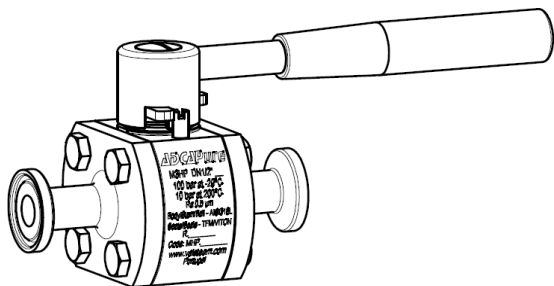


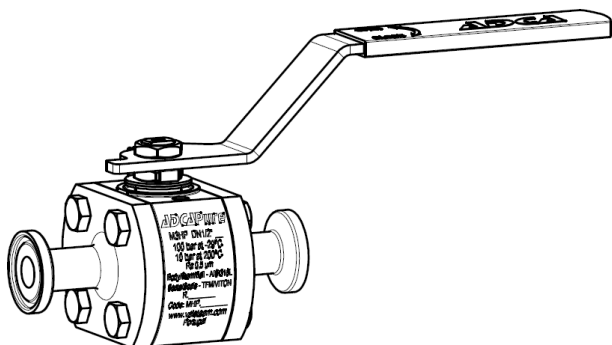
**M3HP and M3H
Options and Extras**

VALVES DESCRIPTION

M3HP (Barstock)

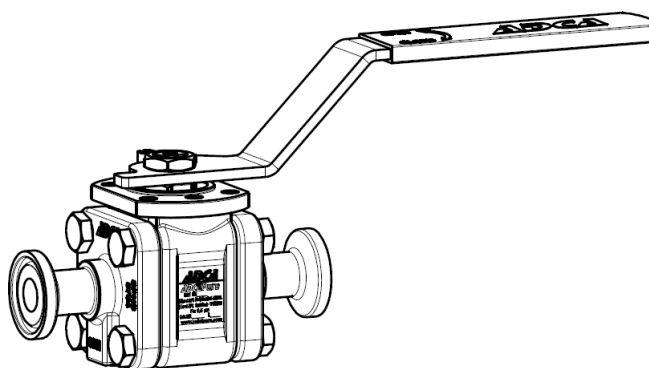


Round lever handle – Standard on M3HP.
Stainless steel / plastic knob.
(Complete stainless steel on request, not recommended for hot fluids).
Lockable system not available with round lever.



Flat lever handle (optional).
Stainless steel / plastic cover.
Available with lockable system (optional).

M3H (Investment casting)

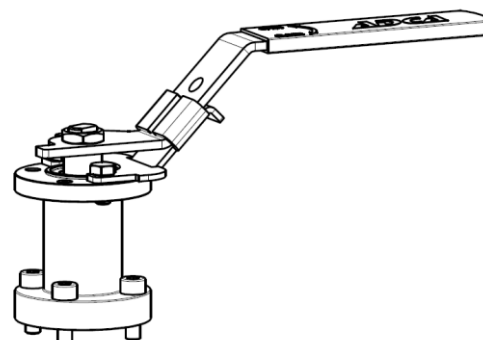
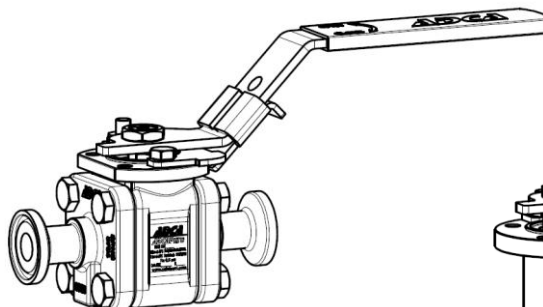
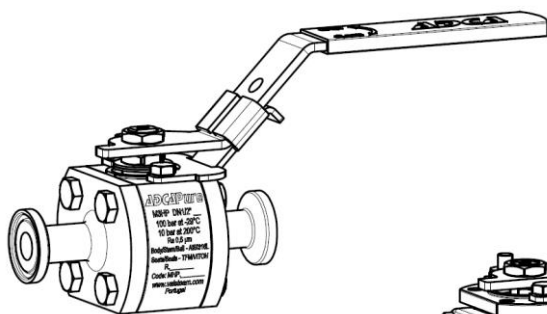


Flat lever handle – Standard on M3H.
Stainless steel / plastic cover.
Available with lockable system (optional).

Important:

Valves with stem extensions are only available with flat lever.
SEF stem extensions are designed only for flat levers.

LOCKABLE LEVER



SEF - STEM EXTENSION

DESCRIPTION

The installation of SEF unit has three main options with specific main features as described below:

SEF/H - Stem extension, where overall height readily clears common insulation thickness.

The installation of the SEF/H unit is tight against the ball valve body avoiding the fluid leakage in the insulation.

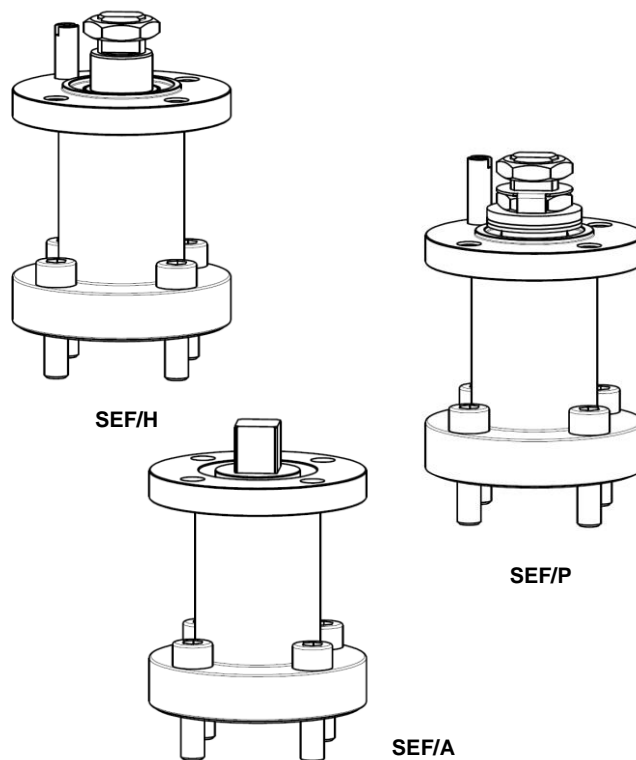
All SEF/H stem extension units allow ISO 5211 mounting.

The lever handle parts from the valve, should be reassembled on the extension unit.

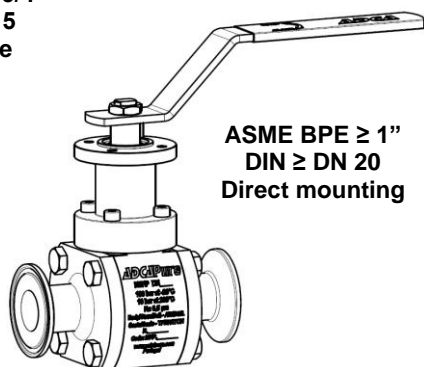
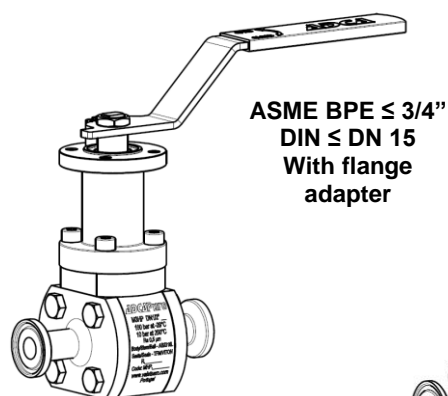
SEF/P – This version has the same features as the previous one and extra security leak to atmosphere through the use of a second packing set.

Optional connection on stem extension to check for leakage of main valve packing. This design includes two sensing ports to provide means of detection and repair of emission sources.

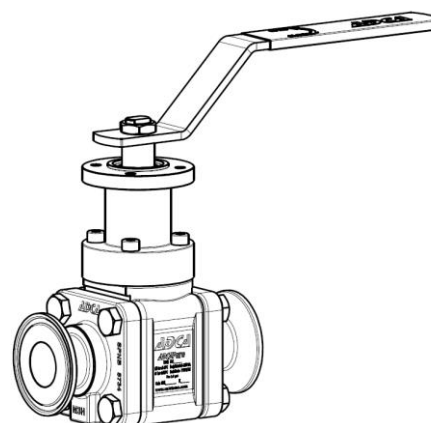
SEF/A - Direct mounting assembling unit between the valve and actuator without the use of brackets and couplings. This mounting adapter serves dual purpose as a mounting adapter and a stem extension.

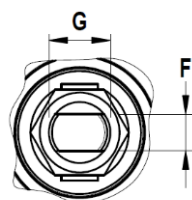
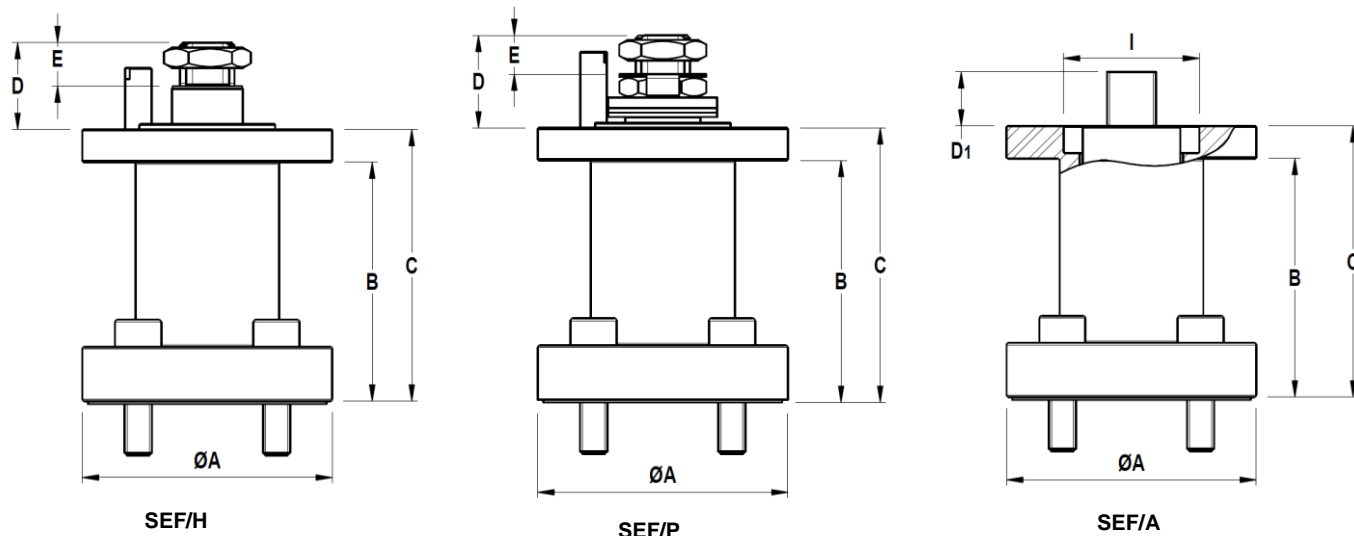


M3HP ISO 5211 mounting

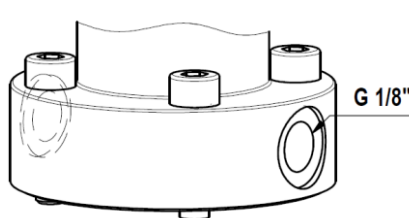


M3H Direct mounting ISO 5211 All sizes

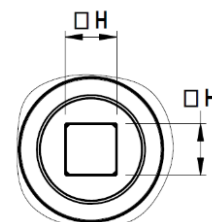




SEF/H and SEF/P
Same dimensions as
top of valve.



Leakage detection
sensing points.



SEF/A

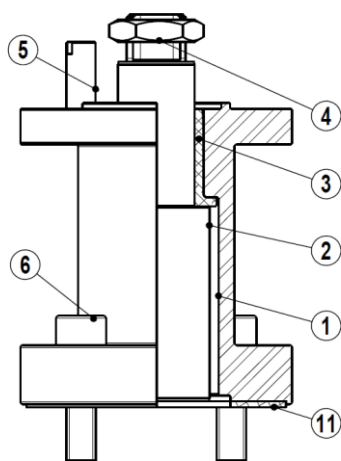
DIMENSIONS (mm)

MODEL	ISO 5211 *	SIZE		A	B	C	D	D1	E	F	G	H	I	WGT. ** (kg)
		BPE	DIN											
SEF/...3	F03 *	1/2"	10	46	44	50	16	10	8	6	M10 x 1	9	25	0,35
SEF/...3	F03 *	3/4"	15	46	44	50	16	10	8	6	M10 x 1	9	25	0,35
SEF/...4	F04	1"	20	55	48	55	24	12	11	7,5	M12 x 1,25	11	30	0,6
SEF/...4	F04	–	25	55	48	55	24	12	11	7,5	M12 x 1,25	11	30	0,6
SEF/...5	F05	1 1/2"	32	65	57	65	27	16	13	11	M16 x 1,5	14	35	0,91
SEF/...5	F05	2"	40	65	57	65	27	16	13	11	M16 x 1,5	14	35	0,91
SEF/...5	F05	–	50	65	57	65	27	16	13	11	M16 x 1,5	14	35	0,91
OR	F7	2 1/2"	65	–	–	–	44	19	16,5	18	M24 x 2	17	55	–
OR	F7	3"	80	–	–	–	44	19	16,5	18	M24 x 2	17	55	–
OR	F10	4"	100	–	–	–	44	24	16,5	18	M24 x 2	22	70	–
OR	F14	6"	150	–	–	–	79	38	45	30	M39 x 2	36	100	–

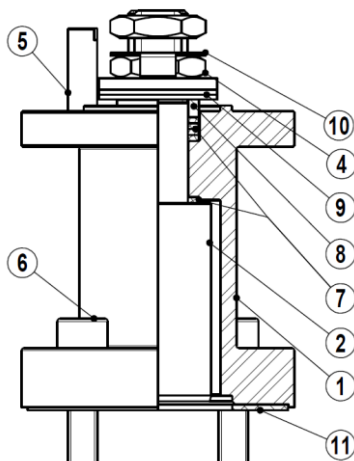
* Flange adapter is required (M3HP only).

** Approximate weights. For certified values, consult factory.

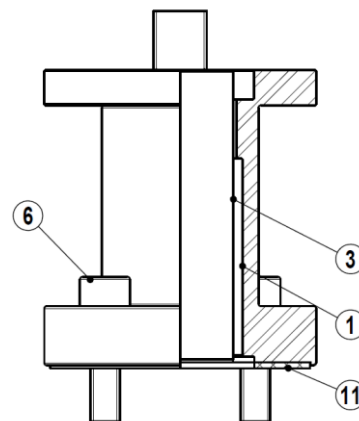
OR – On request.



SEF/H



SEF/P



SEF/A

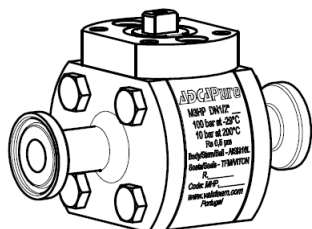
MATERIALS

POS. N°	DESIGNATION	MATERIAL
1	Body	CF3M / 1.4409
2	Stem	CF3M / 1.4409
3	Plain bearing	CF3M / 1.4409 (integral)
4	Compression nut	AISI 304 / 1.4301
5	Stop pin	AISI 304 / 1.4301
6	Fixing bolts	AISI 304 / 1.4301
7	Steam seal	TFM 1600
8	Spacer	AISI 316L / 1.4404
9	Spring washer	AISI 304 / 1.4301
10	Lock washer	AISI 304 / 1.4301
11	Gasket	PTFE

FLANGE ADAPTER FOR M3HP BALL VALVES

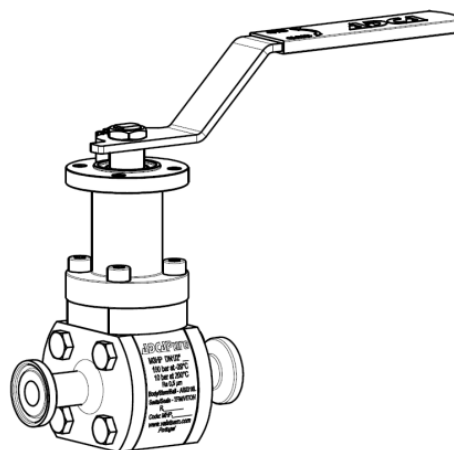
M3HP Only!

The M3HP ASME BPE DN 1/2", 3/4" and DIN DN 10, DN 15 are not provided with ISO mounting connections. When necessary to use that possibility and if the M3H model is not an option, a flange adapter should be fitted using the two standard stop pin threads and making available the ISO 5211 connection.



ASME BPE ≤ 3/4".
DIN ≤ DN 15.

Valve with flange adapter for ISO mounting.



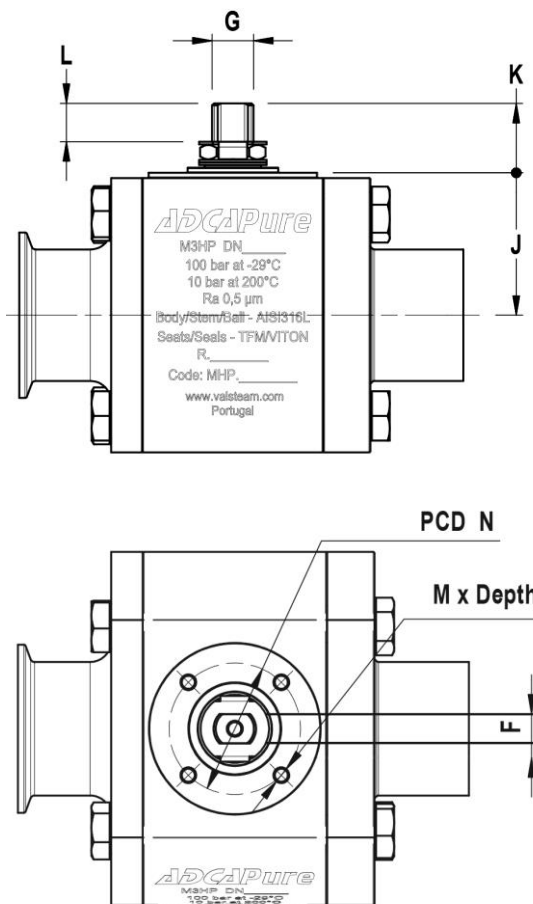
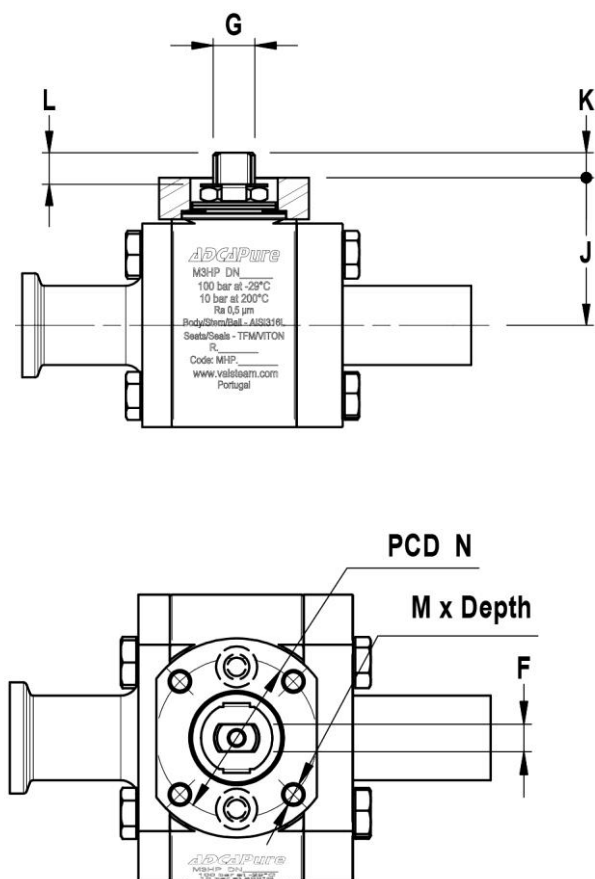
Example of valve with flange adapter and stem extension using ISO 5211 connections.

DIMENSIONS FOR ACTUATOR MOUNTING

M3HP

BPE 1/2" to 3/4"; DIN DN 10 to DN 15

BPE 1" to 6"; DIN DN 20 to DN 150

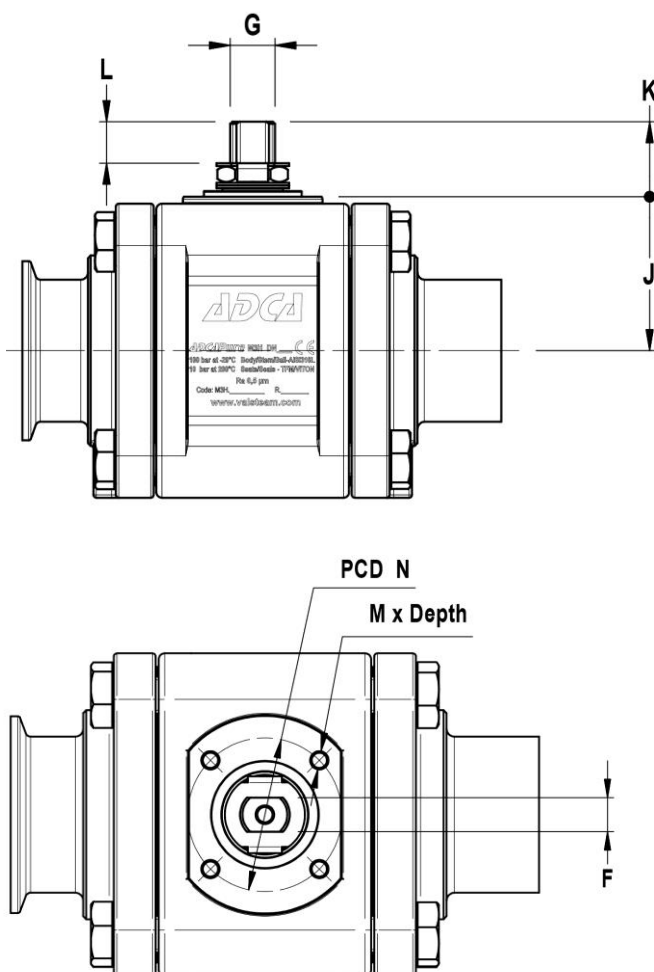


DIMENSIONS (mm)								
SIZE		J	K	L	F	G	M x Depth	N
BPE	DIN							
1/2"	DN 10	32	5,5	7,5	6	M10 x 1	M5 x 10	PCD Ø36 (F03) *
3/4"	DN 15	35,5	6	7,5	6	M10 x 1	M5 x 10	PCD Ø36 (F03) *
1"	DN 20	32	24	13	7,5	M12 x 1,25	M5 x 8	PCD Ø42 (F04)
--	DN 25	37	24	13	7,5	M12 x 1,25	M5 x 8	PCD Ø42 (F04)
1 1/2"	DN 32	45	27	15	11	M16 x 1,5	M6 x 12	PCD Ø50 (F05)
--	DN 40	49	27	15	11	M16 x 1,5	M6 x 12	PCD Ø50 (F05)
2"	DN 50	55	27	15	11	M16 x 1,5	M6 x 12	PCD Ø50 (F05)
2 1/2"	DN 65	72,5	44	25	18	M24 x 2	M8 x 15	PCD Ø70 (F07)
3"	DN 80	83,5	44	25	18	M24 x 2	M8 x 15	PCD Ø70 (F07)
4"	DN 100	101,5	44	25	18	M24 x 2	M10 x 18	PCD Ø102 (F10)
6"	DN 150	166	79	45	30	M39 x 2	M16 x 22	PCD Ø140 (F14)

* Given dimensions include flange adapter for ISO 5211 mounting.

DIMENSIONS FOR ACTUATOR MOUNTING

M3H

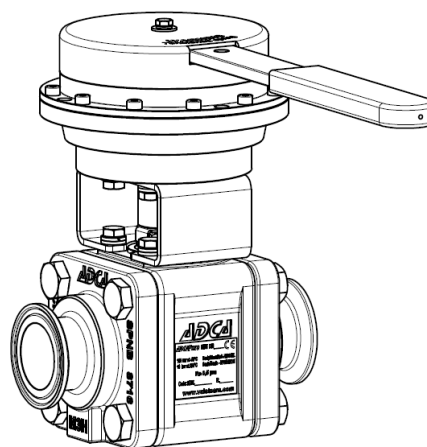
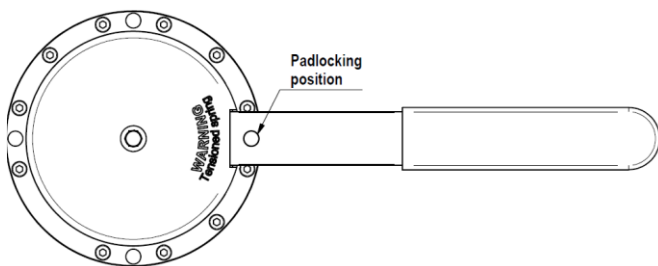
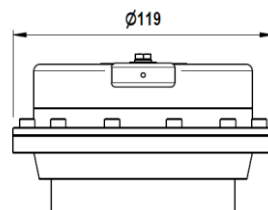
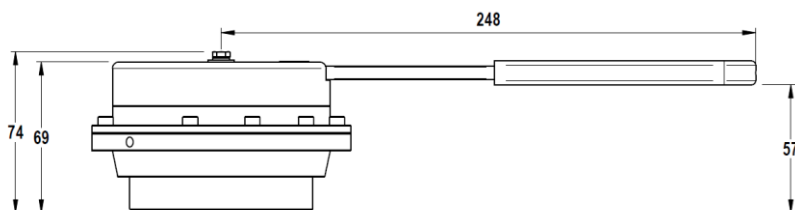


DIMENSIONS (mm)

SIZE		J	K	L	F	G	M x Depth	N
BPE	DIN							
1/2"	DN 10	27,5	10	7	6	M10 x 1	M5 x 5	PCD Ø36 (F03)
3/4"	DN 15	30,5	11	7,5	6	M10 x 1	M5 x 5	PCD Ø36 (F03)
1"	DN 20	38	18	14	7,5	M12 x 1,25	M5 x 10	PCD Ø42 (F04)
--	DN 25	37	24	13	7,5	M12 x 1,25	M5 x 10	PCD Ø42 (F04)
1 1/2"	DN 32	45	27	15	11	M16 x 1,5	M6 x 12	PCD Ø50 (F05)
--	DN 40	50	27	15	11	M16 x 1,5	M6 x 12	PCD Ø50 (F05)
2"	DN 50	55	27	15	11	M16 x 1,5	M6 x 12	PCD Ø50 (F05)
2 1/2"	DN 65	74,5	41	25	18	M24 x 2	M8 x 13	PCD Ø70 (F07)
3"	DN 80	86	41	25	18	M24 x 2	M8 x 13	PCD Ø70 (F07)
4"	DN 100	104	42	25	18	M24 x 2	M10 x 18	PCD Ø102 (F10)
6"	DN 150	166	79	45	30	M39 x 2	M16 x 20	PCD Ø140 (F14)

SRH1 - SPRING RETURN HANDLES

The SRH consists in a spring box which when assembled, switches the ball valve to a safe position (closed or open), as soon as the operator releases its handle.



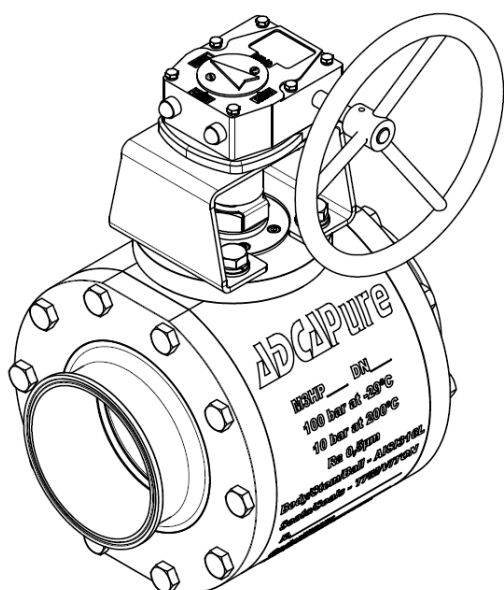
SPRING RETURN HANDLES

MODEL	MOUNT. TYPES	TORQUE (Nm)
SRH1/24	F03; F05; F07	24
SRH1/40	F03; F05; F07	40

“Dead-man” lever ball valve.

GEARBOXES

Gearboxes are quarter-turn devices intended for the operation of ball valves, among others. The handwheels are designed for smooth and easy operation.



M3HP 6” valve with gearbox.

MAINTENANCE VALVE DATA

M3H / M3HP VALVE DATA

SIZE		VALVE TORQUE	BODY BOLTS		STEM NUT	
ASME	DIN	* TORQUE (Nm)	Nº x m	Torque (Nm)	G	Torque (Nm)
1/2"	10	4	4 x M6	15	M10	20
3/4"	15	4	4 x M6	15	M10	20
1"	20	10	4 x M8	25	M12	25
–	25	16	4 x M8	25	M12	25
1 1/2"	32	23	4 x M10	30	M16	30
–	40	28	4 x M10	30	M16	30
2"	50	35	4 x M12	35	M16	30
2 1/2"	65	48	6 x M12	35	M24	40
3"	80	75	8 x M12	35	M24	40
4"	100	120	10 x M12	35	M24	40
6"	150	180	10 x M16	60	M39	100

* Torque values for valves with PTFE / TFM standard seals at full differential pressure. The indicated torques are for valves operated frequently. Greater torques can be requested for valves subject to long static periods. Safety margins not included in these figures. Values may vary depending on the working conditions.
 For more detailed information, consult the IMI.

M3H – WITH CONDENSATE DRAIN

DESCRIPTION

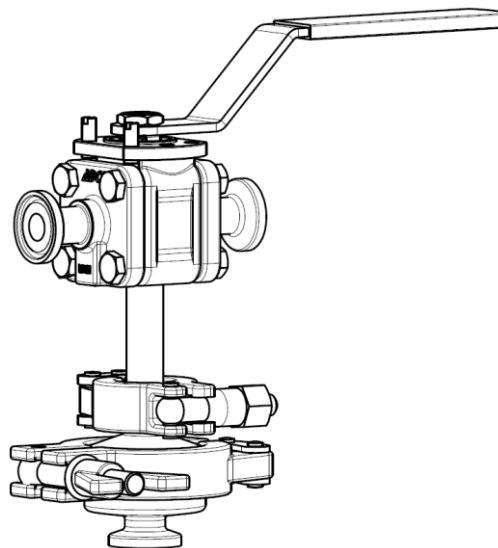
This option directs upstream steam condensate or trapped liquids in the valve body cavity to be drained. The flow of steam surrounding the valve also ensures complete sterilization of the valve body cavity.

HOW IT WORKS

When the valve is in the closed position (B) the condensate flows inside the valve body cavity and it's discharged by an automatic steam trap connected to the bottom connection, preventing liquid backup.

On the position (A) the valve allows the steam flow to the process.

Position (C) allows the maintenance of the steam trap without the need of a second isolating valve, since in this position the inlet valve is fully closed.



Open position (A)	Trap position (B)	Steam trap maintenance position (C)