

spirax/sarco

M10V Ball Valve 1/4" to 2-1/2"

Description

M10V is a three piece body ball valve designed for use as an isolating valve with the majority of industrial fluids. The M10V can be serviced without removing the valve from the pipeline (screwed and welded versions only).

Available types

M10V2	Zinc plated carbon steel body, PTFE seats
M10V3	Stainless steel body, PTFE seats
M10V4	Complete stainless steel, PTFE seats

Note: The nomenclature will be followed with either FB (full bore) or RB (reduced bore).

Options

- Self venting ball.
- Extended stem to 2" (50 mm) and 4" (100 mm), to allow full insulation.
- Lockable handle.
- Oval handle for confined spaces. Ideal for trap modules.

Sizes and pipe connections

1/4", 3/8", 1/2", 3/4", 1", 1-1/4", 1-1/2", 2", (2-1/2" only available with reduced bore).

Screwed BSP, BSPT, NPT, SW, BW full bore and reduced bore.

1/2" to 2" flanged ANSI 150 only available with reduced bore.

Technical data

Flow characteristic	Modified linear
Port	Full and reduced bore
Leakage	Test procedure to ISO 5208 (rate A)
Antistatic	Complies with ISO 7121 and BS 5351

Limiting conditions

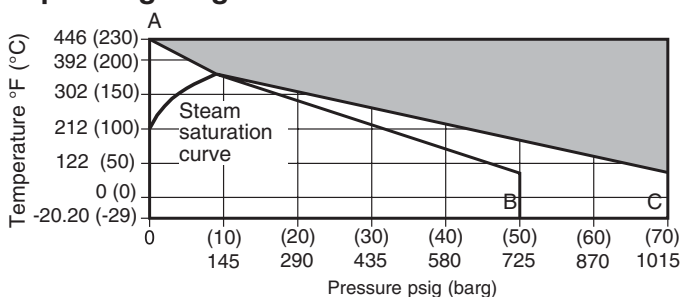
PMA	Max. allowable pressure	1,015 psig@104°F (70 barg@40°C)
TMA	Max. allowable temperature	446°F@0psig (230°C@0 barg)
	Min. allowable temperature	-20.20°F (-29°C)
PMO	Max. operating pressure	
	for saturated steam service	145 psig@363°F (10 barg@184°C)
TMO	Max. operating temperature	449°F@0psig (232°C@0 barg)
	Min. operating temperature	-20.20°F (-29°C)

Note: For lower operating temperatures consult Spirax Sarco

ΔPMX Maximum differential pressure is limited to the PMO

Designed for a maximum cold hydraulic test pressure of 105 bar g

Operating range



The product must not be used in this region.

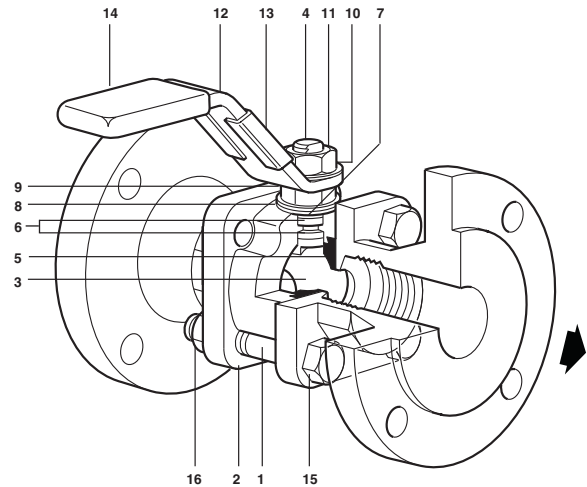
A - B 2" FB and 2-1/2" RB only.

A - C 1/4" - 1-1/2" FB, RB and 2" RB.

Note: The flange standard may restrict the maximum operating pressure. Please check with Spirax Sarco.

Local regulation 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.



Materials

No Part	Material		
1 Body	M10V2	Zinc plated carbon steel	ASTM A105
	M10V3	Stainless steel	ASTM A 182 F 316L
	M10V4	Stainless steel	ASTM A 182 F 316L
2 Cap	M10V2	Zinc plated carbon steel	ASTM A105
	M10V3	Stainless steel	ASTM A 182 F 316L
3 Ball	M10V2	Stainless steel	AISI 316
	M10V3	Stainless steel	AISI 316
4 Stem	M10V2	Stainless steel	AISI 316
5 Seat	M10V2	Virgin PTFE	
6 Stem seal	M10V2	Reinforced PTFE antistatic	
7 Separator	M10V2	Zinc plated carbon steel	ASTM A105
	M10V3	Stainless steel	AISI 316
	M10V4	Stainless steel	AISI 316
8 Belleville washer	M10V2	Stainless steel	AISI 301
9 Nut	M10V2	Zinc plated carbon steel	SAE 12L14
	M10V3	Stainless steel	AISI 316
	M10V4	Stainless steel	AISI 316
10 Name-plate (DN)	M10V2	Stainless steel	AISI 430
11 Stem nut	M10V2	Zinc plated carbon steel	SAE 12L14
	M10V3	Stainless steel	AISI 316
	M10V4	Stainless steel	AISI 304
12 Lever	M10V2	Zinc plated carbon steel	SAE 1010
	M10V3	Stainless steel	AISI 316
	M10V4	Stainless steel	AISI 316
13 Name-plate	M10V2	Stainless steel	AISI 430
14 Grip	M10V2	Vinyl	
15 Bolts	M10V2	Zinc plated carbon steel	Grade5/A 193 B7
	M10V3	Stainless steel	AISI 316
	M10V4	Stainless steel	AISI 316
16 Nuts	M10V2	Zinc plated carbon steel	SAE 1010
	M10V3	Stainless steel	AISI 316
	M10V4	Stainless steel	AISI 316
*17Studs	M10V2	Zinc plated carbon steel	Grade5/A 193 B7
	M10V3	Stainless steel	AISI 316
	M10V4	Stainless steel	AISI 316

*Note: Item 17 not shown - flanged versions only.

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Dimensions (approximate) in inches and lbs.

Note: Weights shown are only for screwed, butt and socket weld versions.

Reduced bore

Size	A	A1	A2	B	B1	C	C1	D	D1	E	Weight
1/4"	2.21	0	-	4.73	-	2.25	-	0.87	-	0.32	1.1
3/8"	2.21	2.05	-	4.73	-	2.25	-	0.87	-	0.32	1.1
1/2"	2.48	2.05	4.26	4.73	4.73	2.40	3.43	0.95	3.51	0.43	1.3
3/4"	2.68	2.36	4.61	4.73	4.73	2.48	3.51	1.02	3.86	0.55	1.5
1"	3.39	3.31	5.00	6.19	6.19	3.59	3.59	1.22	4.26	0.83	2.8
1-1/4"	3.90	3.70	5.52	6.19	6.19	3.74	3.74	1.46	4.65	0.99	3.9
1-1/2"	4.26	4.02	6.50	7.09	7.09	4.29	4.29	1.62	5.00	1.22	5.5
2"	4.89	4.65	7.01	7.09	7.09	4.53	4.53	1.89	5.99	1.50	7.7
2-1/2"	5.99	5.99	-	9.65	-	5.20	-	2.25	-	2.01	15.2

Full bore

Size	A	A1	A2	B	B1	C	C1	D	D1	E	Weight
1/4"	2.21	2.29	-	4.73	-	2.25	-	0.87	-	0.32	1.1
3/8"	2.48	2.36	-	4.73	-	2.40	-	0.95	-	0.43	1.3
1/2"	2.68	2.52	-	4.73	-	2.48	-	1.02	-	0.55	1.5
3/4"	3.39	3.31	-	6.19	-	3.59	-	1.22	-	0.83	2.8
1"	3.90	3.86	-	6.19	-	3.74	-	1.46	-	0.99	3.9
1-1/4"	4.26	4.18	-	7.09	-	4.29	-	1.62	-	1.22	5.5
1-1/2"	4.89	4.89	-	7.09	-	4.53	-	1.89	-	1.50	7.7
2"	5.99	5.99	-	9.65	-	5.20	-	2.25	-	2.01	15.2

Cv values

Size	1/4"	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"
Reduced bore	2.9	2.9	7	12	32	57	82	121	197
Full bore	2.9	8.0	20	42	68	104	179	240	-

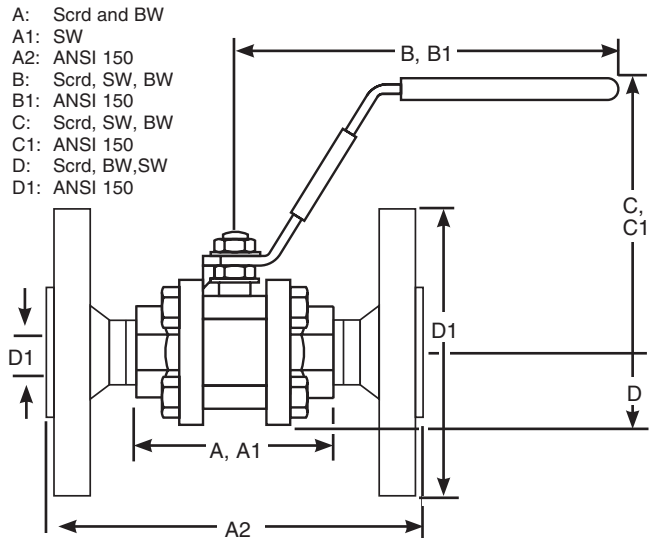
Operating torques (ft/lb)

Size	1/4"	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"
Reduced bore	1.5	1.5	7.5	3	10	15.5	23	29.5	33.5
Full bore	1.5	1.5	3	10	15.5	23	29.5	33.5	-

The indicated torque values are for valves frequently operated, that are submitted to a maximum differential pressure of 899 psi (62 barg)
Valves that are subject to long static periods, may require up to 75 % greater break out torque.

Safety Information, Installation and Maintenance

For full details see the Installation and Maintenance Instructions supplied with the product.



How to order

Example: Spirax Sarco 1/2" screwed NPT M10V2FB ball valve.

Spare parts

The spare parts available are shown in heavy outline. Parts drawn in broken line are not supplied as spares.

Available spare

Seat and stem seal set	5, 6
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How to order spares

Always order spare by using the description given in the column headed Available spare and stating the size and type of ball valve required.

Example: 1-Seat and stem seal set for 1/2" M10V2FB ball valve.

