

# spirax sarco®

## BVA200 Series Pneumatic Actuator with M40 ISO Ball Valve

### Selection tables

#### How to choose:

Ball valve and actuator tables for operating air pressure of 60.70 or 90 psig. (4, 5 or 6 barg)

**Key:** Light service (LS), Heavy service (HS), Double acting (D), Single acting with return spring (S).

#### Operating pressure: 60 psig (4 barg)

Valve M40 ISO Size	BVA actuator			
	Double acting		Single acting	
	LS	HS	LS	HS
1"	215D	215D	220S/4	220S/4
1-1/2"	215D	220D	220S/4	225S/4
2"	220D	220D	220S/4	225S/4
2-1/2"	225D	230D	230S/4	235S/4
3"	230D	235D	235S/4	240S/4
4"	230D	240D	240S/4	245S/4
6"	240D	240D	245S/4	250S/4

#### Operating pressure: 75 psig (5 barg)

Valve M40 ISO Size	BVA actuator			
	Double acting		Single acting	
	LS	HS	LS	HS
1"	215D	215D	220S	220S
1-1/2"	215D	220D	220S	225S
2"	215D	220D	220S	225S
2-1/2"	220D	225D	230S	235S
3"	230D	235D	235S	240S
4"	230D	235D	235S	240S
6"	235D	240D	245S	245S

#### Operating pressure: 90 psig (6 barg)

Valve M40 ISO Size	BVA actuator			
	Double acting		Single acting	
	LS	HS	LS	HS
1"	215D	215D	215S	215S
1-1/2"	215D	220D	220S	220S
2"	215D	220D	220S	220S
2-1/2"	220D	225D	225S	230S
3"	225D	230D	230S	235S
4"	230D	235D	235S	240S
6"	235D	240D	240S	245S

#### BVL\_ Linkage kit selection table

Valve M40 ISO Size	BVA_ actuator										
	210	215	220	225	230	235	240	245	250	255	260
1"	221	221	222								
1-1/2"		221	222	222							
2"		223	224	224							
2-1/2"			256	256	256	237					
3" ANSI 150			227	227	227	235	235				
3" ANSI 300			226	226	226	233	233				
4"			226	226	226	233	233	238	239		
6"						234	234	228	229	229	257

#### Conditions

##### Light service (LS):

- Clean, low viscosity fluid, without solids in suspension.
- Maximum saturated steam pressure 45 psig (3 barg).
- Maximum working temperature 290°F (143°C) at 150 psig (10 barg).
- Maximum differential pressure 300 psig (20 barg) at 100°F (38°C)
- Frequent operation.

##### Heavy service (HS):

All those applications where at least one of the above mentioned conditions is exceeded.

#### Example

##### Select an actuator and linkage kit for the following application:

Valve required: 2" flanged ANSI 150 M40C2 ISO ball valve.

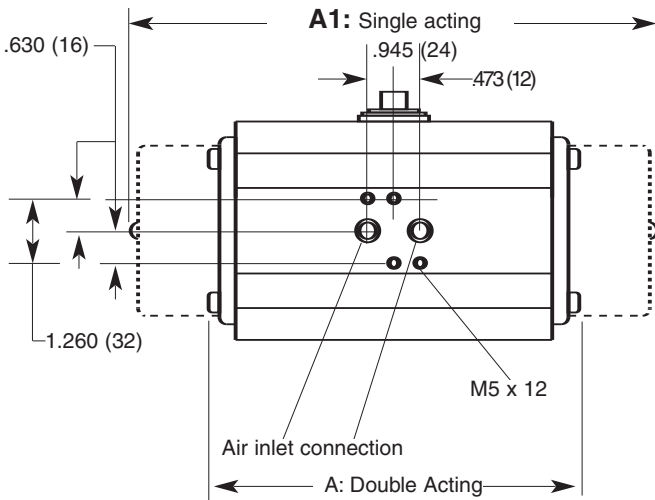
Available air pressure: 90 psig (6 barg)

Light service, double acting actuator.

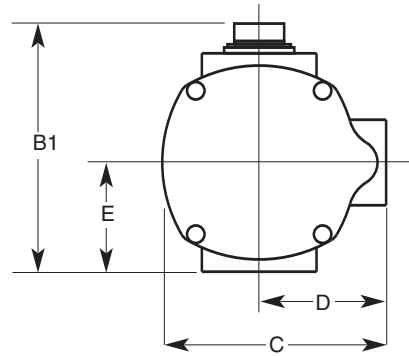
1. Select from 90 psig (6 barg) operating pressure table an actuator for a 2" M40 ISO ball valve, light service (LS), double acting:  
**BVA215D**
2. Select from BVL linkage kit selection table a BVL suitable for a 2" M40 ISO ball valve and BVA215 actuator:  
**BVL223**

#### How to order

**Example:** 1- Spirax Sarco 2" flanged ANSI 150 M40C2 ISO ball valve, with BVA215D actuator and BVL223 linkage kit, operating with 90 psig (6 barg) air pressure.

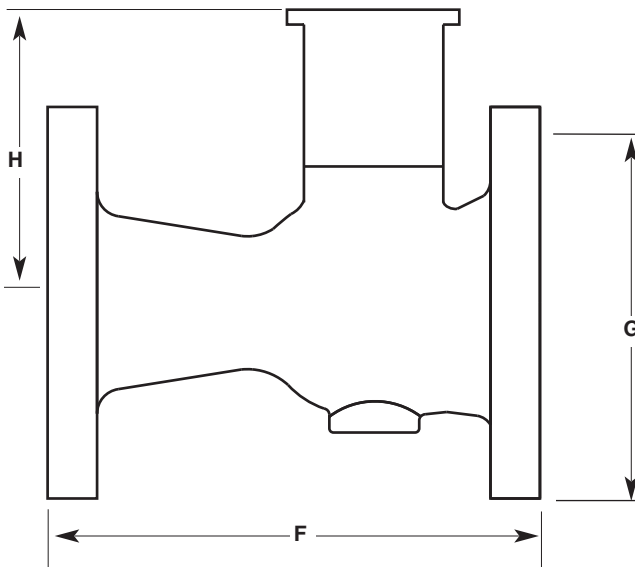


**Dimensions/weights**  
(approximate) in inches (mm) and lbs. (kg)



**BVA200 Series actuators in inches (mm)**

Type	A		B1	C	D	E	Actuator weight lbs.(kg)	
	Double acting	A1 Single acting					Double acting	Single acting
BVA210	5.12 (130)	8.47 (215)	3.78 (96)	2.99 (76)	1.89 (48)	1.34 (34)	2.4 (1.1)	3.3 (1.5)
BVA215	5.67 (144)	9.14 (232)	4.53 (115)	3.55 (90)	2.21 (56)	1.77 (45)	3.7 (1.7)	5.1 (2.3)
BVA220	6.38 (162)	10.64 (270)	5.40 (137)	4.37 (111)	2.60 (66)	2.17 (55)	5.7 (2.6)	8.8 (4.0)
BVA225	7.17 (182)	11.70 (297)	5.75 (146)	4.77 (121)	2.80 (71)	2.36 (60)	7.5 (3.4)	12.1 (5.5)
BVA230	8.31 (211)	13.08 (332)	6.50 (165)	5.32 (135)	3.07 (78)	2.76 (70)	11.2 (5.1)	18.5 (8.4)
BVA235	9.65 (245)	14.62 (371)	7.17 (182)	5.95 (151)	3.39 (86)	3.15 (80)	16.8 (7.6)	26.7 (12.1)
BVA240	10.84 (275)	16.55 (420)	7.84 (199)	6.78 (172)	3.78 (96)	3.35 (85)	23.1 (10.5)	36.4 (16.5)
BVA245	13.24 (336)	18.68 (474)	8.55 (217)	7.56 (192)	4.18 (106)	3.86 (98)	35.3 (16.0)	52.9 (24.0)
BVA250	16.55 (420)	22.77 (578)	9.81 (249)	8.35 (212)	4.57 (116)	4.49 (114)	57.3 (26.0)	83.8 (38.0)
BVA255	18.20 (462)	24.19 (614)	11.03 (280)	9.53 (242)	5.16 (131)	5.16 (131)	80.5 (36.5)	114.6 (52.0)
BVA260	20.41 (518)	29.08 (738)	15.09 (383)	14.03 (356)	7.68 (195)	7.09 (180)	155 (70.0)	221 (100.0)



**BVL linkage kit with M40 ISO ball valve**

Flanged ANSI 150	inches (mm)			lbs (kg)
	Size (Valve)	F	G	H Weight (Valve)
DN25	5.00 (127)	4.26 (108)	3.11 (79)	5.1 (2.3)
DN40	6.50 (165)	5.00 (127)	3.70 (94)	9.9 (4.5)
DN50	7.01 (178)	5.99 (152)	3.82 (97)	15.0 (6.8)
DN65	7.49 (190)	7.01 (178)	5.36 (136)	21.4 (9.7)
DN80	8.00 (203)	7.53 (191)	5.32 (135)	30.9 (14.0)
DN100	9.02 (229)	9.02 (229)	6.03 (153)	46.3 (21.0)
DN150	10.52 (267)	10.99 (279)	6.97 (177)	83.8 (38.0)

**Linkage kit description**

**BVL Linkage kit components and materials are as follows**

Frame (1)	Stainless steel	AISI 304
Stem adapter (1)	Stainless steel	AISI 304
Frame-to-actuator screws (4)	Stainless steel	Gr. 5
Washers (4)	Stainless steel	
Frame-to-valve screws (4)	Stainless steel	Gr. 5
Washers (4)	Stainless steel	
Stem nut (1) or locking plate (1)	Stainless steel	

**Note:** The DN150 M40 ISO ball valve is only available in carbon steel.