

BCV30 DN20 - Blowdown Control Valve

Description

The Spirax Sarco BCV30 is an electrohydraulically actuated control valve for the blowdown of steam boilers or for other high pressure drop, low flowrate applications.

It is generally used with a blowdown controller as part of an automatic TDS control system.

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

The valve, which is supplied adjusted to its low flowrate setting of 10 mm stroke, is specially designed to minimise seat erosion and ensure consistent tight shut-off.

It can be adjusted to give 15 mm stroke for medium flowrates, or to 20 mm stroke for high flowrates, by repositioning the internal cam. A valve position indicator is provided.

The valve can be opened manually by turning the actuator handwheel clockwise.

A ¼" plug at the base of the valve may be removed to allow a sample cooler to be fitted (available from Spirax Sarco).

Operation:

The valve is spring loaded to the closed position.

When power is applied to the actuator the valve opens to the position set by the internal limit switch. Stroking time for the full 20 mm stroke is approximately 2 minutes to open and 8 seconds to close.

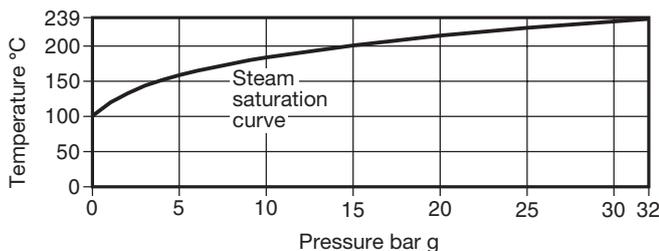
Sizes and pipe connections

DN20 Flanged BS 10 Table H, BS 1560 Class 300, EN 1092 PN40 *

* (PN40 version is also available with 3.1 certification to special order).

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

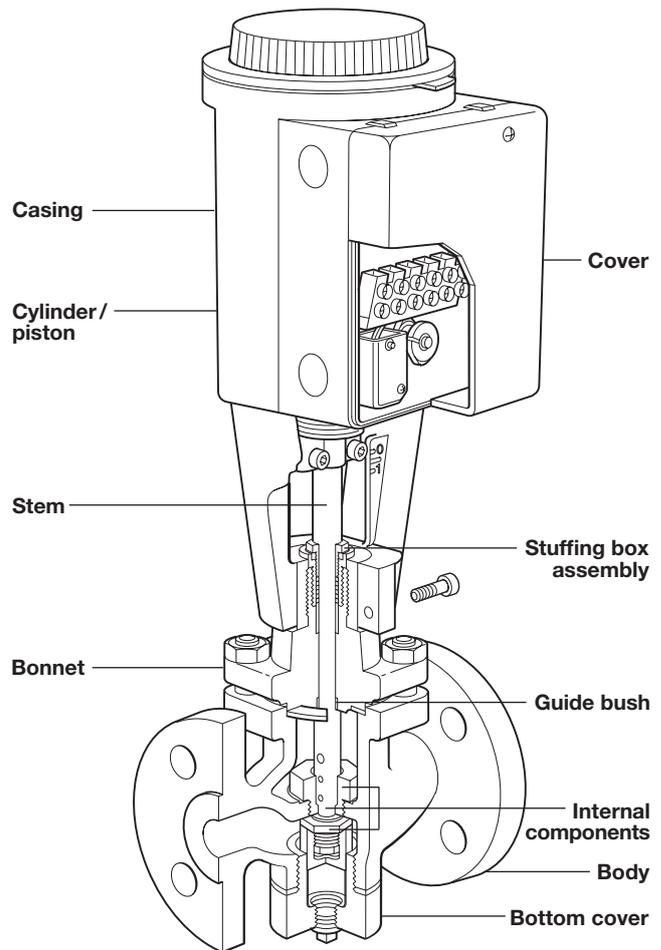
Pressure/temperature limits



Maximum operating pressure	32 bar g	(464 psi g)
Maximum operating temperature	239°C	(462°F)
Maximum ambient temperature	230 V version	50°C (122°F)
	24 V version	55°C (131°F)
Minimum ambient temperature	0°C	(32°F)
Minimum operating temperature	0°C	(32°F)

Capacities

Boiler pressure bar g	Blowdown valve capacity kg/h		
	Low flowrates 10 mm stroke	Medium flowrates 15 mm stroke	High flowrates 20 mm stroke
5	380	530	730
7	460	710	1 150
10	570	950	1500
15	700	1150	1650
20	780	1250	1700
32	940	1400	1800



Materials

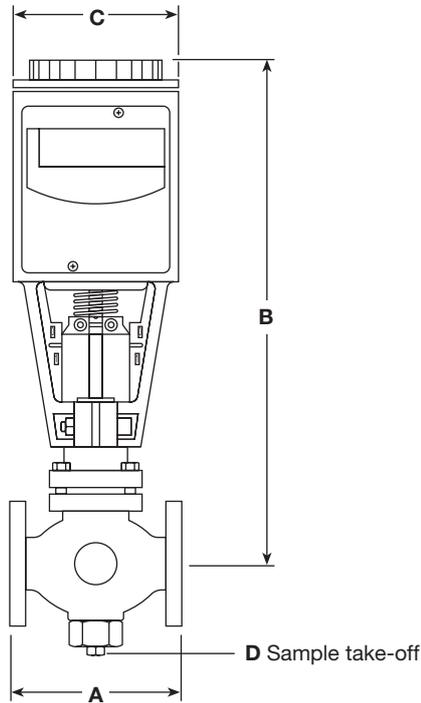
Part	Material
Body	Cast carbon steel DIN 17245 GS-C25
Bonnet	Forged carbon steel DIN 17243 C 22.8
Stuffing box assembly	Martensitic stainless steel/graphite seals ASTM A 276 316L
Bottom cover	Carbon steel BS 970 230 MO7
3.1 version	Forged carbon steel DIN 17243 C 22.8
Internal components	Martensitic stainless steel (valve cone and seat hardened) Type 431
Guide bush	Phosphor bronze BS EN 12163 CW451K
Casing	Die cast aluminium
Cover	ABS
Cylinder/piston	Aluminium
Stem	Martensitic stainless steel ASTM A276 431

Electrical data

Power supply	230 V version	187 - 264 Vac	50 - 60 Hz
	24 V version	19 - 28 Vac	50 - 60 Hz
Power consumption	16 VA		

Dimensions/weight (approximate) in mm and kg

	EN 1092 PN40	BS 1560 Class 300	BS 10 Table H					
Size	A	A	A	B	C	D	Weight	
DN20	150	150	146	390	127	¼" BSP	9	



Safety information, installation and maintenance

This document does not contain sufficient information to install the product safely. See the Installation and Maintenance Instructions supplied with the product.

Important:

Your attention is drawn to Safety Information Leaflet IM-GCM-10, as well as to any national or regional regulations.

Installation note:

Do not install the valve outside without additional weather protection.

Maintenance note:

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

How to order

Example: 1 off Spirax Sarco DN20 BCV30 blowdown control valve having flanged EN 1092 PN40 connections, supplied set for 230 Vac.

Spare parts

The spare parts are available as indicated below. No other parts are supplied as spares.

Available spares

Gasket and packing set	Stock No. 4034482	4, 9, 13, 16, 22, 41
Valve cone, seat and stem set	Stock No. 4034483	3, 5, 6, 7, 8, 15, 16, 20 + Gasket and packing set
Adjustable stuffing box kit	Stock No. 4034484	40, 42, 43, 44 + Gasket and packing set
Actuator with limit switch assembly	230 V Stock No. 4034467	26
	24 V Stock No. 4034468	26
Actuator limit switch assembly	Stock No. 4034419	27

How to order spares

Always order spares by using the description given above and state the size and flange type of blowdown control valve.

Example: 1 off Gasket and packing set, Stock No. 4034482, for a Spirax Sarco DN20 BCV30 blowdown control valve having flanged EN 1092 PN40 connections.

