

MAXIMATOR®

Maximum Pressure.



High Pressure Technology • Testing Equipment
Hydraulics • Pneumatics



» Valves • Fittings • Tubing
Pressures to 217,000 psi (15,000 bar)

15,000 bar Valves, Fittings and Tubing

» Pressures to 217,000 psi (15,000 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.

217,000psi (15,000 bar) Valves, Fittings and Tubing feature:

- Pneumatic Actuated Needle Valves for safe pressure release in accordance with ISO 4113 (with MTTFd-values) with or without proximity switch.
- Fittings
- Tubing and Nipples.
- Adapter.
- Accessories.

MAXIMATOR offers a complete line of high pressure valves, fittings and tubing.

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

15,000 bar Valves, Fittings and Tubing Index	Page:
Pneumatic Actuated Needle Valves	3
Fittings	4
Tubing	5
Nipples	5
Adapter	6
Accessories	7

Pneumatic Actuated Needle Valves

» Pressures to 217,000 psi (15,000 bar)

Ultra High Pressure Pneumatic Actuated Needle Valves

Maximator ultra high pressure pneumatic actuated needle valves with metal to metal seats have a high level of safety and reliability under adverse operating conditions.

The pneumatic actuated needle valves are designed to be used for automatically relief pressure up to 217,000 psi (15,000 bar).

Technical Information

- **Maximum allowable working pressure for actuator:**

See table below

- **Maximum operation temperature range for actuator:**

-20°F to +200°F (-30°C to + 95°C)

- **Actuator material:** Anodized Aluminum

- **Air connection size:** 1/4BSP

- **Connection proximity switch:** M12 x 1, 4-pin



Valve Pattern	Catalog Number	A in. (mm)	B in. (mm)	C in. (mm)	D in. (mm)	E in. (mm)	F in. (mm)	G in. (mm)	H in. (mm)
	217V9X072-N0	8.13 (206.4)	3.46 (88)	6.69 (170)	2.64 (67)	8.91 (226.4)	0.33 (8.5)	2.42 (61.5)	1.77 (45)
	217V9X072-N0-PS (proximity switch)	8.13 (206.4)	3.46 (88)	6.69 (170)	2.64 (67)	11.06 (280.9)	0.33 (8.5)	2.42 (61.5)	1.77 (45)

Fittings and Check Valve

» Pressures to 217,000 psi (15,000 bar)

Ultra high pressure fittings and check valves

Maximator ultra high pressure fittings are designed to be used with the 217V series ultra high pressure pneumatic actuates valves and ultra high pressure tubing.

All ultra high pressure fittings have coned and threaded type connections and are not supplied with glands and collars. Mounting holes are standard on all elbows, tees, and crosses.



Tubing Size	Gland	Collar	Plug	Plug Cap	Cone
9/16	217G9X	217C9X	217P9X	217TC9X	217DC9X

Fitting Pattern	Catalog Number	Connection Type	O.D. Tube Size in.	Orifice in. (mm)	Dimensions in. (mm)							Block Thickness
					A	B	C	D	E	F	G	
Elbow												
	217L9X	9X	9/16	0.07 (1.8)	1.32 (33.5)	2.75 (70)	2.64 (67)	1.38 (35)	0.89 (22.5)	1.77 (45)	0.33 (8.5)	1.53 (39)
Tee												
	217T9X	9X	9/16	0.07 (1.8)	1.32 (33.5)	2.75 (70)	2.64 (67)	1.38 (35)	0.89 (22.5)	1.77 (45)	0.33 (8.5)	1.53 (39)
Cross												
	217X9X	9X	9/16	0.07 (1.8)	1.32 (33.5)	2.75 (70)	2.64 (67)	1.52 (35)	0.89 (22.5)	1.77 (45)	0.33 (8.5)	1.53 (39)
Coupling												
	217F9X	9X	9/16	0.07 (1.8)	2.04 (52)	1.42 (36)						
Check Valve												
	217BC9X	9X	9/16	0.07 (1.8)	7.09 (180)	1.61 (41)						

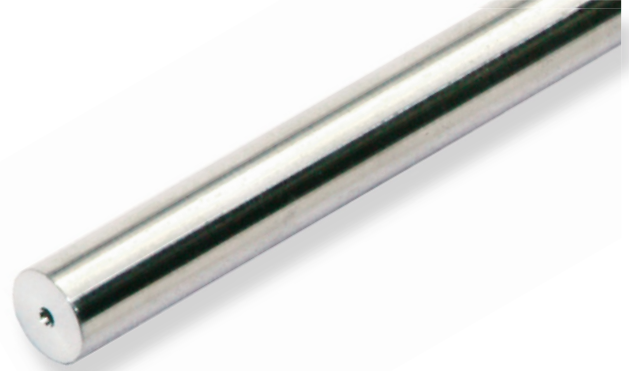
Ultra High Pressure Tubing and Nipple

» Pressures to 217,000 psi (15,000 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 material is HP 160 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)
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 to 100°F (-198°C to 37°C)	200°F (93°C)	400°F (204°C)	600°F (315°C)	800°F (426°C)
217TU9X-HP160	HP160	9XF	9/16 (14.29)	0.07 (1.8)	217,000 (15,000)	178,000 (12,270)	156,000 (10,750)	143,200 (9,870)	134,500 (9,270)

All dimensions for reference only and are subject of change.

Coned and threaded nipples

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

The coned and threaded ultra high pressure tube nipples are available in HP 160. 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 HP160 Stainless Steel material					Fits Connection Type	Tube Size in. (mm)		Working Pressure at 100°F psi (mm)
4" (101.6) Length	6" (152.4) Length	8" (203.2) Length	10" (254) Length	12" (304.8) Length		O.D.	I.D.	
217N9X-4-HP160	217N9X-6-HP160	217N9X-8-HP160	217N9X-10-HP160	217N9X-12-HP160	9X	9/16 (14.29)	0.07 (1.8)	217,000 (15,000)

Standard nipples are not supplied with glands and collars, see Fittings on page 2 for these components. See adjacent Tubing page 4, for pressure/temperature rating chart.

All dimensions are for reference only and subject to change.

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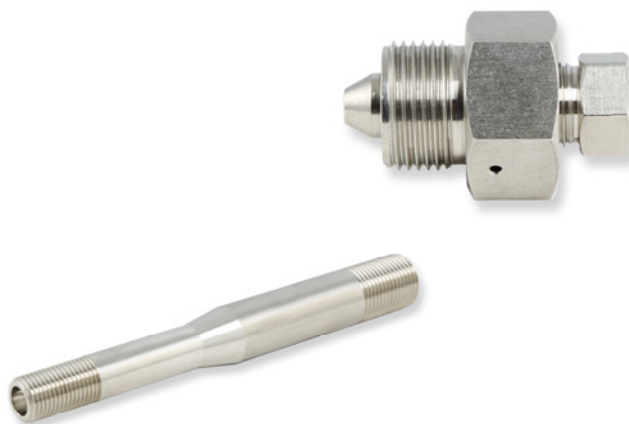
Adapter

» Pressures to 217,000 psi (15,000 bar)

Ultra high pressure adapter

Maximator male to female and male to male adapters allow the joining of male and female connections. The two connections can be a variety of tube or pipe connection types, with different size combinations possible.

All adapters are made of HP 160 stainless steel material; other materials are available upon request. Glands and collars are not included.



Adapter Pattern	Order Code	Working Pressure psi (bar)	Connection Type A	Connection Type B	Orifice in. Size in. (mm)	Dimensions in. (mm)		
						A	B	C
Male to Female								
	217A9X4H	101,000 (7,000)	9X	4H	0.094 (2.3)	2.05 (52)	1.19 (30.16)	
	217A9X6H	65,000 (4,500)	9X	6H	0.126 (3.2)	2.05 (52)	1.42 (36)	
	217A9X5U	152,000 (10,500)	9X	5U	0.071 (1.8)	2.05 (52)	1.19 (30.16)	
	217A9X6B	15,000 (1,050)	9X	6B	0.189 (4.8)	1.99 (50.5)	1.44 (36.51)	
Male to Male								
	217M9X12X	217,000 (15,000)	9X	12X	0.071 (1.8)	5.61 (150)	0.56 (14.3)	0.68 (17.32)

Accessories

» Pressures to 217,000 psi (15,000 bar)

Pressure Transducer

Maximator supplies robust and safe pressure transducers up to max. 217,000 psi (15,000 bar). Main features of the transducers are their high accuracy and good longevity.



Adapter for Pressure Transducer

Adapter Pattern	Adapter Connection		Order Code	Spare Double Cone
	A	B		
	9XM	M20 x 1.5 M	2508.0777	2508.1625
	9XM	M20 x 1.5 F	2508.0779	2508.1625
	9XF	M20 x 1.5 F	3508.9193	2508.1625

Catalog Number	Pressure Range psi (bar)	Connection Type	Accuracy Class
2503.4294	217,000 (15,000)	M20 x 1.5 F	0.5
3502.0839*	217,000 (15,000)	M20 x 1.5 M	0.75

* Evaluation electronics and connection cable need to be ordered separately. All dimensions for reference only and are subject of change.

Threading Tool

The threading tool comes complete with the threading die and bushing. The thread is left hand type. The thread die and the bushing can be changed for other sizes, while using the same base tool.



Tubing Size O.D. x I.D. in. (mm)	Tubing Pressure psi (bar) @ R.T.	Connection Type	Left Hand Thread Size (UNF class 2)	Threading Tool Complete Catalog Number	Replacement Part Information	
					Die Part Number	Bushing Part Number
9/16 x .07 (14.29 x 1.8)	217,000 (15,000)	9XM	9/16-18	TT9	3781.1060	3781.1054

Universal Fixture

The universal fixture is specifically designed for the assembly of ultra high pressure valves and fittings of the 217,000 psi (15,000 bar) series.



Fixture Pattern	Order Code	Dimensions in. (mm)			
		A	B	C	D
	2508.0167	3.15 (80)	1.77 (45)	0.98 (25)	0.33 (8.5)

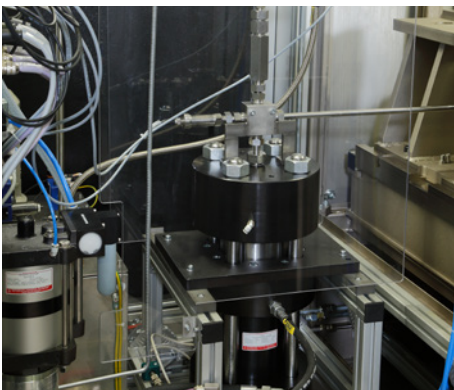
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Your partner for high-pressure and testing technology

As the technology leader in the area of high-pressure and testing technology, hydraulics and pneumatics up to 25,000 bar, Maximator GmbH, with its company headquarter in Nordhausen, has been extremely successful worldwide for more than five decades.

With our top services, we are a partner to well-known companies in the automobile and supplying industry, as well as the chemicals, plastic, oil and gas industry.

We give professional advice, plan projects and supply testing and manufacturing systems. We also develop special solutions and innovative systems for pressure generation precisely customised to the requirements of manufacturers.

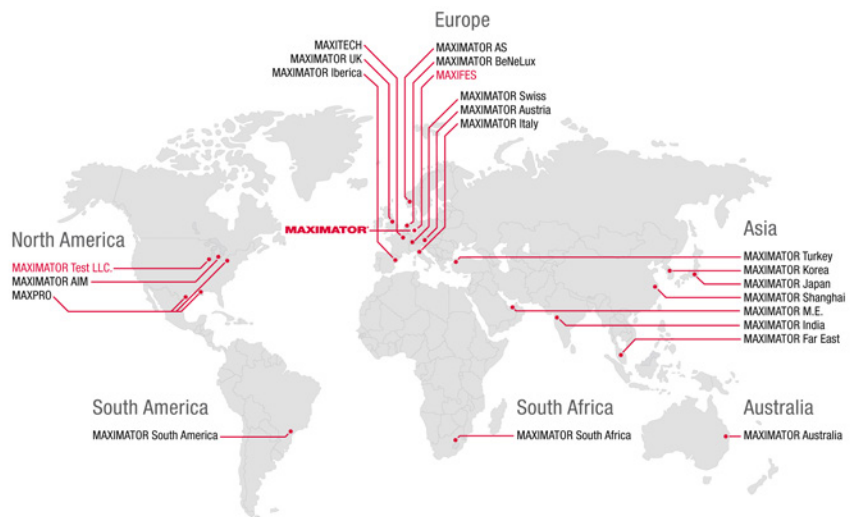


With our international partner companies, experienced experts in high-pressure technology are always ready to assist you. We have compiled detailed contact information for our international partners which you can find on our website at:

www.maximator.de/worldwide+distribution

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