

TYLOK[®]

FITTINGS & VALVES



CBC-LOK[®]



CS-LOK[®]

TUBE FITTINGS

Oct. 18, 1949.

C. B. CRAWFORD

2,484,815

TUBE COUPLING

Filed Aug. 15, 1947

Fig. 1



TYLOK[®]

FITTINGS & VALVES

Fig. 2

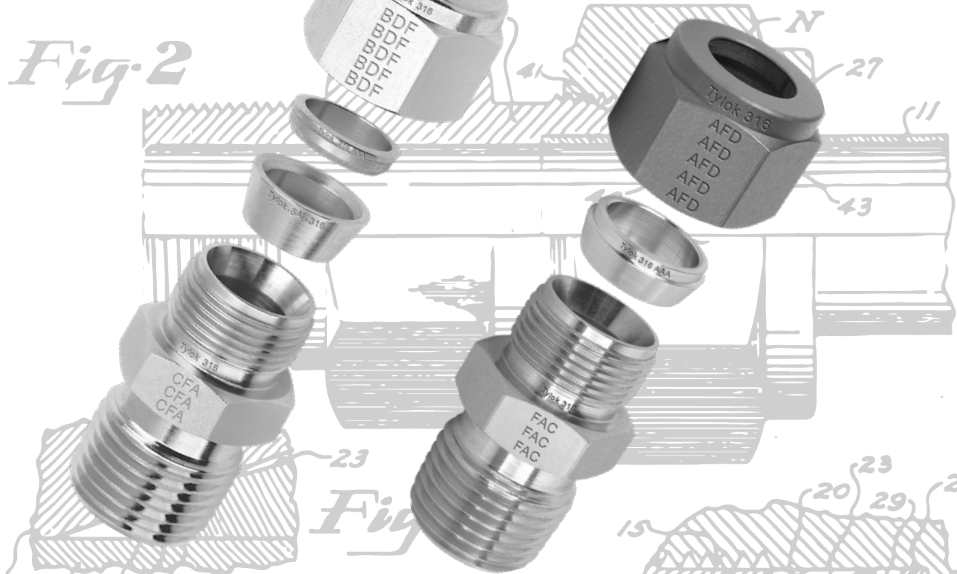


Fig. 3

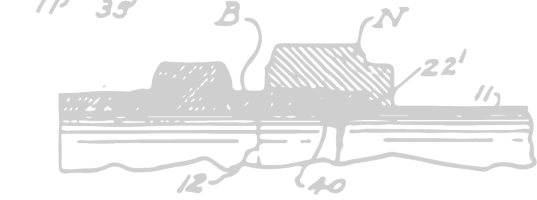
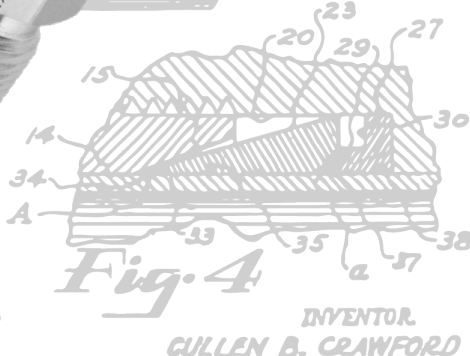


Fig. 4



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 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.

Table of Contents



**DATANF
SATANF**

Adapter Tube
to AN Flare

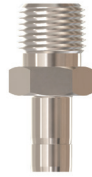
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**DATPF
SATPF**

Adapter Tube
to Female Pipe

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**DATPM
SATPM**

Adapter Tube
to Male NPT

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**DATPM-STB
SATPM-STB**

Adapter Tube to
Straight Thread Boss

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**DBHA
SBHA**

Bulkhead
Adapter

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**DBHFP
SBHFP**

Bulkhead Female
Pipe Connector

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**DBHMP
SBHMP**

Bulkhead Male
Pipe Connector

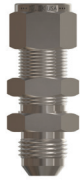
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**DBHU
SBHU**

Bulkhead
Union

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**DBUANF
SBUANF**

Bulkhead to
AN Flare Union

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**DCAP
SCAP**

Cap

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**DF PLUG
SF PLUG**

Fitting
Plug

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**DFC
SFC**

Female
Connector

20



**DMC
SMC**

Male
Connector

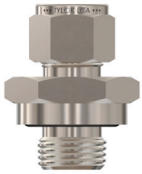
21-22



**DMC-ORS
SMC-ORS**

O-Ring Straight
Thread Male
Connector

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**DMC-ORT
SMC-ORT**

O-Ring Tapered
Thread Male
Connector

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**DMC-STB
SMC-STB**

Straight Thread
Boss Male
Connector

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**DMC-RS
SMC-RS**

BSPP Straight Thread
Male Connector

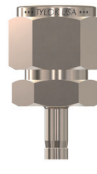
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**DPCU
SPCU**

Port Connector
Union

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**DRATT
SRATT**

Reducer Adapter
Tube to Tube

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**DRPC
SRPC**

Reducing Port
Connector

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**DRU
SRU**

Reducing
Union

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**DTBW
STBW**

Tube to Butt
Weld Connector

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**DTSW
STSW**

Tube to Socket
Weld Connector

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**DU
SU**

Union

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**DUANF
SUANF**

Tube to AN
Flare Union

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**DELU
SELU**

Union
Elbow

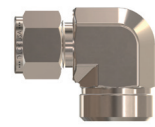
36



**DELU45
SELU45**

Union 45°
Elbow

37



**DFE
SFE**

Female
Elbow

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**DME
SME**

Male
Elbow

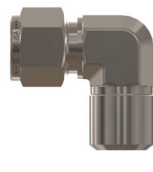
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**DME45
SME45**

Male 45°
Elbow

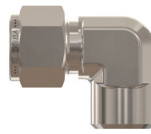
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**DTBWE
STBWE**

Tube to Butt
Weld Elbow

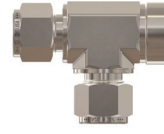
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**DTSWE
STSWE**

Tube to Socket
Weld Elbow

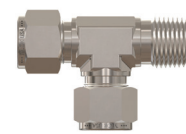
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**DTFT
STFT**

Female Run
Tee

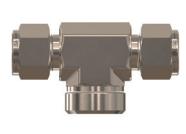
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**DTMT
STMT**

Male Run
Tee

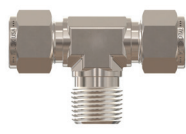
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**DTTF
STTF**

Female Branch
Tee

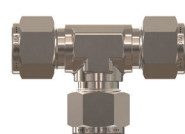
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**DTTM
STTM**

Male Branch
Tee

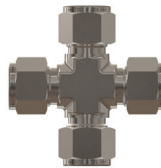
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**DTTT
STTT**

Union
Tee

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**DCR
SCR**

Union
Cross

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TI

Barbed
Insert

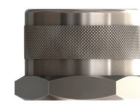
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**DN
SN**

Nut

51



**DKN
SKN**

Knurled
Nut

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DFC

Front Collet
(Ferrule)

53



DRC

Rear Collet
(Ferrule)

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SC

Single Collet
(Ferrule)

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**DCSET
SCSET**

Collet Sets

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**DNCSET
SNCSET**

Nut Collet Sets

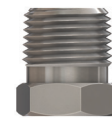
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DGG

Gap
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**TUBE
INSERTION
CHART**

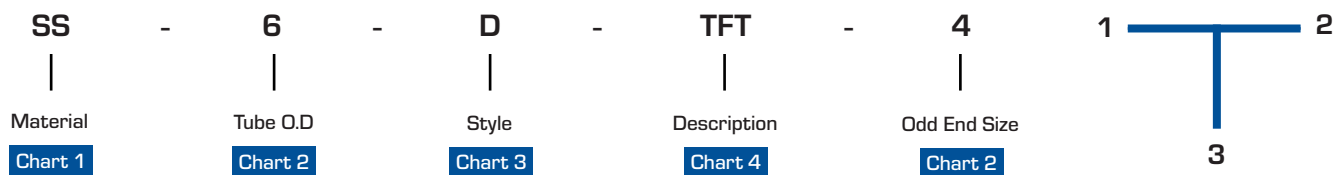
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How to Order

CBC-LOK®/CS-LOK®

CBC-Lok®/CS-Lok® Tube Fittings are ordered as listed in this catalog by inserting the material code before the part number: CBC-Lok®/CS-Lok® Tube Fittings can be identified through the part number as to material, tube size, configuration, and thread connection. The part number describes a complete fitting assembly. Special Configurations available upon request.

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



| CHART 1- MATERIAL | |
|-------------------|-----------------|
| B | Brass |
| SS | Stainless Steel |
| S | Steel |

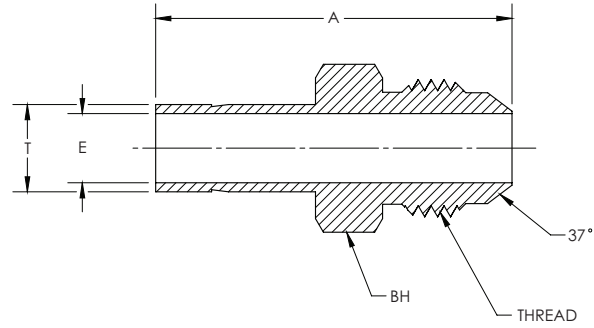
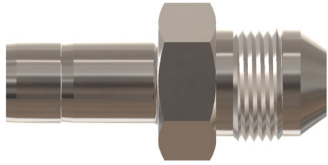
| CHART 3- STYLE | |
|----------------|----------|
| D | CBC-Lok® |
| S | CS-Lok® |

| CHART 2- SIZES | | | | | | |
|---------------------|-------------------|-------------------|------------------|-----------------------|----------------------|-----------|
| Fractional (inches) | | | | | Metric (millimeters) | |
| DESIGNATOR | TUBE OR HOSE O.D. | PIPE THREAD (NPT) | AN/STB TUBE SIZE | PIPE THREAD BSPP/BSPT | DESIGNATOR | TUBE O.D. |
| 1 | 1/16 | 1/16-27 | | 1/16-28 | 6 | 6 mm |
| 2 | 1/8 | 1/8-27 | 5/16-24 | 1/8-28 | 8 | 8 mm |
| 3 | 3/16 | | | | 10 | 10 mm |
| 4 | 1/4 | 1/4-18 | 7/16-20 | 1/4-19 | 12 | 12 mm |
| 5 | 5/16 | | | | 18 | 18 mm |
| 6 | 3/8 | 3/8-18 | 9/16-18 | 3/8-19 | | |
| 8 | 1/2 | 1/2-14 | 3/4-16 | 1/2-14 | | |
| 10 | 5/8 | | | | | |
| 12 | 3/4 | 3/4-14 | 1-1/16-12 | 3/4-14 | | |
| 14 | 7/8 | | | | | |
| 16 | 1 | 1-1 1/2 | 1-5/16-12 | 1-11 | | |

| CHART 4- DESCRIPTION | |
|----------------------|--------------------------------|
| ATANF | Adapter Tube to AN Flare |
| ATPF | Adapter Tube to Female Pipe |
| ATPM | Adapter Tube to Male Pipe |
| BHA | Bulkhead Adapter |
| BHFP | Bulkhead Female Pipe Connector |
| BHMP | Bulkhead Male Pipe Connector |
| BHU | Bulkhead Union |
| BUANF | Bulkhead to AN Flare Union |
| CAP | Cap |
| F PLUG | Fitting Plug |
| FC | Female Connector |
| MC | Male Connector |
| PCU | Port Connector Union |
| RATT | Reducer Adapter Tube to Tube |
| RPC | Reducing Port Connector |
| DRU | Reducing Union |
| TBW | Tube to Butt Weld Connector |

| CHART 4- DESCRIPTION | |
|----------------------|-------------------------------|
| TSW | Tube to Socket Weld Connector |
| U | Union |
| UANF | Tube to AN Flare Union |
| ELU | Union Elbow |
| ELU45 | Union 45° Elbow |
| FE | Female Elbow |
| ME | Male Elbow |
| ME45 | Male 45° Elbow |
| TBWE | Tube to Butt Weld Elbow |
| TSWE | Tube to Socket Weld Elbow |
| TFT | Female Run Tee |
| TMT | Male Run Tee |
| TTF | Female Branch Tee |
| TTM | Male Branch Tee |
| TTT | Union Tee |
| CR | Union Cross |
| N | Nut |
| KN | Knurled Nut |

| CHART 5- MODIFIERS | |
|--------------------|--|
| BBT | Branch Bored Through |
| BT | Bored Through |
| BSPT | BSPT Male Connector |
| CL | Cleaned & Lubricated to ASTM G93 Level C |
| SPCL | Cleaned & Lubricated to CGA G-4.1-2009 |
| ORF-### | Orifice Fittings (### designates orifice size) |
| ORS | O-Ring Straight Thread Male Connector |
| ORT | O-Ring Tapered Thread Male Connector |
| RS | BSPP Male Connector |
| STB | Straight Thread Boss Male Connector |



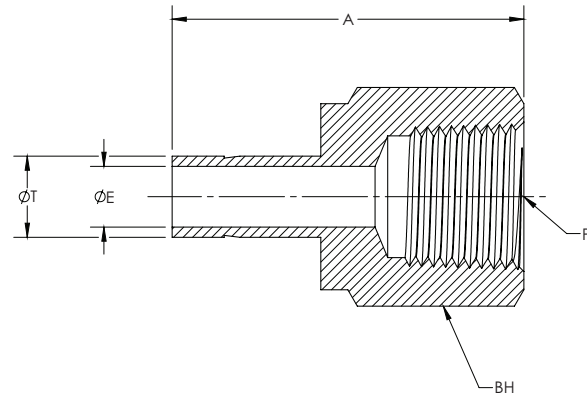
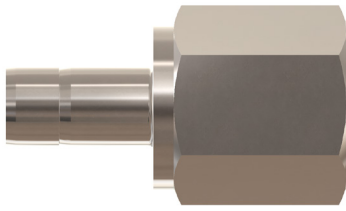
| CBC PART NUMBER | INTERCHANGES WITH | CS PART NUMBER | INTERCHANGES WITH | T TUBE O.D. | THREAD | A | E THRU HOLE | BH BODY HEX |
|-----------------|-------------------|----------------|-------------------|-------------|---------------|------|-------------|-------------|
| 4-DATANF-4 | 4-TA-1-4AN | - | - | 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

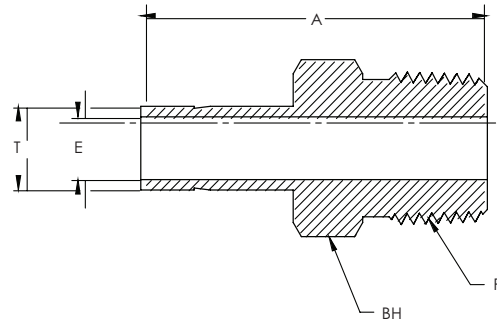
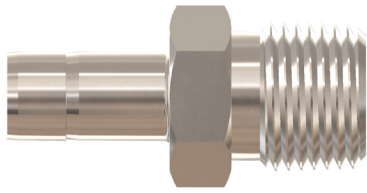


| CBC PART NUMBER | INTERCHANGES WITH | | CS PART NUMBER | INTERCHANGES WITH | | T TUBE O.D. | P PIPE END NPT | A | E THRU HOLE | BH BODY HEX |
|-----------------|-------------------|---------|----------------|-------------------|--|-------------|----------------|------|-------------|-------------|
| 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



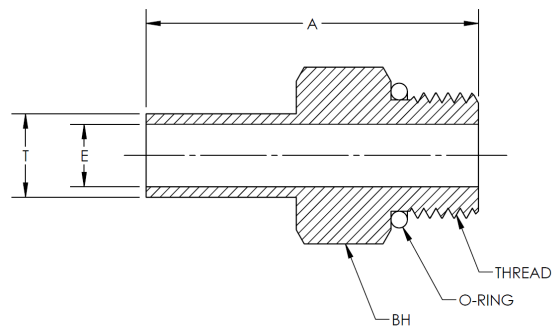
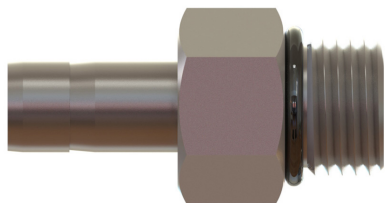
| CBC PART NUMBER | INTERCHANGES WITH | | CS PART NUMBER | INTERCHANGES WITH | | T TUBE O.D. | P PIPE END NPT | A | E THRU HOLE | BH BODY HEX |
|-----------------|-------------------|---------|----------------|-------------------|--|-------------|----------------|------|-------------|-------------|
| 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 | 11/16 |
| 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 | 11/16 |
| 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 | 11/16 |
| 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



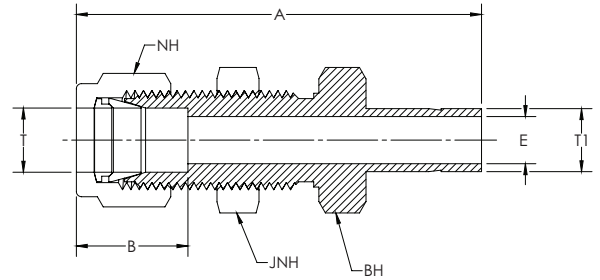
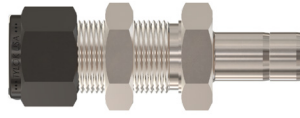
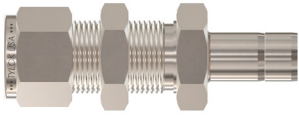
| CBC PART NUMBER | INTERCHANGES WITH | | CS PART NUMBER | INTERCHANGES WITH | | T TUBE O.D. | THREAD | A | E THRU HOLE | O-RING | BH BODY HEX |
|-----------------|-------------------|-----------|-----------------|-------------------|--|-------------|-----------|------|-------------|--------|-------------|
| 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



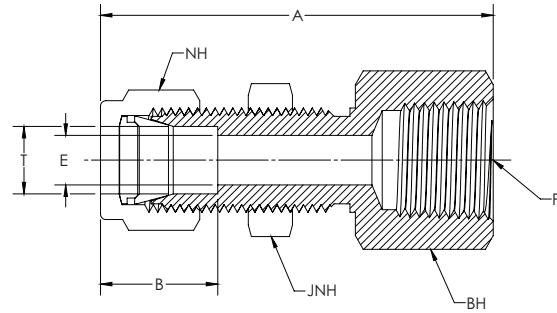
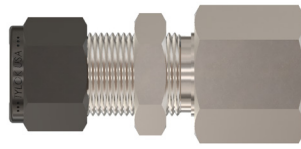
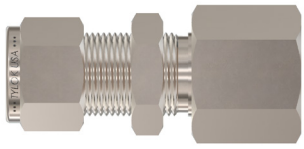
| CBC PART NUMBER | INTERCHANGES WITH | | CS PART NUMBER | INTERCHANGES WITH | | T TUBE O.D. | T1 TUBE O.D. | A | B | E THRU HOLE | JNH JAM NUT HEX | NH NUT HEX | BH BODY HEX | PANEL HOLE |
|-----------------|-------------------|--------|----------------|-------------------|-----|-------------|--------------|------|------|-------------|-----------------|------------|-------------|------------|
| 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



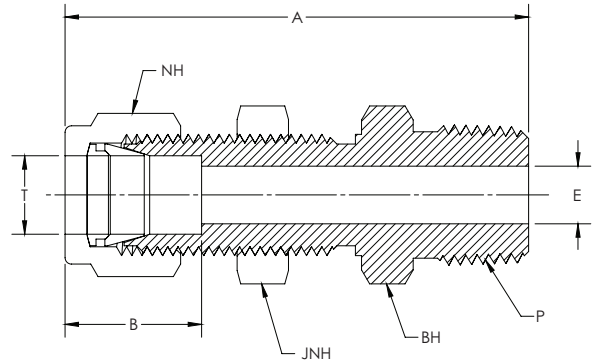
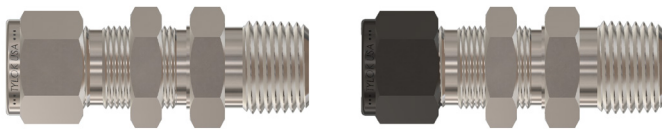
| CBC PART NUMBER | INTERCHANGES WITH | | CS PART NUMBER | INTERCHANGES WITH | | T TUBE O.D. | P PIPE END NPT | A | B | E THRU HOLE | JNH JAM NUT HEX | NH NUT HEX | BH BODY HEX | PANEL HOLE |
|-----------------|-------------------|----------|----------------|-------------------|--|-------------|----------------|------|------|-------------|-----------------|------------|-------------|------------|
| 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



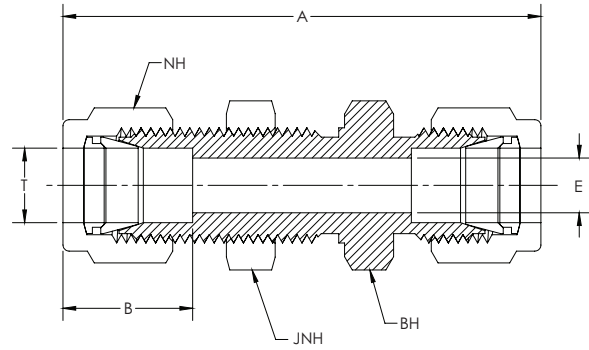
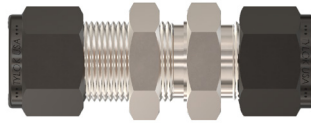
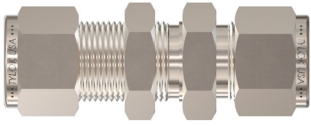
| CBC PART NUMBER | INTERCHANGES WITH | | CS PART NUMBER | INTERCHANGES WITH | T TUBE O.D. | P PIPE END NPT | A | B | E THRU HOLE | JNH JAM NUT HEX | NH NUT HEX | BH BODY HEX | PANEL HOLE | MAX PANEL THK |
|-----------------|-------------------|----------|----------------|-------------------|-------------|----------------|------|------|-------------|-----------------|------------|-------------|------------|---------------|
| 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



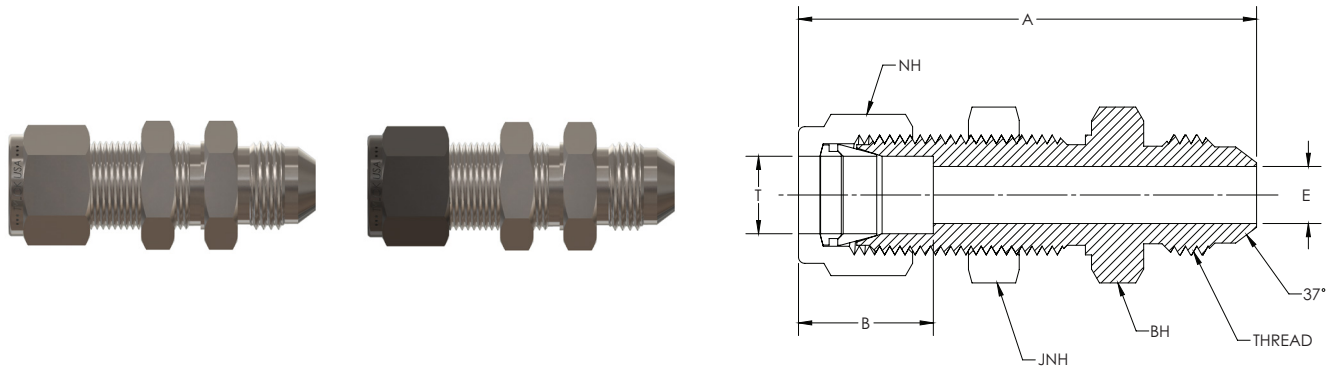
| CBC PART NUMBER | INTERCHANGES WITH | | CS PART NUMBER | INTERCHANGES WITH | | T TUBE O.D. | A | B | E THRU HOLE | JNH JAM NUT HEX | NH NUT HEX | BH BODY HEX | PANEL HOLE |
|-----------------|-------------------|--------|----------------|-------------------|------|-------------|------|------|-------------|-----------------|------------|-------------|------------|
| 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



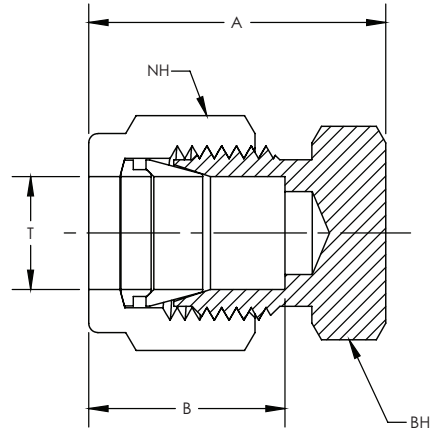
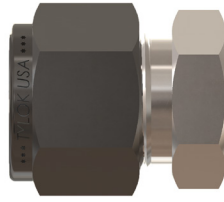
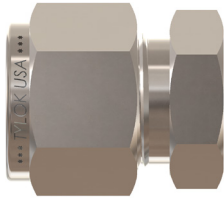
| CBC PART NUMBER | INTERCHANGES WITH | | CS PART NUMBER | INTERCHANGES WITH | T TUBE O.D. | THREAD | A | B | E THRU HOLE | JNH JAM NUT HEX | NH NUT HEX | BH BODY HEX | PANEL HOLE |
|-----------------|-------------------|----------|----------------|-------------------|-------------|-----------|------|------|-------------|-----------------|------------|-------------|------------|
| 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



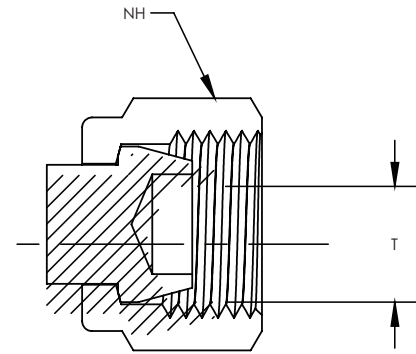
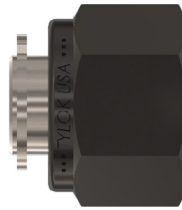
| CBC PART NUMBER | INTERCHANGES WITH | | CS PART NUMBER | INTERCHANGES WITH | | T TUBE O.D. | A | B | NH NUT HEX | BH BODY HEX |
|-----------------|-------------------|----------|----------------|-------------------|------|-------------|------|-------|------------|-------------|
| 1-DCAP | 100-C | 1BLEN1 | 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.

DF PLUG/SF PLUG

Fitting Plug

CBC/CS-Lok



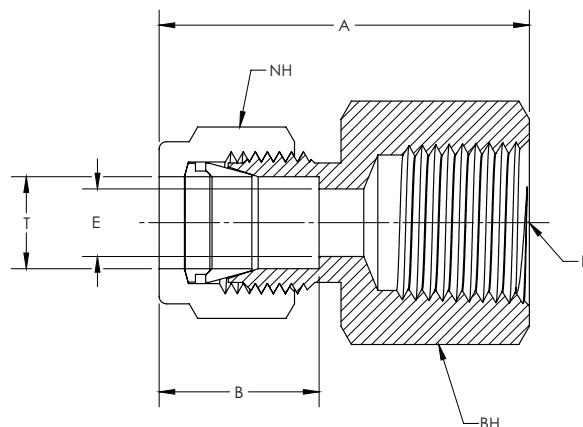
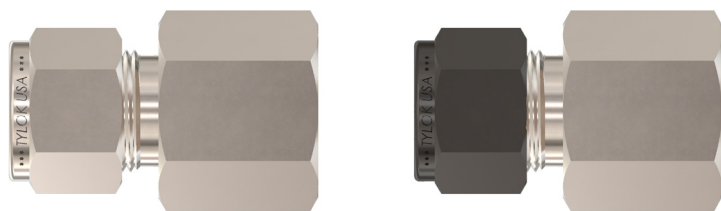
| CBC PART NUMBER | INTERCHANGES WITH | | CS PART NUMBER | INTERCHANGES WITH | | T TUBE O.D. | NH NUT HEX |
|-----------------|-------------------|---------|----------------|-------------------|------|-------------|------------|
| 1-DF PLUG | 100-P | 1BLP1 | 1-SF PLUG | 1 FNZ | 1/16 | 5/16 | |
| 2-DF 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

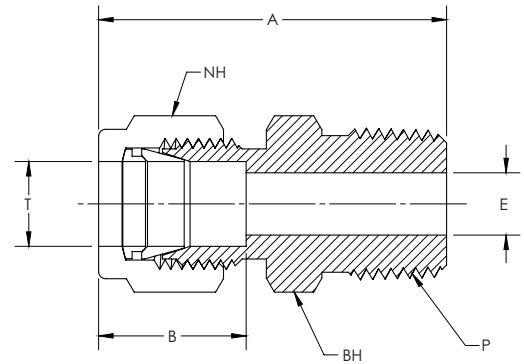
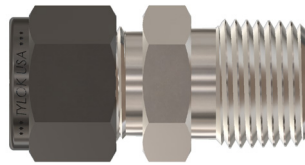
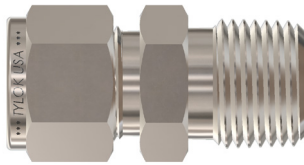
Female Connector

CBC/CS-Lok



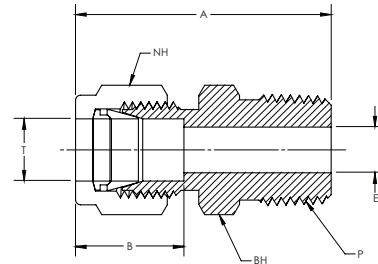
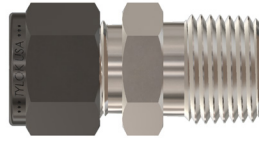
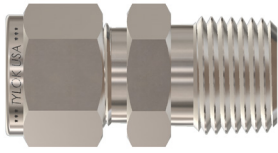
| CBC PART NUMBER | INTERCHANGES WITH | CS PART NUMBER | INTERCHANGES WITH | T TUBE O.D. | P PIPE END NPT | A | B | E THRU HOLE | NH NUT HEX | BH BODY HEX | |
|-----------------|-------------------|----------------|-------------------|-------------|----------------|-----|------|-------------|------------|-------------|--------|
| 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.

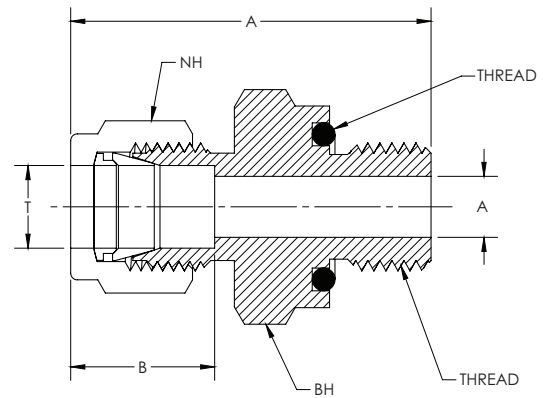
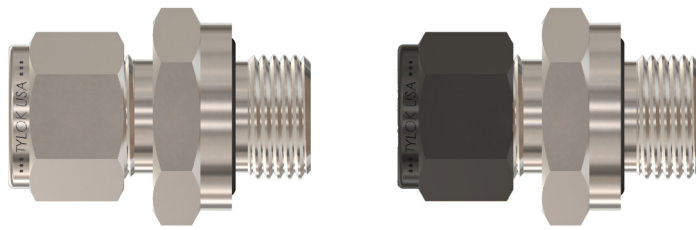


| CBC PART NUMBER | INTERCHANGES WITH | | CS PART NUMBER | INTERCHANGES WITH | T TUBE O.D. | P PIPE END NPT | A | B | E THRU HOLE | NH NUT HEX | BH BODY HEX |
|-----------------|-------------------|----------|----------------|-------------------|-------------|----------------|------|------|-------------|------------|-------------|
| 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



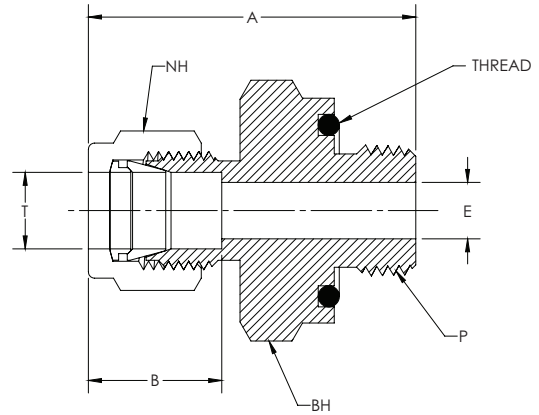
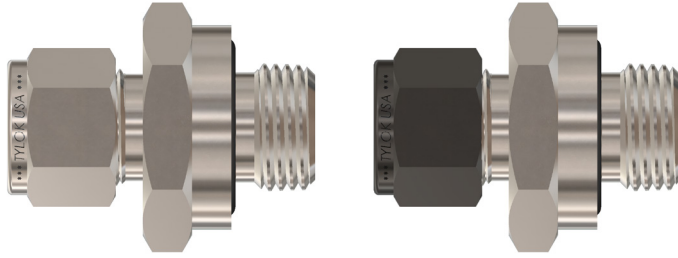
| CBC PART NUMBER | INTERCHANGES WITH | | CS PART NUMBER | INTERCHANGES WITH | | T TUBE O.D. | THREAD | A | B | E THRU HOLE | NH NUT HEX | BH BODY HEX | O-RING |
|-----------------|-------------------|----------|----------------|-------------------|--|-------------|-----------|------|------|-------------|------------|-------------|--------|
| 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

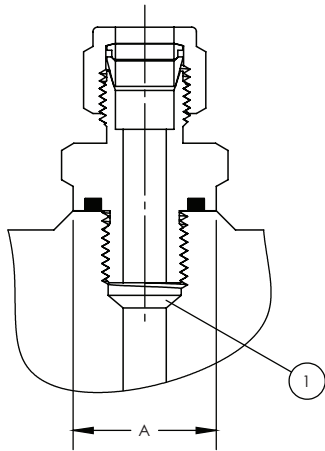


| CBC PART NUMBER | INTERCHANGES WITH | | CS PART NUMBER | INTERCHANGES WITH | T TUBE O.D. | P PIPE END NPT | A | B | E THRU HOLE | NH NUT HEX | BH BODY HEX | O-RING |
|-----------------|-------------------|--------|----------------|-------------------|-------------|----------------|------|------|-------------|------------|-------------|--------|
| 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.

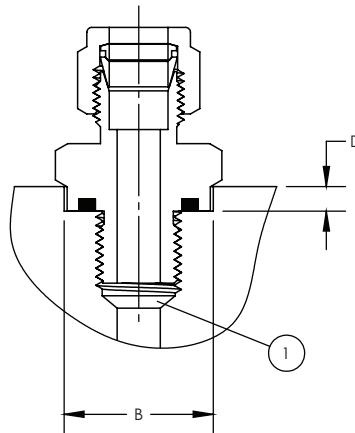
MOUNTING DIMENSIONS

for ORS/ORT Fittings



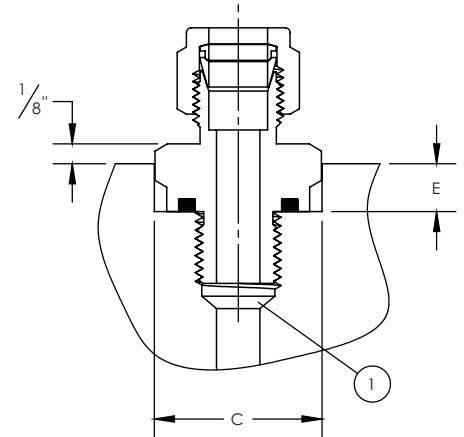
RAISED SURFACE

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)

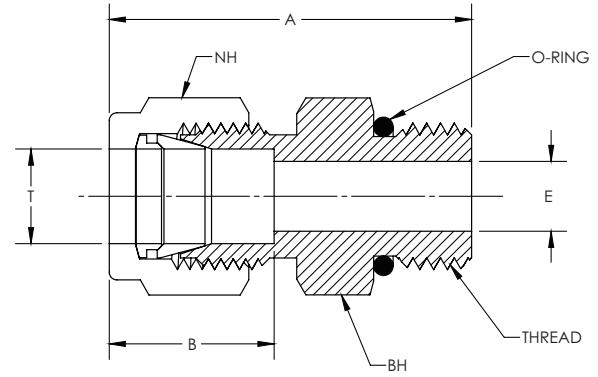
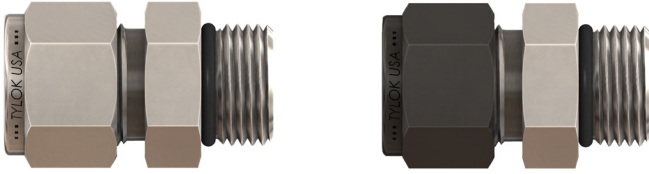
Minimum diameter allows clearance for hex of fitting into recess.

| 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

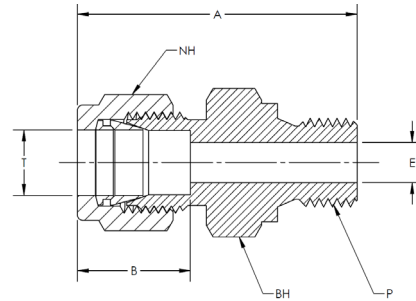
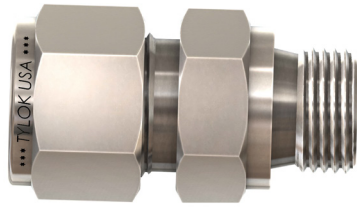


| CBC PART NUMBER | INTERCHANGES WITH | | CS PART NUMBER | INTERCHANGES WITH | | T TUBE O.D. | THREAD | A | B | E THRU HOLE | NH NUT HEX | BH BODY HEX | O-RING |
|-----------------|-------------------|----------|----------------|-------------------|--|-------------|-----------|------|------|-------------|------------|-------------|--------|
| 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



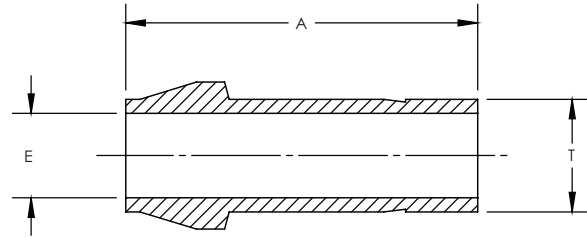
| CBC PART NUMBER | INTERCHANGES WITH | CS PART NUMBER | INTERCHANGES WITH | T TUBE O.D. | P BSPB THREAD SIZE | A | B | E THRU HOLE | NH NUT HEX | BH BODY HEX | |
|-----------------|-------------------|----------------|-------------------|-------------|--------------------|-----|------|-------------|------------|-------------|--------|
| 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



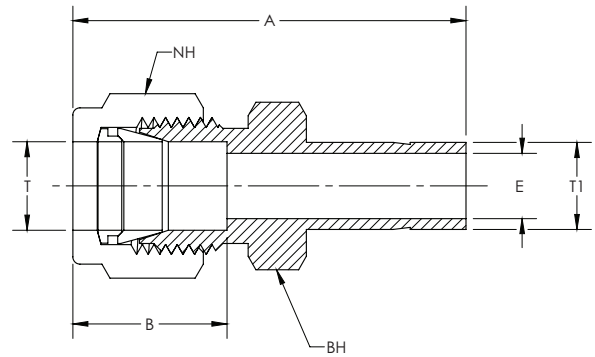
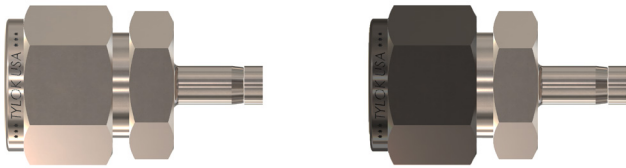
| CBC PART NUMBER | INTERCHANGES WITH | | CS PART NUMBER | INTERCHANGES WITH | | T TUBE O.D. | A | E THRU HOLE |
|-----------------|-------------------|--------|----------------|-------------------|--|-------------|------|-------------|
| 2-DPCU | U201-PC | 2PC2 | 2-SPCU | 2-2 ZPC | | 1/8 | 1.08 | 0.08 |
| 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



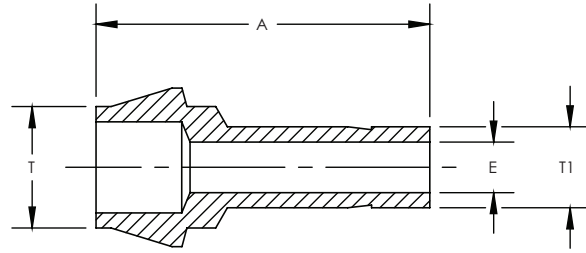
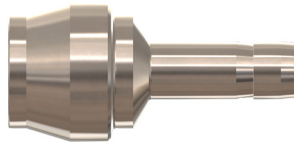
| CBC PART NUMBER | INTERCHANGES WITH | CS PART NUMBER | INTERCHANGES WITH | T TUBE O.D. | T1 TUBE O.D. | A | B | E THRU HOLE | NH NUT HEX | BH BODY HEX |
|-----------------|-------------------|----------------|-------------------|-------------|--------------|------|------|-------------|------------|-------------|
| 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

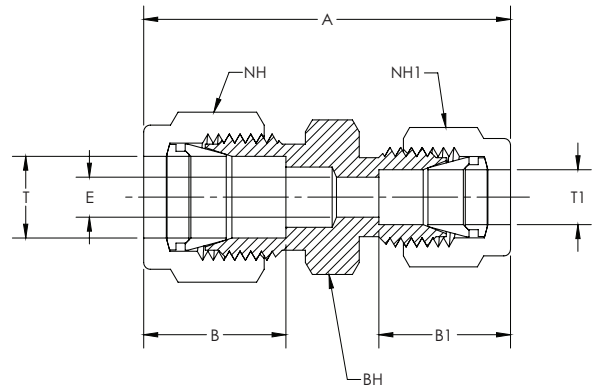
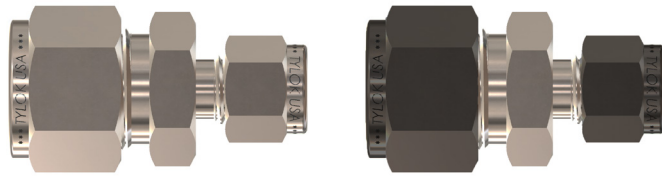
Reducing Port Connector

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.



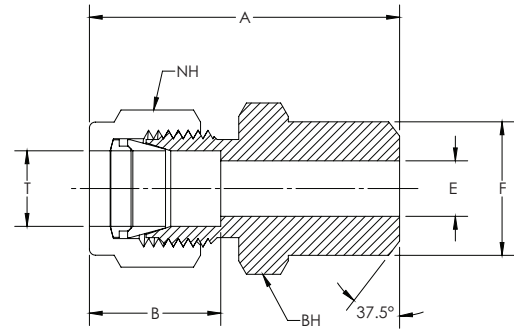
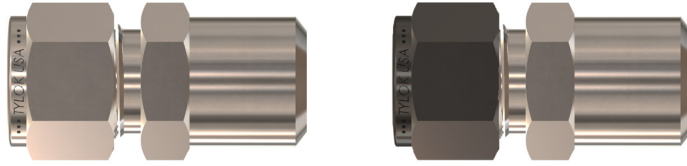
| CBC PART NUMBER | INTERCHANGES WITH | CS PART NUMBER | INTERCHANGES WITH | T TUBE O.D. | T1 TUBE O.D. | A | B | B1 | E THRU HOLE | NH NUT HEX | NH1 NUT HEX | BH BODY HEX | |
|-----------------|-------------------|----------------|-------------------|-------------|--------------|------|------|------|-------------|------------|-------------|-------------|--------|
| 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.

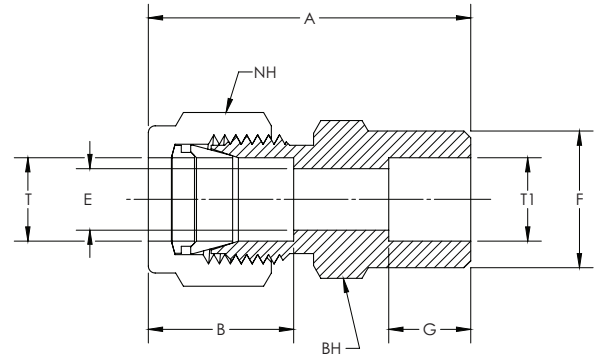
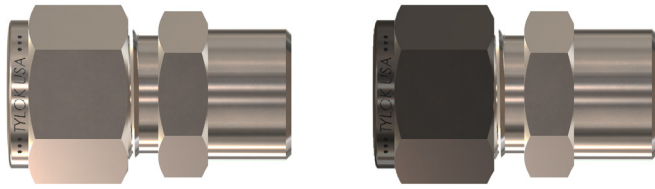
Wall Thickness at weld end is based on schedule 80 pipe.

*Fittings may have a larger ID on weld end.

DTSW/STSW

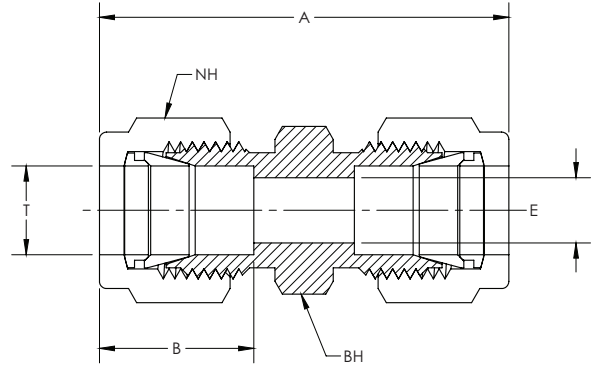
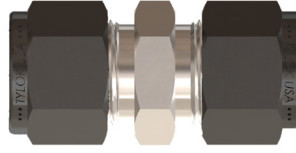
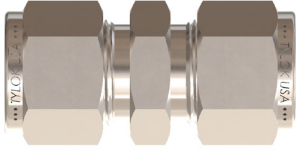
Tube to Tube Socket Weld Connector

CBC/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 | 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.



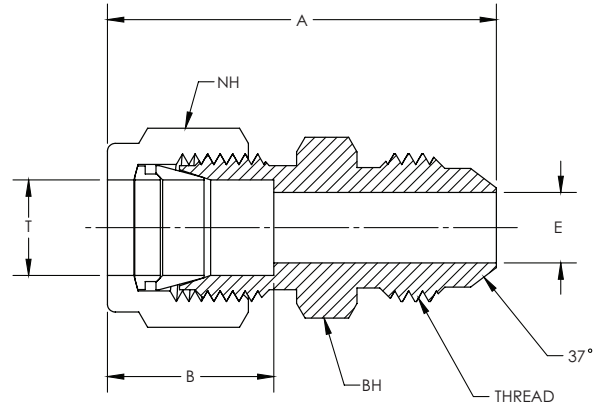
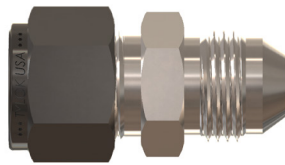
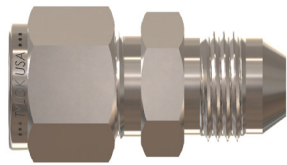
| CBC PART NUMBER | INTERCHANGES WITH | CS PART NUMBER | INTERCHANGES WITH | T TUBE O.D. | A | B | E THRU HOLE | NH NUT HEX | BH BODY HEX |
|-----------------|-------------------|----------------|-------------------|-------------|------|------|-------------|------------|-------------|
| 1-DU | 100-6 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



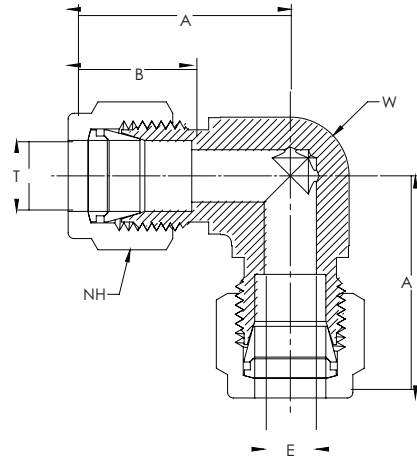
| CBC PART NUMBER | INTERCHANGES WITH | CS PART NUMBER | INTERCHANGES WITH | T TUBE O.D. | THREAD | A | B | E THRU HOLE | NH NUT HEX | BH BODY HEX |
|-----------------|-------------------|----------------|-------------------|-------------|----------------|------|------|-------------|------------|-------------|
| 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

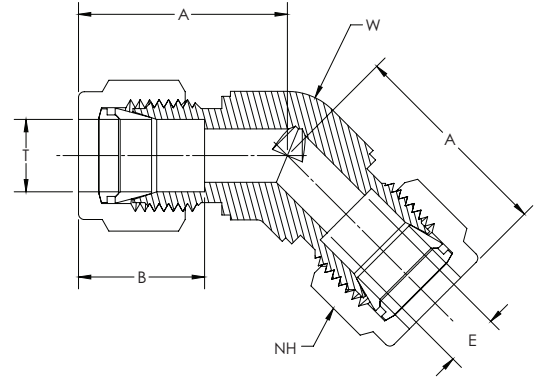
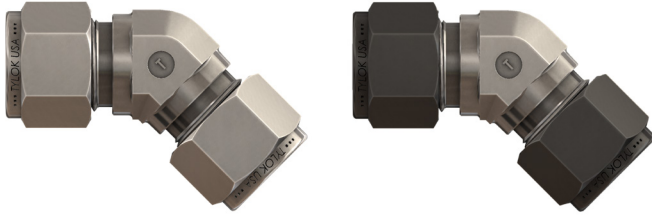


| CBC PART NUMBER | INTERCHANGES WITH | | CS PART NUMBER | INTERCHANGES WITH | | T TUBE O.D. | A | B | E THRU HOLE | NH NUT HEX | W WRENCH FLAT |
|-----------------|-------------------|--------|----------------|-------------------|-----|-------------|------|------|-------------|------------|---------------|
| 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



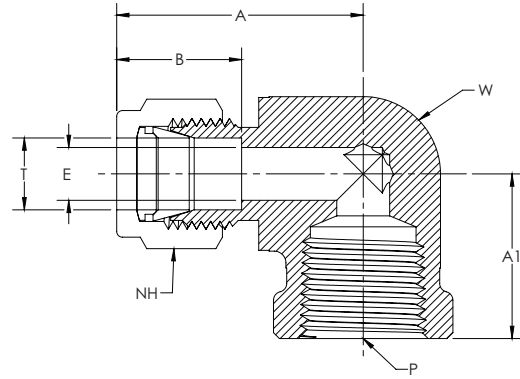
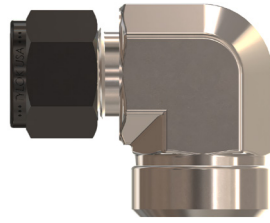
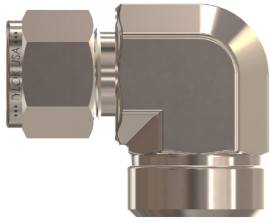
| CBC PART NUMBER | INTERCHANGES WITH | CS PART NUMBER | INTERCHANGES WITH | T TUBE O.D. | A | B | E THRU HOLE | NH NUT HEX | W WRENCH FLAT |
|-----------------|-------------------|----------------|-------------------|-------------|------|------|-------------|------------|---------------|
| 4-DELU45-4 | 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

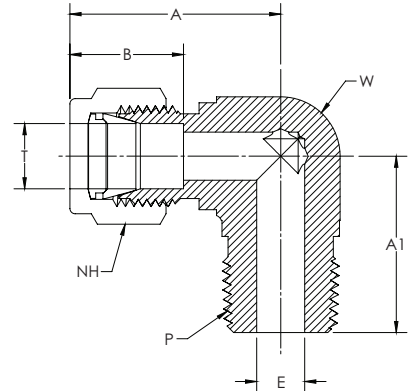
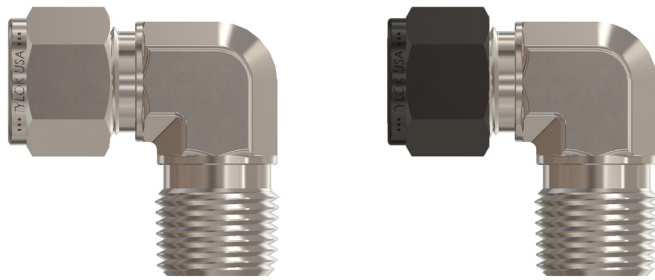
Female Elbow

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 | - | 8FEL2N | 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 | 8FEL12N | 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.



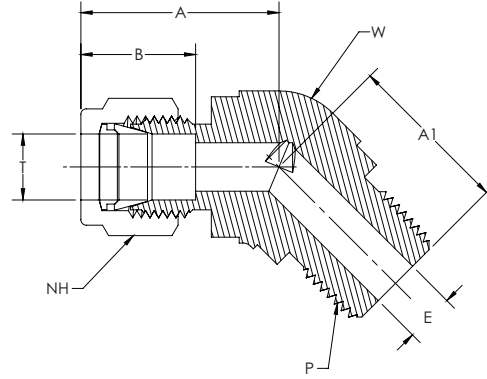
| CBC PART NUMBER | INTERCHANGES WITH | CS PART NUMBER | INTERCHANGES WITH | T TUBE O.D. | P PIPE END NPT | A | A1 | B | E THRU HOLE | NH NUT HEX | W WRENCH FLAT | |
|-----------------|-------------------|----------------|-------------------|-------------|----------------|------|------|------|-------------|------------|---------------|--------|
| 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

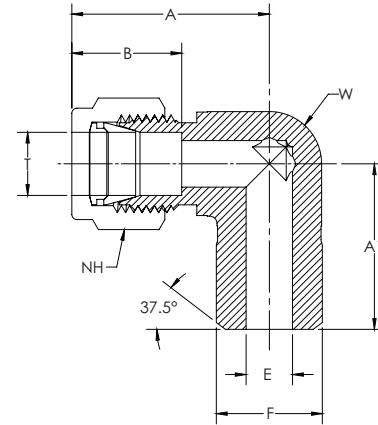
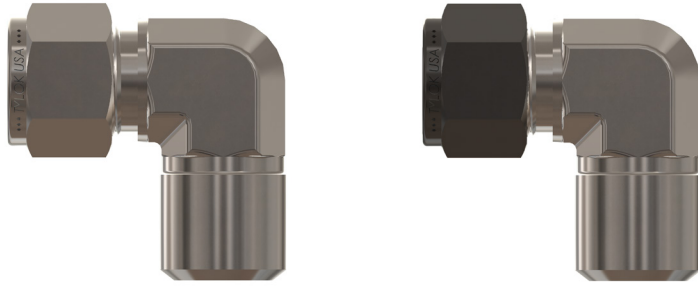


| CBC PART NUMBER | INTERCHANGES WITH | CS PART NUMBER | INTERCHANGES WITH | T TUBE O.D. | P PIPE END NPT | A | A1 | B | E THRU HOLE | NH NUT HEX | W WRENCH FLAT |
|-----------------|-------------------|----------------|-------------------|-------------|----------------|------|------|------|-------------|------------|---------------|
| 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



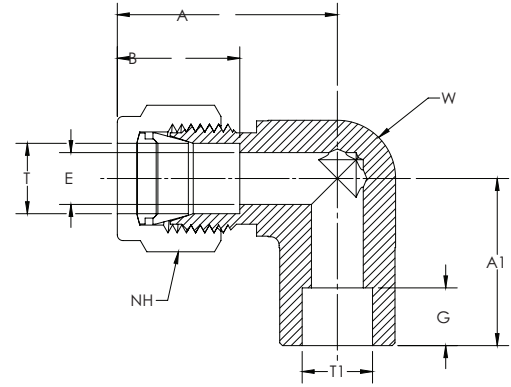
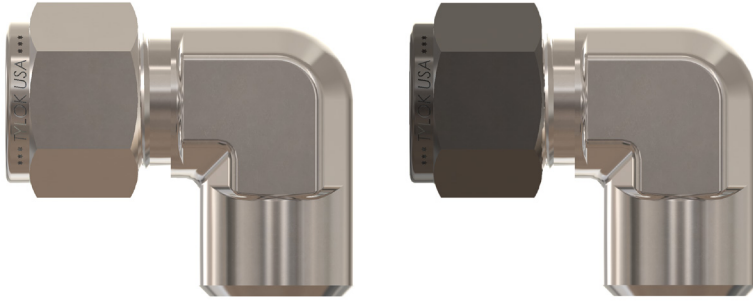
| CBC PART NUMBER | INTERCHANGES WITH | | CS PART NUMBER | INTERCHANGES WITH | | T | P PIPE | A | A1 | B | E | F | NH1 | W |
|-----------------------|----------------------|--------------|----------------------|----------------------|-----|--------------|------------|--------------|------------|----------------|------|-------|--------|---|
| | | | | | | TUBE O.D. | END NPT | THRU HOLE | NUT HEX | WRENCH 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



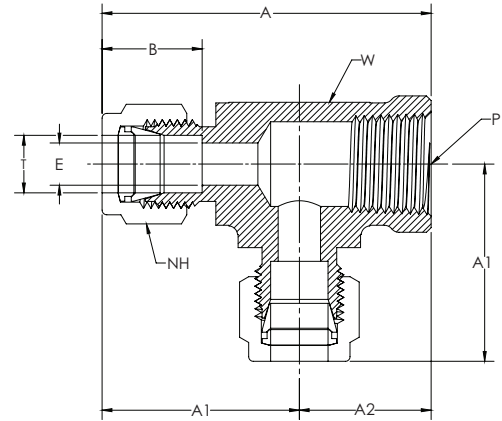
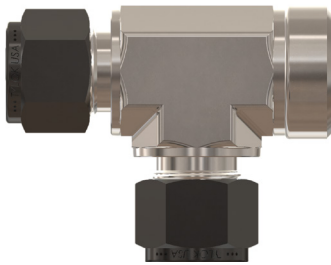
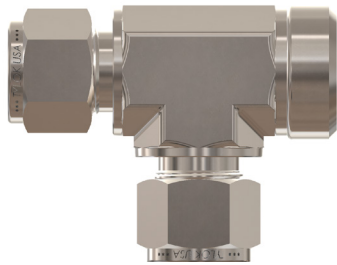
| CBC PART NUMBER | INTERCHANGES WITH | CS PART NUMBER | INTERCHANGES WITH | T TUBE O.D. | T1 TUBE O.D. | A | A1 | B | E THRU HOLE | G | NH1 NUT HEX | W WRENCH FLAT |
|-----------------|-------------------|----------------|-------------------|-------------|--------------|------|------|------|-------------|------|-------------|---------------|
| 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



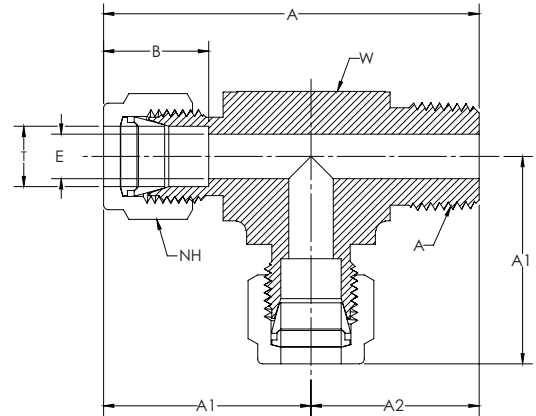
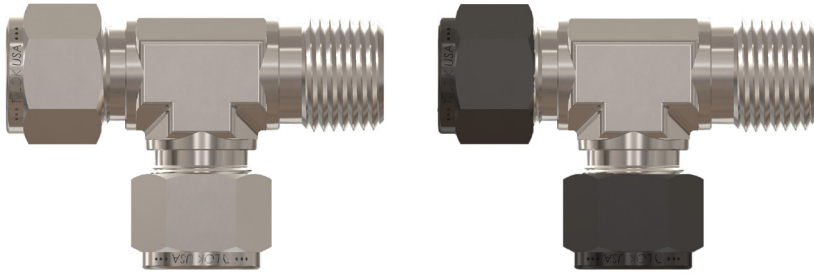
| CBC PART NUMBER | INTERCHANGES WITH | | CS PART NUMBER | INTERCHANGES WITH | T TUBE O.D. | P PIPE END NPT | A | A1 | A2 | B | E THRU HOLE | NH NUT HEX | W WRENCH FLAT |
|-----------------|-------------------|----------|----------------|-------------------|-------------|----------------|------|------|------|------|-------------|------------|---------------|
| 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



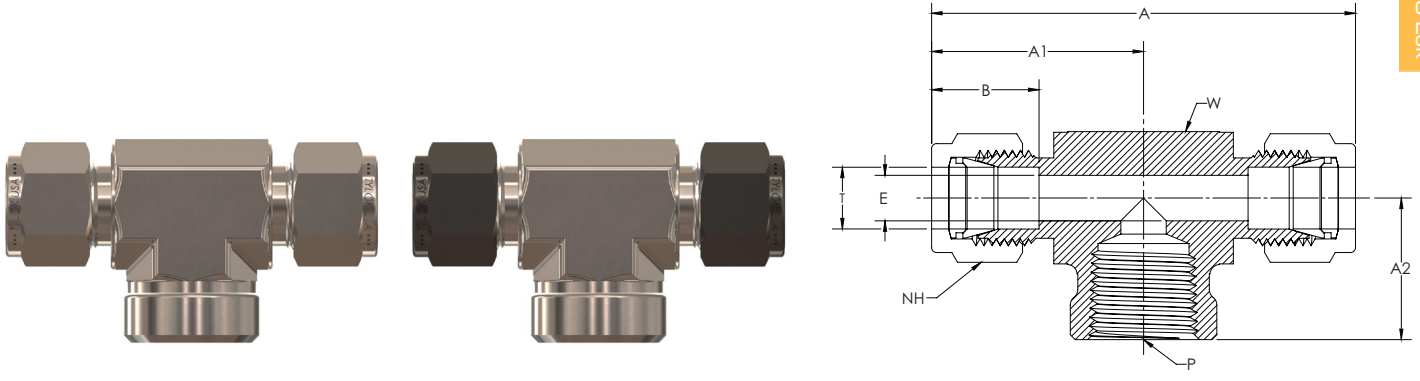
| CBC PART NUMBER | INTERCHANGES WITH | | CS PART NUMBER | INTERCHANGES WITH | T TUBE O.D. | P PIPE END NPT | A | A1 | A2 | B | E THRU HOLE | NH NUT HEX | W WRENCH FLAT |
|-----------------|-------------------|----------|----------------|-------------------|-------------|----------------|------|------|------|------|-------------|------------|---------------|
| 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



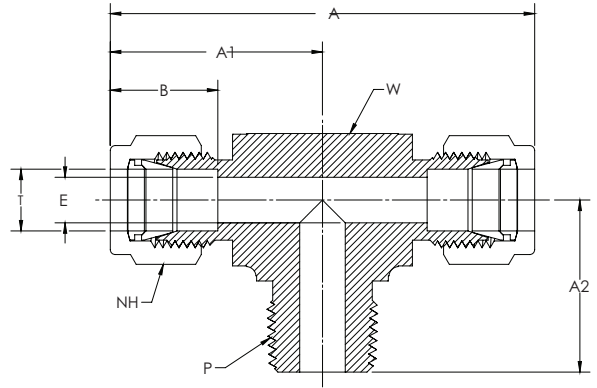
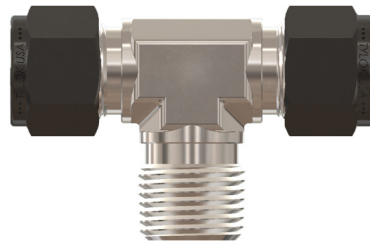
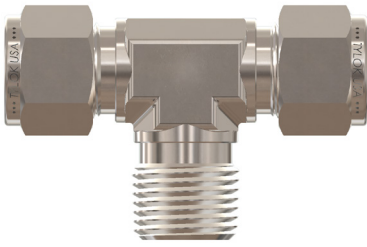
| CBC PART NUMBER | INTERCHANGES WITH | | CS PART NUMBER | INTERCHANGES WITH | T TUBE O.D. | P PIPE END NPT | A | A1 | A2 | B | E THRU HOLE | NH NUT HEX | W WRENCH FLAT |
|-----------------|-------------------|----------|----------------|-------------------|-------------|----------------|------|------|------|------|-------------|------------|---------------|
| 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

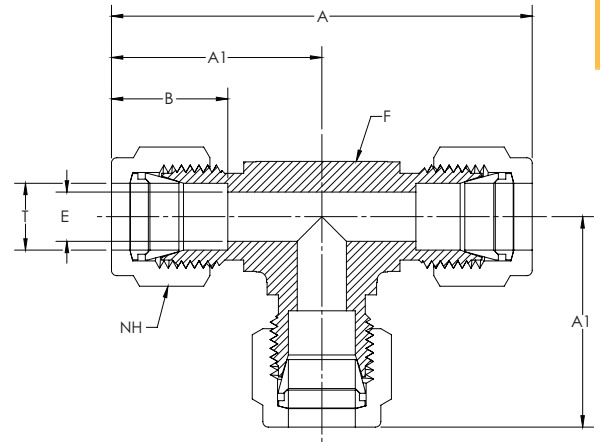
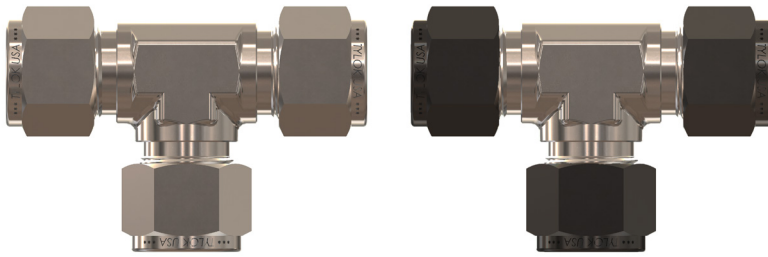
Male Branch Tee

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.



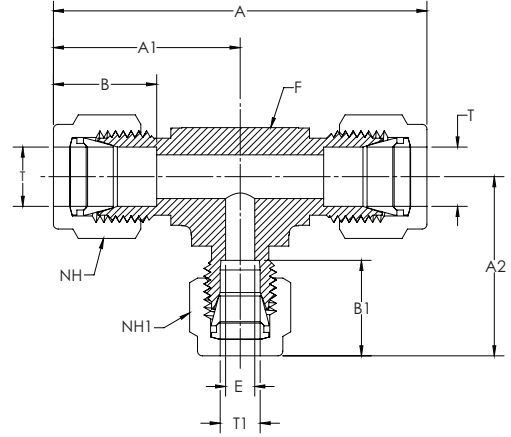
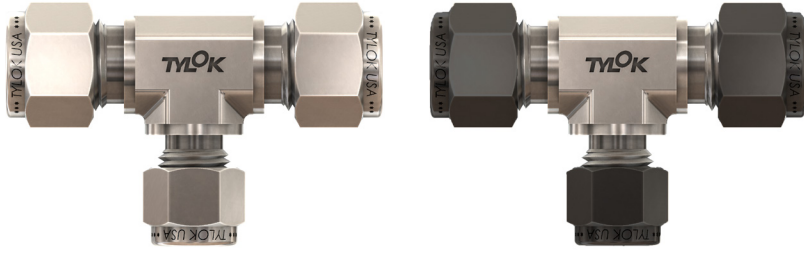
| CBC PART NUMBER | INTERCHANGES WITH | CS PART NUMBER | INTERCHANGES WITH | T TUBE O.D. | A | A1 | A2 | B | B1 | E THRU HOLE | NH NUT HEX | NH1 NUT HEX | W WRENCH FLAT |
|-----------------|-------------------|----------------|-------------------|-------------|------|------|----|------|----|-------------|------------|-------------|---------------|
| 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

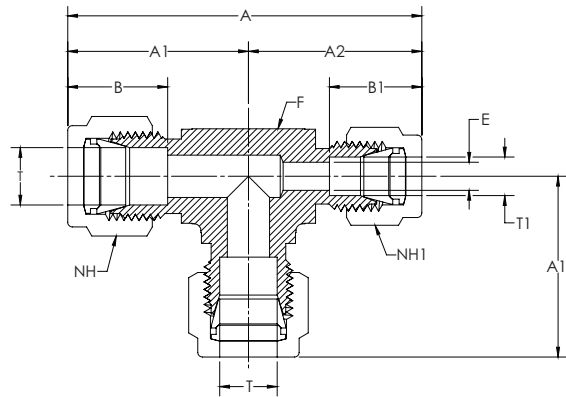
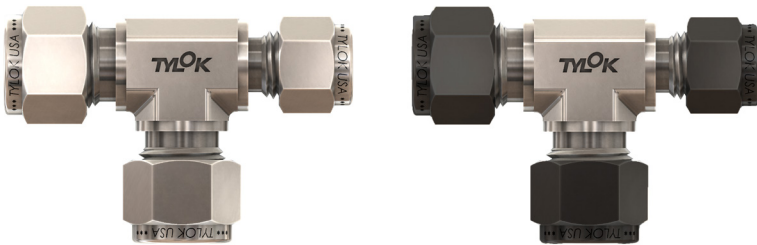
Reducing Branch Tee, Reducing Run Tee

CBC/CS-Lok



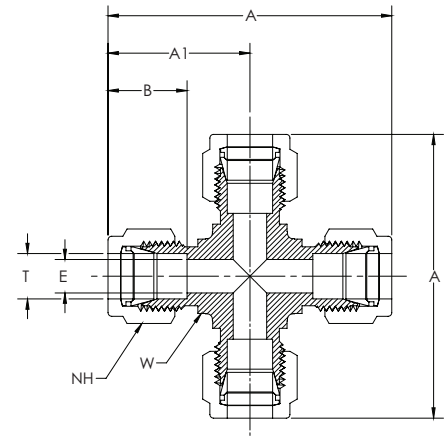
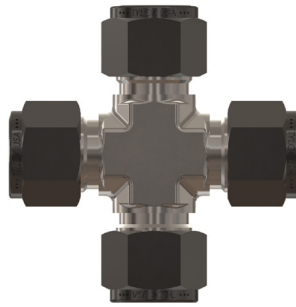
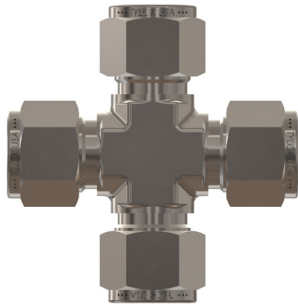
| CBC PART NUMBER | INTERCHANGES WITH | | CS PART NUMBER | INTERCHANGES WITH | T TUBE O.D. | T1 TUBE O.D. | A | A1 | A2 | B | B1 | E THRU HOLE | NH NUT HEX | NH1 NUT HEX | W WRENCH FLAT |
|-----------------|-------------------|--------------|----------------|-------------------|-------------|--------------|------|------|------|------|------|-------------|------------|-------------|---------------|
| 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.



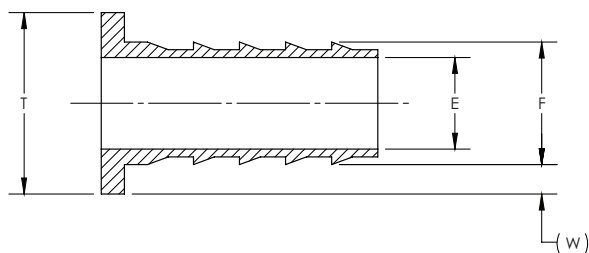
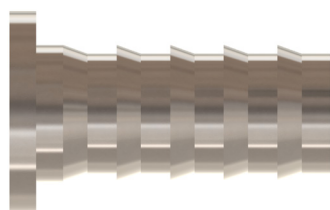
| CBC PART NUMBER | INTERCHANGES WITH | CS PART NUMBER | INTERCHANGES WITH | T TUBE O.D. | A | A1 | B | E THRU HOLE | NH NUT HEX | W WRENCH FLAT |
|-----------------|-------------------|----------------|-------------------|-------------|------|------|------|-------------|------------|---------------|
| 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

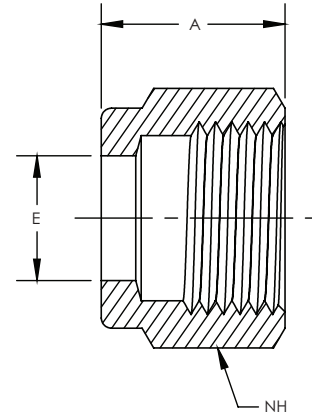
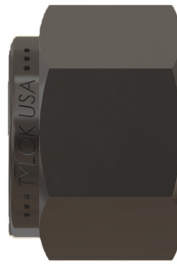
Tubing Insert

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.

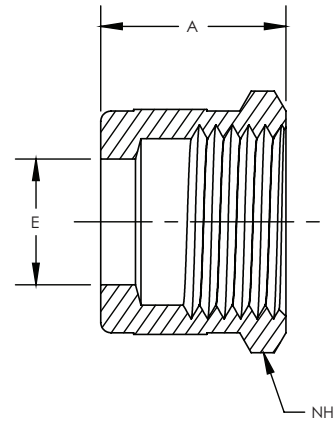
Tylok CS-Lok® nuts are coated with moldisulfide for reduced galling and lower installation torque.

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

DKN/SKN

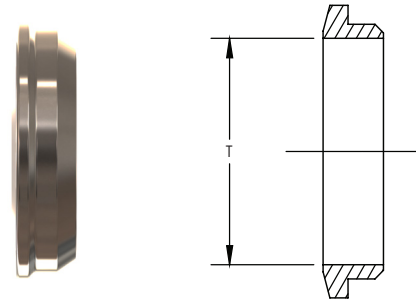
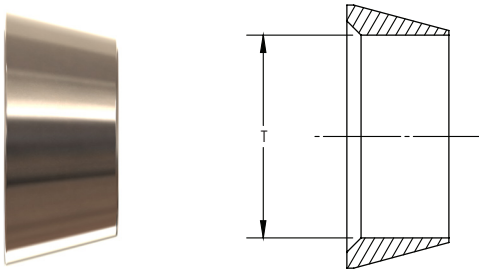
Knurled Nut

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.

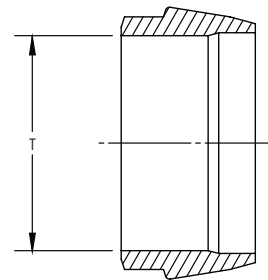
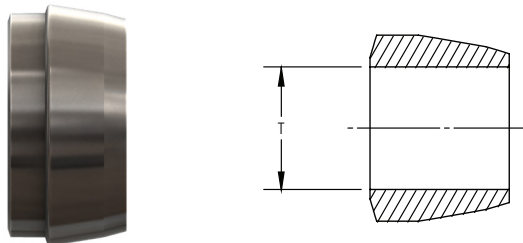


| CBC PART NUMBER | INTERCHANGES WITH | T TUBE O.D. |
|-----------------|-------------------|-------------|
| DFC-1 | 103-1 1FF1 | 1/16 |
| DFC-2 | 203-1 2FF2 | 1/8 |
| DFC-3 | 303-1 3FF3 | 3/16 |
| DFC-4 | 403-1 4FF4 | 1/4 |
| DFC-5 | 503-1 5FF5 | 5/16 |
| DFC-6 | 603-1 6FF6 | 3/8 |
| DFC-8 | 813-1 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.



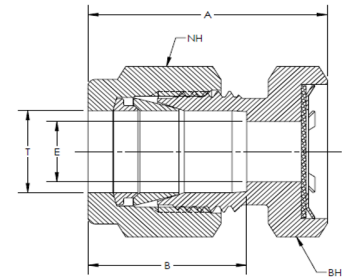
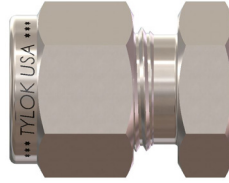
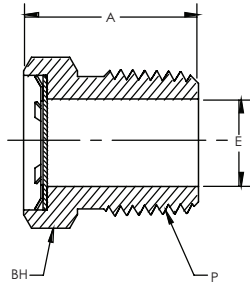
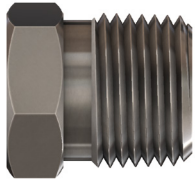
| CBC PART NUMBER | T TUBE O.D. |
|-----------------|------------------------------|
| 1-DGG | 1/16 |
| 2-DGG | 1/8 |
| 3-DGG | 3/16 |
| 4-DGG | 1/4 |
| 5-DGG | 5/16 |
| 6-DGG | 3/8 |
| 8-DGG | 1/2 |
| 10-DGG | 5/8 |
| 12-DGG | 3/4 |
| 14-DGG | 7/8 |
| 16-DGG | 1 |
| 468-DGG | 1/4, 3/8, 1/2 6 mm, 12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

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

MDF

Mud Daubers

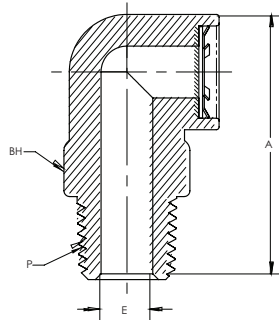
CBC/CS-Lok



| 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 |

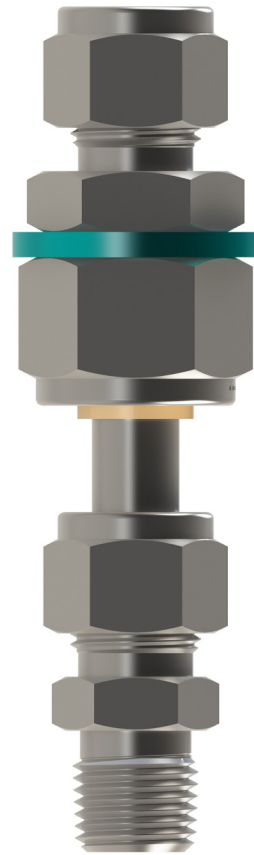
- Tylok Mud Daubers, also known as Vent Protector fittings, protect open ends of tubing, instruments, outlet vents and exhaust lines.
- Each Vent Protector has a 300 series stainless steel 40-mesh wire screen to prevent obstructive foreign objects, such as insects, from entering and clogging a system.
- 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.

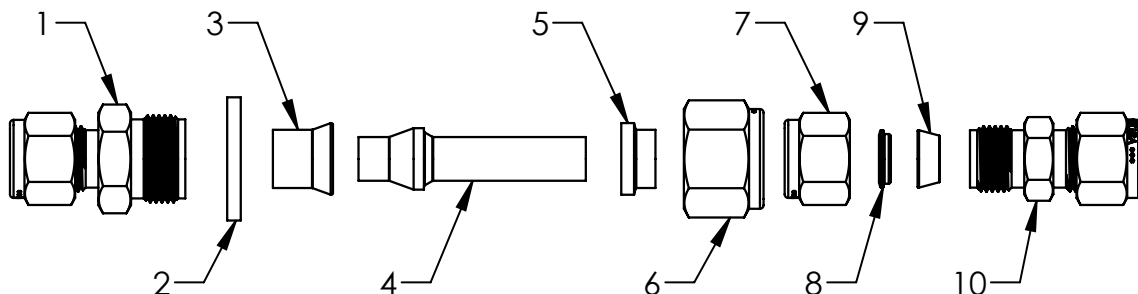
A typical application for a dielectric fitting is in the transmission of natural gas. The dielectric fitting insulates electric current flow that results from static electricity, ground currents, stray currents from instruments, etc.

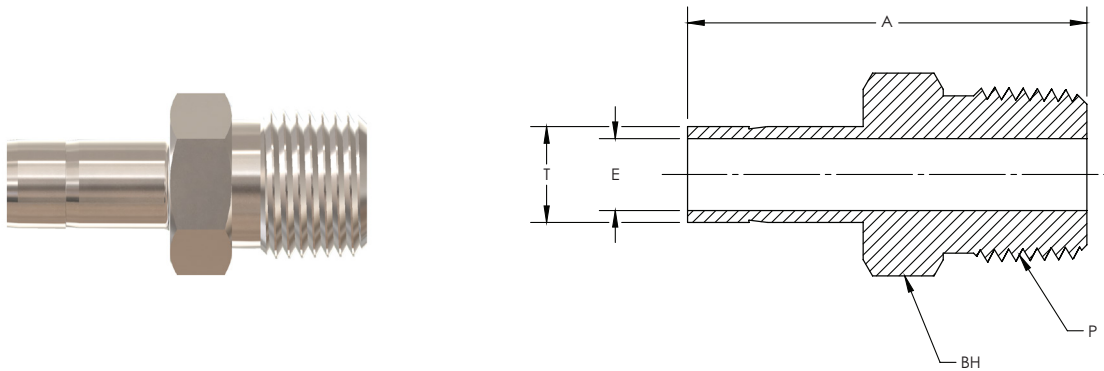
Tylok dielectric fittings have a dielectric resistance above 10×10^7 Ohms at 10 Volts (dc) when at room temperature (70°F / 20°C).



| 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) | |

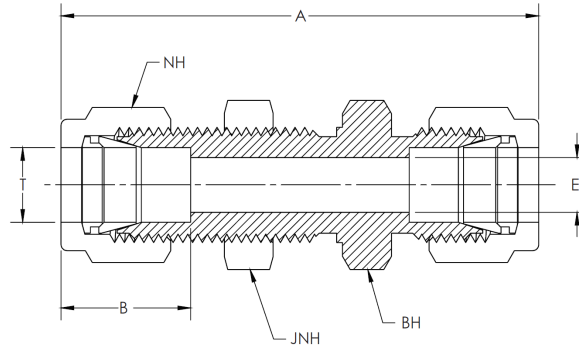
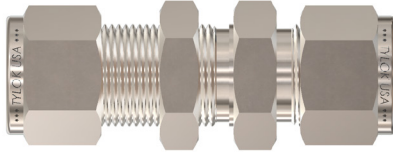
| Item | Component | Materials |
|------|----------------------|-----------------|
| 1 | End 1 | Stainless Steel |
| 2 | Stop Ring | Aluminum |
| 3 | Fitting Insulator | PEEK |
| 4 | Adapter | Stainless Steel |
| 5 | Nut Insulator | PEEK |
| 6 | Nut | Stainless Steel |
| 7 | CBC-Lok Nut | Stainless Steel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





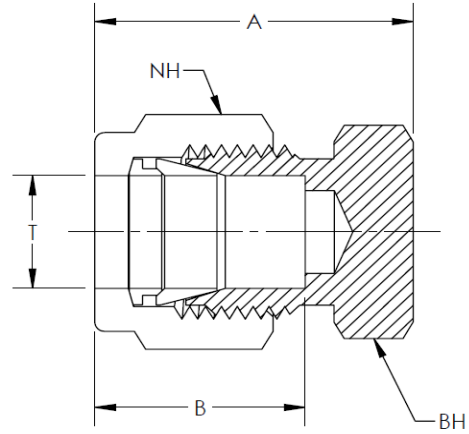
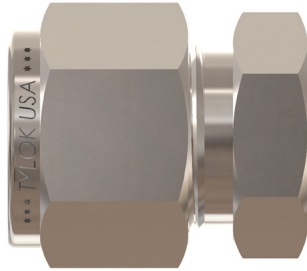
| CBC PART NUMBER | INTERCHANGES WITH | | T TUBE O.D. (mm.) | P PIPE END NPT (in.) | A (mm.) | E THRU HOLE (mm.) | BH BODY HEX (in.) |
|-----------------|-------------------|-----------|-------------------|----------------------|---------|-------------------|-------------------|
| 6MM-DATPM-2 | 6-MTA-1-2 | 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.



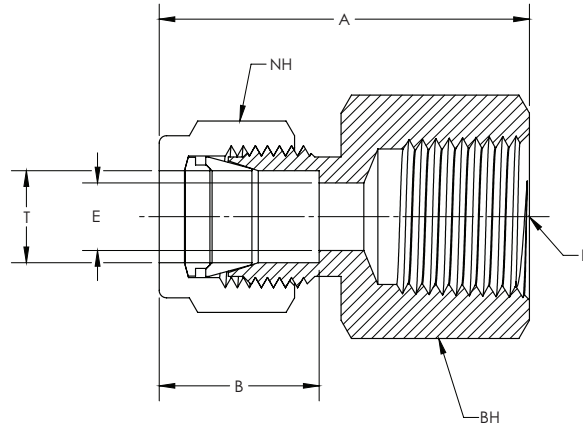
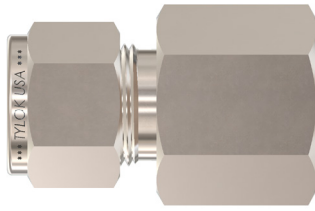
| CBC PART NUMBER | INTERCHANGES WITH | | T TUBE O.D. (mm.) | T1 TUBE O.D. (mm.) | A (mm.) | B (mm.) | E THRU HOLE (mm.) | NH NUT HEX (in.) | BH BODY HEX (in.) | JNH JAM NUT HEX (in.) | PANEL HOLE (mm.) | MAX PANEL THICKNESS (mm.) |
|-----------------|-------------------|-------|-------------------|--------------------|---------|---------|-------------------|------------------|-------------------|-----------------------|------------------|---------------------------|
| 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.



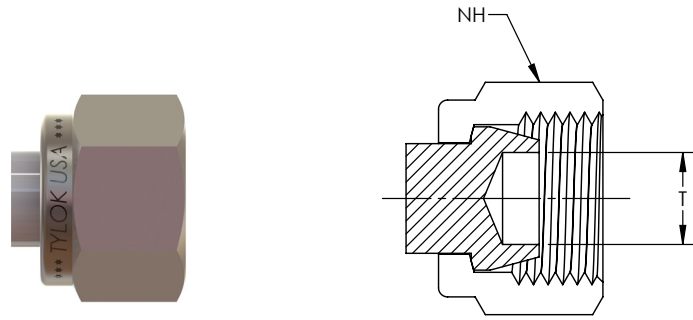
| CBC PART NUMBER | INTERCHANGES WITH | | T TUBE O.D. (mm.) | A (mm.) | B (mm.) | NH NUT HEX (in.) | BH BODY HEX (in.) |
|-----------------|-------------------|---------|-------------------|---------|---------|------------------|-------------------|
| 6MM-DCAP | 6M0-C | BLENM6 | 6 | 23.1 | 15.3 | 9/16 | 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.



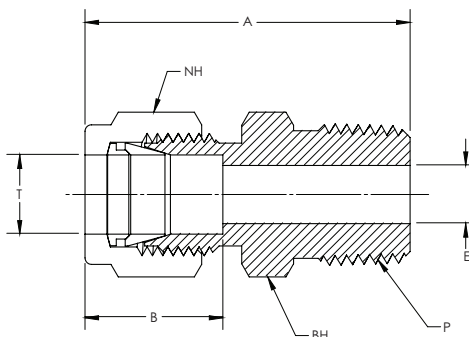
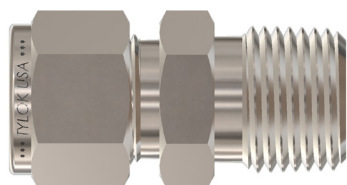
| CBC PART NUMBER | INTERCHANGES WITH | T TUBE O.D. (mm.) | P PIPE END NPT (in.) | A (mm.) | B (mm.) | E THRU HOLE (mm.) | NH NUT HEX (in.) | BH BODY HEX (in.) |
|-----------------|---------------------|-------------------|----------------------|---------|---------|-------------------|------------------|-------------------|
| 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.



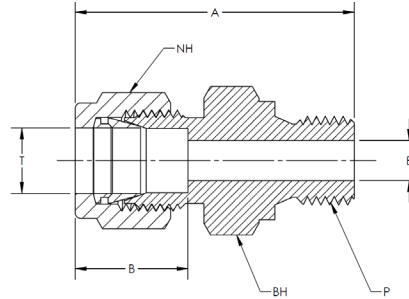
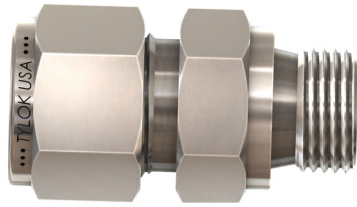
| CBC PART NUMBER | INTERCHANGES WITH | | T TUBE O.D. (mm.) | NH NUT HEX (in.) |
|-----------------|-------------------|--------|-------------------|------------------|
| 6MM-DFPLUG | 6M0-P | BLPM6 | 6 | 9/16 |
| 8MM-DFPLUG | 8M0-P | BLPM8 | 8 | 5/8 |
| 10MM-DFPLUG | 10M0-P | BLPM10 | 10 | 3/4 |
| 12MM-DFPLUG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

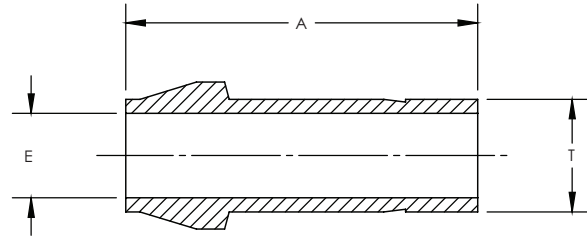
NOTE: Dimensions subject to change, to be used for reference only.



| 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 |

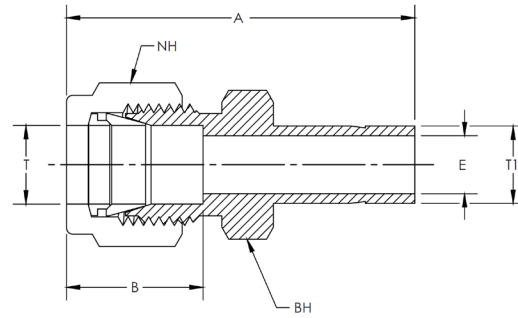
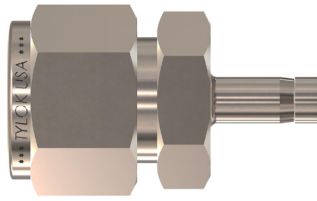
NOTE: Dimensions subject to change, to be used for reference only.

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.

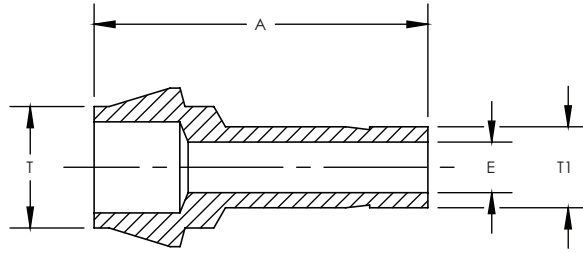
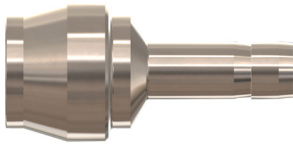


| CBC PART NUMBER | INTERCHANGES WITH | | T TUBE O.D. (mm.) | T1 TUBE O.D. (mm.) | A (mm.) | B (mm.) | E THRU HOLE (mm.) | NH NUT HEX (in.) | BH BODY HEX (in.) |
|-----------------|-------------------|-----------|-------------------|--------------------|---------|---------|-------------------|------------------|-------------------|
| 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

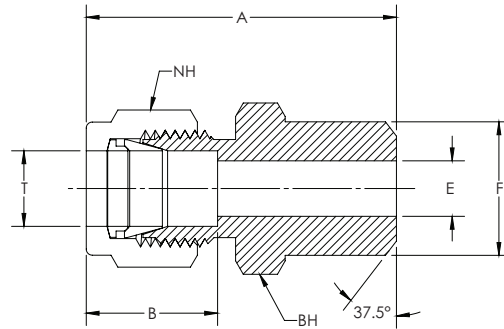
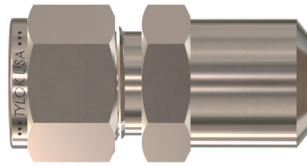
| CBC PART NUMBER | INTERCHANGES WITH | | T TUBE O.D. (mm.) | T1 TUBE O.D. (in.) | A (mm.) | B (mm.) | E THRU HOLE (mm.) | NH NUT HEX (in.) | BH BODY HEX (in.) |
|-----------------|-------------------|----------|-------------------|--------------------|---------|---------|-------------------|------------------|-------------------|
| 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.



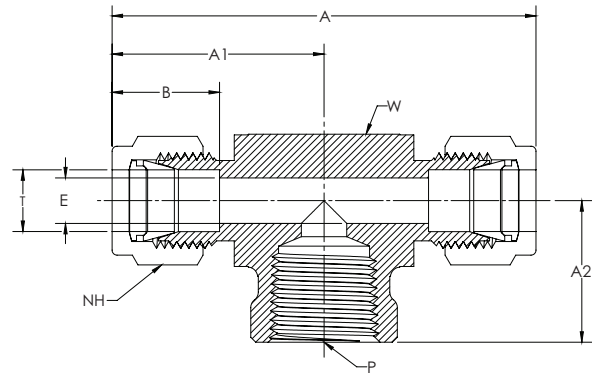
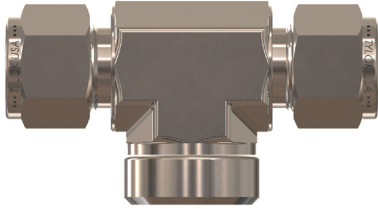
| CBC PART NUMBER | INTERCHANGES WITH | | T TUBE O.D. (mm.) | T1 TUBE O.D. (mm.) | A (mm.) | E THRU HOLE (mm.) |
|-----------------|-------------------|---------|-------------------|--------------------|---------|-------------------|
| 8MM-DRPC-6MM | 8M1-PC-6M | M6PCM8 | 8 | 6 | 25.4 | 4.1 |
| 10MM-DRPC-6MM | 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.



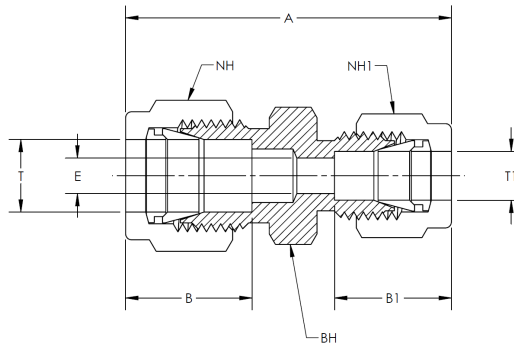
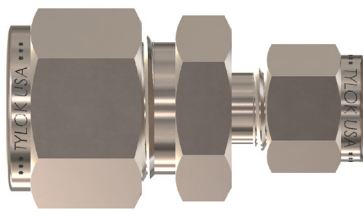
| CBC PART NUMBER | INTERCHANGES WITH | T TUBE O.D. (mm.) | PIPE WELD SIZE (mm.) | A (mm.) | B (mm.) | E THRU HOLE (mm.) | NH1 NUT HEX (in.) | BH BODY HEX (in.) |
|-----------------|------------------------|-------------------|----------------------|---------|---------|-------------------|-------------------|-------------------|
| 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.

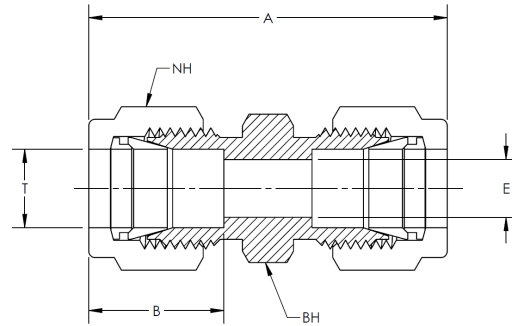
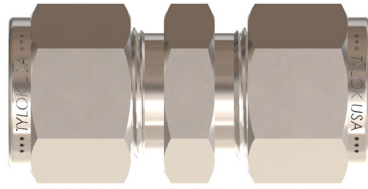


| CBC PART NUMBER | INTERCHANGES WITH | T TUBE O.D. (mm.) | T1 TUBE O.D. (mm.) | A (mm.) | B (mm.) | B1 (mm.) | E THRU HOLE (mm.) | NH NUT HEX (in.) | NH1 NUT HEX (in.) | BH BODY HEX (in.) |
|-----------------|---------------------|-------------------|--------------------|---------|---------|----------|-------------------|------------------|-------------------|-------------------|
| 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

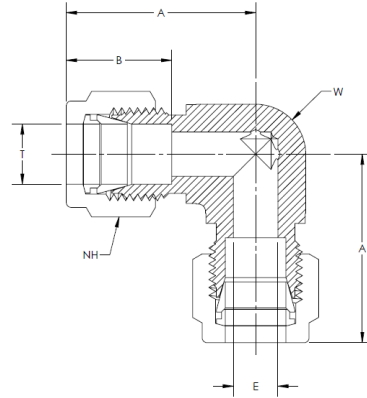
| CBC PART NUMBER | INTERCHANGES WITH | T TUBE O.D. (mm.) | T1 TUBE O.D. (in.) | A (mm.) | B (mm.) | B1 (mm.) | E THRU HOLE (mm.) | NH NUT HEX (in.) | NH1 NUT HEX (in.) | BH BODY HEX (in.) |
|-----------------|-------------------|-------------------|--------------------|---------|---------|----------|-------------------|------------------|-------------------|-------------------|
| 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.



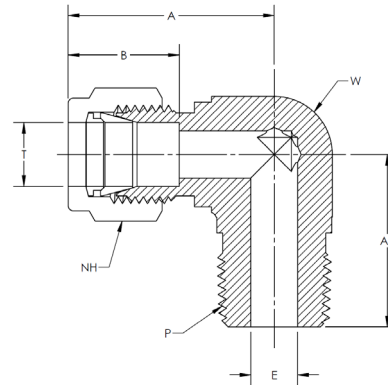
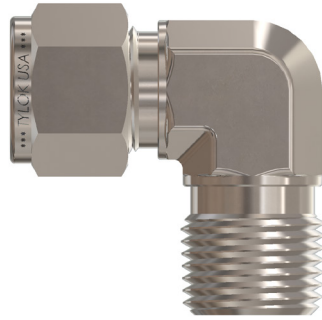
| CBC PART NUMBER | INTERCHANGES WITH | | T TUBE O.D. (mm.) | A (mm.) | B (mm.) | E THRU HOLE (mm.) | NH NUT HEX (in.) | BH BODY HEX (in.) |
|-----------------------|----------------------|-------|----------------------------|------------|------------|----------------------------|---------------------------|----------------------------|
| | | | | | | | | |
| 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.



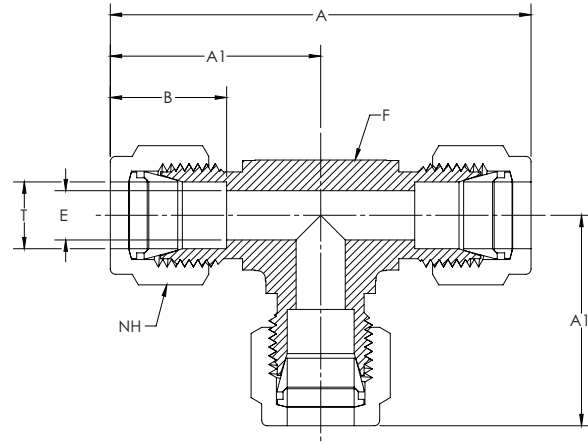
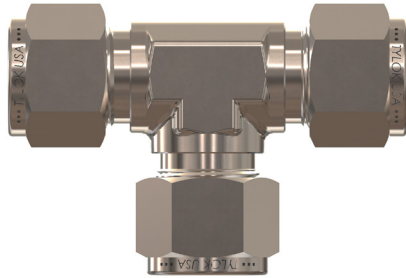
| CBC PART NUMBER | INTERCHANGES WITH | T TUBE O.D. (mm.) | A | | E THRU HOLE (mm.) | NH NUT HEX (in.) | W WRENCH FLAT (in.) |
|-----------------------|----------------------|----------------------------|-------|-------|----------------------------|---------------------------|------------------------------|
| | | | (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.

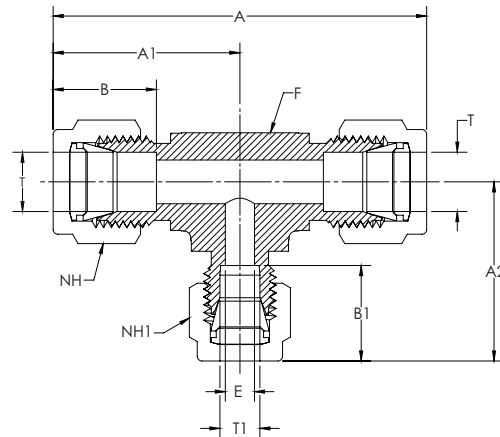


| CBC PART NUMBER | INTERCHANGES WITH | | T TUBE O.D. (mm.) | P PIPE END NPT (in.) | A (mm.) | A1 (mm.) | B (mm.) | E THRU HOLE (mm.) | NH NUT HEX (in.) | BH BODY HEX (in.) |
|-----------------|-------------------|-------------|-------------------|----------------------|---------|----------|---------|-------------------|------------------|-------------------|
| 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.

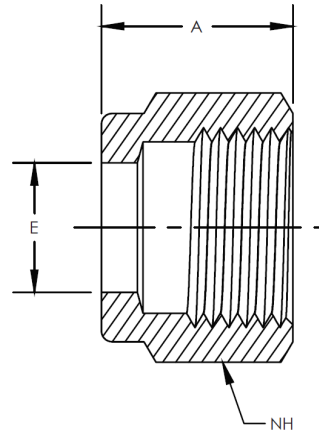
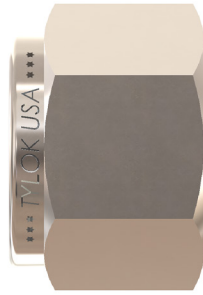


| CBC PART NUMBER | INTERCHANGES WITH | T TUBE O.D. (mm.) | A (mm.) | A1 (mm.) | B (mm.) | E THRU HOLE (mm.) | NH NUT HEX (in.) | W WRENCH FLAT (in.) |
|-----------------|-------------------|-------------------|---------|----------|---------|-------------------|------------------|---------------------|
| 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 |



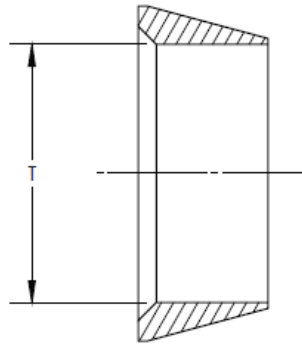
| CBC PART NUMBER | INTERCHANGES WITH | T TUBE O.D. (mm.) | T1 TUBE O.D. (mm.) | A (mm.) | A1 (mm.) | A2 (mm.) | B (mm.) | B2 (mm.) | E THRU HOLE (mm.) | NH NUT HEX (in.) | NH1 NUT HEX (in.) | W WRENCH FLAT (in.) |
|---------------------|-------------------|-------------------|--------------------|---------|----------|----------|---------|----------|-------------------|------------------|-------------------|---------------------|
| 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.

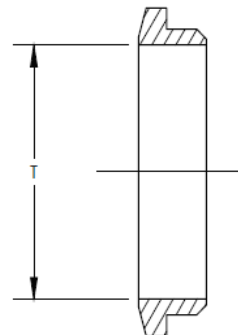


| CBC PART NUMBER | INTERCHANGES WITH | | T TUBE O.D. (mm.) | A (mm.) | NH NUT HEX (in.) |
|-----------------|-------------------|-------|-------------------|---------|------------------|
| DN-6MM | 6M2-1 | NUM6 | 6 | 12.7 | 9/16 |
| DN-8MM | 8M2-1 | NUM8 | 8 | 13.5 | 5/8 |
| DN-10MM | 10M2-1 | NUM10 | 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

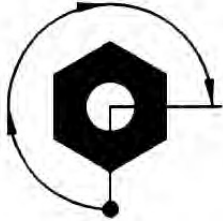
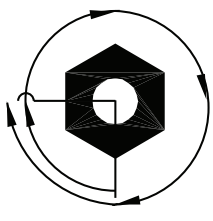
Tylube™ is an anti-gall compound to be used on stainless steel, steel and nickel-based alloys. Temperature range to 500°F. Not recommended for plastic and aluminum products.

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

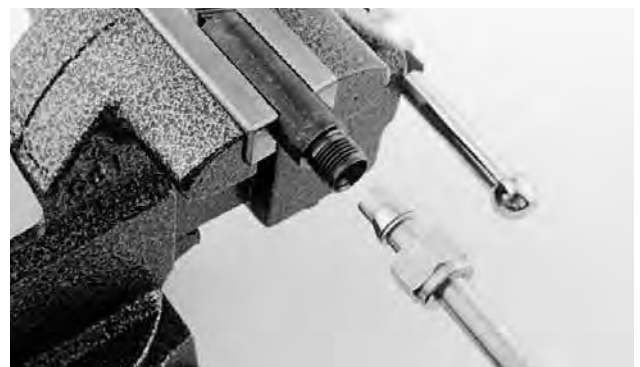
The CBC-Lok®/CS-lok® product line offers a Pre-Set Tool when fittings need to be installed in hard to reach places. The Pre-Set Tool is designed to be used in any tabletop vise. After tightening the nut the specified number of turns, as stated in the included installation instructions, loosen the nut 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

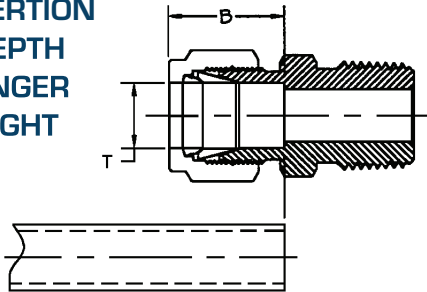
TUBE INSERTION CHART

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.