



Products



Limited Warranty

Notice

In designing a system incorporating tube fittings & valves, it is the designer's or user's obligation & responsibility to determine the appropriate fittings & valves to be used for each application and to ensure proper installation & maintenance.

Limited Lifetime Warranty

Tylok Fittings & Valves are warranted solely against defects in material and workmanship in the performance of the specific functions for which they are designed, as set forth in the published specifications for the life of the product. Should any fitting & valve or its component fail due to a defect in material or workmanship, Tylok will replace said fitting & valve without charge upon return of the failed part and evidence of its failure being due to materials or workmanship. The Warranty above set forth is the only warranty applicable to Tylok products, and is in lieu of any and all other warranties either expressed or implied, including any warranty of merchantability or fitness. Tylok's sole responsibility or liability as a result of any loss or damage due to failure shall be to replace the failed part or fitting & valve, and it shall bear no liability for any incidental or consequential damages to person or property.

Products

CBC-Lok / CS- Lok

3 - Instrumentation Tube Fittings

59 - Metric Tube Fittings

Pipe Fittings

85 - Instrumentation Pipe Fittings

Ball Valves

97 - GP Series Ball Valve

101 - HP Series Ball Valve

107 - 3 Piece Ball Valve

111 - 40 Series Ball Valve

Needle Valves

115 - Screwed Bonnet Needle Valves

122 - Integral Bonnet Needle Valves

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137 - CH Series Check Valves

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161 - Tylok Swaging Units

TYLOK[®]

FITTINGS & VALVES



CBC-LOK[®]



CS-LOK[®]

TUBE FITTINGS

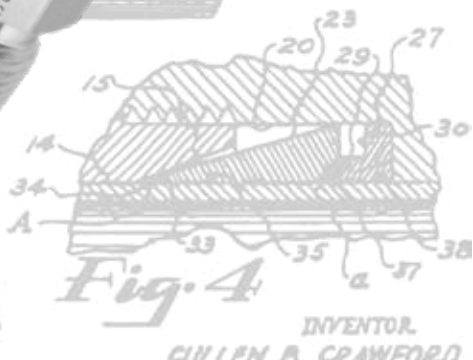
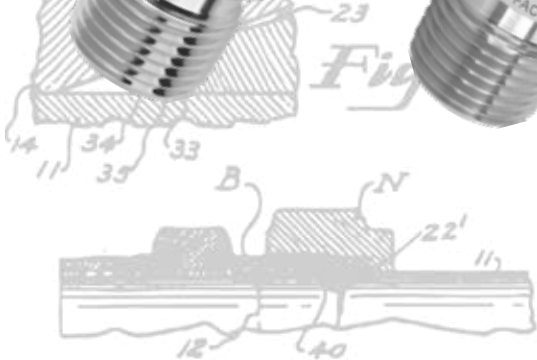
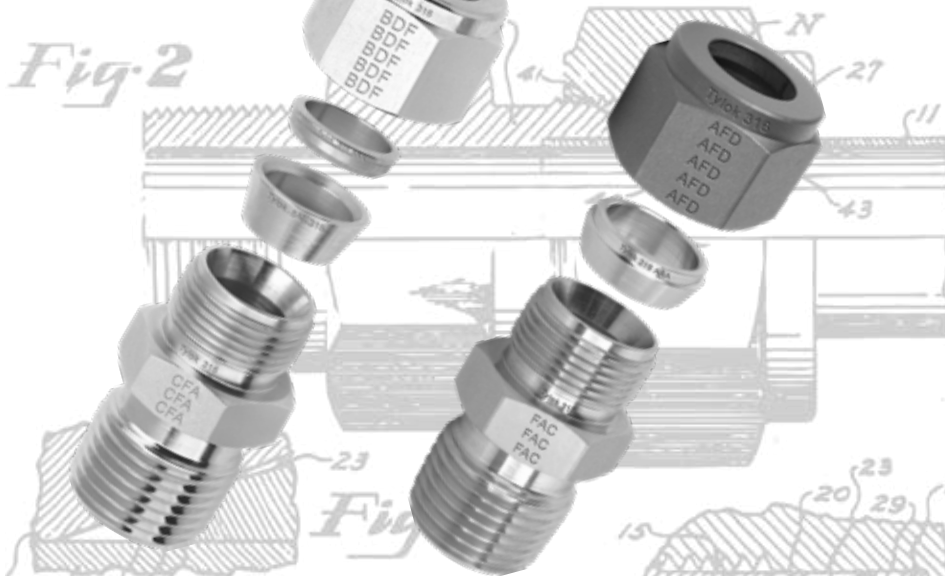
Oct. 18, 1949.

C. B. CRAWFORD

2,484,815

TUBE COUPLING

Filed Aug. 18, 1947



INVENTOR
 CULLEN B. CRAWFORD
 BY *Jay, Colrick & Jay*
 ATTORNEYS

Fig. 3

REGISTRATIONS & TYPE APPROVALS



Canadian Registration



CREATION OF AN INDUSTRY

In the mid 1940's, Cullen Crawford developed and patented the original flareless fitting (nut & double ferrule system), making it easier and more efficient to make tubing connections. Based on this innovation, he founded the Crawford Fitting Company, creating an industry for compression fittings.

At Tylok, our mission is total customer satisfaction with both products & services. Our knowledgeable staff is readily available to answer questions and respond in a timely manner. We continue to develop new products that expand the Tylok brand. If you have a unique product need, Tylok would like to be your engineered-solutions provider.

INTRODUCTION



CBC-Lok® Tube Fittings are fully interchangeable with Swagelok® & Parker A-Lok®. Although it is always recommended to use all CBC-Lok® components intermixing CBC-Lok® bodies and/or components parts with that of other manufacturers will not adversely affect sealing ability. CBC-Lok® Tube Fittings are made to strict quality control standards. CBC-Lok® Tube Fittings are proudly made in the U.S.A.



CS-Lok® Tube Fittings are fully interchangeable with Parker CPI™. Although it is always recommended to use all CS-Lok® components, intermixing CS-Lok® bodies and/or component parts with those of other manufacturers will not adversely affect sealing ability. CS-Lok® Tube Fittings are made strict quality control standards. CS-Lok® Tube Fittings are proudly made in the U.S.A.

OPERATION

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

CS-Lok® Tube Fittings are comprised of three components: Body, Single Ferrule (Collet), & Nut. A leak-proof seal is obtained through proper ferrule action as the ferrules are tightened onto the tubing via axial thrust provided by the nut. The ferrule provides the leak-proof seal, when the nut & ferrule are properly drawn up the specified number of turns. The stainless steel nuts have molybdenum disulfide coating, reducing torque and ensuring proper sealing.

TY-COR™ PROCESS

Ty-Cor™ refers to the treatment that 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 that contain chlorides (e.g., sea water, bleach, HCl, etc.). The Ty-Cor™ process applied to the rear ferrule also helps eliminate galling and ensures proper sealing on the tube end make-ups.

FEATURES

CBC-Lok® Tube Fittings

- Double ferrule swaging action
- Total component interchangeability
- Heat Code traceable
- ASTM material construction

CS-Lok® Tube Fittings

- Single ferrule swaging action
- Total component interchangeability
- Heat Code traceable
- ASTM material construction

The quality system complies with the international standard ISO 9001. Tylok strives to continuously improve the effectiveness of the Quality Management System by each member within the organization.



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

DFC - Female Connector,
DMC - Male Connector, DU - Union, DELU - Elbow Union,
DME - Male Elbow, and DTTT - Union Tee.

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SATPM-STB**

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SBHA**

Bulkhead
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SF PLUG**

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**DMC
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**DTBWE
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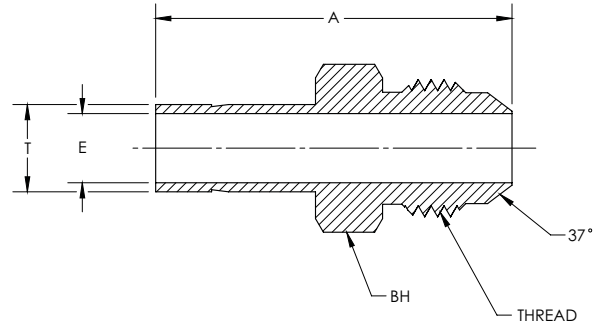
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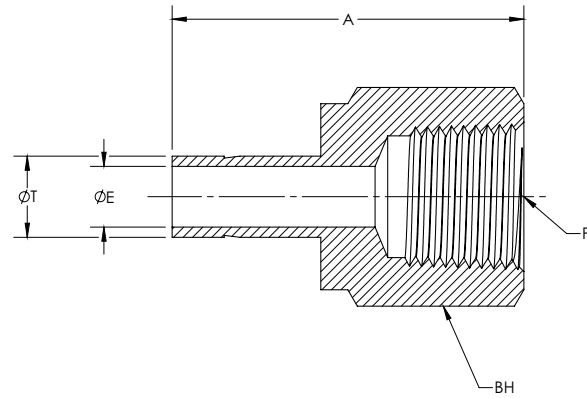
CBC PART NUMBER	INTERCHANGES WITH	CS PART NUMBER	INTERCHANGES WITH	T TUBE O.D.	THREAD	A	E THRU HOLE	BH BODY HEX
4-DATANF-4	4-TA-1-4AN	-	-	1/4	7/16-20 UNJF	1.46	0.17	1/2
6-DATANF-4	6-TA-1-4AN	-	-	3/8	7/16-20 UNJF	1.53	0.17	1/2
6-DATANF-6	6-TA-1-6AN	-	-	3/8	9/16-18 UNJF	1.56	0.27	5/8
8-DATANF-8	8-TA-1-8AN	-	-	1/2	3/4-16 UNJF	1.91	0.38	13/16
12-DATANF-12	12-TA-1-12AN	-	-	3/4	1-1/16-12 UNJ	2.21	0.58	1 1/8
16-DATANF-16	16-TA-1-16AN	-	-	1	1-5/16-12 UNJ	2.58	0.80	1 3/8

NOTE: Dimensions subject to change, to be used for reference only.

DATPF/SATPF

Adapter Tube to Female Pipe

CBC/CS-Lok

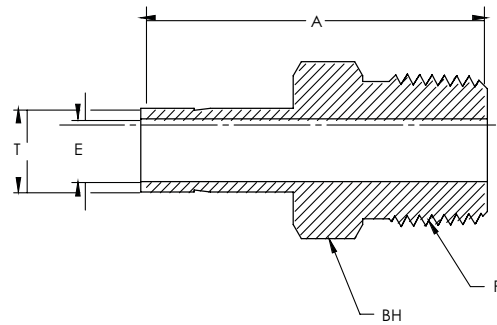


CBC PART NUMBER	INTERCHANGES WITH		CS PART NUMBER	INTERCHANGES WITH		T TUBE O.D.	P PIPE END NPT	A	E THRU HOLE	BH BODY HEX
2-DATPF-2	2-TA-7-2	2FA2N	2-SATPF-2	2-2 T2HG	1/8	1/8	1.24	0.08	9/16	
2-DATPF-4	2-TA-7-4	2FA4N	2-SATPF-4	2-4 T2HG	1/8	1/4	1.39	0.08	3/4	
4-DATPF-2	4-TA-7-2	4FA2N	4-SATPF-2	4-2 T2HG	1/4	1/8	1.30	0.17	9/16	
4-DATPF-4	4-TA-7-4	4FA4N	4-SATPF-4	4-4 T2HG	1/4	1/4	1.46	0.17	3/4	
4-DATPF-6	4-TA-7-6	4FA6N	4-SATPF-6	4-6 T2HG	1/4	3/8	1.55	0.17	7/8	
4-DATPF-8	4-TA-7-8	4FA8N	4-SATPF-8	4-8 T2HG	1/4	1/2	1.79	0.17	1 1/16	
6-DATPF-2	6-TA-7-2	6FA2N	6-SATPF-2	6-2 T2HG	3/8	1/8	1.35	0.27	9/16	
6-DATPF-4	6-TA-7-4	6FA4N	6-SATPF-4	6-4 T2HG	3/8	1/4	1.50	0.27	3/4	
6-DATPF-6	6-TA-7-6	6FA6N	6-SATPF-6	6-6 T2HG	3/8	3/8	1.59	0.27	7/8	
6-DATPF-8	6-TA-7-8	6FA8N	6-SATPF-8	6-8 T2HG	3/8	1/2	1.84	0.27	1 1/16	
8-DATPF-4	8-TA-7-4	8FA4N	8-SATPF-4	8-4 T2HG	1/2	1/4	1.71	0.38	3/4	
8-DATPF-6	8-TA-7-6	8FA6N	8-SATPF-6	8-6 T2HG	1/2	3/8	2.79	0.38	7/8	
8-DATPF-8	8-TA-7-8	8FA8N	8-SATPF-8	8-8 T2HG	1/2	1/2	2.05	0.38	1 1/16	
8-DATPF-12	8-TA-7-12	-	8-SATPF-12	-	1/2	3/4	2.10	0.38	1 5/16	
10-DATPF-8	10-TA-7-8	10FA8N	10-SATPF-8	10-8 T2HG	5/8	1/2	2.09	0.47	1 1/16	
12-DATPF-8	12-TA-7-8	12FA8N	12-SATPF-8	12-8 T2HG	3/4	1/2	2.08	0.58	1 1/16	
12-DATPF-12	12-TA-7-12	12FA12N	12-SATPF-12	12-12 T2HG	3/4	3/4	2.16	0.58	1 5/16	
16-DATPF-12	16-TA-7-12	16FA12N	16-SATPF-12	16-12 T2HG	1	3/4	2.39	0.80	1 5/16	
16-DATPF-16	16-TA-7-16	16FA16N	16-SATPF-16	16-16 T2HG	1	1	2.53	0.80	1 5/8	

NOTE: Dimensions subject to change, to be used for reference only.

DATPM/SATPM

Adapter Tube to Male Pipe



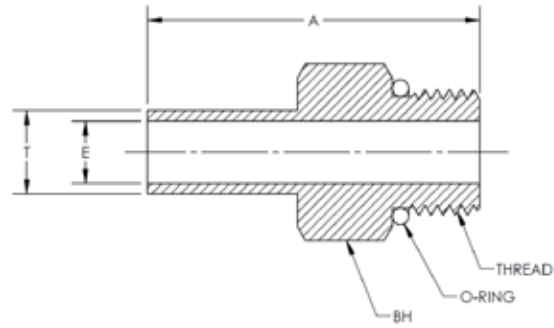
CBC PART NUMBER	INTERCHANGES WITH		CS PART NUMBER	INTERCHANGES WITH		T TUBE O.D.	P PIPE END NPT	A	E THRU HOLE	BH BODY HEX
2-DATPM-2	2-TA-1-2	2MA2N	2-SATPM-2	2-2 T2HF		1/8	1/8	1.16	0.08	7/16
2-DATPM-4	2-TA-1-4	2MA4N	2-SATPM-4	2-4 T2HF		1/8	1/4	1.37	0.08	9/16
4-DATPM-2	4-TA-1-2	4MA2N	4-SATPM-2	4-2 T2HF		1/4	1/8	1.25	0.17	7/16
4-DATPM-4	4-TA-1-4	4MA4N	4-SATPM-4	4-4 T2HF		1/4	1/4	1.46	0.17	9/16
4-DATPM-6	4-TA-1-6	4MA6N	4-SATPM-6	4-6 T2HF		1/4	3/8	1.49	0.17	11/16
4-DATPM-8	4-TA-1-8	4MA8N	4-SATPM-8	4-8 T2HF		1/4	1/2	1.71	0.17	7/8
5-DATPM-4	5-TA-1-4	5MA4N	5-SATPM-4	5-4 T2HF		5/8	1/4	1.50	0.22	9/16
6-DATPM-2	6-TA-1-2	6MA2N	6-SATPM-2	6-2 T2HF		3/8	1/8	1.32	0.19	7/16
6-DATPM-4	6-TA-1-4	6MA4N	6-SATPM-4	6-4 T2HF		3/8	1/4	1.55	0.27	9/16
6-DATPM-6	6-TA-1-6	6MA6N	6-SATPM-6	6-6 T2HF		3/8	3/8	1.56	0.27	11/16
6-DATPM-8	6-TA-1-8	6MA8N	6-SATPM-8	6-8 T2HF		3/8	1/2	1.78	0.27	7/8
8-DATPM-4	8-TA-1-4	8MA4N	8-SATPM-4	8-4 T2HF		1/2	1/4	1.75	0.28	9/16
8-DATPM-6	8-TA-1-6	8MA6N	8-SATPM-6	8-6 T2HF		1/2	3/8	1.78	0.38	11/16
8-DATPM-8	8-TA-1-8	8MA8N	8-SATPM-8	8-8 T2HF		1/2	1/2	2.00	0.38	7/8
8-DATPM-12	8-TA-1-12	-	8-SATPM-12	8-12 T2HF		1/2	3/4	2.00	0.38	1 1/16
10-DATPM-6	-	-	10-SATPM-6	-		5/8	3/8	1.84	0.38	11/16
10-DATPM-8	10-TA-1-8	10MA8N	10-SATPM-8	10-8 T2HF		5/8	1/2	2.06	0.47	7/8
12-DATPM-8	12-TA-1-8	12MA8N	12-SATPM-8	12-8 T2HF		3/4	1/2	2.06	0.47	7/8
12-DATPM-12	12-TA-1-12	12MA12N	12-SATPM-12	12-12 T2HF		3/4	3/4	2.06	0.58	1 1/16
12-DATPM-16	12-TA-1-16	12MA16N	12-SATPM-16	12-16 T2HF		3/4	1	2.32	0.58	1 3/8
14-DATPM-8	-	-	14-SATPM-8	-		7/8	1/2	2.13	0.47	15/16
16-DATPM-12	16-TA-1-12	16MA12N	16-SATPM-12	16-12 T2HF		1	3/4	2.31	0.63	1 1/16
16-DATPM-16	16-TA-1-16	16MA16N	16-SATPM-16	16-16 T2HF		1	1	2.60	0.80	1 3/8

NOTE: Dimensions subject to change, to be used for reference only.

DATPM-STB/SATPM-STB

Adapter Tube to Straight Thread Boss

CBC/CS-Lok



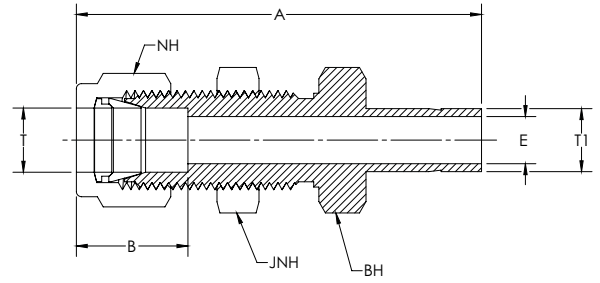
CBC PART NUMBER	INTERCHANGES WITH		CS PART NUMBER	INTERCHANGES WITH		T TUBE O.D.	THREAD	A	E THRU HOLE	O-RING	BH BODY HEX
2-DATPM-2-STB	2-TA-1-2ST	-	2-SATPM-2-STB	-		1/8	5/16-24	1.20	0.08	AS-902	7/16
4-DATPM-4-STB	4-TA-1-4ST	-	4-SATPM-4-STB	-		1/4	7/16-20	1.39	0.17	AS-904	9/16
6-DATPM-4-STB	6-TA-1-4ST	6TUHOA4	6-SATPM-4-STB	6-4 T2HOA		3/8	7/16-20	1.46	0.19	AS-904	9/16
6-DATPM-6-STB	6-TA-1-6ST	-	6-SATPM-6-STB	-		3/8	9/16-18	1.52	0.27	AS-906	11/16
6-DATPM-8-STB	6-TA-1-8ST	6TUHOA8	6-SATPM-8-STB	6-8 T2HOA		3/8	3/4-16	1.60	0.27	AS-908	7/8
8-DATPM-6-STB	8-TA-1-6ST	8TUHOA6	8-SATPM-6-STB	8-6 T2HOA		1/2	9/16-18	1.74	0.28	AS-906	11/16
8-DATPM-8-STB	8-TA-1-8ST	-	8-SATPM-8-STB	-		1/2	3/4-16	1.82	0.38	AS-908	7/8
10-DATPM-10-STB	10-TA-1-10ST	10TUHOA10	10-SATPM-10-STB	10-10 T2HOA		5/8	7/8-14	1.94	0.47	AS-910	1
12-DATPM-12-STB	12-TA-1-12ST	-	12-SATPM-12-STB	-		3/4	1-1/16-12	2.10	0.58	AS-912	1-1/4
16-DATPM-16-STB	16-TA-1-16ST	-	16-SATPM-16-STB	-		1	1-5/16-12	2.41	0.80	AS-916	1-1/2

NOTE: Dimensions subject to change, to be used for reference only.
 Adapts to J1926-1 and ISO 11926-1 Straight Thread Boss.
 Standard O-Ring Material is FKM, 90 durometer.

DBHA/SBHA

Bulkhead Adapter

CBC/CS-Lok



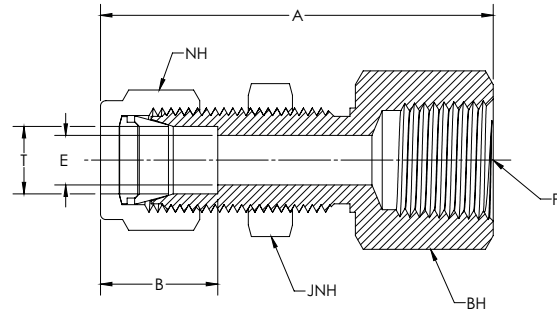
CBC PART NUMBER	INTERCHANGES WITH		CS PART NUMBER	INTERCHANGES WITH		T TUBE O.D.	T1 TUBE O.D.	A	B	E THRU HOLE	JNH JAM NUT HEX	NH NUT HEX	BH BODY HEX	PANEL HOLE
4-DBHA-4	400-R1-4	4TUBC4	4-SBHA-4	4-4 T2H2BZ	1/4	1/4	2.20	0.61	0.17	5/8	9/16	5/8	29/64	
6-DBHA-6	600-R1-6	6TUBC6	6-SBHA-6	6-6 T2H2BZ	3/8	3/8	2.41	0.67	0.27	3/4	11/16	3/4	37/64	
8-DBHA-8	810-R1-8	8TUBC8	8-SBHA-8	8-8 T2H2BZ	1/2	1/2	2.87	0.90	0.38	15/16	7/8	15/16	49/64	

NOTE: Dimensions subject to change, to be used for reference only.

DBHFP/SBHFP

Bulkhead Female Pipe Connector

CBC/CS-Lok



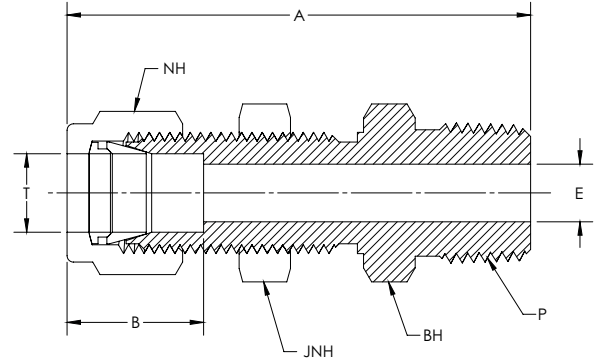
CBC PART NUMBER	INTERCHANGES WITH		CS PART NUMBER	INTERCHANGES WITH		T TUBE O.D.	P PIPE END NPT	A	B	E THRU HOLE	JNH JAM NUT HEX	NH NUT HEX	BH BODY HEX	PANEL HOLE
2-DBHFP-2	200-71-2	2FBC2N	2-SBHFP-2	2-2 GH2BZ	1/8	1/8	1.77	0.52	0.09	1/2	7/16	9/16	21/64	
4-DBHFP-2	400-71-2	4FBC2N	4-SBHFP-2	4-2 GH2BZ	1/4	1/8	1.85	0.61	0.19	5/8	9/16	5/8	29/64	
4-DBHFP-4	400-71-4	4FBC4N	4-SBHFP-4	4-4 GH2BZ	1/4	1/4	2.04	0.61	0.19	5/8	9/16	3/4	29/64	
5-DBHFP-2	-	5FBC2N	5-SBHFP-2	5-2 GH2BZ	5/16	1/8	1.96	0.65	0.25	11/16	5/8	11/16	33/64	
6-DBHFP-4	600-71-4	6FBC4N	6-SBHFP-4	6-4 GH2BZ	3/8	1/4	2.17	0.67	0.28	3/4	11/16	3/4	37/64	
6-DBHFP-6	600-71-6	-	6-SBHFP-6	-	3/8	3/8	2.23	0.67	0.28	3/4	11/16	7/8	37/64	
8-DBHFP-6	810-71-6	8FBC6N	8-SBHFP-6	8-6 GH2BZ	1/2	3/8	2.43	0.90	0.41	15/16	7/8	15/16	49/64	
8-DBHFP-8	810-71-8	8FBC8N	8-SBHFP-8	8-8 GH2BZ	1/2	1/2	2.62	0.90	0.41	15/16	7/8	11/16	49/64	
10-DBHFP-8	-	10FBC8N	10-SBHFP-8	10-8 GH2BZ	5/8	1/2	2.65	0.96	0.50	1 1/16	1	1 1/16	57/64	
16-DBHFP-16	1610-71-16	16FBC16N	16-SBHFP-16	16-16 GH2BZ	1	1	3.68	1.24	0.88	1 5/8	1 1/2	1 5/8	1 21/64	

NOTE: Dimensions subject to change, to be used for reference only.

DBHMP/SBHMP

Bulkhead Male Pipe Connector

CBC/CS-Lok



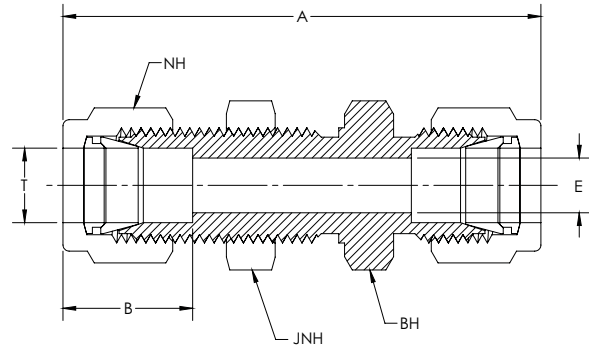
CBC PART NUMBER	INTERCHANGES WITH		CS PART NUMBER	INTERCHANGES WITH	T TUBE O.D.	P PIPE END NPT	A	B	E THRU HOLE	JNH JAM NUT HEX	NH NUT HEX	BH BODY HEX	PANEL HOLE	MAX PANEL THK
2-DBHMP-2	200-11-2	2MBC2N	2-SBHMP-2	2-2 FH2BZ	1/8	1/8	1.83	0.52	0.09	1/2	7/16	1/2	21/64	0.5
4-DBHMP-2	400-11-2	4MBC2N	4-SBHMP-2	4-2 FH2BZ	1/4	1/8	1.95	0.61	0.19	5/8	9/16	5/8	29/64	0.4
4-DBHMP-4	400-11-4	4MBC4N	4-SBHMP-4	4-4 FH2BZ	1/4	1/4	2.13	0.61	0.19	5/8	9/16	5/8	29/64	0.4
4-DBHMP-6	-	4MBC6N	4-SBHMP-6	4-6 FH2BZ	1/4	3/8	2.17	0.61	0.19	5/8	9/16	11/16	29/64	0.4
4-DBHMP-8	-	4MBC8N	4-SBHMP-8	6-4 FH2BZ	3/8	1/4	2.26	0.67	0.28	3/4	11/16	3/4	37/64	0.4
6-DBHMP-4	600-11-4	6MBC4N	6-SBHMP-4	4-8 FH2BZ	1/4	1/2	2.38	0.61	0.19	9/16	5/8	7/8	29/64	0.44
6-DBHMP-6	600-11-6	6MBC6N	6-SBHMP-6	6-6 FH2BZ	3/8	3/8	2.26	0.67	0.28	3/4	11/16	3/4	37/64	0.44
6-DBHMP-8	600-11-8	6MBC8N	6-SBHMP-8	6-8 FH2BZ	3/8	1/2	2.51	0.67	0.28	3/4	11/16	7/8	37/64	0.44
8-DBHMP-4	-	8MBC4N	8-SBHMP-4	8-4 FH2BZ	1/2	1/4	2.49	0.90	0.28	15/16	7/8	15/16	49/64	0.5
8-DBHMP-6	810-11-6	8MBC6N	8-SBHMP-6	8-6 FH2BZ	1/2	3/8	2.49	0.90	0.38	15/16	7/8	15/16	49/64	0.5
8-DBHMP-8	810-11-8	8MBC8N	8-SBHMP-8	8-8 FH2BZ	1/2	1/2	2.71	0.90	0.41	15/16	7/8	15/16	49/64	0.5
12-DBHMP-12	1210-11-12	12MBC12N	12-SBHMP-12	12-12 FH2BZ	3/4	3/4	3.00	0.96	0.63	13/16	11/8	13/16	11/64	0.66
12-DBHMP-16	-	-	12-SBHMP-16	-	3/4	1	3.26	0.96	0.63	13/16	11/8	13/8	11/64	0.66
16-DBHMP-16	1610-11-16	16MBC16N	16-SBHMP-16	16-16 FH2BZ	1	1	3.67	1.02	0.88	15/8	11/2	15/8	121/64	0.75

NOTE: Dimensions subject to change, to be used for reference only.

DBHU/SBHU

Bulkhead Union

CBC/CS-Lok



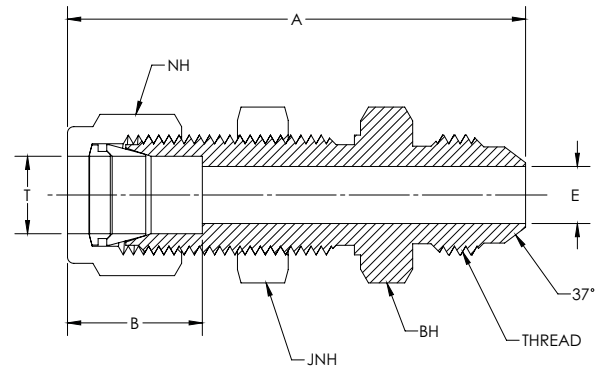
CBC PART NUMBER	INTERCHANGES WITH		CS PART NUMBER	INTERCHANGES WITH		T TUBE O.D.	A	B	E THRU HOLE	JNH JAM NUT HEX	NH NUT HEX	BH BODY HEX	PANEL HOLE
1-DBHU-1	100-61	1BC1	1-SBHU-1	1-1 WBZ	1/16	1.25	0.34	0.05	5/16	5/16	5/16	13/64	
2-DBHU-2	200-61	2BC2	2-SBHU-2	2-2 WBZ	1/8	2.03	0.52	0.09	1/2	7/16	1/2	21/64	
3-DBHU-3	300-61	3BC3	3-SBHU-3	3-3 WBZ	3/16	2.11	0.54	0.13	9/16	1/2	9/16	25/64	
4-DBHU-4	400-61	4BC4	4-SBHU-4	4-4 WBZ	1/4	2.27	0.61	0.19	5/8	9/16	5/8	29/64	
5-DBHU-5	500-61	5BC5	5-SBHU-5	5-5 WBZ	5/16	2.42	0.65	0.25	11/16	5/8	11/16	33/64	
6-DBHU-6	600-61	6BC6	6-SBHU-6	6-6 WBZ	3/8	2.46	0.67	0.28	3/4	11/16	3/4	37/64	
8-DBHU-8	810-61	8BC8	8-SBHU-8	8-8 WBZ	1/2	2.80	0.90	0.41	15/16	7/8	15/16	49/64	
10-DBHU-10	1010-61	10BC10	10-SBHU-10	10-10 WBZ	5/8	2.86	0.96	0.50	1 1/16	1	1 1/16	57/64	
12-DBHU-12	1210-61	12BC12	12-SBHU-12	12-12 WBZ	3/4	3.11	0.96	0.63	1 3/16	1 1/8	1 3/16	1 1/64	
16-DBHU-16	1610-61	16BC16	16-SBHU-16	16-16 WBZ	1	3.80	1.24	0.88	1 5/8	1 1/2	1 5/8	1 21/64	

NOTE: Dimensions subject to change, to be used for reference only.

DBUANF/SBUANF

Bulkhead to AN Flare Union

CBC/CS-Lok



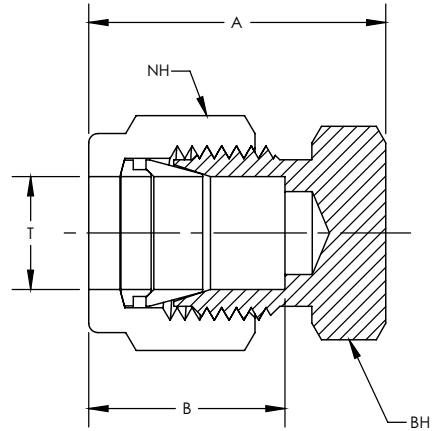
CBC PART NUMBER	INTERCHANGES WITH		CS PART NUMBER	INTERCHANGES WITH	T TUBE O.D.	THREAD	A	B	E THRU HOLE	JNH JAM NUT HEX	NH NUT HEX	BH BODY HEX	PANEL HOLE
4-DBUANF-4	400-61-4AN	4XABC4	4-SBUANF-4	4-4 XH2BZ	1/4	7/16-20	2.12	0.61	0.17	5/8	9/16	5/8	29/64
6-DBUANF-6	600-61-6AN	6XABC6	6-SBUANF-6	6-6 XH2BZ	3/8	9/16-18	2.26	0.67	0.28	3/4	11/16	3/4	37/64
8-DBUANF-8	810-61-8AN	8XABC8	8-SBUANF-8	8-8 XH2BZ	1/2	3/4-16	2.59	0.90	0.39	15/16	7/8	15/16	49/64
12-DBUANF-12	1210-61-12AN	12XABC12	12-SBUANF-12	12-12 XH2BZ	3/4	1-1/16-12	3.12	0.96	0.61	1 3/16	1 1/8	1 3/16	1 1/64
16-DBUANF-16	1610-61-16AN	16XABC16	16-SBUANF-16	16-16 XH2BZ	1	1-5/6-12	3.65	1.24	0.85	1 5/8	1 1/2	1 5/8	1 21/64

NOTE: Dimensions subject to change, to be used for reference only.

DCAP/SCAP

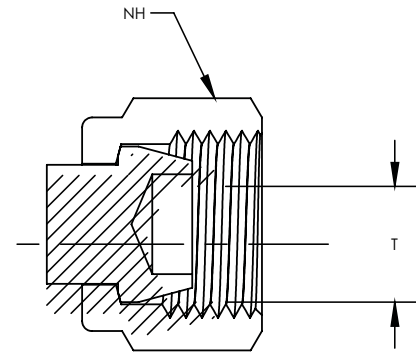
Cap

CBC/CS-Lok



CBC PART NUMBER	INTERCHANGES WITH		CS PART NUMBER	INTERCHANGES WITH		T TUBE O.D.	A	B	NH NUT HEX	BH BODY HEX
1-DCAP	100-C	1BLEN1	1-SCAP	1 PNBZ		1/16	0.59	0.34	5/16	5/16
2-DCAP	200-C	2BLEN2	2-SCAP	2 PNBZ		1/8	0.80	0.52	7/16	7/16
3-DCAP	300-C	3BLEN3	3-SCAP	3 PNBZ		3/16	0.84	0.54	1/2	7/16
4-DCAP	400-C	4BLEN4	4-SCAP	4 PNBZ		1/4	0.92	0.61	9/16	1/2
5-DCAP	500-C	5BLEN5	5-SCAP	5 PNBZ		5/16	0.98	0.65	5/8	9/16
6-DCAP	600-C	6BLEN6	6-SCAP	6 PNBZ		3/8	1.01	0.67	11/16	5/8
8-DCAP	810-C	8BLEN8	8-SCAP	8 PNBZ		1/2	1.15	0.90	7/8	13/16
10-DCAP	1010-C	10BLEN10	10-SCAP	10 PNBZ		5/8	1.18	0.96	1	15/16
12-DCAP	1210-C	12BLEN12	12-SCAP	12 PNBZ		3/4	1.24	0.96	1 1/8	1 1/16
14-DCAP	1410-C	14BLEN14	14-SCAP	14 PNBZ		7/8	1.33	1.02	1 1/4	1 3/16
16-DCAP	1610-C	16BLEN16	16-SCAP	16 PNBZ		1	1.52	1.24	1 1/2	1 3/8

NOTE: Dimensions subject to change, to be used for reference only.



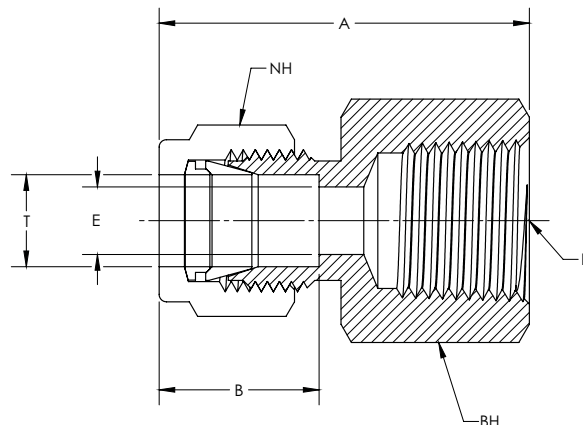
CBC PART NUMBER	INTERCHANGES WITH		CS PART NUMBER	INTERCHANGES WITH		T TUBE O.D.	NH NUT HEX
1-DF PLUG	100-P	1BLP1	1-SF PLUG	1 FNZ		1/16	5/16
2-DF PLUG	200-P	2BLP2	2-SF PLUG	2 FNZ		1/8	7/16
3-DF PLUG	300-P	3BLP3	3-SF PLUG	3 FNZ		3/16	1/2
4-DF PLUG	400-P	4BLP4	4-SF PLUG	4 FNZ		1/4	9/16
5-DF PLUG	500-P	5BLP5	5-SF PLUG	5 FNZ		5/16	5/8
6-DF PLUG	600-P	6BLP6	6-SF PLUG	6 FNZ		3/8	11/16
8-DF PLUG	810-P	8BLP8	8-SF PLUG	8 FNZ		1/2	7/8
10-DF PLUG	1010-P	10BLP10	10-SF PLUG	10 FNZ		5/8	1
12-DF PLUG	1210-P	12BLP12	12-SF PLUG	12 FNZ		3/4	1 1/8
14-DF PLUG	1410-P	14BLP14	14-SF PLUG	14 FNZ		7/8	1 1/4
16-DF PLUG	1610-P	16BLP16	16-SF PLUG	16 FNZ		1	1 1/2

NOTE: Dimensions subject to change, to be used for reference only.

DFC/SFC

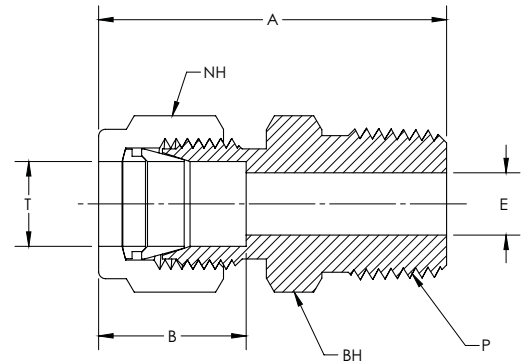
Female Connector

CBC/CS-Lok



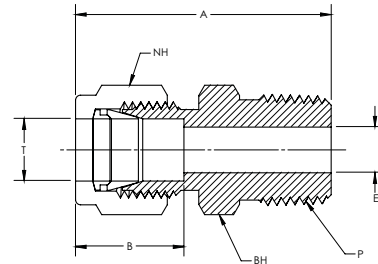
CBC PART NUMBER	INTERCHANGES WITH	CS PART NUMBER	INTERCHANGES WITH	T TUBE O.D.	P PIPE END NPT	A	B	E THRU HOLE	NH NUT HEX	BH BODY HEX	
2-DFC-2	200-7-2	2FSC2N	2-SFC-2	2-2 GBZ	1/8	1/8	1.14	0.52	0.09	7/16	9/16
2-DFC-4	200-7-4	2FSC4N	2-SFC-4	2-4 GBZ	1/8	1/4	1.33	0.52	0.09	7/16	3/4
2-DFC-6	-	-	2-SFC-6	-	1/8	3/8	1.39	0.52	0.09	7/16	7/8
3-DFC-2	300-7-2	3FSC2N	3-SFC-2	3-2 GBZ	3/16	1/8	1.16	0.54	0.13	1/2	9/16
3-DFC-4	3FSC4N	-	3-SFC-4	3-4 GBZ	3/16	1/4	1.35	0.54	0.13	1/2	3/4
4-DFC-2	400-7-2	4FSC2N	4-SFC-2	4-2 GBZ	1/4	1/8	1.23	0.61	0.19	9/16	9/16
4-DFC-4	400-7-4	4FSC4N	4-SFC-4	4-4 GBZ	1/4	1/4	1.42	0.61	0.19	9/16	3/4
4-DFC-6	400-7-6	4FSC6N	4-SFC-6	4-6 GBZ	1/4	3/8	1.48	0.61	0.19	9/16	7/8
4-DFC-8	400-7-8	4FSC8N	4-SFC-8	4-8 GBZ	1/4	1/2	1.67	0.61	0.19	9/16	1-1/16
5-DFC-2	500-7-2	5FSC2N	5-SFC-2	5-2 GBZ	5/16	1/8	1.27	0.65	0.25	5/8	9/16
5-DFC-4	500-7-4	5FSC4N	5-SFC-4	5-4 GBZ	5/16	1/4	1.46	0.65	0.25	5/8	3/4
5-DFC-6	5FSC6N	-	5-SFC-6	5-6 GBZ	5/16	3/8	1.52	0.65	0.25	5/8	7/8
5-DFC-8	-	-	5-SFC-8	-	5/16	1/2	1.71	0.65	0.25	5/8	1-1/16
6-DFC-2	600-7-2	6FSC2N	6-SFC-2	6-2 GBZ	3/8	1/8	1.29	0.67	0.28	11/16	5/8
6-DFC-4	600-7-4	6FSC4N	6-SFC-4	6-4 GBZ	3/8	1/4	1.48	0.67	0.28	11/16	3/4
6-DFC-6	600-7-6	6FSC6N	6-SFC-6	6-6 GBZ	3/8	3/8	1.54	0.67	0.28	11/16	7/8
6-DFC-8	600-7-8	6FSC8N	6-SFC-8	6-8 GBZ	3/8	1/2	1.73	0.67	0.28	11/16	1-1/16
6-DFC-12	600-7-12	6FSC12N	6-SFC-12	6-12 GBZ	3/8	3/4	1.89	0.67	0.28	11/16	1-5/16
8-DFC-4	810-7-4	8FSC4N	8-SFC-4	8-4 GBZ	1/2	1/4	1.59	0.90	0.41	7/8	13/16
8-DFC-6	810-7-6	8FSC6N	8-SFC-6	8-6 GBZ	1/2	3/8	1.65	0.90	0.41	7/8	7/8
8-DFC-8	810-7-8	8FSC8N	8-SFC-8	8-8 GBZ	1/2	1/2	1.84	0.90	0.41	7/8	1-1/16
8-DFC-12	810-7-12	8FSC12N	8-SFC-12	8-12 GBZ	1/2	3/4	1.90	0.90	0.41	7/8	1-5/16
8-DFC-16	810-7-16	-	8-SFC-16	-	1/2	1	2.27	0.90	0.41	7/8	1-5/8
10-DFC-4	-	-	10-SFC-4	-	5/8	1/4	1.80	0.96	0.44	1	15/16
10-DFC-6	1010-7-6	10FSC6N	10-SFC-6	10-6 GBZ	5/8	3/8	1.65	0.96	0.50	1	15/16
10-DFC-8	1010-7-8	10FSC8N	10-SFC-8	10-8 GBZ	5/8	1/2	1.83	0.96	0.50	1	1-1/16
10-DFC-12	1010-7-12	10FSC12N	10-SFC-12	10-12 GBZ	5/8	3/4	1.90	0.96	0.50	1	1-5/16
12-DFC-6	1210-7-6	-	12-SFC-6	-	3/4	3/8	1.67	0.96	0.56	1-1/8	1-1/16
12-DFC-8	1210-7-8	12FSC8N	12-SFC-8	12-8 GBZ	3/4	1/2	1.84	0.96	0.63	1-1/8	1-1/16
12-DFC-12	1210-7-12	12FSC12N	12-SFC-12	12-12 GBZ	3/4	3/4	1.90	0.96	0.63	1-1/8	1-5/16
12-DFC-16	1210-7-16	-	12-SFC-16	-	3/4	1	2.28	0.96	0.63	1-1/8	1-5/8
14-DFC-8	-	-	14-SFC-8	-	7/8	1/2	1.83	1.02	0.70	1-1/4	1-3/16
14-DFC-12	1410-7-12	14FSC12N	14-SFC-12	14-12 GBZ	7/8	3/4	1.96	1.02	0.72	1-1/4	1-3/8
16-DFC-6	-	-	16-SFC-6	-	1	3/8	2.15	1.24	0.56	1-1/2	1-3/8
16-DFC-8	1610-7-8	-	16-SFC-8	-	1	1/2	2.15	1.24	0.70	1-1/2	1-3/8
16-DFC-12	1610-7-12	16FSC12N	16-SFC-12	16-12 GBZ	1	3/4	2.12	1.24	0.88	1-1/2	1-3/8
16-DFC-16	1610-7-16	16FSC16N	16-SFC-16	16-16 GBZ	1	1	2.46	1.24	0.88	1-1/2	1-5/8

NOTE: Dimensions subject to change, to be used for reference only.



CBC PART NUMBER	INTERCHANGES WITH	CS PART NUMBER	INTERCHANGES WITH	T TUBE O.D.	P PIPE END NPT	A	B	E THRU HOLE	NH NUT HEX	BH BODY HEX	
1-DMC-1	100-1-1	1MSC1N	1-SMC-1	1-1 FBZ	1/16	1/16	0.95	0.34	0.05	5/16	5/16
1-DMC-2	100-1-2	1MSC2N	1-SMC-2	1-2 FBZ	1/16	1/8	1.03	0.34	0.05	5/16	7/16
2-DMC-1	200-1-1	2MSC1N	2-SMC-1	2-1 FBZ	1/8	1/16	1.17	0.52	0.09	7/16	7/16
2-DMC-2	200-1-2	2MSC2N	2-SMC-2	2-2 FBZ	1/8	1/8	1.20	0.52	0.09	7/16	7/16
2-DMC-4	200-1-4	2MSC4N	2-SMC-4	2-4 FBZ	1/8	1/4	1.41	0.52	0.09	7/16	9/16
2-DMC-6	200-1-6	2MSC6N	2-SMC-6	2-6 FBZ	1/8	3/8	1.42	0.52	0.09	7/16	11/16
2-DMC-8	200-1-8	2MSC8N	2-SMC-8	2-8 FBZ	1/8	1/2	1.67	0.52	0.09	7/16	7/8
3-DMC-2	300-1-2	3MSC2N	3-SMC-2	3-2 FBZ	3/16	1/8	1.23	0.54	0.13	1/2	7/16
3-DMC-4	300-1-4	3MSC4N	3-SMC-4	3-4 FBZ	3/16	1/4	1.43	0.54	0.13	1/2	9/16
4-DMC-1	400-1-1	4MSC1N	4-SMC-1	4-1 FBZ	1/4	1/16	1.29	0.61	0.13	9/16	1/2
4-DMC-2	400-1-2	4MSC2N	4-SMC-2	4-2 FBZ	1/4	1/8	1.29	0.61	0.19	9/16	1/2
4-DMC-4	400-1-4	4MSC4N	4-SMC-4	4-4 FBZ	1/4	1/4	1.49	0.61	0.19	9/16	9/16
4-DMC-6	400-1-6	4MSC6N	4-SMC-6	4-6 FBZ	1/4	3/8	1.51	0.61	0.19	9/16	11/16
4-DMC-8	400-1-8	4MSC8N	4-SMC-8	4-8 FBZ	1/4	1/2	1.76	0.61	0.19	9/16	7/8
4-DMC-12	400-1-12	4MSC12N	4-SMC-12	4-12 FBZ	1/4	3/4	1.82	0.61	0.19	9/16	1-1/16
5-DMC-2	500-1-2	5MSC2N	5-SMC-2	5-2 FBZ	5/16	1/8	1.35	0.65	0.19	5/8	9/16
5-DMC-4	500-1-4	5MSC4N	5-SMC-4	5-4 FBZ	5/16	1/4	1.54	0.65	0.25	5/8	9/16
5-DMC-6	500-1-6	5MSC6N	5-SMC-6	5-6 FBZ	5/16	3/8	1.56	0.65	0.25	5/8	11/16
5-DMC-8	500-1-8	5MSC8N	5-SMC-8	5-8 FBZ	5/16	1/2	1.77	0.65	0.25	5/8	7/8
6-DMC-2	600-1-2	6MSC2N	6-SMC-2	6-2 FBZ	3/8	1/8	1.39	0.67	0.19	11/16	5/8
6-DMC-4	600-1-4	6MSC4N	6-SMC-4	6-4 FBZ	3/8	1/4	1.57	0.67	0.28	11/16	5/8
6-DMC-6	600-1-6	6MSC6N	6-SMC-6	6-6 FBZ	3/8	3/8	1.57	0.67	0.28	11/16	11/16
6-DMC-8	600-1-8	6MSC8N	6-SMC-8	6-8 FBZ	3/8	1/2	1.83	0.67	0.28	11/16	7/8
6-DMC-12	600-1-12	6MSC12N	6-SMC-12	6-12 FBZ	3/8	3/4	1.89	0.67	0.28	11/16	1-1/16
6-DMC-16	600-1-16	-	6-SMC-16	-	3/8	1	2.14	0.67	0.28	11/16	1-3/8
8-DMC-2	810-1-2	8MSC2N	8-SMC-2	8-2 FBZ	1/2	1/8	1.52	0.90	0.19	7/8	13/16
8-DMC-4	810-1-4	8MSC4N	8-SMC-4	8-4 FBZ	1/2	1/4	1.71	0.90	0.28	7/8	13/16
8-DMC-6	810-1-6	8MSC6N	8-SMC-6	8-6 FBZ	1/2	3/8	1.71	0.90	0.38	7/8	13/16
8-DMC-8	810-1-8	8MSC8N	8-SMC-8	8-FBZ	1/2	1/2	1.93	0.90	0.41	7/8	7/8
8-DMC-12	810-1-12	8MSC12N	8-SMC-12	8-12 FBZ	1/2	3/4	1.99	0.90	0.41	7/8	1-1/16
8-DMC-16	810-1-16	8MSC16N	8-SMC-16	8-16 FBZ	1/2	1	2.26	0.90	0.41	7/8	1-3/8
10-DMC-4	1010-1-4	-	10-SMC-4	-	5/8	1/4	1.74	0.96	0.28	1	15/16
10-DMC-6	1010-1-6	10MSC6N	10-SMC-6	10-6 FBZ	5/8	3/8	1.74	0.96	0.38	1	15/16
10-DMC-8	1010-1-8	10MSC8N	10-SMC-8	10-8 FBZ	5/8	1/2	1.93	0.96	0.47	1	15/16
10-DMC-12	1010-1-12	10MSC12N	10-SMC-12	10-12 FBZ	5/8	3/4	1.99	0.96	0.50	1	1-1/16

NOTE: Dimensions subject to change, to be used for reference only.

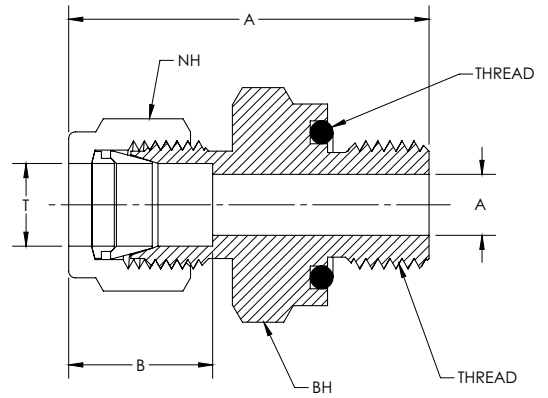


CBC PART NUMBER	INTERCHANGES WITH		CS PART NUMBER	INTERCHANGES WITH		T TUBE O.D.	P PIPE END NPT	A	B	E THRU HOLE	NH NUT HEX	BH BODY HEX
12-DMC-4	1210-1-4	-	12-SMC-4	-		3/4	1/4	1.81	0.96	0.28	1-1/8	1-1/16
12-DMC-6	1210-1-6	-	12-SMC-6	-		3/4	3/8	1.81	0.96	0.38	1-1/8	1-1/16
12-DMC-8	1210-1-8	12MSC8N	12-SMC-8	12-8 FBZ		3/4	1/2	1.99	0.96	0.47	1-1/8	1-1/16
12-DMC-12	1210-1-12	12MSC12N	12-SMC-12	12-12 FBZ		3/4	3/4	1.99	0.96	0.63	1-1/8	1-1/16
12-DMC-16	1210-1-16	12MSC16N	12-SMC-16	12-16 FBZ		3/4	1	2.26	0.96	0.63	1-1/8	1-3/8
14-DMC-6	-	-	14-SMC-6	-		7/8	3/8	1.80	1.02	0.38	1-1/4	1-3/16
14-DMC-8	1410-1-8	-	14-SMC-8	-		7/8	1/2	1.99	1.02	0.47	1-1/4	1-3/16
14-DMC-12	1410-1-12	14MSC12N	14-SMC-12	14-12 FBZ		7/8	3/4	1.99	1.02	0.63	1-1/4	1-3/16
14-DMC-16	1410-1-16	14MSC16N	14-SMC-16	14-16 FBZ		7/8	1	2.26	1.02	0.72	1-1/4	1-3/8
16-DMC-8	1610-1-8	16MSC8N	16-SMC-8	16-8 FBZ		1	1/2	2.27	1.24	0.47	1-1/2	1-3/8
16-DMC-12	1610-1-12	16MSC12N	16-SMC-12	16-12 FBZ		1	3/4	2.27	1.24	0.63	1-1/2	1-3/8
16-DMC-16	1610-1-6	16MSC16N	16-SMC-16	16-16 FBZ		1	1	2.46	1.24	0.88	1-1/2	1-3/8
B-18-DMC-12	-	-	-	-		1-1/8	3/4	2.27	1.25	0.63	1-3/4	1-5/8
B-18-DMC-16	B-1810-1-16	-	-	-		1-1/8	1	2.46	1.25	0.88	1-3/4	1-5/8

NOTE: Dimensions subject to change, to be used for reference only.

DMC-ORS/SMC-ORS

O-Ring Straight Thread Male Connector



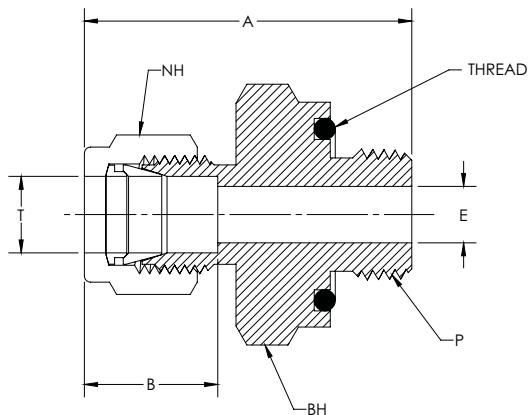
CBC PART NUMBER	INTERCHANGES WITH	CS PART NUMBER	INTERCHANGES WITH	T TUBE O.D.	THREAD	A	B	E THRU HOLE	NH NUT HEX	BH BODY HEX	O-RING
2-DMC-ORS	200-1-OR M2SC2	2-SMC-ORS	2-2 ZHBA5	1/8	5/16-24	1.30	0.52	0.09	7/16	9/16	AS-011
4-DMC-ORS	400-1-OR M2SC4	4-SMC-ORS	4-4 ZHBA5	1/4	7/16-20	1.51	0.61	0.19	9/16	3/4	AS-111
6-DMC-ORS	600-1-OR M2SC6	6-SMC-ORS	6-6 ZHBA5	3/8	9/16-18	1.67	0.67	0.28	11/16	15/16	AS-113
8-DMC-ORS	810-1-OR M2SC8	8-SMC-ORS	8-8 ZHBA5	1/2	3/4-16	1.80	0.90	0.41	7/8	1-1/8	AS-116
12-DMC-ORS	1210-1-OR 12M2SC12	12-SMC-ORS	12-12 ZHBA5	3/4	1-1/16-12	2.06	0.96	0.63	1-1/8	1-1/2	AS-215
16-DMC-ORS	1610-1-OR 16M2SC16	16-SMC-ORS	16-16 ZHBA5	1	1-5/16-12	2.30	1.24	0.88	1-1/2	1-3/4	AS-219

NOTE: Dimensions subject to change, to be used for reference only.
Standard O-Ring material is Buna-N, 70 durometer.

DMC-ORT/SMC-ORT

O-Ring Tapered Thread Male Connector

CBC/CS-Lok

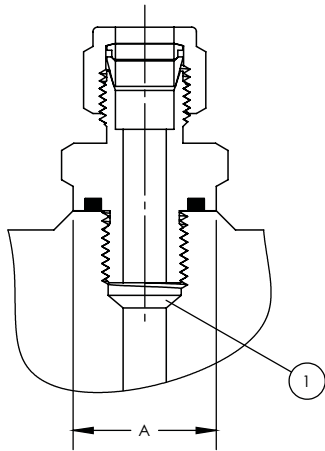


CBC PART NUMBER	INTERCHANGES WITH	CS PART NUMBER	INTERCHANGES WITH	T TUBE O.D.	P PIPE END NPT	A	B	E THRU HOLE	NH NUT HEX	BH BODY HEX	O-RING	
4-DMC-2-ORT	400-1-2-OR	4M3SC2	4-SMC-2-ORT	4-2 ZHBF5	1/4	1/8	1.38	0.61	0.19	9/16	3/4	AS-111
4-DMC-4-ORT	400-1-4-OR	4M3SC4	4-SMC-4-ORT	4-4 ZHBF5	1/4	1/4	1.51	0.61	0.19	9/16	15/16	AS-113
6-DMC-6-ORT	600-1-6-OR	6M3SC6	6-SMC-6-ORT	6-6 ZHBF5	3/8	3/8	1.64	0.67	0.28	11/16	1-1/8	AS-116
6-DMC-8-ORT	600-1-8-OR	6M3SC8	6-SMC-8-ORT	6-8 ZHBF5	3/8	1/2	1.86	0.67	0.28	11/16	1-5/16	AS-212
8-DMC-4-ORT	-	8M3SC4	8-SMC-4-ORT	8-4 ZHBF5	1/2	1/4	1.68	0.90	0.28	7/8	15/16	AS-113
8-DMC-8-ORT	810-1-8-OR	8M3SC8	8-SMC-8-ORT	8-8 ZHBF5	1/2	1/2	1.96	0.90	0.41	7/8	1-5/16	AS-212

NOTE: Dimensions subject to change, to be used for reference only.

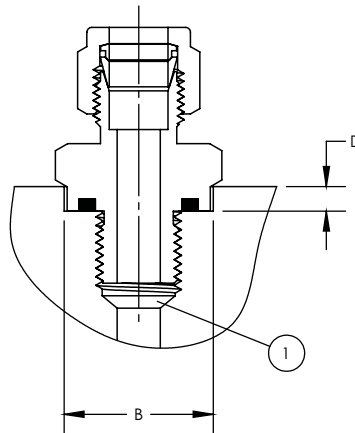
MOUNTING DIMENSIONS

for ORS/ORT Fittings



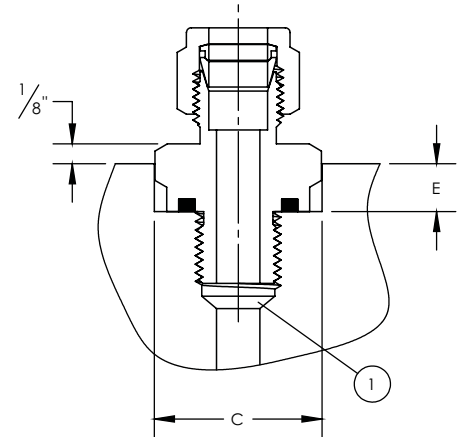
RAISED SURFACE

Minimum diameter is larger than the O-Ring sealing diameter to prevent O-Ring extrusion.



RECESSED HOLE (SHOULDER CLEARANCE)

Minimum diameter allows clearance for round shoulder of fitting into recess.



RECESSED HOLE (HEX CLEARANCE)

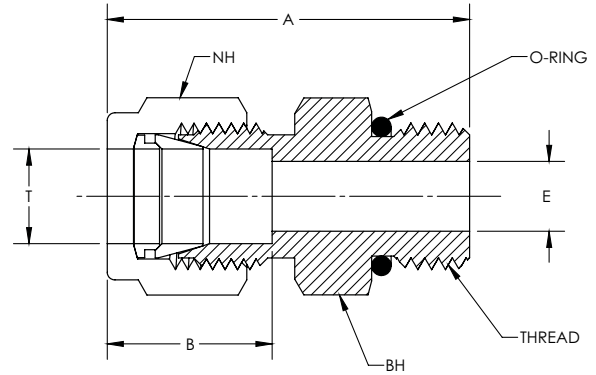
Minimum diameter allows clearance for hex of fitting into recess.

THREAD SIZE	NPT SIZE	A MIN DIA	B MIN DIA	C MIN DIA	D MAX DEPTH	E MAX DEPTH
5/16-24	-	0.50	0.59	0.66	0.09	0.16
5/16-24	-	0.50	0.59	0.66	0.09	0.22
-	1/8	0.69	0.78	0.88	0.16	0.28
3/8-24	-	0.56	0.66	0.75	0.09	0.22
7/16-20	-	0.69	0.78	0.88	0.16	0.28
-	1/8	0.69	0.78	0.88	0.16	0.28
-	1/4	0.87	0.97	1.09	0.16	0.31
1/2-20	-	0.75	0.91	1.03	0.16	0.31
9/16-18	-	0.81	0.97	1.09	0.16	0.31
-	1/4	0.87	0.97	1.09	0.16	0.31
-	3/8	1.00	1.16	1.31	0.16	0.34
-	1/2	1.22	1.34	1.53	0.22	0.44
3/4-16	-	1.00	1.16	1.31	0.16	0.34
-	1/2	1.22	1.34	1.53	0.22	0.44
1-1/16-12	-	1.41	1.53	1.75	0.22	0.50
1-5/16-12	-	1.69	1.78	2.03	0.22	0.56

DMC-STB/SMC-STB

Straight Thread Boss Male Connector

CBC/CS-Lok

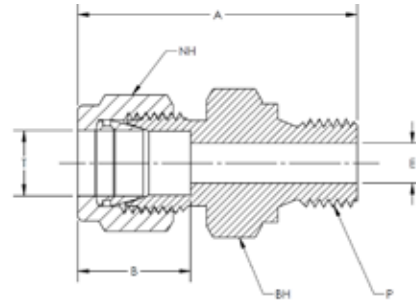


CBC PART NUMBER	INTERCHANGES WITH		CS PART NUMBER	INTERCHANGES WITH		T TUBE O.D.	THREAD	A	B	E THRU HOLE	NH NUT HEX	BH BODY HEX	O-RING
4-DMC-4-STB	400-1-4ST	4M1SC4	4-SMC-4-STB	4-4 ZHBA		1/4	7/16-20	1.34	0.61	0.17	9/16	9/16	AS-904
6-DMC-4-STB	600-1-4ST	6M1SC4	6-SMC-4-STB	6-4 ZHBA		3/8	7/16-20	1.40	0.67	0.17	11/16	5/8	AS-904
6-DMC-6-STB	600-1-6ST	6M1SC6	6-SMC-6-STB	6-6 ZHBA		3/8	9/16-18	1.47	0.67	0.30	11/16	11/16	AS-906
8-DMC-6-STB	810-1-6ST	8M1SC6	8-SMC-6-STB	8-6 ZHBA		1/2	9/16-18	1.54	0.90	0.30	7/8	13/16	AS-906
8-DMC-8-STB	810-1-8ST	8M1SC8	8-SMC-8-STB	8-8 ZHBA		1/2	3/4-16	1.65	0.90	0.39	7/8	7/8	AS-908
12-DMC-12-STB	1210-1-12ST	12M1SC12	12-SMC-12-STB	12-12 ZHBA		3/4	1-1/16-12	1.93	0.96	0.61	1-1/8	1-1/4	AS-212
16-DMC-16-STB	1610-1-16ST	16M1SC16	16-SMC-16-STB	16-16 ZHBA		1	1-5/16-12	2.15	1.24	0.85	1-1/2	1-1/2	AS-916

NOTE: Dimensions subject to change, to be used for reference only.
 Adapts to J1926/1 and ISO 11926-1 Straight Thread Boss.
 Standard O-Ring material is FKM, 90 durometer.

DMC-RS/SMC-RS

BSPB Straight Thread Male Connector



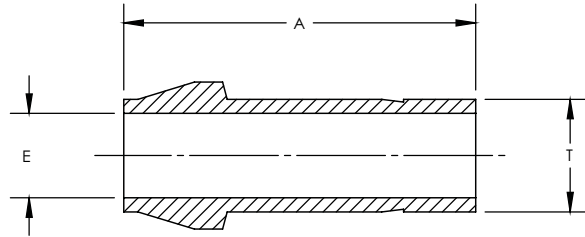
CBC PART NUMBER	INTERCHANGES WITH	CS PART NUMBER	INTERCHANGES WITH	T TUBE O.D.	P BSPB THREAD SIZE	A	B	E THRU HOLE	NH NUT HEX	BH BODY HEX	
2-DMC-2-RS	200-1-2RS	2MSC2R	2-SMC-2-RS	2-2R FBZ	1/8	1/8	1.31	0.52	0.09	7/16	9/16
2-DMC-4-RS	200-1-4RS	2MSC4R	2-SMC-4-RS	2-4R FBZ	1/8	1/4	1.50	0.52	0.09	7/16	3/4
2-DMC-6-RS	200-1-6RS	2MSC6R	2-SMC-6-RS	2-6R FBZ	1/8	3/8	1.53	0.52	0.09	7/16	7/8
4-DMC-2-RS	400-1-2RS	4MSC2R	4-SMC-2-RS	4-2R FBZ	1/4	1/8	1.40	0.61	0.16	9/16	9/16
4-DMC-4-RS	400-1-4RS	4MSC4R	4-SMC-4-RS	4-4R FBZ	1/4	1/4	1.59	0.61	0.19	9/16	3/4
4-DMC-6-RS	400-1-6RS	4MSC6R	4-SMC-6-RS	4-6R FBZ	1/4	3/8	1.62	0.61	0.19	9/16	7/8
4-DMC-8-RS	400-1-8RS	4MSC8R	4-SMC-8-RS	4-8R FBZ	1/4	1/2	1.70	0.61	0.19	9/16	1-1/16
6-DMC-2-RS	600-1-2RS	6MSC2R	6-SMC-2-RS	6-2R FBZ	3/8	1/8	1.49	0.67	0.16	11/16	5/8
6-DMC-4-RS	600-1-4RS	6MSC4R	6-SMC-4-RS	6-4R FBZ	3/8	1/4	1.65	0.67	0.23	11/16	3/4
6-DMC-6-RS	600-1-6RS	6MSC6R	6-SMC-6-RS	6-6R FBZ	3/8	3/8	1.68	0.67	0.28	11/16	7/8
6-DMC-8-RS	600-1-8RS	6MSC8R	6-SMC-8-RS	6-8R FBZ	3/8	1/2	1.76	0.67	0.28	11/16	1-1/16
8-DMC-4-RS	810-1-4RS	8MSC4R	8-SMC-4-RS	8-4R FBZ	1/2	1/4	1.76	0.90	0.23	7/8	13/16
8-DMC-6-RS	810-1-6RS	8MSC6R	8-SMC-6-RS	8-6R FBZ	1/2	3/8	1.79	0.90	0.31	7/8	7/8
8-DMC-8-RS	810-1-8RS	8MSC8R	8-SMC-8-RS	8-8R FBZ	1/2	1/2	1.87	0.90	0.38	7/8	1-1/16
12-DMC-8-RS	1210-1-8RS	12MSC8R	12-SMC-8-RS	12-8R FBZ	3/4	1/2	1.92	0.96	0.38	1 1/8	1-1/16
12-DMC-12-RS	1210-1-12RS	12MSC12R	12-SMC-12-RS	12-12R FBZ	3/4	3/4	2.05	0.96	0.58	1 1/8	1-5/16
16-DMC-8-RS	1610-1-8RS	16MSC8R	16-SMC-8-RS	16-8R FBZ	1	1/2	2.19	1.24	0.38	1 1/2	1-3/8
16-DMC-12-RS	1610-1-12RS		16-SMC-12-RS		1	3/4	2.27	1.24	0.58	1 1/2	1-3/8
16-DMC-16-RS	1610-1-16RS	16MSC16R	16-SMC-16-RS	16-16R FBZ	1	1	2.35	1.24	0.78	1 1/2	1-5/8
B-18-DMC-12	-	-	-	-	1-1/8	3/4	2.27	1.25	0.63	1-3/4	1-5/8
B-18-DMC-16	B-1810-1-16	-	-	-	1-1/8	1	2.46	1.25	0.88	1-3/4	1-5/8

Note: BSPB threaded end requires a sealing washer.

DPCU/SPCU

Port Connector Union

CBC/CS-Lok



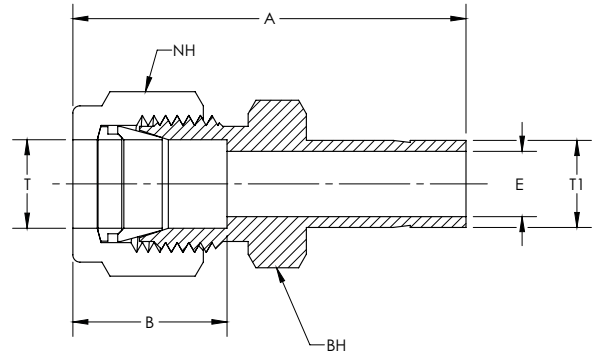
CBC PART NUMBER	INTERCHANGES WITH		CS PART NUMBER	INTERCHANGES WITH		T TUBE O.D.	A	E THRU HOLE
2-DPCU	U201-PC	2PC2	2-SPCU	2-2 ZPC		1/8	1.08	0.08
4-DPCU	401-PC	4PC4	4-SPCU	4-4 ZPC		1/4	1.13	0.17
6-DPCU	601-PC	6PC6	6-SPCU	6-6 ZPC		3/8	1.28	1.27
8-DPCU	811-PC	8PC8	8-SPCU	8-8 ZPC		1/2	1.69	0.38
12-DPCU	1211-PC	12PC12	12-SPCU	12-12 ZPC		3/4	1.75	0.58
16-DPCU	1611-PC	16PC16	16-SPCU	16-16 ZPC		1	2.10	0.80

NOTE: Dimensions subject to change, to be used for reference only.

DRATT/SRATT

Reducer Adapter Tube to Tube

CBC/CS-Lok



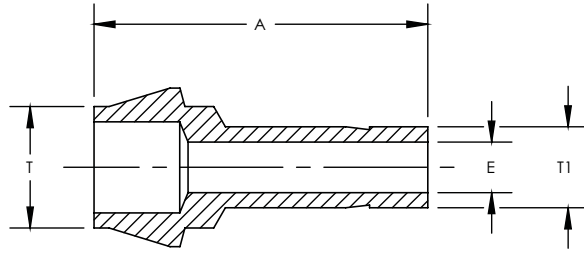
CBC PART NUMBER	INTERCHANGES WITH	CS PART NUMBER	INTERCHANGES WITH	T TUBE O.D.	T1 TUBE O.D.	A	B	E THRU HOLE	NH NUT HEX	BH BODY HEX
1-DRATT-2	100-R-2 2TUR1	1-SRATT-2	2-1 TRBZ	1/16	1/8	1.15	0.34	0.05	5/16	5/16
2-DRATT-1	200-R-1 1TUR2	2-SRATT-1	1-2 TRBZ	1/8	1/16	1.14	0.52	0.03	7/16	7/16
2-DRATT-2	200-R-2 2TUR2	2-SRATT-2	2-2 TRBZ	1/8	1/8	1.32	0.52	0.08	7/16	7/16
2-DRATT-4	200-R-4 4TUR2	2-SRATT-4	4-2 TRBZ	1/8	1/4	1.42	0.52	0.09	7/16	7/16
2-DRATT-6	200-R-6 6TUR2	2-SRATT-6	6-2 TRBZ	1/8	3/8	1.48	0.52	0.09	7/16	7/16
3-DRATT-4	300-R-4 -	3-SRATT-4	-	3/16	1/4	1.46	0.54	0.13	1/2	7/16
4-DRATT-2	400-R-2 2TUR4	4-SRATT-2	2-4 TRBZ	1/4	1/8	1.45	0.61	0.08	9/16	1/2
4-DRATT-4	400-R-4 4TUR4	4-SRATT-4	4-4 TRBZ	1/4	1/4	1.54	0.61	0.17	9/16	1/2
4-DRATT-6	400-R-6 6TUR4	4-SRATT-6	6-4 TRBZ	1/4	3/8	1.60	0.61	0.19	9/16	1/2
4-DRATT-8	400-R-8 8TUR4	4-SRATT-8	8-4 TRBZ	1/4	1/2	1.82	0.61	0.19	9/16	9/16
5-DRATT-6	500-R-6 6TUR5	5-SRATT-6	6-5 TRBZ	5/16	3/8	1.65	0.65	0.25	5/8	9/16
6-DRATT-4	600-R-4 4TUR6	6-SRATT-4	4-6 TRBZ	3/8	1/4	1.63	0.67	0.17	11/16	5/8
6-DRATT-6	600-R-6 6TUR6	6-SRATT-6	6-6 TRBZ	3/8	3/8	1.70	0.67	0.27	11/16	5/8
6-DRATT-8	600-R-8 8TUR6	6-SRATT-8	8-6 TRBZ	3/8	1/2	1.92	0.67	0.28	11/16	5/8
6-DRATT-10	600-R-10 10TUR6	6-SRATT-10	10-6 TRBZ	3/8	5/8	1.98	0.67	0.28	11/16	11/16
6-DRATT-12	600-R-12 12TUR6	6-SRATT-12	12-6 TRBZ	3/8	3/4	1.98	0.67	0.28	11/16	13/16
8-DRATT-4	810-R-4 4TUR8	8-SRATT-4	4-8 TRBZ	1/2	1/4	1.77	0.90	0.17	7/8	13/16
8-DRATT-6	810-R-6 6TUR8	8-SRATT-6	6-8 TRBZ	1/2	3/8	1.84	0.90	0.27	7/8	13/16
8-DRATT-8	810-R-8 -	8-SRATT-8	-	1/2	1/2	2.06	0.90	0.38	7/8	13/16
8-DRATT-10	810-R-10 10TUR8	8-SRATT-10	10-8 TRBZ	1/2	5/8	2.12	0.90	0.41	7/8	13/16
8-DRATT-12	810-R-12 12TUR8	8-SRATT-12	12-8 TRBZ	1/2	3/4	2.12	0.90	0.41	7/8	13/16
8-DRATT-14	- -	8-SRATT-14	-	1/2	7/8	2.21	0.90	0.41	7/8	15/16
8-DRATT-16	810-R-16 16TUR8	8-SRATT-16	16-8 TRBZ	1/2	1	2.37	0.90	0.41	7/8	1-1/16
10-DRATT-12	1010-R-12 12TUR10	10-SRATT-12	12-10 TRBZ	5/8	3/4	2.15	0.96	0.50	1	15/16
10-DRATT-14	1010-R-14 14TUR10	10-SRATT-14	14-10 TRBZ	5/8	7/8	2.21	0.96	0.50	1	15/16
10-DRATT-16	- -	-	-	5/8	1	2.40	0.96	0.50	1	1-1/16
12-DRATT-8	1210-R-8 8TUR12	12-SRATT-8	8-12 TRBZ	3/4	1/2	2.15	0.96	0.38	1-1/8	1-1/16
12-DRATT-16	1210-R-16 16TUR12	12-SRATT-16	16-12 TRBZ	3/4	1	2.46	0.96	0.63	1-1/8	1-1/16
14-DRATT-16	- -	14-SRATT-16	-	7/8	1	2.54	1.02	0.72	1-1/4	1-3/16
16-DRATT-16	- -	16-SRATT-16	-	1	1	2.82	1.24	0.80	1-1/2	1-3/8

NOTE: Dimensions subject to change, to be used for reference only.

DRPC/SRPC

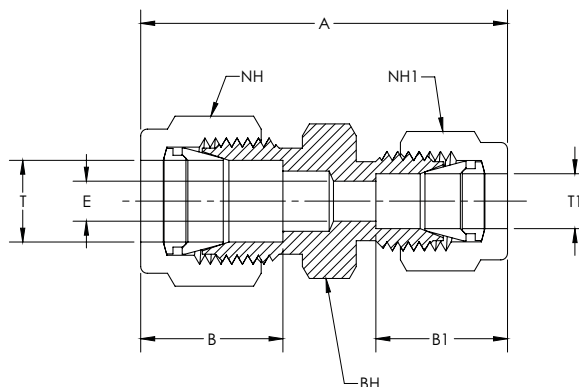
Reducing Port Connector

CBC/CS-Lok



CBC PART NUMBER	INTERCHANGES WITH	CS PART NUMBER	INTERCHANGES WITH	T TUBE O.D.	T1 TUBE O.D.	A	E THRU HOLE
4-DRPC-2	401-PC-2 2PC4	4-SRPC-2	2-4 ZPC	1/4	1/8	1.08	0.08
6-DRPC-4	601-PC-4 4PC6	6-SRPC-4	4-6 ZPC	3/8	1/4	1.12	0.17
8-DRPC-4	811-PC-4 4PC8	8-SRPC-4	4-8 ZPC	1/2	1/4	1.32	0.17
8-DRPC-6	811-PC-6 6PC8	8-SRPC-6	6-8 ZPC	1/2	3/8	1.43	0.27
12-DRPC-8	1211-PC-8 8PC12	12-SRPC-8	8-12 ZPC	3/4	1/2	1.71	0.38

NOTE: Dimensions subject to change, to be used for reference only.



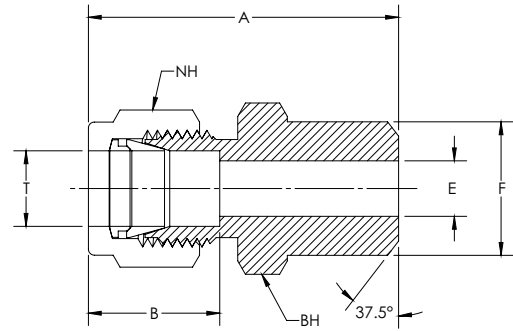
CBC PART NUMBER	INTERCHANGES WITH	CS PART NUMBER	INTERCHANGES WITH	T TUBE O.D.	T1 TUBE O.D.	A	B	B1	E THRU HOLE	NH NUT HEX	NH1 NUT HEX	BH BODY HEX	
2-DRU-1	200-6-1	2RU1	2-SRU-1	2-1 HBZ	1/8	1/16	1.23	0.52	0.34	0.05	7/16	5/16	7/16
4-DRU-1	400-6-1	4RU1	4-SRU-1	4-1 HBZ	1/4	1/16	1.35	0.61	0.34	0.05	9/16	5/16	1/2
4-DRU-2	400-6-2	4RU2	4-SRU-2	4-2 HBZ	1/4	1/8	1.52	0.61	0.52	0.09	9/16	7/16	1/2
4-DRU-3	400-6-3	4RU3	4-SRU-3	4-3 HBZ	1/4	3/16	1.55	0.61	0.54	0.13	9/16	1/2	1/2
5-DRU-2	500-6-2	5RU2	5-SRU-2	5-2 HBZ	5/16	1/8	1.59	0.65	0.52	0.09	5/8	7/16	9/16
5-DRU-4	500-6-4	5RU4	5-SRU-4	5-4 HBZ	5/16	1/4	1.68	0.65	0.61	0.19	5/8	9/16	9/16
6-DRU-1	600-6-1	6RU1	6-SRU-1	6-1 HBZ	3/8	1/16	1.45	0.67	0.34	0.05	11/16	5/16	5/8
6-DRU-2	600-6-2	6RU2	6-SRU-2	6-2 HBZ	3/8	1/8	1.62	0.67	0.52	0.09	11/16	7/16	5/8
6-DRU-4	600-6-4	6RU4	6-SRU-4	6-4 HBZ	3/8	1/4	1.71	0.67	0.61	0.19	11/16	9/16	5/8
6-DRU-5	600-6-5	6RU5	6-SRU-5	6-5 HBZ	3/8	5/16	1.76	0.67	0.65	0.25	11/16	5/8	5/8
8-DRU-2	810-6-2	8RU2	8-SRU-2	8-2 HBZ	1/2	1/8	1.79	0.90	0.52	0.09	7/8	7/16	13/16
8-DRU-4	810-6-4	8RU4	8-SRU-4	8-4 HBZ	1/2	1/4	1.85	0.90	0.61	0.19	7/8	9/16	13/16
8-DRU-6	810-6-6	8RU6	8-SRU-6	8-6 HBZ	1/2	3/8	1.91	0.90	0.67	0.28	7/8	11/16	13/16
10-DRU-6	1010-6-6	10RU6	10-SRU-6	10-6 HBZ	5/8	3/8	1.94	0.96	0.67	0.28	1	11/16	15/16
10-DRU-8	1010-6-8	10RU8	10-SRU-8	10-8 HBZ	5/8	1/2	2.05	0.96	0.90	0.41	1	7/8	15/16
12-DRU-4	1210-6-4	12RU4	12-SRU-4	12-4 HBZ	3/4	1/4	1.94	0.96	0.61	0.19	1-1/8	9/16	1-1/16
12-DRU-6	1210-6-6	12RU6	12-SRU-6	12-6 HBZ	3/4	3/8	2.01	0.96	0.67	0.28	1-1/8	11/16	1-1/16
12-DRU-8	1210-6-8	12RU8	12-SRU-8	12-8 HBZ	3/4	1/2	2.11	0.96	0.90	0.41	1-1/8	7/8	1-1/16
12-DRU-10	1210-6-10	12RU10	12-SRU-10	12-10 HBZ	3/4	5/8	2.11	0.96	0.96	0.50	1-1/8	1	1-1/16
16-DRU-8	1610-6-8	16RU8	16-SRU-8	16-8 HBZ	1	1/2	2.48	1.24	0.90	0.41	1-1/2	7/8	1-3/8
16-DRU-12	1610-6-12	16RU12	16-SRU-12	16-12 HBZ	1	3/4	2.49	1.24	0.96	0.63	1-1/2	1-1/8	1-3/8

NOTE: Dimensions subject to change, to be used for reference only.

DTBW/STBW

Tube to Pipe Butt Weld Connector

CBC/CS-Lok



CBC PART NUMBER	INTERCHANGES WITH		CS PART NUMBER	INTERCHANGES WITH		T TUBE O.D.	PIPE WELD SIZE	A	B	E THRU HOLE	F	NH1 NUT HEX	BH BODY HEX
4-DTBW-4	400-1-4W	4-1/4 ZHLW2	4-STBW-4	4-1/4 ZHBW2	1/4	1/4	1.48	0.61	0.19	0.54	9/16	9/16	
6-DTBW-4	600-1-4W	6-1/4 ZHLW2	6-STBW-4	6-1/4 ZHBW2	3/8	1/4	1.58	0.67	0.28	0.54	11/16	5/8	
6-DTBW-6	600-1-6W	6-3/8 ZHLW2	6-STBW-6	6-3/8 ZHBW2	3/8	3/8	1.58	0.67	0.28	0.68	11/16	3/4	
6-DTBW-8	600-1-8W	6 1/2 ZHLW2	6-STBW-8	6 1/2 ZHBW2	3/8	1/2	1.83	0.67	0.28	0.84	11/16	7/8	
8-DTBW-6	810-1-6W	8 3/8 ZHLW2	8-STBW-6	8 3/8 ZHBW2	1/2	3/8	1.71	0.90	0.41	0.68	7/8	13/16	
8-DTBW-8	810-1-8W	8-1/2 ZHLW2	8-STBW-8	8-1/2 ZHBW2	1/2	1/2	1.93	0.90	0.41	0.84	7/8	7/8	
8-DTBW-16	810-1-16W	-	8-STBW-16	-	1/2	1	2.18	0.90	0.41	1.32	7/8	1-3/8	
12-DTBW-12	1210-1-12W	12-3/4 ZHLW2	12-STBW-12	12-3/4 ZHBW2	3/4	3/4	1.99	0.96	0.63	1.05	1-1/8	1-1/16	
16-DTBW-12	1610-1-12W	-	16-STBW-12	-	1	3/4	2.24	1.24	0.63	1.05	1-1/2	1-3/8	
16-DTBW-16	1610-1-16W	16-1 ZHLW2	16-STBW-16	16-1 ZHBW2	1	1	2.46	1.24	0.88	1.32	1-1/2	1-3/8	

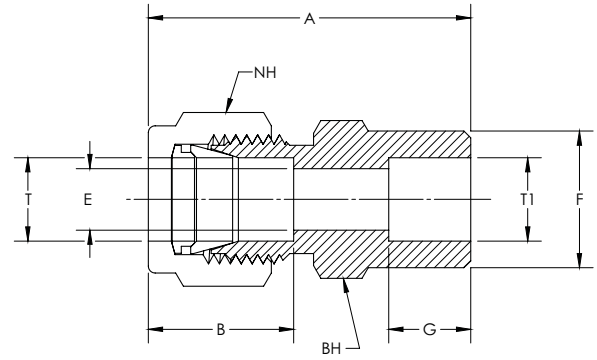
NOTE: Dimensions subject to change, to be used for reference only.

Wall Thickness at weld end is based on schedule 80 pipe.

*Fittings may have a larger ID on weld end.

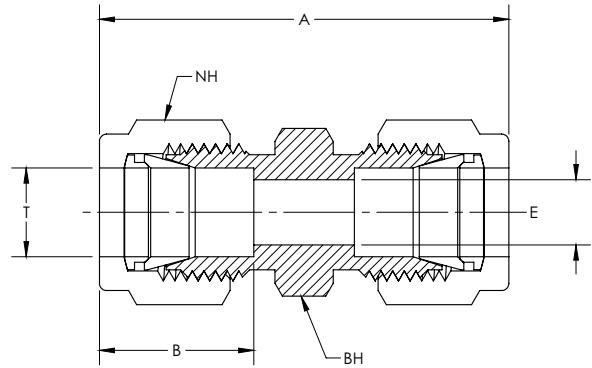
DTSW/STSW

Tube to Tube Socket Weld Connector



CBC PART NUMBER	INTERCHANGES WITH		CS PART NUMBER	INTERCHANGES WITH		T TUBE O.D.	T1 TUBE O.D.	A	B	E THRU HOLE	F	G	NH1 NUT HEX	BH BODY HEX
4-DTSW-4	400-6-4W	4-4 ZHLW	4-STSW-4	4-4 ZHBW		1/4	1/4	1.32	0.61	0.19	0.48	0.28	9/16	1/2
8-DTSW-8	810-6-8W	8-8 ZHLW	8-STSW-8	8-8 ZHBW		1/2	1/2	1.62	0.90	0.41	0.73	0.38	7/8	13/16
12-DTSW-12	1210-6-12W1	2-12 ZHLW	12-STSW-12	12-12 ZHBW		3/4	3/4	1.71	0.96	0.63	1.04	0.44	1-1/8	1-1/16
16-DTSW-16	1610-6-16W1	6-16 ZHLW	16-STSW-16	16-16 ZHBW		1	1	2.09	1.24	0.88	1.36	0.62	1-1/2	1-3/8

NOTE: Dimensions subject to change, to be used for reference only.



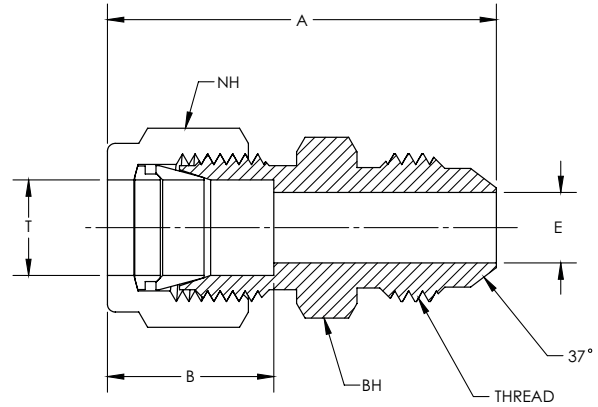
CBC PART NUMBER	INTERCHANGES WITH	CS PART NUMBER	INTERCHANGES WITH	T TUBE O.D.	A	B	E THRU HOLE	NH NUT HEX	BH BODY HEX	
1-DU	100-6	1SC1	1-SU	1-1 HBZ	1/16	1.00	0.34	0.05	5/16	5/16
2-DU	200-6	2SC2	2-SU	2-2 HBZ	1/8	1.41	0.52	0.09	7/16	7/16
3-DU	300-6	3SC3	3-SU	3-3 HBZ	3/16	1.47	0.54	0.13	1/2	7/16
4-DU	400-6	4SC4	4-SU	4-4 HBZ	1/4	1.61	0.61	0.19	9/16	1/2
5-DU	500-6	5SC5	5-SU	5-5 HBZ	5/16	1.72	0.65	0.25	5/8	9/16
6-DU	600-6	6SC6	6-SU	6-6 HBZ	3/8	1.78	0.67	0.28	11/16	5/8
8-DU	810-6	8SC8	8-SU	8-8 HBZ	1/2	2.02	0.90	0.41	7/8	13/16
10-DU	1010-6	10SC10	10-SU	10-10 HBZ	5/8	2.04	0.96	0.50	1	15/16
12-DU	1210-6	12SC12	12-SU	12-12 HBZ	3/4	2.11	0.96	0.63	1-1/8	1-1/16
14-DU	1410-6	14SC14	14-SU	14-14 HBZ	7/8	2.17	1.02	0.72	1-1/4	1-3/16
16-DU	1610-6	16SC16	16-SU	16-16 HBZ	1	2.58	1.24	0.88	1-1/2	1-3/8

NOTE: Dimensions subject to change, to be used for reference only.

DUANF/SUANF

Tube to AN Flare Union

CBC/CS-Lok



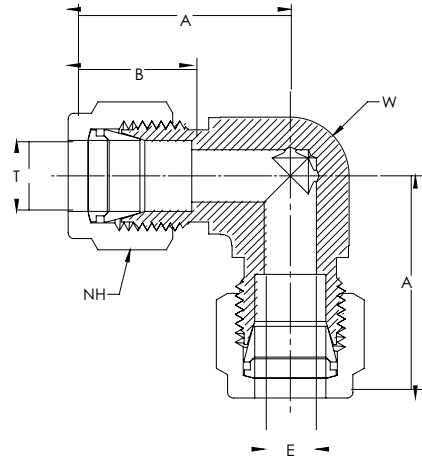
CBC PART NUMBER	INTERCHANGES WITH	CS PART NUMBER	INTERCHANGES WITH	T TUBE O.D.	THREAD	A	B	E THRU HOLE	NH NUT HEX	BH BODY HEX
2-DUANF-2	200-6-2AN	2-SUANF-2	2-2 XHBZ	1/8	5/16-24 UNJF	1.25	0.52	0.06	7/16	7/16
2-DUANF-4	200-6-4AN	2-SUANF-4	4-2 XHBZ	1/8	7/16-20 UNJF	1.39	0.52	0.09	7/16	1/2
4-DUANF-4	400-6-4AN	4-SUANF-4	4-4 XHBZ	1/4	7/16-20 UNJF	1.48	0.61	0.17	9/16	1/2
5-DUANF-5	500-6-5AN	5-SUANF-5	5-5 XHBZ	5/16	1/2-20 UNJF	1.53	0.65	0.23	5/8	9/16
5-DUANF-6	-	5-SUANF-6	-	5/16	9/16-18 UNJF	1.54	0.65	0.25	5/8	5/8
6-DUANF-4	600-6-4AN	6-SUANF-4	4-6 XHBZ	3/8	7/16-20 UNJF	1.56	0.67	0.17	11/16	5/8
6-DUANF-6	600-6-6AN	6-SUANF-6	6-6 XHBZ	3/8	9/16-18 UNJF	1.56	0.67	0.30	11/16	5/8
8-DUANF-8	810-6-8AN	8-SUANF-8	8-8 XHBZ	1/2	3/4-16 UNJF	1.80	0.90	0.39	7/8	13/16
10-DUANF-10	1010-6-10AN	10-SUANF-10	10-10 XHBZ	5/8	7/8-14 UNJF	1.93	0.96	0.48	1	15/16
12-DUANF-12	1210-6-12AN	12-SUANF-12	12-12 XHBZ	3/4	1-1/16-12 UNJF	2.10	0.96	0.61	1-1/8	1-1/8
16-DUANF-16	1610-6-16AN	16-SUANF-16	16-16 XHBZ	1	1-5/16-12 UNJF	2.43	1.24	0.85	1-1/2	1-3/8

NOTE: Dimensions subject to change, to be used for reference only.

DELU/SELU

Union Elbow

CBC/CS-Lok

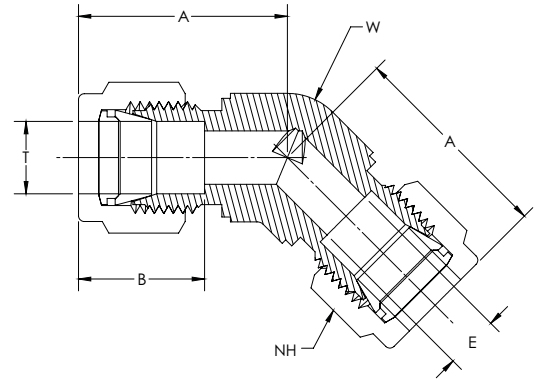


CBC PART NUMBER	INTERCHANGES WITH		CS PART NUMBER	INTERCHANGES WITH		T TUBE O.D.	A	B	E THRU HOLE	NH NUT HEX	W WRENCH FLAT
1-DELU-1	100-9	1EE1	1-SELU-1	1-1	EBZ	1/16	0.80	0.34	0.05	5/16	1/2
2-DELU-2	200-9	2EE2	2-SELU-2	2-2	EBZ	1/8	0.98	0.52	0.09	7/16	1/2
3-DELU-3	300-9	3EE3	3-SELU-3	3-3	EBZ	3/16	1.00	0.54	0.13	1/2	1/2
4-DELU-4	400-9	4EE4	4-SELU-4	4-4	EBZ	1/4	1.06	0.61	0.19	9/16	1/2
5-DELU-5	500-9	5EE5	5-SELU-5	5-5	EBZ	5/16	1.18	0.65	0.25	5/8	5/8
6-DELU-6	600-9	6EE6	6-SELU-6	6-6	EBZ	3/8	1.20	0.67	0.28	11/16	5/8
8-DELU-8	810-9	8EE8	8-SELU-8	8-8	EBZ	1/2	1.42	0.90	0.41	7/8	13/16
10-DELU-10	1010-9	10EE10	10-SELU-10	10-10	EBZ	5/8	1.50	0.96	0.50	1	15/16
12-DELU-12	1210-9	12EE12	12-SELU-12	12-12	EBZ	3/4	1.57	0.96	0.63	1-1/8	1-1/16
14-DELU-14	1410-9	14EE14	14-SELU-14	14-14	EBZ	7/8	1.76	1.02	0.72	1-1/4	1-3/8
16-DELU-16	1610-9	16EE16	16-SELU-16	16-16	EBZ	1	1.95	1.24	0.88	1-1/2	1-3/8

NOTE: Dimensions subject to change, to be used for reference only.

DELU45/SELU45

Union 45° Elbow



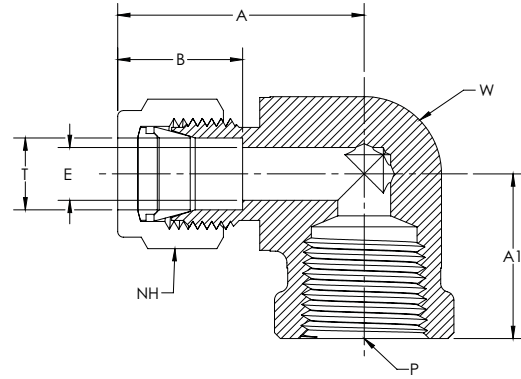
CBC PART NUMBER	INTERCHANGES WITH	CS PART NUMBER	INTERCHANGES WITH	T TUBE O.D.	A	B	E THRU HOLE	NH NUT HEX	W WRENCH FLAT
4-DELU45-4	400-95	4-SELU45-4	-	1/4	0.97	0.61	0.19	9/16	1/2
6-DELU45-6	-	6-SELU45-6	-	3/8	1.11	0.67	0.28	11/16	5/8
8-DELU45-8	810-95	8-SELU45-8	-	1/2	1.26	0.90	0.41	7/8	13/16
12-DELU45-12		12-SELU45-12		3/4	1.33	0.96	0.63	1-1/8	1-1/16

NOTE: Dimensions subject to change, to be used for reference only.

DFE/SFE

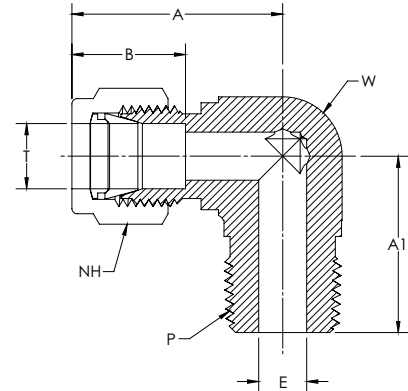
Female Elbow

CBC/CS-Lok



CBC PART NUMBER	INTERCHANGES WITH	CS PART NUMBER	INTERCHANGES WITH	T TUBE O.D.	P PIPE END NPT	A	A1	B	E THRU HOLE	NH NUT HEX	W WRENCH FLAT	
2-DFE-2	200-8-2	2FEL2N	2-SFE-2	2-2 DBZ	1/8	1/8	0.98	0.75	0.52	0.09	7/16	1/2
B-2-DFE-2	200-8-2	2FEL2N	B-2-SFE-2	2-2 DBZ	1/8	1/8	1.05	0.75	0.52	0.09	7/16	5/8
2-DFE-4	200-8-4	2FEL4N	2-SFE-4	2-4 DBZ	1/8	1/4	1.09	0.88	0.52	0.09	7/16	11/16
B-2-DFE-4	200-8-4	2FEL4N	B-2-SFE-4	2-4 DBZ	1/8	1/4	1.16	0.88	0.52	0.09	7/16	13/16
4-DFE-2	400-8-2	4FEL2N	4-SFE-2	4-2 DBZ	1/4	1/8	1.06	0.75	0.61	0.19	9/16	1/2
B-4-DFE-2	400-8-2	4FEL2N	B-4-SFE-2	4-2 DBZ	1/4	1/8	1.14	0.75	0.61	0.19	9/16	5/8
4-DFE-4	400-8-4	4FEL4N	4-SFE-4	4-4 DBZ	1/4	1/4	1.17	0.88	0.61	0.19	9/16	11/16
B-4-DFE-4	400-8-4	4FEL4N	B-4-SFE-4	4-4 DBZ	1/4	1/4	1.25	0.88	0.61	0.19	9/16	13/16
4-DFE-6	400-8-6	4FEL6N	4-SFE-6	4-6 DBZ	1/4	3/8	1.25	0.88	0.61	0.19	9/16	13/16
4-DFE-8	400-8-8	4FEL8N	4-SFE-8	4-8 DBZ	1/4	1/2	1.40	1.13	0.61	0.19	9/16	1-1/16
5-DFE-2	500-8-2	5FEL2N	5-SFE-2	5-2 DBZ	5/16	1/8	1.18	0.75	0.65	0.25	5/8	5/8
5-DFE-4	500-8-4	5FEL4N	5-SFE-4	5-4 DBZ	5/16	1/4	1.22	0.88	0.65	0.25	5/8	11/16
B-5-DFE-4	500-8-4	5FEL4N	B-5-SFE-4	5-4 DBZ	5/16	1/4	1.30	0.88	0.65	0.25	5/8	13/16
6-DFE-2	600-8-2	6FEL2N	6-SFE-2	6-2 DBZ	3/8	1/8	1.20	0.75	0.67	0.28	11/16	5/8
6-DFE-4	600-8-4	6FEL4N	6-SFE-4	6-4 DBZ	3/8	1/4	1.24	0.88	0.67	0.28	11/16	11/16
B-6-DFE-4	600-8-4	6FEL4N	B-6-SFE-4	6-4 DBZ	3/8	1/4	1.32	0.88	0.67	0.28	11/16	13/16
6-DFE-6	600-8-6	6FEL6N	6-SFE-6	6-6 DBZ	3/8	3/8	1.32	0.88	0.67	0.28	11/16	13/16
6-DFE-8	600-8-8	6FEL8N	6-SFE-8	6-8 DBZ	3/8	1/2	1.47	1.13	0.67	0.28	11/16	1-1/16
8-DFE-2	-	-	8-SFE-2	8-2 DBZ	1/2	1/8	1.42	0.88	0.90	0.33	7/8	13/16
8-DFE-4	810-8-4	8FEL4N	8-SFE-4	8-4 DBZ	1/2	1/4	1.42	0.88	0.90	0.41	7/8	13/16
8-DFE-6	810-8-6	8FEL6N	8-SFE-6	8-6 DBZ	1/2	3/8	1.42	0.88	0.90	0.41	7/8	13/16
8-DFE-8	810-8-8	8FEL8N	8-SFE-8	8-8 DBZ	1/2	1/2	1.57	1.13	0.90	0.41	7/8	1-1/16
8-DFE-12	810-8-12	-	8-SFE-12	8-12 DBZ	1/2	3/4	1.76	1.25	0.90	0.41	7/8	1-3/8
10-DFE-6	1010-8-6	10FEL6N	10-SFE-6	10-6 DBZ	5/8	3/8	1.50	0.88	0.96	0.50	1	15/16
10-DFE-8	1010-8-8	10FEL8N	10-SFE-8	10-8 DBZ	5/8	1/2	1.57	1.13	0.96	0.50	1	1-1/16
12-DFE-8	1210-8-8	12FEL8N	12-SFE-8	12-8 DBZ	3/4	1/2	1.57	1.13	0.96	0.63	1-1/8	1-1/16
12-DFE-12	1210-8-12	12FEL12N	12-SFE-12	12-12 DBZ	3/4	3/4	1.76	1.25	0.96	0.63	1-1/8	1-3/8
14-DFE-12	1410-8-12	14FEL12N	14-SFE-12	14-12 DBZ	7/8	3/4	1.76	1.25	1.02	0.72	1-1/4	1-3/8
16-DFE-16	1610-8-16	16FEL16N	16-SFE-16	16-16 DBZ	1	1	2.12	1.50	1.24	0.88	1-1/2	1-5/8

NOTE: Dimensions subject to change, to be used for reference only.



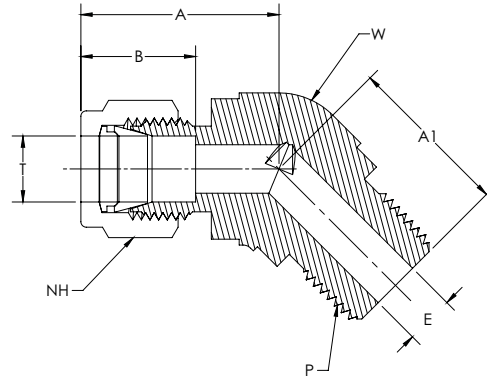
CBC PART NUMBER	INTERCHANGES WITH	CS PART NUMBER	INTERCHANGES WITH	T TUBE O.D.	P PIPE END NPT	A	A1	B	E THRU HOLE	NH NUT HEX	W WRENCH FLAT	
1-DME-1	100-2-1	1MSEL1N	1-SME-1	1-1 CBZ	1/16	1/16	0.80	0.74	0.34	0.05	5/16	1/2
1-DME-2	100-2-2	1MSEL2N	1-SME-2	1-2 CBZ	1/16	1/8	0.80	0.74	0.34	0.05	5/16	1/2
2-DME-1	200-2-1	2MSEL1N	2-SME-1	2-1 CBZ	1/8	1/16	0.98	0.74	0.52	0.09	7/16	1/2
2-DME-2	200-2-2	2MSEL2N	2-SME-2	2-2 CBZ	1/8	1/8	0.98	0.74	0.52	0.09	7/16	1/2
2-DME-4	200-2-4	2MSEL4N	2-SME-4	2-4 CBZ	1/8	1/4	0.98	0.93	0.53	0.09	7/16	1/2
B-2-DME-4	200-2-4	2MSEL4N	B-2-SME-4	2-4 CBZ	1/8	1/4	1.05	1.00	0.52	0.09	7/16	5/8
2-DME-6	200-2-6	-	2-SME-6	-	1/8	3/8	1.09	1.03	0.52	0.09	7/16	11/16
B-2-DME-6	200-2-6	-	B-2-SME-6	-	1/8	3/8	1.16	1.11	0.52	0.09	7/16	13/16
3-DME-2	300-2-2	3MSEL2N	3-SME-2	3-2 CBZ	3/16	1/8	1.00	0.74	0.54	0.13	1/2	1/2
3-DME-4	300-2-4	3MSEL4N	3-SME-4	3-4 CBZ	3/16	1/4	1.00	0.93	0.54	0.13	1/2	1/2
B-3-DME-4	300-2-4	3MSEL4N	B-3-SME-4	3-4 CBZ	3/16	1/4	1.07	1.00	0.54	0.13	1/2	5/8
4-DME-1	400-2-1	4MSEL1N	4-SME-1	4-1 CBZ	1/4	1/16	1.06	0.74	0.61	0.13	9/16	1/2
4-DME-2	400-2-2	4MSEL2N	4-SME-2	4-2 CBZ	1/4	1/8	1.06	0.74	0.61	0.19	9/16	1/2
4-DME-4	400-2-4	4MSEL4N	4-SME-4	4-4 CBZ	1/4	1/4	1.06	0.93	0.61	0.19	9/16	1/2
B-4-DME-4	400-2-4	4MSEL4N	B-4-SME-4	4-4 CBZ	1/4	1/4	1.14	1.00	0.61	0.19	9/16	5/8
4-DME-6	400-2-6	4MSEL6N	4-SME-6	4-6 CBZ	1/4	3/8	1.17	1.03	0.61	0.19	9/16	11/16
B-4-DME-6	400-2-6	4MSEL6N	B-4-SME-6	4-6 CBZ	1/4	3/8	1.25	1.11	0.61	0.19	9/16	13/16
4-DME-8	400-2-8	4MSEL8N	4-SME-8	4-8 CBZ	1/4	1/2	1.25	1.30	0.61	0.19	9/16	13/16
4-DME-12	400-2-12	-	4-SME-12	-	1/4	3/4	1.40	1.45	0.61	0.19	9/16	1-1/16
5-DME-2	500-2-2	5MSEL2N	5-SME-2	5-2 CBZ	5/16	1/8	1.18	0.82	0.65	0.19	5/8	5/8
5-DME-4	500-2-4	5MSEL4N	5-SME-4	5-4 CBZ	5/16	1/4	1.18	1.00	0.65	0.25	5/8	5/8
5-DME-6	500-2-6	-	5-SME-6	-	5/16	3/8	1.22	1.03	0.65	0.25	5/8	11/16
B-5-DME-6	500-2-6	-	B-5-SME-6	-	5/16	3/8	1.30	1.11	0.65	0.25	5/8	13/16
6-DME-2	600-2-2	6MSEL2N	6-SME-2	6-2 CBZ	3/8	1/8	1.20	0.82	0.67	0.19	11/16	5/8
6-DME-4	600-2-4	6MSEL4N	6-SME-4	6-4 CBZ	3/8	1/4	1.20	1.00	0.67	0.28	11/16	5/8
6-DME-6	600-2-6	6MSEL6N	6-SME-6	6-6 CBZ	3/8	3/8	1.24	1.03	0.67	0.28	11/16	11/16
B-6-DME-6	600-2-6	6MSEL6N	B-6-SME-6	6-6 CBZ	3/8	3/8	1.32	1.11	0.67	0.28	11/16	13/16
6-DME-8	600-2-8	6MSEL8N	6-SME-8	6-8 CBZ	3/8	1/2	1.32	1.30	0.67	0.28	11/16	13/16
6-DME-12	600-2-12	6MSEL12N	6-SME-12	6-12 CBZ	3/8	3/4	1.47	1.45	0.67	0.28	11/16	1-1/16
8-DME-2	810-2-2	-	8-SME-2	-	1/2	1/8	1.42	0.92	0.90	0.19	7/8	13/16
8-DME-4	810-2-4	8MSEL4N	8-SME-4	8-4 CBZ	1/2	1/4	1.42	1.11	0.90	0.28	7/8	13/16
8-DME-6	810-2-6	8MSEL6N	8-SME-6	8-6 CBZ	1/2	3/8	1.42	1.11	0.90	0.38	7/8	13/16
8-DME-8	810-2-8	8MSEL8N	8-SME-8	8-8 CBZ	1/2	1/2	1.42	1.30	0.90	0.41	7/8	13/16
8-DME-12	810-2-12	8MSEL12N	8-SME-12	8-12 CBZ	1/2	3/4	1.57	1.45	0.90	0.41	7/8	1-1/16
8-DME-16	810-2-16	-	8-SME-16	-	1/2	1	1.76	1.83	0.90	0.41	7/8	1-3/8
10-DME-4	-	-	10-SME-4	-	5/8	1/4	1.50	1.19	0.96	0.28	1	15/16
10-DME-6	1010-2-6	10MSEL6N	10-SME-6	10-6 CBZ	5/8	3/8	1.50	1.19	0.96	0.38	1	15/16
10-DME-8	1010-2-8	10MSEL8N	10-SME-8	10-8 CBZ	5/8	1/2	1.50	1.38	0.96	0.47	1	15/16
10-DME-12	1010-2-12	10MSEL12N	10-SME-12	10-12 CBZ	5/8	3/4	1.57	1.45	0.96	0.50	1	1-1/16
12-DME-4	-	-	12-SME-4	-	3/4	1/4	1.57	1.25	0.96	0.28	1-1/8	1-1/16
12-DME-6	-	-	12-SME-6	-	3/4	3/8	1.57	1.25	0.96	0.38	1-1/8	1-1/16
12-DME-8	1210-2-8	12MSEL8N	12-SME-8	12-8 CBZ	3/4	1/2	1.57	1.45	0.96	0.47	1-1/8	1-1/16
12-DME-12	1210-2-12	12MSEL12N	12-SME-12	12-12 CBZ	3/4	3/4	1.57	1.45	0.96	0.63	1-1/8	1-1/16
12-DME-16	1210-2-16	-	12-SME-16	-	3/4	1	1.76	1.83	0.96	0.63	1-1/8	1-3/8
14-DME-8	-	-	14-SME-8	-	7/8	1/2	1.76	1.64	1.02	0.47	1-1/4	1-3/8
14-DME-12	1410-2-12	14MSEL12N	14-SME-12	14-12 CBZ	7/8	3/4	1.76	1.64	1.02	0.63	1-1/4	1-3/8
16-DME-8	-	-	16-SME-8	-	1	1/2	1.95	1.64	1.24	0.47	1-1/2	1-3/8
16-DME-12	1610-2-12	16MSEL12N	16-SME-12	16-12 CBZ	1	3/4	1.95	1.64	1.24	0.63	1-1/2	1-3/8
16-DME-16	1610-2-16	16MSEL16N	16-SME-16	16-16 CBZ	1	1	1.95	1.83	1.24	0.88	1-1/2	1-3/8

NOTE: Dimensions subject to change, to be used for reference only.

DME45/SME45

Male 45° Elbow

CBC/CS-Lok

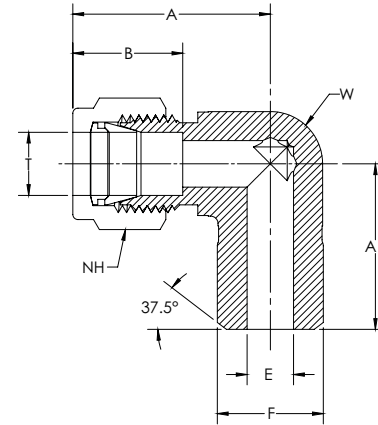


CBC PART NUMBER	INTERCHANGES WITH	CS PART NUMBER	INTERCHANGES WITH	T TUBE O.D.	P PIPE END NPT	A	A1	B	E THRU HOLE	NH NUT HEX	W WRENCH FLAT
4-DME45-2	400-5-2 4MVEL2N	4-SME45-2	4-2 VBZ	1/4	1/8	0.97	0.65	0.61	0.19	9/16	1/2
4-DME45-4	400-5-4 4MVEL4N	4-SME45-4	4-4 VBZ	1/4	1/4	0.97	0.83	0.61	0.19	9/16	1/2
6-DME45-4	600-5-4 6MVEL4N	6-SME45-4	6-4 VBZ	3/8	1/4	1.11	0.90	0.67	0.28	11/16	5/8
6-DME45-6	600-5-6 6MVEL6N	6-SME45-6	6-6 VBZ	3/8	3/8	1.15	0.95	0.67	0.28	11/16	13/16
8-DME45-8	810-5-8 -	8-SME45-8	-	1/2	1/2	1.26	1.14	0.90	0.41	7/8	13/16

NOTE: Dimensions subject to change, to be used for reference only.

DTBWE/STBWE

Tube to Pipe Butt Weld Elbow



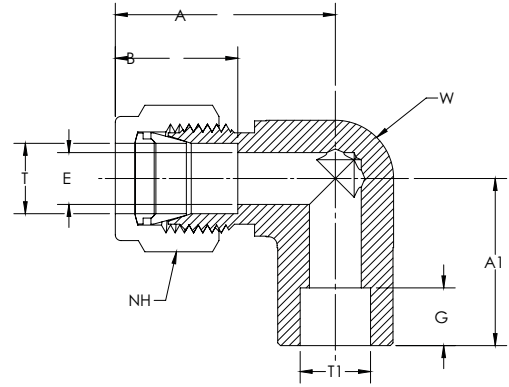
CBC PART NUMBER	INTERCHANGES WITH		CS PART NUMBER	INTERCHANGES WITH		T	P PIPE	A	A1	B	E	F	NH1	W
						TUBE	END							
						O.D.	NPT	HOLE	HEX	FLAT				
6-DTBWE-4	600-2-4W	6-1/4 ZELW2	6-STBWE-4	6-1/4 ZEBW2	3/8	1/4	1.20	1.00	0.67	0.28	0.54	11/16	5/8	
8-DTBWE-8	810-2-8W	8-1/2 ZELW2	8-STBWE-8	8-1/2 ZEBW2	1/2	1/2	1.42	1.31	0.90	0.41	0.84	7/8	13/16	
12-DTBWE-12	1210-2-12W	12-3/4 ZELW2	12-STBWE-12	12-3/4 ZEBW2	3/4	3/4	1.57	1.48	0.96	0.63	1.05	1 1/8	1 1/16	

NOTE: Dimensions subject to change, to be used for reference only.
 Wall Thickness at weld end is based on schedule 80 pipe.
 *Fittings may have a larger ID on weld end

DTSWE/STSWE

Tube to Tube Socket Weld Elbow

CBC/CS-Lok



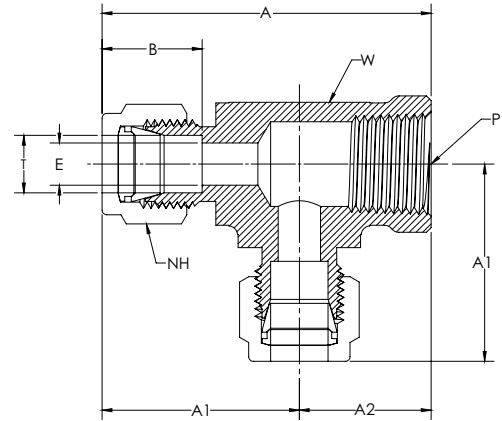
CBC PART NUMBER	INTERCHANGES WITH	CS PART NUMBER	INTERCHANGES WITH	T TUBE O.D.	T1 TUBE O.D.	A	A1	B	E THRU HOLE	G	NH1 NUT HEX	W WRENCH FLAT
6-DTSWE-6	600-9-6W 6-6 ZELW	6-STSWWE-6	6-6 ZEBW	3/8	3/8	1.20	0.91	0.67	0.28	0.31	11/16	5/8

NOTE: Dimensions subject to change, to be used for reference only.

DTFT/STFT

Female Run Tee

CBC/CS-Lok



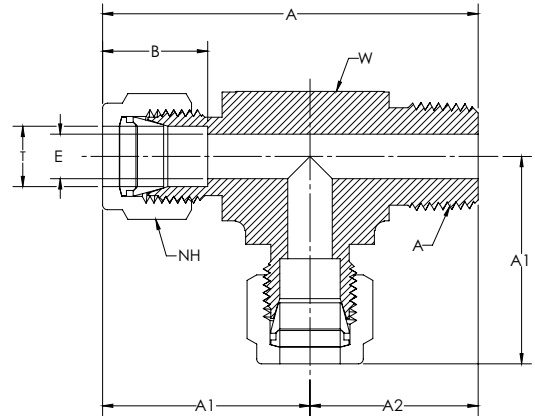
CBC PART NUMBER	INTERCHANGES WITH		CS PART NUMBER	INTERCHANGES WITH	T TUBE O.D.	P PIPE END NPT	A	A1	A2	B	E THRU HOLE	NH NUT HEX	W WRENCH FLAT
2-DTFT-2	200-3TFT	2FRT2N	2-STFT-2	2-2-2 MBZ	1/8	1/8	1.80	1.05	0.75	0.52	0.09	7/16	5/8
4-DTFT-2	400-3TFT	4FRT2N	4-STFT-2	4-2-4 MBZ	1/4	1/8	1.89	1.14	0.75	0.61	0.19	9/16	5/8
4-DTFT-4	400-3-4TFT	4FRT4N	4-STFT-4	4-4-4 MBZ	1/4	1/4	2.13	1.25	0.88	0.61	0.19	9/16	13/16
6-DTFT-4	600-3TFT	6FRT4N	6-STFT-4	6-4-6 MBZ	3/8	1/4	2.19	1.32	0.88	0.67	0.28	11/16	13/16
6-DTFT-6	600-3-3TFT	-	6-STFT-6	-	3/8	3/8	2.19	1.32	0.88	0.67	0.28	11/16	13/16
B-6-DTFT-6	600-3-3TFT	-	B-6-STFT-6	-	3/8	3/8	2.30	1.43	0.88	0.67	0.28	11/16	1
8-DTFT-4	-	8FRT4N	8-STFT-4	8-4-8 MBZ	1/2	1/4	2.30	1.42	0.88	0.90	0.41	7/8	13/16
8-DTFT-6	810-3TFT	8FRT6N	8-STFT-6	8-6-8 MBZ	1/2	3/8	2.30	1.42	0.88	0.90	0.41	7/8	13/16
B-8-DTFT-6	810-3TFT	8FRT6N	B-8-STFT-6	8-6-8 MBZ	1/2	3/8	2.57	1.57	1.00	0.90	0.41	7/8	1 1/16
8-DTFT-8	810-3-3TFT	8FRT8N	8-STFT-8	8-8-8 MBZ	1/2	1/2	2.70	1.57	1.13	0.90	0.41	7/8	1 1/16
10-DTFT-8	-	10FRT8N	10-STFT-8	10-8-10 MBZ	5/8	1/2	2.69	1.57	1.13	0.96	0.50	1	1 1/16
12-DTFT-12	1210-3TFT	12FRT12N	12-STFT-12	12-12-12 MBZ	3/4	3/4	3.01	1.76	1.25	0.96	0.63	1 1/8	1 3/8
16-DTFT-12	1610-3-12TFT	16FRT12N	16-STFT-12	16-12-16 MBZ	1	3/4	3.20	1.95	1.25	1.24	0.88	1 1/2	1 3/8
16-DTFT-16	1610-3TFT	16FRT16N	16-STFT-16	16-16-16 MBZ	1	1	3.62	2.12	1.50	1.24	0.88	1 1/2	1 5/8

NOTE: Dimensions subject to change, to be used for reference only.

DTMT/STMT

Male Run Tee

CBC/CS-Lok



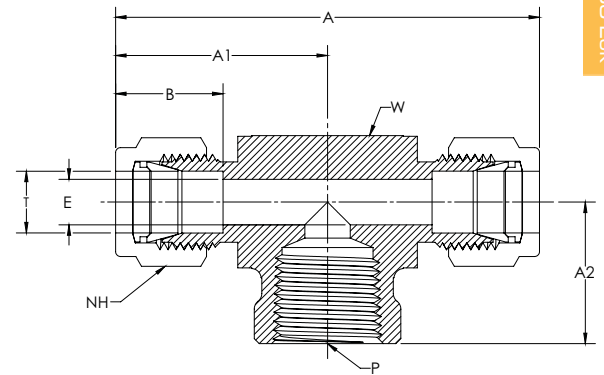
CBC PART NUMBER	INTERCHANGES WITH		CS PART NUMBER	INTERCHANGES WITH	T TUBE O.D.	P PIPE END NPT	A	A1	A2	B	E THRU HOLE	NH NUT HEX	W WRENCH FLAT
2-DTMT-2	200-3TMT	2MRT2N	2-STMT-2	2-2-2 RBZ	1/8	1/8	1.72	0.98	0.74	0.52	0.09	7/16	1/2
2-DTMT-4	200-3-4TMT	2MRT4N	2-STMT-4	2-4-2 RBZ	1/8	1/4	1.99	1.05	0.94	0.52	0.09	7/16	5/8
4-DTMT-2	400-3TMT	4MRT2N	4-STMT-2	4-2-4 RBZ	1/4	1/8	1.81	1.06	0.74	0.61	0.19	9/16	1/2
4-DTMT-4	400-3-4TMT	4MRT4N	4-STMT-4	4-4-4 RBZ	1/4	1/4	2.08	1.14	0.94	0.61	0.19	9/16	5/8
5-DTMT-2	500-3TMT	5MRT2N	5-STMT-2	5-2-5 RBZ	5/16	1/8	2.01	1.19	0.82	0.65	0.19	5/8	5/8
6-DTMT-4	600-3TMT	6MRT4N	6-STMT-4	6-4-6 RBZ	3/8	1/4	2.15	1.21	0.94	0.67	0.28	11/16	5/8
6-DTMT-6	600-3-6TMT	6MRT6N	6-STMT-6	6-6-6 RBZ	3/8	3/8	2.38	1.32	1.06	0.67	0.28	11/16	13/16
8-DTMT-6	810-3TMT	8MRT6N	8-STMT-6	8-6-8 RBZ	1/2	3/8	2.48	1.42	1.06	0.90	0.41	7/8	13/16
8-DTMT-8	810-3-8TMT	8MRT8N	8-STMT-8	8-8-8 RBZ	1/2	1/2	2.72	1.42	1.30	0.90	0.41	7/8	13/16
B-8-DTMT-8	810-3-8TMT	8MRT8N	B-8-STMT-8	8-8-8 RBZ	1/2	1/2	2.95	1.57	1.38	0.90	0.41	7/8	1 1/16
10-DTMT-8	1010-3TMT	10MRT8N	10-STMT-8	10-8-10 RBZ	5/8	1/2	2.94	1.57	1.38	0.96	0.47	1	1 1/16
12-DTMT-12	1210-3TMT	12MRT12N	12-STMT-12	12-12-12 RBZ	3/4	3/4	2.95	1.57	1.38	0.93	0.63	1 1/8	1 1/16
14-DTMT-6	-	-	14-STMT-6	-	7/8	3/8	3.21	1.76	1.45	1.02	0.38	1 1/4	1 3/8
14-DTMT-8	-	-	14-STMT-8	-	7/8	1/2	3.26	1.76	1.50	1.02	0.47	1 1/4	1 3/8

NOTE: Dimensions subject to change, to be used for reference only.

DTTF/STTF

Female Branch Tee

CBC/CS-Lok



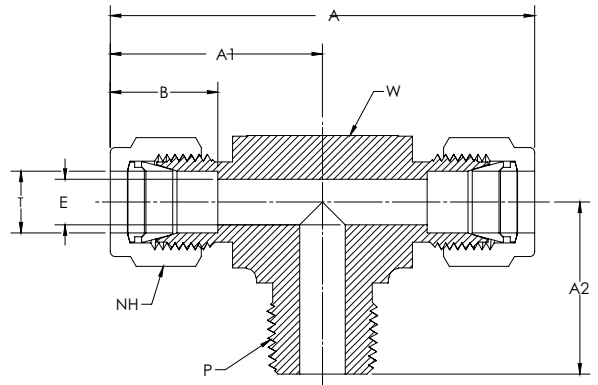
CBC PART NUMBER	INTERCHANGES WITH		CS PART NUMBER	INTERCHANGES WITH	T TUBE O.D.	P PIPE END NPT	A	A1	A2	B	E THRU HOLE	NH NUT HEX	W WRENCH FLAT
2-DTTF-2	200-3TTF	2FBT2N	2-STTF-2	2-2-2 OBZ	1/8	1/8	2.11	1.05	0.75	0.52	0.09	7/16	5/8
4-DTTF-2	400-3TTF	4FBT2N	4-STTF-2	4-4-2 OBZ	1/4	1/8	2.29	1.14	0.75	0.61	0.19	9/16	5/8
4-DTTF-4	400-3-4TTF	4FBT4N	4-STTF-4	4-4-4 OBZ	1/4	1/4	2.51	1.25	0.88	0.61	0.19	9/16	13/16
6-DTTF-4	600-3TTF	6FBT4N	6-STTF-4	6-6-4 OBZ	3/8	1/4	2.63	1.32	0.88	0.67	0.28	11/16	13/16
6-DTTF-6	600-3-6TTF	-	6-STTF-6	-	3/8	3/8	2.63	1.32	0.88	0.67	0.28	11/16	13/16
8-DTTF-4	810-3-4TTF	8FBT4N	8-STTF-4	8-8-4 OBZ	1/2	1/4	2.84	1.42	0.88	0.90	0.41	7/8	13/16
8-DTTF-6	810-3TTF	8FBT6N	8-STTF-6	8-8-6 OBZ	1/2	3/8	2.84	1.42	0.88	0.90	0.41	7/8	13/16
B-8-DTTF-6	810-3TTF	8FBT6N	B-8-STTF-6	8-8-6 OBZ	1/2	3/8	3.14	1.57	1.13	0.90	0.41	7/8	1 1/16
8-DTTF-8	810-3-8TTF	8FBT8N	8-STTF-8	8-8-8 OBZ	1/2	1/2	3.14	1.57	1.13	0.90	0.41	7/8	1 1/16
10-DTTF-8	1010-3TTF	10FBT8N	10-STTF-8	10-10-8 OBZ	5/8	1/2	3.14	1.57	1.13	0.96	0.50	1	1 1/16
12-DTTF-12	1210-3TTF	12FBT12N	12-STTF-12	12-12-12 OBZ	3/4	3/4	3.52	1.76	1.25	0.96	0.63	1 1/8	1 3/8
14-DTTF-12	-	14BFT12N	14-STTF-12	14-14-12 OBZ	7/8	3/4	3.51	1.76	1.25	1.02	0.72	1 1/4	1 3/8
16-DTTF-12	1610-3-12TTF	16BFT12N	16-STTF-12	16-16-12 OBZ	1	3/4	3.89	1.95	1.25	1.24	0.88	1 1/2	1 3/8
16-DTTF-16	1610-3TTF	16BFT16N	16-STTF-16	16-16-16 OBZ	1	1	4.23	2.12	1.50	1.24	0.88	1 1/2	1 5/8

NOTE: Dimensions subject to change, to be used for reference only.

DTTM/STTM

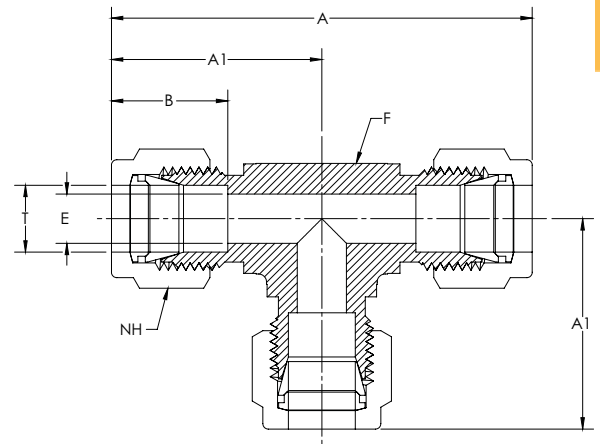
Male Branch Tee

CBC/CS-Lok



CBC PART NUMBER	INTERCHANGES WITH	CS PART NUMBER	INTERCHANGES WITH	T TUBE O.D.	P PIPE END NPT	A	A1	A2	B	E THRU HOLE	NH NUT HEX	W WRENCH FLAT
2-DTTM-2	200-3TTM	2MBT2N	2-STTM-2	2-2-2 SBZ	1/8	1/8	1.95	0.98	0.74	0.09	7/16	1/2
2-DTTM-4	200-3-4TTM	2MBT4N	2-STTM-4	2-2-4 SBZ	1/8	1/4	2.11	1.05	0.94	0.09	7/16	5/8
3-DTTM-2	300-3TTM	3MBT2N	3-STTM-2	3-3-2 SBZ	3/16	1/8	2.00	1.00	0.74	0.13	1/2	1/2
4-DTTM-2	400-3TTM	4MBT2N	4-STTM-2	4-4-2 SBZ	1/4	1/8	2.13	1.06	0.74	0.61	9/16	1/2
4-DTTM-4	400-3-4TTM	4MBT4N	4-STTM-4	4-4-4 SBZ	1/4	1/4	2.29	1.14	0.94	0.61	9/16	5/8
5-DTTM-2	500-3TTM	5MBT2N	5-STTM-2	5-5-2 SBZ	5/16	1/8	2.38	1.19	0.82	0.65	5/8	5/8
5-DTTM-4	-	5MBT4N	5-STTM-4	5-5-4 SBZ	5/16	1/4	2.38	1.19	0.94	0.65	5/8	5/8
6-DTTM-4	600-3TTM	6MBT4N	6-STTM-4	6-6-4 SBZ	3/8	1/4	2.42	1.21	0.94	0.67	11/16	5/8
6-DTTM-6	600-3-6TTM	6MBT6N	6-STTM-6	6-6-6 SBZ	3/8	3/8	2.63	1.32	1.06	0.67	11/16	13/16
8-DTTM-4	810-3-4TTM	-	8-STTM-4	-	1/2	1/4	2.84	1.42	1.11	0.90	7/8	13/16
8-DTTM-6	810-3TTM	8MBT6N	8-STTM-6	8-8-6 SBZ	1/2	3/8	2.84	1.42	1.11	0.90	7/8	13/16
B-8-DTTM-6	810-3TTM	8MBT6N	B-8-STTM-6	8-8-6 SBZ	1/2	3/8	2.84	1.42	1.06	0.90	7/8	13/16
8-DTTM-8	810-3-8TTM	8MBT8N	8-STTM-8	8-8-8 SBZ	1/2	1/2	2.84	1.42	1.30	0.90	7/8	13/16
B-8-DTTM-8	810-3-8TTM	8MBT8N	B-8-STTM-8	8-8-8 SBZ	1/2	1/2	3.14	1.57	1.38	0.90	7/8	1 1/16
10-DTTM-8	1010-3TTM	10MBT8N	10-STTM-8	10-10-8 SBZ	5/8	1/2	3.14	1.57	1.38	0.96	1	1 1/16
12-DTTM-12	1210-3TTM	12MBT12N	12-STTM-12	12-12-12 SBZ	3/4	3/4	3.14	1.57	1.38	0.96	1 1/8	1 1/16

NOTE: Dimensions subject to change, to be used for reference only.



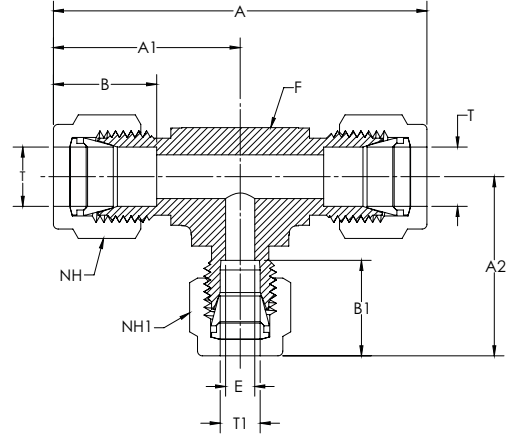
CBC PART NUMBER	INTERCHANGES WITH	CS PART NUMBER	INTERCHANGES WITH	T TUBE O.D.	A	A1	A2	B	B1	E THRU HOLE	NH NUT HEX	NH1 NUT HEX	W WRENCH FLAT
1-DTTT-1	100-3 1ET1	1-STTT-1	1-1-1 JBZ	1/16	1.61	0.80	-	0.34	-	0.05	5/16	-	1/2
2-DTTT-2	200-3 2ET2	2-STTT-2	2-2-2 JBZ	1/8	1.95	0.98	-	0.52	-	0.09	7/16	-	1/2
3-DTTT-3	300-3 3ET3	3-STTT-3	3-3-3 JBZ	3/16	2.00	1.00	-	0.54	-	0.13	1/2	-	1/2
4-DTTT-4	400-3 4ET4	4-STTT-4	4-4-4 JBZ	1/4	2.13	1.06	-	0.61	-	0.19	9/16	-	1/2
5-DTTT-5	500-3 5ET5	5-STTT-5	5-5-5 JBZ	5/16	2.38	1.19	-	0.65	-	0.25	5/8	-	5/8
6-DTTT-6	600-3 6ET6	6-STTT-6	6-6-6 JBZ	3/8	2.42	1.21	-	0.67	-	0.28	11/16	-	5/8
8-DTTT-8	810-3 8ET8	8-STTT-8	8-8-8 JBZ	1/2	2.84	1.42	-	0.90	-	0.41	7/8	-	13/16
10-DTTT-10	1010-3 10ET10	10-STTT-10	10-10-10 JBZ	5/8	3.14	1.57	-	0.96	-	0.50	1	-	1 1/16
12-DTTT-12	1210-3 12ET12	12-STTT-12	12-12-12 JBZ	3/4	3.14	1.57	-	0.96	-	0.63	1 1/8	-	1 1/16
14-DTTT-14	1410-3 14ET14	14-STTT-14	14-14-14 JBZ	7/8	3.51	1.76	-	1.02	-	0.72	1 1/4	-	1 3/8
16-DTTT-16	1610-3 16ET16	16-STTT-16	16-16-16 JBZ	1	3.89	1.95	-	1.24	-	0.88	1 1/2	-	1 3/8

NOTE: Dimensions subject to change, to be used for reference only.

DTTT/STTT

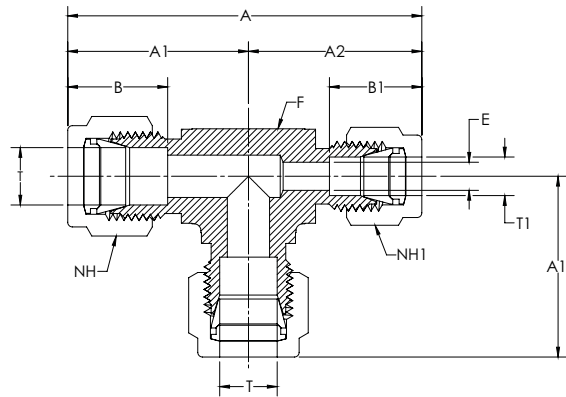
Reducing Branch Tee, Reducing Run Tee

CBC/CS-Lok



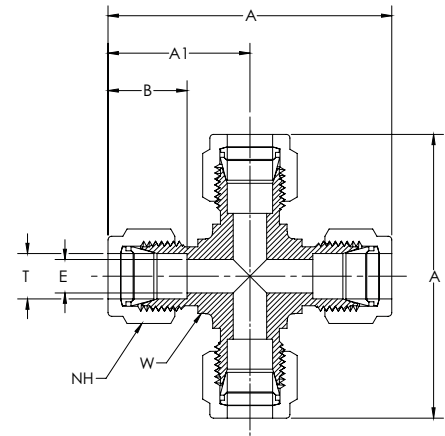
CBC PART NUMBER	INTERCHANGES WITH	CS PART NUMBER	INTERCHANGES WITH	T TUBE O.D.	T1 TUBE O.D.	A	A1	A2	B	B1	E THRU HOLE	NH NUT HEX	NH1 NUT HEX	W WRENCH FLAT	
4-DTTT-4-2	400-3-4-2	4-4-2 JLZ	4-STTT-4-2	4-4-2 JBZ	1/4	1/8	2.13	1.06	0.98	0.61	0.52	0.19	9/16	7/16	1/2
6-DTTT-6-4	600-3-6-4	6-6-4 JLZ	6-STTT-6-4	6-6-4 JBZ	3/8	1/4	2.42	1.21	1.14	0.67	0.61	0.19	11/16	9/16	5/8
8-DTTT-8-4	810-3-8-4	8-8-4 JLZ	8-STTT-8-4	8-8-4 JBZ	1/2	1/4	2.84	1.42	1.25	0.90	0.61	0.19	7/8	9/16	13/16
8-DTTT-8-6	810-3-8-6	8-8-6 JLZ	8-STTT-8-6	8-8-6 JBZ	1/2	3/8	2.84	1.42	1.32	0.90	0.67	0.28	7/8	11/16	13/16
12-DTTT-12-6	1210-3-12-6	12-12-6 JLZ	12-STTT-12-6	12-12-6 JBZ	3/4	3/8	3.14	1.57	1.47	0.96	0.67	0.28	1 1/8	11/16	1 1/16
12-DTTT-12-8	1210-3-12-8	12-12-8 JLZ	12-STTT-12-8	12-12-8 JBZ	3/4	1/2	3.14	1.57	1.57	0.96	0.90	0.41	1 1/8	7/8	1 1/16
16-DTTT-16-4	1610-3-16-4	16-16-4 JLZ	16-STTT-16-4	16-16-4 JBZ	1	1/4	3.89	1.95	1.59	1.24	0.61	0.19	1 1/2	9/16	1 3/8
16-DTTT-16-6	1610-3-16-6	16-16-6 JLZ	16-STTT-16-6	16-16-6 JBZ	1	3/8	3.89	1.95	1.65	1.24	0.67	0.28	1 1/2	11/16	1 3/8
16-DTTT-16-8	1610-3-16-8	16-16-8 JLZ	16-STTT-16-8	16-16-8 JBZ	1	1/2	3.89	1.95	1.76	1.24	0.90	0.41	1 1/2	7/8	1 3/8
16-DTTT-16-12	1610-3-16-12	16-16-12 JLZ	16-STTT-16-12	16-16-12 JBZ	1	3/4	3.89	1.95	1.58	1.24	0.96	0.63	1 1/2	1 1/8	1 3/8

NOTE: Dimensions subject to change, to be used for reference only.



CBC PART NUMBER	INTERCHANGES WITH	CS PART NUMBER	INTERCHANGES WITH	T TUBE O.D.	T1 TUBE O.D.	A	A1	A2	B	B1	E THRU HOLE	NH NUT HEX	NH1 NUT HEX	W WRENCH FLAT	
6-DTTT-4-6	600-3-4-6	6-4-6 JLZ	6-STTT-4-6	6-4-6 JBZ	3/8	1/4	2.35	1.21	1.14	0.67	0.61	0.19	11/16	9/16	5/8
6-DTTT-6-8	600-3-6-8	-	6-STTT-6-8	-	3/8	1/2	2.63	1.32	1.42	0.67	0.90	0.28	11/16	7/8	13/16

NOTE: Dimensions subject to change, to be used for reference only.



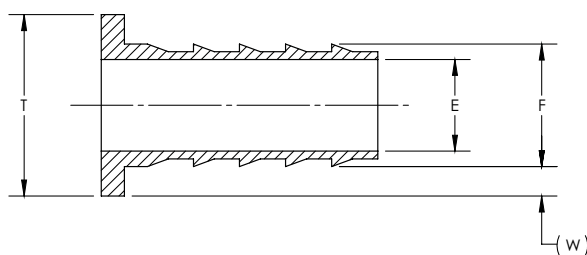
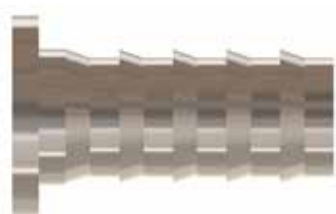
CBC PART NUMBER	INTERCHANGES WITH	CS PART NUMBER	INTERCHANGES WITH	T TUBE O.D.	A	A1	B	E THRU HOLE	NH NUT HEX	W WRENCH FLAT
2-DCR	200-4 2ECR2	2-SCR	2 KBZ	1/8	1.84	0.92	0.52	0.09	7/16	1/2
4-DCR	400-4 4ECR4	4-SCR	4 KBZ	1/4	2.11	1.06	0.61	0.19	9/16	1/2
B-4-DCR	400-4 4ECR4	B-4-SCR	4 KBZ	1/4	2.33	1.17	0.61	0.19	9/16	5/8
6-DCR	600-4 6ECR6	6-SCR	6 KBZ	3/8	2.40	1.20	0.67	0.28	11/16	5/8
8-DCR	810-4 8ECR8	8-SCR	8 KBZ	1/2	2.83	1.41	0.90	0.41	7/8	13/16
12-DCR	1210-4 12ECR12	12-SCR	12 KBZ	3/4	3.14	1.57	0.96	0.63	1 1/8	1 1/16

NOTE: Dimensions subject to change, to be used for reference only.

TI

Tubing Insert

CBC/CS-Lok



CBC PART NUMBER	INTERCHANGES WITH	CS PART NUMBER	INTERCHANGES WITH	T TUBE O.D.	E THRU HOLE	W REF	F TUBE ID
3-TI-2	305-2	-	-	3/16	0.09	0.031	1/8
4-TI-206	-	-	-	1/4	0.16	0.022	0.206
4-TI-3	405-3	-	-	1/4	0.14	0.031	3/16
4-TI-170	405-170	-	-	1/4	0.11	0.040	0.17
4-TI-2	405-2	-	-	1/4	0.09	0.062	1/8
5-TI-4	505-4	-	-	5/16	0.19	0.031	1/4
5-TI-3	505-3	-	-	5/16	0.13	0.062	3/16
5-TI-2	505-2	-	-	5/16	0.09	0.094	1/8
6-TI-277	605-277	-	-	3/8	0.22	0.049	0.277
6-TI-4	605-4	-	-	3/8	0.19	0.062	1/4
6-TI-3	605-3	-	-	3/8	0.13	0.094	3/16
8-TI-6	815-6	-	-	1/2	0.31	0.062	3/8
8-TI-4	815-4	-	-	1/2	0.19	0.125	1/4
10-TI-8	1015-8	-	-	5/8	0.44	0.062	1/2
10-TI-6	1015-6	-	-	5/8	0.31	0.125	3/8
12-TI-10	1215-10	-	-	3/4	0.56	0.062	5/8
12-TI-8	1215-8	-	-	3/4	0.44	0.125	1/2
16-TI-12	1615-12	-	-	1	0.69	0.125	3/4

NOTE: Dimensions subject to change, to be used for reference only.



CBC PART NUMBER	INTERCHANGES WITH	CS PART NUMBER	INTERCHANGES WITH	T TUBE O.D.	A	NH NUT HEX
DN-1	102-1 1NU1	SN-1	1 BZ	1/16	0.31	5/16
DN-2	202-1 2NU2	SN-2	2 BZ	1/8	0.47	7/16
DN-3	302-1 3NU3	SN-3	3 BZ	3/16	0.47	1/2
DN-4	402-1 4NU4	SN-4	4 BZ	1/4	0.50	9/16
DN-5	502-1 5NU5	SN-5	5 BZ	5/16	0.53	5/8
DN-6	602-1 6NU6	SN-6	6 BZ	3/8	0.56	11/16
DN-8	812-1 8NU8	SN-8	8 BZ	1/2	0.69	7/8
DN-10	1012-1 10NU10	SN-10	10 BZ	5/8	0.69	1
DN-12	1212-1 12NU12	SN-12	12 BZ	3/4	0.69	1 1/8
DN-14	1412-1 14NU14	SN-14	14 BZ	7/8	0.69	1 1/4
DN-16	1612-1 16NU16	SN-16	16 BZ	1	0.81	1 1/2

NOTE: Dimensions subject to change, to be used for reference only.

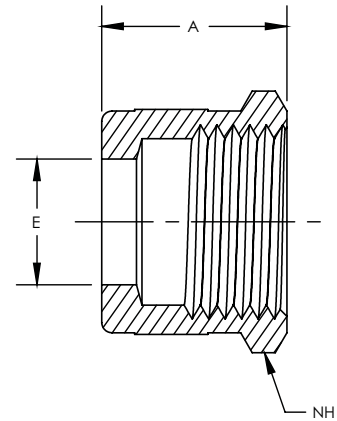
Tylok CS-Lok® nuts are coated with molidisulfide for reduced galling and lower installation torque.

Tylok CBC-Lok® nuts are silver etched on the inside and coated with a proprietary ??? to reduce galling and lower installation torque.

DKN/SKN

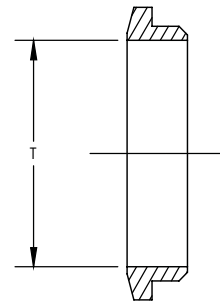
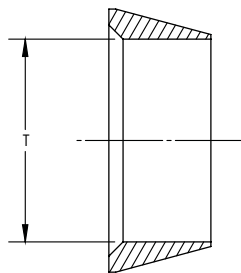
Knurled Nut

CBC/CS-Lok



CBC PART NUMBER	INTERCHANGES WITH	CS PART NUMBER	INTERCHANGES WITH	T TUBE O.D.	A	NH NUT HEX
DKN-1	102-1K 1 BZP	SKN-1	1 BZP	1/16	0.31	5/16
DKN-2	202-1K 2 BZP	SKN-2	2 BZP	1/8	0.47	7/16
DKN-3	302-1K 3 BZP	SKN-3	3 BZP	3/16	0.47	1/2
DKN-4	402-1K 4 BZP	SKN-4	4 BZP	1/4	0.50	9/16
DKN-5	502-1K 5 BZP	SKN-5	5 BZP	5/16	0.53	5/8
DKN-6	602-1K 6 BZP	SKN-6	6 BZP	3/8	0.56	11/16
DKN-8	812-1K 8 BZP	SKN-8	8 BZP	1/2	0.69	7/8
DKN-10	1012-1K 10 BZP	SKN-10	10 BZP	5/8	0.69	1
DKN-12	1212-1K -	SKN-12	-	3/4	0.69	1 1/8
DKN-14	1412-1K -	SKN-14	-	7/8	0.69	1 1/4
DKN-16	1612-1K -	SKN-16	-	1	0.81	1 1/2

NOTE: Dimensions subject to change, to be used for reference only.

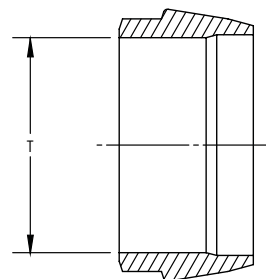
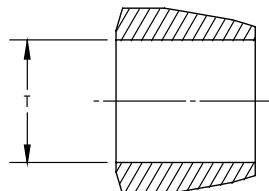


CBC PART NUMBER	INTERCHANGES WITH	T TUBE O.D.
DFC-1	103-1 1FF1	1/16
DFC-2	203-1 2FF2	1/8
DFC-3	303-1 3FF3	3/16
DFC-4	403-1 4FF4	1/4
DFC-5	503-1 5FF5	5/16
DFC-6	603-1 6FF6	3/8
DFC-8	813-1 8FF8	1/2
DFC-10	1013-1 10FF10	5/8
DFC-12	1213-1 12FF12	3/4
DFC-14	1413-1 14FF14	7/8
DFC-16	1613-1 16FF16	1

CBC PART NUMBER	INTERCHANGES WITH	T TUBE O.D.
DRC-1	104-1 1BF1	1/16
DRC-2	204-1 2BF2	1/8
DRC-3	304-1 3BF3	3/16
DRC-4	404-1 4BF4	1/4
DRC-5	504-1 5BF5	5/16
DRC-6	604-1 6BF6	3/8
DRC-8	814-1 8BF8	1/2
DRC-10	1014-1 10BF10	5/8
DRC-12	1214-1 12BF12	3/4
DRC-14	1414-1 14BF14	7/8
DRC-16	1614-1 16BF16	1

NOTE: Dimensions subject to change, to be used for reference only.

NOTE: Dimensions subject to change, to be used for reference only.



CS PART NUMBER	INTERCHANGES WITH	T TUBE O.D.
SC-1	1 TZ	1/16
SC-2	2 TZ	1/8
SC-3	3 TZ	3/16
SC-4	4 TZ	1/4
SC-5	5 TZ	5/16
SC-6	6 TZ	3/8
SC-8	8 TZ	1/2
SC-10	10 TZ	5/8
SC-12	12 TZ	3/4
SC-14	14 TZ	7/8
SC-16	16 TZ	1

COMPONENT REPLACEMENT PARTS

Collet sets and Nut/Collet sets make for easy storage and handling of nuts and collets. CBC-Lok® & CS-Lok® components are precision made and should be handled with care. The components can be ordered on an arbor, which aids in careful handling and prevents them from coming off. Pinch the end of the arbor to release the components.

NOTE: Dimensions subject to change, to be used for reference only.

COLLET /NUT & COLLET SETS



CBC PART NUMBER	INTERCHANGES WITH	CS PART NUMBER	INTERCHANGES WITH	T TUBE O.D.
DCSET-4-10	400-SET 4 ALOK*-SET	SCSET-4-10	4-CPI*-SET	1/4
DCSET-6-10	600-SET 6 ALOK*-SET	SCSET-6-10	6-CPI*-SET	3/8
DCSET-8-10	810-SET 8 ALOK*-SET	SCSET-8-10	8-CPI*-SET	1/2
DCSET-12-10	- 12 ALOK*-SET	SCSET-12-10	12-CPI*-SET	3/4
DCSET-16-10	- 16 ALOK*-SET	SCSET-16-10	16-CPI*-SET	1

NOTE: Dimensions subject to change, to be used for reference only.



CBC PART NUMBER	INTERCHANGES WITH	CS PART NUMBER	INTERCHANGES WITH	T TUBE O.D.
DNCSET-4-5	400-NFSET -	SNCSET-4-5	-	1/4
DNCSET-6-5	600-NFSET -	SNCSET-6-5	-	3/8
DNCSET-8-5	810-NFSET -	SNCSET-8-5	-	1/2
DNCSET-12-5	- -	SNCSET-12-5	-	3/4
DNCSET-16-5	- -	SNCSET-16-5	-	1

NOTE: Dimensions subject to change, to be used for reference only.

COMPONENT REPLACEMENT PARTS

Collet sets and Nut/Collet sets make for easy storage and handling of nuts and collets. CBC-Lok® & CS-Lok® components are precision made and should be handled with care. The components can be ordered on an arbor, which aids in careful handling and prevents them from coming off. Pinch the end of the arbor to release the components.



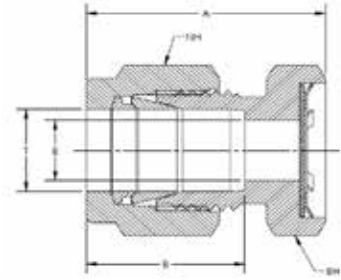
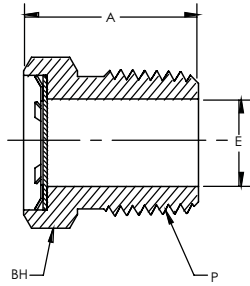
CBC PART NUMBER	T TUBE O.D.
1-DGG	1/16
2-DGG	1/8
3-DGG	3/16
4-DGG	1/4
5-DGG	5/16
6-DGG	3/8
8-DGG	1/2
10-DGG	5/8
12-DGG	3/4
14-DGG	7/8
16-DGG	1
468-DGG	1/4, 3/8, 1/2 6 mm, 12 mm

NOTE: Dimensions subject to change, to be used for reference only.

MDF

Mud Daubers

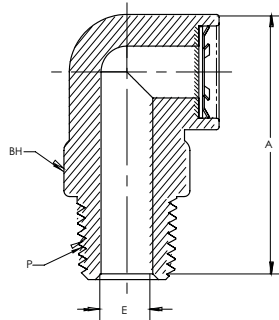
CBC/CS-Lok



CBC PART NUMBER	INTERCHANGES WITH		PIPE WELD SIZE	A	E THRU HOLE	BH BODY HEX
4-1MDF	MD-4	MDF	1/4	.81	.28	9/16
6-1MDF	MD-6	MDF	3/8	.81	.41	11/16
8-1MDF	MD-8	MDF	1/2	1.03	.50	7/8

CBC PART NUMBER	INTERCHANGES WITH		T	A	B	E THRU HOLE	BH BODY HEX	NH NUT HEX
SS-4-DMDF	SS-400-C-MD		1/4	0.95	0.61	0.19	9/16	9/16
SS-6-DMDF	SS-600-C-MD		3/8	1.01	0.67	0.28	11/16	11/16
SS-8-DMDF	SS-810-C-MD		1/2	1.12	0.90	0.41	7/8	7/8

* Also available in single ferrule



CBC PART NUMBER	INTERCHANGES WITH		PIPE WELD SIZE	A	E THRU HOLE	BH BODY HEX
PP-4-2MDF	-	-	1/4	1.44	.28	5/8
PP-6-2MDF	-	-	3/8	1.44	.28	11/16

- Tylok Mud Daubers, also known as Vent Protector fittings, protect open ends of tubing, instruments, outlet vents and exhaust lines.
- Each Vent Protector has a 300 series stainless steel 40-mesh wire screen to prevent obstructive foreign objects, such as insects, from entering and clogging a system.
- Straight Vent Protectors are available in stainless steel. Add an SS in front of part number to specify the desired material.
- Angled Vent Protectors are available in Polypropylene (PP) only.

NOTE: Dimensions subject to change, to be used for reference only.

Tylok Dielectric Fittings are insulated connections used to protect sensitive electrical components from electrical current potentially carried through tubing systems.

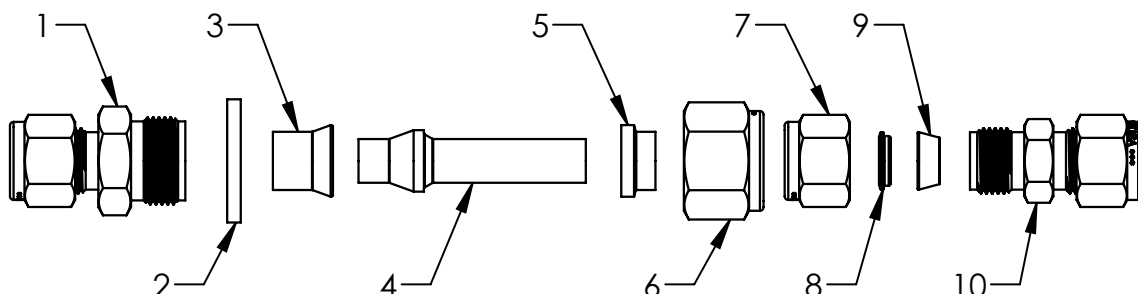
A typical application for a dielectric fitting is in the transmission of natural gas. The dielectric fitting insulates electric current flow that results from static electricity, ground currents, stray currents from instruments, etc.

Tylok dielectric fittings have a dielectric resistance above 10×10^7 Ohms at 10 Volts (dc) when at room temperature (70°F / 20°C).



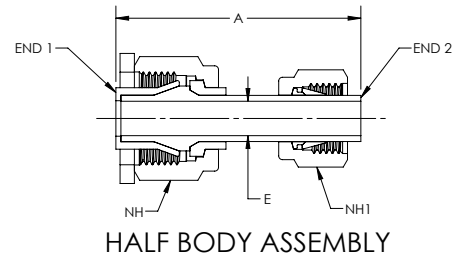
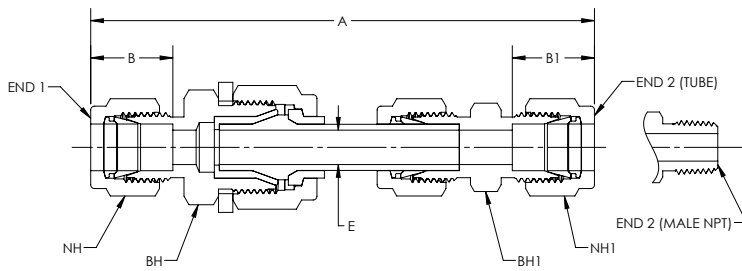
Specifications	6 Series	10 Series
Pressure Rating (room temperature)	5000 psig (344 bar)	3500 psig (241 bar)
Temperature Rating	-40 to 200 °F (-40 to 93 °C)	

Item	Component	Materials
1	End 1	Stainless Steel
2	Stop Ring	Aluminum
3	Fitting Insulator	PEEK
4	Adapter	Stainless Steel
5	Nut Insulator	PEEK
6	Nut	Stainless Steel
7	CBC-Lok Nut	Stainless Steel
8	CBC-Lok Rear Collet	Stainless Steel
9	CBC-Lok Front Collet	Stainless Steel
10	End 2	Stainless Steel



Dielectric Fitting

CBC/CS-Lok



Part Number	End 1	End 2
SS-6-6D-8-DE*	1/2" Tube Port Insulator	3/8" CBC-Lok Tube Adapter
SS-4-6DU-4-DE	1/4" CBC-Lok	1/4" CBC-Lok
SS-4-6SU-4-DE	1/4" CS-Lok	1/4" CS-Lok
SS-6-6DU-6-DE	3/8" CBC-Lok	3/8" CBC-Lok
SS-6-6SU-6-DE	3/8" CS-Lok	3/8" CS-Lok
SS-8-6DU-8-DE	1/2" CBC-Lok	1/2" CBC-Lok
SS-8-6SU-8-DE	1/2" CS-Lok	1/2" CS-Lok
SS-4-6DMC-4-DE	1/4" CBC-Lok	1/4" CBC-Lok
SS-4-6SMC-4-DE	1/4" CS-Lok	1/4" CS-Lok
SS-6-6DMC-4-DE	3/8" CBC-Lok	1/4" CBC-Lok
SS-6-6SMC-4-DE	3/8" CS-Lok	1/4" CS-Lok
SS-6-6DMC-6-DE	3/8" CBC-Lok	3/8" CBC-Lok
SS-6-6SMC-6-DE	3/8" CS-Lok	3/8" CS-Lok
SS-8-6DMC-6-DE	1/2" CBC-Lok	3/8" CBC-Lok
SS-8-6SMC-6-DE	1/2" CS-Lok	3/8" CS-Lok
SS-8-8D-12-DE*	3/4" Tube Port Insulator	1/2" CBC-Lok Tube Adapter

*Half Body Assemblies

How To Order

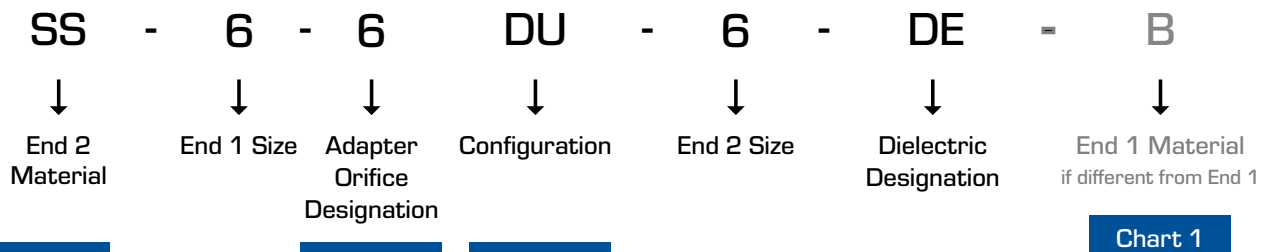
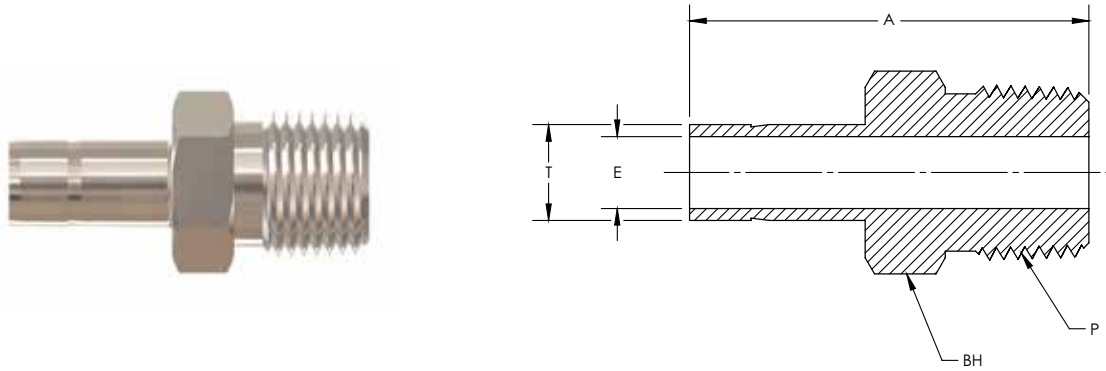


Chart 1- Material	
B	Brass
SS	Stainless Steel

Note: Adapter component only available in Stainless Steel

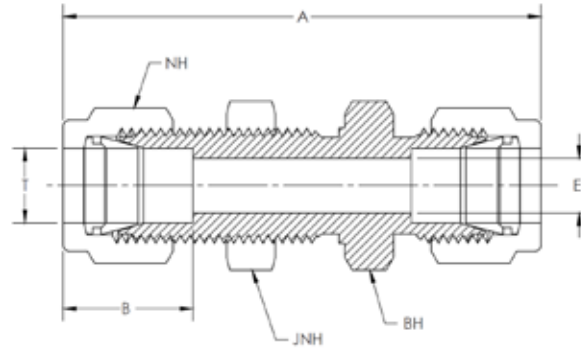
Chart 2 - Adapter Orifice Designation	
Size 6	0.28"
Size 8	0.38"

Chart 3 - Configuration	
DU	Union
DRU	Reducing Union
DELU	Union Elbow
DMC	Male Connector
DME	Male Elbow
DFC	Female Connector
DFE	Female Elbow



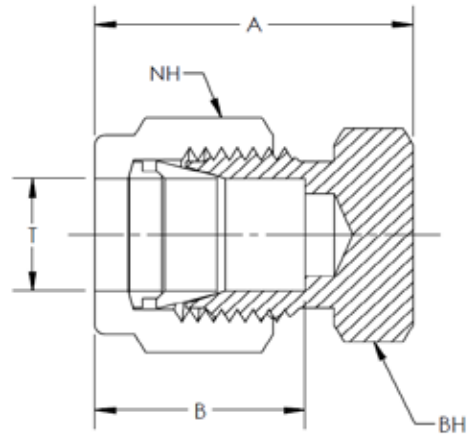
CBC PART NUMBER	INTERCHANGES WITH		T TUBE O.D. (mm.)	P PIPE END NPT (in.)	A (mm.)	E THRU HOLE (mm.)	BH BODY HEX (in.)
6MM-DATPM-2	6-MTA-1-2	M6MA1/8N	6	1/8	32.8	4.1	7/16
6MM-DATPM-4	6-MTA-1-4	M6MA1/4N	6	1/4	38.1	4.1	9/16
8MM-DATPM-4	8-MTA-1-4	M8MA1/4N	8	1/4	39.1	5.6	9/16
8MM-DATPM-6	8-MTA-1-6	M8MA3/8N	8	3/8	39.9	5.6	11/16
10MM-DATPM-4	10-MTA-1-4	M10MA1/4N	10	1/4	39.9	7.1	9/16
10MM-DATPM-6	10-MTA-1-6	M10MA3/8N	10	3/8	40.6	7.1	11/16
10MM-DATPM-8	10-MTA-1-8	M10MA1/2N	10	1/2	46.2	7.1	7/8
12MM-DATPM-4	12-MTA-1-4	M12MA1/4N	12	1/4	46.5	7.1	9/16
12MM-DATPM-8	12-MTA-1-8	M12MA1/2N	12	1/2	52.1	8.8	7/8

NOTE: Dimensions subject to change, to be used for reference only.



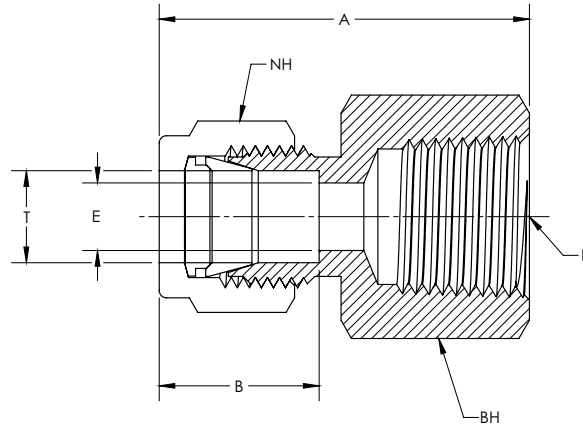
CBC PART NUMBER	INTERCHANGES WITH		T TUBE O.D. (mm.)	T1 TUBE O.D. (mm.)	A (mm.)	B (mm.)	E THRU HOLE (mm.)	NH NUT HEX (in.)	BH BODY HEX (in.)	JNH JAM NUT HEX (in.)	PANEL HOLE (mm.)	MAX PANEL THICKNESS (mm.)
6MM-DBHU	6MO-61	BCM6	6	6	57.7	15.3	4.8	9/16	5/8	5/8	11.5	10.2
8MM-DBHU	8MO-61	BCM8	8	8	61.0	16.2	6.4	5/8	11/16	11/16	13.1	11.2
10MM-DBHU	10MO-61	BCM10	10	10	63.7	17.2	7.9	3/4	7/8	7/8	16.3	11.2
12MM-DBHU	12MO-61	BCM12	12	12	71.0	22.8	9.5	7/8	15/16	15/16	19.5	12.7
18MM-DBHU	18MO-61	BCM18	18	18	78.9	24.4	15.1	1-1/8	1-3/16	1-3/16	26.0	16.8

NOTE: Dimensions subject to change, to be used for reference only.



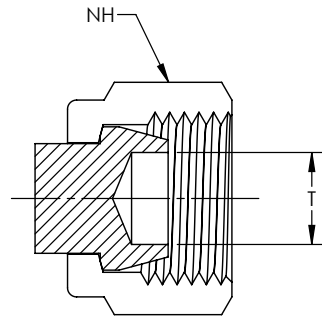
CBC PART NUMBER	INTERCHANGES WITH		T TUBE O.D. (mm.)	A (mm.)	B (mm.)	NH NUT HEX (in.)	BH BODY HEX (in.)
6MM-DCAP	6M0-C	BLENM6	6	23.1	15.3	9/16	9/16
8MM-DCAP	8M0-C	BLENM8	8	24.5	16.2	5/8	9/16
10MM-DCAP	10M0-C	BLENM10	10	26.6	17.2	3/4	11/16
12MM-DCAP	12M0-C	BLENM12	12	30.6	22.8	7/8	7/8
18MM-DCAP	18M0-C	BLENM18	18	32.2	24.4	1-1/8	1-1/16

NOTE: Dimensions subject to change, to be used for reference only.



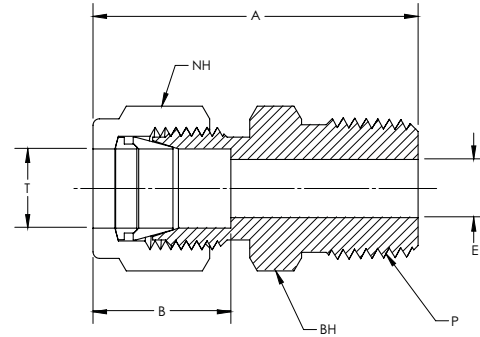
CBC PART NUMBER	INTERCHANGES WITH	T TUBE O.D. (mm.)	P PIPE END NPT (in.)	A (mm.)	B (mm.)	E THRU HOLE (mm.)	NH NUT HEX (in.)	BH BODY HEX (in.)
6MM-DFC-2	6M0-7-2 M6FSC1/8N	6	1/8	31.3	15.3	4.8	9/16	9/16
6MM-DFC-4	6M0-7-4 M6FSC1/4N	6	1/4	35.8	15.3	4.8	9/16	3/4
6MM-DFC-6	6M0-7-6 M6FSC3/8N	6	3/8	37.6	15.3	4.8	9/16	7/8
6MM-DFC-8	6M0-7-8 M6FSC1/2N	6	1/2	42.5	15.3	4.8	9/16	1-1/16
8MM-DFC-2	8M0-7-2 M8FSC1/8N	8	1/8	32.1	16.2	6.4	5/8	9/16
8MM-DFC-4	8M0-7-4 M8FSC1/4N	8	1/4	37.0	16.2	6.4	5/8	3/4
8MM-DFC-6	8M0-7-6 M8FSC3/8N	8	3/8	38.5	16.2	6.4	5/8	7/8
8MM-DFC-8	8M0-7-8 -	8	1/2	43.3	16.2	6.4	5/8	1-1/16
10MM-DFC-4	10M0-7-4 M10FSC1/4N	10	1/8	37.8	17.2	7.9	3/4	3/4
10MM-DFC-6	10M0-7-6 M10FSC3/8N	10	3/8	39.4	17.2	7.9	3/4	7/8
10MM-DFC-8	10M0-7-8 M10FSC1/2N	10	1/2	44.2	17.2	7.9	3/4	1-1/16
12MM-DFC-4	12M0-7-4 M12FSC1/4N	12	1/8	40.3	22.8	9.5	7/8	7/8
12MM-DFC-6	12M0-7-6 M12FSC3/8N	12	3/8	41.9	22.8	9.5	7/8	7/8
12MM-DFC-8	12M0-7-8 M12FSC1/2N	12	1/2	46.7	22.8	9.5	7/8	1-1/16

NOTE: Dimensions subject to change, to be used for reference only.



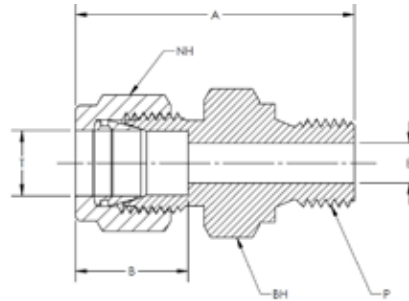
CBC PART NUMBER	INTERCHANGES WITH		T TUBE O.D. (mm.)	NH NUT HEX (in.)
6MM-DFPLUG	6M0-P	BLPM6	6	9/16
8MM-DFPLUG	8M0-P	BLPM8	8	5/8
10MM-DFPLUG	10M0-P	BLPM10	10	3/4
12MM-DFPLUG	12M0-P	BLPM12	12	7/8
18MM-DFPLUG	18M0-P	BLPM18	16	1-1/8

NOTE: Dimensions subject to change, to be used for reference only.



CBC PART NUMBER	INTERCHANGES WITH		T TUBE O.D. (mm.)	P PIPE END NPT (in.)	A (mm.)	B (mm.)	E THRU HOLE (mm.)	NH NUT HEX (in.)	BH BODY HEX (in.)
6MM-DMC-2	6M0-1-2	M6MSC1/8N	6	1/8	32.8	15.3	4.8	9/16	9/16
6MM-DMC-4	6M0-1-4	M6MSC1/4N	6	1/4	37.9	15.3	4.8	9/16	9/16
6MM-DMC-6	6M0-1-6	M6MSC3/8N	6	3/8	38.4	15.3	4.8	9/16	11/16
6MM-DMC-8	6M0-1-8	M6MSC1/2N	6	1/2	44.7	15.3	4.8	9/16	7/8
8MM-DMC-2	8M0-1-2	M8MSC1/8N	8	1/8	34.2	16.2	4.8	5/8	9/16
8MM-DMC-4	8M0-1-4	M8MSC1/4N	8	1/4	38.7	16.2	6.4	5/8	9/16
8MM-DMC-6	8M0-1-6	M8MSC3/8N	8	3/8	39.3	16.2	6.4	5/8	11/16
8MM-DMC-8	8M0-1-8	M8MSC1/2N	8	1/2	45.6	16.2	6.4	5/8	7/8
10MM-DMC-2	10M0-1-2	M10MSC1/8N	10	1/8	36.3	17.2	4.8	3/4	11/16
10MM-DMC-4	10M0-1-4	M10MSC1/4N	10	1/4	40.9	17.2	7.1	3/4	11/16
10MM-DMC-6	10M0-1-6	M10MSC3/8N	10	3/8	40.9	17.2	7.9	3/4	11/16
10MM-DMC-8	10M0-1-8	M10MSC1/2N	10	1/2	46.5	17.2	7.9	3/4	7/8
10MM-DMC-12	10M0-1-12	M10MSC3/4N	10	3/4	48.0	17.2	7.9	3/4	1-1/16
12MM-DMC-2	12M0-1-2	-	12	1/8	38.8	22.8	4.8	7/8	7/8
12MM-DMC-4	12M0-1-4	M12MSC1/4N	12	1/4	43.4	22.8	7.1	7/8	7/8
12MM-DMC-6	12M0-1-6	M12MSC3/8N	12	3/8	43.4	22.8	9.5	7/8	7/8
12MM-DMC-8	12M0-1-8	M12MSC1/2N	12	1/2	49.0	22.8	9.5	7/8	7/8
12MM-DMC-12	12M0-1-12	M12MSC3/4N	12	3/4	50.5	22.8	9.5	7/8	1-1/16
18MM-DMC-8	18M0-1-8	M18MSC1/2N	18	1/2	50.5	24.4	11.9	1-1/8	1-1/16
18MM-DMC-12	18M0-1-12	M18MSC3/4N	18	3/4	50.5	24.4	15.1	1-1/8	1-1/16

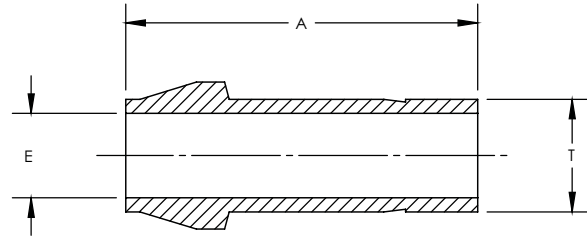
NOTE: Dimensions subject to change, to be used for reference only.



CBC PART NUMBER	INTERCHANGES WITH	T TUBE O.D. (mm.)	P BSPB THREAD SIZE (in.)	A (mm.)	B (mm.)	E THRU HOLE (mm.)	NH NUT HEX (in.)	BH BODY HEX (in.)
6MM-DMC-2-RS	6MO-1-2RS M6MSC1/8R	6	1/8	35.6	15.3	4.0	9/16	9/16
6MM-DMC-4-RS	6MO-1-4RS M6MSC1/4R	6	1/4	40.4	15.3	4.8	9/16	3/4
6MM-DMC-6-RS	6MO-1-6RS M6MSC3/8R	6	3/8	41.1	15.3	4.8	9/16	7/8
6MM-DMC-8-RS	6MO-1-8RS M6MSC1/2R	6	1/2	43.2	15.3	4.8	9/16	1-1/16
8MM-DMC-2-RS	8MO-1-2RS M8MSC1/8R	8	1/8	36.6	16.2	4.0	5/8	9/16
8MM-DMC-4-RS	8MO-1-4RS M8MSC1/4R	8	1/4	41.4	16.2	5.9	5/8	3/4
8MM-DMC-6-RS	8MO-1-6RS M8MSC3/8R	8	3/8	42.2	16.2	6.4	5/8	7/8
8MM-DMC-8-RS	8MO-1-8RS M8MSC1/2R	8	1/2	44.2	16.2	6.4	5/8	1-1/16
10MM-DMC-4-RS	10MO-1-4RS M10MSC1/4R	10	1/4	42.2	17.2	5.9	3/4	3/4
10MM-DMC-6-RS	10MO-1-6RS M10MSC3/8R	10	3/8	42.9	17.2	7.9	3/4	7/8
10MM-DMC-8-RS	10MO-1-8RS M10MSC1/2R	10	1/2	45.0	17.2	7.9	3/4	1-1/16
12MM-DMC-4-RS	12MO-1-4RS M12MSC1/4R	12	1/4	44.5	22.8	5.9	7/8	7/8
12MM-DMC-6-RS	12MO-1-6RS M12MSC3/8R	12	3/8	45.5	22.8	7.9	7/8	7/8
12MM-DMC-8-RS	12MO-1-8RS M12MSC1/2R	12	1/2	47.5	22.8	9.5	7/8	1-1/16
12MM-DMC-12-RS	12MO-1-12RS M12MSC3/4R	12	3/4	52.1	22.8	9.5	7/8	1-5/16
18MM-DMC-8-RS	18MO-1-8RS M18MSC1/2R	18	1/2	48.8	24.4	11.9	1-1/8	1-1/16
18MM-DMC-12-RS	18MO-1-12RS M18MSC3/4R	18	3/4	52.1	24.4	15.1	1-1/8	1-5/16

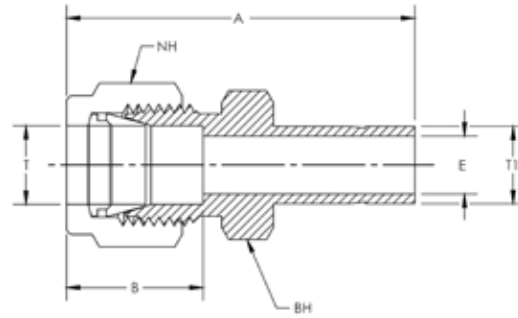
NOTE: Dimensions subject to change, to be used for reference only.

Note: BSPB threaded end requires a sealing washer.



CBC PART NUMBER	INTERCHANGES WITH	TUBE O.D. (mm.)	A (mm.)	E THRU HOLE (mm.)
6MM-DPCU	6M1-PC PCM6	6	25.0	4.1
8MM-DPCU	8M1-PC PCM8	8	26.0	5.6
10MM-DPCU	10M1-PC PCM10	10	27.1	7.1
12MM-DPCU	12M1-PC PCM12	12	36.2	8.8
18MM-DPCU	18M1-PC PCM18	18	37.8	13.9

NOTE: Dimensions subject to change, to be used for reference only.

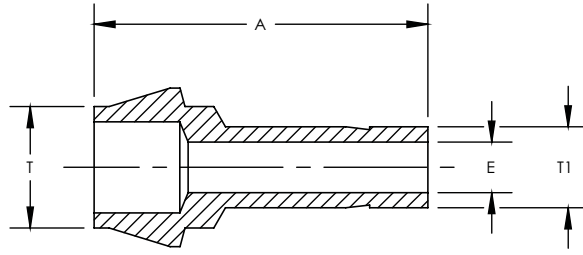


CBC PART NUMBER	INTERCHANGES WITH		T TUBE O.D. (mm.)	T1 TUBE O.D. (mm.)	A (mm.)	B (mm.)	E THRU HOLE (mm.)	NH NUT HEX (in.)	BH BODY HEX (in.)
6MM-DRATT-8MM	6M0-R-8M	M8TURM6	6	8	39.9	15.3	4.8	9/16	9/16
6MM-DRATT-10MM	6M0-R-10M	M10TURM6	6	10	40.7	15.3	4.8	9/16	9/16
6MM-DRATT-12MM	6M0-R-12M	M12TURM6	6	12	46.3	15.3	4.8	9/16	9/16
6MM-DRATT-18MM	6M0-R-18M	-	6	18	49.6	15.3	4.8	9/16	7/8
8MM-DRATT-6MM	8M0-R-6M	M6TURM8	8	6	40.3	16.2	4.1	5/8	9/16
8MM-DRATT-10MM	8M0-R-10M	M10TURM8	8	10	42.0	16.2	6.4	5/8	9/16
8MM-DRATT-12MM	8M0-R-12M	M12TURM8	8	12	47.6	16.2	6.4	5/8	9/16
10MM-DRATT-6MM	10M0-R-6M	M6TURM10	10	6	42.4	17.2	4.1	3/4	11/16
10MM-DRATT-8MM	10M0-R-8M	M8TURM10	10	8	43.4	17.2	5.6	3/4	11/16
10MM-DRATT-12MM	10M0-R-12M	M12TURM10	10	12	49.8	17.2	7.9	3/4	11/16
10MM-DRATT-18MM	10M0-R-18M	-	10	18	51.3	17.2	7.9	3/4	7/8
12MM-DRATT-6MM	12M0-R-6M	M6TURM12	12	6	44.9	22.8	4.1	7/8	7/8
12MM-DRATT-8MM	12M0-R-8M	-	12	8	45.9	22.8	5.6	7/8	7/8
12MM-DRATT-10MM	12M0-R-10M	M10TURM12	12	10	46.7	22.8	7.1	7/8	7/8
12MM-DRATT-18MM	12M0-R-18M	M18TURM12	12	18	53.8	22.8	9.5	7/8	7/8
18MM-DRATT-12MM	18M0-R-12M	M12TURM18	18	12	54.6	24.4	8.8	1-1/8	1-1/16

Metric to Fractional

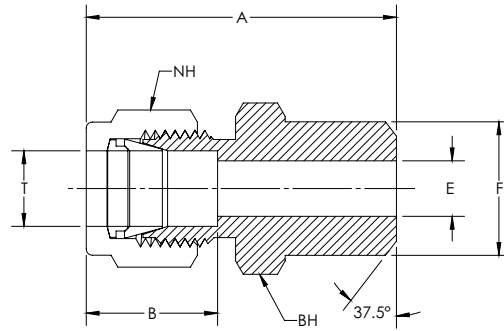
CBC PART NUMBER	INTERCHANGES WITH		T TUBE O.D. (mm.)	T1 TUBE O.D. (in.)	A (mm.)	B (mm.)	E THRU HOLE (mm.)	NH NUT HEX (in.)	BH BODY HEX (in.)
6MM-DRATT-2	6M0-R-2	-	6	1/8	36.9	15.3	2.0	9/16	9/16
6MM-DRATT-4	6M0-R-4	4TUCM6	6	1/4	39.2	15.3	4.4	9/16	9/16
6MM-DRATT-5	6M0-R-5	5TUCM6	6	5/16	39.9	15.3	4.8	9/16	9/16
6MM-DRATT-6	6M0-R-6	6TUCM6	6	3/8	40.7	15.3	4.8	9/16	9/16
6MM-DRATT-8	6M0-R-8	8TUCM6	6	1/2	46.3	15.3	4.8	9/16	9/16
8MM-DRATT-4	8M0-R-4	-	8	1/4	40.3	16.2	4.4	5/8	9/16
8MM-DRATT-6	8M0-R-6	6TUCM8	8	3/8	42.0	16.2	6.4	5/8	9/16
8MM-DRATT-8	8M0-R-8	8TUCM8	8	1/2	47.6	16.2	6.4	5/8	9/16
10MM-DRATT-6	10M0-R-6	6TUCM10	10	3/8	44.2	17.2	6.8	3/4	11/16
10MM-DRATT-8	10M0-R-8	8TUCM10	10	1/2	49.8	17.2	7.9	3/4	11/16
12MM-DRATT-8	12M0-R-8	8TUCM12	12	1/2	52.3	22.8	9.3	7/8	7/8
12MM-DRATT-12	12M0-R-12	12TUCM12	12	3/4	53.8	22.8	9.5	7/8	7/8
18MM-DRATT-12	18M0-R-12	12TUCM18	18	3/4	56.1	24.4	14.7	1-1/8	1-1/16
18MM-DRATT-16	18M0-R-16	-	18	1	62.4	24.4	15.1	1-1/8	1-1/16

NOTE: Dimensions subject to change, to be used for reference only.



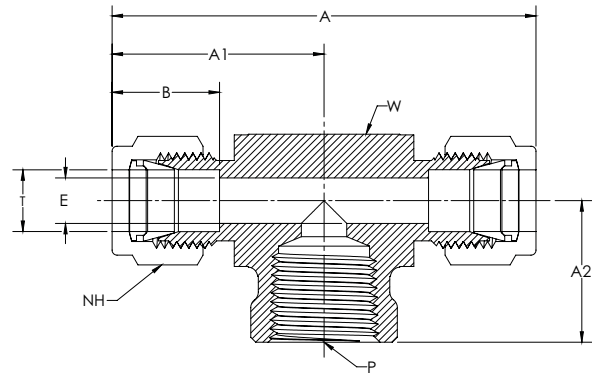
CBC PART NUMBER	INTERCHANGES WITH		T TUBE O.D. (mm.)	T1 TUBE O.D. (mm.)	A (mm.)	E THRU HOLE (mm.)
8MM-DRPC-6MM	8M1-PC-6M	M6PCM8	8	6	25.4	4.1
10MM-DRPC-6MM	10M1-PC-6M	M6PCM10	10	6	25.8	4.1
10MM-DRPC-8MM	10M1-PC-8M	M8PCM10	10	8	26.3	5.6
12MM-DRPC-6MM	12M1-PC-6M	-	12	6	29.6	4.1
12MM-DRPC-8MM	12M1-PC-8M	M8PCM12	12	8	30.1	5.6
12MM-DRPC-10MM	12M1-PC-10M	-	12	10	30.6	7.1

NOTE: Dimensions subject to change, to be used for reference only.



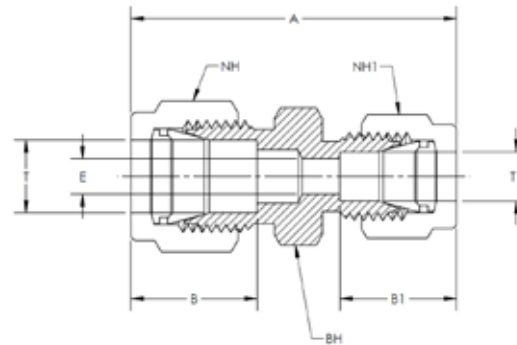
CBC PART NUMBER	INTERCHANGES WITH	T TUBE O.D. (mm.)	PIPE WELD SIZE (mm.)	A (mm.)	B (mm.)	E THRU HOLE (mm.)	NH1 NUT HEX (in.)	BH BODY HEX (in.)
6MM-DTBW-4	6M0-1-4W ZHLW2 6-1/4	6	1/4	37.9	15.3	4.8	9/16	9/16
8MM-DTBW-4	8M0-1-4W ZHLW2 8-1/4	8	1/4	38.7	16.2	6.4	5/8	9/16
8MM-DTBW-8	8M0-1-8W ZHLW2 8-1/2	8	1/2	45.6	16.2	6.4	5/8	7/8
10MM-DTBW-4	10M0-1-4W ZHLW2 10-1/4	10	1/4	40.9	17.2	7.9	3/4	11/16
10MM-DTBW-6	10M0-1-6W ZHLW2 10-3/8	10	3/8	40.9	17.2	7.9	3/4	11/16
10MM-DTBW-8	10M0-1-8W ZHLW2 10-1/2	10	1/2	46.5	17.2	7.9	3/4	7/8
12MM-DTBW-4	12M0-1-4W ZHLW2 12-1/4	12	1/4	43.4	22.8	9.5	7/8	7/8
12MM-DTBW-6	12M0-1-6W ZHLW2 12-3/8	12	3/8	43.4	22.8	9.5	7/8	7/8
12MM-DTBW-8	12M0-1-8W ZHLW2 12-1/2	12	1/2	49.0	22.8	9.5	7/8	7/8
12MM-DTBW-12	12M0-1-12W -	12	3/4	50.5	22.8	9.5	7/8	1-1/16

NOTE: Dimensions subject to change, to be used for reference only.



CBC PART NUMBER	INTERCHANGES WITH		T TUBE O.D. (mm.)	P PIPE END NPT (in.)	A (mm.)	A1 (mm.)	A2 (mm.)	B (mm.)	E THRU HOLE (mm.)	NH NUT HEX (in.)	W WRENCH FLAT (in.)
6MM-DTTF-2	6M0-3TTF	M6FBT1/8N	6	1/8	59.7	29.9	19.0	15.3	4.8	9/16	5/8
6MM-DTTF-4	6M0-3-4TTF	M6FBT1/4N	6	1/4	59.6	29.8	22.4	16.2	4.8	9/16	13/16
8MM-DTTF-2	8M0-3TTF	M8FBT1/8N	8	1/8	59.8	29.9	19.0	16.2	6.4	5/8	5/8
8MM-DTTF-4	8M0-3-4TTF	-	8	1/4	61.2	30.6	22.4	17.2	6.4	5/8	13/16
10MM-DTTF-4	10M0-3TTF	M10FBT1/4N	10	1/4	67.0	33.5	22.4	17.2	7.9	3/4	13/16
12MM-DTTF-4	12M0-3-4TTF	M12FBT1/4N	12	1/4	71.9	36.0	22.4	17.2	9.5	7/8	13/16
12MM-DTTF-6	12M0-3TTF	M12FBT3/8N	12	3/8	71.9	36.0	22.4	22.8	9.5	7/8	13/16
12MM-DTTF-8	12M0-3-8TTF	M12FBT1/2N	12	1/2	79.6	39.8	28.4	22.8	9.5	7/8	1-1/16

NOTE: Dimensions subject to change, to be used for reference only.

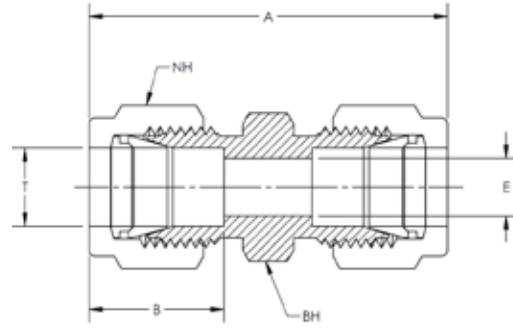


CBC PART NUMBER	INTERCHANGES WITH	T TUBE O.D. (mm.)	T1 TUBE O.D. (mm.)	A (mm.)	B (mm.)	B1 (mm.)	E THRU HOLE (mm.)	NH NUT HEX (in.)	NH1 NUT HEX (in.)	BH BODY HEX (in.)
8MM-DRU-6MM	8M0-6-6M M8RUM6	8	6	42.3	16.2	15.3	4.8	5/8	9/16	9/16
10MM-DRU-6MM	10M0-6-6M M10RUM6	10	6	44.5	17.2	15.3	4.8	3/4	9/16	11/16
10MM-DRU-8MM	10M0-6-8M M10RUM8	10	8	45.1	17.2	16.2	6.4	3/4	5/8	11/16
12MM-DRU-6MM	12M0-6-6M M12RUM6	12	6	47.0	22.8	15.3	4.8	7/8	9/16	7/8
12MM-DRU-8MM	12M0-6-8M M12RUM8	12	8	47.8	22.8	16.2	6.4	7/8	5/8	7/8
12MM-DRU-10MM	12M0-6-10M M12RUM10	12	10	48.7	22.8	17.2	7.9	7/8	3/4	7/8
18MM-DRU-12MM	18M0-6-12M M18RUM12	18	12	53.5	24.4	22.8	9.5	1-1/8	7/8	1-1/16

Metric to Fractional

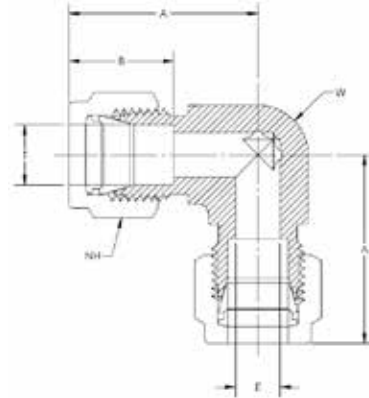
CBC PART NUMBER	INTERCHANGES WITH	T TUBE O.D. (mm.)	T1 TUBE O.D. (in.)	A (mm.)	B (mm.)	B1 (mm.)	E THRU HOLE (mm.)	NH NUT HEX (in.)	NH1 NUT HEX (in.)	BH BODY HEX (in.)
6MM-DRU-1	6M0-6-1 -	6	1/16	34.3	15.3	8.7	1.3	9/16	5/16	9/16
6MM-DRU-2	6M0-6-2 M6CU2	6	1/8	38.5	15.3	13.1	2.4	9/16	7/16	9/16
6MM-DRU-4	6M0-6-4 M6CU4	6	1/4	41.0	15.3	15.4	4.8	9/16	9/16	1/2
6MM-DRU-5	6M0-6-5 M6CU5	6	5/16	42.3	15.3	16.5	4.8	9/16	5/8	9/16
6MM-DRU-6	6M0-6-6 -	6	3/8	43.2	15.3	17.0	4.8	9/16	11/16	5/8
8MM-DRU-4	8M0-6-4 M8CU4	8	1/4	42.3	16.2	15.4	4.8	5/8	9/16	9/16
8MM-DRU-6	8M0-6-6 M8CU6	8	3/8	44.3	16.2	17.0	6.4	5/8	11/16	5/8
10MM-DRU-2	10M0-6-2 M10CU2	10	1/8	41.8	17.2	13.1	2.4	3/4	7/16	11/16
10MM-DRU-4	10M0-6-4 M10CU4	10	1/4	44.5	17.2	15.4	4.8	3/4	9/16	11/16
10MM-DRU-5	10M0-6-5 -	10	5/16	45.1	17.2	16.5	6.4	3/4	5/8	11/16
10MM-DRU-6	10M0-6-6 M10CU6	10	3/8	45.9	17.2	17.0	7.1	3/4	11/16	11/16
12MM-DRU-4	12M0-6-4 -	12	1/4	47.0	22.8	15.4	4.8	7/8	9/16	7/8
12MM-DRU-5	12M0-6-5 -	12	5/16	47.8	22.8	16.5	6.4	7/8	5/8	7/8
12MM-DRU-6	12M0-6-6 M12CU6	12	3/8	48.4	22.8	17.0	7.1	7/8	11/16	7/8
12MM-DRU-8	12M0-6-8 M12CU8	12	1/2	51.2	22.8	22.9	9.5	7/8	7/8	7/8
18MM-DRU-12	18M0-6-12 M18CU12	18	3/4	53.5	24.4	24.5	15.1	1-1/8	-1/8	1-1/16

NOTE: Dimensions subject to change, to be used for reference only.



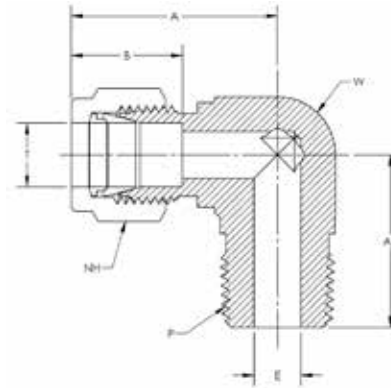
CBC PART NUMBER	INTERCHANGES WITH		T TUBE O.D. (mm.)	A (mm.)	B (mm.)	E THRU HOLE (mm.)	NH NUT HEX (in.)	BH BODY HEX (in.)
6MM-DU	6M0-6	SCM6	6	41.0	15.3	4.8	9/16	9/16
8MM-DU	8M0-6	SCM8	8	43.2	16.2	6.4	5/8	9/16
10MM-DU	10M0-6	SCM10	10	46.2	17.2	7.9	3/4	11/16
12MM-DU	12M0-6	SCM12	12	51.2	22.8	9.5	7/8	7/8
18MM-DU	18M0-6	SCM18	18	53.5	24.4	15.1	1-1/8	1-1/16

NOTE: Dimensions subject to change, to be used for reference only.



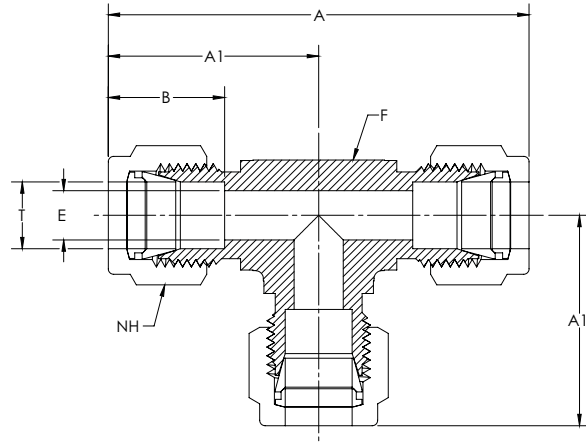
CBC PART NUMBER	INTERCHANGES WITH	T TUBE O.D. (mm.)	A		B		E		NH		W	
			(mm.)	(mm.)	(mm.)	(mm.)	(mm.)	(mm.)	(mm.)	(mm.)	(mm.)	(mm.)
6MM-DELU	6M0-9 EEM6	6	27.0	15.3	4.8	9/16	1/2					
8MM-DELU	8M0-9 EEM8	8	28.8	16.2	6.4	5/8	9/16					
10MM-DELU	10M0-9 EEM10	10	33.0	17.2	7.9	3/4	13/16					
12MM-DELU	12M0-9 EEM12	12	36.0	22.8	9.5	7/8	13/16					
18MM-DELU	18M0-9 EEM18	18	39.8	24.4	15.1	1-1/8	1-1/16					

NOTE: Dimensions subject to change, to be used for reference only.

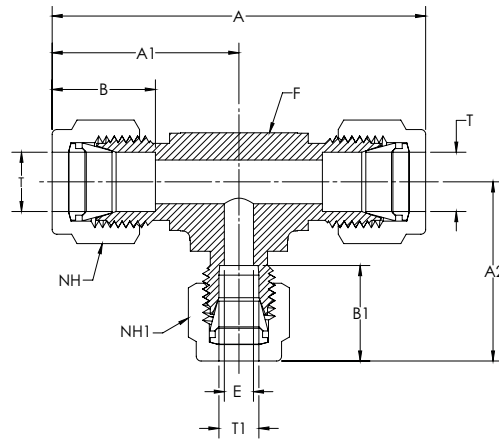


CBC PART NUMBER	INTERCHANGES WITH	T TUBE O.D. (mm.)	P PIPE END NPT (in.)	A (mm.)	A1 (mm.)	B (mm.)	E THRU HOLE (mm.)	NH NUT HEX (in.)	BH BODY HEX (in.)
6MM-DME-2	6M0-2-2 M6MSEL1/8N	6	1/8	27.0	18.8	15.3	4.8	9/16	1/2
6MM-DME-4	6M0-2-4 M6MSEL1/4N	6	1/4	27.0	23.4	15.3	4.8	9/16	1/2
6MM-DME-6	6M0-2-6 M6MSEL3/8N	6	3/8	29.8	26.2	15.3	4.8	9/16	11/16
6MM-DME-8	6M0-2-8 M6MSEL1/2N	6	1/2	31.8	33.0	15.3	4.8	9/16	13/16
8MM-DME-2	8M0-2-2 M8MSEL1/8N	8	1/8	28.8	19.8	16.2	4.8	5/8	5/8
8MM-DME-4	8M0-2-4 M8MSEL1/4N	8	1/4	28.8	24.4	16.2	6.4	5/8	5/8
8MM-DME-6	8M0-2-6 M8MSEL3/8N	8	3/8	30.6	26.2	16.2	6.4	5/8	11/16
8MM-DME-8	8M0-2-8 M8MSEL1/2N	8	1/2	32.6	33.0	16.2	6.4	5/8	13/16
10MM-DME-2	10M0-2-2 M10MSEL1/8N	10	1/8	33.0	23.4	17.2	4.8	3/4	13/16
10MM-DME-4	10M0-2-4 M10MSEL1/4N	10	1/4	33.0	27.9	17.2	7.1	3/4	13/16
10MM-DME-6	10M0-2-6 M10MSEL3/8N	10	3/8	33.0	27.9	17.2	7.9	3/4	13/16
10MM-DME-8	10M0-2-8 M10MSEL1/2N	10	1/2	33.5	33.0	17.2	7.9	3/4	13/16
12MM-DME-4	12M0-2-4 M12MSEL1/4N	12	1/4	36.0	28.2	22.8	7.1	7/8	13/16
12MM-DME-6	12M0-2-6 M12MSEL3/8N	12	3/8	36.0	28.2	22.8	9.5	7/8	13/16
12MM-DME-8	12M0-2-8 M12MSEL1/2N	12	1/2	36.0	33.0	22.8	9.5	7/8	13/16
12MM-DME-12	12M0-2-12 M12MSEL3/4N	12	3/4	39.8	36.8	22.8	9.5	7/8	1-1/16
18MM-DME-8	18M0-2-8 M18MSEL1/2N	18	1/2	39.8	36.8	24.4	11.9	1-1/8	1-1/16
18MM-DME-12	18M0-2-12 M18MSEL3/4N	18	3/4	39.8	36.8	24.4	15.1	1-1/8	1-1/16

NOTE: Dimensions subject to change, to be used for reference only.

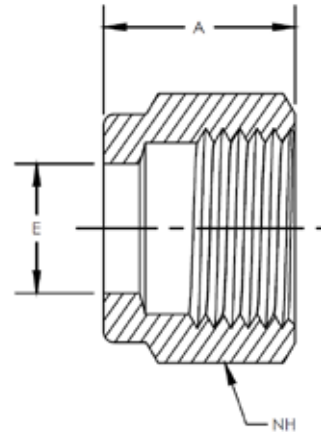


CBC PART NUMBER	INTERCHANGES WITH	T TUBE O.D. (mm.)	A (mm.)	A1 (mm.)	B (mm.)	E THRU HOLE (mm.)	NH NUT HEX (in.)	W WRENCH FLAT (in.)
6MM-DTTT	6M0-3 ETM6	6	53.9	27.0	15.3	4.8	9/16	1/2
8MM-DTTT	8M0-3 ETM8	8	59.7	29.9	16.2	6.4	5/8	5/8
10MM-DTTT	10M0-3 ETM10	10	66.0	33.0	17.2	7.9	3/4	13/16
12MM-DTTT	12M0-3 ETM12	12	72.0	36.0	22.8	9.5	7/8	13/16
18MM-DTTT	18M0-3 ETM18	18	79.6	39.8	24.4	15.1	1-1/8	1-1/16



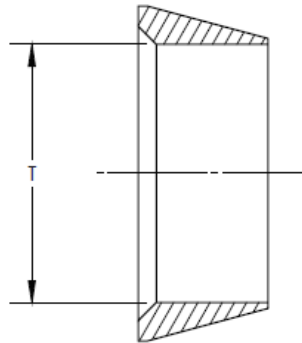
CBC PART NUMBER	INTERCHANGES WITH	T TUBE O.D. (mm.)	T1 TUBE O.D. (mm.)	A (mm.)	A1 (mm.)	A2 (mm.)	B (mm.)	B2 (mm.)	E THRU HOLE (mm.)	NH NUT HEX (in.)	NH1 NUT HEX (in.)	W WRENCH FLAT (in.)
8MM-DTTT-8MM-6MM	8M0-3-8M-6M	8	6	59.9	29.9	29.0	16.2	15.3	4.8	5/8	9/16	5/8
10MM-DTTT-10MM-6MM	10M0-3-10M-6M	10	6	66.0	33.0	31.8	17.2	15.3	4.8	3/4	9/16	13/16
12MM-DTTT-12MM-6MM	12M0-3-12M-6M	12	6	72.0	36.0	31.8	22.8	15.3	4.8	7/8	9/16	13/16
18MM-DTTT-18MM-12MM	18M0-3-18M-12M	18	12	79.8	39.9	39.9	24.4	22.8	9.5	1-1/8	7/8	1-1/16

NOTE: Dimensions subject to change, to be used for reference only.

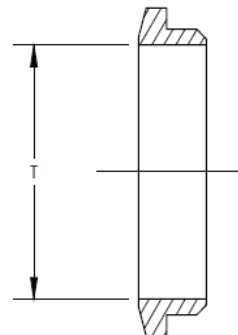


CBC PART NUMBER	INTERCHANGES WITH		T TUBE O.D. (mm.)	A (mm.)	NH NUT HEX (in.)
DN-6MM	6M2-1	NUM6	6	12.7	9/16
DN-8MM	8M2-1	NUM8	8	13.5	5/8
DN-10MM	10M2-1	NUM10	10	15.1	3/4
DN-12MM	12M2-1	NUM12	12	17.4	7/8
DN-18MM	18M2-1	NUM18	18	17.4	1-1/8

NOTE: Dimensions subject to change, to be used for reference only.



CBC PART NUMBER	INTERCHANGES WITH	T TUBE O.D. (mm.)
DFC-6MM	6M3-1 FFM6	6
DFC-8MM	8M3-1 FFM8	8
DFC-10MM	10M3-1 FFM10	10
DFC-12MM	12M3-1 FFM12	12
DFC-18MM	18M3-1 FFM18	18



CBC PART NUMBER	INTERCHANGES WITH	T TUBE O.D. (mm.)
DRC-6MM	6M4-1 BFM6	6
DRC-8MM	8M4-1 BFM8	8
DRC-10MM	10M4-1 BFM10	10
DRC-12MM	12M4-1 BFM12	12
DRC-18MM	18M4-1 BFM18	18

NOTE: Dimensions subject to change, to be used for reference only.

TYLOK LIQUID LEAK DETECTORS

- Tylok Liquid Leak Detector detect gas leaks in hard-to-reach areas.
- Safe for oxygen systems
- Sustainable bubble action works even on very small leaks and vertical surfaces
- Flexible tube extends for hard-to-reach areas
- Formulas dries clean, without staining

Part Number	Container Size	Pull Out Tube Length
Leak Detector- 8oz.	8 fl oz. (236 ml)	12 inch (30.48cm)
Leak Detector- Gal	1 Gallon	
Leak Detector COOL- 8oz.	8 fl oz. (236 ml)	12 inch (30.48cm)
Leak Detector COOL- Gal	1 Gallon	



TYLOK LIQUID LEAK DETECTOR

- Temperature rating: Can be used over a temperature range of 27° to 200°F (-2 to 93°C).

Specifications: Meets the performance requirements of:

- MIL-PRF-25567 Leak Detector Compound, Oxygen Systems, Type I, 1 to 70°C (33 to 158°F)
- NFPA 52 Section 6-12.2 Leak Testing Compressed Natural Gas Vehicular Fuel System
- EPA Part 60, Appendix A, Method 21, Section 4.3.3 Alternative Screening Procedures Using Soap Solutions
- Nontoxic, noncorrosive, nonflammable



TYLOK LOW TEMPERATURE LIQUID LEAK DETECTOR

- Temperature rating: Can be used over a temperature range of -65° to 200°F (-54 to 93°C).

Specifications: Meets the performance requirements of:

- MIL-PRF-25567 Leak Detector Compound, Oxygen Systems, Type II, -54° to 1°C (-65 to 33°F)
- NFPA 52 Section 6-12.2 Leak Testing Compressed Natural Gas Vehicular Fuel System
- EPA Part 60, Appendix A, Method 21, Section 4.3.3 Alternative Screening Procedures Using Soap Solutions
- Noncorrosive, nonflammable



TYLUBE™ THREAD LUBRICANT

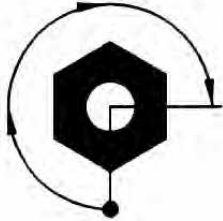
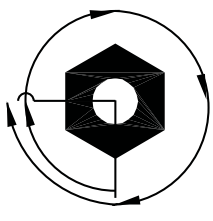
Tylube™ is an anti-gall compound to be used on stainless steel, steel and nickel-based alloys. Temperature range to 500°F. Not recommended for plastic and aluminum products.

Tylube™ is made from distilled water with inert ingredients and contains no silicones, heavy metals, chlorine or sulfur. Safe for oxygen applications.

For a complete list of ingredients, request an SDS to be sure of its compatibility with your installation. Available in 8 oz. plastic bottles.

CBC-LOK®/CS-LOK® INSTALLATION INSTRUCTIONS

CBC-Lok®/CS-Lok® Tube Fittings come completely assembled & ready for use, no disassembly required. Although there are some general guidelines to follow, no special preparation of the tubing is necessary. In overhead applications, Tylok recommends using a Pre-Set Tool.

Size	Tighen # Turn(s)	
1 1/16"	3/4"	SIZE #1 thru #3  Finger tight plus 3/4 turn
2 1/8"		
3 3/16"		
4 1/4"	1-1/4"	SIZE #4 thru #16  Finger tight plus 1-1/4 turn
5 5/16"		
6 3/8"		
8 1/2"		
10 5/8"		
12 3/4"		
14 7/8"		
16 1"		

NOTE: DF Plugs, -NF (Nut & Ferrule Pre-Assemblies) require only 1/4 turn make-up.



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. High pressure applications and high safety-factor systems. Further tighten the nut until the tube will not turn by hand or move axially in the fitting.



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



TO REMOVE TUBE & RE-CONNECT TUBE FITTING

Mark the location of the nut with reference to the body before disassembly. Back off the nut until it is clear of the body and remove the tubing from the fitting. For assembly, re-insert the tubing into the body until it is seated. With proper size wrench, re-tighten 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.

TUBING

Selection & Preparation

CBC/CS-Lok

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 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 A213, ASTM A269 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, or imperfections of any kind and should be suitable for bending. 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 Tube Pressure De-rating Factors at Elevated Temperatures Chart.

CBC-Lok®/CS-Lok® Tube Fitting swage the tubing to achieve sealing. Thin wall tubing (wall thickness with working pressures highlighted in reverse text in the charts) is not recommended for Gas Service. See "Gas Service" on page 81.

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 of selecting tubing.

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.

Note: Tables, calculated to the right, are suggested maximum working pressure ratings, in accordance with ASME B31.3, but should be used for reference only. Tylok International Inc., is not responsible for its accuracy nor designs using these figures.

Following the stated recommendations will result in a safe application, free of leaks. The entire system must be considered when selecting the tube. Tylok tube fittings are designed to work to the tubing pressure ratings found in the charts below.

SUGGESTED ALLOWABLE WORKING PRESSURE TABLES (psig)

Stainless Steel								
Tube Size O.D.	Tube Wall Thickness (inches)							
	.028	.035	.049	.065	.083	.095	.109	.120
1/8"	8500	10900						
3/16"	5400	7000	10200					
1/4"	4000	5100	7500	10200				
5/16"		4000	5800	8000				
3/8"		3300	4800	6500				
1/2"		2600	3700	5100	6700			
5/8"			2900	4000	5200	6000		
3/4"			2400	3300	4200	4900	5800	
7/8"			2000	2800	3600	4200	4800	
1"				2400	3100	3600	4200	4700

Note: For welded and drawn tubing, a de-rating factor must be utilized. For double welded tube, multiply the above pressure rating by .85; and of single welded tube by .80 (ASME B31.3).

Carbon Steel								
Tube Size O.D.	Tube Wall Thickness (inches)							
	.028	.035	.049	.065	.083	.095	.109	.120
1/8"	8000	10200						
3/16"	5100	6600	9600					
1/4"	3700	4800	7000	9600				
5/16"		3700	5500	7500				
3/8"		3100	4500	6200				
1/2"		2300	3200	4500	5900			
5/8"			2600	3500	4600	5300		
3/4"			2100	2900	3700	4300	5100	
7/8"			1800	2400	3200	3700	4300	
1"			1500	2100	2700	3200	3700	4100

Copper								
Tube Size O.D.	Tube Wall Thickness (inches)							
	.028	.035	.049	.065	.083	.095	.109	.120
1/8"	2700	3600						
3/16"	1800	2300	3400					
1/4"	1300	1600	2500	3500				
5/16"		1300	1900	2700				
3/8"		1000	1600	2200				
1/2"		800	1100	1600	2100			
5/8"			900	1200	1600	1900		
3/4"			700	1000	1300	1500	1800	
7/8"			600	800	1100	1300	1500	
1"			500	700	900	1100	1300	1500

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. When using large diameter tubing, the possibility of surface defects is increased further due to greater surface area. It is strongly recommended that the heavier wall thickness be selected. Penetration of the ferrules on thin wall tubing or soft material may not offer enough radial resistance for sealing.

Valves in reverse text are not recommended for Gas Service.

GAP GAGE

Gap Gage can be purchased to ensure the Installer and Inspector that the nut has been properly tightened.



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

PRECAUTIONS FOR WELD END

CBC-Lok®/CS-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 & ferrules 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 track welding symmetrically.
- Once welded, remove the weld splatter protection and reassemble nut & ferrules on fitting.

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 73, before pressurizing the system.
- Tubing material should be softer than fitting material.
- Tylok recommends using only 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 & inspected to meet strict quality control standards in each phase of production. All employees are thoroughly trained to follow procedures, in accordance with the ISO 9001 Quality Standard, to ensure a quality product from the start of each job through completion.

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 to provide the finest possible product.

Materials: Brass • 316 Stainless Steel • Steel

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.

Pressure ratings for Tylok tube fittings that have differing end connection styles shall use the lowest of the pressure ratings.

TUBE PRESSURE DE-RATING FACTORS ELEVATED TEMPERATURES

The table lists de-rating factors that must be considered in applications above that of ambient temperatures.

Example:

Type 316 Stainless Steel 1/4" O.D.x.0.49" wall at 800°F is 7,500 PSI x .79 = 5,925 psig.

Therefore, the suggested allowable working pressure for 316 Stainless Steel (1/4" O.D. with .049" tube wall) at 800°F is 5,925 psig.

THERMOCOUPLE BORE THROUGH

Sizes	De-Rating Factor
1/2" & Smaller	0.75
Over 1/2" up to & including 3/4"	0.50
Larger than 3/4"	0.25

NOTE: Multiply tube pressure rating (see Suggested Allowable Working Pressure tables) by de-rating factor to determine safe working pressure.

Suggested Maximum Operating Pressures for Pipe Threads (psig)				
NPT Size	316 SS & Carbon Steel		Brass	
	Male	Female	Male	Female
1/16"	11000	6700	5500	3300
1/8"	10000	6500	5000	3200
1/4"	8000	6600	4000	3300
3/8"	7800	5300	3900	2600
1/2"	7700	4900	3800	2400
3/4"	7300	4600	3600	2300
1"	5300	4400	2600	2200

Tylok Instrumentation Fittings are rated at the following temperatures:	
316 Stainless	-325°F to 1000°F (-198°C to 648°C)
Brass	-40°F to 400°F (-40°C to 204°C)
Steel	-65°F to 375°F (-54°C to 190°C)

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

Temperatures		Tubing Material		
°F	°C	Carbon	304 SS	316 SS
200	93	0.95	1.00	1.00
300	149	0.90	1.00	1.00
400	204	0.87*	0.93	0.96
500	260		0.87	0.89
600	316		0.82	0.85
700	371		0.8	0.81
800	427		0.76	0.79
900	482		0.73	0.77
1000	538		0.69	0.76

* Based on 375°F (190°C) max

Temperatures		Tubing Material
°F	°C	Copper
100	38	1.00
150	66	0.85
200	93	0.80
250	121	0.80
300	149	0.78
350	177	0.66
400	204	0.50

HEAT TRACEABILITY

Tylok Tube Fittings are completely heat code traceable back to the original mill heat from which they were made. Starting with the original billet, the mill creates a certificate that completely describes the chemical & physical makeup. For any one of the four components (body, front ferrule, rear ferrule, nut), the material certifications can be provided. Call Tylok and provided the heat code stamp marked on the part itself, along the part number to obtain the certificate.

RAW MATERIAL SPECIFICATIONS

Fitting Material	Bar Stock	Forging
Brass	ASTM B16 ASTM B453	ASTM B283
Stainless Steel	ASTM A276 ASTM A479 ASME SA-479 Type 316-SS	ASTM A182 ASME SA-182 Type 316-SS
Steel	ASTM A108	

* Reference Tubing Selection & Preparation

TYLOK PRE-SET TOOL

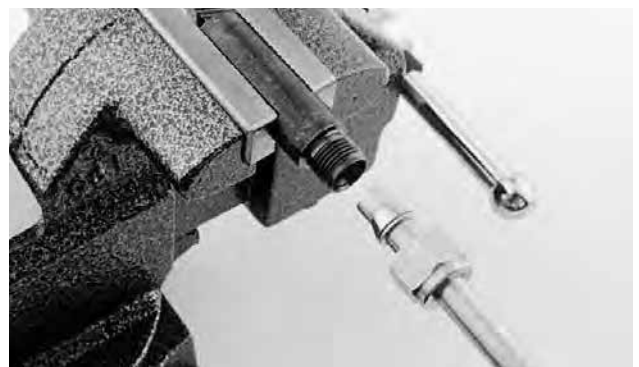
The CBC-Lok®/CS-lok® product line offers a Pre-Set Tool when fittings need to be installed in hard to reach places. The Pre-Set Tool is designed to be used in any tabletop vise. After tightening the nut the specified number of turns, as stated in the included installation instructions, loosen the nut from the Pre-Set Tool. Once the ferrules have swaged into the tubing surface, the assembly is ready for installation. Follow the installation for re-connecting the tube fitting as stated on page 79. When ordering the CBC-Lok®/CS-Lok® Pre-Set Tool, reference the part number in the chart. The Pre-Set Tool is hardened for maximum durability. The Pre-Set Tool can be used repeatedly to set the ferrules 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"



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



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

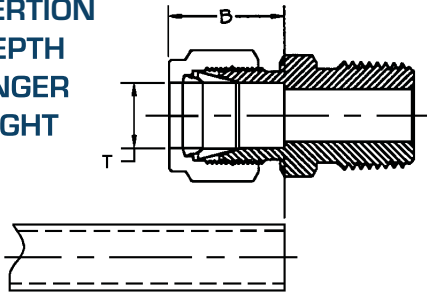
TUBE INSERTION CHART

Applications

TUBE INSERTION CHART

For pre-cutting tubing to length, the following chart shows the additional length inside the fitting assembly.

**TUBE
INSERTION
DEPTH
FINGER
TIGHT**



Tube Size	T Tube OD	B Insertion Depth
1	1/16	0.34
2	1/8	0.52
3	3/16	0.54
4	1/4	0.61
5	5/16	0.65
6	3/8	0.67
8	1/2	0.90
10	5/8	0.96
12	3/4	0.96
14	7/8	1.02
16	1	1.24

Note: Dimensions subject to change, to be used for reference only.

TUBING-GENERAL APPLICATIONS

Tylok Tube Fittings are designed to perform in a variety of applications that demand high performance. The CBC-Lok® & CS-Lok® product lines have been engineered to provide optimal performance. However, tubing should always be considered as an important factor in the design stages of any system. The table is provided as an reference to the Engineer in the design process. Tylok suggests the use of seamless, fully annealed tubing. Welded tubing may be used with Tylok fittings. However, due to the manufacturing of welded tubing, variables may be encountered. The media flowing through the tubing must be compatible with the tubing itself. It is always a good rule to use like tubing material on like fitting material. If this format is not followed, the ferrules may have difficulty penetrating the tubing, adversely affecting the sealing ability addition, dissimilar materials in contact may be sensitive to galvanic corrosion. Tylok recommends ordering tubing material to meet ASTM specifications to ensure that it will be dimensionally, physically, and chemically within precise limits.

Tubing Material	General Applications
Carbon Steel	Air Lines, High Pressure, High Temperature, Oil, Air, Specialty Chemicals, Hydraulic Gases
Copper	Low Temperature, Low Pressure, Water, Oil, Air, Pneumatic Controls, Lube Lines
Stainless Steel	High Pressure, High Temperature, Nitrogen, Helium, Flammable Gases, Hydraulic Gases, generally corrosive media

NOTICE

In designing a system incorporating tube fittings and valves, it is the designer's or user's obligation & responsibility to determine the appropriate fittings and valves to be used for each application and to insure proper installation and maintenance.



Instrumentation Pipe Fittings



1CLN
Close Nipple

89



1FMA
Female to Male
Adapter

89



1FPC
Female
Pipe Cap

89



1FPRU
Female Pipe
Reducer Union

89



1FPU
Female
Pipe Union

90



1HLN
Hex
Long Nipple

90



1HN
Hex Nipple

90



1MPP
Male Pipe
Plug

90



1HRN
Hex
Reducing Nipple

91



1RAFM
Reducer Adapter -
Female to Male

91



1RBMF
Reducer Bushing -
Male to Female

92



2FF
Female Pipe
Elbow

92



2FM
Female - Male
Pipe Elbow

92



2FMR
Female - Male
Reducer Pipe Elbow

93



2MM
Male Pipe
Elbow

93



3FFF
All Female
Pipe Elbow

93



3FFM
Pipe Tee - Female -
Female - Male

94



3FMF
Pipe Tee - Female -
Male - Female

94



3MMM
All Male
Pipe Tee

94



4FPCR
Female Pipe Cross

94

Instrumentation Pipe Fittings

Tylok Instrumentation Pipe Fittings are offered in popular configurations such as reducing adapters, reducing bushings, pipe unions, elbows, tees, crosses, etc.

Fittings are manufactured to the same high quality standards as other Tylok Fittings. Each fitting is thoroughly cleaned to eliminate system contamination and features an attractive surface finish to enhance the appearance of modern scientific instrumentation and equipment.

Fittings are manufactured from materials meeting applicable ASTM or ASME specifications, with pipe threads which meet or exceed ANSI/ASME B1.20.1 requirements. Strict quality controls procedures are followed throughout production.

Pipe thread connections are very common in today's industry. They are relatively easy to work with because of the common sizes and dimensions throughout manufacturing. It is important to use a thread sealant.

These products range from pipe "dopes" to Teflon tape, all of which can be purchase through your local Tylok Distributor.

Design/Features

Tylok Instrumentation Pipe Fittings are manufactured to the same high quality standards as other Tylok Fittings. Each fitting is thoroughly cleaned to eliminate system contamination and features an attractive surface finish to enhance the appearance of modern scientific instrumentation and equipment.

Technical Support & Training

Tylok Instrumentation Inc. ensures all of its Distributors are trained on the proper installation of fittings and valves. Tylok Distributors are trained to provide the technical support you deserve. Additionally, our Distributors will help in finding solutions for specific applications. Contact your local Tylok Distributor for further information.

Quality Management System

SAI Global has registered Tylok International's Quality Management System to ISO 9001. The quality system complies with the international standard ISO 9001 and its technical equivalent, ANSI/ISO/ASQ 9001. Tylok strives to continuously improve the effectiveness of the Quality Management System.



ISO 9001

How to Order

Tylok Instrumentation Pipe Fittings are ordered as listed in this catalog by inserting the material code before the part number.

Tylok Instrumentation Pipe Fittings can be identified through the part number as to material, pipe size, configuration, and thread connection. The part number describes a complete fitting. The size nomenclature to describe a tee fitting is from left (1) to right (2) and down (3).

Special Configurations available upon request.

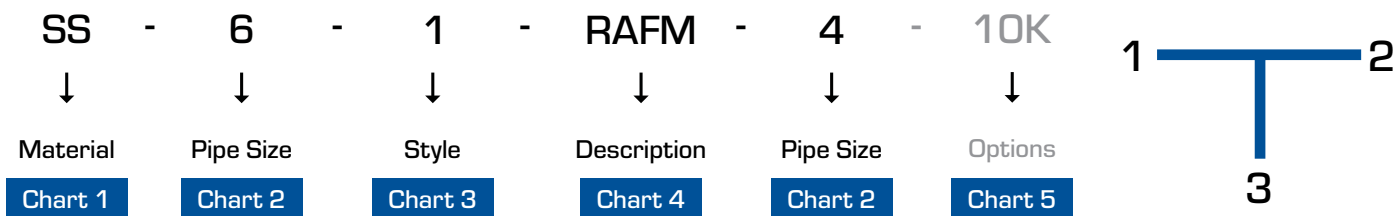


Chart 1- Material	
B	Brass
S	Steel
SS	Stainless Steel

Chart 2- Pipe Size		
Designator	Pipe Thread (NPT)	Pipe Thread BSPP/BSPT
1	1/16-27	1/16-28
2	1/8-27	1/8-28
4	1/4-18	1/4-19
6	3/8-18	3/8-19
8	1/2-14	1/2-14
12	3/4-14	3/4-14
16	10-1-11/2	10-11

Chart 3- Style	
1	Straight
2	Elbow
3	Tee
4	Cross

Chart 4- Description	
1CLN	Close Nipple
1FMA	Female to Male Adapter
1FPC	Female Pipe Cap
1FPU	Female Pipe Union
1FPRU	Female Pipe Reducer Union
1HLN	Hex Long Nipple
1HN	Hex Nipple
1HRN	Hex Reducing Nipple
1MPP	Male Pipe Plug
1RAFM	Reducer Adapter-Female to Male
1RBMF	Reducer Bushing-Male to Female
2FF	Female Pipe Elbow
2FM	Female-Male Pipe Elbow
2FMR	Female-Male Reducer Pipe Elbow
2MM	Male Pipe Elbow
3FFF	All Female Pipe Tee
3FFM	Pipe Tee-Female-Female-Male
3FMF	Pipe Tee-Female-Male-Female
3MMM	All Male Pipe Tee
4FPCR	Female Pipe Cross

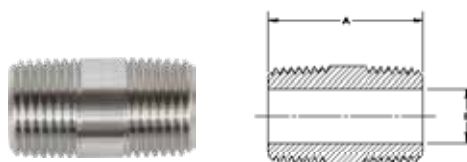
Chart 5- Options	
10K	10K Rated
RS	BSPM Male Connector
BSPT	BSPT Male Connector
BT	Bored Through
CL	Clean & Lubricated to ASTM G93 Level C
SPCL	Clean & Lubricated to CGA G-4.1-2009
NACE	NACE Compliant

1CLN, 1FMA, 1FPC, 1FPRU

Part No.	Interchanges With	Male Pipe Size	A	E Thru Hole
2-1CLN	2-CN	1/8	0.75	0.19
4-1CLN	4-CN	1/4	1.13	0.28
6-1CLN	6-CN	3/8	1.13	0.38
8-1CLN	8-CN	1/2	1.5	0.47
12-1CLN	12-CN	3/4	1.5	0.63
16-1CLN	16-CN	1	1.88	0.88

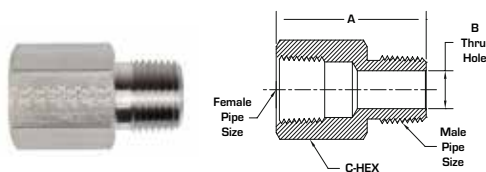
1CLN

Close Nipple



1FMA

Female to Male Adapter

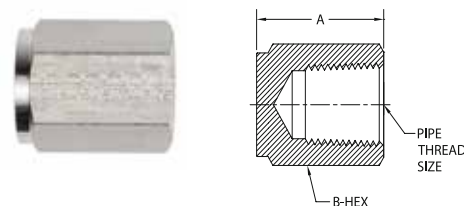


Part No.	Interchanges With	Female Pipe Size	Male Pipe Size	A	B Thru Hole	C Hex
2-1FMA	2-A	1/8	1/8	1.06	.187	9/16
4-1FMA	4-A	1/4	1/4	1.38	.281	3/4
6-1FMA	6-A	3/8	3/8	1.56	.375	7/8
8-1FMA	8-A	1/2	1/2	1.91	.468	1-1/16
12-1FMA	12-A	3/4	3/4	1.94	.625	1-5/16
16-1FMA	16-A	1	1	2.28	.875	1-5/8
1OK Fittings						
2-1FMA-1OK	-	1/4	1/8	1.10	0.19	3/4
4-1FMA-1OK	4-A-1OK	3/8	1/4	1.40	0.23	1
6-1FMA-1OK	-	1/2	1/4	1.51	0.31	1-1/4
8-1FMA-1OK	8-4-1OK	1/2	1/2	1.94	0.39	1-5/8

Part No.	Interchanges With	Pipe Thread Size	A	B Hex
2-1FPC	2-CP	1/8	.750	9/16
4-1FPC	4-CP	1/4	.906	3/4
6-1FPC	6-CP	3/8	1.03	7/8
8-1FPC	8-CP	1/2	1.34	1-1/16
12-1FPC	12-CP	3/4	1.44	1-5/16
16-1FPC	16-CP	1	1.63	1-5/8
1OK Fittings				
2-1FPC-1OK	-	1/8	0.63	3/4
4-1FPC-1OK	-	1/4	0.88	1
6-1FPC-1OK	-	3/8	1.00	1-1/4
8-1FPC-1OK	-	1/2	1.35	1-5/8

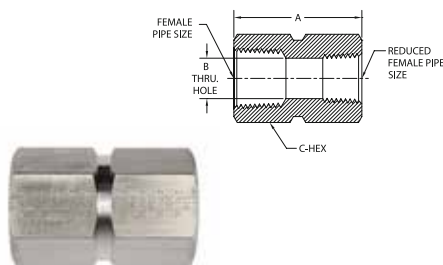
1FPC

Female Pipe Cap



1FPRU

Female Pipe Reducer Union



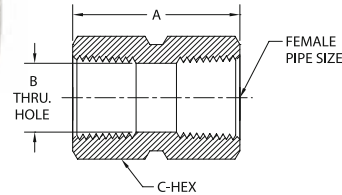
Part No.	Interchanges With	Female Pipe Size	Reduced Female Pipe Size	A	B Thru Hole	C Hex
4-1FPRU-2	4-HRCG-2	1/8	1/8	1.06	.187	9/16
6-1FPRU-4	6-HRCG-4	1/4	1/4	1.38	.281	3/4
8-1FPRU-2	8-HRCG-2	3/8	3/8	1.56	.375	7/8
8-1FPRU-4	8-HRCG-4	1/2	1/2	1.91	.468	1-1/16
8-1FPRU-6	8-HRCG-6	3/4	3/4	1.94	.625	1-5/16
12-1FPRU-4	12-HRCG-4	1	1	2.28	.875	1-5/8
12-1FPRU-8	12-HRCG-8	1/2	1/2	1.91	.468	1-1/16
16-1FPRU-8	16-HRCG-8	3/4	3/4	1.94	.625	1-5/16
16-1FPRU-12	16-HRCG-12	1	1	2.28	.875	1-5/8
1OK Fittings						
4-1FPRU-2-1OK	-	1/4	1/8	1.22	0.33	1
6-1FPRU-4-1OK	-	3/8	1/4	1.38	0.42	1-1/4
8-1FPRU-4-1OK	8-HRCG-4-1OK	1/2	1/4	1.75	0.42	1-5/8
8-1FPRU-6-1OK	-	1/2	3/8	1.78	1.78	1-5/8

1FPU, 1HLN, 1HN, 1MPP

Part No.	Interchanges With	Female Pipe Size	A	B Thru Hole	C Hex
2-1FPU	2-HCG	1/8	.812	.328	9/16
4-1FPU	4-HCG	1/4	1.19	.421	3/4
6-1FPU	6-HCG	3/8	1.31	.562	7/8
8-1FPU	8-HCG	1/2	1.63	.687	1-1/16
12-1FPU	12-HCG	3/4	1.69	.890	1-5/16
16-1FPU	16-HCG	1	2.00	1.13	1-5/8
10K Fittings					
2-1FPU-10K	-	1/8	0.81	0.33	3/4
4-1FPU-10K	4-HCG-10K	1/4	1.19	0.42	1
6-1FPU-10K	-	3/8	1.31	0.42	1-1/4
8-1FPU-10K	8-HCG-10K	1/2	1.56	0.56	1-5/8

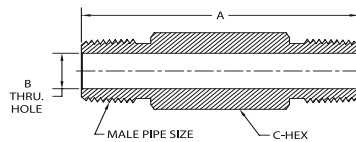
1FPU

Female Pipe Union



1HLN

Hex Long Nipple

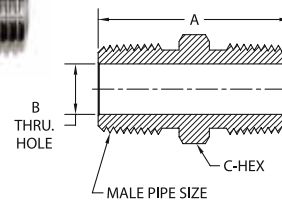


Part No.	Interchanges With	Male Pipe Size	A	B Thru Hole	C Hex
2-1HLN*	2-HLN- 2.00	1/8	* - Made to Order Specify Size	.187	7/16
4-1HLN*	4-HLN- 2.00	1/4		.281	9/16
6-1HLN*	6-HLN- 2.00	3/8		.375	1/16
8-1HLN*	8-HLN- 2.00	1/2		.468	7/8
12-1HLN*	12-HLN- 2.00	3/4		.625	1-1/16
16-1HLN*	16-HLN- 2.00	1		.875	1-3/8

Part No.	Interchanges With	Male Pipe Size	A	B Thru Hole	C Hex
1-1HN	1-HN	1/16	1.01	.125	3/8
2-1HN	2-HN	1/8	1.01	.187	7/16
4-1HN	4-HN	1/4	1.40	.281	9/16
6-1HN	6-HN	3/8	1.43	.375	11/16
8-1HN	8-HN	1/2	1.84	.468	7/8
12-1HN	12-HN	3/4	1.84	.625	1-1/16
16-1HN	16-HN	1	2.32	.875	1-3/8
10K Fittings					
2-1HN	2-HN	1/8	1.01	11/16	7/16
4-1HN-10K	4-HN-10K	1/4	1.40	7/8	9/16
6-1HN-10K	-	3/8	1.43	1-1/16	11/16
8-1HN-10K	8-HN-10K	1/2	1.84	1-3/8	7/8

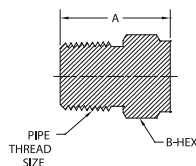
1HN

Hex Nipple



1MPP

Male Pipe Plug

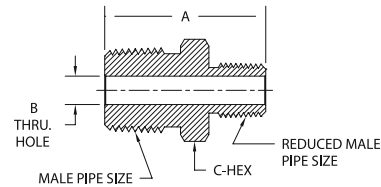


Part No.	Interchanges With	Pipe Thread Size	A	B Hex
1-1MPP	1-P	1/16	.750	3/8
2-1MPP	2-P	1/8	.750	7/16
4-1MPP	4-P	1/4	1.000	9/16
6-1MPP	6-P	3/8	1.000	11/16
8-1MPP	8-P	1/2	1.312	7/8
12-1MPP	12-P	3/4	1.375	1-1/16
16-1MPP	16-P	1	1.500	1-3/8

Part No.	Interchanges With	Male Pipe Size	Reduced Male Pipe Size	A	B Thru Hole	C Hex
2-1HRN-1	2-HRN-1	1/8	1/16	1.00	.125	7/16
4-1HRN-2	4-HRN-2	1/4	1/8	1.19	.187	9/16
6-1HRN-2	6-HRN-2	3/8	1/8	1.22	.1871	1/16
6-1HRN-4	6-HRN-4	3/8	1/4	1.41	.281	11/16
8-1HRN-2	8-HRN-2	1/2	1/8	1.41	.187	7/8
8-1HRN-4	8-HRN-4	1/2	1/4	1.59	.281	7/8
8-1HRN-6	8-HRN-6	1/2	3/8	1.63	.375	7/8
12-1HRN-4	12-HRN-4	3/4	1/4	1.63	.281	1-1/16
12-1HRN-8	12-HRN-8	3/4	1/2	1.81	.468	1-1/16
16-1HRN-4	16-HRN-4	1	1/4	1.91	.281	1-3/8
16-1HRN-8	16-HRN-8	1	1/2	2.09	.468	1-3/8
16-1HRN-12	16-HRN-12	1	3/4	2.09	.625	1-3/8
1OK Fittings						
2-1HRN-1	2-HRN-1	1/8	1/16	1.01	0.13	7/16
4-1HRN-2-1OK	-	1/4	1/8	1.22	0.19	9/16
6-1HRN-2-1OK	-	3/8	1/8	1.25	0.19	11/16
6-1HRN-4-1OK	-	3/8	1/4	1.43	0.23	11/16
8-1HRN-2-1OK	-	1/2	1/8	1.47	0.19	7/8
8-1HRN-4-1OK	8-HRN-4-1OK	1/2	1/4	1.65	0.23	7/8
8-1HRN-6-1OK	-	1/2	3/8	1.65	0.31	7/8

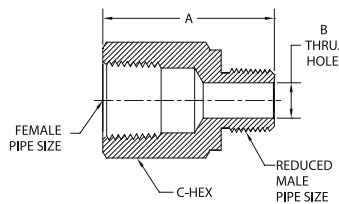
1HRN

Hex Reducing Nipple



1RAFM

Reducer Adapter - Male to Female



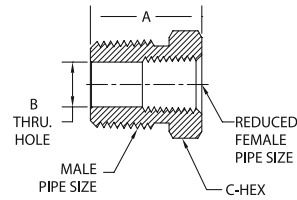
Part No.	Interchanges With	Female Pipe Size	Reduced Male Pipe Size	A	B Thru Hole	C Hex
2-1RAFM-1	2-RA-1	1/8	1/16	1.09	.125	9/16
4-1RAFM-2	4-RA-2	1/4	1/8	1.25	.187	3/4
6-1RAFM-2	6-RA-2	3/8	1/8	1.44	.187	7/8
6-1RAFM-4	6-RA-4	3/8	1/4	1.56	.281	7/8
8-1RAFM-2	8-RA-2	1/2	1/8	1.69	.187	1-1/16
8-1RAFM-4	8-RA-4	1/2	1/4	1.81	.281	1-1/16
8-1RAFM-6	8-RA-6	1/2	3/8	1.81	.375	1-1/16
12-1RAFM-4	12-RA-4	3/4	1/4	1.97	.281	1-5/16
12-1RAFM-6	12-RA-6	3/4	3/8	1.97	.375	1-5/16
12-1RAFM-8	12-RA-8	3/4	1/2	2.06	.468	1-5/16
16-1RAFM-4	16-RA-4	1	1/4	2.13	.281	1-5/8
16-1RAFM-8	16-RA-8	1	1/2	2.25	.468	1-5/8
16-1RAFM-12	16-RA-12	1	3/4	2.25	.625	1-5/8
1OK Fittings						
2-1RAFM-1-1OK	-	1/8	1/16	1.09	0.13	3/4
4-1RAFM-2-1OK	-	1/4	1/8	1.25	0.19	1
6-1RAFM-2-1OK	-	3/8	1/8	1.33	0.19	1-1/4
6-1RAFM-4-1OK	-	3/8	1/4	1.50	0.23	1-1/4
8-1RAFM-2-1OK	-	1/2	1/8	1.58	0.19	1-5/8
8-1RAFM-4-1OK	8-RA-4-1OK	1/2	1/4	1.76	0.23	1-5/8
8-1RAFM-6-1OK	-	1/2	3/8	1.75	0.31	1-5/8

1RBMF, 2FF, 2FM

Part No.	Interchanges With	Male Pipe Size	Reduced Female Pipe Size	A	B Thru Hole	C Hex
2-1RBMF-1	2-RB-1	1/8	1/16	1.00	.187	7/16
4-1RBMF-2	4-RB-2	1/4	1/8	1.00	.281	9/16
6-1RBMF-2	6-RB-2	3/8	1/8	.843	.328	11/16
6-1RBMF-4	6-RB-4	3/8	1/4	1.13	.375	3/4
8-1RBMF-2	8-RB-2	1/2	1/8	1.06	.328	7/8
8-1RBMF-4	8-RB-4	1/2	1/4	1.06	.421	7/8
8-1RBMF-6	8-RB-6	1/2	3/8	1.31	.468	7/8
12-1RBMF-4	12-RB-4	3/4	1/4	1.06	.421	1-1/16
12-1RBMF-6	12-RB-6	3/4	3/8	1.06	.562	1-1/16
12-1RBMF-8	12-RB-8	3/4	1/2	1.56	.625	1-1/16
16-1RBMF-4	16-RB-4	1	1/4	1.34	.421	1-3/8
16-1RBMF-6	16-RB-6	1	3/8	1.34	.562	1-3/8
16-1RBMF-8	16-RB-8	1	1/2	1.34	.687	1-3/8
16-1RBMF-12	16-RB-12	1	3/4	1.75	.875	1-3/8
1OK Fittings						
4-1RBMF-2-1OK	-	1/4	1/8	1.15	0.23	3/4
6-1RBMF-4-1OK	-	3/8	1/4	1.38	0.31	1
8-1RBMF-2-1OK	-	1/2	1/8	1.09	0.33	7/8
8-1RBMF-4-1OK	-	1/2	1/4	1.53	0.39	1
8-1RBMF-6-1OK	-	1/2	3/8	1.63	0.39	1-1/4

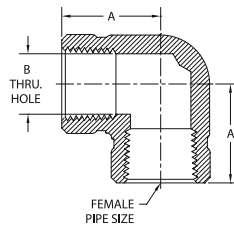
1RBMF

Reducer Bushing-
Male to Female



2FF

Female Pipe Elbow

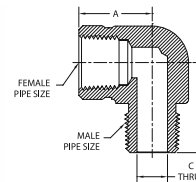


Part No.	Interchanges With	Female Pipe Size	A	B Thru Hole
2-2FF-2	2-E	1/8	.843	.328
4-2FF-4	4-E	1/4	.968	.421
6-2FF-6	6-E	3/8	1.00	.562
8-2FF-8	8-E	1/2	1.13	.687
12-2FF-12	12-E	3/4	1.44	.890
1OK Fittings				
2-2FF-2-1OK	-	1/8	1.04	0.31
4-2FF-4-1OK	-	1/4	1.20	0.41
6-2FF-6-1OK	-	3/8	1.45	0.50
8-2FF-8-1OK	-	1/2	1.65	0.63

Part No.	Interchanges With	Female Pipe Size	Male Pipe Size	A	B	C Thru Hole
1-2FM-1	1-SE	1/16	1/16	.750	.718	.125
2-2FM-2	2-SE	1/8	1/8	.843	.843	.187
4-2FM-4	4-SE	1/4	1/4	.843	1.09	.281
6-2FM-6	6-SE	3/8	3/8	1.00	1.13	.375
8-2FM-8	8-SE	1/2	1/2	1.13	1.38	.468
12-2FM-12	12-SE	3/4	3/4	1.44	1.56	.625
16-2FM-16	16-SE	1	1	1.91	1.91	.875
1OK Fittings						
2-2FM-2-1OK	-	1/8	1/8	1.04	1.04	0.16
4-2FM-4-1OK	-	1/4	1/4	1.20	1.20	0.20
6-2FM-6-1OK	-	3/8	3/8	1.45	1.45	0.28
8-2FM-8-1OK	-	1/2	1/2	1.65	1.65	0.36

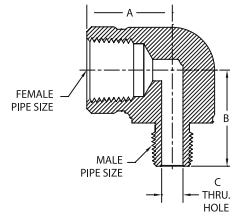
2FM

Female-Male Pipe Elbow



2FMR

Female-Male Reducer Pipe Elbow

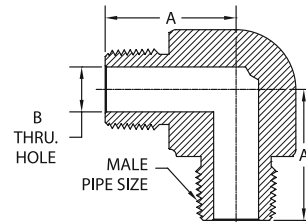


Part No.	Interchanges With	Female Pipe Size	Male Pipe Size	A	B	C Thru Hole
2-2FMR-1	2-RSE-1	1/8	1/16	.750	.750	.125
4-2FMR-2	4-RSE-2	1/4	1/8	.843	.937	.187
6-2FMR-4	6-RSE-4	3/8	1/4	1.06	1.06	.281
8-2FMR-4	8-RSE-4	1/2	1/4	1.13	1.25	.281
8-2FMR-6	8-RSE-6	1/2	3/8	1.13	1.25	.375
10K Fittings						
2-2FMR-1-10K	-	1/8	1/16	1.04	1.04	0.11
4-2FMR-2-10K	-	1/4	1/8	1.20	1.20	0.16
6-2FMR-4-10K	-	3/8	1/4	1.45	1.45	0.20
8-2FMR-4-10K	-	1/2	1/4	1.65	1.65	0.20
8-2FMR-6-10K	-	1/2	3/8	1.65	1.65	0.28

Part No.	Interchanges With	Male Pipe Size	A	B Thru Hole
2-2MM-2	2-ME	1/8	.843	.328
4-2MM-4	4-ME	1/4	.968	.421
6-2MM-6	6-ME	3/8	1.00	.562
8-2MM-8	8-ME	1/2	1.13	.687
12-2MM-12	12-ME	3/4	1.44	.890
16-2MM-16	16-ME	3/4	1.44	.890
10K Fittings				
4-2MM-4-10K	-	1/4	1.20	0.20
6-2MM-6-10K	-	3/8	1.45	0.28
8-2MM-8-10K	-	1/2	1.65	0.36

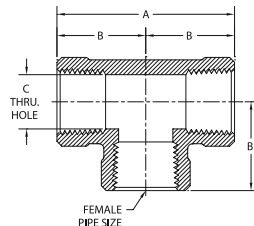
2MM

Male Pipe Elbow



3FFF

All Female Pipe Tee



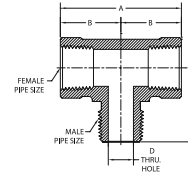
Part No.	Interchanges With	Female Pipe Size	A	B	C Thru Hole
2-3FFF-2	2-T	1/8	1.69	.843	.328
4-3FFF-4	4-T	1/4	1.69	.843	.421
6-3FFF-6	6-T	3/8	2.00	1.00	.562
8-3FFF-8	8-T	1/2	2.63	1.13	.687
12-3FFF-12	12-T	3/4	1.13	1.31	.890
16-3FFF-16	16-T	1	3.25	1.63	.125
10K Fittings					
2-3FFF-2-10K	-	1/8	2.08	1.04	0.31
4-3FFF-4-10K	-	1/4	2.40	1.20	0.41
6-3FFF-6-10K	-	3/8	2.90	1.45	0.50
8-3FFF-8-10K	-	1/2	3.30	1.65	0.63

3FFM, 3FMF, 3MMM, 4FPCR

Part No.	Interchanges With	Female Pipe Size	Male Pipe Size	A	B	C	D Thru Hole
2-3FFM-2	2-BT	1/8	1/8	1.69	.843	.843	.187
4-3FFM-4	4-BT	1/4	1/4	1.88	.937	1.00	.281
6-3FFM-6	6-BT	3/8	3/8	2.00	1.00	1.13	.375
8-3FFM-8	8-BT	1/2	1/2	2.25	1.13	1.38	.468
12-3FFM-12	12-BT	3/4	3/4	2.75	1.38	1.63	.625
10K Fittings							
2-3FFM-2-10K	-	1/8	1/8	2.08	1.04	1.04	0.16
4-3FFM-4-10K	-	1/4	1/4	2.40	1.20	1.20	0.20
6-3FFM-6-10K	-	3/8	3/8	2.90	1.45	1.45	0.28

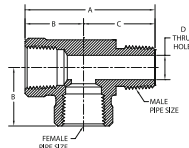
3FFM

Pipe Tee Female - Female - Male



3FMF

Pipe Tee - Female - Male - Female

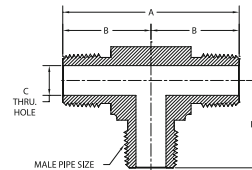


Part No.	Interchanges With	Female Pipe Size	Male Pipe Size	A	B	C	D Thru Hole
2-3FMF-2	2-ST	1/8	1/8	1.69	.843	.843	.187
4-3FMF-4	4-ST	1/4	1/4	1.89	.843	1.05	.281
6-3FMF-6	6-ST	3/8	3/8	2.13	1.00	1.13	.375
8-3FMF-8	8-ST	1/2	1/2	2.50	1.13	1.38	.468
12-3FMF-12	12-ST	3/4	3/4	2.94	1.44	1.50	.625
10K Fittings							
2-3FMF-2-10K	-	1/8	1/8	2.08	1.04	1.04	0.16
4-3FMF-4-10K	-	1/4	1/4	2.40	1.20	1.20	0.20
6-3FMF-6-10K	-	3/8	3/8	2.90	1.45	1.45	0.28

Part No.	Interchanges With	Male Pipe Size	A	B	C Thru Hole
2-3MMM-2	2-MT	1/8	1.44	.718	.187
4-3MMM-4	4-MT	1/4	1.88	.937	.281
6-3MMM-6	6-MT	3/8	2.00	1.00	.375
8-3MMM-8	8-MT	1/2	2.75	1.38	.468
12-3MMM-12	12-MT	3/4	2.75	1.38	.625
10K Fittings					
4-3MMM-4-10K	-	1/4	2.40	1.20	0.20
6-3MMM-6-10K	-	3/8	2.90	1.45	0.28
8-3MMM-8-10K	-	1/2	3.00	1.50	0.36

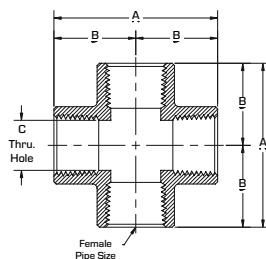
3MMM

All Male Pipe Tee



4FPCR

Female Pipe Cross



Part No.	Interchanges With	Female Pipe Size	A	B	C Thru Hole
2-4FPCR	2-CS	1/8	1.69	.843	.328
4-4FPCR	4-CS	1/4	1.69	.843	.421
6-4FPCR	6-CS	3/8	2.13	1.06	.562
8-4FPCR	8-CS	1/2	2.25	1.13	.687
12-4FPCR	12-CS	3/4	2.88	1.44	.890
16-4FPCR	16-CS	1	3.25	1.63	1.13
10K Fittings					
2-4FPCR-10K	-	1/8	2.08	1.04	0.31
4-4FPCR-10K	-	1/4	2.40	1.20	0.41

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 to provide the finest possible product.

Materials: Brass • 316 Stainless Steel • Steel

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.

Pressure ratings for Tylok tube fittings that have differing end connection styles shall use the lowest of the pressure ratings.

Suggested Maximum Operating Pressures for Pipe Threads (psig)				
NPT Size	316 SS & Carbon Steel		Brass	
	Male	Female	Male	Female
1/16"	11000	6700	5500	3300
1/8"	10000	6500	5000	3200
1/4"	8000	6600	4000	3300
3/8"	7800	5300	3900	2600
1/2"	7700	4900	3800	2400
3/4"	7300	4600	3600	2300
1"	5300	4400	2600	2200

Tylok Instrumentation Fittings are rated at the following temperatures:	
316 Stainless	-325°F to 1000°F [-198°C to 648°C]
Brass	-40°F to 400°F [-40°C to 204°C]
Steel	-65°F to 375°F [-54°C to 190°C]

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

TUBE PRESSURE DE-RATING FACTORS ELEVATED TEMPERATURES

The table lists de-rating factors that must be considered in applications above that of ambient temperatures.

Example:

Type 316 Stainless Steel 1/4" O.D.x.0.49" wall at 800°F is 7,500 PSI x .79 = 5,925 psig.

Therefore, the suggested allowable working pressure for 316 Stainless Steel (1/4" O.D. with .049" tube wall) at 800°F is 5,925 psig.

Temperatures		Tubing Material		
°F	°C	Carbon	304 SS	316 SS
200	93	0.95	1.00	1.00
300	149	0.90	1.00	1.00
400	204	0.87*	0.93	0.96
500	260		0.87	0.89
600	316		0.82	0.85
700	371		0.8	0.81
800	427		0.76	0.79
900	482		0.73	0.77
1000	538		0.69	0.76

* Based on 375°F (190°C) max

Temperatures		Tubing Material
°F	°C	Copper
100	38	1.00
150	66	0.85
200	93	0.80
250	121	0.80
300	149	0.78
350	177	0.66
400	204	0.50

Temperature Ratings

Tylok Instrumentation Pipe Fittings are rated at the following temperatures:

316 Stainless: -325°F to 1000°F (-198°C to 538°C) **Brass:** -40°F to 375°F (-40°C to 204°C) **Steel:** -20°F to 400°F (-28°C to 204°C)

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

Heat Traceability

Tylok Instrumentation Pipe 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 & physical makeup. 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
Brass	ASTM B16 ASTM B453	ASTM B283
Stainless Steel	ASTM A276 ASTM A479 ASME SA-479 Type 316-SS	ASTM A182 ASME SA-182 Type 316-SS
Steel	ASTM A108	

* Reference Tubing Selection & Preparation

General Purpose Ball Valves

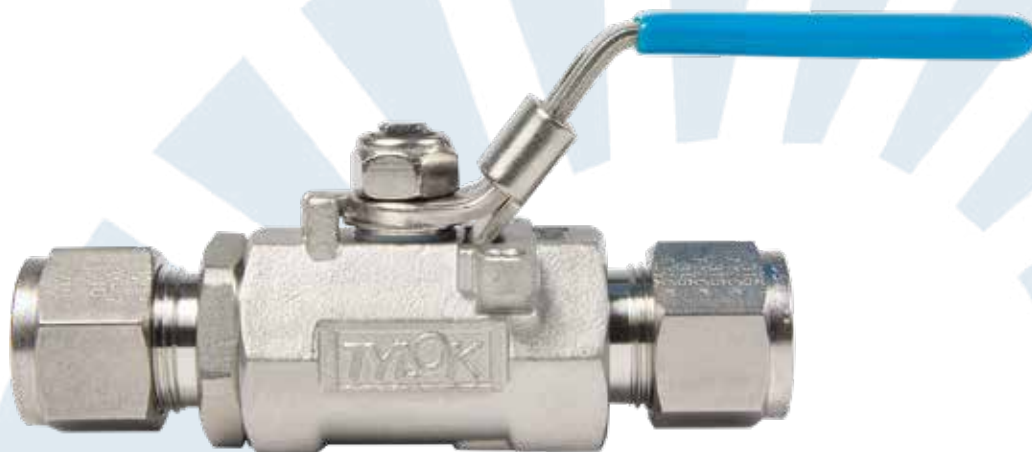
The GP Series Ball Valve is an instrumentation valve solution for tubing & piping systems. It is available from 1/4" to 1" with tube end connections and from 1/4" to 1/2" with female pipe threads for female to female applications.

Tylok General Purpose Ball Valve Series is a moderate pressure ball valve for general service. They are designed for tight shut-off, long service life, and low operating torque.

- 2,000 psig (138 bar) Pressure Rating
- 400°F (204°C) Temperature Rating
- Built-in actuator mounting holes for ease of automation
- Bi-directional flow
- Compact in size but with high flow capacity
- Locking Handle in both On and Off position
- Oval or Butterfly Handles available
(locking devices not available on butterfly handles)

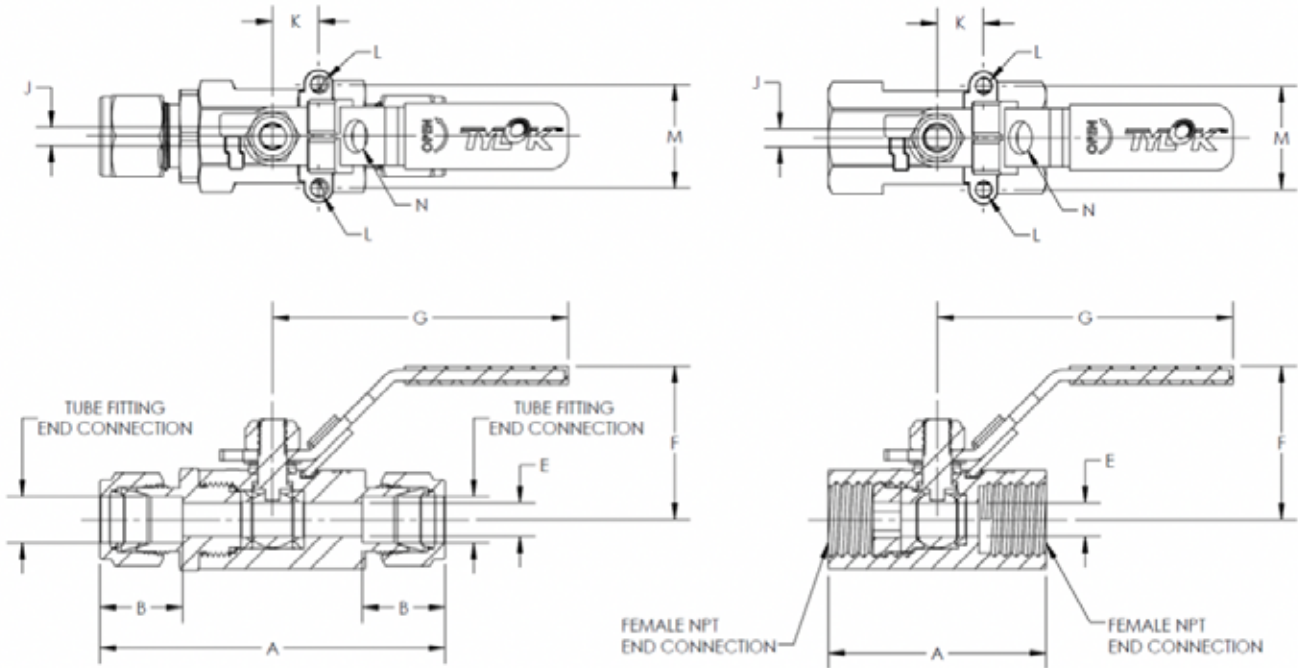


GP Series



Features

- Blow out Proof Stem
- Stainless Steel Construction
- Locking Handles in On & Off positions
- Mounting Holes Available for Automation
- Material: Stainless Steel Cast CF8M
- Pressure Rating: 2000 psi (138 bar) at 100°F (38°C)
- Temperature Rating: 400°F (204°C) max.
- Seat Material: TFM 1600
- Flow Coefficient (Cv) 1.20 to 17.35
- Size Range 1/4" to 1"
- Integral Tube Fitting (Both Twin [CBC-Lok® & Single [CS-Lok®] Ferrule Designs)
- Female NPT x Female NPT
- 100% factory leak tested with Nitrogen at 1000 psi
- Maximum allowable leak rate is 0.1 std cc/min.



End Connection Type	Size	Part No. *	Cv	A	B	E Orifice	F	G	J	K	L Thread Size	M	N Lock Hole	
CBC-Lok® Tube Fitting	1/4	SS-GP4-D4D4	1.25	2.95	0.61	0.20	1.38	2.44	0.12	0.50	M5 X 0.8	1.12	5/16" Lock Shackle Diameter	
	3/8	SS-GP6-D6D6	2.50	3.15	0.67	0.28	1.46	3.15	0.16					
	1/2	SS-GP8-D8D8	9.25	3.75	0.90	0.36	1.69	3.23	0.20					
	3/4	SS-GP12-D12D12	12.65	4.34	0.96	0.49	1.81	3.74	0.20					
CS-Lok® Tube Fitting	1	SS-GP16-D16D16	17.35	4.91	1.24	0.59	2.05	4.02	0.24	0.87	M5 X 0.8	1.37	5/16" Lock Shackle Diameter	
	1/4	SS-GP4-S4S4	1.25	2.95	0.61	0.20	1.38	2.44	0.12	0.50		M5 X 0.8		1.12
	3/8	SS-GP6-S6S6	2.50	3.15	0.67	0.28	1.46	3.15	0.16					
	1/2	SS-GP8-S8S8	9.25	3.75	0.90	0.36	1.69	3.23	0.20					
3/4	SS-GP12-S12S12	12.65	4.34	0.96	0.49	1.81	3.74	0.20						
Female NPT	1	SS-GP16-S16S16	17.35	4.91	1.24	0.59	2.05	4.02	0.24	0.87	M5 X 0.8	1.37	5/16" Lock Shackle Diameter	
	1/4	SS-GP4-F4F4	1.20	1.89	N/A	0.20	1.38	2.44	0.12	0.50		M5 X 0.8		1.12
	3/8	SS-GP6-F6F6	2.40	2.09	N/A	0.28	1.46	3.15	0.16					
1/2	SS-GP8-F8F8	4.27	2.48	N/A	0.36	1.69	3.23	0.20						

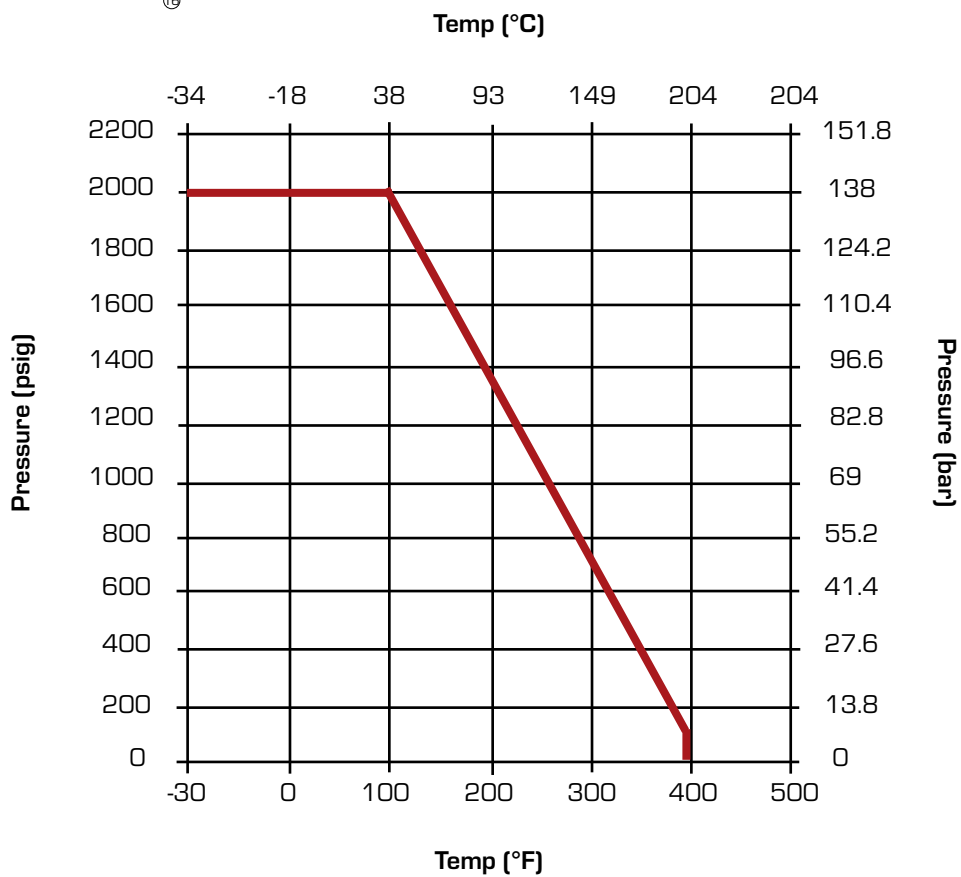
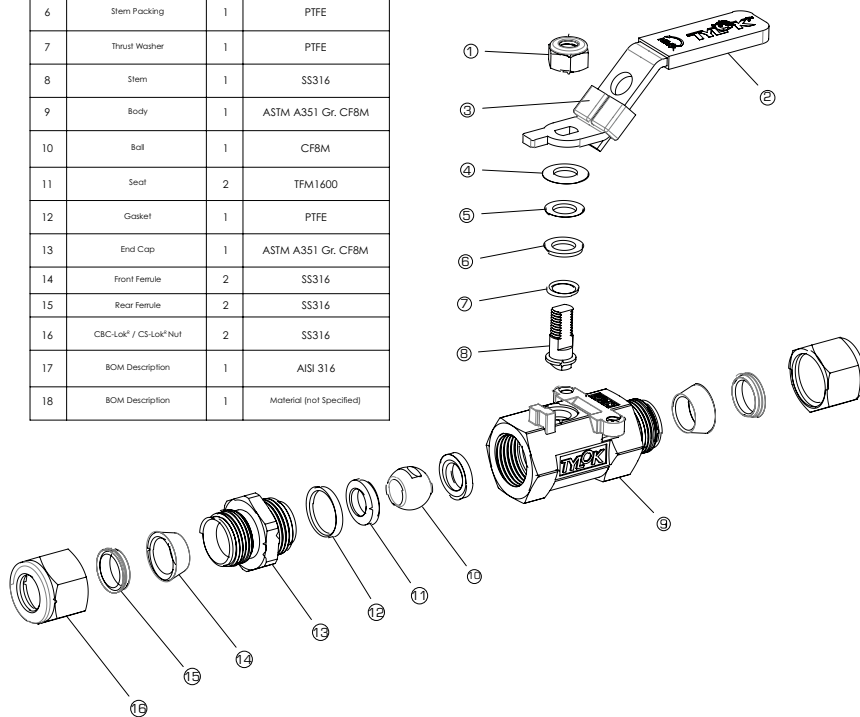
* For optional handle styles, add the following to the end of the part number:

-OH	Oval Handle with Lock Hole for 5/16" Shackle Diameter
-BH	Butterfly Handle with No Lock Hole
-025	Lever Handle with Lock Hole for 1/4" Shackle Diameter

General Purpose Ball Valves

GP Series

NO.	DESCRIPTION	QTY.	MATERIAL
1	Hex Lock Nut (with Nylon Insert)	1	SS304
2	Handle	1	SS304
3	Locking Device	1	SS304
4	Belleville Washer	1	SS301
5	Washer	1	SS304
6	Stem Packing	1	PTFE
7	Thrust Washer	1	PTFE
8	Stem	1	SS316
9	Body	1	ASTM A351 Gr. CF8M
10	Ball	1	CF8M
11	Seat	2	TFM1-600
12	Gasket	1	PTFE
13	End Cap	1	ASTM A351 Gr. CF8M
14	Front Ferrule	2	SS316
15	Rear Ferrule	2	SS316
16	CBC-Lok® / CS-Lok® Nut	2	SS316
17	BOM Description	1	AISI 316
18	BOM Description	1	Material (not Specified)



Handle Options

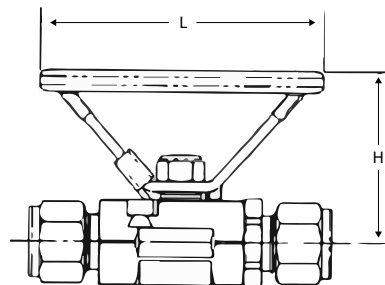
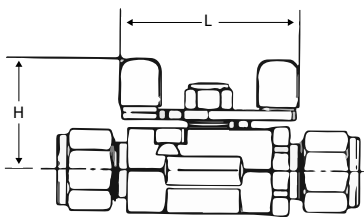
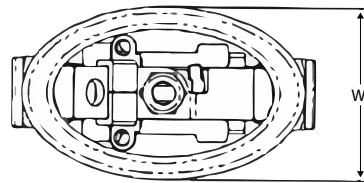
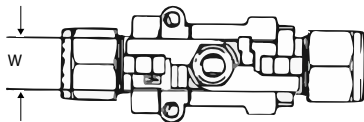
Tylok's GP Series Ball Valves are available with two other handle options:

Butterfly Handle

For applications where space limits the use of a standard lever handle

Oval Handle

For applications where lever handles may pose a hazard if mistakenly actuated.



Size	Butterfly Handle			Oval Handle		
	H	L	W	H	L	W
1/4	1.53	3.51	2.14	1.17	2.00	.48
3/8	1.75	3.51	2.14	1.20	2.10	.55
1/2	2.12	3.51	2.14	1.38	2.22	.63
3/4	2.23	3.51	2.14	1.50	2.22	.63
1	2.40	3.51	2.14	2.08	2.81	.79

High Pressure Ball Valves

HP Series



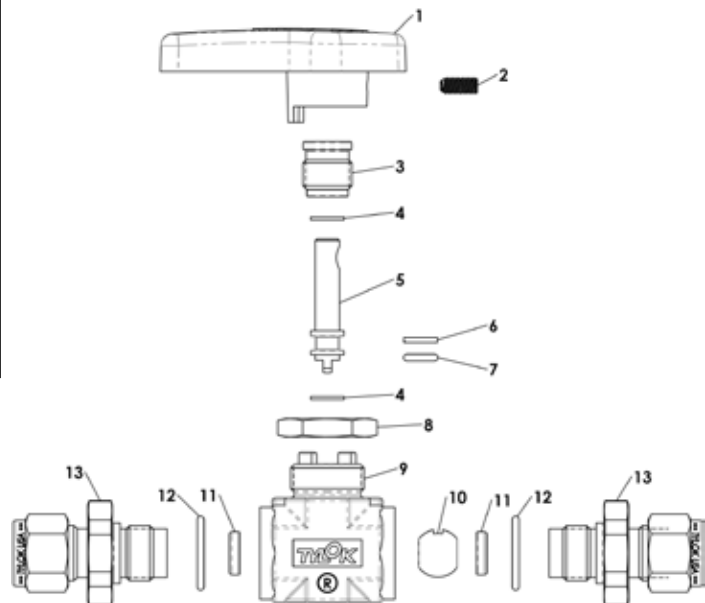
Valve Options

- Reliable, simple, operation for on-off service.
- Fast acting, one quarter turn fully opens or closes the valve.
- Maximum performance, straight through flow for minimum turbulence and pressure drop.
- Positive leak tight shut off, even with fluctuating pressures.
- Panel mounting capabilities standard
- Bi-Directional Flow.
- Handle direction indicates position of valve and flow direction.
- Micro finished ball provides positive seal.
- Free floating ball design compensates for seat wear.
- Available in CBC-Lok®, CS-Lok®, or Tylok Standard Tube Fittings and NPT pipe end connections.

Specifications	Stainless Steel	
	TFE	KEL-F
Pressure Rating	1500 psig (103 bar)	5000 psig (344 bar)
Temperature Rating	-15 to 400 °F (-26 to 204 °C)	-15 to 300 °F (-26 to 149 °C)

* For tubing and pipe working pressures see CBC-Lok® / CS-Lok® section.

#	Components	Stainless Steel	Brass
1	Handle	Nylon with Brass Insert	
2	Screw	Stainless Steel	
3	Gland Nut	316 SS	Brass
4	Stem Washer	Nylat	
5	Stem	316 Stainless Steel	
6	Stem Back-up Ring	TFE	
7	Stem O-Ring	Fluorocarbon FKM	
8	Panel Lock Nut	316 SS	Brass
9	Body	316 SS	Brass
10	Ball	316 Stainless Steel	
11	Seat	TFE, KEL-F	
12	End Connector O-Ring	Fluorocarbon FKM	
13	End Connector	316 SS	Brass



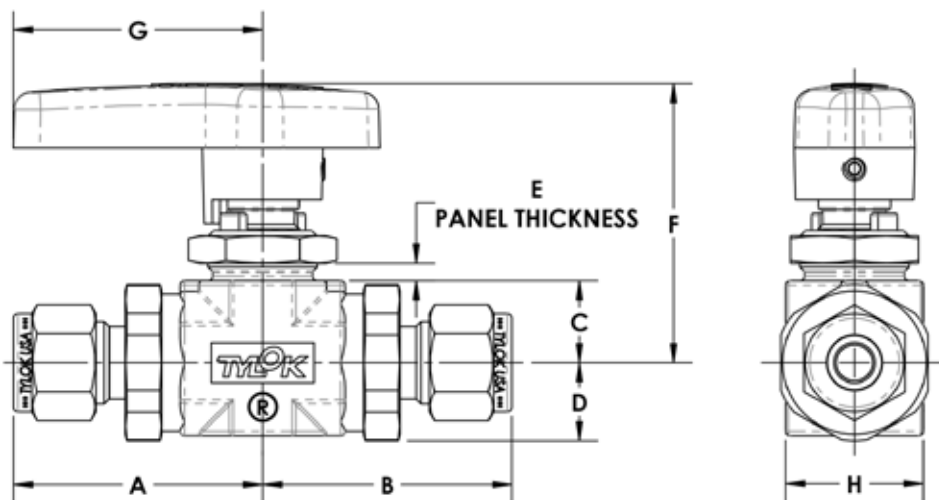
High Pressure Ball Valves

Part Number Shown:

SS-6-DTT-6-6-K

CBC-Lok® double ferrule tube ends are completely interchangeable with Swagelok® & Parker A-Lok® tube ends.

CS-Lok® single ferrule tube ends are completely interchangeable with Parker CPI® tube ends.



Valve Dimension Chart

	Part Number	Connection		Orifice Inch (mm)	Dimensions (Inches)									
		Port A	Port B		A	B	C	D	E	F	G	H	Panel Hole	Panel Nut: Hex
SERIES 4	4-DTT-2-2*	1/8" CBC-Lok®		0.188 (4.8)	1.54	1.54	0.56	0.47	1/8	1.89	1.70	0.88	0.75	7/8
	4-STT-2-2*	1/8" CS-Lok®												
	4-DTT-4-4	1/4" CBC-Lok®			1.63	1.63								
	4-STT-4-4	1/4" CS-Lok®												
	4-1FF-2-2	1/8" Female NPT			1.21	1.21								
	4-1FF-4-4	1/4" Female NPT			1.46	1.46								
	4-1MM-2-2	1/8" Male NPT			1.30	1.30								
	4-1MM-4-4	1/4" Male NPT			1.49	1.49								
SERIES 6	6-DTT-4-4*	1/4" CBC-Lok®		0.250 (6.4)	1.65	1.65	0.56	0.54	5/32	1.91	1.70	0.94	0.75	7/8
	6-STT-4-4*	1/4" CS-Lok®												
	6-DTT-6-6	3/8" CBC-Lok®			1.71	1.71								
	6-STT-6-6	3/8" CS-Lok®												
	6-DTT-8-8	1/2" CBC-Lok®			1.83	1.83								
	6-STT-8-8	1/2" CS-Lok®												
	6-1FF-4-4	1/4" Female NPT			1.51	1.51								
	6-1FF-6-6	3/8" Female NPT			1.70	1.70								
	6-1FF-8-8	1/2" Female NPT												
	6-1MM-4-4	1/4" Male NPT			1.51	1.51								
6-1MM-6-6	3/8" Male NPT													
6-1MM-8-8	1/2" Male NPT		1.70	1.70										
SERIES 8	8-DTT-6-6*	3/8" CBC-Lok®		0.375 (9.5)	1.85	1.85	0.81	0.65	5/32	2.29	1.96	1.13	0.88	1-1/16
	8-STT-6-6*	3/8" CS-Lok®												
	8-DTT-8-8	1/2" CBC-Lok®			1.96	1.96								
	8-STT-8-8	1/2" CS-Lok®			1.97	1.97								
	8-DTT-12-12	3/4" CBC-Lok®			1.61	1.61								
	8-STT-12-12	3/4" CS-Lok®			1.78	1.78								
	8-1FF-6-6	3/8" Female NPT			1.90	1.90								
	8-1FF-8-8	1/2" Female NPT												
	8-1FF-12-12	3/4" Female NPT			1.65	1.65								
	8-1MM-6-6	3/8" Male NPT			1.84	1.84								
8-1MM-8-8	1/2" Female NPT													

* Reduced Port

HP Series Ball Valve are ordered as listed in this catalog by inserting the material code before the part number. HP Series Valves can be identified through the part number as to material, valve series, style, valve configurations, port size, and seat material. The part number describes a complete ball valve assembly.

Special Configurations available upon request.

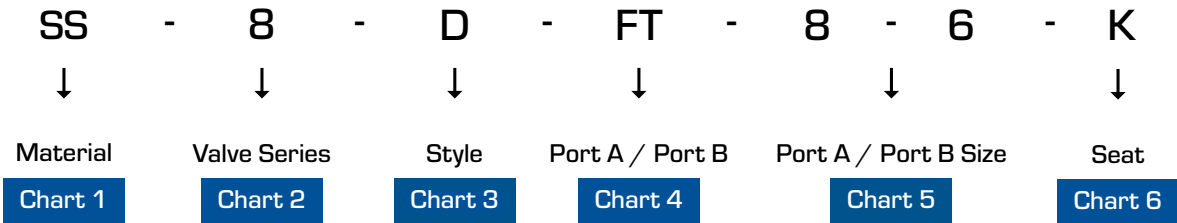


Chart 1- Material	
B	Brass
SS	Stainless Steel

Chart 2- Valve Series	
4	0.188" Orifice
6	0.250" Orifice
8	0.375" Orifice

Chart 3- Style	
D	CBC-Lok
S	CS-Lok
1	Tylok Standard

Chart 4- Valve Configuration		
Type	Port A	Port B
TT	Tube	Tube
MM*	Male NPT	Male NPT
FF*	Female NPT	Female NPT
MF*	Male NPT	Female NPT
FM*	Female NPT	Male NPT
TM	Tube	Male NPT
MT	Male NPT	Tube
TF	Tube	Female NPT
FT	Female NPT	Tube

Chart 5- Port Size		
Designator	Tube OD (Inches)	Pipe Thread (NPT)
2	1/8"	1/8-27
4	1/4"	1/4-18
6	3/8"	3/8-18
8	1/2"	1/2-14
12	3/4"	3/4-14

See dimension chart for available sizes.

Chart 6- Seat	
T	PTFE (Teflon)
K	KEL-F

* Use Style 1 from Chart 3 for this type of configuration.

Example: B-4-DTT-4-4-T

Designates a 1500 psi brass ball valve,, 0.188" orifice with 1/4" CBC-Lok® end connections and PTFE seats.

Example: SS-6-1FF-6-4-K

Designates a 5000 psi stainless steel ball valve,, 0.250" orifice with a 3/8" Female NPT end connections for port A and a 1/4" female NPT end connection for port B and PCTFE seats.

High Pressure Ball Valves

Handles & Locking Device

Assembled standard with black handle. For other colors add the designator as a suffix to the order number.



Handle Color	Designator
Black	-BK
Red	-RD
Blue	-BL
Green	-GN
Orange	-OG
Yellow	-YW

Tylok is proud to announce a newly-redesigned handle and locking device for our HP Series Ball Valves.

The handle comes in various colors: black, red, blue, green, orange, and yellow. These color choices will make it easy to identify different process lines and can help customers who want their valves handles to conform to ASME A13.1, Scheme for the Identification of Piping Systems.

Our new lock-out device is designed specifically to work with the new handles, and allows the valve to be locked in fully open or fully closed positions.

Lock-Out Device

A Lock-out device allows the user to lock the valve in either the fully opened or fully closed position. Lock-out devices are available factory installed only.

Add the suffix -LD to the ordering number

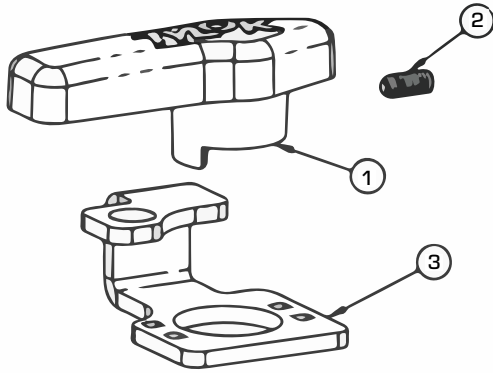
Example: SS-6-DTT-6-6-K-LD



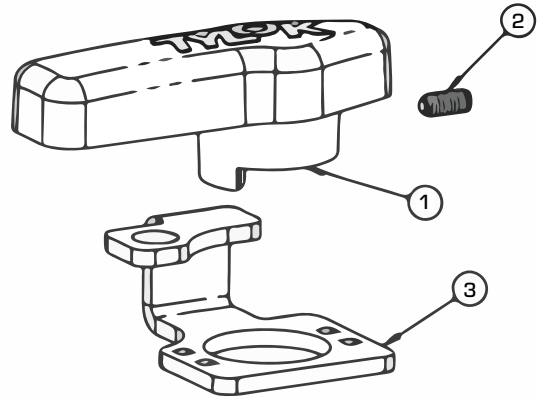
For example, a 1/2" stainless steel valve with 1/2" CBC-Lok Tube Ends, a PCTFE seat, lock out valve, and a green handle would have the part number: **SS-8-DTT-8-8-K-LD-GR**

To order an handle for field assembly, use the following part numbers:

Series 4 & 6	Series 8
NY-HPBV-46-BK	NY-HPBV-8-BK
NY-HPBV-46-RD	NY-HPBV-8-RD
NY-HPBV-46-BL	NY-HPBV-8-BL
NY-HPBV-46-GN	NY-HPBV-8-GN
NY-HPBV-46-OG	NY-HPBV-8-OG
NY-HPBV-46-YW	NY-HPBV-8-YW



4 & 6 Series



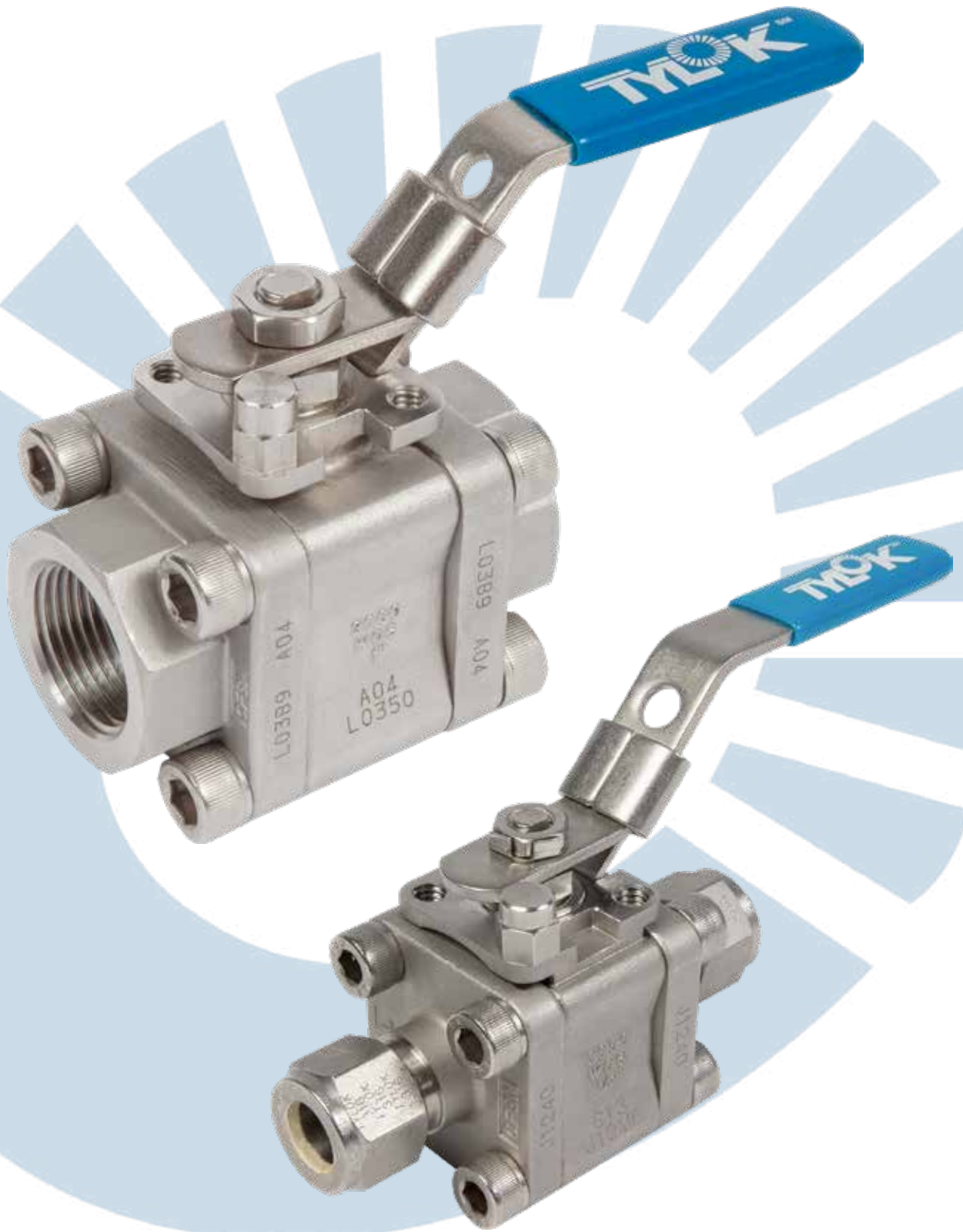
8 Series

Kit Number	Description	Handle	Set Screw	Locking Bracket
KIT-46-BK*	4/6 Series Ball Valve Black Handle Kit	6-BV-16-BK	BV-16B	N/A
KIT-8-BK*	8 Series Ball Valve Black Handle Kit	8-BV-16-BK	BV-16B	N/A
-	-	-	-	-
KIT-46-HPBV-LD	4/6 Series Locking Device	N/A	N/A	SS-6-BV-17
KIT-8-HPBV-LD	8 Series Locking Device	N/A	N/A	SS-6-BV-17
-	-	-	-	-
KIT-46-HPBV-LDH**	4/6 Series Ball Valve Black Handle Kit with Locking Device	6-BV-16-BK	BV-16B	SS-6-BV-17
KIT-8-HPBV-LDH**	8 Series Ball Valve Black Handle Kit with Locking Device	8-BV-16-BK	BV-16B	SS-6-BV-17

* "BK" designates black colored handle, other color handles are available and should be verified against part number.

** By default "LDH" kits contain black handles, however other color handles are available and should be verified against part number.

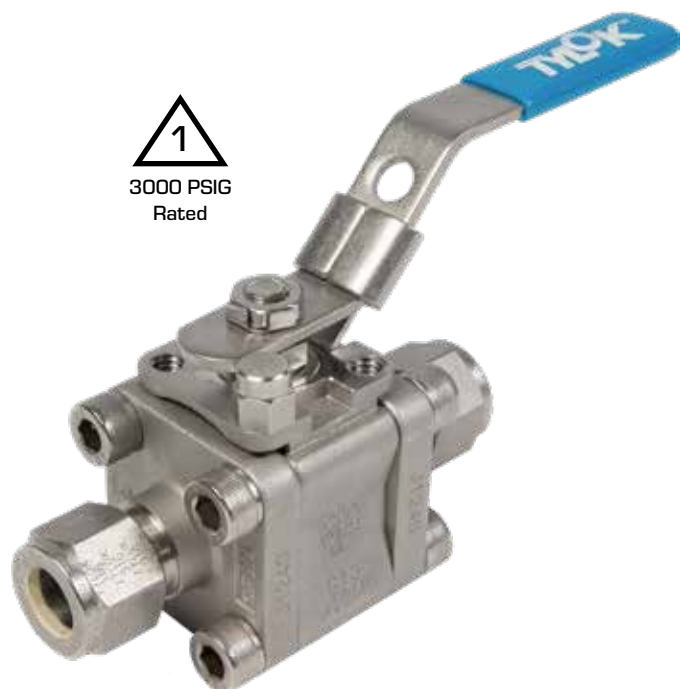
3 Piece Ball Valves



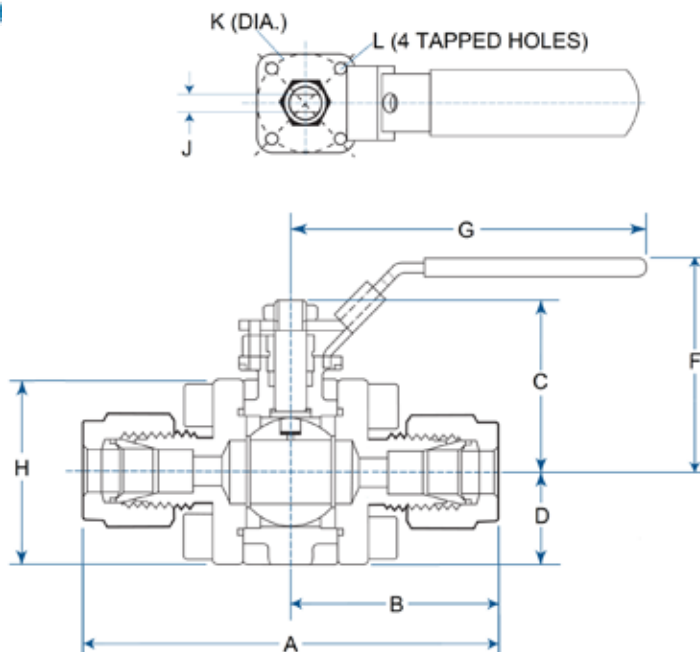
3 Piece Series

3 Piece Ball Valves

3 Piece Series



1
3000 PSIG
Rated



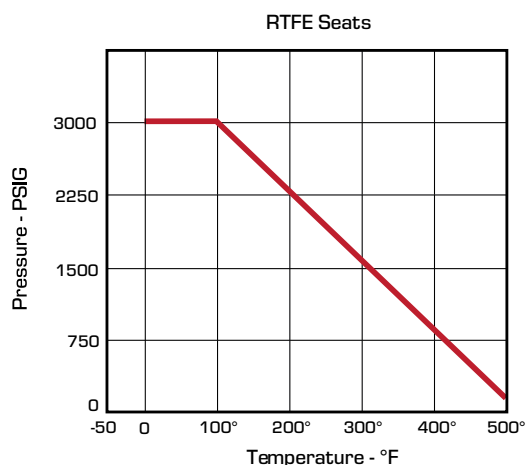
Features

- 3 Piece, 8-Bolt construction
- Fire Safe to API 607 4th Edition & ISO 10497¹
- ISO 5211 4-Bolt actuator mounting pad
- NACE MRO175 Rev 2000 compliant
- Minimum 3.2 to 1 hydrostatic safety factor
- Tube ended valves come standard with -RR (Reinforced PTFE Seats & Seal).

* 1 For Fire Safe ball valves, add -GG (Grafoil packed & Grafoil seals)

Pressure Ratings

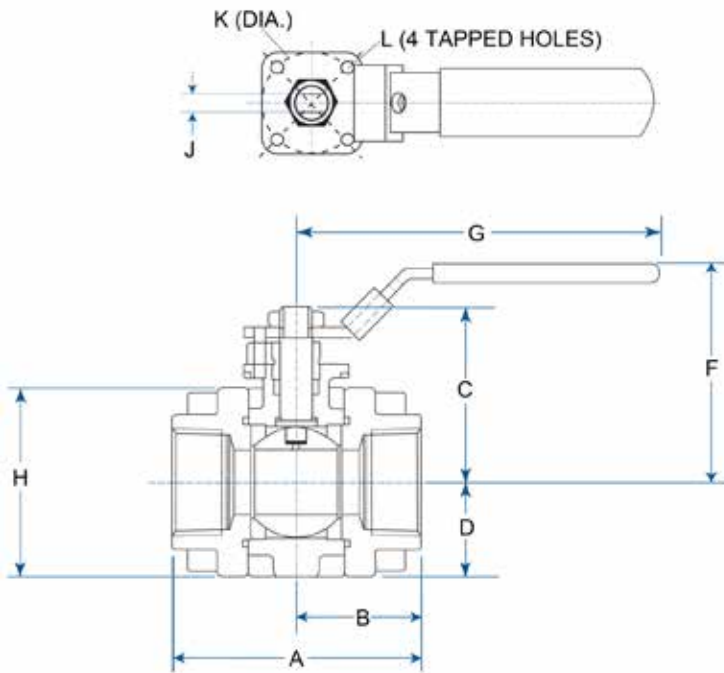
- CF8M with 316SS Trim. 3000 psig at 100°F
- 250 psig Saturated Steam Rating



Part Number	Connection	A	B	C	D	F	G	H	Orifice	Cv	J	K	L	Cycle Torque	
														PTFE Seats (in-lbs.)	PEEK Seats (in-lbs.)
4-5TT-4	1/4" CBC-LOK	3.19	1.60	1.71	0.9	2.5	4.0	1.8	0.19	1.2	0.20	1.42	1/4"20 /UNC	100	130
4-5ZZ-4	1/4" CS-LOK														
6-5TT-6	3/8" CBC-LOK	3.19	1.60	1.71	0.9	2.5	4.0	1.8	0.28	3.8				100	130
6-5ZZ-6	3/8" CS-LOK														
8-5TT-8	1/2" CBC-LOK	4.04	2.02	1.71	0.9	2.5	4.0	1.8	0.41	7.5				100	130
8-5ZZ-8	1/2" CS-LOK														
12-5TT-12	3/4" CBC-LOK	4.04	2.02	1.83	1.1	2.6	4.0	2.1	0.57	18.0				200	250
12-5ZZ-12	3/4" CS-LOK														
16-5TT-16	1" CBC-LOK	5.36	2.68	2.34	1.2	3.0	4.8	2.4	0.81	40.0	0.28	1.65	230	300	
16-5ZZ-16	1" CS-LOK														

3 Piece Ball Valves

3 Piece Series



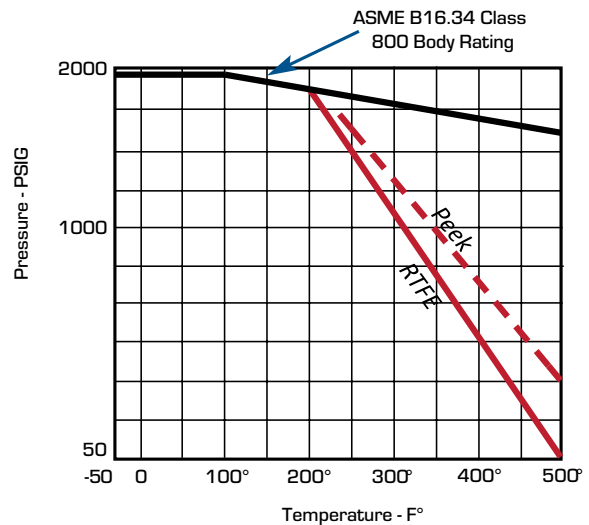
2
ASME
B16.34
Compliant

Features

- 3 Piece, 8-Bolt construction
- ASME B16.34, Class 800 Compliant
- Fire Safe to API 607 4th Edition & ISO 10497
- ISO 5211 4-Bolt mounting
- NACE MR0175 Rev 2000 compliant
- Pipe ended valves come standard with -RG (Reinforced PTFE Seats & Seals).

Pressure Ratings

- CF8M with 316SS Trim. 1920 psig at 100°F
- 250 psig Saturated Steam Rating

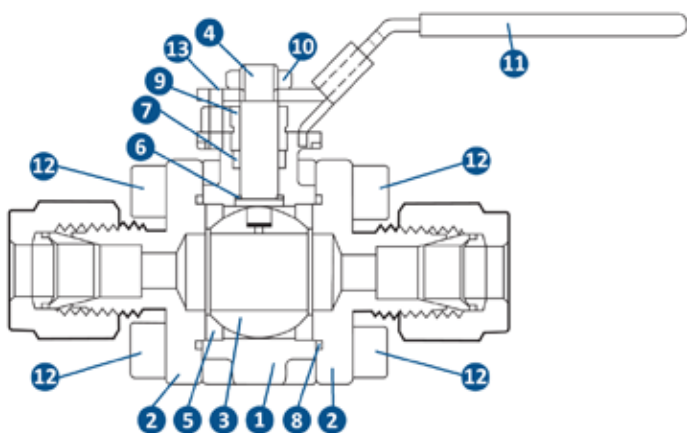


Cycle Torque

Part Number	Port Type	Connection	A	B	C	D	F	G	H	Orifice	Cv	J	K	L	PTFE Seats (in-lbs.)	PEEK Seats (in-lbs.)
4-5FF-4	Full	1/4" Female NPT	2.70	1.35	1.71	0.9	2.5	4.0	1.8	0.43	10.0	0.20	1.42	1/4"-20 UNC	100	130
6-5FF-6	Full	3/8" Female NPT														
8-5FF-8	Reduced	1/2" Female NPT	2.70	1.35	1.71	0.9	2.5	4.0	1.8	0.43	10.0	0.20	1.42		100	130
	Full (-L)		2.80	1.40	1.83	1.1	2.6	4.0	2.1	0.57	16.0	0.20	1.42		200	250
12-5FF-12	Reduced	3/4" Female NPT	3.00	1.50	1.83	1.1	2.6	4.0	2.1	0.57	25.0	0.20	1.42		200	250
	Full (-L)		3.20	1.60	2.34	1.2	3.0	4.8	2.4	0.81	40.0	0.28	1.65		230	300
16-5FF-16	Reduced	1" Female NPT	3.50	1.75	2.34	1.2	3.0	4.8	2.4	0.81	42.0	0.28	1.65		230	300
	Full (-L)		3.80	1.90	2.69	-	3.4	5.8	-	1.00	62.0	0.32	1.65		250	-

3 Piece Ball Valves

3 Piece Series



Materials of Construction (STD)			
Part	Quantity	Description	Standard Material
1	1	Body	CF8M Stainless Steel
2	2	Tailpiece	CF3M Stainless Steel
3	1	Ball	316 or CF8M Stainless Steel
4	1	Stem	316 or CF8M Stainless Steel
5	2	Seat	Peek or Reinforced PTFE
6	1	Thrust Washer	Reinforced PTFE
7	1	Packing Set	Graphite or Reinforced PTFE
8	2	Body Seal	Graphite or Reinforced PTFE
9	1	Packing Nut	316 Stainless Steel
10	1	Handle Nut	304 Stainless Steel
11	1	Handle Assy	304 Stainless Steel
12	8	Body Bolt	Stainless Steel
13	1	Handle Stop	304 Stainless Steel

3 Piece Ball Valves are ordered as listed in this catalog by inserting the material code before the part number. The standard Ball & Stem are in Stainless Steel unless otherwise requested. Full Port is only available in NPT configurations and Special cleaning and packaging is available. Contact authorized Tylok Representative for more information.

Example: A Stainless Steel, 1/2" Inlet to 1/2" Outlet, 3 Piece Ball Valve, with CBC-Lok Instrumentation Tube Ends, Reinforced PTFE Seats & Seals, with the following option: ASME B16.34 compliant is designated as follows:

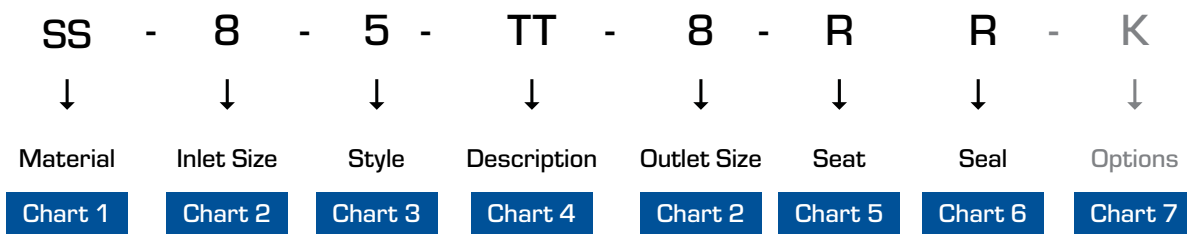


Chart 1- Material	
SS	Stainless Steel

Chart 2- Valve Series	
Designator	Valve Size
4	1/4"
6	3/8"
8	1/2"
12	3/4"
16	1"

Chart 3- Style	
5	3 Piece Ball Valve, 2 way, Bi-Directional flow

Chart 4- Description		
Code	End Description	Size Range
EE	Extended Butt Weld (Schedule 80)	1/4"-1"
FF	Female NPT	1/4"-4"
II	Pipe Socket Weld	1/2"-1"
TT	Instrumentation Tube End (CBC-Lok®)	1/4"-1"
XX	Extended Pipe Socket Weld	1/2"-4"
ZZ	Instrumentation Tube End (CS-Lok®)	1/4"-1"

Chart 5- Seat	
R	Reinforced PTFE
P	PEEK

Chart 6- Seal	
G	Graphite
R	Reinforced PTFE

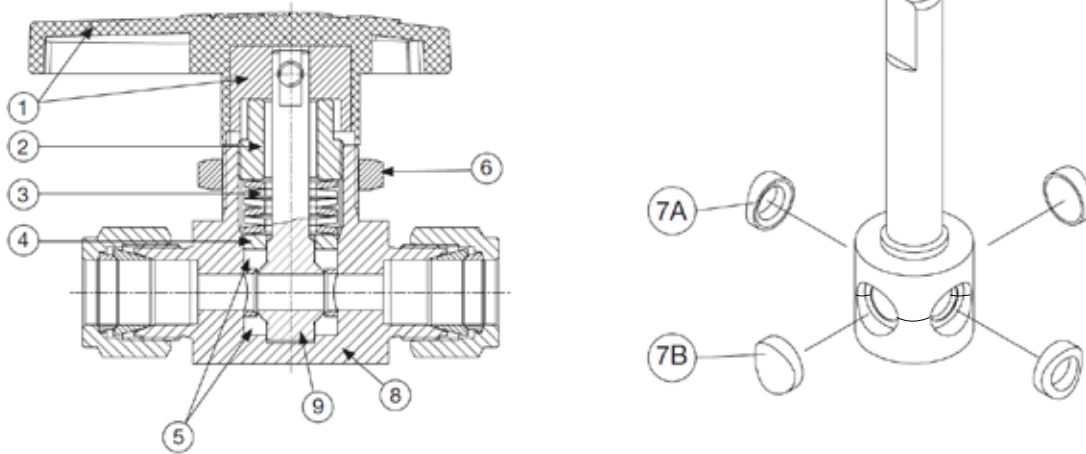
Chart 7- Options	
I	Oval Handle
K	ASME B.16.34 Compliant
L	* Full Port

* Tube ended valves come standard with -RR (Reinforced PTFE Seats & Seal). Pipe ended valves come standard with -RG (Reinforced PTFE Seats & Graphite Seals).



Features

- **Live-Load Option**
 - Springs create a “live-loading” so packing adjustments are made less frequently
- **Directional Handle**
 - Shows system flow direction
- **Panel Mountable**
 - Standard
- **Packing Can Be Adjusted**
 - Allows for adjustments due to pressure, temperature or wear
- **Minimal Dead Space**
 - Sealing is created without system pressure
- **One Piece Body Construction**
 - Reduces leak points
- **Factory Tested**
 - 1000 psi nitrogen to a maximum allowable leakage of 0.1 SCCM
- **Temperature/Pressure**
 - Up to 3,000 psig (206 bar) Pressure Rating
 - -65°F (-54°C) to 300°F (65°C) Temperature Rating
- **Dimensionally Matches Industry Standard**
 - Valves were designed around competitor dimension
 - Available in Straight & 3-Way configurations
- **Locking Option Available**

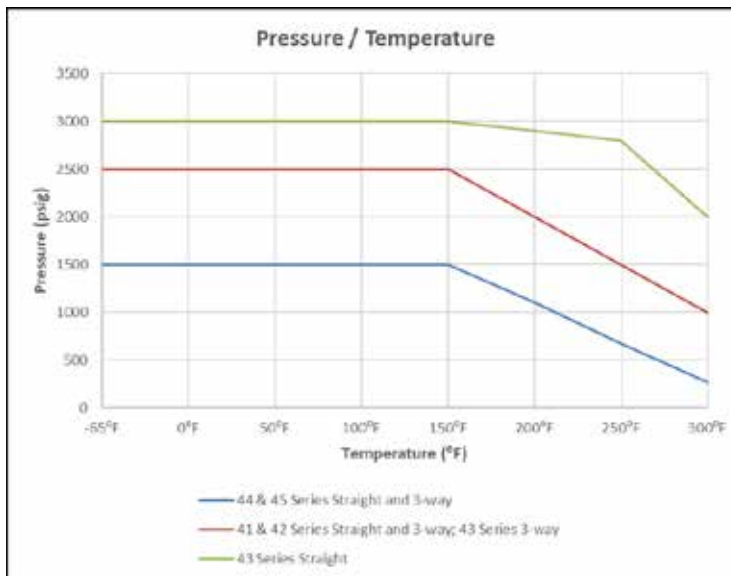


Spring Loaded Valve pictured above.

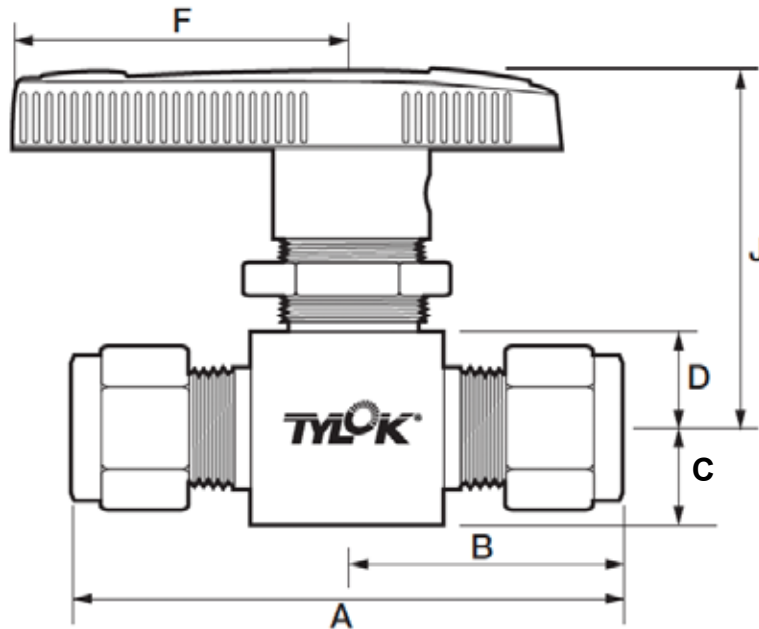
#	Components	Description/Material
1	Handle	Nylon/Aluminum Alloy Insert
2	Packing Bolt	SS316 ASTM A176
3	Packing Springs* *	SS316 ASTM A240
4	Upper Gland	SS316 ASTM A276/A479
5	Stem/Seat Packing	PTFE ASTM D1710
6	Panel Nut	S17400 ASTM A693
7A/7B	Seat Support Ring	SS316 ASTM 276 with Fluorocarbon coating
8	Body	SS316 ASTM A276/A182
9	Stem	SS316 ASTM A276/A479
10	Locking Bracket*	SS316 ASTM A479
11	Lubricant	Wetted Component: Silicone based Non-Wetted Component: Hydrocarbon based

* Locking Bracket are an available option, please consult with your local Tylok Distributor

** If Equipped



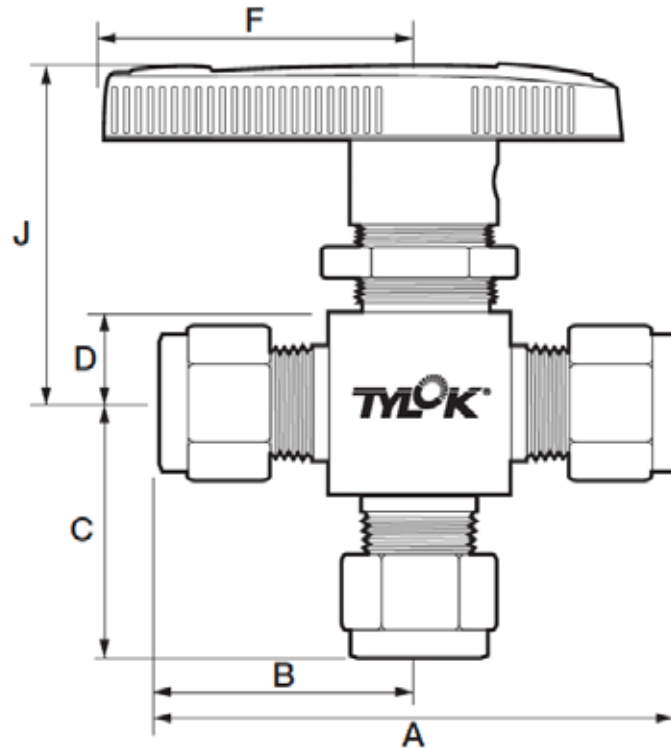
Straight Ball Valve



	Size (in)	Part Number	Interchanges With	Orifice	Cv	A	B	C	D	F	J	Body Width	Panel Nut Dia.	Panel Nut Min/Max Thickness
CBC-Lok Tube Fittings	1/8*	SS-41S-D2D2	SS-41GS2	0.093	0.2	2.20	1.10	0.28	0.34	1.12	1.36	0.58	19/32"	1/8" - 1/4"
	1/4*	SS-42S-D4D4	SS-42GS4	0.125	0.6	2.20	1.10	0.28	0.34	1.12	1.36	0.58	19/32"	1/8" - 1/4"
	1/4*	SS-43S-D4D4	SS-43GS4	0.187	1.5	2.40	1.20	0.38	0.44	1.53	1.47	0.78	25/32"	1/8" - 3/16"
	3/8*	SS-43S-D6D6	SS-43GS6	0.187	1.5	2.58	1.29	0.38	0.44	1.53	1.47	0.78	25/32"	1/8" - 3/16"
	3/8	SS-44-D6D6	SS-44S6	0.281	6.0	3.04	1.52	0.56	0.56	2.00	2.07	1.12	1-1/8"	1/8" - 3/8"
	1/2	SS-45-D8D8	SS-45S8	0.406	12	3.92	1.96	0.69	0.69	3.00	2.43	1.50	1-1/2"	1/8" - 3/8"
CS-Lok Tube Fittings	1/8*	SS-41S-S2S2	SS-41GS2	0.093	0.2	2.20	1.10	0.28	0.34	1.12	1.36	0.58	19/32"	1/8" - 1/4"
	1/4*	SS-42S-S4S4	SS-42GS4	0.125	0.6	2.20	1.10	0.28	0.34	1.12	1.36	0.58	19/32"	1/8" - 1/4"
	1/4*	SS-43S-S4S4	SS-43GS4	0.187	1.5	2.40	1.20	0.38	0.44	1.53	1.47	0.78	25/32"	1/8" - 3/16"
	3/8*	SS-43S-S6S6	SS-43GS6	0.187	1.5	2.58	1.29	0.38	0.44	1.53	1.47	0.78	25/32"	1/8" - 3/16"
	3/8	SS-44-S6S6	SS-44S6	0.281	6.0	3.04	1.52	0.56	0.56	2.00	2.07	1.12	1-1/8"	1/8" - 3/8"
	1/2	SS-45-S8S8	SS-45S8	0.406	12	3.92	1.96	0.69	0.44	3.00	2.43	1.50	1-1/2"	1/8" - 3/8"
Female NPT	1/4*	SS-43S-F4F4	SS-43GF4	0.187	0.9	2.06	1.03	0.36	0.69	1.53	1.47	0.78	25/32"	1/8" - 25/32"
	3/8	SS-44-F6F6	SS-44F6	0.281	2.6	2.50	1.25	0.56	0.56	2.00	2.07	1.12	1-1/8"	1/8" - 3/8"
	1/2	SS-45-F8F8	SS-45F8	0.406	6.3	3.12	1.56	0.69	0.69	3.00	2.43	1.50	1-1/2"	1/8" - 3/8"

* Spring Loaded

3-Way Ball Valve



	Description [size]	Part Number	Interchanges With	Orifice	Cv	A	B	C	D	F	J	Body Width	Panel Nut Dia.	Panel Nut Min/Max Thickness
CBC-Lok Tube Fittings	1/8*	SS-41XS-D2D2	SS-41GXS2	0.093	0.15	2.20	1.10	1.10	0.34	1.12	1.36	0.58	19/32"	1/8" - 1/4"
	1/4*	SS-42XS-D4D4	SS-42GXS4	0.125	0.4	2.20	1.10	1.10	0.34	1.12	1.36	0.58	19/32"	1/8" - 1/4"
	1/4*	SS-43XS-D4D4	SS-43GXS4	0.187	0.9	2.40	1.20	1.20	0.44	1.53	1.47	0.78	25/32"	1/8" - 3/16"
	1/4*	SS-43XS-D6D6	SS-43GXS6	0.187	0.9	2.58	1.29	1.29	0.44	1.53	1.47	0.78	25/32"	1/8" - 3/4"
	3/8	SS-44X-D6D6	SS-44XS6	0.281	2.0	3.04	1.52	1.52	0.56	2.00	2.07	1.12	1-1/8"	1/8" - 3/16"
	1/2	SS-45X-D8D8	SS-45XS8	0.406	4.6	3.92	1.96	1.96	0.69	3.00	2.43	1.50	1-1/2"	1/8" - 3/8"
CS-Lok Tube Fittings	1/8*	SS-41XS-S2S2	SS-41GXS2	0.093	0.15	2.20	1.10	1.10	0.34	1.12	1.36	0.58	19/32"	1/8" - 1/4"
	1/4*	SS-42XS-S4S4	SS-42GXS4	0.125	0.4	2.20	1.10	1.10	0.34	1.12	1.36	0.58	19/32"	1/8" - 1/4"
	1/4*	SS-43XS-S4S4	SS-43GXS4	0.187	0.9	2.40	1.20	1.20	0.44	1.53	1.47	0.78	25/32"	1/8" - 3/16"
	1/4*	SS-43XS-S6S6	SS-43GXS6	0.187	0.9	2.58	1.29	1.29	0.44	1.53	1.47	0.78	25/32"	1/8" - 3/16"
	3/8	SS-44X-S6S6	SS-44XS6	0.281	2.0	3.04	1.52	1.52	0.56	2.00	2.07	1.12	1-1/8"	1/8" - 3/8"
	1/2	SS-45X-S8S8	SS-45XS8	0.406	4.6	3.92	1.96	1.96	0.69	3.00	2.43	1.50	1-1/2"	1/8" - 3/8"
Female NPT	1/4*	SS-43XS-F4F4	SS-43GXF4	0.187	0.7	2.06	1.03	1.03	0.44	1.53	1.47	0.78	25/32"	1/8" - 25/32"
	3/8	SS-44X-F6F6	SS-44XF6	0.281	1.5	2.50	1.25	1.25	0.56	2.00	2.07	1.12	1-1/8"	1/8" - 3/8"
	1/2	SS-45X-F8F8	SS-45XF8	0.406	3.5	3.12	1.56	1.56	0.69	3.00	2.43	1.50	1-1/2"	1/8" - 3/8"

* Spring Loaded

Screwed Bonnet Needle Valves



Screwed Bonnet
Needle Valve

Design Features

- Hard (Vee) or Delrin® Soft Seat/Tip
- Orifice sizes from 0.172 to 0.438 in.
- Flow Coefficients (Cv) from 0.37 to 2.70
- Straight or angle flow patterns
- Optional panel mount
- Handle options available
- Non-wetted stem threads
- Valves with PTFE packings have a max pressure rating of 6000 psi.

Specifications	316 Stainless		Brass		*Steel	
	Hard Seat	Soft Seat	Hard Seat	Soft Seat	Hard Seat	Soft Seat
Pressure Rating ¹ psig (bar)	10,000 (689)	6,000 (413)	6,000 (413)	3,000 (206)	10,000 (689)	6,000 (413)
Temperature Rating ² °F (°C)	-10 to 200 (-23 to 93)		-10 to 200 (-23 to 93)		-10 to 200 (-23 to 93)	

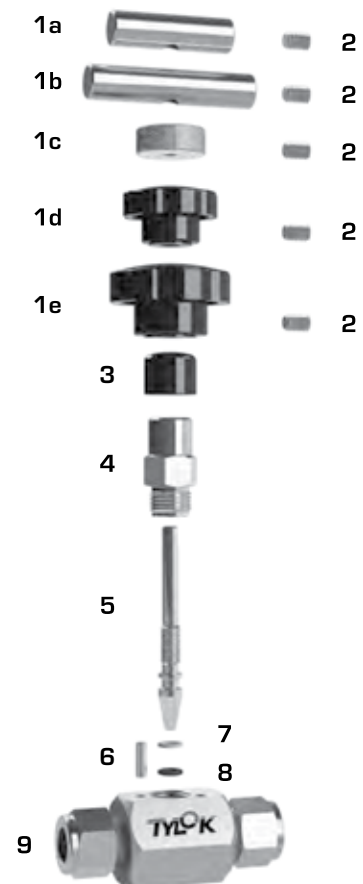
¹ For pressure ratings of valves with the tube fitting end connections, see CBC-Lok® or CS-Lok® catalogs.

* Steel valves are Zinc, Nickel plated for corrosion resistance

² Temperature ratings based on working temperatures of standard stem seals.
See O-Ring/packing options for temperature ratings of optional stem seals & soft seat valve.

Materials of Construction

#	Component	316 SS	Brass	Steel
1a	Mini "T" Handle	316 SS	N/A	Steel
1b	"T" Handle	316 SS	N/A	Steel
1c	Round Knurled Handle	316 SS	Brass	Steel
1d	1-3/8" Plastic Handle	Phenolic		
1e	1-3/4" Plastic Handle	Phenolic		
2	Set Screw	316 SS		Steel
3	Dust Cap ¹	Vinyl		
4	Valve Bonnet	316 SS	Brass	Steel
5	Valve Stem	Chrome-plated 316 SS	316 SS	
6	Bonnet Lock Pin ¹	316 SS	N/A	Steel
7	Stem Back-up Ring	PTFE		
8	Stem O-ring	Fluorocarbon FKM		
9	Valve Body	316 SS	Brass	Steel



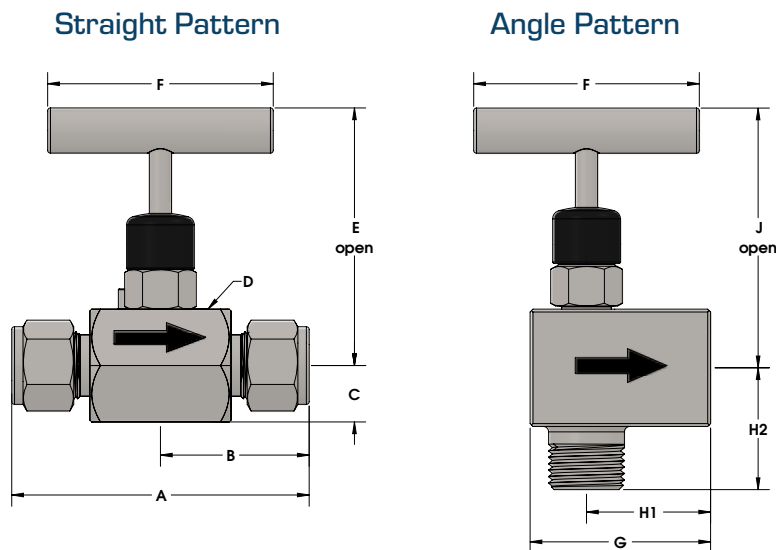
Testing

Tylok Screwed Needle Valves are 100% Helium leak tested to 1x10⁻⁴ ml/s ensuring performance and reliability

Screwed Bonnet Needle Valves

CBC-Lok® double ferrule tube ends are completely interchangeable with Swagelok® and Parker A-Lok® tube ends.

CS-Lok® single ferrule tube ends are completely interchangeable with Parker CPI® tube ends.



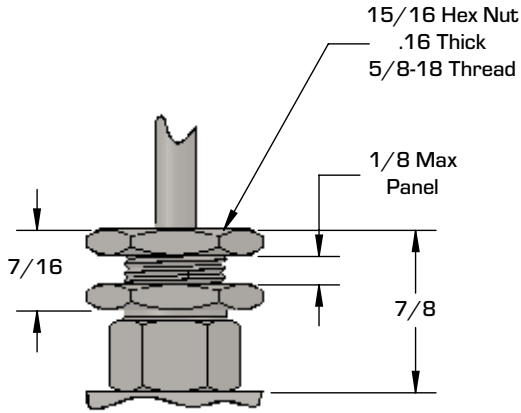
Screwed Bonnet Needle Valve

End Connections		Part Number	Orifice in (mm)	Cv Hard Seat (Soft Seat/Tip)	Dimensions in. (mm)									
Inlet/Outlet	Size in.				A	B	C	D	E	*F	G	H1	H2	J
CBC-Lok® Tube Fittings	1/4	4-6DD-4	0.172 [4.4]	0.37 [0.37]	2.46 [62.5]	1.23 [31.2]	0.33 [8.4]	3/4" SQ	2.17 [55.1]	1.81 [46]	-	-	-	-
	3/8	6-6DD-6			3.08 [78.2]	1.54 [39.1]	0.37 [9.4]		2.13 [54.1]		-	-	-	-
	1/2	8-6DD-8	0.187 [4.8]	0.44	3.30 [83.8]	1.65 [41.9]	0.63 [16]	1-1/4" HEX	3.16 [80.3]	2.50 [63.5]	-	-	-	-
CS-Lok® Tube Fittings	1/4	4-6SS-4	0.172 [4.8]	0.37 [0.37]	2.46 [62.5]	1.23 [31.2]	0.33 [8.4]	3/4" SQ	2.17 [55.1]	1.81 [46]	-	-	-	-
	3/8	6-6SS-6			3.08 [78.2]	1.54 [39.1]	0.37 [9.4]		2.13 [54.1]		-	-	-	-
	1/2	6-8SS-6	0.187 [4.8]	0.44	3.30 [83.8]	1.65 [41.9]	0.63 [16]	1-1/4" HEX	3.16 [80.3]	2.50 [63.5]	-	-	-	-
Female NPT	1/8	2-6FF-2	0.172 [4.4]	0.42 [0.42]	1.81 [46]	0.91 [23]	0.38 [9.7]	3/4" SQ	2.09 [53.1]	1.81 [46]	1.25 [31.8]	0.88 [22.4]	0.88 [22.4]	2.09 [53.1]
	1/4	4-6FF-4									1.50 [38.1]	1.13 [28.7]	1.13 [28.7]	
	3/8	6-6FF-6	0.187 [4.8]	0.44 [0.76]	2.50 [63.5]	1.25 [31.7]	0.63 [16]	1-1/4" HEX	3.16 [80.3]	2.50 [63.5]	-	-	-	-
	1/2	8-6FF-8									2.00 [50.8]	1.38 [35.1]	1.38 [35.1]	3.66 [93]
	3/4	12-6FF-12	0.438 [11.1]	2.70	4.25 [108]	2.13 [54]	1.25 [31.8]	2-1/4" HEX	4.25 [108]	4.25 [108]	-	-	-	-
	1	16-6FF-16									-	-	-	-
	1-1/4	20-6FF-20									-	-	-	-
1-1/2	24-6FF-24	-									-	-	-	
Male NPT	1/8	2-6MM-2	0.172 [4.4]	0.42 [0.42]	1.81 [46]	0.91 [23]	0.38 [9.7]	3/4" SQ	2.09 [53.1]	1.81 [46]	1.25 [31.8]	0.88 [22.4]	0.72 [18.3]	2.09 [53.1]
	1/4	4-6MM-4									1.50 [38.1]	1.13 [28.7]	0.88 [22.4]	
Male/Female NPT	1/8	2-6MF-2	0.172 [4.4]	0.42 [0.42]	1.81 [46]	0.91 [23]	0.38 [9.7]	3/4" SQ	2.09 [53.1]	1.81 [46]	1.25 [31.8]	0.88 [22.4]	0.72 [18.3]	2.09 [53.1]
	1/4	4-6MF-4									1.75 [50.8]	1.13 [28.7]	0.88 [22.4]	
	1/2	8-6MF-8	0.44 [0.76]	0.44 [0.76]	3.50 [88.9]	1.25 [31.8]	0.63 [16]	1-1/4" HEX	3.16 [80.3]	2.50 [63.5]	2.00 [50.8]	1.38 [35.1]	1.38 [35.1]	3.66 [93]
	3/4	12-6MF-12	0.438 [11.1]	2.70	5.25 [133.4]	2.13 [54]	1.25 [31.8]	2-1/4" HEX	4.25 [108]	4.25 [108]	-	-	-	-
	1	16-6MF-16									-	-	-	-
	1-1/4	20-6MF-20									-	-	-	-
	1-1/2	24-6MF-24									-	-	-	-

* Soft stem tips use a smaller length handle.

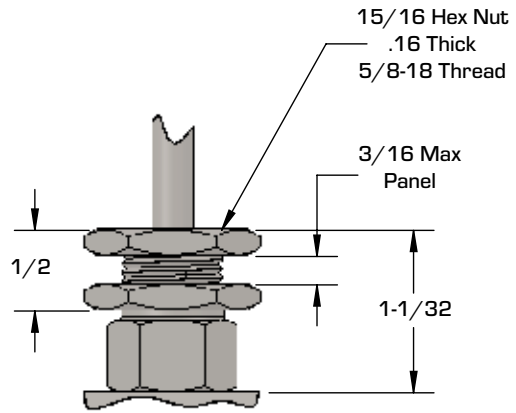
* Special configuration options are shown as general guidelines, not all options are available with every configuration.

Panel Mount Details



Dimensions for:

- Square Bar Stock
- 1/4" and Smaller Angle Valves

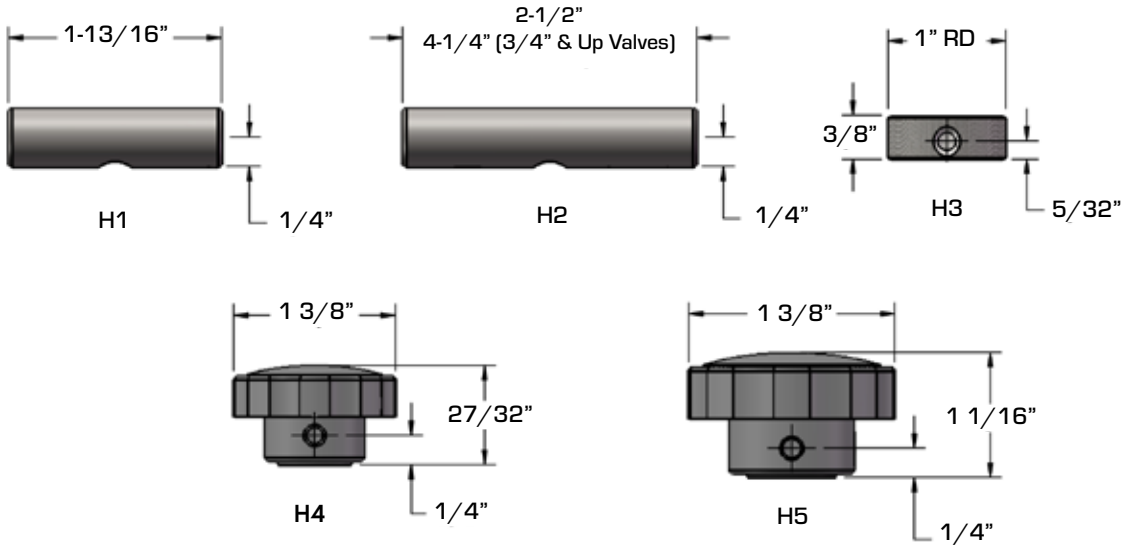


Dimensions for:

- Hex Bar Stock
- 1/2" Angle Valves

Screwed Bonnet
Needle Valve

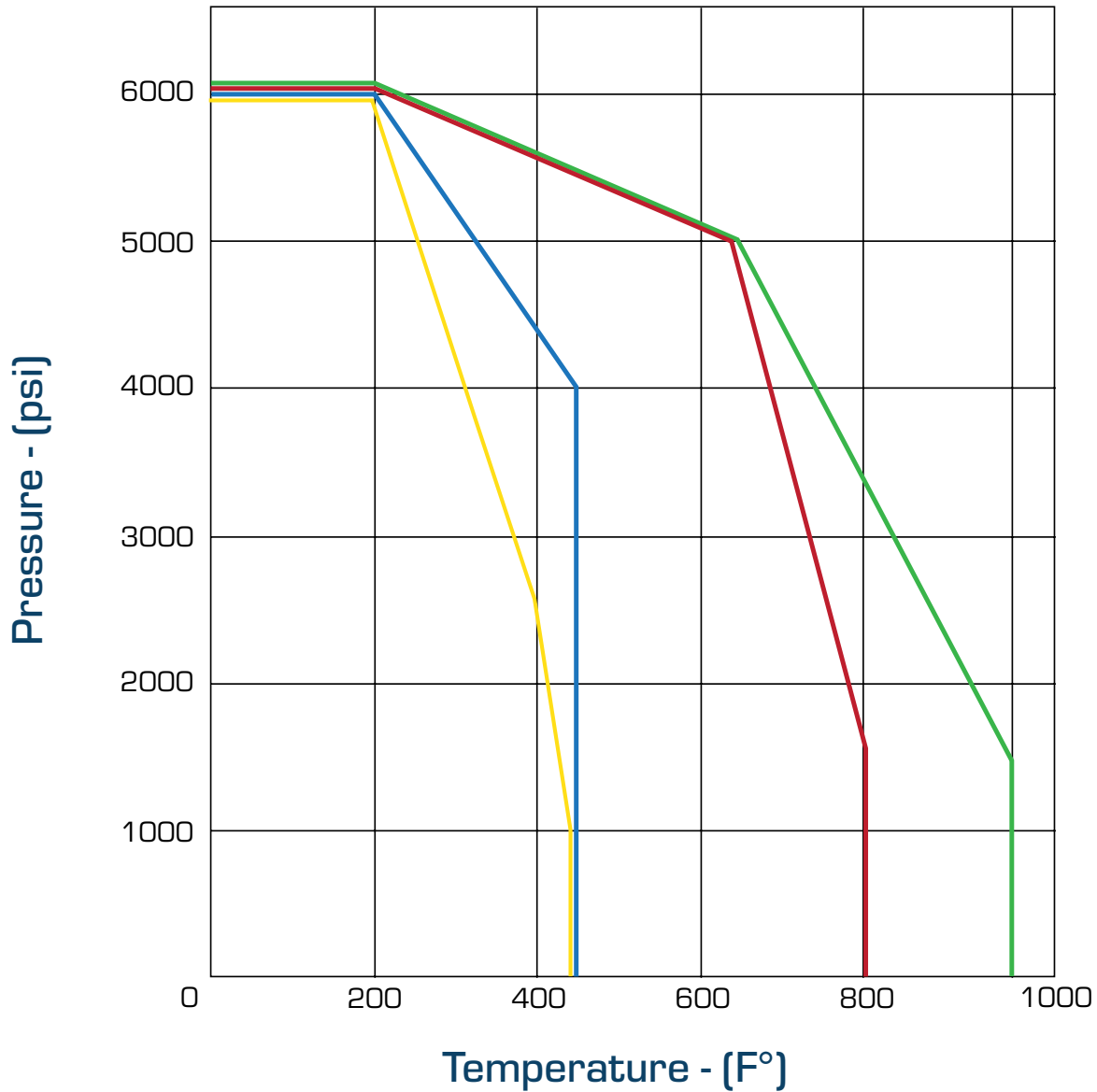
Handle Options



Standard Handles	316 SS	Brass	Steel
Square Bar Stock and 1/4" Small Angle Valves	H1	H3	H1
Hex Bar Stock and 1/2" Angle Valves	H2	N/A	H2

The handle material will always match the valve body, unless otherwise specified.

Pressure vs. Temperature

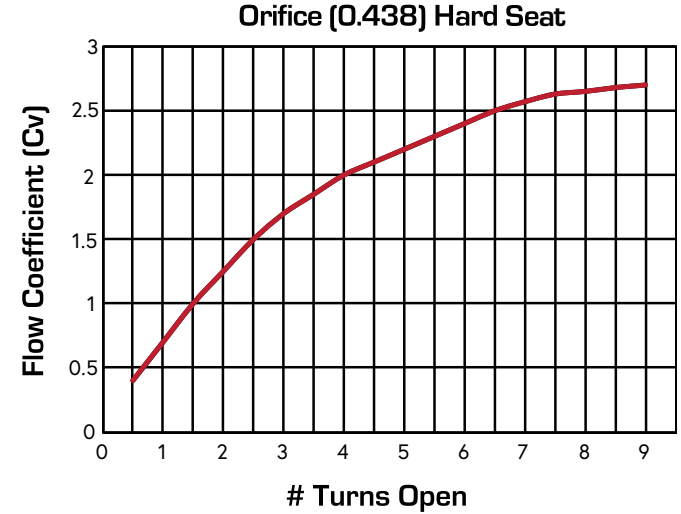
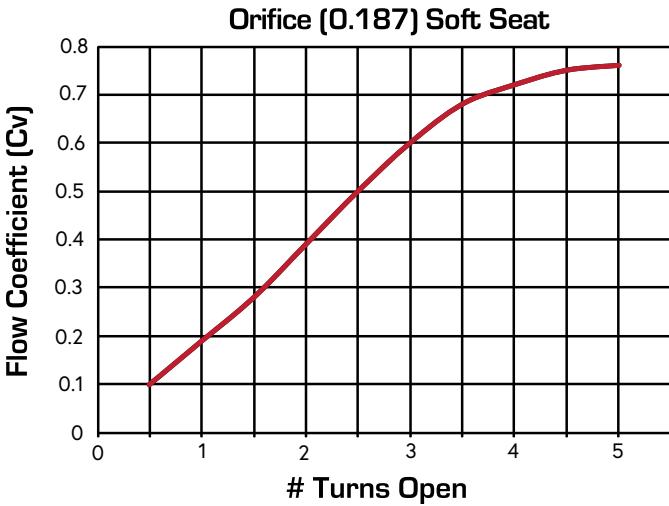
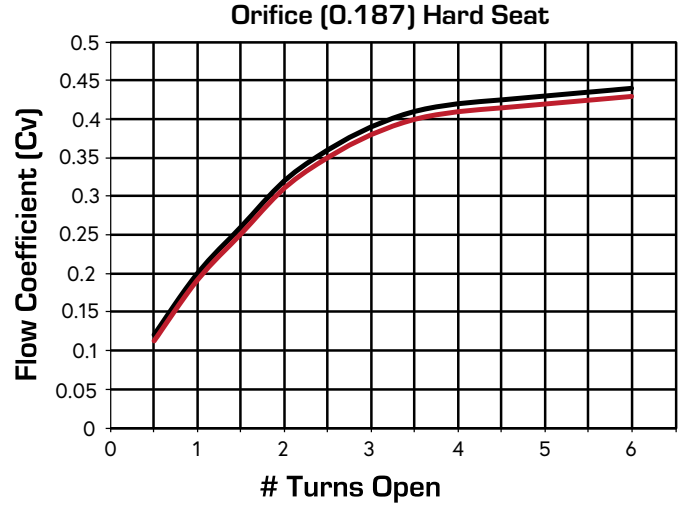
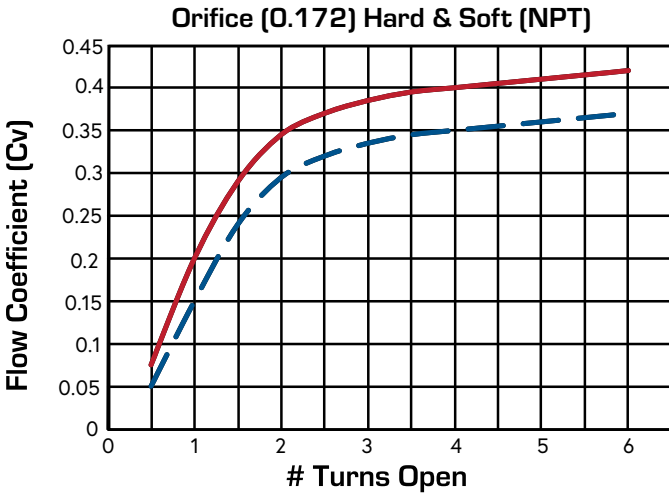


- Steel Needle Valve with Graphoil* Packing
- Steel or Stainless Steel Needle Valve with PTFE Packing
- Stainless Steel Needle Valve with Graphoil* Packing
- Brass Needle Valve with PTFE or Graphoil* Packing

Flow Data at 100°F (37°C)

- Orifice (0.172) Hard & Soft Seat (NPT)
- - Orifice (0.172) Hard & Soft Seat (Tube Fittings)

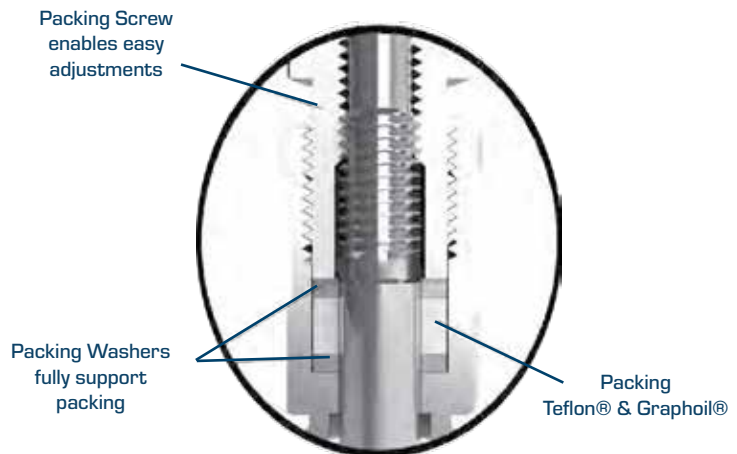
Screwed Bonnet
Needle Valve



O-Ring/Packing Options

Temperature Ratings:

- -10°F to 200°F with Fluorocarbon FKM O-Ring
- -65°F to 150°F with EPDM O-Ring
- -13°F to 300°F with Kalrez® O-Ring
- -65°F to 250°F with Teflon® Packing
- -20°F to 400°F with Graphoil® Packing
- -200°F max with Soft Seat/Tip Valves



Screwed Bonnet Needle Valves

Screwed Needle Valves are ordered as listed in this catalog by inserting the material code before the part number.

Special configurations available upon request.

Example: A Stainless Steel Needle Valve with 1/2" CBC-Lok® Tube Fitting inlet to 1/2" CBC-Lok® Tube Fitting outlet with 2 nut panel mount option, Graphoil® Packing and 1-3/4" phenolic handle is designed as follows:

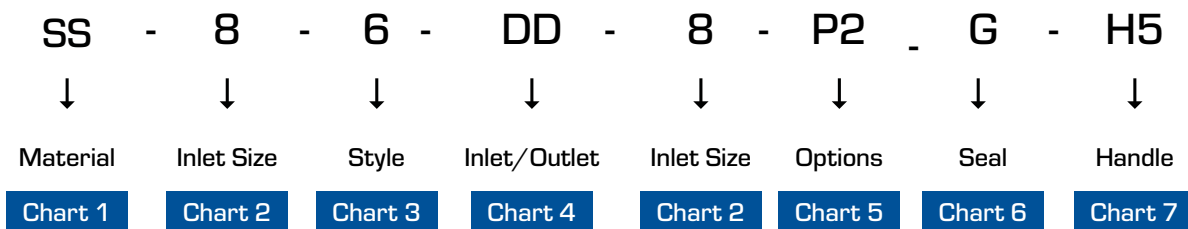


Chart 1- Material	
SS	Stainless Steel
S	Steel
B	Brass

Chart 2- Valve Series	
Designator	Valve Size
2	1/8"
4	1/4"
6	3/8"
8	1/2"
12	3/4"
16	1"
20	1-1/4"
24	1-1/2"

Chart 3- Style	
6	Needle Valve

Chart 4- Inlet/Outlet Port		
Designator	Inlet	Outlet
DD	CBC-Lok® Tube Fitting	CBC-Lok® Tube Fitting
SS	CS-Lok® Tube Fitting	CS-Lok® Tube Fitting
MM	Male NPT	Male NPT
FF	Female NPT	Female NPT
MF	Male NPT	Female NPT

Chart 5- Options	
A	Angle Pattern
L	Delrin® Soft Stem/Seat
P1	Panel Mount (1 Nut)
P2	Panel Mount (2 Nut)

Chart 7- Handle Options	
H1	Mini "T" Handle
H2	"T" Handle
H3	Round Knurled Handle
H4	1-3/8" Phenolic Handle
H5	1-3/4" Phenolic Handle

Chart 6- Stem Seal	
EM1	EPDM 80 O-Ring
KZ1	Kalrez® 3018 O-Ring
G	Graphoil® Packing
T	PTFE Packing

* Fluorocarbon FKM O-Ring is standard

* See handle options section for standard handles

* Special configuration options are shown as general guidelines, not all options are available with every configuration. Consult factory for details.

Example: SS-6-6DD-6-P2-T

Designates a Stainless Steel Needle Valve with 3/8" CBC-Lok® Tube Fitting inlet to 3/8" CBC-Lok® Tube Fitting outlet with 2 nut panel mount option, and optional Teflon® Packing.

Integral Bonnet Needle Valves

Integral Bonnet
Needle Valve



Typical Applications:

- Instrument air lines
- Instrumentation panels
- Test Stands
- Analytical systems
- General flow control service
- A complete series from 1/4", 3/8", 1/2", 3/4" with integral tube end connections.
- Designed for regulation and tight shut off
- Compare with Swagelok O, 1 and 18 Series Integral Bonnet Needle Valves
- Panel Mountable
- Live-Loaded, Chevron-Style packing

Features:

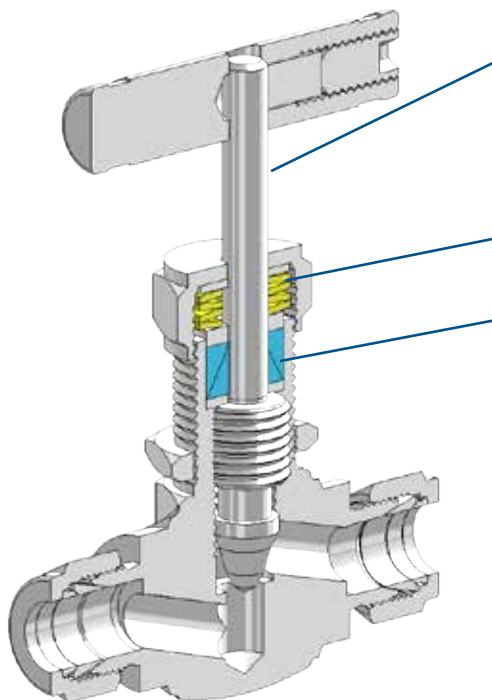
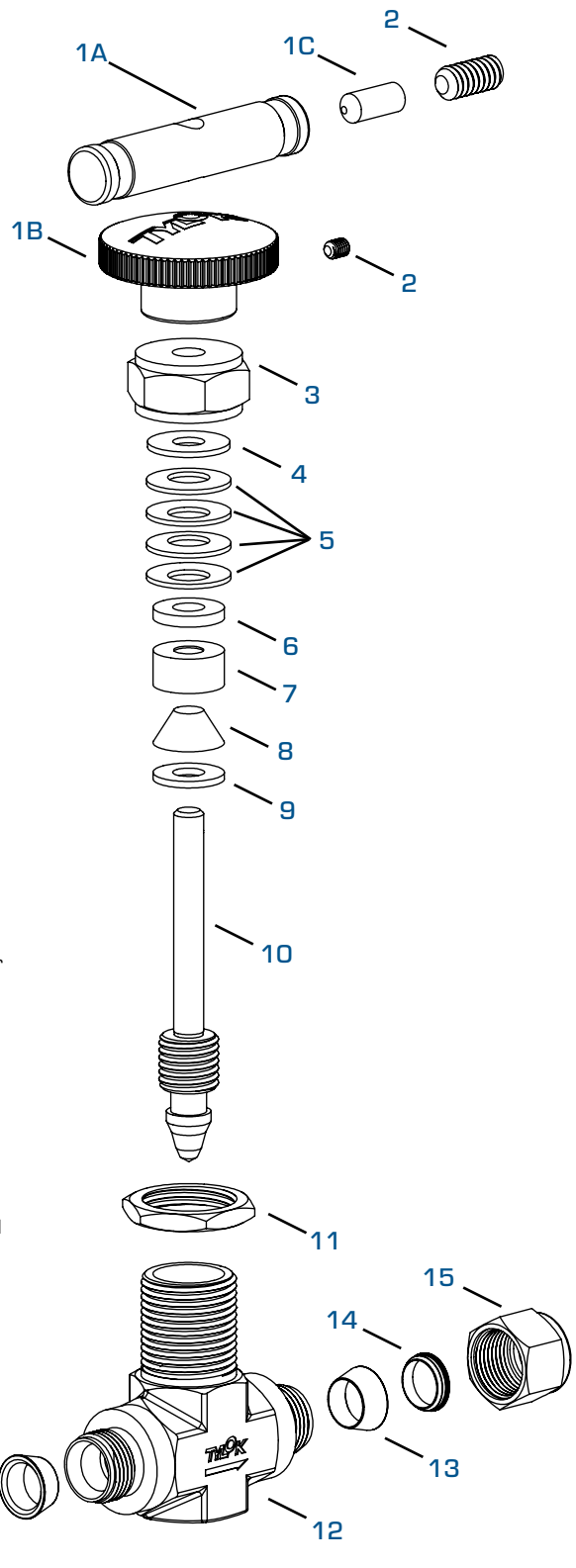
- Stainless Steel Construction
- Pressure Rating 5000 psi (345 bar)
- Temperature Rating: 400°F (204°C) max
- Packing Material: PTFE
- Flow coefficient (Cv) 0.30 to 1.80
- Integral tube fitting (both twin & single ferrule designs)
- Male NPT x Tube
- Female NPT
- Male NPT x Female NPT
- 100% factory tested with nitrogen at 1000 psi



Integral Bonnet Needle Valves

Item	Component	Materials
1A	Tee Handle*	Aluminum
1B	Round Handle	Black Phenolic
1C	Handle Pin	Stainless
2	Set Screw	316 SS
3	Packing Nut	304 SS
4	Gland	304 SS
5	Packing Springs	304 SS
6	Packing Gland	304 SS
7	Upper Packing	TFM 1600 PTFE (Polytetrafluoroethylene)
8	Lower Packing	
9	Lower Gland	316 SS
10	Stem	Chrome-plated 316 SS
11	Panel Nut	304 SS
12	Body	316L SS
13	Front Ferrule	316L SS
14	Rear Ferrule	316L SS
15	Nut	316L SS

* 1RB Series valve are only available with Tee (Bar) handles



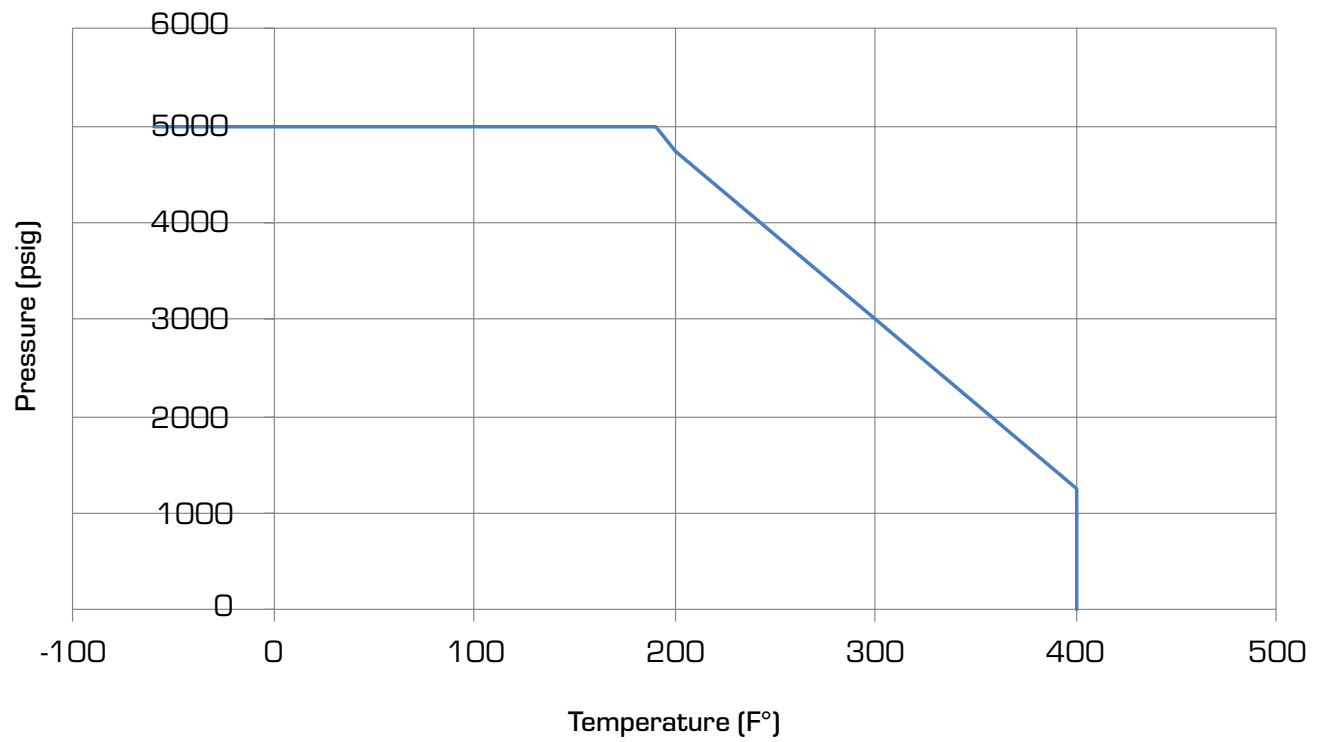
Chevron (2) piece sliding provides improved ID/OD sealing and wear compensation.

Belleville washers provide active compensation for wear, improved sealing and reduce manual adjustment.

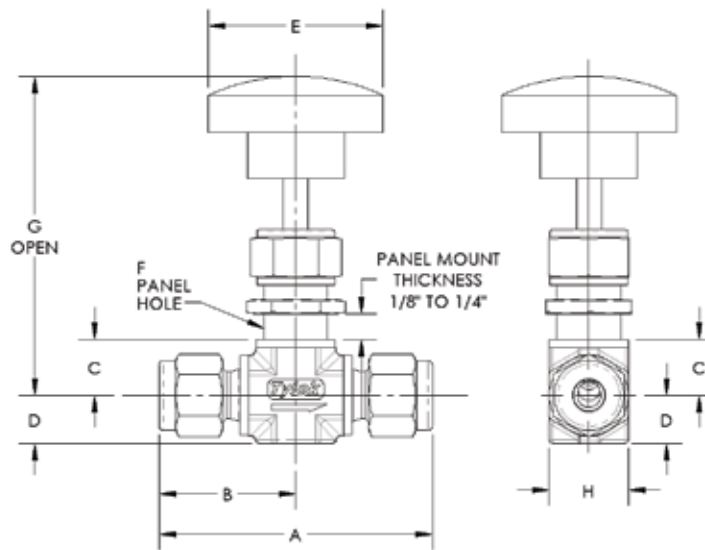
Stem chrome plated for wear and corrosion resistance.

Temperature (F°)	Pressure (psig)
-60	5000
0	5000
100	5000
190	5000
200	4750
300	3000
400	1250
400	0

Integral Bonnet
Needle Valve



Integral Bonnet Needle Valves



End Connections Type	Size	Part Number	Interchanges With	Cv	Orifice	A	B	C	D	E	F	G	H
CBC-Lok® Tube Fitting	1/4	SS-1R4-D4D4	SS-1RS4	0.37	0.158	2.27	1.13	0.44	0.41	1.38	0.53	2.50	0.63
	3/8	SS-1R6-D6D6	SS-1RS6	0.73	0.250	2.58	1.29	0.50	0.56	1.88	0.78	2.97	0.88
	1/2	SS-1R6-D8D8	SS-1RS8	0.73	0.250	2.80	1.40	0.50	0.56	1.88	0.78	2.97	1.13
	1/2	SS-1R8-D8D8	SS-18RS8	1.80	0.375	3.80	1.90	0.75	0.75	3.00	1.03	3.91	1.13
	3/4	SS-1R8-D12D12	SS-18RS12	1.80	0.375	3.80	1.90	0.75	0.75	3.00	1.03	3.91	1.13
CS-Lok® Tube Fitting	1/4	SS-1R4-S4S4	N/A	0.37	0.158	2.27	1.14	0.44	0.41	1.38	0.53	2.50	0.63
	3/8	SS-1R6-S6S6	N/A	0.73	0.250	2.60	1.30	0.50	0.56	1.88	0.78	2.97	0.88
	1/2	SS-1R6-S8S8	N/A	0.73	0.250	2.81	1.40	0.50	0.56	1.88	0.78	2.97	1.13
	1/2	SS-1R8-S8S8	N/A	1.80	0.375	3.80	1.90	0.75	0.75	3.00	1.03	3.91	1.13
	3/4	SS-1R8-S12S12	N/A	1.80	0.375	3.80	1.90	0.75	0.75	3.00	1.03	3.91	1.13
Male NPT to CBC-Lok®	1/4	SS-1R4-M4D4	SS-1RM4-S4	0.37	0.158	1.95	0.82	0.44	0.38	1.38	0.53	2.50	0.63
Male NPT to CS-Lok®	1/4	SS-1R4-M4S4	N/A	0.37	0.158	1.95	0.82	0.44	0.38	1.38	0.53	2.50	0.63
Female NPT	1/4	SS-1R6-F4F4	SS-1RF4	0.37	0.158	2.12	1.06	0.55	0.50	1.88	0.53	2.97	0.63
	3/8	SS-1R8-F6F6	SS-18RF6	1.80	0.375	3.00	1.50	0.75	0.75	3.00	1.03	3.88	1.13
	1/2	SS-1R8-F8F8	SS-18RF8	1.80	0.375	3.00	1.50	0.75	0.75	3.00	1.03	3.88	1.13
Male NPT to Female NPT	1/4	SS-1R6-M4F4	SS-1RM4-F4	0.73	0.250	2.19	1.13	0.50	0.50	1.88	0.53	2.97	0.63
	1/2	SS-1R8-M8F8	SS-1RM8-F8	1.80	0.375	3.00	1.50	0.75	0.75	3.00	1.03	3.88	1.13

Note: In designing a system incorporating tube fittings and valves, it is the designer's or user's obligation and responsibility to determine the appropriate fittings and valves to be used for each application and to ensure proper installation and maintenance.



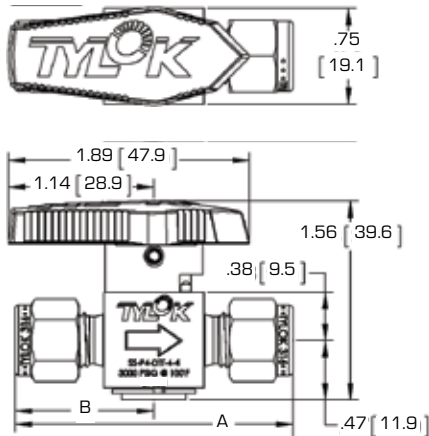
Design & Features:

- Working Pressure up to 3000 psig (206 bar)
- 316 Stainless Steel material
- 1/8 through 3/8 inch sizes
- CBC-Lok® interchanges with Swagelok® & Parker A-Lok®
- CS-Lok® interchanges with Parker CPI®
- Positive leak tight shut off
- Every valve tested for shut off at 1000 psi (41.3 bar)
- Simple design, easy to clean and maintain
 - One piece body construction
 - Replaceable plug assembly
 - O-Ring seal to atmosphere
 - Fast acting, one quarter turn fully actuates the valve
 - Handle direction indicates valve position & flow direction



Dimensions

P4 Series

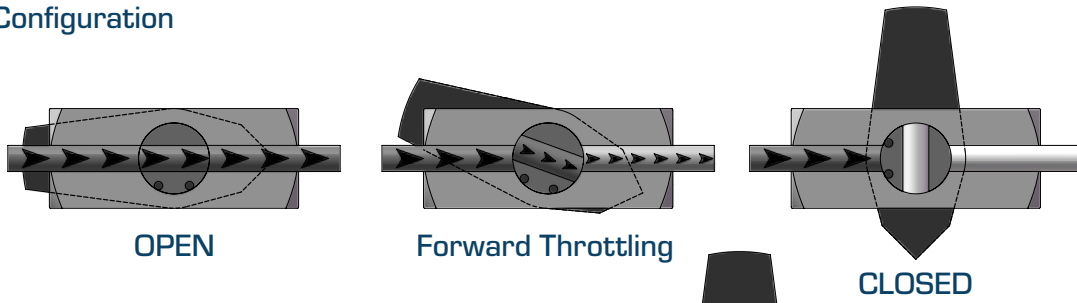


End Connections		Part Number	Swagelok Number	Series	Dimensions, in. (mm)			
Inlet/Outlet	Size				Orifice	A ¹	B ¹	
CBC-Lok® Tube Fitting	1/8"	SS-P4-DTT-2-2	SS-2P4T	P4	0.093 (2.3)	1.99 (50.5)	0.98 (24.9)	
	1/4"	SS-P4-DTT-4-4	SS-4P4T	P4	0.172 (4.4)	2.17 (55.1)	1.08 (27.4)	
	3/8"	SS-P4-DTT-6-6	SS-6P4T	P4	0.172 (4.4)	2.29 (58.2)	1.14 (29.0)	
CS-Lok® Tube Fitting	1/8"	SS-P4-STT-2-2	-	P4	0.093 (2.3)	1.99 (50.5)	0.98 (24.9)	
	1/4"	SS-P4-STT-4-4	-	P4	0.172 (4.4)	2.17 (55.1)	1.08 (27.4)	
	3/8"	SS-P4-STT-6-6	-	P4	0.172 (4.4)	2.29 (58.2)	1.14 (29.0)	
Female NPT	1/8"	SS-P4-1FF-2-2	SS-2P4T4	P4	0.172 (4.4)	1.78 (45.2)	0.89 (22.6)	
	1/4"	SS-P4-1FF-4-4	SS-4P4T4	P4	0.172 (4.4)	2.09 (53.1)	1.05 (26.7)	
Male NPT	1/8"	SS-P4-1MM-2-2	SS-2P4T2	P4	0.172 (4.4)	1.53 (38.9)	0.76 (19.3)	
	1/4"	SS-P4-1MM-4-4	SS-4P4T2	P4	0.172 (4.4)	1.90 (48.3)	0.98 (24.1)	
Male NPT/ CBC-Lok® Tube Fitting	1/4"	SS-P4-DMT-4-4	SS-4P4T1	P4	0.172 (4.4)	2.03 (51.2)	0.95 (24.1)	
Male NPT/ CS-Lok® Tube Fitting	1/4"	SS-P4-SMT-4-4	-	P4	0.172 (4.4)	2.03 (51.2)	0.95 (24.1)	
Male NPT/ Female NPT	1/4"	SS-P4-1MF-4-4	SS-4P4T5		0.172 (4.4)	2.00 (50.8)	0.95 (24.1)	

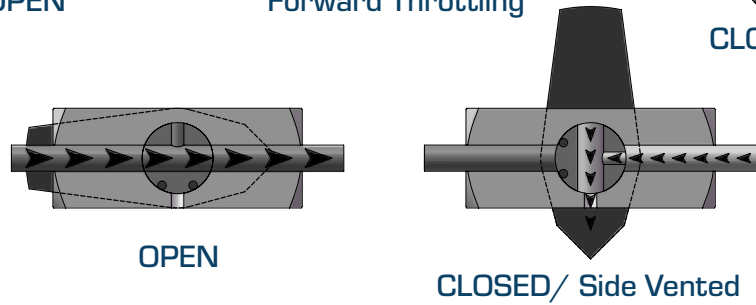
* ¹ Dimensions are shown with tube fitting ends finger-tight and in standard configurations. Dimensions are subject to change.

Flow Considerations

Standard Configuration

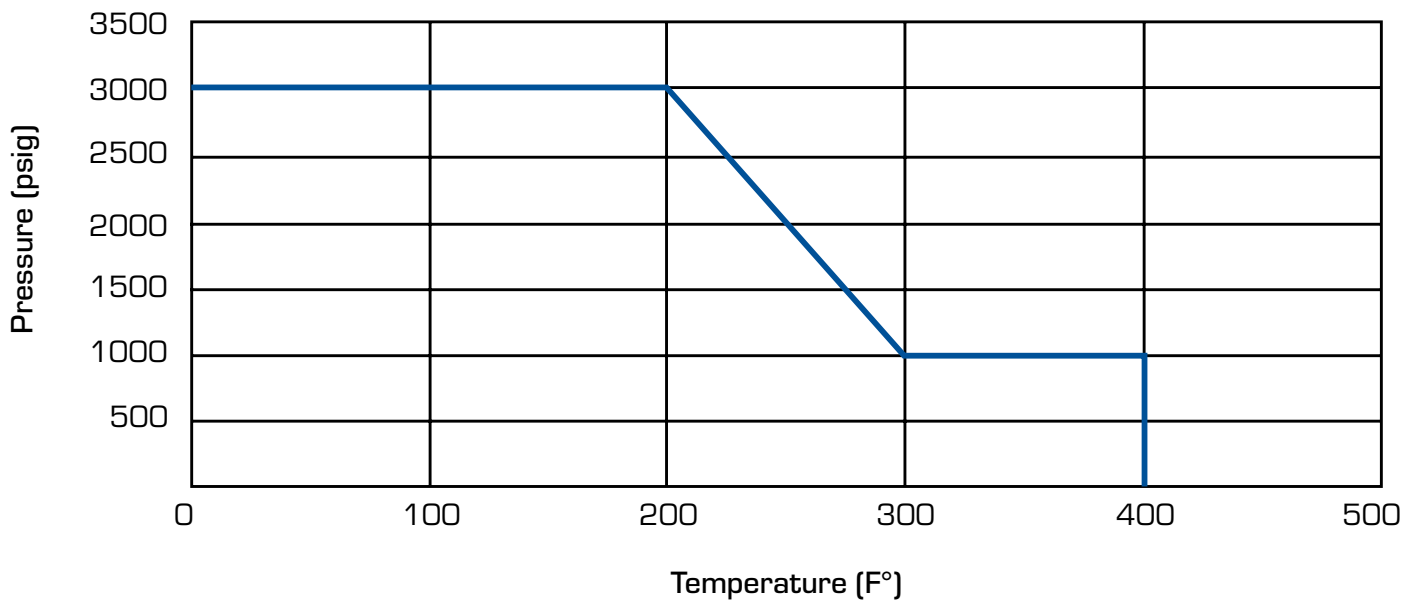


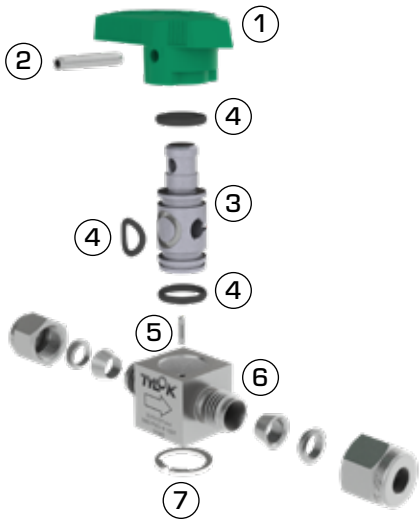
Vented Configuration



Temperature (F°)	Pressure (psig)
0	3000
100	3000
150	3000
200	3000
250	2000
300	1000
350	1000
400	1000
400	0

Pressure - Temperature





Component		Material (Material Grade/ASTM Specification)
1	Handle	Nylon 6/6
2	Pin	316 SS
3	Plug ²	PTFE-coated 316 SS/A479
4	O-ring ²	PTFE-coated Fluorocarbon FKM
5	Pin	316 SS
6	Body ²	316 SS/A479
7	Snap Ring	PH 15-7 Mo [®] SS
8	Lubricant	Perfluoropolyether Based

Plug Valve Options

Downstream Vent

Vented Plug Valves allow downstream pressure to release to atmosphere when the valve is closed. They have a 150 psig (10.3 bar) maximum operating pressure.

Optional O-Ring Materials

Tylok Plug Valves ordinarily come with PTFE-coated Fluorocarbon FKM O-Rings. For a different material, add an O-Ring material designator from Chart 6 to the valve ordering number.

Optional Handle Colors

Tylok Plug Valves ordinarily come with a dark green handle. For a different color, add a handle color designator from Chart 7 to the valve ordering number.

Panel Mount

Contact manufacturer for availability.

SS	-	P4	-	D	-	TT	-	4	-	4	-	TE	-	BK
↓		↓		↓		↓		↓		↓		↓		↓
Material		Valve Series		Style		Inlet/Outlet		Port Size		Port Size		O-Ring Options		Handle Options
Chart 1		Chart 2		Chart 3		Chart 4		Chart 5		Chart 5		Chart 6		Chart 7
												*optional		*optional

Chart 1- Material	
SS	Stainless Steel

Chart 2- Valve Series	
P4	4 Series
P4V	4 Series, Vented

Chart 4- Inlet/Outlet Port		
Type	Port A	Port B
TT	Tube	Tube
MM*	Male NPT	Male NPT
FF*	Female NPT	Female NPT
MF*	Male NPT	Female NPT
MT	Male NPT	Tube

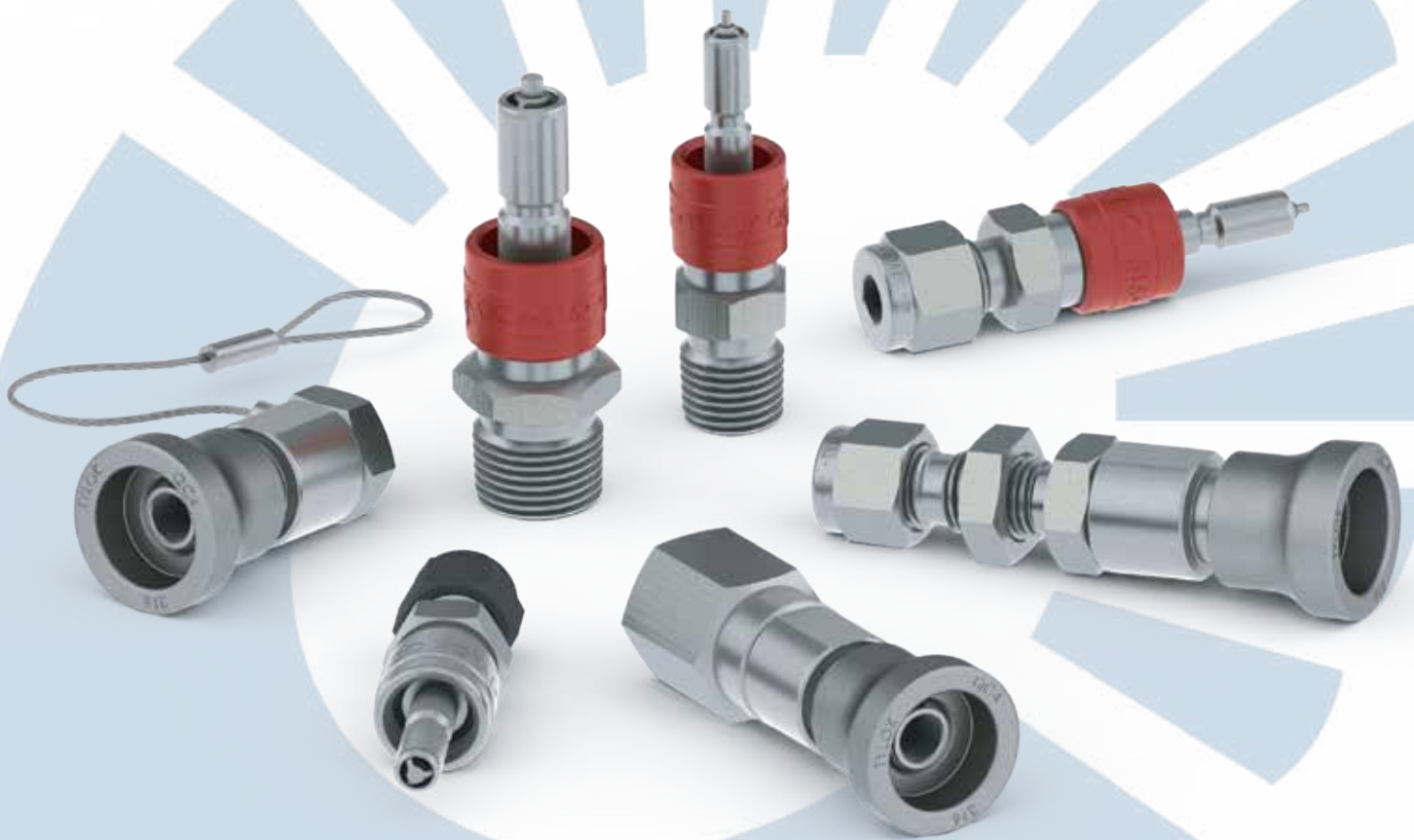
Chart 6- O-Ring Options	
TB	PTFE Coated Buna N
TE	PTFE Coated Ethylene Propylene
TN	PTFE Coated Neoprene

Chart 3- Style	
D	CBC-Lok [®]
S	CS-Lok [®]
1	Threaded

Chart 5- Port Size	
2	1/8"
4	1/4"
6	3/8"

Chart 7- Handle Options	
BK	Black
BL	Blue
RD	Red

QC Series Quick Connects



Quick Connects

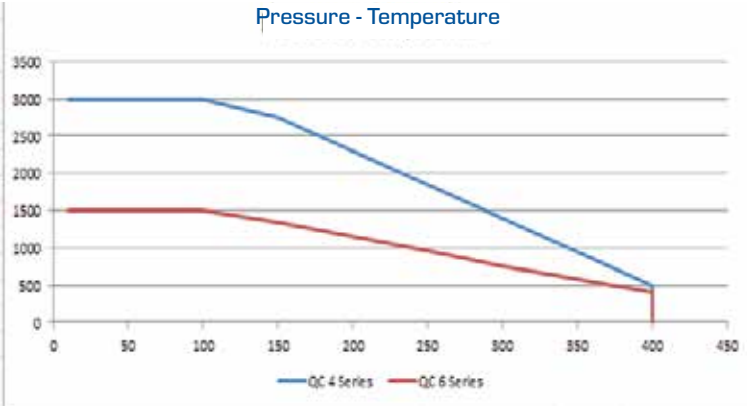
Single End Shut Off (SESO)



Double End Shut Off (DESO)



Pressure - Temperature



Rated Working Pressure, psi (bar)

Body Size	1/4"	3/8"
Connected Position	3000 (207)	1500 (103)
Disconnected Position	3000 (207)	1500 (103)
Connect Under Pressure	250 (17)	250 (17)

Materials of Construction

Machined Parts	Stainless Steel, ANSI Type 316
Springs & Retaining Rings	Stainless Steel, ANSI Type 316
Seals	FKM O-Rings (-15°F to 400°F)
Seal Lubricant	Fluorinated grease thickened with PTFE

Design/ Features

- Redundant Viton O-ring provide quick leak tight sealing in vacuum or pressure systems
- Dependable poppet valves with integral Viton O-Ring Seals are standard in all quick connect bodies and valved plugs.
- Positive valve stops prevent flow checking in the quick connect. Valve guides improve reliability by providing precise alignment to the seat.
- Smooth entrance and positive engagement, firmly gripping the plug, is ensured by Teflon® bonded locking "dogs".
- All quick connect valve springs are made 316 Stainless Steel.
- Tylok Quick Connects are 100% leak tested.

Quick Connect Cover Accessories

Series	Fitting Size	Ordering Number	OAL		B		Flat in.
			in.	(mm)	in.	(mm)	
Dust Cap							
QC4	1/4	SS-QC4-C	1.65	(41.9)	0.92	(23.4)	5/8
QC6	3/8	SS-QC6-C	1.65	(41.9)	1.03	(26.2)	3/4



Series	Fitting Size	Ordering Number	OAL		B		Flat in.
			in.	(mm)	in.	(mm)	
Dust Plug							
QC4	1/4	SS-QC4-P	1.88	(47.8)	0.62	(15.7)	9/16
QC6	3/8	SS-QC6-P	1.84	(46.7)	0.74	(18.8)	11/16



Vacuum Specifications

50 Millitor

= 0.05mm of Hg, absolute pressure
 = 27.9 inches of Hg, gauge pressure

QC Series Quick Connects

Instrumentation Quick Connect Bodies, Valved

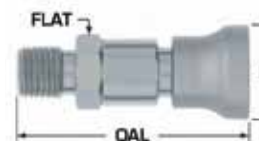
Series	Fitting Size	Part Number	Interchanges With	OAL in. (mm)	B in. (mm)	Flat in.
CBC-Lok® Tube Fitting End						
QC4	1/8	SS-QC4-B-2D	SS-QC4-B-200	2.35 (59.7)	0.92 (23.4)	5/8
QC4	1/4	SS-QC4-B-4D	SS-QC4-B-400	2.38 (60.5)	0.92 (23.4)	5/8
QC6	3/8	SS-QC6-B-6D	SS-QC6-B-600	2.86 (72.6)	1.03 (26.2)	3/4



Series	Fitting Size	Part Number	Interchanges With	OAL in. (mm)	B in. (mm)	Flat in.
CS-Lok® Tube Fitting End						
QC4	1/8	SS-QC4-B-2S	-	2.34 (59.4)	0.92 (23.4)	5/8
QC4	1/4	SS-QC4-B-4S	-	2.39 (60.7)	0.92 (23.4)	5/8
QC6	3/8	SS-QC6-B-6S	-	2.87 (72.9)	1.03 (26.2)	3/4



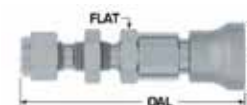
Series	Fitting Size	Part Number	Interchanges With	OAL in. (mm)	B in. (mm)	Flat in.
Male Pipe End						
QC4	1/8	SS-QC4-B-2M	SS-QC4-B-2PM	2.06 (52.3)	0.92 (23.4)	5/8
QC4	1/4	SS-QC4-B-4M	SS-QC4-B-4PM	2.25 (57.2)	0.92 (23.4)	5/8
QC6	1/4	SS-QC6-B-4M	SS-QC6-B-4PM	2.62 (66.5)	1.03 (26.2)	3/4
QC6	3/8	SS-QC6-B-6M	SS-QC6-B-6PM	2.62 (66.5)	1.03 (26.2)	3/4



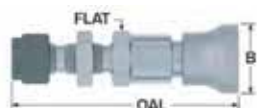
Series	Fitting Size	Part Number	Interchanges With	OAL in. (mm)	B in. (mm)	Flat in.
Female Pipe End						
QC4	1/8	SS-QC4-B-2F	SS-QC4-B-2PF	2.20 (55.9)	0.92 (23.4)	5/8
QC4	1/4	SS-QC4-B-4F	SS-QC4-B-4PF	2.49 (63.2)	0.92 (23.4)	5/8
QC6	1/4	SS-QC6-B-4F	SS-QC6-B-4PF	2.80 (71.1)	1.03 (26.2)	3/4
QC6	3/8	SS-QC6-B-6F	SS-QC6-B-6PF	2.82 (71.6)	1.03 (26.2)	7/8



Series	Fitting Size	Part Number	Interchanges With	OAL in. (mm)	B in. (mm)	Flat in.
CBC-Lok® Bulkhead Tube Fitting End						
QC4	1/4	SS-QC4-B1-4D	SS-QC4-B1-400	3.00 (76.2)	0.92 (23.4)	5/8
QC6	3/8	SS-QC6-B1-6D	SS-QC6-B1-600	3.25 (82.6)	1.03 (26.2)	3/4

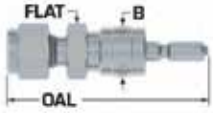


Series	Fitting Size	Part Number	Interchanges With	OAL in. (mm)	B in. (mm)	Flat in.
CS-Lok® Bulkhead Tube Fitting End						
QC4	1/4	SS-QC4-B1-4S	-	3.01 (76.5)	0.92 (23.4)	5/8
QC6	3/8	SS-QC6-B1-6S	-	3.26 (82.8)	1.03 (26.2)	3/4



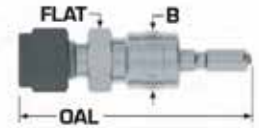
Quick Connects

Instrumentation Quick Connect Plugs, Non-Valved

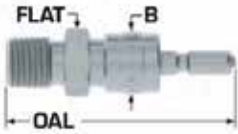


Series	Fitting Size	Part Number	Interchanges With	OAL in.	(mm)	B in.	(mm)	Flat in.
CBC-Lok® Tube Fitting End								
QC4	1/8	SS-QC4-S-2D	SS-QC4-S-200	2.74	(69.6)	0.62	(15.7)	5/8
QC4	1/4	SS-QC4-S-4D	SS-QC4-S-400	2.35	(59.7)	0.62	(15.7)	9/16
QC6	3/8	SS-QC6-S-6D	SS-QC6-S-600	2.56	(65.0)	0.74	(18.8)	11/16

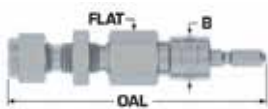
Series	Fitting Size	Part Number	Interchanges With	OAL in.	(mm)	B in.	(mm)	Flat in.
CS-Lok® Tube Fitting End								
QC4	1/8	SS-QC4-S-2S	-	2.73	(69.3)	0.62	(15.7)	5/8
QC4	1/4	SS-QC4-S-4S	-	2.36	(59.9)	0.62	(15.7)	9/16
QC6	3/8	SS-QC6-S-6S	-	2.57	(65.3)	0.74	(18.8)	11/16



Series	Fitting Size	Part Number	Interchanges With	OAL in.	(mm)	B in.	(mm)	Flat in.
Male Pipe End								
QC4	1/8	SS-QC4-S-2M	SS-QC4-S-2PM	2.03	(51.6)	0.62	(15.7)	9/16
QC4	1/4	SS-QC4-S-4M	SS-QC4-S-4PM	2.22	(56.4)	0.62	(15.7)	9/16
QC6	1/4	SS-QC6-S-4M	SS-QC6-S-4PM	2.33	(59.2)	0.74	(18.8)	3/4
QC6	3/8	SS-QC6-S-6M	SS-QC6-S-6PM	2.33	(59.2)	0.74	(18.8)	3/4

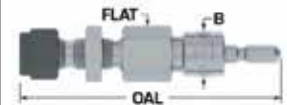


Series	Fitting Size	Part Number	Interchanges With	OAL in.	(mm)	B in.	(mm)	Flat in.
Female Pipe End								
QC4	1/8	SS-QC4-S-2F	SS-QC4-S-2PF	2.09	(53.1)	0.62	(15.7)	9/16
QC4	1/4	SS-QC4-S-4F	SS-QC4-S-4PF	2.33	(59.2)	0.62	(15.7)	3/4
QC6	1/4	SS-QC6-S-4F	SS-QC6-S-4PF	2.50	(63.5)	0.74	(18.8)	3/4
QC6	3/8	SS-QC6-S-6F	SS-QC6-S-6PF	2.50	(63.5)	0.74	(18.8)	7/8



Series	Fitting Size	Part Number	Interchanges With	OAL in.	(mm)	B in.	(mm)	Flat in.
CBC-Lok® Bulkhead Tube Fitting End								
QC4	1/4	SS-QC4-S1-4D	SS-QC4-S1-400	3.39	(86.1)	0.62	(15.7)	5/8
QC6	3/8	SS-QC6-S1-6D	SS-QC6-S1-600	3.61	(91.7)	0.74	(18.8)	3/4

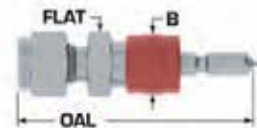
Series	Fitting Size	Part Number	Interchanges With	OAL in.	(mm)	B in.	(mm)	Flat in.
CS-Lok® Bulkhead Tube Fitting End								
QC4	1/4	SS-QC4-S1-4S	-	3.40	(86.4)	0.62	(15.7)	5/8
QC6	3/8	SS-QC6-S1-6S	-	3.62	(91.9)	0.74	(18.8)	3/4



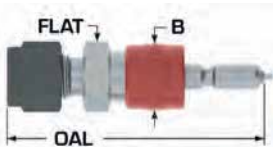
QC Series Quick Connects

Instrumentation Quick Connect Plugs, Valved

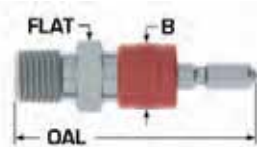
Series	Fitting Size	Part Number	Interchanges With	OAL in. (mm)	B in. (mm)	Flat in.
CBC-Lok® Tube Fitting End						
QC4	1/8	SS-QC4-D-2D	SS-QC4-D-200	2.74 (69.6)	0.62 (15.7)	5/8
QC4	1/4	SS-QC4-D-4D	SS-QC4-D-400	2.35 (59.7)	0.62 (15.7)	9/16
QC6	3/8	SS-QC6-D-6D	SS-QC6-D-600	2.56 (65.0)	0.74 (18.8)	11/16



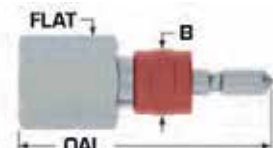
Series	Fitting Size	Part Number	Interchanges With	OAL in. (mm)	B in. (mm)	Flat in.
CS-Lok® Tube Fitting End						
QC4	1/8	SS-QC4-D-2S	-	2.73 (69.3)	0.62 (15.7)	5/8
QC4	1/4	SS-QC4-D-4S	-	2.36 (59.9)	0.62 (15.7)	9/16
QC6	3/8	SS-QC6-D-6S	-	2.57 (65.3)	0.74 (18.8)	11/16



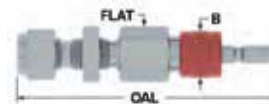
Series	Fitting Size	Part Number	Interchanges With	OAL in. (mm)	B in. (mm)	Flat in.
Male Pipe End						
QC4	1/8	SS-QC4-D-2M	SS-QC4-D-2PM	2.03 (51.6)	0.62 (15.7)	9/16
QC4	1/4	SS-QC4-D-4M	SS-QC4-D-4PM	2.22 (56.4)	0.62 (15.7)	9/16
QC6	1/4	SS-QC6-D-4M	SS-QC6-D-4PM	2.33 (59.2)	0.74 (18.8)	3/4
QC6	3/8	SS-QC6-D-6M	SS-QC6-D-6PM	2.33 (59.2)	0.74 (18.8)	3/4



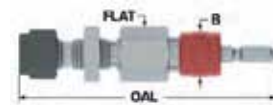
Series	Fitting Size	Part Number	Interchanges With	OAL in. (mm)	B in. (mm)	Flat in.
Female Pipe End						
QC4	1/8	SS-QC4-D-2F	SS-QC4-D-2PF	2.09 (53.1)	0.62 (15.7)	9/16
QC4	1/4	SS-QC4-D-4F	SS-QC4-D-4PF	2.33 (59.2)	0.62 (15.7)	3/4
QC6	1/4	SS-QC6-D-4F	SS-QC6-D-4PF	2.50 (63.5)	0.74 (18.8)	3/4
QC6	3/8	SS-QC6-D-6F	SS-QC6-D-6PF	2.50 (63.5)	0.74 (18.8)	7/8



Series	Fitting Size	Part Number	Interchanges With	OAL in. (mm)	B in. (mm)	Flat in.
CBC-Lok® Bulkhead Tube Fitting End						
QC4	1/4	SS-QC4-D1-4D	SS-QC4-D1-400	3.39 (86.1)	0.62 (15.7)	5/8
QC6	3/8	SS-QC4-D1-6D	SS-QC4-D1-600	3.61 (91.7)	0.74 (18.8)	3/4



Series	Fitting Size	Part Number	Interchanges With	OAL in. (mm)	B in. (mm)	Flat in.
CS-Lok® Bulkhead Tube Fitting End						
QC4	1/4	SS-QC4-D1-4S	-	3.40 (86.4)	0.62 (15.7)	5/8
QC6	3/8	SS-QC6-D1-6S	-	3.62 (91.9)	0.74 (18.8)	3/4



Quick Connects are ordered as listed in this catalog providing the ordering number.

Special Configurations available upon request

Example: A Stainless Steel, QC4 series quick connect body with a 1/4" CBC-Lok® Tube Fitting End.

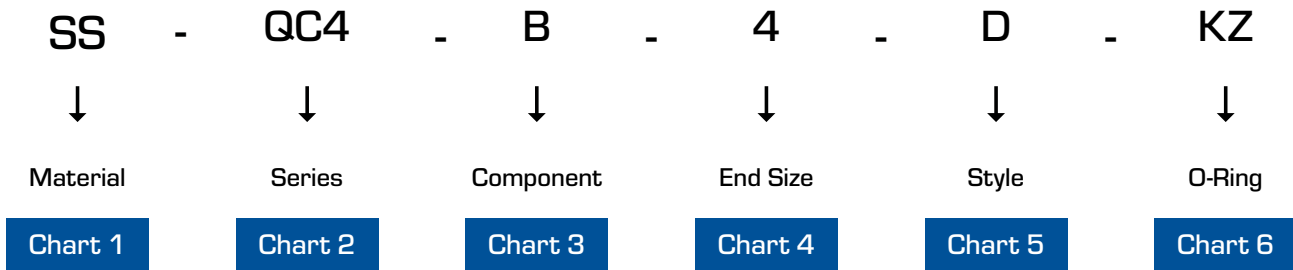


Chart 1- Material	
SS	Stainless Steel

Chart 4- End Size	
2	1/8"
4	1/4"
6	3/8"

Chart 2- Quick Coupler Series	
QC4	4 Series (1/4")
QC6	6 Series (3/8")

Chart 5- Options	
D	CBC-Lok
S	CS-Lok
1	Tylok Standard
M	Male NPT
F	Female NPT

Chart 3- Coupler Component	
B	Body
B1	Bulkhead Body
S	Non-Valved Plug
S1	Non-Valved Bulkhead Plug
D	Valved Plug
D1	Valved Bulkhead Plug
C	Dust Cap
P	Dust Plug

Chart 6- O-Ring Options	
B	Buna N
E	EPDM
KZ	Kalrez®
N	Neoprene



CH Series Check Valves for Instrumentation

Tylok Check Valves are poppet-style valves made of 316 Stainless Steel, and feature a compact design that is perfect for instrumentation systems. These directional valves are normally closed, but open when the differential pressure between the inlet and outlet exceed the spring pressures.

Features:

- 6000 psig (413 bar) maximum pressure rating
- -10°F (-23°C) to 400°F (204°C) temperature rating
- 1/3 to 10 psig cracking pressure
- Fluorocarbon FKM Seals
- End Connections - Integral Tube Fittings (both twin [CBC-Lok®] & Single [CS-Lok®] ferrule designs)
- Available in sizes 1/4", 3/8", 1/2", 3/4" and 1"



Pressure - Temperature Ratings (based on fluorocarbon FKM seals)

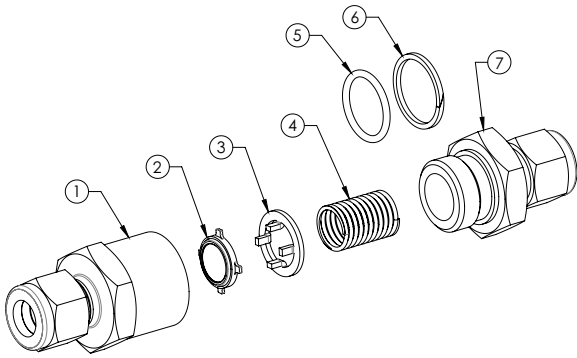
Temperature °F (°C)	Working Pressure psig (bar)
-10°F (-23°C) to 100°F (37°C)	6000 psig (413 bar)
200°F (93°C)	5160 psig (355 bar)
250°F (121°C)	4910 psig (338 bar)
300°F (148°C)	4660 psig (321 bar)
375°F (190°C)	4280 psig (295 bar)

Check Valves

Cracking and Reseal Pressures

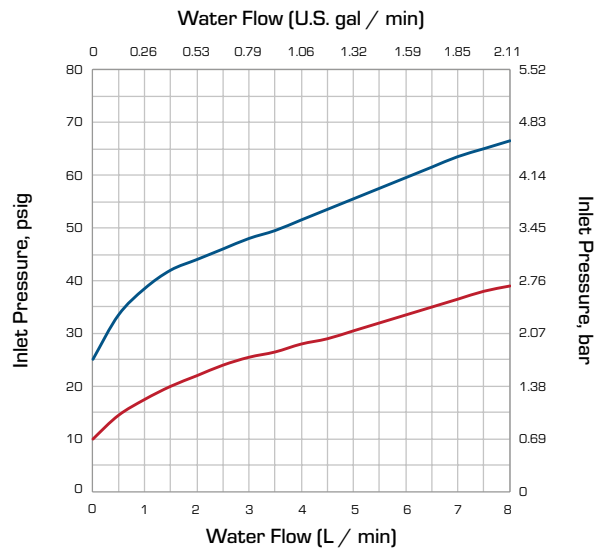
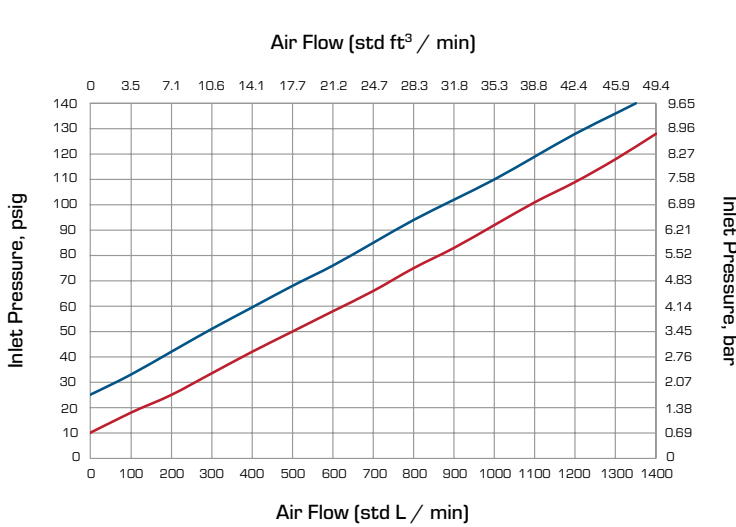
Nominal Cracking Pressure psig (bar)	Cracking Pressure Range psig (bar)	Reseal Pressure Range psig (bar)
1/3 psig (0.02 bar)	1/3 to 3 psig (0.02 to 0.20 bar)	Up to 6 psig (0.41 bar) differential pressure
1 psig (0.06 bar)	1 to 4 psig (0.06 to 0.27 bar)	Up to 6 psig (0.41 bar) differential pressure
5 psig (0.34 bar)	3 to 9 psig (0.20 to 0.62 bar)	Up to 2 psig (0.14 bar) differential pressure
10 psig (0.68 bar)	7 to 15 psig (0.48 to 1.00 bar)	Up to 3 psig (0.20 bar) differential pressure
25 psig (1.07 bar)	20 to 30 psig (1.04 to 2.01 bar)	Up to 17 psig (1.02 bar) differential pressure

CH Series Check Valves

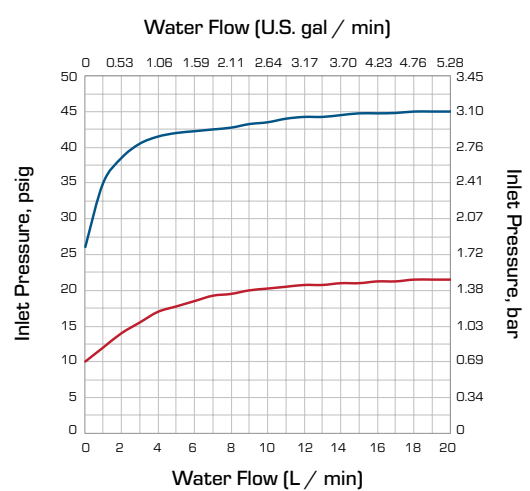
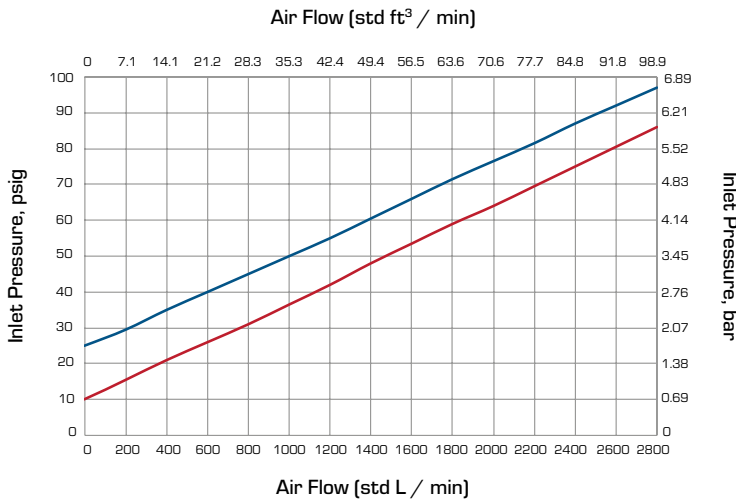


Component		Material (Material Grade/ASTM Specification)
1	Inlet Body	316SS / A479
2	Bonded Poppet	Fluorocarbon FKM - Bonded 316SS / A479
3	Poppet Stop	316SS / A240
4	Spring	302SS / A313
5	O-Ring	Fluorocarbon FKM
6	Backup Ring	PTFE / D1710
7	Outlet Body	316SS / A479

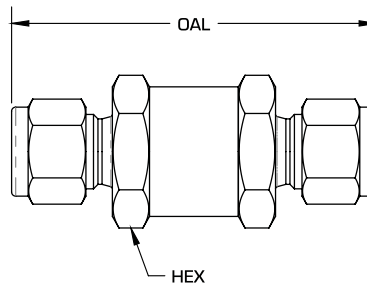
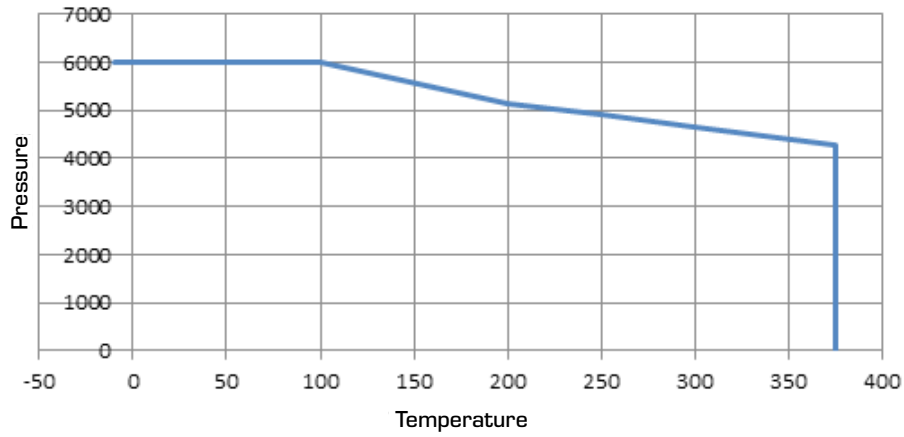
— $C_v = 0.67$ Cracking = 1 psig — $C_v = 0.67$ Cracking = 10 psig



— $C_v = 1.8$ Cracking = 1 psig — $C_v = 1.8$ Cracking = 10 psig

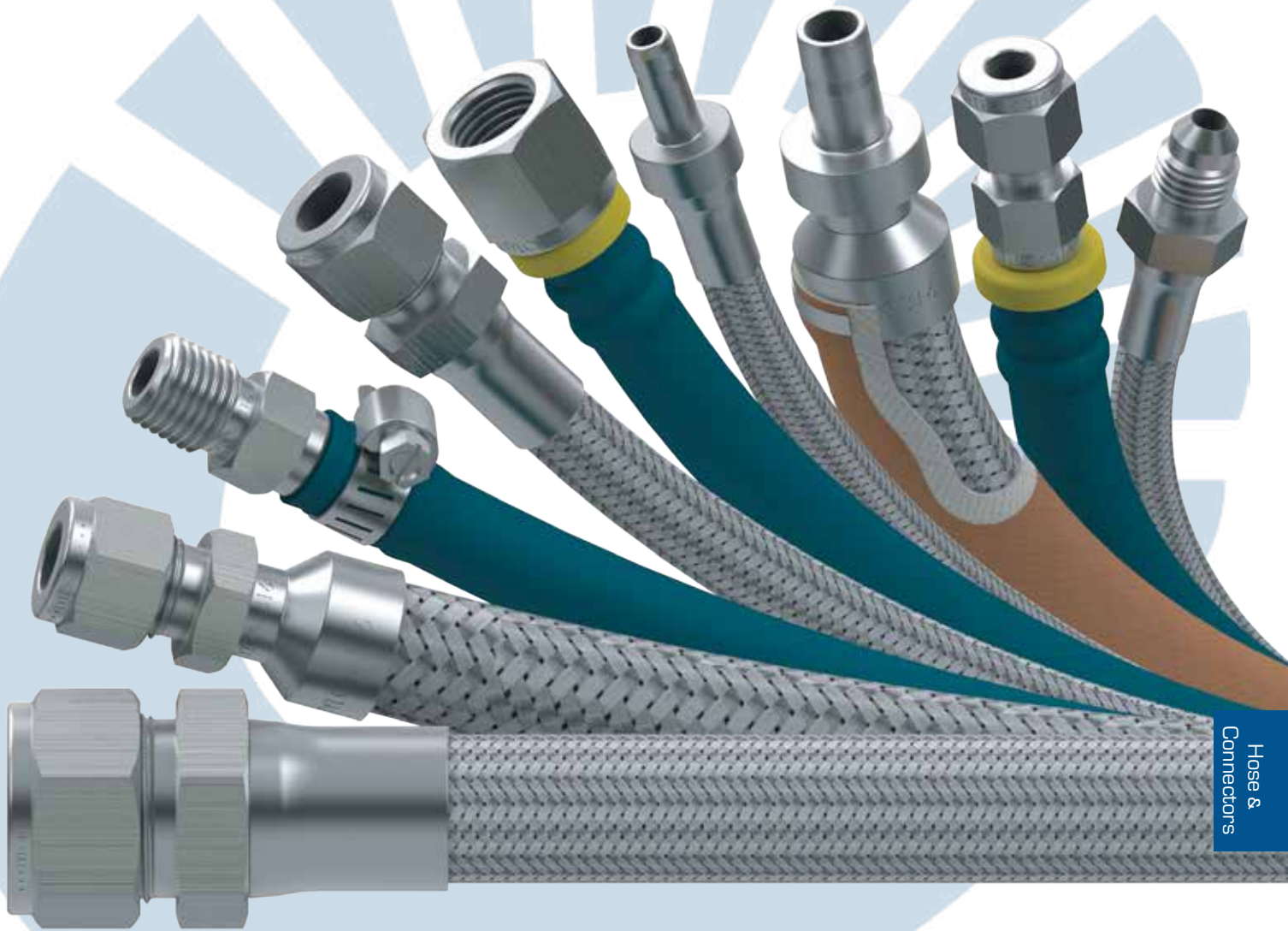


Temperature - Pressure Ratings



Check Valves

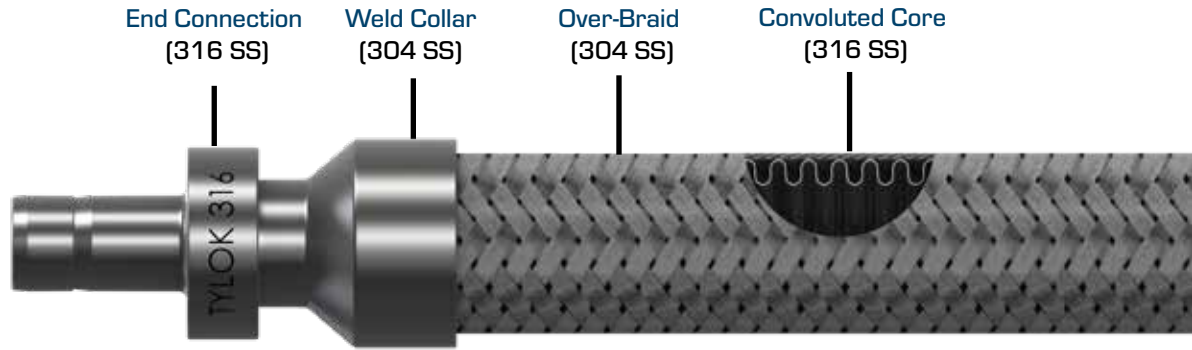
End Connection		Part Number	Interchanges With	Pressure Rating At 100°F (37°C) psig (bar)	Cv	OAL	HEX
Type	Size						
CBC-Lok® Tube Fitting	1/4	SS-CH-D4D4-	SS-CHS4-	6000 (413)	0.67	2.43	1/16
	3/8	SS-CH-D6D6-	SS-CHS6-		1.80	2.75	1
	1/2	SS-CH-D8D8-	SS-CHS8-	5000 (344)	4.70	2.96	
	3/4	SS-CH-D12D12-	SS-CHS12-		4.70	3.52	1-5/8
CS-Lok® Tube Fitting	1/4	SS-CH-S4S4-	-	6000 (413)	0.67	2.43	11/16
	3/8	SS-CH-S6S6-	-		1.80	2.75	1
	1/2	SS-CH-S8S8-	-	5000 (344)	4.70	2.96	
	3/4	SS-CH-S12S12-	-		4.70	3.52	1-5/8



Hose &
Connectors

Flexible Metal Hose • PTFE Lined Hose • Multi Purpose Push On Hose

Flexible Metal Hose



Design Features:

- Working pressures from vacuum to 4600 psig (317 bar)
-L Series (standard pressure) & H Series (high pressure)
- Medium-pressure applications where permeation is unacceptable
- End Connections are available in 1/4" to 1" sizes
- Stainless Steel core for corrosion resistance
- Stainless Steel braid contains hose pressure in dynamic applications
- End Connections weld meets ASME Boiler and Pressure Vessel Code Section IX
- Assembly number and pressure rating are etched onto weld collar
- Hose covers, identification tags, and additional leak testing options are available

Testing

Every Tylok L & H series hose assembly is helium leak tested to a maximum leak rate of 1×10^{-6} std cm³/s. See additional test options in the ordering section.

Available Sizes

Adapter Tube Size	Hose Size	A		Minimum Inside Diameter		Minimum Outside Diameter	
		in	(mm)	in	(mm)	in	(mm)
1/4	4	1.63	(41.3)	0.16	(4.0)	0.56	(14.3)
3/8	6	1.84	(46.8)	0.28	(7.1)	0.78	(19.8)
1/2	8	2.09	(53.2)	0.39	(9.9)	0.93	(23.2)
3/4	12	2.31	(58.7)	0.63	(15.9)	1.32	(33.5)
1	16	2.81	(71.4)	0.88	(22.2)	1.63	(41.4)

Available End Connections

Tube Adapter; CBC-Lok Tube Fitting; CS-Lok Tube Fitting; Male Pipe Fitting; Female Pipe Fitting; Male JIC, 37° Flare; Female Swivel JIC, 37° flare

Technical Data

	Hose Size Designator	Nominal Hose Size in (mm)	Minimum Bend Radius		Temperature Range °F (°C)	Working Pressure at 70°F (21°C) psig (bar)	Burst Pressure at 70°F (21°C) psig (bar)	Hose Weight lb/ft (kg/m)
			Static in	Dynamic (mm)				
L Series	4	0.47 (11.9)	1.0 (25.4)	4.5 (114)	-325 to 850 (-200 to 454)	1800 (124)	7233 (499)	0.11 (0.16)
	6	0.71 (18.0)	1.2 (30.5)	5.0 (127)	-325 to 850 (-200 to 454)	1558 (107)	6230 (430)	0.20 (0.30)
	8	0.83 (21.1)	1.5 (38.1)	5.5 (140)	-325 to 850 (-200 to 454)	1186 (82)	4743 (327)	0.22 (0.33)
	12	1.22 (31.0)	2.1 (53.3)	8.0 (203)	-325 to 850 (-200 to 454)	898 (62)	3591 (248)	0.37 (0.55)
	16	1.53 (38.9)	2.7 (68.6)	9.0 (229)	-325 to 850 (-200 to 454)	718 (50)	2872 (198)	0.50 (0.74)
H Series	4	0.52 (13.2)	1.1 (27.9)	5.0 (127)	-325 to 850 (-200 to 454)	4600 (317)	18400 (1268)	0.21 (0.31)
	6	0.70 (17.8)	1.4 (35.6)	5.5 (140)	-325 to 850 (-200 to 454)	3800 (162)	15200 (1048)	0.36 (0.54)
	8	0.82 (20.8)	1.6 (40.6)	5.7 (145)	-325 to 850 (-200 to 454)	2600 (179)	10400 (717)	0.43 (0.64)
	12	1.19 (30.2)	2.8 (71.1)	6.5 (165)	-325 to 850 (-200 to 454)	2000 (138)	8000 (552)	0.64 (0.95)
	16	1.39 (35.9)	3.5 (88.9)	7.9 (201)	-325 to 850 (-200 to 454)	1500 (103)	6000 (414)	0.78 (1.16)

Temperature °F (°C)	De-Rating Factor
-325 to 300 (-198 to 149)	1.00
400 (204)	0.93
500 (260)	0.86
600 (316)	0.81
650 (343)	0.79
700 (371)	0.77
750 (399)	0.75
800 (427)	0.74
850 (454)	0.72

Pressure Temperature De-Rating

The working pressure must be de-rated when PTFE-lined hose operates outside of ambient temperatures.

Dynamic Pressure De-Rating

Pulsating or shock pressures, like those encountered with fast-operating valves, can severely damage a hose. If your application experiences pulsating pressures, use a de-rating factor of 0.50. If your application experiences shock pressures, use a de-rating factor of 0.17.

Standard Assemblies

L Series					
SS-L4A4A4-12	1/4" Hose, 1/4" Adapter Ends, 12" OAL	SS-L6A6A6-12	3/8" Hose, 3/8" Adapter Ends, 12" OAL	SS-L8A8A8-12	1/2" Hose, 1/2" Adapter Ends, 12" OAL
SS-L4A4A4-18	1/4" Hose, 1/4" Adapter Ends, 18" OAL	SS-L6A6A6-18	3/8" Hose, 3/8" Adapter Ends, 18" OAL	SS-L8A8A8-18	1/2" Hose, 1/2" Adapter Ends, 18" OAL
SS-L4A4A4-24	1/4" Hose, 1/4" Adapter Ends, 24" OAL	SS-L6A6A6-24	3/8" Hose, 3/8" Adapter Ends, 24" OAL	SS-L8A8A8-24	1/2" Hose, 1/2" Adapter Ends, 24" OAL

H Series					
SS-H4A4A4-12	1/4" Hose, 1/4" Adapter Ends, 12" OAL	SS-H6A6A6-12	3/8" Hose, 3/8" Adapter Ends, 12" OAL	SS-H8A8A8-12	1/2" Hose, 1/2" Adapter Ends, 12" OAL
SS-H4A4A4-18	1/4" Hose, 1/4" Adapter Ends, 18" OAL	SS-H6A6A6-18	3/8" Hose, 3/8" Adapter Ends, 18" OAL	SS-H8A8A8-18	1/2" Hose, 1/2" Adapter Ends, 18" OAL
SS-H4A4A4-24	1/4" Hose, 1/4" Adapter Ends, 24" OAL	SS-H6A6A6-24	3/8" Hose, 3/8" Adapter Ends, 24" OAL	SS-H8A8A8-24	1/2" Hose, 1/2" Adapter Ends, 24" OAL



CBC-Lok® Tube Adapter ¹							
Adapter Tube Size	Hose Size	A		Minimum Inside Diameter		Maximum Outside Dimension	
		in	(mm)	in	(mm)	in	(mm)
1/4	4	1.63	[41.3]	0.16	[4.0]	0.56	[14.3]
3/8	6	1.84	[46.8]	0.28	[7.1]	0.78	[19.8]
1/2	8	2.09	[53.2]	0.39	[9.9]	0.93	[23.6]
3/4	12	2.31	[58.7]	0.63	[15.9]	1.32	[33.5]
1	16	2.81	[71.4]	0.88	[22.2]	1.63	[41.4]



CBC-Lok® Tube Fitting ¹							
Fitting Size	Hose Size	A		Minimum Inside Diameter		Maximum Outside Dimension	
		in	(mm)	in	(mm)	in	(mm)
1/4	4	1.66	[42.3]	0.19	[4.7]	0.65	[16.5]
3/8	6	1.89	[48.0]	0.28	[7.1]	0.79	[20.1]
1/2	8	2.02	[51.3]	0.38	[9.5]	1.01	[25.7]
3/4	12	2.25	[57.0]	0.63	[15.9]	1.32	[33.5]
1	16	2.65	[67.2]	0.88	[22.2]	1.73	[44.0]



CS-Lok® Tube Fitting ²							
Fitting Size	Hose Size	A		Minimum Inside Diameter		Maximum Outside Dimension	
		in	(mm)	in	(mm)	in	(mm)
1/4	4	1.67	[42.4]	0.19	[4.7]	0.65	[16.5]
3/8	6	1.89	[48.1]	0.28	[7.1]	0.79	[20.1]
1/2	8	2.02	[51.4]	0.38	[9.5]	1.01	[25.7]
3/4	12	2.24	[56.9]	0.63	[15.9]	1.32	[33.5]
1	16	2.64	[67.0]	0.88	[22.2]	1.73	[44.0]



Female Pipe Fitting							
NPT Size	Hose Size	A		Minimum Inside Diameter		Maximum Outside Dimension	
		in	(mm)	in	(mm)	in	(mm)
1/4	4	1.56	[39.7]	0.25	[6.4]	0.87	[22.0]
3/8	6	1.88	[47.6]	0.38	[9.5]	1.01	[25.7]
1/2	8	2.03	[51.6]	0.47	[11.9]	1.23	[31.1]
3/4	12	2.19	[55.5]	0.63	[15.9]	1.51	[38.5]
1	16	2.47	[62.7]	0.88	[22.2]	1.88	[47.7]

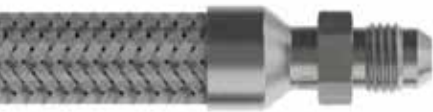


Male Pipe Fitting							
NPT Size	Hose Size	A		Minimum Inside Diameter		Maximum Outside Dimension	
		in	(mm)	in	(mm)	in	(mm)
1/4	4	1.56	[39.7]	0.25	[6.4]	0.65	[16.5]
3/8	6	1.72	[43.6]	0.38	[9.5]	0.79	[20.1]
1/2	8	1.91	[48.4]	0.47	[11.9]	1.01	[25.7]
3/4	12	2.06	[52.4]	0.63	[15.9]	1.32	[33.5]
1	16	2.47	[62.7]	0.88	[22.2]	1.63	[41.4]

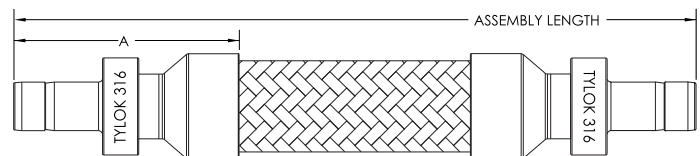


Female Swivel JIC, 37° Flare							
JIC Flare Size	Hose Size	A		Minimum Inside Diameter		Maximum Outside Dimension	
		in	(mm)	in	(mm)	in	(mm)
1/4	4	1.37	[34.8]	0.17	[4.32]	0.65	[16.5]
3/8	6	1.61	[40.8]	0.30	[7.62]	0.79	[20.1]
1/2	8	1.73	[43.8]	0.39	[9.91]	1.01	[25.7]
3/4	12	2.03	[51.6]	0.61	[15.5]	1.44	[36.7]
1	16	2.26	[57.3]	0.84	[21.3]	1.73	[44.0]

Hose & Connectors



Male JIC, 37° Flare							
JIC Flare Size	Hose Size	A		Minimum Inside Diameter		Maximum Outside Dimension	
		in	(mm)	in	(mm)	in	(mm)
1/4	4	1.30	[33.0]	0.17	[4.32]	0.60	[15.2]
3/8	6	1.40	[35.6]	0.30	[7.62]	0.78	[19.8]
1/2	8	1.50	[38.1]	0.39	[9.91]	0.93	[23.6]
3/4	12	1.70	[43.2]	0.61	[15.5]	1.32	[33.5]
1	16	1.90	[48.3]	0.84	[21.3]	1.63	[41.4]



Example:

A 1/4" L Series Flexible Metal Hose with 1/4" CBC-Lok Tube Adapter ends, 18" overall length and optional hydrostatic test is designated as follows:

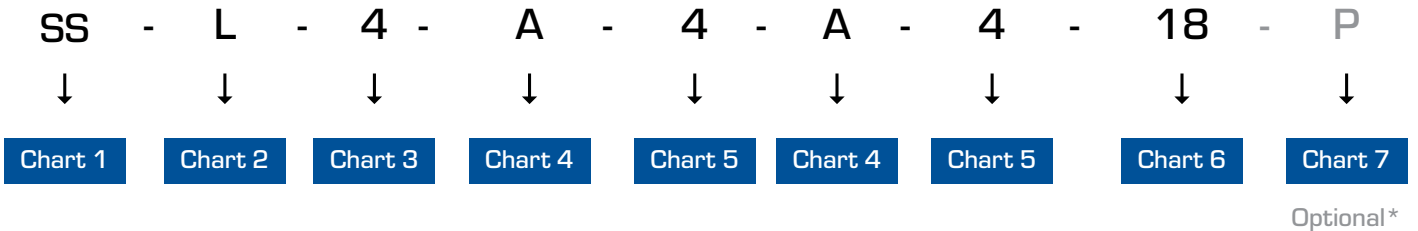


Chart 1- Material	
SS	Stainless Steel

Chart 2- Hose Type	
L	L Series Metal Hose
H	H Series Metal Hose

Chart 3- Hose Size	
4	1/4 in
6	3/8 in
8	1/2 in
12	3/4 in
16	1 in

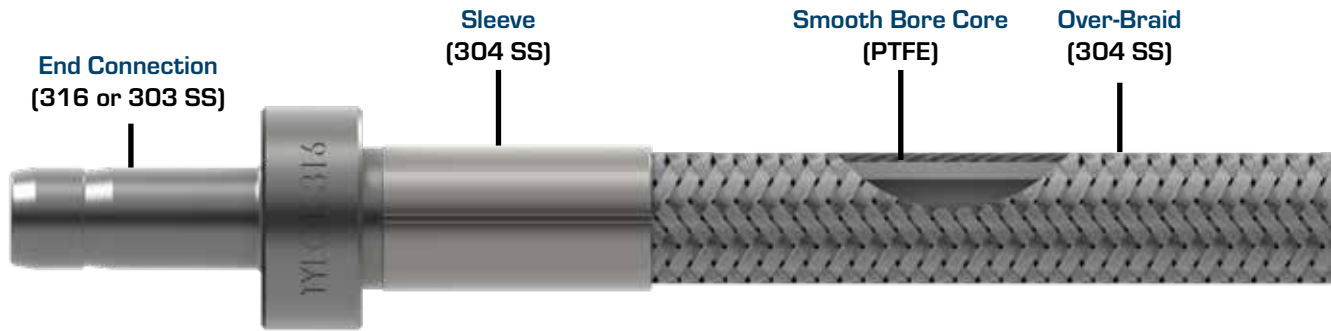
Chart 4- End Connection Type	
A	Tube Adapter
D	CBC-Lok® Tube Fitting
S	CS-Lok® Tube Fitting
M	Male Pipe Threads
F	Female Pipe Threads
AN	Male JIC, 37° Flare
AS	Female Swivel JIC, 37° Flare

Chart 5- End Connection Size	
4	1/4 in
6	3/8 in
8	1/2 in
12	3/4 in
16	1 in

Chart 6- Total Assembly Length	
6	Inches, and ordered in whole number increments

Chart 7- Options	
-TAG	Tag (customer specified text)
H	Helium Leak Test (1x10 ⁻⁹ std cm ³ /s)
N	Nitrogen Pressure Test
P	Hydrostatic Test

PTFE-Lined, Stainless Steel Braided Hose



Design Features:

- PTFE core made from fine powder PTFE resin.
- Stainless Steel end connections are available in 1/4" to 1" sizes.
- Custom lengths and optional cover accessories are available.
- Assembly meets or exceeds requirements of SAE 10OR14.
- PTFE meets FDA 21CFR part 177.1550 for contact with food, water and beverages.
- Carbon black-filled core tube is available to provide static charge dissipation.

Testing

Tylok PTFE-lined hose assemblies are hydrostatically pressure tested at 1.5 times the working pressure, with a requirement of no visible leakage.

Available Sizes

Adapter Tube Size	Hose Size	A		Minimum Inside Diameter		Maximum Outside Dimension	
		in	(mm)	in	(mm)	in	(mm)
1/4	4	1.58	(40.1)	0.15	(3.8)	0.56	(14.2)
3/8	6	1.74	(44.2)	0.28	(7.0)	0.68	(17.3)
1/2	8	2.09	(53.1)	0.36	(9.0)	0.81	(20.5)
3/4	12	2.35	(59.7)	0.59	(15.0)	1.06	(26.9)
1	16	2.77	(70.4)	0.81	(20.6)	1.37	(34.8)

Available End Connections

Tube Adapter; CBC-Lok Tube Fitting; CS-Lok Tube Fitting; Male Pipe Fitting; Female Pipe Fitting; Male JIC, 37° Flare; Female Swivel JIC, 37° flare

Technical Data

Hose Size Designator	Nominal Hose Size		Minimum Bend Radius		Temperature Range °F (°C)	Working Pressure at 70°F (21°C) psig (bar)	Burst Pressure at 70°F (21°C) psig (bar)	Hose Weight	
	in	(mm)	in	(mm)				lb/ft	(kg/m)
4	1/4	(6.4)	2.0	(50.8)	Continuous: -65 to 400 (-53 to 204)	3000 (206)	12000 (827)	0.07 (0.10)	
6	3/8	(9.5)	4.0	(101.6)		Intermittent: -100 to 500 (-73 to 260)	2500 (172)	10000 (689)	0.11 (0.16)
8	1/2	(12.7)	5.2	(132.1)	2000 (137)		8000 (551)	0.12 (0.18)	
12	3/4	(19.0)	7.7	(195.6)	1200 (82.7)		4800 (331)	0.17 (0.25)	
16	1	(25.4)	9.0	(228.6)	1000 (68.9)		4000 (275)	0.27 (0.41)	

Temperature °F (°C)	De-Rating Factor
-65 to 100 (-53 to 37)	1.00
200 (93)	0.90
300 (148)	0.83
400 (204)	0.75

Pressure Temperature De-Rating

The working pressure must be de-rated when PTFE-lined hose operates outside of ambient temperatures.

Standard Assemblies

Description	OAL (in.)	Part Number	Interchanges With
1/4" PTFE Hose, 1/4" CBC-Lok® Tube Adapter Ends	6	SS-TH4A4A4-6	SS-4BHT-6
	12	SS-TH4A4A4-12	SS-4BHT-12
	18	SS-TH4A4A4-18	SS-4BHT-18
	24	SS-TH4A4A4-24	SS-4BHT-24
	36	SS-TH4A4A4-36	SS-4BHT-36
	48	SS-TH4A4A4-48	SS-4BHT-48
	60	SS-TH4A4A4-60	SS-4BHT-60
	72	SS-TH4A4A4-72	SS-4BHT-72
3/8" PTFE Hose, 3/8" CBC-Lok® Tube Adapter Ends	12	SS-TH6A6A6-12	SS-6BHT-12
	18	SS-TH6A6A6-18	SS-6BHT-18
	24	SS-TH6A6A6-24	SS-6BHT-24
	36	SS-TH6A6A6-36	SS-6BHT-36
	48	SS-TH6A6A6-48	SS-6BHT-48
	60	SS-TH6A6A6-60	SS-6BHT-60
1/2" PTFE Hose, 1/2" CBC-Lok® Tube Adapter Ends	72	SS-TH6A6A6-72	SS-6BHT-72
	12	SS-TH8A8A8-12	SS-8BHT-12
	18	SS-TH8A8A8-18	SS-8BHT-18
	24	SS-TH8A8A8-24	SS-8BHT-24
	36	SS-TH8A8A8-36	SS-8BHT-36
	48	SS-TH8A8A8-48	SS-8BHT-48
	60	SS-TH8A8A8-60	SS-8BHT-60
3/4" PTFE Hose, 3/4" CBC-Lok® Tube Adapter Ends	72	SS-TH8A8A8-72	SS-8BHT-72
	120	SS-TH8A8A8-120	SS-8BHT-120
	24	SS-TH12A12A12-24	SS-12BHT-24
3/4" PTFE Hose, 3/4" CBC-Lok® Tube Adapter Ends	36	SS-TH12A12A12-36	SS-12BHT-36
	48	SS-TH12A12A12-48	SS-12BHT-48

Example:

What is the pressure rating of size 6 hose at 200°F (93°C)?

Technical Data gives a working pressure of 3000 psig (206 bar). Pressure Temperature De-Rating gives a de-rating factor of .90. $3000 \text{ psig} \times 0.90 = 2700 \text{ psig}$ and $206 \text{ bar} \times 0.90 = 186 \text{ bar}$. The working pressure at 200°F (93°C) is 2700 psig (186 bar).

Hose & Hose Connectors



CBC-Lok® Tube Adapter ¹ (316 SS)							
Adapter Tube Size	Hose Size	A		Minimum Inside Diameter		Maximum Outside Dimension	
		in	(mm)	in	(mm)	in	(mm)
1/4	4	1.58	(40.1)	0.15	(3.8)	0.55	(14.0)
3/8	6	1.74	(44.2)	0.27	(6.9)	0.68	(17.3)
1/2	8	2.09	(53.1)	0.35	(8.9)	0.80	(20.3)
3/4	12	2.35	(59.7)	0.59	(15.0)	1.05	(26.7)
1	16	2.77	(70.4)	0.81	(20.6)	1.37	(34.8)



CBC-Lok® Tube Fitting ¹ (316 SS)							
Fitting Size	Hose Size	A		Minimum Inside Diameter		Maximum Outside Dimension	
		in	(mm)	in	(mm)	in	(mm)
1/4	4	1.65	(41.9)	0.15	(3.8)	0.65	(16.5)
3/8	6	1.81	(46.0)	0.27	(6.9)	0.80	(20.3)
1/2	8	2.07	(52.6)	0.35	(8.9)	1.02	(25.9)
3/4	12	2.29	(58.2)	0.59	(15.0)	1.30	(33.0)

¹CBC-Lok® double ferrule tube ends are completely interchangeable with Swagelok® and Parker A-Lok® tube ends.



Male Pipe Fitting (303 SS)							
NPT Size	Hose Size	A		Minimum Inside Diameter		Maximum Outside Dimension	
		in	(mm)	in	(mm)	in	(mm)
1/4	4	1.52	(38.6)	0.15	(3.8)	0.65	(16.5)
3/8	6	1.68	(42.7)	0.27	(6.9)	0.79	(20.0)
1/2	8	1.98	(50.3)	0.35	(8.9)	1.01	(25.7)
3/4	12	2.26	(57.4)	0.59	(15.0)	1.23	(31.2)
1	16	2.61	(66.3)	0.81	(20.6)	1.59	(40.4)



CS-Lok® Tube Fitting ² (316 SS)							
Fitting Size	Hose Size	A		Minimum Inside Diameter		Maximum Outside Dimension	
		in	(mm)	in	(mm)	in	(mm)
1/4	4	1.65	(41.9)	0.15	(3.8)	0.65	(16.5)
3/8	6	1.81	(46.0)	0.27	(6.9)	0.80	(20.3)
1/2	8	2.07	(52.6)	0.35	(8.9)	1.02	(25.9)
3/4	12	2.29	(58.2)	0.59	(15.0)	1.30	(33.0)

²CS-Lok® single ferrule tube ends are completely interchangeable with Parker CPI® tube ends.

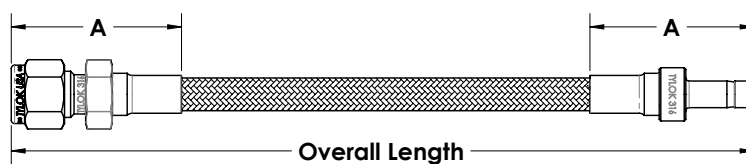


Male JIC, 37° Flare (316 SS)							
JIC Flare Size	Hose Size	A		Minimum Inside Diameter		Maximum Outside Dimension	
		in	(mm)	in	(mm)	in	(mm)
1/4	4	1.56	(39.6)	0.15	(3.8)	0.58	(14.7)
3/8	6	1.52	(38.6)	0.27	(6.9)	0.72	(18.3)
1/2	8	1.89	(48.0)	0.35	(8.9)	0.93	(23.6)



Female Swivel JIC, 37° Flare (303 SS)							
JIC Flare Size	Hose Size	A		Minimum Inside Diameter		Maximum Outside Dimension	
		in	(mm)	in	(mm)	in	(mm)
1/4	4	1.52	(38.6)	0.15	(3.8)	1.65	(16.5)
3/8	6	1.71	(43.4)	0.27	(6.9)	0.79	(20.0)
1/2	8	1.88	(47.8)	0.35	(8.9)	1.01	(25.7)

Hose & Connectors



Example:

A 1/4" PTFE-Lined Stainless Steel Braided Hose with 1/4" CBC-Lok Tube Adapter ends, 12" overall length and optional hydrostatic test is designated as follows:

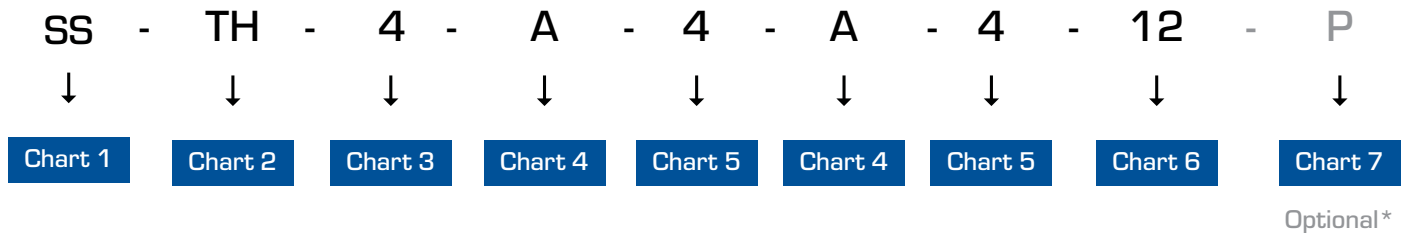


Chart 1- Material	
SS	Stainless Steel

Chart 5- End Connection Size	
2	1/8 in
4	1/4 in
6	3/8 in
8	1/2 in
12	3/4 in
16	1 in

Chart 2- Hose Type	
TH	PTFE Hose
TC	Carbon Black Filled PTFE Hose

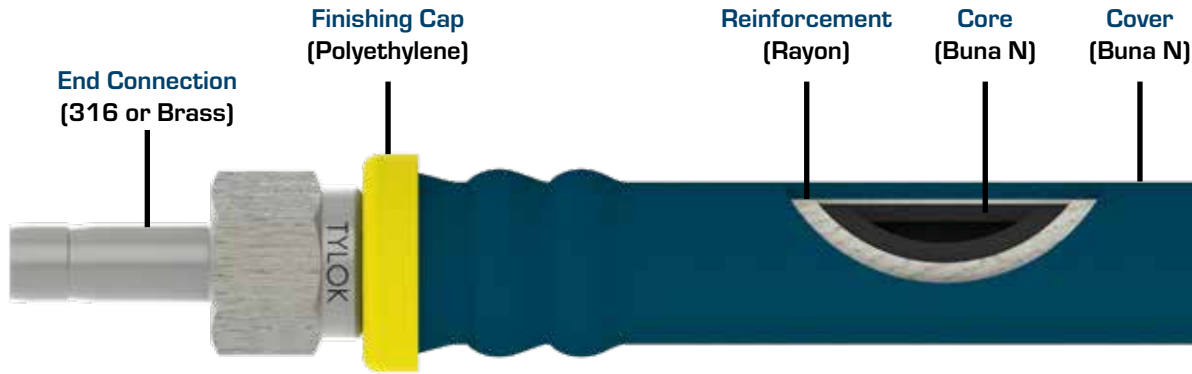
Chart 6- Total Assembly Length	
6	Inches, and ordered in whole number increments

Chart 3- Hose Size	
4	1/4 in
6	3/8 in
8	1/2 in
12	3/4 in
16	1 in

Chart 7- Options	
-TAG	Tag (customer specified text)
H	Helium Leak Test (1x10 ⁻⁹ std cm ³ /s)
N	Nitrogen Pressure Test
P	Hydrostatic Test

Chart 4- End Connection Type	
A	Tube Adapter
D	CBC-Lok [®] Tube Fitting
S	CS-Lok [®] Tube Fitting
M	Male Pipe Threads
AN	Male JIC, 37° Flare
AS	Female Swivel JIC, 37° Flare

Multi-Purpose Push-On Hose



Hose Connectors

- Sizes from 1/4 to 3/4 in.

Design Features

- Flame-resistant cover meets Part 18 of 30CFR
- Single-braided reinforcement maximizes strength and hose connector retention.
- Stainless Steel and Brass HB Series hose connectors are available 1/4 to 3/4 inch sizes [sold separately].
- Assembly does not require clamps or specialized tools.
- Hose connectors are reusable.

Available End Connections

Tube Adapter; CBC-Lok Tube Fitting; CS-Lok Tube Fitting; Male Pipe Fitting; Female Pipe Fitting; Union.

Pressure Temperature De-Rating

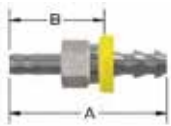
The working pressure of multipurpose push-on hose does not de-rate when used in its normal operating range: -40 to 200 °F (-40 to 93 °C). It is not recommended that this hose be used outside of this range.

Hose & Connectors

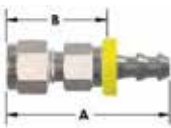
Part Number	Nominal Hose Size in (mm)	Minimum Bend Radius Static in (mm)	Temperature Range °F (°C)	Working Pressure at 70°F (21°C)		Hose Weight	
				psig	(bar)	lb/ft	(kg/m)
PH-4	0.50 (12.7)	3.0 (76.2)	-40 to 200 (-40 to 93)	400	(27.6)	0.08	(0.12)
PH-6	0.67 (17.0)	3.0 (76.2)		400	(27.6)	0.13	(0.19)
PH-8	0.76 (19.3)	5.0 (127)		400	(27.6)	0.14	(0.21)
PH-12	1.06 (26.9)	7.0 (178)		400	(27.6)	0.24	(0.36)

Hose & Hose Connectors

Fitting Size in.	Hose Size in.	Part Number	Interchanges With	A in (mm)	B in (mm)	Minimum Inside Diameter in (mm)	Maximum Outside Dimension in (mm)
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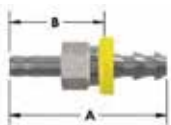


CBC-Lok® Tube Adapter ¹											
1/4	1/4	-4-DATHB-4	PB4 -TA4	1.91	[48.5]	1.51	[29.2]	0.15	[3.8]	0.68	[17.3]
3/8	3/8	-6-DATHB-6	PB6 -TA6	2.00	[50.8]	0.13	[28.7]	0.24	[6.1]	0.87	[22.1]
1/2	1/2	-8-DATHB-8	PB8 -TA8	2.42	[61.5]	1.37	[34.8]	0.34	[8.7]	0.98	[24.9]
3/4	3/4	-12-DATHB-12	PB12 -TA12	3.10	[78.7]	1.43	[36.2]	0.57	[14.5]	1.27	[32.3]

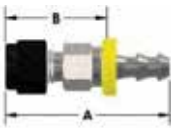


CBC-Lok® Tube Fitting ¹											
1/4	1/4	-4-DTHB-4	PB4 -SL4	1.97	[50.0]	1.21	[30.7]	0.15	[3.8]	0.68	[17.3]
3/8	3/8	-6-DTHB-6	PB6 -SL6	2.11	[53.6]	1.24	[31.5]	0.27	[6.9]	0.87	[22.1]
1/2	1/2	-8-DTHB-8	PB8 -SL8	2.47	[62.7]	1.42	[36.1]	0.37	[9.5]	0.98	[24.9]

¹CBC-Lok® double ferrule tube ends are completely interchangeable with Swagelok® and Parker A-Lok® tube ends.



CS-Lok® Tube Adapter ²											
1/4	1/4	-4-SATHB-4	-	1.91	[48.5]	1.51	[29.2]	0.15	[3.8]	0.68	[17.3]
3/8	3/8	-6-SATHB-6	-	2.00	[50.8]	0.13	[28.7]	0.24	[6.1]	0.87	[22.1]
1/2	1/2	-8-SATHB-8	-	2.42	[61.5]	1.37	[34.8]	0.34	[8.7]	0.98	[24.9]
3/4	3/4	-12-SATHB-12	-	3.10	[78.7]	1.43	[36.2]	0.57	[14.5]	1.27	[32.3]

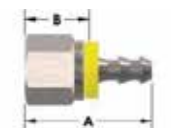


CS-Lok® Tube Fitting ²											
1/4	1/4	-4-STHB-4	-	1.97	[50.0]	1.21	[30.7]	0.15	[3.8]	0.68	[17.3]
3/8	3/8	-6-STHB-6	-	2.11	[53.6]	1.24	[31.5]	0.27	[6.9]	0.87	[22.1]
1/2	1/2	-8-STHB-8	-	2.47	[62.7]	1.42	[36.1]	0.37	[9.5]	0.98	[24.9]

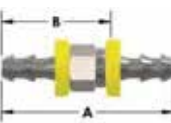
²CS-Lok® single ferrule tube ends are completely interchangeable with Parker CPI® tube ends.



Male Pipe Threads											
1/4	1/4	-4-1MPHB-4	PB4 -PM4	1.67	[42.7]	0.92	[23.4]	0.15	[3.8]	0.68	[17.3]
3/8	3/8	-6-1MPHB-6	PB6 -PM6	1.80	[45.7]	0.93	[23.9]	0.27	[6.9]	0.87	[22.1]
1/2	1/2	-8-1MPHB-8	PB8 -PM8	2.19	[55.6]	1.14	[29.0]	0.37	[9.5]	0.98	[24.9]
3/4	3/4	-12-1MPHB-12	PB12 -PM12	2.81	[71.4]	1.15	[29.2]	0.61	[15.6]	1.27	[32.3]



Female Pipe Threads											
1/4	1/4	-4-1FPHB-4	-	1.53	[38.9]	0.77	[19.6]	0.15	[3.8]	0.87	[22.0]
3/8	3/8	-6-1FPHB-6	-	1.77	[45.0]	0.90	[22.7]	0.27	[6.9]	1.01	[25.7]
1/2	1/2	-8-1FPHB-8	-	2.06	[52.3]	1.02	[25.9]	0.37	[9.5]	1.23	[31.2]



Union											
1/4	1/4	-4-1HBU	PB4 -6	2.07	[52.6]	1.31	[33.3]	0.15	[3.8]	0.68	[17.3]
3/8	3/8	-6-1HBU	PB6 -6	2.25	[57.2]	1.83	[35.1]	0.27	[6.9]	0.87	[22.1]
1/2	1/2	-8-1HBU	PB8 -6	2.61	[66.3]	1.56	[39.6]	0.37	[9.5]	0.98	[24.9]
3/4	3/4	-12-1HBU	PB12 -6	3.83	[97.3]	2.18	[55.4]	0.61	[15.6]	1.27	[32.3]

HC Series End Connections

Design Features

- Allow for easy installation of soft rubber or plastic tubing.
- Stainless Steel and Brass end connection are available in 1/4 to 3/4 inch series.
- End Connection are reusable.
- Use of hose clamp with HC Series fittings is recommended for secure connection.
- For field assembly, subtract dimension B from the desired overall assembly length for each end.



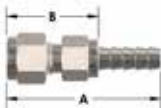
Fitting Size in.	Hose Size in.	Part Number	Interchanges With	A in (mm)	B in (mm)	Minimum Inside Diameter in (mm)	Maximum Outside Dimension in (mm)
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CBC-Lok® Tube Adapter¹



1/4	1/4	-4-DATHC-4	-4-HC-A-401	1.85 (47.0)	1.06 (26.9)	0.15 (3.8)	0.51 (12.9)
3/8	3/8	-6-DATHC-6	-6-HC-A-601	1.99 (50.5)	1.10 (28.0)	0.28 (7.0)	0.65 (16.6)
1/2	1/2	-8-DATHC-8	-8-HC-A-811	2.32 (58.9)	1.38 (35.1)	0.38 (9.7)	0.80 (20.3)
3/4	3/4	-12-DATHC-12	-12-HC-A-1211	2.49 (63.3)	1.44 (36.6)	0.58 (14.7)	1.23 (31.3)

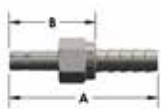
CBC-Lok® Tube Fitting¹



1/4	1/4	-4-DTHC-4	-4-HC-1-400	1.92 (48.8)	1.13 (28.7)	0.18 (4.6)	0.65 (16.6)
3/8	3/8	-6-DTHC-6	-6-HC-1-600	2.06 (52.3)	1.19 (30.2)	0.28 (7.1)	0.87 (22.1)
1/2	1/2	-8-DTHC-8	-8-HC-1-810	2.24 (56.9)	1.30 (33.0)	0.38 (9.7)	1.01 (25.7)

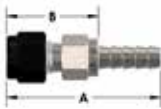
¹CBC-Lok® double ferrule tube ends are completely interchangeable with Swagelok® and Parker A-Lok® tube ends.

CS-Lok® Tube Adapter²



1/4	1/4	-4-SATHC-4	-	1.85 (47.0)	1.06 (26.9)	0.15 (3.8)	0.51 (12.9)
3/8	3/8	-6-SATHC-6	-	1.99 (50.5)	1.10 (28.0)	0.28 (7.0)	0.55 (16.6)
1/2	1/2	-8-SATHC-8	-	2.32 (58.9)	1.38 (35.1)	0.38 (9.7)	0.80 (20.3)
3/4	3/4	-12-SATHC-12	-	2.49 (63.3)	1.44 (36.6)	0.58 (14.7)	1.23 (31.3)

CS-Lok® Tube Fitting²



1/4	1/4	-4-STHC-4	-	1.92 (48.8)	1.13 (28.7)	0.18 (4.6)	0.65 (16.6)
3/8	3/8	-6-STHC-6	-	2.06 (52.3)	1.19 (30.2)	0.28 (7.1)	0.87 (22.1)
1/2	1/2	-8-STHC-8	-	2.24 (56.9)	1.30 (33.0)	0.38 (9.7)	1.01 (25.7)

²CS-Lok® single ferrule tube ends are completely interchangeable with Parker CPI® tube ends.

Male Pipe Threads



1/4	1/4	-4-1MPHC-4	-4-HC-1-4	1.61 (40.9)	0.82 (20.8)	0.18 (4.6)	0.65 (16.6)
3/8	3/8	-6-1MPHC-6	-6-HC-1-6	1.78 (45.2)	0.89 (22.6)	0.28 (7.1)	0.79 (20.2)
1/2	1/2	-8-1MPHC-8	-8-HC-1-8	1.95 (49.5)	1.06 (26.9)	0.40 (10.1)	1.01 (25.7)
3/4	3/4	-12-1MPHC-12	-12-HC-1-12	1.97 (50.0)	1.08 (27.4)	0.62 (15.7)	1.23 (31.3)

Female Pipe Threads



1/4	1/4	-4-1FPHC-4	-4-HC-7-4	1.69 (42.9)	0.90 (22.9)	0.18 (4.6)	0.87 (22.1)
3/8	3/8	-6-1FPHC-6	-6-HC-7-6	1.81 (46.0)	0.92 (23.4)	0.28 (7.1)	1.01 (25.7)
1/2	1/2	-8-1FPHC-8	-8-HC-7-8	2.08 (52.8)	1.19 (30.2)	0.40 (10.1)	1.23 (31.2)

Consider the following categories below when selecting a hose:

S

Size

T

Temperature

A

Application

M

Media

P

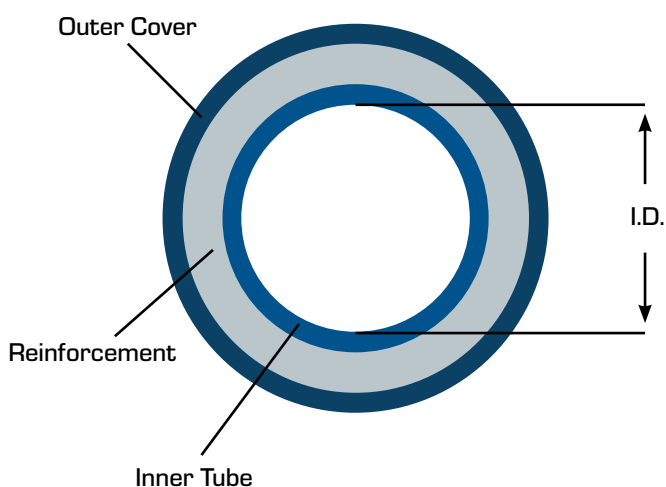
Pressure

E

Ends

D

Delivery



Size

Dash Numbers is a system to indicate hose and fitting size. The dash number, is the measure of a hose's Inner Diameter (I.D.) in sixteenths of an inch.

The hose I.D. should be sized accurately to obtain the proper flow velocity. A flow that's too slow results in sluggish system performance, while a flow that's too high causes excessive pressure drops, system damage, and leaks.

Temperature

There are two temperatures you need to identify. One is the ambient temperature, which is the temperature that is outside the hose where it is being used; the other is the media temperature which is the temperature of the media conveyed through the hose.

Very high or low ambient temperatures can have affects on the hose cover and reinforcement materials, resulting in reduced service life.

Application

Before selecting a hose, it is important to consider how the hose assembly will be used. Some applications require a specific type of hose. Industry standards set specific requirements concerning construction type, size, tolerances, burst pressure, and impulse cycles of hoses.

Hose Selection

Typical Applications Include:

- Hydraulic Presses & Machinery
- Process Tool Cooling Lines
- Testing Equipment
- High Vibration Dissipation
- Portable Measurement Equipment

Media

Also consider what the hose will hold, some applications require the use of specialized oils or chemicals. The hose must be compatible with the medium used. Compatibility must cover the inner tube, the cover, hose fittings, and o-rings.

Pressure

With hose pressure, it's important to know both the system working pressure and any surge pressures and spikes. Surge pressures or peak transient pressures in the system must be below the published maximum working pressure for the hose. A hose assembly is rated at the maximum working pressure of the hose and the fitting component.

End Connections

Consider the style, type, etc. as well when selecting a hose. Clarify any space constraints. Hose assemblies with elbow or union ball joints may help solve these issues.

Delivery

Special delivery requirements or specific quality, testing, and packaging needs should be decided during selection process.



Pressure Gauge

Features and Benefits

- Gauge Orientation made easy with tube stub connection.
- NPT threads and PTFE tape eliminated from system.
- Reduces potential for improper installations as most installers screw the gauge on by hand.
- All welded design through to the bourdon tube eliminates potential leakage due to mechanical connections.
- All gauges are 100% tested
- Specials available upon request
- 2 ½" stainless pressure gauges
- Many pressure range available
- Standard glycerin liquid filled case dry/liquid fillable cases are also available.

Liquid filled used for:

- Dampening vibration
- Dampening pressure pulsations
- Permanent lubrication

Technical Specifications

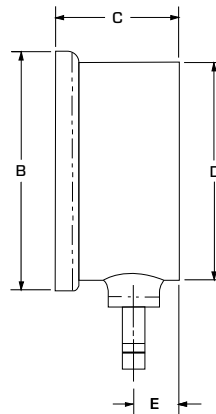
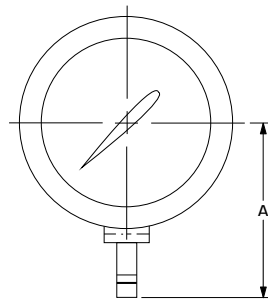
- Accuracy: $\pm 1.6\%$ Full Scale
- Maximum Temperature Rating:
 - Liquid filled gauges 150°F (65°C)
 - Dry gauges 250°F (121°C)



Leak Free Connection-

Machined groove in to tube adapter ensures a positive seat for the front ferrule.

Materials of Construction	
Case	304 Stainless Steel
Ring	304 Stainless Steel
Window	Acrylic
Dial Face	Aluminum
Pointer	Aluminum
Fill Fluid	Glycerin
Movement	316 Stainless Steel
Bourdon Tube	316 Stainless Steel
End Connection	316 Stainless Steel



Gage Series	Connection Size	A	B	C	D	E
PG25-A4	1/4"	2.22	2.68	1.38	2.44	0.51
PG25-A6	3/8"	2.35	2.68	1.38	2.44	0.51

Part Number PG25-A4-(1/4") Series	Part Number PG25-A6-(3/8") Series	Range
SS-PG25-A4-30VAC	SS-PG25-A6-30VAC	30" HG to 0
SS-PG25-A4-15	SS-PG25-A6-15	0 to 15 psi
SS-PG25-A4-30	SS-PG25-A6-30	0 to 30 psi
SS-PG25-A4-60	SS-PG25-A6-60	0 to 60 psi
SS-PG25-A4-100	SS-PG25-A6-100	0 to 100 psi
SS-PG25-A4-160	SS-PG25-A6-160	0 to 160 psi
SS-PG25-A4-200	SS-PG25-A6-200	0 to 200 psi
SS-PG25-A4-300	SS-PG25-A6-300	0 to 300 psi
SS-PG25-A4-600	SS-PG25-A6-600	0 to 600 psi
SS-PG25-A4-1000	SS-PG25-A6-1000	0 to 1000 psi
SS-PG25-A4-3000	SS-PG25-A6-3000	0 to 3000 psi

NOTE: It is important that the maximum continuous operating pressure of the application not exceed 75% of the selected measurement range. A range should be selected that is approximately twice the normal working pressure.



For the best in Stainless Steel instrumentation tubing, turn to Tylok. We offer the quality, reliability, and value that you trust for over 50 years.

Tylok offers all types of Stainless Steel instrumentation tubing, ensuring accurate, straight, and distortion free cut length to the tolerances you require.

Tylok's Stainless Steel tubing is the perfect compliment to our CBC-Lok® & CS-Lok® Tube Fitting offering.

Fitting Lines

CBC-Lok® double ferrule tube fittings are completely interchangeable with tube fittings of Swagelok® and Parker A-Lok®

CS-Lok® single ferrule tube fittings are completely interchangeable with tube fittings of Parker CPI®.

Customer Care

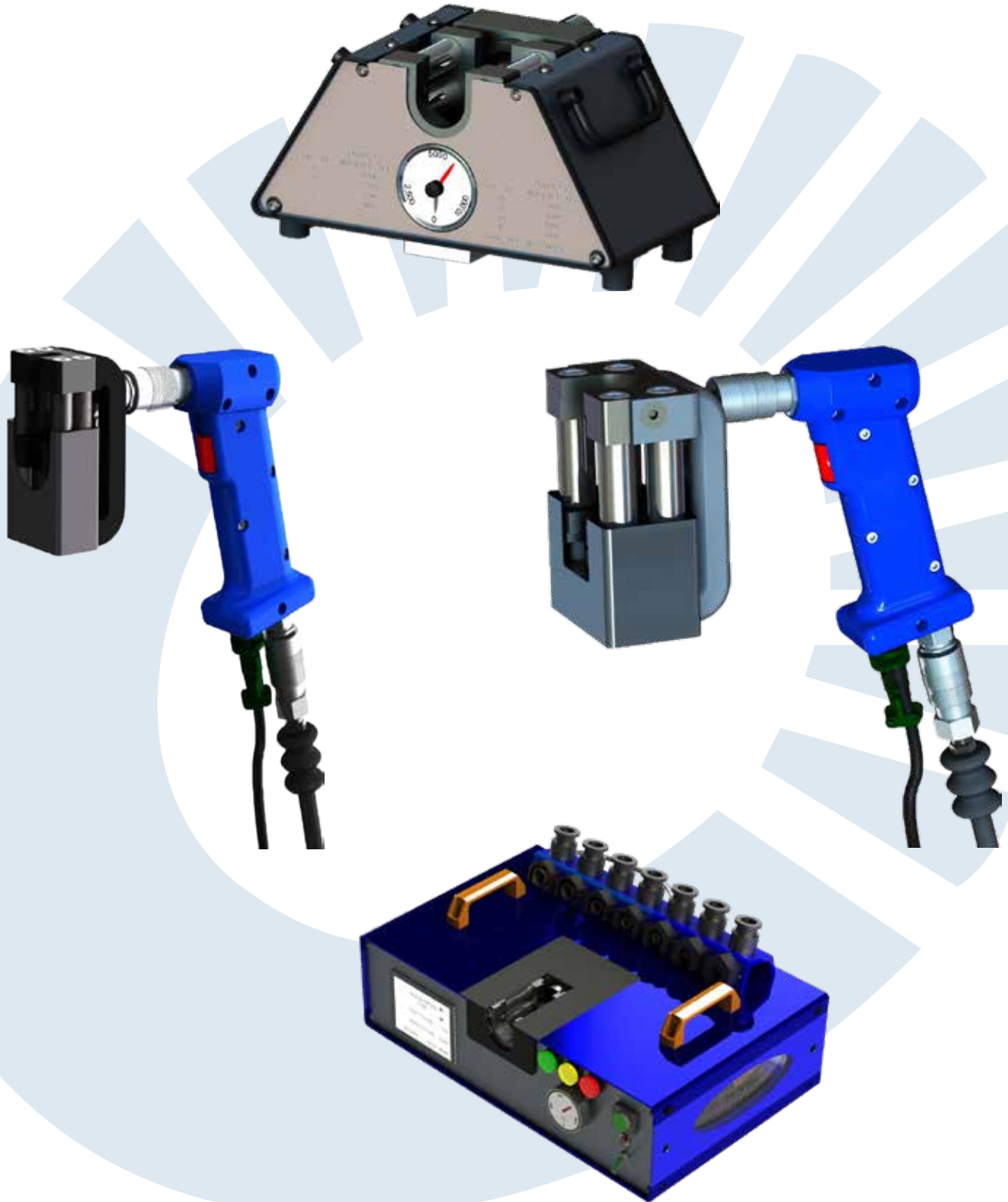
At Tylok, we strive for total satisfaction of our customers. Your inquiries will be responded to within 24 hours. Our team features a knowledgeable staff to answer your questions quickly. We have the ability to make special items for you at a reasonable price, with a fast delivery. Fast delivery is key to our success. Realizing this, delivery is constantly being measured via our ISO 9001 Quality Management System.



Part Number	Outside Diameter (inches)	Wall Thickness (inches)	Type	Nominal Length (feet)	Material Standard
4-T-035-S-304/LA269	1/4	0.35	Seamless	20	A269*
4-T-035-W-304/LA269			Welded		
4-T-035-S-316/LA269			Seamless		
4-T-035-W-316/LA269			Welded		
4-T-049-S-304/LA269		0.49	Seamless		
4-T-049-W-304/LA269			Welded		
4-T-049-S-316/LA269			Seamless		
4-T-049-W-316/LA269		Welded			
4-T-065-S-304/LA269		0.65	Seamless		
4-T-065-W-304/LA269			Welded		
4-T-065-S-316/LA269			Seamless		
4-T-065-W-316/LA269			Welded		
6-T-035-S-304/LA269	3/8	0.35	Seamless	20	A269*
6-T-035-W-304/LA269			Welded		
6-T-035-S-316/LA269			Seamless		
6-T-035-W-316/LA269			Welded		
6-T-049-S-304/LA269		0.49	Seamless		
6-T-049-W-304/LA269			Welded		
6-T-049-S-316/LA269			Seamless		
6-T-049-W-316/LA269		Welded			
6-T-065-S-304/LA269		0.65	Seamless		
6-T-065-W-304/LA269			Welded		
6-T-065-S-316/LA269			Seamless		
6-T-065-W-316/LA269			Welded		
8-T-035-S-304/LA269	1/2	0.35	Seamless	20	A269*
8-T-035-W-304/LA269			Welded		
8-T-035-S-316/LA269			Seamless		
8-T-035-W-316/LA269			Welded		
8-T-049-S-304/LA269		0.49	Seamless		
8-T-049-W-304/LA269			Welded		
8-T-049-S-316/LA269			Seamless		
8-T-049-W-316/LA269		Welded			
8-T-065-S-304/LA269		0.65	Seamless		
8-T-065-W-304/LA269			Welded		
8-T-065-S-316/LA269			Seamless		
8-T-065-W-316/LA269			Welded		

* Cold Drawn Seamless Tube, A&P Polished, ASTM A269/A213

Other Sizes Available Upon Request



Available for Rent or Purchase

BTSU Bench Top Swaging Unit



BTSU Features:

- Designed to pre-swage the nut and ferrules of either the Tylok CBC-Lok or CS-Lok style fitting onto tubing in tube sizes ranging from 1/4" to 1" for all typical wall thicknesses.
- Reduces installation torque from 30-50%, depending on the tube size, tube wall thickness, and tube hardness.
- Reduces the number of turns required to make up the fitting.

BTSU Attributes:

- The BTSU is a small compact unit that can be used on the ground, on a workbench, or held in a vice via the vice tang located on the bottom of the unit.
- The BTSU can be hydraulically powered manually for field use, or powered with an electric pump.
- The BTSU uses Threadless Quick Change Dies resulting in fast, accurate swages every time.

The Bench Top Swaging Unit comes in a water tight case that includes:

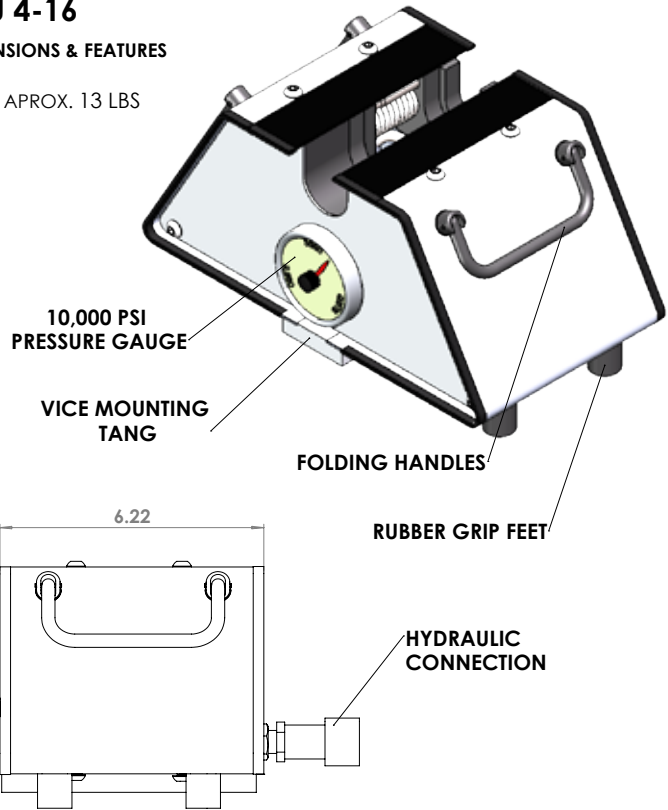
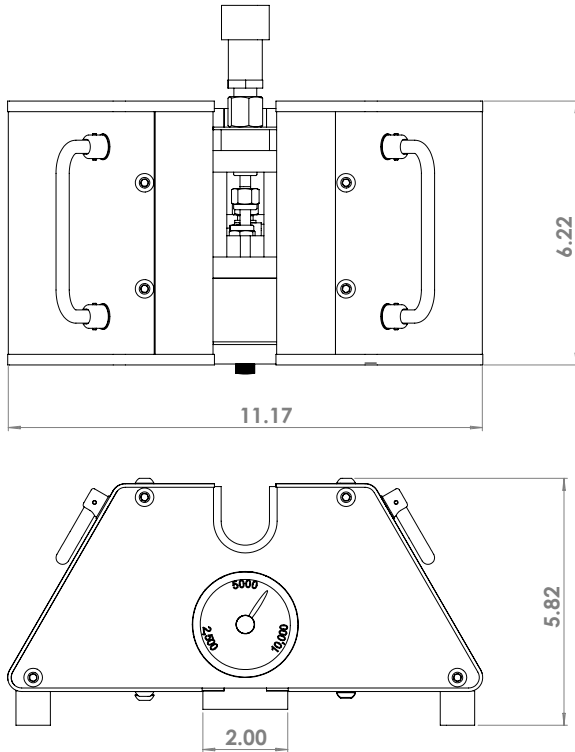
- Hand Pump
- Bench Top Swaging Unit
- Die set in sizes 1/4" thru 1"

BTSU Bench Top Swaging Unit

BTSU 4-16

BASIC DIMENSIONS & FEATURES

WEIGHT: APROX. 13 LBS



Tube Size	CBC Size	Swage Pressure Reference (psi)
1/4"	4	2600
3/8"	6	2700
7/16"	7	2900
1/2"	8	3000
5/8"	10	3800
3/4"	12	4600
7/8"	14	5200
1"	16	6000

Note: This chart is for reference to models 617.

The Swage Pressure Reference is used as a guide for preswaging, since the pressure will vary for each Tube Wall Thickness, Tube Hardness and Tube Diameter.

HHSU Hand Held Swaging Unit



HHSU Features:

- Designed to pre-swage the nut and ferrules of either the Tylok CBC-Lok or CS-Lok style fitting onto tubing in tube sizes ranging from 1/4" to 1" for all typical wall thicknesses.
- Reduces installation torque from 30-50%, depending on the tube size, tube wall thickness, and tube hardness.
- Contains a pressure regulator, enabling consistent Pre-swaging across the range of tube sizes and wall thicknesses, under 5 seconds every time

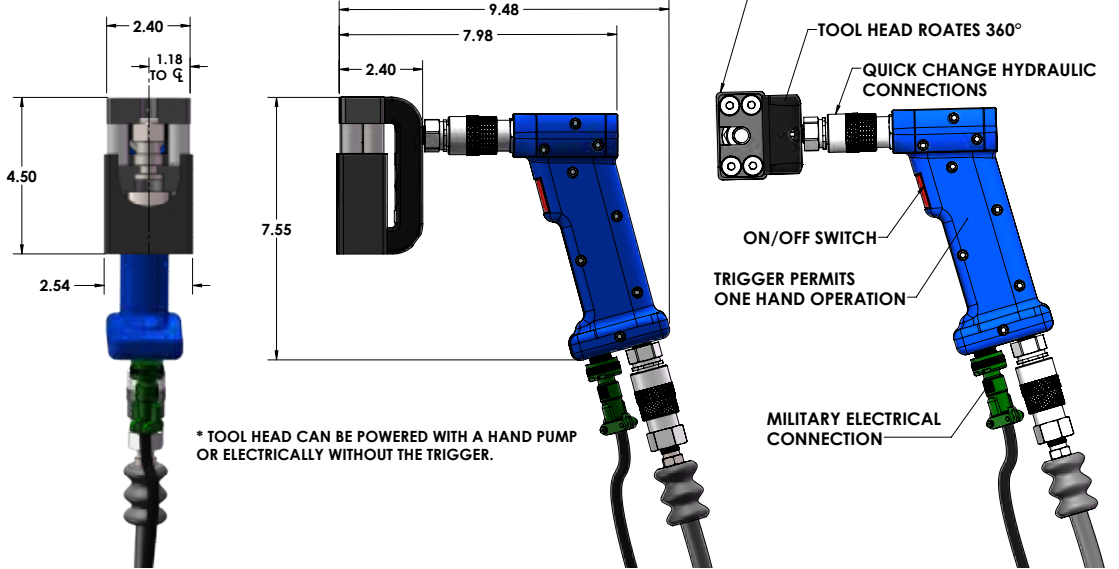
HHSU Attributes:

- The HHSU 4-16 & HHSU 4-10 are powered with an electric hydraulic pump using 110V AC.
- The HHSU 4-16 is a small compact unit that is designed to pre-swage ferrules onto tubing in tight spaces, such as inside an enclosure, underneath cabinets, or tubing runs that are closely spaced.
- The Tool Head can pivot 360° on the trigger, enabling swages in any position.
- Threadless Quick Change Dies resulting in fast accurate swages every time.

HHSU Hand Held Swaging Unit

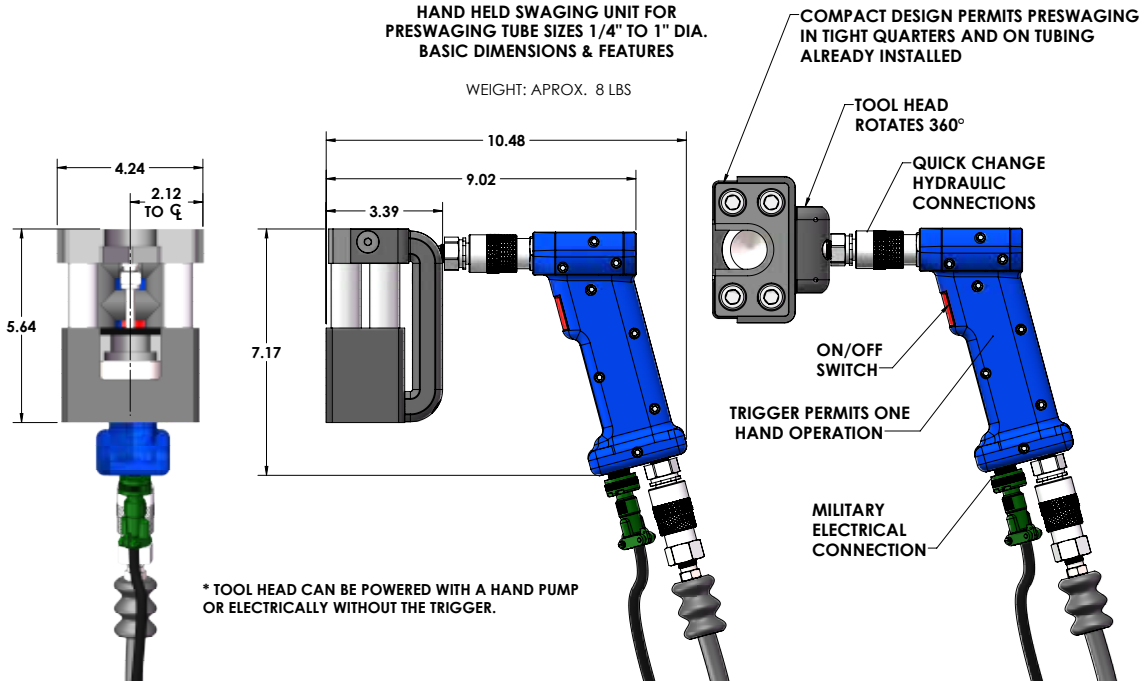
HHSU 4-10 HAND HELD SWAGING UNIT FOR PRESWAGING TUBE SIZES 1/4" TO 5/8" DIA. BASIC DIMENSIONS & FEATURES

WEIGHT: APROX. 6 LBS



HHSU 4-16 HAND HELD SWAGING UNIT FOR PRESWAGING TUBE SIZES 1/4" TO 1" DIA. BASIC DIMENSIONS & FEATURES

WEIGHT: APROX. 8 LBS



DSU Digital Swaging Unit



DSU Features:

- Designed to pre-swage the nut and ferrules of either the Tylok CBC-Lok or CS-Lok style fitting onto tubing in tube sizes ranging from 1/4" to 1" for all typical wall thicknesses.
- The DSU 4-16 is a digitally controlled hydraulic press that uses 110V AC current, and produces enough force to swage all of the tubes sizes with one touch of a button.
- The DSU 4-16 is a bench top unit that is designed to give precise control over the pre-swaging process, with positioning accuracy of +/- .002".
- A Foot Switch is also included for hands free operation, permitting swages on long or awkward bends.

DSU Attributes:

- Changing tube sizes require Swage Die and Push Plate changes, which are made in seconds without any tools required.
- Pre-swaging ferrules onto the tube reduces installation torque from 30-50%, depending on the tube size, tube wall thickness and tube hardness.
- Pre-swaging reduces the number of turns required to make up the fitting. Typically about a half turn past finger tight is required to make up the fitting after pre-swaging, making installation in tight spaces easier.
- The DSU uses Threadless Quick Change Dies resulting in fast accurate swages every time.

