

spirax sarco

M10Pi ISO Ball Valve 1/4" to 2 1/2"

(High Static Pressure Applications)

Description

The M10Pi ISO three-piece body ball valve has been designed for use as an isolating valve, not a control valve, has a lockable handle as standard and can be serviced without removal from the pipeline (screwed and welded versions only). It can be used with process fluids for services ranging from vacuum to the higher temperatures and pressures.

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

M10Pi2 ISO Zinc plated carbon steel body and caps.

M10Pi4 ISO Complete stainless steel construction.

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. This product has been specifically designed for use on steam, compressed air, water/condensate, 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.

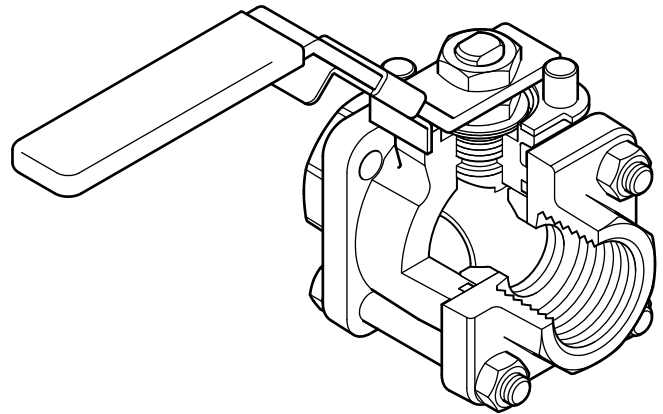
Options

- 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

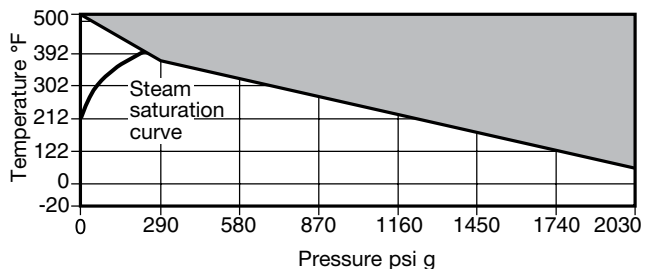
Full bore

1/4", 3/8", 1/2", 3/4", 1", 1 1/4", 1 1/2" and 2"
Screwed NPT, BW, SW

Reduced bore

1/4", 3/8", 1/2", 3/4", 1", 1 1/4", 1 1/2", 2" and 2 1/2"
Screwed NPT, BW, SW

Pressure/temperature limits

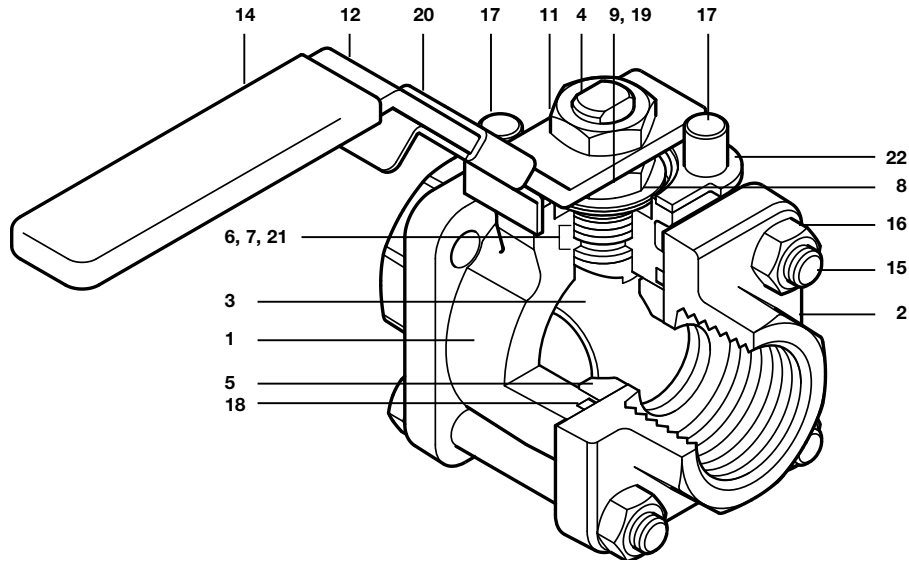


The product must not be used in this region.

PMA	Maximum allowable pressure	2030 psi g @ 89°F
TMA	Maximum allowable temperature	500°F @ 0 psi g
	Minimum allowable temperature	-20°F
PMO	Maximum operating pressure for saturated steam service	254 psi g
TMO	Maximum operating temperature	500°F @ 0 psi g
	Minimum operating temperature	-20°F

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 3045 psi g



Materials

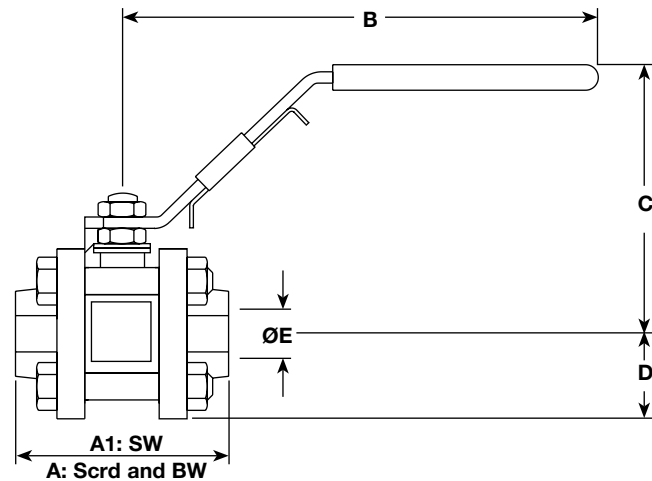
No. Part		Material	
1	Body	M10Pi2 ISO	Zinc plated carbon steel ASTM A105
		M10Pi4 ISO	Stainless steel ASTM A 182 F 316L
2	Cap	M10Pi2 ISO	Zinc plated carbon steel ASTM A105
		M10Pi4 ISO	Stainless steel ASTM A 182 F 316L
3	Ball		Stainless steel AISI 316
4	Stem		Stainless steel AISI 316
*5	Seat		Reinforced PTFE
*6	Stem seal		Reinforced PTFE antistatic
7	Separator	M10Pi2 ISO	Zinc plated carbon steel SAE 1010
		M10Pi4 ISO	Stainless steel AISI 316
8	Belleville washer		Stainless steel AISI 301
9	Lower stem nut	M10Pi2 ISO	Zinc plated carbon steel SAE 1010
		M10Pi4 ISO	Stainless steel AISI 304
10	Name-plate - DN (Not shown)		Stainless steel AISI 430
11	Upper stem nut	M10Pi2 ISO	Zinc plated carbon steel SAE 1010
		M10Pi4 ISO	Stainless steel AISI 304
12	Lever	M10Pi2 ISO	Zinc plated carbon steel SAE 1010
		M10Pi4 ISO	Stainless steel AISI 316
13	Name-plate (Not shown)		Stainless steel AISI 430
14	Grip		Vinyl black
15	Studs	M10Pi2 ISO	Zinc plated carbon steel B7
		M10Pi4 ISO	Stainless steel
		M10Pi2 ISO	Zinc plated carbon steel 2H
16	Nuts	M10Pi4 ISO	Stainless steel
		M10Pi2 ISO	Zinc plated carbon steel 2H
		M10Pi4 ISO	Stainless steel
17	Stop screw	M10Pi2 ISO	Zinc plated carbon steel SAE 12L 14
		M10Pi4 ISO	Stainless steel AISI 304
*18	Body/cap 'O' ring		Geothermal EPDM
19	Nut locker		Stainless steel AISI 304
20	Lockable handle		Stainless steel AISI 304L
*21	Stem seal		Stainless steel AISI 316
22	Lock-plate		Stainless steel AISI 304L

*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"	2.6	2.6	6.4	0.4	0.9	0.4	1.6
3/8"	2.6	2.6	6.4	0.4	0.9	0.4	1.6
1/2"	2.6	2.6	6.4	0.4	0.9	0.4	1.8
3/4"	2.8	2.8	6.4	3.7	1	0.5	2.2
1"	3.4	3.4	6.4	3.9	1.2	0.8	3.4
1-1/4"	4	4	6.4	4.2	1.5	1	5.1
1-1/2"	4.3	4.3	7.3	4.6	1.6	1.2	6.7
2"	4.9	4.7	7.3	4.8	1.9	1.5	9.7
2-1/2"	6	6	9.8	5.5	2.2	2	18



Full Bore

Size	A	A1	B	C	D	E	Weight
1/4"	2.6	2.6	6.4	0.4	0.9	0.4	1.6
3/8"	2.6	2.6	6.4	0.4	0.9	0.4	1.8
1/2"	2.8	2.8	6.4	3.7	1	0.5	2.2
3/4"	2.8	2.8	6.4	3.9	1.2	0.8	3.4
1"	3.4	3.4	6.4	4.2	1.5	1	5.1
1-1/4"	4	4	7.3	4.6	1.6	1.2	6.7
1-1/2"	4.3	4.3	7.3	4.8	1.9	1.5	9.7
2"	6	6	9.8	5.5	2.2	2	19.9

Cv values

Size	1/4"	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"
Reduced Bore	5.7	7.8	6.9	11.56	31.2	56.6	80.9	119	194.2
Full Bore	5.7	7.8	19.6	41.6	67	102.8	176.8	236.9	-

Operating torque (Lb-Ft)

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	2.5	4.4	10.3	15.4	36.8	44.2	55.3
Full Bore	2.5	2.5	4.4	10.3	15.4	36.8	44.2	55.3	-

The indicated torque values are for valves frequently operated, that are submitted to a maximum differential pressure of 2030 psi. Valves that are subject to long static periods, may require greater break-out torque.

Safety information, installation and maintenance

Installation and Maintenance Instructions, IM-P133-72.

How to order example:

1 off Spirax Sarco 1/2" screwed NPT M10Pi2FB 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 spare

Seat, seals and body gasket set 5, 6, 18, 21

How to order spares

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

Example: 1 - Seat, seals and body gasket set for a Spirax Sarco 1/2" M10Pi2FB ISO ball valve.

