

spirax sarco

M10HPi ISO Ball Valve

1/4" to 2 1/2"

(High Pressure Applications) *Not suitable for steam

Description

The M10HPi ISO three-piece body ball valve has a lockable handle and ISO mounting as standard. It features a special floating ball, which has received a surface hardening and a blow-out proof stem. This particular ball valve has been specially designed for manual isolation of applications using high-pressure gas. The M10HTi ISO has been designed for use as an isolating valve, not a control valve, and can be serviced without removal from the pipeline.

ISO mounting

The integral ISO body mounting allows the valve to be automated without losing seal integrity, as the body does not require disassembly. Manual to remote control may therefore be easily accomplished by the ISO range of Spirax Sarco ball valves.

Available types

M10HPi2 ISO Zinc plated carbon steel body and caps.

M10HPi3 ISO Stainless steel body and caps.

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 Pressure Equipment Directive (PED) and carries the **CE** mark when so required. The product has been specifically designed for use on steam, compressed air, water, and other industrial fluids that are in Group two of the above mentioned PED.

Certification

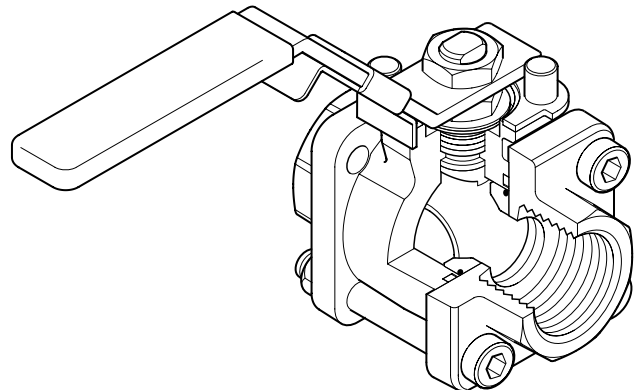
This product is available with certification to EN 10204 3.1. **Note:** All certification / inspection requirements must be stated at the time of order placement.

Options

- Self-venting ball.
 - Extended stem 4" (100 mm) to allow full insulation.*
 - Oval handle for confined spaces. Ideal for trap modules.*
- *manual operation only

Technical data

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



Sizes and pipe connections

Full bore

1/4", 3/8", 1/2", 3/4", 1", 1 1/4" and 1 1/2"

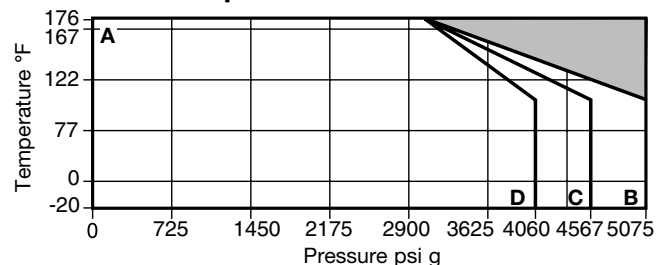
Screwed NPT, BW, SW

Reduced bore

1/4", 3/8", 1/2", 3/4", 1", 1 1/4", 1 1/2" and 2"

Screwed NPT, BW, SW

Pressure / temperature limits



The product must not be used in this region.

- A - B** 1/4", 3/8" and 1/2" RB
- A - C** 1/2" FB; 3/4" and 1" RB
- A - D** 1" FB; 1 1/4", 1 1/2" and 2" RB

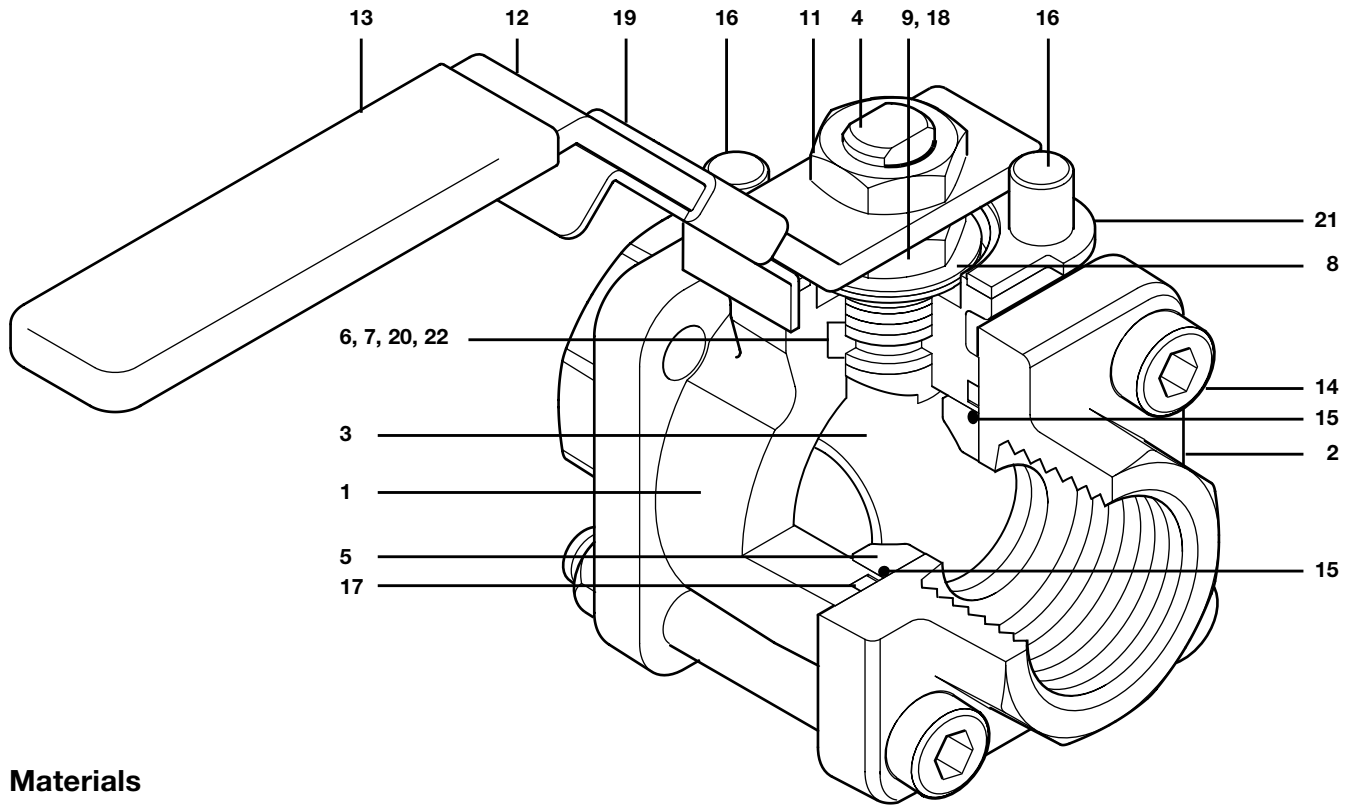
	Maximum	1/4", 3/8" and 1/2" RB	5075 psi
PMA	allowable (operating) pressure (PMO)	1/2" FB; 3/4" and 1" RB	4567 psi
		1" FB; 1 1/4", 1 1/2" and 2" RB	4060 psi
TMA	Maximum allowable temperature		176°F
	Minimum allowable temperature		-20°F
TMO	Maximum operating temperature		176°F @ 3045 psi g
	Minimum operating temperature		-20°F

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 1.5 x PMO

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.



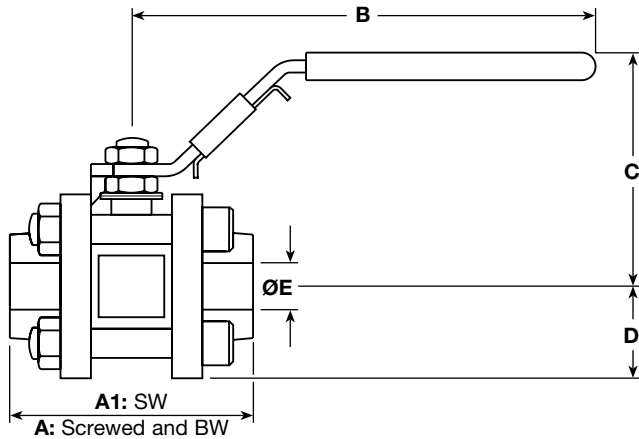
Materials

No.	Part	Material	
1	Body	M10HPi2 ISO	Zinc plated carbon steel ASTM A105
		M10HPi3 ISO	Stainless steel ASTM A 182 F 316L
2	Cap	M10HPi2 ISO	Zinc plated carbon steel ASTM A105
		M10HPi3 ISO	Stainless steel ASTM A 182 F 316L
3	Ball	Stainless steel (hardened)	AISI 316
4	Stem	Stainless steel	AISI 316
*5	Seat	Acetal	
*6	Stem seal	Reinforced PEEK	
7	Separator	Zinc plated carbon steel	SAE 1010
8	Belleville washer	Stainless steel	AISI 301
9	Stem nut	Zinc plated carbon steel	SAE 1010
10	Name-plate (Not shown)	Stainless steel	AISI 430
11	Upper stem nut	Zinc plated carbon steel	SAE 1010
12	Lever	Zinc plated carbon steel	SAE 1010
13	Grip	Vinyl green	
14	Bolts	Zinc plated carbon steel	Grade 12.9
*15	Seat 'O' ring	Viton	
16	Stop screw	Zinc plated carbon steel	SAE 12L 14
*17	Body / cap 'O' ring	Viton	
18	Nut locker	Stainless steel	AISI 316
19	Lockable handle	Stainless steel	AISI 316
*20	Stem seal	Glass - PTFE	
21	Lock-plate	Stainless steel	AISI 316
*22	Stem seal	Stainless steel	AISI 316

*Note: Available spare parts sold as a kit.

Dimensions (approximate) in Inches / lb's Reduced Bore

Size	A	A1	B	C	D	E	Weight
1/4"	3.2	3.2	3.6	6.3	1.1	0.4	3.2
3/8"	3.3	3.3	3.6	6.3	1.1	0.4	3.2
1/2"	3.3	3.3	3.6	6.3	1.1	0.4	3.3
3/4"	3.6	3.6	3.7	6.3	1.1	0.5	3.8
1"	4.5	4.5	3.9	6.3	1.3	0.8	5.6
1-1/4"	5.2	5.2	4.1	6.3	1.6	0.9	8.6
1-1/2"	5.7	5.7	4.7	7.3	1.8	1.2	12.3
2"	6	6	4.9	7.3	2	1.5	15.3



Full Bore

Size	A	A1	B	C	D	E	Weight
1/4"	3.3	3.3	3.6	6.3	1.1	0.4	3.2
3/8"	3.3	3.3	3.6	6.3	1.1	0.4	3.2
1/2"	3.6	3.6	3.7	6.3	1.1	0.5	3.8
3/4"	4.5	4.5	3.9	6.3	1.3	0.8	5.6
1"	5.2	5.2	4.1	6.3	1.6	0.9	8.6
1-1/4"	5.7	5.7	4.7	7.3	1.8	1.2	12.3
1-1/2"	6	6	4.9	7.3	2	1.5	15.3

Cv values

Size	1/4"	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
Reduced Bore	5.7	7.8	6.9	11.5	31.1	56.5	80.7	118.7
Full Bore	5.7	7.8	19.6	41.5	66.8	102.6	176.4	-

Operating torque (Lb-Ft)

Size	1/4"	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
Reduced Bore	7.3	7.3	7.3	11.0	18.4	29.5	40.5	73.7
Full Bore	7.3	7.3	11.0	18.4	29.5	40.5	73.7	-

The indicated torque values are for valves frequently operated, that are submitted to a maximum differential pressure. Valves that are subject to long static periods, may require greater break-out torque.

Safety information, installation and maintenance

Installation and Maintenance Instructions, IM-P133-74.

How to order example:

1 off Spirax Sarco 1/2" screwed NPT M10HPi2FB ISO ball valve.

Spare parts

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

Available spares

Seat, seals, body / cap 'O' ring and seat 'O' ring set **5, 6, 15, 17, 20, 22**

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, seals, body / cap 'O' ring and seat 'O' ring set for a Spirax Sarco 1/2" M10HPi2FB ISO ball valve.

