

CREATION OF AN INDUSTRY

In the mid 1940's, Cullen Crawford founded the Crawford Fitting company, which evolved into what is today Swagelok, Inc. Mr. Crawford developed and patented the original flareless fitting (nut and two ferrule system), for the Crawford Fitting Company. Thus, a new and innovative industry was born making it far easier to make tubing connections. This reduces installation time and errors. End Users from all four corners of the globe, since his invention, have made billions of connections. This system provides leak proof seals and thus Mr. Crawford has been named "The founder of the flareless fitting."



INTRODUCTION

Tylok International, Inc. offers a tube fitting line, CBC-Lok™, that is fully interchangeable with Swagelok® and Parker A-Lok®. Although it is always recommended to use all CBC-Lok™ components, intermixing CBC-Lok™ bodies and/or component parts with that of other manufacturers will not adversely affect sealing ability. CBC-Lok™ Tube Fittings are made to strict quality control standards and cannot guarantee that of other manufacturers. CBC-Lok Tube Fittings are proudly made in the U.S.A.

OPERATION

CBC-Lok™ Tube Fittings are comprised of four components: the Body, Front Collet, Rear Collet and Nut. A leak proof seal is obtained through proper collet action as the collets are tightened onto the tubing via axial thrust provided by the nut. The front collet provides the leak proof seal, when the nut and collets are properly drawn up the specified number of turns. The rear collet grips the tubing preventing pull-off. The stainless steel nuts are silver plated and a dry film lubricant is applied, reducing torque and ensuring proper sealing.

TY-COR™ PROCESS

Ty-Cor™ refers to the Kolsterising® treatment which diffuses carbon into the surface of the stainless steel, thereby increasing the surface hardness without affecting the quality of the metal treated. In fact, when AISI 316 stainless steel is treated, the corrosion resistance is equal to or better than non-treated 316 stainless steel. The increase in corrosion resistance to pitting and stress corrosion is very pronounced in media which contain chlorides (e.g. sea water, bleach, HCl, etc.). The Ty-Cor™ process applied to the rear collet also helps eliminate galling and ensures proper sealing on tube end make ups.

ABS CERTIFICATION



Tylok has received the Certificate of Type Approval from the American Bureau of Shipping (ABS). The following Part Families are ABS approved:

DFC – Female Connector, DMC – Male Connector, DU – Union, DELU – Union Elbow, DME – Male Elbow and DTTT – Union Tee. For further information visit www.eagle.org.

FEATURES

- Double collet swaging action
- Total component interchangeability
- Heat Code traceable
- ASTM material construction
- Corrosion resistant 316 Stainless Steel rear collets

QUALITY MANAGEMENT SYSTEM

QMI has registered Tylok International's Quality Management System to ISO 9001:2000. The quality system complies with the international standard ISO 9001:2000 and its technical equivalent, ANSI/ISO/ASQ Q9001:2000. Tylok strives to continuously improve the effectiveness of the Quality Management System by each member within the organization.



Certificate No. 012106

Instrumentation



HOW TO ORDER CBC-LOK™ TUBE FITTINGS

CBC-Lok™ Tube Fittings are ordered as listed in this catalog by inserting the material code before the part number. CBC-Lok™ Tube Fittings can be identified through the part number as to material, tube size, configuration and thread connection. The part number describes a complete fitting assembly. The size nomenclature to describe a tee fitting is from left (1) to right (2) and down (3). **Special Configurations available upon request.**

Example: A Stainless Steel Female Run Tee, 3/8" Tube Size to 1/4" Female Pipe to 3/8" Tube is designated as follows.



CHART 1 - MATERIAL

B	Brass
SS	Stainless Steel

CHART 3 - STYLE

D	CBC-Lok™
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CHART 2 - TUBE O.D.

Designator	Tube or Hose OD (inches)	Pipe Thread (NPT)	AN Tube Flare Size (inches)	Pipe Thread BSPP/BSPT
1	1/16	1/16-27		1/16-28
2	1/8	1/8-27	1/8	1/8-28
3	3/16		3/16	
4	1/4	1/4-18	1/4	1/4-19
5	5/16		5/16	
6	3/8	3/8-18	3/8	3/8-19
8	1/2	1/2-14	1/2	1/2-14
10	5/8		5/8	
12	3/4	3/4-14	3/4	3/4-14
14	7/8		7/8	
16	1	1.0-11 1/2	1	1.0-11

CHART 4 - DESCRIPTION

DATANF	Adapter Tube to AN Flare
DATPF	Adapter Tube to Female Pipe
DATPM	Adapter Tube to Male Pipe
DBHA	Bulkhead Adapter
DBHFP	Bulkhead Female Pipe Connector
DBHMP	Bulkhead Male Pipe Connector
DBHU	Bulkhead Union
DBUANF	Bulkhead to AN Flare Union
DCAP	Cap
DF PLUG	Fitting Plug
DFC	Female Connector
DMC	Male Connector
DMC-ORS	O Ring Straight Thread Male Connector
DMC-ORT	O Ring Pipe Thread Male Connector
DPCU	Port Connector Union
DRATT	Reducer Adapter Tube to Tube
DRPC	Reducing Port Connector
DRU	Reducing Union
DTBW	Tube to Butt Weld Connector
DTSW	Tube to Socket Weld Connector

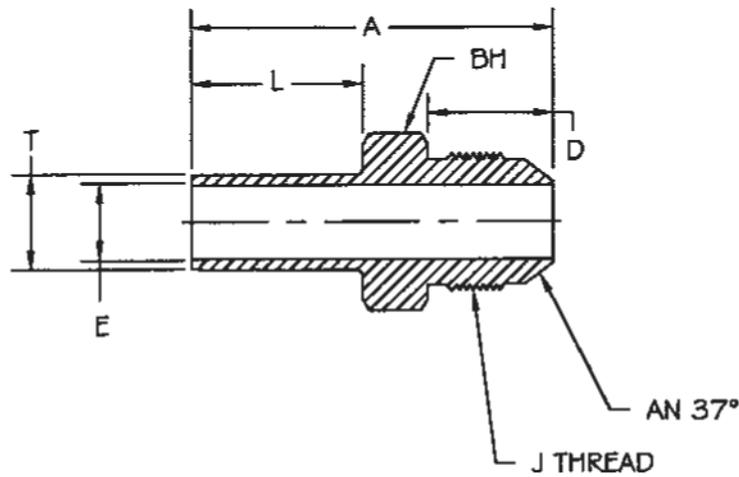
DU	Union
DUANF	Tube to AN Flare Union
DELU	Union Elbow
DFE	Female Elbow
DME	Male Elbow
DTBWE	Tube to Butt Weld Elbow
DTSWE	Tube to Socket Weld Elbow
DTFT	Female Run Tee
DTMT	Male Run Tee
DTTF	Female Branch Tee
DTTM	Male Branch Tee
DTTT	Union Tee
DCR	Union Cross
DBI	Barbed Insert
DPI	Plane Insert
DN	Nut
DKN	Knurled Nut
DFC	Front Collet
DRC	Rear Collet

Instrumentation



ADAPTER TUBE TO AN FLARE

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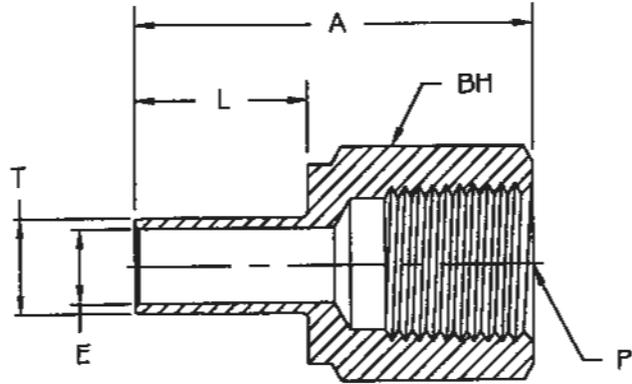
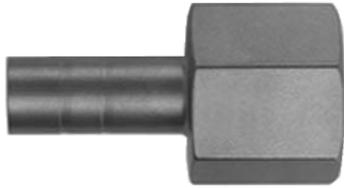
Instrumentation

PART NUMBER	T TUBE O.D.	J THREAD	A	D	E THRU HOLE	L	BH BODY HEX
2-DATANF-2	1/8	5/16-24	1.203	.448	.062	.531	3/8
2-DATANF-4	1/8	7/16-20	1.312	.550	.094	.531	1/2
3-DATANF-3	3/16	3/8-24	1.250	.479	.125	.562	7/16
4-DATANF-4	1/4	7/16-20	1.469	.550	.172	.625	1/2
5-DATANF-5	5/16	1/2-20	1.453	.550	.234	.656	9/16
6-DATANF-4	3/8	7/16-20	1.531	.550	.172	.687	1/2
6-DATANF-6	3/8	9/16-18	1.500	.556	.281	.687	5/8
8-DATANF-8	1/2	3/4-16	1.906	.657	.391	.906	13/16
10-DATANF-10	5/8	7/8-14	2.031	.758	.484	.969	15/16
12-DATANF-12	3/4	1-1/16-12	2.187	.864	.656	.969	1-1/8
16-DATANF-16	1	1-5/16-12	2.531	.911	.937	1.219	1-3/8

*NOTE: All dimensions subject to change, to be used for reference only.



ADAPTER TUBE TO FEMALE FLARE



Tylok

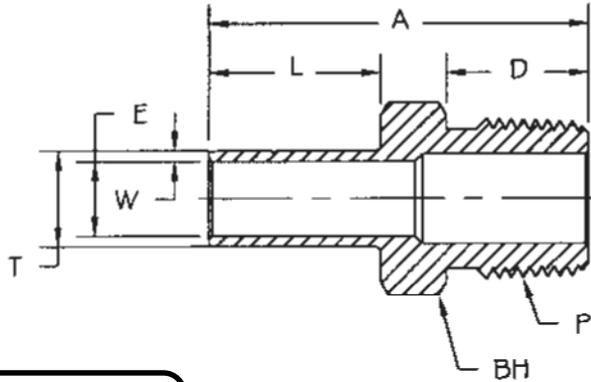
PART NUMBER	T TUBE O.D.	P PIPE END NPT	A	E THRU HOLE	L	BH BODY HEX
2-DATPF-2	1/8	1/8	1.234	.094	.531	9/16
2-DATPF-4	1/8	1/4	1.375	.094	.531	3/4
3-DATPF-2	3/16	1/8	1.266	.125	.562	9/16
3-DATPF-4	3/16	1/4	1.406	.125	.562	3/4
4-DATPF-2	1/4	1/8	1.312	.187	.625	9/16
4-DATPF-4	1/4	1/4	1.469	.187	.625	3/4
4-DATPF-6	1/4	3/8	1.562	.187	.625	7/8
4-DATPF-8	1/4	1/2	1.812	.187	.625	1-1/16
5-DATPF-2	5/16	1/8	1.359	.250	.656	9/16
5-DATPF-4	5/16	1/4	1.516	.250	.656	3/4
6-DATPF-2	3/8	1/8	1.391	.281	.687	9/16
6-DATPF-4	3/8	1/4	1.547	.281	.687	3/4
6-DATPF-6	3/8	3/8	1.625	.281	.687	7/8
6-DATPF-8	3/8	1/2	1.843	.281	.687	1-1/16
8-DATPF-4	1/2	1/4	1.719	.391	.906	3/4
8-DATPF-6	1/2	3/8	1.859	.391	.906	7/8
8-DATPF-8	1/2	1/2	2.093	.391	.906	1-1/16
10-DATPF-6	5/8	3/8	1.828	.500	.969	7/8
10-DATPF-8	5/8	1/2	2.093	.500	.969	1-1/16
12-DATPF-8	3/4	1/2	2.093	.594	.969	1-1/16
14-DATPF-12	7/8	3/4	2.203	.687	1.031	1-1/4
16-DATPF-12	1	3/4	2.406	.797	1.219	1-1/4
16-DATPF-16	1	1	2.547	.797	1.219	1-5/8

*NOTE: All dimensions subject to change, to be used for reference only.

Instrumentation



ADAPTER TUBE TO MALE FLARE



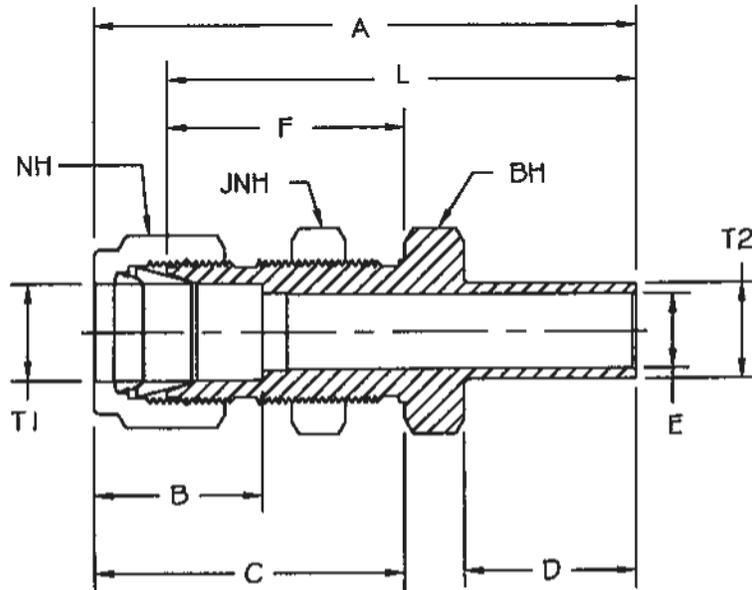
PART NUMBER	T TUBE O.D.	P PIPE END NPT	A	D	E THRU HOLE	L	W	BH BODY HEX
2-DATPM-2	1/8	1/8	1.156	.375	.093	.531	.022	7/16
2-DATPM-4	1/8	1/4	1.375	.562	.093	.531	.022	9/16
3-DATPM-2	3/16	1/8	1.187	.375	.187	.562	.022	7/16
3-DATPM-4	3/16	1/4	1.406	.562	.281	.562	.022	9/16
4-DATPM-2	1/4	1/8	1.250	.375	.171	.625	.032	7/16
4-DATPM-4	1/4	1/4	1.469	.562	.171	.625	.032	9/16
4-DATPM-6	1/4	3/8	1.500	.562	.171	.625	.032	11/16
4-DATPM-8	1/4	1/2	1.718	.750	.171	.625	.032	7/8
5-DATPM-2	5/16	1/8	1.297	.375	.187	.656	.032	7/16
5-DATPM-4	5/16	1/4	1.500	.562	.250	.656	.032	9/16
6-DATPM-2	3/8	1/8	1.343	.375	.187	.687	.032	7/16
6-DATPM-4	3/8	1/4	1.547	.562	.281	.687	.032	9/16
6-DATPM-6	3/8	3/8	1.562	.562	.281	.687	.032	11/16
6-DATPM-8	3/8	1/2	1.781	.750	.281	.687	.032	7/8
8-DATPM-4	1/2	1/4	1.750	.562	.281	.906	.047	9/16
8-DATPM-6	1/2	3/8	1.781	.562	.375	.906	.047	11/16
8-DATPM-8	1/2	1/2	2.000	.750	.391	.906	.047	7/8
10-DATPM-6	5/8	3/8	1.844	.562	.375	.969	.047	11/16
10-DATPM-8	5/8	1/2	2.062	.750	.468	.969	.047	7/8
10-DATPM-12	5/8	3/4	2.062	.750	.500	.969	.047	1-1/16
12-DATPM-8	3/4	1/2	2.062	.750	.468	.969	.047	7/8
12-DATPM-12	3/4	3/4	2.062	.750	.594	.969	.047	1-1/16
12-DATPM-16	3/4	1	2.359	.937	.594	.969	.047	1-3/8
14-DATPM-12	7/8	3/4	2.125	.750	.687	1.031	.047	1-3/8
16-DATPM-12	1	3/4	2.312	.750	.625	1.218	.047	1-1/16
16-DATPM-16	1	1	2.625	.937	.797	1.218	.047	1-3/8

*NOTE: All dimensions subject to change, to be used for reference only.



BULKHEAD ADAPTER

Tylok



Instrumentation

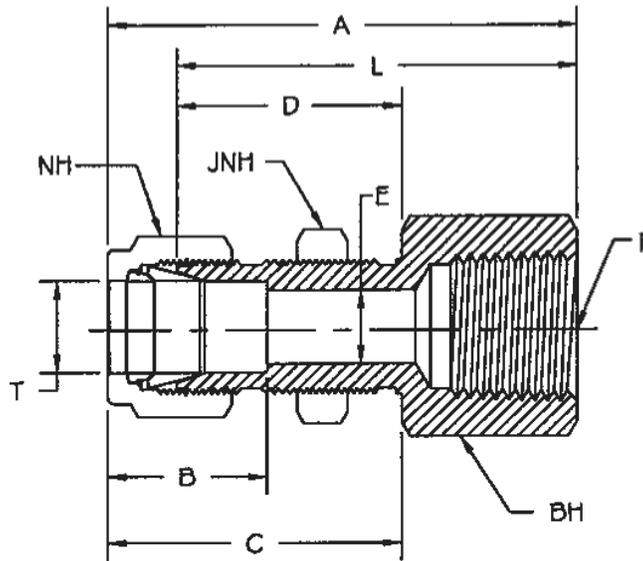
PART NUMBER	T1 TUBE O.D.	T2 TUBE O.D.	A	B	C	D	E THRU HOLE	F	L	NH NUT HEX	JNH JAM NUT HEX	BH BODY HEX	PANEL HOLE
2-DBHA-2	1/8	1/8	1.953	.500	1.234	.531	.078	.969	1.687	7/16	1/2	1/2	21/64
4-DBHA-4	1/4	1/4	2.203	.609	1.328	.625	.187	1.031	1.906	9/16	5/8	5/8	29/64
6-DBHA-6	3/8	3/8	2.406	.656	1.453	.687	.281	1.156	2.125	11/16	3/4	3/4	37/64
8-DBHA-8	1/2	1/2	2.875	.906	1.656	.906	.391	1.250	2.468	7/8	15/16	15/16	49/64

*NOTE: All dimensions subject to change, to be used for reference only.



BULKHEAD FEMALE PIPE CONNECTOR

Tylok



Instrumentation

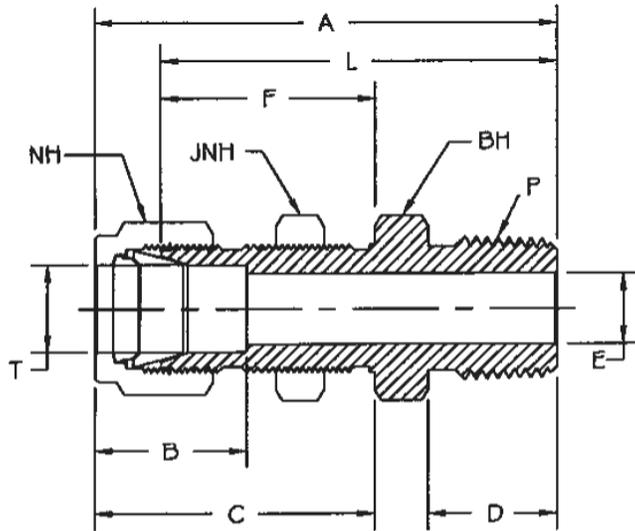
PART NUMBER	T TUBE O.D.	P PIPE END NPT	A	B	C	D	E THRU HOLE	L	NH NUT HEX	JNH JAM NUT HEX	BH BODY HEX	PANEL HOLE
2-DBHFP-2	1/8	1/8	1.766	.500	1.234	.969	.094	1.500	7/16	1/2	9/16	21/64
3-DBHFP-2	3/16	1/8	1.797	.547	1.266	1.000	.125	1.531	1/2	9/16	9/16	25/64
4-DBHFP-2	1/4	1/8	1.859	.609	1.328	1.031	.187	1.562	9/16	5/8	5/8	29/64
4-DBHFP-4	1/4	1/4	2.047	.609	1.328	1.031	.187	1.750	9/16	5/8	3/4	29/64
5-DBHFP-2	5/16	1/8	1.969	.641	1.422	1.125	.250	1.656	5/8	3/4	11/16	33/64
6-DBHFP-4	3/8	1/4	2.172	.656	1.453	1.156	.281	1.875	11/16	3/4	3/4	37/64
8-DBHFP-6	1/2	3/8	2.437	.906	1.656	1.250	.406	2.031	7/8	15/16	15/16	49/64
8-DBHFP-8	1/2	1/2	2.625	.906	1.656	1.250	.406	2.219	7/8	15/16	1-1/16	49/64
10-DBHFP-8	5/8	1/2	2.656	.969	1.687	1.281	.500	2.250	1	1-1/16	1-1/16	57/64
16-DBHFP-16	1	1	3.687	1.234	2.266	1.781	.875	3.187	1-1/2	1-1/2	1-5/8	1-21/64

*NOTE: All dimensions subject to change, to be used for reference only.



BULKHEAD MALE PIPE CONNECTOR

Tylok



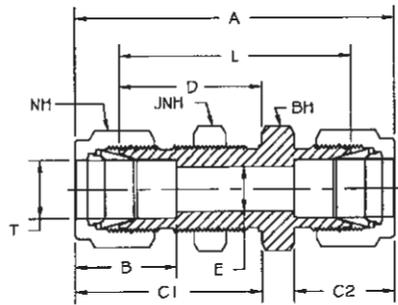
PART NUMBER	T TUBE O.D.	P PIPE END NPT	A	B	C	D	E THRU HOLE	F	L	NH NUT HEX	JNH JAM NUT HEX	BH BODY HEX	PANEL HOLE
1-DBHMP-1	1/16	1/16	1.187	.437	.687	.375	.052	.531	1.031	5/16	7/16	5/16	13/64
1-DBHMP-2	1/16	1/8	1.234	.437	.687	.375	.052	.531	1.094	5/16	7/16	7/16	13/64
2-DBHMP-2	1/8	1/8	1.828	.500	1.234	.375	.094	.969	1.578	7/16	1/2	1/2	21/64
3-DBHMP-2	3/16	1/8	1.859	.547	1.266	.375	.125	1.000	1.594	1/2	9/16	9/16	25/64
4-DBHMP-2	1/4	1/8	1.953	.609	1.328	.375	.187	1.031	1.656	9/16	5/8	5/8	29/64
4-DBHMP-4	1/4	1/4	2.109	.609	1.328	.562	.187	1.031	1.843	9/16	5/8	5/8	29/64
4-DBHMP-6	1/4	3/8	2.187	.609	1.328	.562	.187	1.016	1.891	9/16	5/8	11/16	29/64
4-DBHMP-8	1/4	1/2	2.484	.609	1.328	.562	.187	1.016	2.187	9/16	5/8	7/8	29/64
6-DBHMP-4	3/8	1/4	2.266	.656	1.453	.562	.281	1.156	1.969	11/16	3/4	3/4	37/64
6-DBHMP-6	3/8	3/8	2.312	.656	1.437	.562	.281	1.156	1.969	11/16	3/4	3/4	37/64
6-DBHMP-8	3/8	1/2	2.609	.656	1.437	.750	.375	1.156	2.312	11/16	3/4	7/8	37/64
8-DBHMP-4	1/2	1/4	2.547	.906	1.656	.562	.375	1.250	2.141	7/8	15/16	15/16	49/64
8-DBHMP-6	1/2	3/8	2.484	.906	1.656	.562	.375	1.250	2.094	7/8	15/16	15/16	49/64
8-DBHMP-8	1/2	1/2	2.719	.906	1.656	.750	.406	1.250	2.312	7/8	15/16	15/16	49/64

*NOTE: All dimensions subject to change, to be used for reference only.



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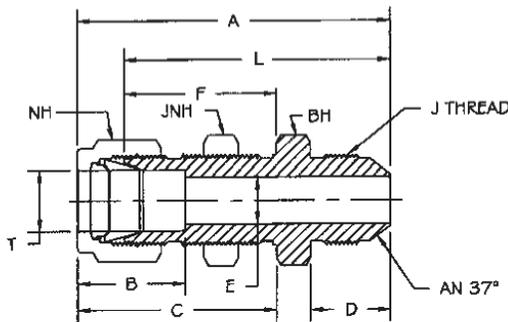
BULKHEAD UNION



PART NUMBER	T TUBE O.D.	A	B	C1	C2	D	E THRU HOLE	L	NH NUT HEX	JNH JAM NUT HEX	BH BODY HEX	PANEL HOLE
1-DBHU-1	1/16	1.234	.344	.687	.437	.531	.052	.937	5/16	5/16	5/16	13/64
2-DBHU-2	1/8	2.016	.500	1.234	.609	.969	.094	1.500	7/16	1/2	1/2	21/64
3-DBHU-3	3/16	2.109	.547	1.266	.625	1.000	.125	1.594	1/2	9/16	9/16	25/64
4-DBHU-4	1/4	2.266	.609	1.328	.703	1.031	.187	1.687	9/16	5/8	5/8	29/64
5-DBHU-5	5/16	2.391	.641	1.406	.734	1.125	.250	1.812	5/8	11/16	11/16	33/64
6-DBHU-6	3/8	2.453	.656	1.453	.766	1.156	.281	1.875	11/16	3/4	3/4	37/64
8-DBHU-8	1/2	2.797	.906	1.656	.859	1.250	.406	2.000	7/8	15/16	15/16	49/64
10-DBHU-10	5/8	2.859	.969	1.687	.859	1.281	.500	2.062	1	1-1/16	1-1/16	57/64
12-DBHU-12	3/4	3.109	.969	1.875	.859	1.469	.625	2.312	1-1/8	1-3/16	1-3/16	1-1/64
14-DBHU-14	7/8	3.328	1.031	2.094	.875	1.687	.718	2.531	1-1/4	1-3/8	1-3/8	1-9/64
16-DBHU-16	1	3.766	1.234	2.266	1.047	1.781	.875	2.812	1-1/2	1-5/8	1-5/8	1-21/64

BULKHEAD TO AN FLARE UNION

Tylok

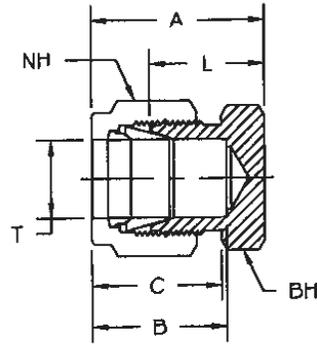


PART NUMBER	T TUBE O.D.	J THREAD	A	B	C	D	E THRU HOLE	F	L	NH NUT HEX	BH BODY HEX	JNH JAM NUT HEX	PANEL HOLE
2-DBUANF-2	1/8	5/16-24	1.906	.516	1.234	.453	.062	.969	1.656	7/16	1/2	1/2	21/64
3-DBUANF-3	3/16	3/8-24	1.984	.547	1.266	.484	.125	1.000	1.719	1/2	9/16	9/16	25/64
4-DBUANF-4	1/4	7/16-20	2.125	.609	1.328	.547	.172	1.031	1.828	9/16	5/8	5/8	29/64
5-DBUANF-5	5/16	1/2-20	2.219	.641	1.406	.547	.234	1.125	1.922	5/8	11/16	11/16	33/64
6-DBUANF-6	3/8	9/16-18	2.250	.656	1.453	.562	.281	1.156	1.969	11/16	11/16	3/4	37/64
8-DBUANF-8	1/2	3/4-16	2.594	.906	1.656	.656	.391	1.250	2.187	7/8	15/16	15/16	49/64
10-DBUANF-10	5/8	7/8-14	2.734	.969	1.687	.766	.484	1.281	2.234	1	1-1/16	1-1/16	57/64
12-DBUANF-12	3/4	1-1/16-12	3.109	.969	1.875	.859	.609	1.469	2.719	1-1/8	1-3/16	1-3/16	1-1/64
16-DBUANF-16	1	1-5/16-12	3.641	1.234	2.266	.906	.844	1.781	3.156	1-1/2	1-5/8	1-5/8	1-21/64

*NOTE: All dimensions subject to change, to be used for reference only.

Instrumentation

CAP

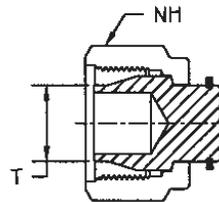


Tylok

PART NUMBER	T TUBE O.D.	A	B	C	L	BH BODY HEX	NH NUT HEX
1-DCAP	1/16	.594	.344	.437	.437	5/16	5/16
2-DCAP	1/8	.797	.500	.609	.531	7/16	7/16
3-DCAP	3/16	.844	.547	.625	.578	7/16	1/2
4-DCAP	1/4	.922	.609	.703	.625	1/2	9/16
5-DCAP	5/16	.969	.641	.734	.672	9/16	5/8
6-DCAP	3/8	1.016	.656	.766	.719	5/8	11/16
8-DCAP	1/2	1.156	.906	.859	.750	13/16	7/8
10-DCAP	5/8	1.188	.969	.859	.781	15/16	1
12-DCAP	3/4	1.234	.969	.859	.844	1-1/16	1-1/8
14-DCAP	7/8	1.344	1.016	.859	.937	1-3/16	1-1/4
16-DCAP	1	1.516	1.234	1.047	1.031	1-3/8	1-1/2

Instrumentation

FITTING PLUG



Tylok

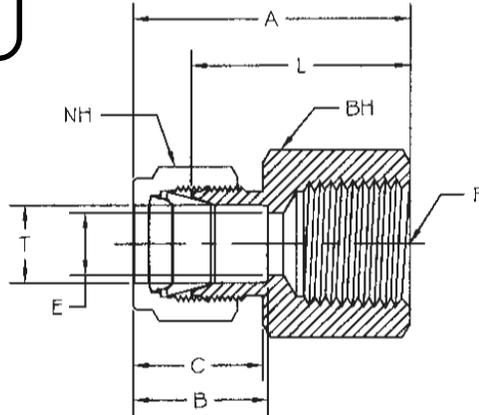
PART NUMBER	T TUBE O.D.	NH NUT HEX
1-DF PLUG	1/16	5/16
2-DF PLUG	1/8	7/16
3-DF PLUG	3/16	1/2
4-DF PLUG	1/4	9/16
5-DF PLUG	5/16	5/8
6-DF PLUG	3/8	11/16
8-DF PLUG	1/2	7/8
10-DF PLUG	5/8	1
12-DF PLUG	3/4	1-1/8
14-DF PLUG	7/8	1-1/4
16-DF PLUG	1	1-1/2

*NOTE: All dimensions subject to change, to be used for reference only.



FEMALE CONNECTOR

Tylok



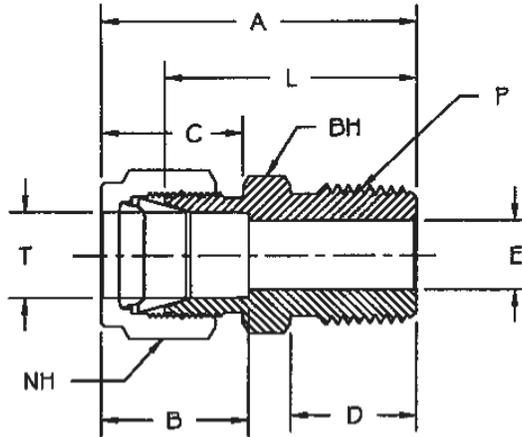
PART NUMBER	T TUBE O.D.	P PIPE END NPT	A	B	C	E THRU HOLE	L	NH NUT HEX	BH BODY HEX
1-DFC-1	1/16	1/16	.937	.344	.437	.052	.782	5/16	7/16
1-DFC-2	1/16	1/8	.969	.344	.437	.052	.812	5/16	9/16
2-DFC-2	1/8	1/8	1.125	.500	.609	.094	.875	7/16	9/16
2-DFC-4	1/8	1/4	1.328	.500	.609	.094	1.062	7/16	3/4
2-DFC-6	1/8	3/8	1.390	.500	.609	.094	1.125	7/16	7/8
3-DFC-2	3/16	1/8	1.171	.547	.625	.125	.906	1/2	9/16
3-DFC-4	3/16	1/4	1.344	.547	.625	.125	1.094	1/2	3/4
3-DFC-8	3/16	1/2	1.594	.547	.625	.125	1.344	1/2	1-1/8
4-DFC-1	1/4	1/16	1.203	.609	.703	.187	.906	9/16	1/2
4-DFC-2	1/4	1/8	1.234	.609	.703	.187	.937	9/16	9/16
4-DFC-4	1/4	1/4	1.406	.609	.703	.187	1.125	9/16	3/4
4-DFC-6	1/4	3/8	1.484	.609	.703	.187	1.187	9/16	7/8
4-DFC-8	1/4	1/2	1.670	.609	.703	.187	1.375	9/16	1-1/16
5-DFC-2	5/16	1/8	1.266	.640	.734	.250	.969	5/8	9/16
5-DFC-4	5/16	1/4	1.453	.640	.734	.250	1.156	5/8	3/4
5-DFC-6	5/16	3/8	1.515	.640	.734	.250	1.218	5/8	7/8
5-DFC-8	5/16	1/2	1.703	.640	.734	.250	1.406	5/8	1-1/16
6-DFC-2	3/8	1/8	1.297	.656	.766	.281	1.000	11/16	5/8
6-DFC-4	3/8	1/4	1.484	.656	.766	.281	1.187	11/16	3/4
6-DFC-6	3/8	3/8	1.547	.656	.766	.281	1.250	11/16	7/8
6-DFC-8	3/8	1/2	1.734	.656	.766	.281	1.437	11/16	1-1/16
6-DFC-12	3/8	3/4	1.875	.656	.766	.281	1.593	11/16	1-1/4
8-DFC-4	1/2	1/4	1.593	.906	.859	.406	1.187	7/8	13/16
8-DFC-6	1/2	3/8	1.656	.906	.859	.406	1.250	7/8	7/8
8-DFC-8	1/2	1/2	1.843	.906	.859	.406	1.437	7/8	1-1/16
8-DFC-12	1/2	3/4	1.906	.906	.859	.406	1.500	7/8	1-1/4
8-DFC-16	1/2	1	2.265	.906	.859	.406	1.875	7/8	1-5/8
10-DFC-4	5/8	1/4	1.797	.969	.859	.281	1.406	1	15/16
10-DFC-6	5/8	3/8	1.656	.969	.859	.500	1.250	1	15/16
10-DFC-8	5/8	1/2	1.844	.969	.859	.500	1.437	1	1-1/16
10-DFC-12	5/8	3/4	1.953	.969	.859	.500	1.562	1	1-1/4
12-DFC-6	3/4	3/8	1.655	.969	.859	.500	1.265	1-1/8	1-1/16
12-DFC-8	3/4	1/2	1.844	.969	.859	.625	1.437	1-1/8	1-1/16
12-DFC-12	3/4	3/4	1.906	.969	.859	.625	1.500	1-1/8	1-1/4
12-DFC-16	3/4	1	2.265	.969	.859	.625	1.875	1-1/8	1-5/8
14-DFC-8	7/8	1/2	1.828	1.016	.859	.687	1.437	1-1/4	1-5/16
14-DFC-12	7/8	3/4	1.969	1.016	.859	.719	1.562	1-1/4	1-3/8
14-DFC-16	7/8	1	2.234	1.016	.859	.719	1.843	1-1/4	1-5/8
16-DFC-12	1	3/4	2.109	1.234	1.047	.875	1.625	1-1/2	1-3/8
16-DFC-16	1	1	2.453	1.234	1.047	.875	1.969	1-1/2	1-5/8

*NOTE: All dimensions subject to change, to be used for reference only.

Instrumentation

Tylok

MALE CONNECTOR



Instrumentation

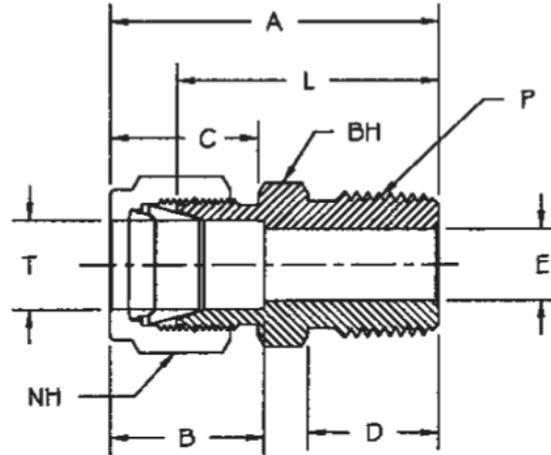
PART NUMBER	T TUBE O.D.	P PIPE END NPT	A	B	C	D	E THRU HOLE	L	NH NUT HEX	BH BODY HEX
1-DMC-1	1/16	1/16	.937	.344	.437	.375	.052	.797	5/16	5/16
1-DMC-2	1/16	1/8	1.031	.344	.437	.375	.052	.875	5/16	7/16
2-DMC-1	1/8	1/16	1.172	.500	.609	.375	.094	.906	7/16	7/16
2-DMC-2	1/8	1/8	1.203	.500	.609	.375	.094	.937	7/16	7/16
2-DMC-4	1/8	1/4	1.406	.500	.609	.562	.094	1.140	7/16	9/16
2-DMC-6	1/8	3/8	1.406	.500	.609	.562	.094	1.156	7/16	11/16
2-DMC-8	1/8	1/2	1.656	.500	.609	.750	.094	1.406	7/16	7/8
3-DMC-2	3/16	1/8	1.234	.546	.625	.375	.125	.969	1/2	7/16
3-DMC-4	3/16	1/4	1.437	.546	.625	.562	.125	1.171	1/2	9/16
4-DMC-1	1/4	1/16	1.299	.609	.703	.375	.125	1.000	9/16	1/2
4-DMC-2	1/4	1/8	1.299	.609	.703	.375	.187	1.000	9/16	1/2
4-DMC-4	1/4	1/4	1.484	.609	.703	.562	.187	1.203	9/16	9/16
4-DMC-6	1/4	3/8	1.516	.609	.703	.562	.187	1.219	9/16	11/16
4-DMC-8	1/4	1/2	1.766	.609	.703	.750	.187	1.469	9/16	7/8
4-DMC-12	1/4	3/4	1.828	.609	.703	.750	.187	1.531	9/16	1-1/16
4-DMC-16	1/4	1	2.109	.609	.703	.937	.187	1.812	9/16	1-3/8
5-DMC-2	5/16	1/8	1.343	.641	.734	.375	.187	1.047	5/8	9/16
5-DMC-4	5/16	1/4	1.516	.641	.734	.562	.250	1.234	5/8	9/16
5-DMC-6	5/16	3/8	1.547	.641	.734	.562	.250	1.250	5/8	11/16
5-DMC-8	5/16	1/2	1.765	.641	.734	.750	.250	1.468	5/8	7/8
6-DMC-2	3/8	1/8	1.390	.656	.766	.375	.187	1.109	11/16	5/8
6-DMC-4	3/8	1/4	1.578	.656	.766	.562	.281	1.281	11/16	5/8
6-DMC-6	3/8	3/8	1.578	.656	.766	.562	.281	1.281	11/16	11/16
6-DMC-8	3/8	1/2	1.828	.656	.766	.750	.281	1.531	11/16	7/8
6-DMC-12	3/8	3/4	1.875	.656	.766	.750	.281	1.593	11/16	1-1/16
6-DMC-16	3/8	1	2.141	.656	.766	.937	.281	1.843	11/16	1-3/8

*NOTE: All dimensions subject to change, to be used for reference only.



Tylok

MALE CONNECTOR



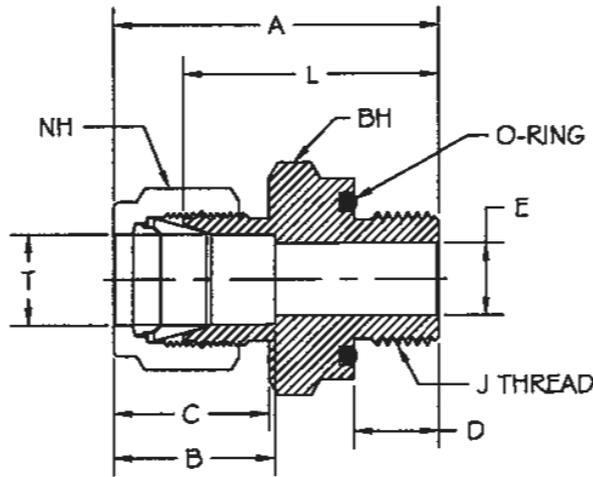
PART NUMBER	T TUBE O.D.	P PIPE END NPT	A	B	C	D	E THRU HOLE	L	NH NUT HEX	BH BODY HEX
8-DMC-2	1/2	1/8	1.531	.906	.859	.375	.187	1.125	7/8	13/16
8-DMC-4	1/2	1/4	1.719	.906	.859	.562	.281	1.312	7/8	13/16
8-DMC-6	1/2	3/8	1.719	.906	.859	.562	.375	1.312	7/8	13/16
8-DMC-8	1/2	1/2	1.937	.906	.859	.750	.406	1.531	7/8	7/8
8-DMC-12	1/2	3/4	1.984	.906	.859	.750	.406	1.593	7/8	1-1/16
8-DMC-16	1/2	1	2.250	.906	.859	.937	.406	1.859	7/8	1-3/8
10-DMC-4	5/8	1/4	1.934	.969	.859	.562	.281	1.343	1	15/16
10-DMC-6	5/8	3/8	1.934	.969	.859	.562	.375	1.343	1	15/16
10-DMC-8	5/8	1/2	1.937	.969	.859	.750	.469	1.531	1	15/16
10-DMC-12	5/8	3/4	1.984	.969	.859	.750	.500	1.593	1	1-1/16
10-DMC-16	5/8	1	2.172	.969	.859	.937	.500	1.781	1	1-3/8
12-DMC-4	3/4	1/4	1.796	.969	.859	.562	.281	1.405	1-1/4	1-1/8
12-DMC-6	3/4	3/8	1.796	.969	.859	.562	.375	1.405	1-1/4	1-1/8
12-DMC-8	3/4	1/2	1.984	.969	.859	.750	.468	1.593	1-1/8	1-1/16
12-DMC-12	3/4	3/4	1.984	.969	.859	.750	.625	1.593	1-1/8	1-1/16
12-DMC-16	3/4	1	2.250	.969	.859	.937	.625	1.859	1-1/8	1-3/8
14-DMC-8	7/8	1/2	1.984	1.015	.859	.750	.468	1.593	1-3/8	1-1/4
14-DMC-12	7/8	3/4	1.984	1.015	.859	.750	.625	1.593	1-1/4	1-3/16
14-DMC-16	7/8	1	2.250	1.015	.859	.937	.718	1.859	1-1/4	1-3/8
16-DMC-4	1	1/4	2.055	1.234	1.046	.562	.281	1.562	1-1/2	1-3/8
16-DMC-6	1	3/8	2.055	1.234	1.046	.562	.375	1.562	1-1/2	1-3/8
16-DMC-8	1	1/2	2.265	1.234	1.046	.750	.468	1.781	1-1/2	1-3/8
16-DMC-12	1	3/4	2.265	1.234	1.046	.750	.625	1.781	1-1/2	1-3/8
16-DMC-16	1	1	2.453	1.234	1.046	.937	.875	1.969	1-1/2	1-3/8

*NOTE: All dimensions subject to change, to be used for reference only.



O-RING STRAIGHT THREAD MALE CONNECTOR

Tylok



PART NUMBER	T TUBE O.D.	J THREAD	A	B	C	D	E THRU HOLE	L	NH NUT HEX	BH BODY HEX	O-RING
1-DMC-ORS	1/16	5/16-24	1.047	.344	.437	.343	.047	.906	5/16	9/16	AS-011
2-DMC-ORS	1/8	5/16-24	1.297	.500	.609	.343	.094	1.031	7/16	9/16	AS-011
3-DMC-ORS	3/16	3/8-24	1.359	.547	.625	.375	.125	1.094	1/2	5/8	AS-012
4-DMC-ORS	1/4	7/16-20	1.516	.609	.703	.406	.187	1.219	9/16	3/4	AS-111
5-DMC-ORS	5/16	1/2-20	1.609	.641	.734	.437	.250	1.312	5/8	7/8	AS-112
6-DMC-ORS	3/8	9/16-18	1.672	.656	.766	.468	.281	1.375	11/16	15/16	AS-113
8-DMC-ORS	1/2	3/4-16	1.812	.906	.859	.468	.406	1.406	7/8	1-1/8	AS-116
12-DMC-ORS	3/4	1-1/16-12	2.062	.969	.859	.562	.625	1.656	1-1/8	1-1/2	AS-215
16-DMC-ORS	1	1-5/16-12	2.297	1.234	1.047	.562	.875	1.812	1-1/2	1-3/4	AS-219

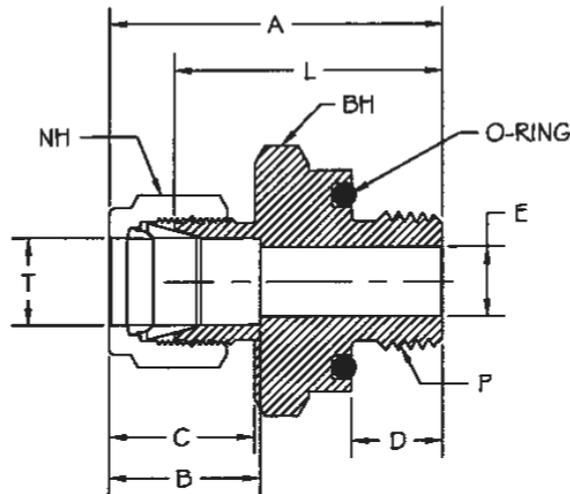
*NOTE: All dimensions subject to change, to be used for reference only.



Instrumentation

O-RING PIPE THREAD MALE CONNECTOR

Tylok



PART NUMBER	T TUBE O.D.	P PIPE END NPT	A	B	C	D	E THRU HOLE	L	NH NUT HEX	BH BODY HEX	O-RING
2-DMC-2-ORT	1/8	1/8	1.297	.500	.609	.280	.094	1.031	7/16	3/4	AS-111
2-DMC-4-ORT	1/8	1/4	1.437	.516	.609	.375	.094	1.172	7/16	15/16	AS-113
3-DMC-4-ORT	3/16	1/4	1.469	.547	.641	.375	.125	1.203	1/2	15/16	AS-113
4-DMC-2-ORT	1/4	1/8	1.375	.609	.703	.280	.187	1.094	9/16	3/4	AS-111
4-DMC-4-ORT	1/4	1/4	1.516	.609	.703	.375	.187	1.219	9/16	15/16	AS-113
6-DMC-6-ORT	3/8	3/8	1.625	.656	.766	.406	.281	1.344	11/16	1-1/8	AS-116
6-DMC-8-ORT	3/8	1/2	1.859	.656	.766	.531	.281	1.562	11/16	1-3/8	AS-212
8-DMC-4-ORT	1/2	1/4	1.687	.906	.875	.375	.281	1.281	7/8	15/16	AS-113
8-DMC-8-ORT	1/2	1/2	1.969	.906	.859	.531	.406	1.562	7/8	1-3/8	AS-212
10-DMC-12-ORT	5/8	3/4	2.062	.969	.875	.562	.500	1.656	1	1-1/2	AS-215
12-DMC-12-ORT	3/4	3/4	2.062	.969	.875	.562	.625	1.656	1-1/8	1-1/2	AS-215

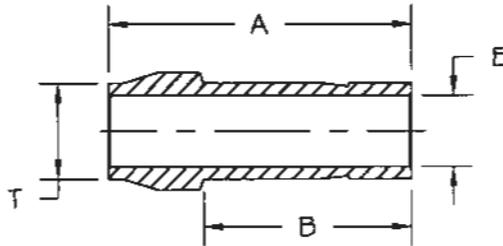
*NOTE: All dimensions subject to change, to be used for reference only.

Instrumentation



PORT CONNECTOR UNION

Tylok



Instrumentation

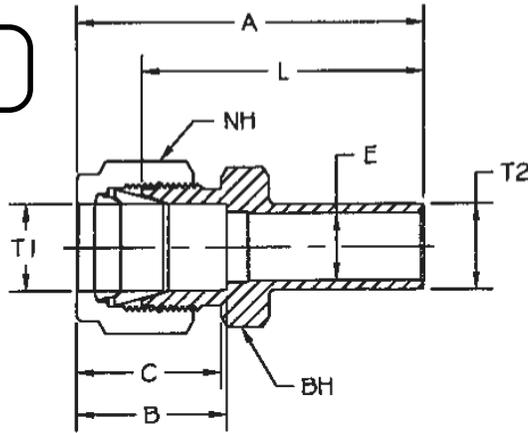
PART NUMBER	T TUBE O.D.	A	B	E THRU HOLE
1-DPCU-1	1/16	.547	.422	.031
2-DPCU-2	1/8	.875	.625	.094
4-DPCU-4	1/4	.969	.734	.187
5-DPCU-5	5/16	1.016	.797	.250
6-DPCU-6	3/8	1.031	.797	.297
8-DPCU-8	1/2	1.406	1.016	.391
12-DPCU-12	3/4	1.469	1.094	.594
16-DPCU-16	1	1.906	1.359	.812

*NOTE: All dimensions subject to change, to be used for reference only.



REDUCER ADAPTER TUBE TO TUBE

Tylok



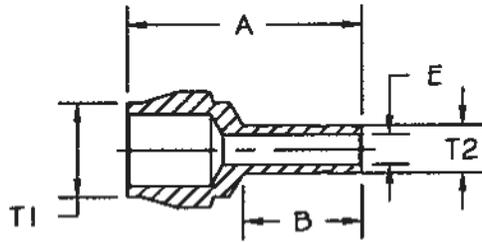
PART NUMBER	T1 TUBE O.D.	T2 TUBE O.D.	A	B	C	E THRU HOLE	L	NH NUT HEX	BH BODY HEX
1-DRATT-2	1/16	1/8	1.156	.344	.437	.052	1.000	5/16	5/16
1-DRATT-4	1/16	1/4	1.234	.344	.437	.052	1.094	5/16	5/16
2-DRATT-1	1/8	1/16	1.141	.500	.609	.031	.875	7/16	7/16
2-DRATT-2	1/8	1/8	1.328	.500	.609	.078	1.062	7/16	7/16
2-DRATT-3	1/8	3/16	1.359	.500	.609	.094	1.094	7/16	7/16
2-DRATT-4	1/8	1/4	1.422	.500	.609	.094	1.156	7/16	7/16
2-DRATT-6	1/8	3/8	1.484	.500	.609	.094	1.219	7/16	7/16
2-DRATT-8	1/8	1/2	1.734	.500	.609	.094	1.484	7/16	9/16
3-DRATT-2	3/16	1/8	1.375	.547	.625	.078	1.109	1/2	7/16
3-DRATT-4	3/16	1/4	1.469	.547	.625	.125	1.203	1/2	7/16
4-DRATT-2	1/4	1/8	1.453	.609	.703	.078	1.156	9/16	1/2
4-DRATT-4	1/4	1/4	1.547	.609	.703	.187	1.250	9/16	1/2
4-DRATT-5	1/4	5/16	1.578	.609	.703	.187	1.281	9/16	1/2
4-DRATT-6	1/4	3/8	1.609	.609	.703	.187	1.312	9/16	1/2
4-DRATT-8	1/4	1/2	1.828	.609	.703	.187	1.531	9/16	9/16
4-DRATT-10	1/4	5/8	1.891	.609	.703	.187	1.609	9/16	11/16
5-DRATT-6	5/16	3/8	1.656	.641	.734	.250	1.359	5/8	9/16
5-DRATT-8	5/16	1/2	1.875	.641	.734	.250	1.578	5/8	9/16
6-DRATT-6	3/8	3/8	1.703	.656	.766	.281	1.406	11/16	5/8
6-DRATT-10	3/8	5/8	1.984	.656	.766	.281	1.687	11/16	11/16
6-DRATT-12	3/8	3/4	1.984	.656	.766	.281	1.687	11/16	13/16
8-DRATT-4	1/2	1/4	1.766	.906	.859	.187	1.375	7/8	13/16
8-DRATT-6	1/2	3/8	1.844	.906	.859	.281	1.437	7/8	13/16
8-DRATT-8	1/2	1/2	2.062	.906	.859	.406	1.656	7/8	13/16
8-DRATT-10	1/2	5/8	2.125	.906	.859	.406	1.719	7/8	13/16
8-DRATT-12	1/2	3/4	2.125	.906	.859	.406	1.719	7/8	13/16
8-DRATT-16	1/2	1	2.375	.906	.859	.406	1.969	7/8	1-1/16
10-DRATT-12	5/8	3/4	2.156	.969	.859	.500	1.750	1	15/16
10-DRATT-14	5/8	7/8	2.219	.969	.859	.500	1.812	1	15/16
10-DRATT-16	5/8	1	2.406	.969	.859	.500	2.000	1	1-1/16
12-DRATT-8	3/4	1/2	2.156	.969	.859	.391	1.750	1-1/8	1-1/16
12-DRATT-16	3/4	1	2.469	.969	.859	.625	2.062	1-1/8	1-1/16

*NOTE: All dimensions subject to change, to be used for reference only.

Instrumentation

REDUCING PORT CONNECTOR

Tylok



Instrumentation

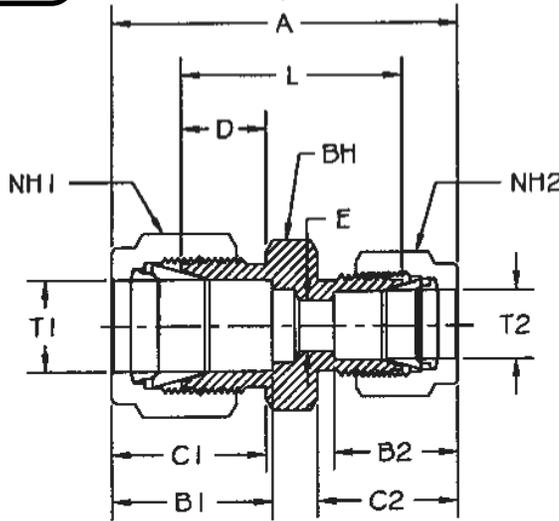
PART NUMBER	T1 TUBE O.D.	T2 TUBE O.D.	A	B	E THRU HOLE
2-DRPC-1	1/8	1/16	.687	.344	.031
4-DRPC-1	1/4	1/16	.719	.344	.031
4-DRPC-2	1/4	1/8	.891	.531	.094
6-DRPC-2	3/8	1/8	.906	.531	.094
6-DRPC-4	3/8	1/4	.984	.625	.187
8-DRPC-4	1/2	1/4	1.156	.625	.187
8-DRPC-6	1/2	3/8	1.203	.687	.281
12-DRPC-8	3/4	1/2	1.437	.906	.391

*NOTE: All dimensions subject to change, to be used for reference only.



Tylok

REDUCING UNION



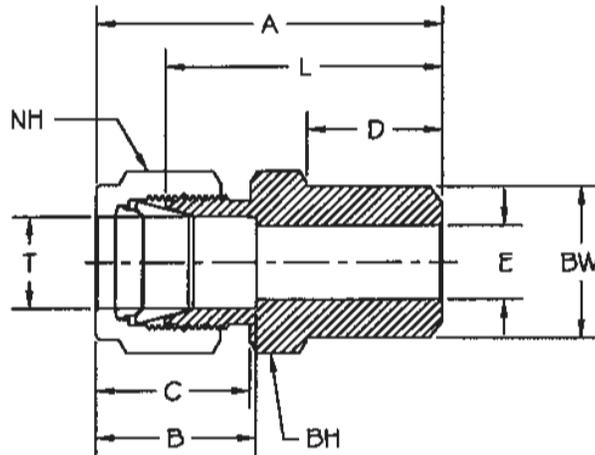
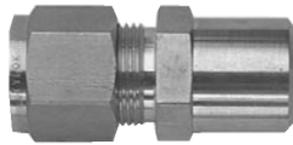
PART NUMBER	T1 TUBE O.D.	T2 TUBE O.D.	A	B1	B2	C1	C2	D	E THRU HOLE	L	NH1 NUT HEX	NH2 NUT HEX	BH BODY HEX
2-DRU-1	1/8	1/16	1.219	.500	.344	.609	.437	.343	.052	.812	7/16	5/16	7/16
3-DRU-1	3/16	1/16	1.266	.547	.344	.625	.437	.375	.052	.859	1/2	5/16	7/16
3-DRU-2	3/16	1/8	1.437	.547	.500	.625	.609	.375	.094	.922	1/2	7/16	7/16
4-DRU-2	1/4	1/8	1.516	.609	.500	.703	.609	.406	.094	.969	9/16	7/16	1/2
4-DRU-3	1/4	3/16	1.547	.609	.547	.703	.625	.406	.125	1.000	9/16	1/2	1/2
5-DRU-2	5/16	1/8	1.578	.641	.500	.734	.609	.437	.094	1.016	5/8	7/16	9/16
5-DRU-4	5/16	1/4	1.656	.641	.609	.734	.703	.437	.187	1.078	5/8	9/16	9/16
6-DRU-1	3/8	1/16	1.437	.656	.344	.765	.437	.468	.052	1.000	11/16	5/16	5/8
6-DRU-2	3/8	1/8	1.609	.656	.500	.765	.609	.468	.094	1.062	11/16	7/16	5/8
6-DRU-4	3/8	1/4	1.703	.656	.609	.765	.703	.468	.187	1.125	11/16	9/16	5/8
6-DRU-5	3/8	5/16	1.734	.656	.641	.765	.734	.468	.250	1.156	11/16	5/8	5/8
8-DRU-2	1/2	1/8	1.781	.906	.500	.859	.609	.468	.094	1.125	7/8	7/16	13/16
8-DRU-4	1/2	1/4	1.859	.906	.609	.859	.703	.468	.187	1.156	7/8	9/16	13/16
8-DRU-6	1/2	3/8	1.906	.906	.656	.859	.765	.468	.281	1.219	7/8	11/16	13/16
10-DRU-6	5/8	3/8	1.937	.969	.656	.859	.765	.468	.281	1.250	1	11/16	15/16
10-DRU-8	5/8	1/2	2.047	.969	.906	.859	.859	.468	.406	1.250	1	7/8	15/16
12-DRU-4	3/4	1/4	1.937	.969	.609	.859	.703	.468	.187	1.250	1-1/8	9/16	1-1/16
12-DRU-6	3/4	3/8	2.000	.969	.656	.859	.765	.468	.281	1.312	1-1/8	11/16	1-1/16
12-DRU-8	3/4	1/2	2.109	.969	.906	.859	.859	.468	.406	1.312	1-1/8	7/8	1-1/16
12-DRU-10	3/4	5/8	2.109	.969	.969	.859	.859	.468	.500	1.312	1-1/8	1	1-1/16
16-DRU-12	1	3/4	2.469	1.234	.969	1.047	.859	.562	.625	1.594	1-1/2	1-1/8	1-3/8

*NOTE: All dimensions subject to change, to be used for reference only.

Instrumentation

TUBE TO BUTT WELD CONNECTOR

Tylok



Instrumentation

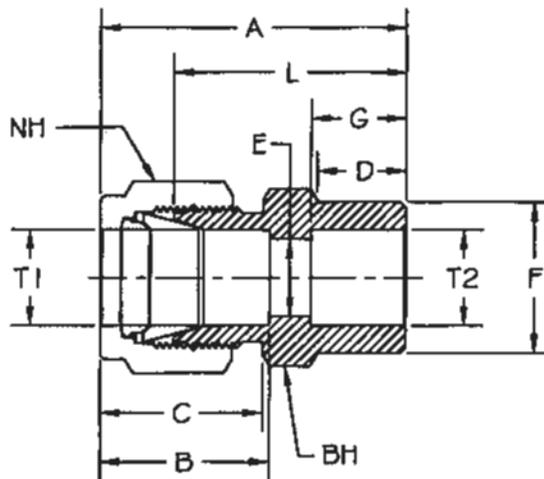
PART NUMBER	T TUBE O.D.	BW	A	B	C	D	E THRU HOLE	L	NH NUT HEX	BH BODY HEX
2-DTBW-2	1/8	.405	1.203	.500	.609	.375	.094	.937	7/16	7/16
3-DTBW-2	3/16	.405	1.234	.547	.625	.375	.125	.969	1/2	7/16
4-DTBW-2	1/4	.405	1.297	.609	.703	.375	.187	1.000	9/16	1/2
4-DTBW-4	1/4	.540	1.484	.609	.703	.562	.187	1.203	9/16	9/16
5-DTBW-4	5/16	.540	1.516	.641	.734	.562	.250	1.234	5/8	9/16
6-DTBW-4	3/8	.540	1.578	.656	.766	.562	.281	1.281	11/16	5/8
6-DTBW-6	3/8	.675	1.578	.656	.766	.562	.281	1.281	11/16	3/4
6-DTBW-8	3/8	.840	1.828	.656	.766	.750	.281	1.531	11/16	7/8
8-DTBW-6	1/2	.675	1.719	.906	.859	.562	.406	1.312	7/8	13/16
8-DTBW-8	1/2	.840	1.937	.906	.859	.750	.406	1.531	7/8	7/8
8-DTBW-12	1/2	1.050	1.984	.906	.859	.750	.406	1.594	7/8	1-1/16
10-DTBW-8	5/8	.840	1.937	.969	.859	.750	.500	1.531	1	15/16
12-DTBW-12	3/4	1.050	1.984	.969	.859	.750	.625	1.594	1-1/8	1-1/16
16-DTBW-16	1	1.315	2.453	1.234	1.047	.937	.875	1.969	1-1/2	1-3/8

*NOTE: All dimensions subject to change, to be used for reference only.



TUBE TO SOCKET WELD CONNECTOR

Tylok



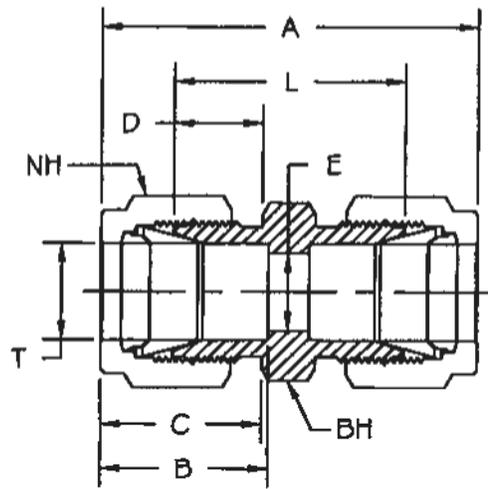
PART NUMBER	T1 TUBE O.D.	T2 TUBE O.D.	A	B	C	D	E THRU HOLE	F	G	L	NH NUT HEX	BH BODY HEX
2-DTSW-2	1/8	1/8	1.141	.500	.609	.344	.094	.312	.250	.875	7/16	7/16
3-DTSW-3	3/16	3/16	1.172	.547	.641	.375	.125	.422	.203	.906	1/2	7/16
4-DTSW-4	1/4	1/4	1.328	.609	.703	.406	.187	.437	.312	1.031	9/16	1/2
6-DTSW-6	3/8	3/8	1.484	.656	.766	.469	.281	.609	.375	1.187	11/16	5/8
8-DTSW-8	1/2	1/2	1.625	.906	.859	.469	.406	.750	.500	1.219	7/8	13/16
10-DTSW-10	5/8	5/8	1.656	.969	.859	.469	.500	.922	.500	1.250	1	15/16
12-DTSW-12	3/4	3/4	1.719	.969	.859	.469	.625	1.047	.562	1.312	1-1/8	1-1/16
16-DTSW-16	1	1	2.078	1.234	1.047	.562	.875	1.312	.750	1.594	1-1/2	1-3/8

*NOTE: All dimensions subject to change, to be used for reference only.

Instrumentation

UNION

Tylok



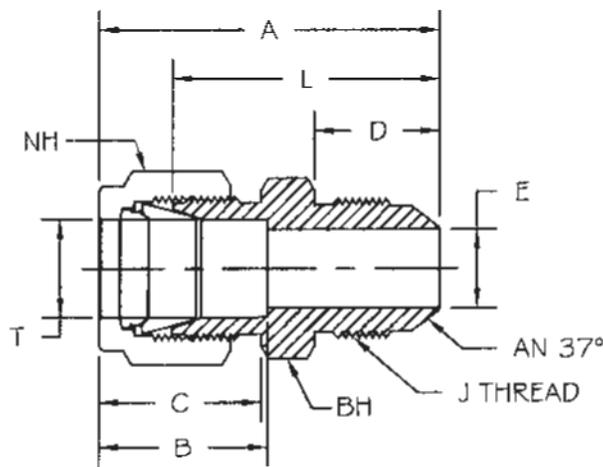
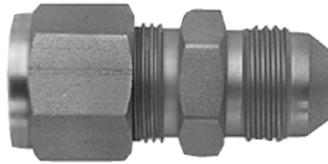
PART NUMBER	T TUBE O.D.	A	B	C	D	E THRU HOLE	L	NH NUT HEX	BH BODY HEX
1-DU-1	1/16	.984	.344	.437	.281	.052	.687	5/16	5/16
2-DU-2	1/8	1.406	.500	.609	.343	.094	.875	7/16	7/16
3-DU-3	3/16	1.469	.547	.625	.375	.125	.953	1/2	7/16
4-DU-4	1/4	1.609	.609	.703	.406	.187	1.031	9/16	1/2
5-DU-5	5/16	1.687	.641	.734	.437	.250	1.109	5/8	9/16
6-DU-6	3/8	1.766	.656	.766	.468	.281	1.187	11/16	5/8
8-DU-8	1/2	2.016	.906	.859	.468	.406	1.219	7/8	13/16
10-DU-10	5/8	2.047	.969	.859	.468	.500	1.250	1	15/16
12-DU-12	3/4	2.109	.969	.859	.468	.625	1.312	1-1/8	1-1/16
14-DU-14	7/8	2.187	1.016	.859	.468	.718	1.375	1-1/4	1-3/16
16-DU-16	1	2.547	1.234	1.047	.562	.875	1.594	1-1/2	1-3/8

*NOTE: All dimensions subject to change, to be used for reference only.



TUBE TO AN FLARE UNION

Tylok



Instrumentation

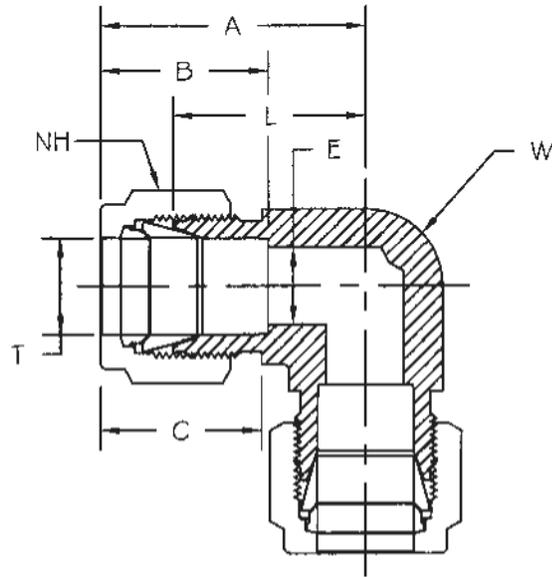
PART NUMBER	T TUBE O.D.	J THREAD	A	B	C	D	E THRU HOLE	L	NH NUT HEX	BH BODY HEX
2-DUANF-2	1/8	5/16-24	1.234	.500	.609	.448	.062	.984	7/16	7/16
2-DUANF-4	1/8	7/16-20	1.375	.500	.609	.550	.094	1.125	7/16	1/2
3-DUANF-3	3/16	3/8-24	1.328	.547	.641	.479	.125	1.062	1/2	7/16
4-DUANF-4	1/4	7/16-20	1.484	.609	.703	.550	.172	1.187	9/16	1/2
5-DUANF-5	5/16	1/2-20	1.516	.641	.734	.550	.234	1.219	5/8	9/16
6-DUANF-4	3/8	7/16-20	1.562	.656	.766	.550	.172	1.266	11/16	5/8
6-DUANF-6	3/8	9/16-18	1.562	.656	.766	.556	.297	1.266	11/16	5/8
8-DUANF-8	1/2	3/4-16	1.812	.906	.859	.657	.391	1.406	7/8	13/16
10-DUANF-10	5/8	7/8-14	1.937	.969	.875	.758	.484	1.531	1	15/16
12-DUANF-12	3/4	1-1/16-12	2.109	.969	.859	.864	.609	1.703	1-1/8	1-1/8
16-DUANF-16	1	1-5/16-12	2.422	1.234	1.047	.911	.844	1.937	1-1/2	1-3/8

*NOTE: All dimensions subject to change, to be used for reference only.



Tylok

UNION ELBOW



Instrumentation

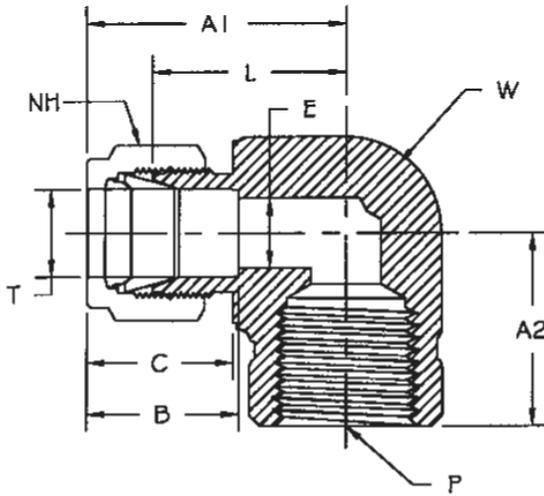
PART NUMBER	T TUBE O.D.	A	B	C	E THRU HOLE	L	NH NUT HEX	W WRENCH FLAT
1-DELU-1	1/16	.750	.344	.437	.052	.609	5/16	7/16
2-DELU-2	1/8	.875	.500	.609	.094	.625	7/16	3/8
3-DELU-3	3/16	1.000	.547	.625	.125	.734	1/2	1/2
4-DELU-4	1/4	1.062	.609	.703	.187	.766	9/16	1/2
5-DELU-5	5/16	1.125	.640	.734	.250	.844	5/8	9/16
6-DELU-6	3/8	1.203	.656	.766	.281	.906	11/16	5/8
8-DELU-8	1/2	1.421	.906	.859	.406	1.016	7/8	13/16
10-DELU-10	5/8	1.500	.969	.859	.500	1.109	1	15/16
12-DELU-12	3/4	1.578	.969	.859	.625	1.171	1-1/8	1-1/16
14-DELU-14	7/8	1.766	1.016	.859	.718	1.406	1-1/4	1-3/8
16-DELU-16	1	1.937	1.234	1.047	.875	1.438	1-1/2	1-3/8

*NOTE: All dimensions subject to change, to be used for reference only.



Tylok

FEMALE ELBOW



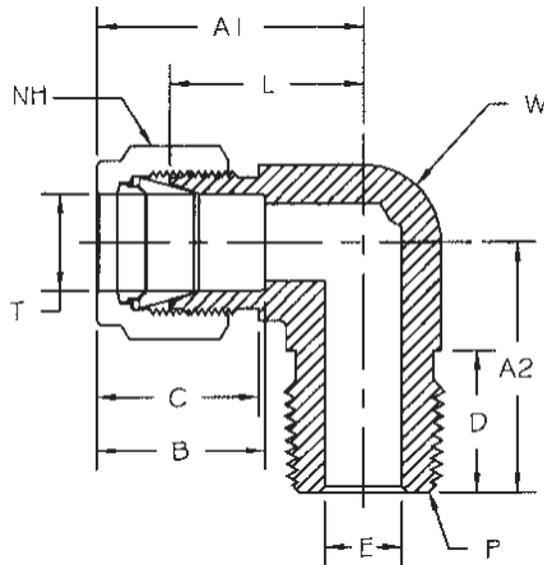
PART NUMBER	T TUBE O.D.	P PIPE END NPT	A1	A2	B	C	E THRU HOLE	L	NH NUT HEX	W WRENCH FLAT
1-DFE-2	1/16	1/8	.812	.750	.500	.609	.052	.687	5/16	1/2
2-DFE-2	1/8	1/8	.969	.750	.500	.609	.094	.719	7/16	1/2
2-DFE-4	1/8	1/4	1.078	.875	.500	.609	.094	.828	7/16	11/16
3-DFE-2	3/16	1/8	1.000	.750	.547	.625	.125	.734	1/2	1/2
4-DFE-2	1/4	1/8	1.062	.750	.609	.703	.187	.781	9/16	1/2
4-DFE-4	1/4	1/4	1.172	.875	.609	.703	.187	.875	9/16	11/16
4-DFE-6	1/4	3/8	1.250	.875	.609	.703	.187	.969	9/16	13/16
4-DFE-8	1/4	1/2	1.359	1.125	.609	.703	.187	1.078	9/16	1
5-DFE-2	5/16	1/8	1.125	.750	.640	.734	.250	.844	5/8	9/16
5-DFE-4	5/16	1/4	1.203	.875	.640	.734	.250	.906	5/8	11/16
6-DFE-2	3/8	1/8	1.203	.750	.656	.766	.281	.906	11/16	5/8
6-DFE-4	3/8	1/4	1.234	.875	.656	.766	.281	.937	11/16	11/16
6-DFE-6	3/8	3/8	1.312	.875	.656	.766	.281	1.016	11/16	13/16
6-DFE-8	3/8	1/2	1.429	1.125	.656	.766	.281	1.125	11/16	1
8-DFE-4	1/2	1/4	1.429	.875	.906	.859	.406	1.016	7/8	13/16
8-DFE-6	1/2	3/8	1.429	.875	.906	.859	.406	1.016	7/8	13/16
8-DFE-8	1/2	1/2	1.531	1.125	.906	.859	.406	1.125	7/8	1
10-DFE-6	5/8	3/8	1.500	.875	.969	.859	.500	1.109	1	15/16
10-DFE-8	5/8	1/2	1.578	1.125	.969	.859	.500	1.171	1	1-1/16
12-DFE-8	3/4	1/2	1.578	1.125	.969	.859	.625	1.171	1-1/8	1-1/16
12-DFE-12	3/4	3/4	1.766	1.250	.969	.859	.625	1.359	1-1/8	1-3/8
14-DFE-12	7/8	3/4	1.766	1.250	1.016	.859	.718	1.359	1-1/4	1-3/8
16-DFE-12	1	3/4	1.937	1.250	1.234	1.049	.875	1.453	1-1/2	1-3/8
16-DFE-16	1	1	1.984	1.500	1.234	1.049	.875	1.500	1-1/2	1-11/16

*NOTE: All dimensions subject to change, to be used for reference only.

Instrumentation

MALE ELBOW

Tylok



Instrumentation

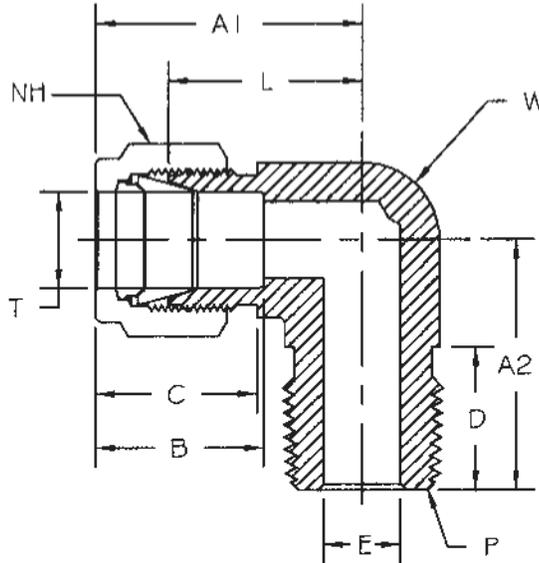
PART NUMBER	T TUBE O.D.	P PIPE END NPT	A1	A2	B	C	D	E THRU HOLE	L	NH NUT HEX	W WRENCH FLAT
1-DME-1	1/16	1/16	.703	.656	.344	.437	.375	.052	.547	5/16	3/8
1-DME-2	1/16	1/8	.750	.703	.344	.437	.375	.052	.609	5/16	7/16
2-DME-1	1/8	1/16	.937	.703	.500	.609	.375	.094	.672	7/16	7/16
2-DME-2	1/8	1/8	.937	.703	.500	.609	.375	.094	.672	7/16	7/16
2-DME-4	1/8	1/4	.969	.922	.500	.609	.562	.094	.719	7/16	1/2
2-DME-6	1/8	3/8	1.203	1.125	.500	.609	.562	.094	.812	7/16	13/16
3-DME-2	3/16	1/8	1.000	.734	.547	.625	.375	.125	.734	1/2	1/2
3-DME-4	3/16	1/4	1.000	.922	.547	.625	.562	.125	.734	1/2	1/2
4-DME-1	1/4	1/16	1.203	.703	.609	.703	.375	.156	.719	9/16	1/2
4-DME-2	1/4	1/8	1.062	.734	.609	.703	.375	.187	.766	9/16	1/2
4-DME-4	1/4	1/4	1.062	.922	.609	.703	.562	.187	.766	9/16	1/2
4-DME-6	1/4	3/8	1.172	1.031	.609	.703	.562	.187	.875	9/16	11/16
4-DME-8	1/4	1/2	1.250	1.297	.609	.703	.750	.187	.969	9/16	13/16
4-DME-12	1/4	3/4	1.546	1.500	.609	.703	.750	.187	1.093	9/16	1-1/16
5-DME-2	5/16	1/8	1.125	.781	.641	.734	.375	.187	.844	5/8	9/16
5-DME-4	5/16	1/4	1.125	.969	.641	.734	.562	.250	.844	5/8	9/16
5-DME-6	5/16	3/8	1.203	1.031	.641	.734	.562	.250	.906	5/8	11/16
6-DME-2	3/8	1/8	1.203	.812	.656	.766	.375	.187	.906	11/16	5/8
6-DME-4	3/8	1/4	1.203	1.000	.656	.766	.562	.281	.906	11/16	5/8
6-DME-6	3/8	3/8	1.234	1.031	.656	.766	.562	.281	.937	11/16	11/16

*NOTE: All dimensions subject to change, to be used for reference only.



MALE ELBOW

Tylok



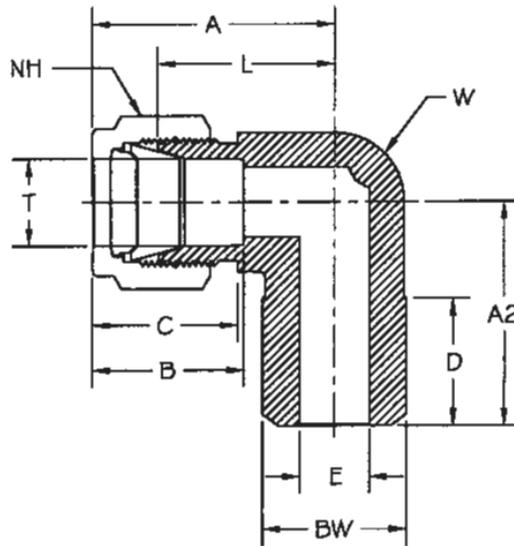
PART NUMBER	T TUBE O.D.	P PIPE END NPT	A1	A2	B	C	D	E THRU HOLE	L	NH NUT HEX	W WRENCH FLAT
6-DME-8	3/8	1/2	1.312	1.297	.656	.766	.750	.281	1.016	11/16	13/16
6-DME-12	3/8	3/4	1.469	1.453	.656	.766	.750	.281	1.172	11/16	1-1/16
8-DME-2	1/2	1/8	1.609	1.109	.906	.859	.375	.187	.969	7/8	13/16
8-DME-4	1/2	1/4	1.422	1.109	.906	.859	.562	.281	1.016	7/8	13/16
8-DME-6	1/2	3/8	1.422	1.109	.906	.859	.562	.375	1.016	7/8	13/16
8-DME-8	1/2	1/2	1.422	1.297	.906	.859	.750	.406	1.016	7/8	13/16
8-DME-12	1/2	3/4	1.578	1.453	.906	.859	.750	.406	1.172	7/8	1-1/16
10-DME-4	5/8	1/4	1.498	1.125	.969	.859	.562	.281	1.093	1	1
10-DME-6	5/8	3/8	1.500	1.187	.969	.859	.562	.375	1.109	1	15/16
10-DME-8	5/8	1/2	1.500	1.375	.969	.859	.750	.469	1.109	1	15/16
10-DME-12	5/8	3/4	1.578	1.453	.969	.859	.750	.500	1.172	1	1-1/16
10-DME-16	5/8	1	1.780	1.844	.969	.859	.937	.500	1.375	1	1-1/2
12-DME-4	3/4	1/4	1.576	1.250	.969	.859	.562	.281	1.375	1-1/4	1-1/16
12-DME-6	3/4	3/8	1.576	1.250	.969	.859	.562	.406	1.375	1-1/4	1-1/16
12-DME-8	3/4	1/2	1.561	1.453	.969	.859	.750	.469	1.172	1-1/8	1-1/16
12-DME-12	3/4	3/4	1.578	1.453	.969	.859	.750	.625	1.172	1-1/8	1-1/16
14-DME-12	7/8	3/4	1.766	1.641	1.016	.859	.750	.625	1.359	1-1/4	1-3/8
16-DME-4	1	1/4	1.935	1.375	1.234	1.047	.562	.281	1.531	1-1/2	1-1/2
16-DME-8	1	1/2	1.935	1.562	1.234	1.047	.750	.500	1.531	1-1/2	1-1/2
16-DME-12	1	3/4	1.937	1.641	1.234	1.047	.937	.625	1.453	1-1/2	1-3/8
16-DME-16	1	1	1.937	1.828	1.234	1.047	.937	.875	1.453	1-1/2	1-3/8

*NOTE: All dimensions subject to change, to be used for reference only.



TUBE TO BUTT WELD ELBOW

Tylok



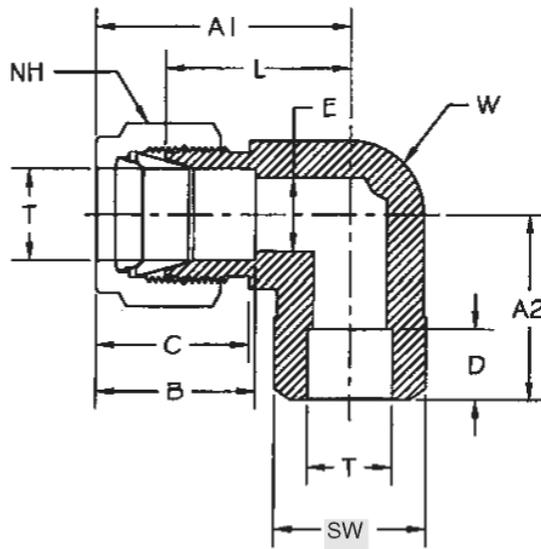
PART NUMBER	T TUBE O.D.	BW	A1	A2	B	C	D	E THRU HOLE	L	NH NUT HEX	W WRENCH FLAT
2-DTBWE-2	1/8	.405	.922	.719	.516	.609	.344	.094	.656	7/16	1/2
3-DTBWE-2	3/16	.405	1.016	.734	.547	.641	.375	.125	.734	1/2	1/2
4-DTBWE-2	1/4	.405	1.062	.734	.609	.703	.375	.187	.766	9/16	1/2
4-DTBWE-4	1/4	.540	1.062	.937	.609	.703	.562	.187	.766	9/16	1/2
6-DTBWE-4	3/8	.540	1.203	1.000	.656	.766	.562	.281	.906	11/16	5/8
8-DTBWE-6	1/2	.675	1.375	1.125	.906	.859	.562	.406	.969	7/8	13/16
8-DTBWE-8	1/2	.840	1.422	1.297	.906	.859	.750	.406	1.016	7/8	13/16
10-DTBWE-8	5/8	.840	1.437	1.312	.969	.859	.750	.500	1.031	1	7/8
12-DTBWE-12	3/4	1.050	1.578	1.453	.969	.859	.750	.625	1.172	1-1/8	1-1/16
16-DTBWE-12	1	1.050	1.937	1.625	1.234	1.047	.750	.875	1.453	1-1/2	1-5/16
16-DTBWE-16	1	1.315	1.937	1.844	1.234	1.047	.937	.875	1.453	1-1/2	1-5/16

*NOTE: All dimensions subject to change, to be used for reference only.



TUBE TO SOCKET WELD ELBOW

Tylok



Instrumentation

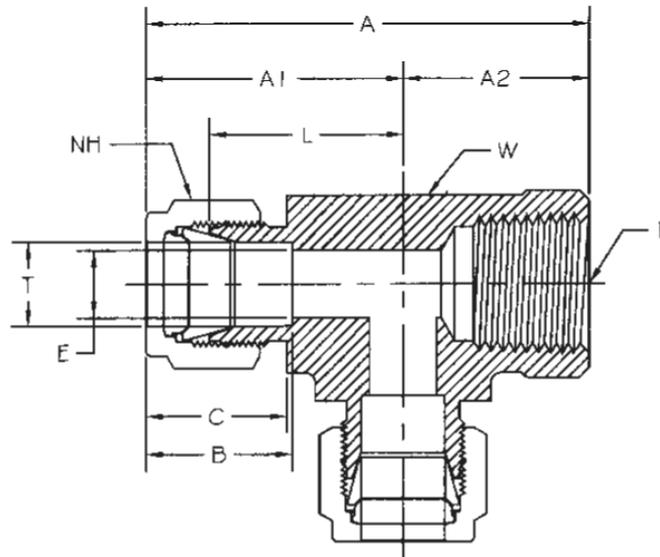
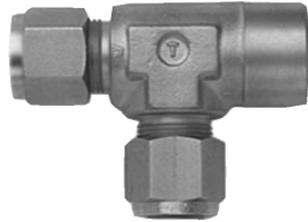
PART NUMBER	T TUBE O.D.	SW	A1	A2	B	C	D	E THRU HOLE	L	NH NUT HEX	W WRENCH FLAT
2-DTSWE-2	1/8	.375	.922	.625	.516	.609	.156	.094	.656	7/16	5/16
3-DTSWE-3	3/16	.437	.984	.687	.547	.641	.203	.125	.719	1/2	7/16
4-DTSWE-4	1/4	.500	1.062	.766	.609	.703	.312	.187	.766	9/16	1/2
6-DTSWE-6	3/8	.625	1.203	.906	.656	.766	.375	.281	.875	11/16	5/8
8-DTSWE-8	1/2	.812	1.422	1.016	.906	.859	.500	.406	1.016	7/8	13/16
10-DTSWE-10	5/8	.937	1.562	1.156	.969	.875	.500	.500	1.156	1	1-1/16
12-DTSWE-12	3/4	1.094	1.562	1.312	.969	.875	.500	.625	1.156	1-1/8	1-1/16
16-DTSWE-16	1	1.375	1.937	1.469	1.234	1.047	.562	.875	1.453	1-1/2	1-5/16

*NOTE: All dimensions subject to change, to be used for reference only.



FEMALE RUN TEE

Tylok



PART NUMBER	T TUBE O.D.	P PIPE END NPT	A	A1	A2	B	C	E THRU HOLE	L	NH NUT HEX	W WRENCH FLAT
2-DTFT-2	1/8	1/8	1.719	.969	.750	.500	.609	.094	.719	7/16	1/2
3-DTFT-2	3/16	1/8	1.766	1.016	.750	.547	.641	.125	.750	1/2	9/16
4-DTFT-2	1/4	1/8	1.812	1.078	.750	.609	.703	.187	.781	9/16	9/16
4-DTFT-4	1/4	1/4	2.047	1.172	.875	.609	.703	.187	.875	9/16	11/16
5-DTFT-2	5/16	1/8	1.922	1.172	.750	.641	.734	.250	.875	5/8	5/8
6-DTFT-4	3/8	1/4	2.109	1.234	.875	.656	.766	.281	.937	11/16	11/16
8-DTFT-4	1/2	1/4	2.562	1.437	1.125	.906	.875	.406	1.125	7/8	13/16
8-DTFT-6	1/2	3/8	2.297	1.422	.875	.906	.859	.406	1.016	7/8	13/16
8-DTFT-8	1/2	1/2	2.687	1.578	1.125	.906	.859	.406	1.172	7/8	1-1/16
10-DTFT-8	5/8	1/2	2.656	1.531	1.125	.969	.875	.500	1.125	1	1-1/16
12-DTFT-12	3/4	3/4	3.016	1.766	1.250	.969	.859	.625	1.359	1-1/8	1-3/8
14-DTFT-12	7/8	3/4	3.016	1.766	1.250	1.031	.875	.750	1.359	1-1/4	1-5/16
16-DTFT-12	1	3/4	3.187	1.937	1.250	1.234	1.047	.875	1.453	1-1/2	1-5/16
16-DTFT-16	1	1	3.516	2.016	1.500	1.234	1.047	.875	1.531	1-1/2	1-5/8

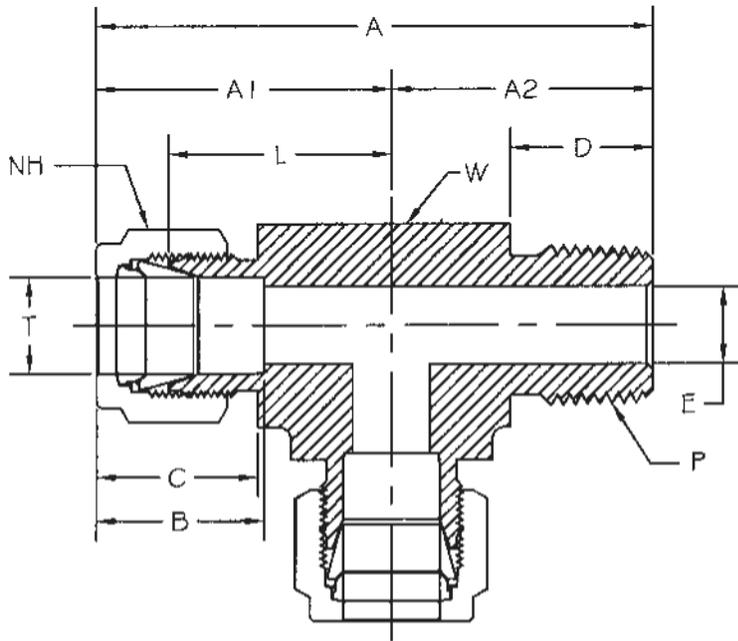
*NOTE: All dimensions subject to change, to be used for reference only.
*Both tube ends are typical.

Instrumentation



Tylok

MALE RUN TEE



PART NUMBER	T TUBE O.D.	P PIPE END NPT	A	A1	A2	B	C	D	E THRU HOLE	L	NH NUT HEX	W WRENCH FLAT
2-DTMT-2	1/8	1/8	1.625	.937	.703	.500	.609	.375	.094	.672	7/16	7/16
3-DTMT-2	3/16	1/8	1.656	.969	.703	.547	.625	.375	.125	.703	1/2	7/16
4-DTMT-2	1/4	1/8	1.797	1.062	.734	.609	.703	.375	.187	.766	9/16	1/2
4-DTMT-4	1/4	1/4	1.984	1.062	.922	.609	.703	.562	.187	.766	9/16	5/8
5-DTMT-2	5/16	1/8	1.984	1.172	.828	.641	.725	.375	.187	.875	5/8	5/8
6-DTMT-4	3/8	1/4	2.203	1.203	1.000	.656	.766	.562	.281	.906	11/16	5/8
6-DTMT-6	3/8	3/8	2.422	1.312	1.109	.656	.766	.562	.281	1.016	11/16	13/16
8-DTMT-6	1/2	3/8	2.531	1.422	1.109	.906	.859	.562	.406	1.016	7/8	13/16
8-DTMT-8	1/2	1/2	2.719	1.422	1.297	.906	.859	.750	.406	1.016	7/8	13/16
10-DTMT-8	5/8	1/2	2.875	1.500	1.375	.969	.859	.750	.469	1.109	1	15/16
12-DTMT-12	3/4	3/4	3.016	1.578	1.453	.969	.859	.750	.625	1.172	1-1/8	1-1/16
14-DTMT-12	7/8	3/4	3.266	1.766	1.500	1.031	.875	.750	.750	1.359	1-1/4	1-5/16
16-DTMT-12	1	3/4	3.609	1.937	1.656	1.234	1.047	.750	.875	1.453	1-1/2	1-5/16
16-DTMT-16	1	1	3.781	1.937	1.844	1.234	1.047	.937	.875	1.453	1-1/2	1-5/16

*NOTE: All dimensions subject to change, to be used for reference only.

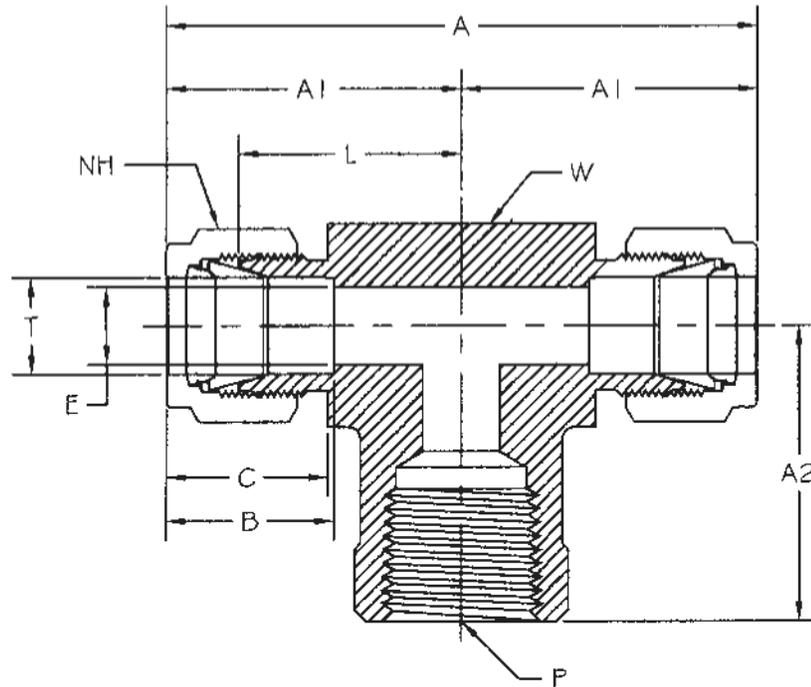
*Both tube ends are typical.

Instrumentation



Tylok

FEMALE BRANCH TEE



Instrumentation

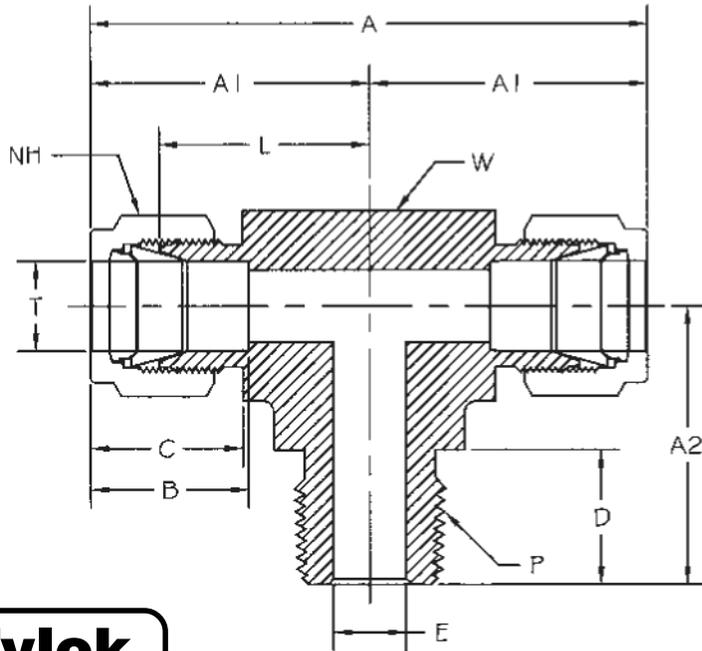
PART NUMBER	T TUBE O.D.	P PIPE END NPT	A	A1	A2	B	C	E THRU HOLE	L	NH NUT HEX	W WRENCH FLAT
2-DTTF-2	1/8	1/8	1.937	.969	.750	.500	.609	.094	.719	7/16	1/2
3-DTTF-2	3/16	1/8	2.016	1.016	.750	.547	.641	.125	.750	1/2	1/2
4-DTTF-2	1/4	1/8	2.125	1.062	.750	.609	.703	.187	.766	9/16	1/2
4-DTTF-4	1/4	1/4	2.344	1.172	.875	.609	.703	.187	.875	9/16	11/16
5-DTTF-2	5/16	1/8	2.344	1.172	.750	.641	.734	.250	.875	5/8	5/8
6-DTTF-4	3/8	1/4	2.469	1.234	.875	.656	.766	.281	.937	11/16	11/16
8-DTTF-4	1/2	1/4	2.844	1.422	.875	.906	.859	.406	1.016	7/8	13/16
8-DTTF-6	1/2	3/8	2.844	1.422	.875	.906	.859	.406	1.016	7/8	13/16
8-DTTF-8	1/2	1/2	3.062	1.531	1.125	.906	.859	.406	1.125	7/8	1
10-DTTF-8	5/8	1/2	3.062	1.531	1.125	.969	.859	.500	1.125	1	1
12-DTTF-12	3/4	3/4	3.516	1.766	1.250	.969	.859	.625	1.359	1-1/8	1-3/8
14-DTTF-12	7/8	3/4	3.016	1.766	1.250	1.031	.875	.750	1.359	1-1/4	1-5/16
16-DTTF-12	1	3/4	3.859	1.937	1.250	1.234	1.047	.875	1.453	1-1/2	1-3/8
16-DTTF-16	1	1	3.969	1.984	1.500	1.234	1.047	.875	1.500	1-1/2	1-11/16

*NOTE: All dimensions subject to change, to be used for reference only.

*Both tube ends are typical.



MALE BRANCH TEE



Tylok

PART NUMBER	T TUBE O.D.	P PIPE END NPT	A	A1	A2	B	C	D	E THRU HOLE	L	NH NUT HEX	W WRENCH FLAT
2-DTTM-2	1/8	1/8	1.859	.937	.703	.500	.609	.375	.094	.672	7/16	7/16
2-DTTM-4	1/8	1/4	1.937	.969	.922	.500	.609	.562	.094	.719	7/16	1/2
3-DTTM-2	3/16	1/8	1.922	.969	.703	.547	.625	.375	.125	.703	1/2	7/16
4-DTTM-2	1/4	1/8	2.125	1.062	.734	.609	.703	.375	.187	.765	9/16	1/2
4-DTTM-4	1/4	1/4	2.125	1.062	.922	.609	.703	.562	.187	.765	9/16	1/2
5-DTTM-2	5/16	1/8	2.344	1.172	.828	.641	.725	.375	.187	.875	5/8	5/8
6-DTTM-4	3/8	1/4	2.406	1.203	1.000	.656	.765	.562	.281	.906	11/16	5/8
6-DTTM-6	3/8	3/8	2.625	1.312	1.109	.656	.765	.562	.281	1.016	11/16	13/16
8-DTTM-6	1/2	3/8	2.844	1.422	1.109	.906	.859	.562	.375	1.016	7/8	13/16
8-DTTM-8	1/2	1/2	2.844	1.422	1.297	.906	.859	.750	.406	1.016	7/8	13/16
10-DTTM-8	5/8	1/2	3.062	1.531	1.406	.969	.859	.750	.469	1.125	1	1
12-DTTM-12	3/4	3/4	3.141	1.172	1.453	.969	.859	.750	.625	1.172	1-1/8	1-1/16
14-DTTM-12	7/8	3/4	3.516	1.766	1.500	1.031	.875	.750	.750	1.359	1-1/4	1-3/8
16-DTTM-12	1	3/4	3.875	1.937	1.656	1.234	1.047	.750	.875	1.453	1-1/2	1-1/2
16-DTTM-16	1	1	3.875	1.937	1.656	1.234	1.047	.937	.875	1.453	1-1/2	1-5/16

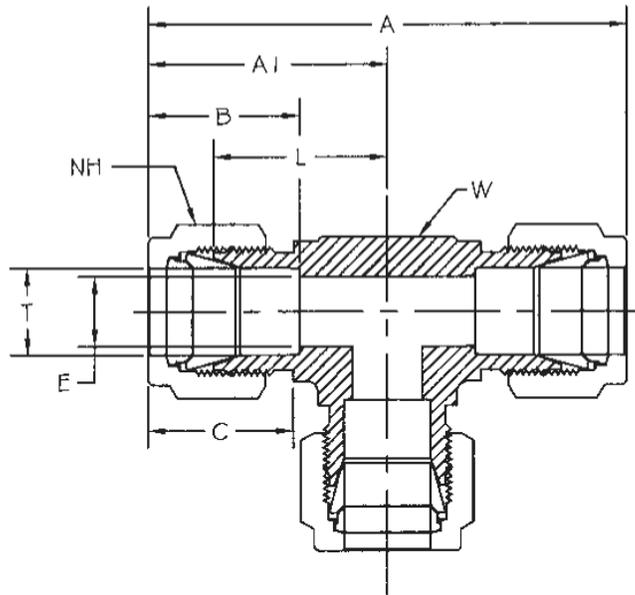
*NOTE: All dimensions subject to change, to be used for reference only.

*Both tube ends are typical.

Instrumentation

UNION TEE

Tylok



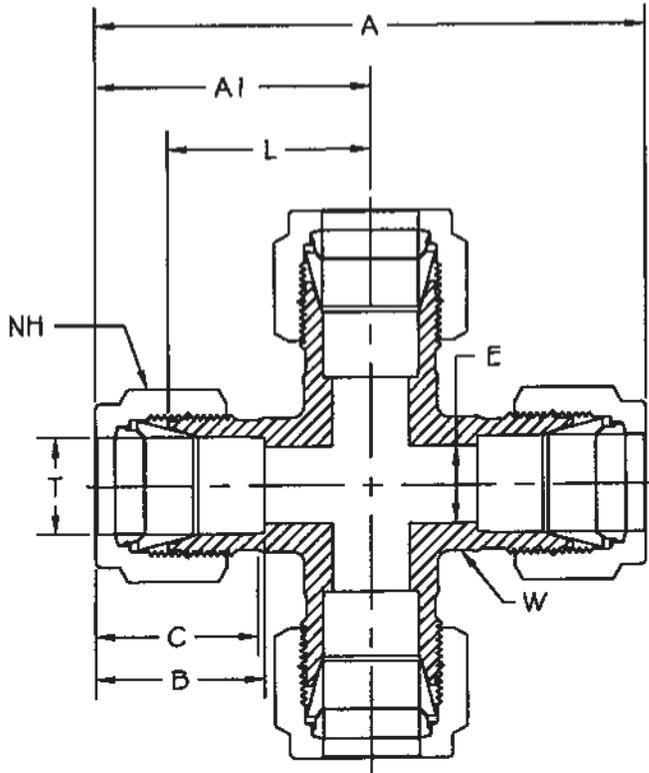
PART NUMBER	T TUBE O.D.	A	A1	B	C	E THRU HOLE	L	NH NUT HEX	W WRENCH FLAT
1-DTTT-1	1/16	1.406	.703	.344	.437	.052	.547	5/16	3/8
2-DTTT-2	1/8	1.766	.875	.500	.609	.094	.625	7/16	3/8
3-DTTT-3	3/16	1.922	.969	.547	.625	.125	.703	1/2	7/16
4-DTTT-4	1/4	2.125	1.062	.609	.703	.187	.766	9/16	1/2
5-DTTT-5	5/16	2.344	1.172	.641	.734	.250	.875	5/8	5/8
6-DTTT-6	3/8	2.406	1.203	.656	.766	.281	.906	11/16	5/8
8-DTTT-8	1/2	2.844	1.422	.906	.859	.406	1.016	7/8	13/16
10-DTTT-10	5/8	3.062	1.531	.969	.859	.500	1.125	1	1
12-DTTT-12	3/4	3.141	1.578	.969	.859	.625	1.172	1-1/8	1-1/16
14-DTTT-14	7/8	3.516	1.766	1.016	.859	.718	1.359	1-1/4	1-3/8
16-DTTT-16	1	3.859	1.937	1.234	1.047	.875	1.453	1-1/2	1-3/8

*NOTE: All dimensions subject to change, to be used for reference only.

*All tube ends are typical.



UNION CROSS



Tylok

Instrumentation

PART NUMBER	T TUBE O.D.	A	A1	B	C	E THRU HOLE	L	NH NUT HEX	W WRENCH FLAT
2-DCR	1/8	1.766	.875	.500	.609	.094	.625	7/16	3/8
4-DCR	1/4	2.125	1.062	.609	.703	.187	.766	9/16	1/2
5-DCR	5/16	2.344	1.172	.641	.734	.250	.875	5/8	5/8
6-DCR	3/8	2.406	1.203	.656	.766	.281	.906	11/16	5/8
8-DCR	1/2	2.844	1.422	.906	.859	.406	1.016	7/8	13/16
12-DCR	3/4	3.016	1.516	.969	.859	.625	1.109	1-1/8	1-1/16
16-DCR	1	3.687	1.844	1.234	1.047	.875	1.359	1-1/2	1-3/8

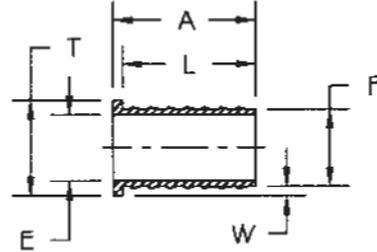
*NOTE: All dimensions subject to change, to be used for reference only.

*All tube ends are typical.



BARBED INSERT

Tylok



Instrumentation

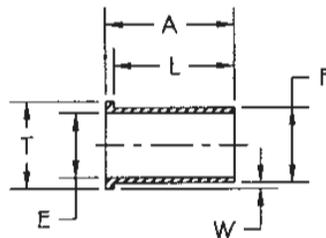
PART NUMBER	T TUBE O.D.	W REF.	A	E THRU HOLE	F TUBE I.D.	L
3-DBI-031	3/16	.031	.566	.062	1/8	.518
4-DBI-022	1/4	.022	.566	.141	13/64	.518
4-DBI-031	1/4	.031	.566	.125	3/16	.518
4-DBI-040	1/4	.040	.566	.109	11/64	.518
4-DBI-062	1/4	.062	.566	.062	1/8	.518
5-DBI-031	5/16	.031	.566	.187	1/4	.518
5-DBI-062	5/16	.062	.566	.125	3/16	.518
5-DBI-094	5/16	.094	.566	.062	1/8	.518
5-DBI-103	5/16	.103	.566	.045	7/64	.518
6-DBI-049	3/8	.049	.566	.218	9/32	.518
6-DBI-062	3/8	.062	.566	.187	1/4	.518
6-DBI-094	3/8	.094	.566	.125	3/16	.518
6-DBI-159	3/8	.159	.566	.032	1/16	.518
8-DBI-035	1/2	.035	.750	.375	7/16	.702
8-DBI-049	1/2	.049	.750	.344	13/32	.702
8-DBI-062	1/2	.062	.750	.312	3/8	.702
8-DBI-125	1/2	.125	.750	.187	1/4	.702
10-DBI-049	5/8	.049	.750	.469	17/32	.702
10-DBI-062	5/8	.062	.750	.437	1/2	.702
10-DBI-125	5/8	.125	.750	.312	3/8	.702
10-DBI-187	5/8	.187	.750	.187	1/4	.702
12-DBI-049	3/4	.049	.750	.562	21/32	.702
12-DBI-062	3/4	.062	.750	.562	5/8	.702
12-DBI-125	3/4	.125	.750	.437	1/2	.702
14-DBI-049	7/8	.049	1.031	.687	25/32	.938
14-DBI-062	7/8	.062	1.031	.687	3/4	.938
14-DBI-125	7/8	.125	1.031	.562	5/8	.938
16-DBI-062	1	.062	1.031	.812	7/8	.938
16-DBI-125	1	.125	1.031	.687	3/4	.938

*NOTE: All dimensions subject to change, to be used for reference only.



PLANE INSERT

Tylok



PART NUMBER	T TUBE O.D.	W REF.	A	E THRU HOLE	F TUBE I.D.	L
3-DPI-031	3/16	.031	.566	.062	1/8	.518
4-DPI-022	1/4	.022	.566	.140	13/64	.518
4-DPI-031	1/4	.031	.566	.125	3/16	.518
4-DPI-040	1/4	.040	.566	.109	11/64	.518
5-DPI-031	5/16	.031	.566	.187	1/4	.518
5-DPI-062	5/16	.062	.566	.125	3/16	.518
5-DPI-094	5/16	.094	.566	.062	1/8	.518
6-DPI-049	3/8	.049	.566	.218	9/32	.518
6-DPI-062	3/8	.062	.566	.187	1/4	.518
6-DPI-094	3/8	.094	.566	.125	3/16	.518
8-DPI-035	1/2	.035	.750	.375	7/16	.702
8-DPI-049	1/2	.049	.750	.344	13/32	.702
8-DPI-062	1/2	.062	.750	.312	3/8	.702
8-DPI-125	1/2	.125	.750	.187	1/4	.702
10-DPI-049	5/8	.049	.750	.469	17/32	.702
10-DPI-062	5/8	.062	.750	.437	1/2	.702
10-DPI-125	5/8	.125	.750	.312	3/8	.702
12-DPI-049	3/4	.049	.750	.562	21/32	.702
12-DPI-062	3/4	.062	.750	.562	5/8	.702
12-DPI-125	3/4	.125	.750	.437	1/2	.702
14-DPI-049	7/8	.049	1.000	.687	25/32	.952
14-DPI-062	7/8	.062	1.000	.687	3/4	.952
14-DPI-125	7/8	.125	1.000	.562	5/8	.952
16-DPI-050	1	.050	1.000	.843	57/64	.952
16-DPI-062	1	.062	1.000	.812	7/8	.952
16-DPI-125	1	.125	1.000	.687	3/4	.952

*NOTE: All dimensions subject to change, to be used for reference only.

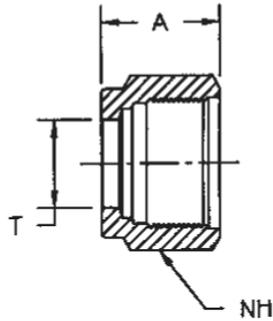
Instrumentation

Tylok

NUT



NUT



PART NUMBER	T TUBE O.D.	A	NH NUT HEX
DN-1	1/16	.312	5/16
DN-2	1/8	.469	7/16
DN-3	3/16	.469	1/2
DN-4	1/4	.500	9/16
DN-5	5/16	.531	5/8
DN-6	3/8	.562	11/16
DN-8	1/2	.687	7/8
DN-10	5/8	.687	1
DN-12	3/4	.687	1-1/8
DN-14	7/8	.687	1-1/4
DN-16	1	.812	1-1/2

*NOTE: All dimensions subject to change, to be used for reference only.

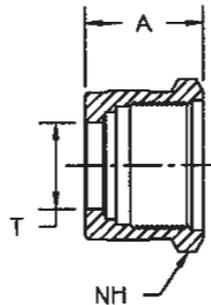
Instrumentation

Tylok

KNURLED NUT



KNURLED NUT

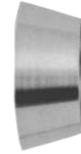
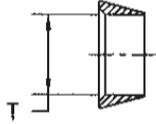


Knurled nuts are available in the same sizes as shown for CBC-LOK™ nuts (DN). The knurled nut part descriptor is DKN. For example, the part number for a 1/2" knurled nut is SS-DKN-8.



Tylok

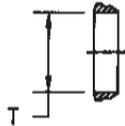
FRONT COLLET



PART NUMBER	T TUBE O.D.
DFC-1	1/16
DFC-2	1/8
DFC-3	3/16
DFC-4	1/4
DFC-5	5/16
DFC-6	3/8
DFC-8	1/2
DFC-10	5/8
DFC-12	3/4
DFC-14	7/8
DFC-16	1

REAR COLLET

Tylok



PART NUMBER	T TUBE O.D.
DRC-1	1/16
DRC-2	1/8
DRC-3	3/16
DRC-4	1/4
DRC-5	5/16
DRC-6	3/8
DRC-8	1/2
DRC-10	5/8
DRC-12	3/4
DRC-14	7/8
DRC-16	1

**NOTE: All dimensions subject to change, to be used for reference only.*

Instrumentation

INSTRUMENT TEE

The Instrument Tee may be ordered with any standard tube or pipe size. When ordering, specify sizes in the following order:

1. Tube Size O.D
2. Female Pipe Size
3. Male Pipe Size

Example: 1/2" tube, 3/8" female pipe, 1/4" male pipe.
SS-8-DTFM-6-4



HEAT EXCHANGER TEE

The Heat Exchanger Tee may be ordered in any standard tube size. The process tube is bored through. When ordering, specify sizes in the following order:

1. Jacket Tube O.D
2. Process Tube O.D. followed by "BT" for bore through designation
3. Branch Tube O.D.

Example: 1/2" tube, 1/4" tube bored through, 1/2" tube.
SS-8-DTTT-4BT-8



**THERMOCOUPLE
BORE THROUGH**

A Thermocouple Connector can be furnished already bored through for an additional charge. When ordering:

1. Select required size male connector. See pages 14 and 15 for a listing of available Male Connectors.
2. Add the letters "BT" to designate bore through.
Example: 4-DMC-2-BT



TYLUBE™ THREAD LUBRICANT

Tylube™ is an anti-gall compound to be used on stainless steel, steel and nickel based alloys. Temperature range to 500°F. Not recommended for plastic and aluminum products.

Tylube™ is made from distilled water with inert ingredients and contains no silicones, heavy metals, chlorine or sulfur. For a complete list of ingredients request an MSDS to be sure of its compatibility with your installation.

Available in handy 8 oz. plastic bottles.



Tylok



CBC-LOK™ INSTALLATION INSTRUCTIONS

CBC-Lok™ Tube Fittings come completely assembled and ready for use, no disassembly required. Although there are some general guide lines to follow no special preparation of the tubing is necessary, reference page 44. In overhead applications Tylok recommends using a Pre-Set Tool, see page 47.

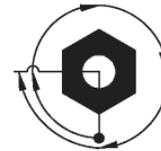
Size		Tighten # Turn(s)
1	1/16"	3/4
2	1/8"	
3	3/16"	
4	1/4"	1-1/4
5	5/16"	
6	3/8"	
8	1/2"	
10	5/8"	
12	3/4"	
14	7/8"	
16	1"	

Size #1 Thru #3
(1/16" – 3/16")

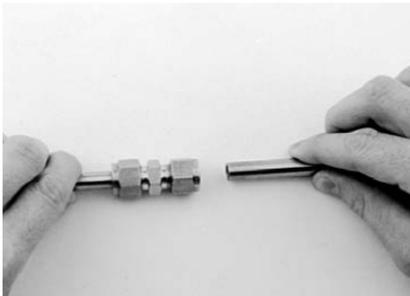


Finger Tight Plus
3/4 Turn

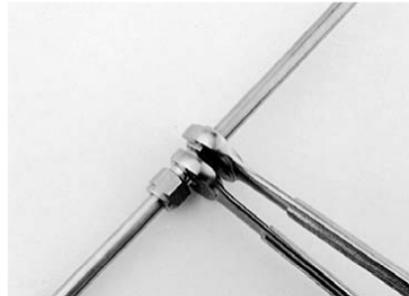
Size #4 Thru #16
(1/4" – 1")



Finger Tight Plus
1-1/4 Turns



Simply insert the tubing into the assembly making sure the tubing seats firmly against the shoulder of the body and the nut is finger tight.

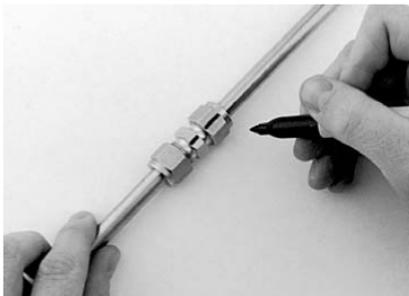


Tighten nut with wrench an additional number of turns indicated above, while holding the fitting body with a second wrench.

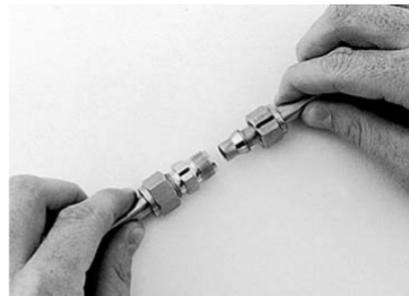


TO REMOVE TUBE AND RE-CONNECT TUBE FITTING

Mark the location of the nut with reference to the body before disassembly. For reassembly, re-insert the tubing into the body until it is seated. With proper size wrench, retighten nut to original location by realigning previous marks. A noticeable amount of torque will develop when the nut is turned to original position. Next, rotate the nut slightly past original position to fully re-set the seal.



Mark the location of the nut with reference to the body.



Back off the nut until it is clear of the body and remove the tubing from the fitting.

Instrumentation

CBC-LOK™ TUBING SELECTION & PREPARATION

Proper selection of tubing is key to the performance of the fitting. When selecting the proper wall thickness and material, all tubing should be compatible with the process fluid, temperature, application, flow and system pressure.

For proper sealing it is recommended that the tubing and fitting be of like material to allow for positive sealing (i.e., stainless on stainless, brass on copper, steel on steel). Galvanic corrosion could occur if the tubing and fitting are not of like material, with the exception of a brass fitting on copper tubing.

When using stainless steel tubing, Tylok recommends using Type 304 or 316 fully annealed, seamless or welded redrawn meeting ASTM-A-213, ASTM-A-269 or equivalent, with a suggested maximum hardness of 80 Rb.

For copper tubing, Tylok suggests using soft annealed, seamless tubing per ASTM-B75 or equivalent. Copper water tube type K or L, soft annealed (Temper O) per ASTM-B88 can also be used.

When using carbon steel, all tubing should be fully annealed and conform to ASTM-A-179, or equivalent, with a maximum hardness of 72 Rb.

In general, all tubing should be free of nicks, scratches, imperfections of any kind and be suitable for bending. Out of round tubing that does not easily go through fitting components should not be used. It is recommended that the charts be used for tube selection. Ideally, the tube end should be cut square so that when it bottoms out inside the fitting an extra seal is provided. Avoid installing contaminated tubing into your system. For elevated temperatures see page 46.

CBC-Lok™ Tube Fittings swage the tubing to achieve its seals. Thin wall tubing (wall thicknesses with working pressures highlighted in reverse text, in the charts) is not recommended for Gas Service. For Gas Service see page 45.

When using tubing of a thinner or thicker wall than shown, it is always recommended that you consult with your local Distributor or contact Tylok International directly if there is any doubt selecting tubing.

Values in reverse text are not recommended for Gas Service.

Note: Tables calculated, to the right, are suggested pressure ratings, in accordance with ANSI 31.3, but should be used for reference only. Tylok International, Inc., is not responsible for its accuracy nor designs using these figures. All compatible Tylok fittings will withstand pressures above those listed for maximum tubing working pressures.

It is the responsibility of the Engineer to refer to the technical pages in this catalog to ensure selection of the proper tubing material, tubing compatibility with the fitting, media and tubing wall thickness. Following the stated recommendations will ensure a safe application, free of leaks. The entire system must be considered when selecting the fitting.

SUGGESTED ALLOWABLE WORKING PRESSURE TABLES (PSI)

Stainless Steel								
Tube Size O.D.	Tube Wall Thickness (inches)							
	.028	.035	.049	.065	.083	.095	.109	.120
1/8"	8550	10900						
3/16"	5500	7000	10250					
1/4"	4000	5100	7500	10200				
5/16"		4050	5900	8050				
3/8"		3300	4800	6550				
1/2"		2500	3500	4700	6250			
5/8"			2900	4000	5200	6050		
3/4"			2400	3300	4250	4950	5800	
7/8"			2050	2800	3600	4200	4850	
1"				2400	3150	3650	4200	4700

75,000 PSI Tensile

Carbon Steel								
Tube Size O.D.	Tube Wall Thickness (inches)							
	.028	.035	.049	.065	.083	.095	.109	.120
1/8"	8100	10200						
3/16"	5150	6650	9700					
1/4"	3750	4850	7100	10000				
5/16"		3750	5500	7600				
3/8"		3100	4500	6200				
1/2"		2300	3250	4500	5950			
5/8"			2600	3500	4600	5350		
3/4"			2150	2900	3750	4350	5100	
7/8"			1800	2450	3200	3700	4300	
1"				2100	2750	3200	3700	4100

47,000 PSI Tensile

Copper								
Tube Size O.D.	Tube Wall Thickness (inches)							
	.028	.035	.049	.065	.083	.095	.109	.120
1/8"	2750	3700						
3/16"	1700	2300	3500					
1/4"	1300	1650	2550	3550				
5/16"		1300	1950	2750				
3/8"		1050	1600	2250				
1/2"		800	1150	1600	2100			
5/8"			900	1250	1650	1950		
3/4"			750	1000	1350	1550	1850	
7/8"			600	850	1100	1300	1550	
1"			550	750	950	1150	1350	1500

30,000 PSI Tensile



GAS SERVICE

Extra care must be taken when tubing is used in gas service applications. Small gas molecules easily escape through minute leak paths, therefore, the tubing must be free of nicks, scratches and imperfections of any kind. In particular, when using large diameter tubing the possibility of surface defects is increased due to greater surface area. It is strongly recommended that the heavier wall thicknesses be selected. Penetration of the collets on thin wall tubing or soft material may not offer enough radial resistance for sealing. In such cases, Tylok recommends using a Plane Insert (Part descriptor DPI, page 39). In the tables on page 44 note the suggested allowable working pressure for gas service. **Values in reverse text are not recommended for Gas Service.**

PRECAUTIONS FOR WELD ENDS

CBC-Lok™ Tube Fittings with weld ends offer the same positive sealing as all other Tylok fittings. Welding could deform the assembly, making pull ups or disassembly difficult. Some precautions should be taken...

- Remove the nut and collets from the fitting
- It is important that the fitting threads and sealing surfaces be protected from weld splatter
- A heat sink should be used to dissipate heat
- Ensure alignment by tack welding symmetrically
- Once welded, remove the weld splatter protection and reassemble nut and collets on fitting

TYSKY LEAK DETECTOR

Tylok offers a leak detector, Tyspy, for use in all sealing applications. Tyspy meets standard MIL-L-25567D, Sect. 4.4.9 for use on oxygen systems. Available in 1 pt. spray bottles. Specify number of bottles needed when ordering. Part Number: TYSPY

- All temperature formula: -55°F to 200°F
- Ultra-sensitive
- Long-lasting bubbles
- Available in handy spray bottle
- Fluorescent for improved visibility
- Safe for oxygen systems
- Non-corrosive, non-toxic

GAP GAGES

Gap Gages can be purchased to ensure the Installer and Inspector that the nut has been properly tightened. Available upon request.

Part Number	Tube Size	Part Number	Tube Size
#1-DGG	1/16"	#8-DGG	1/2"
#2-DGG	1/8"	#10-DGG	5/8"
#3-DGG	3/16"	#12-DGG	3/4"
#4-DGG	1/4"	#14-DGG	7/8"
#5-DGG	5/16"	#16-DGG	1"
#6-DGG	3/8"		



When fitting is properly tightened, **gap gage should not fit** between nut and shoulder of body.

SAFETY GUIDELINES

- Never connect, disconnect or remake a fitting with pressure in the system
- Make sure all fittings are properly installed, reference Installation Instructions - page 43, before pressurizing the system
- Tubing material should be softer than fitting material
- Tylok recommends using Tylok replacement parts
- Although the fittings will hold to the pressure rating of the tubing, it is not recommended to go beyond this rating. Elongation could occur in the tubing, shrinking the wall thickness and causing potential harm to anyone in the area
- Always use proper thread lubricants and sealants on tapered pipe threads
- If process fluids are toxic and/or hazardous, exercise extra caution
- Never bleed a system by loosening a fitting
- For proper sealing it is recommended that the tubing and fitting be of like material

QUALITY CONTROL

All components are manufactured and inspected to meet strict quality control standards in each phase of production. All employees are thoroughly trained to follow rigid procedures, in accordance with the ISO 9001:2000 Quality Standard, to ensure a quality product from the start of each job through completion. At Tylok our primary concern is quality, reliability and service to our customers.



Instrumentation

PIPE THREAD SPECIFICATIONS

Tylok Pipe Fittings are manufactured from materials meeting applicable ASTM or ASME specifications, with pipe threads which meet or exceed ANSI B1.20.1 requirements. Strict quality control procedures are followed throughout production. All parts are individually inspected to provide the finest possible product.

Materials: Brass ■ Steel ■ 316 Stainless Steel

Suggested Maximum Operating Pressures for Male Pipe Threads

MNPT Size	316 Stainless Steel PSI Rating	Brass PSI Rating	Steel PSI Rating
1/16"	10,100	5,700	10,500
1/8"	9,200	5,300	9,800
1/4"	7,500	4,100	8,000
3/8"	7,250	4,000	7,700
1/2"	6,900	3,900	7,300
3/4"	6,600	3,700	7,000
1"	5,000	2,700	5,000



Suggested Maximum Operating Pressures for Female Pipe Threads

FNPT Size	316 Stainless Steel PSI Rating	Brass PSI Rating	Steel PSI Rating
1/16"	6,200	3,500	6,800
1/8"	6,000	3,400	6,600
1/4"	6,100	3,300	6,500
3/8"	5,000	2,700	5,400
1/2"	4,700	2,500	4,800
3/4"	4,300	2,400	4,600
1"	4,100	2,300	4,500

These charts are to be used as a guide only and are based on normal wall thicknesses, used for the various sizes. These ratings may vary widely from effects such as the proper use of sealants, size of stock, temperature, corrosion factors, etc. Therefore, Tylok International, Inc., assumes no responsibility for its accuracy in any individual design.

TEMPERATURE RATINGS

Tylok Instrumentation Fittings are rated at the following temperatures:

316 Stainless -325°F to 1200°F Brass -40°F to 400°F Steel¹ -65°F to 400°F
 (-198°C to 648°C) (-40°C to 204°C) (-54°C to 204°C)

Note: Consideration should be given to maximum temperature ratings if fittings and/or tubing are coated or plated.

¹Special attention should be considered when selecting coated and/or plated materials such as Steel.

TUBE PRESSURE DERATING FACTORS AT ELEVATED TEMPERATURES

The following table lists derating factors that must be considered in applications above that of ambient temperatures.

Temperatures		Multiplier Factors			
°F	°C	304 SS	316 SS	Carbon Steel	Brass
200	93	1.00	1.00	.95	.80
400	204	.94	.97	.86	.50
600	315	.82	.85	.77	
800	427	.76	.80	.59	
1000	538	.69	.77		
1200	649	.30	.37		

Example

Type 316 Stainless Steel 1/4" O.D. x .049" wall at 800°F is...

7,500 PSI x .80 = 6,000 PSI

Therefore, the suggested allowable working pressure for 316 Stainless Steel - 1/4" O.D. with .049" tube wall - at 800°F is 6,000 PSI.

These charts are to be used as a guide only and are based on normal wall thicknesses, used for the various sizes. These ratings may vary widely from effects such as the proper use of sealants, size of stock, temperature, corrosion factors, etc. Therefore, Tylok International, Inc., assumes no responsibility for its accuracy in any individual design.

Instrumentation



HEAT TRACEABILITY

CBC-LOK™ Tube Fittings are completely heat code traceable back to the original mill heat from which it was made. Starting with the original billet, the mill creates a certificate which completely describes the chemical and physical makeup. For any one of the four components (body, front collet, rear collet, nut) the material certifications can be provided when calling Tylok and giving the heat code stamp marked on the part itself, along with the part number.



RAW MATERIAL SPECIFICATIONS

Fitting Material	Bar Stock	Forging	*Tubing Specification	Max Recommended Hardness (Tubing)
Brass	ASTM-B16 Alloy 360 ASTM-B453 Alloy 345	ASTM-B124 Alloy 377	ASTM-B75 Copper (Temper O)	60 Max. Rockwell 15T
Stainless Steel	ASTM-A276 ASME-SA-479 Type 316-SS	ASME-SA-182 Type 316-SS	ASTM-A213 ASTM-A269	90 Rb
Steel	ASTM-A108	—	ASTM-A179	72 Rb

*Reference Tubing Selection & Preparation, page 44.

TYLOK PRE-SETTING TOOL

The CBC-Lok™ product line offers a Pre-Setting Tool when fittings need to be installed in hard to reach places. The Pre-Setting Tool is designed to be used in any tabletop vice. After tightening the nut the specified number of turns, as stated in Installation Instructions - page 43, loosen the nut from the Pre-Setting Tool. Once the collets have swaged into the tubing surface, the assembly is ready for installation (reference To Remove and Re-Connect Tube Fitting, page 43).



When ordering the CBC-Lok™ Pre-Set Tool, reference the part number in the chart. The Pre-Set Tool is made from carbon steel and is hardened for maximum durability. The Pre-Set Tool can be used repeatedly to set the collets onto the tubing for easy installation.

Part Number	Tube Size
#1-DPST	1/16"
#2-DPST	1/8"
#3-DPST	3/16"
#4-DPST	1/4"
#5-DPST	5/16"
#6-DPST	3/8"
#8-DPST	1/2"
#10-DPST	5/8"
#12-DPST	3/4"
#14-DPST	7/8"
#16-DPST	1"

Instrumentation



Place Pre-Setting Tool in a vice and tighten nut specified number of turns.



Back nut off of Pre-Setting Tool. Notice the collets have swaged into the tubing. Now take tubing to installation area.