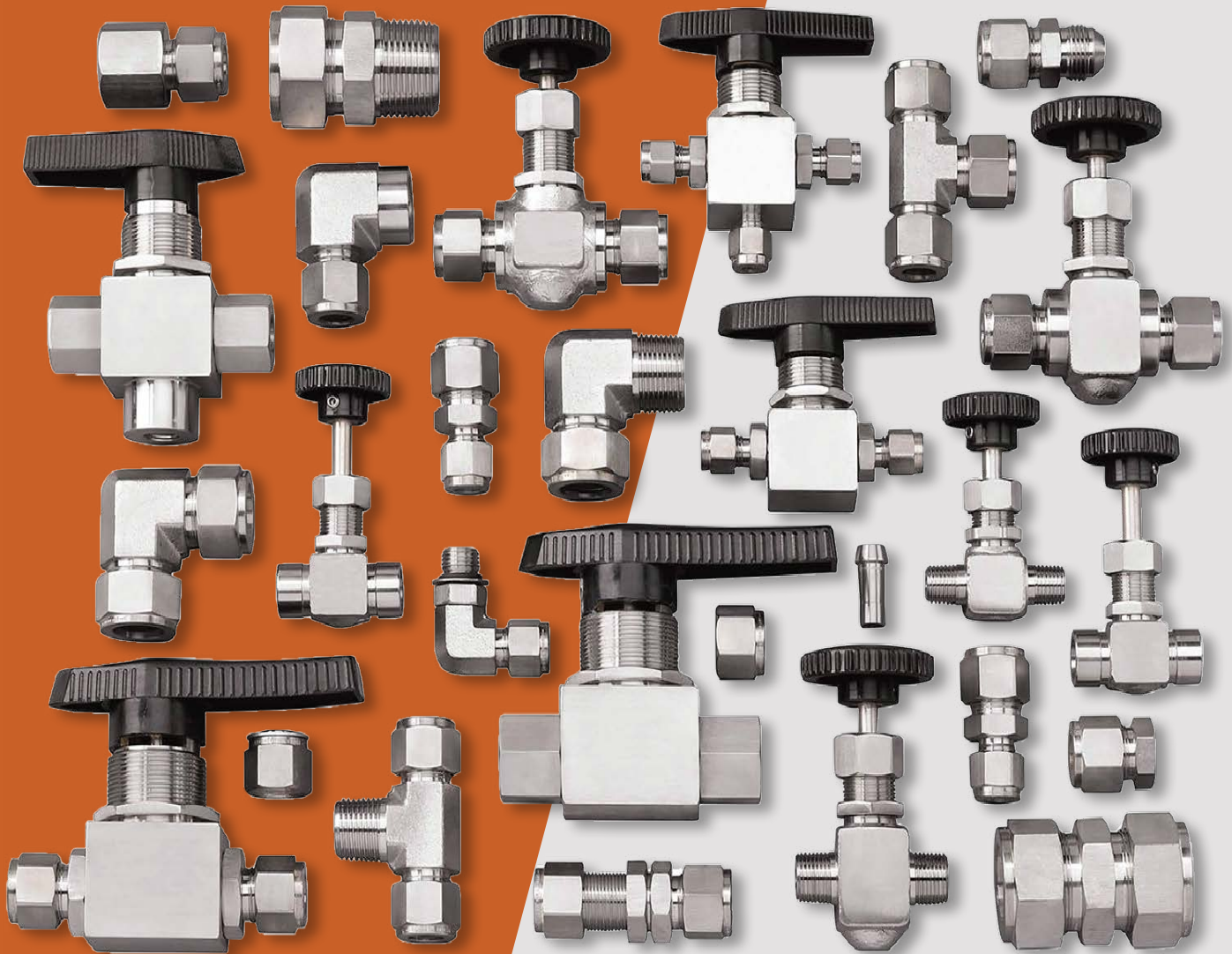


STAINLESS STEEL TUBING, TUBE FITTINGS AND VALVES



LEARN MORE



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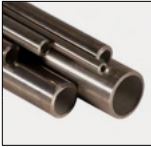
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Merit Brass Headquarters Has An ISO 9001:2015 Registered Quality Management System

STAINLESS STEEL TUBING GALLERY

304 Welded

	0.035 Wall T50
	0.049 Wall T50
	0.065 Wall T50


316 Welded

	0.035 Wall T70
	0.049 Wall T70
	0.065 Wall T70

304 Seamless

	0.035 Wall T52
	0.049 Wall T52
	0.065 Wall T52

316 Seamless

	0.035 Wall T72	0.095 Wall T72
	0.049 Wall T72	0.109 Wall T72
	0.065 Wall T72	0.120 Wall T72
	0.083 Wall T72	0.134 Wall T72

Specifications

- Seamless and Welded
- Recommend Annealed 304 or 316 stainless steel tubing to ASTM A269 or A213 or equivalent (ERW tubing is not recommended).
- 4 – 1 safety factor considering tensile strength of 75,000 psi at room temperature.
- Tube hardness should not exceed RB 80. The preferable hardness range is RB 75-80.
- Tubing should be free of any surface defects and imperfections, and should be suitable for bending and flaring. For drawn and welded tubing, a derating factor must be used.

TUBING WORKING PRESSURE TABLE

Welded

The allowable working pressures for 304 stainless steel and 316 stainless steel welded tubing to ASTM A269, ASTM/ASME A249 or equivalent based on the following data: Temperature: -20°F to 100°F. Ultimate tensile strength: 75,000 psi; allowable stress: 20,000 psi as specified by ASME B31.3-2002.

Table 1 - Wall Thickness of Tube (Inches)

Tube OD (In)	0.01	0.012	0.016	0.02	0.028	0.035	0.049	0.065	0.083	0.095	0.109	0.12	0.134	0.156
1/16"	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1/8"	—	—	—	—	—	—	—	—	Working Pressure (psig)			—	—	—
3/16"	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1/4"	—	—	—	3,000	4,200	5,250	7,350	10,135	—	—	—	—	—	—
5/16"	—	—	—	2,396	3,355	4,193	5,871	—	—	—	—	—	—	—
3/8"	—	—	—	2,000	2,800	3,500	4,900	6,500	—	—	—	—	—	—
1/2"	—	—	—	1,500	2,100	2,625	3,675	4,875	6,225	7,125	8,175	—	—	—
5/8"	—	—	—	1,200	1,680	2,100	2,940	3,900	4,980	5,700	6,540	—	—	—
3/4"	—	—	—	1,000	1,400	1,750	2,450	3,250	4,150	4,750	5,450	—	—	—
7/8"	—	—	—	857	1,200	1,500	2,100	2,786	3,557	4,071	4,671	—	—	—
1"	—	—	—	750	1,050	1,313	1,838	2,438	3,113	3,563	4,088	—	—	—

TUBE FITTING GALLERY

316 Stainless Steel



Tube Plug
T617



Tube Nut
T619



Male Connector JIC
TMJ611
Tube X Male JIC



Union
T687
Tube X Tube



Male Connector
TM611
Tube X Male



Female Connector
TF611
Tube X Female



Reducer
T612
Tube X Machined Tube Stub



Tube Cap
T616



Port Connector
TPC



Union Elbow
T68701
Tube X Tube



Male Elbow
TM601
Tube X Male



Female Elbow
TF601
Tube X Female



Male Branch Tee
TTM606
Tube X Tube X Male



Union Tee
T68706
Tube X Tube X Tube



Male Run Tee
TMT606
Tube X Male X Tube



Bulkhead Union
TBH687
Tube X Tube



90° Positionable Male Elbow
TMS601P
Tube X Male SAE

VALVES GALLERY

316 Stainless Steel



Reduced Port Ball Valve
TBVRP
Tube X Tube



Full Port Ball Valve
TBVFPF
FNPT X FNPT



Full Port Ball Valve
TBVFP
Tube X Tube



Reduced Port Ball Valve
TBV3RP
Tube X Tube X Tube 3 Way



Full Port Ball Valve
TBV3FPF
FNPT X FNPT X FNPT 3 Way



Regulating Needle Valve
TNVRF
FNPT X FNPT



Regulating Needle Valve
TNVRM
MNPT X MNPT



Regulating Needle Valve
TNVR
Tube X Tube



Vee-Stem Needle Valve
TNVVM
MNPT X MNPT



Vee-Stem Needle Valve
TNVVF
FNPT X FNPT



Vee-Stem Needle Valve
TNVV
Tube X Tube

INTRODUCTION TO MERIT TUBE FITTINGS & VALVES

Since 1937, Merit's mission is to give you, our customers, the ability to provide competitive and consistently high quality materials and services to your customers. Each product we have added over the years has had to undergo an extensive quality assurance examination to ensure that your needs are met. We are proud to enhance our offering once more with our stainless steel instrumentation tube fittings and valves which complement our stainless steel tubing line.

Some of the Benefits of Tube Fittings

- At all tubing connections, they provide leak-proof torque-free seals.
- Eliminate potentially hazardous and expensive leaks in instrumentation, process, pneumatic, hydraulic, gas and other tubing systems.

What Comprises a Double-Ferrule Tube Fitting?

There are four pieces within Double-Ferrule tube fittings: the nut, back ferrule, front ferrule and the body.

Benefits of the double-ferrule design

- Combines geometry and metallurgy.
- All action in the fitting is an axial movement along the tube instead of a rotary motion to create the joint.
 - » Axial movement prevents transmission of torque from a fitting to the tubing.
- The tubing does not weaken since there's no initial strain in the tubing.
- Swaging action of the twin ferrules overcomes variations in tubing wall thickness, hardness and dimensional tolerance.
- Self-aligning.
- Vibration resistant.
- Reusable several times.
- In both vacuum and pressure systems, it can withstand heavy impulse.

At Installation

- A solid, leak-free joint is formed as these fittings become a five-piece connection with the addition of the tubing.
- As the two ferrules grasp tightly around the tube, the tube wall is not damaged.
- The tubing will yield before the double-ferrule joint starts leaking as proven in multiple, comprehensive tests.

Welcome to Merit's line of instrumentation tube fittings and valves where INTERCHANGEABILITY is key!

These double-ferrule tube fittings are manufactured to be fully component **intermixable** and totally interchangeable with brands such as Swagelok®, Parker A-LOK® and more...

Tube Fitting Features

- All fittings are certified for ASTM F1387.
- Manufactured in Type 316 Stainless Steel.
- Machined from cold-finished bar stock in accordance with ASTM Specifications.
- Shaped bodies are machined from close-grained forgings in accordance with ASTM Specifications.
- Function with thick and thin wall tubing.
- Interact with a variety of tube materials.
- For thermal compatibility and corrosion resistance, all components are made from the same material.
- Resistant to temperature cycling.
- Compensate for variables encountered in the materials and tube.
- Flow area is minimally reduced.

Tube Fitting Performance

- Works at low pressures, high pressures and in vacuums.
- Seals at low cryogenic and elevated temperatures rated for the tube.
- When making or remaking, the fitting repeatedly seals.
- Pressure resistant beyond the tubing burst point.

Assembly

- For uniformity of make-up, use geometry rather than torque (To complete the joint, it requires only a 1¼ turn after snug-tightening).
- Does not require disassembly and inspection of ferrule swaging at every make-up.
- Does not require any special tools for assembly.

TUBING WORKING PRESSURE TABLE

Seamless

The allowable working pressures for 304 stainless steel and 316 stainless steel seamless tubing to ASTM A269, ASTM/ASME A213 or equivalent based on the following data: Temperature: -20°F to 100°F. Ultimate tensile strength: 75,000 psi; allowable stress: 20,000 psi as specified by ASME B31.3-2002.

Table 2 - Wall Thickness of Tube (Inches)

Tube OD (In)	0.01	0.012	0.016	0.02	0.028	0.035	0.049	0.065	0.083	0.095	0.109	0.12	0.134	0.156
1/16"	5,587	6,861	9,593	12,185	—	—	—	—	—	—	—	—	—	—
1/8"	—	—	—	—	8,565	10,829	—	—	Working Pressure (psig)			—	—	—
3/16"	—	—	—	—	5,474	7,039	10,116	—	—	—	—	—	—	—
1/4"	—	—	—	—	4,020	5,132	7,500	10,135	—	—	—	—	—	—
5/16"	—	—	—	—	—	4,037	5,848	8,071	—	—	—	—	—	—
3/8"	—	—	—	—	—	3,326	4,791	6,566	—	—	—	—	—	—
1/2"	—	—	—	—	—	2,611	3,741	5,092	6,696	—	—	—	—	—
5/8"	—	—	—	—	—	—	2,951	3,998	5,225	6,075	—	—	—	—
3/4"	—	—	—	—	—	—	2,436	3,289	4,283	4,966	5,785	—	—	—
7/8"	—	—	—	—	—	—	2,073	2,793	3,628	4,199	4,881	—	—	—
1"	—	—	—	—	—	—	1,804	2,427	3,146	3,637	4,220	4,688	—	—
1 1/4"	—	—	—	—	—	—	—	—	2,485	2,867	3,321	3,682	4,149	4,900
1 1/2"	—	—	—	—	—	—	—	—	2,046	2,358	2,726	3,020	3,398	4,003

Stress Factor for Elevated Temperatures

Temp(°F)	Stainless Steel ASTM A-269	
	304	316
100	1.00	1.00
200	1.00	1.00
300	1.00	1.00
400	0.94	0.97
500	0.88	0.85
600	0.82	0.85
700	0.80	0.82
800	0.76	0.80
900	0.73	0.78
1000	0.69	0.77

To calculate the maximum allowable working pressure for various tubing materials at elevated temperatures, multiply the maximum allowable working pressure for the tube size and wall thickness found in Tables 1 and 2 by the correct stress factor located in this Table.

Thread Specifications

One or more tubing end connections may exist on a given tube fitting; and therefore, it is important to note that the tube fittings stocked by Merit Brass are supplied with American National Pipe Threads (NPT) unless otherwise described. The reference specification is ASA B2.1; 1960. These threads meet the codified ISO standards as well as individual countries' standards.

Merit can obtain British Standard Pipe Threads (BSP) if you are interested. These BSP threads are available as follows:

- ISO Parallel pipe thread (British Standard Pipe Thread): Reference specifications BS2779, ISO 228/1, DIN 259, JIS B 0202, IS 2643.
- ISO Taper pipe thread (British Standard Pipe Thread): Reference specifications BS 21, ISO 7/1, DIN 2999, JIS B 0203, IS 554.

If you are interested in the BSP tube fittings, please contact your sales representative today at contactus@meritbrass.com or 800.726.9800

To Safely Select Product

Merit Brass Company is not a manufacturer of stainless steel tube or tube fittings, but we must stress the importance of choosing high quality tube and fittings to ensure the safety and reliability of your system. Please review your specific system requirements to ensure that they meet your needs, and that the system designer and user choose product with safety in mind. In designing your system, please consider the entire design and select the products necessary to complete your line safely and with performance that is trouble free. It is the responsibility of the system designer, installer and user to determine the system:

- Function
- Material compatibility
- Adequate ratings
- Proper installation, operation and maintenance

WARNING: Valve components should not be mixed or interchanged with any other manufacturer.

CROSS REFERENCE GUIDE

Tube Fittings and Valves Manufactured with Type 316 Stainless Steel

Merit Part Number	Size (In)	Swagelok®	Brennan
Tube Plug			
T617-04	¼"	SS-400-P	N0304-04-SS
T617-06	¾"	SS-600-P	N0304-06-SS
T617-08	½"	SS-810-P	N0304-08-SS
Tube Nut			
T619-02	¼"	SS-202-1	N0318-02-SS
T619-04	½"	SS-402-1	N0318-04-SS
T619-06	¾"	SS-602-1	N0318-06-SS
T619-08	½"	SS-812-1	N0318-08-SS
Male Connector (JIC) Tube X Male JIC			
TMJ611-0404	¼" x ¼"	SS-400-6-4AN	N2402-04-04-SS
TMJ611-0606	¾" x ¾"	SS-600-6-6AN	N2402-06-06-SS
TMJ611-0808	½" x ½"	SS-810-6-8AN	N2402-08-08-SS
Union Tube X Tube			
T687-02	¼" x ½"	SS-200-6	N2403-02-02-SS
T687-04	¼" x ¼"	SS-400-6	N2403-04-04-SS
T687-05	¾" x ¾"	SS-500-6	N2403-05-05-SS
T687-06	¾" x ¾"	SS-600-6	N2403-06-06-SS
T687-08	½" x ½"	SS-810-6	N2403-08-08-SS
T687-10	¾" x ¾"	SS-1010-6	N2403-10-10-SS
T687-12	¾" x ¾"	SS-1210-6	N2403-12-12-SS
T687-16	1" x 1"	SS-1610-6	N2403-16-16-SS
Reducing Union Tube X Tube			
T687-0402	¼" x ½"	SS-400-6-2	N2403-04-02-SS
T687-0604	¾" x ¼"	SS-600-6-4	N2403-06-04-SS
T687-0804	½" x ¼"	SS-810-6-4	N2403-08-04-SS
T687-0806	½" x ¾"	SS-810-6-6	N2403-08-06-SS
Male Connector Tube X Male			
TM611-0202	¼" x ½"	SS-200-1-2	N2404-02-02-SS
TM611-0204	¼" x ¼"	SS-200-1-4	N2404-02-04-SS
TM611-0402	¼" x ½"	SS-400-1-2	N2404-04-02-SS
TM611-0404	¼" x ¼"	SS-400-1-4	N2404-04-04-SS
TM611-0406	¼" x ¾"	SS-400-1-6	N2404-04-06-SS
TM611-0408	¼" x ½"	SS-400-1-8	N2404-04-08-SS
TM611-0504	¾" x ¼"	SS-500-1-4	N2404-05-04-SS
TM611-0602	¾" x ½"	SS-600-1-2	N2404-06-02-SS
TM611-0604	¾" x ¼"	SS-600-1-4	N2404-06-04-SS
TM611-0606	¾" x ¾"	SS-600-1-6	N2404-06-06-SS
TM611-0608	¾" x ½"	SS-600-1-8	N2404-06-08-SS
TM611-0804	½" x ¼"	SS-810-1-4	N2404-08-04-SS
TM611-0806	½" x ¾"	SS-810-1-6	N2404-08-06-SS
TM611-0808	½" x ½"	SS-810-1-8	N2404-08-08-SS
TM611-0812	½" x ¾"	SS-810-1-12	N2404-08-12-SS
TM611-1008	¾" x ½"	SS-1010-1-8	N2404-10-08-SS
TM611-1208	¾" x ½"	SS-1210-1-8	N2404-12-08-SS
TM611-1212	¾" x ¾"	SS-1210-1-12	N2404-12-12-SS
TM611-1616	1" x 1"	SS-1610-1-16	N2404-16-16-SS
Female Connector Tube X Female			
TF611-0402	¼" x ½"	SS-400-7-2	N2405-04-02-SS
TF611-0404	¼" x ¼"	SS-400-7-4	N2405-04-04-SS
TF611-0408	¼" x ½"	SS-400-7-8	N2405-04-08-SS
TF611-0504	¾" x ¼"	SS-500-7-4	N2405-05-04-SS
TF611-0604	¾" x ¼"	SS-600-7-4	N2405-06-04-SS
TF611-0606	¾" x ¾"	SS-600-7-6	N2405-06-06-SS
TF611-0608	¾" x ½"	SS-600-7-8	N2405-06-08-SS
TF611-0804	½" x ¼"	SS-810-7-4	N2405-08-04-SS

Merit Part Number	Size (In)	Swagelok®	Brennan
Female Connector Tube X Female			
TF611-0806	½" x ¾"	SS-810-7-6	N2405-08-06-SS
TF611-0808	½" x ½"	SS-810-7-8	N2405-08-08-SS
Reducer Tube X Machined Tube Stub			
T612-0402	¼" x ½"	SS-400-R-2	N2406-04-02-SS
T612-0604	¾" x ¼"	SS-600-R-4	N2406-06-04-SS
T612-0608	¾" x ½"	SS-600-R-8	N2406-06-08-SS
T612-0812	½" x ¾"	SS-810-R-12	N2406-08-12-SS
T612-1208	¾" x ½"	SS-1210-R-8	N2406-12-08-SS
Tube Cap			
T616-02	¼"	SS-200-C	N2408-02-SS
T616-04	½"	SS-400-C	N2408-04-SS
T616-06	¾"	SS-600-C	N2408-06-SS
T616-08	½"	SS-810-C	N2408-08-SS
Port Connector			
TPC-06	¾"	SS-601-PC	N2440-06-06-SS
Union Elbow Tube X Tube			
T68701-04	¼" x ¼"	SS-400-9	N2500-04-04-SS
T68701-06	¾" x ¾"	SS-600-9	N2500-06-06-SS
T68701-08	½" x ½"	SS-810-9	N2500-08-08-SS
T68701-12	¾" x ¾"	SS-1210-9	N2500-12-12-SS
Male Elbow Tube X Male			
TM601-0202	¼" x ½"	SS-200-2-2	N2501-02-02-SS
TM601-0402	¼" x ¼"	SS-400-2-2	N2501-04-02-SS
TM601-0404	¼" x ¼"	SS-400-2-4	N2501-04-04-SS
TM601-0406	¼" x ¾"	SS-400-2-6	N2501-04-06-SS
TM601-0408	¼" x ½"	SS-400-2-8	N2501-04-08-SS
TM601-0602	¾" x ½"	SS-600-2-2	N2501-06-02-SS
TM601-0604	¾" x ¼"	SS-600-2-4	N2501-06-04-SS
TM601-0606	¾" x ¾"	SS-600-2-6	N2501-06-06-SS
TM601-0608	¾" x ½"	SS-600-2-8	N2501-06-08-SS
TM601-0804	½" x ¼"	SS-810-2-4	N2501-08-04-SS
TM601-0806	½" x ¾"	SS-810-2-6	N2501-08-06-SS
TM601-0808	½" x ½"	SS-810-2-8	N2501-08-08-SS
TM601-1208	¾" x ½"	SS-1210-2-8	N2501-12-08-SS
TM601-1212	¾" x ¾"	SS-1210-2-12	N2501-12-12-SS
Female Elbow Tube X Female			
TF601-0402	¼" x ½"	SS-400-8-2	N2502-04-02-SS
TF601-0404	¼" x ¼"	SS-400-8-4	N2502-04-04-SS
TF601-0604	¾" x ¼"	SS-600-8-4	N2502-06-04-SS
TF601-0606	¾" x ¾"	SS-600-8-6	N2502-06-06-SS
TF601-0808	½" x ½"	SS-810-8-8	N2502-08-08-SS
Male Branch Tee Tube X Tube X Male			
TTM606-040402	¼" x ¼" x ¼"	SS-400-3TTM	N2601-04-04-02-SS
TTM606-040404	¼" x ¼" x ¼"	SS-400-3-4TTM	N2601-04-04-04-SS
TTM606-060604	¾" x ¾" x ¼"	SS-600-3-4TTM	N2601-06-06-04-SS
TTM606-060606	¾" x ¾" x ¾"	SS-600-3-6TTM	N2601-06-06-06-SS

Tube Ferrule Sets

Merit Part Number	Description	Brennan	Merit Part Number	Description	Brennan
TFS-02	¼" Ferrule Sets 1 EA Front/Rear	N0319-S-02-SS	TFS-08	½" Ferrule Sets 1 EA Front/Rear	N0319-S-08-SS
TFS-03	¾" Ferrule Sets 1 EA Front/Rear	N0319-S-03-SS	TFS-10	¾" Ferrule Sets 1 EA Front/Rear	N0319-S-10-SS
TFS-04	½" Ferrule Sets 1 EA Front/Rear	N0319-S-04-SS	TFS-12	¾" Ferrule Sets 1 EA Front/Rear	N0319-S-12-SS
TFS-05	¾" Ferrule Sets 1 EA Front/Rear	N0319-S-05-SS	TFS-14	¾" Ferrule Sets 1 EA Front/Rear	N0319-S-14-SS
TFS-06	¾" Ferrule Sets 1 EA Front/Rear	N0319-S-06-SS	TFS-16	1" Ferrule Sets 1 EA Front/Rear	N0319-S-16-SS

Merit Part Number	Size (In)	Swagelok®	Brennan
Male Branch Tee Tube X Tube X Male			
TTM606-080808	½" x ½" x ½"	SS-810-3-8TTM	N2601-08-08-08-SS
Union Tee Tube X Tube X Tube			
T68706-02	¼" x ¼" x ¼"	SS-200-3	N2603-02-02-02-SS
T68706-04	¼" x ¼" x ¼"	SS-400-3	N2603-04-04-04-SS
T68706-06	¾" x ¾" x ¾"	SS-600-3	N2603-06-06-06-SS
T68706-08	½" x ½" x ½"	SS-810-3	N2603-08-08-08-SS
Male Run Tee Tube X Male X Tube			
TMT606-040204	¼" x ¼" x ¼"	SS-400-3TMT	N2605-04-02-04-SS
TMT606-040404	¼" x ¼" x ¼"	SS-400-3-4TMT	N2605-04-04-04-SS
TMT606-060406	¾" x ¼" x ¾"	SS-600-3TMT	N2605-06-04-06-SS
Bulkhead Union Tube X Tube			
TBH687-04	¼" x ¼"	SS-400-61	N2700-LN-04-04-SS
TBH687-06	¾" x ¾"	SS-600-61	N2700-LN-06-06-SS
TBH687-08	½" x ½"	SS-810-61	N2700-LN-08-08-SS
90° Positionable Male Elbow Tube X Male SAE			
TMS601P-0606	¾" x ¾"	SS-600-2-6ST	N6801-06-06-NWO-SS

Tube Valves

Merit Part Number	Size (In) & End Connection	Swagelok®	Brennan
Reduced Port Ball Valve			
TBVRP-04	¼" Tube x ¼" Tube	SS-42S4	NVB-1005-SS
Full Port Ball Valve			
TBVP-04	¼" Tube x ¼" Tube	SS-43S4	NVB-1006-SS
TBVPFP-04	¼" FNPT x ¼" FNPT	SS-43F4	NVB-1007-SS
TBVP-06	¾" Tube x ¾" Tube	SS-44S6	NVB-1012-SS
TBVPFP-06	¾" FNPT x ¾" FNPT	SS-44F6	NVB-1013-SS
TBVP-08	½" Tube x ½" Tube	SS-45S8	NVB-1014-SS
TBVPFP-08	½" FNPT x ½" FNPT	SS-45F8	NVB-1015-SS
3 Way Reduced Port Ball Valve			
TBV3RP-04	¼" Tube x ¼" Tube x ¼" Tube	SS-42XS4	NVB-1104-SS
3 Way Full Port Ball Valve			
TBV3FP-04	¼" FNPT x ¼" FNPT x ¼" FNPT	SS-44XF4	NVB-1107-SS
Regulating Needle Valve			
TNVR-04	¼" Tube x ¼" Tube	SS-1RS4	NVN-2007-SS
TNVR-04	¼" FNPT x ¼" FNPT	SS-1RF4	NVN-2008-SS
TNVRM-04	¼" MNPT x ¼" MNPT	SS-1RM4	NVN-2009-SS
TNVR-06	¾" Tube x ¾" Tube	SS-1RS6	NVN-2013-SS
TNVR-08	½" Tube x ½" Tube	SS-1RS8	NVN-2018-SS
Vee-Stem Needle Valve			
TNVVM-04	¼" MNPT x ¼" MNPT	SS-1VM4	NVN-2031-SS
TNVV-04	¼" Tube x ¼" Tube	SS-1VS4	NVN-2032-SS
TNVVF-04	¼" FNPT x ¼" FNPT	SS-1VF4	NVN-2033-SS
TNVV-06	¾" Tube x ¾" Tube	SS-1VS6	NVN-2035-SS
TNVVM-06	¾" MNPT x ¾" MNPT	SS-1VM6	NVN-2037-SS
TNVV-08	½" Tube x ½" Tube	SS-1VS8	NVN-2038-SS

ASSEMBLY

Merit's product offering of stainless steel double-ferrule instrumentation tube fittings are stocked fully assembled, finger-tightened and ready to use immediately. If dirt or foreign materials get into the fitting due to disassembly before use, it can cause leaks.

There are 3 easy steps to install tube fittings:



Step 1: Insert the tubing into the tube fitting. Make sure that the tubing rests firmly on the shoulders of the fitting and that the nut is snug-tight. The tube does not rotate by hand in this position.



Step 2: Scribe the nut at the 9 o'clock position before tightening the nut.



Step 3: While holding the fitting body steady with a backup wrench, tighten the nut $1\frac{1}{4}$ turns*. Watch the scribe mark and make one complete revolution. Then continue turning to the 12 o'clock position.

*For $\frac{1}{16}$ ", $\frac{1}{8}$ " and $\frac{3}{16}$ " size tube fittings, only $\frac{3}{4}$ turns from finger-tight is required.

Pre-Setting

Tube fittings at times must be installed in cramped quarters or overhead. For these applications, it is advantageous to use a preset tool on the tubing in an open ground level area, thus pre-swaging the ferrules onto the tubing. The tubing is then removed from the pre-setting tool. The tubing (with nut and pre-swaged ferrules) can now be attached to the fitting by following the reassembly instructions:

Step 1: Assemble the ferrules and nut to the pre-swaging tool. Insert the tubing until it bottoms out in the fitting body. Next tighten the nut $1\frac{1}{4}$ turns.

Step 2: Loosen the nut and remove the tubing with the pre-swaged ferrules from the pre-setting tool.

Step 3: The connection can now be made simply by snug-tightening the nut as described in the retightening instructions.

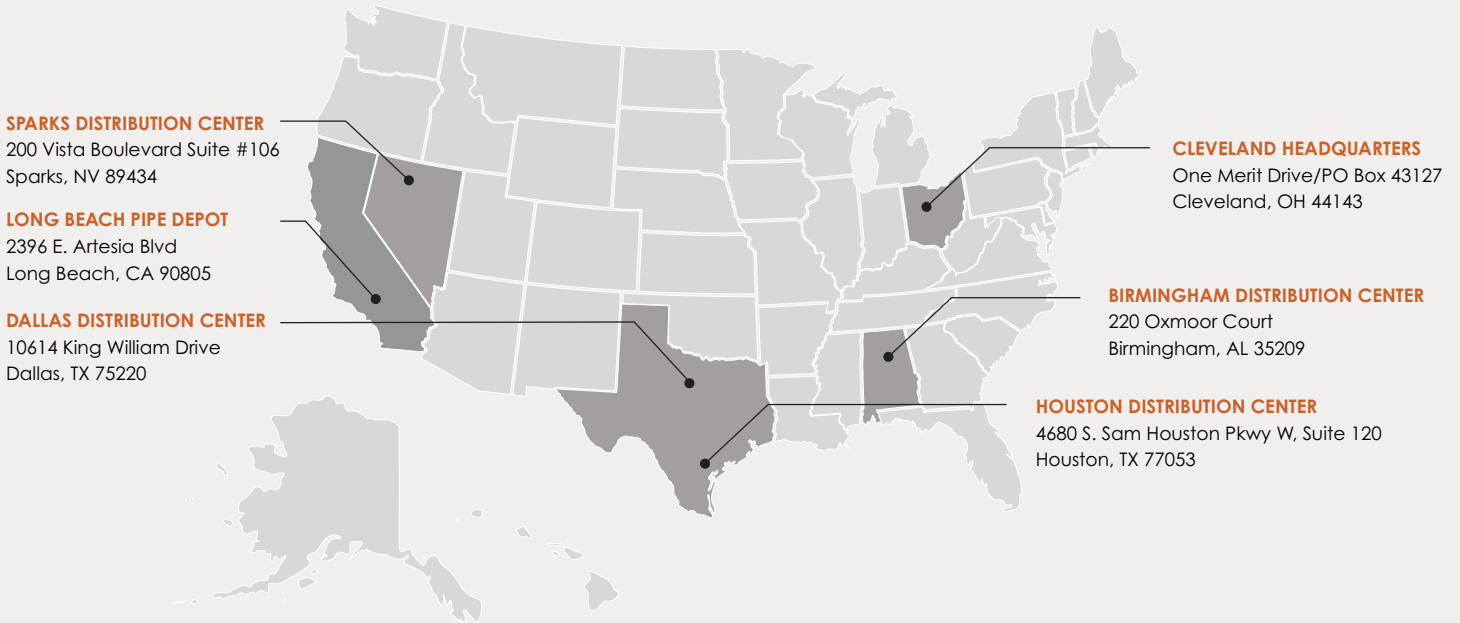
Merit can special order pre-set tools for all common fractional instrumentation tube fitting sizes.

Recommendations For Pre-Set Tool Usage

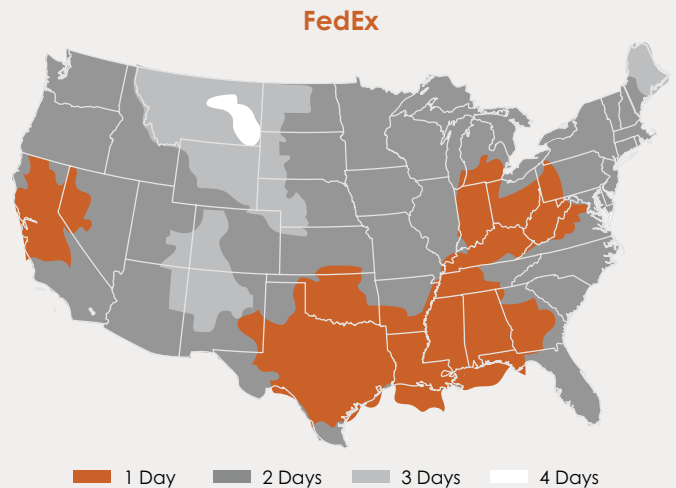
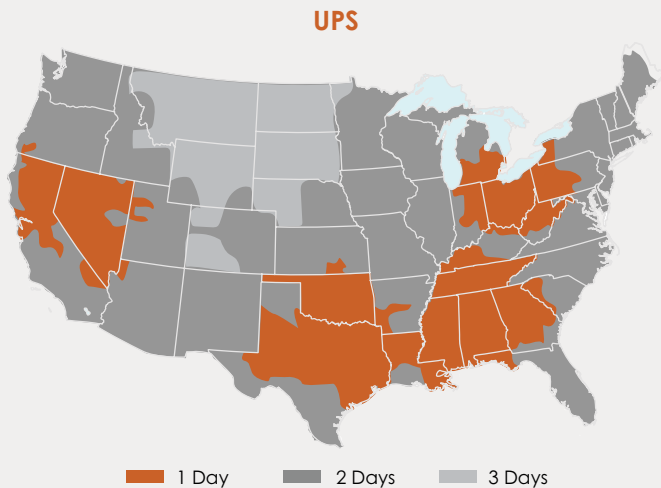
When installations comprise a large quantity of fittings or are in hard-to-reach areas, Merit recommends using manual pre-set tools for $\frac{1}{2}$ " and smaller size tubing and fittings.

Merit suggests using a pre-set tool (hydraulic or manual) for $\frac{5}{8}$ " and larger tubing sizes in all applications in recognition of the heavy wall tubing's intrinsic strength. For these larger tubing size jobs, using tubing with a wall thickness of less than 0.065", only a manual pre-set tool is required. In applications where the tubing wall thickness is 0.065" and above, hydraulically pre-setting of the ferrules onto the tubing is specifically recommended.

LOCATIONS



SHIPPING TIMES



*FedEx is Merit's Primary Carrier

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