

spirax/sarco®

BCV 31 Blowdown Control Valve

- Pneumatically actuated-suitable for hazardous areas
- Articulated valve cone ensures tight shut-off and correct alignment
- Wide ambient temperature range:
- 4°F to + 230°F (-20°C to + 110°C)
- Cast steel body with stainless steel internals
- Can be installed outdoors

DESCRIPTION

The Spirax Sarco BCV 31 is a pneumatically operated control valve for the blowdown of steam boilers. It is normally used with a controller as part of an automatic TDS control system, though it can also be used for other high pressure drop, low flowrate applications.

The flow rate is adjusted by limiting the spindle stroke to regulate the number of orifices that are uncovered.

The valve, which is specially designed to minimise seat erosion and ensure consistent tight shut-off, is supplied adjusted to its low flow rate setting of 0.4" (10mm).

It can be adjusted to give 0.6" (15mm) stroke for medium flow rates, or to 0.8" (20mm) stroke for high flow rates. The actuator has a mechanical stroke indicator and incorporates a rolling diaphragm.

A 1/4" NPT tapping at the base of the valve allows a sample cooler to be fitted.

The BCV 31 requires a regulated and filtered air supply, (1/8" NPT), which should be free of oil and water, and a solenoid valve.

Spirax Sarco can supply suitable equipment.

Full installation, adjustment, and maintenance information is provided with the valve.

OPERATION

The valve is spring loaded to the closed position (spring retract), and is also held closed by the boiler pressure. When the solenoid valve opens, air is admitted to the actuator causing the valve to open to the selected stroke.

LIMITING CONDITIONS

Maximum Pressure	464 psig (32 barg)
Maximum Temperature	482°F (250°C)
Ambient Temperature Range	-4°F to 230°F (-20 to +110°C)
Air Pressure Range	30 psig to 90 psig (2 to 6 barg)
Air Consumption	(0.8" - 20mm travel) 0.33 litres

The valve itself may be installed outdoors without additional protection. The solenoid valve however, must be installed indoors, or adequately protected against outdoor conditions.

AVAILABLE TYPES

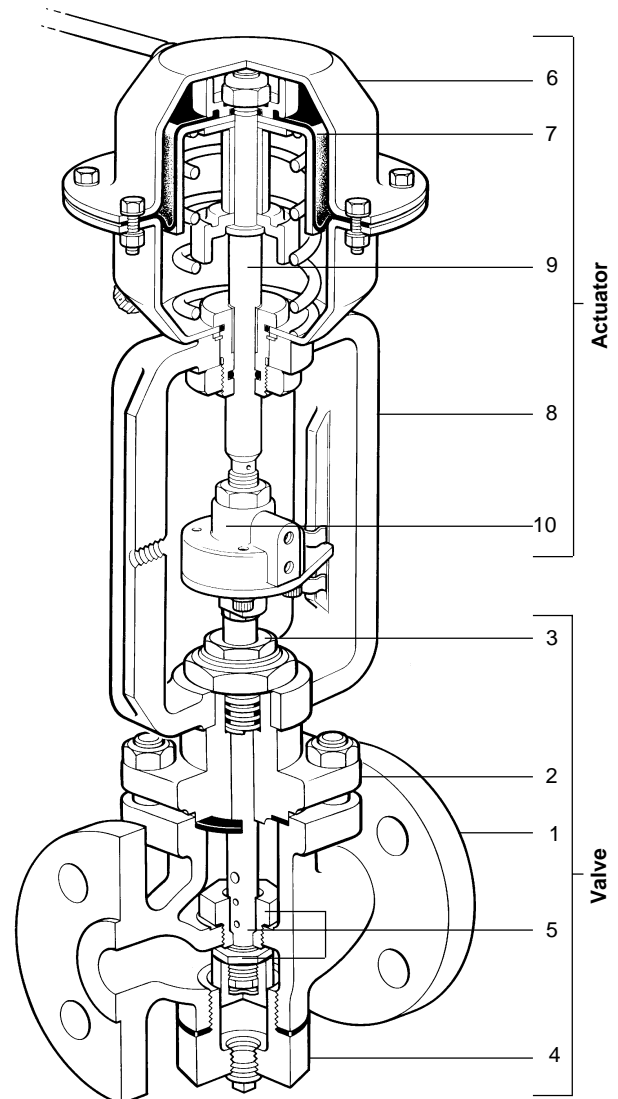
Flanged 3/4" ANSI 300

CONSTRUCTION MATERIALS

Valve

No. Part	Material
1 Body	Cast carbon steel DIN 17245 GS-C25
2 Bonnet	Forged carbon steel DIN 17243 C 22.8
3 Stuffing box	Martensitic stainless steel Type 431
4 Bottom cover	Carbon steel or Forged carbon steel BS 970 230 M07 DIN 17243 C22.8
5 Internals	Martensitic stainless steel Type 431

(Valve cone and seat are hardened)

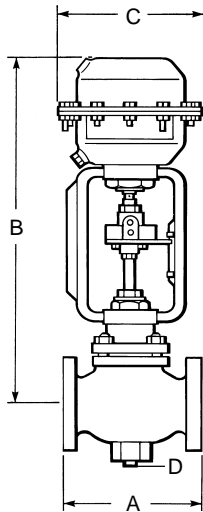


Actuator

No. Part	Material
6 Diaphragm housing	Pressed steel
7 Diaphragm	Fabric reinforced nitrile rubber
8 Yoke	Aluminium
9 Spindle	Stainless steel
10 Connector	Carbon steel

Local regulation may restrict the use of this product below the conditions quoted. Limiting conditions refer to standard connections only. In the interests of development and improvement of the product, we reserve the right to change the specification.

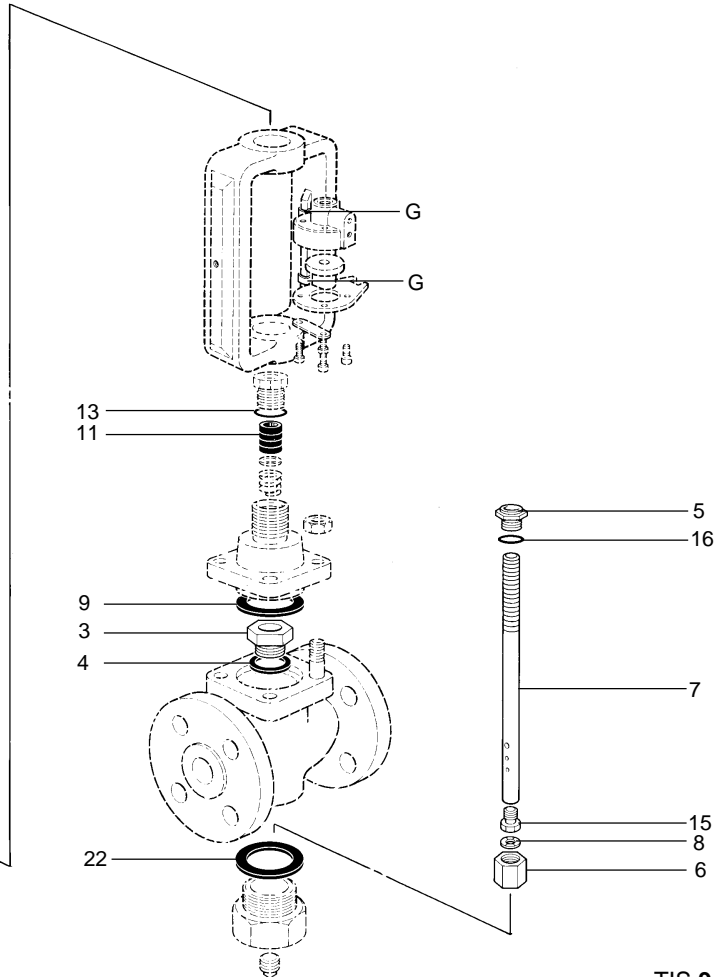
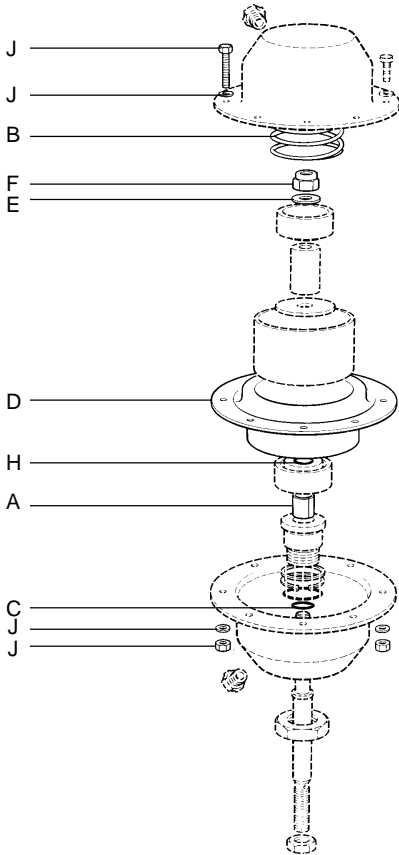
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DIMENSIONS (approximate) in inches and millimetres

DN	PN	Class	Table		D	Weight
	40	300	A	H		
3/4"	5.9"	5.9"	5.7"	14.9"	5.8"	20.3lb
	(150)	(150)	(146)	(378)	(147)	(9.2 kg)

Actuator withdrawal distance 80.



CAPACITIES

Boiler Pressure psig	Blowdown valve capacity lb/h		
	Low flow rates 0.4" (10mm) stroke	Medium flow rates 0.6" (15mm) stroke	High flow rates 0.8" (20mm) stroke
80	880	1210	1900
102	1015	1565	2540
145	1260	2100	3310
218	1540	2540	3640
290	1720	2760	3750
464	2075	3090	3970

AVAILABLE SPARES

Valve

Gasket and packing set	4, 9, 11, 13, 16, 22
Valve cone, seat, and stem set	3, 5, 6, 7, 8, 15

Actuator

Stem seal kit	A, C, H
Diaphragm Kit	D, E, F, H
Travel indicators (2)	G
Spring kit	B, J

MAINTENANCE

We recommend that the valve and actuator are examined annually and parts replaced as necessary.

HOW TO SPECIFY

On/off pneumatically actuated blowdown control valve

HOW TO ORDER

Spirax Sarco BCV 31 blowdown control valve, flanged ANSI 300