



TI-P403-60  
EMM Issue 6

# 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 mm<sup>2</sup> (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

## Electrical data

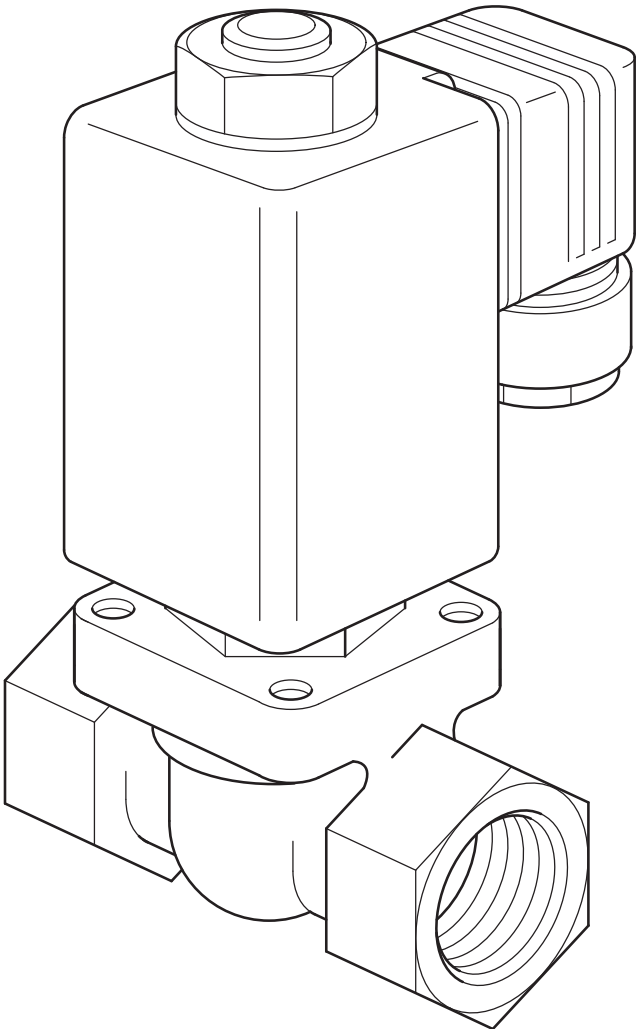
230 V version	207 V to 253 V
110 V version	99 V to 121 V
120 V version	108 V to 132 V
Frequency	50 - 60 Hz
Maximum power consumption	40 VA (inrush)
	16 VA/12 W (hold)
Protection rating	IP65 (Nema 4)

## Materials

Body	Brass
Soft seal	PTFE
Internal components	Stainless steel

## Limiting conditions

Blowdown valves	BCV1		BCV20	
Maximum boiler or steam pressure - Intermittent operation	14 bar g	203 psi g	4 bar g	58 psi g
Medium temperature range	-40 to +200 °C	-40 to +392 °F	-40 to +180 °C	-40 to +356 °F
Maximum ambient temperature	55 °C	130 °F	55 °C	130 °F
Medium	Water and steam		Water and steam	



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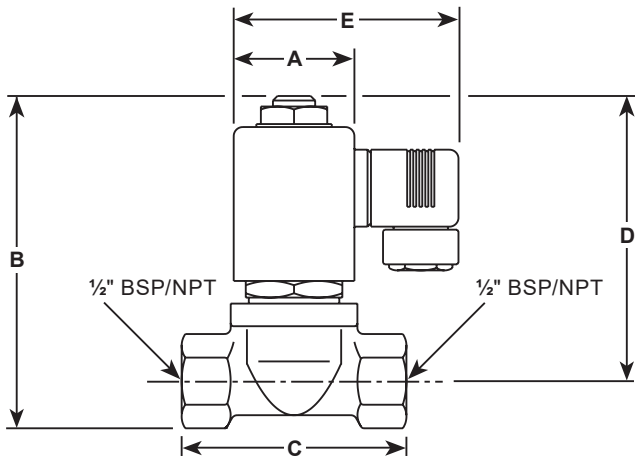
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Boiler house  
TDS blowdown controls

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	For conversion: $C_v \text{ (UK)} = K_v \times 0.963$ $C_v \text{ (US)} = K_v \times 1.156$
Orifice size	3 mm (1/8")	6 mm (1/4")	
K <sub>V</sub> value	0.25	0.8	

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		Capacities			
	bar g	psi g	BCV1		BCV20	
			kg / h	lb / h	kg / h	lb / h
	1	14.5	175	385	560	1 232
	2	29	250	550	790	1 738
	4	58	350	770	1 120	2 464
	6	87	385	847		
	8	116	445	979		
	10	145	495	1 089		
	14	203	590	1 298		

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		Capacities			
	m	ft	Cold water		Hot water with flash steam	
			kg / h	lb / h	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	1 245	142	312
	10	30	800	1 760	200	440

How to specify

- BCV1**  
Solenoid valves shall be Spirax Sarco normally closed blowdown valve type BCV1 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.

Spare parts

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

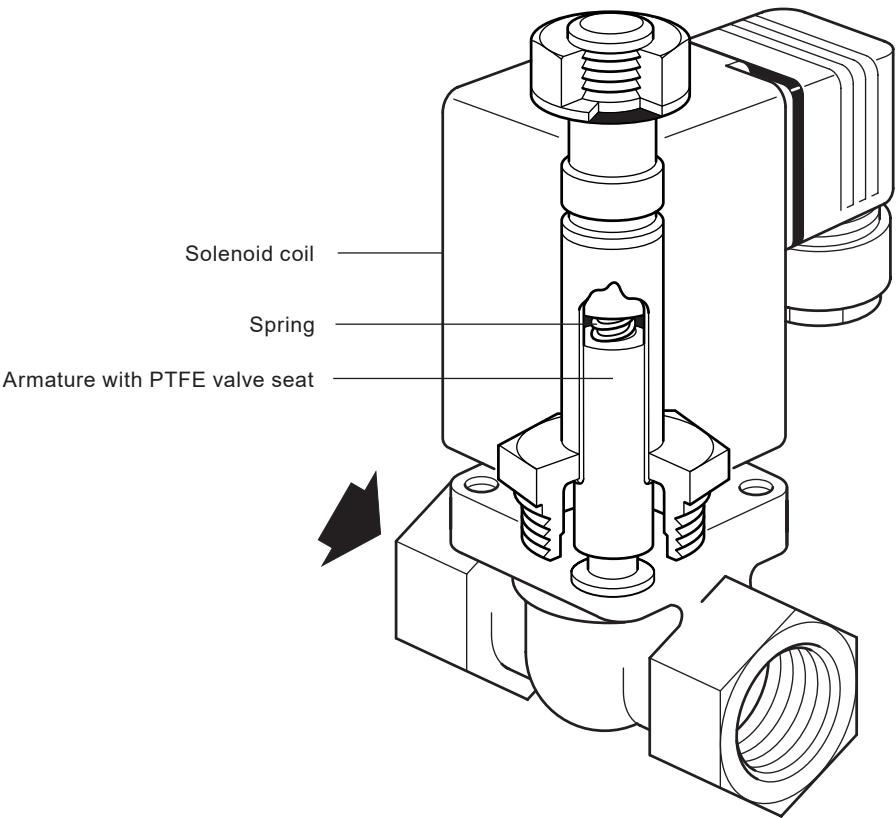
Available spares

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.



How to order

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

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Boiler house  
TDS blowdown controls

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