

GBV Ball Valve DN 1/4" to DN 2 1/2"

M10Vi ISO

Description

The M10Vi 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 GESTRA ball valves.

Available types

M10Vi2__ ISO	Zinc plated carbon steel body, PTFE seats.
M10Vi3__ ISO	Stainless steel body, 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 Pressure Equipment Directive (PED) and carries the  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

Screwed and welded
1/4", 3/8", 1/2", 3/4", 1", 1 1/4", 1 1/2" and 2"
BSP, BSPT, API/NPT, BW, SW

Flanged

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

Reduced bore

Screwed and welded
1/4", 3/8", 1/2", 3/4", 1", 1 1/4", 1 1/2", 2" and 2 1/2"
BSP, BSPT, API/NPT, BW, SW

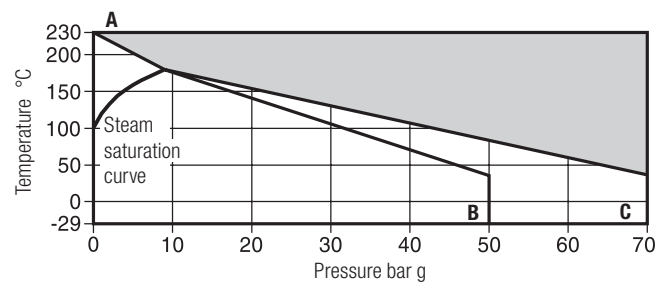
Flanged

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

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

Pressure/temperature limits



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

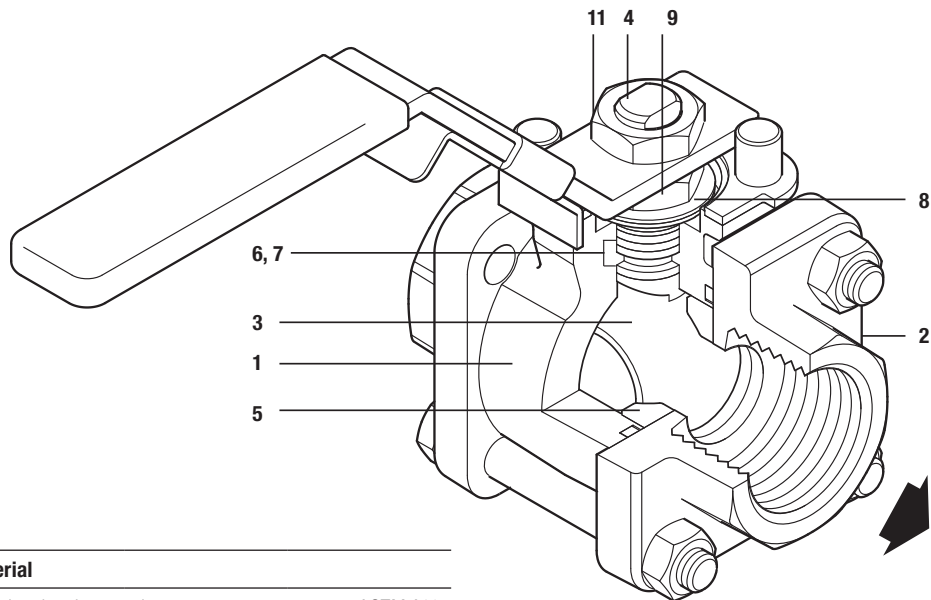
A - B 2" FB and 2½" RB only.

A - C ¼" - 1½" FB, RB and 2" RB.

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

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 GESTRA		
ΔPMX	Maximum differential pressure is limited to the PMO	
Designed for a maximum cold hydraulic test pressure of:		105 bar g

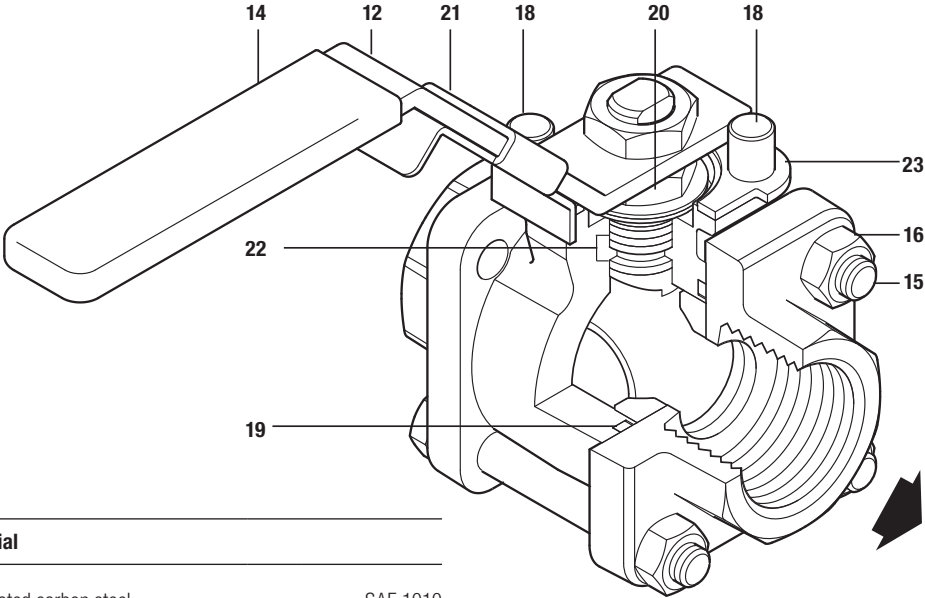
Materials



No.	Part	Material		
1	Body	M10Vi2 ISO	Zinc plated carbon steel	ASTM A105
		M10Vi3 ISO	Stainless steel	ASTM A 182 F 316L
2	Cap	M10Vi2 ISO	Zinc plated carbon steel	ASTM A105
		M10Vi3 ISO	Stainless steel	ASTM A 182 F 316L
3	Ball		Stainless steel	AISI 316
4	Stem		Stainless steel	AISI 316
5	Seat		Virgin PTFE	
6	Stem seal		Reinforced PTFE antistatic	
7	Separator	M10Vi2 ISO	Zinc plated carbon steel	SAE 1010
		M10Vi3 ISO		
8	Spring washer		Stainless steel	AISI 301
9	Nut	M10Vi2 ISO	Zinc plated carbon steel	SAE 1010
		M10Vi3 ISO		
10	Name-plate (Not shown)		Stainless steel	AISI 430
11	Stem nut	M10Vi2 ISO	Zinc plated carbon steel	SAE 1010
		M10Vi3 ISO		

For parts 12 to 23 see page next page

Materials (continued)



No. Part		Material		
12	Lever	M10Vi2 ISO M10Vi3 ISO	Zinc plated carbon steel	SAE 1010
14	Grip		Vinyl orange	
15	Bolts	M10Vi2 ISO M10Vi3 ISO	Zinc plated carbon steel	Grade 5
16	Nuts	M10Vi2 ISO M10Vi3 ISO	Zinc plated carbon steel	SAE 1010
17	Studs		Stainless steel	AISI 31
Note: Item 17 can not be shown as it is only applicable to welded versions				
18	Stop screw	M10Vi2 ISO M10Vi3 ISO	Zinc plated carbon steel	SAE 12L 14
19	Body/cap gasket - 'O' ring		EPDM geothermal (Viton on request)	
20	Nut locker		Stainless steel	AISI 316
21	Lockable handle	M10Vi2 ISO M10Vi3 ISO	Zinc plated carbon steel	SAE 1010
22	Stem seal		Stainless steel	
23	Lock-plate		Stainless steel	AISI 304L

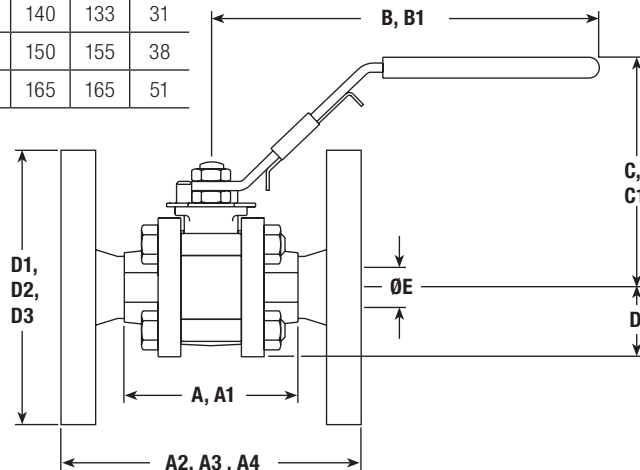
Dimensions (approximate) in mm

Reduced bore

Size	A	A1	A2	A3	A4	B	B1	C	C1	D	D1	D2	D3	E
¼"	66	63	-	-	-	162	-	93	-	24	-	-	-	11
⅜"	66	63	-	-	-	162	-	93	-	24	-	-	-	11
½"	66	66	108	130	140	162	145	93	81	24	89	95	95	11
¾"	72	60	117	150	152	162	145	95	84	26	98	105	117	14
1"	87	84	127	160	165	162	162	106	100	31	108	115	124	21
1¼"	104	94	140	180	178	162	162	106	104	37	118	140	133	25
1½"	110	102	165	200	190	186	185	116	112	41	127	150	155	31
2"	125	118	178	230	216	186	185	123	120	48	152	165	165	38
2½"	153	152	-	-	241	251	-	142	-	57	-	-	190	51

Full bore

Size	A	A1	A2	A3	A4	B	B1	C	C1	D	D1	D2	D3	E
¼"	66	63	-	-	-	162	-	93	-	24	-	-	-	11
⅜"	66	63	-	-	-	162	-	93	-	24	-	-	-	11
½"	72	64	117.4	130	140	162	145	95	84	26	89	95	95	14
¾"	87	84	136.4	150	152	162	162	101	100	31	98	105	117	21
1"	104	98	155.0	160	165	162	162	106	104	37	108	115	124	25
1¼"	110	106	163.6	180	178	186	185	116	112	41	118	140	133	31
1½"	125	124	183.2	200	190	186	185	123	120	48	127	150	155	38
2"	153	152	215.2	230	216	251	250	142	140	57	152	165	165	51



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

Weights (approximate) in kg

Size	Reduced bore				Full bore			
	Scrd/BW/SW	PN40	ASME 150	ASME 300	Scrd/BW/SW	PN40	ASME 150	ASME 300
¼"	0.65	-	-	-	0.65	-	-	-
⅜"	0.65	-	-	-	0.72	-	-	-
½"	0.72	2.30	1.77	1.70	0.95	2.60	1.87	2.40
¾"	0.95	3.20	2.35	2.28	1.60	3.80	2.73	3.79
1"	1.60	4.20	3.47	2.91	2.05	4.70	3.55	5.01
1¼"	2.05	5.70	4.47	4.15	2.75	6.40	4.76	6.50
1½"	2.75	6.80	5.96	5.88	4.25	8.30	5.82	9.22
2"	4.25	9.50	9.16	8.12	7.50	12.80	11.91	13.99
2½"	7.50	-	-	15.85	-	-	-	-

K_V values

Size	¼"	⅜"	½"	¾"	1"	1¼"	1½"	2"	2½"
Reduced bore	2.5	6.8	6	10	27	49	70	103	168
Full bore	2.5	6.8	17	36	58	89	153	205	-

For conversion:
 $C_V (UK) = K_V \times 0.963$
 $C_V (US) = K_V \times 1.156$

Operating torque (N m)

Size	¼"	⅜"	½"
Reduced bore	3.25	3.25	3.25
Full bore	3.25	3.25	5.50

Size	¾"	1"	1¼"
Reduced bore	5.50	13.25	20
Full bore	13.25	20	50

Size	1½"	2"	2½"
Reduced bore	50	60	75
Full bore	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 BSP M10Vi2FB 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 (ie: Oxygen application).
- Viton O'rings (Part 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.

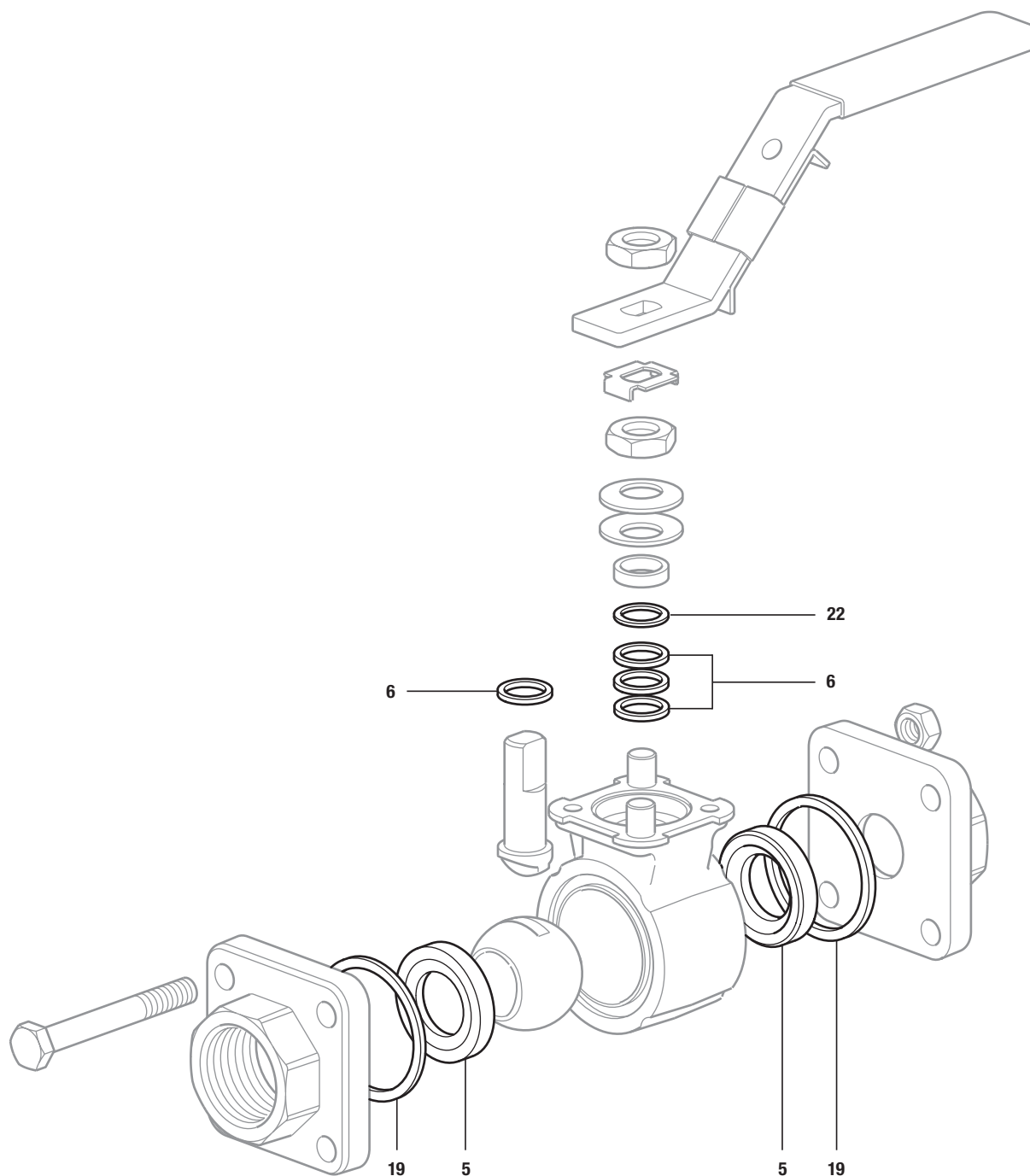
Available spares

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" M10Vi2FB ISO ball valve.



GESTRA GmbH

Münchener Straße 77, 28215 Bremen, Germany
Telefon +49 421 3503-0, Telefax +49 421 3503-393
E-mail info@de.gestra.com, Web www.gestra.com

