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ISO 9001

spirax sarco

TI-P405-15
AB Issue 9

ABV20

Air Actuated Boiler Blowdown Valve

Description

The Spirax Sarco ABV20 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 (normally closed) for fail-safe operation. A switch box is mounted on the actuator, and either or both microswitches may be wired to a Building Management System if required.

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 opened fully.

A solenoid valve is required, which 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" BSP), where it is necessary to install the solenoid valve remote from the actuator.

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

The ABV20 must be installed with the flow in the direction of the arrow on the body.

Principal features:

- Automatic timed blowdown-avoids wasted heat.
- Suitable for boiler pressures up to 17.25 bar g.
- Spring return for fail-safe operation.
- Pneumatic actuator for fast response.

Pressure / temperature limits

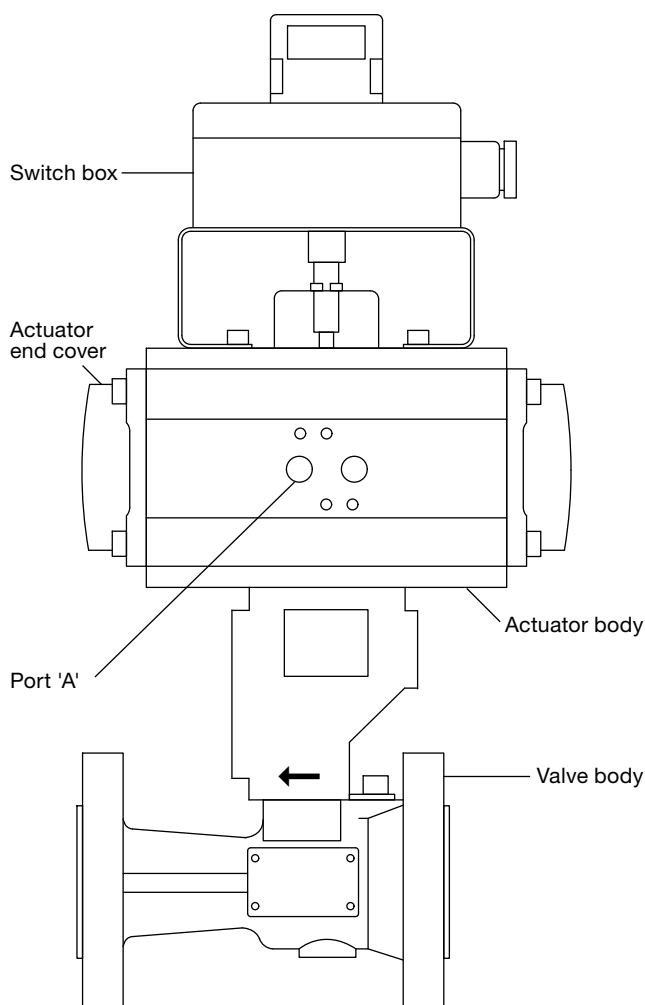
Valve	Maximum operating pressure	17.25 bar g @ 208°C
	Maximum design temperature	208°C @ 17.25 bar g
	Minimum design temperature	0°C
	Designed for a maximum cold hydraulic test pressure of:	PN40 60 bar g ANSI 300 78 bar g
Actuator	Maximum ambient temperature	80°C
	Minimum ambient temperature	0°C
	Maximum air supply pressure	8 bar g
	Minimum air supply pressure will depend on the operating conditions	
MV series solenoid	Maximum ambient temperature	50°C
	Minimum ambient temperature	0°C

Technical data

Operating time (full stroke)	0.35 - 0.65 seconds		
Operating media	Clean compressed air Non-corrosive gas		
Compressed air consumption @ 6 bar g	DN25	BVA320S/14 actuator	0.0006 (N)m ³ / stroke
	DN32	BVA325S/14 actuator	0.0008 (N)m ³ / stroke
	DN40	BVA325S/14 actuator	0.0008 (N)m ³ / stroke
	DN50	BVA325S/14 actuator	0.0008 (N)m ³ / stroke
	DN65	BVA330S/14 actuator	0.0011 (N)m ³ / stroke
LSB3 switch rating	10 A 250 Vac		
Protection rating	IP65		

Sizes and pipe connections

DN25, DN32 (PN40 only), DN40, DN50 and DN65
Flanged EN 1092 PN40 or ANSI BS 1560 Class 300.



Materials

Valve

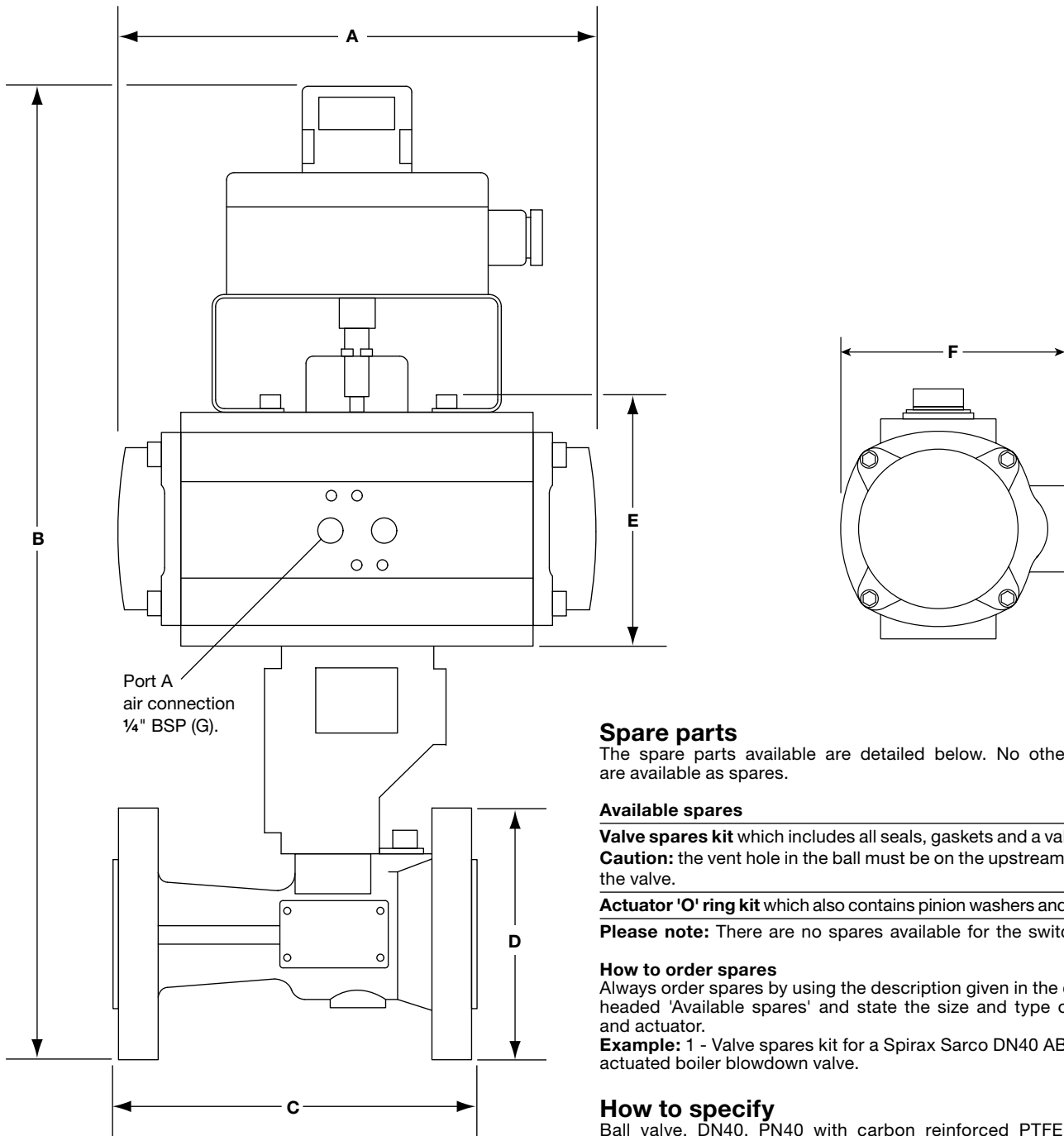
Body	Carbon steel	ASTM A216 WCB
Seats and stem seals	Carbon reinforced PTFE	
Ball	Austenitic stainless steel	AISI 316
Spindle	Martensitic stainless steel	AISI 420
	Austenitic stainless steel	AISI 316

Actuator

Body, piston and end caps	Aluminium - anodised
Pinion	Carbon steel - nickel plated
'O' ring seals	Nitrile rubber

Dimensions/weights (approximate) in mm and kg

Actuator type	Valve size	Flange	A	B	C	D	E	F	Valve bore	Weight
BVA320S/14	DN25	PN40	217	450	165	115	137	111	20.6	9.5
		Class 300	217	454	165	124	137	111	20.6	9.5
	DN32	PN40	217	483	178	140	137	111	23.0	12.5
BVA325S/14	DN40	PN40	258	503	190	150	147	122	31.0	15.0
		Class 300	258	506	191	156	147	122	31.0	15.0
	DN50	PN40	258	531	216	165	147	122	38.0	17.0
Class 300		258	531	216	165	147	122	38.0	17.0	
BVA330S/14	DN65	PN40	299	587	241	185	165	136	50.8	26.0
		Class 300	299	590	241	191	165	136	50.8	26.0



Spare parts

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

Available spares

Valve spares kit which includes all seals, gaskets and a valve ball.

Caution: the vent hole in the ball must be on the upstream side of the valve.

Actuator 'O' ring kit which also contains pinion washers and circlip.

Please note: There are no spares available for the switch box.

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 actuator.

Example: 1 - Valve spares kit for a Spirax Sarco DN40 ABV20 air actuated boiler blowdown valve.

How to specify

Ball valve, DN40, PN40 with carbon reinforced PTFE seats, 90° rotary pneumatic actuator and switch box.
NAMUR compatible solenoid valve 220/240 V.

How to order

Example: 1 off Spirax Sarco DN40 ABV20 air actuated boiler blowdown valve having flanged PN40 connections plus
1 off MV11 solenoid valve 220/240 V.