

High Pressure Valves, Fittings and Tubing

» Pressures to 65,000 psi (4,500 bar)



MAXIMATOR has been designing and manufacturing high pressure equipment for more than thirty years and has a worldwide reputation for quality and reliability, backed by one of the best service organizations in the industry.

High Pressure Valves feature:

- Rising stem design.
- 316 L (1.4404) wetted parts and 17-4 PH Stem for excellent corrosion resistance.
- Metal-to-metal seating achieves bubble-tight shut-off, longer stem and seat life, greater durability for repeated open and close cycles.
- PTFE and carbon packing with metal back-up rings offers reliable stem to body sealing.
- Non-rotating stem prevents stem to seat galling.
- Stem sleeve and packing gland materials have been selected to achieve optimum thread cycle life and reduced handle torque. All stem sleeve threads are rolled, assuring smooth operation.

- Safety weep holes for all pressure connections and packing area.
- Six different valve body patterns, with choice of vee or regulating type stem tip.

MAXIMATOR offers a complete line of high pressure valves, fittings, tubing, check valves, line filters, anti-vibration fittings and safety head assemblies. All high pressure valves and fittings use the high pressure style connection.

Note: When selecting multiple items, the pressure rating would be that of the lowest rated component.

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High Pressure Valves

» Pressures to 36,000 psi (2,500 bar)



Ordering Information
Typical catalog number:
36V4H872

High pressure valves

Maximator high pressure valves with metal to metal seats have a high level of safety and reliability under adverse operating conditions. These valves may be used both with gases and liquids.

Traceability is ensured through extensively documented data (batch number, max. pressure, material number, type designation). All high pressure valves include glands and collars.

36 V Valve Series	4H O.D. Tube Size	87 Stem Type	2 Body Pattern	Options
36 V	4H – 1/4"	07 – VEE stem	1 – two-way straight	Extreme
	6H – 3/8"	08 – REGULATING stem*	2 – two-way angle	temperature
	9H – 9/16"	87 – VEE stem with replaceable seat	3 – three-way, two on pressure	option, see
		88 – REGULATING stem with replaceable seat*	4 – three-way, one on pressure	information
			5 – three-way, two-stem manifold	below.

Options for High pressure valves

Special Designs for Extreme Temperatures

Standard valves are supplied with Teflon / Carbon packing and may be operated to 450°F (230°C). High temperature packing and / or extended stuffing box are available for service from -423°F to 1200°F (-252°C to 650°C) by adding the following suffixes to catalog order number.

- **TG** – standard valve with teflon glass packing to 600°F (315°C).
- **GY** – standard valve with graphite braided yarn packing to 800°F (425°C).
- **HT** – extended stuffing box valve with graphite braided yarn packing to 1200°F (650°C).
- **B** – standard valve with cryogenic trim materials and Teflon packing to -100°F (-73°C).
- **LT** – extended stuffing box valve with teflon packing and cryogenic trim materials to -423°F (-252°C).

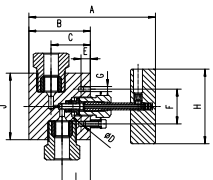
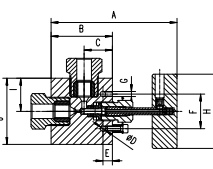
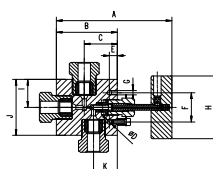
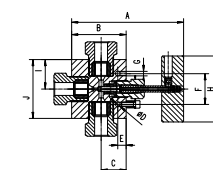
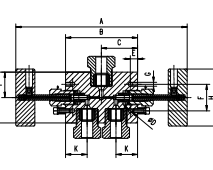
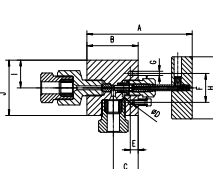
O.D. Size in. (mm)	Connec- tion Type	Orifice Size in. (mm)	Rated Cv**	Pressure Rating @ R.T. psi (bar)***
1/4 (6.35)	4HF	0.094 (2.3)	0.12	36,000 (2,500)
3/8 (9.53)	6HF	0.125 (3.2)	0.23	36,000 (2,500)
9/16 (14.30)	9HF	0.125 (3.2)	0.33	36,000 (2,500)

Consult your MAXIMATOR representative for **repair kits** and valve bodies. Refer to the Technical Information section for proper maintenance procedures.

* tapered tip for regulating and shutoff

** Cv values shown are for 2-way straight pattern vee stem valves. For 2-way angle patterns, increase the Cv value by 50%.

*** See page 2 in the Technical Section for Pressure/Temperature Rating Chart.

Valve Pattern	Catalog Number	Stem Type	O.D. Tube in.	Orifice in. (mm)	Dimensions in. (mm)										Valve Panel Hole	Block Thick-ness
2-Way Straight																
	36V4H071	Vee	1/4	0.094	4.76	2.01	1.50	0.22	0.37	1.38	2.95	1.12	2.01		1.00	1.02
	36V4H081	Reg		(2.3)	(121)	(51)	(38)	(5.6)	(9.5)	(35)	(75)	(28.5)	(51)		(25.4)	(25.9)
	36V6H071	Vee	3/8	0.125	4.76	2.01	1.50	0.22	0.37	1.38	2.95	1.12	2.01		1.00	1.02
	36V6H081	Reg		(3.2)	(121)	(51)	(38)	(5.6)	(9.5)	(35)	(75)	(28.5)	(51)		(25.4)	(25.9)
	36V9H071	Vee	9/16	0.125	5.20	2.44	1.56	0.22	0.37	1.38	2.95	1.12	2.64		1.00	1.54
	36V9H081	Reg		(3.2)	(132)	(62)	(39.6)	(5.6)	(9.5)	(35)	(75)	(28.5)	(67)		(25.4)	(39.1)
2-Way Angle																
	36V4H072	Vee	1/4	0.094	4.76	2.01	1.12	0.22	0.37	1.38	2.95	1.00	2.01		1.00	1.02
	36V4H082	Reg		(2.3)	(121)	(51)	(28.5)	(5.6)	(9.5)	(35)	(75)	(25.4)	(51)		(25.4)	(25.9)
	36V6H072	Vee	3/8	0.125	4.96	2.20	1.10	0.22	0.37	1.38	2.95	1.00	2.01		1.00	1.02
	36V6H082	Reg		(3.2)	(126)	(56)	(28)	(5.6)	(9.5)	(35)	(75)	(25.4)	(51)		(25.4)	(25.9)
	36V9H072	Vee	9/16	0.125	5.20	2.44	1.12	0.22	0.37	1.38	2.95	1.32	2.64		1.00	1.54
	36V9H082	Reg		(3.2)	(132)	(62)	(28.5)	(5.6)	(9.5)	(35)	(75)	(33.5)	(67)		(25.4)	(39.1)
3-Way / 2 on Pressure																
	36V4H073	Vee	1/4	0.094	4.89	2.13	1.50	0.22	0.37	1.38	2.95	1.00	2.01	1.12	1.00	1.02
	36V4H083	Reg		(2.3)	(124)	(54.1)	(38)	(5.6)	(9.5)	(35)	(75)	(25.4)	(51)	(28.5)	(25.4)	(25.9)
	36V6H073	Vee	3/8	0.125	5.26	2.50	1.50	0.22	0.37	1.38	2.95	1.00	2.01	1.12	1.00	1.02
	36V6H083	Reg		(3.2)	(133.5)	(63.5)	(38)	(5.6)	(9.5)	(35)	(75)	(25.4)	(51)	(28.5)	(25.4)	(25.9)
	36V9H073	Vee	9/16	0.125	5.63	2.87	1.56	0.22	0.37	1.38	2.95	1.32	2.64	1.12	1.00	1.54
	36V9H083	Reg		(3.2)	(143)	(72.9)	(39.6)	(5.6)	(9.5)	(35)	(75)	(33.5)	(67)	(28.5)	(25.4)	(39.1)
3-Way / 1 on Pressure																
	36V4H074	Vee	1/4	0.094	4.76	2.01	1.12	0.22	0.37	1.38	2.95	1.00	2.01		1.00	1.02
	36V4H084	Reg		(2.3)	(121)	(51)	(28.5)	(5.6)	(9.5)	(35)	(75)	(25.4)	(51)		(25.4)	(25.9)
	36V6H074	Vee	3/8	0.125	4.90	2.20	1.12	0.22	0.37	1.38	2.95	1.00	2.01		1.00	1.02
	36V6H084	Reg		(3.2)	(124.5)	(56)	(28.5)	(5.6)	(9.5)	(35)	(75)	(25.4)	(51)		(25.4)	(25.9)
	36V9H074	Vee	9/16	0.125	5.20	2.44	1.12	0.22	0.37	1.38	2.95	1.32	2.64		1.00	1.54
	36V9H084	Reg		(3.2)	(132)	(62)	(28.5)	(5.6)	(9.5)	(35)	(75)	(33.5)	(67)		(25.4)	(39.1)
3-Way / 2-Stem Manifold																
	36V4H075	Vee	1/4	0.094	8.54	3.07	1.54	0.22	0.37	1.38	2.95	1.00	2.01	1.12	1.00	1.02
	36V4H085	Reg		(2.3)	(217)	(78)	(39.1)	(5.6)	(9.5)	(35)	(75)	(25.4)	(51)	(28.5)	(25.4)	(25.9)
	36V6H075	Vee	3/8	0.125	8.72	3.25	1.63	0.22	0.37	1.38	2.95	1.00	2.01	1.12	1.00	1.02
	36V6H085	Reg		(3.2)	(221.5)	(82.5)	(41.5)	(5.6)	(9.5)	(35)	(75)	(25.4)	(51)	(28.5)	(25.4)	(25.9)
	36V9H075	Vee	9/16	0.125	9.21	3.74	1.88	0.22	0.37	1.38	2.95	1.32	2.64	1.12	1.00	1.54
	36V9H085	Reg		(3.2)	(234)	(95)	(47.8)	(5.6)	(9.5)	(35)	(75)	(33.5)	(67)	(28.5)	(25.4)	(39.1)
2-Way Angle / Replaceable Seat																
	36V4H872	Vee	1/4	0.094	4.96	2.38	1.12	0.22	0.37	1.38	2.95	1.12	2.01		1.00	1.02
	36V4H882	Reg		(2.3)	(126)	(60.5)	(28.5)	(5.6)	(9.5)	(35)	(75)	(28.5)	(51)		(25.4)	(25.9)
	36V6H872	Vee	3/8	0.125	4.96	2.38	1.12	0.22	0.37	1.38	2.95	1.12	2.01		1.00	1.02
	36V6H882	Reg		(3.2)	(126)	(60.5)	(28.5)	(5.6)	(9.5)	(35)	(75)	(28.5)	(51)		(25.4)	(25.9)
	36V9H872	Vee	9/16	0.125	4.93	2.44	1.18	0.22	0.37	1.38	2.95	1.32	2.64		1.00	1.54
	36V9H882	Reg		(3.2)	(125)	(62)	(30)	(5.6)	(9.5)	(35)	(75)	(33.5)	(67)		(25.4)	(39.1)

G - Panel mounting screw thread size 10-24 UNC (screw included). All dimensions are for reference only and are subject to change.

All technical and dimensional information subject to change. All general Terms and Conditions of sale, including limitations of our liability, apply to all products and services sold.

High Pressure Valves

» Pressures to 43,000 psi (2,965 bar)



Ordering Information
Typical catalog number:
43V16M072

High pressure valves

Maximator high pressure valves with metal to metal seats have a high level of safety and reliability under adverse operating conditions. These valves may be used both with gases and liquids.

Traceability is ensured through extensively documented data (batch number, max. pressure, material number, type designation). All high pressure valves include glands and collars.

43 V Valve Series	16M O.D. Tube Size	07 Stem Type	2 Body Pattern
43 V	16M – 1"	07 – VEE stem	1 – two-way straight
		08 – REGULATING stem*	2 – two-way angle
		87 – VEE stem with replaceable seat	3 – three-way, two on pressure
		88 – REGULATING stem with replaceable seat*	4 – three-way, one on pressure
			5 – three-way, two-stem manifold

O.D. Size in. (mm)	Connec- tion Type	Orifice Size in. (mm)	Rated Cv**	Pressure Rating @ R.T. psi (bar)***
1 (24.5)	16MF	0.438 (11.1)	2.6	43,000 (2,965)

Consult your MAXIMATOR representative for **repair kits** and valve bodies. Refer to the Technical Information section for proper maintenance procedures.

* tapered tip for regulating and shutoff

** Cv values shown are for 2-way straight pattern vee stem valves. For 2-way angle patterns, increase the Cv value by 50%.

*** See page 2 in the Technical Section for Pressure/Temperature Rating Chart.

Products for Sour
Gas Applications
Pipe Valves & Fittings
to 15,200 psi (1,050 bar)

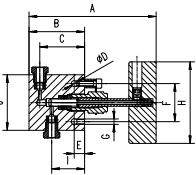
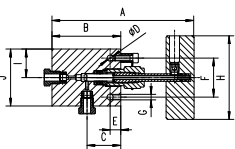
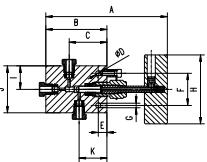
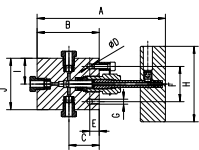
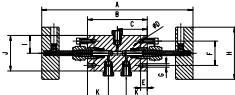
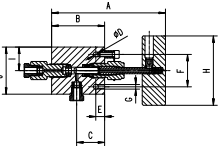
Adapters and
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Medium Pressure
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to 21,000 psi (1,500 bar)

Valve Pattern	Catalog Number	Stem Type	O.D. Tube in.	Orifice in. (mm)	Dimensions in. (mm)										Valve Panel Hole	Block Thickness
2-Way Straight																
	43V16M071	Vee	1	0.438 (11.1)	9.472 (240)	4.45 (113)	3.50 (88.9)	0.571 (14.5)	1.122 (28.5)	2.50 (63.5)	10.35 (263)	2.736 (69.5)	4.921 (125)		1.614 (41)	2.244 (57)
	43V16M081	Reg														
2-Way Angle																
	43V16M072	Vee	1	0.438 (11.1)	4.76 (121)	5.12 (130)	1.50 (38)	0.571 (14.5)	1.122 (28.5)	2.50 (63.5)	10.35 (263)	2.431 (62.5)	4.921 (125)		1.614 (41)	2.244 (57)
	43V16M082	Reg														
3-Way / 2 on Pressure																
	43V16M073	Vee	1	0.438 (11.1)	10.19 (259)	5.87 (149)	3.75 (95.3)	0.571 (14.5)	1.122 (28.5)	2.50 (63.5)	10.35 (263)	2.431 (62.5)	4.921 (125)	2.81 (71.4)	1.614 (41)	2.244 (57)
	43V16M083	Reg														
3-Way / 1 on Pressure																
	43V16M074	Vee	1	0.438 (11.1)	9.52 (242)	5.20 (132)	2.81 (71.4)	0.571 (14.5)	1.122 (28.5)	2.50 (63.5)	10.35 (263)	2.431 (62.5)	4.921 (125)		1.614 (41)	2.244 (57)
	43V16M084	Reg														
3-Way / 2-Stem Manifold																
	43V16M075	Vee	1	0.438 (11.1)	16.18 (411)	7.52 (191)	3.76 (95.5)	0.571 (14.5)	1.122 (28.5)	2.50 (63.5)	10.35 (263)	2.431 (62.5)	4.921 (125)	2.81 (71.4)	1.614 (41)	2.244 (57)
	43V16M085	Reg														
2-Way Angle / Replaceable Seat																
	43V16M872	Vee	1	0.438 (11.1)	9.61 (244)	5.25 (133)	2.81 (71.4)	0.571 (14.5)	1.122 (28.5)	2.50 (63.5)	10.35 (263)	2.431 (62.5)	4.921 (125)		1.614 (41)	2.244 (57)
	43V16M882	Reg														

G - Panel mounting screw thread size 10-24 UNC (screw included). All dimensions are for reference only and are subject to change.

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High Pressure Fittings

» Pressures to 43,000 psi (2,965 bar)

High pressure fittings

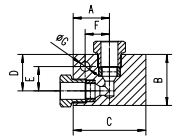
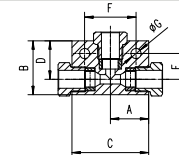
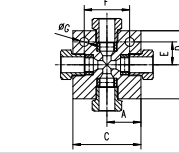
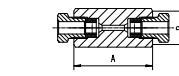
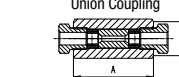
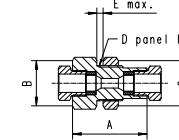
Maximator high pressure fittings are designed to be used with the 43V series high pressure valves and high pressure tubing. All high pressure fittings have coned and threaded type connections. Mounting holes are standard on all elbows, tees and crosses.



Tubing Size	Gland	Collar	Plug	Tubing Cap
1	43G16M	43C16M	43P16M	43TC16M

Connection Components

All high pressure fittings are supplied with glands and collars. Refer to the adjacent chart for ordering any of the connection components individually. When using the plug, the collar is not needed.

Fitting Pattern	Catalog Number	Connection Type	O.D. Tube Size in.	Orifice in. (mm)	Dimensions in. (mm)							Block Thick-ness
					A	B	C	D	E	F	G	
Elbow												
	43L16M	16MF	1	0.438 (11.1)	2.07 (52.5)	3.00 (76.2)	4.13 (105)	2.06 (52.3)	1.38 (35)	1.38 (35)	0.53 (13.5)	1.77 (45)
Tee												
	43T16M	16MF	1	0.438 (11.1)	2.07 (52.5)	3.00 (76.2)	4.13 (105)	2.06 (52.3)	1.38 (35)	2.76 (70)	0.53 (13.5)	1.77 (45)
Cross												
	43X16M	16MF	1	0.438 (11.1)	2.07 (52.5)	4.13 (105)	4.13 (105)	2.07 (52.5)	1.38 (35.2)	2.75 (70)	0.53 (13.5)	1.77 (45)
Straight Coupling / Union Coupling												
<div><div>Straight Coupling</div></div>	43F16M	16MF	1	0.438 (11.1)	3.50 (89)	2.00 (50.8)	Straight Coupling					
<div><div>Union Coupling</div></div>	43UF16M						Union Coupling					
Bulkhead Coupling												
	43BF16M	16MF	1	0.438 (11.1)	3.50 (88.9)	2.00 (50.8)	2.36 (60)	1.69 (43)	0.47 (12)			

See page 2 in the Technical Section for pressure/temperature rating chart.
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to 15,200 psi (1,050 bar)

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to 152,000 psi (10,500 bar)

Technical Information

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Ball Valves
to 21,000 psi (1,500 bar)

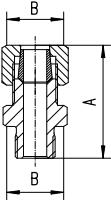
Anti-Vibration and Safety Head Assembly

» Pressures to 43,000 psi (2,965 bar)

Anti-vibration collet gland assemblies

Maximator anti-vibration collet gland assemblies are for use in applications where there could be extreme external mechanical vibrations or shock in tubing lines. These collet gland assemblies are interchangeable with the standard high pressure coned and threaded tube connections.

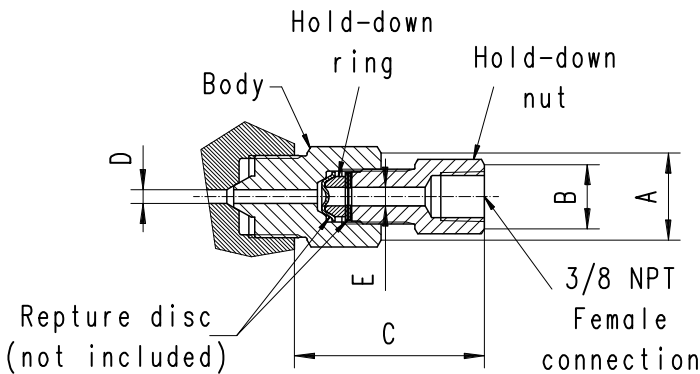


Gland Pattern	Catalog Number	Part	O.D. Tubing Size in.	Dimensions in. (mm)	
				A	B (Hex.)
	43AVA16M	Complete Assembly	1	2.44 (61.9)	1.50 (38.1)
	43AVB16M	Collet Body			
	43AVC16M	Slotted Collet			
	43AVG16M	Gland Nut			

All dimensions are for reference only and are subject to change.

Safety head assemblies

Maximator safety head assemblies are used to provide over-pressure protection to high pressure systems. These safety head assemblies are to be used with the appropriate 1/4" angular and flat rupture disc.



Safety Head Assembly Catalog Number without Disc	Fits Connection Type	Pressure Rating psi (bar)	Body Torque ft - lbs. (Nm)	Dimensions in. (mm)				
				A (Hex.)	B (Hex.)	C (LG.)	D (I.D.)	E (I.D.)
43SH16M	16MF	43,000 (2,965)	150 (200)	1.44 (36.5)	0.88 (22.4)	2.72 (69.1)	0.307 (7.8)	0.250 (6.3)

All dimensions for reference only and are subject of change

All technical and dimensional information subject to change. All general Terms and Conditions of sale, including limitations of our liability, apply to all products and services sold.

Check Valves

» Pressures to 43,000 psi (2,965 bar)

O-Ring Check Valves

Maximator O-Ring Check Valves provide high quality directional flow control and tight shut-off for liquids and gases. All Check Valves are supplied with glands and collars. These Check Valves are not to be used as a relief device. The opening pressure of the O-Ring Check Valves is approx. 20 psi (1.5 bar).

» **Materials:**

Body, cover, poppet, cover gland: 316 stainless steel

Spring: 300 series stainless steel

O-Ring: FKM "A" [-4°F to 392°F(-20°C to 200°C)]

Ball Check Valves

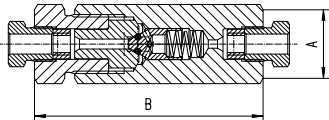
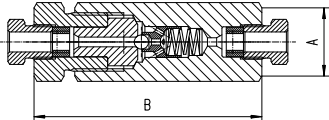
Maximator Ball Check Valves prevent reverse flow where bubble tight shut-off is not mandatory. These Check Valves are designed with a ball cradled floating poppet to assure positive inline seating. This poppet design allows full flow around the ball to minimize pressure drop. Check Valves are rated to 660°F (350°C). All Check Valves are supplied with glands and collars. These Check Valves are not to be used as a relief device. The opening pressure of the Ball Check Valves is approx. 20 psi (1.5 bar).

» **Materials:**

Body, cover, poppet, cover gland: 316L series stainless steel

Ball and Spring: 300 series stainless steel



Valve Pattern	Catalog Number	Connection Type	Pressure Rating psi (bar)	Orifice in. (mm)	Rated (Cv)	Dimensions in. (mm)	
						A (Hex.)	B
O-Ring Check Valves							
	43OC16M	16MF	43,000 (2,965)	0.438 (11.1)	4.3	2.00 (50.8)	6.433 (163.4)
Ball Check Valves							
	43BC16M	16MF	43,000 (2,965)	0.438 (11.1)	4.3	2.00 (50.8)	6.433 (163.4)

CAUTION: FREQUENT INSPECTIONS OF O-Rings are necessary to ensure proper service of the check valve. O-Rings have shown satisfactory service life in testing, however different service conditions may lead to variations in cycle and shelf life. All dimensions are for reference only and subject to change.

Products for Sour Gas Applications
Pipe Valves & Fittings
to 15,200 psi (1,050 bar)

Adapters and Couplings
Medium Pressure
to 22,500 psi (1,550 bar)

Accessories
High Pressure
to 65,000 psi (4,500 bar)

Tools
Ultra High Pressure
to 152,000 psi (10,500 bar)

Technical Information
Valve Actuators

Customized Solutions
Ball Valves
to 21,000 psi (1,500 bar)

Tubing and Coned and Threaded Nipples

» Pressures to 43,000 psi (2,965 bar)

High Pressure Tubing

Maximator offers a line of cold drawn thick wall tubing, with flow areas to compliment the 43,000 psi high pressure valves and fittings series. This tubing is made under strict manufacturing and quality control standards and inspections, with dimensional tolerances to match the requirements of the high pressure coned and threaded connections.

Tubing Tolerances

Normal Tubing Size in. (mm)		Tolerance O.D in. (mm)
1	(25.4)	0.995 / 0.990 (25.273 / 25.174)



Catalog Number	Tube Material	Fits Connection Type	Tube Size in. (mm)		Working Pressure psi (bar)				
			O.D.	I.D.	-325°F to 100°F (-198°C to 37°C)	200°F (93°C)	400°F (204°C)	600°F (315°C)	800°F (426°C)
43TU16M-316	316SS	16MF	1 (25.4)	0.438 (11.1)	43,000 (2,965)	38,700 (2,670)	35,830 (2,470)	32,480 (2,240)	31,050 (2,140)

All dimensions for reference only and are subject of change.

Coned and threaded nipples

Maximator offers a line of coned and threaded high pressure tube nipples in a variety of lengths for all standard tube sizes.

The coned and threaded high pressure tube nipples are available in 316 stainless steel. See chart below for ordering information.

Special length coned and threaded nipples are available upon request. Consult Maximator for availability and price.



Catalog Numbers are 316 Stainless Steel material Length in. (mm)				Fits Connection Type	Tube Size in. (mm)		Working Pressure at 100°F psi (bar)
6" (152.4)	8" (203.2)	10" (254)	12" (304.8)		O.D.	I.D.	
43N16M-6-316	43N16M-8-316	43N16M-10-316	43N16M-12-316	16MF	1 (25.4)	0.438 (11.1)	43,000 (2,965)

Standard nipples are not supplied with glands and collars, see Fittings on page 6 for these components. See adjacent Tubing information, for pressure/temperature rating chart.

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High Pressure Valves

» Pressures to 65,000 psi (4,500 bar)

Ordering Information
Typical catalog number:
65V6H073



High pressure valves

Maximator high pressure valves with metal to metal seats have a high level of safety and reliability under adverse operating conditions. These valves may be used both with gases and liquids.

Traceability is ensured through extensively documented data (batch number, max. pressure, material number, type designation). All high pressure valves include glands and collars.

65 V Valve Series	6H O.D. Tube Size	07 Stem Type	3 Body Pattern	Options
65 V	4H – 1/4"	07 – VEE stem	1 – two-way straight	Extreme
	6H – 3/8"	08 – REGULATING stem*	2 – two-way angle	temperature
	9H – 9/16"	87 – VEE stem with replaceable seat	3 – three-way, two on pressure	option, see
		88 – REGULATING stem with replaceable seat*	4 – three-way, one on pressure	information
			5 – three-way, two-stem manifold	below.

Options for High pressure valves

Special Designs for Extreme Temperatures

Standard valves are supplied with Teflon / Carbon packing and may be operated to 450°F (230°C). High temperature packing and / or extended stuffing box are available for service from -423°F to 1200°F (-252°C to 650°C) by adding the following suffixes to catalog order number.

- **TG** – standard valve with teflon glass packing to 600°F (315°C).

- **GY** – standard valve with graphite braided yarn packing to 800°F (425°C).
- **HT** – extended stuffing box valve with graphite braided yarn packing to 1200°F (650°C).
- **B** – standard valve with cryogenic trim materials and Teflon packing to -100°F (-73°C).
- **LT** – extended stuffing box valve with teflon packing and cryogenic trim materials to -423°F (-252°C).

O.D. Size in. (mm)	Connec- tion Type	Orifice Size in. (mm)	Rated Cv**	Pressure Rating @ R.T. psi (bar)***
1/4 (6.35)	4HF	0.062 (1.6)	0.08	65,000 (4,500)
3/8 (9.53)	6HF	0.062 (1.6)	0.09	65,000 (4,500)
9/16 (14.30)	9HF	0.078 (2)	0.14	65,000 (4,500)

Consult your MAXIMATOR representative for **repair kits** and valve bodies. Refer to the Technical Information section for proper maintenance procedures.

* tapered tip for regulating and shutoff

** Cv values shown are for 2-way straight pattern vee stem valves. For 2-way angle patterns, increase the Cv value by 50%.

*** See page 2 in the Technical Section for Pressure/Temperature Rating Chart.

Products for Sour
Gas Applications
Pipe Valves & Fittings
to 15,200 psi (1,050 bar)

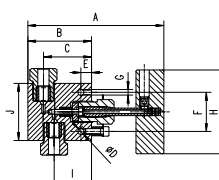
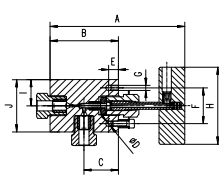
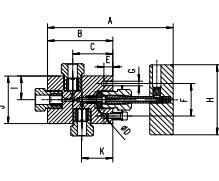
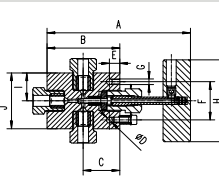
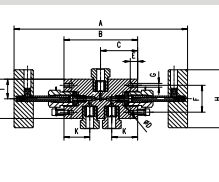
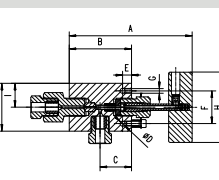
Adapters and
Couplings
Medium Pressure
to 22,500 psi (1,550 bar)

Accessories
High Pressure
to 65,000 psi (4,500 bar)

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Ultra High Pressure
to 152,000 psi (10,500 bar)

Technical
Information
Valve Actuators

Customized
Solutions
Ball Valves
to 21,000 psi (1,500 bar)

Valve Pattern	Catalog Number	Stem Type	O.D. Tube in.	Orifice in. (mm)	Dimensions in. (mm)										Valve Panel Hole	Block Thick-ness
2-Way Straight																
	65V4H071	Vee	1/4	0.062	4.67	2.13	1.69	0.22	0.37	1.38	2.95	1.32	2.01		1.00	1.02
	65V4H081	Reg		(1,6)	(118.6)	(54.1)	(43)	(5.6)	(9.5)	(35)	(75)	(33.5)	(51)		(25.4)	(25.9)
	65V6H071	Vee	3/8	0.062	4.80	2.24	1.69	0.22	0.37	1.38	2.95	1.32	2.01		1.00	1.02
	65V6H081	Reg		(1,6)	(122)	(56.9)	(43)	(5.6)	(9.5)	(35)	(75)	(33.5)	(51)		(25.4)	(25.9)
	65V9H071	Vee	9/16	0.078	5.04	2.50	1.75	0.22	0.37	1.38	2.95	1.30	2.64		1.00	1.54
	65V9H081	Reg		(2)	(128)	(63.5)	(44.5)	(5.6)	(9.5)	(35)	(75)	(33)	(67)		(25.4)	(39.1)
2-Way Angle																
	65V4H072	Vee	1/4	0.062	4.96	2.38	1.34	0.22	0.37	1.38	2.95	1.00	2.01		1.00	1.02
	65V4H082	Reg		(1,6)	(126)	(60.5)	(34)	(5.6)	(9.5)	(35)	(75)	(25.4)	(51)		(25.4)	(25.9)
	65V6H072	Vee	3/8	0.062	5.16	2.62	1.32	0.22	0.37	1.38	2.95	1.00	2.01		1.00	1.02
	65V6H082	Reg		(1,6)	(131)	(66.5)	(33.5)	(5.6)	(9.5)	(35)	(75)	(25.4)	(51)		(25.4)	(25.9)
	65V9H072	Vee	9/16	0.078	5.35	2.80	1.32	0.22	0.37	1.38	2.95	1.32	2.64		1.00	1.54
	65V9H082	Reg		(2)	(136)	(71.1)	(33.5)	(5.6)	(9.5)	(35)	(75)	(33.5)	(67)		(25.4)	(39.1)
3-Way / 2 on Pressure																
	65V4H073	Vee	1/4	0.062	4.96	2.38	1.69	0.22	0.37	1.38	2.95	1.00	2.01	1.12	1.00	1.02
	65V4H083	Reg		(1,6)	(126)	(60.5)	(43)	(5.6)	(9.5)	(35)	(75)	(25.4)	(51)	(28.5)	(25.4)	(25.9)
	65V6H073	Vee	3/8	0.062	5.33	2.76	1.69	0.22	0.37	1.38	2.95	1.00	2.01	1.12	1.00	1.02
	65V6H083	Reg		(1,6)	(133.5)	(70.1)	(43)	(5.6)	(9.5)	(35)	(75)	(25.4)	(51)	(28.5)	(25.4)	(25.9)
	65V9H073	Vee	9/16	0.078	5.71	3.15	1.75	0.22	0.37	1.38	2.95	1.32	2.64	1.12	1.00	1.54
	65V9H083	Reg		(2)	(145)	(80)	(44.5)	(5.6)	(9.5)	(35)	(75)	(33.5)	(67)	(28.5)	(25.4)	(39.1)
3-Way / 1 on Pressure																
	65V4H074	Vee	1/4	0.062	4.96	2.38	1.32	0.22	0.37	1.38	2.95	1.00	2.01		1.00	1.02
	65V4H084	Reg		(1,6)	(126)	(60.5)	(33.5)	(5.6)	(9.5)	(35)	(75)	(25.4)	(51)		(25.4)	(25.9)
	65V6H074	Vee	3/8	0.062	5.16	2.62	1.32	0.22	0.37	1.38	2.95	1.00	2.01		1.00	1.02
	65V6H084	Reg		(1,6)	(131)	(66.5)	(33.5)	(5.6)	(9.5)	(35)	(75)	(25.4)	(51)		(25.4)	(25.9)
	65V9H074	Vee	9/16	0.078	5.35	2.80	1.32	0.22	0.37	1.38	2.95	1.32	2.64		1.00	1.54
	65V9H084	Reg		(2)	(136)	(71.1)	(33.5)	(5.6)	(9.5)	(35)	(75)	(33.5)	(67)		(25.4)	(39.1)
3-Way / 2-Stem Manifold																
	65V4H075	Vee	1/4	0.062	8.56	3.44	1.72	0.22	0.37	1.38	2.95	1.00	2.01	1.12	1.00	1.02
	65V4H085	Reg		(1,6)	(217.4)	(87.4)	(43.7)	(5.6)	(9.5)	(35)	(75)	(25.4)	(51)	(28.5)	(25.4)	(25.9)
	65V6H075	Vee	3/8	0.062	8.56	3.76	1.89	0.22	0.37	1.38	2.95	1.00	2.01	1.12	1.00	1.02
	65V6H085	Reg		(1,6)	(217.4)	(95.5)	(48)	(5.6)	(9.5)	(35)	(75)	(25.4)	(51)	(28.5)	(25.4)	(25.9)
	65V9H075	Vee	9/16	0.078	9.25	4.13	2.07	0.22	0.37	1.38	2.95	1.32	2.64	1.12	1.00	1.54
	65V9H085	Reg		(2)	(235)	(105)	(52.6)	(5.6)	(9.5)	(35)	(75)	(33.5)	(67)	(28.5)	(25.4)	(39.1)
2-Way Angle / Replaceable Seat																
	65V4H872	Vee	1/4	0.062	5.16	2.62	1.32	0.22	0.37	1.38	2.95	1.00	2.01		1.00	1.02
	65V4H882	Reg		(1,6)	(131)	(66.5)	(33.5)	(5.6)	(9.5)	(35)	(75)	(25.4)	(51)		(25.4)	(25.9)
	65V6H872	Vee	3/8	0.062	5.16	2.62	1.32	0.22	0.37	1.38	2.95	1.00	2.01		1.00	1.02
	65V6H882	Reg		(1,6)	(131)	(66.5)	(33.5)	(5.6)	(9.5)	(35)	(75)	(25.4)	(51)		(25.4)	(25.9)
	65V9H872	Vee	9/16	0.078	5.16	2.62	1.32	0.22	0.37	1.38	2.95	1.32	2.64		1.00	1.54
	65V9H882	Reg		(2)	(131)	(66.5)	(33.5)	(5.6)	(9.5)	(35)	(75)	(33.5)	(67)		(25.4)	(39.1)

G - Panel mounting screw thread size 10-24 UNC (screw included). All dimensions are for reference only and are subject to change.

All technical and dimensional information subject to change. All general Terms and Conditions of sale, including limitations of our liability, apply to all products and services sold.

High Pressure Fittings

» Pressures to 65,000 psi (4,500 bar)

High pressure fittings

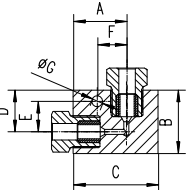
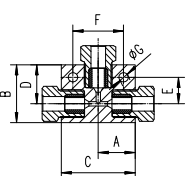
Maximator high pressure fittings are designed to be used with the 36V and 65V series high pressure valves and high pressure tubing. All high pressure fittings have coned and threaded type connections. Mounting holes are standard on all elbows, tees and crosses.



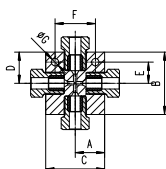
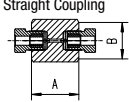
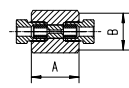
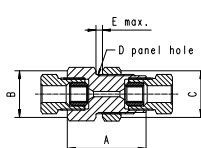
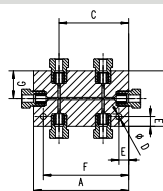
Tubing Size	Gland	Collar	Plug	Tubing Cap
1/4	65G4H	65C4H	65P4H	65TC4H
3/8	65G6H	65C6H	65P6H	65TC6H
9/16	65G9H	65C9H	65P9H	65TC9H

Connection Components

All high pressure fittings are supplied with glands and collars. Refer to the adjacent chart for ordering any of the connection components individually. When using the plug, the collar is not needed.

Fitting Pattern	Catalog Number	Connection Type	O.D. Tube Size in.	Orifice in. (mm)	Dimensions in. (mm)							Block Thick-ness
					A	B	C	D	E	F	G	
Elbow												
	65L4H	4HF	1/4	0.094 (2.3)	0.89 (22.6)	1.02 (25.9)	1.54 (39.1)	0.63 (16)	0.46 (11.7)	0.65 (16.5)	0.22 (5.6)	1.02 (25.9)
	65L6H	6HF	3/8	0.125 (3.2)	1.26 (32)	1.50 (38.1)	2.01 (51)	0.98 (24.9)	0.72 (18.3)	0.69 (17.5)	0.26 (6.6)	1.02 (25.9)
	65L9H	9HF	9/16	0.188 (4.8)	1.89 (48)	1.89 (48)	2.64 (67)	1.10 (28)	0.83 (21.1)	0.94 (23.9)	0.33 (8.4)	1.54 (39.1)
Tee												
	65T4H	4HF	1/4	0.094 (2.3)	1.00 (25.4)	1.26 (32)	2.01 (51)	0.89 (22.6)	0.46 (11.7)	1.30 (33)	0.22 (5.6)	1.02 (25.9)
	65T6H	6HF	3/8	0.125 (3.2)	1.00 (25.4)	1.57 (39.9)	2.01 (51)	1.06 (26.9)	0.72 (18.3)	1.38 (35)	0.26 (6.6)	1.02 (25.9)
	65T9H	9HF	9/16	0.188 (4.8)	1.32 (33.5)	2.13 (54.1)	2.64 (67)	1.38 (35)	0.83 (21.1)	1.89 (48)	0.33 (8.4)	1.54 (39.1)

See page 2 in the Technical Section for pressure/temperature rating chart. All dimensions are for reference only and are subject to change.

Fitting Pattern	Catalog Number	Connection Type	O.D. Tube Size in.	Orifice in. (mm)	Dimensions in. (mm)							Block Thickness
Cross												
	65X4H	4HF	1/4	0.094 (2.3)	1.00 (25.4)	1.26 (32)	2.01 (51.1)	0.63 (16)	0.46 (11.7)	1.30 (33)	0.22 (5.6)	1.02 (25.9)
	65X6H	6HF	3/8	0.125 (3.2)	1.00 (25.4)	2.13 (54.1)	2.01 (51.1)	1.06 (27)	0.72 (18.3)	1.38 (35)	0.26 (6.6)	1.02 (25.9)
	65X9H	9HF	9/16	0.188 (4.8)	1.32 (33.5)	2.76 (70.1)	2.64 (67)	1.38 (35)	0.83 (21.1)	1.89 (48)	0.33 (8.4)	1.54 (39.1)
Straight Coupling / Union Coupling												
<div><div>Straight Coupling</div><div>Union Coupling</div></div>	65F4H	4HF	1/4	0.094 (2.3)	1.38 (35)	1.06 (27)	Straight Coupling					
	65UF4H						Union Coupling					
	65F6H	6HF	3/8	0.125 (3.2)	1.77 (45)	1.06 (27)	Straight Coupling					
	65UF6H						Union Coupling					
	65F9H	9HF	9/16	0.188 (4.8)	2.19 (55.6)	1.44 (36.6)	Straight Coupling					
	65UF9H						Union Coupling					
Bulkhead Coupling												
	65BF4H	4HF	1/4	0.094 (2.3)	1.89 (48)	1.06 (27)	1.06 (27)	0.94 (23.9)	0.16 (4)			
	65BF6H	6HF	3/8	0.125 (3.2)	2.38 (60.5)	1.44 (36.5)	1.44 (36.5)	1.12 (28.5)	0.35 (8.9)			
	65BF9H	9HF	9/16	0.188 (4.8)	2.76 (70.1)	1.63 (41.3)	1.63 (41.3)	1.43 (36.3)	0.67 (17)			
Manifold Block												
	65MB64H	4HF	1/4	0.094 (2.3)	3.44 (87.5)	2.01 (51.1)	2.52 (64)	0.22 (5.5)	0.35 (8.9)	3.09 (78.5)	1.0 (25.5)	1.02 (25.9)
	65MB66H	6HF	3/8	0.125 (3.2)	3.76 (95.5)	2.01 (51.1)	2.66 (67.5)	0.26 (6.5)	0.35 (8.9)	3.41 (86.5)	1.0 (25.5)	1.02 (25.9)
	65MB69H	9HF	9/16	0.188 (4.8)	5.12 (130)	2.64 (67)	3.74 (95)	0.33 (8.5)	0.37 (9.5)	4.74 (120.5)	1.32 (33.5)	1.54 (39.1)

See page 2 in the Technical Section for pressure/temperature rating chart.
All dimensions are for reference only and are subject to change.

Anti-Vibration Collet Gland Assembly

» Pressures to 65,000 psi (4,500 bar)

Anti-vibration collet gland assemblies

Maximator anti-vibration collet gland assemblies are for use in applications where there could be extreme external mechanical vibrations or shock in tubing lines. These collet gland assemblies are interchangeable with the standard high pressure coned and threaded tube connections.

In a normal coned and threaded tube connection, any external mechanical loading on the tubing lines, valves or fittings, would be concentrated on the first thread of the tube. This can cause failure of the tube at this thinner cross-section. The anti-vibration collet gland assembly grips the tube behind the connection, supporting the tube at the full cross-section and straight area, moving the loading away from the threaded area.

The anti-vibration collet gland assembly, when tightened properly, compresses a split collet on the tube, providing the beneficial gripping action. All anti-vibration collet gland assemblies come with a Molybdenum Disulfide Coating to guard against galling of the stainless components.



Gland Pattern	Catalog Number	Part	O.D. Tubing Size in.	Dimensions in. (mm)	
				A	B (Hex.)
	65AVA4H	Complete Assembly	1/4	0.83 (21.1)	0.62 (15.7)
	65AVFC4H	Flat Collar			
	65AVC4H	Slotted Collet			
	65AVG4H	Gland Nut			
	65AVA6H	Complete Assembly	3/8	1.16 (29.5)	0.81 (20.6)
	65AVFC6H	Flat Collar			
	65AVC6H	Slotted Collet			
	65AVG6H	Gland Nut			
	65AVA9H	Complete Assembly	9/16	1.50 (38)	1.19 (30.2)
	65AVFC9H	Flat Collar			
	65AVC9H	Slotted Collet			
	65AVG9H	Gland Nut			

All dimensions are for reference only and are subject to change.

Check Valves

» Pressures to 65,000 psi (4,500 bar)

O-Ring Check Valves

Maximator O-Ring Check Valves provide high quality directional flow control and tight shut-off for liquids and gases. All Check Valves are supplied with glands and collars. These Check Valves are not to be used as a relief device. The opening pressure of the O-Ring Check Valves is approx. 20 psi (1.5 bar).

- » **Materials:**
Body, cover, poppet, cover gland: 316 stainless steel
Spring: 300 series stainless steel
O-Ring: FKM "A" [-4°F to 392°F(-20°C to 200°C)]

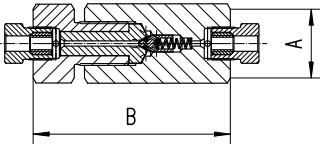
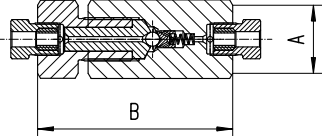


Ball Check Valves

Maximator Ball Check Valves prevent reverse flow where bubble tight shut-off is not mandatory. These Check Valves are designed with a ball cradled floating poppet to assure positive inline seating. This poppet design allows full flow around the ball to minimize pressure drop. Check Valves are rated to 660°F. (350°C). All Check Valves are supplied with glands and collars. These Check Valves are not to be used as a relief device. The opening pressure of the Ball Check Valves is approx. 20 psi (1.5 bar).

- » **Materials:**
Body, cover, poppet, cover gland: 316L series stainless steel
Ball and Spring: 300 series stainless steel



Valve Pattern	Catalog Number	Connection Type	Pressure Rating psi (bar)	Orifice in. (mm)	Rated (Cv)	Dimensions in. (mm)	
						A (Hex.)	B
O-Ring Check Valves							
	650C4H	4HF	65,000 (4,500)	0.094 (2.3)	0.15	1.19 (30.2)	3.40 (86.4)
	650C6H	6HF	65,000 (4,500)	0.125 (3.2)	0.28	1.19 (30.2)	3.81 (96.8)
	650C9H	9HF	65,000 (4,500)	0.188 (4.8)	0.63	1.63 (41.4)	4.61 (117.1)
Ball Check Valves							
	65BC4H	4HF	65,000 (4,500)	0.094 (2.3)	0.15	1.19 (30.2)	3.40 (86.4)
	65BC6H	6HF	65,000 (4,500)	0.125 (3.2)	0.28	1.19 (30.2)	3.81 (96.8)
	65BC9H	9HF	65,000 (4,500)	0.188 (4.8)	0.63	1.63 (41.4)	4.61 (117.1)

CAUTION: FREQUENT INSPECTIONS of O-Rings are necessary to ensure proper service of the check valve. O-Rings have shown satisfactory service life in testing, however different service conditions may lead to variations in cycle and shelf life. All dimensions are for reference only and subject to change.

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Line Filters

» Pressures to 65,000 psi (4,500 bar)

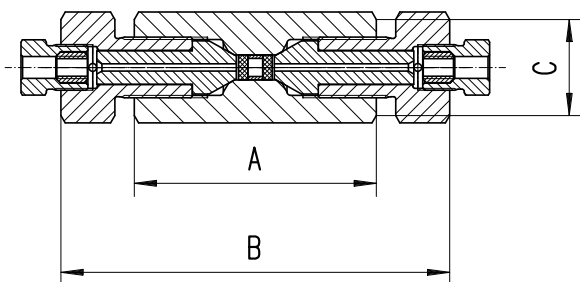
Dual-Disc Line Filters

Maximator Dual-Disc Line Filters are used to filter process fluids in high pressure systems. This design helps remove the large particles first through a coarse primary disc, which then allows a secondary disc to provide a smaller micron filtration. These filter elements are designed to withstand pressure surges without cracking, flaking, or rupturing. Filter elements come standard in the following micron sizes: 5/8, 8/30, 30/56 (secondary/primary). Filters are rated for temperatures from -423°F to 660°F **(-252°C to 350°C)**. All Line Filters come with glands and collars.

» Materials:

Body, cover, cover gland: 316 series stainless steel

Element: 316 series stainless steel



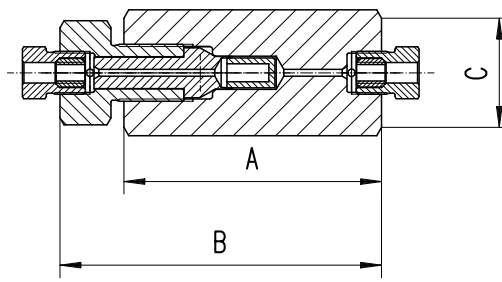
Cup-Type Line Filters

Maximator Cup-Type Line Filters are used when maximum filtration surface area and a single micron size element is preferred. This design increases the filter area as much as 6 times the area of the disc type filter, and will permit higher flow rates with a lower pressure drop, and longer intervals between element changes. Filter elements come standard in 5, 30, or 56 micron sizes and are easily replaced. Filters are rated for temperatures from -423°F to 660°F **(-252°C to 350°C)**. All line filters come with glands and collars.

» Materials:

Body, cover, cover gland: 316 series stainless steel

Element: 316 series stainless steel



Catalog Number	Pressure Rating psi (bar)	Orifice in. (mm)	Micron Size	Connection Type	Filter Element Area in. ² (mm) ²	Dimensions in. (mm)		
Dual-Disc Line Filters								
65DF4H-5/8	65,000 (4,500)	0.094 (2.3)	5/8	4HF	0.07 (50)	2.99 (76)	4.8 (121.9)	1.19 (30.2)
65DF4H-8/30			8/30					
65DF4H-30/56			30/56					
65DF6H-5/8	65,000 (4,500)	0.125 (3.2)	5/8	6HF	0.07 (50)	2.99 (76)	5.29 (134.4)	1.19 (30.2)
65DF6H-8/30			8/30					
65DF6H-30/56			30/56					
65DF9H-5/8	65,000 (4,500)	0.188 (4.8)	5/8	9HF	0.15 (95)	3.39 (86.1)	5.75 (146)	1.44 (36.6)
65DF9H-8/30			8/30					
65DF9H-30/56			30/56					
Cup-Type Line Filters								
65CF4H-5	65,000 (4,500)	0.094 (2.3)	5	4HF	0.82 (530)	3.39 (86.1)	4.25 (108)	1.44 (36.6)
65CF4H-30			30					
65CF4H-56			56					
65CF6H-5	65,000 (4,500)	0.125 (3.2)	5	6HF	0.82 (530)	3.39 (86.1)	4.44 (112.8)	1.44 (36.6)
65CF6H-30			30					
65CF6H-56			56					
65CF9H-5	65,000 (4,500)	0.188 (4.8)	5	9HF	0.82 (530)	4.06 (103.1)	5.28 (134.1)	1.63 (41.3)
65CF9H-30			30					
65CF9H-56			56					

It is recommended that all fluids entering a high pressure system be thoroughly cleaned.

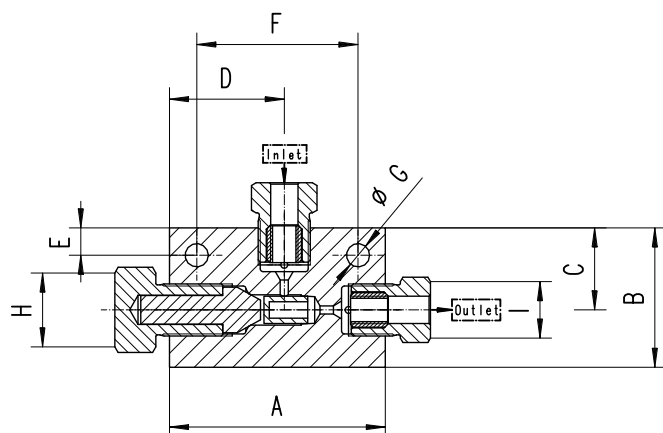
Maximator filters are designed to remove small amounts of process particles. Pressure differential should not exceed 1000 psi across the filter elements.

All dimensions for reference only and are subject to change.

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Angle Filters

» Pressures to 65,000 psi (4,500 bar)



Angle Filters

Maximator angle filters are used to filter gases or liquids in high pressure systems. The filter elements can be easily changed in-situ. The special design allows the exchange of the filter element without the need to first disassemble the filter in front of the tubing. Filter elements are made of sintered material with pore sizes of 5 µm, 30 µm or 56 µm. Filters are rated for temperatures from -423°F to 660°F **(-252°C to 350°C)**. All angle filters come with glands and collars.

» Material:

Body, cover, cover gland: 316L series stainless steel

Element: 316 stainless steel

Catalog Number	Pressure Rating psi (bar)	Orifice in. (mm)	Connection Type	Micron Size	Filter Element Areas in. ² (mm ²)	Dimensions in. (mm)										Block thickness
Angle Filter																
65AF4H-5	65,000 (4,500)	0.094 (2.3)	4H	5	0.82 (530)	2.80 (71)	2.01 (51)	1.18 (30)	1.65 (42)	0.39 (10)	2.01 (51)	0.34 (8.5)	1.06 (27)	0.63 (15.9)	1.02 (26)	
65AF4H-30				30												
65AF4H-56				56												
65AF6H-5	65,000 (4,500)	0.125 (3.2)	6H	5	0.82 (530)	3.11 (79)	2.01 (51)	1.18 (30)	1.65 (42)	0.39 (10)	2.32 (59)	0.34 (8.5)	1.06 (27)	0.81 (20.7)	1.02 (26)	
65AF6H-30				30												
65AF6H-56				56												
65AF9H-5	65,000 (4,500)	0.188 (4.8)	9H	5	0.82 (530)	3.23 (82)	2.64 (67)	1.32 (33.5)	1.65 (42)	0.39 (10)	2.44 (62)	0.34 (8.5)	1.06 (27)	1.19 (30.2)	1.54 (39)	
65AF9H-30				30												
65AF9H-56				56												

It is recommended that all fluids entering a high pressure system be thoroughly cleaned.

Maximator filters are designed to remove small amounts of process particles. Pressure differential should not exceed 1000 psi across the filter elements.

All dimensions for reference only and are subject to change.

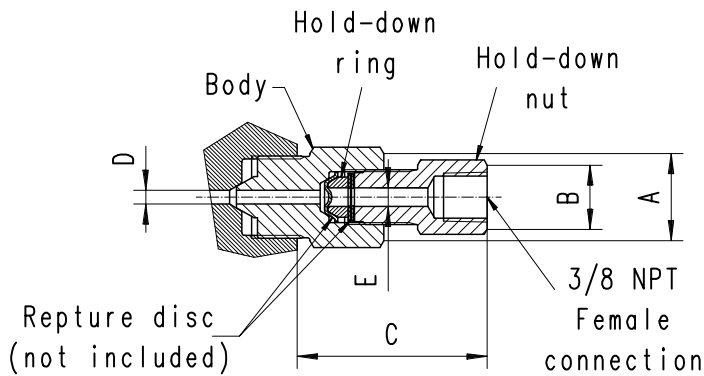
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Safety Head Assembly

» Pressures to 65,000 psi (4,500 bar)

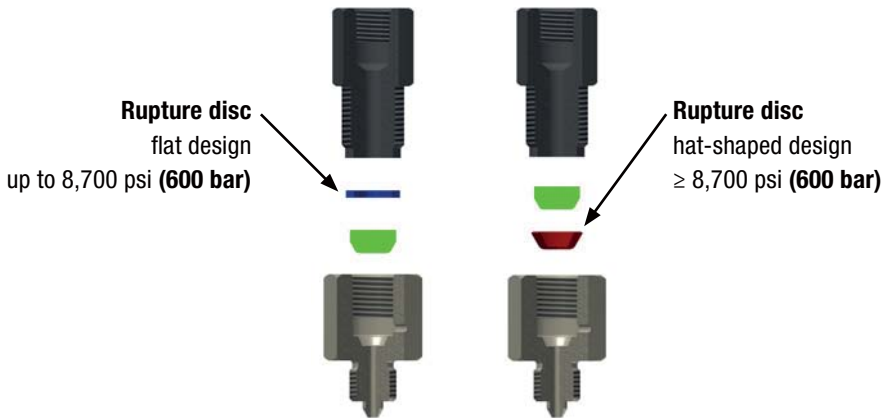
Safety head assemblies

Maximator safety head assemblies are used to provide over-pressure protection to high pressure systems. These safety head assemblies are to be used with the appropriate 1/4" angular rupture disc listed in the chart below.



Safety Head Assembly Catalog Number without Disc	Fits Connection Type	Pressure Rating psi (bar)	Body Torque ft - lbs. (Nm)	Dimensions in. (mm)				
				A (Hex.)	B (Hex.)	C (LG.)	D (I.D.)	E (I.D.)
65SH4H	4HF	65,000 (4,500)	25 (35)	1.06 (26.9)	0.88 (22.4)	2.57 (65.3)	0.083 (2.31)	0.250 (6.3)
65SH6H	6HF	65,000 (4,500)	50 (70)	1.06 (26.9)	0.88 (22.4)	2.54 (64.5)	0.125 (3.2)	0.250 (6.3)
65SH9H	9HF	65,000 (4,500)	110 (150)	1.19 (30.2)	0.88 (22.4)	2.48 (63)	0.188 (4.7)	0.250 (6.3)

All dimensions for reference only and are subject of change



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Products for Sour Gas Applications

Pipe Valves & Fittings
to 15,200 psi (1,050 bar)

Adapters and Couplings

Medium Pressure
to 22,500 psi (1,550 bar)

Accessories

High Pressure
to 65,000 psi (4,500 bar)

Tools

Ultra High Pressure
to 152,000 psi (10,500 bar)

Technical Information

Valve Actuators

Customized Solutions

Ball Valves
to 21,000 psi (1,500 bar)

Rupture Discs

» Pressures to 65,000 psi (4,500 bar)

1/4" Rupture discs

1/4" angular and flat seat rupture discs are designed to be used with the safety head assemblies that are shown on page 18. Minimum rupture disc pressure ratings should be at least 110% of system operating pressure. The standard material is stainless steel. The pressure ranges indicated in the table below are at room temperature (72°F). Other materials and pressure ranges are available upon request.

Catalog Number	Pressure range psi (bar)	Catalog Number	Pressure range psi (bar)	Catalog Number	Pressure range psi (bar)	Catalog Number	Pressure range psi (bar)
RD-1200	1,164 - 1,272 (80.3 - 87.7)	RD-7000	6,790 - 7,420 (468.3 - 511.7)	RD-17000	16,490 - 18,020 (1,137.2 - 1,242.8)	RD-30000	29,100 - 31,800 (2,006.9 - 2,193.1)
RD-1500	1,455 - 1,590 (99.7 - 109.7)	RD-7500	7,275 - 7,950 (501.7 - 548.3)	RD-18000	17,460 - 19,080 (1,204.1 - 1,315.9)	RD-32500	31,525 - 34,450 (2,174.1 - 2,375.9)
RD-1750	1,697 - 1,855 (117 - 127.9)	RD-8000	7,760 - 8,480 (535.2 - 584.8)	RD-19000	18,430 - 20,140 (1,271 - 1,389)	RD-35000	33,950 - 37,100 (2,341.4 - 2,558.6)
RD-2000	1,940 - 2,120 (133.8 - 146.2)	RD-8500	8,245 - 9,010 (568.6 - 621.4)	RD-20000	19,400 - 21,200 (1,337.9 - 1,462.1)	RD-37500	36,375 - 39,750 (2,508.6 - 2,741.4)
RD-2500	2,425 - 2,650 (167.2 - 182.8)	RD-9000	8,730 - 9,540 (602.1 - 657.9)	RD-21000	20,370 - 22,260 (1,404.8 - 1,535.2)	RD-40000	38,880 - 42,400 (2,681.4 - 2,924.1)
RD-3000	2,910 - 3,180 (200.7 - 219.3)	RD-9500	9,215 - 10,070 (635.5 - 694.5)	RD-22000	21,340 - 23,320 (1,471.7 - 1,608.3)	RD-42500	41,255 - 45,050 (2,845.2 - 3,106.9)
RD-3500	3,395 - 3,710 (234.1 - 255.9)	RD-10000	9,700 - 10,600 (669 - 731)	RD-23000	22,310 - 24,380 (1,538.6 - 1,681.4)	RD-45000	43,650 - 47,700 (3,010.3 - 3,289.7)
RD-4000	3,880 - 4,240 (267.6 - 292.4)	RD-11000	10,670 - 11,660 (735.9 - 804.1)	RD-24000	23,280 - 25,440 (1,605.5 - 1,754.5)	RD-47500	46,075 - 50,350 (3,177.6 - 3,472.4)
RD-4500	4,365 - 4,770 (301 - 329)	RD-12000	11,640 - 12,720 (802.8 - 877.2)	RD-25000	24,250 - 26,500 (1,672.4 - 1,827.6)	RD-50000	48,500 - 53,000 (3,344.8 - 3,655.2)
RD-5000	4,850 - 5,300 (334.5 - 365.5)	RD-13000	12,610 - 13,780 (869.7 - 950.3)	RD-26000	25,220 - 27,560 (1,739.3 - 1,900.7)	RD-55000	53,350 - 58,300 (3,679.3 - 4,020.7)
RD-5500	5,335 - 5,830 (367.9 - 402.1)	RD-14000	13,580 - 14,840 (936.6 - 1,023.4)	RD-27000	26,190 - 28,620 (1,806.2 - 1,973.8)	RD-60000	58,200 - 63,600 (4,013.8 - 4,386.2)
RD-6000	5,820 - 6,360 (401.4 - 438.6)	RD-15000	14,550 - 15,900 (1,003.4 - 1,096.6)	RD-28000	27,160 - 29,680 (1,873.1 - 2,046.9)	RD-67500	65,475 - 71,550 (4,515.5 - 4,934.5)
RD-6500	6,305 - 6,890 (434.8 - 475.2)	RD-16000	15,520 - 16,960 (1,070.3 - 1,169.7)	RD-29000	28,130 - 30,740 (1,940 - 2,120)	RD-70000	67,900 - 74,200 (4,682.8 - 5,117.2)

Rupture Discs are individually packed and marked type plate.



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Relief Valves

» Pressures to 65,000 psi (4,500 bar)

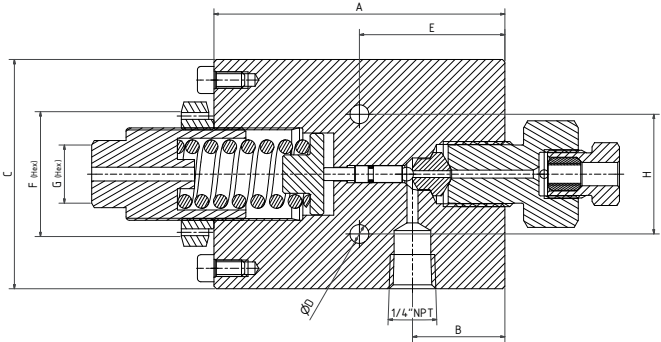
Relief Valves

Maximator High Pressure Relief Valves with metal seat provide reliable venting of liquids for set pressure from 14,500 psi (1.000 bar) up to 65,000 psi (4,500 bar). The relief valves are intended to be used as an adjustable pressure relief device actuated by inlet static pressure having a gradual lift generally proportional to the increase in pressure over opening pressure.

All relief valves are ATEX (CE Ex II 2D/2G IIC c TX) approved, have a 1/4" NPT relief connection, are equipped with a replaceable seat and come with glands and collars.

Materials:

- Body, double cone: 316 stainless steel
- Spring: 300 series stainless steel
- O-ring: FKM "A" [-4°F to 392°F (-20°C to 200°C)]



Catalog Number	Pressure Rating psi (bar)	Pressure Range min./max. psi (bar)	Orifice in. (mm)	Connection Type	Dimensions in. (mm)								Block thick- ness
					A	B	C	D	E	F (Hex.)	G (Hex.)	H	
36RV4H	36,000 (2,500)	14,500 / 36,000 (1,000 / 2,500)	0,08 (2.0)	4HF	3.35 (85)	1.06 (27)	2.64 (67)	0.28 (5.5)	1.67 (42.5)	1.44 (36.5)	0.67 (17)	1.38 (35)	1.54 (39)
36RV6H	36,000 (2,500)	14,500 / 36,000 (1,000 / 2,500)	0,08 (2.0)	6HF	3.35 (85)	1.06 (27)	2.64 (67)	0.28 (5.5)	1.67 (42.5)	1.44 (36.5)	0.67 (17)	1.38 (35)	1.54 (39)
65RV4H	65,000 (4,500)	29,000 / 65,000 (2,000 / 4,500)	0,06 (1.5)	4HF	3.35 (85)	1.06 (27)	2.64 (67)	0.28 (5.5)	1.67 (42.5)	1.44 (36.5)	0.67 (17)	1.38 (35)	1.54 (39)
65RV6H	65,000 (4,500)	29,000 / 65,000 (2,000 / 4,500)	0,06 (1.5)	6HF	3.35 (85)	1.06 (27)	2.64 (67)	0.28 (5.5)	1.67 (42.5)	1.44 (36.5)	0.67 (17)	1.38 (35)	1.54 (39)

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Products for Sour
Gas Applications
Pipe Valves & Fittings
to 15,200 psi (1,050 bar)

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to 65,000 psi (4,500 bar)

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to 152,000 psi (10,500 bar)

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High Pressure Tubing

» Pressures to 65,000 psi (4,500 bar)

High Pressure Tubing

Maximator offers a line of cold drawn thick wall tubing, with flow areas to compliment the high pressure valves and fittings. This tubing is made under strict manufacturing and quality control standards and inspections, with dimensional tolerances to match the requirements of the high pressure coned and threaded connections.

The standard materials are 304 and 316 stainless steels. Other materials may be provided on special request, depending on the specific material, diameters and lengths.

Tubing Tolerances

Normal Tubing Size in. (mm)	Tolerance O.D in. (mm)
1/4 (6.35)	0.248 / 0.243 (6.299 / 6.172)
3/8 (9.53)	0.370 / 0.365 (9.398 / 9.271)
9/16 (14.29)	0.557 / 0.552 (14.147 / 14.021)



Catalog Number	Tube Material	Fits Connection Type	Tube Size in. (mm)		Working Pressure psi (bar)				
			O.D.	I.D.	-325°F to 100°F (-198°C to 37°C)	200°F (93°C)	400°F (204°C)	600°F (315°C)	800°F (426°C)
65TU4H-316	316SS	4HF	1/4 (6.35)	0.083 (2.11)	65,000 (4,500)	58,500 (4,050)	53,950 (3,750)	49,400 (3,400)	46,800 (3,250)
65TU4H-304	304SS								
65TU6H-316	316SS	6HF	3/8 (9.53)	0.125 (3.18)	65,000 (4,500)	58,500 (4,050)	53,950 (3,750)	49,400 (3,400)	46,800 (3,250)
65TU6H-304	304SS								
65TU9H-316	316SS	9HF	9/16 (14.29)	0.188 (4.77)	65,000 (4,500)	58,500 (4,050)	53,950 (3,750)	49,400 (3,400)	46,800 (3,250)
65TU9H-304	304SS								

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Products for Sour
Gas Applications

Pipe Valves & Fittings
to 15,200 psi (1,050 bar)

Medium Pressure
to 22,500 psi (1,550 bar)

Adapters and
Couplings

Accessories

High Pressure
to 65,000 psi (4,500 bar)

Tools

Ultra High Pressure
to 152,000 psi (10,500 bar)

Technical
Information

Valve Actuators

Customized
Solutions

Ball Valves
to 21,000 psi (1,500 bar)

Coned and Threaded Nipples

» Pressures to 65,000 psi (4,500 bar)

Coned and threaded nipples

Maximator offers a line of coned and threaded high pressure tube nipples in a variety of lengths for all standard tube sizes.

The coned and threaded high pressure tube nipples are available in 316 stainless steel. See chart below for ordering information.

Special length coned and threaded nipples are available upon request. Consult Maximator for availability and price.



Catalog Numbers are 316 Stainless Steel material							Fits Con- nection Type	Tube Size in. (mm)		Working Pressure at 100°F psi (bar)
2.75" (69.85)	3" (76.2)	4" (101.6)	6" (152.4)	8" (203.2)	10" (254)	12" (304.8)		O.D.	I.D.	
65N4H-2.75-316	65N4H-3-316	65N4H-4-316	65N4H-6-316	65N4H-8-316	65N4H-10-316	65N4H-12-316	4HF	1/4	0.083 (2.11)	65,000 (4,500)
	65N6H-3-316	65N6H-4-316	65N6H-6-316	65N6H-8-316	65N6H-10-316	65N6H-12-316	6HF	3/8	0.125 (3.17)	65,000 (4,500)
		65N9H-4-316	65N9H-6-316	65N9H-8-316	65N9H-10-316	65N9H-12-316	9HF	9/16	0.188 (4.77)	65,000 (4,500)

Standard nipples are not supplied with glands and collars, see Fittings on page 6 for these components.
See adjacent Tubing page 21, for pressure/temperature rating chart.

All dimensions are for reference only and subject to change.