Seal-Lok™ O-Ring Face Seal Tube Fittings

A

Parker

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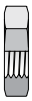
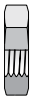
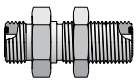
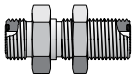
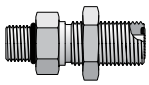
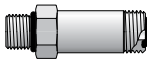
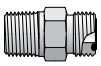
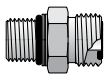
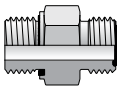
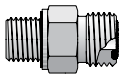
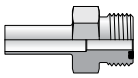
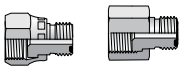
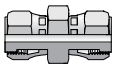
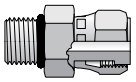
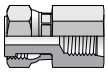
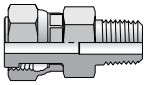
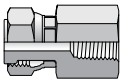
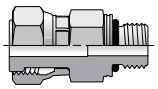
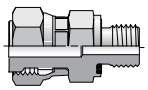
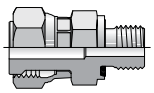
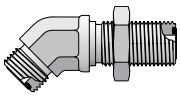
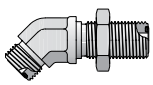
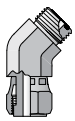
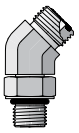
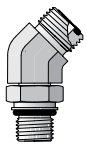
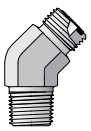
Nuts, Sleeves, Locknuts	**BL** Tube Nut  A9	**BML** Tube Nut - mm Hex  A9	**TPLS (Metric)** Parflange Sleeve  A9	**TPL (Inch)** Parflange Sleeve  A9	**TL (Inch)** Braze Reducer Sleeve  A10
TLS (Metric) Braze Reducer Sleeve  A10	**SBR (Inch and Metric)** Braze Ring  A11	**WLNL** Bulkhead Locknut  A11	**WLNML** Blkhd Locknut - mm Hex  A11	**Straights**	**HLO** Union  A12
HMLO Union - mm Hex  A12	**WLO** Bulkhead Union  A12	**WMLO** Bulkhead Union - mm Hex  A13	**WF5OLO** ORFS Blkhd / SAE-ORB  A13	**F5OLO** ORFS / SAE-ORB  A14	**FF5OLO** ORFS - Long / SAE-ORB  A14
FLO ORFS / NPTF  A14	**GLO** ORFS / NPTF  A15	**F87OMLO** ORFS / ISO 6149  A15	**F82EDMLO** ORFS / Metric-ED  A15	**F42EDMLO** ORFS / BSPP-ED  A15	**LOHB3** ORFS / Braze Socket  A16
MMLOHB3 ORFS / Braze - mm Hex  A16	**LOHT3** ORFS / Tube Weld  A16	**Straight Swivels**	**TRLON** Tube End Reducer  A17	**LOHL6** Extender and Expander  A17	**HL6** ORFS Swivel Union  A17
F65OL ORFS Swivel / SAE-ORB  A18	**G65L** ORFS Swivel / SAE-ORB  A18	**F6L** ORFS Swivel / NPTF  A18	**G6L** ORFS Swivel / NPTF  A18	**F687OML** ORFS Swivel / ISO 6149  A19	**F682EDML** ORFS Swivel / Metric-ED  A19
F642EDML ORFS Swivel / BSPP-ED  A19	**45° Elbows**	**WNLO** Bulkhead Union  A19	**WNMLO** Bulkhead Union - mm Hex  A20	**V6LO** ORFS Swivel Elbow  A20	**V5OLO** ORFS / SAE-ORB  A20
V87OMLO ORFS / ISO 6149  A20	**VLO** ORFS / NPTF  A21	**V4OMLO** ORFS / BSPP-ORR A21	**90° Elbows**	**ELO** Union Elbow A21	**EMLO** Union Elbow - mm Hex A21

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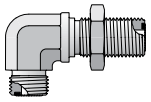
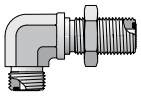
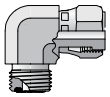
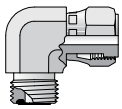
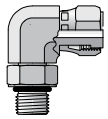
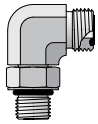
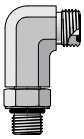
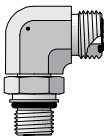
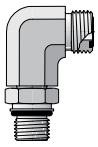
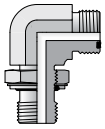
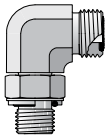
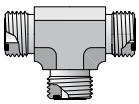
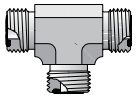
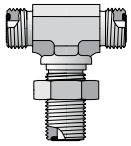
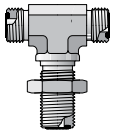
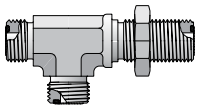
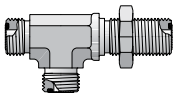
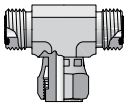
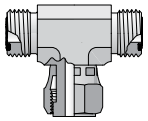
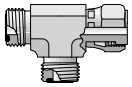
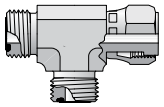
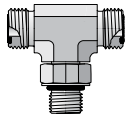
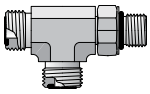
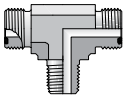
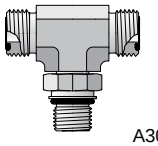
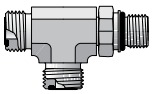
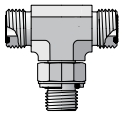
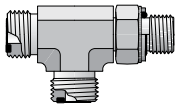
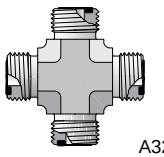
WELO Bulkhead Union  A22	**WEMLO** Bulkhead Union - mm Hex  A22	**C6LO** ORFS Swivel Elbow  A23	**C6MLO** Swivel Elbow - mm Hex  A23	**AOEL6** ORFS Swivel / SAE-ORB  A23	**C5OLO** ORFS / SAE-ORB  A23
CC5OLO ORFS / SAE-ORB - Long  A24	**CLO** ORFS / NPTF  A24	**C87OMLO** ORFS / ISO 6149  A24	**CC87OMLO** ORFS / ISO 6149 - Long  A25	**C8OMLO** ORFS / Metric-ORR  A25	**C4OMLO** ORFS / BSPP-ORR  A26
Tees	**JLO** Union Tee  A26	**JMLO** Union Tee - mm Hex  A26	**WJLO** Bulkhead Branch  A26	**WJMLO** Blkhd Branch - mm Hex  A27	**WJJLO** Bulkhead Run  A27
WJJMLO Bulkhead Run - mm Hex  A28	**S6LO** ORFS Swivel Branch  A28	**S6MLO** Swivel Branch - mm Hex  A28	**R6LO** ORFS Swivel Run  A29	**R6MLO** Swivel Run - mm Hex  A29	**S5OLO** SAE-ORB Branch Tee  A29
R5OLO SAE-ORB Run Tee  A30	**SLO** NPTF Branch Tee  A30	**S87OMLO** ISO 6149 Branch Tee  A30	**R87OMLO** ISO 6149 Run Tee  A31	**S4OMLO** BSPP-ORR Branch Tee  A31	**R4OMLO** BSPP-ORR Run Tee  A32
Crosses	**KLO** Union Cross  A32	**Plugs, Caps and Bleed Adapters**	**PNLO** ORFS Plug  A33	**PNMLO** ORFS Plug - mm Hex  A33	**FNL** ORFS Cap  A33
FNML ORFS Cap - mm Hex  A33	**UPTC Nut Assembly**	**UPTC** Nut Assembly  A34			

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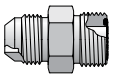
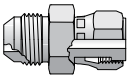
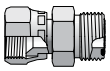
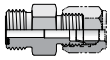
Conversion Adapters (Shown in Section K)

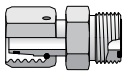
Conversion Adapters

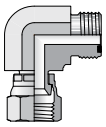
XHLO
37° Flare / ORFS

K3

XHL6
37° Flare / ORFS Swivel

K3

LOHX6
ORFS / 37° Swivel

K3

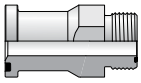
BUHLO
ORFS / Flareless (inch)

K4

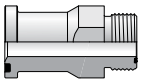
LOHU86
Metric Swivel (EO)/ORFS

K4

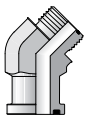
LOEX6
ORFS / 37° Swivel

K3

Flange Adapters (Shown in Section L)

SAE Flange Adapters

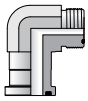
LOHQ1
Code 61 / ORFS

L12

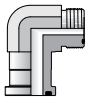
LOHQ2
Code 62 / ORFS

L12

LOVQ1
Code 61 / ORFS

L30

LOVQ2
Code 62 / ORFS

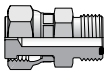
L30

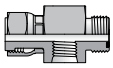
LOEQ1
Code 61 / ORFS

L31

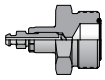
LOEQ2
Code 62 / ORFS

L31

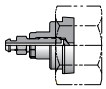
Diagnostic, Bleed Adapters & Screen Fittings (Shown in Section M)

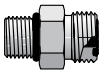
Diagnostic, Bleed Adapters & Screen Fittings

LOHL6 Orifice
Orifice Swivel with Orifice / ORFS

M9

LOHL6G5TP
Orifice Swivel / ORFS / SAE-ORB

M5

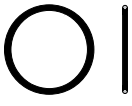
PNLOBA
Bleed Screw / ORFS

M10

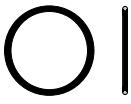
FNLBA
Bleed Screw / SAE-ORB

M10

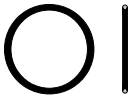
Screen Fittings

M12

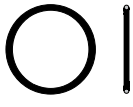
O-Rings and Seals (Shown in Section N)

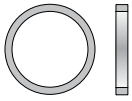
O-Rings and Seals

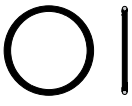
ORFS O-Ring

N4

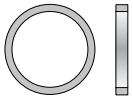
SAE O-Ring

N4

ISO 6149 O-Ring

N5

Metric O-Ring

N5

Metric Retaining Ring

N5

BSPP O-Ring

N6

BSPP Retaining O-Ring

N6

EOlastic Seal Ring

N6

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Seal-Lok Introduction

The Seal-Lok fitting meets or exceeds the strict requirements of SAE J1453 and ISO 8434-3. It is an O-ring face seal type fitting that consists of a nut, a body, an O-ring and a sleeve. As shown in Fig. A2, the tube is flanged to 90° (or the tube may be brazed instead to a braze-type sleeve). When the fitting is assembled, it compresses an O-ring in the precision machined groove of the fitting body to form a leak tight seal.

Seal-Lok fittings are suitable for a wide range of tube wall thicknesses and are readily adaptable to inch or metric tubing and hose. (Please refer to Tables U3 and U4 located in the Appendix section for min./max. tube wall thickness for inch and metric tubing, respectively). Seal-Lok's leak-free design and rugged construction make it suitable for a wide range of applications where higher pressures, vibration and impulse are prevalent.

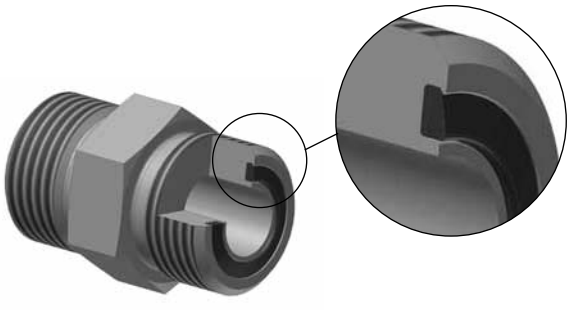

Fig. A1 — Captive O-ring Groove (CORG) Cutaway with Parker's trap seal

How Seal-Lok Fittings Work

The Seal-Lok fitting body face contains a high durometer trap seal to maximize retention in a precision machined groove also known as a Captive O-Ring Groove (CORG) referenced in Fig. A1. As the nut is tightened onto the fitting body, the trap seal is compressed between the body and flat face of the tube flange or braze sleeve to form a tight, positive seal (see Fig. A2).

As the two faces come in contact, further tightening of the nut produces a sharp rise in assembly torque. A solid pull of the wrench at this point, to recommended assembly torque, completes the assembly. The sharp torque rise gives a "solid feel" at assembly, minimizing the possibility of over tightening.

Because the sealing surfaces are flat and perpendicular to the assembly pull, they remain virtually free of distortion during assembly, giving Seal-Lok fittings practically unlimited remakeability. The O-ring should be inspected at each disassembly and replaced when necessary. **See the O-Rings and Seals section for information on replacement ORFS O-rings.**

Because the tubing is a sealing surface, it must be smooth, free of any nicks, scratches, spiral tool marks, splits or weld beads. Seamless tube is recommended for Seal-Lok fittings for ease in flanging and bending. Certain types of harder tubes that are not fully annealed may not be suitable for flanging due to the potential for immediate or long-term cracking of the tube flange. For specific tube type and wall thickness recommendations, please see Table U3 in the Appendix Section.

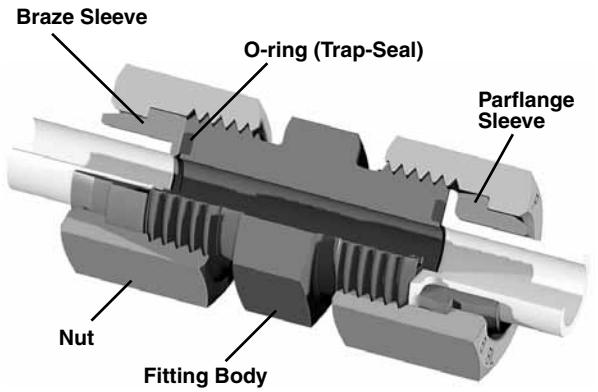

Fig. A2 — Seal-Lok Union cutaway with flanged and brazed assemblies

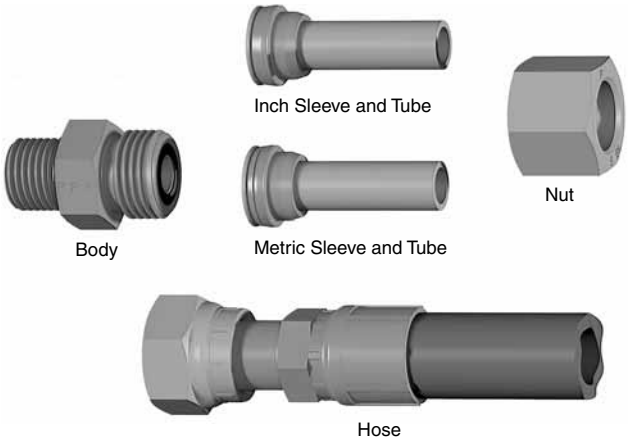

Fig. A3 — Seal-Lok Works with Inch or Metric Tube and Hose

Reference locations

Dynamic Pressure Ratings: Please refer to the last column of the part number tables located on the following pages of this section for the appropriate dynamic pressure ratings.

Recommended Tube Wall Thickness: Please refer to Table U3 located in the Appendix section.

Assembly and Installation: Please refer to Seal-lok Assembly located within the Assembly/Installation section of this catalog.

Standard material specifications: Please refer to Table U1 located in the Appendix section.

Dimensions and pressures for reference only, subject to change.

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Seal Material Selection: Please refer to Table T8 in the General Technical section of this catalog.

Tube Wall Thickness: Recommended min/max tube wall thicknesses for inch and metric Seal-Lok are provided in Tables U3 and U4 in the Appendix section, respectively. When using the braze method, all tube wall thicknesses can be used. For Parflange min/max tube wall thickness range, please refer to page R24 for tooling availability.

Fig. A4 — UPTC Seal-Lok is adaptable to a UPTC hydraulic or thermoplastic hose assembly. To be used with ET, EN, or EU hose ends.

International Acceptance

The tube/hose end connection for metric Seal-Lok is the same as standard (inch) Seal-Lok. It consists of a body, a flange or braze sleeve, an O-ring and a nut. The difference is at the port end of the fitting. Instead of the SAE straight thread connection for example, it features a similar connection with metric threads per ISO 6149-2 or ISO 9974-1. Additionally, the fitting body, tube nut and locknut are manufactured with metric hexes or wrench flats for shaped fittings. The metric Seal-Lok fittings meet or exceed all requirements of ISO 8434-3.

To identify the metric sleeves used for metric tubing, there is a groove machined into the TPLS & TLS sleeves.

UPTC Pressure Ratings

Size	Pressure (psi)	Pressure (Bar)
-4	5800	400
-6	5000	345
-8	4250	293
-10	4000	276
-12	3125	216
-16	3125	216

Table A1 — UPTC Seal-Lok pressure ratings.

Universal Push-to-Connect (UPTC) Introduction

Traditionally, the fluid power industry has utilized threaded connectors to make a leak free connection. The speed of making connections is slow and the reliability of the connection is dependent on proper assembly procedures. Parker's UPTC connectors, on the other hand, rely on a mechanical retaining mechanism (other than threads) for holding power. No tools are required to assemble, and the reliability and speed of making connections with the UPTC design is greatly improved.

Design and Construction

UPTC Seal-Lok consists of a base Seal-Lok ORFS fitting, a UPTC nut (including internal sealing and retaining elements) and a UPTC hose assembly, as shown in figure A4. The base ORFS fitting is a highly reliable and widely available off-the-shelf standard SAE J1453 adapter. The sealing O-Ring is supported by a pressure energized anti-extrusion ring that prevents O-Ring extrusion and ensures tight sealing even under high pressure. Once fully engaged, the retaining element is positively trapped between the male and UPTC nut. The dust seal keeps contamination out as well as giving a visual indication that the male stud has been inserted all the way. There is also a clear tactile indicator at the end of the push indicating a proper connection. Once a proper connection is made, the dust seal is covered by the UPTC nut. Proof of full engagement for easy inspection and quality control.

Once connected, the UPTC nut is permanently attached to the UPTC hose end similar to a traditional swivel nut. To disconnect, just use a wrench to unscrew the UPTC nut from the base adapter. Re-connect is possible by tightening the UPTC nut back to the base adapter, if the connection is not damaged. If the hose is damaged, it can be replaced by installing a readily available standard Seal-Lok ORFS hose assembly, or a new UPTC assembly.

Features

- Available in sizes 1/4", 3/8", 1/2", 5/8", 3/4", and 1"
- Utilizes all Seal-Lok adapters for a wide variety of configurations, as well as excellent field serviceability
- Meets or exceeds SAE 100R2 pressure ratings (see Table A1)
- Includes visual and tactile installation indicators
- Self-aligning nipple eliminates hose twist during assembly
- No special tooling required for disassembly
- Utilizes elastomeric seals, including Parker's patented Trap-Seal

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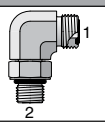
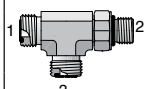
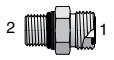
How to order examples

Base Seal-Lok Part		UPTC Part #	Explanation
	8 C5OLO-S	**8UR10 C5OLO-S**	Uniform size, UPTC subassembly on 1st end only
	8-10 C5OLO-S	**8-10UR10 C5OLO-S**	Jump size, UPTC subassembly on 1st end only
	8 R5OLO-S	**8UR101 R5OLO-S**	Uniform size, UPTC subassembly on 1st and 3rd end
	8-10-8 R5OLO-S	**8-10-8UR001 R5OLO-S**	Jump size, UPTC subassembly on 3rd end only
	8-10-8 R5OLO-S	**8-10-8UR100 R5OLO-S**	Jump size, UPTC subassembly on 1st end only
	8M14F87OMLOS	**8M14UR10F87OMLOS**	Compressed nomenclature, UPTC subassembly on 1st end only

The Parker Advantage

Trap Seal™: The patented trapezoidal seal of the Seal-Lok tube end allows for maximum o-ring retention in the CORG groove. This advantage over the competition increases the productivity of assembly as well as offers the maximum assurance for a leak free connection. Ultimately, operational and maintenance costs can be avoided.

Resistance to over-torque: The minimum requirement for a Seal-Lok connection is to withstand 200% torque above the rated value. This reduces the frequency of metal distortion and the potential of leaks. Seal-Lok reduces production assembly and maintenance costs by its resistance to over-torque.

Zero clearance: The flat face of Seal-Lok allows for easy and fast drop-in installation. This reduces rework costs from a design and assembly perspective. Maintenance cost can be avoided due to the time savings of disassembly and assembly.

High pressure rating: Seal-Lok offers a high pressure rating which can be used in a wide range of applications. This provides the opportunity to standardize across multiple product lines, saving procurement and inventory costs.

Superior Plating: Superior plating gives Parker steel tube fittings unmatched protection against red rust. In neutral salt spray test per ASTM B117, Parker Triple-Lok fittings substantially exceeded the SAE requirement of 96 hours to red rust.

Robust Port Stud: The adjustable port stud is manufactured with a longer locknut designed to cover the uppermost threads completely. Since the backup washer is never exposed to the upper threads, it cannot be damaged during assembly. During assembly, exposed upper threads, as common with fittings from other fitting manufacturers, can lead to a deformed backup washer that can pinch the o-ring and create an o-ring extrusion gap that has the potential to leak. The longer locknut also provides a greater grip area for the wrench.

Unlimited reusability: When a Seal-Lok connection is completely assembled and disassembled, very little metal is distorting in the connection. So, Seal-Lok allows for unlimited reusability in the field, reducing the component replacement and maintenance costs of the connection.

Universal Push to Connect (UPTC): Parker's UPTC offers a quick and easy way to assemble Seal-Lok configurations. UPTC is ideal for hard to reach applications or to speed up the process of assembly. The tangible operational and maintenance costs associated with each connection made will be reduced when using UPTC.

Dimensions and pressures for reference only, subject to change.

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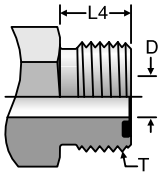
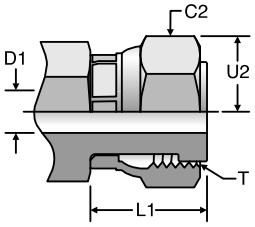
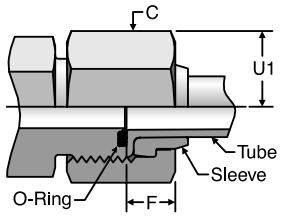
Seal-Lok O-Ring Face Seal Tube Ends



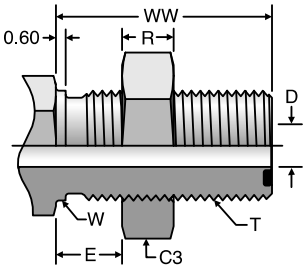
Seal-Lok Male Tube End



Seal-Lok Female Swivel



Seal-Lok Tube End Assembly



Seal-Lok Bulkhead

			Thread	Tube Nut Hex		Swivel Nut Hex		Bulkhead Locknut Hex		Nominal Drill Tube End	Nominal Drill Swivel End	Max Bulkhead Thickness	Tube Nut Assembled Allowance	Swivel Turn Back	Male Turn Back	Bulkhead			Across Corners	
																Locknut Thickness	Pilot Dia	Length	Tube Nut Hex	Swivel Nut Hex
SAE Dash Size	**Tube O.D.** (in.)	**Tube O.D.** (mm)	**T** UN/UNF	**C** (in.)	**C** (mm)	**C2** (in.)	**C2** (mm)	**C3** (in.)	**C3** (mm)	**D**[1)] (in)	**D1**[1)] (in)	**E** (in)	**F** (in)	**L1** (in)	**L4** (in)	**R** (in)	**W**[2)] (in)	**WW** (in)	**U1** (in)	**U2** (in)
4	1/4	6	9/16-18	11/16	17	11/16	17	13/16	22	0.177	0.157	0.55	0.270	0.642	0.394	0.27	0.563	1.24	0.80	0.80
6	3/8	8 10	11/16-16	13/16	22	13/16	22	1	27	0.256	0.256	0.55	0.340	0.715	0.441	0.32	0.688	1.34	0.94	0.94
8	1/2	12	13/16-16	15/16	24	15/16	24	1 1/8	30	0.374	0.354	0.55	0.400	0.865	0.512	0.35	0.813	1.44	1.08	1.08
10	5/8	14 15 16	1-14	1 1/8	30	1 1/8	30	1 5/16	36	0.492	0.453	0.55	0.455	0.980	0.618	0.41	1.000	1.60	1.30	1.30
12	3/4	18 20	1 3/16-12	1 3/8	36	1 3/8	36	1 1/2	41	0.610	0.551	0.55	0.510	1.110	0.677	0.41	1.188	1.64	1.58	1.58
14	7/8	—	1 5/16-12	1 1/2		1 1/2		1 5/8		0.709	0.709	0.55	0.512	1.145	0.697	0.41	1.313	1.66	1.74	1.74
16	1	22 25	1 7/16-12	1 5/8	41	1 5/8	41	1 3/4	46	0.807	0.787	0.55	0.596	1.190	0.697	0.41	1.438	1.66	1.88	1.88
20	1 1/4	28 30 32	1 11/16-12	1 7/8	50	1 7/8	50	2	50	1.024	1.024	0.55	0.566	1.251	0.697	0.41	1.688	1.66	2.16	2.16
24	1 1/2	35 38	2-12	2 1/4	60	2 1/4	60	2 3/8	60	1.260	1.260	0.55	0.545	1.330	0.697	0.41	2.000	1.66	2.60	2.60
32	2	42 50	2 1/2-12	2 7/8		2 7/8		2 3/4		1.772	1.732	0.50	0.606	1.690	0.874	0.54	2.500	1.83	3.32	3.32

1) D and D1 nominal may vary from the values shown in the chart by 0.004 to 0.008. Also, D for -4 metric based Seal-Lok may be D.197 (5 mm) to satisfy ISO 8434-3 (1994 edition). Contact the Tube Fittings Division if there are any questions.

2) Recommended clearance hole = W + 0.015.

3) See page N4 for ORFS O-rings.

4) Note: For port and stud end dimensions reference section F: Pipe Fittings and Port Adapters.

Dimensions and pressures for reference only, subject to change.

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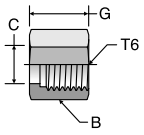


TUBE FITTING PART #	END SIZE in.	T6	B HEX in.	C in.	G in.	Material -S	Material -SS
4 BL				.	.	•	•
5 BL				.	.	•	•
6 BL				.	.	•	•
8 BL				.	.	•	•
10 BL				.	.	•	•
12 BL				.	.	•	•
12-14 BL				.	.	•	•
14 BL				.	.	•	•
16 BL				.	.	•	•
20 BL				.	.	•	•
24 BL				.	.	•	•
32 BL*				.	.	•	•

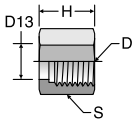
i es and are not included in .

hese tube nuts should not be e posed to annealing temperatures, such as furnace bra ing. ontact the ube ittings Di ision for information on special nuts.

• Stainless steel tube nuts are prelubricated for ease of assembly.

BML

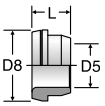
ube ut mm e



TUBE FITTING PART #	END SIZE mm	END SIZE in.	D THREAD	D13 DRILL mm	H mm	S HEX mm	Material - S
4BML				.	.		•
6BML	,			.	.		•
8BML				.	.		•
10BML	, ,			.	.		•
12BML	,			.	.		•
16BML	,			.	.		•
20BML	, ,			.	.		•
24BML	,			.	.		•

TPLS (Metric)

ar ange lee e for etric ubing echanically ttachable lee e



TUBE FITTING PART #	USED WITH FITTING SIZE	D5 END SIZE mm	D8 DIA mm	L mm	Material -S
TPLS6			.	.	•
TPLS8			.	.	•
TPLS10			.	.	•
TPLS12			.	.	•
TPLS14			.	.	•
TPLS15			.	.	•
TPLS16			.	.	•
TPLS18			.	.	•
TPLS20			.	.	•
TPLS25			.	.	•
TPLS30			.	.	•
TPLS32			.	.	•
TPLS35			.	.	•
TPLS38			.	.	•

• Must be mechanically attached using Parflange system.

• Additional -S not required, TPLS6 is complete part number.

TPL (Inch)

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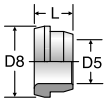

TUBE FITTING PART #	D5 END SIZE in.	D8 DIA in.	L in.	Material -S
4 TPL		.	.	•
6 TPL		.	.	•
8 TPL		.	.	•
10 TPL		.	.	•
12 TPL		.	.	•
16 TPL		.	.	•
20 TPL		.	.	•
24 TPL		.	.	•
32 TPL		.	.	•

• Must be mechanically attached using Parflange system.

Dimensions and pressures for reference only, subject to change.

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TL (Inch)

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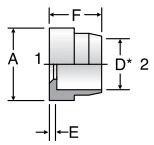
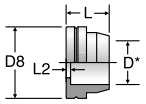


TUBE FITTING PART #	END SIZE 1 in.	END SIZE 2 in.	A in.	D* in.	E in.	F in.	Material -S	Material -SS
4 TL			.	.	.	.	•	•
6 TL			.	.	.	.	•	•
6-4 TL			.	.	.	.	•	•
8 TL			.	.	.	.	•	•
8-4 TL			.	.	.	.	•	•
8-6 TL			.	.	.	.	•	•
10 TL			.	.	.	.	•	•
10-4 TL			.	.	.	.	•	•
10-6 TL			.	.	.	.	•	•
10-8 TL			.	.	.	.	•	•
12 TL			.	.	.	.	•	•
12-4 TL			.	.	.	.	•	•
12-6 TL			.	.	.	.	•	•
12-8 TL			.	.	.	.	•	•
12-10 TL			.	.	.	.	•	•
12-14 TL**			.	.	.	.	•	•
14 TL***			.	.	.	.	•	•
16 TL			.	.	.	.	•	•
16-8 TL			.	.	.	.	•	•
16-10 TL			.	.	.	.	•	•
16-12 TL			.	.	.	.	•	•
16-14 TL			.	.	.	.	•	•
20 TL			.	.	.	.	•	•
20-12 TL			.	.	.	.	•	•
20-16 TL			.	.	.	.	•	•
24 TL			.	.	.	.	•	•
24-16 TL			.	.	.	.	•	•
24-20 TL			.	.	.	.	•	•
32 TL***			.	.	.	.	•	•

nplated part, oil dipped for corrosion protection.
D is for sil er bra ing.
must be assembled ith .
i es and are not included in .
• Uses SBR silver braze rings

TLS (Metric)

ra e lee e for etric ubing
il er ra e lee e



TUBE FITTING PART #	USED WITH FITTING SIZE	D* END SIZE mm	D8 DIA mm	L mm	L2 mm	Material S	Material SS
TLS6			.	.	.	•	•
TLS8			.	.	.	•	•
TLS10			.	.	.	•	•
TLS12			.	.	.	•	•
TLS16			.	.	.	•	•
TLS20			.	.	.	•	•
TLS25			.	.	.	•	•
TLS30			.	.	.	•	•
TLS38			.	.	.	•	•

nplated part, oil dipped for corrosion protection.
D is for sil er bra ing.
• Uses SBR (metric) silver braze rings
• Stainless steel part number example: TLSS10

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SBR (Inch)

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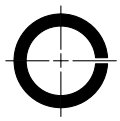
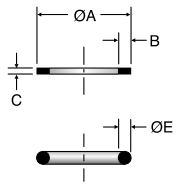


TUBE FITTING PART #	END SIZE in.	A DIA in.	B in.	C in.	E in.
4 SBR		.			.
6 SBR		.	.	.	
8 SBR		.	.	.	
10 SBR		.	.	.	
12 SBR		.	.	.	
14 SBR		.			.
16 SBR		.	.	.	
20 SBR		.	.	.	
24 SBR		.	.	.	
32 SBR		.			.



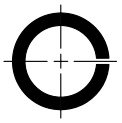
recommended for steel or copper tubing. not re uired.

recommended for stainless tubing, but can be used on steel tubing.

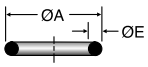
ontact the ube ittings Di ision for bra e rings used in marine or special applications.

SBR (Metric)

il er ra e ing for etric ubing



TUBE FITTING PART #	END SIZE mm	A DIA mm	E mm
SBR 6mm		.	.
SBR 8mm		.	.
SBR 10mm		.	.
SBR 12mm		.	.
SBR 16mm		.	.
SBR 20mm		.	.
SBR 25mm		.	.
SBR 30mm		.	.
SBR 38mm		.	.



recommended for steel or copper tubing.

recommended for stainless tubing, but can be used on steel tubing.

ontact the ube ittings Di ision for bra e rings used in marine or special applications.

WLNL

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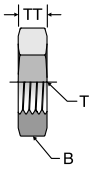
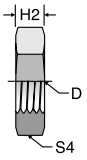


TUBE FITTING PART #	END SIZE in.	T TUBE END	B HEX in.	TT in.	Material -S
4 WLNL				.	•
6 WLNL				.	•
8 WLNL				.	•
10 WLNL				.	•
12 WLNL				.	•
14 WLNL*				.	•
16 WLNL				.	•
20 WLNL				.	•
24 WLNL				.	•

i e is not included in .

WLNML

ul head oc nut mm e



TUBE FITTING PART #	END SIZE mm	END SIZE in.	D TUBE END	H2 mm	S4 HEX mm	Material S
4WLNML				.		•
6WLNML	,			.		•
8WLNML				.		•
10WLNML	, ,			.		•
12WLNML	,			.		•
16WLNML	,			.		•
20WLNML	, ,			.		•
24WLNML	,			.		•

Dimensions and pressures for reference only, subject to change.

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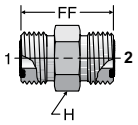
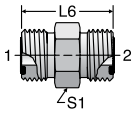


TUBE FITTING PART #	END SIZE 1 in.	END SIZE 2 in.	FF in.	H HEX in.	Dynamic Pressure (x 1,000 PSI) -S	-SS	D
4 HLO			.		.	.	.
6 HLO			.		.	.	.
6-4 HLO			.		.	.	.
8 HLO			.		.	.	.
8-6 HLO			.		.	.	.
10 HLO			.		.	.	.
10-8 HLO			.		.	.	.
12 HLO			.		.	.	.
12-8 HLO			.		.	.	.
12-10 HLO			.		.	.	.
16 HLO			.		.	.	.
16-12 HLO			.		.	.	.
20 HLO			.		.	.	.
20-16 HLO			.		.	.	.
24 HLO			.		.	.	.
32 HLO*			.		.	.	.

i e is not included in .

HMLO

nion mm e



TUBE FITTING PART #	END SIZE 1 & 2 mm	END SIZE 1 & 2 in.	L6 mm	S1 HEX mm	Dynamic Pressure (x 1,000 PSI) S	SS
4HMLO			.		.	.
6HMLO	,		.		.	.
8HMLO			.		.	.
10HMLO	, ,		.		.	.
12HMLO	,		.		.	.
16HMLO	,		.		.	.
20HMLO	, ,		.		.	.
24HMLO	,		.		.	.

WLO

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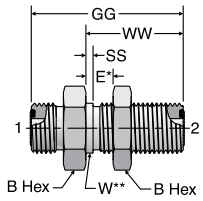

TUBE FITTING PART #	END SIZE in.	B HEX in.	E MAX in.	GG in.	SS	W DIA in.	WW in.	Dynamic Pressure (x 1,000 PSI) -S	-SS
4 WLO			.	.	.	.	.	.	.
6 WLO			.	.	.	.	.	.	.
8 WLO			.	.	.	.	.	.	.
10 WLO			.	.	.	.	.	.	.
12 WLO			.	.	.	.	.	.	.
16 WLO			.	.	.	.	.	.	.
20 WLO			.	.	.	.	.	.	.
24 WLO			.	.	.	.	.	.	.

ul head pilot diameter. ecommended clearance hole is

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Dimensions and pressures for reference only, subject to change.

WMLO

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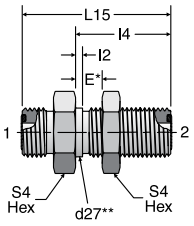

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TUBE FITTING PART #	END SIZE 1 & 2 mm	in.	d27** mm	E mm	l4 mm	l2 mm	L15 mm	S4 HEX mm	Dynamic Pressure (x 1,000 PSI) S	SS
4WMLO			.		.	.	.		.	.
6WMLO	,		.		.	.	.		.	.
8WMLO			.		.	.	.		.	.
10WMLO	, ,		.		.	.	.		.	.
12WMLO	,		.		.	.	.		.	.
16WMLO	,		.		.	.	.		.	.
20WMLO	, ,		.		.	.	.		.	.
24WMLO	,		.		.	.	.		.	.

a imum bul head thic ness.
d ul head pilot diameter. ecommended clearance hole is d . mm

WF5OLO

traight hread ul head
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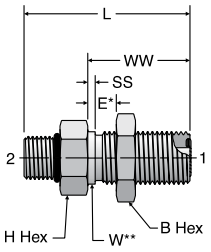


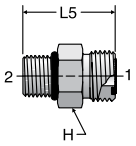
TUBE FITTING PART #	END SIZE 1 in.	2	B HEX in.	E MAX in.	H HEX in.	L in.	SS in.	W DIA in.	WW in.	Dynamic Pressure (x 1,000 PSI) -S	-SS
4 WF5OLO				.		.	.	.	.	.	.
6 WF5OLO				.		.	.	.	.	.	.
8 WF5OLO				.		.	.	.	.	.	.
10 WF5OLO				.		.	.	.	.	.	.
12 WF5OLO				.		.	.	.	.	.	.
16 WF5OLO				.		.	.	.	.	.	.

a imum bul head thic ness.
ul head pilot diameter. ecommended clearance hole is . .

Dimensions and pressures for reference only, subject to change.

F5OLO

traight hread onnector



TUBE FITTING PART #	END SIZE 1 in.	END SIZE 2	H HEX in.	L5 in.	Dynamic Pressure (x 1,000 PSI) -S	-SS	D
4 F5OLO				.	.	.	.
4-5 F5OLO				.	.	.	.
4-6 F5OLO				.	.	.	.
4-8 F5OLO				.	.	.	.
6 F5OLO				.	.	.	.
6-4 F5OLO				.	.	.	.
6-5 F5OLO				.	.	.	.
6-8 F5OLO				.	.	.	.
6-10 F5OLO				.	.	.	.
6-12 F5OLO				.	.	.	.
8 F5OLO				.	.	.	.
8-4 F5OLO				.	.	.	.
8-6 F5OLO				.	.	.	.
8-10 F5OLO				.	.	.	.
8-12 F5OLO				.	.	.	.
8-16 F5OLO				.	.	.	.
10 F5OLO				.	.	.	.
10-6 F5OLO				.	.	.	.
10-8 F5OLO				.	.	.	.
10-12 F5OLO				.	.	.	.
10-16 F5OLO				.	.	.	.
12 F5OLO				.	.	.	.
12-6 F5OLO				.	.	.	.
12-8 F5OLO				.	.	.	.
12-10 F5OLO				.	.	.	.
12-16 F5OLO				.	.	.	.
14 F5OLO				.	.	.	.
16 F5OLO				.	.	.	.
16-8 F5OLO				.	.	.	.
16-10 F5OLO				.	.	.	.
16-12 F5OLO				.	.	.	.
16-20 F5OLO				.	.	.	.
16-24 F5OLO				.	.	.	.
20 F5OLO				.	.	.	.
20-16 F5OLO				.	.	.	.
20-24 F5OLO				.	.	.	.
24 F5OLO				.	.	.	.
24-20 F5OLO				.	.	.	.
32 F5OLO*				.	.	.	.

FF5OLO

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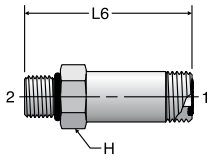

TUBE FITTING PART #	END SIZE 1 in.	END SIZE 2	H HEX in.	L6 in.	Dynamic Pressure (x 1,000 PSI) -S	-SS
4 FF5OLO				.	.	.
6 FF5OLO				.	.	.
6-4 FF5OLO				.	.	.
8 FF5OLO				.	.	.
10 FF5OLO				.	.	.
12 FF5OLO				.	.	.
16 FF5OLO				.	.	.
20 FF5OLO				.	.	.
24 FF5OLO				.	.	.

FLO

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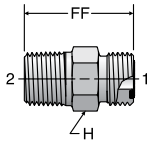

TUBE FITTING PART #	END SIZE 1 in.	END SIZE 2	FF in.	H HEX in.	Dynamic Pressure (x 1,000 PSI) -S	-SS	D
4 FLO			.		.	.	.
4-4 FLO			.		.	.	.
4-6 FLO			.		.	.	.
4-8 FLO			.		.	.	.
6 FLO			.		.	.	.
6-2 FLO			.		.	.	.
6-6 FLO			.		.	.	.
6-8 FLO			.		.	.	.
8 FLO			.		.	.	.
8-4 FLO			.		.	.	.
8-8 FLO			.		.	.	.
8-12 FLO			.		.	.	.
10 FLO			.		.	.	.
10-12 FLO			.		.	.	.
12 FLO			.		.	.	.
12-8 FLO			.		.	.	.
12-16 FLO			.		.	.	.
16 FLO			.		.	.	.
16-12 FLO			.		.	.	.
16-20 FLO			.		.	.	.
20 FLO			.		.	.	.
20-12 FLO			.		.	.	.
20-16 FLO			.		.	.	.
24 FLO			.		.	.	.

Dimensions and pressures for reference only, subject to change.

GLO

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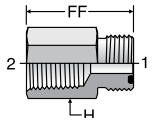

TUBE FITTING PART #	END SIZE 1 in.	END SIZE 2	FF in.	H HEX in.	Dynamic Pressure (x 1,000 PSI) -S	-SS
4 GLO			.		.	.
4-4 GLO-S			.		.	.
6 GLO			.		.	.
6-6 GLO-S			.		.	.
8 GLO			.		.	.

F42EDMLO

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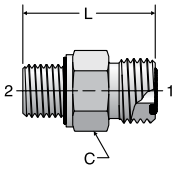

TUBE FITTING PART #	END SIZE 1 mm	END SIZE 1 in.	END SIZE 2	C HEX mm	L mm	Dynamic Pressure (x 1,000 PSI) S	SS
4F42EDMLO					.	.	.
4-4F42EDMLO					.	.	.
4-6F42EDMLO					.	.	.
4-8F42EDMLO					.	.	.
6F42EDMLO	,				.	.	.
6-2F42EDMLO	,				.	.	.
6-6F42EDMLO	,				.	.	.
6-8F42EDMLO	,				.	.	.
6-12F42EDMLO	,				.	.	.
8F42EDMLO					.	.	.
8-4F42EDMLO					.	.	.
8-8F42EDMLO					.	.	.
8-12F42EDMLO					.	.	.
10F42EDMLO	, ,				.	.	.
10-6F42EDMLO	, ,				.	.	.
10-12F42EDMLO	, ,				.	.	.
12F42EDMLO	,				.	.	.
12-8F42EDMLO	,				.	.	.
12-16F42EDMLO	,				.	.	.
12-20F42EDMLO	, ,				.	.	.
16F42EDMLO	,				.	.	.
16-12F42EDMLO	,				.	.	.
16-20F42EDMLO	,				.	.	.
16-24F42EDMLO	,				.	.	.
20F42EDMLO	, ,				.	.	.
20-16F42EDMLO	, ,				.	.	.
20-24F42EDMLO	, ,				.	.	.
24F42EDMLO					.	.	.

F87OMLO

etric traight hread onnector

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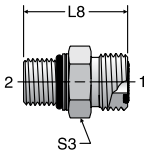

TUBE FITTING PART #	END SIZE 1 mm	END SIZE 1 in.	END SIZE 2	L8 mm	S3 HEX mm	Dynamic Pressure (x 1,000 PSI) S	SS
4M12F87OMLO			.	.		.	.
4M14F87OMLO			.	.		.	.
6M12F87OMLO	,		.	.		.	.
6M14F87OMLO	,		.	.		.	.
6M16F87OMLO	,		.	.		.	.
6M18F87OMLO	,		.	.		.	.
8M14F87OMLO			.	.		.	.
8M16F87OMLO			.	.		.	.
8M18F87OMLO			.	.		.	.
8M22F87OMLO			.	.		.	.
8M27F87OMLO			.	.		.	.
10M18F87OMLO	, ,		.	.		.	.
10M22F87OMLO	, ,		.	.		.	.
10M27F87OMLO	, ,		.	.		.	.
12M22F87OMLO	,		.	.		.	.
12M27F87OMLO	,		.	.		.	.
12M33F87OMLO	,		.	.		.	.
16M27F87OMLO	,		.	.		.	.
16M33F87OMLO	,		.	.		.	.
20M33F87OMLO	, ,		.	.		.	.
20M42F87OMLO	, ,		.	.		.	.
24M48F87OMLO	,		.	.		.	.

F82EDMLO

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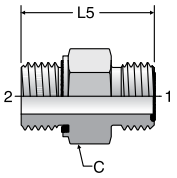
etric D



TUBE FITTING PART #	END SIZE 1 mm	END SIZE 1 in.	END SIZE 2 etric	C HEX mm	L5 mm	Dynamic Pressure (x 1,000 PSI) S	SS
4M12F82EDMLO			.		.	.	.
4M14F82EDMLO			.		.	.	.
6M14F82EDMLO	,		.		.	.	.
6M16F82EDMLO	,		.		.	.	.
8M16F82EDMLO			.		.	.	.
8M18F82EDMLO			.		.	.	.
10M22F82EDMLO	, ,		.		.	.	.
12M22F82EDMLO	,		.		.	.	.
12M27F82EDMLO	,				.	.	.
16M33F82EDMLO	,				.	.	.
20M42F82EDMLO	, ,				.	.	.

Dimensions and pressures for reference only, subject to change.

MMLOHB3

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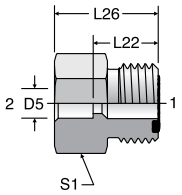

TUBE FITTING PART #	END SIZE 1 mm	END SIZE 1 in.	END SIZE 2 mm	D5* DIA TUBE SOCKET	L22 mm	L26 mm	S1 HEX	Dynamic Pressure (x 1,000 PSI) S	Dynamic Pressure (x 1,000 PSI) SS
4-6MMLOHB3				.	.	.		.	.
4-8MMLOHB3				.	.	.		.	.
6-10MMLOHB3	,			.	.	.		.	.
8-12MMLOHB3				.	.	.		.	.
10-16MMLOHB3	, ,			.	.	.		.	.
12-20MMLOHB3	,			.	.	.		.	.
16-25MMLOHB3	,			.	.	.		.	.
20-30MMLOHB3	, ,			.	.	.		.	.
24-38MMLOHB3	,			.	.	.		.	.

D is for sil er bra ing. tandard steel parts are not recommended for elding.

LOHB3

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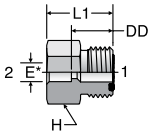

TUBE FITTING PART #	END SIZE 1 in.	END SIZE 2 in.	DD in.	E* DIA in.	H HEX in.	L1 in.	Dynamic Pressure (x 1,000 PSI) -S	Dynamic Pressure (x 1,000 PSI) -SS
4 LOHB3			.	.		.	.	.
4-6 LOHB3			.	.		.	.	.
6 LOHB3			.	.		.	.	.
6-4 LOHB3			.	.		.	.	.
6-8 LOHB3			.	.		.	.	.
8 LOHB3			.	.		.	.	.
8-4 LOHB3**			.	.		.	.	.
8-6 LOHB3			.	.		.	.	.
8-10 LOHB3			.	.		.	.	.
8-12 LOHB3**			.	.		.	.	.
10 LOHB3			.	.		.	.	.
10-6 LOHB3			.	.		.	.	.
10-8 LOHB3			.	.		.	.	.
10-12 LOHB3			.	.		.	.	.
12 LOHB3			.	.		.	.	.
12-8 LOHB3			.	.		.	.	.
12-10 LOHB3			.	.		.	.	.
12-16 LOHB3			.	.		.	.	.
16 LOHB3			.	.		.	.	.
16-8 LOHB3**			.	.		.	.	.
16-12 LOHB3			.	.		.	.	.
16-20 LOHB3			.	.		.	.	.
20 LOHB3			.	.		.	.	.
20-16 LOHB3			.	.		.	.	.
20-24 LOHB3			.	.		.	.	.
24 LOHB3			.	.		.	.	.
24-20 LOHB3			.	.		.	.	.

is for sil er bra ing. tandard steel parts are not recommended for elding.

i e is not included in .

LOHT3

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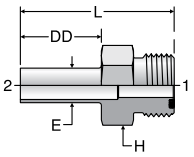

TUBE FITTING PART #	END SIZE 1 & 2 in.	DD in.	E DIA in.	H HEX in.	L in.	Dynamic Pressure (x 1,000 PSI) -SS
4-4X035 LOHT3		.	.		.	.
6-6X035 LOHT3		.	.		.	.
8-8X065 LOHT3		.	.		.	.
12-12X065 LOHT3		.	.		.	
12-16X065 LOHT3		.	.		.	.
16-16X065 LOHT3		.	.		.	.

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Dimensions and pressures for reference only, subject to change.

TRLON

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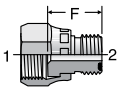
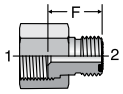
body only
body ith large nut



ssembled ith rimp ut



ssembled ith arge ut

TUBE FITTING PART #			END SIZE			Dynamic Pressure (x 1,000 PSI)	
TRLON	TRLON	TRLO					
*One Piece Design (With Crimp Nut)	**Two Piece Design (With Large Nut)	***Body Only (For Two-Piece Design Only)	1 in.	2 in.	F in.	-S	-SS
					.	.	.
					.	.	.
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					.	.	.
					.	.	.
					.	.	.
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o order reducer ithout large nut body only remo e the from the part number i.e., .

LOHL6

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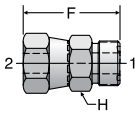

TUBE FITTING PART #	END SIZE		F	H HEX	Dynamic Pressure (x 1,000 PSI)	
	1 in.	2 in.	in.	in.	-S	-SS
4 LOHL6			.		.	.
6 LOHL6			.		.	.
6-4 LOHL6			.		.	.
8 LOHL6			.		.	.
8-6 LOHL6			.		.	.
10-8 LOHL6			.		.	.
12-10 LOHL6			.		.	.
16-12 LOHL6			.		.	.
20-16 LOHL6			.		.	.
24-20 LOHL6			.		.	.

HL6

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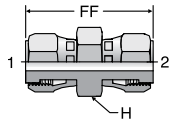

TUBE FITTING PART #	END SIZE		FF	H HEX	Dynamic Pressure (x 1,000 PSI)	
	1 in.	2 in.	in.	in.	-S	-SS
4 HL6			.		.	.
6 HL6			.		.	.
8 HL6			.		.	.
10 HL6			.		.	.
12 HL6			.		.	.
16 HL6			.		.	.

Dimensions and pressures for reference only, subject to change.

F65OL

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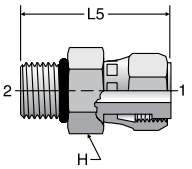

TUBE FITTING PART #	END SIZE 1 in.	END SIZE 2	H HEX in.	L5 in.	Dynamic Pressure (x 1,000 PSI) -S	Dynamic Pressure (x 1,000 PSI) -SS
4 F65OL				.	.	.
6 F65OL				.	.	.
8 F65OL				.	.	.
10 F65OL				.	.	.
12 F65OL				.	.	.
16 F65OL				.	.	.
20 F65OL				.	.	.

G65L

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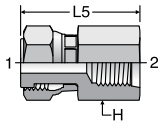
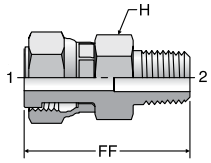


TUBE FITTING PART #	END SIZE 1 in.	END SIZE 2	H HEX in.	L5 in.	Dynamic Pressure (x 1,000 PSI) -S	Dynamic Pressure (x 1,000 PSI) -SS
4 G65L				.	.	.
4-6 G65L				.	.	.
6-4 G65L				.	.	.
8-4 G65L				.	.	.

F6L

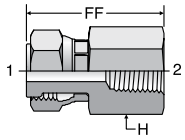
ipe hread i el onnector i el



TUBE FITTING PART #	END SIZE 1 in.	END SIZE 2	FF in.	H HEX in.	Dynamic Pressure (x 1,000 PSI) -S	Dynamic Pressure (x 1,000 PSI) -SS
4 F6L			.		.	.
4-4 F6L			.		.	.
6 F6L			.		.	.
6-6 F6L			.		.	.
8 F6L			.		.	.
8-8 F6L			.		.	.
10 F6L			.		.	.
12 F6L			.		.	.
16 F6L			.		.	.

G6L

emale ipe hread i el onnector i el

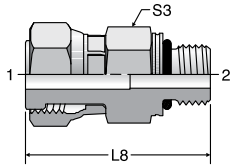


TUBE FITTING PART #	END SIZE 1 in.	END SIZE 2	FF in.	H in.	Dynamic Pressure (x 1,000 PSI) -S	Dynamic Pressure (x 1,000 PSI) -SS
4-4 G6L			.		.	.
6 G6L			.		.	.
8-4 G6L			.		.	.

Dimensions and pressures for reference only, subject to change.

F687OML

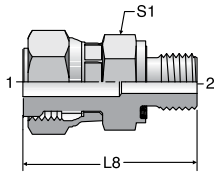
i el onnector
i el



TUBE FITTING PART #	END SIZE 1 mm	1 in.	2	L8 mm	S3 HEX mm	Dynamic Pressure (x 1,000 PSI) S	SS
4M12F687OML			.	.		.	.
6M12F687OML	,		.	.		.	.
6M14F687OML	,		.	.		.	.
6M16F687OML	,		.	.		.	.
8M16F687OML			.	.		.	.
10M22F687OML	, ,		.	.		.	.
10M27F687OML	, ,			.		.	.
12M27F687OML	,			.		.	.
16M33F687OML	,			.		.	.

F682EDML

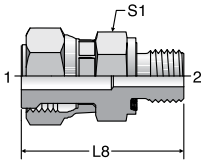
i el etric onnector
i el etric D



TUBE FITTING PART #	END SIZE 1 mm	1 in.	2 etric	L8 mm	S1 HEX mm	Dynamic Pressure (x 1,000 PSI) S	SS
4M12F682EDML			.	.		.	.
6M14F682EDML	,		.	.		.	.
8M16F682EDML			.	.		.	.
10M22F682EDML	, ,		.	.		.	.
12M27F682EDML	,			.		.	.
16M33F682EDML	,			.		.	.

F642EDML

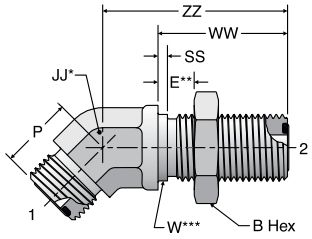
i el onnector
i el D



TUBE FITTING PART #	END SIZE 1 mm	1 in.	2	L8 mm	S1 HEX mm	Dynamic Pressure (x 1,000 PSI) S	SS
4F642EDML				.		.	.
6F642EDML	,			.		.	.
8F642EDML				.		.	.
10F642EDML	, ,			.		.	.
12F642EDML	,			.		.	.
16F642EDML	,			.		.	.

WNLO

ul head nion lbo



ody ith oc nut
ee page for

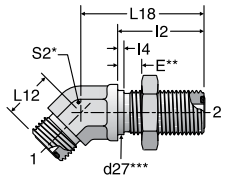
TUBE FITTING PART #	END SIZE 1 in.	2 in.	B HEX in.	E MAX in.	JJ in.	P in.	SS in.	W DIA in.	WW in.	ZZ in.	Dynamic Pressure (x 1,000 PSI) -S	-SS
4 WNLO				.		.	.	.	.	.	.	.
6 WNLO				.		.	.	.	.	.	.	.
8 WNLO				.		.	.	.	.	.	.	.
10 WNLO				.		.	.	.	.	.	.	.
12 WNLO				.		.	.	.	.	.	.	.
16 WNLO				.		.	.	.	.	.	.	.
20 WNLO				.		.	.	.	.	.	.	.
24 WNLO				.		.	.	.	.	.	.	.

cross rench ats.
a imum bul head thic ness.
ul head pilot diameter. ecommended clearnace hole is . .

Dimensions and pressures for reference only, subject to change.

WNMLO

ul head nion lbo mm e



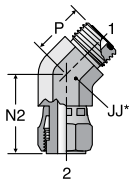
ody ith oc nut
ee page for

TUBE FITTING PART #	END SIZE 1 & 2 mm	in.	d27*** mm	E mm	I2 mm	I4 mm	L12 mm	L18 mm	S2 mm	Dynamic Pressure (x 1,000 PSI) S	SS
4WNMLO			.		.	.	.	.		.	.
6WNMLO	,		.		.	.	.	.		.	.
8WNMLO			.		.	.	.	.		.	.
10WNMLO	, ,		.		.	.	.	.		.	.
12WNMLO	,		.		.	.	.	.		.	.
16WNMLO	,		.		.	.	.	.		.	.
20WNMLO	, ,		.		.	.	.	.		.	.
24WNMLO	,		.		.	.	.	.		.	.

cross rench lats.
a imum bul head thic ness.
d ul head pilot diameter. ecommended clearance hole is d . mm.

V6LO

i el ut lbo
i el

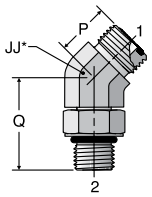


cross rench lats

TUBE FITTING PART #	END SIZE 1 & 2 in.	JJ in.	N2 in.	P in.	Dynamic Pressure (x 1,000 PSI) -S	-SS
4 V6LO			.	.	.	.
6 V6LO			.	.	.	.
8 V6LO			.	.	.	.
10 V6LO			.	.	.	.
12 V6LO			.	.	.	.
16 V6LO			.	.	.	.
20 V6LO			.	.	.	.
24 V6LO			.	.	.	.

V5OLO

traight hread lbo



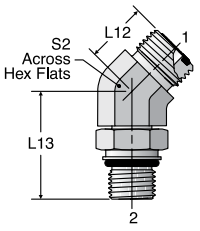
cross e
lats

TUBE FITTING PART #	END SIZE 1 in.	2	JJ in.	P in.	Q in.	Dynamic Pressure (x 1,000 PSI) -S	-SS
4 V5OLO				.	.	.	.
4-6 V5OLO				.	.	.	.
6 V5OLO				.	.	.	.
6-4 V5OLO				.	.	.	.
6-8 V5OLO				.	.	.	.
8 V5OLO				.	.	.	.
8-6 V5OLO				.	.	.	.
8-10 V5OLO				.	.	.	.
10 V5OLO				.	.	.	.
10-8 V5OLO				.	.	.	.
10-12 V5OLO				.	.	.	.
12 V5OLO				.	.	.	.
12-10 V5OLO				.	.	.	.
12-16 V5OLO				.	.	.	.
16 V5OLO				.	.	.	.
16-10 V5OLO				.	.	.	.
16-12 V5OLO				.	.	.	.
16-20 V5OLO				.	.	.	.
20 V5OLO				.	.	.	.
24 V5OLO				.	.	.	.

V87OMLO

etric traight hread lbo

D



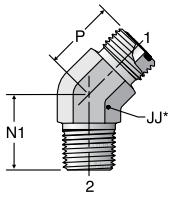
cross
e lats

TUBE FITTING PART #	END SIZE 1 mm	in.	2	L12 mm	L13 mm	S2 mm	Dynamic Pressure (x 1,000 PSI) S	SS
4M12V87OMLO			.	.	.		.	.
4M14V87OMLO			.	.	.		.	.
6M16V87OMLO	,		.	.	.		.	.
8M18V87OMLO			.	.	.		.	.
10M22V87OMLO	, ,		.	.	.		.	.
12M27V87OMLO	,			.	.		.	.
16M33V87OMLO	,			.	.		.	.
20M42V87OMLO	, ,			.	.		.	.
24M48V87OMLO	,			.	.		.	.

Dimensions and pressures for reference only, subject to change.

VLO

ale lbo

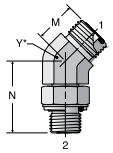


cross rench lats

TUBE FITTING PART #	END SIZE 1 in.	END SIZE 2	JJ in.	N1 in.	P in.	Dynamic Pressure (x 1,000 PSI) -S	Dynamic Pressure (x 1,000 PSI) -SS
4 VLO				.	.	.	.
4-4 VLO				.	.	.	.
6 VLO				.	.	.	.
6-6 VLO				.	.	.	.
8 VLO				.	.	.	.
8-8 VLO				.	.	.	.
10 VLO				.	.	.	.
12 VLO				.	.	.	.
16 VLO				.	.	.	.
20 VLO				.	.	.	.

V4OMLO

ale lbo for ort

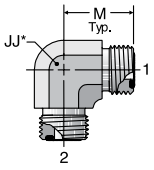


cross e lats

TUBE FITTING PART #	END SIZE 1 mm	END SIZE 1 in.	END SIZE 2	M mm	N mm	Y mm	Dynamic Pressure (x 1,000 PSI) S	Dynamic Pressure (x 1,000 PSI) SS
4V4OMLO				.	.		.	.
4-4V4OMLO				.	.		.	.
6V4OMLO	,			.	.		.	.
6-6V4OMLO	,			.	.		.	.
6-8V4OMLO	,			.	.		.	.
8V4OMLO				.	.		.	.
8-8V4OMLO				.	.		.	.
10V4OMLO	, ,			.	.		.	.
10-12V4OMLO	, ,			.	.		.	.
12V4OMLO	,			.	.		.	.
12-16V4OMLO	,			.	.		.	.
16V4OMLO	,			.	.		.	.

ELO

nion lbo



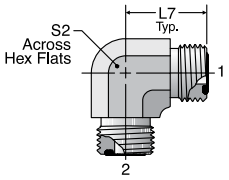
cross rench lats

TUBE FITTING PART #	END SIZE 1 in.	END SIZE 2 in.	JJ in.	M in.	Dynamic Pressure (x 1,000 PSI) -S	Dynamic Pressure (x 1,000 PSI) -SS
4 ELO				.	.	.
6 ELO				.	.	.
8 ELO				.	.	.
10 ELO				.	.	.
12 ELO				.	.	.
16 ELO				.	.	.
20 ELO				.	.	.
24 ELO				.	.	.
32 ELO*				.	.	.

i e is not included in .

EMLO

nion lbo mm e

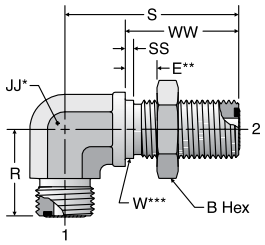


TUBE FITTING PART #	END SIZE 1 & 2 mm	END SIZE 1 & 2 in.	L7 mm	S2 mm	Dynamic Pressure (x 1,000 PSI) S	Dynamic Pressure (x 1,000 PSI) SS
4EMLO			.		.	.
6EMLO	,		.		.	.
8EMLO			.		.	.
10EMLO	, ,		.		.	.
12EMLO	,		.		.	.
16EMLO	,		.		.	.
20EMLO	, ,		.		.	.
24EMLO	,		.		.	.

Dimensions and pressures for reference only, subject to change.

WELO

ul head nion lbo



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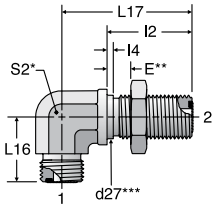
TUBE FITTING PART #	END SIZE 1 in.	END SIZE 2 in.	B HEX in.	E MAX in.	JJ in.	R in.	S in.	SS in.	W in.	WW in.	Dynamic Pressure (x 1,000 PSI) -S	Dynamic Pressure (x 1,000 PSI) -SS
4 WELO				.		.	.	.	.	.	.	.
6 WELO				.		.	.	.	.	.	.	.
8 WELO				.		.	.	.	.	.	.	.
10 WELO				.		.	.	.	.	.	.	.
12 WELO				.		.	.	.	.	.	.	.
16 WELO				.		.	.	.	.	.	.	.
20 WELO				.		.	.	.	.	.	.	.
24 WELO				.		.	.	.	.	.	.	.

cross rench ats.
a imum bul head thic ness.
ul head pilot diameter. ecommended clearance hole is . .

WEMLO

ul head nion lbo mm e



ody ith oc nut
ee page for

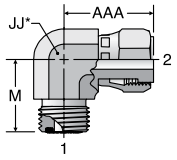
TUBE FITTING PART #	END SIZE 1 & 2 mm	END SIZE 1 & 2 in.	d27*** mm	E mm	I2 mm	I4 mm	L16 mm	L17 mm	S2 mm	Dynamic Pressure (x 1,000 PSI) S	Dynamic Pressure (x 1,000 PSI) SS
4WEMLO			.		.	.	.	.		.	.
6WEMLO	,		.		.	.	.	.		.	.
8WEMLO			.		.	.	.	.		.	.
10WEMLO	, ,		.		.	.	.	.		.	.
12WEMLO	,		.		.	.	.	.		.	.
16WEMLO	,		.		.	.	.	.		.	.
20WEMLO	, ,		.		.	.	.	.		.	.
24WEMLO	,		.		.	.	.	.		.	.

cross rench ats.
a imum bul head thic ness.
d ul head pilot diameter. ecommended clearance is d . mm.

Dimensions and pressures for reference only, subject to change.

C6LO

i el ut lbo
i el

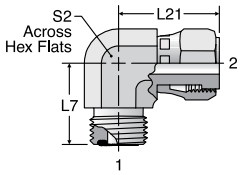


cross
rench lats

TUBE FITTING PART #	END SIZE 1 in.	END SIZE 2 in.	AAA in.	JJ in.	M in.	Dynamic Pressure (x 1,000 PSI) -S	-SS	D
4 C6LO			.		.	.	.	.
6 C6LO			.		.	.	.	.
8 C6LO			.		.	.	.	.
10 C6LO			.		.	.	.	.
12 C6LO			.		.	.	.	.
16 C6LO			.		.	.	.	.
20 C6LO			.		.	.	.	.
24 C6LO			.		.	.	.	.

C6MLO

i el ut lbo mm e
i el

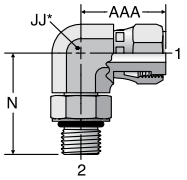


cross
e lats

TUBE FITTING PART #	END SIZE 1 mm	END SIZE 2 in.	L7 mm	L21 mm	S2 mm	Dynamic Pressure (x 1,000 PSI) S	SS
4C6MLO			.	.		.	.
6C6MLO	,		.	.		.	.
8C6MLO			.	.		.	.
10C6MLO	, ,		.	.		.	.
12C6MLO	,		.	.		.	.
16C6MLO	,		.	.		.	.
20C6MLO	, ,		.	.		.	.
24C6MLO	,		.	.		.	.

AOEL6

traight hread i el lbo
i el

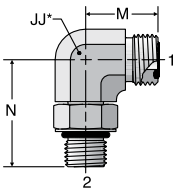


cross
rench lats

TUBE FITTING PART #	END SIZE 1 in.	END SIZE 2	AAA in.	JJ in.	N in.	Dynamic Pressure (x 1,000 PSI) -S	-SS
4 AOEL6			.		.	.	.
6 AOEL6			.		.	.	.
8 AOEL6			.		.	.	.
10 AOEL6			.		.	.	.
12 AOEL6			.		.	.	.
16 AOEL6			.		.	.	.
20 AOEL6			.		.	.	.
24 AOEL6			.		.	.	.

C5OLO

traight hread lbo



cross
rench lats

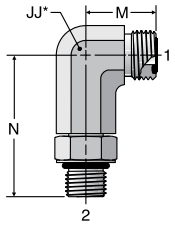
TUBE FITTING PART #	END SIZE 1 in.	END SIZE 2	JJ in.	M in.	N in.	Dynamic Pressure (x 1,000 PSI) -S	-SS	D
4 C5OLO				.	.	.	.	.
4-6 C5OLO***				.	.	.	.	.
4-8 C5OLO				.	.	.	.	.
6 C5OLO				.	.	.	.	.
6-4 C5OLO				.	.	.	.	.
6-5 C5OLO				.	.	.	.	.
6-8 C5OLO				.	.	.	.	.
6-10 C5OLO***				.	.	.	.	.
6-12 C5OLO				.	.	.	.	.
8 C5OLO				.	.	.	.	.
8-6 C5OLO				.	.	.	.	.
8-10 C5OLO***				.	.	.	.	.
8-12 C5OLO				.	.	.	.	.
10 C5OLO				.	.	.	.	.
10-8 C5OLO				.	.	.	.	.
10-12 C5OLO				.	.	.	.	.
12 C5OLO				.	.	.	.	.
12-8 C5OLO				.	.	.	.	.
12-10 C5OLO				.	.	.	.	.
12-16 C5OLO				.	.	.	.	.
16 C5OLO				.	.	.	.	.
16-12 C5OLO				.	.	.	.	.
16-20 C5OLO				.	.	.	.	.
20 C5OLO				.	.	.	.	.
20-16 C5OLO				.	.	.	.	.
20-24 C5OLO				.	.	.	.	.
24 C5OLO				.	.	.	.	.
24-20 C5OLO				.	.	.	.	.
32 C5OLO**				.	.	.	.	.

i e is not included in .
for these parts does not conform to .

Dimensions and pressures for reference only, subject to change.

CC5OLO

ong traight hread lbo
ong

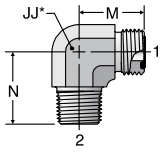


cross
rench lats

TUBE FITTING PART #	END SIZE 1 in.	END SIZE 2	JJ in.	M in.	N in.	Dynamic Pressure (x 1,000 PSI) -S	-SS
4 CC5OLO				.	.	.	.
6 CC5OLO				.	.	.	.
8 CC5OLO				.	.	.	.
10 CC5OLO				.	.	.	.
12 CC5OLO				.	.	.	.
16 CC5OLO				.	.	.	.

CLO

ale ipe lbo



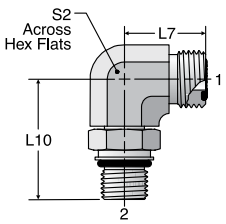
cross
rench lats

TUBE FITTING PART #	END SIZE 1 in.	END SIZE 2	JJ in.	M in.	N in.	Dynamic Pressure (x 1,000 PSI) -S	-SS	D
4 CLO				.	.	.	.	.
4-4 CLO				.	.	.	.	.
4-6 CLO				.	.	.	.	.
4-8 CLO				.	.	.	.	.
6 CLO				.	.	.	.	.
6-6 CLO				.	.	.	.	.
6-8 CLO				.	.	.	.	.
8 CLO				.	.	.	.	.
8-4 CLO				.	.	.	.	.
8-8 CLO				.	.	.	.	.
8-12 CLO				.	.	.	.	.
10 CLO				.	.	.	.	.
10-6 CLO				.	.	.	.	.
10-12 CLO				.	.	.	.	.
12 CLO				.	.	.	.	.
12-8 CLO				.	.	.	.	.
12-16 CLO				.	.	.	.	.
16 CLO				.	.	.	.	.
16-12 CLO				.	.	.	.	.
20 CLO				.	.	.	.	.
24 CLO				.	.	.	.	.
24-20 CLO				.	.	.	.	.

C87OMLO

etric traight hread lbo

D



TUBE FITTING PART #	END SIZE 1 mm	END SIZE 1 in.	END SIZE 2	L7 mm	L10 mm	S2 mm	Dynamic Pressure (x 1,000 PSI) S	SS
4M12C87OMLO			.	.	.		.	.
4M14C87OMLO			.	.	.		.	.
6M12C87OMLO	,		.	.	.		.	.
6M14C87OMLO	,		.	.	.		.	.
6M16C87OMLO	,		.	.	.		.	.
8M14C87OMLO			.	.	.		.	.
8M18C87OMLO			.	.	.		.	.
8M22C87OMLO			.	.	.		.	.
10M18C87OMLO	, ,		.	.	.		.	.
10M22C87OMLO	, ,		.	.	.		.	.
12M22C87OMLO	,		.	.	.		.	.
12M27C87OMLO	,			.	.		.	.
16M33C87OMLO	,			.	.		.	.
20M38C87OMLO*	, ,			.	.		.	.
20M42C87OMLO	, ,			.	.		.	.
24M48C87OMLO	,			.	.		.	.

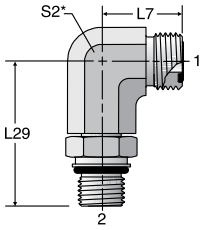
or special style port. he current does not include the si e.

Dimensions and pressures for reference only, subject to change.

CC87OMLO

ong etric traight hread lbo ong

D

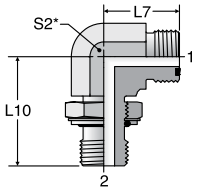


cross e lats

TUBE FITTING PART #	END SIZE 1 mm	1 in.	2	L7 mm	L29 mm	S2 mm	Dynamic Pressure (x 1,000 PSI) S	SS
4M12CC87OMLO			.	.	.		.	.
6M14CC87OMLO	,		.	.	.		.	.
6M16CC87OMLO	,		.	.	.		.	.
8M18CC87OMLO			.	.	.		.	.
8M22CC87OMLO			.	.	.		.	.
10M22CC87OMLO	, ,		.	.	.		.	.
12M27CC87OMLO	,			.	.		.	.
16M33CC87OMLO	,			.	.		.	.
20M42CC87OMLO	, ,			.	.		.	.

C8OMLO

etric traight hread lbo etric



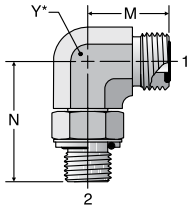
cross e lats

TUBE FITTING PART #	END SIZE 1 mm	1 in.	2	L7 (mm)	L10 (mm)	S2 mm	Dynamic Pressure (x 1,000 PSI) S	SS
4M12C8OMLO			.	.	.		.	.
6M12C8OMLO	,		.	.	.		.	.
6M14C8OMLO	,		.	.	.		.	.
6M16C8OMLO	,		.	.	.		.	.
8M14C8OMLO			.	.	.		.	.
8M18C8OMLO			.	.	.		.	.
8M22C8OMLO			.	.	.		.	.
10M22C8OMLO	, ,		.	.	.		.	.
12M27C8OMLO	,			.	.		.	.
16M33C8OMLO	,			.	.		.	.
20M38C8OMLO	, ,			.	.		.	.
20M42C8OMLO	, ,			.	.		.	.

Dimensions and pressures for reference only, subject to change.

C4OMLO

ale lbo
for ort

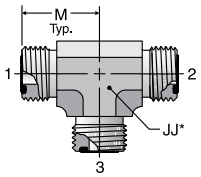


cross
rench lats

TUBE FITTING PART #	END SIZE 1 mm	END SIZE 1 in.	END SIZE 2	M mm	N mm	Y mm	Dynamic Pressure (x 1,000 PSI) S	Dynamic Pressure (x 1,000 PSI) SS
4C4OMLO				.	.		.	.
4-4C4OMLO				.	.		.	.
4-6C4OMLO				.	.		.	.
6C4OMLO	,			.	.		.	.
6-6C4OMLO	,			.	.		.	.
8-4C4OMLO				.	.		.	.
8C4OMLO				.	.		.	.
8-8C4OMLO				.	.		.	.
8-12C4OMLO				.	.		.	.
10-6C4OMLO	, ,			.	.		.	.
10C4OMLO	, ,			.	.		.	.
10-12C4OMLO	, ,			.	.		.	.
10-16C4OMLO	, ,			.	.		.	.
12-8C4OMLO	,			.	.		.	.
12C4OMLO	,			.	.		.	.
12-16C4OMLO	,			.	.		.	.
16-12C4OMLO	,			.	.		.	.
16C4OMLO	,			.	.		.	.
16-20C4OMLO	,			.	.		.	.
20-16C4OMLO	, ,			.	.		.	.
20C4OMLO	, ,			.	.		.	.
20-24C4OMLO	, ,			.	.		.	.
24C4OMLO	,			.	.		.	.

JLO

nion ee
all three ends



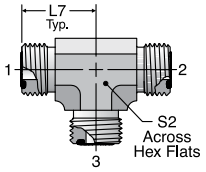
cross
rench lats

TUBE FITTING PART #	END SIZE 1-3 in.	JJ in.	M in.	Dynamic Pressure (x 1,000 PSI) -S	Dynamic Pressure (x 1,000 PSI) -SS
4 JLO			.	.	.
6 JLO			.	.	.
8 JLO			.	.	.
10 JLO			.	.	.
12 JLO			.	.	.
16 JLO			.	.	.
20 JLO			.	.	.
24 JLO			.	.	.
32 JLO*			.	.	.

i e is not included in .

JMLO

nion ee mm e
all three ends



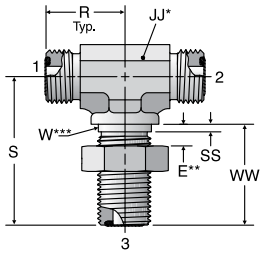
cross
e lats

TUBE FITTING PART #	END SIZE 1-3 mm	END SIZE 1-3 in.	L7 mm	S2 mm	Dynamic Pressure (x 1,000 PSI) S	Dynamic Pressure (x 1,000 PSI) SS
4JMLO			.		.	.
6JMLO	,		.		.	.
8JMLO			.		.	.
10JMLO	, ,		.		.	.
12JMLO	,		.		.	.
16JMLO	,		.		.	.
20JMLO	, ,		.		.	.
24JMLO	,		.		.	.

WJLO

ul head ranch ee
all three ends

ody ith oc nut
ee page for



TUBE FITTING PART #	END SIZE 1-3 in.	E MAX in.	JJ in.	R in.	S in.	SS in.	W DIA in.	WW in.	Dynamic Pressure (x 1,000 PSI) -S	Dynamic Pressure (x 1,000 PSI) -SS
4 WJLO		.		.	.	.	.	.	.	.
6 WJLO		.		.	.	.	.	.	.	.
8 WJLO		.		.	.	.	.	.	.	.
10 WJLO		.		.	.	.	.	.	.	.
12 WJLO		.		.	.	.	.	.	.	.
16 WJLO		.		.	.	.	.	.	.	.

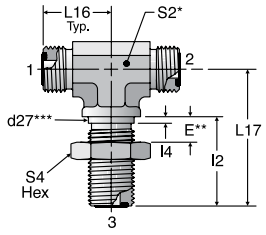
cross rench ats.
a imum bul head thic ness.
ul head pilot diameter. ecommended clearance hole is . .

Dimensions and pressures for reference only, subject to change.

WJMLO

ul head nion ee mm e
all three ends

ody ith oc nut
ee page for



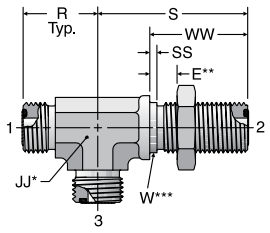
TUBE FITTING PART #	END SIZE 1-3 mm	END SIZE 1-3 in.	d27*** mm	E mm	I2 mm	I4 mm	L16 mm	L17 mm	S2 mm	S4 HEX mm	Dynamic Pressure (x 1,000 PSI) S	Dynamic Pressure (x 1,000 PSI) SS
4WJMLO			.		.	.	.	.			.	.
6WJMLO	,		.		.	.	.	.			.	.
8WJMLO			.		.	.	.	.			.	.
10WJMLO	, ,		.		.	.	.	.			.	.
12WJMLO	,		.		.	.	.	.			.	.
16WJMLO	,		.		.	.	.	.			.	.
20WJMLO	, ,		.		.	.	.	.			.	.
24WJMLO	,		.		.	.	.	.			.	.

cross rench ats.
a imum bul head thic ness.
d ul head pilot diameter. ecommended clearance hole is d . mm.

WJJLO

ul head un ee
all three ends

ody ith oc nut
ee page for



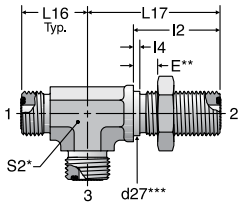
TUBE FITTING PART #	END SIZE 1-3 in.	E MAX in.	JJ in.	R in.	S in.	SS in.	W DIA in.	WW in.	Dynamic Pressure (x 1,000 PSI) -S	Dynamic Pressure (x 1,000 PSI) -SS
4 WJJLO		.		.	.	.	.	.	.	.
6 WJJLO		.		.	.	.	.	.	.	.
8 WJJLO		.		.	.	.	.	.	.	.
10 WJJLO		.		.	.	.	.	.	.	.
12 WJJLO		.		.	.	.	.	.	.	.
16 WJJLO		.		.	.	.	.	.	.	.
20 WJJLO		.		.	.	.	.	.	.	.
24 WJJLO		.		.	.	.	.	.	.	.

cross rench ats.
a imum bul head thic ness.
ul head pilot diameter. ecommended clearance hole is . .

Dimensions and pressures for reference only, subject to change.

WJJMLO

ul head un ee mm e all three ends



ody ith oc nut

ee page for

TUBE FITTING PART #	END SIZE 1-3 mm	1-3 in.	d27*** mm	E mm	l2 mm	l4 mm	L16 mm	L17 mm	S2 mm	Dynamic Pressure (x 1,000 PSI) S	SS
4WJJMLO			.		.	.	.	.		.	.
6WJJMLO	,		.		.	.	.	.		.	.
8WJJMLO			.		.	.	.	.		.	.
10WJJMLO	, ,		.		.	.	.	.		.	.
12WJJMLO	,		.		.	.	.	.		.	.
16WJJMLO	,		.		.	.	.	.		.	.
20WJJMLO	, ,		.		.	.	.	.		.	.
24WJJMLO	,		.		.	.	.	.		.	.

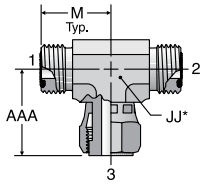
cross rench ats.

a imum bul head thic ness.

d ul head pilot diameter. ecommended clearance hole is d . mm.

S6LO

i el ut ranch ee i el

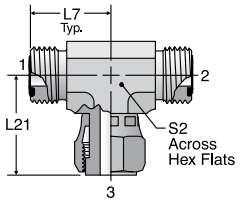


cross rench lats

TUBE FITTING PART #	END SIZE 1-3 in.	AAA in.	JJ in.	M in.	Dynamic Pressure (x 1,000 PSI) -S	-SS
4 S6LO		.		.	.	.
6 S6LO		.		.	.	.
8 S6LO		.		.	.	.
10 S6LO		.		.	.	.
12 S6LO		.		.	.	.
16 S6LO		.		.	.	.
20 S6LO		.		.	.	.
24 S6LO		.		.	.	.

S6MLO

i el ut ranch ee mm e i el



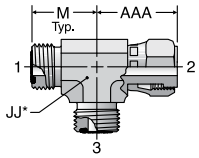
cross rench lats

TUBE FITTING PART #	END SIZE 1-3 mm	1-3 in.	L7 mm	L21 mm	S2 mm	Dynamic Pressure (x 1,000 PSI) S	SS
4S6MLO			.	.			
6S6MLO	,		.	.		.	.
8S6MLO			.	.		.	.
10S6MLO	, ,		.	.		.	.
12S6MLO	,		.	.		.	.
16S6MLO	,		.	.		.	.
20S6MLO	, ,		.	.		.	.
24S6MLO	,		.	.		.	.

Dimensions and pressures for reference only, subject to change.

R6LO

i el ut un ee
i el

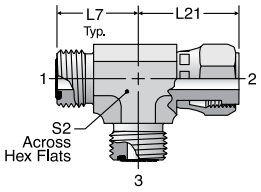


cross
rench lats

TUBE FITTING PART #	END SIZE 1-3 in.	AAA in.	JJ in.	M in.	Dynamic Pressure (x 1,000 PSI) -S	-SS
4 R6LO		.		.	.	.
6 R6LO		.		.	.	.
8 R6LO		.		.	.	.
10 R6LO		.		.	.	.
12 R6LO		.		.	.	.
16 R6LO		.		.	.	.
20 R6LO		.		.	.	.
24 R6LO		.		.	.	.

R6MLO

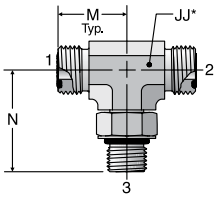
i el ut un ee mm e
i el



TUBE FITTING PART #	END SIZE 1-3 mm	in.	L7 mm	L21 mm	S2 mm	Dynamic Pressure (x 1,000 PSI) S	SS
4R6MLO			.	.		.	.
6R6MLO	,		.	.		.	.
8R6MLO			.	.		.	.
10R6MLO	, ,		.	.		.	.
12R6MLO	,		.	.		.	.
16R6MLO	,		.	.		.	.
20R6MLO	, ,		.	.		.	.
24R6MLO	,		.	.		.	.

S5OLO

traight hread ranch ee



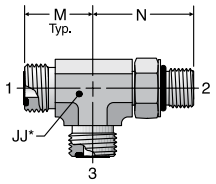
cross
rench lats

TUBE FITTING PART #	END SIZE 1 in.	2 in.	3	JJ in.	M in.	N in.	Dynamic Pressure (x 1,000 PSI) -S	-SS
4 S5OLO					.	.	.	.
4-4-6 S5OLO					.	.	.	.
6 S5OLO					.	.	.	.
6-6-4 S5OLO					.	.	.	.
6-6-8 S5OLO					.	.	.	.
8 S5OLO					.	.	.	.
8-8-10 S5OLO					.	.	.	.
8-8-12 S5OLO					.	.	.	.
10 S5OLO					.	.	.	.
10-10-12 S5OLO					.	.	.	.
12 S5OLO					.	.	.	.
12-12-16 S5OLO					.	.	.	.
16 S5OLO					.	.	.	.
16-16-20 S5OLO					.	.	.	.
20 S5OLO					.	.	.	.
24 S5OLO					.	.	.	.

Dimensions and pressures for reference only, subject to change.

R5OLO

traight hread un ee

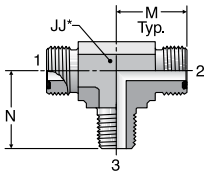


cross
rench lats

TUBE FITTING PART #	END SIZE 1 in.	END SIZE 2	END SIZE 3 in.	JJ in.	M in.	N in.	Dynamic Pressure (x 1,000 PSI) -S	Dynamic Pressure (x 1,000 PSI) -SS
4 R5OLO					.	.	.	.
4-6-4 R5OLO					.	.	.	.
6 R5OLO					.	.	.	.
6-8-6 R5OLO					.	.	.	.
8 R5OLO					.	.	.	.
8-10 8 R5OLO					.	.	.	.
10 R5OLO					.	.	.	.
10-12-10 R5OLO					.	.	.	.
12 R5OLO					.	.	.	.
12-16-12 R5OLO					.	.	.	.
16 R5OLO					.	.	.	.
16-20-16 R5OLO					.	.	.	.
20 R5OLO					.	.	.	.
24 R5OLO					.	.	.	.

SLO

ale ipe ee



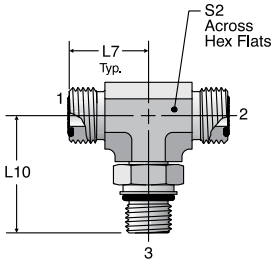
cross
rench lats

TUBE FITTING PART #	END SIZE 1 & 2 in.	END SIZE 3	JJ in.	M in.	N in.	Dynamic Pressure (x 1,000 PSI) -S	Dynamic Pressure (x 1,000 PSI) -SS
4-4-4 SLO				.	.	.	.
6 SLO				.	.	.	.
6-6-6 SLO				.	.	.	.
8 SLO				.	.	.	.
8-8-8 SLO				.	.	.	.
10 SLO				.	.	.	.
12 SLO				.	.	.	.
16 SLO				.	.	.	.
20 SLO				.	.	.	.

S87OMLO

etric traight hread ranch ee

D



cross
e lats

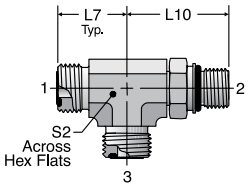
TUBE FITTING PART #	END SIZE 1 & 2 mm	END SIZE 1 & 2 in.	END SIZE 3	L7 mm	L10 mm	S2 mm	Dynamic Pressure (x 1,000 PSI) S	Dynamic Pressure (x 1,000 PSI) SS
4M12S87OMLO			.	.	.		.	.
4M14S87OMLO			.	.	.		.	.
6M14S87OMLO	,		.	.	.		.	.
6M16S87OMLO	,		.	.	.		.	.
8M14S87OMLO			.	.	.		.	.
8M18S87OMLO			.	.	.		.	.
8M22S87OMLO			.	.	.		.	.
10M22S87OMLO	, ,		.	.	.		.	.
12M27S87OMLO	,			.	.		.	.
16M33S87OMLO	,			.	.		.	.
20M42S87OMLO	, ,			.	.		.	.
24M48S87OMLO	,			.	.		.	.

Dimensions and pressures for reference only, subject to change.

R87OMLO

etric traight hread un ee

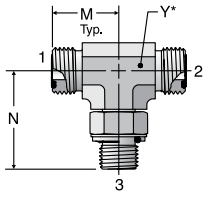
D



TUBE FITTING PART #	END SIZE 1 & 3 mm	1 & 3 in.	2	L7 mm	L10 mm	S2 mm	Dynamic Pressure (x 1,000 PSI) S	SS
4M12R87OMLO			.	.	.		.	.
4M14R87OMLO			.	.	.		.	.
6M14R87OMLO	,		.	.	.		.	.
6M16R87OMLO	,		.	.	.		.	.
8M14R87OMLO			.	.	.		.	.
8M18R87OMLO			.	.	.		.	.
8M22R87OMLO			.	.	.		.	.
10M22R87OMLO	, ,		.	.	.		.	.
12M27R87OMLO	,			.	.		.	.
16M33R87OMLO	,			.	.		.	.
20M42R87OMLO	, ,			.	.		.	.
24M48R87OMLO	,			.	.		.	.

S4OMLO

ranch ee
for ort



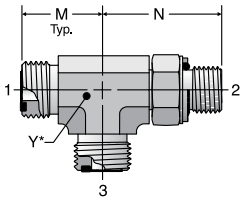
cross
rench lats

TUBE FITTING PART #	END SIZE 1 & 2 mm	1 & 2 in.	3	M mm	N mm	Y mm	Dynamic Pressure (x 1,000 PSI) S	SS
4S4OMLO				.	.		.	.
4-4-4S4OMLO				.	.		.	.
6S4OMLO	,			.	.		.	.
6-6-6S4OMLO	,			.	.		.	.
8S4OMLO				.	.		.	.
8-8-8S4OMLO				.	.		.	.
10S4OMLO	, ,			.	.		.	.
12S4OMLO	,			.	.		.	.
16S4OMLO	,			.	.		.	.

Dimensions and pressures for reference only, subject to change.

R4OMLO

un ee
for ort

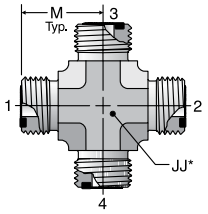


cross
rench lats

TUBE FITTING PART #	END SIZE 1 & 3 mm	END SIZE 1 & 3 in.	END SIZE 2	M mm	N mm	Y mm	Dynamic Pressure (x 1,000 PSI) S	Dynamic Pressure (x 1,000 PSI) SS
4R4OMLO				.	.		.	.
4-4-4R4OMLO				.	.		.	.
6R4OMLO	,			.	.		.	.
6-6-6R4OMLO	,			.	.		.	.
8R4OMLO				.	.		.	.
8-8-8R4OMLO				.	.		.	.
10R4OMLO	, ,			.	.		.	.
12R4OMLO	,			.	.		.	.
16R4OMLO	,			.	.		.	.

KLO

nion ross
all four ends

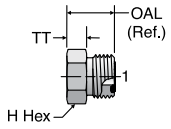


cross
rench lats

TUBE FITTING PART #	END SIZE 1-4 in.	JJ in.	M in.	Dynamic Pressure (x 1,000 PSI) -S	Dynamic Pressure (x 1,000 PSI) -SS
4 KLO			.	.	.
6 KLO			.	.	.
8 KLO			.	.	.
10 KLO			.	.	.
12 KLO			.	.	.
16 KLO			.	.	.
20 KLO			.	.	.
24 KLO					

Dimensions and pressures for reference only, subject to change.

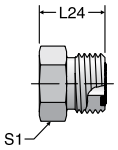
PNLO
lug



TUBE FITTING PART #	END SIZE 1 in.	H HEX in.	OAL (REF) in.	TT in.	Dynamic Pressure (x 1,000 PSI) -S	-SS
4 PNLO			.	.	.	.
6 PNLO			.	.	.	.
8 PNLO			.	.	.	.
10 PNLO			.	.	.	.
12 PNLO			.	.	.	.
14 PNLO*			.	.	.	.
16 PNLO			.	.	.	.
20 PNLO			.	.	.	.
24 PNLO			.	.	.	.
32 PNLO*			.	.	.	.

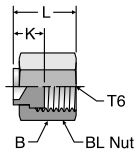
i es and are not included in .

PNMLO
lug mm e



TUBE FITTING PART #	ORFS TUBE O.D. mm	ORFS TUBE O.D. in.	L24 mm	S1 HEX mm	Dynamic Pressure (x 1,000 PSI) S	SS
4PNMLO			.		.	.
6PNMLO	,		.		.	.
8PNMLO			.		.	.
10PNMLO	, ,		.		.	.
12PNMLO	,		.		.	.
16PNMLO	,		.		.	.
20PNMLO	, ,		.		.	.
24PNMLO			.		.	.

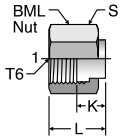
FNL
ap



TUBE FITTING PART #	TUBE O.D. in.	T6 SWIVEL	B HEX in.	K in.	L in.	Dynamic Pressure (x 1,000 PSI) -S	-SS
4 FNL				.	.	.	.
6 FNL				.	.	.	.
8 FNL				.	.	.	.
10 FNL				.	.	.	.
12 FNL				.	.	.	.
14 FNL*				.	.	.	.
16 FNL				.	.	.	.
20 FNL				.	.	.	.
24 FNL				.	.	.	.
32 FNL*				.	.	.	.

i es and are not included in .

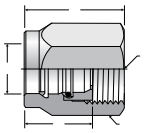
FNML
ap



TUBE FITTING PART #	TUBE O.D. mm	TUBE O.D. in.	T6 SWIVEL	K mm	L mm	S HEX mm	Dynamic Pressure (x 1,000 PSI) S	SS
4FNML				.	.		.	.
6FNML	,			.	.		.	.
8FNML				.	.		.	.
10FNML	, ,			.	.		.	.
12FNML	,			.	.		.	.
16FNML	,			.	.		.	.
20FNML	, ,			.	.		.	.
24FNML	,			.	.		.	.

Dimensions and pressures for reference only, subject to change.

UPTC Nut Assembly



TUBE FITTING PART #	END SIZE in.	T6	B HEX in.	L in.	L1 in.	C Nominal Nipple Size in.	C Nominal Nipple Size mm
4 UPTCL				.	.	.	
6 UPTCL				.	.	.	
8 UPTCL				.	.	.	
10 UPTCL				.	.	.	
12 UPTCL				.	.	.	
16 UPTCL				.	.	.	

o order as pre tor ued assembly on standard eal o adapters, see page .

Dimensions and pressures for reference only, subject to change.