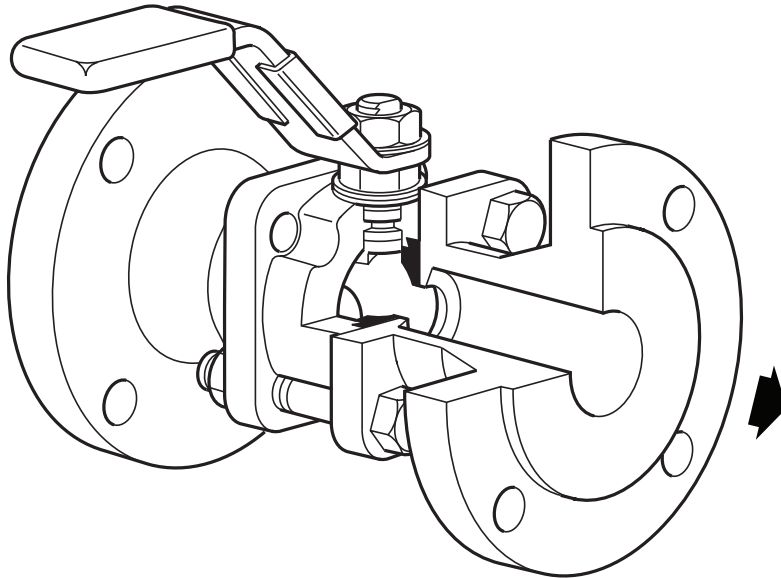




spirax sarco

TI-D216-05
BR Rev.00

M10V Ball Valve DN $\frac{1}{4}$ " to 2 $\frac{1}{2}$ "



Description

The M10V three-piece body ball valve has been designed for use as an isolating valve, not a control valve, and can be serviced without removal from the pipeline (screwed and welded versions only). It can be used with the majority of industrial fluids.

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).

Standards

This product fully complies with the requirements of the European Pressure Equipment Directive 97/23/EC and carries the CE mark when so required.

Certification

This product is available with certification to EN 10204 3.1.

Note: All certification / inspection requirements must be stated at the time of order placement.

Sizes and pipe connections

Full bore

$\frac{1}{4}$ ", $\frac{3}{8}$ ", $\frac{1}{2}$ ", $\frac{3}{4}$ ", 1", 1 $\frac{1}{4}$ ", 1 $\frac{1}{2}$ " and 2"

Screwed

BSP, BSPT, API/NPT, BW, SW

Flanged

DN15 to DN50
ASME (ANSI) Class 150,
ASME (ANSI) Class 300,
and EN 1092 PN40.

Reduced bore

$\frac{1}{4}$ ", $\frac{3}{8}$ ", $\frac{1}{2}$ ", $\frac{3}{4}$ ", 1", 1 $\frac{1}{4}$ ", 1 $\frac{1}{2}$ ", 2" and 2 $\frac{1}{2}$ "

Screwed

BSP, BSPT, API/NPT, BW, SW

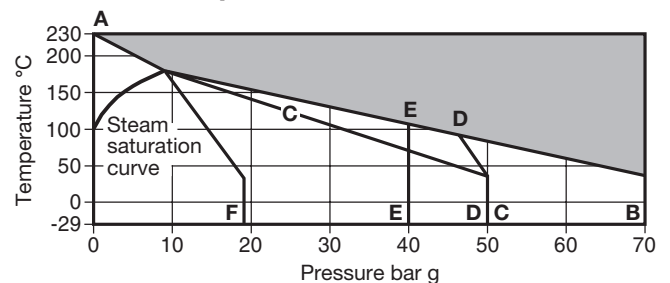
Flanged

DN15 to DN65
ASME (ANSI) Class 150,
ASME (ANSI) Class 300,
and EN 1092 PN40.

Technical data

Flow characteristic	Modified linear
Port	Full and reduced port versions
Leakage test procedure to ISO 5208 (Rate A) / EN 12266-1 (Rate A)	
Antistatic device	Complies with ISO 7121 and BS 5351

Pressure / temperature limits



The product must not be used in this region.

A - B $\frac{1}{4}$ " - 1 $\frac{1}{2}$ " FB, RB and 2" RB.

A - C 2" FB and 2 $\frac{1}{2}$ " RB only.

A - D Flanged ASME (ANSI) 300

A - E Flanged EN 1092 PN40

A - F Flanged ASME (ANSI) 150

Note 1: On the 2" FB and 2 $\frac{1}{2}$ " RB a PTFE gasket is fitted between the body and cap.

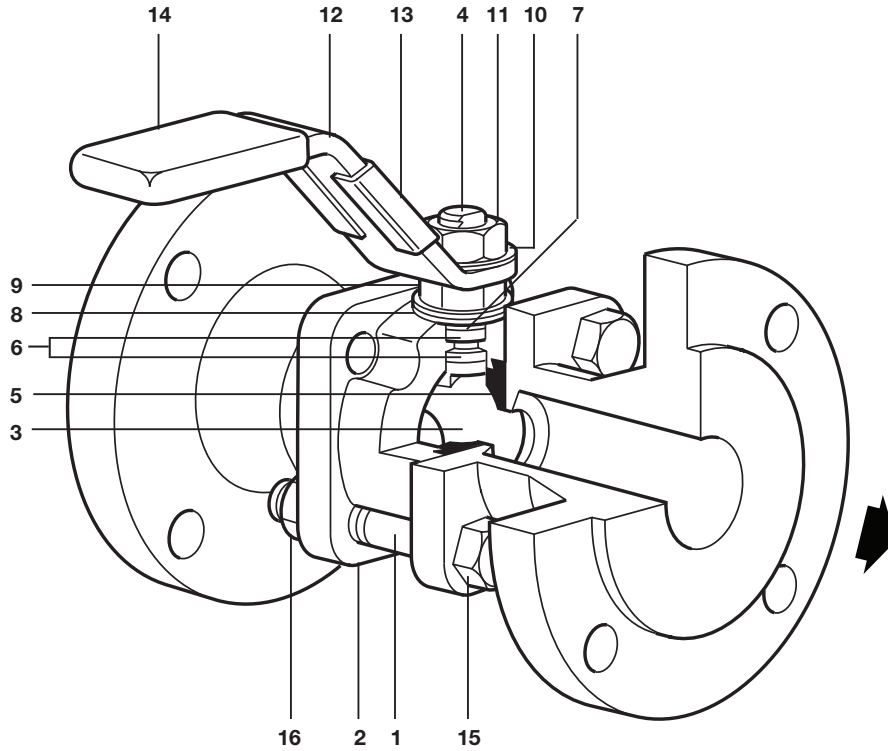
Note 2: The flange standard may restrict the maximum operating pressure. Please check with Spirax Sarco.

Body design conditions		PN100
PMA	Maximum allowable pressure	70 bar g @ 40°C
TMA	Maximum allowable temperature	230°C @ 0 bar g
Minimum allowable temperature		-29°C
PMO	Maximum operating pressure for saturated steam service	10 bar g
TMO	Maximum operating temperature	230°C @ 0 bar g
Minimum operating temperature		-29°C
Note: For lower operating temperatures consult Spirax Sarco		
Δ PMX		Maximum differential pressure is limited to the PMO
Designed for a maximum cold hydraulic test pressure of 105 bar g		

Local regulations may restrict the use of this product to below the conditions quoted.

In the interests of development and improvement of the product, we reserve the right to change the specification without notice.

© Copyright 2012



Materials

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

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

Dimensions (approximate) in mm**Reduced bore**

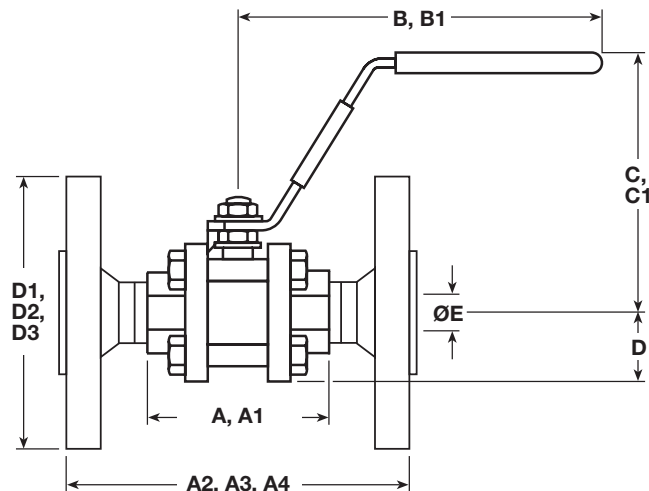
Size	A	A1	A2	A3	A4	B	B1	C	C1	D	D1	D2	D3	E
¼"	56	56	-	-	-	120	-	57	-	22	-	-	-	8
⅜"	56	51	-	-	-	120	-	57	-	22	-	-	-	8
½"	63	51	108	130	140	120	120	61	87	24	89	95	95	11
¾"	68	59	117	150	152	120	120	63	89	26	98	105	117	14
1"	86	84	127	160	165	157	157	91	91	31	108	115	124	21
1¼"	97	93	140	180	178	157	157	95	95	37	118	140	133	25
1½"	106	102	165	200	190	180	180	109	109	41	127	150	156	31
2"	124	118	178	230	216	180	180	115	115	48	152	165	165	38
2½"	152	152	191	-	241	245	-	132	132	57	-	-	190	51

Full bore

Size	A	A1	A2	A3	A4	B	B1	C	C1	D	D1	D2	D3	E
¼"	56	56	-	-	-	120	-	57	-	22	-	-	-	8
⅜"	63	63	-	-	-	120	-	61	-	24	-	-	-	11
½"	68	68	-	130	140	120	120	63	89	26	-	95	95	14
¾"	86	86	-	150	152	157	157	91	91	31	-	105	117	21
1"	97	97	-	160	165	157	157	95	95	37	-	115	124	25
1¼"	106	106	-	180	178	180	180	109	109	41	-	140	133	31
1½"	124	124	-	200	190	180	180	115	115	48	-	150	156	38
2"	152	152	-	230	216	245	245	132	132	57	-	165	165	51

Weights (approximate) in kg

Size	Scrd / BW / SW	Reduced bore			Scrd / BW / SW	Full bore	
		PN40	ASME 150	ASME 300		PN40	ASME 300
¼"	0.52	-	-	-	0.52	-	-
⅜"	0.52	-	-	-	0.61	-	-
½"	0.61	2.2	1.65	2.2	0.70	2.3	2.5
¾"	0.70	2.9	2.20	2.9	1.27	3.5	4.2
1"	1.27	3.9	3.38	4.5	1.77	4.4	5.1
1¼"	1.77	5.4	4.44	7.0	2.50	6.2	7.5
1½"	2.50	6.5	5.84	8.36	3.50	7.5	10.0
2"	3.50	8.8	8.99	11.2	6.90	12.2	13.4
2½"	6.90	-	-	17.5	-	-	-



- A** : Scrd and BW
A1 : SW
A2 : Flanged ASME (ANSI) 150
A3 : Flanged PN40
A4 : Flanged ASME (ANSI) 300
B : Scrd, BW, SW
B1 : Flanged ASME (ANSI) 150, PN40
C : Scrd, BW, SW
C1 : Flanged ASME (ANSI) 150,
 Flanged PN40
D : Scrd, BW, SW
D1 : Flanged ASME (ANSI) 150
D2 : Flanged PN40
D3 : Flanged ASME (ANSI) 300

K_v values

Size	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"
Reduced bore	2.5	2.5	6	10	27	49	70	103	168
Full bore	2.5	6.8	17	36	58	89	153	205	-

For conversion: C_v (UK) = K_v x 0.963 C_v (US) = K_v x 1.156

Operating torque (N m)

Size	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"
Reduced bore	2	2	2	3.5	13	21	30	40	45
Full bore	2	2	3.5	13	21	30	40	45	-

The indicated torque values are for valves frequently operated, that are submitted to a maximum differential pressure of 62 bar. Valves that are subject to long static periods, may require 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:

1 off Spirax Sarco 1/2" screwed BSP M10V2FB ball valve.

Optional extras:

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

Spare parts

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

Available spares

Seat and stem seal set	5, 6
------------------------	-------------

How to order spares

Always order spares by using the description given in the column headed 'Available spares' and state the size and type of ball valve.

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

