

Dome Loaded Pressure Maintaining Valve

The M30 series is a 1/2", 1" and 1 1/2" balanced valve dome loaded pressure maintaining valve, used for quick and accurate control of inlet pressures. Ideal for high flow and low to medium pressure applications, It is a stable and noiseless valve for maintaining a set pressure of upstream media, it's heavy duty construction allows it to be installed in the most arduous of environments.



Standard Features

Valve Sizes:	M31	M32	M33
	1/2"	1"	1 1/2"

Materials of construction:

- BODY - CAST NODULAR IRON - BS EN 1563 400-18LT
- DOME - CAST NODULAR IRON - BS EN 1563 400-18LT
- SEAT - STAINLESS STEEL - BS EN 10088 1.4401
- TRIM, DIAPHRAGM AND 'O' RINGS - HIGH NITRILE

Maximum Inlet Pressures:	M31	M32	M33
	70 BAR (1015 PSI)	70 BAR (1015 PSI)	55 BAR (800 PSI)
Outlet Pressure Ranges:	M31	M32	M33
	0.5 - 70 BAR (7 - 1015 PSI)	0.5 - 70 BAR (7 - 1015 PSI)	0.5 - 42 BAR (7 - 610 PSI)

Dome Loading:

- INTERNAL OR EXTERNAL VIA 1/4" BSPP CONNECTION
- DOMES SHOULD BE LOADED WITH AIR OR INERT GAS

Media:

- LIQUID AND GASES

Weight:	M31	M32	M33
	5,5 Kg (12 lb)	18,5 Kg (41 lb)	32 Kg (70 lb)

Additional Features

- WELDED FLANGES ON REQUEST (STAINLESS STEEL BODIES ONLY)
- REMOTE DOME PILOTING, SEE A17 PROPORTIONAL CONTROLLER (see pg 86)

Options

Materials of construction:

- BODY-STAINLESS STEEL-BS EN 10213 PT1-4
- DOME-STAINLESS STEEL-BS EN 10213 PT1-4
- ELASTOMERS - FLUOROCARBON OR EPDM

Applications

- Compressors
- Dryer systems
- Filter systems
- Brewery plants
- Gas & liquid sampling
- Pump pressure control
- Research laboratories
- Aerospace ground support

Ordering Information

TYPE	MATERIAL OPTION	ELASTOMER
M31	P8 (NODULAR IRON)	N (NITRILE)
M32	9H (STAINLESS STEEL)	V (FLUOROCARBON)
M33		E (EPDM)

ORDERING INFORMATION EXAMPLE:

M31P8N

Notes

Technical Specifications

Pressure

	M31	M32	M33
TEST (PROOF) PRESSURE	105 BAR (1523 PSI)	105 BAR (1523 PSI)	83 BAR (1200 PSI)
MAXIMUM INLET PRESSURE	70 BAR (1015 PSI)	70 BAR (1015 PSI)	55 BAR (800 PSI)
INLET REDUCED PRESSURE RANGES	0.5-70 BAR (7-1015PSI)	0.5-70 BAR (7-1015PSI)	0.5-42 BAR (7-610PSI)

Leakage

STANDARD ON REQUEST	BUBBLE TIGHT (TYPICALLY 10 ⁻⁶ AT CM ³ SEC ⁻¹) HELIUM LEAK TESTED TO 10 ⁻⁸ AT CM ³ SEC ⁻¹
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Temperature Range

	M31	M32	M33
NODULAR IRON BODY	-20°C TO +150°C	-20°C TO +150°C	-20°C TO +150°C
STAINLESS STEEL BODY	-40°C TO +150°C	-40°C TO +150°C	-40°C TO +150°C

Valve Size and flow area

	M31	M32	M33
NOMINAL SIZE	12.7mm (1/2")	25.4mm (1")	38.1mm (1 1/2")
ORIFICE AREA A1	97mm ² (0.15in ²)	323mm ² (0.50in ²)	968mm ² (1.50in ²)
PORT AREA A2	387mm ² (0.60in ²)	1503mm ² (2.33in ²)	2858mm ² (4.43in ²)
FLOW COEFFICIENT	Kv=2.9 (Cv=3.4)	Kv=9.7 (Cv = 11.4)	Kv=29 (Cv=34)

Spares Code

SPARES	ELASTOMER
M31	N (NITRILE)
M32	V (FLUOROCARBON)
M33	E (EPDM)

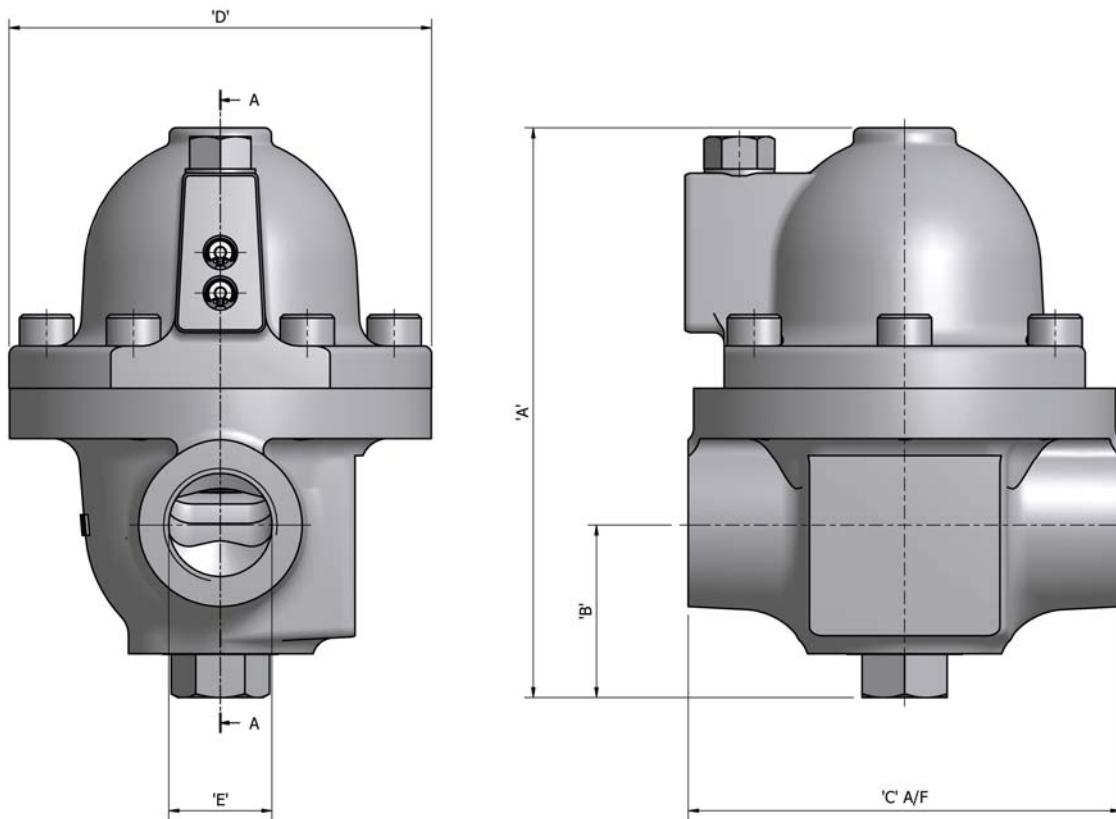
Spares BOM

ITEM	DESCRIPTION	MATERIAL	QTY	REQUIRED	
1	DOWTY	St. Stl / Rubber	1	*	*
2	CIRCLIP	BS 5216-HD 3	2	*	*
3	NEEDLE VALVE	BS 3S 145 (Normalised)	2	*	*
4	'O' RING	Rubber	2	*	*
5	DIAPHRAGM	Rubber	1	*	*
6	'O' RING	Rubber	1	*	*
7	VALVE PAD	Rubber	1	*	*
8	'O' RING	Rubber	1	*	*
9	'O' RING	Rubber	1	*	*
10	'O' RING	Rubber	1	*	*

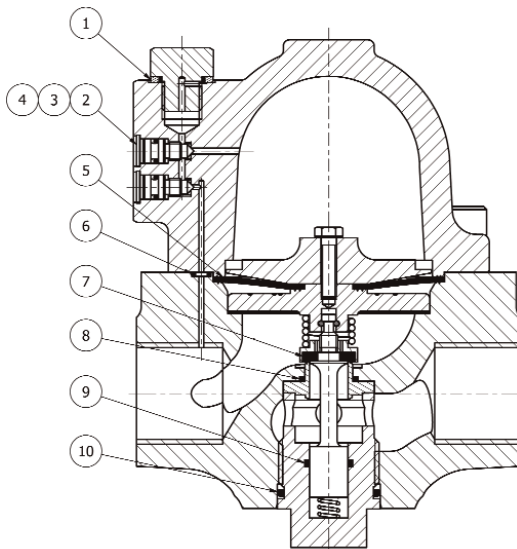
STANDARD PRESSURE

LOW PRESSURE

Technical Specifications



SECTION VIEW 'A-A'



Dimensions

TYPE	'A'	'B'	'C'	'D'	'E'	WEIGHT
M31	167	51	127	124	1" BSPP	5,5Kg (12lb)
M32	266	78	227	197	2" BSPP	18,5Kg (42lb)
M33	315	97	254	229	3" BSPP	32Kg (70lb)