

spirax sarco®

BVA200 Series Pneumatic Actuator with M10H ISO 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: Heavy service (HS), Double acting (D), Single acting with return spring (S).

Operating pressure: 60 psig (4 barg)

Valve M10H ISO Size	BVA_ actuator	
	Double acting HS	Single acting HS
1/4" RB, FB - 3/8" RB	215D	220S/4
1/2" RB - 3/8" FB	215D	220S/4
3/4" RB - 1/2" FB	215D	220S/4
1" RB - 3/4" FB	220D	225S/4
1-1/4" RB - 1" FB	230D	230S/4
1-1/2" RB - 1-1/4" FB	230D	235S/4
2" RB - 1-1/2" FB	230D	235S/4

Operating pressure: 75 psig (5 barg)

Valve M10H ISO Size	BVA_ actuator	
	Double acting HS	Single acting HS
1/4" RB, FB - 3/8" RB	210D	215S
1/2" RB - 3/8" FB	210D	215S
3/4" RB - 1/2" FB	215D	220S
1" RB - 3/4" FB	220D	225S
1-1/4" RB - 1" FB	225D	230S
1-1/2" RB - 1-1/4" FB	225D	235S
2" RB - 1-1/2" FB	225D	235S

Operating pressure: 90 psig (6 barg)

Valve M10H ISO Size	BVA_ actuator	
	Double acting HS	Single acting HS
1/4" RB, FB - 3/8" RB	210D	215S
1/2" RB - 3/8" FB	210D	215S
3/4" RB - 1/2" FB	215D	215S
1" RB - 3/4" FB	220D	220S
1-1/4" RB - 1" FB	225D	230S
1-1/2" RB - 1-1/4" FB	225D	230S
2" RB - 1-1/2" FB	225D	230S

BVL_ Linkage kit selection table

Valve M10H ISO Size	BVA_ actuator							
	210	215	220	225	230	235	240	245
1/4" RB - 3/8" RB	200	200	201					
1/2" RB - 3/8" FB	200	200	201					
3/4" RB - 1/2" FB		200	201					
1" RB - 3/4" FB			212	212				
1-1/4" RB - 1" FB				213	213			
1-1/2" RB - 1-1/4" FB				214	214	215		
2" RB - 1-1/2" FB				214	214	215		

Conditions

Heavy service (HS):

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

- 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.

Note: For M10H ISO ball valve range, all applications are considered as heavy service.

Selection example

Select an actuator and linkage kit for the following application:

Valve required: 1-1/2" screwed NPT M10H2FB ISO ball valve.

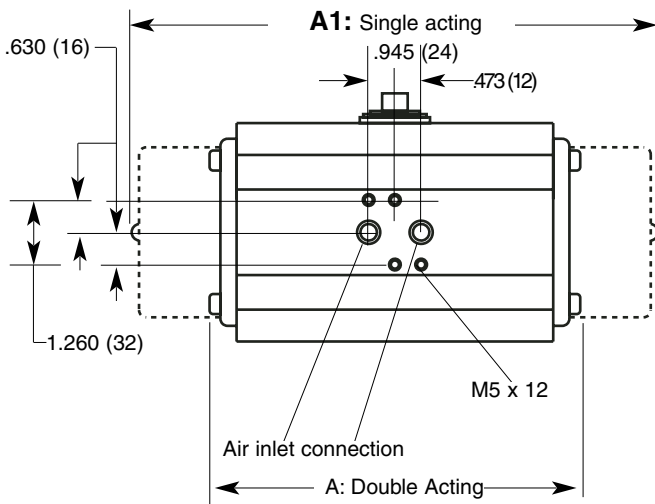
Available air pressure: 90 psig (6 barg).

Heavy service, double acting actuator.

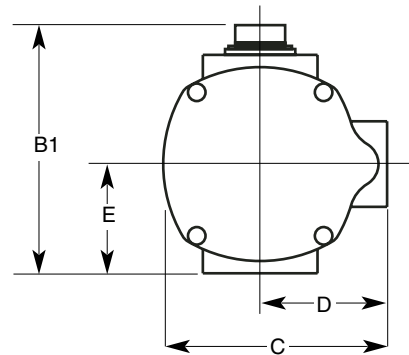
1. Select from 90 psig (6 barg) operating pressure table an actuator for a 1-1/2" FB ball valve, heavy service (HS), double acting: **BVA225D**
2. Select from BVL linkage kit selection table a BVL suitable for a 1-1/2" FB ball valve and BVA225 actuator: **BVL214**

How to order

Example: 1- Spirax Sarco 1-1/2" screwed NPT M10H2FB ISO ball valve, with BVA225D actuator and BVL214 linkage kit, operating with 90 psig (6 barg) air pressure.

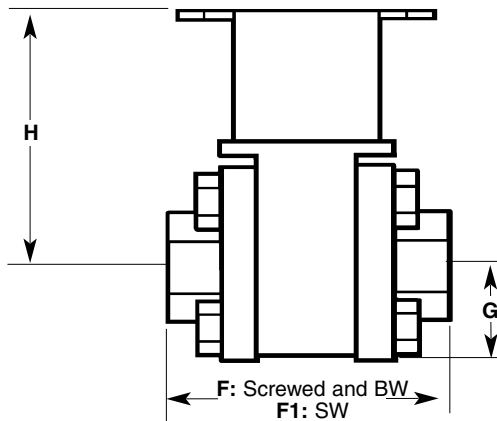


Dimensions/weights (approximate) in inches (mm) and lbs. (kg)



BVA200 Series actuators in inches (mm)

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



BVL linkage kit with M10H ISO ball valve

Size	Reduced bore inches (mm)				lbs. (kg) (Valve) Weight
	F	F1	G	H	
1/4"	2.48 (63)	2.36 (60)	0.87 (22)	2.96 (75)	2.0 (0.92)
3/8"	2.48 (63)	2.36 (60)	0.87 (22)	2.96 (75)	2.0 (0.92)
1/2"	2.48 (63)	2.01 (51)	1.02 (26)	2.96 (75)	2.0 (0.92)
3/4"	2.76 (70)	2.40 (61)	1.10 (28)	3.07 (78)	2.1 (0.95)
1"	3.27 (83)	3.19 (81)	1.30 (33)	3.31 (84)	3.6 (1.65)
1-1/4"	3.90 (99)	3.74 (94)	1.46 (37)	3.55 (90)	5.1 (2.30)
1-1/2"	4.18 (106)	4.02 (102)	1.62 (41)	3.66 (93)	6.2 (3.05)
2"	4.81 (122)	4.57 (116)	1.89 (48)	3.98 (101)	10.1 (4.60)

Size	Full bore inches (mm)				lbs. (kg) Weight (Valve)
	F	F1	G	H	
1/4"	2.48 (63)	2.36 (60)	0.87 (22)	2.96 (75)	2.0 (0.92)
3/8"	2.48 (63)	2.36 (60)	1.02 (26)	2.96 (75)	2.0 (0.92)
1/2"	2.76 (70)	2.60 (64)	1.10 (28)	3.07 (78)	2.1 (0.95)
3/4"	3.27 (83)	3.23 (82)	1.30 (33)	3.31 (84)	3.6 (1.65)
1"	3.90 (99)	3.90 (99)	1.46 (37)	3.55 (90)	5.1 (2.30)
1-1/4"	4.18 (106)	4.18 (106)	1.62 (41)	3.66 (93)	2.2 (3.05)
1-1/2"	4.81 (122)	4.81 (122)	1.89 (48)	3.98 (101)	10.1 (4.60)

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 screw (4)	Stainless steel	Gr. 5
Washer (4)	Stainless steel	
Frame-to-valve screw (4)	Stainless steel	Gr. 5
Washer (4)	Stainless steel	
Stem nut (1) or locking plate (1)	Stainless steel	

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