

# spirax sarco®

## BVA200 Series Pneumatic Actuator with M20 Ball Valve

### Selection tables

#### How to choose:

Ball valve and actuator tables for operating air pressure of 60, 75 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 M20 Size	BVA_actuator			
	Double acting		Single acting	
	LS	HS	LS	HS
1"	215D	215D	220S/4	220S/4
1-1/4"	215D	215D	220S/4	220S/4
1-1/2"	220D	220D	220S/4	225S/4
2"	220D	220D	225S/4	225S/4
2-1/2"	225D	225D	230S/4	235S/4
3"	225D	230D	235S/4	235S/4
4"	235D	240D	240S/4	245S/4
6"	240D	245D	245S/4	250S/4

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

Valve M20 Size	BVA actuator			
	Double acting		Single acting	
	LS	HS	LS	HS
1"	215D	215D	220S	220S
1-1/4"	215D	215D	220S	220S
1-1/2"	220D	220D	220S	220S
2"	220D	220D	225S	225S
2-1/2"	220D	225D	225S	230S
3"	225D	230D	230S	235S
4"	235D	235D	235S	240S
6"	235D	245D	240S	250S

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

Valve M20 Size	BVA actuator			
	Double acting		Single acting	
	LS	HS	LS	HS
1"	210D	210D	215S	215S
1-1/4"	215D	215D	215S	215S
1-1/2"	215D	215D	220S	220S
2"	220D	220D	220S	225S
2-1/2"	220D	220D	225S	225S
3"	220D	225D	225S	235S
4"	230D	235D	235S	240S
6"	235D	240D	240S	245S

#### BVL Linkage kit selection table

Valve M20 Size	BVA_actuator								
	210	215	220	225	230	235	240	245	250
1"	260	260	261						
1-1/4"		260	261						
1-1/2"		262	263	263					
2"			263	263					
2-1/2"			264	264	264	65-A			
3"			265	265	265	67			
4"					265	67	67	266	
6"						71	71	267	268

### 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: DN50 flanged ANSI 150 M20C2 ball valve.

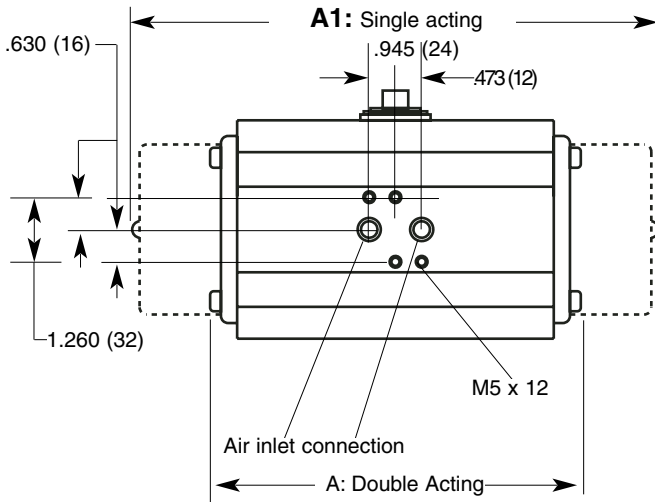
Available air pressure: 90 psig (6 barg).

Light service, double acting actuator.

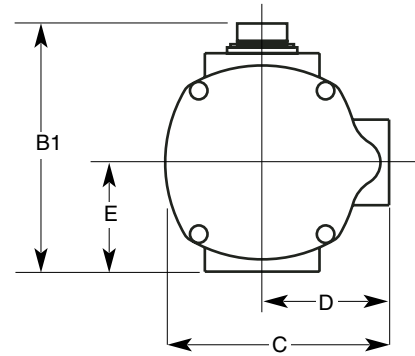
1. Select from 90 psig (6 barg). operating pressure table an actuator for a 2" M20 ball valve, light service (LS), double acting: **BVA220D**
2. Select from BVL linkage kit selection table a BVL suitable for a 2" M20 ball valve and BVA220 actuator: **BVL263**

### How to order

Example: 1- Spirax Sarco 2" flanged ANSI 150 M20C2 ball valve, with BVA220D actuator and BVL263 linkage kit, operating with 90 psig (6 barg) air pressure.

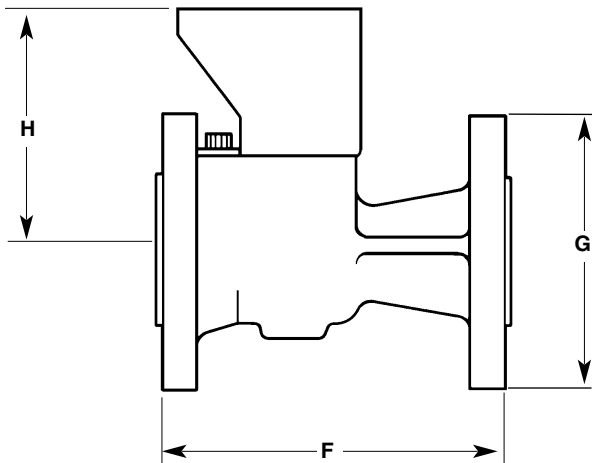


**Dimensions/weights**  
(approximate) in inches (mm) and lbs. (kg)



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

Type	A		A1 Actuator weight lbs.(kg)		C	D	E	Double acting		Single acting	
	Double acting	Single acting	Single acting	B1				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)			



**Linkage kit description**

BVL Linkage kit components and materials are as follows

Frame (1)	Zinc plated carbon steel
Stem adapter (1)	Zinc plated carbon steel
Frame-to-actuator screws (4)	Zinc plated carbon steel
Washers (4)	Zinc plated carbon steel
Frame-to-valve screws (3)	Zinc plated carbon steel
Washers (3)	Zinc plated carbon steel
Stem nut (1*)	Zinc plated carbon steel

Note: \* For 3" to 6" ball valves two stem nuts will be supplied.

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**BVL linkage kit with M20 ball valve**

Size (Valve)	Flanged PN40 inches (mm)			lbs. (kg)
	F	G	H	Weight (Valve)
DN25	6.50 (165)	4.53 (115)	4.02 (102)	11.0 (5.0)
DN32	7.01 (178)	5.52 (140)	4.14 (105)	14.1 (6.4)
DN40	7.49 (190)	5.91 (150)	4.65 (118)	19.4 (8.8)
DN50	8.51 (216)	6.50 (165)	4.96 (126)	24.3 (11.0)
DN65	9.50 (241)	7.29 (185)	5.44 (138)	37.5 (17.0)
DN80	11.15 (283)	7.88 (200)	6.62 (168)	55.1 (25.0)
DN100	12.02 (305)	9.26 (235)	7.05 (179)	88.2 (40.0)
DN150	15.88 (403)	11.82 (300)	8.47 (215)	187.4 (85.0)

**BVL linkage kit with M20 ball valve**

Size (Valve)	Flanged ANSI 150 inches (mm)			lbs. (kg)
	F	G	H	Weight (Valve)
DN25	5.00 (127)	4.26 (108)	4.02 (102)	7.3 (3.3)
DN32	5.52 (140)	4.65 (118)	4.14 (105)	8.8 (4.0)
DN40	6.50 (165)	5.00 (127)	4.65 (118)	12.8 (5.8)
DN50	7.01 (178)	5.99 (152)	4.96 (126)	19.0 (8.6)
DN65	7.53 (191)	7.01 (178)	5.44 (138)	29.1 (13.2)
DN80	8.00 (203)	7.49 (190)	6.62 (168)	41.2 (18.7)
DN100	9.02 (229)	9.02 (229)	7.05 (179)	61.3 (27.8)
DN150	10.52 (267)	10.99 (279)	8.47 (215)	97.0 (44.0)

**BVL linkage kit with M20 ball valve**

Size (Valve)	Flanged ANSI 300 inches (mm)			lbs. (kg)
	F	G	H	Weight (Valve)
DN25	6.5 (165)	4.89 (124)	4.02 (102)	11.0 (5.0)
DN32	7.01 (178)	4.65 (118)	4.14 (105)	14.1 (6.0)
DN40	7.49 (190)	6.15 (156)	4.65 (118)	19.4 (8.8)
DN50	8.51 (216)	6.50 (165)	4.96 (126)	24.3 (11.0)
DN65	9.50 (241)	7.49 (190)	5.44 (138)	37.5 (17.0)
DN80	11.15 (283)	8.27 (210)	6.62 (168)	55.1 (25.0)
DN100	12.02 (305)	10.00 (254)	7.05 (179)	88.2 (40.0)
DN150	15.88 (403)	12.53 (318)	8.47 (215)	187.4 (85.0)