

spirax sarco®

ABV 20 Air Actuated Boiler Blowdown Valve

- Automatic timed blowdown-avoids wasted heat
- Suitable for boiler pressures up to 250 psig at 440°F (17.25 barg)
- Spring return for fail-safe operation
- Pneumatic actuator for fast response

DESCRIPTION

The Spirax Sarco ABV 20 is a ball valve with a 90° rotary spring return pneumatic actuator, for boiler blowdown duties.

It is used in conjunction with a Spirax Sarco blowdown timer to provide timed control of bottom blowdown, ensuring that the recommended boiler blowdown cycles occur with minimum heat loss, avoiding duplication or omission.

The pneumatic actuator, (which can also be operated with other non-corrosive gases), moves through 90° to open the valve, and has a spring return action to the closed position for fail-safe operation.

A switch box is mounted on the actuator, and may be used to signal valve open and closed positions.

A solenoid valve is required, and may be directly mounted to the "NAMUR" (VDI/VDE 3845) interface on the actuator.

*A suitable valve, complete with adaptor plate, may be selected from the Spirax Sarco MV range. Alternatively, an air supply may be connected directly to the actuator port "A" (1/4" NPT), where it is necessary to install the solenoid valve remote from the actuator.

A standard 1/4" NPT 3-way solenoid valve could also be used.

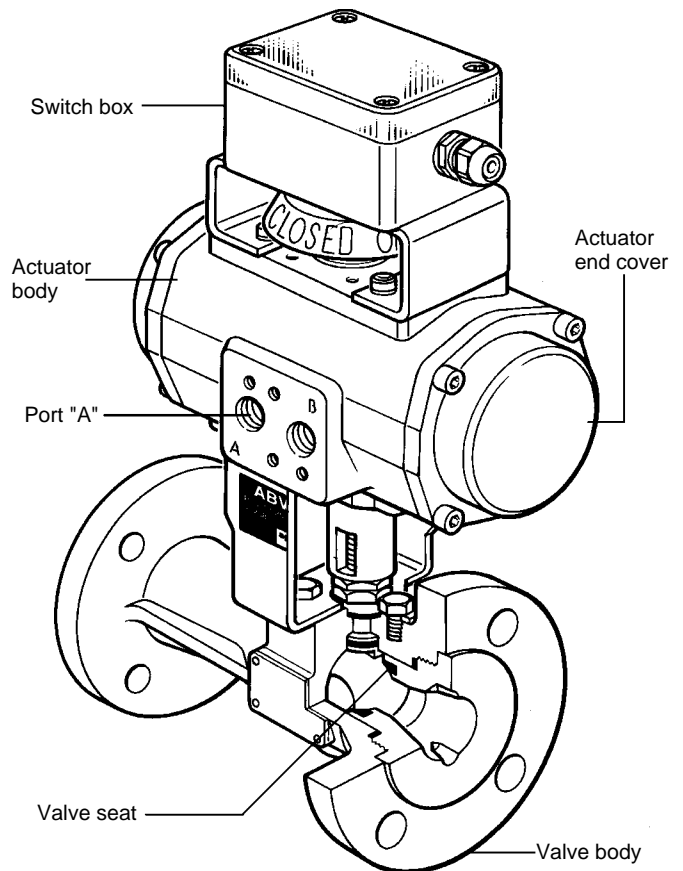
The ABV 20 may be installed with the flow in either direction.

LIMITING CONDITIONS

Maximum operating pressure	250 psig	(17.25 barg)
Maximum operating temperature	410°F	(208°C)
Valve cold hydraulic test pressure (Class 300)	1130 psig	(78 bar g)
Maximum ambient temperature (MV series solenoid 120°F-(50°C))	180°F	(80°C)
Minimum air supply pressure	90 psig	(6 barg)
Maximum air supply pressure	150 psig	(10 barg)
RB 11 switch rating	3A 250Vac	
Protection rating	NEMA 13 (IP65)	

TECHNICAL DATA

Available sizes	1", 1-1/2", 2", 2-1/2"	
Available flanges	ANSI 300	
Operating time (Full stroke)	1 to 3 seconds	
Operating media	Clean compressed air Non-corrosive gas	
Air consumption Inches ³ /Stroke-(dm ³ /stroke=litres/stroke)		
1" (DN 25)	(BVA 6i actuator)	16 in ³ (0.27 dm ³)
1-1/2", 2" (DN 32, 40, 50)	(BVA 15i actuator)	37 in ³ (0.6 dm ³)
2-1/2" (DN 65)	(BVA 28i actuator)	92 in ³ (1.5 dm ³)



* Note: The BT1000 blowdown timer uses one switch only to indicate 'valve fully closed' or 'valve not fully closed' positions, and does not indicate that the valve has fully opened.

ABV 20

Air Actuated Boiler Blowdown Valve

MATERIALS

Valve

Body	Carbon steel	ASTM A216 WCB
Seats	Carbon reinforced PTFE	
Ball	Austenitic stainless steel	AISI 316
Spindle	Martensitic stainless steel	AISI 420 or Austenitic stainless steel
	Austenitic stainless steel	AISI 316

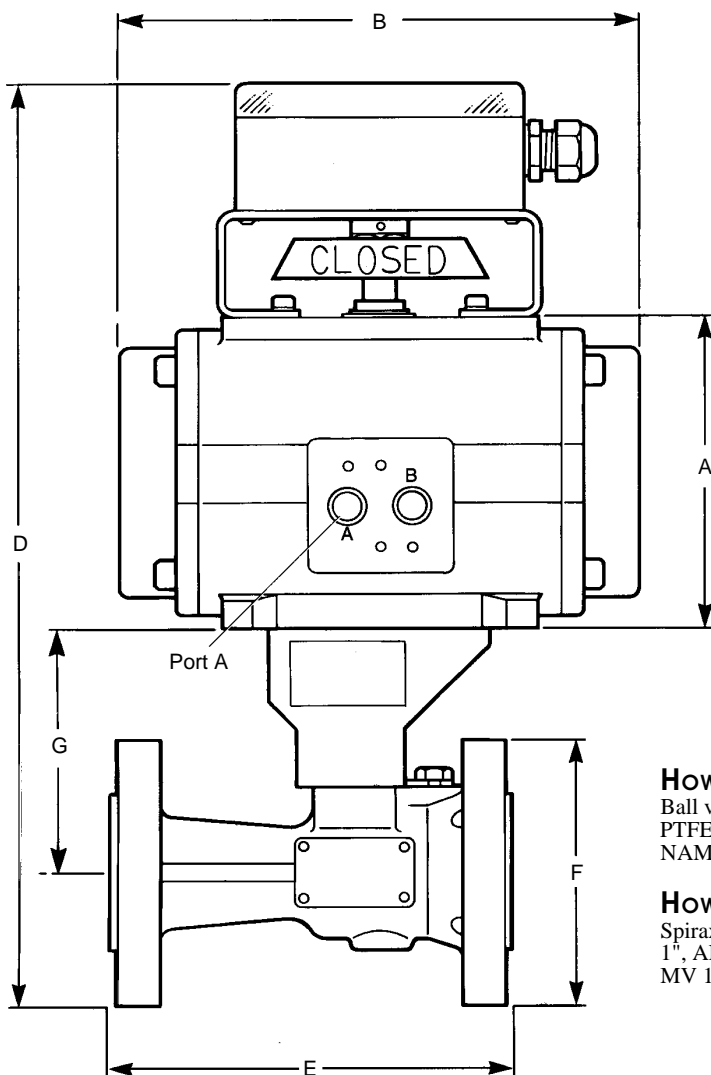
Actuator

Body, piston, end cover	Aluminium alloy
Drive shaft	Carbon steel
"O" ring seals	Nitrile rubber

DIMENSIONS (approximate) in inches/millimetres

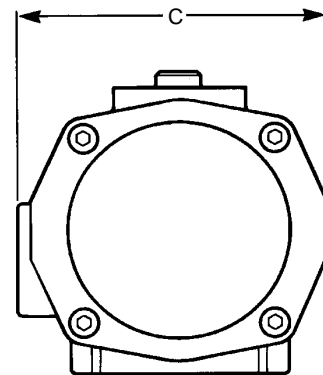
Valve Size	Flange Type	Actuator Type	A	B	C	D	E	F	G	Valve bore
1"	Cl. 300	BVA 6i	4.0" (101)	7.2" (183)	4.2" (107)	14.4" (365)	6.5" (165)	4.9" (124)	4.0" (102)	0.8" (20.6)
1-1/2"	Cl. 300	BVA 15i	5.3" (135)	8.6" (218)	5.6" (141)	16.9" (430)	7.5" (191)	6.1" (156)	4.6" (118)	1.2" (31)
2"	Cl. 300	BVA 15i	5.3" (135)	8.6" (218)	5.6" (141)	17.5" (444)	8.5" (216)	6.5" (165)	5.0" (126)	1.5" (38)
2-1/2"	Cl. 300	BVA 28i	6.3" (159)	11.9" (302)	7.0" (178)	19.3" (490)	9.5" (241)	7.5" (191)	5.4" (138)	2.0" (50.8)

Air connection 1/4" NPT.



WEIGHT (approximate) in lb (kg)

1"	1-1/2"	2"	2-1/2"
21 (9.5)	37 (16.5)	42 (19.0)	66 (30.0)



HOW TO SPECIFY

Ball valve, 1" Flanged ANSI 300 with carbon reinforced PTFE seats, 90° rotary pneumatic actuator and switch box. NAMUR compatible solenoid valve 240V.

HOW TO ORDER

Spirax Sarco ABV 20 Actuated boiler blowdown valve 1", ANSI 300.
MV 11 Solenoid valve 240V.