EX-Lok™

Two Ferrule Tube Fittings

- Available in tube sizes from 1/16 in. to 2 in. & 2mm to 50 mm.
- Easy to disconnect and retighten.
- Wide variety of materials and configurations.

Techman systems

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Techman systems

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Our Company

Established in 2007, Techman Systems specialized in Design, Manufacture and Supply of Tube and Pipe fittings and Gas Handling System Accessories as per National and International Standards.

We - Techman Systems are a preeminent manufacturer, exporter, stockholder & supplier of instrumentation tube fittings (Two Ferrule Tube Fittings) to meet the requirements of various industries.

Evolving ourselves with time, we have achieved a special place for ourselves within the industry as well as domestic & international markets in which we operate our business.

Being an ISO 9001:2008 certified company; we have a well-defined quality control process that is structured to meet the international benchmarks of quality. Our core objective is "customer satisfaction" and we are continually improving upon the quality of our products & services, we endeavour to create value for our customers.

Ex-Lok two ferrule tube fittings are manufactured under Techman Systems strict quality control program which enabled Ex-Lok to obtain “CE” marking certificate and ISO 9001.

Installation

Easy to install using hand tools. No torque is transmitted to tubing during installation. Gap inspection gauge assures sufficient pull-up upon initial installation. Installation instructions are available. Excellent gas-tight sealing and tube-gripping action. Reduced potential for improper pull-up.

Consistent remakes. Excellent vibration fatigue resistance and tube support. Full compatibility with original stainless steel tube fittings & front ferrules of identical sizes. Easy 1.1/4-turn installation. Gauge ability on initial installation using gap inspection gauges.

Product Range

Techman Systems offers a wide range of Ex-Lok Tube Fittings such as Male Connector, Bulkhead Male Connector, Male Elbow, Male Branch Tee, Male Run Tee, Female Connector Female-Run Tee, Female Elbow, Female Branch Tee, Union, Bulkhead Union, Bulkhead-Reducing Union, Reducing Union, Union Elbow, Union Cross, Union Tee, Reducer/ Adapter, Cap, Plug, Nut, Ferrule etc., from 1/8” to 1/2” sizes.

Temperature Ratings

Ex-Lok Fittings provide safe and reliable performance from cryogenic temperature to high temperature up to 380^{0}C for stainless steel fittings.

Brass : .54^{0}C to 204^{0}C

Tubing

Variety of tubing materials and wide range of wall thickness can be used with Ex-Lok two ferrule fittings. However, it is essential to specify, select, and handle the tubing with care in order to ensure reliable, safe, leak tight installation using Ex-Lok two ferrule tube fittings.

Pressure Ratings

Ex- Lok two Ferrule tube Fitting Are rated to the maximum Working Pressure of tube Recommended for use with Ex-Lok tube Fitting . Careful selection of high-quality tubing is important at the time of installation.

The maximum working Pressure of Tubing are listed in below MPAW Table.

Note: Material Strength and allowable working pressure decrease as the temperature increases.

Maximum Allowable Working Pressure (MPAW) Table

• Working Pressure Calculated in accordance with ASME B13.3, Chemical Plant and Petroleum Refinery Piping.

Table 1. Stainless Steel Tubing

Fully Annealed SS 304 or SS 316 high quality Seamless Stainless steel tube to ASTM A269 or equivalent Hardness 90 Rb or less

Stainless Steel Tube Inch Size

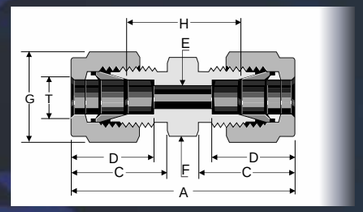
Tube O.D. (Inches)	Tube Wall Thickness in Inches														
	0.010	0.012	0.014	0.016	0.020	0.028	0.035	0.049	0.065	0.083	0.095	0.109	0.120	0.134	0.156	0.188
1/16”	5,600	6,800	8,200	9,600	12,600											
1/8”						8,500	11,200									
3/16”						5,400	7,000	10,400								
1/4”						4,000	5,100	7,500	10,400							
5/16”							4,000	5,800	8,000							
3/8”							3,300	4,800	6,500							
½”							2,600	3,700	5,100	6,700						
5/8”								2,900	4,000	5,200	6,000					
3/4”								2,400	3,300	4,200	4,900	5,800				
7/8”								2,000	2,800	3,600	4,200	4,800				
1”									2,400	3,100	3,600	4,200	4,700			
1 1/4”										2,500	2,800	3,300	3,600	4,100	4,900	
1 ½”											2,300	2,700	3,000	3,400	4,000	4,900
2”												2000	2200	2500	2900	3600

Some general rules are shown below:

1. The tubing material must be compatible with process fluid.
2. Temperature, pressure, vibration and shock conditions must be considered when selecting the wall thickness. Further, extremely thick wall may not be properly deformed and extremely thin wall may be collapsed by ferrule action.
3. The metal tubing must be softer than the fittings materials. In general, metal tubing should be fully annealed to work properly with Ex-Lok two ferrule tube fittings.
4. For leak tight installation, the tubing surface finish must be smooth and free from weld seam, scratched and draw marks.
5. The tubing with high tolerance in ovality or O.D. may not fit in the fitting or may cause improper performance.
6. Best performance is achieved when the tubing ends are squarely cut and deburred properly.

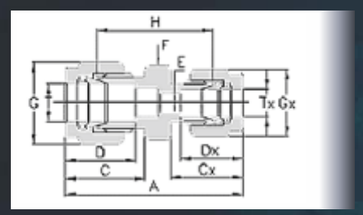
Unions

T TUBE O.D.	Ex-Lok Part No.	A	C	D	E Minimum Opening	F Hex Flat	G Hex Flat	H
in		in	in	in	in	in	in	in
1/8	US-S6-020-2	1.40	0.60	0.50	0.09	7/16	7/16	0.88
1/4	US-S6-040-2	1.61	0.70	0.60	0.19	1/2	9/16	1.03
3/8	US-S6-060-2	1.77	0.76	0.66	0.28	5/8	11/16	0.19
1/2	US-S6-080-2	2.02	0.80	0.90	0.41	13/16	7/8	1.22



Reducing Unions

T TUBE O.D.	Tx Tube O.D.	Ex-Lok Part No.	A	C	Cx	D	Dx	E Minimim Opening	F Hex Flat	G Hex Flat	Gx Hex Flat	Hx
in	in	in	in	in	in	in	in	in	in	in	in	in
1/4	1/8	RU-S6-040-020	1.52	0.70	0.60	0.60	0.50	0.09	1/2	9/16	1/16	0.97
3/8	1/8	RU-S6-060-020	1.61	0.76	0.60	0.60	0.50	0.09	5/8	11/16	7/16	1.06
3/8	1/4	RU-S6-060-040	1.70	0.76	0.70	0.60	0.60	0.19	5/8	11/16	9/16	1.12
1/2	1/8	RU-S6-080-020	1.78	0.86	0.60	0.90	0.50	0.09	13/16	7/8	7/16	1.12
1/2	1/4	RU-S6-080-040	1.85	0.86	0.86	0.90	0.66	0.28	13/16	7/8	11/16	1.22
1/2	3/8	RU-S6-080-060	1.91	0.86	0.86	0.90	0.66	0.28	13/16	7/8	11/16	1.22



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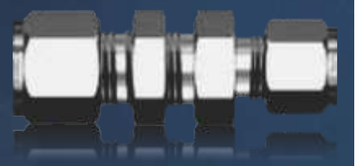
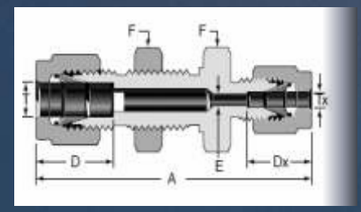
Reducing Bulkhead Union

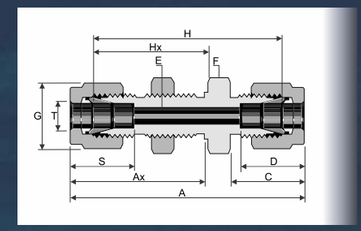
T Tube OD	Tx Tube OD"	Ex-Lok Part No	A	D	Dx	E	F flat	Panel Hole Size	Max Panel Thickness
in	in		in	in	in	in	in	in	in
1/4"	1/8"	RBU -S6-040-020	2.17	0.60	0.50	0.09	5/8"	29/64"	0.40
3/8"	1/4"	RBU -S6-060-040	2.39	0.66	0.60	0.19	3/4"	37/64"	0.44
½"	1/4:	RBU -S6-080-040	2.63	0.90	0.60	0.19	15/16"	49/64"	0.50





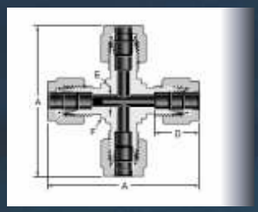
Bulkhead Union

T TUBE O.D.	Ex-Lok Part No.	A	Ax	C	D	E Minimum Opening	F Hex Flat	G Hex Flat	H	Hx	Panel Hole Drill Size	Max Panel Thickness
in	in	in	in	in	in	in	in	in	in	in	in	in
1/8	BU-S6-020-2	2.02	1.23	0.60	0.50	0.09	1/2	7/16	1.50	0.97	21/64	0.50
1/4	BU-S6-040-2	2.27	1.32	0.70	0.60	0.19	5/8	9/16	1.69	1.03	29/64	0.40
3/8	BU-S6-060-2	2.45	1.45	0.76	0.66	0.28	3/4	11/16	1.87	1.16	37/64	0.44
1/2	BU-S6-080-2	2.80	1.65	0.86	0.90	0.41	15/16	7/8	2.00	1.25	49/64	0.50



Cross

Tube OD	Ex-Lok Part No.	A	E	D	F Flat
in		in	in	in	in
1/8"	CR-S6-020-4	1.76	0.09	0.50	3/8"
1/4"	CR-S6-040-4	2.12	0.19	0.60	1/2"
3/8"	CR-S6-060-4	2.40	0.28	0.66	5/8"
1/2"	CR-S6-080-4	2.84	0.41	0.90	13/16"
3/4'	CR-S6-120-4	3.14	0.62	0.96	1 1/16"
1"	CR-S6-160-4	3.86	0.88	1.23	1 3/8"



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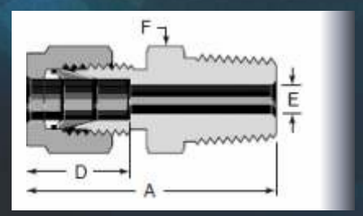
NPTM Connector

Tube OD	M NPT Size	Ex Lok Part NO	A	D	E	F Flat
in	in		in	in	in	in
1/8"	1/8"	NMC-S6-020-024	1.20	0.50	0.09	7/16"
	1/4"	NMC-S6-020-044	1.40			9/16"
	3/8"	NMC-S6-020-064	1,41			11/16"
	1/2"	NMC-S6-020-084	1.66			7/8"
1/4"	1/8"	NMC-S6-040-024	1.29	0.60	0.19	1/2"
	1/4"	NMC-S6-040-044	1.49			9/16"
	3/8"	NMC-S6-040-064	1.51			11/16"
	1/2"	NMC-S6-040-084	1.76			7/8"
3/8"	1/8"	NMC-S6-060-024	1.39	0.66	0.19	5/8"
	1/4"	NMC-S6-060-044	1.57		0.28	5/8"
	3/8"	NMC-S6-060-064	1.57			11/16"
	1/2"	NMC-S6-060-084	1.82			7/8"
1/2"	1/8"	NMC-S6-080-024	1.53	0.90	0.19	13/16"
	1/4"	NMC-S6-080-044	1.71		0.28	13/16"
	3/8"	NMC-S6-080-064	1.71		0.38	13/16"
	1/2"	NMC-S6-080-084	1.93		0.41	7/8"



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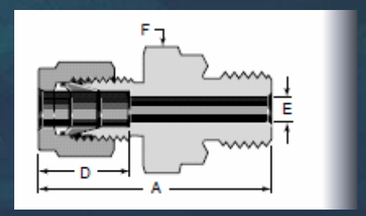
Ex-Lok™

BSPM Connector

Tube OD	BSPM Size	Ex Lok Part No.	A	D	E	F Flat
in	in	in	in	in	in	
1/8"	1/8"	NMC-S6-020-025	1.20	0.50	0.09	7/16"
	1/4"	NMC-S6-020-045	1.40			9/16"
	3/8"	NMC-S6-020-065	1,41			11/16"
	1/2"	NMC-S6-020-085	1.66			7/8"
1/4"	1/8"	NMC-S6-040-025	1.29	0.60	0.19	1/2"
	1/4"	NMC-S6-040-045	1.49			9/16"
	3/8"	NMC-S6-040-065	1.51			11/16"
	1/2"	NMC-S6-040-085	1.76			7/8"
3/8"	1/8"	NMC-S6-060-025	1.39	0.66	0.19	5/8"
	1/4"	NMC-S6-060-045	1.57		0.28	5/8"
	3/8"	NMC-S6-060-065	1.57			11/16"
	1/2"	NMC-S6-060-085	1.82			7/8"
1/2"	1/8"	NMC-S6-080-025	1.53	0.90	0.19	13/16"
	1/4"	NMC-S6-080-045	1.71		0.28	13/16"
	3/8"	NMC-S6-080-065	1.71		0.38	13/16"
	1/2"	NMC-S6-080-085	1.93		0.41	7/8"



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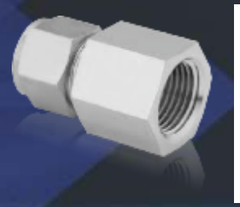
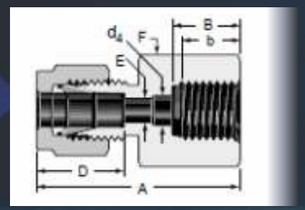
BSPF Connector

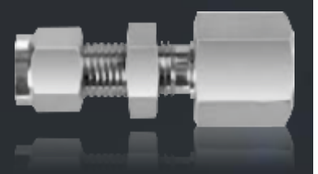
Tube OD	BSPF Size	Ex-lok Part No.	A	B	b	D	d4	E	F Flat
in	in	in	in		in	in	in	in	in
1/4"	1/4"	BFC-S6-040-042	1.48	0.51	0.39	0.60	0.22	0.19	3/4"
	3/8"	BFC-S6-040-062	1.48	0.56	0.37	0.60	0.26	0.19	15/16"
	1/2"	BFC-S6-040-082	1.71	0.74	0.57	0.60	0.26	0.19	1 1/16"
3/8"	1/4"	BFC-S6-060-042	1.54	0.51	0.39	0.66	0.00	0.22	3/4"
	3/8"	BFC-S6-060-062	1.52	0.56	0.39	0.66	0.00	0.26	15/16"
	1/2"	BFC-S6-060-082	1.65	0.74	0.57	0.66	0.00	0.28	1 1/16"
1/2"	3/8"	BFC-S6-080-062	1.75	0.56	0.39	0.90	0.00	0.26	15/16"
	1/2"	BFC-S6-080-082	1.90	0.74	0.57	0.90	0.00	0.28	1 1/16"

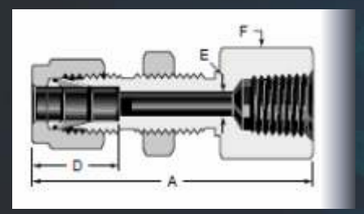




NPTF Bulkhead Connector

Tube OD	NPTF Size	Ex.Lock Part No.	A	D	E	F Flat	Panel Hole Size	Panel Thik Max
IN	IN		IN	IN	IN	IN	IN	IN
1/8"	1/8"	NFBC-S6-020-021	1.76	0.50	0.09	9/16"	21/64"	0.50
1/4"	1/8"	NFBC-S6-040-021	1.85	0.60	0.19	5/8"	29/64"	0.40
	1/4"	NFBC-S6-040-041	2.04	0.60	0.19	3/4"	29/64"	0.40
3/8"	1/4"	NFBC-S6-060-041	2.17	0.66	0.28	3/4"	37/64"	0.44
½"	3/8"	NFBC-S6-080-061	2.43	0.90	0.41	15/16"	49/64"	0.50
	½'	NFBC-S6-080-081	2.62	0.90	0.41	1 1/16"	49/64"	0.50





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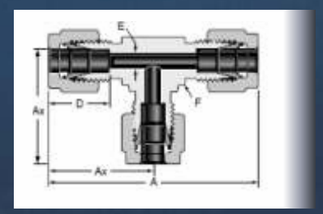
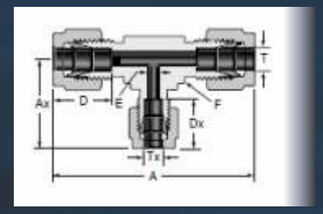
Equal Tee

Tube OD	EX-Lok Part No.	A	Ax	D	E	F Flat
in		in	in	in	in	in
1/8"	TE-S6-020-3	1.76	0.88	0.50	0.09	3/8"
1/4"	TE-S6-040-3	2.12	1.06	0.60	0.19	1/2"
3/8"	TE-S6-060-3	2.40	1.20	0.66	0.28	5/8"
1/2"	TE-S6-080-3	2.84	1.42	0.90	0.41	13/16"
3/4"	TE-S6-120-3	3.14	1.57	0.96	0.62	1 1/16"
1"	TE-S6-160-3	3.86	1.93	1.23	0.88	1 3/8"



Reducing Tee

T Tube	Tx Tube OD	EX-Lok Part No	A	Ax	D	DX	E	F Flat
IN	IN		IN	IN	IN	IN	IN	IN
3/8"	1/4"	RT-S6-060-2-040	2.40	1.14	0.66	0.60	0.19	5/8"
1/2"	1/4"	RT-S6-080-2-040	2.84	1.25	0.90	0.60	0.19	13/16"
	3/8"	RT-S6-080-2-060	2.84	1.31	0.90	0.66	0.28	13/16"
3/4"	3/8"	RT-S6-120-2-060	3.14	1.46	0.96	0.66	0.28	1 1/16"
	1/2"	RT-S6-120-2-080	3.14	1.57	0.96	0.90	0.41	1 1/16"
1"	3/8"	RT-S6-160-2-060	3.86	1.65	1.23	0.66	0.28	1 3/8"
	1/2"	RT-S6-160-2-080	3.86	1.76	1.23	0.90	0.41	1 3/8"
	3/4"	RT-S6-160-2-120	3.86	1.76	1.23	0.96	0.62	1 3/8"



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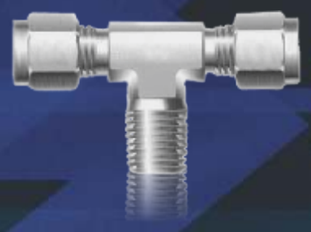
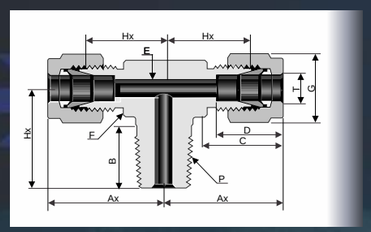
Male Branch Tee

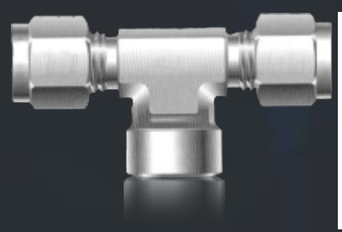
T TUBE O.D.	P NPT Male Pipe Size	Ex-Lok Part No.	Ax	B	C	D	E Minimim Opening	F Wrench Pad	G Hex Flat	Hx	Hy
in	in	in	in	in	in	in	in	in	in	in	in
1/8	1/8	MBT-S6-020-2-024	0.93	0.38	0.60	0.50	0.09	7/16	7/16	0.67	0.70
1/8	1/4	MBT-S6-020-2-044	0.97	0.56	0.60	0.50	0.09	1/2	7/16	0.71	0.92
1/4	1/8	MBT-S6-040-2-024	1.06	0.38	0.70	0.60	0.19	1/2	9/16	0.77	0.74
1/4	1/4	MBT-S6-040-2-044	1.06	0.56	0.70	0.60	0.19	1/2	9/16	0.77	0.92
3/8	1/4	MBT-S6-060-2-044	1.20	0.56	0.76	0.66	0.28	5/8	11/16	0.91	1.00
3/8	3/8	MBT-S6-060-2-064	1.31	0.56	0.76	0.66	0.28	13/16	11/16	1.02	1.11
1/2	3/8	MBT-S6-080-2-064	1.42	0.56	0.86	0.90	0.38	13/16	7/8	1.02	1.11
1/2	1/2	MBT-S6-080-2-084	1.42	0.75	0.86	0.90	0.41	13/16	7/8	1.02	1.30

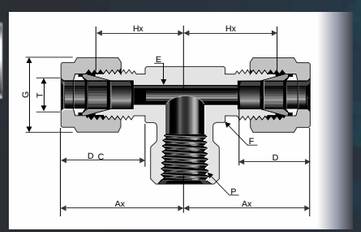




Female Branch Tee

T TUBE O.D.	P NPT Male Pipe Size	Ex-Lok Part No.	Ax	B	C	D	E Minimim Opening	F Wrench Pad	G Hex Flat	Hx	Hy
in	in	in	in	in	in	in	in	in	in	in	in
1/8	1/8	FBT-S6-020-021-020	0.97	0.41	0.60	0.60	0.19	5/8	7/16	0.71	0.75
1/4	1/8	FBT-S6-040-021-040	1.06	0.41	0.70	0.60	0.19	5/8	9/16	0.77	0.75
1/4	1/4	FBT-S6-040-041-040	1.17	0.59	0.70	0.60	0.19	13/16	9/16	0.88	0.88
3/8	1/4	FBT-S6-060-041-060	1.23	0.59	0.76	0.66	0.28	13/16	11/16	0.94	0.88
3/8	3/8	FBT-S6-060-061-060	1.31	0.59	0.76	0.66	0.28	15/16	11/16	1.02	0.88
3/8	1/2	FBT-S6-060-081-060	1.42	0.78	0.76	0.66	0.28	1-1/16	11/16	1.13	1.12
1/2	1/4	FBT-S6-080-041-080	1.42	0.59	0.86	0.90	0.41	13/16	7/8	1.02	0.88
1/2	3/8	FBT-S6-080-080-061	1.42	0.59	0.86	0.90	0.41	15/16	7/8	1.02	0.88
1/2	1/2	FBT-S6-080-2-081	1.53	0.78	0.86	0.90	0.41	15/16	7/8	0.13	1.12

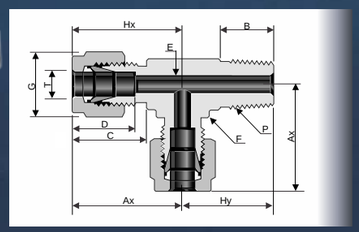




Dimensions & Images are for reference only and are subject to change.

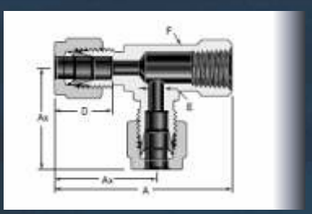
Male Run Tee

T TUBE O.D.	P NPT Male Pipe Size	Ex-Lok Part No.	Ax	B	C	D	E Minimim Opening	F Wrench Pad	G Hex Flat	Hx	Hy
in	in	in	in	in	in	in	in	in	in	in	in
1/8	1/8	MRT-S6-020-024-020	0.93	0.38	0.60	0.50	0.09	7/16	7/16	0.67	0.70
1/8	1/4	MRT-S6-020-044-020	0.97	0.56	0.60	0.50	0.09	1/2	7/16	0.71	0.92
1/4	1/8	MRT-S6-040-024-040	1.06	0.38	0.70	0.60	0.19	1/2	9/16	0.77	0.74
1/4	1/4	MRT-S6-040-044-040	1.06	0.56	0.70	0.60	0.19	1/2	9/16	0.77	0.92
3/8	1/4	MRT-S6-060-044-060	1.20	0.56	0.76	0.66	0.28	5/8	11/16	0.91	1.00
3/8	3/8	MRT-S6-060-064-060	1.31	0.56	0.76	0.66	0.28	13/16	11/16	1.02	1.11
1/2	3/8	MRT-S6-080-064-080	1.42	0.56	0.86	0.90	0.38	13/16	7/8	1.02	1.11
1/2	1/2	MRT-S6-080-084-080	1.42	0.75	0.86	0.90	0.41	13/16	7/8	1.02	1.30



Female Run Tee

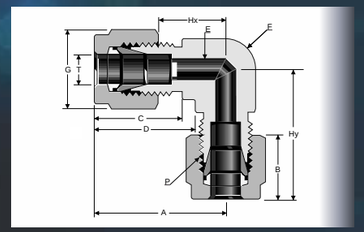
Tube OD	NPT Female Size	Ex-Lok Part No.	A	Ax	D	E	F Flat
in	in		in	in	in	in	in
1/8"	1/8"	FRT-S6-020-021-020	1.72	0.97	0.50	0.09	1/2"
1/4"	1/8"	FRT-S6-040-021-040	1.81	1.06	0.60	0.19	1/2"
	1/4"	FRT-S6-040-041-040	2.05	1.17			11/16"
3/8"	1/4"	FRT-S6-060-041-060	2.11	1.23	0.66	0.28	11/16"
1/2"	3/8"	FRT-S6-080-061-080	2.30	1.42	0.90	0.41	13/16"
	1/2"	FRT-S6-080-081-080	2.69	1.57			1 1/16"
3/4"	3/4"	FRT-S6-120-121-120	3.01	1.76	0.96	0.62	1 3/8"
1"	3/4"	FRT-S6-160-121-160	3.18	1.93	1.23	0.88	1 3/8"
	1"	FRT-S6-160-161-160	3.61	2.11			1 11/16"



Dimensions & Images are for reference only and are subject to change.

Male Elbow

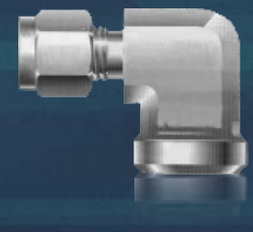
T TUBE O.D.	P NPT Male Pipe Size	Ex-Lok Part No.	A	B	C	D	E Minimim Opening	F Hex Flat	G Hex Flat	Hx	Hy
in	in	in	in	in	in	in	in	in	in	in	in
1/8	1/8	ME-S6-020-024	0.93	0.38	0.60	0.50	0.09	1/16	7/16	0.67	0.70
1/8	1/4	ME-S6-020-044	0.97	0.56	0.60	0.50	0.09	1/2	7/16	0.71	0.92
1/4	1/8	ME-S6-040-024	1.06	0.38	0.70	0.60	0.19	1/2	9/16	0.77	0.74
1/4	1/4	ME-S6-040-044	1.06	0.56	0.70	0.60	0.19	1/2	9/16	0.77	0.92
1/4	3/8	ME-S6-040-064	1.17	0.56	0.70	0.60	0.19	11/16	9/16	0.88	1.03
1/4	1/2	ME-S6-040-084	1.25	0.75	0.70	0.60	0.19	13/16	9/16	0.96	1.30
3/8	1/8	ME-S6-060-024	1.20	0.38	0.76	0.66	0.19	5/8	11/16	0.91	0.82
3/8	1/4	ME-S6-060-044	1.20	0.56	0.76	0.66	0.28	5/8	11/16	0.91	1.00
3/8	3/8	ME-S6-060-064	1.23	0.56	0.76	0.66	0.28	11/16	11/16	0.94	1.03
3/8	1/2	ME-S6-060-084	1.31	0.75	0.76	0.66	0.28	13/16	7/8	1.02	1.30
1/2	1/4	ME-S6-080-044	1.42	0.56	0.86	0.90	0.28	13/16	7/8	1.02	1.11
1/2	3/8	ME-S6-080-064	1.42	0.56	0.86	0.90	0.38	13/16	7/8	1.02	1.11
1/2	1/2	ME-S6-080-084	1.42	0.75	0.86	0.90	0.41	13/16	7/8	1.02	1.30

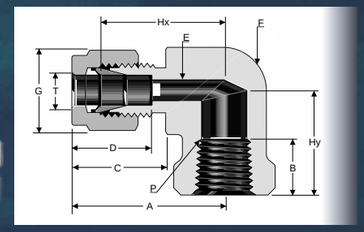


Dimensions & Images are for reference only and are subject to change.

Female Elbow

T TUBE O.D.	P NPT Male Pipe Size	Ex-Lok Part No.	A	B	C	D	E Minimim Opening	F Hex Flat	G Hex Flat	Hx	Hy
in	in	in	in	in	in	in	in	in	in	in	in
1/8	1/8	EL-S6-020-021	0.97	0.41	0.60	0.50	0.09	1/2	7/16	0.71	0.75
1/8	1/4	EL-S6-020-041	1.08	0.59	0.60	0.50	0.09	11/16	7/16	0.82	0.88
1/4	1/8	EL-S6-040-021	1.06	0.39	0.70	0.60	0.19	1/2	9/16	0.77	0.75
1/4	1/4	EL-S6-040-041	1.17	0.59	0.70	0.60	0.19	11/16	9/16	0.88	0.88
1/4	3/8	EL-S6-040-061	1.25	0.59	0.70	0.60	0.19	13/16	9/16	0.96	0.88
1/4	1/2	EL-S6-040-081	1.36	0.78	0.70	0.60	0.19	1	9/16	1.07	1.12
3/8	1/8	EL-S6-060-021	1.20	0.39	0.76	0.66	0.28	5/8	11/16	0.91	0.75
3/8	1/4	EL-S6-060-041	1.23	0.59	0.76	0.66	0.28	11/16	11/16	0.94	0.88
3/8	3/8	EL-S6-060-061	1.31	0.59	0.76	0.66	0.28	13/16	11/16	1.02	0.88
3/8	1/2	EL-S6-060-081	1.42	0.78	0.76	0.66	0.28	1	11/16	1.13	1.12
1/2	1/4	EL-S6-080-141	1.42	0.59	0.86	0.90	0.41	13/16	7/8	1.02	0.88
1/2	3/8	EL-S6-080-001	1.42	0.59	0.86	0.90	0.41	13/16	7/8	1.02	0.88
1/2	1/2	EL-S6-080-081	1.53	0.78	0.86	0.90	0.41	1	7/8	1.13	1.12

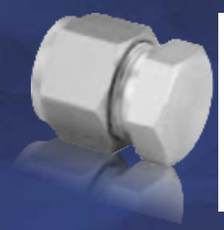


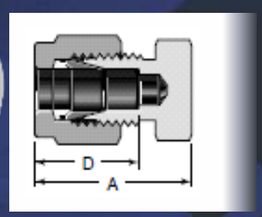


Dimensions & Images are for reference only and are subject to change.

Cap

Tube OD	Ex-Lock Part No	A	D
in		in	in
1/8"	CP-S6-020	0.79	0.50
1/4"	CP-S6-020	0.92	0.60
3/8"	CP-S6-020	1.01	0.66
½"	CP-S6-020	1.15	0.90
3/4"	CP-S6-020	1.24	0.96
1"	CP-S6-020	1.51	0.04





Plug

Tube OD	Ex-lok Part No.
IN	
1/8"	PL-S6-020
1/4"	PL-S6-040
3/8"	PL-S6-060
½"	PL-S6-080
3/4"	PL-S6-120
1"	PL-S6-160

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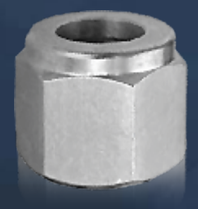
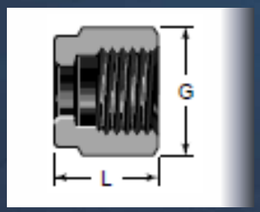
Female Nut

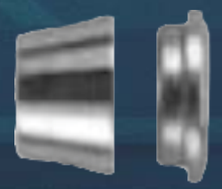
Tube OD	Ex-lok Part No.	G	L
in		in	in
1/8"	FN-S6-020	7/16"	0.47
1/4"	FN-S6-040	9/16"	0.50,
3/8"	FN-S6-060	11/16"	0.56
½"	FN-S6-080	7/8"	0.69
3/4"	FN-S6-120	1 1/8"	0.69
1"	FN-S6-160	1 ½"	0.81

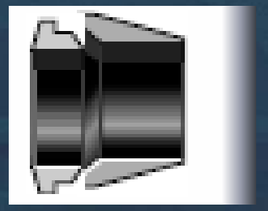




Ferrule Set

Tube OD	Ex-Lok Part No.
IN	
1/8"	FS-S6-020
1/4"	FS-S6-040
3/8"	FS-S6-060
½"	FS-S6-080
3/4"	FS-S6-120
1"	FS-S6-160





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WELD FITTING

Pressure Ratings Basis

Catalog pressure ratings shown are for temperatures from - 20 to 100°F (- 28 to 37°C).

Pressure ratings from –20 to 100°F (–28 to 37°C) are based onan allowable stress value of 20 000 psi (1378 bar) in accordance with ASME B31.3. Pressure derating factors for application sat temperatures greater than 100°F (37°C) were determined from this pressure code and are listed in the table below.

Consult ASME Boiler and Pressure Vessel Code, ASME B31.1, B31.3, or other applicable codes for information on weld setup, technique, and additional considerations for welded systems.

The choice of fitting, pipe, and tubing material being welded is critical. Using the same materials will ensure the same coefficients of expansion and will reduce the possibility of poor welds, out-of-roundness, or dimensional changes that are detrimental to a good weld.

Pipe threads are based on the requirements of ASME B1.2 0.1(NPT) and SAE AS71051 (ANPT) for tapered pipe threads.

Materials of Construction

316 stainless steel Bar Stock As per ASTM A479/ASME SA479 and ASTM A276 Standerd
316 stainless steel Forging as per ASTM A182/ASME SA182 and ASTM A314 Standerd

Testing

Ex-Lok follows the relevant ASTM, ANSI, ASME, ISO, SEMI & SEMASPEC standards for testing and for qualifying both processes and results.

Packing

Each finished component is Bagged to ensure component cleanliness and to protect it from Environmental contamination. The bag is polyethylene.

Welding

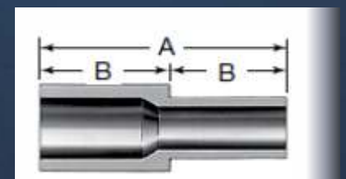
Options:
Butt weld (Orbital weld) , socket weld

Reference Specs: All welded products are manufactured and Welded according to SEMI F3-94.

Tube to Tube Butt Weld Fitting

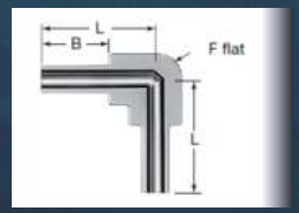
Reducer

Tube OD	Wall Thik	Tube OD	Wall Thik	EX-Lok Part No	B	A	Pressure Rating
IN	MM	IN	MM		MM	MM	Bar
3/8”	0.89	1/4”	0.89	RE-S6-06-04 TB	25	50	209
½"	1.24	1/4"	0.89	RE-S6-08-04 TB	25	50	209
½	1.24	3/8”	0.89	RE-S6-08-06 TB	25	50	209
3/4"	1.24	3/8”	0.89	RE-S6-12-06 TB	25	50	150
3/4”	1.24	1/2"	1.24	RE-S6-12-08 TB	25	50	150
1"	1.65	1/2"	1.24	RE-S6-16-08 TB	25	50	140
1”	1.65	3/4"	1.24	RE-S6-16-12 TB	25	50	140



Elbow

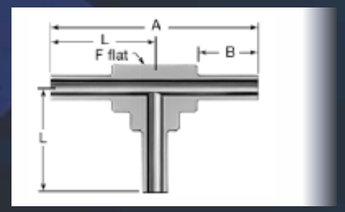
Tube OD	Wall Thick	Ex-lok Part No	B	F	L	Pressure Rating
IN	MM		MM	MM	MM	Bar
1/4 ”	0.89	EL-S6-04-TB-2	19.5	11.1	32.00	310
3/8”	0.89	EL-S6-06-TB-2	19.5	11.1	32.00	209
½"	1.24	EL-S6-08-TB-2	19.5	17.2	35.80	209
3/4”	1.50	EL-S6-12-TB-2	19.5	24.3	37.50	150
1”	1.65	EL-S6-16-TB-2	19.5	32.2	47.50	140



Tube Fitting Above ½” not Available in cat log will beorder to make.

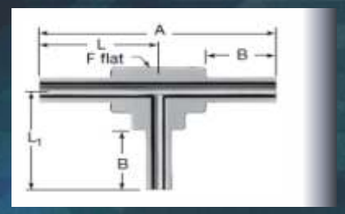
Union Tee

Tube OD	Wall Thick	Ex-lok Part No	B	F	L	A	Pressure Rating
IN	MM		MM	MM	MM	MM	Bar
1/4 ”	0.89	TE-S6-04-TB-3	19.5	11.1	32.00	64.00	310
3/8”	0.89	TE-S6-06-TB-3	19.5	11.1	32.00	64.00	209
½"	1.24	TE-S6-08-TB-3	19.5	17.2	35.80	71.60	209
3/4”	1.50	TE-S6-12-TB-3	19.5	24.3	37.50	75.00	150
1”	1.65	TE-S6-16-TB-3	19.5	32.2	47.50	95.00	140



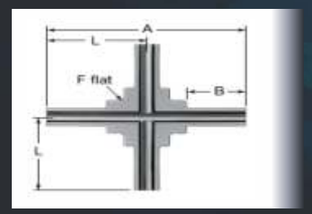
Reducing Tee

Tube OD	Wall Thik OD	Tube	Wall Thik	EX-Lok Part No	A	B	L	F Flat	Pressure Rating
IN	MM	IN	MM		MM	MM	MM	Bar	Bar
3/8”	0.89	1/4”	0.89	RT-S6-06-2-04-1TB	64.0	19.5	32.00	11.1	209
½"	1.24	1/4"	0.89	RT-S6-08-2-04-1TB	71.0	19.5	35.80	17.2	209
½	1.24	3/8”	0.89	RT-S6-08-2-06-1TB	71.0	19.5	35.80	17.2	209
3/4"	1.24	3/8”	0.89	RT-S6-12-2-06-1TB	75.0	19.5	37.50	24.3	150
3/4”	1.24	1/2"	1.24	RT-S6-12-2-08-1TB	75.0	19.5	37.50	24.3	150
1"	1.65	1/2"	1.24	RT-S6-16-2-08-1TB	95.0	19.5	47.50	32.2	140
1”	1.65	3/4"	1.24	RT-S6-16-2-12-1TB	95.0	19.5	47.50	32.2	140



Union Cross

Tube OD	Wall Thick	Ex-lok Part No	B	F	L	A	Pressure Rating
IN	MM		MM	MM	MM	MM	Bar
1/4 ”	0.89	CR-S6-04-TB-4	19.5	11.1	32.00	64.00	310
3/8”	0.89	CR-S6-06-TB-4	19.5	11.1	32.00	64.00	209
½"	1.24	CR-S6-08-TB-4	19.5	17.2	35.80	71.60	209
3/4”	1.50	CR-S6-12-TB-4	19.5	24.3	37.50	75.00	150
1”	1.65	CE-S6-16-TB-4	19.5	32.2	47.50	95.00	140

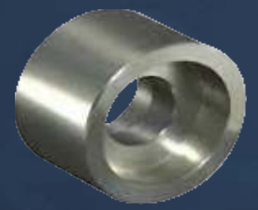


Tube Fitting Above ½” not Available in cat log will beorder to make.

Tube to Tube Socket Weld

Reducer

Tube Size 1	Tube Size 2	Ex-lock Part No
1”	3/4"	RE-S6-16-12-SW
1 ½"	3/4"	RE-S6-24-12-SW
1 ½"	1"	RE-S6-24-16-SW
2”	1”	RE-S6-32-16-SW
2”	1 ½"	RE-S6-32-24-SW



Socket

Tube Size1	Ex-lock Part No
3/4"	SO-S6-12- SW
1”	SO-S6-16-SW
1 ½"	SO-S6-24-SW
2”	SO-S6-32-SW

Reducing Tee

Tube Size 1	Tube Size 2	Ex-lock Part No
1”	3/4"	RT-S6-16-2-12-1-SW
1 ½"	3/4"	RT-S6-24-2-12-1-SW
1 ½"	1"	RT-S6-24-2-16-1-SW
2”	1”	RT-S6-32-2-16-1-SW
2”	1 ½"	RT-S6-32-2-24-1-SW

Union Tee

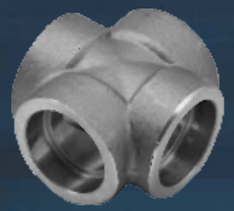
Tube Size1	Ex-lock Part No.
3/4"	TE-S6-12- SW-3
1”	TE-S6-16-SW-3
1 ½"	TE-S6-24-SW-3
2”	TE-S6-32-SW-3

Elbow

Tube Size1	Ex-lock Part No.
3/4"	EL-S6-12- SW
1”	EL-S6-16-SW
1 ½"	EL-S6-24-SW
2”	EL-S6-32-SW

Cross

Tube Size1	Ex-lock Part No
3/4"	CR-S6-12- SW
1”	CR-S6-16-SW
1 ½"	CR-S6-24-SW
2”	CR-S6-32-SW



Tube Fitting Above ½” not Available in cat log will beorder to make.

SAFETY PRECAUTION IN USING Ex-LOCK TUBE FITTINGS

1. Select proper tubing with Ex-Lok tube fittings. Seamless tubing is recommended.
2. Avoid combining or mixing materials or fittings components from various manufacturers.
3. Do not make up or tighten fittings when system is pressurized.
4. Never turn fitting body. Hold body and turn nut.
5. Do not bleed down system by loosening fittings nut or plug.
6. Always use proper thread sealant and lubricants on tapered pipe threads.
7. Total system design must be considered to assure safe & trouble free performance. Material compatibility, adequate rating, proper installation operation and maintenance are the responsibility of the system engineer and user.
8. Tubing materials should always be softer than the fitting material. S.S. tubing should not be used with Brass fittings.
9. Tubing should be fully annealed if tubing and fitting material is same.
10. Extremes (Minimum and maximum) of wall thickness should always be checked.
11. Surface finish is very important for proper sealing. Tubing with any kind of depression, scratch, raised portion or other surface defect will be difficult to seal particularly on gas service.
12. Tubing which is oval and does not easily fit through fitting nut, ferrule and body should never be forced into the fitting.