



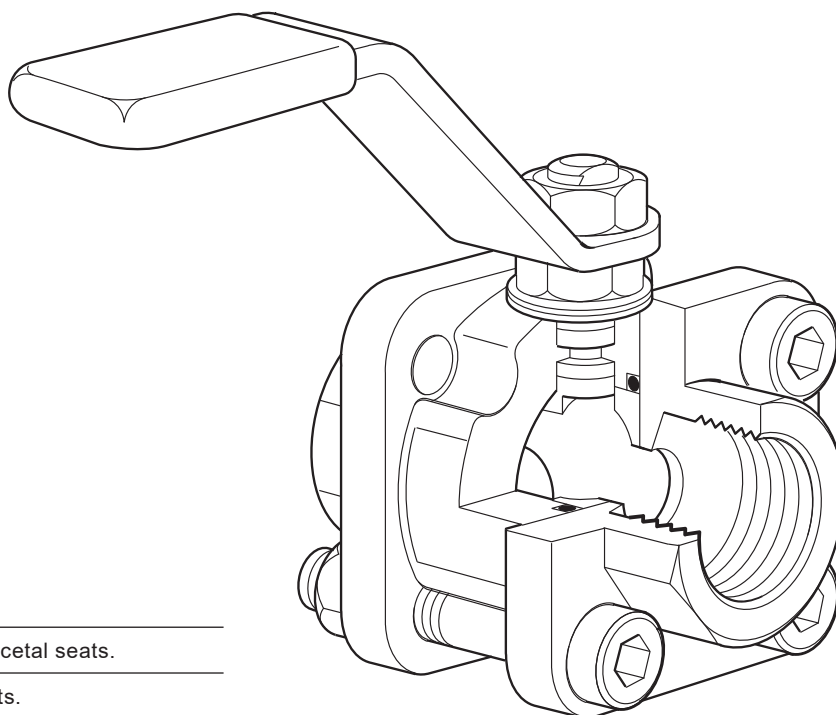
TI-P133-45
CMGT Issue 9

M10HP Ball Valve DN $\frac{1}{4}$ " to DN2"

Description

The M10HP is a three piece body ball valve designed specially for manual isolation of high pressure gas service. The design includes floating ball and blow-out proof stem. Servicing can be achieved without removing the ball valve from the pipeline.

As a main feature, the M10HP has a special AISI 316L ball, subjected to ionic nitriding surface hardening.



Available types

M10HP2 _ _ Zinc plated carbon steel body, Acetal seats.

M10HP3 _ _ Stainless steel body, Acetal 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 1: All certification/inspection requirements must be stated at the time of order placement.

Note 2: Fully degreased under request (i.e. Oxygen application).

Sizes and pipe connections

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

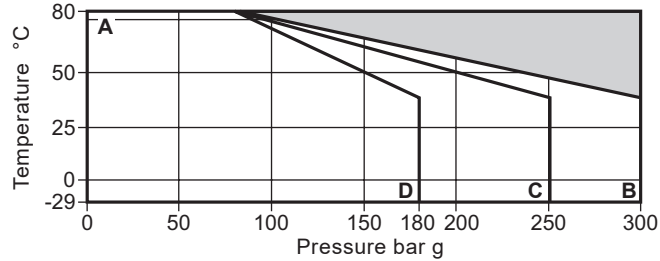
Screwed BSP, BSPT, NPT, SW and BW all available either as full bore (FB) or reduced bore (RB).

* **Note:** The 2" is only available with reduced bore (RB).

Technical data

Port	Full and reduced bore versions
Leakage test procedure to ISO 5208 (Rate A)/EN 12266-1 (Rate A)	
Design	ANSI B 16.11, B 1.2.1, B 16.34

Pressure/temperature limits



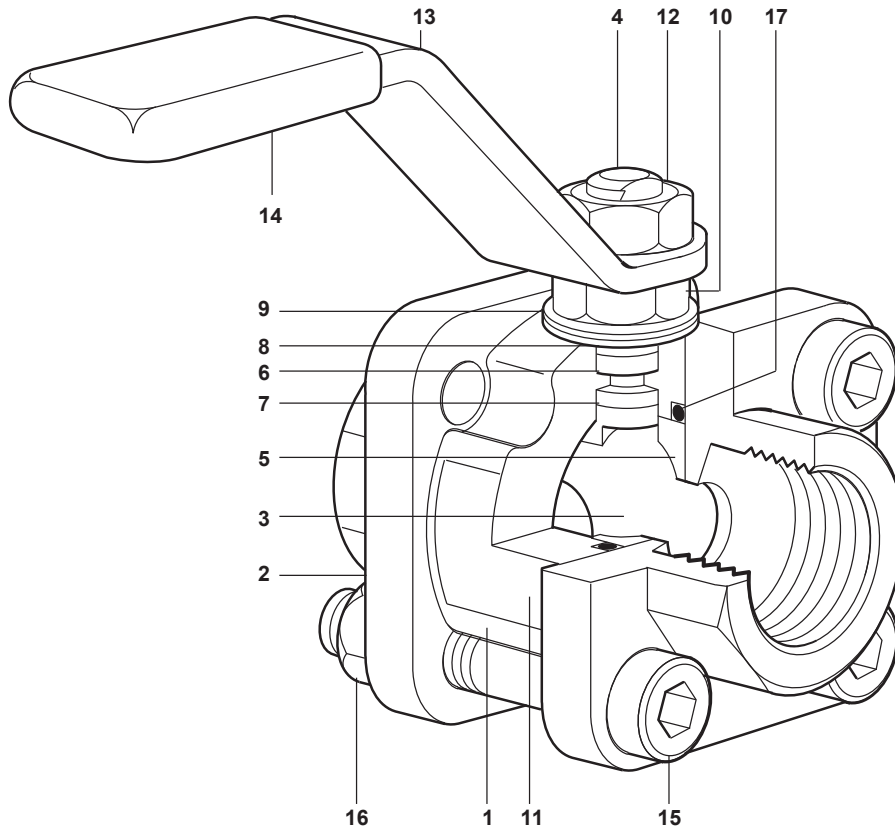
The product **must not** be used in this region.

A - B ¼", ⅜" and ½" RB

A - C ½" FB; ¾" and 1" RB

	¼", ⅜" and ½" RB	300 bar
PMA	Maximum allowable (operating) pressure (PMO)	½" FB; ¾" and 1" RB 250 bar
	1" FB; 1¼", 1½" and 2" RB	180 bar
TMA	Maximum allowable temperature	80 °C
	Minimum allowable temperature	-29 °C
TMO	Maximum operating temperature	80 °C @ 210 bar g
	Minimum operating temperature Note: For lower operating temperatures consult Spirax Sarco	-29 °C
ΔPMX	Maximum differential pressure is limited to the PMO	
Designed for a maximum cold hydraulic test pressure of 1.5 x PMO		

Materials

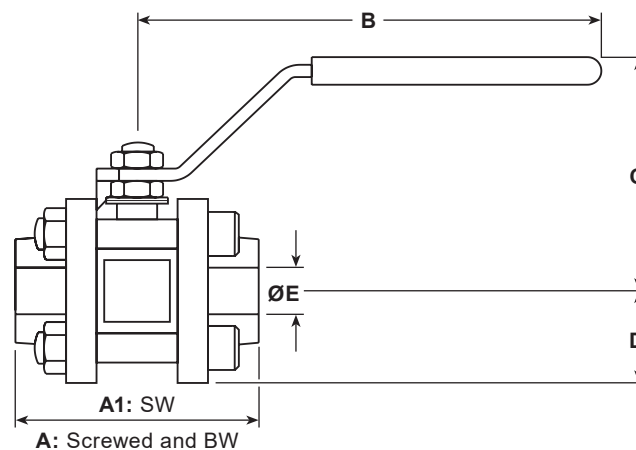


No.	Part	Material
1	Body	M10HP2 Zinc plated carbon steel ASTM A105
		M10HP3 Stainless steel ASTM A 182 F 316L
2	Cap	M10HP2 Zinc plated carbon steel ASTM A105
		M10HP3 Stainless steel ASTM A 182 F 316L
3	Ball	Stainless steel (Hardened) AISI 316L
4	Stem	Stainless steel AISI 316L
5	Seat	Acetal
6	Stem seal	Antistatic R-PTFE
7	Stem seal	PEEK
8	Separator	Zinc plated carbon steel
9	Belleville washer	Stainless steel AISI 301
10	Nut	Zinc plated carbon steel SAE 12L 14
11	Name-plate	Stainless steel AISI 430
12	Nut	Zinc plated carbon steel SAE 12L 14
13	Lever	Zinc plated carbon steel SAE 1010
14	Grip	Vinyl (Green)
15	Bolts (Allen)	Zinc plated carbon steel Grade 12.9
16	Nuts	Zinc plated carbon steel Grade 2H
17	Cap gasket	Viton 'O' ring

Dimensions/weights (approximate) in mm and kg

Reduced bore

Size	A	A1	B	C	D	E	Weight
1/4"	63	60	120	61	24	11	0.61
3/8"	63	63	120	61	24	11	0.61
1/2"	63	52	120	61	24	11	0.61
3/4"	68	60	120	63	26	14	0.70
1"	86	84	157	91	31	21	1.27
1 1/4"	97	94	157	95	37	25	1.77
1 1/2"	106	102	180	109	41	31	2.50
2"	124	118	180	115	48	38	3.50



Full bore

Size	A	A1	B	C	D	E	Weight
1/4"	63	60	120	61	24	11	0.61
3/8"	63	63	120	61	24	11	0.61
1/2"	68	68	120	63	26	14	0.70
3/4"	86	86	157	91	31	21	1.27
1"	97	97	157	95	37	25	1.77
1 1/4"	106	106	180	109	41	31	2.50
1 1/2"	124	124	180	115	48	38	3.50

K_v values

Size	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
Reduced bore	5	6.8	6	10	27	49	70	103
Full bore	5	6.8	17	36	58	89	153	-

For conversion:
 C_v (UK) = $K_v \times 0.963$
 C_v (US) = $K_v \times 1.156$

Operating torque (N m)

Size	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
Reduced bore	10	10	10	15	25	40	55	100
Full bore	10	10	15	25	40	55	100	-

The indicated torque figures are for valves frequently operated, that are submitted to the maximum differential pressure. 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.

Welding

Only the models that have connections designed for welding (SW, BW, Imperial Tube connections) should be welded. Valves with SW or BW welding connections must be disassembled before welding onto the pipeline, the ends should be welded separately and the valve should be reassembled when the ends are cool. Carbon steel valves with threaded (BSPT, BSP, NPT) or flanged connections must not be welded to avoid damages to the valve and/or injury to personnel.

How to order example:

1 off Spirax Sarco 1" screwed NPT M10HP3FB ball valve.

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, stem seals, seat seal set and cap gaskets	5, 6, 7, 17
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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, stem seals, seat seal set and cap gaskets for a Spirax Sarco 1" M10HP3FB ball valve.

