



Ultra High Pressure Valves, Fittings and Tubing Pressures to 152,000 psi

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.

Ultra High Pressure Valves feature:

- ▶ Rising stem design.
- ▶ HP160 wetted parts with a 17-4 PH stem provides excellent corrosion resistance.
- ▶ Metal-to-metal seating achieves bubble-tight shut-off, longer stem and seat life and 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.
- ▶ Three different valve body patterns, with vee type stem tip.

MAXPRO offers a complete line of ultra high pressure valves, fittings and tubing. They come standard with ultra high pressure coned and threaded connections.

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

Ultra High Pressure Index

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Maxpro Technologies, Inc.
7728 Klier Drive South · Fairview Pennsylvania 16415
Phone: 814-474-9191 · Fax: 814-474-9391
website: www.maxprotech.com

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MT R7 Nov 2020

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MAXPRO Technologies

Printed in the USA

Ultra High Pressure Fittings

Pressures to 101,000 psi - 1/4" - 3/8" - 9/16" UHP Connection

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MAXIMATOR ultra high pressure fittings are designed to be used with the ultra high pressure tubing and coned and threaded nipples. All ultra high pressure fittings have coned and threaded type connections and are supplied with glands and collars. Mounting holes are standard on all elbows, tees, and crosses.



Tubing Size	Gland	Collar	Plug	Tubing Cap
1/4				
3/8				
9/16				

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	Conn. Type	O.D. Tube Size (in.)	Orifice (in.)	Dimensions (in.)							Block Thickness
					A	B	C	D	E	F	G	
Elbow												
	101L4U	4UF	1/4	0.094	0.89	1.02	1.54	0.63	0.46	0.65	0.22	1.02
	101L6U	6UF	3/8	0.125	1.26	1.50	2.01	0.98	0.72	0.69	0.26	1.02
	101L9U	9UF	9/16	0.188	1.89	1.89	2.64	1.10	0.83	0.94	0.33	1.54
Tee												
	101T4U	4UF	1/4	0.094	1.00	1.26	2.01	0.89	0.46	1.30	0.22	1.02
	101T6U	6UF	3/8	0.125	1.00	1.57	2.01	1.06	0.72	1.38	0.26	1.02
	101T9U	9UF	9/16	0.188	1.32	2.13	2.64	1.38	0.83	1.89	0.33	1.54
Cross												
	101X4U	4UF	1/4	0.094	1.00	1.26	2.01	0.63	0.46	1.30	0.22	1.02
	101X6U	6UF	3/8	0.125	1.00	2.13	2.01	1.06	0.72	1.38	0.26	1.02
	101X9U	9UF	9/16	0.188	1.32	2.76	2.64	1.38	0.83	1.89	0.33	1.54
Straight Coupling / Union Coupling												
	101F4U	4UF	1/4	0.094	1.38	1.06	Straight Coupling					
	101UF4U						Union Coupling					
	101F6U	6UF	3/8	0.125	1.77	1.06	Straight Coupling					
	101UF6U						Union Coupling					
	101F9U	9UF	9/16	0.188	2.19	1.44	Straight Coupling					
	101UF9U						Union Coupling					
Bulkhead Coupling												
	101BF4U	4UF	1/4	0.094	1.89	1.06	1.06	0.94	0.16			
	101BF6U	6UF	3/8	0.125	2.38	1.44	1.44	1.12	0.35			
	101BF9U	9UF	9/16	0.188	2.76	1.63	1.63	1.43	0.67			

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

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Ultra High Pressure Tubing & Threaded Nipples

Pressures to 101,000 psi - 1/4" - 3/8" - 9/16" UHP Connection

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

The standard material is HP160 stainless steel. Other materials may be provided on special request, depending on the specific material, diameters and lengths.



Tubing Tolerances

Normal Tubing Size (in.)	Tolerance O.D. (in.)
1/4	0.248/0.243
3/8	0.370/0.365
9/16	0.557/0.552

Catalog Number	Tube Material	Fits Connection Type	Tube Size (in.)		Working Pressure (psi)				
			O.D.	I.D.	-325 to 100°F	200°F	400°F	600°F	800°F
101TU4U-160	HP160	4UF	1/4	0.083	101,000	82,600	72,600	66,500	61,500
101TU6U-160	HP160	6UF	3/8	0.125	101,000	82,600	72,600	66,500	61,500
101TU9U-160	HP160	9UF	9/16	0.188	101,000	82,600	72,600	66,500	61,500

All dimensions are for reference only and subject to change.

Coned and Threaded Nipples

MAXPRO offers a line of coned and threaded ultra high pressure tube nipples in a variety of lengths.

The coned and threaded ultra high pressure tube nipples are available in HP160 stainless steel. See chart below for ordering information.

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



Catalog Numbers are HP160 Stainless Steel material							Fits Connection Type	Tube Size (in.)		Working Pressure at 100°F (psi)
2.75" Length	3" Length	4" Length	6" Length	8" Length	10" Length	12" Length		O.D.	I.D.	
101N4U-2.75-160	101N4U-3-160	101N4U-4-160	101N4U-6-160	101N4U-8-160	101N4U-10-160	101N4U-12-160	4UF	1/4	0.083	101,000
	101N6U-3-160	101N6U-4-160	101N6U-6-160	101N6U-8-160	101N6U-10-160	101N6U-12-160	6UF	3/8	0.125	101,000
		101N9U-4-160	101N9U-6-160	101N9U-8-160	101N9U-10-160	101N9U-12-160	9UF	9/16	0.188	101,000

Standard nipples are not supplied with glands and collars, see Fittings on page 2 for these components.

See the above chart for Pressure/Temperature Rating.

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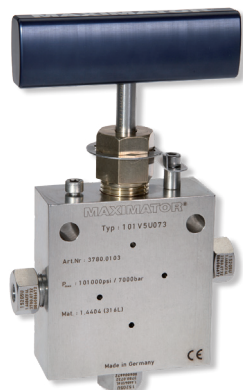
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Ultra High Pressure Valves

Pressures to 101,000 psi

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O.D. Size (in.)	Connection Type	Orifice Size (in.)	Rated Cv*	Pressure/Temp. Rating (psi @ R.T.)**
1/4	4UF	0.062	0.09	101,000
5/16	5UF	0.062	0.09	101,000
3/8	6UF	0.062	0.09	101,000
9/16	9UF	0.062	0.09	101,000

* 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.

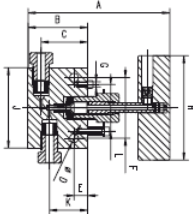
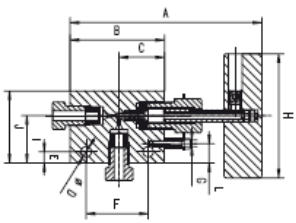
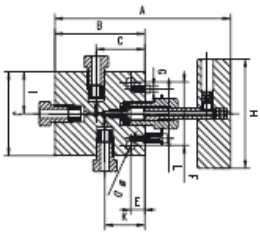
Ordering Information

Typical catalog number: **101V5U071**

101V	5U	07	1
Valve Series	O.D. Tube Size	Stem Type	Body Pattern
101V	4U - 1/4" 5U - 5/16" 6U - 3/8" 9U - 9/16"	07 - VEE stem	1 - two-way straight 2 - two-way angle 3 - three-way, two on pressure

Temperature Ranges

Standard valves are supplied with Teflon/Carbon packing and may be operated to 450°F. Consult **MAXPRO** for higher temperature packing ratings.

Valve Pattern	Catalog Number	Stem type	O.D. Tube (in.)	Orifice (in.)	Dimensions (in.)											Valve Panel Hole	Block Thickness
					A	B	C	D	E	F	H	I	J	K	L		
2-Way Straight																	
	101V4U071	Vee	1/4	0.062	5.34	2.24	1.75	0.34	0.51	2.28	3.94		3.03	1.44		1.00	1.26
	101V5U071	Vee	5/16	0.062	5.34	2.24	1.75	0.33	0.51	2.28	3.94		3.03	1.44		1.00	1.26
	101V6U071	Vee	3/8	0.062	5.34	2.24	1.75	0.34	0.51	2.24	3.94		3.03	1.44		1.00	1.26
	101V9U071	Vee	9/16	0.062	5.72	2.64	1.79	0.34	0.51	1.77	3.94		2.64	1.40		1.00	1.54
2-Way Angle																	
	101V4U072	Vee	1/4	0.062	6.12	3.03	1.44	0.34	0.35	1.97	3.94	1.50	2.28		0.61	1.00	1.26
	101V5U072	Vee	5/16	0.062	6.12	3.03	1.44	0.34	0.35	1.97	3.94	1.50	2.28		0.61	1.00	1.26
	101V6U072	Vee	3/8	0.062	6.12	3.03	1.44	0.34	0.35	1.97	3.94	1.50	2.28		0.61	1.00	1.26
	101V9U071	Vee	9/16	0.062	6.05	2.95	1.40	0.34	0.51	1.77	3.94	1.32	2.64			1.00	1.54
3-Way / 2 on Pressure																	
	101V4U073	Vee	1/4	0.062	6.34	3.25	1.75	0.34	0.51	2.28	3.94	1.52	3.03	1.44	1.77	1.00	1.26
	101V5U073	Vee	5/16	0.062	6.34	3.25	1.75	0.34	0.51	2.28	3.94	1.52	3.03	1.44	1.77	1.00	1.26
	101V6U073	Vee	3/8	0.062	6.34	3.25	1.75	0.34	0.51	2.28	3.94	1.52	3.03	1.44	1.77	1.00	1.26
	101V9U073	Vee	9/16	0.062	6.36	3.25	1.81	0.34	0.51	1.77	3.94	1.32	2.64	1.40		1.00	1.54



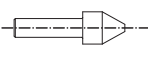
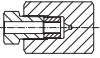
G - Panel mounting screw thread size 10-24 UNC.

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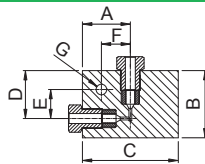
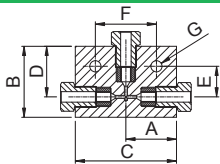
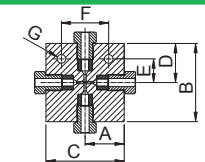
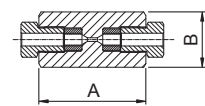
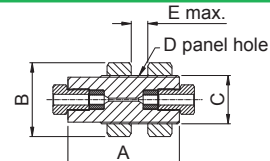
MAXIMATOR ultra high pressure fittings are designed to be used with the 101V series ultra high pressure valves and ultra high pressure tubing. All ultra high pressure fittings have coned and threaded type connections and are supplied with glands and collars. Mounting holes are standard on all elbows, tees, and crosses.



Tubing Size	Gland	Collar	Plug	Tubing Cap
5/16				
	152G5U	152C5U	152P5U	152TC5U

Connection Components

All ultra 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	Conn. Type	O.D. Tube Size (in.)	Orifice (in.)	Dimensions (in.)							Block Thickness	
					A	B	C	D	E	F	G		
Elbow													
	152L5U	5UF	5/16	0.094	1.52	2.13	3.03	1.52	0.92	0.92	0.33	1.26	
Tee													
	152T5U	5UF	5/16	0.094	1.52	2.13	3.03	1.52	0.92	1.83	0.33	1.26	
Cross													
	152X5U	5UF	5/16	0.094	1.52	3.03	3.03	1.52	0.92	1.83	0.33	1.26	
Straight Coupling / Union Coupling													
	152F5U	5UF	5/16	0.094	2.64	1.19	Straight Coupling						
	152UF5U						Union Coupling						
Bulkhead Coupling													
	152BF5U	5UF	5/16	0.094	3.27	2.17	1.42	1.43	0.87				

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

Ultra High Pressure Tubing & Threaded Nipples

Pressures to 152,000 psi - 5/16" UHP Connection

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MAXPRO offers a line of cold drawn thick wall tubing, with flow areas to compliment the ultra high pressure valve and fitting line. This tubing is made under strict manufacturing and quality control standards and inspections, with dimensional tolerances to match the requirements of the ultra high pressure coned and threaded connections. The standard material is 316 stainless steel.



Tubing Tolerances

Normal Tubing Size (in.)	Tolerance O.D. (in.)
5/16	0.310 / 0.306

Catalog Number	Tube Material	Fits Connection Type	Tube Size (in.)		Working Pressure (psi)				
			O.D.	I.D.	-325 to 100°F	200°F	400°F	600°F	800°F
152TU5U-316	316SS	5UF	5/16	0.062	152,000	136,800	126,160	115,520	109,440

All dimensions are for reference only and subject to change.

Coned and Threaded Nipples

MAXPRO offers a line of coned and threaded ultra high pressure tube nipples in a variety of lengths.

The coned and threaded ultra 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 **MAXPRO** for availability and price.



Catalog Numbers are 316 Stainless Steel material					Fits Connection Type	Tube Size (in.)		Working Pressure at 100°F (psi)
4" Length	6" Length	8" Length	10" Length	12" Length		O.D.	I.D.	
152N5U-4-316	152N5U-6-316	152N5U-8-316	152N5U-10-316	152N5U-12-316	5UF	5/16	0.062	152,000

Standard nipples are not supplied with glands and collars, see Fittings on page 5 for these components.

See the above chart for Pressure/Temperature Rating.

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Ultra High Pressure Adapters & Couplings Pressures to 152,000 psi

Adapter (male x female)

Male Connection "A"				Female Connection "B"			
				Female Ultra High Pressure			
Pressure Series	Tube Size (in)	Conn. Type	Maximum Pressure (psi)*	1/4 - 4UF 101,000	3/8 - 6UF 101,000	9/16 - 9UF 101,000	5/16 - 5UF 152,000
Male Ultra High Pressure	1/4	4UM	101,000		101A4U6U	101A4U9U	101A4U5U
	3/8	6UM	101,000	101A6U4U		101A6U9U	101A6U5U
	9/16	9UM	101,000	101A9U4U	101A9U6U		101A9U5U
	5/16	5UM	152,000	101A5U4U	101A5U6U	101A5U9U	



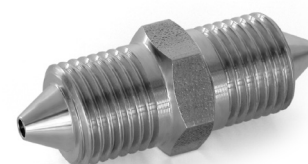
Couplings (female x female)

Female Connection "A"				Female Connection "B"			
				Female Ultra High Pressure			
Pressure Series	Tube Size (in)	Conn. Type	Maximum Pressure (psi)*	1/4 - 4UF 101,000	3/8 - 6UF 101,000	9/16 - 9UF 101,000	5/16 - 5UF 152,000
Female Ultra High Pressure	1/4	4UF	101,000	101F4U	101F4U6U	101F4U9U	101F4U5U
	3/8	6UF	101,000		101F6U	101F6U9U	101F6U5U
	9/16	9UF	101,000			101F9U	101F9U5U
	5/16	5UF	152,000				152F5U





Adapter (male x male)

Male Connection "A"				Male Connection "B"			
				Male Ultra High Pressure			
Pressure Series	Tube Size (in)	Conn. Type	Maximum Pressure (psi)*	1/4 - 4UF 101,000	3/8 - 6UF 101,000	9/16 - 9UF 101,000	5/16 - 5UF 152,000
Male Ultra High Pressure	1/4	4UM	101,000	101M4U	101M4U6U	101M4U9U	101M4U5U
	3/8	6UM	101,000		101M6U	101M6U9U	101M6U5U
	9/16	9UM	101,000			101M9U	101M9U5U
	5/16	5UM	152,000				152M5U



Special Glands & Collars to adapt 1/4" UHP male nipples to 5/16" UHP female connections

Gland	Collar
	
3780.2644	3780.2643

* The pressure rating of any adapter is the value of the lowest rated connection in the fitting.

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Ultra High Rupture Tube Assembly

Pressures to 130,000 psi

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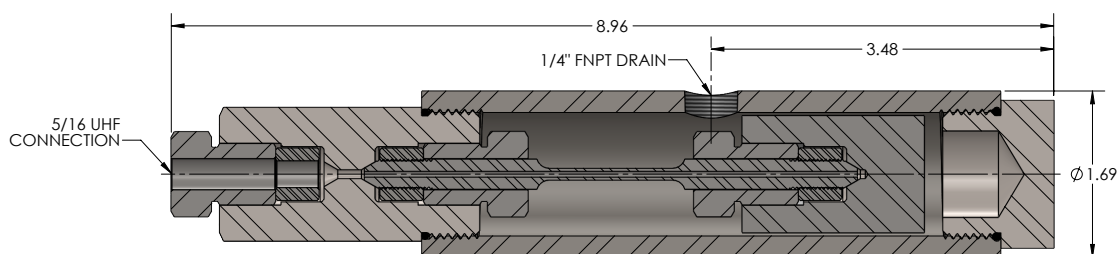
MAXPRO rupture tube assemblies are used to provide over-pressure protection to high pressure systems. These rupture tube assemblies are available in pressures from 106,000 psi to 130,000 psi.

Minimum burst assembly pressure ratings should be at least 110% of system operating pressure. Custom burst pressures are available.

- 5/16" Ultra High Pressure Connection
- Rupture tube and assembly are 316SS material
- Liquid service
- Tolerance of burst pressure is +/- 5%
- Outlet drain port must be vented to atmosphere



PART NUMBER 152RT5U



All dimensions are for reference only and subject to change.

Rupture Tube Assy. Catalog Number without Tube	Connection Type		Pressure Rating (psi)	Inlet Connection & Rupture Tube Torque (Ft. - Lbs.)
	Inlet	Outlet		
152RT5U	5UF	1/4" FNPT	130,000	70

Rupture Tubes

Rupture Tube Catalog Number	Rupture Pressure (psi) +/- 5%
RT-106000	106,000
RT-115000	115,000
RT-125000	125,000
RT-129000	129,000
RT-132000	132,000

See page 2 in the Technical Section for determining operating pressures above room temperature.

Rupture tubes are designed to be used with the rupture tube assemblies that are shown above. Minimum rupture tube pressure ratings should be at least 110% of system operating pressure. The standard rupture tube material is 316SS. The pressure ranges indicated in table are at room temperature (72°F). Other materials and pressure ranges are available upon request.

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