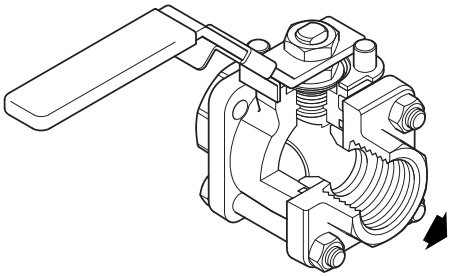


GBV Ball Valves

M10Si ISO

DN ½" to DN 2"

Description

The M10Si 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 for steam and other industrial 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 GESTRA ball valves.

Available types

M10Si2_ _ ISO	Zinc plated carbon steel body, PDR 0.8 seats.
M10Si4_ _ ISO	Complete stainless steel, PDR 0.8 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 Pressure Equipment Directive (PED) 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.

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

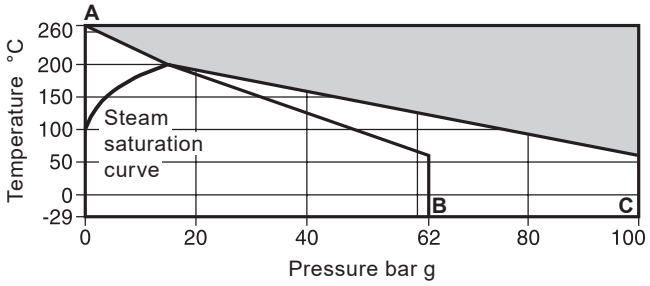
Full bore

Screwed and welded	**Flanged**
½", ¾", 1", 1¼", 1½" and 2"	DN15 to DN50 EN 1092 PN40.

Reduced bore

Screwed and welded	**Flanged**
¼", ⅜", ½", ¾", 1", 1¼", 1½" and 2"	DN15 to DN50 EN 1092 PN40.

Pressure/temperature limits



The product **must not** be used in this region.

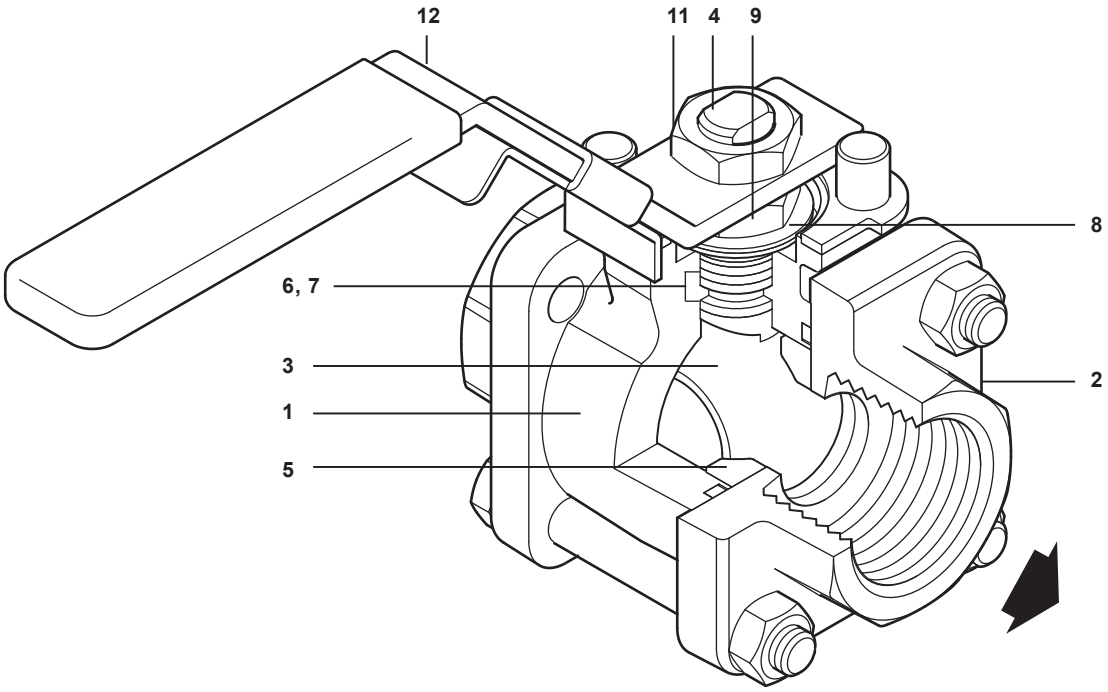
A - B 2" FB and 2" RB only.

A - C ½" - 1½" FB, RB and 2" RB.

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

PMA	Maximum allowable pressure	100 bar g @ 60 °C
TMA	Maximum allowable temperature	260 °C @ 0 bar g
Minimum allowable temperature		-29 °C
PMO	Maximum operating pressure for saturated steam service	17.5 bar g
TMO	Maximum operating temperature	260 °C @ 0 bar g
Minimum operating temperature **Note:** For lower operating temperatures consult GESTRA		-29 °C
ΔPMX	Maximum differential pressure is limited to the PMO	
Designed for a maximum cold hydraulic test pressure of		150 bar g

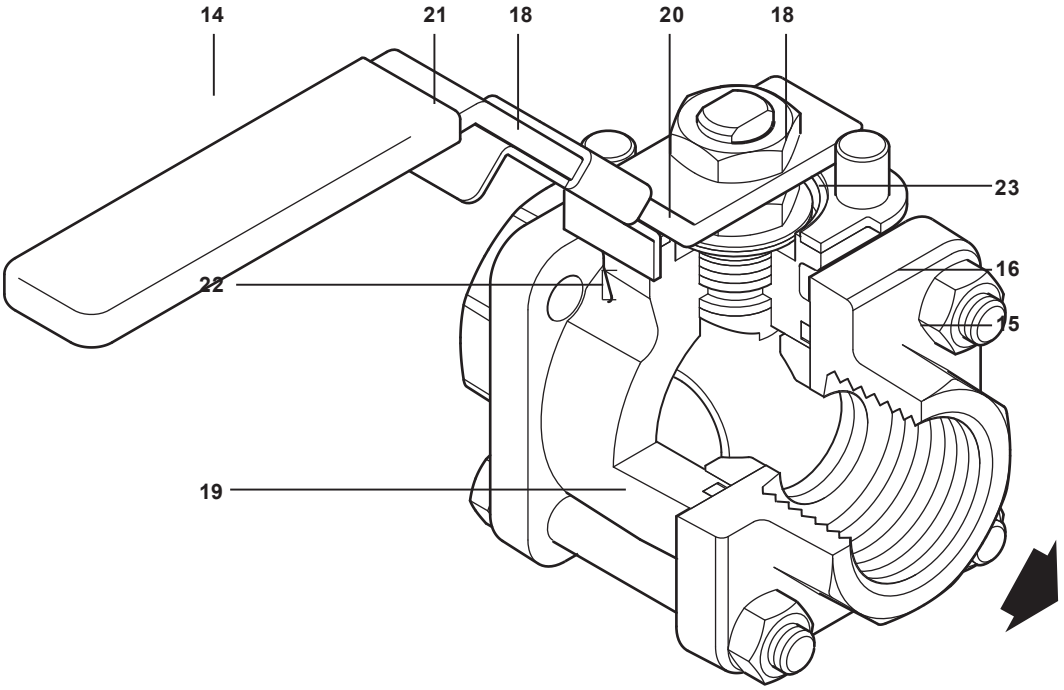
Materials



No.	Part		Material	
1	Body	M10Si2 ISO	Zinc plated carbon steel	ASTM A105
		M10Si4 ISO	Stainless steel	ASTM A 182 F 316L
2	Cap	M10Si2 ISO	Zinc plated carbon steel	ASTM A105
		M10Si4 ISO	Stainless steel	ASTM A 182 F 316L
3	Ball		Stainless steel	AISI 316
4	Stem		Stainless steel	AISI 316
5	Seat		Carbon/graphite reinforced PTFE	PDR 0.8
6	Stem seal		Reinforced PTFE antistatic	
7	Separator	M10Si2 ISO	Zinc plated carbon steel	SAE 1010
		M10Si4 ISO	Stainless steel	AISI 316
8	Spring washer		Stainless steel	AISI 301
9	Nut	M10Si2 ISO	Zinc plated carbon steel	SAE 1010
		M10Si4 ISO	Stainless steel	AISI 304
10	Name-plate (Not shown)		Stainless steel	AISI 430
11	Stem nut	M10Si2 ISO	Zinc plated carbon steel	SAE 1010
		M10Si4 ISO	Stainless steel	AISI 304
12	Lever	M10Si2 ISO	Zinc plated carbon steel	SAE 1010
		M10Si4 ISO	Stainless steel	AISI 316
No.	**Part**		**Material**	
14	Grip		Vinyl	

For parts 14 to 23 see page 4

Materials (continued)



15	Bolts	M10Si2 ISO	Zinc plated carbon steel	Grade 5
		M10Si4 ISO	Stainless steel	AISI 304
16	Nuts	M10Si2 ISO	Zinc plated carbon steel	SAE 1010
		M10Si4 ISO	Stainless steel	AISI 304
17	Studs	M10Si4 ISO	Stainless steel	AISI 316
Note: Item 17 can not be shown as it is only applicable to welded versions				
18	Stop screw	M10Si2 ISO	Zinc plated carbon steel	SAE 12L 14
		M10Si4 ISO	Stainless steel	AISI 304
19	Body/cap gasket - 'O' ring		EPDM geothermal (Viton on request)	
20	Nut locker		Stainless steel	AISI 316
21	Lockable handle	M10Si2 ISO	Zinc plated carbon steel	SAE 1010
		M10Si4 ISO	Stainless steel	AISI 316
22	Stem seal		Stainless steel	
23	Lock-plate		Stainless steel	AISI 304L

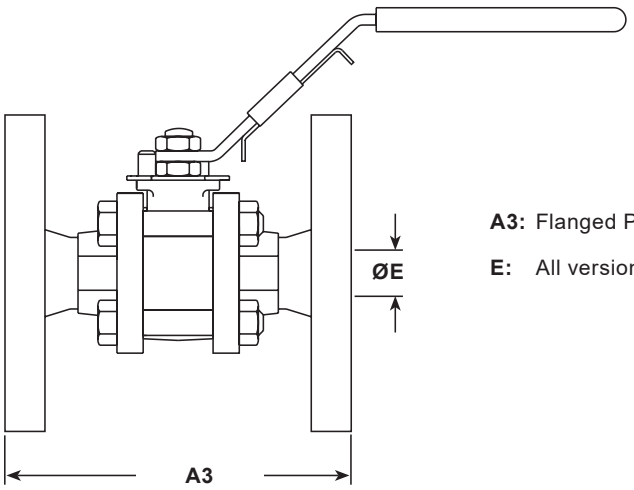
Dimensions (approximate) in mm

Reduced bore

Size	A3
½"	130
¾"	150
1"	160
1¼"	180
1½"	200
2"	230

Full bore

Size	A3
½"	130
¾"	150
1"	160
1¼"	180
1½"	200
2"	230



A3: Flanged PN40

E: All versions

Weights (approximate) in kg

Size	Reduced bore PN40	Full bore PN40
½"	2.30	2.60
¾"	3.20	3.80
1"	4.20	4.70
1¼"	5.70	6.40
1½"	6.80	8.30
2"	9.50	12.80

K_v values

Size	¼"	⅜"	½"	¾"	1"	1¼"	1½"	2"
Reduced bore	2.5	6.8	6	10	27	49	70	103
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	¼"	⅜"	½"	¾"	1"	1¼"	1½"	2"
Reduced bore	3.25	3.25	3.25	5.50	13.25	20	50	60
Full bore	3.25	3.25	5.50	13.25	20	50	60	75

The indicated torque values are for valves frequently operated, that are submitted to a maximum differential pressure of 40 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 GESTRA ½" screwed M10Si2FB ISO ball valve.

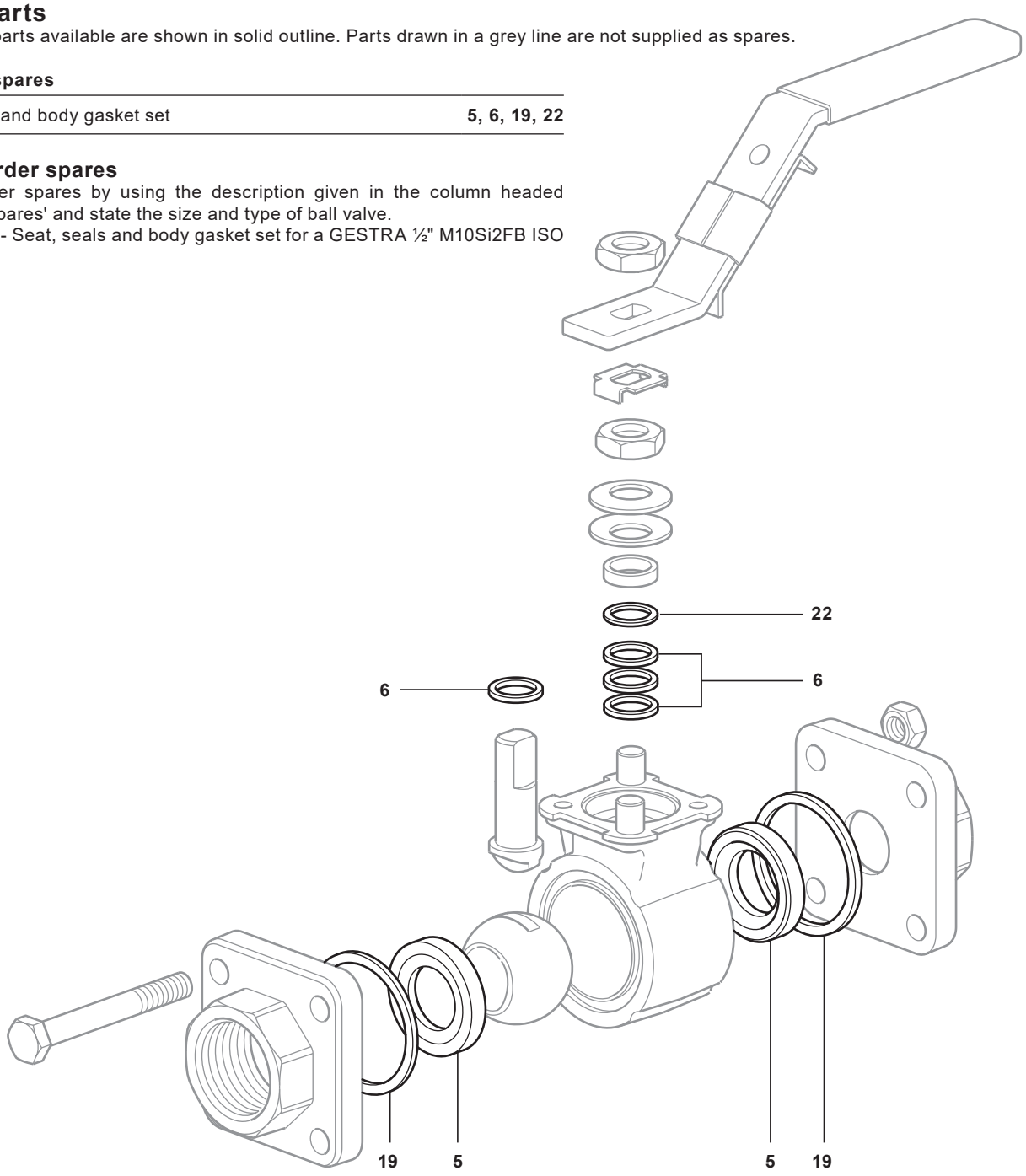
Optional extras:

- Self-venting ball.
- Extended stems 50 mm (2") and 100 mm (4") to allow full insulation.
- Fully degreased under request (i.e: Oxygen application).
- Viton O'rings (Part No 19) on request.

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

Available spares	
Seat, seals and body gasket set	**5, 6, 19, 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 and body gasket set for a GESTRA ½" M10Si2FB ISO ball valve.



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