



Cert. No. LRQ 0963008

ISO 9001

spirax sarco

TI-P403-60
AB Issue 4

BCV1 and BCV20 Blowdown Valves

Description

The BCV1 and BCV20 valves are small bore, normally closed valves with a brass body and corrosion resistant internal components. They are primarily intended for low and medium pressure boiler blowdown applications.

BCV1 and BCV20 valves are identical apart from the orifice size, the BCV1 having a 3 mm (1/8") orifice and the BCV20 a 6 mm (1/4") orifice. Valves are supplied complete with a mains connector, which is protected to IP65 and is suitable for 3 x 1 mm² (18 AWG) cable.

Available sizes and pipe connections

1/2" screwed BSP - 230 V version
 1/2" screwed BSP - 110 V version
 1/2" screwed NPT - 120 V version
 1/2" screwed NPT - 120 V version (UL/CSA Listed)

Limiting conditions

BCV1	
Maximum boiler or steam pressure	14 bar g (203 psi g) (Intermittent operation)
Medium temperature range	-40 to +200°C (-40 to +392°F)
Medium	Water and steam
Maximum ambient temperature	55°C (130°F)

BCV1 (UL/CSA)	
Maximum boiler or steam pressure	9 bar g (130 psi g)
Medium temperature range	-40 to +180°C (-40 to +356°F)
Medium	Water and steam
Maximum ambient temperature	55°C (130°F)

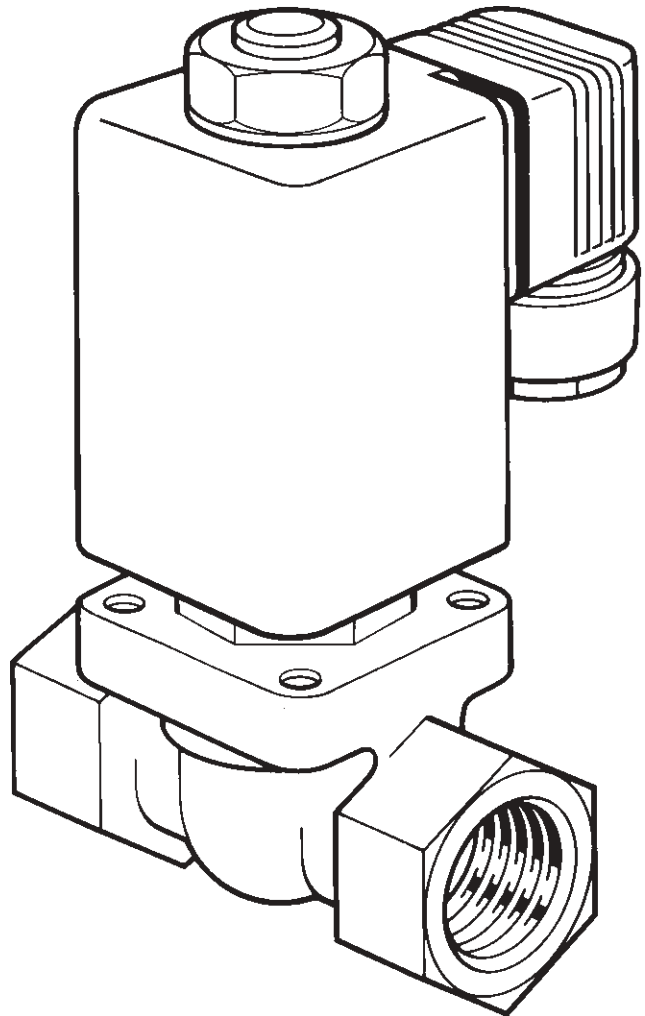
BCV20	
Maximum boiler or steam pressure	4 bar g (58 psi g)
Medium temperature range	-40 to +180°C (-40 to +356°F)
Medium	Water and steam
Maximum ambient temperature	55°C (130°F)

Electrical data

230 V version	207 V to 253 V
110 V version	99 V to 121 V
120 V version	108 V to 132 V
Frequency	50 - 60 Hz
Maximum power consumption	40 VA (inrush)
	16 VA/12 W (hold)
Protection rating	IP65 (Nema 4)

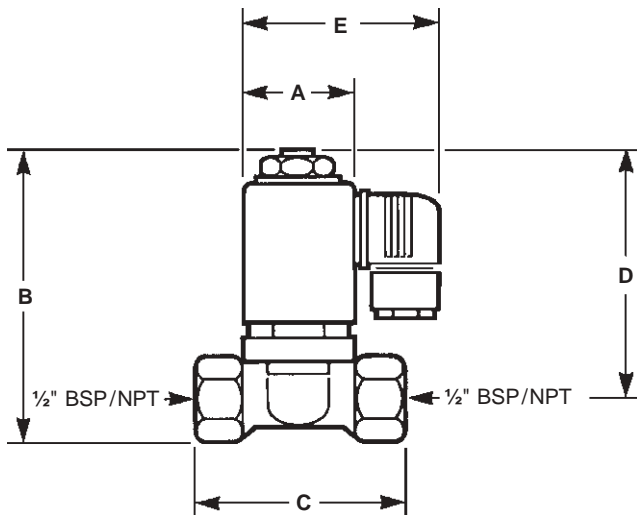
Materials

Body	Brass
Soft seal	PTFE
Internal components	Stainless steel



Dimensions/weight (approximate) in mm (ins) and kg (lbs)

A	B	C	D	E	Weight
40 (1.57)	110 (4.33)	74.5 (2.93)	94.5 (3.72)	73 (2.87)	0.75 (1.65)



Capacities

Model	BCV1	BCV20
Orifice size	3 mm (1/8")	6 mm (1/4")
K _v value	0.25	0.8

For conversion: C_v (UK) = $K_v \times 0.963$ C_v (US) = $K_v \times 1.156$

When used for boiler blowdown purposes, the valve will be controlling a mixture of water and flash steam, so the following capacity table applies:-

Boiler pressure bar g (psi g)	Capacity kg/h (lb/h)	
	BCV1	BCV20
1 (14.5)	175 (385)	560 (1232)
2 (290)	250 (550)	790 (1738)
4 (580)	350 (770)	1120 (2464)
6 (870)	385 (847)	-
8 (1160)	445 (979)	-
10 (1450)	495 (1089)	-
14 (2030)	590 (1298)	-

When the BCV20 valve is used as part of the BCS2 blowdown control system, downstream of a steam trap, the following capacity table applies:-

Head across valve m (ft)	Cold water capacity kg/h (lb/h)	Hot water capacity with flash steam kg/h (lb/h)
1 (3)	253 (557)	63 (138)
2 (6)	358 (787)	90 (198)
3 (9)	438 (963)	110 (242)
5 (15)	566 (1245)	142 (312)
10 (30)	800 (1760)	200 (440)

How to specify

BCV1

Solenoid valves shall be Spirax Sarco normally closed blowdown valve type BCV1 or BCV1 (UL/CSA) with brass bodies and stainless steel valve seat with a PTFE seal.

BCV20

Solenoid valves shall be Spirax Sarco normally closed, low pressure blowdown valve type BCV20 with brass bodies and stainless steel valve seat with a PTFE seal.

How to order

Example: 1 off Spirax Sarco BCV1 or BCV20 blowdown valve having screwed BSP connections, 230 V 50-60 Hz.

Spare parts

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

Available spares

Armature and spring set (kit).	Stock No. 4034080
Solenoid coil 230 V	Stock No. 4034081
Solenoid coil 110/120 V	Stock No. 4034082

How to order spares

Always order spares by using the description given in the column headed 'Available spares' and state the valve type.

Example: 1 off Armature and spring set (Stock No. 4034080) for a Spirax Spirax BCV20 blowdown valve.

