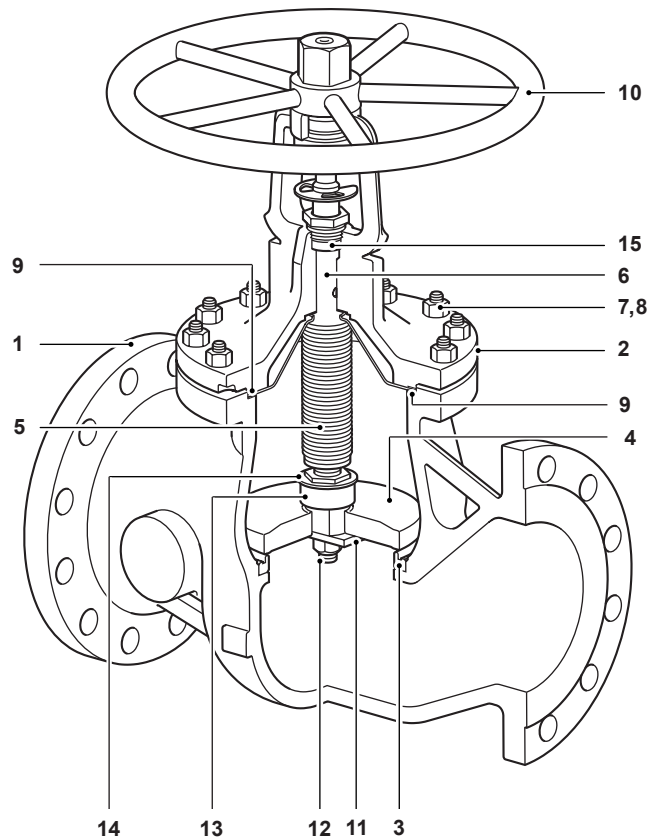
DN200 and DN250



DN300 to DN400

No.	Part	Material	
1	Body	Cast steel	1.0619+N
2	Bonnet	Cast steel	1.0619+N
3	Seat	A105 and Stellite	
4	Disc	Stainless steel	DIN 17440 X30 Cr13 and Stellite
5	Bellows	Stainless steel	DIN 17440 X6 Cr Ni Ti 1810
6	Stem	Stainless steel	AISI 420
7	Bonnet nut	Steel	ASTM A194 2H
8	Bonnet stud	Steel	ASTM A193 B7
9	Body/bonnet gasket	Graphite laminated with stainless steel insert	
10	Handwheel	Carbon steel	DN200 and DN250
		Cast iron	DN300 to DN400
11	Strap	Stainless steel	ASTM A276 304
12	Self locking nut	Stainless steel	
13	Balance plug	Stainless steel	DIN 17440 x 30 Cr13 and Stellite
14	Locking washer	Stainless steel	ASTM A276 304
15	Stem packing	Graphite	

Materials for BSA6-BD

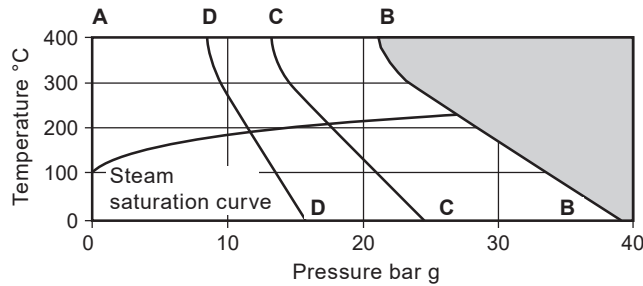


No.	Part	Material	
1	Body	Stainless steel Dual approved	EN 10213 1.4408/ASTM A351 CF8M
2	Bonnet	Stainless steel Dual approved	EN 10213 1.4408/ASTM A351 CF8M
3	Seat	Stainless steel	ASTM A182 F316L, with Stellite
4	Main Disc	Stainless steel	ASTM A182 F316L, with Stellite
5	Bellows	Stainless steel	DIN 17440 1.4571
6	Stem	Martensitic	ANSI 420
7	Bonnet nuts	Stainless steel	A4-70
8	Bonnet studs	Stainless steel	A4-70
9	Body/bonnet gasket	Graphite laminated with stainless steel insert	
10	Handwheel	Pressed steel	BS 1449 CR4
11	strap	Stainless steel	ASTM A276 304
12	Locking screw	Stainless steel	
13	Balance plug	Stainless steel	ASTM A182 316L/316, with Stellite
14	Locking washer	Stainless steel	ASTM A276 304
15	Stem packing	Graphite	

Pressure/temperature limits - EN 1092 and EN 12516-1

BSA3-BD

Flanged:
PN16
PN25
PN40



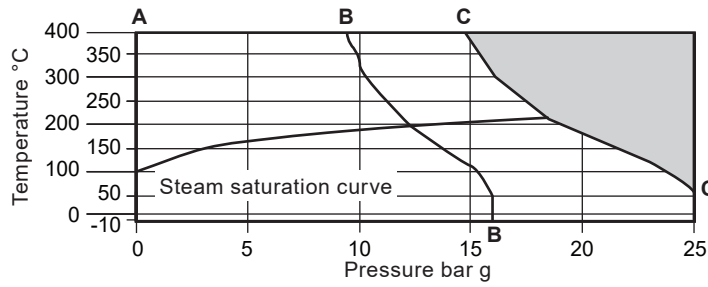
The product **must not** be used in this region or beyond the parameter of the PMA or TMA of the relative end connection.

	Body design condition	PN16
	PMA Maximum allowable pressure	16 bar g @ 0 °C
	TMA Maximum allowable temperature	400 °C @ 9.5 bar g
	Minimum allowable temperature	-10 °C
A - D - D	PMO Maximum operating pressure for saturated steam service	13.5 bar g
	TMO Maximum operating temperature	400 °C @ 9.5 bar g
	Minimum operating temperature	-10 °C
	Minimum operating pressure	0 bar g
	Maximum differential pressure is limited to the PMO	
	Designed for a maximum cold hydraulic test pressure of:	24 bar g
	Body design condition	PN25
	PMA Maximum allowable pressure	25 bar g @ 0 °C
	TMA Maximum allowable temperature	400 °C @ 14.8 bar g
	Minimum allowable temperature	-10 °C
A - C - C	PMO Maximum operating pressure for saturated steam service	20.5 bar g
	TMO Maximum operating temperature	400 °C @ 14.8 bar g
	Minimum operating temperature	-10 °C
	Minimum operating pressure	0 bar g
	Maximum differential pressure is limited to the PMO	
	Designed for a maximum cold hydraulic test pressure of:	37.5 bar g
	Body design condition	PN40
	PMA Maximum allowable pressure	40 bar g @ 0 °C
	TMA Maximum allowable temperature	400 °C @ 23.8 bar g
	Minimum allowable temperature	-10 °C
A - B - B	PMO Maximum operating pressure for saturated steam service	31.3 bar g
	TMO Maximum operating temperature	400 °C @ 23.8 bar g
	Minimum operating temperature	-10 °C
	Minimum operating pressure	0 bar g
	Maximum differential pressure is limited to the PMO	
	Designed for a maximum cold hydraulic test pressure of:	60 bar g

Pressure/temperature limits - EN 1092 and EN 12516-1

BSA6-BD

**Flanged:
PN16
PN25**

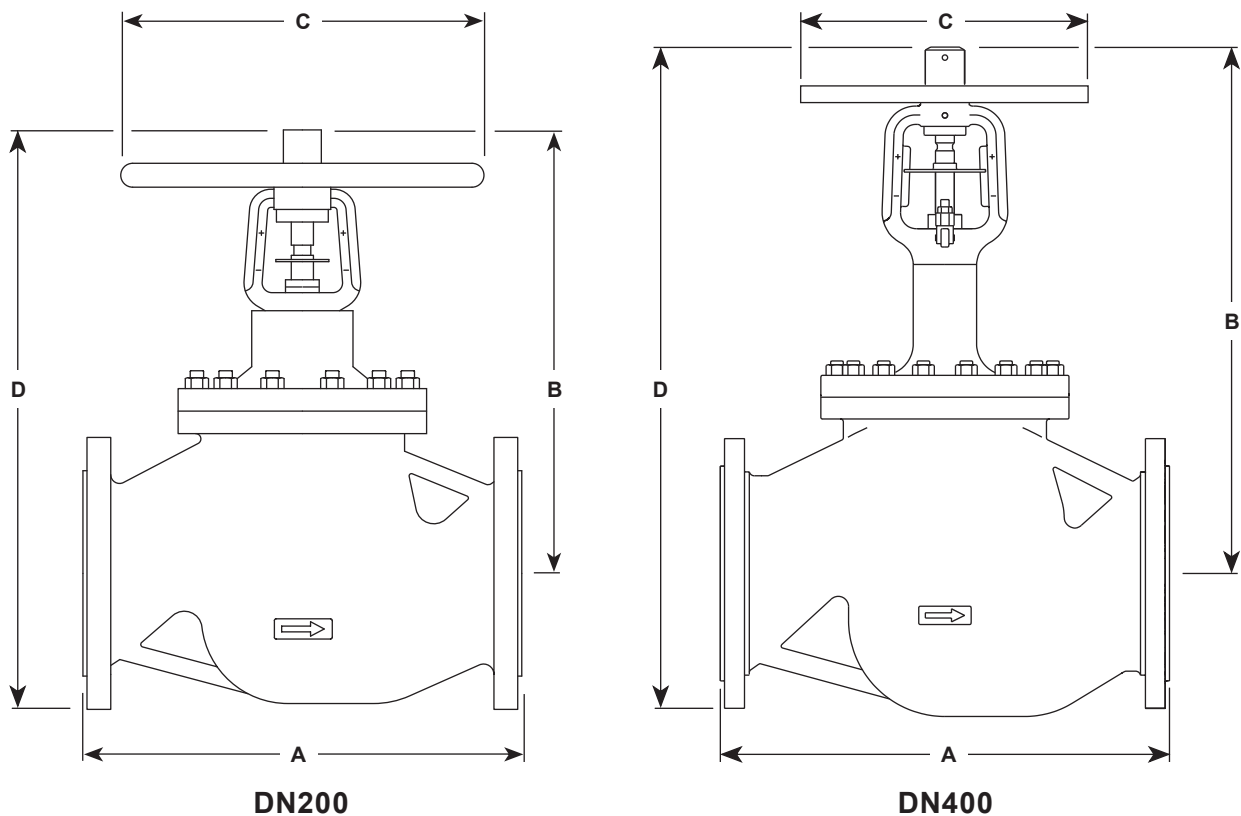


The product **must not** be used in this region or beyond the parameter of the PMA or TMA of the relative end connection.

	Body design condition	PN16
	PMA Maximum allowable pressure	16 bar g @ 50 °C
	TMA Maximum allowable temperature	400 °C @ 9.4 bar g
	Minimum allowable temperature	-10 °C
A - B - B PN16	PMO Maximum operating pressure for saturated steam service	12.33 bar g
	TMO Maximum operating temperature	400 °C @ 9.4 bar g
	Minimum operating temperature	-10 °C
	Minimum operating pressure	0 bar g
	Maximum differential pressure is limited to the PMO	
	Designed for a maximum cold hydraulic test pressure of:	24 bar g
	Body design condition	PN25
	PMA Maximum allowable pressure	25 bar g @ 50 °C
	TMA Maximum allowable temperature	400 °C @ 14.7 bar g
	Minimum allowable temperature	-10 °C
A - C - C PN25	PMO Maximum operating pressure for saturated steam service	18.58 bar g
	TMO Maximum operating temperature	400 °C @ 14.7 bar g
	Minimum operating temperature	-10 °C
	Minimum operating pressure	0 bar g
	Maximum differential pressure is limited to the PMO	
	Designed for a maximum cold hydraulic test pressure of:	37.5 bar g

Dimensions/weights (approximate) in mm and kg

	Size	A	B	C	D	Weight
BSA3-BD	DN200	600	612	500	800	180
	DN250	730	765	500	990	316
	DN300	850	1005	600	1265	480
	DN350	980	1095	650	1420	690
	DN400	1100	1173	700	1505	950
BSA6-BD	DN125	400	416	315	-	52
	DN150	480	450	400	-	75
	DN200	600	622	500	-	145



Safety information, installation and maintenance

For full details see the Installation and Maintenance Instructions (IM-P184-19) supplied with the product.

Installation note

Install in the direction of flow given by the arrow on the body with the handwheel in a suitable position.

Disposal

These products are recyclable. No ecological hazard is anticipated with the disposal of these products, providing due care is taken.

Please visit the Spirax Sarco product compliance web pages

<https://www.spiraxsarco.com/product-compliance>

for up to date information on any substances of concern that may be contained within this product. Where no additional information is provided on the Spirax Sarco product compliance web page, this product may be safely recycled and/or disposed providing due care is taken. Always check your local recycling and disposal regulations.

How to order

Example: 1 off DN200 Spirax Sarco type **BSA6-BD** bellows sealed stop valve, flanged EN 1092 PN40.

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	15 and 9 (2 off)
Stem and bellows assembly	5, 6, 12, 14, 15 and 9 (2 off)
Disc	4, 12, 13, 14, 15 and 9 (2 off)
(state full description of the valve)	

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 **9, 12, 14** and **15** 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 DN200 Spirax Sarco **BSA3-BD** PN40 bellows sealed stop valve.

