



## 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 PN40 or ANSI 300 connections.


## Seat leakage

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

## Bleed valve options

A **bleed valve connection** is provided to depressurise the downstream when the upstream valve is isolated. This can be supplied with either a DN15 flanged, ½" screwed BSP or NPT or ½" socket weld connection and 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  mark when so required.

## 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

DN15, DN20, DN25, DN40, DN50, DN65, DN80 and DN100.

Flanged EN 1092 PN40 or ANSI B 16.5 Class 300.

Face-to-face dimensions conform to BS EN 558:2008.

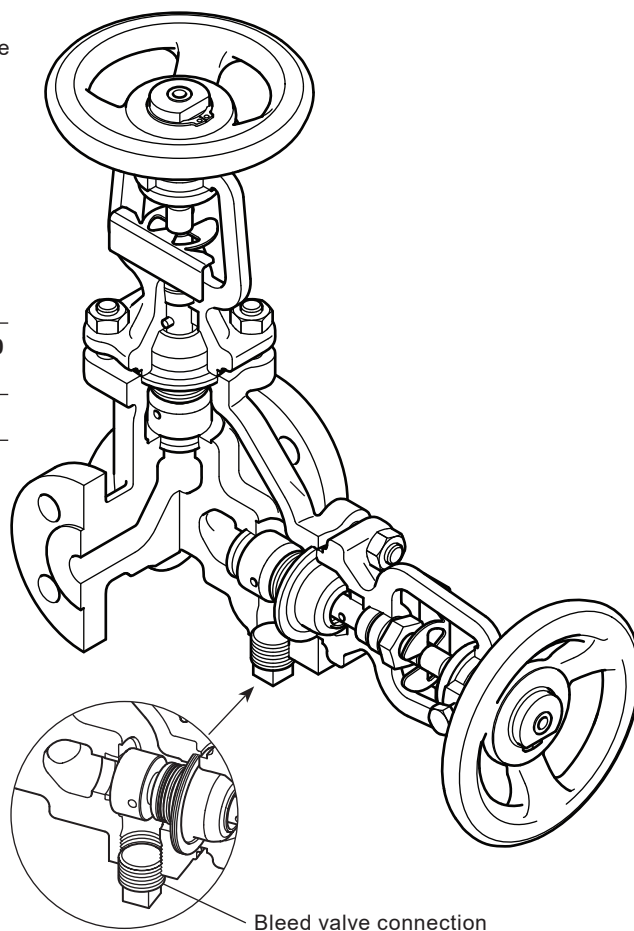
## K<sub>v</sub> values

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

For conversion:

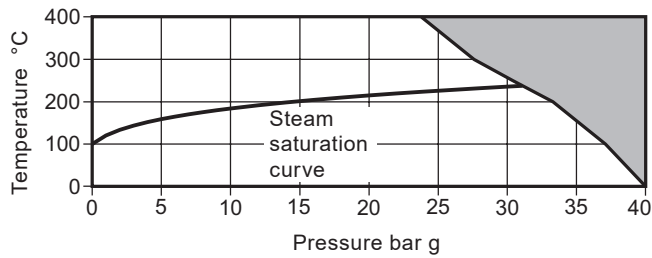
$$C_v \text{ (UK)} = K_v \times 0.963$$

$$C_v \text{ (US)} = K_v \times 1.156$$



## Pressure/temperature limits (ISO 6552)

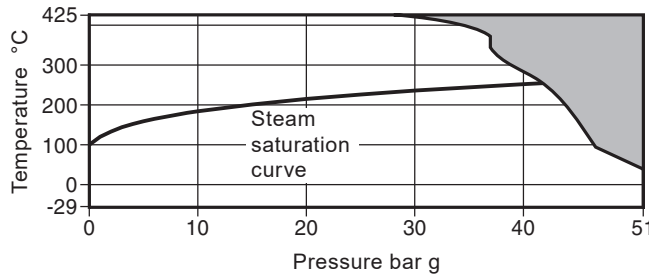
### PN40



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

Body design conditions	PN40
PMA Maximum allowable pressure	40 bar g @ 0 °C
TMA Maximum allowable temperature	400 °C @ 24 bar g
Minimum allowable temperature	-10 °C
PMO Maximum operating pressure for saturated steam service	30.4 bar g
TMO Maximum operating temperature	400 °C @ 24 bar g
Minimum operating temperature ( <b>Note:</b> For lower operating temperatures consult Spirax Sarco)	-10 °C
Designed for a maximum cold hydraulic test pressure of:	60 bar g

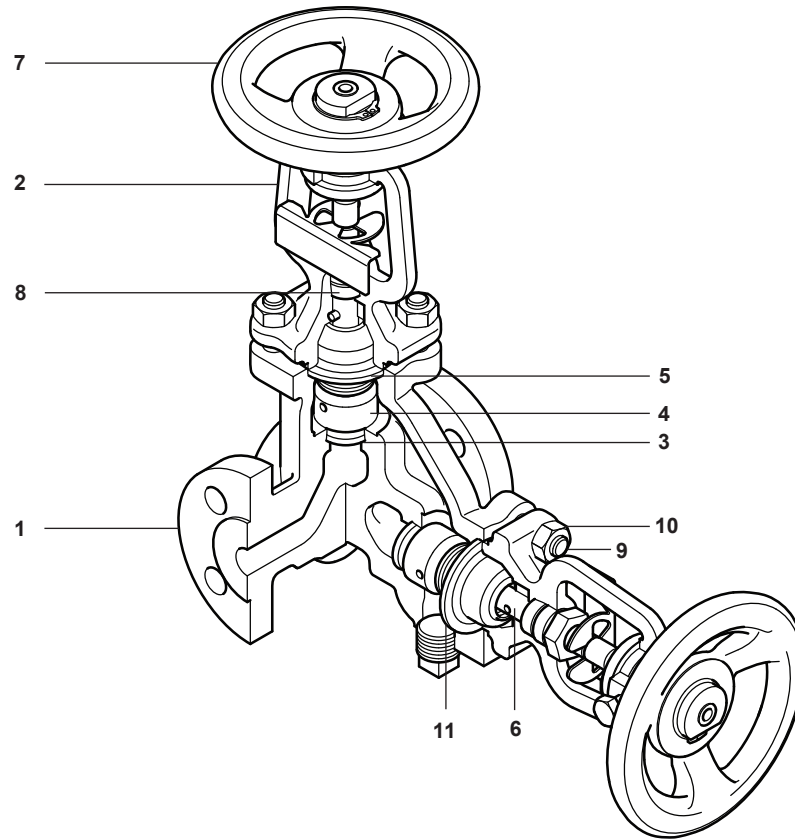
### ANSI 300



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

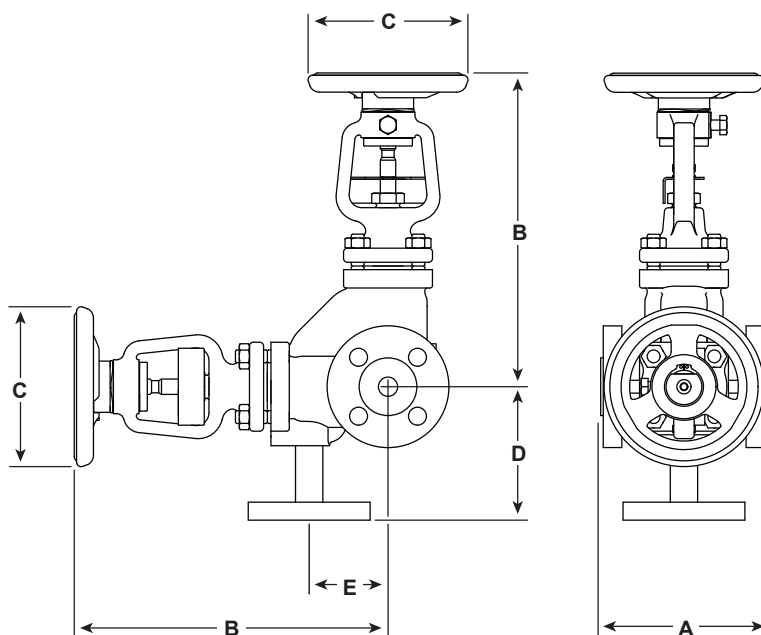
Body design conditions	ANSI 300
PMA Maximum allowable pressure	51 bar g @ 37.7 °C
TMA Maximum allowable temperature	425 °C @ 28 bar g
Minimum allowable temperature	-29 °C
PMO Maximum operating pressure for saturated steam service	41.6 bar g
TMO Maximum operating temperature	425 °C @ 28 bar g
Minimum operating temperature ( <b>Note:</b> For lower operating temperatures consult Spirax Sarco)	-29 °C
Designed for a maximum cold hydraulic test pressure of:	77 bar g

## Materials



No.	Part	Material			
1	Body	Cast steel	DN	EN 10213-2 GP240GH	
			ANSI	ASTM A 216 WCB	
2	Bonnets	DN15 - DN80	Forged steel	DIN 17243 C22.8	
				ANSI ASTM A 105 N	
		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 mm and kg)



Size	A		B	C	D	E	Weight
	PN	ANSI 300					
DN15	130	152	251	125	106	61.5	8.3
DN20	150	178	248	125	106	61.5	9.2
DN25	160	203	260	125	107	63.0	10.5
DN40	200	229	295	200	117	73.0	20.8
DN50	230	267	307	200	121	83.5	25.2
DN65	290	292	342	200	129	100.0	37.1
DN80	310	318	375	200	136	118.0	51.4
DN100	350	356	503	315	147	147.5	92.0

## Safety information, installation and maintenance

For full details see the Installation and Maintenance Instructions (IM-P165-02-EN-ISS1) 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 DN25 Spirax SafeBloc™ DBB3 double block and bleed bellows sealed stop valve having flanged PN40 connections. The bleed valve connection is to be DN15 flanged PN40.

**Note:** The bleed valve is to be ordered separately. For example: 1 off Spirax Sarco DN15 BSA3 bellows sealed stop valve having flanged PN40 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 DN15 Spirax SafeBloc™ DBB3 double block and bleed bellows sealed stop valve having PN40 connections.

