



Spirax SafeBloc™ DBB3

Double Block and Bleed Bellows Sealed Stop Valve

Description

The Spirax SafeBloc™ is a double block and bleed bellows sealed stop valve, accommodated within the same face-to-face dimension of a single valve. It has been designed for use as an in-line double isolation valve on steam, gas, liquid, condensate and water systems.

Available types

DBB3 steel body and bonnet with ANSI 300 connections and optional PN40 connections.

Seat leakage

Disc to seat shut-off conforms to EN 12266-1 leakage Rate A and ISO 5208 Rate A.

Bleed valve options

A bleed valve connection is provided to depressurize the downstream when the upstream valve is isolated. This can be supplied with either a ½" flanged, ½" screwed NPT or BSP or ½" socket weld connection. Bleed valve connection must be stated at the time of order placement.

Standards

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

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Certification

This product is available with certification to EN 10204 3.1.

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

Size and pipe connections

½", ¾", 1", 1½", 2", 2½", 3" and 4" flanged ANSI B 16.5 Class 300.

EN 1092 PN40 DN15, DN20, DN25, DN40, DN50, DN65, DN80 and DN100 optional.

The face-to-face dimensions conform to BS EN 558:2008

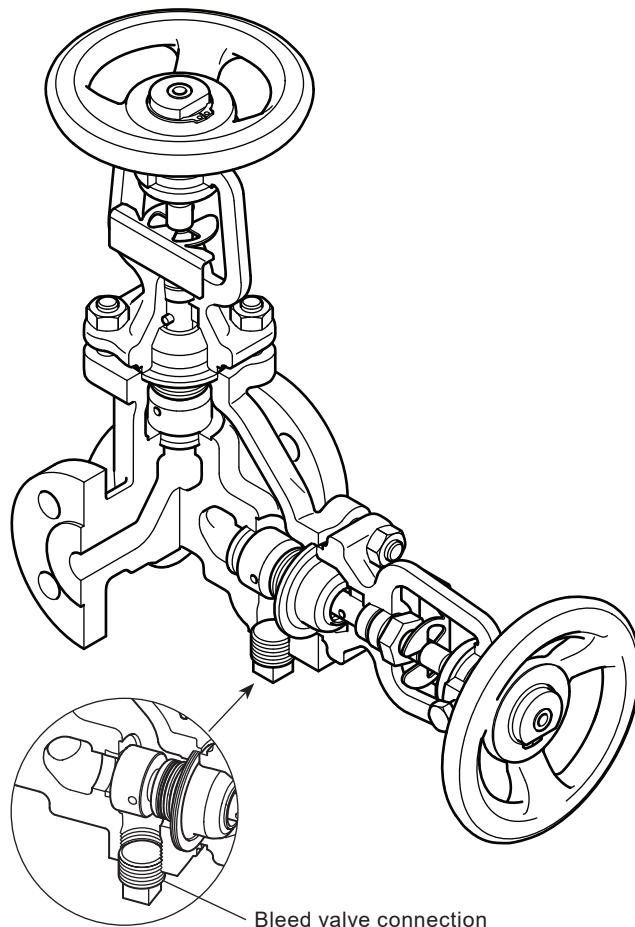
K_v values

Size	½" DN15	¾" DN20	1" DN25	1½" DN40	2" DN50	2½" DN65	3" DN80	4" DN100
K _v	4	4.5	8	22	32	70	123	144

For conversion:

C_v (UK) = K_v x 0.963

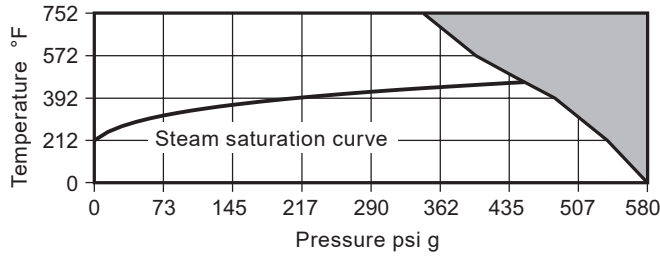
C_v (US) = K_v x 1.156



Bleed valve connection

Pressure/temperature limits (ISO 6552)

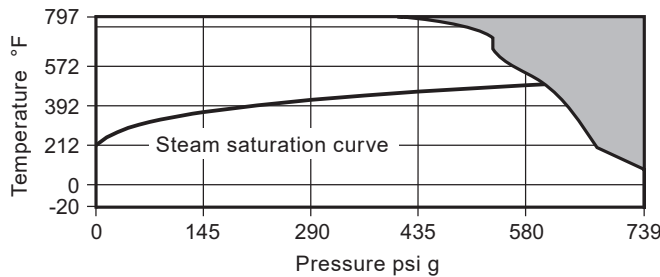
PN40



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

Body design conditions	PN40
PMA Maximum allowable pressure	580 psi g @ 32 °F
TMA Maximum allowable temperature	752 °F @ 348 psi g
Minimum allowable temperature	14 °F
PMO Maximum operating pressure for saturated steam service	441 psi g
TMO Maximum operating temperature	752 °F @ 348 psi g
Minimum operating temperature (Note: For lower operating temperatures consult Spirax Sarco)	14 °F
Designed for a maximum cold hydraulic test pressure of:	870 psi g

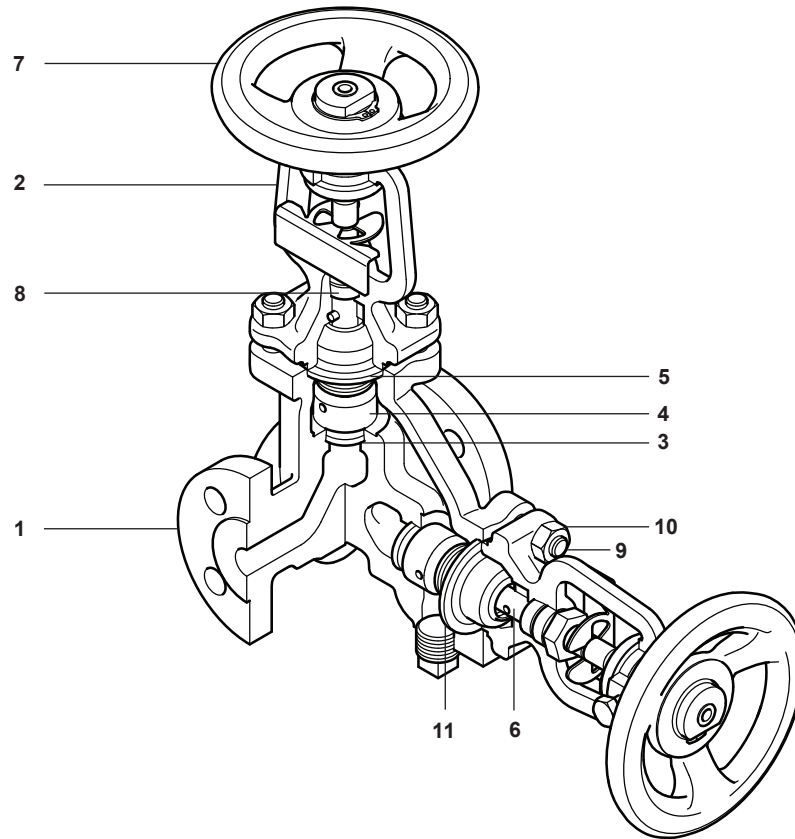
ANSI 300



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

Body design conditions	ANSI 300
PMA Maximum allowable pressure	739 psi g @ 100 °F
TMA Maximum allowable temperature	797 °F @ 406 psi g
Minimum allowable temperature	-20 °F
PMO Maximum operating pressure for saturated steam service	603 psi g
TMO Maximum operating temperature	797 °F @ 406 psi g
Minimum operating temperature (Note: For lower operating temperatures consult Spirax Sarco)	-20 °F
Designed for a maximum cold hydraulic test pressure of:	1117 psi g

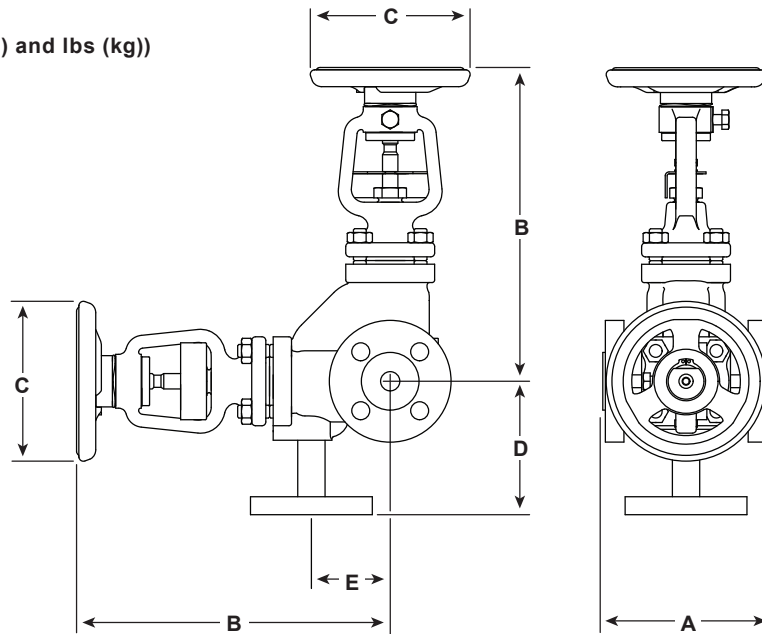
Materials



No.	Part	Material		
1	Body	Cast steel	DN	EN 10213-2 GP240GH
			ANSI	ASTM A 216 WCB
2	Bonnets	½" - 3" (DN15 - DN80)	Forged steel	DIN 17243 C22.8
				ANSI ASTM A 105 N
		4" (DN100)	Cast steel	DIN EN 10213-2 GP240 GH
				ANSI ASTM A 216 WCB
3	Seats	Stainless steel	AISI 420	
4	Discs	Stainless steel	DIN17440 X30 Cr13	
5	Bellows	Stainless steel	DIN17440 X6CrNiTi 1810	
6	Stems	Stainless steel	AISI 420	
7	Handwheels		BS 1449 CR4	
8	Stem packing	Graphite		
9	Bonnet studs	Steel	DIN	17240 24 Cr Mo 5
			ANSI	ASTM A 193 B7
10	Bonnet nuts	Steel	DIN	DIN 17240 Ck 35
			ANSI	ASTM A 192 2 H
11	Body/bonnet gaskets	Graphite laminated with stainless steel insert		

Dimensions/weights

(approximate in inches (mm) and lbs (kg))



Size	A		B	C	D	E	Weight
	PN	ANSI 300					
½" (DN15)	5.1 (130)	6 (152)	9.8 (248)	5 (125)	4.2 (106)	2.4 (61.5)	18.3 (8.3)
¾" (DN20)	5.9 (150)	7 (178)	9.8 (248)	5 (125)	4.2 (106)	2.4 (61.5)	20.3 (9.2)
1" (DN25)	6.2 (160)	8 (203)	10.2 (260)	5 (125)	4.2 (107)	2.5 (63.0)	23.1 (10.5)
1½" (DN40)	7.9 (200)	9 (229)	11.6 (295)	7.9 (200)	4.6 (117)	2.9 (73.0)	45.8 (20.8)
2" (DN50)	9.1 (230)	10.5 (267)	12 (307)	7.9 (200)	4.8 (121)	3.3 (83.5)	55.6 (25.2)
2½" (DN65)	11.4 (290)	11.5 (292)	13.5 (342)	7.9 (200)	5.1 (129)	3.9 (100.0)	81.8 (37.1)
3" (DN80)	12.2 (310)	12.5 (318)	14.8 (375)	7.9 (200)	5.3 (136)	4.6 (118.0)	113.3 (51.4)
4" (DN100)	13.8 (350)	14 (356)	19.8 (503)	12.4 (315)	5.8 (147)	5.8 (147)	202.8 (92.0)

Safety information, installation and maintenance

For full details see the Installation and Maintenance Instructions (IM-P184-09) supplied with this product.

Disposal

This product is recyclable. No ecological hazard is anticipated with the disposal of this product, providing due care is taken.

How to order

Example: 1 off ½" Spirax SafeBloc™ DBB3 double block and bleed bellows sealed stop valve having flanged ANSI 300 connections. The bleed valve connection is to be ½" flanged ANSI 300.

Note: The bleed valve is to be ordered separately. For example: 1 off Spirax Sarco ½" BSA3T bellows sealed stop valve having flanged ANSI 300 connections.

Spare parts

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

Available spares

Body/bonnet gasket and stem packing	8 (2 off), 11a, 11b
Stem and bellows assembly	6, 5
Disc	4

Note: The gasket contains sharp metal reinforcement, please handle with care. For a complete overhaul of the valve 2 x each spare is required.

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 and bellows assembly is ordered, parts (8, 11a and 11b) and (6 and 5) will be included in the kit. Always order spares by using the description given above and state the size and type of stop valve.

Example: 1 - Body / bonnet gasket and stem packing for a ½" Spirax SafeBloc™ DBB3 double block and bleed bellows sealed stop valve having ANSI 300 connections.

