



BCV43 Blowdown Control Valves 3/4" and 1 1/2"

Description

Spirax Sarco's BCV blowdown control valves are manufactured using the market proven SPIRA-TROL body. These valves have been specifically designed for the blowdown of steam boilers or for other high pressure drop, low flow applications, and are generally used with a blowdown controller as part of an automatic TDS control system.

The flowrate is adjusted by setting the stroke of the valve spindle. These valves have been specially designed to minimize seat erosion and ensure consistent shut-off.

A 1/4" BSP plug at the base of the valve may be removed to allow a sample cooler to be fitted.

Two versions are available:

- Electrically actuated TDS blowdown control valve. (Non-UL Listed)
- Pneumatically actuated TDS blowdown control valve.

Available model	Material	Connection
BCV43	Carbon Steel	Flanged

SPIRA-TROL valve body options

Stem sealing	Graphite packing	High temperature applications
Seating	Hard facing	316L stainless steel with Stellite 6 facing

BCV blowdown control valves are compatible with the following actuators and positioners:

Version	Actuator	Positioners
Electric	AHL1 series	
Pneumatic	PN9___ series	PP5 (pneumatic)
		EP5 (electropneumatic)
		ISP5 (intrinsically safe electropneumatic)
		SP400 and SP500 (microprocessor based electropneumatic)

Standards

These products fully comply with the requirements of the European Pressure Equipment Directive 97 / 23 / EC.

Certification

These products are available with material certification to EN 10204 3.1. Note: All certification / inspection requirements must be stated at the time of order placement.

Operation

BCV blowdown control valves are supplied in the normally closed position.

Electrical version: When the power is connected to the actuator the valve opens to the position set by the internal limit switch.

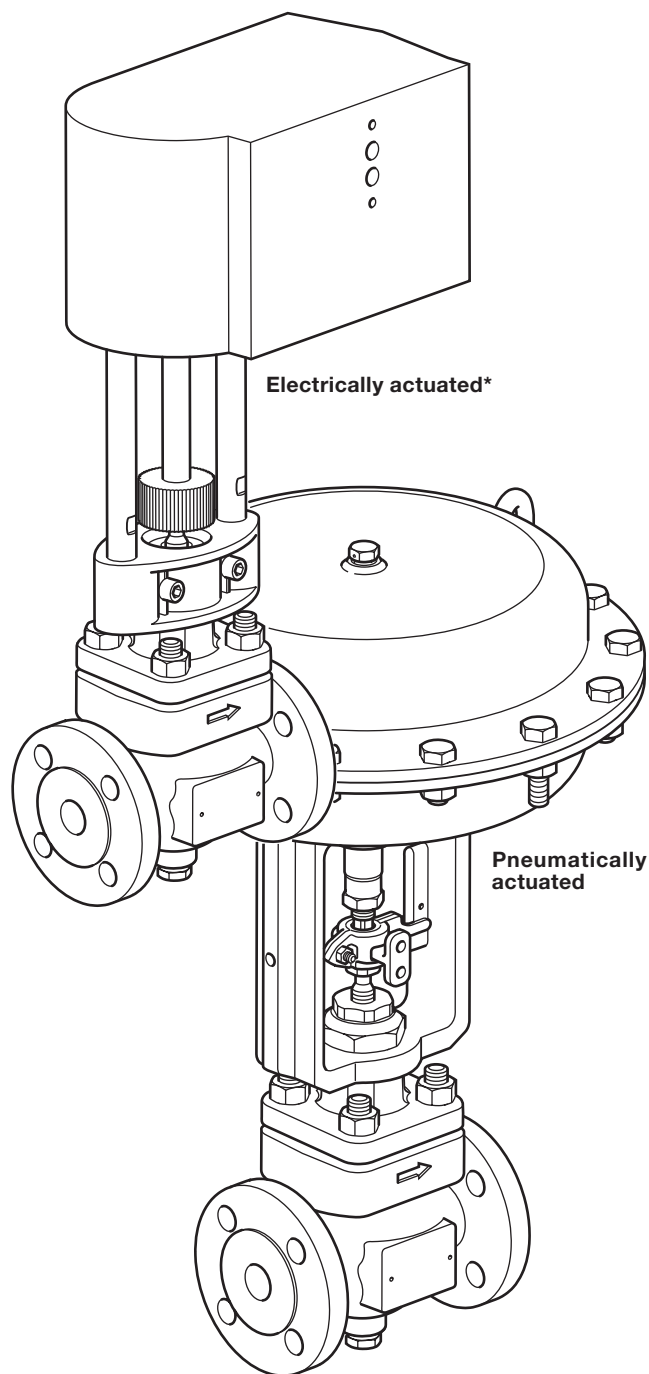
Pneumatic version: When the solenoid valve opens, air is admitted to the actuator activating the valve to open to the selected stroke.

*AHL1 series electric actuator is not UL Listed

Size and pipe connections

3/4" and 1 1/2" Flanged

ASME class 300



Electrically actuated*

Pneumatically actuated

BCV43

Blowdown Control Valves

3/4" and 1 1/2"

Materials

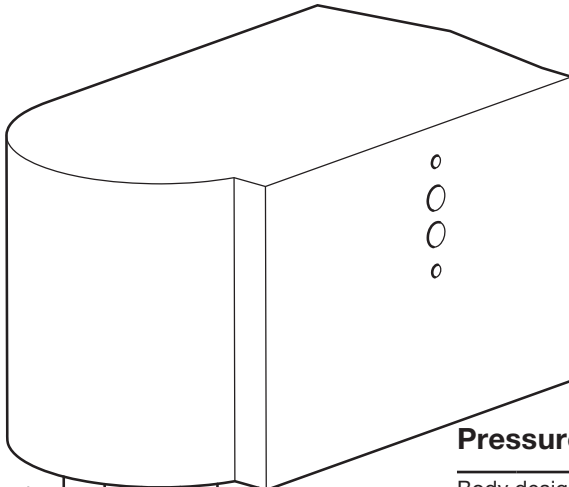
Please note that the spare parts available for the blowdown control valve are the same for both the electrically and pneumatically actuated versions.

No.	Part	Material
1.	Body	Carbon steel 1.0619+N / WCB
2.	Bonnet	Forged steel 1.0460 / A105N or 1.0619 / WCB
3.	Seat retainer	Stainless steel 316L
4.	Seat	Stainless steel 316L with Stellite
5.	Plug	Stainless steel 316L with Stellite

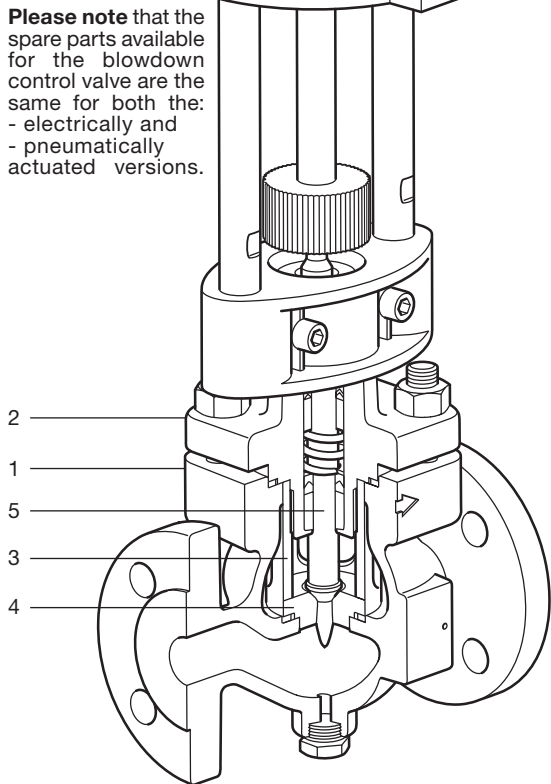
Electrical data

Actuator	AHL1 series
Supply voltage	Standard 24 Vdc and 110 Vac
Supply frequency	50 to 60 Hz
Power consumption	10 to 18 watts
Actuator speed	2 mm/s, 4 mm/s or 6 mm/s
Actuators thrust maximum	450 lbf (2kN)
Maximum shut-off value	600 psig (42 bar g)

Size	Actuator	Maximum shut-off value
1/2"	AHL1 series / PN9123E	600 psig (42 bar g)
1 1/2"	AHL1 series / PN9223E	600 psig (42 bar g)



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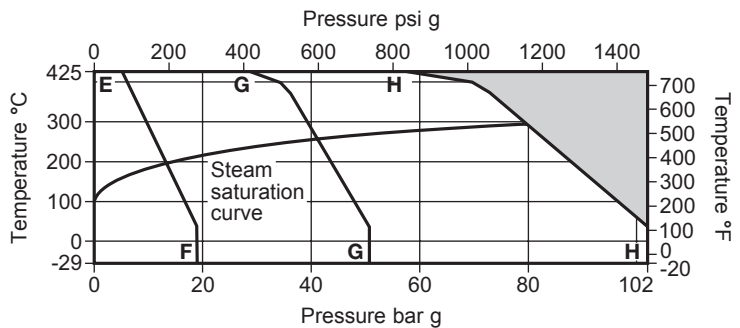


Pressure/temperature limits – BCV43

Body design conditions: PN40, PN63, or PN100
JIS/KS 20K, 30K, or 40K, ASME class 300

PMA	Maximum allowable pressure	51.1 bar g @ 38°C	741 psi g @ 100°F
TMA	Maximum allowable temperature	425°C @ 28.8 bar g	797°F @ 418 psi g
	Minimum allowable temperature	-29°C	-20°F
PMO	Maximum operating pressure for saturated steam service	41.7 bar g @ 254°C	605 psi g @ 489°F
TMO	Maximum operating temperature	425°C @ 28.8 bar g	797°F @ 418 psi g
	Minimum operating temperature	-29°C	-20°F

Designed for a maximum cold hydraulic test pressure of:
1.5 x PMA of the relative end connection of choice



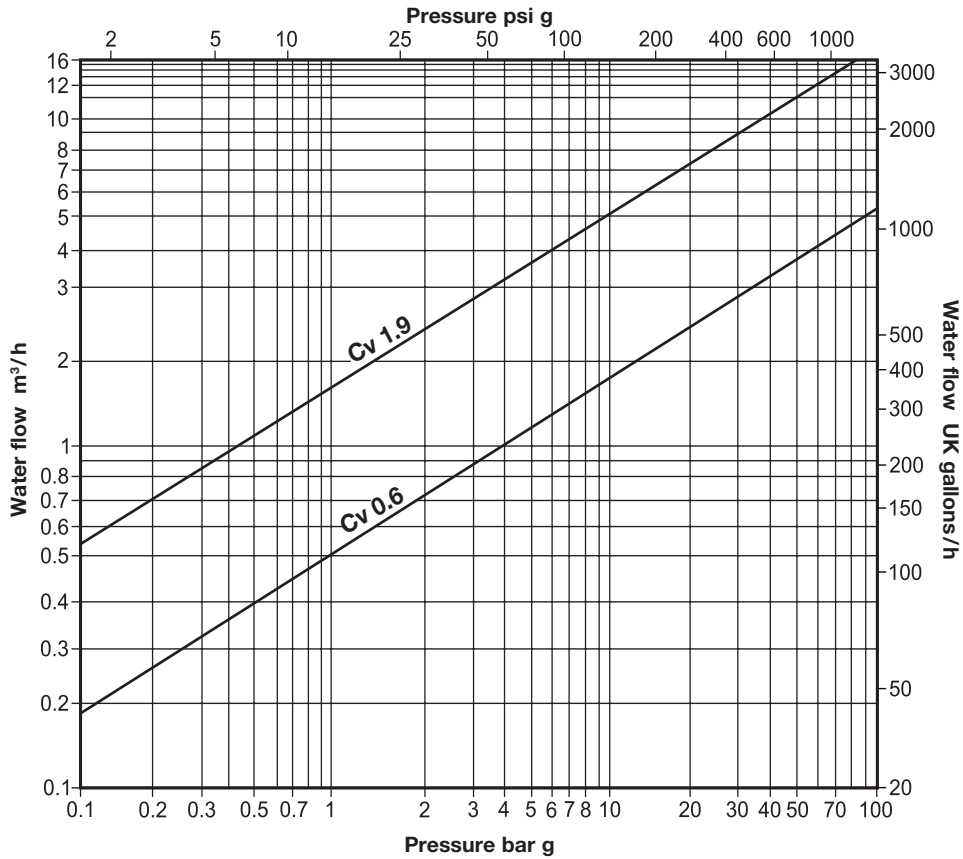
■ The product **must not** be used in this region.
E - G Flanged ASME class 300

BCV43 Blowdown Control Valves $\frac{3}{4}$ " and $1\frac{1}{2}$ "

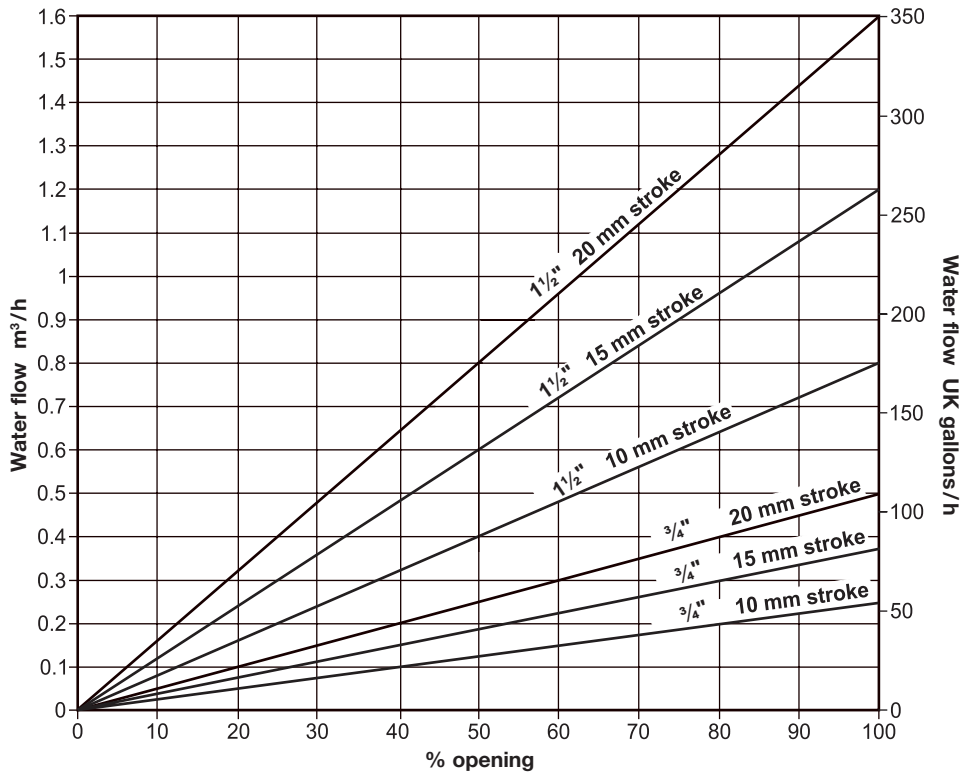
Cvs values

Valve size	$\frac{3}{4}$ "	$1\frac{1}{2}$ "
Cvs value	0.6	1.9

Cvs chart



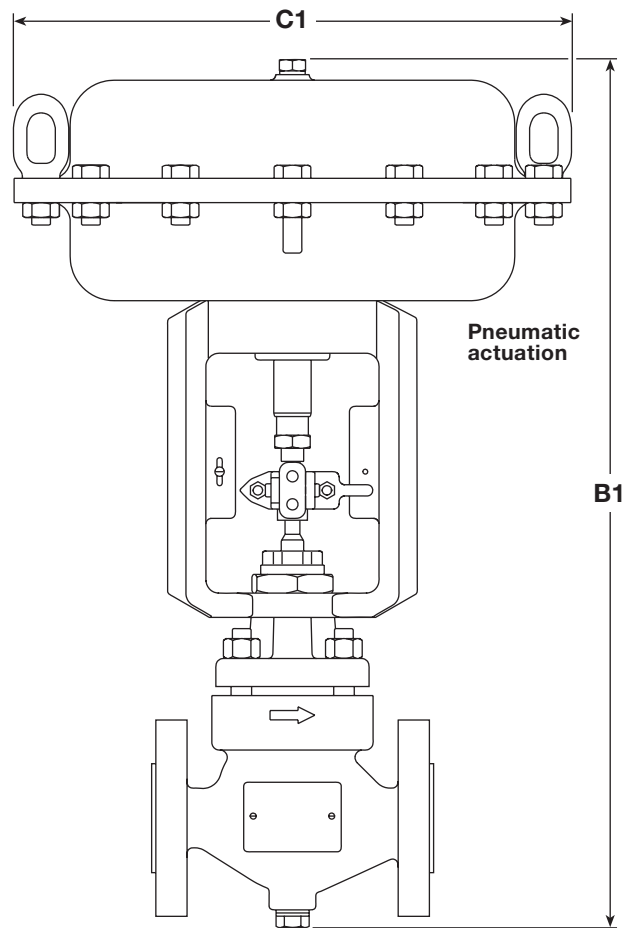
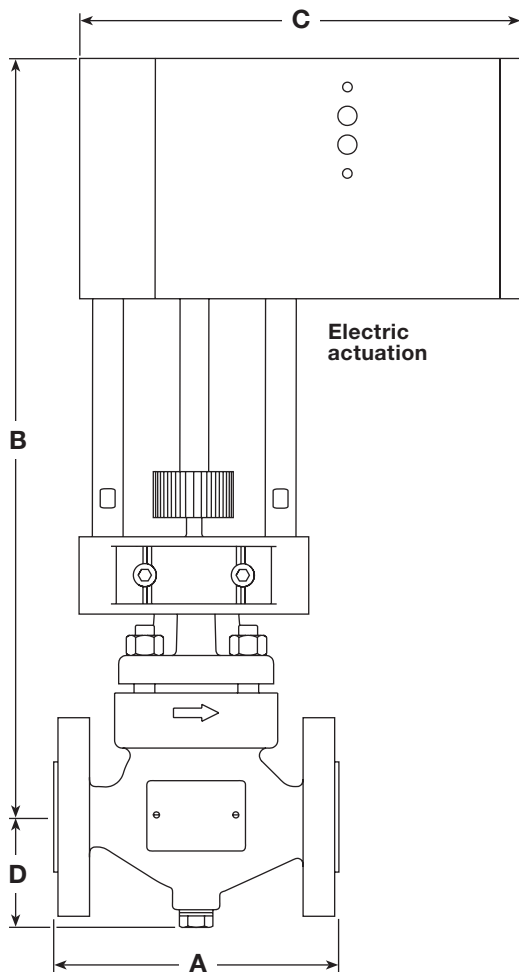
Capacities



BCV43 Blowdown Control Valves $\frac{3}{4}$ " and $1\frac{1}{2}$ "

Dimensions / weights (approximate) in inches and lbs

Size	A	B	B1	C	C1	D	Weight	
							Electric version	Pneumatic version
							ASME 300	ASME 300
$\frac{3}{4}$ "	7.5	15.4	14.9	9.0	6.7	2.25	28.2	28.2
$1\frac{1}{2}$ "	9.25	16.6	17.0	9.0	11.8	3.0	44.0	68.3



BCV43 Blowdown Control Valves $\frac{3}{4}$ " and $1\frac{1}{2}$ "

BCV selection guide

Valve size	$\frac{3}{4}$ " and $1\frac{1}{2}$ "	
Valve series	BCV	
Body material	4	Carbon steel
Connections	3	Flanged
Stem sealing	H =	Graphite
Seating	W =	Stainless Steel 316L with Stellite
Type of trim	S =	Standard trim
Trim-balancing	U =	Unbalanced
Bonnet type	S =	Standard
Bolting	S =	Standard
Flow coefficient	To be specified	
Connection type	To be specified	
Actuation	PN =	Pneumatic
	EL =	Electrical
		110 Vac or 24 Vac/Vdc

Available Models

Pipe Size		Cv	Pipe Connection	Actuation
$\frac{3}{4}$ "	BCV43HWSUSS	0.6	Flanged ASME300	EL110VAC
$\frac{3}{4}$ "	BCV43HWSUSS	0.6	Flanged ASME300	EL24VDC
$\frac{3}{4}$ "	BCV43HWSUSS	0.6	Flanged ASME300	PN
$1\frac{1}{2}$ "	BCV43HWSUSS	1.9	Flanged ASME300	EL110VAC
$1\frac{1}{2}$ "	BCV43HWSUSS	1.9	Flanged ASME300	EL24VDC
$1\frac{1}{2}$ "	BCV43HWSUSS	1.9	Flanged ASME300	PN

Safety information, installation and maintenance

For full details see the Installation and Maintenance Instructions (IM-P403-103) supplied with the product.

Installation note: The blowdown control valve should preferably be installed with the actuator vertically above the pipework and the flow direction as indicated on the valve body. It can be fitted in other positions, but not upside down.

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

Spare parts

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

Please note that the spare parts available for the BCV blowdown control valve are the same for both the electrically and pneumatically actuated versions.

Available spares

Actuator clamping nut	A
Gasket set	B, G
Stem seal kits	Graphite packing C1
Plug stem and seat kit	Linear trim (No gaskets supplied) D2, E

How to order spares

Always order spares by using the description given in the column headed 'Available spares', and state the size and type of valve and specify clearly the full product description as found on the label of the blowdown control valve body, as this will ensure that the correct spare parts are supplied.

Example: 1 off Actuator clamping nut for a Spirax Sarco $\frac{3}{4}$ " BCV43 blowdown control valve.

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TI-P403-102-US 8.14

