

spirax sarco®

BVA200 Series

Pneumatic Actuator with M10V, M10S or M60 Ball Valves

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),
Reduced bore (RB), Full bore (FB).

Operating pressure: 60 psig (4 barg)

Valves M10V and M10S Size	BVA actuator			
	Double acting		Single acting	
	LS	HS	LS	HS
1/4" RB, FB - 3/8" RB	210D	210D	210S/4	210S/4
1/2" RB - 3/8" FB	210D	210D	215S/4	215S/4
3/4" RB - 1/2" FB	210D	210D	215S/4	215S/4
1" RB - 3/4" FB	215D	215D	220S/4	220S/4
1-1/4" RB - 1" FB	215D	220D	220S/4	220S/4
1-1/2" RB - 1-1/4" FB	220D	220D	220S/4	225S/4
2" RB - 1-1/2" FB	220D	225D	225S/4	230S/4
2-1/2" RB - 2" FB	225D	230D	230S/4	235S/4

Operating pressure: 75 psig (5 barg)

Valves M10V and M10S Size	BVA actuator			
	Double acting		Single acting	
	LS	HS	LS	HS
1/4" RB, FB - 3/8" RB	210D	210D	210S	210S
1/2" RB - 3/8" FB	210D	210D	210S	210S
3/4" RB - 1/2" FB	210D	210D	215S	215S
1" RB - 3/4" FB	215D	215D	220S	220S
1-1/4" RB - 1" FB	215D	215D	220S	220S
1-1/2" RB - 1-1/4" FB	215D	220D	220S	220S
2" RB - 1-1/2" FB	220D	220D	225S	225S
2-1/2" RB - 2" FB	225D	225D	230S	235S

Operating pressure: 90 psig (6 barg)

Valves M10V and M10S Size	BVA actuator			
	Double acting		Single acting	
	LS	HS	LS	HS
1/4" RB, FB - 3/8" RB	210D	210D	210S	210S
1/2" RB - 3/8" FB	210D	210D	210S	210S
3/4" RB - 1/2" FB	210D	210D	210S	210S
1" RB - 3/4" FB	210D	215D	215S	215S
1-1/4" RB - 1" FB	215D	215D	215S	220S
1-1/2" RB - 1-1/4" FB	215D	215D	220S	220S
2" RB - 1-1/2" FB	220D	220D	220S	225S
2-1/2" RB - 2" FB	220D	225D	225S	230S

BVL_ Linkage kit selection table

Valves M10V and M10S Size	Series 200 BVA_ actuator							
	210	215	220	225	230	235	240	245
	1/4" RB- 3/8" RB	240						
1/2" RB - 3/8" FB	241	241						
3/4" RB - 1/2" FB	242	242						
1" RB - 3/4" FB	243	243	244					
1-1/4" RB - 1" FB		245	246					
1-1/2" RB - 1-1/4" FB		247	248	248				
2" RB- 1-1/2" FB			249	249	249			
2-1/2" RB - 2" FB			250	250	250	251		

Note: Linkage Kits BVL240-S to 251-S for M10 stainless steel are available upon request.

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: 1-1/2" screwed NPT M10S2FB ball valve.
Available air pressure: 90 psig. (6 barg)
Light service, double acting actuator.

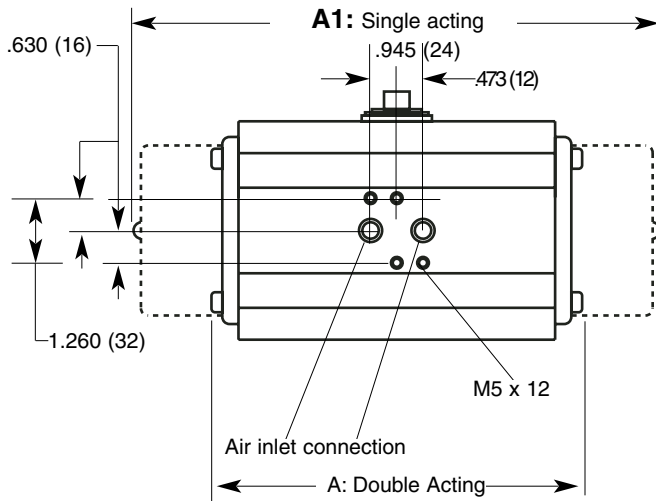
1. Select from 90 psig (6 barg) operating pressure table an actuator for a 1-1/2" FB ball valve, light service (LS), double acting:
BVA220D
2. Select from BVL linkage kit selection table a BVL suitable for a 1-1/2" FB ball valve and BVA220 actuator:
BVL249

How to order

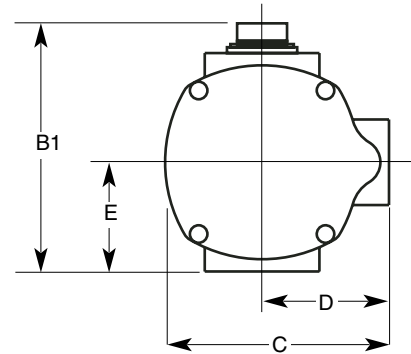
Example: 1- Spirax Sarco 1-1/2" screwed NPT M10S2FB ball valve, with BVA220D actuator and BVL249 linkage kit, operating with 90 psig (6 barg) air pressure.

BVA200 Series

Pneumatic Actuator with M10V, M10S or M60 Ball Valves

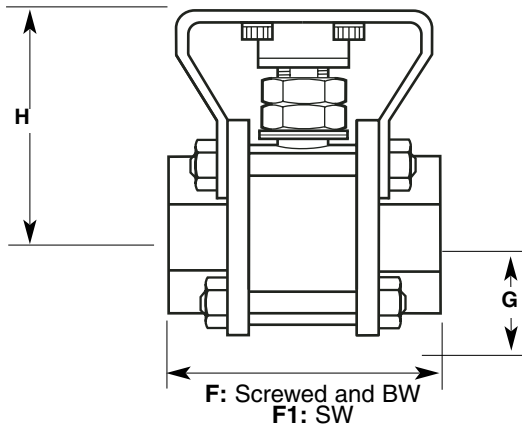


Dimensions/weights
(approximate) in inches (mm) and lbs. (kg)



BVA200 Series actuators in inches (mm)

Type	A		A1 Actuator weight lbs.(kg)		C	D	E	Double acting	
	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	Gr. 5
Valve bolts (2)	Zinc plated carbon steel	Gr. 5
Nuts (2)	Zinc plated carbon steel	Gr. 5
Stem nuts (2)	Zinc plated carbon steel	Gr. 5
Washers (4)	Zinc plated carbon steel	

BVL linkage kit with M10V or M10S ball valve

Reduced bore	inches (mm)		lbs. (kg)		(Valve) Weight
	Size	F	F1	G	
1/4"	2.21 (56)	2.05 (52)	0.87 (22)	1.73 (44)	1.0 (0.45)
3/8"	2.21 (56)	2.05 (52)	0.87 (22)	1.73 (44)	1.0 (0.45)
1/2"	2.48 (63)	2.05 (52)	0.95 (24)	1.85 (47)	1.3 (0.57)
3/4"	2.68 (68)	2.36 (60)	1.02 (26)	1.93 (49)	1.5 (0.70)
1"	3.39 (86)	3.31 (84)	1.22 (31)	2.52 (64)	2.8 (1.27)
1-1/4"	3.90 (99)	3.70 (94)	1.46 (37)	2.72 (69)	3.9 (1.77)
1-1/2"	4.26 (108)	4.02 (102)	1.62 (41)	3.27 (83)	5.5 (2.50)
2"	4.89 (124)	4.65 (118)	1.89 (48)	3.55 (90)	7.7 (3.50)
2-1/2"	5.99 (152)	5.99 (152)	2.25 (57)	5.24 (133)	15.2 (6.90)

Full bore	inches (mm)		lbs. (kg)		H Weight (Valve)
	Size	F	F1	G	
1/4"	2.21 (56)	2.29 (58)	0.87 (22)	1.73 (44)	1.0 (0.45)
3/8"	2.48 (63)	2.36 (60)	0.95 (24)	1.85 (47)	1.3 (0.57)
1/2"	2.68 (68)	2.52 (64)	1.02 (26)	1.93 (49)	1.5 (0.70)
3/4"	3.39 (86)	3.31 (84)	1.22 (31)	2.52 (64)	2.8 (1.27)
1"	3.90 (99)	3.86 (98)	1.46 (37)	2.72 (69)	3.7 (1.7)
1-1/4"	4.26 (108)	4.18 (106)	1.62 (41)	3.27 (83)	5.5 (2.50)
1-1/2"	4.89 (124)	4.89 (124)	1.89 (48)	3.55 (90)	7.7 (3.50)
2"	5.99 (152)	5.99 (152)	2.25 (57)	5.24 (133)	15.2 (6.90)

Note: Weights including BVL are available upon request.