

spirax/sarco®

Series 200 BVA Pneumatic Actuators with Spirax Sarco Ball Valves

Description

The BVA 200 Series is a range of pneumatic rotary actuators to automate Spirax Sarco ball valves for a wide range of industrial applications.

The pneumatic actuated ball valve range comprises:-

Actuators combined with three piece ball valves M10Si ISO, M10Vi ISO, M10F ISO and M10H ISO.

Actuators combined with one piece ball valves M40 ISO and M21S ISO.

Available types of BVA actuator

| | |
|---|--|
| Single acting: (spring return low pressure) | 210S/4, 215S/4, 220S/4, 225S/4, 230S/4, 235S/4, 240S/4, 245S/4, 250S/4, 255S/4 |
| Single acting: (spring return standard pressure) | 210S, 215S, 220S, 225S, 230S, 235S, 240S, 245S, 250S, 255S 260S |
| Double acting: (all pressures) | 210D, 215D, 220D, 225D, 230D, 235D, 240D, 245D, 250D, 255D, 260D |

Technical data actuators

| | |
|--|--|
| Maximum pressure | 150 psig (10 barg) |
| Operating pressure range (standard) | 60, 75 or 90 psig (4, 5 or 6 barg) |
| Operating temperature range | -22°F to +212°F (-30°C to 100°C) |
| Operating media | Compressed air (dry or lubricated) Non corrosive gas Light hydraulic oil |
| Rotation 90° | Anti-clockwise with port 'A' pressurized |

Materials

| No | Part | Material |
|----|-------------------|----------------------------|
| 1 | Body | Aluminium hard anodized |
| 3* | Pinion | Nickel plated carbon steel |
| 4 | End caps | Aluminium epoxy coated |
| 12 | 'O' ring | NBR |
| 13 | Screws | Stainless steel |
| 16 | Blind nut | Stainless steel |
| 17 | Washer | Stainless steel |
| 20 | Indicator cap | Polyamide |
| 21 | Colored indicator | Polyamide |

* Item 3 not shown on this diagram

Normal ft³ / stroke

| BVA actuator size | 210 | 215 | 220 | 225 | 230 | 235 | 240 | 245 | 250 | 255 |
|----------------------|------|------|------|-------|-------|-------|-------|-------|--------|--------|
| Single acting | .142 | .248 | .495 | .813 | 1.201 | 1.978 | 2.967 | 5.298 | 7.063 | 11.301 |
| Double acting | .248 | .459 | .883 | 1.413 | 2.049 | 3.214 | 4.945 | 8.829 | 12.008 | 18.364 |

Normal ft³ per open/close cycle when supplied with air at 90 psig (6 barg).

Time (seconds)

| BVA actuator size | 210 | 215 | 220 | 225 | 230 | 235 | 240 | 245 | 250 | 255 |
|----------------------|------|------|------|------|------|------|------|------|------|------|
| Single acting | 0.11 | 0.20 | 0.27 | 0.32 | 0.50 | 0.70 | 0.90 | 2.20 | 2.30 | 2.80 |
| Double acting | 0.04 | 0.08 | 0.11 | 0.15 | 0.18 | 0.30 | 0.40 | 0.80 | 1.20 | 1.80 |

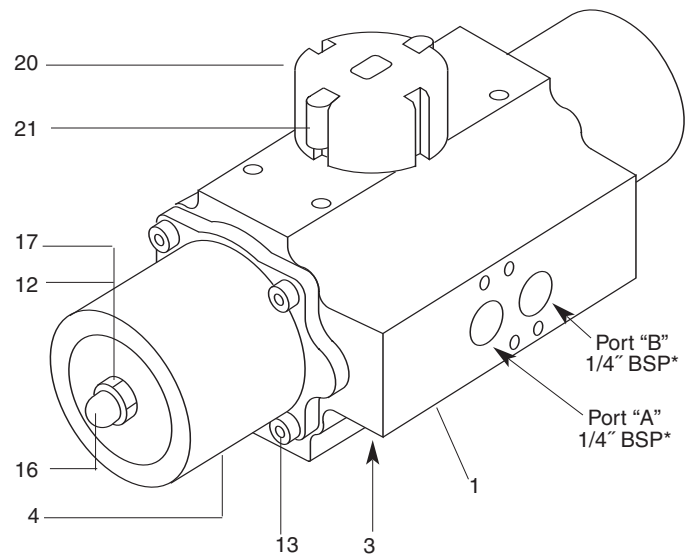
Typical operating time (seconds). Operating media - compressed air at 90 psig (6 barg).

Note: Operating time is for valve opening

Dimensions

Refer to individual TI for dimensions.

*Local regulations may restrict the use of this product below the conditions quoted. Limiting conditions refer to standard connections only.
In the interests of development and improvement of the product, we reserve the right to change the specification.*



* When connecting to the Solenoid Valve or directly to the Actuator (both have 1/4" BSP connections), an adaptor is available to convert 1/4" BSP to 1/4" NPT. See Part Number 72416

Accessories

MV solenoid valve: a range of Namur electrical valves with an encapsulation rating to IP65 is available for use with BVA actuators. These can be used to drive actuators with compressed air, non-corrosive gas or light oil in the temperature range -14°F to 195°F (-25°C to 90°C).

| Solenoid Valve | Volts | Power | Coil Construction | Application |
|----------------|---------|---------|-------------------|-------------|
| 4239037 | 240V AC | 11VA | Standard | 3/2, 5/2 |
| 4239036 | 120V AC | 11VA | Standard | 3/2, 5/2 |
| 4239035 | 24V AC | 11VA | Standard | 3/2, 5/2 |
| 73790 | 240V AC | 7VA | Explosion Proof | 3/2, 5/2 |
| 73789 | 120V AC | 7VA | Explosion Proof | 3/2, 5/2 |
| 73788 | 24V AC | 7VA | Explosion Proof | 3/2, 5/2 |
| 73791 | 24V DC | 7 Watts | Explosion Proof | 3/2, 5/2 |

How to order

Example:

- 1 - 3460531: 1-1/2" M10Si4 ball valve. (Automation)
- 1 - 4232122: BVA225S Actuator
- 1 - 6748910: BVL305 Linkage Kit.
- 1 - 4239036: Namur Solenoid Valve 12V AC
- X - 72416: Adaptor, 1/4" BSP to 1/4" NPT.

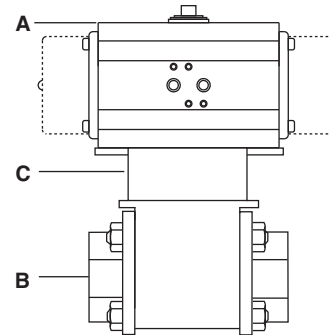
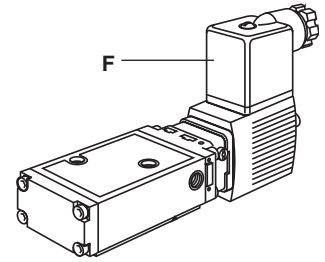
or actuated ball valves may be supplied completely assembled to suit the application.

Available spares set comprises

| | |
|---|-------------------|
| 'O' rings | 9, 10, 11, 12, 18 |
| Pinion washers | 5, 8 |
| Pinion circlip | 7 |
| State actuator model/type on order e.g. BVA 220-S | |

Typical assemblies

- A - BVA actuator series 200
- B - Three piece or one piece ball valve
- C - Linkage kit (BVL)
- F - Solenoid Valve Namur Mount



Typical assembly for ISO ball valves

