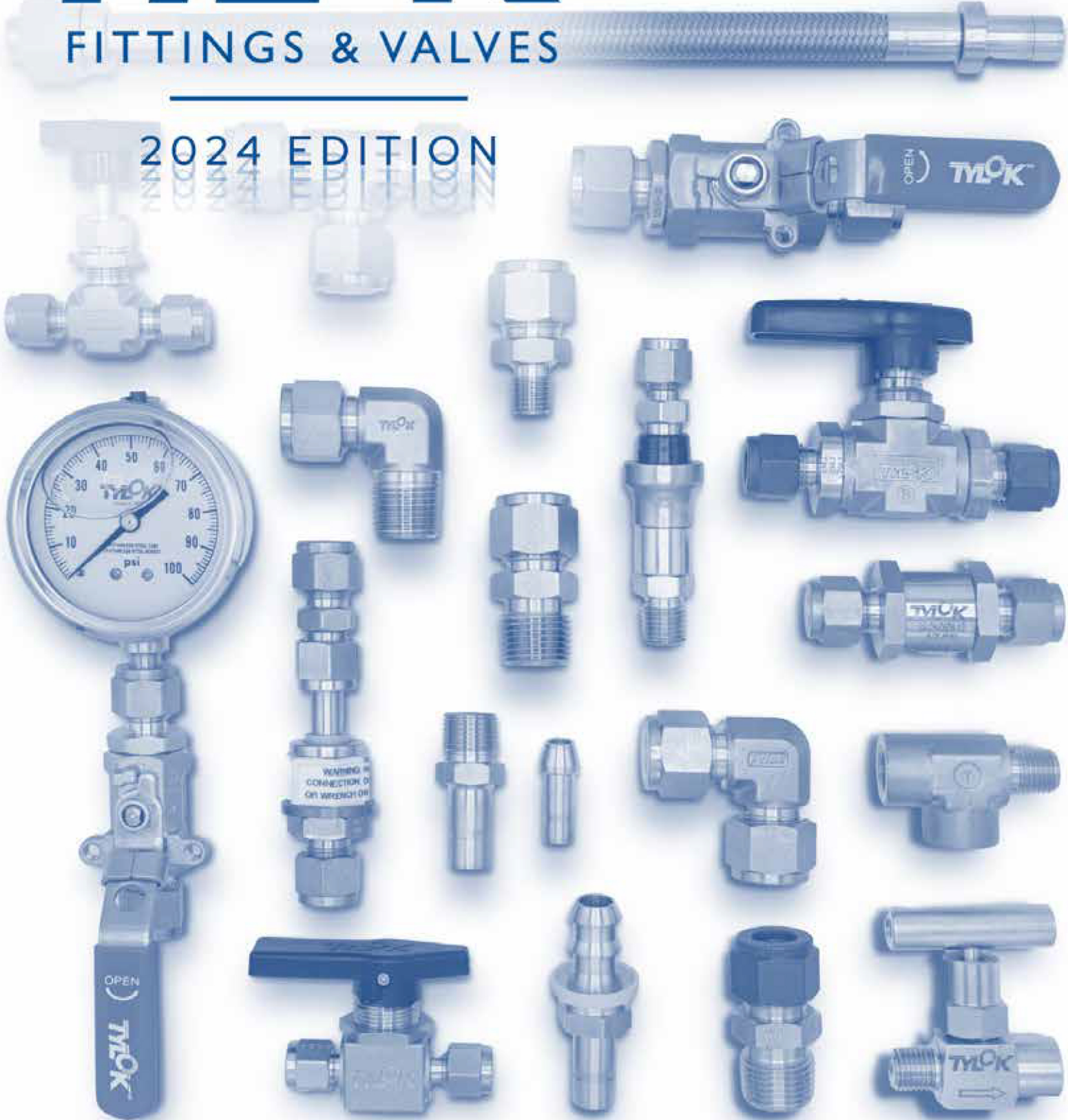


# TYLOK<sup>®</sup>

## FITTINGS & VALVES

2024 EDITION



Canadian  
Registration

Oct. 18, 1949.

C. B. CRAWFORD

TUBE COUPLING

Filed Aug. 15, 1947

2,424,815

## Our History

In the mid 1940's Cullen Crawford founded the Crawford Fitting Company. Mr. Crawford developed & patented the original flareless fitting (nut & two ferrule system), for the Crawford Fitting Company. Thus, a new & innovative industry was born, making it far easier to make tubing connections. Since his innovation, End Users from all corners of the globe have made billions of connections. This system provides leak-proof seals and thus Mr. Crawford has been named "The Founder of the Flareless Fitting."

## Our Mission

It is our mission, at Tylok International, Inc., to continuously strive for and achieve total customer satisfaction with both our products & services.

## Our Goal

Tylok's aggressive goal is to establish ourselves as an industry leader & expand our market share. This is maintained in every department within the organization. Our "total effort" will guard against losing the personal touch that makes our business enjoyable & prosperous for all involved.

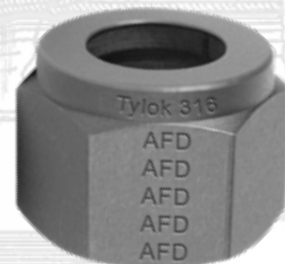


Fig. 3

Fig. 3

ATTORNEYS

## INTRODUCTION

CBC-Lok® Tube Fittings are fully interchangeable with Swagelok® & Parker A-Lok® and CS-Lok® Tube Fittings are fully interchangeable with Parker CPI™. Although it is always recommended to use all Tylok components intermixing Tylok 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. Tylok Fittings are proudly made in the U.S.A.

## OPERATION

CBC-Lok® Tube Fittings are comprised of four components: Body, Front Ferrule, Rear Ferrule & 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 & 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.

## 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

## 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.

## LIMITED LIFETIME WARRANTY

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

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.

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.

# Products

CBC-Lok / CS- Lok

5 - Instrumentation Tube Fittings

64 - Metric Tube Fittings

83 - Counter Walk-in Solutions

Pipe Fittings

95 - Instrumentation Pipe Fittings

Ball Valves

105 - GP Series Ball Valve

109 - HP Series Ball Valve

115 - 3 Piece Ball Valve

121 - 40 Series Ball Valve

Needle Valves

125 - Screwed Bonnet Needle Valves

133 - Integral Bonnet Needle Valves

Plug Valves

137 - Plug Valves

Quick Connects

141 - QC Series Quick Connects

Check Valves

147 - CH Series Check Valves

Hose/Connectors

152 - Flexible Metal Hose

156 - PTFE-Lined Braided Hose

160 - Multi-Purpose Push-On Hose

162 - HC Series End Connections

Pressure Gauges

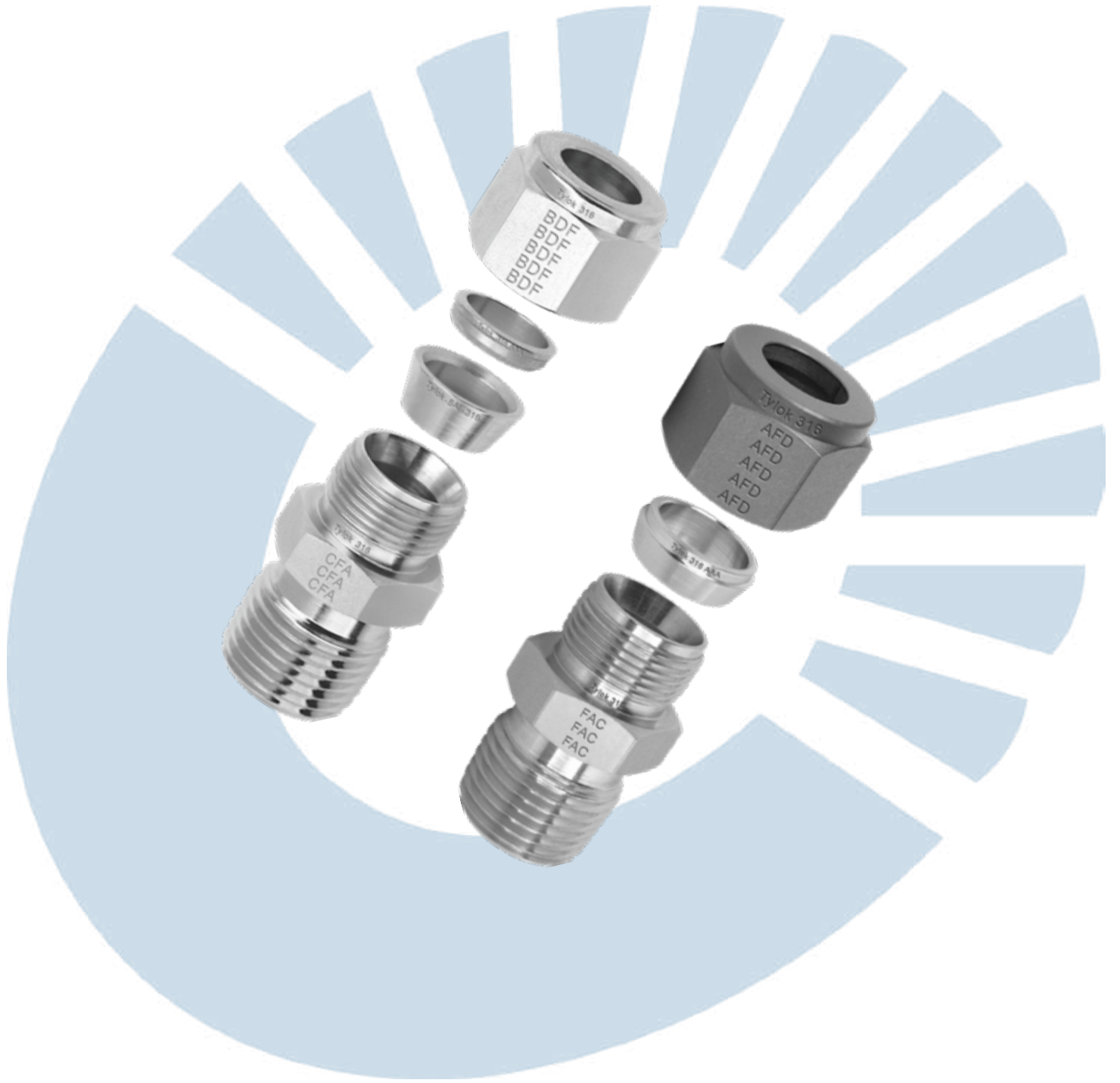
165 - Pressure Gauges

Swaging Units

169 - Tylok Swaging Units

Medlok

175 - Medical Gas Fittings





**DATPF  
SATPF**

Adapter Tube  
to Female Pipe

9



**DATPM  
SATPM**

Adapter Tube  
to Male NPT

10



**DATPM-STB  
SATPM-STB**

Adapter Tube to  
Straight Thread Boss

11



**DBHA  
SBHA**

Bulkhead  
Adapter

12



**DBHFP  
SBHFP**

Bulkhead Female  
Pipe Connector

13



**DBHMP  
SBHMP**

Bulkhead Male  
Pipe Connector

14



**DBHU  
SBHU**

Bulkhead  
Union

15



**DCAP  
SCAP**

Cap

16



**DF PLUG  
SF PLUG**

Fitting  
Plug

17



**DFC  
SFC**

Female  
Connector

18-19



**DMC  
SMC**

Male  
Connector

20-21



**DMC-ORS  
SMC-ORS**

O-Ring Straight  
Thread Male  
Connector

22



**DMC-ORT  
SMC-ORT**

O-Ring Tapered  
Thread Male  
Connector

23-24



**DMC-STB  
SMC-STB**

Straight Thread  
Boss Male  
Connector

25



**DMC-RS  
SMC-RS**

BSPP Straight Thread  
Male Connector

26



**DPCU  
SPCU**

Port Connector  
Union

27



**DRATT  
SRATT**

Reducer Adapter  
Tube to Tube

28



**DRPC  
SRPC**

Reducing Port  
Connector

29



**DRU  
SRU**

Reducing  
Union

30



**DTBW  
STBW**

Tube to Pipe Butt  
Weld Connector

31



**DTSW  
STSW**

Tube to Tube Socket  
Weld Connector

32



**DU  
SU**

Union

33



**DATANF  
SATANF**

Adapter Tube to  
JIC Flare

34



**DBUANF  
SBUANF**

Bulkhead to JIC  
Flare Union

35



**DUANF  
SUANF**

Tube to  
JIC Flare Union

36



**DELU  
SELU**

Union  
Elbow

37



**DELU45  
SELU45**

Union 45°  
Elbow



























38



**DFE  
SFE**

Female  
Elbow

39

						
<b>DME SME</b> Male Elbow <b>40</b>	<b>DME45 SME45</b> Male 45° Elbow <b>41</b>	<b>DME-STB SME-STB</b> SAE Straight Thread Positionable Elbow <b>42-43</b>	<b>DTBWE STBWE</b> Tube to Pipe Butt Weld Elbow <b>44</b>	<b>DTSWE STSWE</b> Tube to Tube Socket Weld Elbow <b>45</b>	<b>DTFT STFT</b> Female Run Tee <b>46</b>	<b>DTMT STMT</b> Male Run Tee <b>47</b>
						
<b>DTMT-STB STMT-STB</b> SAE Straight Thread Positionable Run Tee <b>48</b>	<b>DTTF STTF</b> Female Branch Tee <b>49</b>	<b>DTTM STTM</b> Male Branch Tee <b>50</b>	<b>DTTT STTT</b> Union Tee <b>51-52</b>	<b>DCR SCR</b> Union Cross <b>53</b>	<b>TI</b> Barbed Insert <b>54</b>	<b>DN SN</b> Nut <b>55</b>
						
<b>DKN SKN</b> Knurled Nut <b>56</b>	<b>DFC</b> Front Ferrule <b>57</b>	<b>DRC</b> Rear Ferrule <b>57</b>	<b>SC</b> Single Ferrule <b>57</b>	<b>DCSET SCSET</b> Ferrule Sets <b>58</b>	<b>DNCSET SNCSET</b> Nut Ferrule Sets <b>58</b>	<b>DGG</b> Gap Gage <b>59</b>
					<b>LEAK DETECTOR</b> <b>86</b>	<b>GAP GAGE</b> <b>87</b>
<b>MDF</b> Mud Daubers <b>60</b>	<b>INJECTION LANCES</b> <b>61</b>	<b>DIELECTRIC FITTING</b> <b>62-63</b>	<b>METRIC FITTINGS</b> <b>64</b>	<b>COUNTER WALK-IN SOLUTIONS</b> <b>83</b>	<b>CABINET</b> <b>88</b>	<b>TUBING</b> <b>90</b>
					<b>INSTALLATION INSTRUCTIONS</b> <b>92</b>	<b>GAS &amp; SAFETY</b> <b>93</b>
					<b>END CONNECTIONS</b> <b>94</b>	

# 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:

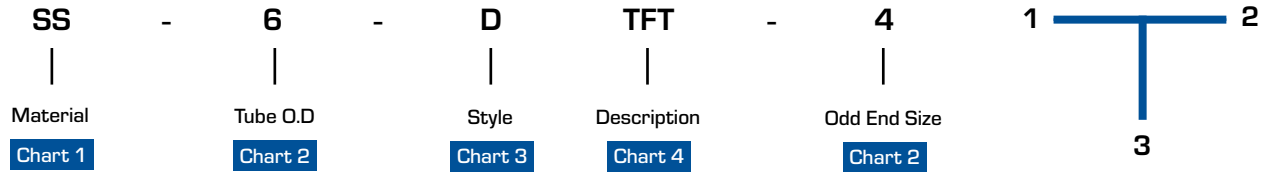


CHART 1- MATERIAL	
B	Brass
SS	Stainless Steel
S	Steel

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	1-11 1/2	1-5/16-12	1-11		

CHART 4- DESCRIPTION	
ATANF	Adapter Tube to JIC
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 JIC 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
RU	Reducing Union
TBW	Tube to Pipe Butt Weld Connector
TSW	Tube to Socket Weld Connector
U	Union
UANF	Tube to JIC Flare Union
ELU	Union Elbow
ELU45	Union 45° Elbow
FE	Female Elbow
ME	Male Elbow

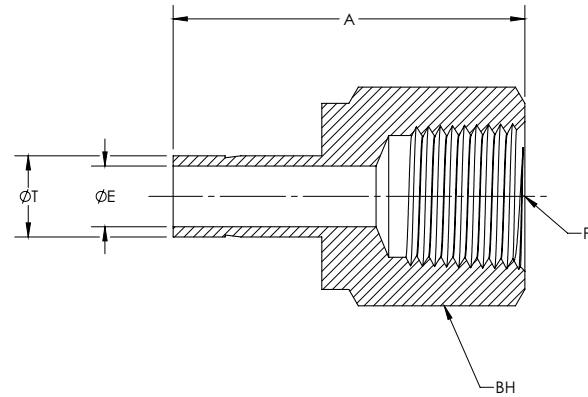
CHART 4- DESCRIPTION	
ME-STB	SAE Straight Thread Positionable Elbow
ME45	Male 45° Elbow
TBWE	Tube to Pipe Butt Weld Elbow
TSWE	Tube to Tube Socket Weld Elbow
TFT	Female Run Tee
TMT	Male Run Tee
TMT-STB	SAE Straight Thread Positionable Run Tee
TTF	Female Branch Tee
TTM	Male Branch Tee
TTT	Union Tee
CR	Union Cross
N	Nut
KN	Knurled Nut

CHART 5- MODIFIERS	
BT	Bored Through
BSPT	BSPT Male Connector
CL	Cleaned & Lubricated to ASTM G93 Level C
DN	Silver Plated Nut
HD	Heavy Duty
L	Lanyard
NF	Preswaged Nuts & Ferrules on Adapter End
Q	Body Only
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



# DATPF/SATPF

## Adapter Tube to Female 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-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	1.79	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
20-DATPF-12-NF	20-TA-7-12	20FA12N	-	-	1-1/4	3/4	2.90	0.89	1-5/16
20-DATPF-20-NF	20-TA-7-20	20FA20N	-	-	1-1/4	1-1/4	3.06	1.02	2-1/8

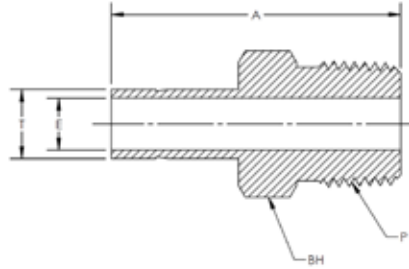
**NOTE:** Dimensions subject to change, to be used for reference only.

- 1/16", 1/8", and 3/16" adapters come standard without a groove.
- 1-1/4", 1-1/2", and 2" adapters are furnished with preswaged nuts and collets.
- Add "-NF" for preswaged nuts and ferrules.
- Add "-HD" for thick wall adapters with pressures ratings that match max recommended tube.

# DATPM/SATPM

## Adapter Tube to Male NPT

CBC/CS-Lok



CBC 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	2-2 T2HF	1/8	1/8	1.16	0.08	7/16
2-DATPM-4	2-TA-1-4	2MA4N	2-4 T2HF	1/8	1/4	1.37	0.08	9/16
4-DATPM-2	4-TA-1-2	4MA2N	4-2 T2HF	1/4	1/8	1.25	0.17	7/16
4-DATPM-4	4-TA-1-4	4MA4N	4-4 T2HF	1/4	1/4	1.46	0.17	9/16
4-DATPM-6	4-TA-1-6	4MA6N	4-6 T2HF	1/4	3/8	1.49	0.17	11/16
4-DATPM-8	4-TA-1-8	4MA8N	4-8 T2HF	1/4	1/2	1.71	0.17	7/8
5-DATPM-4	5-TA-1-4	5MA4N	5-4 T2HF	5/16	1/4	1.50	0.22	9/16
6-DATPM-2	6-TA-1-2	6MA2N	6-2 T2HF	3/8	1/8	1.32	0.19	7/16
6-DATPM-4	6-TA-1-4	6MA4N	6-4 T2HF	3/8	1/4	1.55	0.27	9/16
6-DATPM-6	6-TA-1-6	6MA6N	6-6 T2HF	3/8	3/8	1.56	0.27	11/16
6-DATPM-8	6-TA-1-8	6MA8N	6-8 T2HF	3/8	1/2	1.78	0.27	7/8
8-DATPM-4	8-TA-1-4	8MA4N	8-4 T2HF	1/2	1/4	1.75	0.28	9/16
8-DATPM-6	8-TA-1-6	8MA6N	8-6 T2HF	1/2	3/8	1.78	0.38	11/16
8-DATPM-8	8-TA-1-8	8MA8N	8-8 T2HF	1/2	1/2	2.00	0.38	7/8
8-DATPM-12	8-TA-1-12	-	-	1/2	3/4	2.00	0.38	1-1/16
10-DATPM-6	-	-	-	5/8	3/8	1.84	0.38	11/16
10-DATPM-8	10-TA-1-8	10MA8N	10-8 T2HF	5/8	1/2	2.06	0.47	7/8
12-DATPM-8	12-TA-1-8	12MA8N	12-8 T2HF	3/4	1/2	2.06	0.47	7/8
12-DATPM-12	12-TA-1-12	12MA12N	12-12 T2HF	3/4	3/4	2.06	0.58	1-1/16
12-DATPM-16	12-TA-1-16	12MA16N	12-16 T2HF	3/4	1	2.32	0.58	1-3/8
14-DATPM-8	-	-	-	7/8	1/2	2.13	0.47	15/16
16-DATPM-12	16-TA-1-12	16MA12N	16-12 T2HF	1	3/4	2.31	0.63	1-1/16
16-DATPM-16	16-TA-1-16	16MA16N	16-16 T2HF	1	1	2.60	0.80	1-3/8
20-DATPM-16-NF	20-TA-1-16	-	-	1-1/4	1	3.16	0.88	1-3/8
20-DATPM-20-NF	20-TA-1-20	20MA20N	-	1-1/4	1-1/4	3.16	1.02	1-3/4
20-DATPM-24-NF	-	-	-	1-1/4	1-1/2	3.25	1.02	2-1/8
24-DATPM-24-NF	24-TA-1-24	24MA24N	-	1-1/2	1-1/2	3.72	1.25	2-1/8
32-DATPM-32-NF	32-TA-1-32	32MA32N	-	2	2	4.70	1.72	2-3/4

## DATPM-BSPT/SATPM-BSPT

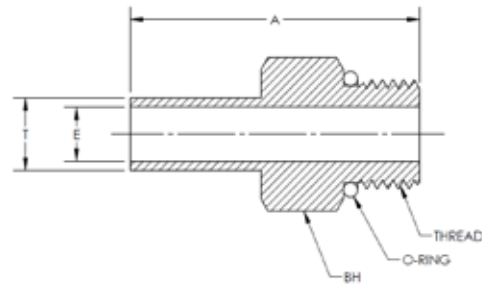
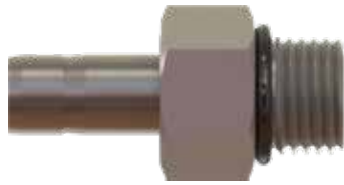
Tube Adapter to BSPT Male Pipe

CBC PART NUMBER	INTERCHANGES WITH		T TUBE O.D.	P PIPE END BSPT	A	E THRU HOLE	BH BODY HEX	
2-DATPM-2-BSPT	2-TA-1-2RT	-	1/8	1/8	1.16	0.08	7/16	
2-DATPM-4-BSPT	2-TA-1-4RT	-	1/8	1/4	1.37	0.08	9/16	
4-DATPM-2-BSPT	4-TA-1-2RT	4MA2K	4-2K T2HFK	1/4	1/8	1.25	0.17	7/16
4-DATPM-4-BSPT	4-TA-1-4RT	4MA4K	4-4K T2HFK	1/4	1/4	1.46	0.17	9/16
6-DATPM-4-BSPT	6-TA-1-4RT	6MA4K	6-4K T2HFK	3/8	1/4	1.53	0.27	9/16
6-DATPM-6-BSPT	6-TA-1-6RT	6MA6K	6-6K T2HFK	3/8	3/8	1.56	0.27	11/16
6-DATPM-8-BSPT	6-TA-1-8RT	6MA8K	6-8K T2HFK	3/8	1/2	1.78	0.27	7/8
8-DATPM-4-BSPT	8-TA-1-4RT	8MA4K	8-4K T2HFK	1/2	1/4	1.75	0.28	9/16
8-DATPM-6-BSPT	8-TA-1-6RT	8MA6K	8-6K T2HFK	1/2	3/8	1.78	0.37	11/16
8-DATPM-8-BSPT	8-TA-1-8RT	8MA8K	8-8K T2HFK	1/2	1/2	2.00	0.37	7/8
10-DATPM-8-BSPT	-	10MA8K	10-8K T2HFK	5/8	1/2	2.06	0.47	7/8
12-DATPM-12-BSPT	12-TA-1-12RT	-	-	3/4	3/4	2.06	0.58	1-1/16
16-DATPM-16-BSPT	16-TA-1-16RT	-	-	1	1	2.60	0.80	1-3/8
20-DATPM-20-BSPT-NF	20-TA-1-20-RT	-	-	1-1/4	1-1/4	3.16	1.02	1-7/8

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

# DATPM-STB/SATPM-STB

## Adapter Tube to Straight Thread Boss



CBC PART NUMBER	INTERCHANGES WITH	CS PART NUMBER	INTERCHANGES WITH	T TUBE O.D.	THREAD	A	E THRU HOLE	BH BODY HEX	
2-DATPM-2-STB	2-TA-1-2ST	-	2-SATPM-2-STB	-	1/8	5/16-24	1.20	0.08	7/16
4-DATPM-4-STB	4-TA-1-4ST	-	4-SATPM-4-STB	-	1/4	7/16-20	1.39	0.17	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	9/16
6-DATPM-6-STB	6-TA-1-6ST	-	6-SATPM-6-STB	-	3/8	9/16-18	1.52	0.27	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	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	11/16
8-DATPM-8-STB	8-TA-1-8ST	-	8-SATPM-8-STB	-	1/2	3/4-16	1.82	0.38	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	1
12-DATPM-12-STB	12-TA-1-12ST	-	12-SATPM-12-STB	-	3/4	1-1/16-12	2.10	0.58	1-1/4
16-DATPM-16-STB	16-TA-1-16ST	-	16-SATPM-16-STB	-	1	1-5/16-12	2.41	0.80	1-1/2
20-DATPM-20-STB-NF	20-TA-1-20ST	-	-	-	1-1/4	1-5/8-12	2.81	1.02	1-7/8
24-DATPM-24-STB-NF	24-TA-1-24ST	24TUHOA24	-	-	1-1/2	1-7/8-12	3.28	1.25	2-1/8

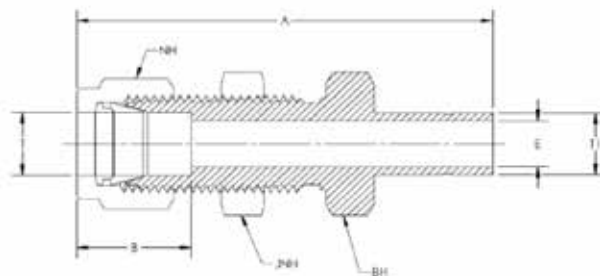
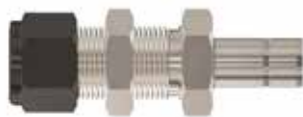
**NOTE:** Dimensions subject to change, to be used for reference only.

- 1/16", 1/8", and 3/16" adapters come standard without a groove.
- 1-1/4", 1-1/2", and 2" adapters are furnished with preswaged nuts and ferrules.
- Add "-NF" for preswaged nuts and ferrules.
- Straight thread connectors adapt to SAE J1926-1 and ISO 1126-1 ports.
- Parts are supplied with FKM Fluorocarbon O-Rings. Other options are available upon request.
- Standard straight thread connectors are designed to withstand SAE J1926-3 pressure ratings.
- Add "-HD" suffix for pressures rated to SAE J1926-2 straight thread ends or adapter ends that meet max wall recommended tubing pressures.

# 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	NH NUT HEX	BH BODY HEX	JNH JAM NUT HEX	PANEL HOLE SIZE	MAX HOLE THICK.
4-DBHA-4	400-R1-4 4TUBC4	4-SBHA-4	4-4 T2H2BZ	1/4	1/4	2.20	0.61	0.17	9/16	5/8	5/8	29/64	0.40
6-DBHA-6	600-R1-6 6TUBC6	6-SBHA-6	6-6 T2H2BZ	3/8	3/8	2.41	0.67	0.27	11/16	3/4	3/4	37/64	0.44
8-DBHA-8	800-R1-8 8TUBC8	8-SBHA-8	8-8 T2H2BZ	1/2	1/2	2.87	0.90	0.38	7/8	15/16	15/16	49/64	0.50

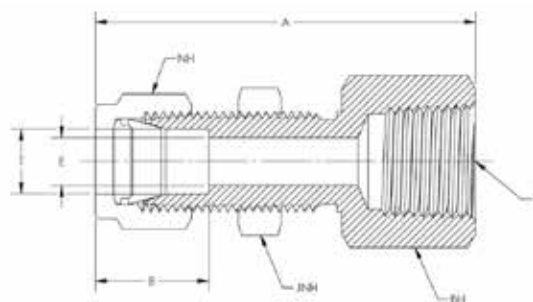
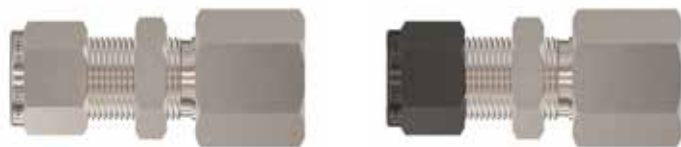
**NOTE:** Dimensions subject to change, to be used for reference only.

- 1/16", 1/8", and 3/16" adapters come standard without a groove.
- 1-1/4", 1-1/2", and 2" adapters are furnished with preswaged nuts and ferrules.
- Add "-NF" for preswaged nuts and ferrules.
- Add "-HD" suffix for pressures rated to SAE J1926-2 straight thread ends or adapter ends that meet max wall recommended tubing pressures.

# DBHFP/SBHFP

## Bulkhead Female Pipe Connector

CBC/CS-Lok



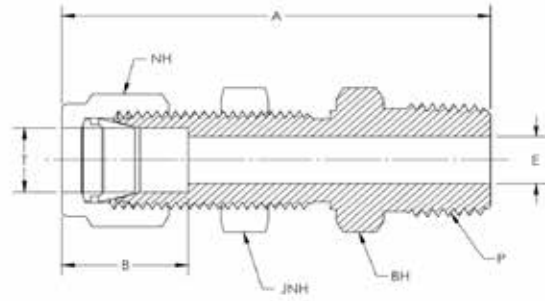
CBC PART NUMBER	INTERCHANGES WITH		CS PART NUMBER	INTERCHANGES WITH	T TUBE O.D.	P PIPE END NPT	A	B	E THRU HOLE	NH NUT HEX	JNH JAM NUT HEX	BH BODY HEX	PANEL HOLE SIZE	MAX HOLE THICK.
2-DBHFP-2	200-71-2	2FBC2N	2-SBHFP-2	2-2 GH2BZ	1/8	1/8	1.77	0.52	0.09	7/16	1/2	9/16	21/64	0.50
4-DBHFP-2	400-71-2	4FBC2N	4-SBHFP-2	4-2 GH2BZ	1/4	1/8	1.85	0.61	0.19	9/16	5/8	5/8	29/64	0.40
4-DBHFP-4	400-71-4	4FBC4N	4-SBHFP-4	4-4 GH2BZ	1/4	1/4	2.04	0.61	0.19	9/16	5/8	3/4	29/64	0.40
5-DBHFP-2	-	5FBC2N	5-SBHFP-2	-	5/16	1/8	1.96	0.65	0.25	5/8	11/16	11/16	33/64	0.44
6-DBHFP-4	600-71-4	6FBC4N	6-SBHFP-4	6-4 GH2BZ	3/8	1/4	2.17	0.67	0.28	11/16	3/4	3/4	37/64	0.44
6-DBHFP-6	600-71-6	6FBC6N	6-SBHFP-6	6-6 GH2BZ	3/8	3/8	2.23	0.67	0.28	11/16	3/4	7/8	37/64	0.44
8-DBHFP-6	810-71-6	8FBC6N	8-SBHFP-6	8-6 GH2BZ	1/2	3/8	2.43	0.90	0.41	7/8	15/16	15/16	49/64	0.50
8-DBHFP-8	810-71-8	8FBC8N	8-SBHFP-8	8-8 GH2BZ	1/2	1/2	2.62	0.90	0.41	7/8	15/16	1-1/16	49/64	0.50
10-DBHFP-8	-	10FBC8N	10-SBHFP-8	-	5/8	1/2	2.65	0.96	0.50	1	1-1/16	1-1/16	57/64	0.50
16-DBHFP-16	1610-71-16	16FBC16N	16-SBHFP-16	16-16 GH2BZ	1	1	3.68	1.24	0.88	1-1/2	1-5/8	1-5/8	1-21/64	0.75

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

# DBHMP/SBHMP

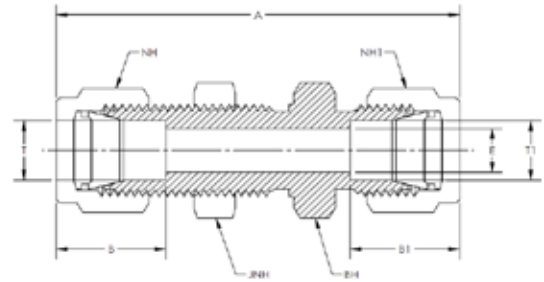
## Bulkhead Male Pipe Connector

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	NH NUT HEX	JNH JAM NUT HEX	BH BODY HEX	PANEL HOLE SIZE	MAX HOLE THICK.
2-DBHMP-2	200-11-2	2MBC2N	2-SBHMP-2	2-2 FH2BZ	1/8	1/8	1.83	0.52	0.09	7/16	1/2	1/2	21/64	0.50
4-DBHMP-2	400-11-2	4MBC2N	4-SBHMP-2	4-2 FH2BZ	1/4	1/8	1.95	0.61	0.19	9/16	5/8	5/8	29/64	0.40
4-DBHMP-4	400-11-4	4MBC4N	4-SBHMP-4	4-4 FH2BZ	1/4	1/4	2.13	0.61	0.19	9/16	5/8	5/8	29/64	0.40
4-DBHMP-6	-	4MBC6N	4-SBHMP-6	4-6 FH2BZ	1/4	3/8	2.17	0.61	0.19	9/16	5/8	11/16	29/64	0.40
4-DBHMP-8	-	4MBC8N	4-SBHMP-8	4-8 FH2BZ	1/4	1/2	2.38	0.61	0.19	9/16	5/8	3/4	29/64	0.40
6-DBHMP-4	600-11-4	6MBC4N	6-SBHMP-4	6-4 FH2BZ	3/8	1/4	2.26	0.67	0.28	11/16	3/4	7/8	37/64	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	11/16	3/4	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	11/16	3/4	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	7/8	15/16	15/16	49/64	0.50
8-DBHMP-6	810-11-6	8MBC6N	8-SBHMP-6	8-6 FH2BZ	1/2	3/8	2.49	0.90	0.38	7/8	15/16	15/16	49/64	0.50
8-DBHMP-8	810-11-8	8MBC8N	8-SBHMP-8	8-8 FH2BZ	1/2	1/2	2.71	0.90	0.41	7/8	15/16	15/16	49/64	0.50
12-DBHMP-12	1210-11-12	12MBC12N	12-SBHMP-12	12-12 FH2BZ	3/4	3/4	3.00	0.96	0.63	1-1/8	1-3/16	1-3/16	1-1/64	0.66
12-DBHMP-16	-	-	12-SBHMP-16	-	3/4	1	3.26	0.96	0.63	1-1/8	1-3/16	1-3/8	1-1/64	0.66
16-DBHMP-16	1610-11-16	16MBC16N	16-SBHMP-16	16-16 FH2BZ	1	1	3.67	1.02	0.88	1-1/2	1-5/8	1-5/8	1-21/64	0.75

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



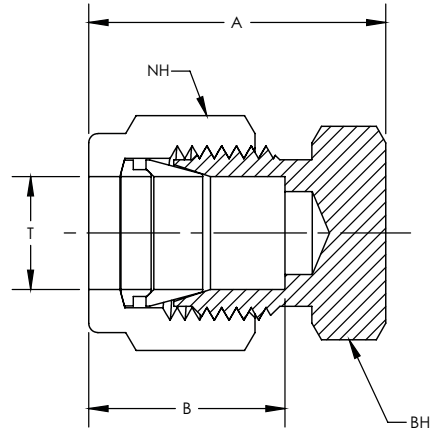
CBC PART NUMBER	INTERCHANGES WITH		CS PART NUMBER	INTERCHANGES WITH		T TUBE O.D.	T1 TUBE O.D.	A	B	B1	E THRU HOLE	NH NUT HEX	NH1 NUT HEX	BH BODY HEX	JNH JAM NUT HEX	PANEL HOLE SIZE	MAX HOLE THICK.
1-DBHU-1	100-61	1BC1	1-SBHU-1	1-1 WBZ		1/16	1/16	1.24	0.35	0.35	0.05	5/16	5/16	5/16	5/16	13/64	0.12
2-DBHU-2	200-61	2BC2	2-SBHU-2	2-2 WBZ		1/8	1/8	2.02	0.52	0.52	0.09	7/16	7/16	1/2	1/2	21/64	0.50
3-DBHU-3	300-61	3BC3	3-SBHU-3	3-3 WBZ		3/16	3/16	2.11	0.54	0.54	0.13	1/2	1/2	9/16	9/16	25/64	0.50
4-DBHU-4	400-61	4BC4	4-SBHU-4	4-4 WBZ		1/4	1/4	2.27	0.61	0.61	0.19	9/16	9/16	5/8	5/8	29/64	0.40
4-DBHU-6	-	-	4-SBHU-6	-		1/4	3/8	2.33	0.61	0.67	0.19	9/16	11/16	5/8	5/8	29/64	0.40
5-DBHU-5	500-61	5BC5	5-SBHU-5	5-5 WBZ		5/16	5/16	2.39	0.65	0.65	0.25	5/8	5/8	11/16	11/16	33/64	0.44
6-DBHU-6	600-61	6BC6	6-SBHU-6	6-6 WBZ		3/8	3/8	2.45	0.67	0.67	0.28	11/16	11/16	3/4	3/4	37/64	0.44
8-DBHU-8	810-61	8BC8	8-SBHU-8	8-8 WBZ		1/2	1/2	2.80	0.90	0.90	0.41	7/8	7/8	15/16	15/16	49/64	0.50
10-DBHU-10	1010-61	10BC10	10-SBHU-10	10-10 WBZ		5/8	5/8	2.86	0.96	0.96	0.50	1	1	1-1/16	1-1/16	57/64	0.50
12-DBHU-12	1210-61	12BC12	12-SBHU-12	12-12 WBZ		3/4	3/4	3.11	0.96	0.96	0.63	1-1/8	1-1/8	1-3/16	1-3/16	1-1/64	0.66
14-DBHU-14	1410-61	14BC14	14-DBHU-14	14-14 WBZ		7/8	7/8	3.33	1.02	1.02	0.72	1-1/4	1-1/4	1-3/8	1-3/8	1-9/64	0.66
16-DBHU-16	1610-61	16BC16	16-SBHU-16	16-16 WBZ		1	1	3.77	1.24	1.24	0.88	1-1/2	1-1/2	1-5/8	1-5/8	1-21/64	0.75
20-DBHU-20	2000-61	-	-	-		1-1/4	1-1/4	4.85	1.62	1.62	1.09	1-7/8	1-7/8	1-7/8	1-7/8	1-41/64	0.75
24-DBHU-24	2400-61	-	-	-		1-1/2	1-1/2	5.48	1.97	1.97	1.34	2-1/4	2-1/4	2-1/4	2-1/4	1-61/64	0.75
32-DBHU-32	3200-61	-	-	-		2	2	7.10	2.66	2.66	1.81	3	3	2-3/4	2-3/4	2-41/64	0.75

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	0.35	5/16	5/16
2-DCAP	200-C	2BLEN2	2-SCAP	2 PNBZ	1/8	0.79	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	0.96	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	1.21	0.90	7/8	13/16
10-DCAP	1010-C	10BLEN10	10-SCAP	10 PNBZ	5/8	1.24	0.96	1	15/16
12-DCAP	1210-C	12BLEN12	12-SCAP	12 PNBZ	3/4	1.27	0.96	1-1/8	1-1/16
14-DCAP	1410-C	14BLEN14	14-SCAP	14 PNBZ	7/8	1.37	1.02	1-1/4	1-3/16
16-DCAP	1610-C	16BLEN16	16-SCAP	16 PNBZ	1	1.61	1.24	1-1/2	1-3/8
B-18-DCAP	B-1810-C	-	-	-	1-1/8	1.61	1.25	1-3/4	1-5/8
20-DCAP	2000-C	20BLEN20	-	-	1-1/4	2.10	1.62	1-7/8	1-3/4
24-DCAP	2400-C	24BLEN24	-	-	1-1/2	2.54	1.97	2-1/4	2-1/8
32-DCAP	3200-C	32BLEN32	-	-	2	3.41	2.66	3	2-3/4

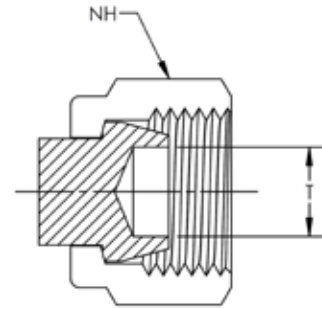
NOTE: Dimensions subject to change, to be used for reference only.



# DF PLUG/SF PLUG

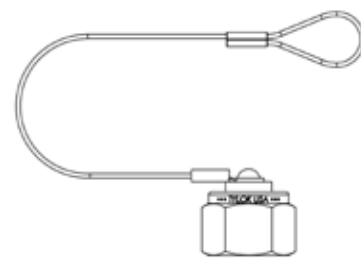
Plug

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	SF PLUG-1	1 FNZ	1/16 5/16
2-DF PLUG	200-P	2BLP2	SF PLUG-2	2 FNZ	1/8 7/16
3-DF PLUG	300-P	3BLP3	SF PLUG-3	3 FNZ	3/16 1/2
4-DF PLUG	400-P	4BLP4	SF PLUG-4	4 FNZ	1/4 9/16
5-DF PLUG	500-P	5BLP5	SF PLUG-5	5 FNZ	5/16 5/8
6-DF PLUG	600-P	6BLP6	SF PLUG-6	6 FNZ	3/8 11/16
8-DF PLUG	810-P	8BLP8	SF PLUG-8	8 FNZ	1/2 7/8
10-DF PLUG	1010-P	10BLP10	SF PLUG-10	10 FNZ	5/8 1
12-DF PLUG	1210-P	12BLP12	SF PLUG-12	12 FNZ	3/4 1-1/8
14-DF PLUG	1410-P	14BLP14	SF PLUG-14	14 FNZ	7/8 1-1/4
16-DF PLUG	1610-P	16BLP16	SF PLUG-16	16 FNZ	1 1-1/2
18-B-DF PLUG	B-1810-P	-	-	-	1-1/8 1-3/4
20-DF PLUG	2000-P	20BLP20	-	-	1-1/4 1-7/8
24-DF PLUG	2400-P	24BLP24	-	-	1-1/2 2-1/4
32-DF PLUG	3200-P	32BLP32	-	-	2 3

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

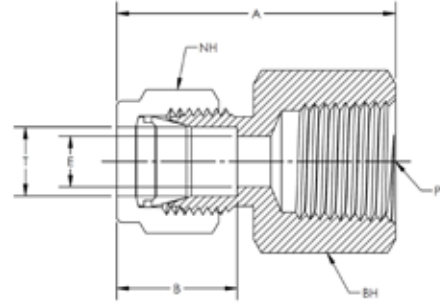


CBC PART NUMBER	INTERCHANGES WITH	CS PART NUMBER	T TUBE O.D.	NH NUT HEX
4-DF PLUG-L	400-P-0013	4-SF PLUG-L	1/4	9/16
5-DF PLUG-L	-	5-SF PLUG-L	5/16	5/8
6-DF PLUG-L	600-P-0012	6-SF PLUG-L	3/8	11/16
8-DF PLUG-L	810-P-0006	8-SF PLUG-L	1/2	7/8
10-DF PLUG-L	-	10-SF PLUG-L	5/8	1
12-DF PLUG-L	1210-P-0005	12-SF PLUG-L	3/4	1-1/8
14-DF PLUG-L	-	14-SF PLUG-L	7/8	1-1/4
16-DF PLUG-L	-	16-SF PLUG-L	1	1-1/2

# DFC/SFC

## Female Connector

CBC/CS-Lok

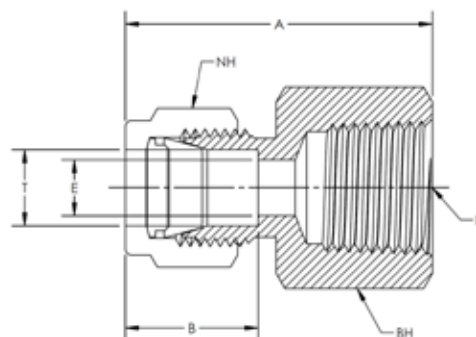


CBC PART NUMBER	INTERCHANGES WITH		CS PART NUMBER	INTERCHANGES WITH	T TUBE O.D.	P PIPE END NPT	A	B	E THRU HOLE	NH NUT HEX	BH BODY HEX
2-DFC-2	200-7-2	2FSC2N	2-SFC-2	2-2 GBZ	1/8	1/8	1.15	0.52	0.09	7/16	9/16
2-DFC-4	200-7-4	2FSC4N	2-SFC-4	2-4 GBZ	1/8	1/4	1.33	0.52	0.09	7/16	3/4
2-DFC-6	-	-	2-SFC-6	-	1/8	3/8	1.40	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	1.17	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	6-4 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	1.28	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	1.47	0.65	0.25	5/8	3/4
5-DFC-6	-	5FSC6N	5-SFC-6	5- GBZ	5/16	3/8	1.53	0.65	0.25	5/8	7/8
5-DFC-8	-	-	5-SFC-8	-	5/16	1/2	1.72	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	1.88	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	2.28	0.90	0.41	7/8	1-5/8
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	1.84	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	-
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	1.84	1.02	0.69	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	-	-	16-SFC-8	-	1	1/2	2.15	1.24	0.69	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	-
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
20-DFC-20	2000-7-20	20FSC20N	-	-	1-1/4	1-1/4	2.94	1.62	1.09	1-7/8	2-1/8
24-DFC-24	2400-7-24	24FSC24N	-	-	1-1/2	1-1/2	3.28	1.97	1.34	2-1/4	2-3/8
32-DFC-32	3200-7-32	32FSC32N	-	-	2	2	4.00	2.66	1.81	3	2-7/8

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

# DFC-BSPT/SFC-BSPT

## BSPT Female Connector



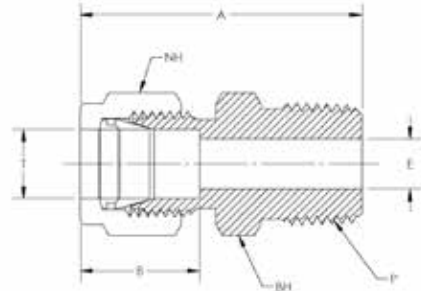
CBC PART NUMBER	INTERCHANGES WITH		CS PART NUMBER	INTERCHANGES WITH		T TUBE O.D.	P PIPE END BSPT	A	B	E THRU HOLE	NH NUT HEX	BH BODY HEX
4-DFC-4-BSPT	400-7-4RT	4FSC4K	4-SFC-4-BSPT	4-4K GBZ	1/4	1/4	1.41	0.61	0.19	9/16	3/4	
4-DFC-6-BSPT	400-7-6RT	4FSC6K	4-SFC-6-BSPT	4-6K GBZ	1/4	3/8	1.48	0.61	0.19	9/16	7/8	
4-DFC-8-BSPT	400-7-8RT	4FSC8K	4-SFC-8-BSPT	4-8K GBZ	1/4	1/2	1.67	0.61	0.19	9/16	1-1/16	
6-DFC-4-BSPT	600-7-4RT	6FSC4K	6-SFC-4-BSPT	6-4K GBZ	3/8	1/4	1.48	0.67	0.28	11/16	3/4	
6-DFC-6-BSPT	600-7-6RT	6FSC6K	6-SFC-6-BSPT	6-6K GBZ	3/8	3/8	1.54	0.67	0.28	11/16	7/8	
6-DFC-8-BSPT	600-7-8RT	6FSC8K	6-SFC-8-BSPT	6-8K GBZ	3/8	1/2	1.73	0.67	0.28	11/16	1-1/16	
8-DFC-4-BSPT	810-7-4RT	8FSC4K	8-SFC-4-BSPT	8-4K GBZ	1/2	1/4	1.59	0.90	0.41	7/8	13/16	
8-DFC-6-BSPT	810-7-6RT	8FSC6K	8-SFC-6-BSPT	8-6K GBZ	1/2	3/8	1.65	0.90	0.41	7/8	7/8	
8-DFC-8-BSPT	810-7-8RT	8FSC8K	8-SFC-8-BSPT	8-8K GBZ	1/2	1/2	1.84	0.90	0.41	7/8	1-1/16	
12-DFC-12-BSPT	1210-7-12RT	-	12-SFC-12-BSPT	-	3/4	3/4	1.90	0.96	0.63	1-1/8	1-5/16	
16-DFC-16-BSPT	1610-7-16RT	-	16-SFC-16-BSPT	-	1	1	2.46	1.24	0.88	1-1/2	1-5/8	
20-DFC-20-BSPT	2000-7-20RT	-	-	-	1-1/4	1-1/4	2.94	1.62	1.09	1-7/8	2-1/8	

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

# DMC/SMC

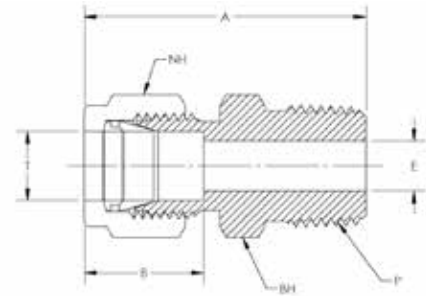
## NPT Male Connector

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
1-DMC-1	100-1-1	1MSC1N	1-SMC-1	1-1 FBZ	1/16	1/16	0.94	0.35	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	0.35	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	200-1-3	2MSC4N	2-SMC-4	2-4 FBZ	1/8	1/4	1.40	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	1.41	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	1.66	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	1.34	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	1.52	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	1.54	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	1.80	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	1.82	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	1.88	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	1.53	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	8-8 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	2.25	0.90	0.41	1	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	
10-DMC-16	-	-	10-SMC-16	-	5/8	1	2.20	0.96	0.50	1	1-3/8	
12-DMC-4	1210-1-4	-	12-SMC-4	-	3/4	1/4	1.80	0.96	0.28	1-1/8	1-1/16	
12-DMC-6	1210-1-6	-	12-SMC-6	-	3/4	3/8	1.80	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	

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-16	1210-1-16	12MSC16N	12-SMC-16	12-16 FBZ	3/4	1	2.25	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	1	1	2.25	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	2.26	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	2.26	1.24	0.63	1-1/2	1-3/8	
16-DMC-16	1610-1-16	16MSC16N	16-SMC-16	16-16 FBZ	1	1	2.45	1.24	0.88	1-1/2	1-3/8	
16-DMC-20	1610-1-20	-	16-SMC-20	-	1	1-1/4	2.56	1.24	0.88	1-1/2	1-3/4	
16-DMC-24	1610-1-24	-	16-SMC-24	-	1	1-1/2	2.77	1.24	0.88	1-1/2	2-1/8	
B-18-DMC-12	B-1810-1-12	-	-	-	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	2.45	1.25	0.88	1-3/4	1-5/8	
20-DMC-16	2000-1-16	-	-	-	1-1/4	1	3.04	1.62	0.88	1-7/8	1-3/4	
20-DMC-20	2000-1-20	20MSC20N	-	-	1-1/4	1-1/4	3.04	1.62	1.09	1-7/8	1-3/4	
20-DMC-24	2000-1-24	-	-	-	1-1/4	1-1/2	3.13	1.62	1.09	1-7/8	2-1/8	
24-DMC-12	-	-	-	-	1-1/2	3/4	3.22	1.97	0.63	2-1/4	2-1/8	
24-DMC-16	2400-1-16	-	-	-	1-1/2	1	3.41	1.97	0.88	2-1/4	2-1/8	
24-DMC-20	2400-1-20	-	-	-	1-1/2	1-1/4	3.41	1.97	1.09	2-1/4	2-1/8	
24-DMC-24	2400-1-24	24MSC24N	-	-	1-1/2	1-1/2	3.50	1.97	1.34	2-1/4	2-1/8	
32-DMC-32	3200-1-32	32MSC32N	-	-	2	2	4.47	2.66	1.81	3	2-3/4	

## DMC-BSPT/SMC-BSPT

### BSPT Male Connector

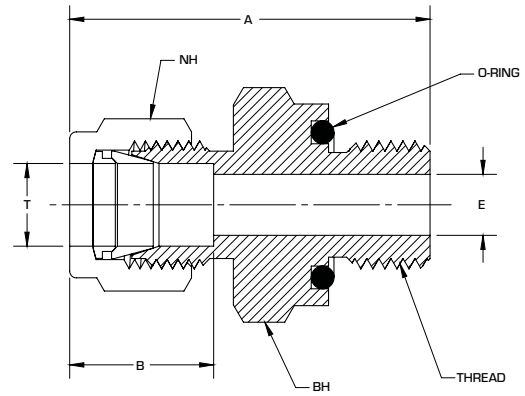
CBC PART NUMBER	INTERCHANGES WITH		CS PART NUMBER	INTERCHANGES WITH		T TUBE O.D.	P PIPE END BSPT	A	B	E THRU HOLE	NH NUT HEX	BH BODY HEX
4-DMC-4-BSPT	400-1-4RT	4MSC4K	4-SMC-4-BSPT	4-4K FBZ	1/4	1/4	1.49	0.61	0.19	9/16	9/16	
6-DMC-6-BSPT	600-1-6RT	6MSC6K	6-SMC-6-BSPT	6-6K-FBZ	3/8	3/8	1.57	0.67	0.66	11/16	11/16	
8-DMC-8-BSPT	810-1-8RT	8MSC8K	8-SMC-8-BSPT	8-8K FBZ	1/2	1/2	1.93	0.90	0.90	7/8	7/8	
12-DMC-12-BSPT	1210-1-12RT	-	12-SMC-12-BSPT	-	3/4	3/4	1.99	0.96	0.96	1-1/8	1-1/16	
16-DMC-16-BSPT	1610-1-16RT	-	16-SMC-16-BSPT	-	1	1	2.45	1.24	1.23	1-1/2	1-3/8	
20-DMC-20-BSPT	2000-1-20RT	-	-	-	1-1/4	1-1/4	3.04	1.62	1.62	1-7/8	1-3/4	
24-DMC-24-BSPT	2400-1-24RT	-	-	-	1-1/2	1-1/2	3.50	1.97	1.34	2-1/4	2-1/8	

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

# DMC-ORS/SMC-ORS

## O-Ring Straight Thread Male Connector

CBC/CS-Lok

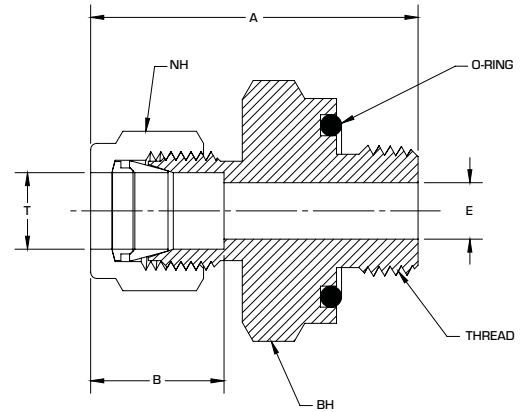


CBC PART NUMBER	INTERCHANGES WITH		CS PART NUMBER	INTERCHANGES WITH		T TUBE O.D.	THREAD	A	B	E THRU HOLE	NH NUT HEX	BH BODY HEX	O-RING
2-DMC-ORS	200-1-OR	M2SC2	2-SMC-ORS	2-2 ZHBA5		1/8	5/16-24	1.30	0.52	0.09	7/16	9/16	AS-011
4-DMC-ORS	400-1-OR	M2SC4	4-SMC-ORS	4-4 ZHBA5		1/4	7/16-20	1.51	0.61	0.19	9/16	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



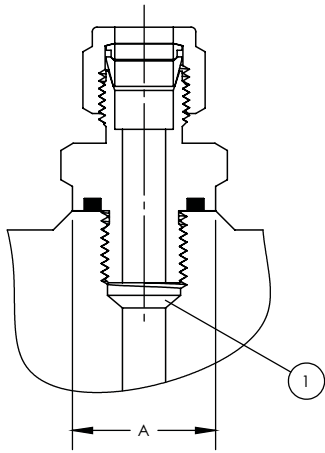
CBC PART NUMBER	INTERCHANGES WITH		CS PART NUMBER	INTERCHANGES WITH		T TUBE O.D.	P PIPE END NPT	A	B	E THRU HOLE	NH NUT HEX	BH BODY HEX	O-RING
4-DMC-2-ORT	400-1-2-OR	4M3SC2	4-SMC-2-ORT	4-2 ZHBF5	1/4	1/8	1.38	0.61	0.19	9/16	3/4	AS-111	
4-DMC-4-ORT	400-1-4-OR	4M3SC4	4-SMC-4-ORT	4-4 ZHBF5	1/4	1/4	1.51	0.61	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

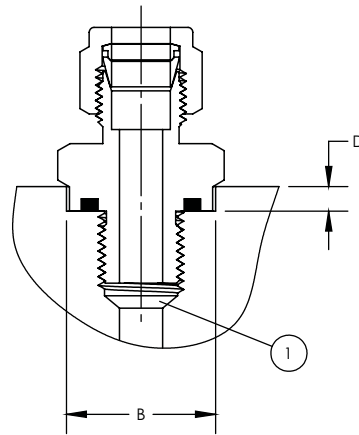
for ORS/ORT Fittings

CBC/CS-Lok



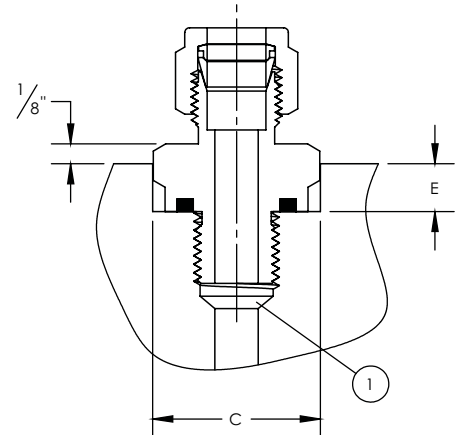
## RAISED SURFACE

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)

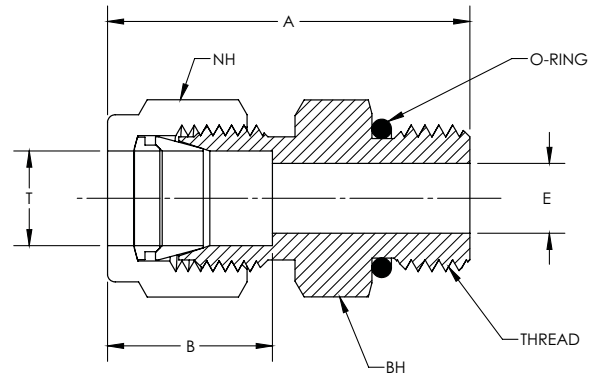
Minimum diameter allows clearance for hex of fitting into recess.

	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 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-DMC-2-STB	200-1-2ST	2M1SC2	2-SMC-2-STB	2-2 ZHBA	1/8	5/16-24	1.19	0.52	0.06	7/16	7/16
4-DMC-2-STB	400-1-2ST	-	4-SMC-2-STB	-	1/4	5/16-24	1.27	0.61	0.06	9/16	1/2
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
4-DMC-6-STB	400-1-6ST	4M1SC6	4-SMC-6-STB	4-6 ZHBA	1/4	9/16-18	1.40	0.61	0.19	9/16	11/16
4-DMC-8-STB	400-1-8ST	4M1SC8	4-SMC-8-STB	4-8 ZHBA	1/4	3/4-16	1.48	0.61	0.19	9/16	7/8
6-DMC-2-STB	-	-	6-SMC-2-STB	-	3/8	5/16-24	1.30	0.67	0.06	11/16	5/8
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
6-DMC-6-STB	600-1-6ST	6M1SC6	6-SMC-6-STB	6-6 ZHBA	3/8	9/16-18	1.46	0.67	0.28	11/16	11/16
6-DMC-8-STB	600-1-8ST	6M1SC8	6-SMC-8-STB	6-8 ZHBA	3/8	3/4-16	1.54	0.67	0.28	11/16	7/8
8-DMC-6-STB	810-1-6ST	8M1CS6	8-SMC-6-STB	8-6 ZHBA	1/2	9/16-18	1.54	0.90	0.28	7/8	13/16
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
8-DMC-10-STB	810-1-10ST	-	8-SMC-10-STB	-	1/2	7/8-14	1.77	0.90	0.41	7/8	1
10-DMC-8-STB	1010-1-8ST	-	10-SMC-8-STB	-	5/8	3/4-16	1.65	0.96	0.39	1	15/16
10-DMC-10-STB	1010-1-10ST	10M1SC10	10-SMC-10-STB	10-10 ZHBA	5/8	7/8-14	1.78	0.96	0.48	1	1
12-DMC-8-STB	1210-1-8ST	-	12-SMC-8-STB	-	3/4	3/4-16	1.81	0.96	0.39	1-1/8	1-1/16
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
16-DMC-12-STB	1610-1-12ST	16M1SC12	16-SMC-12-STB	16-12 ZHBA	1	1-1/16-12	2.10	1.24	0.61	1-1/2	1-3/8
16-DMC-16-STB	1610-1-16ST	16M1SC16	16-SMC-16-STB	16-16 ZHBA	1	1-5/16-12	2.14	1.24	0.84	1-1/2	1-1/2
16-DMC-20-STB	1610-1-20ST	-	16-SMC-20-STB	-	1	1-5/8-12	2.14	1.24	0.88	1-1/2	1-7/8
20-DMC-16-STB	2000-1-16ST	-	-	-	1-1/4	1-5/16-12	2.69	1.62	0.84	1-7/8	1-3/4
20-DMC-20-STB	2000-1-20ST	20M1SC20	-	-	1-1/4	1-5/8-12	2.69	1.62	1.08	1-7/8	1-7/8
24-DMC-24-STB	2400-1-24ST	24M1SC24	-	-	1-1/2	1-7/8-12	3.06	1.97	1.31	2-1/4	2-1/8
32-DMC-32-STB	3200-1-32ST	32M1SC32	-	-	2	2-1/2-12	4.00	2.66	1.77	3	2-3/4

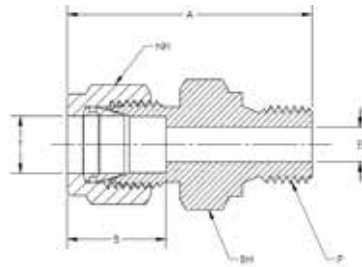
**NOTE:** Dimensions subject to change, to be used for reference only.

- Straight thread connectors adapt to SAE J1926-1 and ISO 1126-1 ports.
- Parts are supplied with FKM Fluorocarbon O-Rings. Other options are available upon request.
- Standard straight thread connectors are designed to withstand SAE J1926-3 pressure ratings.
- Add "-HD" suffix for straight thread connectors designed to withstand SAE J1926-2 pressure ratings.

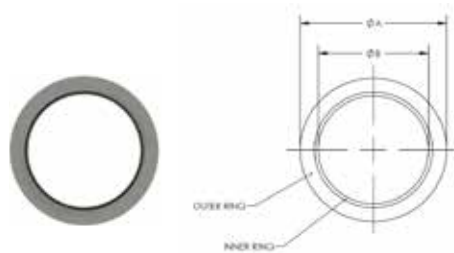
# DMC-RS/SMC-RS

## BSPF Straight Thread Male Connector

CBC/CS-Lok



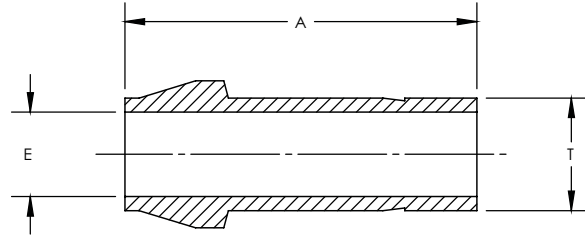
CBC PART NUMBER	INTERCHANGES WITH	CS PART NUMBER	INTERCHANGES WITH	T TUBE O.D.	P BSPP THREAD SIZE	A	B	E THRU HOLE	NH NUT HEX	BH BODY HEX	
2-DMC-2-RS	200-1-2RS	2MSC2R	2-SMC-2-RS	2-2R FBZ	1/8	1/8	1.31	0.52	0.09	7/16	9/16
2-DMC-4-RS	200-1-4RS	2MSC4R	2-SMC-4-RS	2-4R FBZ	1/8	1/4	1.50	0.52	0.09	7/16	3/4
2-DMC-6-RS	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	16MSC12R	16-SMC-12-RS	16-12R FBZ	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
20-DMC-20-RS	2000-1-20RS	20MSC20R	-	-	1-1/4	1-1/4	3.12	1.62	1.13	1-7/8	2
24-DMC-24-RS	2400-1-24RS	24MSC24R	-	-	1-1/2	1-1/2	3.58	1.97	1.25	2-1/4	2-1/4



PART NUMBER	INTERCHANGES WITH	B BSPP THREAD SIZE	A	B	THICKNESS	PRESSURE RATING (PSIG)
SS-RSGK-2-F	SS-2-RS-2V M30201-SS	1/8	0.63	0.41	0.41	5300
SS-RSGK-4-F	SS-4-RS-2V M30202-SS	1/4	0.81	0.54	0.54	5500
SS-RSGK-6-F	SS-6-RS-2V M30203-SS	3/8	0.94	0.68	0.68	4400
SS-RSGK-8-F	SS-8-RS-2V M30204-SS	1/2	1.13	0.85	0.85	4000
SS-RSGK-10-F	-	5/8	1.25	0.92	0.92	4500
SS-RSGK-12-F	SS-12-RS-2V M30206-SS	3/4	1.38	1.07	1.07	3800
SS-RSGK-16-F	SS-16-RS-2V M30208-SS	1	1.69	1.33	1.33	2800
SS-RSGK-20-F	SS-20-RS-2V	1-1/4	2.06	1.69	1.69	2400
SS-RSGK-24-F	SS-24-RS-2V	1-1/2	2.31	1.91	1.91	2500

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

- BSPP threaded end requires a sealing washer.
- Standard materials are Stainless Steel Outer Ring and FKM Fluorocarbon Inner Ring.
- Pressure ratings are based on ASME B31.3 min wall calculations with a stress value of 20,000 psi.
- For Carbon Steel Outer Ring, replace "SS" with "S".
- For NBR (Buna-N) Inner Ring, replace "F" with "B".



CBC PART NUMBER	INTERCHANGES WITH		CS PART NUMBER	INTERCHANGES WITH		T TUBE O.D.	A	E THRU HOLE
2-DPCU	201-PC	2PC2	2-SPCU	2-2 ZPC		1/8	0.95	0.08
4-DPCU	401-PC	4PC4	4-SPCU	4-4 ZPC		1/4	1.06	0.17
6-DPCU	601-PC	6PC6	6-SPCU	6-6 ZPC		3/8	1.17	0.27
8-DPCU	811-PC	8PC8	8-SPCU	8-8 ZPC		1/2	1.59	0.38
10-DPCU	1011-PC	-	10-SPCU	10-10 ZPC		5/8	1.66	0.47
12-DPCU	1211-PC	12PC12	12-SPCU	12-12 ZPC		3/4	1.66	0.58
16-DPCU	1611-PC	16PC16	16-SPCU	16-16 ZPC		1	2.09	0.80
20-DPCU-NF	2000-PC	-	-	-		1-1/4	2.72	1.02
24-DPCU-NF	2400-PC	-	-	-		1-1/2	3.31	1.25
32-DPCU-NF	3200-PC	-	-	-		2	4.56	1.72

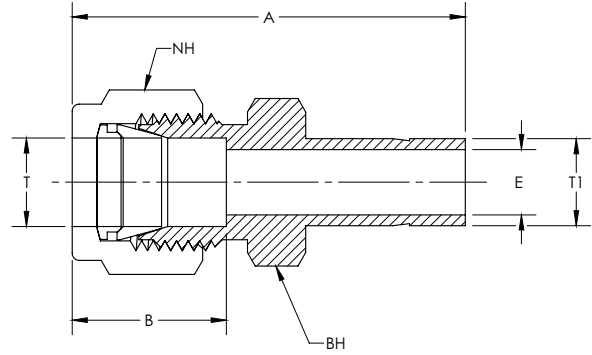
**NOTE:** Dimensions subject to change, to be used for reference only.

- 1/16", 1/8", and 3/16" adapters come standard without a groove.
- 1-1/4", 1 1/2", and 2" adapters are furnished with preswaged nuts and ferrules.
- Add "-NF" for preswaged nuts and ferrules.
- Add "-HD" for thick wall adapters with pressures ratings that match max recommended tube.

# 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	0.35	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	4TUR3	3-SRATT-4	4-3 TRBZ	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	8-8 TRBZ	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	810-R-14	-	8-SRATT-14	14-8 TRBZ	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	1010-R-16	16TUR10	10-SRATT-16	16-10 TRBZ	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	1410-R-16	16TUR14	14-SRATT-16	16-14 TRBZ	7/8	1	2.54	1.02	0.72	1-1/4	1-3/16
16-DRATT-16	1610-R-16	16TUR16	16-SRATT-16	16-16 TRBZ	1	1	2.82	1.24	0.80	1-1/2	1-3/8
16-DRATT-20-NF	1610-R-20	20TUR16	-	-	1	1-1/4	3.17	1.24	0.88	1-1/2	1-7/8
16-DRATT-24-NF	1610-R-24	24TUR16	-	-	1	1-1/2	3.51	1.24	0.88	1-1/2	2-1/4
16-DRATT-32-NF	1610-R-32	32TUR16	-	-	1	2	4.43	1.24	0.88	1-1/2	3
20-DRATT-16	2000-R-16	16TUR20	-	-	1-1/4	1	3.41	1.62	0.80	1-7/8	1-3/4
20-DRATT-24-NF	2000-R-24	23TUR20	-	-	1-1/4	1-1/2	4.10	1.62	1.09	1-7/8	1-3/4
20-DRATT-32-NF	2000-R-32	32TUR20	-	-	1-1/4	2	4.93	1.62	1.09	1-7/8	2-1/8
24-DRATT-32-NF	2400-R-32	32TUR24	-	-	1-1/2	2	5.17	1.97	1.34	2-1/4	2-1/8

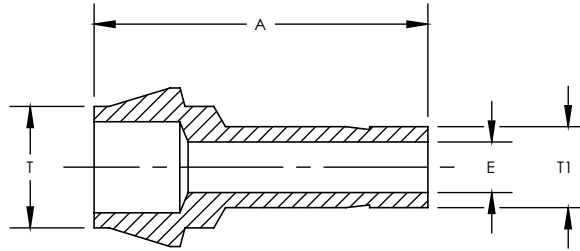
**NOTE:** Dimensions subject to change, to be used for reference only.

- 1/16", 1/8", and 3/16" adapters come standard without a groove.
- 1-1/4", 1-1/2", and 2" adapters are furnished with preswaged nuts and ferrules.
- Add "-NF" for preswaged nuts and ferrules on the adapter end to the end of the part number.
- Add "-HD" for thick wall adapters with pressures ratings that match max recommended tube to the end of the part number.

# 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	0.94	0.08
6-DRPC-4	601-PC-4 4PC6	6-SRPC-4	4-6 ZPC	3/8	1/4	1.03	0.17
8-DRPC-4	811-PC-4 4PC8	8-SRPC-4	4-8 ZPC	1/2	1/4	1.23	0.17
8-DRPC-6	811-PC-6 6PC8	8-SRPC-6	6-8 ZPC	1/2	3/8	1.28	0.27
12-DRPC-8	1211-PC-8 8PC12	12-SRPC-8	8-12 ZPC	3/4	1/2	1.53	0.38
16-DRPC-8	1611-PC-8 -	16-SRPC-8	-	1	1/2	1.78	0.38

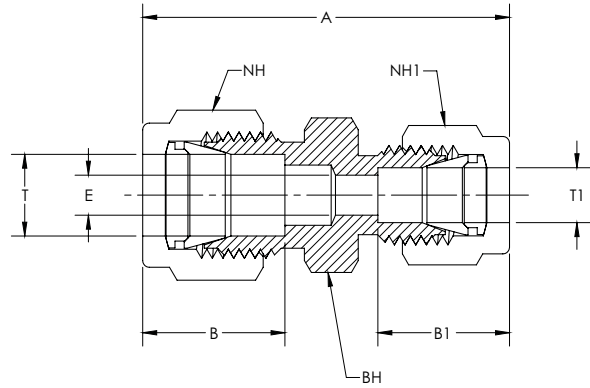
**NOTE:** Dimensions subject to change, to be used for reference only.

- 1/16", 1/8", and 3/16" adapters come standard without a groove.
- 1-1/4", 1-1/2", and 2" adapters are furnished with preswaged nuts and ferrules.
- Add "-NF" for preswaged nuts and ferrules.
- Add "-HD" for thick wall adapters with pressures ratings that match max recommended tube.

# DRU/SRU

## Reducer Union

CBC/CS-Lok

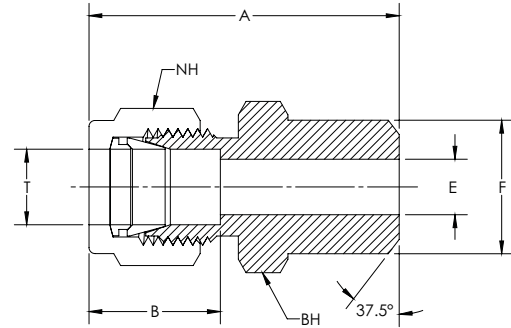


CBC PART NUMBER	INTERCHANGES WITH	CS PART NUMBER	INTERCHANGES WITH	T TUBE O.D.	T1 TUBE O.D.	A	B	B1	E THRU HOLE	NH NUT HEX	NH1 NUT HEX	BH BODY HEX	
2-DRU-1	200-6-1	2RU1	2-SRU-1	2-1 HBZ	1/8	1/16	1.23	0.52	0.35	0.05	7/16	5/16	7/16
4-DRU-1	400-6-1	4RU1	4-SRU-1	4-1 HBZ	1/4	1/16	1.35	0.61	0.35	0.05	9/16	5/16	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	0.35	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-5	-	-	8-SRU-5	-	1/2	5/16	1.87	0.90	0.65	0.25	7/8	5/8	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	2.00	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-6	-	-	16-SRU-6	-	1	3/8	2.31	1.24	0.67	0.28	1-1/2	11/16	1-3/8
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
20-DRU-16	2000-6-16	20RU16	-	20-16 HBZ	1-1/4	1	3.17	1.62	1.24	0.88	1-7/8	1-1/2	1-3/4
24-DRU-16	2400-6-16	24RU16	-	24-16 HBZ	1-1/2	1	3.52	1.97	1.24	0.88	2-1/4	1-1/2	2-1/8

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

# DTBW/STBW

## Tube to Pipe Butt Weld Connector



CBC PART NUMBER	INTERCHANGES WITH		CS PART NUMBER	INTERCHANGES WITH		T TUBE OD	P PIPE SIZE	A	B	E THRU HOLE	F	NH NUT HEX	BW HEX FLAT
2-DTBW-2	200-1-2W	2-1/8 ZHLW2	2-STBW-2	2-1/8 ZHBW2	1/8	1/8	1.20	0.52	0.09	0.405	7/16	7/16	
3-DTBW-2	300-1-2W	3-1/8 ZHLW2	3-STBW-2	3-1/8 ZHBW2	3/16	1/8	1.23	0.54	0.12	0.405	1/2	7/16	
4-DTBW-2	400-1-2W	4-1/8 ZHLW2	4-STBW-2	4-1/8 ZHBW2	1/4	1/8	1.29	0.61	0.19	0.405	9/16	1/2	
4-DTBW-4	400-1-4W	4-1/4 ZHLW2	4-STBW-4	4-1/4 ZHBW2	1/4	1/4	1.49	0.61	0.19	0.540	9/16	9/16	
5-DTBW-2	500-1-2W	5-1/8 ZHLW2	5-STBW-2	5-1/8 ZHBW2	5/16	1/8	1.34	0.65	0.21	0.405	5/8	9/16	
5-DTBW-4	500-1-4W	5-1/4 ZHLW2	5-STBW-4	5-1/4 ZHBW2	5/16	1/4	1.52	0.65	0.25	0.540	5/8	9/16	
6-DTBW-4	600-1-4W	6-1/4 ZHLW2	6-STBW-4	6-1/4 ZHBW2	3/8	1/4	1.57	0.67	0.28	0.540	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	1.57	0.67	0.28	0.675	11/16	11/16	
6-DTBW-8	600-1-8W	6-1/2 ZHLW2	6-STBW-8	6-1/2 ZHBW2	3/8	1/2	1.82	0.67	0.28	0.840	11/16	7/8	
6-DTBW-12	600-1-12W	6-3/4 ZHLW2	6-STBW-12	6-3/4 ZHBW2	3/8	3/4	1.88	0.67	0.28	1.050	11/16	1-1/16	
8-DTBW-6	810-1-6W	8-3/8 ZHLW2	8-STBW-6	8-3/8 ZHBW2	1/2	3/8	1.71	0.96	0.41	0.675	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	0.96	0.41	0.840	7/8	7/8	
8-DTBW-12	810-1-12W	8-3/4 ZHLW2	8-STBW-12	8-3/4 ZHBW2	1/2	3/4	1.99	0.96	0.41	1.050	7/8	1-1/16	
8-DTBW-16	810-1-16W	-	8-STBW-16	-	1/2	1	2.25	0.96	0.41	1.315	7/8	1-3/8	
10-DTBW-8	1010-1-8W	10-1/2 ZHLW2	10-STBW-8	10-1/2 ZHBW2	5/8	1/2	1.93	0.96	0.50	0.840	1	15/16	
12-DTBW-8	1210-1-8W	-	12-STBW-8	-	3/4	1/2	1.99	0.96	0.55	0.840	1-1/8	1-1/16	
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	1.050	1-1/8	1-1/16	
16-DTBW-12	1610-1-12W	-	16-STBW-12	-	1	3/4	2.24	1.24	0.73	1.050	1-1/2	1-3/8	
16-DTBW-16	1610-1-16W	16-1 ZHLW2	16-STBW-16	16-1 ZHBW2	1	1	2.45	1.24	0.88	1.315	1-1/2	1-3/8	
20-DTBW-20	2000-1-20W	-	-	-	1-1/4	1-1/4	3.04	1.62	1.09	1.660	1-7/8	1-3/4	
24-DTBW-24	2400-1-24W	-	-	-	1-1/2	1-1/2	3.50	1.97	1.34	1.900	2-1/4	2-1/8	
32-DTBW-32	3200-1-32W	-	-	-	2	2	4.47	2.66	1.81	2.375	3	2-3/4	

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

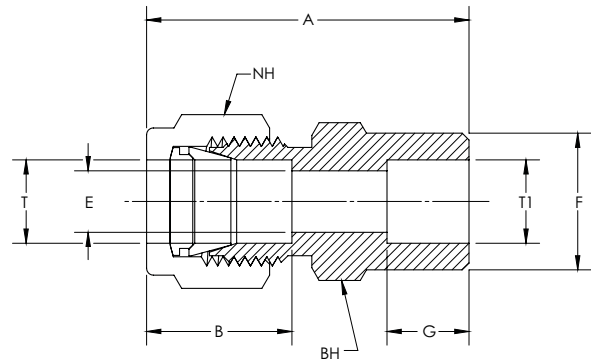
Wall Thickness at weld end is based on schedule 80 pipe.

- Fittings may have a larger ID on weld end.
- Carbon steel bodies are not plated.

# DTSW/STSW

## Tube to Tube Socket Weld Connector

CBC/CS-Lok

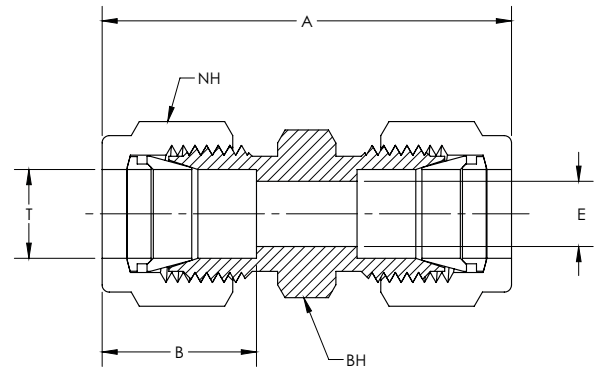


CBC PART NUMBER	INTERCHANGES WITH		CS PART NUMBER	INTERCHANGES WITH		T TUBE OD	T1 SOCKET WELD	A	B	E THRU HOLE	F	G	NH NUT HEX	BH HEX FLAT
2-DTSW-2	200-6-2W	2-2 ZHLW	2-STSW-2	2-2 ZHBW	1/8	1/8	1.14	0.52	0.09	0.29	0.10	7/16	7/16	
4-DTSW-4	400-6-4W	4-4 ZHLW	4-STSW-4	4-4 ZHBW	1/4	1/4	1.32	0.61	0.19	0.48	0.28	9/16	1/2	
6-DTSW-6	600-6-6W	6-6 ZHLW	6-STSW-6	6-6 ZHBW	3/8	3/8	1.48	0.67	0.28	0.60	0.31	11/16	5/8	
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	
10-DTSW-10	-	10-10 ZHLW	10-STSW-10	10-10 ZHBW	5/8	5/8	1.65	0.96	0.50	0.92	0.44	1	15/16	
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	2.07	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.

- Carbon steel bodies are not plated.





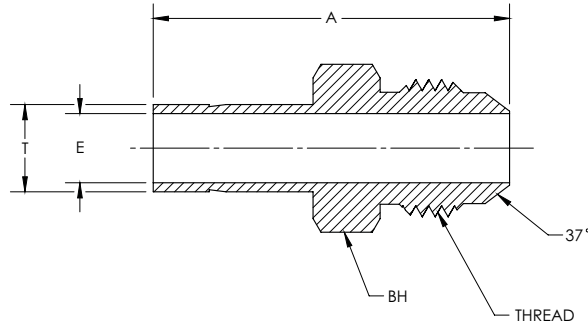
CBC PART NUMBER	INTERCHANGES WITH		CS PART NUMBER	INTERCHANGES WITH		T TUBE O.D.	A	B	E THRU HOLE	NH NUT HEX	BH BODY HEX
1-DU	100-6	1SC1	1-SU	1-1 HBZ		1/16	0.99	0.35	0.05	5/16	5/16
2-DU	200-6	2SC2	2-SU	2-2 HBZ		1/8	1.40	0.52	0.09	7/16	7/16
3-DU	300-6	3SC3	3-SU	3-3 HBZ		3/16	1.47	0.54	0.13	1/2	7/16
4-DU	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	1.69	0.65	0.25	5/8	9/16
6-DU	600-6	6SC6	6-SU	6-6 HBZ		3/8	1.77	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	2.05	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	2.55	1.24	0.88	1-1/2	1-3/8
B-18-DU	B-1810-6	-	-	-		1-1/8	2.55	1.25	0.97	1-3/4	1-5/8
20-DU	2000-6	20SC20	-	-		1-1/4	3.63	1.62	1.09	1-7/8	1-3/4
24-DU	2400-6	24SC24	-	-		1-1/2	4.25	1.97	1.34	2-1/4	2-1/8
32-DU	3200-6	32SC32	-	-		2	5.88	2.66	1.81	3	2-3/4

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

# DATANF

## Adapter Tube to JIC Flare

CBC/CS-Lok



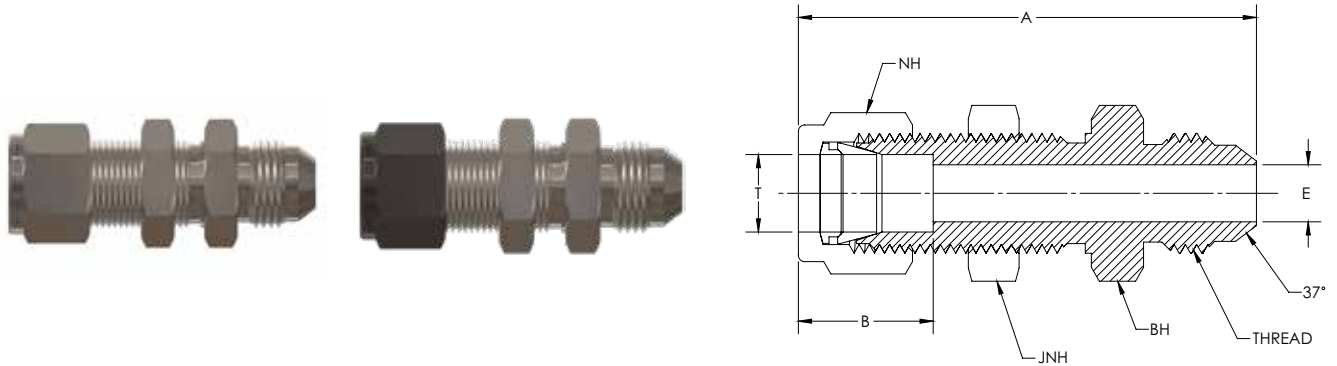
CBC PART NUMBER	INTERCHANGES WITH	T TUBE O.D.	JIC FLARE SIZE	THREAD	A	E THRU HOLE	BH BODY HEX
4-DATANF-4	4-TA-1-4AN	1/4	1/4	7/16-20	1.46	0.17	1/2
6-DATANF-4	6-TA-1-4AN	3/8	1/4	7/16-20	1.53	0.17	1/2
6-DATANF-6	6-TA-1-6AN	3/8	3/8	9/16-18	1.56	0.27	5/8
8-DATANF-8	8-TA-1-8AN	1/2	1/2	3/4-16	1.91	0.38	13/16
12-DATANF-12	12-TA-1-12AN	3/4	3/4	1-1/16-12	2.21	0.58	1-1/8
16-DATANF-16	16-TA-1-16AN	1	1	1-5/16-12	2.58	0.80	1-3/8
20-DATANF-20-NF	20-TA-1-20AN	1-1/4	1-1/4	1-5/8-12	3.40	0.95	1-11/16

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

- 1/16", 1/8", and 3/16" adapters comes standard without a groove.
- 1-1/4", 1-1/2", and 2" adapters are furnished with preswaged nuts and ferrules.
- Add "-NF" to the end of any part number for adapters with nut and preswaged ferrules.
- Add "HD" for thick wall adapters with pressure ratings that match max recommended tube.

# DBUANF/SBUANF

## Bulkhead to JIC Flare Union



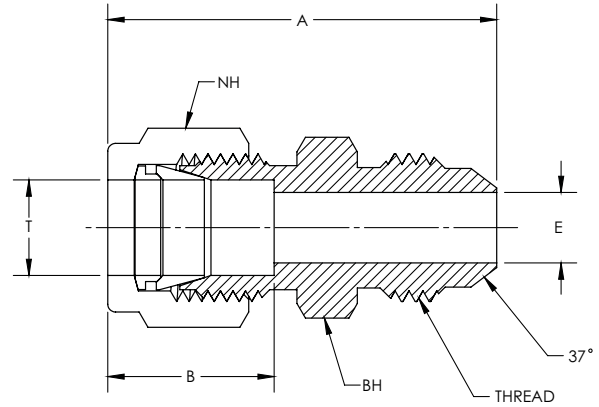
CBC PART NUMBER	INTERCHANGES WITH		CS PART NUMBER	INTERCHANGES WITH		T TUBE O.D.	JIC TUBE FLARE	THREAD	A	B	E THRU HOLE	JNH JAM NUT HEX	NH NUT HEX	BH BODY HEX	PANEL HOLE	MAX PANEL THICK.
4-DBUANF-4	400-61-4AN	4XABC4	4-SBUANF-4	4-4 XH2BZ	1/4	1/4	7/16-20	2.12	0.61	0.17	5/8	9/16	5/8	29/64	29/64	
6-DBUANF-6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

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

# DUANF/SUANF

## Tube to JIC Flare Union

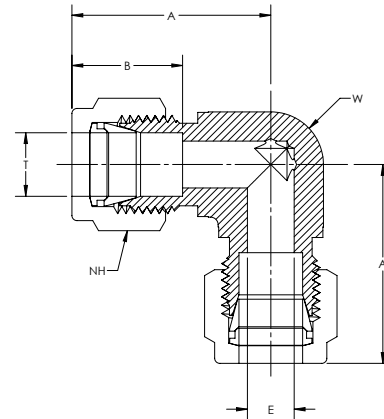
CBC/CS-Lok



CBC PART NUMBER	INTERCHANGES WITH		CS PART NUMBER	INTERCHANGES WITH	T TUBE O.D.	JIC FLARE SIZE	THREAD	A	B	E THRU HOLE	NH NUT HEX	BH BODY HEX
2-DUANF-2	200-6-2AN	2XASC2	2-SUANF-2	2-2 XHBZ	1/8	1/8	5/16-24	1.25	0.52	0.06	7/16	7/16
2-DUANF-4	200-6-4AN	4XASC2	2-SUANF-4	4-2 XHBZ	1/8	1/4	7/16-20	1.39	0.52	0.09	7/16	1/2
4-DUANF-4	400-6-4AN	4XASC4	4-SUANF-4	4-4 XHBZ	1/4	1/4	7/16-20	1.48	0.61	0.17	9/16	1/2
5-DUANF-5	500-6-5AN	5XASC5	5-SUANF-5	5-5 XHBZ	5/16	5/16	1/2-20	1.53	0.65	0.23	5/8	9/16
5-DUANF-6	-	-	5-SUANF-6	-	5/16	3/8	9/16-18	1.54	0.65	0.23	5/8	5/8
6-DUANF-4	600-6-4AN	4XASC6	6-SUANF-4	4-6 XHBZ	3/8	1/4	7/16-20	1.56	0.67	0.17	11/16	5/8
6-DUANF-6	600-6-6AN	6XASC6	6-SUANF-6	6-6 XHBZ	3/8	3/8	9/16-18	1.56	0.67	0.30	11/16	5/8
8-DUANF-8	810-6-8AN	8XASC8	8-SUANF-8	8-8 XHBZ	1/2	1/2	3/4-16	1.80	0.90	0.39	7/8	13/16
10-DUANF-10	1010-6-10AN	10XASC10	10-SUANF-10	10-10 XHBZ	5/8	5/8	7/8-14	1.93	0.96	0.48	1	15/16
12-DUANF-12	1210-6-12AN	12XASC12	12-SUANF-12	12-12 XHBZ	3/4	3/4	1-1/16-12	2.10	0.96	0.61	1-1/8	1-1/8
16-DUANF-16	1610-6-16AN	16XASC16	16-SUANF-16	16-16 XHBZ	1	1	1-5/16-12	2.10	1.24	0.85	1-1/2	1-3/8
20-DUANF-20	2000-6-20AN	-	-	-	1-1/4	1-1/4	1-5/8-12	3.94	1.62	1.08	1-7/8	1-3/4

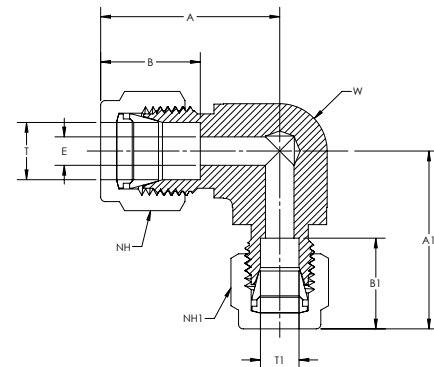
**NOTE:** Dimensions subject to change, to be used for reference only.

- 1/16", 1/8", and 3/16" adapters come standard without a groove.
- 1-1/4", 1-1/2", and 2" adapters are furnished with preswaged nuts and ferrules.



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	0.35	0.05	5/16	3/8
2-DELU-2	200-9	2EE2	2-SELU-2	2-2 EBZ	1/8	0.98	0.52	0.09	7/16	3/8
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	1.93	1.24	0.88	1-1/2	1-3/8
20-DELU-20	2000-9	20EE20	-	-	1-1/4	2.67	1.62	1.09	1-7/8	1-11/16
24-DELU-24	2400-9	24EE24	-	-	1-1/2	3.10	1.97	1.34	2-1/4	2
32-DELU-32	3200-9	32EE32	-	-	2	4.22	2.66	1.81	3	2-3/4

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



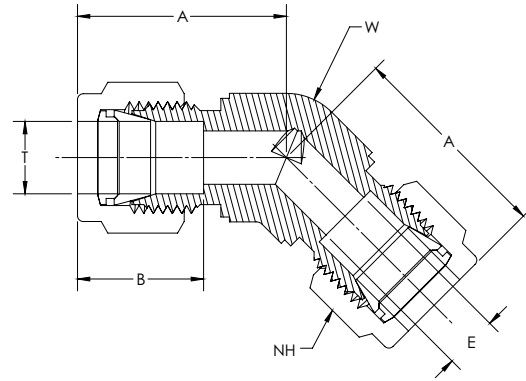
CBC PART NUMBER	INTERCHANGES WITH	CS PART NUMBER	INTERCHANGES WITH	T TUBE O.D.	T1 TUBE O.D.	A	A1	B	B1	E THRU HOLE	NH NUT HEX	W WRENCH FLAT
2-DELU-1	-	2-SELU-1	-	1/8	1/16	0.98	0.81	0.52	0.35	0.05	5/16	1/2
4-DELU-2	4-2 ELZ	4-SELU-2	4-2 EBZ	1/4	1/8	1.06	0.98	0.61	0.52	0.09	7/16	1/2
6-DELU-4	600-9-4 6-4 ELZ	6-SELU-4	6-4 EBZ	3/8	1/4	1.20	1.18	0.67	0.61	0.13	9/16	5/8
8-DELU-4	810-9-4 8-4 ELZ	8-SELU-4	8-4 EBZ	1/2	1/4	1.42	1.31	0.90	0.61	0.19	9/16	13/16
8-DELU-6	8-6 ELZ	8-SELU-6	8-6 EBZ	1/2	3/8	1.42	1.29	0.90	0.67	0.28	11/16	13/16

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

# DELU45/SELU45

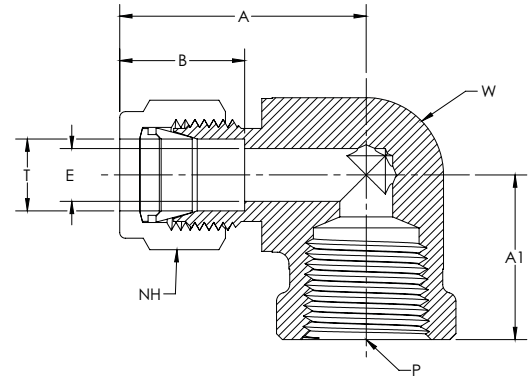
Union 45° Elbow

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
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.



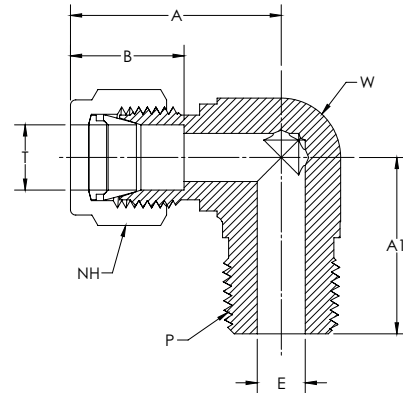
CBC PART NUMBER	INTERCHANGES WITH	CS PART NUMBER	INTERCHANGES WITH	T TUBE O.D.	P PIPE END NPT	A	A1	B	E THRU HOLE	NH NUT HEX	W WRENCH FLAT	
2-DFE-2	200-8-2	2FEL2N	2-SFE-2	2-2 DBZ	1/8	1/8	0.98	0.75	0.52	0.09	7/16	1/2
B-2-DFE-2	200-8-2	2FEL2N	B-2-SFE-2	2-2 DBZ	1/8	1/8	1.05	0.75	0.52	0.09	7/16	5/8
2-DFE-4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

# DME/SME

## Male 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	
1-DME-1	100-2-1	1MSEL1N	1-SME-1	1-1 CBZ	1/16	1/16	0.80	0.74	0.35	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	0.35	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	0.52	0.09	7/16	1/2
2-DME-6	200-2-6	-	2-SME-6	-	1/8	3/8	1.34	1.03	0.52	0.09	7/16	11/16
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
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
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
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
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
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
6-DME-16	600-2-16	-	6-SME-16	-	3/8	1	1.65	1.83	0.67	0.28	11/16	1-3/8
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	1010-2-4	-	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	1210-2-4	-	12-SME-4	-	3/4	1/4	1.57	1.25	0.96	0.28	1-1/8	1-1/16
12-DME-6	1210-2-6	-	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	12MSEL16N	12-SME-16	-	3/4	1	1.76	1.83	0.96	0.63	1-1/8	1-3/8
14-DME-8	1410-2-8	14MSEL8N	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	1610-2-8	16MSEL8N	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
20-DME-20	2000-2-20	20MSEL20N	-	-	1-1/4	1-1/4	2.67	2.00	1.62	1.09	1-7/8	1-11/16
24-DME-24	2400-2-24	24MSEL24N	-	-	1-1/2	1-1/2	3.10	2.25	1.97	1.34	2-1/4	2

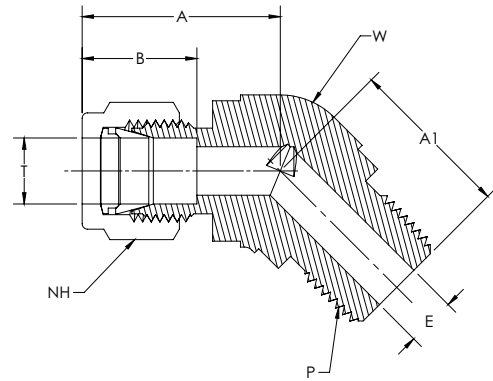
NOTE: Dimensions subject to change, to be used for reference only.



# DME45/SME45

## Male 45° Elbow

CBC/CS-Lok



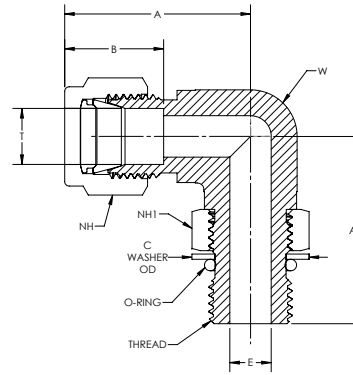
CBC PART NUMBER	INTERCHANGES WITH		CS PART NUMBER	INTERCHANGES WITH		T TUBE O.D.	P PIPE END NPT	A	A1	B	E THRU HOLE	NH NUT HEX	W WRENCH FLAT
4-DME45-2	400-5-2	4MVEL2N	4-SME45-2	4-2 VBZ		1/4	1/8	0.97	0.65	0.61	0.19	9/16	1/2
4-DME45-4	400-5-4	4MVEL4N	4-SME45-4	4-4 VBZ		1/4	1/4	0.97	0.83	0.61	0.19	9/16	1/2
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.

# DME-STB/SME-STB

## SAE Straight Thread Positionable Elbow

CBC/CS-Lok



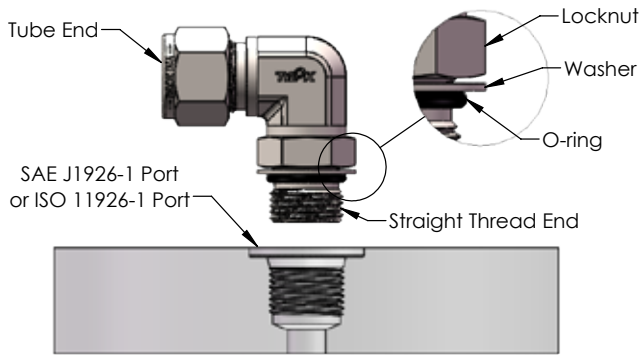
CBC PART NUMBER	INTERCHANGES WITH		CS PART NUMBER	INTERCHANGES WITH		T	THREAD	A	A1	B	C	E	NH	NH1	W
						TUBE O.D.					THRU HOLE	HEX	HEX	BODY WIDTH	
4-DME-4-STB	400-2-4ST	4M5SEL4	4-SME-4-STB	4-4 C5BZ	1/4	7/16-20	1.12	1.12	0.61	0.65	0.17	9/16	9/16	1/2	
4-DME-6-STB	400-2-6ST	-	4-SME-6-STB	-	1/4	9/16-18	1.20	1.27	0.61	0.79	0.19	9/16	11/16	5/8	
5-DME-5-STB	500-2-5ST	-	5-SME-5-STB	-	5/16	1/2-20	1.19	1.27	0.65	0.72	0.23	5/8	5/8	5/8	
6-DME-4-STB	600-2-4ST	-	6-SME-4-STB	-	3/8	7/16-20	1.26	1.27	0.67	0.65	0.17	11/16	9/16	5/8	
6-DME-6-STB	600-2-6ST	6M5SEL6	6-SME-6-STB	6-6 C5BZ	3/8	9/16-18	1.26	1.27	0.67	0.79	0.28	11/16	11/16	5/8	
6-DME-8-STB	600-2-8ST	-	6-SME-8-STB	-	3/8	3/4-16	1.37	1.49	0.67	1.01	0.28	11/16	7/8	13/16	
8-DME-6-STB	810-2-6ST	-	8-SME-6-STB	-	1/2	9/16-18	1.48	1.49	0.90	0.79	0.30	7/8	11/16	13/16	
8-DME-8-STB	810-2-8ST	8M5SEL8	8-SME-8-STB	8-8 C5BZ	1/2	3/4-16	1.48	1.49	0.90	1.01	0.39	7/8	7/8	13/16	
10-DME-8-STB	-	-	10-SME-8-STB	-	5/8	3/4-16	1.63	1.75	0.96	1.01	0.39	1	7/8	1-1/16	
10-DME-10-STB	1010-2-10ST	-	10-SME-10-STB	-	5/8	7/8-14	1.63	1.83	0.96	1.16	0.48	1	1	1-1/16	
10-DME-12-STB	-	-	10-SME-12-STB	-	5/8	1-1/16-12	1.63	1.92	0.96	1.44	0.50	1	1-1/4	1-1/16	
12-DME-8-STB	-	-	12-SME-8-STB	-	3/4	3/4-16	1.63	1.75	0.96	1.01	0.39	1-1/8	7/8	1-1/16	
12-DME-12-STB	1210-2-12ST	12M5SEL12	12-SME-12-STB	12-12-C5BZ	3/4	1-1/16-12	1.63	1.92	0.96	1.44	0.61	1-1/8	1-1/4	1-1/16	
16-DME-16-STB	-	16M5SEL16	16-SME-16-STB	16-16 C5BZ	1	1-5/16-12	1.99	2.11	1.24	1.73	0.84	1-1/2	1-1/2	1-3/8	
20-DME-20-STB	2000-2-20ST	-	-	-	1-1/4	1-5/8-12	2.67	2.29	1.62	2.16	1.08	1-7/8	1-7/8	1-11/16	
24-DME-24-STB	2400-2-24ST	24M5SEL24	-	-	1-1/2	1-7/8-12	3.07	2.45	1.97	2.45	1.31	2-1/4	2-1/8	2	

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

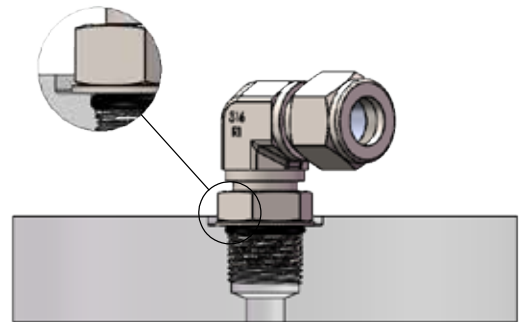
- Straight thread connectors adapt to SAE J1926-1 and ISO 1126-1 ports.
- Parts are supplied with FKM Fluorocarbon O-Rings. Other options are available upon request.
- Standard straight thread connectors are designed to withstand SAE J1926-3 pressure ratings.
- Add "HD" suffix for straight thread connectors designed to withstand SAE J1926-2 pressure ratings.

# INSTALLATION INSTRUCTIONS

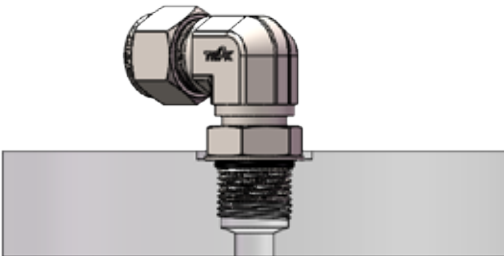
for Positionable STB



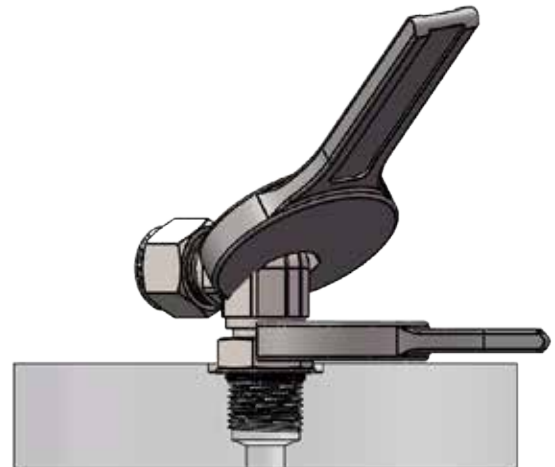
1. Lubricate O-Ring with system compatible lubricant. FKM O-rings are standard, other options are available upon request.



2. Screw the Straight Thread End into Port until the washer contacts the face of the port and the O-ring squeezes into the tapered section.



3. Unscrew the fitting (1 turn max) until the tube end is facing the desired direction.

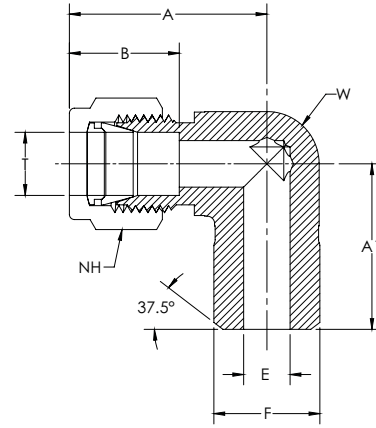


4. Hold the fitting in place and tighten the locknut into place until the washer is properly compressed into the tapered port. Consult SAE J1926 specifications for recommended installation torques.

# DTBWE/STBWE

## Tube to Pipe Butt Weld Elbow

CBC/CS-Lok



CBC PART NUMBER	INTERCHANGES WITH		CS PART NUMBER	INTERCHANGES WITH		T TUBE OD	P PIPE SIZE	A	A1	B	F	E THRU HOLE	NH1 NUT HEX	W WRENCH FLAT
4-DTBWE-2	400-2-2W	4-1/8 ZELW2	4-STBWE-2	4-1/8 ZEBW2	1/4	1/4	1.06	0.90	0.61	0.405	0.19	9/16	1/2	
4-DTBWE-4	400-2-4W	4-1/4 ZELW2	4-STBWE-4	4-1/4 ZEBW2	1/4	1/4	1.06	0.90	0.61	0.540	0.19	9/16	1/2	
6-DTBWE-4	600-2-4W	6-1/4 ZELW2	6-STBWE-4	6-1/4 ZEBW2	3/8	3/8	1.20	1.00	0.67	0.540	0.28	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	0.840	0.41	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	1.050	0.63	1-1/8	1-1/16	
16-DTBWE-16	1610-2-16W	16-1 ZELW2	16-STBWE-16	16-1 ZEBW2	1	1	1.94	1.84	1.24	1.315	0.88	1-1/2	1-3/8	

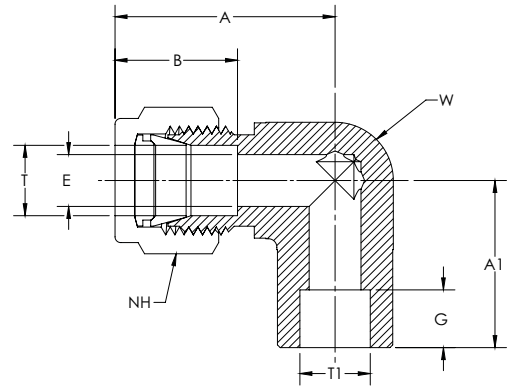
**NOTE:** Dimensions subject to change, to be used for reference only.

- Wall Thickness at weld end is based on schedule 80 pipe.
- Fittings may have a larger ID on weld end.
- Carbon Steel bodies are not plated.

# DTSWE/STSWE

## Tube to Tube Socket Weld Elbow

CBC/CS-Lok



CBC PART NUMBER	INTERCHANGES WITH		CS PART NUMBER	INTERCHANGES WITH		T TUBE OD	P PIPE SIZE	A	A1	B	G	H	E THRU HOLE	NH NUT HEX	W WRENCH FLAT
4-DTSWE-4	400-9-4W	4-4 ZELW	4-STSW-4	4-4 ZEBW	1/4	1/4	1.06	0.77	0.61	0.28	0.50	0.19	9/16	1/2	
6-DTSWE-6	600-9-6W	6-6 ZELW	6-STSW-6	6-6 ZEBW	3/8	3/8	1.20	0.91	0.67	0.31	0.63	0.28	11/16	5/8	
8-DTSWE-8	810-9-8W	8-8 ZELW	8-STSW-8	8-8 ZEBW	1/2	1/2	1.42	1.02	0.90	0.38	0.81	0.41	7/8	13/16	
12-DTSWE-12	1210-9-12W	12-12 ZELW	12-STSW-12	12-12 ZEBW	3/4	3/4	1.57	1.17	0.96	0.44	1.06	0.63	1-1/8	1-1/16	
16-DTSWE-16	1610-9-16W	16-16 ZELW	16-STSW-16	16-16 ZEBW	1	1	1.93	1.44	0.88	0.62	1.38	0.88	1-1/2	1-3/8	

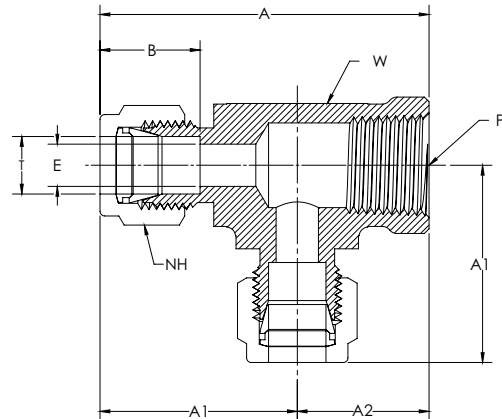
NOTE: Dimensions subject to change, to be used for reference only.

- Carbon Steel bodies are not plated.

# DTFT/STFT

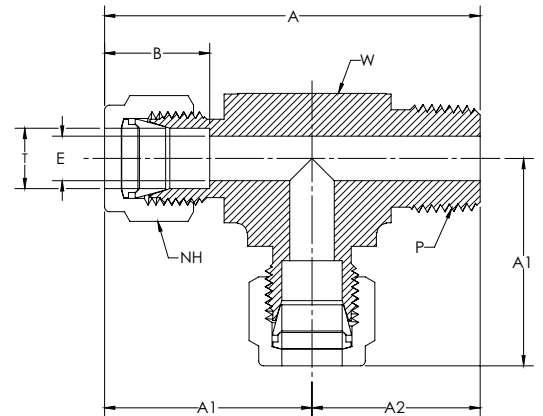
## Female Run Tee

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 8FRT6N	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.



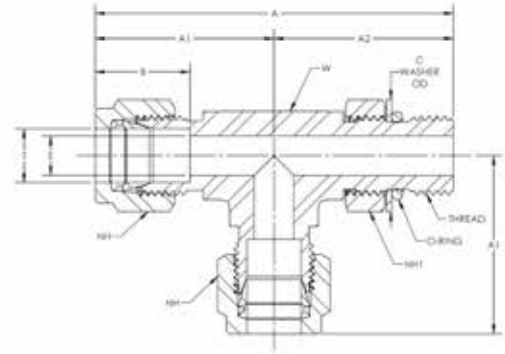
CBC PART NUMBER	INTERCHANGES WITH		CS PART NUMBER	INTERCHANGES WITH	T TUBE O.D.	P PIPE END NPT	A	A1	A2	B	E THRU HOLE	NH NUT HEX	W WRENCH FLAT
2-DTMT-2	200-3TMT	2MRT2N	2-STMT-2	2-2-2 RBZ	1/8	1/8	1.72	0.98	0.74	0.52	0.09	7/16	1/2
2-DTMT-4	200-3-4TMT	2MRT4N	2-STMT-4	2-4-2 RBZ	1/8	1/4	1.99	1.05	0.94	0.52	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	810-3-3TMT	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	810-3-3TMT	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.

# DTMT-STB/STMT-STB

## Positionable Run Tee, SAE Straight Thread

CBC/CS-Lok



CBC PART NUMBER	INTERCHANGES WITH		CS PART NUMBER	INTERCHANGES WITH		T TUBE O.D.	THREAD	A	A1	A2	B	C	E THRU HOLE	NH NUT HEX	NH1 NUT HEX	W WRENCH FLAT
4-DTMT-4-STB	400-3TST	4M5RT4	4-STMT-4-STB	4-4-4 R5BZ	4	7/16/20	2.24	1.12	1.12	0.61	0.65	0.19	9/16	9/16	1/2	
6-DTMT-6-STB	600-3TST	6M5RT6	6-STMT-6-STB	6-6-6 R5BZ	6	9/16-18	2.53	1.26	1.27	0.67	0.79	0.28	11/16	11/16	5/8	
8-DTMT-8-STB	810-3TST	8M5RT8	8-STMT-8-STB	8-8-8 R5BZ	8	3/4-16	2.97	1.48	1.49	0.90	1.01	0.41	7/8	7/8	5/8	

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

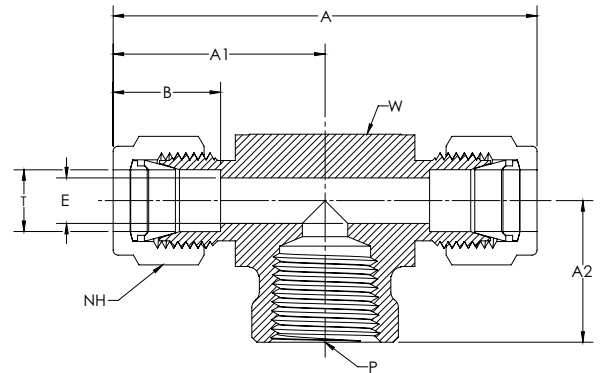
- Standard O-ring material is FKM. Other options are available upon request.
- Adapts to SAE J1926-1 and ISO 11926-1 straight thread boss.



# DTTF/STTF

## Female Branch Tee

CBC/CS-Lok



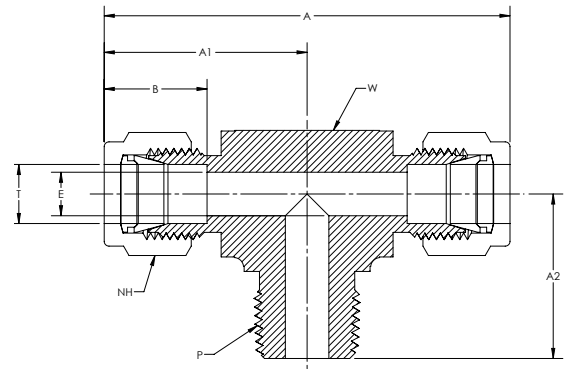
CBC PART NUMBER	INTERCHANGES WITH	CS PART NUMBER	INTERCHANGES WITH	T TUBE O.D.	P PIPE END NPT	A	A1	A2	B	E THRU HOLE	NH NUT HEX	W WRENCH FLAT	
2-DTTF-2	200-3TTF	2FBT2N	2-STTF-2	2-2-2 OBZ	1/8	1/8	2.12	1.06	0.75	0.52	0.09	7/16	5/8
4-DTTF-2	400-3TTF	4FBT2N	4-STTF-2	4-4-2 OBZ	1/4	1/8	2.28	1.14	0.75	0.61	0.19	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
4-DTTF-6	-	-	4-STTF-6	-	1/4	3/8	2.50	1.25	0.88	0.61	0.19	9/16	13/16
B-4 DTTF-6	-	-	B-4 STTF-6	-	1/4	3/8	2.78	1.39	1.13	0.61	0.19	9/16	1-1/16
4-DTTF-8	-	-	4-STTF-8	-	1/4	1/2	2.84	1.42	1.12	0.61	0.19	9/16	1-1/16
5-DTTF-2	-	5FBT2N	5-STTF-2	5-5-2 OBZ	5/16	1/8	2.38	1.19	0.75	0.65	0.25	5/8	5/8
6-DTTF-4	600-3TTF	6FBT4N	6-STTF-4	6-6-4 OBZ	3/8	1/4	2.62	1.31	0.88	0.67	0.28	11/16	13/16
6-DTTF-6	600-3-6TTF	-	6-STTF-6	-	3/8	3/8	2.62	1.31	0.88	0.67	0.28	11/16	13/16
B-6-DTTF-6	B-600-3-6TTF	-	B-6-STTF-6	-	3/8	3/8	2.84	1.42	1.12	0.67	0.28	11/16	1-1/16
6-DTTF-8	600-3-8TTF	-	6-STTF-8	-	3/8	1/2	2.84	1.42	1.12	0.67	0.28	11/16	1-1/16
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-6	-	-	14-STTF-6	-	7/8	3/8	3.52	1.76	1.25	1.02	0.72	1-1/4	1-3/8
14-DTTF-12	-	14FBT12N	14-STTF-12	14-14-12 OBZ	7/8	3/4	3.52	1.76	1.25	1.02	0.72	1-1/4	1-3/8
16-DTTF-12	1610-3-12TTF	16FBT12N	16-STTF-12	16-16-12 OBZ	1	3/4	3.88	1.94	1.25	1.24	0.88	1-1/2	1-3/8
16-DTTF-16	1610-3TTF	16FBT16N	16-STTF-16	16-16-16 OBZ	1	1	4.24	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

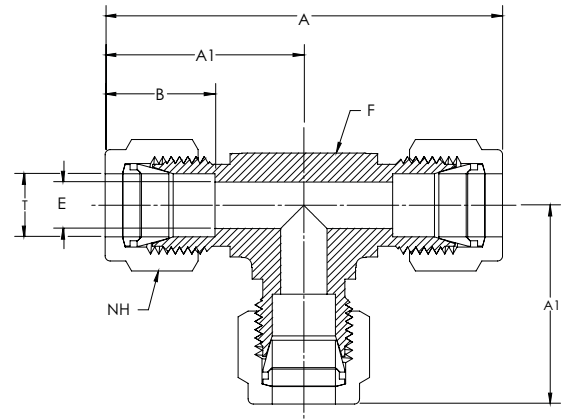
## Male Branch Tee

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	0.52	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	0.52	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	0.54	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	0.19	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	0.19	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	0.19	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	0.25	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	0.28	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	0.28	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	0.28	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	0.38	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	0.38	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	0.41	7/8	13/16
B-8-DTTM-8	810-3-8TTM	8MBT8N	B-8-DTTM-8	8-8-8 SBZ	1/2	1/2	3.14	1.57	1.38	0.90	0.41	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	0.47	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	0.63	1-1/8	1-1/16

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



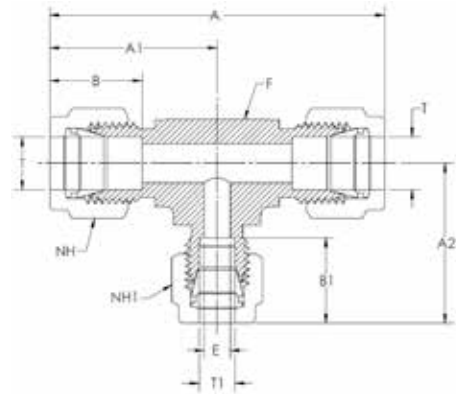
CBC PART NUMBER	INTERCHANGES WITH	CS PART NUMBER	INTERCHANGES WITH	T TUBE O.D.	A	A1	B	E THRU HOLE	NH NUT HEX	W WRENCH FLAT	
1-DTTT-1	100-3	1ET1	1-STTT-1	1-1-1 JBZ	1/16	1.40	0.70	0.35	0.05	5/16	3/8
2-DTTT-2	200-3	2ET2	2-STTT-2	2-2-2 JBZ	1/8	1.76	0.88	0.52	0.09	7/16	3/8
3-DTTT-3	300-3	3ET3	3-STTT-3	3-3-3 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	2.12	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	2.40	1.20	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	3.06	1.53	0.96	0.50	1	1
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	3.52	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	3.88	1.94	1.24	0.88	1-1/2	1-3/8
20-DTTT-20	2000-3	20ET20	-	-	1-1/4	5.34	2.67	1.62	1.09	1-7/8	1-1/16
24-DTTT-24	2400-3	24ET24	-	-	1-1/2	6.20	3.10	1.97	1.34	2-1/4	2
32-DTTT-32	3200-3	32ET32	-	-	2	8.44	4.22	2.66	1.81	3	2-3/4

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

# DTTT/STTT

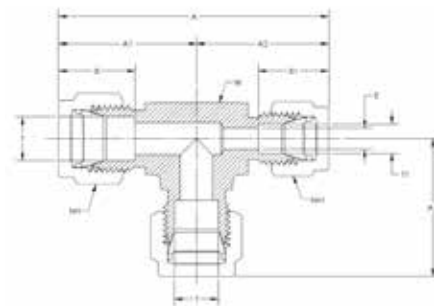
## Reducing Branch Tee, Reducing Run Tee

CBC/CS-Lok



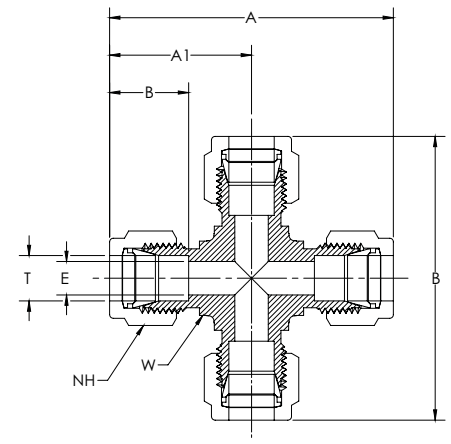
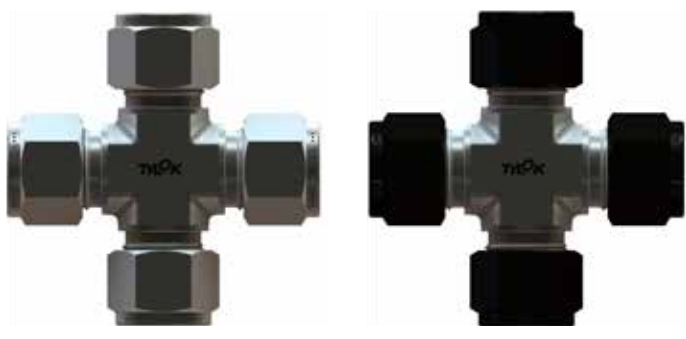
CBC PART NUMBER	INTERCHANGES WITH		CS PART NUMBER	INTERCHANGES WITH	T TUBE O.D.	T1 TUBE O.D.	A	A1	A2	B	B1	E THRU HOLE	NH NUT HEX	NH1 NUT HEX	W WRENCH FLAT
4-DTTT-4-2	400-3-4-2	4-4-2 JLZ	4-STTT-4-2	4-4-2 JBZ	1/4	1/8	2.13	1.06	0.98	0.61	0.52	0.19	9/16	5/16	1/2
6-DTTT-6-4	600-3-6-4	6-6-4 JLZ	6-STTT-6-4	6-6-4 JBZ	3/8	1/4	2.42	1.21	1.14	0.67	0.61	0.19	11/16	7/16	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	9/16	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	11/16	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
20-DTTT-20-16	2000-3-20-16	-	-	-	1-1/4	1	5.34	2.17	1.62	1.62	1.24	0.88	1-7/8	1-1/2	1-11/16
24-DTTT-24-16	2400-3-24-16	-	-	-	1-1/2	1	6.20	2.36	1.97	1.97	1.24	0.88	2-1/4	1-1/2	2

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

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



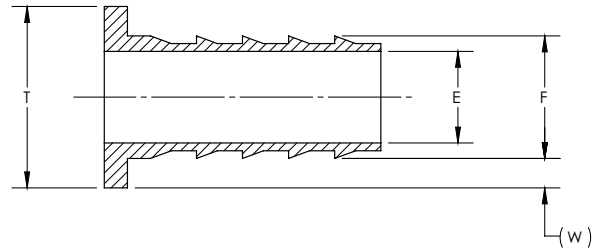
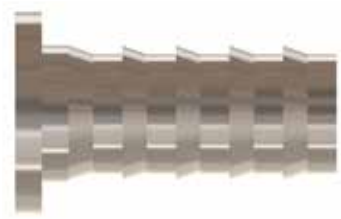
CBC PART NUMBER	INTERCHANGES WITH		CS PART NUMBER	INTERCHANGES WITH		T TUBE O.D.	A	A1	B	E THRU HOLE	NH NUT HEX	W WRENCH FLAT
2-DCR	200-4	2ECR2	2-SCR	2 KBZ	1/8	1.76	0.88	0.52	0.09	7/16	3/8	
4-DCR	400-4	4ECR4	4-SCR	4 KBZ	1/4	2.11	1.06	0.61	0.19	9/16	1/2	
B-4-DCR	400-4	4ECR4	B-4-SCR	B-4 KBZ	1/4	2.33	1.17	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
B-DN-18	B-1812-1	-	-	-	1-1/8	0.81	1-3/4
DN-20	2002-1	20NU20	-	-	1-1/4	1.25	1-7/8
DN-24	2402-1	24NU24	-	-	1-1/2	1.50	2-1/4
DN-32	3202-1	32NU32	-	-	2	2.06	3

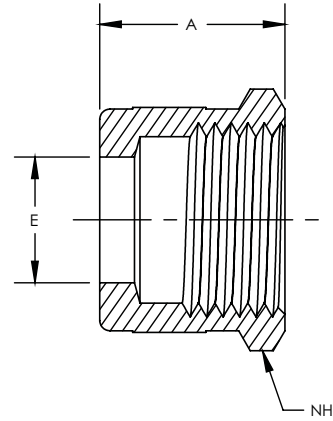
**NOTE:** Dimensions subject to change, to be used for reference only.

- CBC-Lok® nut inside surfaces are silver plated to reduce galling and lower installation torque.
- CS-Lok® nuts are coated with molybdenum disulfide to reduce galling and lower installation torque.

# DKN/SKN

## Knurled Nut

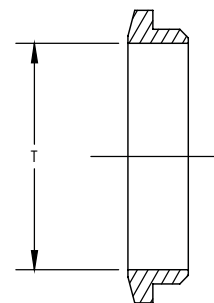
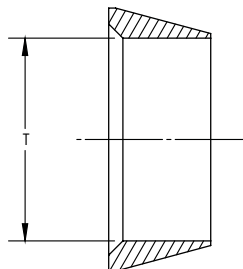
CBC/CS-Lok



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.



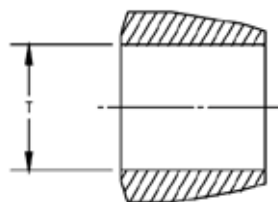


CBC PART NUMBER	INTERCHANGES WITH		T TUBE O.D.
DFC-1	103-1	1FF1	1/16
DFC-2	203-1	2FF2	1/8
DFC-3	303-1	3FF3	3/16
DFC-4	403-1	4FF4	1/4
DFC-5	503-1	5FF5	5/16
DFC-6	603-1	6FF6	3/8
DFC-8	813-1	8FF8	1/2
DFC-10	1013-1	10FF10	5/8
DFC-12	1213-1	12FF12	3/4
DFC-14	1413-1	14FF14	7/8
DFC-16	1613-1	16FF16	1
B-DFC-18	B-1813-1	-	1-1/8
DFC-20	2003-1	20FF20	1-1/4
DFC-24	2403-1	24FF24	1-1/2
DFC-32	3202-1	32FF32	2

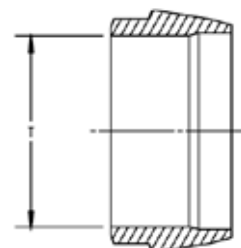
CBC PART NUMBER	INTERCHANGES WITH		T TUBE O.D.
DRC-1	104-1	1BF1	1/16
DRC-2	204-1	2BF2	1/8
DRC-3	304-1	3BF3	3/16
DRC-4	404-1	4BF4	1/4
DRC-5	504-1	5BF5	5/16
DRC-6	604-1	6BF6	3/8
DRC-8	814-1	8BF8	1/2
DRC-10	1014-1	10BF10	5/8
DRC-12	1214-1	12BF12	3/4
DRC-14	1414-1	14BF14	7/8
DRC-16	1614-1	16BF16	1
B-DRC-18	B-1814-1	-	1-1/8
DRC-20	2004-1	20BF20	1-1/4
DRC-24	2404-1	24BF24	1-1/2
DRC-32	3204-1	32BF32	2

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

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



For sizes 1, 2, 3, 4, 5, and 6  
(sizes 1/16" through 3/8")



For sizes 8, 10, 12, 14, and 16  
(sizes 1/2" through 1")

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

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

# NUT/FERRULE & FERRULE SETS



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

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

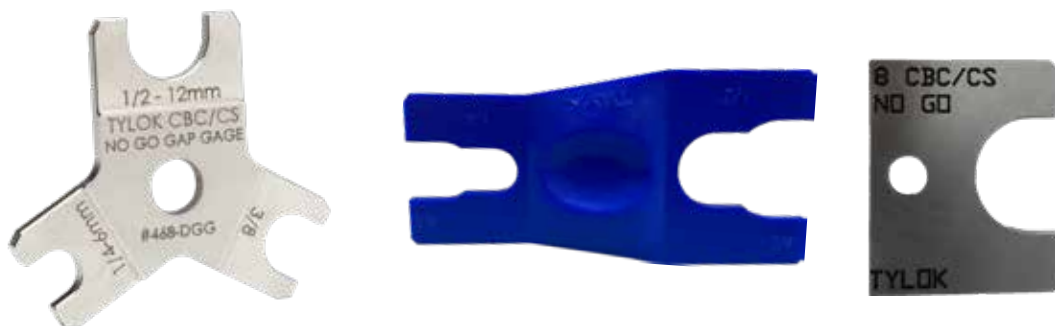


CBC PART NUMBER	INTERCHANGES WITH	CS PART NUMBER	INTERCHANGES WITH	T TUBE O.D.
DNCSET-4	400-NFSET -	SNCSET-4	-	1/4
DNCSET-6	600-NFSET -	SNCSET-6	-	3/8
DNCSET-8	810-NFSET -	SNCSET-8	-	1/2
DNCSET-12	- -	SNCSET-12	-	3/4
DNCSET-16	- -	SNCSET-16	-	1

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

## COMPONENT REPLACEMENT PARTS

Ferrule sets and Nut/Ferrule sets make for easy storage and handling. 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, 6mm, 12mm
ABS-46812-DGG	1/4, 3/8, 1/2, 3/4



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

## 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. 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-DSPT	5/8
12-DSPT	3/4
14-DPST	7/8
16-DPST	1



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

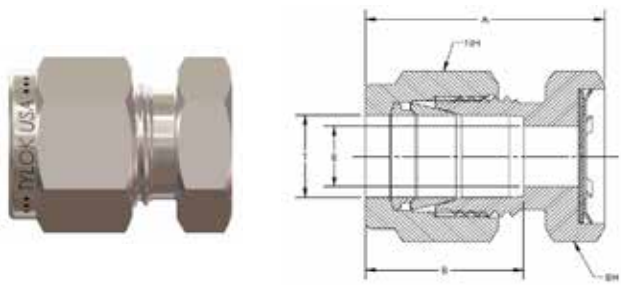
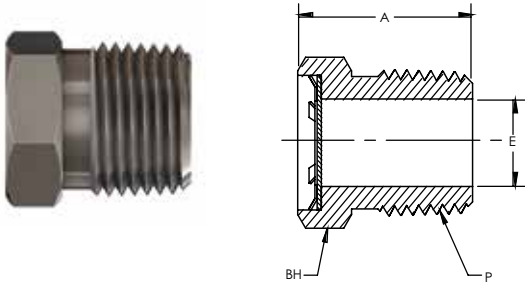


Back nut off of Pre-Set Tool. Notice the ferrules have swaged into the tubing. Now take the tubing to installation area.

# MDF

## Mud Daubers

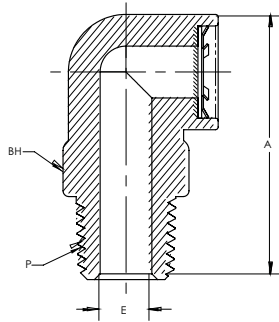
CBC/CS-Lok



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 is now offering customized stainless steel AOD injection lance assemblies for refractory tube applications found in most steel mills.

AOD (Argon Oxygen Decarburization) is used during the refining process to produce steel with low carbon properties and low silicon levels, while creating a metal more weldable and more corrosion and heat resistant. It brings the tightest chemistry control to deliver the highest levels of metal purity. Most injection lances are replaced daily and in fact considered disposable items in most mills.

Tylok is now offering customized burner tubes suitable for most steel mills. The injection lances are available in 1/4", 3/8" and 1/2" diameters and offered in a variety of custom lengths.



Size	Part Number	Length Options (in.)	Degree Options
1/4	SS-4-INJ-LANCE-4MNPT-36	24", 36"	90"
3/8	SS-6-INJ-LANCE-6MNPT-36		
1/2	SS-8-INJ-LANCE-8MNPT-36		

Example: SS-4-INJ-LANCE-4MNPT is the straight version  
 SS-4-INJ-LANCE-4MNPT-36-90 is the 90 degree version

# Dielectric Fitting

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

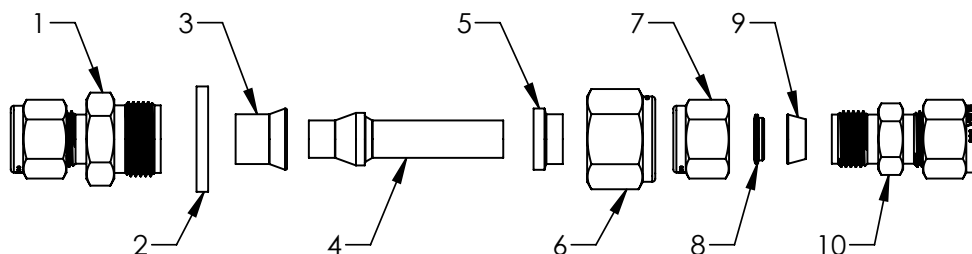
A typical application for a dielectric fitting is in the transmission of natural gas. The dielectric fitting insulates electric current flow that results from static electricity, ground currents, stray currents from instruments, etc.

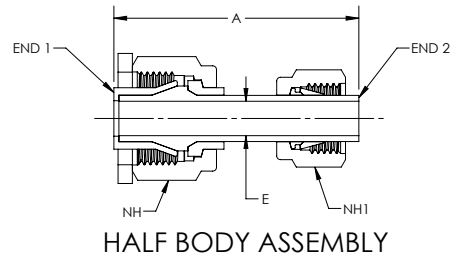
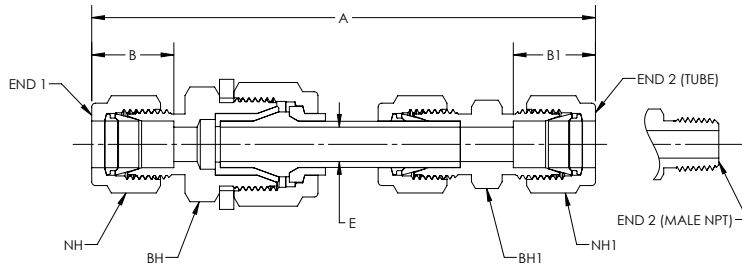
Tylok dielectric fittings have a dielectric resistance above  $10 \times 10^7$  Ohms at 10 Volts (dc) when at room temperature (70°F / 20°C).



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





Part Number	End 1	End 2	A	B	B1	E	NH	NH1	BH	BH1
SS-6-6D-8-DE*	1/2" Tube Port Insulator	3/8" CBC-Lok Tube Adapter	2.05	-	-	0.28	7/8	11/16	-	-
SS-4-6DU-4-DE	1/4" CBC-Lok	1/4" CBC-Lok	4.02	0.61	0.61	0.19	9/16	9/16	13/16	5/8
SS-4-6SU-4-DE	1/4" CS-Lok	1/4" CS-Lok	4.02	0.61	0.61	0.19	9/16	9/16	13/16	5/8
SS-6-6DU-6-DE	3/8" CBC-Lok	3/8" CBC-Lok	4.14	0.67	0.67	0.28	11/16	11/16	13/16	5/8
SS-6-6SU-6-DE	3/8" CS-Lok	3/8" CS-Lok	4.14	0.67	0.67	0.28	11/16	11/16	13/16	5/8
SS-8-6DU-8-DE	1/2" CBC-Lok	1/2" CBC-Lok	4.38	0.90	0.90	0.28	7/8	7/8	13/16	13/16
SS-8-6SU-8-DE	1/2" CS-Lok	1/2" CS-Lok	4.38	0.90	0.90	0.28	7/8	7/8	13/16	13/16
SS-4-6DMC-4-DE	1/4" CBC-Lok	1/4" Male NPT	3.93	0.61	-	0.19	9/16	9/16	13/16	5/8
SS-4-6SMC-4-DE	1/4" CS-Lok	1/4" Male NPT	3.93	0.61	-	0.19	9/16	9/16	13/16	5/8
SS-6-6DMC-4-DE	3/8" CBC-Lok	1/4" Male NPT	3.99	0.67	-	0.28	11/16	11/16	13/16	5/8
SS-6-6SMC-4-DE	3/8" CS-Lok	1/4" Male NPT	3.99	0.67	-	0.28	11/16	11/16	13/16	5/8
SS-6-6DMC-6-DE	3/8" CBC-Lok	3/8" Male NPT	3.99	0.67	-	0.28	11/16	11/16	13/16	11/16
SS-6-6SMC-6-DE	3/8" CS-Lok	3/8" Male NPT	3.99	0.67	-	0.28	11/16	11/16	13/16	11/16
SS-8-6DMC-6-DE	1/2" CBC-Lok	3/8" Male NPT	4.09	0.90	-	0.28	7/8	7/8	13/16	11/16
SS-8-6SMC-6-DE	1/2" CS-Lok	3/8" Male NPT	4.09	0.90	-	0.28	7/8	7/8	13/16	11/16
SS-8-8D-12-DE*	3/4" Tube Port Insulator	1/2" CBC-Lok Tube Adapter	2.01	-	-	0.38	1-1/8	1-1/8	-	-

\*Half Body Assemblies

## How To Order

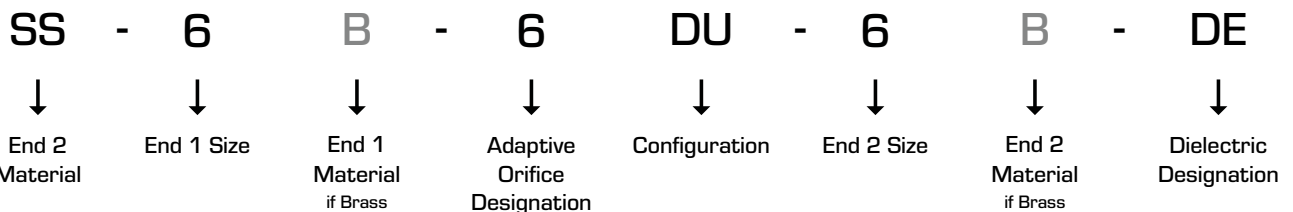


Chart 1

Chart 1

Chart 2

Chart 3

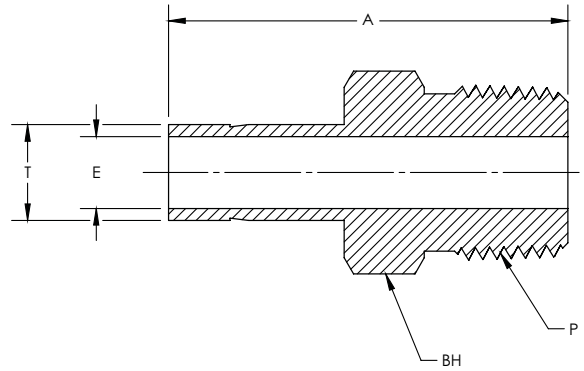
Chart 1

Chart 1 - Material	
B	Brass
SS	Stainless Steel

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

Note: Adapter component only available in Stainless Steel

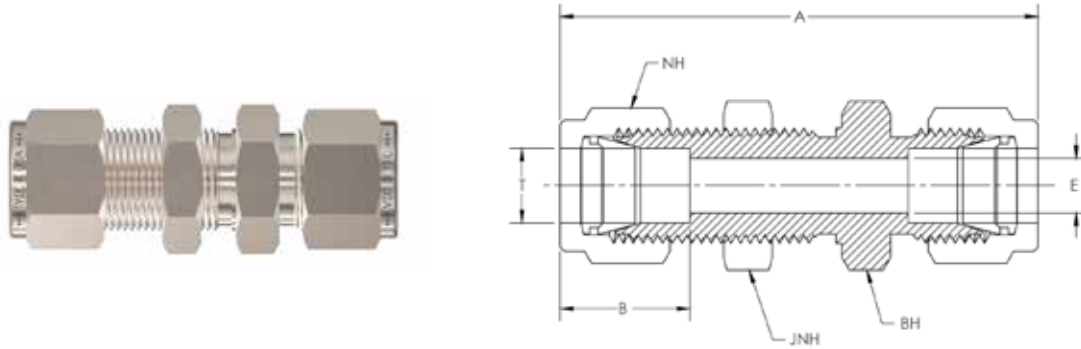
Chart 3 - Configuration	
DU	Union
DRU	Reducing Union
DELU	Union Elbow
DMC	Male Connector
DME	Male Elbow
DFC	Female Connector
DFE	Female Elbow



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

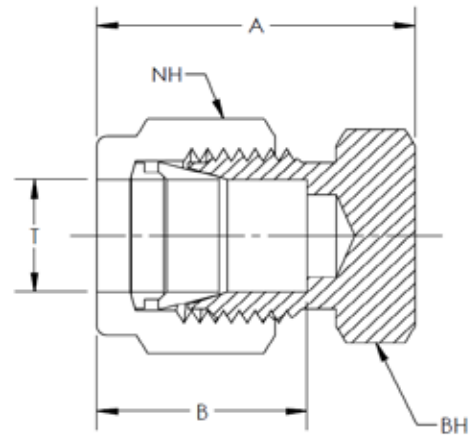
**NOTE:** Dimensions subject to change, to be used for reference only.





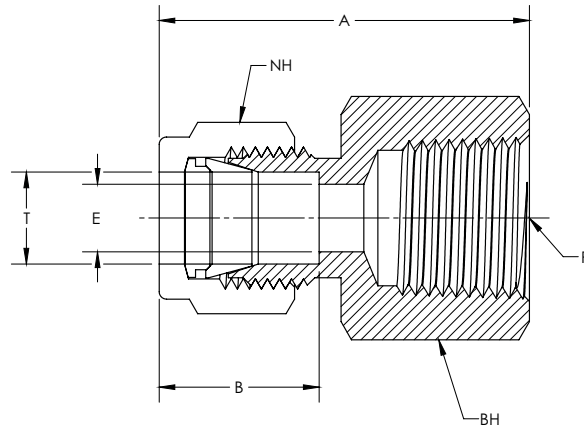
CBC PART NUMBER	INTERCHANGES WITH	T TUBE O.D. (mm.)	T1 TUBE O.D. (mm.)	A (mm.)	B (mm.)	E THRU HOLE (mm.)	NH NUT HEX (in.)	BH BODY HEX (in.)	JNH JAM NUT HEX (in.)	PANEL HOLE (mm.)	MAX PANEL THICKNESS (mm.)
6MM-DBHU	6M0-61 BCM6	6	6	57.7	15.3	4.8	9/16	5/8	5/8	11.5	10.2
8MM-DBHU	8M0-61 BCM8	8	8	61.0	16.2	6.4	5/8	11/16	11/16	13.1	11.2
10MM-DBHU	10M0-61 BCM10	10	10	63.7	17.2	7.9	3/4	7/8	7/8	16.3	11.2
12MM-DBHU	12M0-61 BCM12	12	12	71.0	22.8	9.5	7/8	15/16	15/16	19.5	12.7
18MM-DBHU	18M0-61 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	A	B	NH	BH
			TUBE O.D. (mm.)	(mm.)	(mm.)	NUT HEX (in.)	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

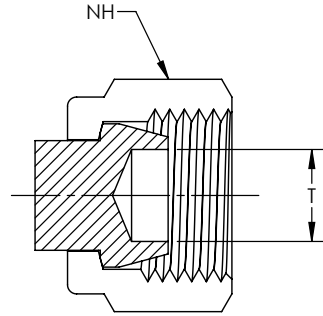
NOTE: Dimensions subject to change, to be used for reference only.

# DF PLUG

Fitting Plug

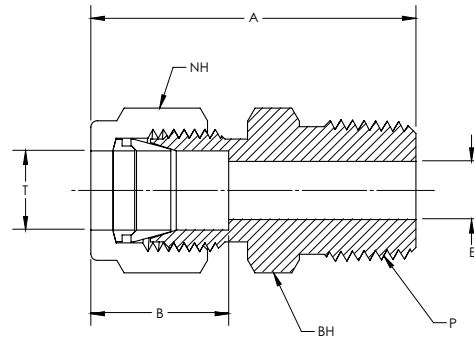
METRIC

METRIC



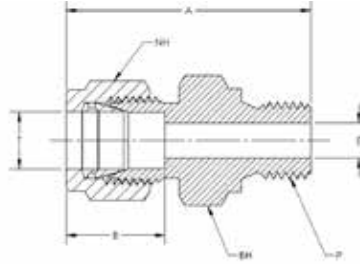
CBC PART NUMBER	INTERCHANGES WITH		T TUBE O.D. (mm.)	NH NUT HEX (in.)
6MM-DFPLUG	6MO-P	BLPM6	6	9/16
8MM-DFPLUG	8MO-P	BLPM8	8	5/8
10MM-DFPLUG	10MO-P	BLPM10	10	3/4
12MM-DFPLUG	12MO-P	BLPM12	12	7/8
18MM-DFPLUG	18MO-P	BLPM18	16	1-1/8

**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

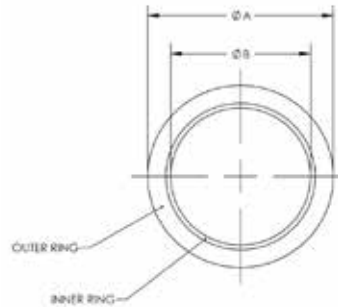
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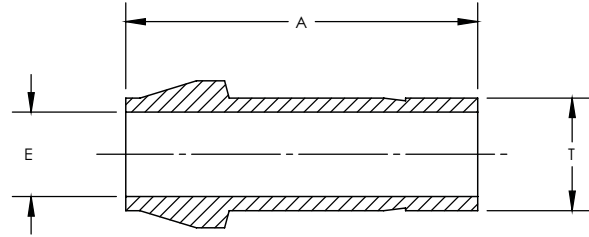
CBC PART NUMBER	INTERCHANGES WITH		T TUBE O.D. (mm.)	P BSPB THREAD SIZE (in.)	A (mm.)	B (mm.)	E THRU HOLE (mm.)	NH NUT HEX (in.)	BH BODY HEX (in.)
6MM-DMC-2-RS	6M0-1-2RS	M6MSC1/8R	6	1/8	35.6	15.3	4.0	9/16	9/16
6MM-DMC-4-RS	6M0-1-4RS	M6MSC1/4R	6	1/4	40.4	15.3	4.8	9/16	3/4
6MM-DMC-6-RS	6M0-1-6RS	M6MSC3/8R	6	3/8	41.1	15.3	4.8	9/16	7/8
6MM-DMC-8-RS	6M0-1-8RS	M6MSC1/2R	6	1/2	43.2	15.3	4.8	9/16	1-1/16
8MM-DMC-2-RS	8M0-1-2RS	M8MSC1/8R	8	1/8	36.6	16.2	4.0	5/8	9/16
8MM-DMC-4-RS	8M0-1-4RS	M8MSC1/4R	8	1/4	41.4	16.2	5.9	5/8	3/4
8MM-DMC-6-RS	8M0-1-6RS	M8MSC3/8R	8	3/8	42.2	16.2	6.4	5/8	7/8
8MM-DMC-8-RS	8M0-1-8RS	M8MSC1/2R	8	1/2	44.2	16.2	6.4	5/8	1-1/16
10MM-DMC-4-RS	10M0-1-4RS	M10MSC1/4R	10	1/4	42.2	17.2	5.9	3/4	3/4
10MM-DMC-6-RS	10M0-1-6RS	M10MSC3/8R	10	3/8	42.9	17.2	7.9	3/4	7/8
10MM-DMC-8-RS	10M0-1-8RS	M10MSC1/2R	10	1/2	45.0	17.2	7.9	3/4	1-1/16
12MM-DMC-4-RS	12M0-1-4RS	M12MSC1/4R	12	1/4	44.5	22.8	5.9	7/8	7/8
12MM-DMC-6-RS	12M0-1-6RS	M12MSC3/8R	12	3/8	45.5	22.8	7.9	7/8	7/8
12MM-DMC-8-RS	12M0-1-8RS	M12MSC1/2R	12	1/2	47.5	22.8	9.5	7/8	1-1/16
12MM-DMC-12-RS	12M0-1-12RS	M12MSC3/4R	12	3/4	52.1	22.8	9.5	7/8	1-5/16
18MM-DMC-8-RS	18M0-1-8RS	M18MSC1/2R	18	1/2	48.8	24.4	11.9	1-1/8	1-1/16
18MM-DMC-12-RS	18M0-1-12RS	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.

- BSPB threaded end requires a sealing washer.

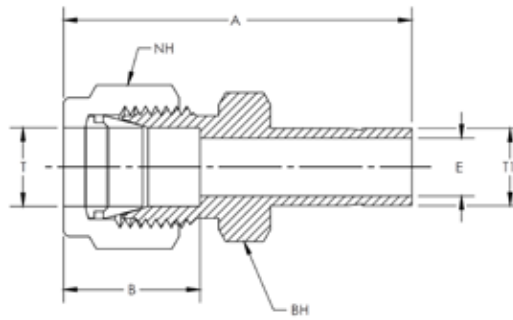


PART NUMBER	INTERCHANGES WITH		B BSPB THREAD SIZE	A	B	THICKNESS	PRESSURE RATING (PSIG)
SS-RSGK-2-F	SS-2-RS-2V	M30201-SS	1/8	0.63	0.41	0.41	5300
SS-RSGK-4-F	SS-4-RS-2V	M30202-SS	1/4	0.81	0.54	0.54	5500
SS-RSGK-6-F	SS-6-RS-2V	M30203-SS	3/8	0.94	0.68	0.68	4400
SS-RSGK-8-F	SS-8-RS-2V	M30204-SS	1/2	1.13	0.85	0.85	4000
SS-RSGK-10-F	-	-	5/8	1.25	0.92	0.92	4500
SS-RSGK-12-F	SS-12-RS-2V	M30206-SS	3/4	1.38	1.07	1.07	3800
SS-RSGK-16-F	SS-16-RS-2V	M30208-SS	1	1.69	1.33	1.33	2800
SS-RSGK-20-F	SS-20-RS-2V	-	1-1/4	2.06	1.69	1.69	2400
SS-RSGK-24-F	SS-24-RS-2V	-	1-1/2	2.31	1.91	1.91	2500



CBC PART NUMBER	INTERCHANGES WITH		T 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.



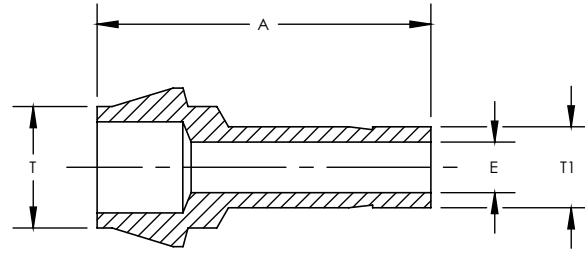
CBC PART NUMBER	INTERCHANGES WITH		T TUBE O.D. (mm.)	T1 TUBE O.D. (mm.)	A (mm.)	B (mm.)	E THRU HOLE (mm.)	NH NUT HEX (in.)	BH BODY HEX (in.)
6MM-DRATT-8MM	6M0-R-8M	M8TURM6	6	8	39.9	15.3	4.8	9/16	9/16
6MM-DRATT-10MM	6M0-R-10M	M10TURM6	6	10	40.7	15.3	4.8	9/16	9/16
6MM-DRATT-12MM	6M0-R-12M	M12TURM6	6	12	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

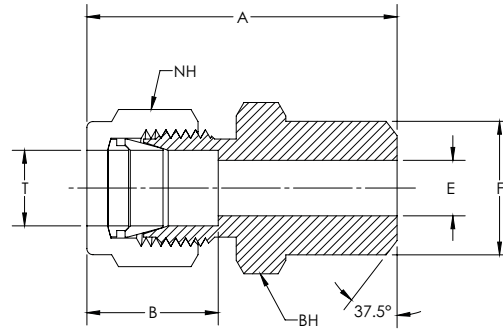
NOTE: Dimensions subject to change, to be used for reference only.





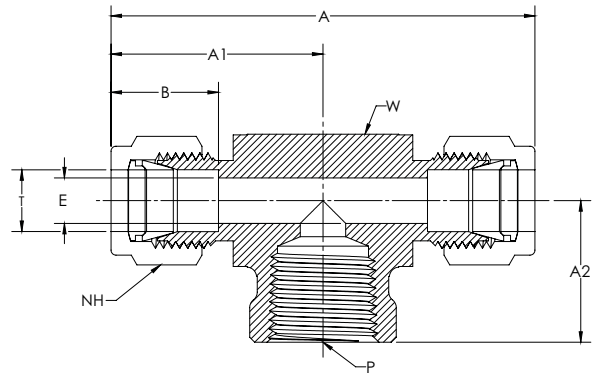
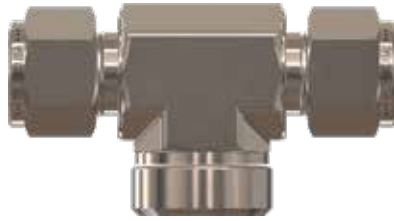
CBC PART NUMBER	INTERCHANGES WITH	T TUBE O.D. (mm.)	T1 TUBE O.D. (mm.)	A (mm.)	E THRU HOLE (mm.)
8MM-DRPC-6MM	8M1-PC-6M M6PCM8	8	6	25.4	4.1
10MM-DRPC-6MM	10M1-PC-6M M6PCM10	10	6	25.8	4.1
10MM-DRPC-8MM	10M1-PC-8M M8PCM10	10	8	26.3	5.6
12MM-DRPC-6MM	12M1-PC-6M -	12	6	29.6	4.1
12MM-DRPC-8MM	12M1-PC-8M M8PCM12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



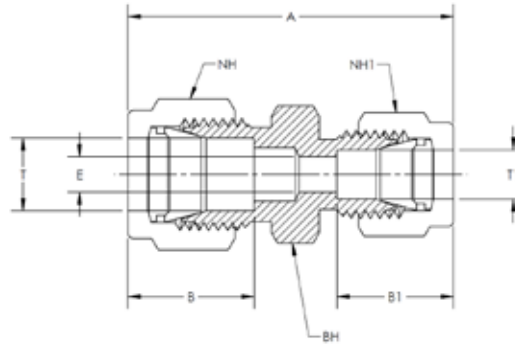
CBC PART NUMBER	INTERCHANGES WITH	T TUBE O.D. (mm.)	PIPE WELD SIZE (mm.)	A (mm.)	B (mm.)	E THRU HOLE (mm.)	NH1 NUT HEX (in.)	BH BODY HEX (in.)
6MM-DTBW-4	6M0-1-4W ZHLW2 6-1/4	6	1/4	37.9	15.3	4.8	9/16	9/16
8MM-DTBW-4	8M0-1-4W ZHLW2 8-1/4	8	1/4	38.7	16.2	6.4	5/8	9/16
8MM-DTBW-8	8M0-1-8W ZHLW2 8-1/2	8	1/2	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.

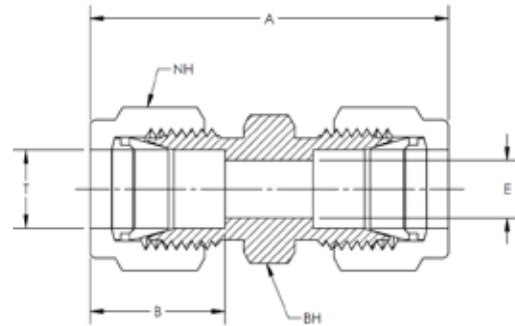


CBC PART NUMBER	INTERCHANGES WITH		T TUBE O.D. (mm.)	T1 TUBE O.D. (mm.)	A (mm.)	B (mm.)	B1 (mm.)	E THRU HOLE (mm.)	NH NUT HEX (in.)	NH1 NUT HEX (in.)	BH BODY HEX (in.)
8MM-DRU-6MM	8M0-6-6M	M8RUM6	8	6	42.3	16.2	15.3	4.8	5/8	9/16	9/16
10MM-DRU-6MM	10M0-6-6M	M10RUM6	10	6	44.5	17.2	15.3	4.8	3/4	9/16	11/16
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

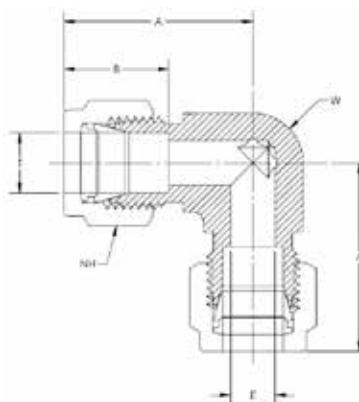
CBC PART NUMBER	INTERCHANGES WITH		T TUBE O.D. (mm.)	T1 TUBE O.D. (in.)	A (mm.)	B (mm.)	B1 (mm.)	E THRU HOLE (mm.)	NH NUT HEX (in.)	NH1 NUT HEX (in.)	BH BODY HEX (in.)
6MM-DRU-1	6M0-6-1	-	6	1/16	34.3	15.3	8.7	1.3	9/16	5/16	9/16
6MM-DRU-2	6M0-6-2	M6CU2	6	1/8	38.5	15.3	13.1	2.4	9/16	7/16	9/16
6MM-DRU-4	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.



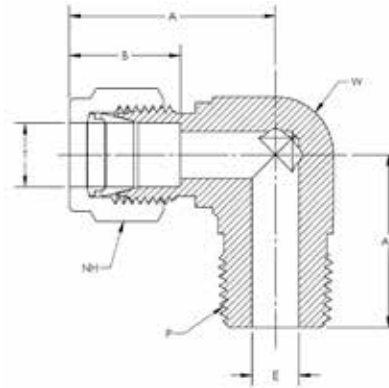
CBC PART NUMBER	INTERCHANGES WITH	T TUBE O.D. (mm.)	A		B		E		NH		BH	
			(mm.)	(mm.)	(mm.)	(mm.)	THRU HOLE (mm.)	HEX (in.)	HEX (in.)	HEX (in.)		
6MM-DU	6M0-6	SCM6	6	41.0	15.3	4.8	9/16	9/16				
8MM-DU	8M0-6	SCM8	8	43.2	16.2	6.4	5/8	9/16				
10MM-DU	10M0-6	SCM10	10	46.2	17.2	7.9	3/4	11/16				
12MM-DU	12M0-6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

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



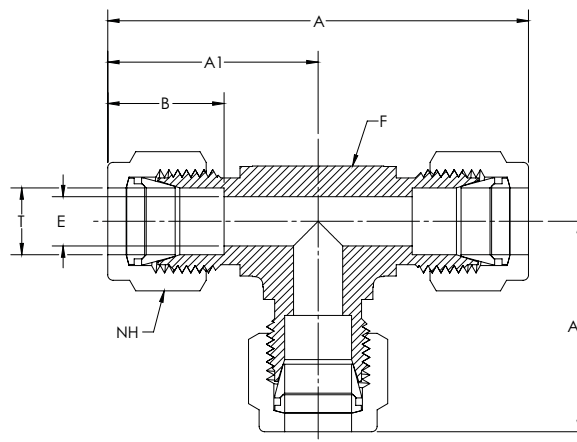
CBC PART NUMBER	INTERCHANGES WITH	T TUBE O.D. (mm.)	A		B	E	NH	W
			(mm.)	(mm.)	(mm.)	THRU HOLE (mm.)	NUIT HEX (in.)	WRENCH FLAT (in.)
6MM-DELU	6M0-9 EEM6	6	27.0	15.3	4.8	9/16	1/2	
8MM-DELU	8M0-9 EEM8	8	28.8	16.2	6.4	5/8	9/16	
10MM-DELU	10M0-9 EEM10	10	33.0	17.2	7.9	3/4	13/16	
12MM-DELU	12M0-9 EEM12	12	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.

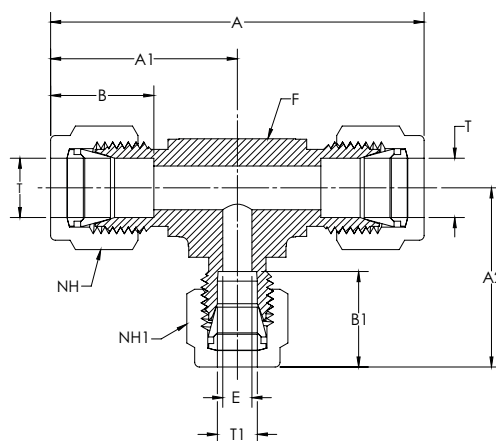


CBC PART NUMBER	INTERCHANGES WITH		T TUBE O.D. (mm.)	P PIPE END NPT (in.)	A (mm.)	A1 (mm.)	B (mm.)	E THRU HOLE (mm.)	NH NUT HEX (in.)	BH BODY HEX (in.)
6MM-DME-2	6MO-2-2	M6MSEL1/8N	6	1/8	27.0	18.8	15.3	4.8	9/16	1/2
6MM-DME-4	6MO-2-4	M6MSEL1/4N	6	1/4	27.0	23.4	15.3	4.8	9/16	1/2
6MM-DME-6	6MO-2-6	M6MSEL3/8N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



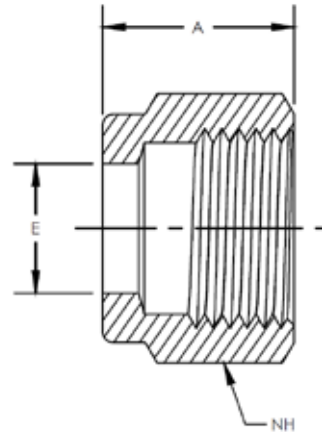
CBC PART NUMBER	INTERCHANGES WITH	T TUBE O.D. (mm.)	A (mm.)	A1 (mm.)	B (mm.)	E THRU HOLE (mm.)	NH NUT HEX (in.)	W WRENCH FLAT (in.)
6MM-DTTT	6M0-3 ETM6	6	53.9	27.0	15.3	4.8	9/16	1/2
8MM-DTTT	8M0-3 ETM8	8	59.7	29.9	16.2	6.4	5/8	5/8
10MM-DTTT	10M0-3 ETM10	10	66.0	33.0	17.2	7.9	3/4	13/16
12MM-DTTT	12M0-3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

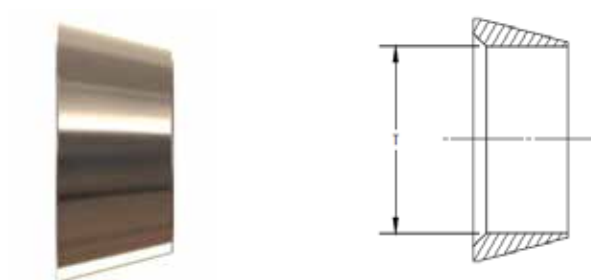
NOTE: Dimensions subject to change, to be used for reference only.



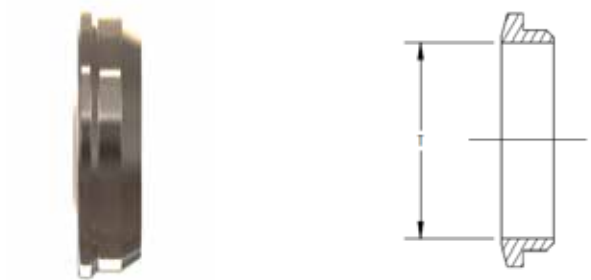


CBC PART NUMBER	INTERCHANGES WITH		T TUBE O.D. (mm.)	A (mm.)	NH NUT HEX (in.)
DN-6MM	6M2-1	NUM6	6	12.7	9/16
DN-8MM	8M2-1	NUM8	8	13.5	5/8
DN-10MM	10M2-1	NUM10	10	15.1	3/4
DN-12MM	12M2-1	NUM12	12	17.4	7/8
DN-18MM	18M2-1	NUM18	18	17.4	1-1/8

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.





## Coffee Mugs

**Part Number**  
Coffee-mug-blue  
Coffee-mug-white  
**Price**  
\$5.00/each

## Camo Hats

**Part Number**  
Camo-hats-black  
Camo-hat-orange  
**Price**  
\$10.00/each



## Drawstring Bags

**Part Number**  
Drawstring-bag  
**Price**  
\$5.00/each



## Zippo Lighters

**Part Number**  
Logo-zippo  
**Price**  
\$30.00/each



## Phone Wallets

**Part Number**  
Phone-wallet  
**Price**  
\$1.00/each



## Tube Grips

**Part Number**  
Tube-grip-holder  
**Price**  
\$1.00/each



## Fitting Gap Gages

**Part Number**  
Refer to page 87  
**Price**  
Call for pricing



## Flashdrives

**Part Number**  
Logo-flashdrive  
**Price**  
\$1.00/each



## Pens

**Part Number**  
tylok-pens  
**Price**  
\$1.00/each



## Golfballs - Titleist Pro V1

**Part Number**  
tylok-golfball  
**Price**  
\$50.00/per box of 12



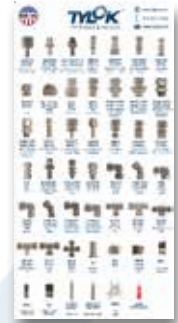


## Can Koozie

**Part Number**  
can-koozie  
**Price**  
\$1.00/each

## Wall Chart Sticker - 12x24

**Part Number**  
wall-chart-sticker  
**Price**  
\$10.00/each



## Wall Charts - 24x36

**Part Number**  
wall-chart  
**Price**  
\$1.00/each

## Mini Notepads - 5 pack

**Part Number**  
mini-notepads  
**Price**  
\$1.00/each



## Counter Mats

**Part Number**  
counter-mats  
**Price**  
\$10.00/each

## Logo Banners - 2.5x4

**Part Number**  
Tylok-wall-banner  
**Price**  
\$30.00/each



## Cabinets

**Part Number**  
Refer to page 88  
**Price**  
Call for pricing

## Bar Stools

**Part Number**  
bar-stool  
**Price**  
\$100.00/each



## Leak Detector

**Part Number**  
Refer to page 86 for more info.  
**Price**  
Call for pricing

## TyLube

**Part Number**  
Refer to page 86 for more info.  
**Price**  
Call for pricing



Co-branding options available upon request

# LEAK DETECTOR & THREAD LUBRICANT

## TYSPY LIQUID LEAK DETECTOR

- Temperature rating: Can be used over a temperature range of 27° to 200°F (-2 to 93°C).
- Low 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-PF25567 Leak Detector Compound, Oxygen Systems, Type I, 0 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 Liquid Leak Detector detects 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 Numbers	Description
Leak Detector-8oz	8oz. Bottle
Leak Detector COOL-8oz	
Leak Detector-GAL	1 Gallon
Leak Detector COOL-GAL	
Leak Detector-55G	55 Gallon Drum
Leak Detector COOL-55G	



## 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, check out the SDS on [www.tylok.com/tylube](http://www.tylok.com/tylube) to be sure of its compatibility with your installation.

Part Numbers	Description
TYLUBE-8OZ	8oz. bottle
TYLUBE-100	100 ct. box
TYLUBE-1ML	1ml packet





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, 5/8, 12mm
ABS-46812 DGG	1/4, 5/8, 1/2, 3/4



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

**1940'S**  
**THE PRODUCT**  
Founder Cullen Crawford patented the Original Flareless Fitting.

**1947**  
**THE BUSINESS**  
Mr. Crawford then formed a business called the Crawford Fitting Company.

**1966**  
**THE FUTURE**  
The Crawford Fitting Company would then be sold to be formed into another business.

**PRESENT**  
TYLOK International has now been manufacturing instrumentation fittings in the US for over 60 years.

Manufacturing in Cleveland, Ohio since 1955.  
Value • Quality • Reliability

in LinkedIn WBENC

**CBC/CS/CS-Lok™ INSTALLATION INSTRUCTIONS**

CBC/CS/CS-Lok™ Tube Fittings are completely assembled & ready for use. To ensure proper fit, always use the correct gage to verify fit. To ensure proper fit, always use the correct gage to verify fit. To ensure proper fit, always use the correct gage to verify fit.

**TO REMOVE TUBE & RE-CONNECT TUBE FITTING**

Mark the base of the tube with reference to the fitting before separating. Mark off the tube to a distance of 1/2 inch from the end of the tube. Use a sharp utility knife to cut the tube. Use a sharp utility knife to cut the tube. Use a sharp utility knife to cut the tube.

Making connections in the oil field for over 60 years.

AD WOMEN OWNED

Making connections in the oil field for over 60 years.

AD WOMEN OWNED

Co-branding options available upon request



## Features & Benefits

- Organized and stocked inventory
- Valuable sales tool for bin fill placements
- Balanced inventory reduces cost
- Tylok provides a suggested inventory list of the most used product
- Single purchase order saves accounting time and money
- Always have the spare parts you need
- Customized product offering available
- Tylok part number chart and size chart provided for easy identification

## Cabinet Attributes

- All welded, prime cold rolled steel
- Fully hemmed 1-1/2" bin fronts to hold labels and retain parts
- Compatible with most 12" deep bins drawer cabinets
- Durable blue powder coat finish, custom colors available
- Fittings & Cabinets made in the USA



## Suggested Stock



SS-4-DMC-4  
SS-4-DMC-6  
SS-6-DMC-4  
SS-6-DMC-6

10 EACH



SS-4-DFC-4  
SS-6-DFC-6

10 EACH



SS-4-DU  
SS-6-DU  
SS-8-DU

10 EACH



SS-4-DF PLUG  
SS-6-DF PLUG  
SS-8-DF PLUG

10 EACH



SS-4-DCAP  
SS-6-DCAP  
SS-8-DCAP

10 EACH



SS-4-DELU-4  
SS-6-DELU-6  
SS-8-DELU-8

10 EACH



SS-4-DME-4  
SS-6-DME-4  
SS-6-DME-6  
SS-8-DME-8

10 EACH



SS-4-DFE-4  
SS-6-DFE-6

10 EACH



SS-4-DTTT-4  
SS-6-DTTT-6  
SS-8-DTTT-8

10 EACH



SS-4-DTT-4-4-K  
SS-6-DTT-6-6-K  
SS-8-DTT-8-8-K

3 EACH



SS-43S-D4D4  
SS-43S-D6D6  
SS-45-D8D8

3 EACH



SS-1R4-D4D4  
SS-1R6-D6D6  
SS-1R6-D8D8

3 EACH



LEAK DETECTOR

1 EACH

Part Number	Description	Dimensions (in.)		
		W	D	H
Cabinet-40B-CBC	CBC-Lok Suggested Stock	33-7/8"	12"	28-7/8"
Cabinet-40B-CS	CS-Lok Suggested Stock			
Cabinet-40B	Empty Cabinet			

# INSTRUMENTATION TUBING

CBC/CS-Lok



## STAINLESS STEEL INSTRUMENTATION TUBING

- Meets ASTM A213 and ASTM A269
- Grade TP 316/316L (dual certified)
- Seamless, Cold Finished
- 20 foot lengths

Outside Diameter (in)	Part Number	Wall Thickness (in)
1/4	4-T-035-S-316L	0.035
	4-T-049-S-316L	0.049
	4-T-065-S-316L	0.065
3/8	6-T-035-S-316L	0.035
	6-T-049-S-316L	0.049
	6-T-065-S-316L	0.065
1/2	8-T-035-S-316L	0.035
	8-T-049-S-316L	0.049
	8-T-065-S-316L	0.065
	8-T-083-S-316L	0.083
5/8	10-T-049-S-316L	0.049
	10-T-065-S-316L	0.065
	10-T-083-S-316L	0.083
	10-T-095-S-316L	0.095
3/4	12-T-049-S-316L	0.049
	12-T-065-S-316L	0.065
	12-T-083-S-316L	0.083
	12-T-095-S-316L	0.095
	12-T-109-S-316L	0.109
1	16-T-065-S-316L	0.065
	16-T-083-S-316L	0.083
	16-T-095-S-316L	0.095
	16-T-109-S-316L	0.109
	16-T-120-S-316L	0.120

Values in the black cells with white text are not recommended for gas services. Maximum suggested working pressures are based on ASME B31.3 equations using the following values:

Stainless Steel Welded Tube De-rating factors:

	Stress Value (psi)	Fractional Tube Specifications	Metric Tube Specifications
Stainless Steel	20,000	ASTM A269	ISO 1127 <sup>3 to 12 mm O.D. D4 T4 tolerance</sup> 14 mm O.D and larger: D4 T3 tolerance
Carbon Steel	15,700	ASTM A179	-
Copper	6,000	ASTM B75	-

Double-Welded	0.85
Single-Welded	0.80

### FRACTIONAL TUBE (psig)

Tube Size O.D.	Stainless Steel															
	Tube Wall Thickness (inches)															
	.010	.012	.014	.016	.020	.028	.035	.049	.065	.083	.095	.109	.120	.134	.156	.188
1/16"	5600	6800	8100	9400	12000											
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			
1-1/4"										2400	2800	3300	3600	4100	4900	
1-1/2"											2300	2700	3000	3400	4000	4900
2"												2000	2200	2500	2900	3600

Tube Size O.D.	Carbon Steel							
	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

Tube Size O.D.	Copper							
	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

### METRIC TUBE (bar)

Tube Size O.D.	Stainless Steel									
	Tube Wall Thickness (mm)									
	0.8	1.0	1.2	1.5	1.8	2.0	2.2	2.5	2.8	3.0
3	670									
6	310	420	540	710						
8		310	390	520						
10		240	300	400	510	580				
12		200	250	330	410	470				
14		160	200	270	340	380	430			
15		150	190	250	310	360	400			
16			170	230	290	330	370			
18			150	200	260	290	320	370		
20			140	180	230	260	290	330	380	
22			120	160	200	230	260	300	340	
25					180	200	230	260	290	320

### TUBE PRESSURE DE-RATING FACTORS ELEVATED TEMPERATURES

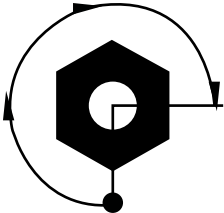
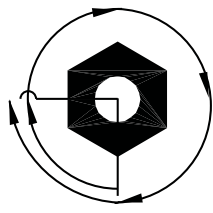
Temperatures		Tubing Material			
°F	°C	Carbon	304 SS	316 SS	Copper
100	38				1.00
150	66				0.85
200	93	0.95	1.00	1.00	0.80
250	121				0.80
300	149	0.90	1.00	1.00	0.78
350	177				0.66
400	204	0.87*	0.93	0.96	0.50
500	260		0.87	0.89	
600	316		0.82	0.85	
700	371		0.8	0.81	
800	427		0.76	0.79	
900	482		0.73	0.77	
1000	538		0.69	0.76	

\* Based on 375°F (190°C) max

# INSTALLATION INSTRUCTIONS

## 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	Tighten # 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 GUIDELINES

### General

- Free of nicks, scratches, and imperfections
- Suitable for bending and flaring
- Square cut ends

### Stainless Steel

- Types 304, 304L, 316, 316L, 317, or 317L per ASTM A213, ASTM A269, or equivalent.
- Fully Annealed, Seamless or Welded Redrawn, Maximum hardness of 80 HRB.

### Copper

- Seamless ASTM B75 Soft Annealed, ASTM B88 K or L Temper O, or equivalent.

### Carbon Steel

- ASTM A179 or equivalent, maximum hardness of 72 HRB.

## GAS SERVICE

Gases are generally less viscous than liquids allowing them to leak through imperfect seals. Tylok recommends tubing with minimal surface imperfections (nicks, scratches, etc.) and heavier walls for gas service applications. Heavy wall tubing offers more resistance to ferrules during installation which promotes a skiving effect that smooths out surface defects that would otherwise be leak paths. Thin wall tubing offers less resistance which promotes flexing rather than skiving resulting in a seal that may not be suitable for gas service. Refer to tubing pressure tables in this catalog for wall thickness recommended for gas services.

## PRECAUTIONS FOR WELD END

For best results when using Tylok tube fittings with weld ends, certain precautions should be taken:

- Remove the nut & ferrules from the fitting.
- Protect exposed threads & sealing surfaces from spatter.
- Use a heat sink to dissipate heat.
- Tack weld symmetrically to maintain alignment.
- When finishing welding remove weld spatter protection and make sure nuts and ferrules are in the proper orientation before assembling.

## SAFETY GUIDELINES

- Depressurize fluid systems before connecting, disconnecting or remaking a fitting.
- Follow Tylok's guidelines for proper fitting installation.
- Consult the factory before attempting to interchange Tylok fitting components.
- Don't exceed the recommended pressure ratings of system components.
- Use thread sealants when installing tapered pipe threads.
- Select fitting and tubing materials for best results.
- Never use a fitting to bleed pressure from a system.

## HEAT TRACEABILITY

Tylok Tube Fittings are heat code traceable back to mill heat of the material they were made from. Contact the factory for material certification requests.

## 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

## 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.

## 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.

# End Connections

## Suggested Allowable Working Pressure Tables



### CBC-LOK/CS-LOK TUBE ADAPTERS

Size	Tube Size	Fractional (PSIG)		Metric (BAR)	
		Stainless Steel & Carbon Steel	Brass	Tube Size	Stainless Steel & Carbon Steel
1	1/16	7200	2600	3mm	370
2	1/8	6400	3200	6mm	390
3	3/16	6000	3000	8mm	390
4	1/4	5900	2900	10mm	390
5	5/16	5800	2700	12mm	360
6	3/8	5800	2200	15mm	340
8	1/2	4900	2100	16mm	340
10	5/8	5000	1900	18mm	310
12	3/4	4600	1800	20mm	310
14	7/8	4300	1500	22mm	340
16	1	4100	1500	25mm	280
20	1-1/4	4900	-		
24	1-1/2	4900	-		
32	2	3600	-		

NOTE: Ratings calculated in accordance with ASME B31.3 (stress values of 10,000 psi for brass and 20,000 psi for stainless and carbon steel).



### STB FITTINGS (PSIG)

Stainless Steel & Carbon Steel			
Size	Thread	Straights	Positionable
2	5/16-24	5076	5076
3	3/8-24	5076	5076
4	7/16-20	5076	4568
5	1/2-20	5076	4568
6	9/16-18	5076	4061
8	3/4-16	4568	4061
10	7/8-14	3626	3045
12	1-1/16-12	3626	3045
14	1-3/16-12	3045	2538
16	1-5/16-12	3045	2538
20	1-5/8-12	2538	2030
24	1-7/8-12	2538	2030
32	2-1/2-12	2030	1522

NOTE: Pressure ratings per SAE J1926-3 for light-duty stud ends.



### JIC 37° FLARE (PSIG)

Stainless Steel & Carbon Steel		
Size	Thread	PSIG
2	5/16-24	5000
3	3/8-24	5000
4	7/16-20	5000
5	1/2-20	5000
6	9/16-18	5000
8	3/4-16	4500
10	7/8-14	3500
12	1-1/16-12	3500
14	1-3/16-12	3000
16	1-5/16-12	3000
20	1-5/8-12	2500
24	1-7/8-12	2000
32	2-1/2-12	1500

NOTE: Pressure ratings per SAE J514.



### NPT & BSPT PIPE THREADS

Size	Thread	PSIG			
		Stainless Steel & Carbon Steel		Brass	
		Male	Female	Male	Female
1	1/16	11000	6700	5500	3300
2	1/8	10000	6500	5000	3200
4	1/4	8000	6600	4000	3300
6	3/8	7800	5300	3900	2600
8	1/2	7700	4900	3800	2400
12	3/4	7300	4600	3600	2300
16	1	5300	4400	2600	2200
20	1-1/4	6000	5000	3000	2500
24	1-1/2	5000	4600	2500	2300
32	2	3900	3900	1900	1900

NOTE: Pressure ratings calculated in accordance with ASME B31.3 with NPT threads per ASME B1.20.1 and BSPT threads per ISO 7-1.

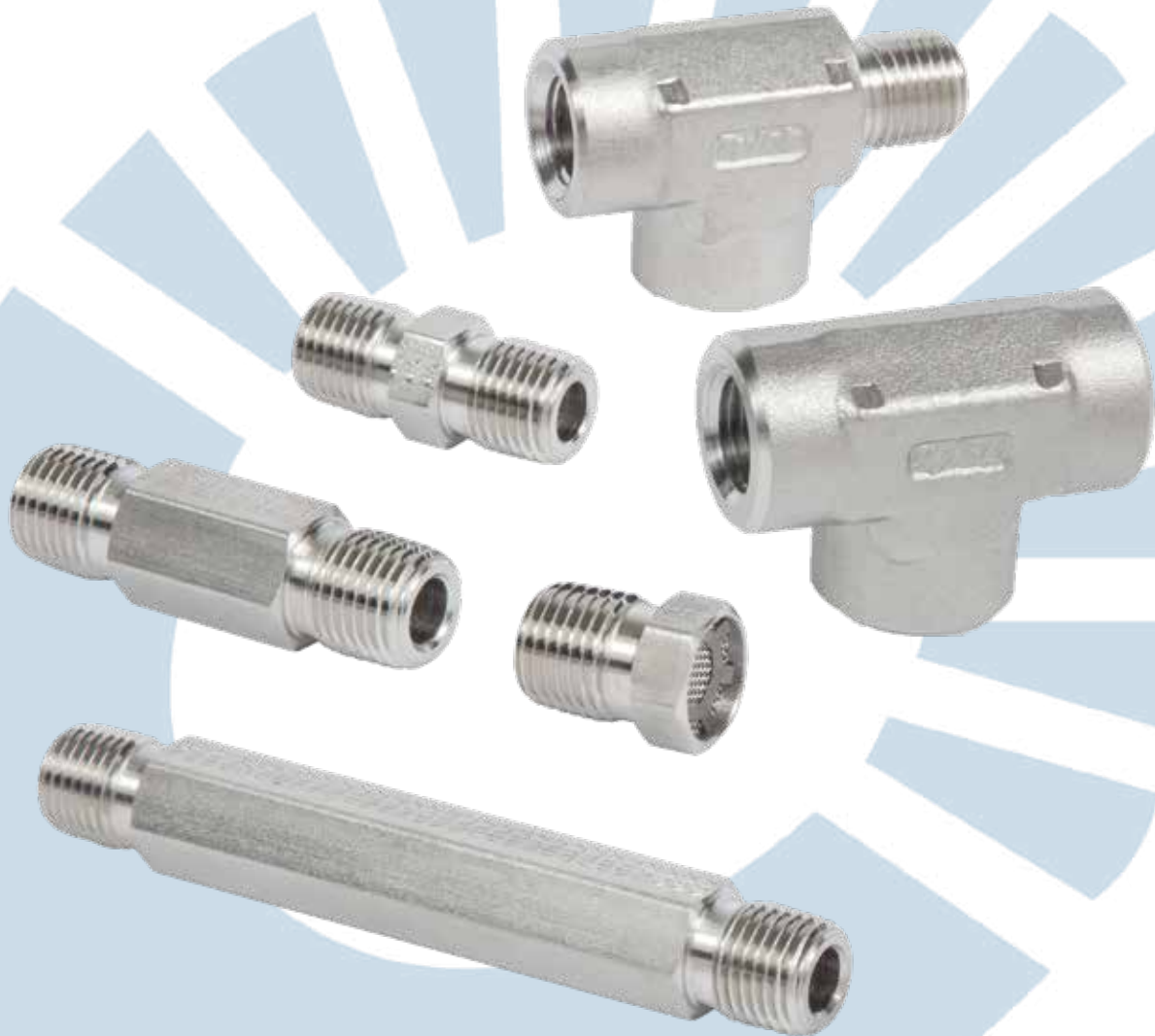
### THERMOCOUPLE BORE THROUGH

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.

### FITTING TEMPERATURE RATINGS

316 Stainless	Brass	Steel
-325°F to 1000°F (-198°C to 648°C)	-40°F to 400°F (-40°C to 204°C)	-65°F to 375°F (-54°C to 190°C)



# Instrumentation Pipe Fittings



**1CLN**  
Close Nipple

99



**1FMA**  
Female to Male  
Adapter

99



**1FPC**  
Female  
Pipe Cap

99



**1FPRU**  
Female Pipe  
Reducer Union

99



**1FPU**  
Female  
Pipe Union

100



**1HLN**  
Hex  
Long Nipple

100



**1HN**  
Hex Nipple

100



**1MPP**  
Male Pipe  
Plug

100



**1HRN**  
Hex  
Reducing Nipple

101



**1RAFM**  
Reducer Adapter -  
Female to Male

101



**1RBMF**  
Reducer Bushing -  
Male to Female

102



**2FF**  
Female Pipe  
Elbow

102



**2FM**  
Female - Male  
Pipe Elbow

102



**2FMR**  
Female - Male  
Reducer Pipe Elbow

103



**2MM**  
Male Pipe  
Elbow

103



**3FFF**  
All Female  
Pipe Tee

103



**3FFM**  
Pipe Tee - Female -  
Female - Male

104



**3FMF**  
Pipe Tee - Female -  
Male - Female

104



**3MMM**  
All Male  
Pipe Tee

104



**4FPCR**  
Female Pipe Cross

104



## Instrumentation Pipe Fittings

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

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

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

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

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

## Design/Features

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

## Technical Support & Training

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

## Quality Management System

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



# How to Order

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

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

Special Configurations available upon request.

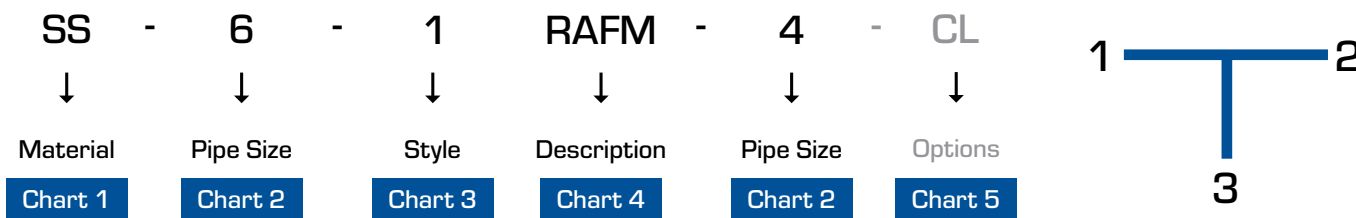


Chart 1- Material	
B	Brass
S	Steel
SS	Stainless Steel

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

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

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

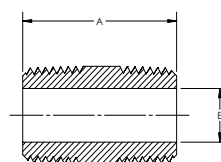
Chart 5- Options	
BSPT	BSPT Male Connector
CL	Clean & Lubricated to ASTM G93 Level C
SPCL	Clean & Lubricated to CGA G-4.1-2009
NACE	NACE Compliant

# 1CLN, 1FMA, 1FPC, 1FPRU

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

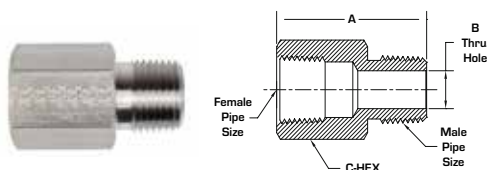
## 1CLN

### Close Nipple



## 1FMA

### Female to Male Adapter

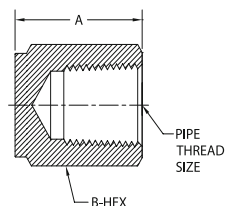


Part No.	Interchanges With	Female Pipe Size	Male Pipe Size	A	B Thru Hole	C Hex
2-1FMA	2-A	1/8	1/8	1.06	.187	9/16
4-1FMA	4-A	1/4	1/4	1.38	.281	3/4
6-1FMA	6-A	3/8	3/8	1.56	.375	7/8
8-1FMA	8-A	1/2	1/2	1.91	.468	1-1/16
12-1FMA	12-A	3/4	3/4	1.94	.625	1-5/16
16-1FMA	16-A	1	1	2.28	.875	1-5/8
1OK Fittings		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

Part No.	Interchanges With	A	B Hex
2-1FPC	2-CP	1/8	.750
4-1FPC	4-CP	1/4	.906
6-1FPC	6-CP	3/8	1.03
8-1FPC	8-CP	1/2	1.34
12-1FPC	12-CP	3/4	1.44
16-1FPC	16-CP	1	1.63
20-1FPC	20-CP	1-1/4	1.81
24-1FPC	24-CP	1-1/2	1.88
32-1FPC	32-CP	2	2.00
1OK Fittings			
2-1FPC-1OK	-	1/8	0.63
4-1FPC-1OK	-	1/4	0.88
6-1FPC-1OK	-	3/8	1.00
8-1FPC-1OK	-	1/2	1.35

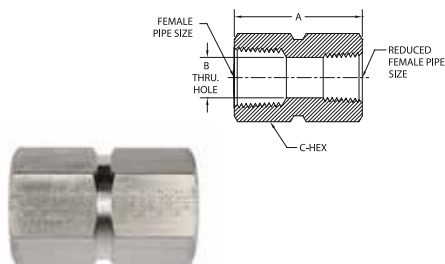
## 1FPC

### Female Pipe Cap



## 1FPRU

### Female Pipe Reducer Union



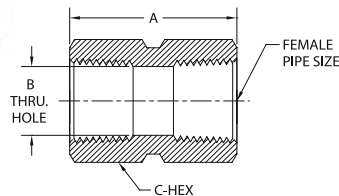
Part No.	Interchanges With	Female Pipe Size	Reduced Female Pipe Size	A	B Thru Hole	C Hex
4-1FPRU-2	4-HRCG-2	1/4	1/8	1.06	.187	9/16
6-1FPRU-4	6-HRCG-4	3/8	1/4	1.38	.281	3/4
8-1FPRU-2	8-HRCG-2	1/2	1/8	1.56	.375	7/8
8-1FPRU-4	8-HRCG-4	1/2	1/4	1.91	.468	1-1/16
8-1FPRU-6	8-HRCG-6	1/2	3/8	1.94	.625	1-5/16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

# 1FPU, 1HLN, 1HN, 1MPP

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

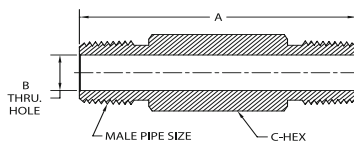
## 1FPU

### Female Pipe Union



## 1HLN

### Hex Long Nipple

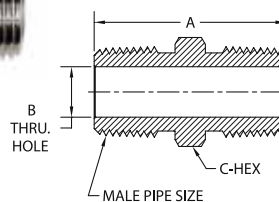


Part No.	Interchanges With	Male Pipe Size	A	B Thru Hole	C Hex
2-1HLN*	2-HLN- 2.00	1/8	* - Made to Order Specify Size	.187	7/16
4-1HLN*	4-HLN- 2.00	1/4		.281	9/16
6-1HLN*	6-HLN- 2.00	3/8		.3751	1/16
8-1HLN*	8-HLN- 2.00	1/2		.468	7/8
12-1HLN*	12-HLN- 2.00	3/4		.625	1-1/16
16-1HLN*	16-HLN- 2.00	1		.875	1-3/8

Part No.	Interchanges With	Male Pipe Size	A	B Thru Hole	C Hex
1-1HN	1-HN	1/16	1.01	.125	3/8
2-1HN	2-HN	1/8	1.01	.187	7/16
4-1HN	4-HN	1/4	1.40	.281	9/16
6-1HN	6-HN	3/8	1.43	.375	11/16
8-1HN	8-HN	1/2	1.84	.468	7/8
12-1HN	12-HN	3/4	1.84	.625	1-1/16
16-1HN	16-HN	1	2.32	.875	1-3/8
20-1HN	20-HN	1-1/4	2.32	.875	1-3/8
24-1HN	24-HN	1-1/2	2.61	1.44	2
32-1HN	32-HN	2	2.82	1.75	2-1/2
1OK Fittings					
2-1HN	2-HN	1/8	1.01	11/16	7/16
4-1HN-1OK	4-HN-1OK	1/4	1.40	7/8	9/16
6-1HN-1OK	-	3/8	1.43	1-1/16	11/16
8-1HN-1OK	8-HN-1OK	1/2	1.84	1-3/8	7/8

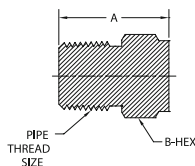
## 1HN

### Hex Nipple



## 1MPP

### Male Pipe Plug

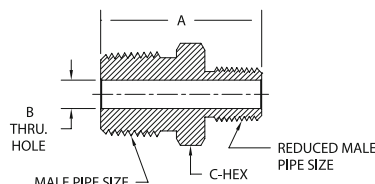


Part No.	Interchanges With	Pipe Thread Size	A	B Hex
1-1MPP	1-P	1/16	.750	3/8
2-1MPP	2-P	1/8	.750	7/16
4-1MPP	4-P	1/4	1.000	9/16
6-1MPP	6-P	3/8	1.000	11/16
8-1MPP	8-P	1/2	1.312	7/8
12-1MPP	12-P	3/4	1.375	1-1/16
16-1MPP	16-P	1	1.500	1-3/8
20-1MPP	20-P	1-1/4	1.625	1-3/4
24-1MPP	24-P	1-1/2	1.500	1-7/8
32-1MPP	32-P	2	1.875	1-7/8

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

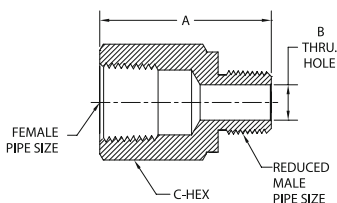
## 1HRN

### Hex Reducing Nipple



## 1RAFM

### Reducer Adapter - Female to Male



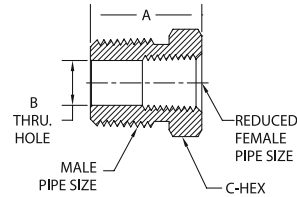
Part No.	Interchanges With	Female Pipe Size	Reduced Male Pipe Size	A	B Thru Hole	C Hex
2-1RAFM-1	2-RA-1	1/8	1/16	1.09	.125	9/16
4-1RAFM-2	4-RA-2	1/4	1/8	1.25	.187	3/4
6-1RAFM-2	6-RA-2	3/8	1/8	1.44	.187	7/8
6-1RAFM-4	6-RA-4	3/8	1/4	1.56	.281	7/8
8-1RAFM-2	8-RA-2	1/2	1/8	1.69	.187	1-1/16
8-1RAFM-4	8-RA-4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

# 1RBMF, 2FF, 2FM

Part No.	Interchanges With	Male Pipe Size	Reduced Female Pipe Size	A	B Thru Hole	C Hex
2-1RBMF-1	2-RB-1	1/8	1/16	1.00	.19	7/16
4-1RBMF-2	4-RB-2	1/4	1/8	1.00	.28	9/16
6-1RBMF-2	6-RB-2	3/8	1/8	.843	.33	11/16
6-1RBMF-4	6-RB-4	3/8	1/4	1.13	.38	3/4
8-1RBMF-2	8-RB-2	1/2	1/8	1.06	.33	7/8
8-1RBMF-4	8-RB-4	1/2	1/4	1.06	.42	7/8
8-1RBMF-6	8-RB-6	1/2	3/8	1.31	.47	7/8
12-1RBMF-4	12-RB-4	3/4	1/4	1.06	.42	1-1/16
12-1RBMF-6	12-RB-6	3/4	3/8	1.06	.56	1-1/16
12-1RBMF-8	12-RB-8	3/4	1/2	1.56	.63	1-1/16
16-1RBMF-4	16-RB-4	1	1/4	1.34	.42	1-3/8
16-1RBMF-6	16-RB-6	1	3/8	1.34	.56	1-3/8
16-1RBMF-8	16-RB-8	1	1/2	1.34	.69	1-3/8
16-1RBMF-12	16-RB-12	1	3/4	1.75	.88	1-3/8
20-1RBMF-8	20-RB-8	1-1/4	1/2	1.47	.69	1-3/4
20-1RBMF-12	20-RB-12	1-1/4	3/4	1.47	.89	1-3/4
20-1RBMF-16	20-RB-16	1-1/4	1	1.47	1.13	1-3/4
24-1RBMF-8	24-RB-8	1-1/2	1/2	1.57	0.69	2
24-1RBMF-12	24-RB-12	1-1/2	3/4	1.57	0.89	2
24-1RBMF-16	24-RB-16	1-1/2	1	1.57	1.13	2
32-1RBMF-24	32-RB-24	2	1-1/2	1.75	1.71	2-1/2
<b>10K Fittings</b>						
4-1RBMF-2-10K	-	1/4	1/8	1.15	0.23	3/4
6-1RBMF-4-10K	-	3/8	1/4	1.38	0.31	1
8-1RBMF-2-10K	-	1/2	1/8	1.09	0.33	7/8
8-1RBMF-4-10K	-	1/2	1/4	1.53	0.39	1
8-1RBMF-6-10K	-	1/2	3/8	1.63	0.39	1-1/4

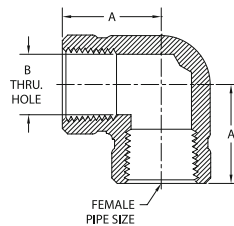
## 1RBMF

Reducer Bushing-  
Male to Female



## 2FF

Female Pipe Elbow

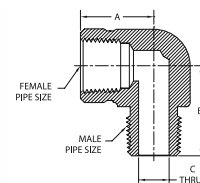


Part No.	Interchanges With	Female Pipe Size	A	B Thru Hole
2-2FF-2	2-E	1/8	.843	.328
4-2FF-4	4-E	1/4	.968	.421
6-2FF-6	6-E	3/8	1.00	.562
8-2FF-8	8-E	1/2	1.13	.687
12-2FF-12	12-E	3/4	1.44	.890
<b>10K Fittings</b>				
2-2FF-2-10K	-	1/8	1.04	0.31
4-2FF-4-10K	-	1/4	1.20	0.41
6-2FF-6-10K	-	3/8	1.45	0.50
8-2FF-8-10K	-	1/2	1.65	0.63

Part No.	Interchanges With	Female Pipe Size	Male Pipe Size	A	B	C Thru Hole
1-2FM-1	1-SE	1/16	1/16	.750	.718	.125
2-2FM-2	2-SE	1/8	1/8	.843	.843	.187
4-2FM-4	4-SE	1/4	1/4	.843	1.09	.281
6-2FM-6	6-SE	3/8	3/8	1.00	1.13	.375
8-2FM-8	8-SE	1/2	1/2	1.13	1.38	.468
12-2FM-12	12-SE	3/4	3/4	1.44	1.56	.625
16-2FM-16	16-SE	1	1	1.91	1.91	.875
<b>10K Fittings</b>						
2-2FM-2-10K	-	1/8	1/8	1.04	1.04	0.16
4-2FM-4-10K	-	1/4	1/4	1.20	1.20	0.20
6-2FM-6-10K	-	3/8	3/8	1.45	1.45	0.28
8-2FM-8-10K	-	1/2	1/2	1.65	1.65	0.36

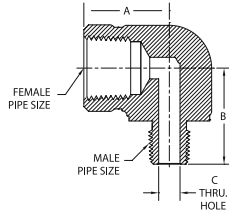
## 2FM

Female-Male Pipe Elbow



## 2FMR

### Female-Male Reducer Pipe Elbow

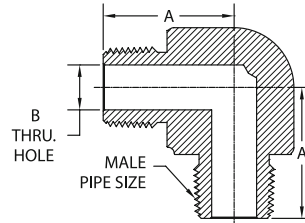


Part No.	Interchanges With	Female Pipe Size	Male Pipe Size	A	B	C Thru Hole
2-2FMR-1	2-RSE-1	1/8	1/16	.750	.750	.125
4-2FMR-2	4-RSE-2	1/4	1/8	.843	.937	.187
6-2FMR-4	6-RSE-4	3/8	1/4	1.06	1.06	.281
8-2FMR-4	8-RSE-4	1/2	1/4	1.13	1.25	.281
8-2FMR-6	8-RSE-6	1/2	3/8	1.13	1.25	.375
10K Fittings						
2-2FMR-1-10K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

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

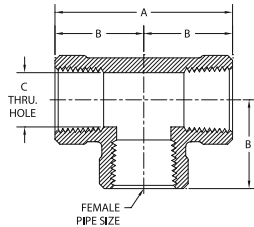
## 2MM

### Male Pipe Elbow



## 3FFF

### All Female Pipe Tee



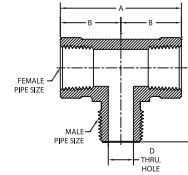
Part No.	Interchanges With	Female Pipe Size	A	B	C Thru Hole
2-3FFF-2	2-T	1/8	1.69	.843	.328
4-3FFF-4	4-T	1/4	1.69	.843	.421
6-3FFF-6	6-T	3/8	2.00	1.00	.562
8-3FFF-8	8-T	1/2	2.63	1.13	.687
12-3FFF-12	12-T	3/4	1.13	1.31	.890
16-3FFF-16	16-T	1	3.25	1.63	.125
10K Fittings					
2-3FFF-2-10K	-	1/8	2.08	1.04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

# 3FFM, 3FMF, 3MMM, 4FPCR

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

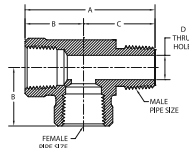
## 3FFM

Pipe Tee Female - Female - Male



## 3FMF

Pipe Tee - Female - Male - Female

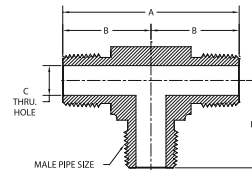


Part No.	Interchanges With	Female Pipe Size	Male Pipe Size	A	B	C	D Thru Hole
2-3FMF-2	2-ST	1/8	1/8	1.69	.843	.843	.187
4-3FMF-4	4-ST	1/4	1/4	1.89	.843	1.05	.281
6-3FMF-6	6-ST	3/8	3/8	2.13	1.00	1.13	.375
8-3FMF-8	8-ST	1/2	1/2	2.50	1.13	1.38	.468
12-3FMF-12	12-ST	3/4	3/4	2.94	1.44	1.50	.625
10K Fittings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

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

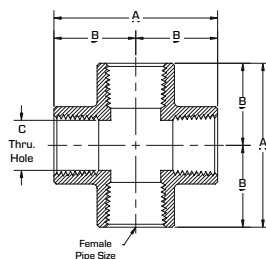
## 3MMM

All Male Pipe Tee



## 4FPCR

Female Pipe Cross



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



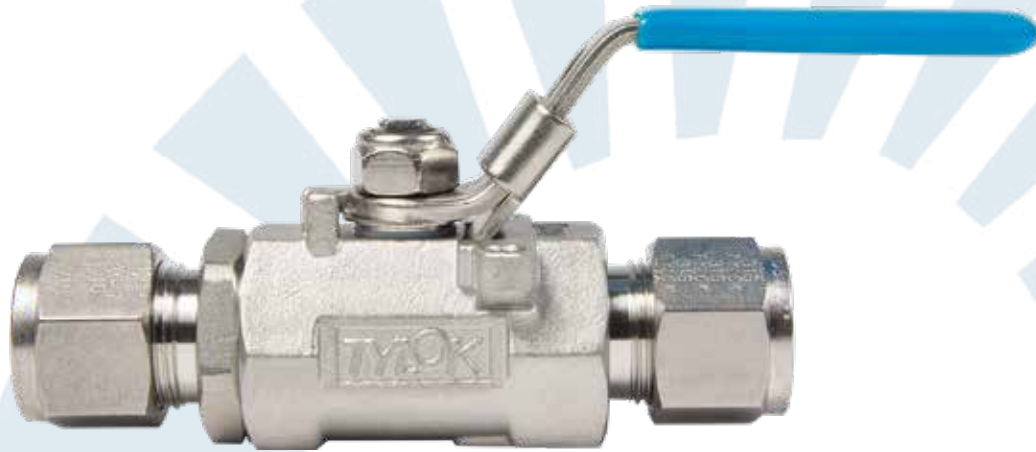
The GP Series Ball Valve is an instrumentation valve solution for tubing & piping systems. It is available from 1/4" to 1" with tube end connections and from 1/4" to 1/2" with female pipe threads for female to female applications.

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

- 2,000 psig (138 bar) Pressure Rating
- Built-in actuator mounting holes for ease of automation
- Bi-directional flow
- Compact in size but with high flow capacity
- Oval or Butterfly Handles available  
(locking devices not available on butterfly handles)

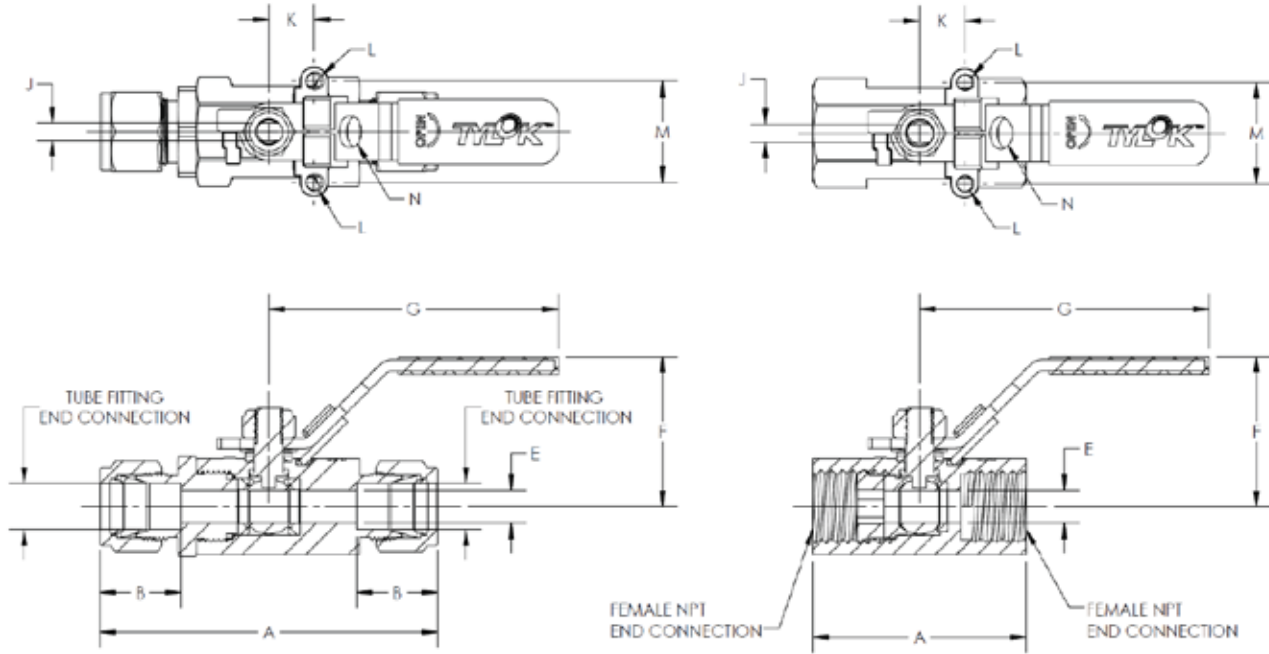


GP Series



## Features

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

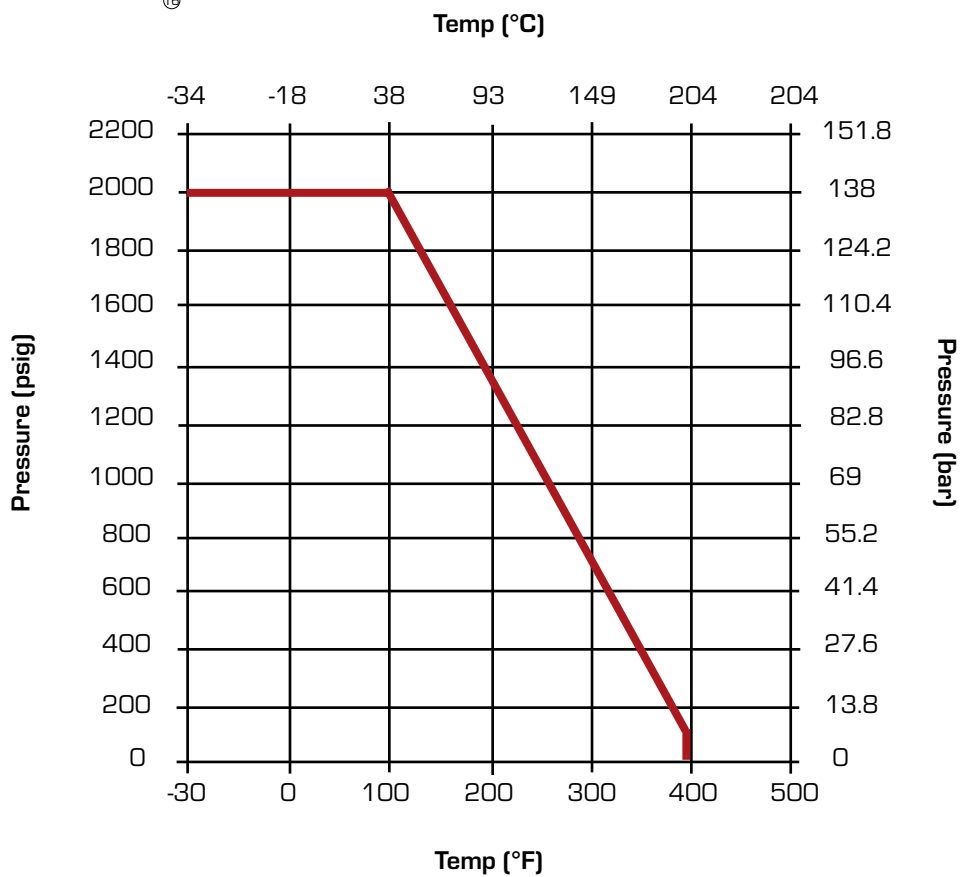
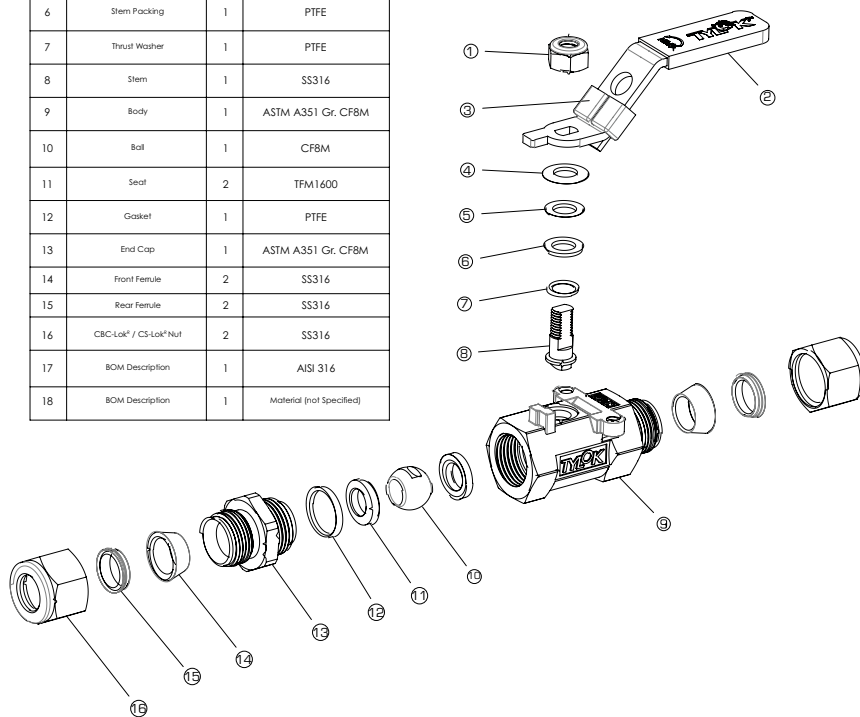


End Connection		Part Number	Cv	A	B	E	F	G	J	K	L	M	N
Type	Size												
CBC-Lok Tube Fitting	1/4	SS-GP4-D4D4	1.25	2.95	0.61	0.20	1.38	2.44	0.12	0.50	M5 X 0.8	1.12	5/16" Lock Shackle Diameter
	3/8	SS-GP6-D6D6	2.50	3.15	0.67	0.28	1.46	3.15	0.16				
	1/2	SS-GP8-D8D8	9.25	3.75	0.90	0.36	1.69	3.23	0.20				
	3/4	SS-GP12-D12D12	12.65	4.34	0.96	0.49	1.81	3.74	0.20				
	1	SS-GP16-D16D16	17.35	4.91	1.24	0.59	2.05	4.02	0.24				
CS-Lok Tube Fitting	1/4	SS-GP4-S4S4	1.25	2.95	0.61	0.20	1.38	2.44	0.12	0.50	M5 X 0.8	1.12	5/16" Lock Shackle Diameter
	3/8	SS-GP6-S6S6	2.50	3.15	0.67	0.28	1.46	3.15	0.16				
	1/2	SS-GP8-S8S8	9.25	3.75	0.90	0.36	1.69	3.23	0.20				
	3/4	SS-GP12-S12S12	12.65	4.34	0.96	0.49	1.81	3.74	0.20				
	1	SS-GP16-S16S16	17.35	4.91	1.24	0.59	2.05	4.02	0.24				
Female NPT	1/4	SS-GP4-F4F4	1.20	1.89	-	0.20	1.38	2.44	0.12	0.50	M5 X 0.8	1.12	5/16" Lock Shackle Diameter
	3/8	SS-GP6-F6F6	2.40	2.09		0.28	1.46	3.15	0.16				
	1/2	SS-GP8-F8F8	4.27	2.48		2.48	1.69	3.23	0.20				

# General Purpose Ball Valves

GP Series

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



## Handle Options

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

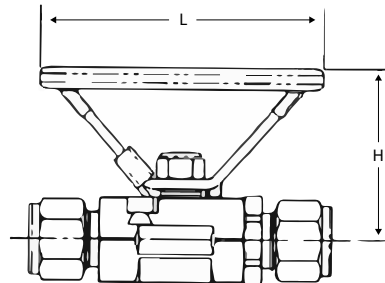
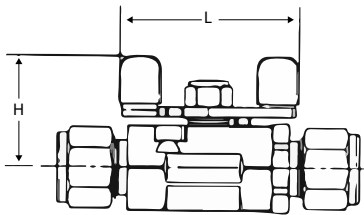
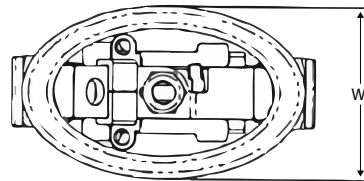
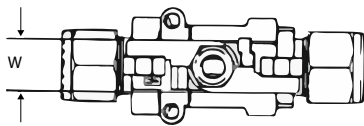
### Butterfly Handle

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

### Oval Handle

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

GP Series



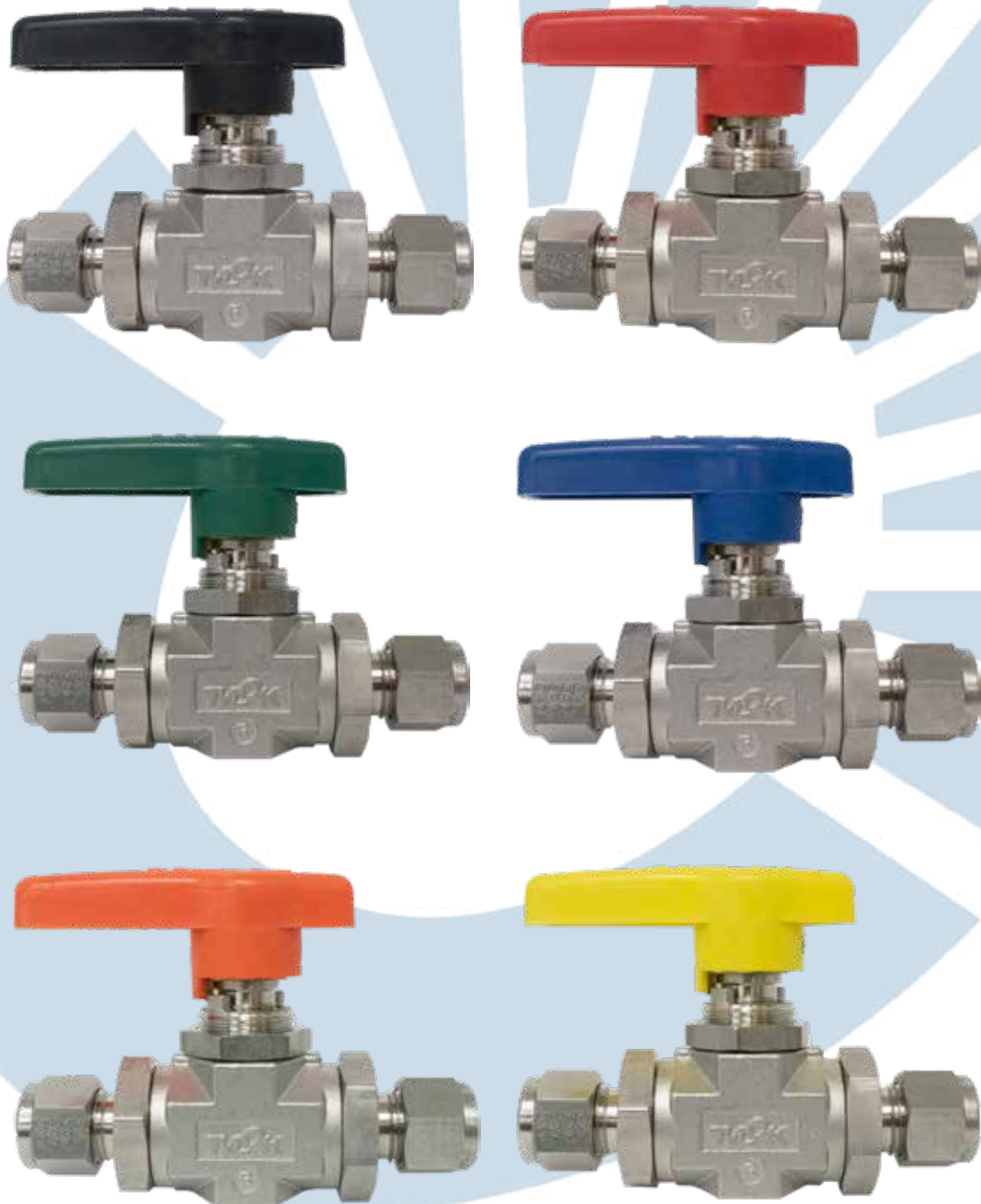
Size	Butterfly Handle			Oval Handle		
	H	L	W	H	L	W
1/4	1.53	3.51	2.14	1.17	2.00	.48
3/8	1.75	3.51	2.14	1.20	2.10	.55
1/2	2.12	3.51	2.14	1.38	2.22	.63
3/4	2.23	3.51	2.14	1.50	2.22	.63
1	2.40	3.51	2.14	2.08	2.81	.79

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

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

# High Pressure Ball Valves

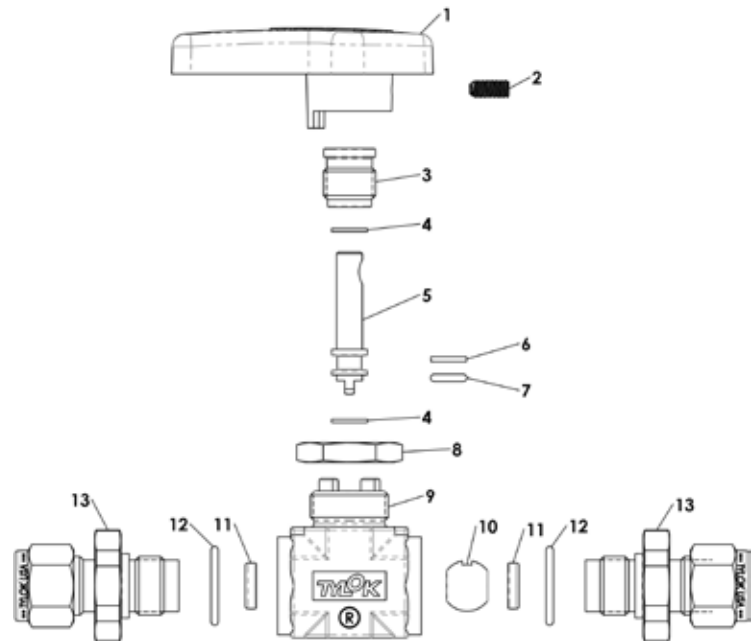
HP Series



## Features

- Stainless steel construction
- Pressure ratings up to 6,000 psig
- Quarter turn operation
- Bi-directional flow
- Free-floating ball
- FKM end connector and stem seals
- PTFE and PEEK seat options
- 1/8" to 3/4" tube and NPT connections available
- Standard panel mounting capabilities
- Lockout devices and color-coded handles available

#	Components	Stainless Steel
1	Handle	Nylon with Brass Insert
2	Screw	Carbon Steel
3	Gland Nut	316 SS
4	Stem Washer	Nylatron
5	Stem	316 SS
6	Stem Back-up Ring	PTFE
7	Stem Seal	Fluorocarbon FKM
8	Panel Lock Nut	316 SS
9	Body	316 SS
10	Ball	316 SS
11	Seat	PTFE, PEEK
12	End Connector Seal	Fluorocarbon FKM
13	End Connector	316 SS
	Lubricant	Perfluoropolyether Grease



Seat Material	PTFE	PEEK
Designator	-T	-PK
Pressure Rating @100°F (psig)	1500	6000
Temperature Rating (°F)	-15 to 400	-15 to 400

# High Pressure Ball Valves

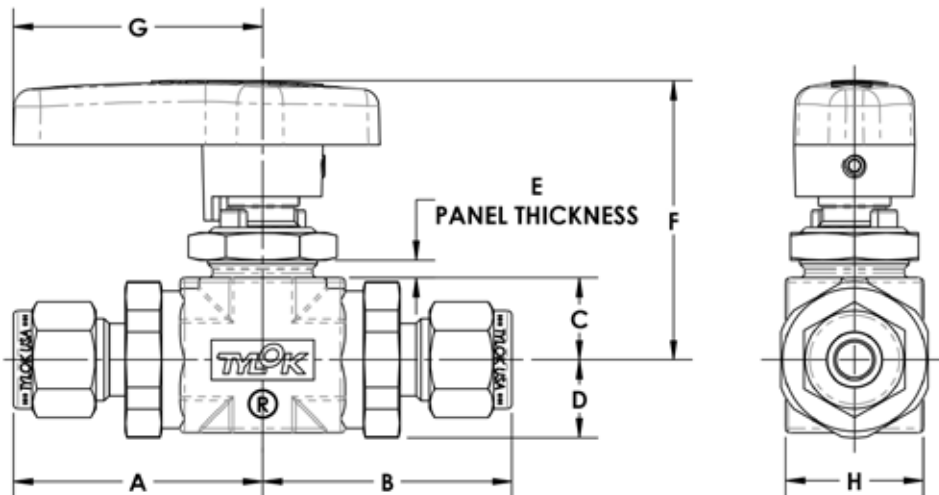
HP Series

**Part Number Shown:**

**SS-6-DTT-6-6-PK**

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

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



## Valve Dimension Chart

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

\* Reduced Port

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

**Special Configurations available upon request.**

HP Series

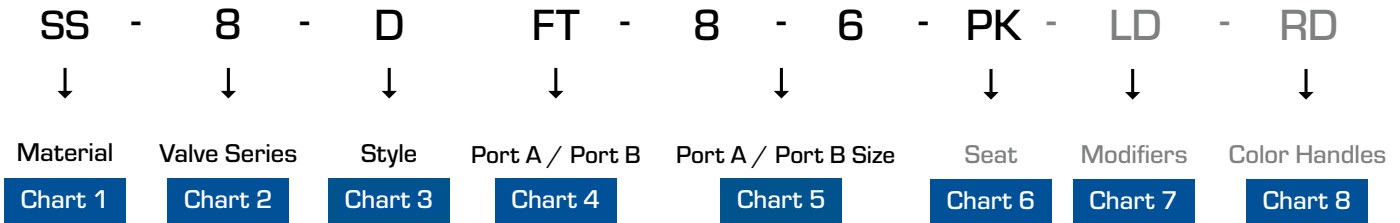


Chart 1- Material	
SS	Stainless Steel

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

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

Chart 4- Valve Configuration		
Type	Port A	Port B
TT	Tube	Tube
MM <sup>1</sup>	Male NPT	Male NPT
FF <sup>1</sup>	Female NPT	Female NPT
MF <sup>1</sup>	Male NPT	Female NPT
FM <sup>1</sup>	Female NPT	Male NPT
TM	Tube	Male NPT
MT	Male NPT	Tube
TF	Tube	Female NPT
FT	Female NPT	Tube

<sup>1</sup> Use Style 1 from Chart 3 for this type of configuration.

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

\* See dimension chart for available sizes.

Chart 6- Seat	
T	PTFE
PK	PEEK

Chart 7- Modifiers	
LD	Locking Handle

Chart 8- Color Handles	
RD	Red Handle
BL	Blue Handle
GN	Green Handle
OG	Orange Handle
YW	Yellow Handle

\* Black handles are default on HP ball valves.

**Example: SS-4-DTT-4-4-T**

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

**Example: SS-6-1FF-6-4-PK**

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



## Handle Options

Color	Valve Adder	4 & 6 Series Kit	8 Series Kit
Black (Standard)		KIT-46-BK	KIT-8-BK
Red	-RD	KIT-46-RD	KIT-8-RD
Blue	-BL	KIT-46-BL	KIT-8-BL
Green	-GN	KIT-46-GN	KIT-8-GN
Orange	-OG	KIT-46-OG	KIT-8-OG
Yellow	-YW	KIT-46-YW	KIT-8-YW

Kits come with a Handle and Set Screw.  
Sample Part Number:

- **SS-6-DTT-8-8-K-BL**

PEEK Seated 6 Series HP Ball Valve  
with 1/2" CBC-Lok End Connectors  
and a Blue Handle

## Locking Device

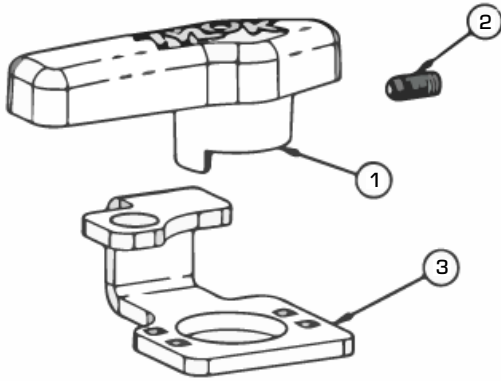
Valve Adder	4 & 6 Series Kit	8 Series Kit
-LD	KIT-46-HPBV-LD	KIT-8-HPBV-LD



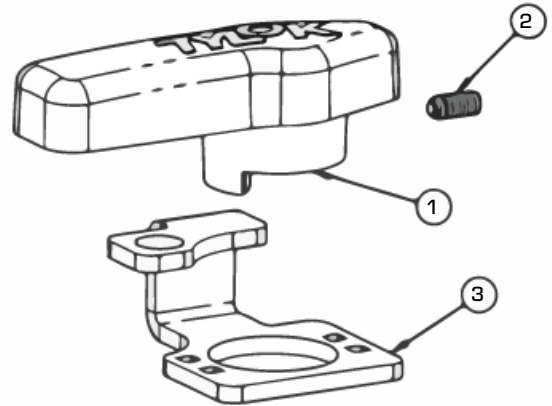
Kits come with a Locking Device

- **SS-6-DTT-8-8-PK-LD**

PEEK Seated 6 Series HP Ball Valve  
with 1/2" CBC-Lok End Connectors  
and a Locking Device



4 & 6 Series

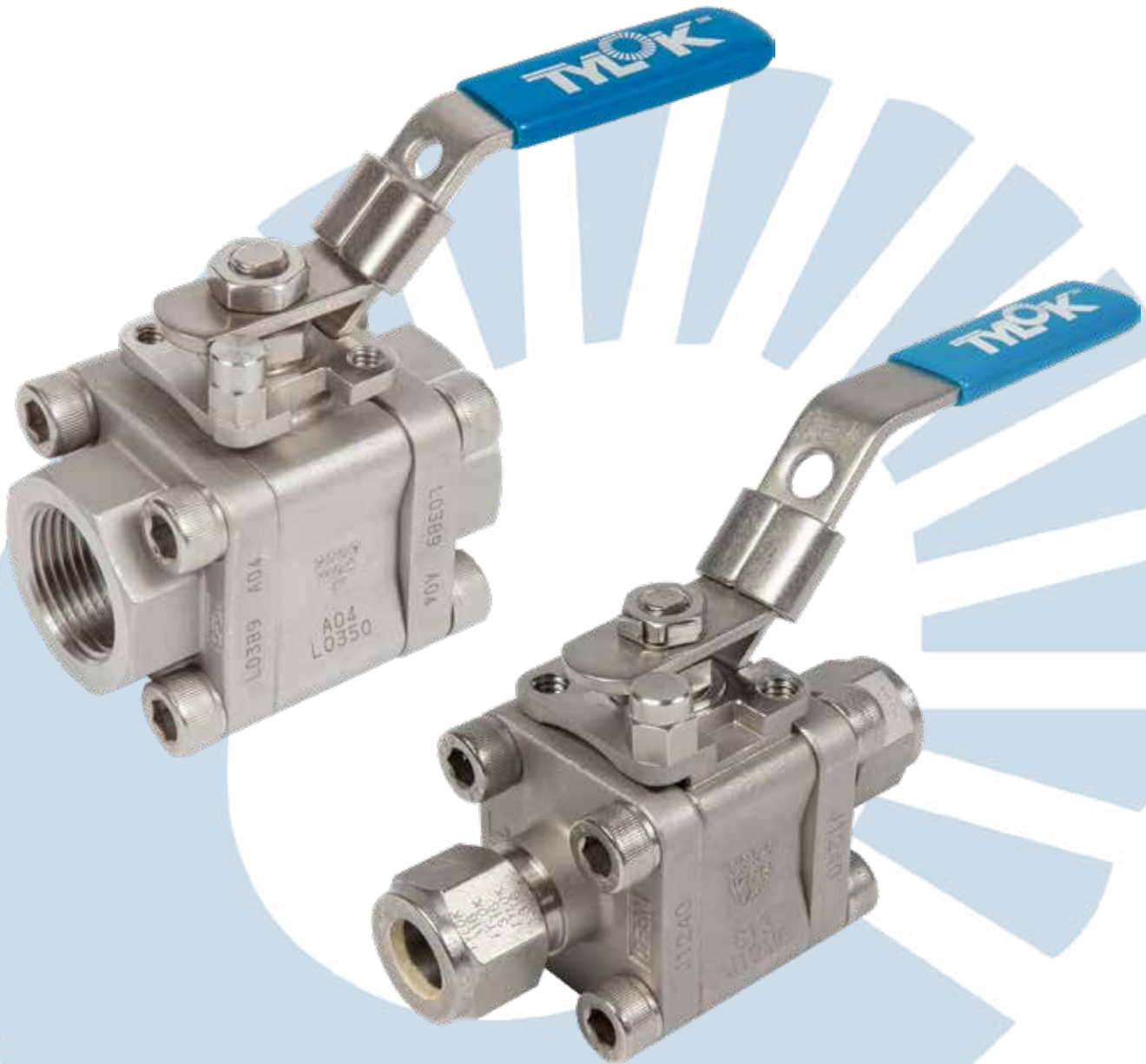


8 Series

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

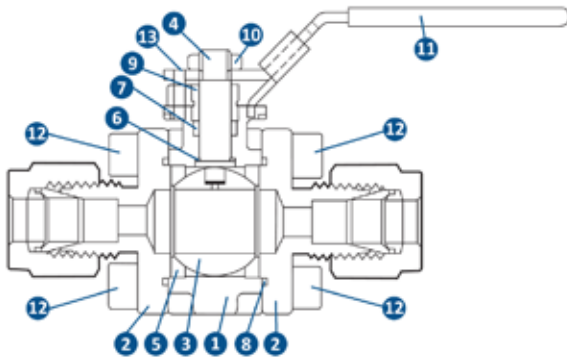
\* "BK" designates black colored handle, other color handles are available and should be verified against part number.

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



## Features

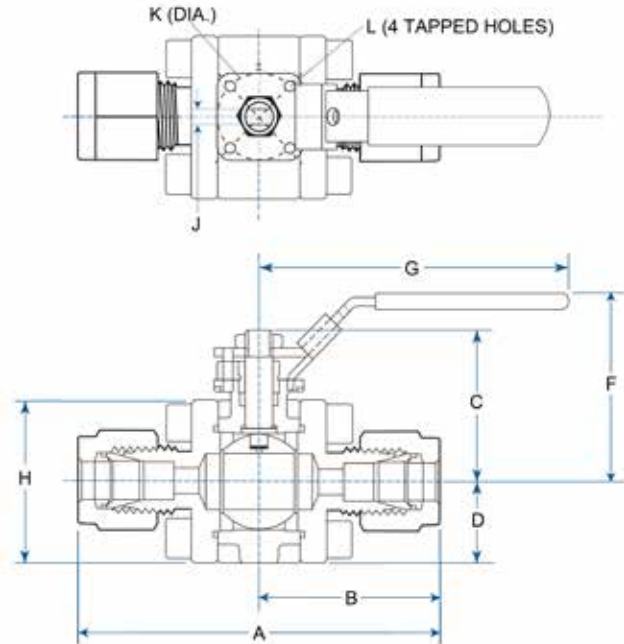
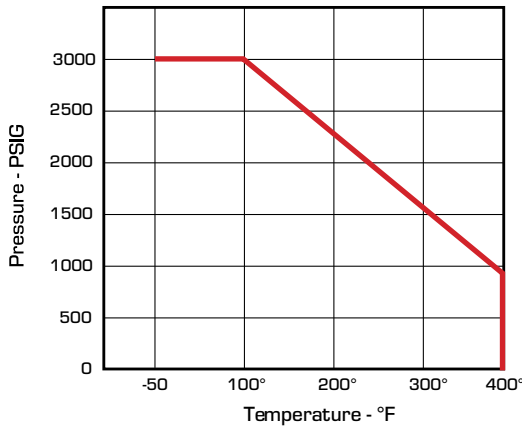
- Blowout proof stem
- Stainless Steel Construction
- Locking Handles in On & Off positions
- ISO 5211 4-Bolt Actuator Mounting Pad
- Pressure ratings up to 3,000 psig
- API 607 6th Edition Compliant
- API 608 5th Edition Compliant
- 1/4" to 1" tube connections and 1/4" to 2" female pipe connections
- NACE MRO175 Rev. 2000 Compliant
- Available series:
  - 3G Series: Instrumentation
  - 3P Series: ASME B16.34 Class 800 Compliant Pipe
  - 3S Series: Steam Service
- 3 Piece Maintenance Design
- Available with automated pneumatic actuators
- Electrically grounded stem
- Extended packing adjusted nut
- Oval handles available with "-OH" suffix



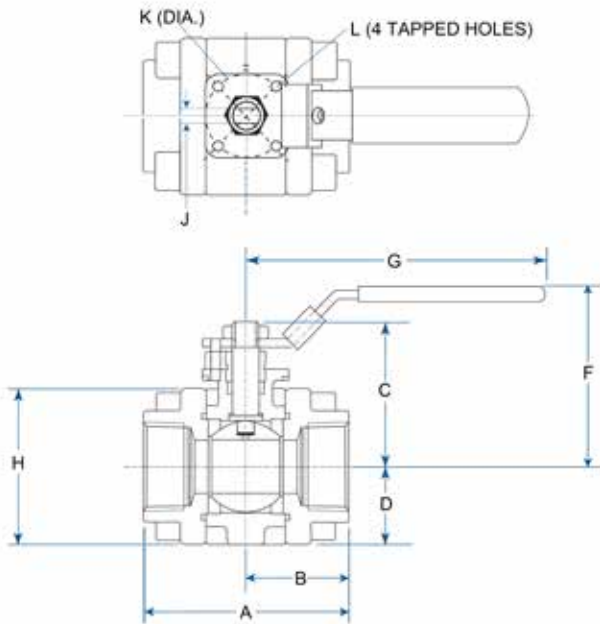
Materials of Construction				
#	Component	3G (Instrumentation)	3P (Pipe ASME)	3S (Steam)
1	Body	ASTM A351 Grade CF8M		
2	Tailpiece	ASTM A351 Grade CF8M		
3	Ball	ASTM A276 Grade 316 or ASTM A351 Grade CF8M		
4	Stem	ASTM A276 Grade 316 or ASTM A351 Grade CF8M		
5	Seat	Reinforced PTFE	Reinforced PTFE	PEEK
6	Thrust Washer	Reinforced PTFE	Reinforced PTFE	PEEK
7	Packing	Reinforced PTFE	Graphite	Graphite
8	Body Seal	Fluorocarbon FKM	Graphite	Graphite
9	Packing Nut	ASTM A276 Grade 316		
10	Handle Nut	304 Stainless Steel		
11	Handle Assembly	304 Stainless Steel		
12	Body Bolt	ASTM A193 Grade B8		
13	Handle Stop	304 Stainless Steel		

### 3G Series Instrumentation Ball Valve

- 1/4" to 1" Tube Connections
- 3,000 psig maximum pressure rating
- Reinforced PTFE seats and packing
- Fluorocarbon FKM flange seals



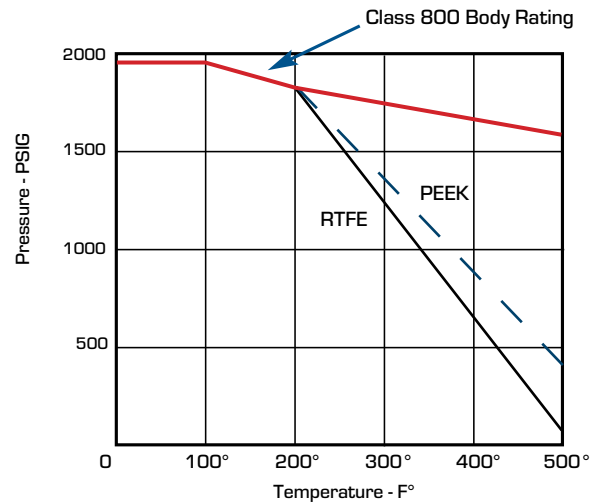
Size	Part Number	Connection	Interchange With	A	B	C	D	F	G	H	Orifice	J	K	L	Max Cycle Torque (in-lbs.)
1/4"	SS-3G8-D4D4	CBC-Lok	SS-62TS4	3.84	1.92	1.71	0.90	2.45	4.30	1.80	0.19	0.20	1.42	1/4"-20 UNC	100
	SS-3G8-S4S4	CS-Lok													
3/8"	SS-3G8-D6D6	CBC-Lok	SS-63TS6												
	SS-3G8-S6S6	CS-Lok													
1/2"	SS-3G8-D8D8	CBC-Lok	SS-63TS8	4.06	2.03	1.83	1.05	2.62	2.10	0.28	0.20	1.42	1/4"-20 UNC		
	SS-3G8-S8S8	CS-Lok													
3/4"	SS-3G12-D12D12	CBC-Lok	SS-63TS12												
	SS-3G12-S12S12	CS-Lok													
1"	SS-3G16-D16D16	CBC-Lok	SS-65TS16	5.37	2.69	2.30	1.20	3.01	5.70	2.40	0.81	0.28	1.65	230	
	SS-3G16-S16S16	CS-Lok													



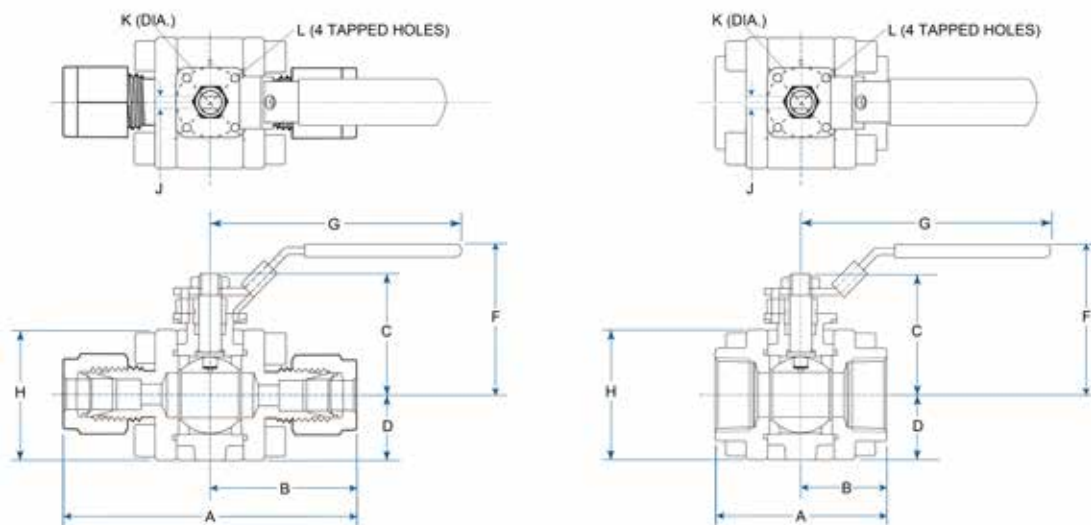
3 Piece Series

### 3P Series ASME B16.34 Class 800 Compliant Pipe Ball Valve

- 1/4" to 2" Female NPT Pipe Connections
- 1,920 psig maximum pressure rating
- API 607 6th Edition Compliant
- API 608 5th Edition Compliant
- Reinforced PTFE seats
- Graphite flange seals and packing



Size	Part Number	Interchange With	A	B	C	D	F	G	H	Orifice	J	K	L	Max Cycle Torque [in-lbs.]
1/4"	SS-3P8-F4F4	SS-62TF4	2.70	1.35	1.71	0.90	2.50	4.30	1.80	0.43	0.20	1.42	1/4"-20 UNC	100
3/8"	SS-3P8-F6F6	SS-63TF6												
1/2"	SS-3P8-F8F8	SS-63TF8												
3/4"	SS-3P12-F12F12	SS-63TF12	3.00	1.50	1.83	1.10	2.60		2.10	0.57				200
1"	SS-3P16-F16F16	SS-65TF16	3.50	1.75	2.34	1.20	3.00	5.70	2.40	0.81	0.28			230
1-1/4"	SS-3P20-F20F20	SS-67TF20	3.90	1.95	2.69	1.45	3.40	5.80	2.89	1.00	0.32	1.65		250
1-1/2"	SS-3P24-F24F24	SS-67TF24	4.50	2.25	2.91	1.54	3.70	7.50	3.07	1.25	0.39	1.97		380
2"	SS-3P32-F32F32	SS-68TF32	5.00	2.50	3.15	1.87	3.90		3.73	1.50			520	



### 3S Series Steam Service Ball Valve

- 1/4" to 1" Tube Connections and 1/4" to 2" Female NPT
- 250 psig at 406°F saturated steam rating
- API 607 6th Edition Compliant
- API 608 5th Edition Compliant
- PEEK seats
- Graphite flange seals and packing

Size	Part Number	Connection	Interchange With	A	B	C	D	F	G	H	Orifice	J	K	L	Max Cycle Torque [in-lbs.]
1/4"	SS-3S8-D4D4	CBC-Lok	SS-S62PS4	3.84	1.92	1.71	0.90	2.45	4.30	1.78	0.19	0.20	1.42		80
	SS-3S8-S4S4	CS-Lok													
3/8"	SS-3S8-D6D6	CBC-Lok	SS-S62PS6	4.06	2.03	1.83	1.05	2.62	4.30	2.08	0.28	0.20	1.42		90
	SS-3S8-S6S6	CS-Lok													
1/2"	SS-3S8-D8D8	CBC-Lok	SS-S63PS8	4.06	2.03	1.83	1.05	2.62	4.30	2.08	0.41	0.20	1.42		90
	SS-3S8-S8S8	CS-Lok													
3/4"	SS-3S12-D12D12	CBC-Lok	SS-S63PS12	5.37	2.69	2.34	1.20	3.01	5.70	2.35	0.57	0.28	1.65	1/4"-20 UNC	150
	SS-3S12-S12S12	CS-Lok													
1"	SS-3S16-D16D16	CBC-Lok	SS-S65PS16	5.37	2.69	2.34	1.20	3.01	5.70	2.35	0.81	0.28	1.65	1/4"-20 UNC	150
	SS-3S16-S16S16	CS-Lok													
1/4"	SS-3S8-F4F4	Female NPT	SS-S63PF4	2.70	1.35	1.71	0.90	2.50	4.30	1.78	0.43	0.20	1.42		80
3/8"	SS-3S8-F6F6		SS-S63PF6												
1/2"	SS-3S8-F8F8		SS-S63PF8												
3/4"	SS-3S12-F12F12		SS-S63PF12	3.00	1.50	1.83	1.10	2.60	4.30	2.08	0.57	0.20	1.42	90	
1"	SS-3S16-F16F16		SS-S65PF16	3.50	1.75	2.34	1.20	3.00	5.70	2.35	0.81	0.28	1.65	150	
1-1/4"	SS-3S20-F20F20		SS-S67PF20	3.90	1.95	2.69	1.45	3.40	5.80	2.89	1.00	0.32	1.65	220	
1-1/2"	SS-3S24-F24F24		SS-S67PF24	4.50	2.25	2.91	1.54	3.70	7.50	3.07	1.25	0.39	1.97	400	
2"	SS-3S32-F32F32		SS-S68PF32	5.00	2.50	3.15	1.87	3.90	7.50	3.73	1.50	0.39	1.97	450	

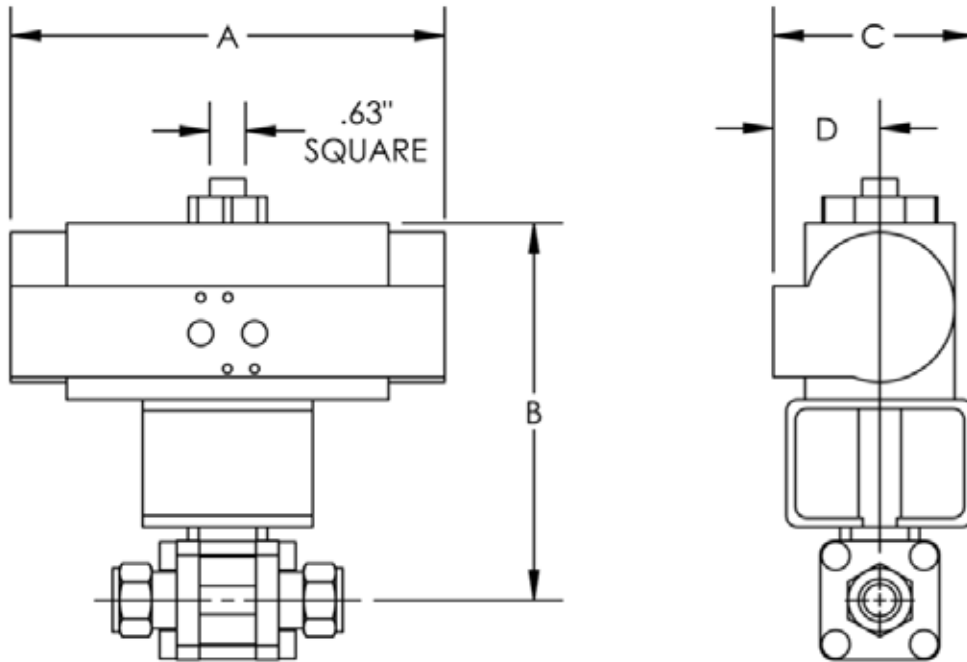


3 Piece Series

- Operating Pressure Range: 80 to 100 psig
- Operating Temperature: 40°F to 200°F
- Operating Media: Dry or Lubricated Non-Corrosive Gas
- 120V and 24V DC NAMUR Solenoid and Topworks Mount
- 1/4" Actuator Ports
- Dual Position Limit Stops
- Stainless Steel Brackets and Fasteners
- Mud Daubers screened fittings available on vent ports (-MDF)

Actuator Designators			
Series	Double Acting	Spring Return Open	Spring Return Closed
3G8, 3G12 3P8, 3P12 3S8, 3S12	-125DA	-250SRO	-250SRC
3G16, 3P16	-250DA	-250SRO	-250SRC
3S16	-250DA	-450SRO	-450SRC

Designators are added at the end of the part number. For example, a 3G instrumentation series 3/8" CBC-lok tube ended ball valve with a double acting actuator would be SS-3G8-D6D6-125DA.



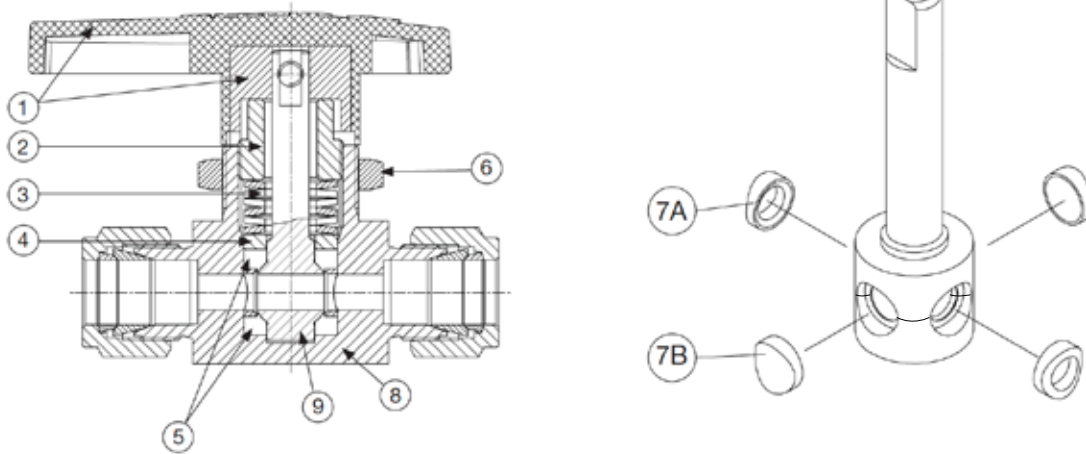
Series	Actuator Designator	A	B	C	D	Actuation Pressure
3G8 3P8 3S8	125DA	4.72	5.85	3.02	1.65	80-100 psi
	250SRC, 250SRO	7.66	6.44	3.39	1.88	
3G12 3P12 3S12	125DA	4.72	5.85	3.02	1.65	
	250SRC, 250SRO	7.66	6.44	3.39	1.88	
3G16 3P16	250SRC, 250SRO 250DA	7.66	7.61	4.88	1.88	
	250DA	7.66		5.03	2.03	
S316	450SRC, 450SRO	8.09		5.03	2.03	





## Features

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

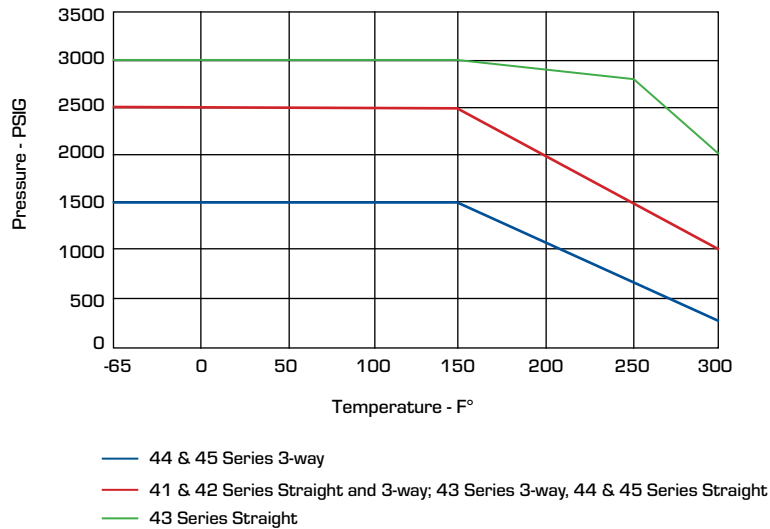


Spring Loaded Valve pictured above.

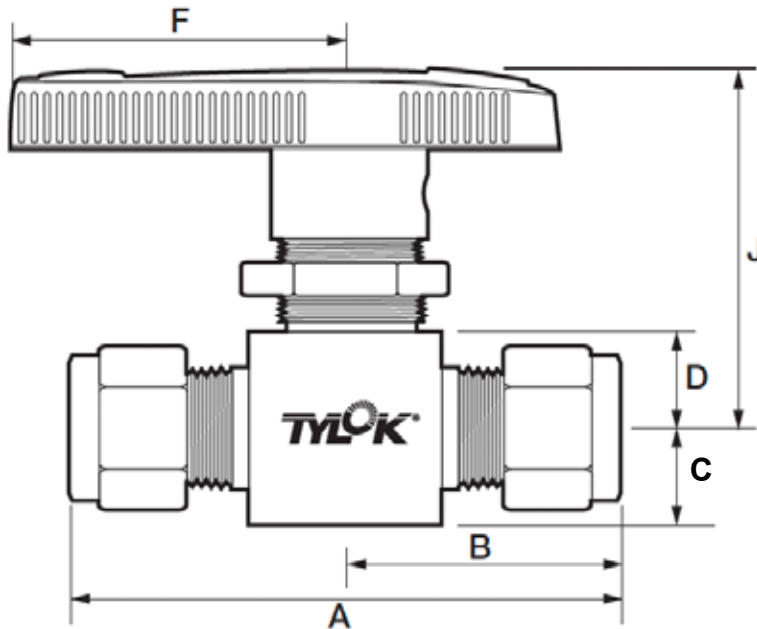
#	Components	Description/Material
1	Handle	Nylon/Aluminum Alloy Insert
2	Packing Bolt	SS316 ASTM A176
3	Packing Springs* *	SS316 ASTM A240
4	Upper Gland	SS316 ASTM A276/A479
5	Stem/Seat Packing	PTFE ASTM D1710
6	Panel Nut	S17400 ASTM A693
7A/7B	Seat Support Ring	SS316 ASTM 276 with Fluorocarbon coating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

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

\*\* If Equipped



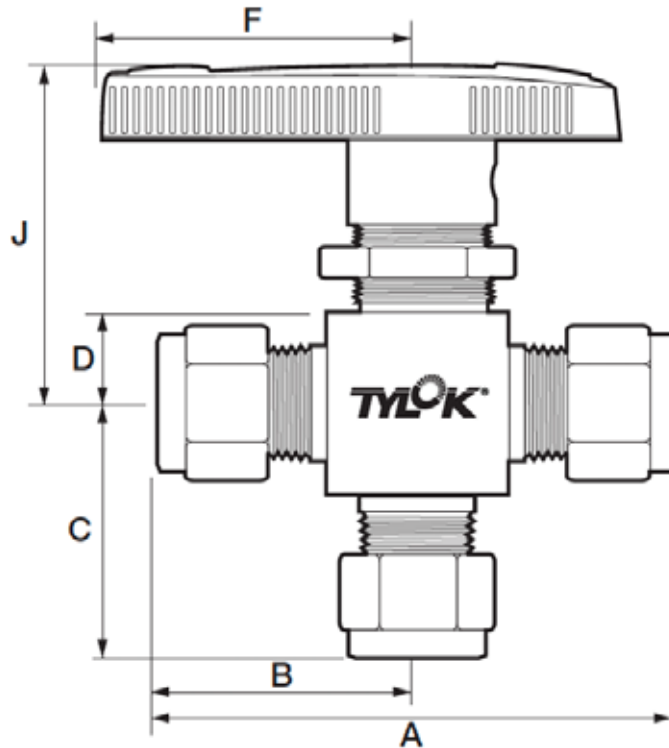
## Straight Ball Valve



	Size (in)	Part Number	Interchanges With	Orifice	A	B	C	D	F	J	Body Width	Panel Nut Dia.	Panel Nut Min/Max Thickness
CBC-Lok Tube Fittings	1/8*	SS-41S-D2D2	SS-41GS2	0.093	2.02	1.01	0.28	0.34	1.12	1.36	0.58	19/32"	1/8" - 1/4"
		B-41S-D2D2	B-41S2										
	1/4*	SS-42S-D4D4	SS-42GS4	0.125	2.20	1.10	0.28	0.34	1.12	1.36	0.58	19/32"	1/8" - 1/4"
	1/4*	SS-43S-D4D4	SS-43GS4	0.187	2.40	1.20	0.38	0.44	1.53	1.47	0.78	25/32"	1/8" - 3/16"
	3/8*	SS-43S-D6D6	SS-43GS6	0.187	2.58	1.29	0.38	0.44	1.53	1.47	0.78	25/32"	1/8" - 3/16"
	3/8	SS-44-D6D6	SS-44S6	0.281	3.04	1.52	0.56	0.56	2.00	2.07	1.12	1-1/8"	1/8" - 3/8"
1/2	SS-45-D8D8	SS-45S8	0.406	3.92	1.96	0.69	0.69	3.00	2.43	1.50	1-1/2"	1/8" - 3/8"	
CS-Lok Tube Fittings	1/8*	SS-41S-S2S2	SS-41GS2	0.093	2.02	1.01	0.28	0.34	1.12	1.36	0.58	19/32"	1/8" - 1/4"
		B-41S-S2S2	B-41S2										
	1/4*	SS-42S-S4S4	SS-42GS4	0.125	2.20	1.10	0.28	0.34	1.12	1.36	0.58	19/32"	1/8" - 1/4"
	1/4*	SS-43S-S4S4	SS-43GS4	0.187	2.40	1.20	0.38	0.44	1.53	1.47	0.78	25/32"	1/8" - 3/16"
	3/8*	SS-43S-S6S6	SS-43GS6	0.187	2.58	1.29	0.38	0.44	1.53	1.47	0.78	25/32"	1/8" - 3/16"
	3/8	SS-44-S6S6	SS-44S6	0.281	3.04	1.52	0.56	0.56	2.00	2.07	1.12	1-1/8"	1/8" - 3/8"
1/2	SS-45-S8S8	SS-45S8	0.406	3.92	1.96	0.69	0.69	3.00	2.43	1.50	1-1/2"	1/8" - 3/8"	
Female NPT	1/4*	SS-43S-F4F4	SS-43GF4	0.187	2.06	1.03	0.38	0.44	1.53	1.47	0.78	25/32"	1/8" - 25/32"
	3/8	SS-44-F6F6	SS-44F6	0.281	2.50	1.25	0.56	0.56	2.00	2.07	1.12	1-1/8"	1/8" - 3/16"
	1/2	SS-45-F8F8	SS-45F8	0.406	3.12	1.56	0.69	0.69	3.00	2.43	1.50	1-1/2"	1/8" - 3/8"

\* Spring Loaded

### 3-Way Ball Valve



	Description [size]	Part Number	Interchanges With	Orifice	A	B	C	D	F	J	Body Width	Panel Nut Dia.	Panel Nut Min/Max Thickness
CBC-Lok Tube Fittings	1/8*	SS-41XS-D2D2	SS-41GXS2	0.093	2.02	1.01	0.97	0.34	1.12	1.36	0.58	19/32"	1/8" - 1/4"
	1/4*	SS-42XS-D4D4	SS-42GXS4	0.125	2.20	1.10	1.07	0.34	1.12	1.36	0.58	19/32"	1/8" - 3/16"
	1/4*	SS-43XS-D4D4	SS-43GXS4	0.187	2.40	1.20	1.17	0.44	1.53	1.47	0.78	25/32"	1/8" - 3/16"
	3/8*	SS-43XS-D6D6	SS-43GXS6	0.187	2.58	1.29	1.29	0.44	1.53	1.47	0.78	25/32"	1/8" - 3/8"
	3/8	SS-44X-D6D6	SS-44XS6	0.281	3.04	1.52	1.43	0.56	2.00	2.07	1.12	1-1/8"	1/8" - 3/16"
	1/2	SS-45X-D8D8	SS-45XS8	0.406	3.92	1.96	1.74	0.69	3.00	2.43	1.50	1-1/2"	1/8" - 3/8"
CS-Lok Tube Fittings	1/8*	SS-41XS-S2S2	SS-41GXS2	0.093	2.02	1.01	0.97	0.34	1.12	1.36	0.58	19/32"	1/8" - 1/4"
	1/4*	SS-42XS-S4S4	SS-42GXS4	0.125	2.20	1.10	1.07	0.34	1.12	1.36	0.58	19/32"	1/8" - 1/4"
	1/4*	SS-43XS-S4S4	SS-43GXS4	0.187	2.40	1.20	1.17	0.44	1.53	1.47	0.78	25/32"	1/8" - 3/16"
	3/8*	SS-43XS-S6S6	SS-43GXS6	0.187	2.58	1.29	1.29	0.44	1.53	1.47	0.78	25/32"	1/8" - 3/16"
	3/8	SS-44X-S6S6	SS-44XS6	0.281	3.04	1.52	1.43	0.56	2.00	2.07	1.12	1-1/8"	1/8" - 3/8"
	1/2	SS-45X-S8S8	SS-45XS8	0.406	3.92	1.96	1.74	0.69	3.00	2.43	1.50	1-1/2"	1/8" - 3/8"
Female NPT	1/4*	SS-43XS-F4F4	SS-43GXF4	0.187	2.06	1.03	1.03	0.44	1.53	1.47	0.78	25/32"	1/8" - 3/16"
	3/8	SS-44X-F6F6	SS-44XF6	0.281	2.50	1.25	1.25	0.56	2.00	2.07	1.12	1-1/8"	1/8" - 3/8"
	1/2	SS-45X-F8F8	SS-45XF8	0.406	3.12	1.56	1.56	0.69	3.00	2.43	1.50	1-1/2"	1/8" - 3/8"

\* Spring Loaded

# Screwed Bonnet Needle Valves



Screwed Bonnet  
Needle Valve

## Design Features

- Hard (Vee) or Delrin® Soft Seat/Tip
- Straight or angle flow patterns
- Optional panel mount
- Handle options available
- Non-wetted stem threads
- Valves are 100% Helium leak tested to  $1 \times 10^{-6}$  ml/s ensuring performance and reliability.

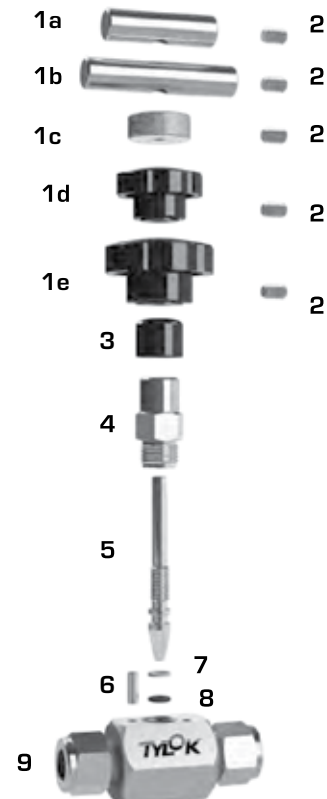
Material	Maximum Pressure Rating, psig		
	316 Stainless	Carbon Steel	Brass
O-Ring Stem Seal, Hard Seat, 1/2" and Smaller	10,000	10,000	6,000
O-Ring Stem Seal, Hard Seat, 3/4" to 1-1/2" NPT	8,000	8,000	
Delrin Soft Seat / Tip	6,000	6,000	
Graphite Packing, Hard Seat			
PTFE Packing, Hard Seat			

Screwed Bonnet  
Needle Valve

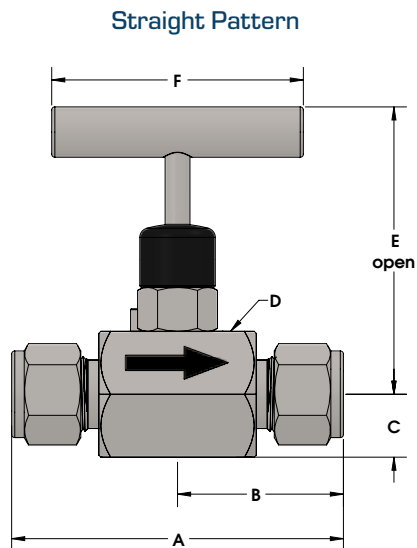
## Materials of Construction

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

\* Not applicable to all configurations



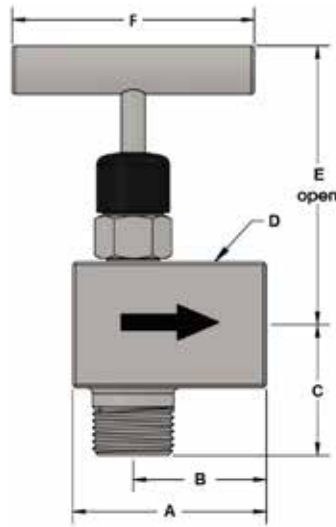
# Screwed Bonnet Needle Valves



End Connections		Dimensions							Hard Seat		Soft Seat/Tip	
Inlet/Outlet	Size	Part Number	Orifice	A	B	C	D	E	F*	Cv	F*	Cv
CBC-Lok® Tube Fittings	1/4	4-6DD-4	0.172	2.46	1.23	0.33	3/4" SQ	2.17	1-13/16	0.37	1-3/8	0.37
	3/8	6-6DD-6		3.08	1.54	0.37		2.13				
	1/2	8-6DD-8	0.187	3.30	1.65	0.63	1-1/4" HEX	3.16	2-1/2	0.44	2-1/2	0.44
CS-Lok® Tube Fittings	1/4	4-6SS-4	0.172	2.46	1.23	0.33	3/4" SQ	2.17	1-13/16	0.37	1-3/8	0.37
	3/8	6-6SS-6		3.08	1.54	0.37		2.13				
	1/2	8-6SS-8	0.187	3.30	1.65	0.63	1-1/4" HEX	3.16	2-1/2	0.44	2-1/2	0.44
Female NPT	1/8	2-6FF-2	0.172	1.81	0.91	0.38	3/4" SQ	2.09	1-13/16	0.42	1-3/8	0.42
	1/4	4-6FF-4										
	3/8	6-6FF-6	0.187	2.50	1.25	0.63	1-1/4" HEX	3.16	2-1/2	0.44	2-1/2	0.76
	1/2	8-6FF-8										
	3/4	12-6FF-12	0.438	4.25	2.13	1.25	2-1/4" HEX	4.25	4-1/4	2.70	4-1/4	4.00
	1	16-6FF-16										
	1-1/4	20-6FF-20										
1-1/2	24-6FF-24											
Male NPT	1/8	2-6MM-2	0.172	1.81	0.91	0.38	3/4" SQ	2.09	1-13/16	0.42	1-3/8	0.42
	1/4	4-6MM-4										
Male/Female NPT	1/8	2-6MF-2	0.172	1.81	0.91	0.38	3/4" SQ	2.09	1-13/16	0.42	1-3/8	0.42
	1/4	4-6MF-4										
	1/2	8-6MF-8	0.44	3.50	1.25	0.63	1-1/4" HEX	3.16	2-1/2	0.44	2-1/2	0.76
	3/4	12-6MF-12	0.438	5.25	2.13	1.25	2-1/4" HEX	5.25	4-1/4	2.70	4-1/4	4.00
	1	16-6MF-16										
	1-1/4	20-6MF-20										
	1-1/2	24-6MF-24										

\* Brass Default is 1" Round Knurled Nut

### Angle Pattern



Screwed Bonnet  
Needle Valve

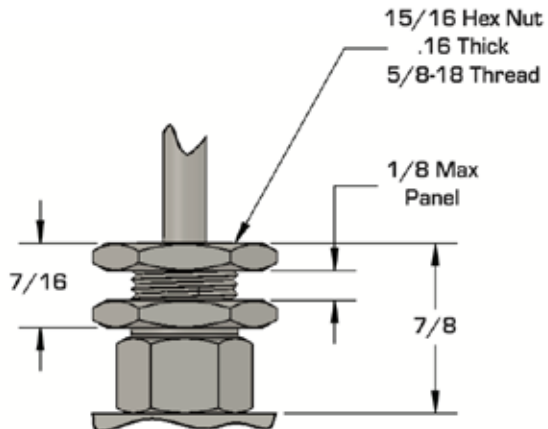
End Connections		Dimensions							Hard Seat	
Inlet/ Outlet	Size	Part Number	Orifice	A	B	C	D	E	F*	Cv
Female NPT	1/8	2-6FF-2-A	0.172	1.25	0.88	0.88	3/4	2.09	1-13/16	0.42
	1/4	4-6FF-4-A		1.50	1.13	1.13	3/4			
	1/2	8-6FF-8-A	0.187	2.00	1.38	1.38	1-1/4	3.66	2-1/2	0.44
Male NPT	1/8	2-6MM-2-A	0.172	1.25	0.88	0.72	3/4	2.09	1-13/16	0.42
	1/4	4-6MM-4-A		1.50	1.13	0.88	3/4			
Male/Female NPT	1/8	2-6MF-2-A		1.25	0.88	0.72	3/4		2.09	1-13/16
	1/4	4-6MF-4-A	1.75	1.13	0.88	3/4				
	1/2	8-6MF-8-A	0.187	2.00	1.38	1.38	1-1/4	3.66		

\* Brass Default is 1" Round Knurled Nut



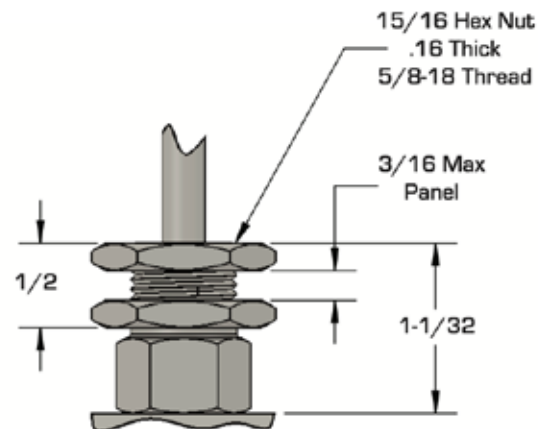
# Screwed Bonnet Needle Valves

## Panel Mount Details



Dimensions for:

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



Dimensions for:

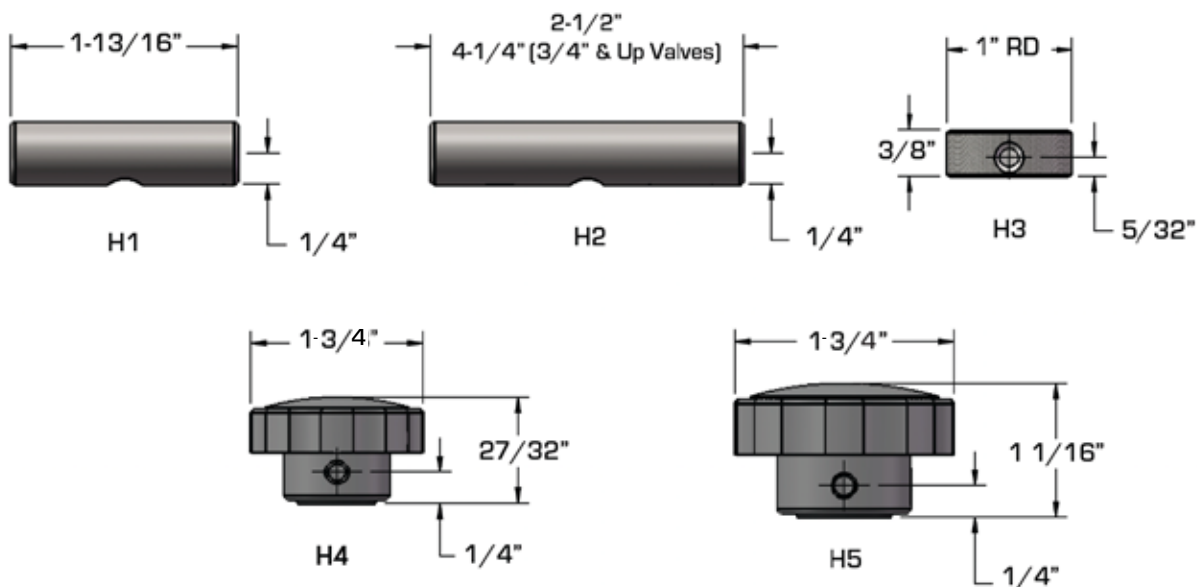
- Hex Bar Stock
- 1/2" Angle Valves

Screwed Bonnet Needle Valve

## Handle Options

1 - 13/16" (Hard Seat)

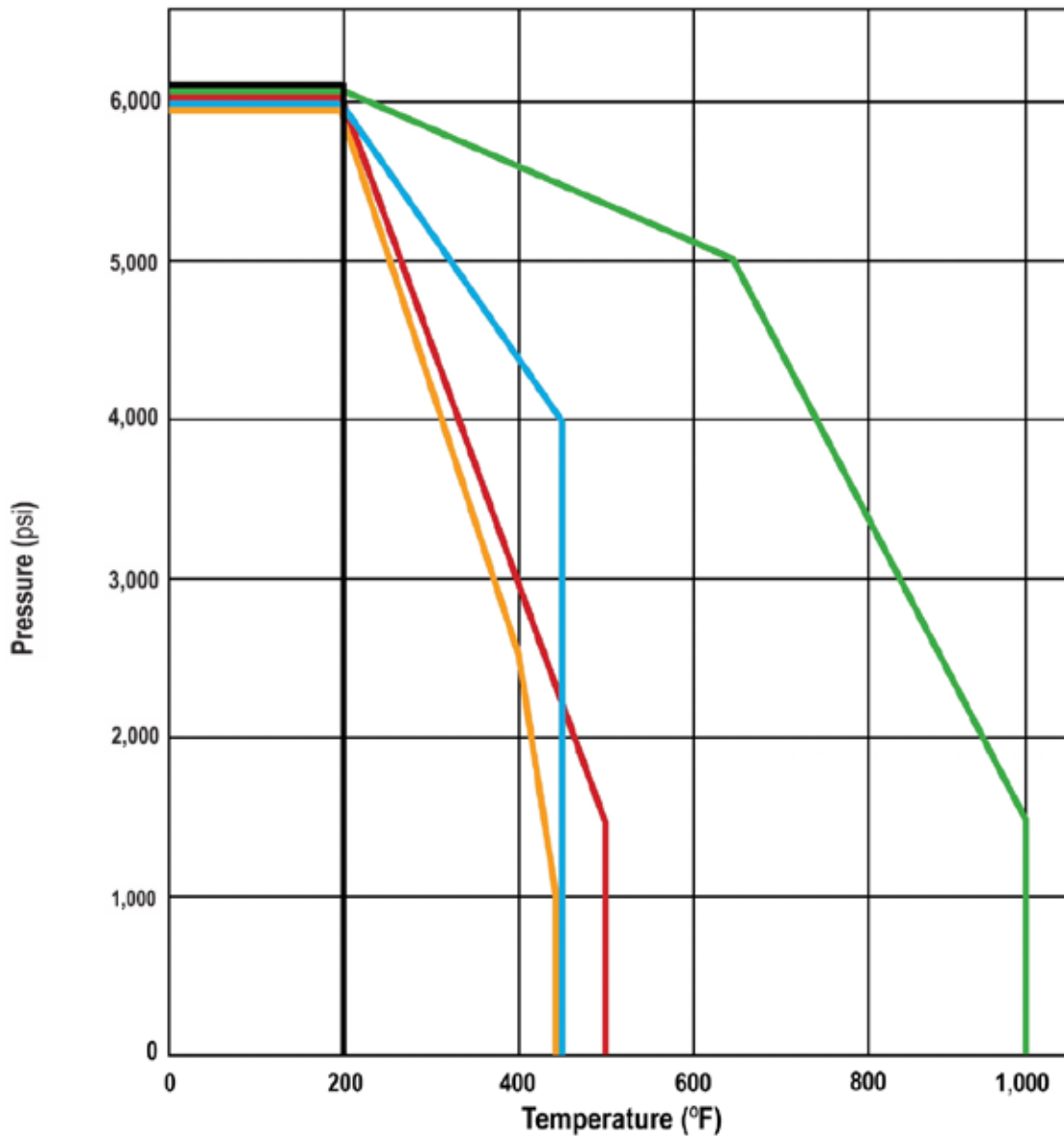
1 - 3/8" (Delrin® Soft Seat/Tip)



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

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

## Screwed Bonnet Needle Valve with Packing Option Pressure vs Temperature

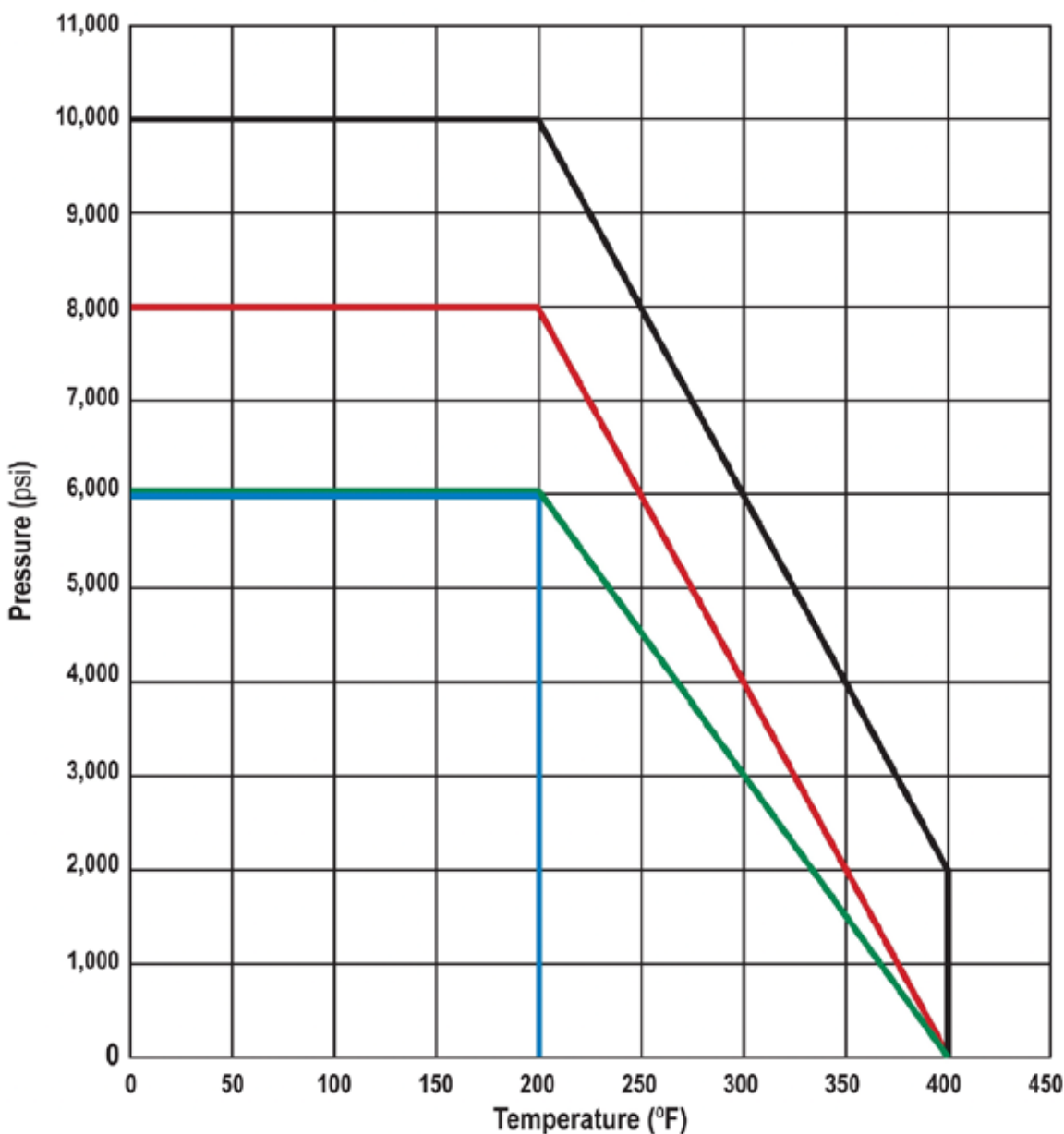


- Brass, Steel, or Stainless Steel Body; PTFE Packing; Delrin® Soft Seat / Tip; All Ends
- Brass Body; Graphite or PTFE Packing; Hard Seat; 3/8" and Smaller Tube Ends or 1/4" and Smaller Female and Male NPT Ends
- Steel Body; Graphite Packing; Hard Seat; All Ends
- Steel or Stainless Steel Body; PTFE Packing; Hard Seat; All Ends
- Stainless Steel Body; Graphite Packing, Hard Seat; All Ends

\* For tubing and pipe working pressures, CBC-Lok® / CS-Lok® Section.

# Screwed Bonnet Needle Valves

## Screwed Bonnet Needle Valves with O-Ring Stem Seals Pressure vs Temperature



- Brass, Steel, or Stainless Steel Body; Delrin® Soft Seat / Tip; All Ends
- Brass Body; Hard Seat; 3/8" and Smaller Tube Ends or 1/4" and Smaller Female and Male NPT Ends
- Steel or Stainless Steel Body; Hard Seat; 1/2" and Smaller Ends
- Steel or Stainless Steel Body; Hard Seat; 3/4" to 1-1/2" Female and Male NPT Ends

\* For tubing and pipe working pressures, CBC-Lok® / CS-Lok® Section.

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

Special configurations available upon request.

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

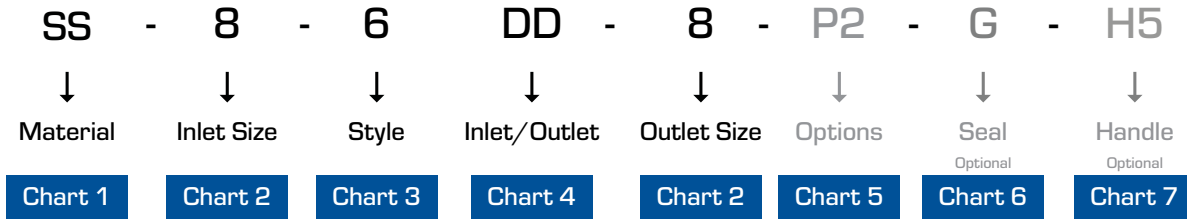


Chart 1- Material	
SS	Stainless Steel
S	Steel*
B	Brass**

\* Zinc-Nickel plated  
 \*\* Available for 1/4" ends and smaller

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

Chart 3- Style	
6	Needle Valve

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

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

Chart 6- Stem Seal/Packing Options	
EM1	EPDM 80 O-Ring
KZ1	FFKM (Kalrez® or Equivalent)
G	Graphite Packing
T	PTFE Packing

Chart 7- Handle Options	
H1	Mini "T" Handle
H2	2-1/2" "T" Handle
H3	Round Knurled Handle
H4	1-3/8" Phenolic Handle
H5	1-3/4" Phenolic Handle
H9	2-3/8" Phenolic Handle

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

Screwed Bonnet Needle Valve

# Integral Bonnet Needle Valves



Integral Bonnet  
Needle Valve

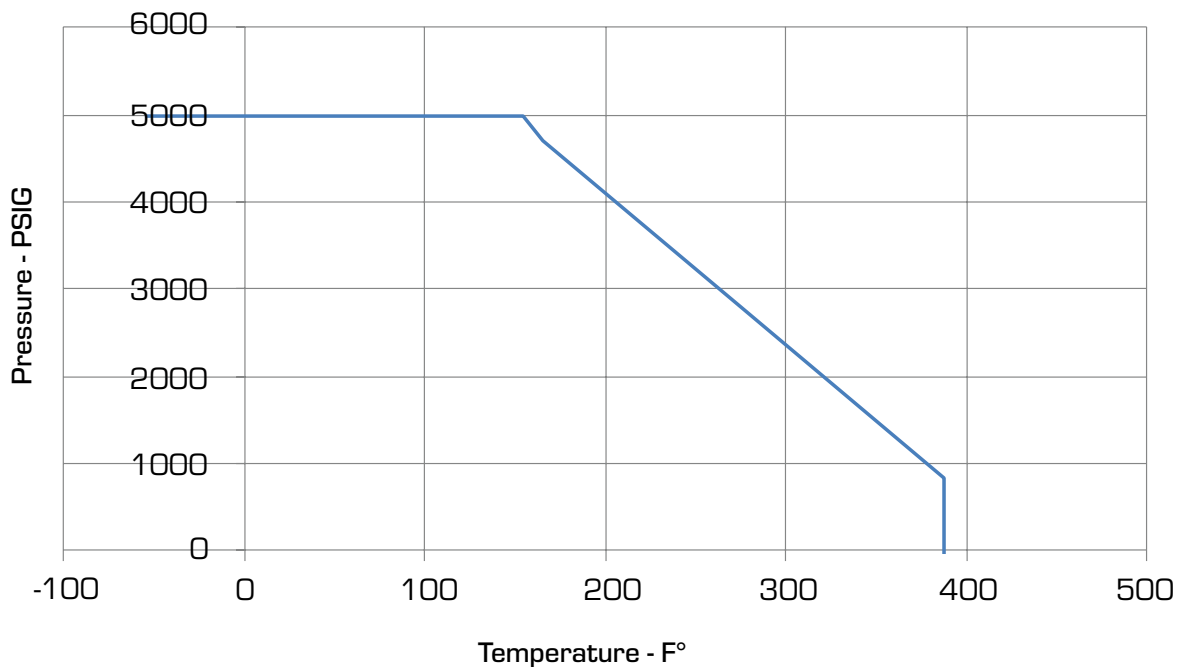
## Applications & Features:

- Designed for Instrument air lines, panels, Test Stands & Analytical systems
- General flow control service
- Designed for regulation and tight shut off
- Compare with Swagelok O, 1 and 18 Series Integral Bonnet Needle Valves
- Panel Mountable
- Live-Loaded, Chevron-Style packing
- Stainless Steel Construction
- Packing Material: PTFE
- Flow coefficient (Cv) 0.30 to 1.80
- Integral tube fitting (both double & single ferrule designs)
- 100% factory tested with nitrogen at 1000 psi



Integral Bonnet  
Needle Valve

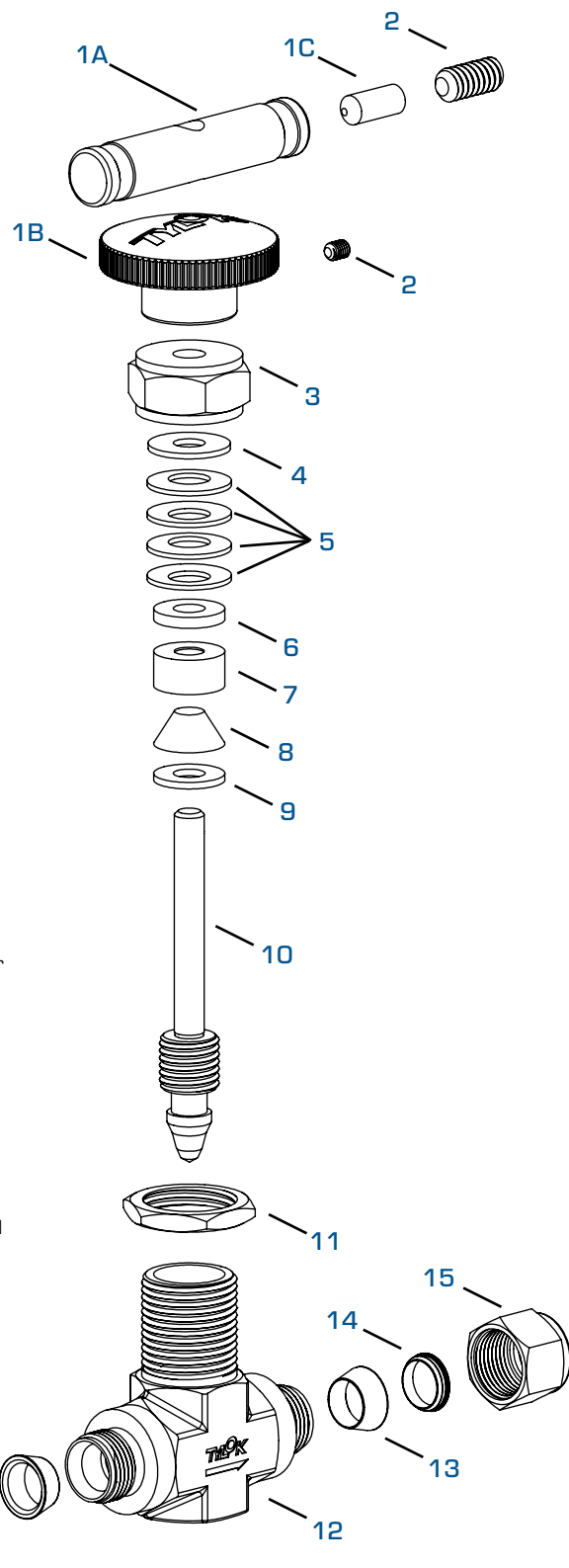
Temperature (F°)	Pressure (psig)
-60	5000
0	5000
100	5000
190	5000
200	4750
300	3000
400	1250
400	0



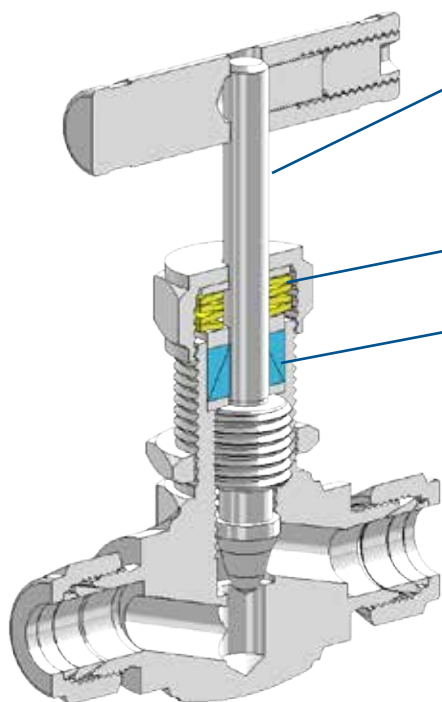
# Integral Bonnet Needle Valves

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

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



Integral Bonnet  
Needle Valve

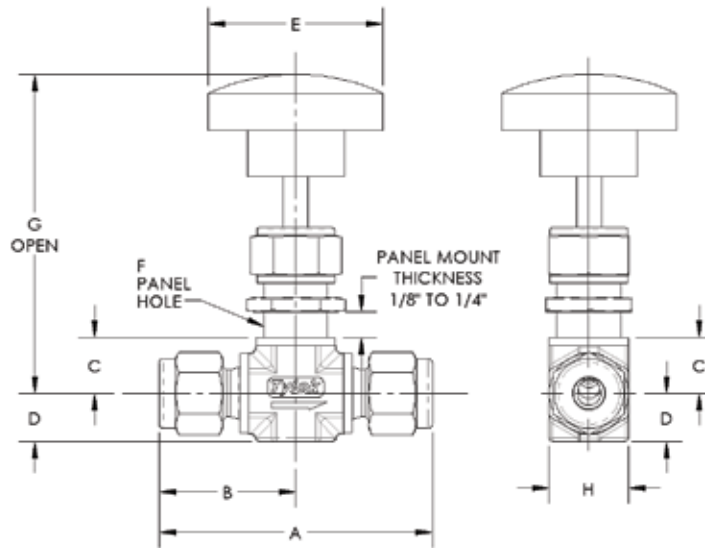


Chevron (2) piece sliding provides improved ID/OD sealing and wear compensation.

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

Stem chrome plated for wear and corrosion resistance.

# Integral Bonnet Needle Valves



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

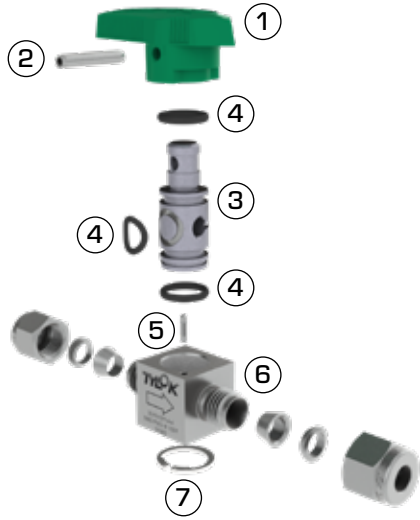
**Note:** In designing a system incorporating tube fittings and valves, it is the designer's or user's obligation and responsibility to determine the appropriate fittings and valves to be used for each application and to ensure proper installation and maintenance.





## Features

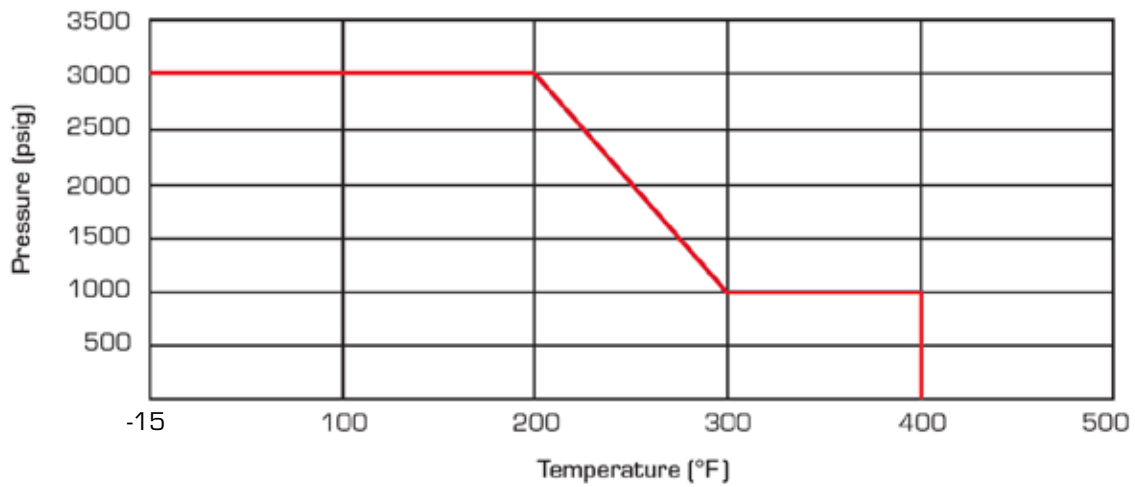
- Working pressures up to 3000 psig
- CBC-Lok Tube, CS-Lok Tube, and NPT End Connections
- 1/8" through 1/2" sizes
- Stainless steel construction
- CBC-Lok® interchanges with Swagelok® & Parker A-Lok®
- CS-Lok® interchanges with Parker CPI®
- Unidirectional Flow
- Throttleable
- Downstream vented options available
- One piece body
- O-ring seals



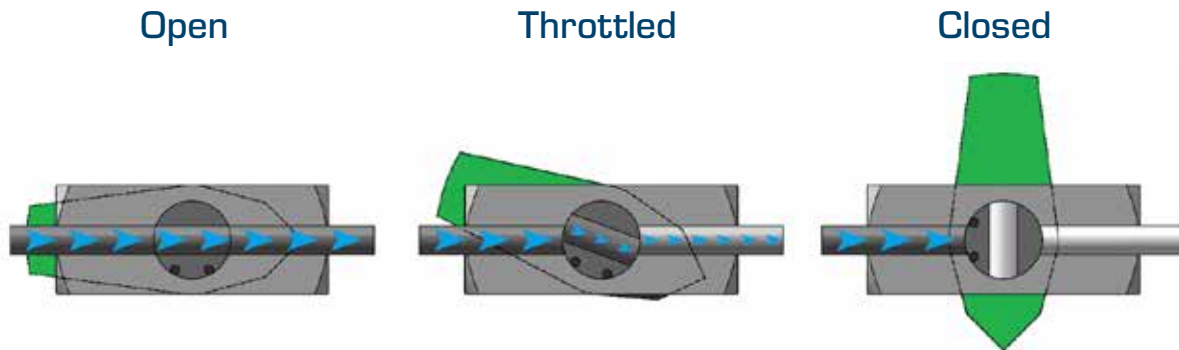
#	Component	Material
1	Handle	Nylon 6/6
2	Pin	316 SS
3	Plug	PTFE-coated 316 SS
4	O-ring	PTFE-coated Fluorocarbon FKM
5	Pin	316 SS
6	Body	316 SS
7	Snap Ring	PH 15-7 SS
	Lubricant	Perfluoropolyether Based

Plug Valves

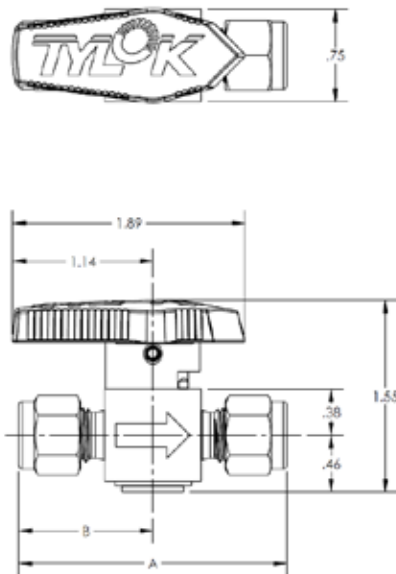
### Pressure - Temperature with FKM Seals



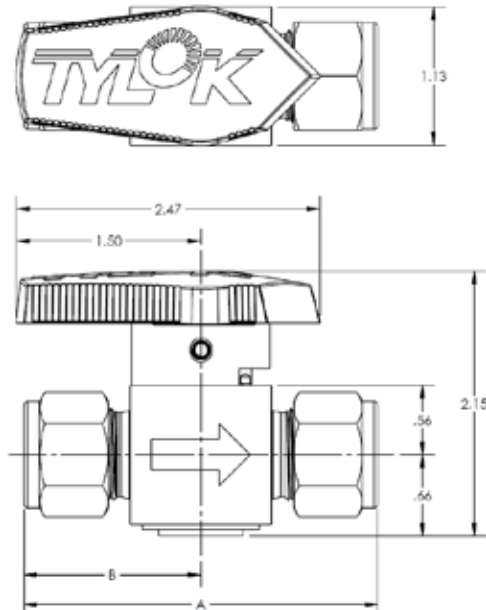
### Unidirectional Flow



## P4 Series



## P6 Series



Inlet/Outlet End	End Size	Part Number	Competitive Part Numbers		Series	Orifice	A	B
CBC-Lok	1/8	SS-P4-DTT-2-2	SS-2P4T	2A-PR4-VT-SS	P4	0.093	1.99	0.98
	1/4	SS-P4-DTT-4-4	SS-4P4T	4A-PR4-VT-SS			2.17	1.08
	3/8	SS-P4-DTT-6-6	SS-6P4T	6A-PR4-VT-SS		P6	0.172	2.29
		SS-P6-DTT-6-6	SS-6P6T	6A-PR6-VT-SS	2.66			1.33
	1/2	SS-P6-DTT-8-8	SS-8P6T	8A-PR6-VT-SS		0.283	2.88	1.44
CS-Lok	1/8	SS-P4-STT-2-2	-	2Z-PR4-VT-SS	P4	0.093	1.99	0.98
	1/4	SS-P4-STT-4-4	-	4Z-PR4-VT-SS			2.17	1.08
	3/8	SS-P4-STT-6-6	-	6Z-PR4-VT-SS		P6	0.172	2.29
		SS-P6-STT-6-6	-	6Z-PR6-VT-SS	2.66			1.33
	1/2	SS-P6-STT-8-8	-	8Z-PR6-VT-SS		0.283	2.88	1.44
Female NPT	1/8	SS-P4-1FF-2-2	SS-2P4T4	2F-PR4-VT-SS	P4	0.172	1.78	0.89
	1/4	SS-P4-1FF-4-4	SS-4P4T4	4F-PR4-VT-SS			2.09	1.05
	1/2	SS-P6-1FF-8-8	SS-8P6T4	8F-PR6-VT-SS	P6	0.283	2.88	1.44
Male NPT	1/8	SS-P4-1MM-2-2	SS-2P4T2	2M-PR4-VT-SS	P4	0.172	1.53	0.76
	1/4	SS-P4-1MM-4-4	SS-4P4T2	4M-PR4-VT-SS			1.90	0.95
Male NPT / CBC-Lok	1/4	SS-P4-DMT-4-4	SS-4P4T1	4M4A-PR4-VT-SS	P4	0.172	2.03	0.95
Male NPT / CS-Lok	1/4	SS-P4-SMT-4-4	-	4M4Z-PR4-VT-SS				
Male NPT/Female NPT	1/4	SS-P4-1MF-4-4	SS-4P4T5	4M4F-PR4-VT-SS				2.00

## Options & Accessories

### O-Ring Options

O-Ring Material	Temp. Range	Valve Designator	P4 Kit	P6 Kit
PTFE Coated FKM	-15 to 400 °F	Default	KIT-P4-TV	KIT-P6-TV
PTFE Coated Buna-N	-30 to 225 °F	-TB	KIT-P4-TB	KIT-P6-TB
PTFE Coated EPDM	-70 to 250 °F	-TE	KIT-P4-TE	KIT-P6-TE
PTFE Coated Neoprene	-35 to 225 °F	-TN	KIT-P4-TN	KIT-P6-TN

Kalrez® (-KZ) available upon request.

EX: P4 with Buna-N O-rings and 1/4" CBC-Lok ends: SS-P4-DTT-4-4-TB

### Handle Options

Color	Valve Designator	P4 Kit	P6 Kit
Green	Default	KIT-P4-GN	KIT-P6-GN
Black	-BK	KIT-P4-BK	KIT-P6-BK
Blue	-BL	KIT-P4-BL	KIT-P6-BL
Red	-RD	KIT-P4-RD	KIT-P6-RD

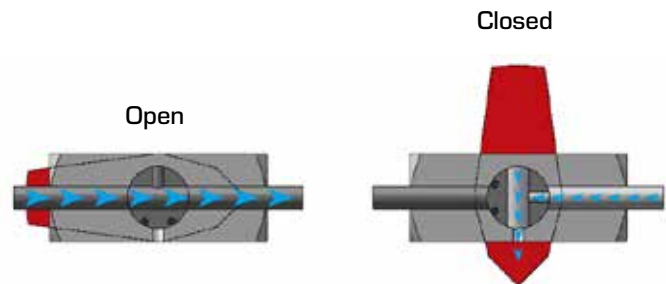
EX: P4 with black handle and 1/4" CBC-Lok ends: SS-P4-DTT-4-4-BK

### Downstream Vent

Valves vents downstream to atmosphere when closed.

- Working Pressure derated to 150 psig max.
- Red handles are standard
- To order:
  - Change P4 to P4V
  - Change P6 to P6V

EX: Vented P4 with 1/4" CBC-Lok Tube ends: SS-P4V-DTT-4-4



### Locking Handle

Series	Valve Designator	Kit
P4	-LD	KIT-P4-LD
P6	-LD	KIT-P6-LD

Kit comes with green handle. Consult factory for other options.

EX: P4 with locking device and 1/4" CBC-Lok Ends: SS-P4-DTT-4-4-LD

### Panel Mount (Mounting Bracket)

Series	Valve Designator	Kit
P4	-MB	KIT-P4-MB
P6	-MB	KIT-P6-MB

EX: P4 with locking device and 1/4" CBC-Lok Ends: SS-P4-DTT-4-4-MB

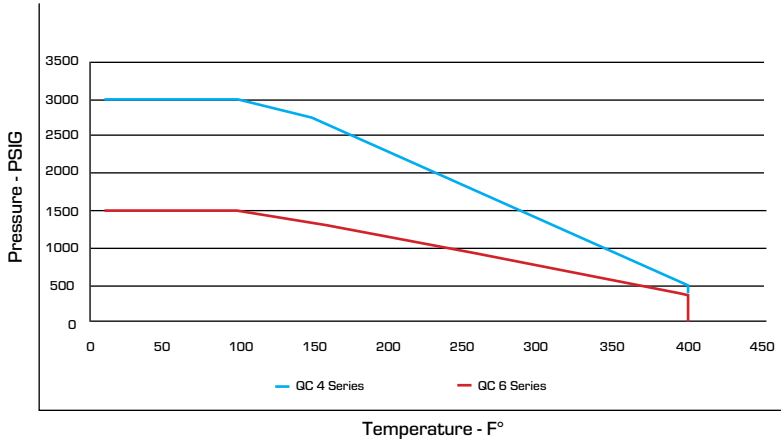
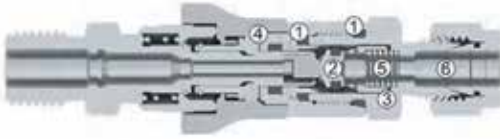
All Options

EX: Vented P4 with Buna-N O-rings, black handle and locking device: SS-PV4-DTT-4-4-TB-BK-LD



Quick Connects

## Single End Shut Off (SESO)



## Double End Shut Off (DESO)



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

## Design/ Features

1. Redundant Viton O-ring Seals provide quick leak tight sealing in vacuum or pressure systems.
2. Dependable poppet valves with integral Viton O-ring seals are standard in all quick connect bodies and valved plugs.
3. Positive valve stops prevent flow checking in the quick connect. Valve guides improve reliability by providing precise alignment to the seat.
4. Smooth entrance and positive engagement, firmly gripping the plug, is insured by PTFE bonded locking "dogs".
5. All quick connect valve springs are made of 316 stainless steel.
6. Tylok CBC-Lok® double ferrule tube ends are completely interchangeable with Swagelok® and Parker A-Lok® tube ends.
7. Tylok CS-Lok® single ferrule tube ends are completely interchangeable with Parker CPI® tube ends.

### Materials of Construction

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

### Quick Connect Cover Accessories

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



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



## Vacuum Specifications

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

# QC Series Quick Connects

## Instrumentation Quick Connect Bodies, Valved

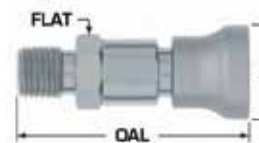
Series	Fitting Size	Part Number	Interchanges With	OAL	B	Flat
in.	(mm)	in.	(mm)	in.	(mm)	in.
<b>CBC-Lok® Tube Fitting End</b>						
QC4	1/8	SS-QC4-B-2D	SS-QC4-B-200	2.35 (59.7)	0.92 (23.4)	5/8
QC4	1/4	SS-QC4-B-4D	SS-QC4-B-400	2.38 (60.5)	0.92 (23.4)	5/8
QC6	3/8	SS-QC6-B-6D	SS-QC6-B-600	2.86 (72.6)	1.03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



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



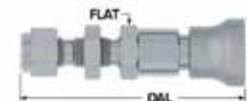
Series	Fitting Size	Part Number	Interchanges With	OAL	B	Flat
in.	(mm)	in.	(mm)	in.	(mm)	in.
<b>Male Pipe End</b>						
QC4	1/8	SS-QC4-B-2M	SS-QC4-B-2PM	2.06 (52.3)	0.92 (23.4)	5/8
QC4	1/4	SS-QC4-B-4M	SS-QC4-B-4PM	2.25 (57.2)	0.92 (23.4)	5/8
QC6	1/4	SS-QC6-B-4M	SS-QC6-B-4PM	2.62 (66.5)	1.03 (26.2)	3/4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



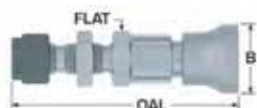
Series	Fitting Size	Part Number	Interchanges With	OAL	B	Flat
in.	(mm)	in.	(mm)	in.	(mm)	in.
<b>Female Pipe End</b>						
QC4	1/8	SS-QC4-B-2F	SS-QC4-B-2PF	2.20 (55.9)	0.92 (23.4)	5/8
QC4	1/4	SS-QC4-B-4F	SS-QC4-B-4PF	2.49 (63.2)	0.92 (23.4)	5/8
QC6	1/4	SS-QC6-B-4F	SS-QC6-B-4PF	2.80 (71.1)	1.03 (26.2)	3/4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



Series	Fitting Size	Part Number	Interchanges With	OAL	B	Flat
in.	(mm)	in.	(mm)	in.	(mm)	in.
<b>CBC-Lok Bulkhead Tube Fitting End</b>						
QC4	1/4	SS-QC4-B1-4D	SS-QC4-B1-400	3.00 (76.6)	0.92 (23.4)	5/8
QC6	3/8	SS-QC6-B1-6D	SS-QC6-B1-600	3.25 (82.6)	1.03 (26.2)	3/4

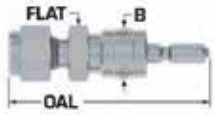


Series	Fitting Size	Part Number	Interchanges With	OAL	B	Flat
in.	(mm)	in.	(mm)	in.	(mm)	in.
<b>CS-Lok Bulkhead Tube Fitting End</b>						
QC4	1/4	SS-QC4-B1-4S	-	3.01 (76.5)	0.92 (23.4)	5/8
QC6	3/8	SS-QC6-B1-6S	-	3.26 (82.8)	1.03 (26.2)	3/4



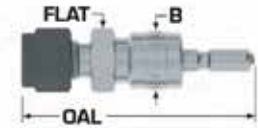
Quick Connects

## Instrumentation Quick Connect Plugs, Non-Valved

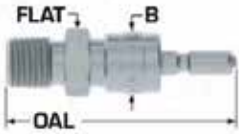


Series	Fitting Size	Part Number	Interchanges With	OAL in. (mm)	B in. (mm)	Flat in.
<b>CBC-Lok Tube Fitting End</b>						
QC4	1/8	SS-QC4-S-2D	SS-QC4-S-200	2.74 (69.6)	0.62 (15.7)	5/8
QC4	1/4	SS-QC4-S-4D	SS-QC4-S-400	2.35 (59.7)	0.62 (15.7)	9/16
QC6	3/8	SS-QC6-S-6D	SS-QC6-S-600	2.56 (65.0)	0.74 (18.8)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

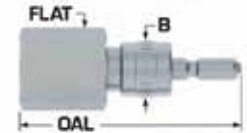
Series	Fitting Size	Part Number	Interchanges With	OAL in. (mm)	B in. (mm)	Flat in.
<b>CS-Lok Tube Fitting End</b>						
QC4	1/8	SS-QC4-S-2S	-	2.73 (69.3)	0.62 (15.7)	5/8
QC4	1/4	SS-QC4-S-4S	-	2.36 (59.9)	0.62 (15.7)	9/16
QC6	3/8	SS-QC6-S-6S	-	2.57 (65.3)	0.74 (18.8)	11/16



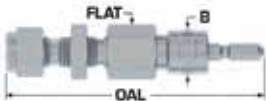
Series	Fitting Size	Part Number	Interchanges With	OAL in. (mm)	B in. (mm)	Flat in.
<b>Male Pipe End</b>						
QC4	1/8	SS-QC4-S-2M	SS-QC4-S-2PM	2.03 (51.6)	0.62 (15.7)	9/16
QC4	1/4	SS-QC4-S-4M	SS-QC4-S-4PM	2.22 (56.4)	0.62 (15.7)	9/16
QC6	1/4	SS-QC6-S-4M	SS-QC6-S-4PM	2.33 (59.2)	0.74 (18.8)	3/4
QC6	3/8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



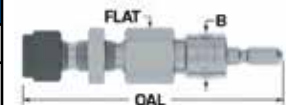
Series	Fitting Size	Part Number	Interchanges With	OAL in. (mm)	B in. (mm)	Flat in.
<b>Female Pipe End</b>						
QC4	1/8	SS-QC4-S-2F	SS-QC4-S-2PF	2.09 (53.1)	0.62 (15.7)	9/16
QC4	1/4	SS-QC4-S-4F	SS-QC4-S-4PF	2.33 (59.2)	0.62 (15.7)	3/4
QC6	1/4	SS-QC6-S-4F	SS-QC6-S-4PF	2.50 (63.5)	0.74 (18.8)	3/4
QC6	3/8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



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



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

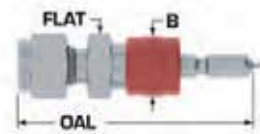




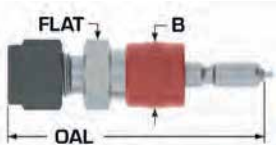
# QC Series Quick Connects

## Instrumentation Quick Connect Plugs, Valved

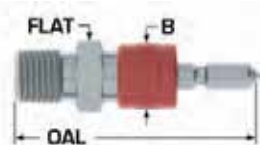
Series	Fitting Size	Part Number	Interchanges With	OAL in. (mm)	B in. (mm)	Flat in.
<b>CBC-Lok Tube Fitting End</b>						
QC4	1/8	SS-QC4-D-2D	SS-QC4-D-200	2.74 (69.6)	0.62 (15.7)	5/8
QC4	1/4	SS-QC4-D-4D	SS-QC4-D-400	2.35 (59.7)	0.62 (15.7)	9/16
QC6	3/8	SS-QC6-D-6D	SS-QC6-D-600	2.56 (65.0)	0.74 (18.8)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



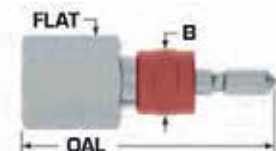
Series	Fitting Size	Part Number	Interchanges With	OAL in. (mm)	B in. (mm)	Flat in.
<b>CS-Lok Tube Fitting End</b>						
QC4	1/8	SS-QC4-D-2S	-	2.73 (69.3)	0.62 (15.7)	5/8
QC4	1/4	SS-QC4-D-4S	-	2.36 (59.9)	0.62 (15.7)	9/16
QC6	3/8	SS-QC6-D-6S	-	2.57 (65.3)	0.74 (18.8)	11/16



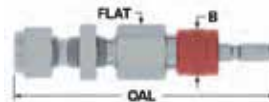
Series	Fitting Size	Part Number	Interchanges With	OAL in. (mm)	B in. (mm)	Flat in.
<b>Male Pipe End</b>						
QC4	1/8	SS-QC4-D-2M	SS-QC4-D-2PM	2.03 (51.6)	0.62 (15.7)	9/16
QC4	1/4	SS-QC4-D-4M	SS-QC4-D-4PM	2.22 (56.4)	0.62 (15.7)	9/16
QC6	1/4	SS-QC6-D-4M	SS-QC6-D-4PM	2.33 (59.2)	0.74 (18.8)	3/4
QC6	3/8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



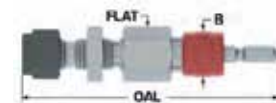
Series	Fitting Size	Part Number	Interchanges With	OAL in. (mm)	B in. (mm)	Flat in.
<b>Female Pipe End</b>						
QC4	1/8	SS-QC4-D-2F	SS-QC4-D-2PF	2.09 (53.1)	0.62 (15.7)	9/16
QC4	1/4	SS-QC4-D-4F	SS-QC4-D-4PF	2.33 (59.2)	0.62 (15.7)	3/4
QC6	1/4	SS-QC6-D-4F	SS-QC6-D-4PF	2.50 (63.5)	0.74 (18.8)	3/4
QC6	3/8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



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



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



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

Special Configurations available upon request

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

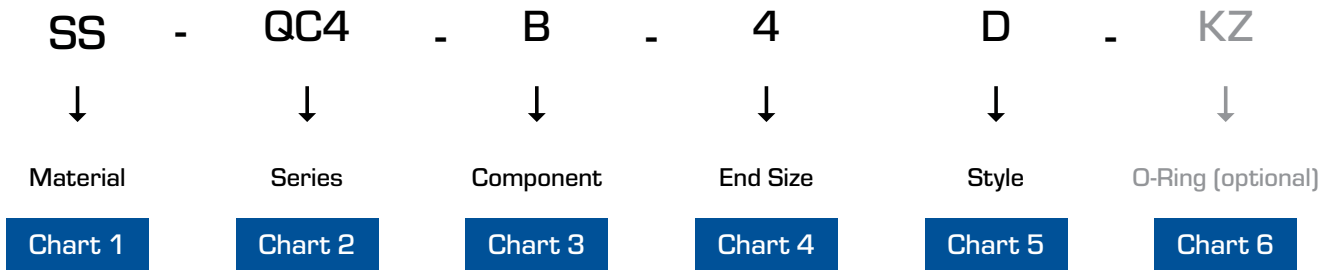


Chart 1- Material	
SS	Stainless Steel

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

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

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

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

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

\*FKM is standard

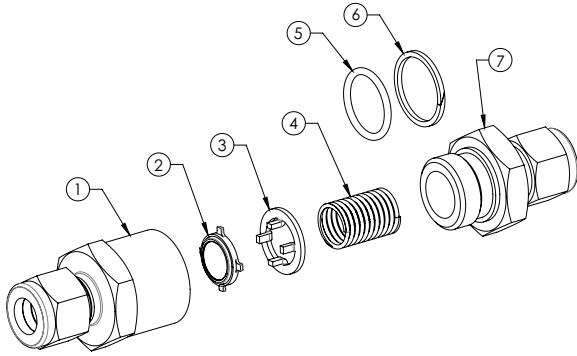
# CH Series Check Valves



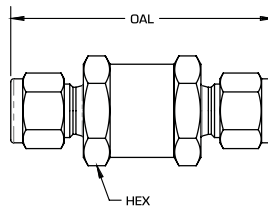
Check Valves

### Features:

- Stainless Steel Construction
- Poppet with bonded elastomer seal
- Up to 6000 psig maximum working pressure
- -10°F to 400°F temperature rating
- Cracking pressures from 1/3 to 25 psi
- Fluorocarbon FKM seals



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



Check Valves

End Connection		Part Number	Interchanges With	-10°F to 100°F Pressure Rating psig	Cv	OAL	HEX
Type	Size						
CBC-Lok® Tube Fitting	1/8	SS-CH-D2D2-	SS-CHS2-	6000	0.67	2.27	1 1/16
	1/4	SS-CH-D4D4-	SS-CHS4-			2.43	
	3/8	SS-CH-D6D6-	SS-CHS6-		1.80	2.75	1
	1/2	SS-CH-D8D8-	SS-CHS8-			2.96	
	3/4	SS-CH-D12D12-	SS-CHS12-	5000	4.70	3.52	1-5/8
	1	SS-CH-D16D16-	SS-CHS16-	4700*		3.88	
CS-Lok® Tube Fitting	1/8	SS-CH-S2S2-	-	6000	0.67	2.27	1 1/16
	1/4	SS-CH-S4S4-	-			2.43	
	3/8	SS-CH-S6S6-	-		1.80	2.75	1
	1/2	SS-CH-S8S8-	-			2.96	
	3/4	SS-CH-S12S12-	-	5000	4.70	3.52	1-5/8
	1	SS-CH-S16S16-	-	4700*		3.88	
Female NPT to Female NPT	1/4	SS-CH-F4F4-	SS-CHF4-	6000	0.67	2.13	1 1/16
	3/8	SS-CH-F6F6-	SS-CHF6-	5000		1.80	
	1/2	SS-CH-F8F8-	SS-CHF8-	4600*	3.03		1
	3/4	SS-CH-F12F12-	SS-CHF12-	4300*	4.70		
	1	SS-CH-F16F16-	SS-CHF16-	4100*		3.83	1-5/8

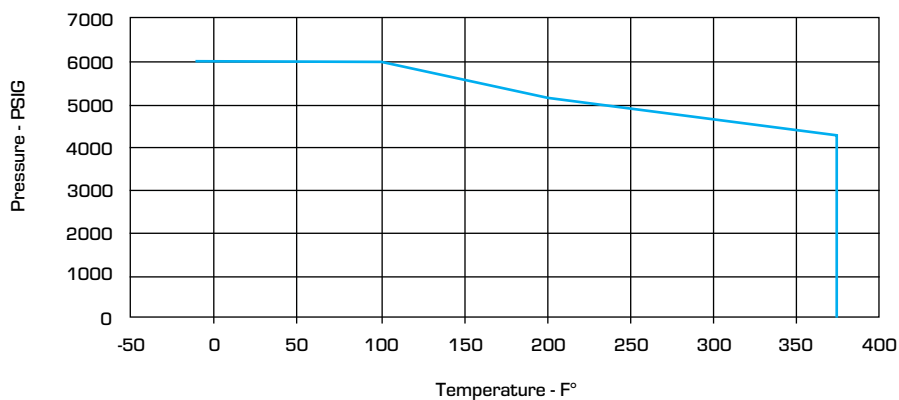
\*Pressure derating based on end connection

Cracking Pressure Designator psig	Cracking Differential Pressure psig	Minimal Reseal Differential Pressure psig
1/3	1/3 to 3	6 back pressure
1	1 to 4	6 back pressure
5	3 to 9	2 back pressure
10	7 to 15	3 (inlet)
25	20 to 30	17 (inlet)

To order, add Cracking Pressure Designator to the end of the Part Number.

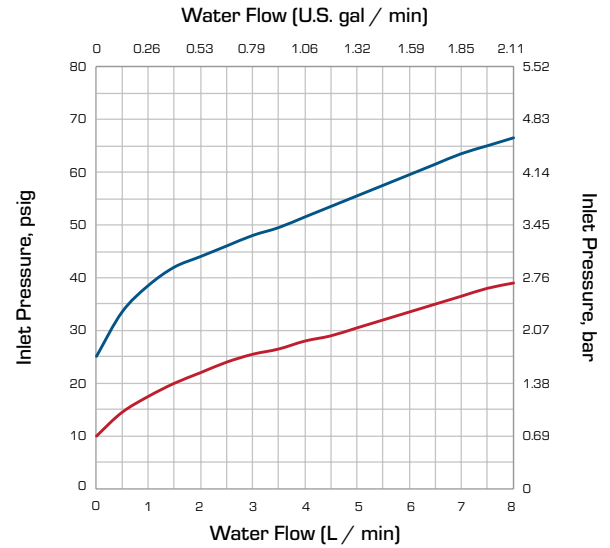
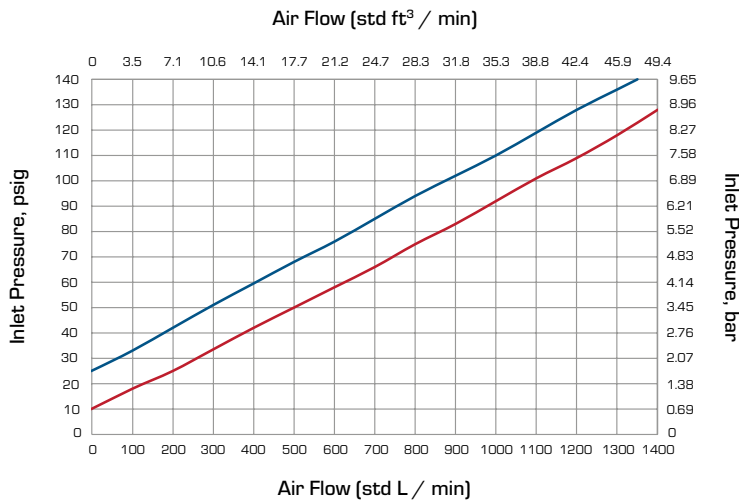
**Ex:** a 1/4" CBC-Lok Check Valve with a 1/3" cracking pressure would be SS-CH-D4D4-1/3

## Temperature - Pressure Ratings

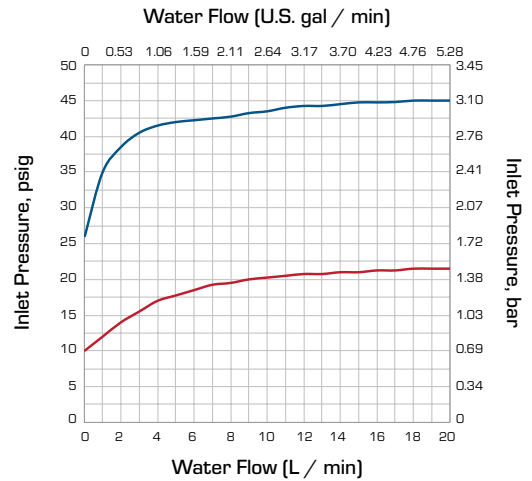
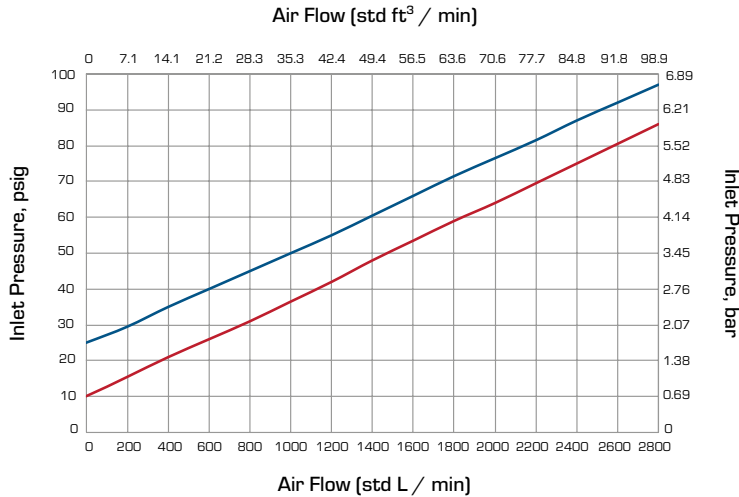


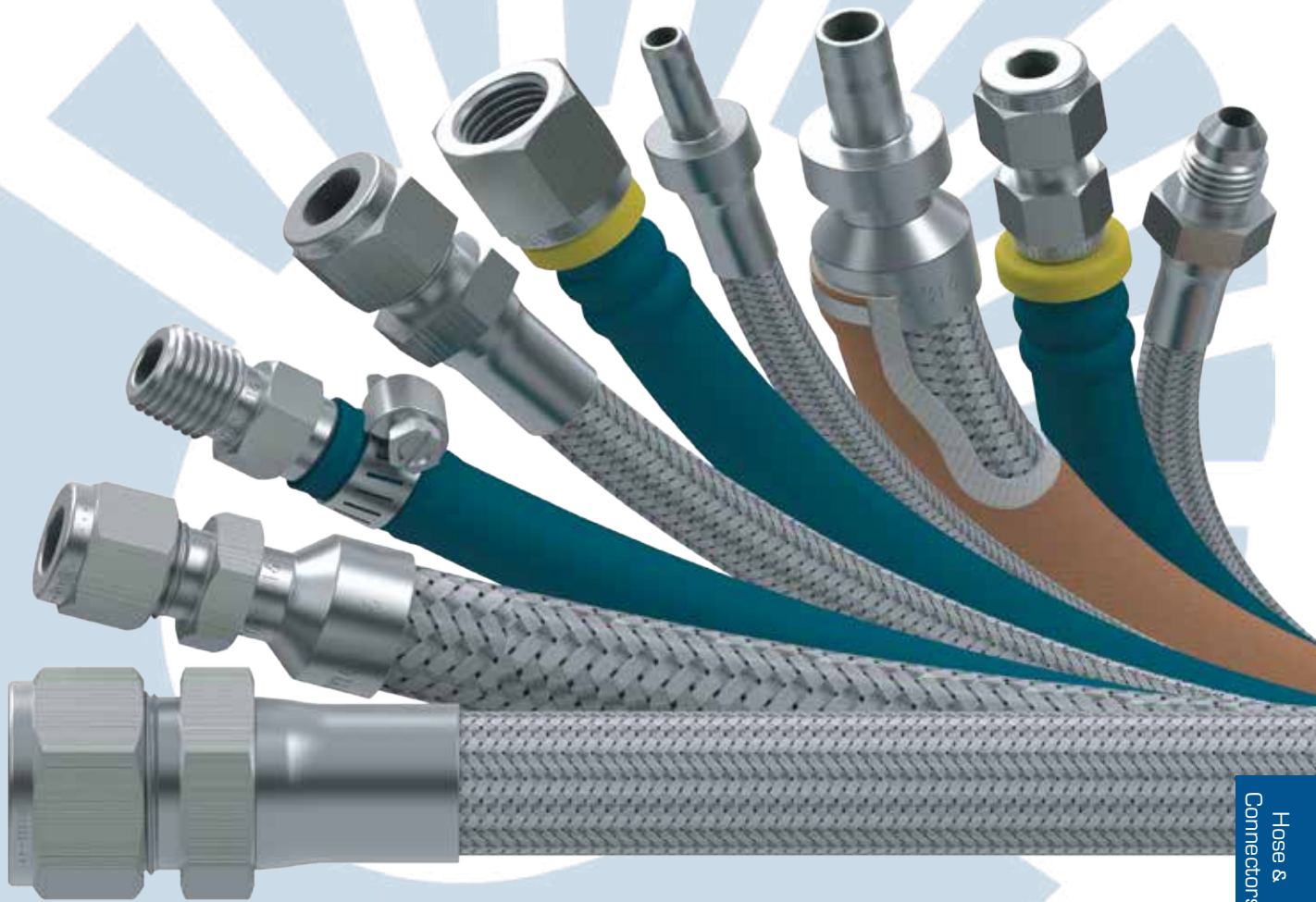
Pressure - Temperature Ratings (based on fluorocarbon FKM seals)	
Temperature °F (°C)	Working Pressure psig (bar)
-10°F (-23°C) to 100°F (37°C)	6000 psig (413 bar)
200°F (93°C)	5160 psig (355 bar)
250°F (121°C)	4910 psig (338 bar)
300°F (148°C)	4660 psig (321 bar)
375°F (190°C)	4280 psig (295 bar)

— Cv = 0.67 Cracking = 1 psig — Cv = 0.67 Cracking = 10 psig



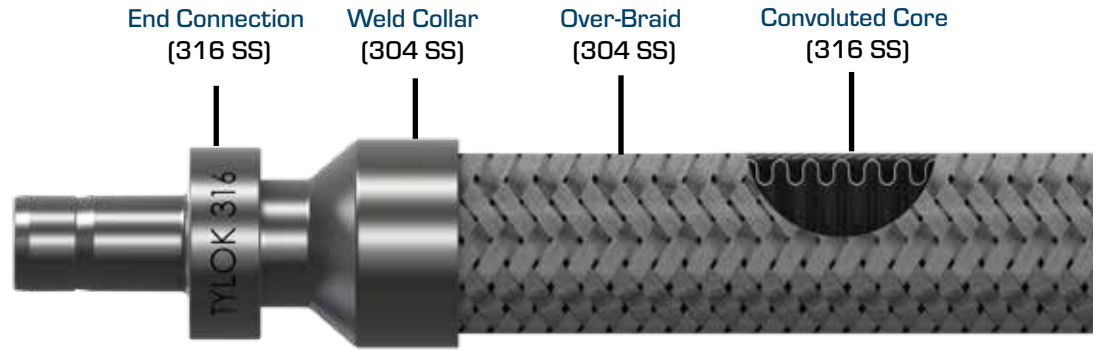
— Cv = 1.8 Cracking = 1 psig — Cv = 1.8 Cracking = 10 psig





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

# Flexible Metal Hose



## Design Features:

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

## Testing

Every Tylok L & H series hose assembly is helium leak tested to a maximum leak rate of  $1 \times 10^{-6}$  std cm<sup>3</sup>/s. See additional test options in the ordering section.

## Available Sizes

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

## Available End Connections

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



## Technical Data

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

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

### Pressure Temperature De-Rating

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

### Dynamic Pressure De-Rating

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

## Standard Assemblies

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

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



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



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



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



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

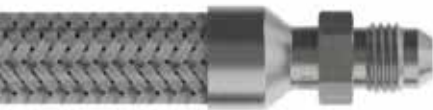


Male Pipe Fitting							
NPT Size	Hose Size	A		Minimum Inside Diameter		Maximum Outside Dimension	
		in	(mm)	in	(mm)	in	(mm)
1/4	4	1.56	(39.7)	0.25	(6.4)	0.65	(16.5)
3/8	6	1.72	(43.6)	0.38	(9.5)	0.79	(20.1)
1/2	8	1.91	(48.4)	0.47	(11.9)	1.01	(25.7)
3/4	12	2.06	(52.4)	0.63	(15.9)	1.32	(33.5)
1	16	2.47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

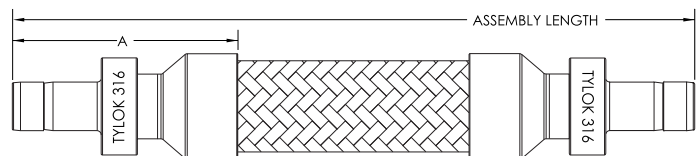


Female Swivel JIC, 37° Flare							
JIC Flare Size	Hose Size	A		Minimum Inside Diameter		Maximum Outside Dimension	
		in	(mm)	in	(mm)	in	(mm)
1/4	4	1.37	(34.8)	0.17	(4.32)	0.65	(16.5)
3/8	6	1.61	(40.8)	0.30	(7.62)	0.79	(20.1)
1/2	8	1.73	(43.8)	0.39	(9.91)	1.01	(25.7)
3/4	12	2.03	(51.6)	0.61	(15.5)	1.44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

Hose & Connectors



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



## Example:

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

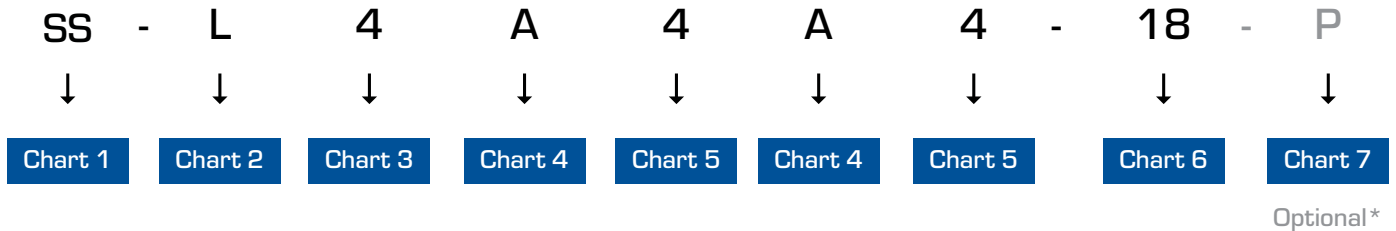


Chart 1- Material	
SS	Stainless Steel

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

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

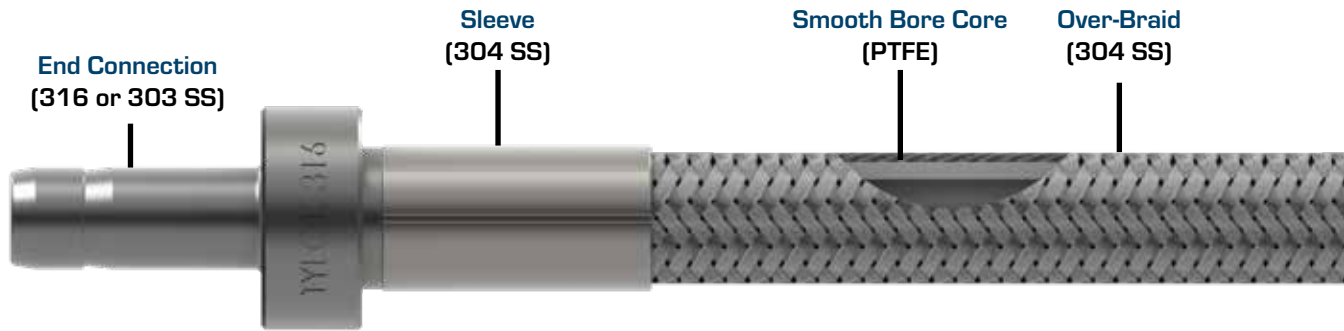
Chart 4- End Connection Type	
A	Tube Adapter
D	CBC-Lok® Tube Fitting
S	CS-Lok® Tube Fitting
M	Male Pipe Threads
F	Female Pipe Threads
AN	Male JIC, 37° Flare
AS	Female Swivel JIC, 37° Flare

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

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

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

# PTFE-Lined, Stainless Steel Braided Hose



## Design Features:

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

## Testing

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

## Available Sizes

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

## Available End Connections

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

## Technical Data

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

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

### Pressure Temperature De-Rating

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

## Standard Assemblies

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

### Example:

What is the pressure rating of size 4 hose at 200°F (93°C)?

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

# Hose & Hose Connectors



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



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

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



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



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

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

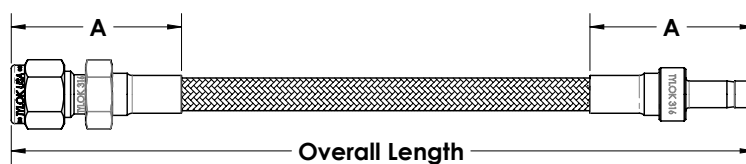


Male JIC, 37° Flare (316 SS)							
JIC Flare Size	Hose Size	A		Minimum Inside Diameter		Maximum Outside Dimension	
		in	(mm)	in	(mm)	in	(mm)
1/4	4	1.56	(39.6)	0.15	(3.8)	0.58	(14.7)
3/8	6	1.52	(38.6)	0.27	(6.9)	0.72	(18.3)
1/2	8	1.89	(48.0)	0.35	(8.9)	0.93	(23.6)



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

Hose & Connectors



## Example:

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

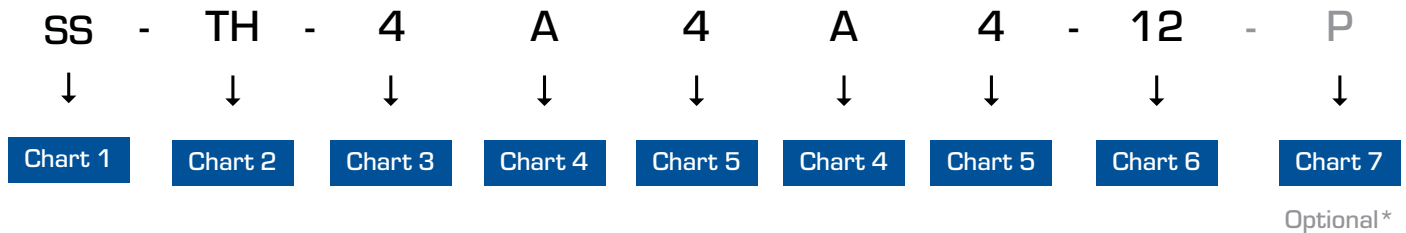


Chart 1- Material	
SS	Stainless Steel

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

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

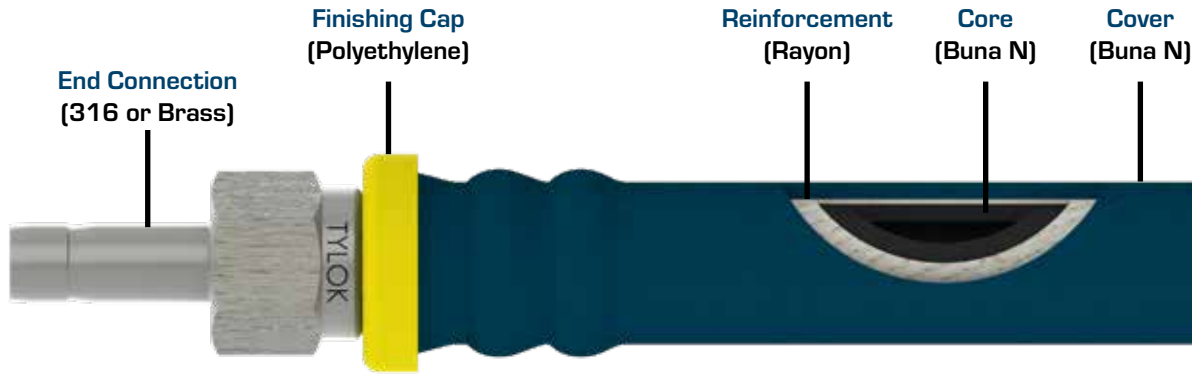
Chart 6- Total Assembly Length	
6	Inches, and ordered in whole number increments

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

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

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

# Multi-Purpose Push-On Hose



## Hose Connectors

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

## Design Features

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

## Available End Connections

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

## Pressure Temperature De-Rating

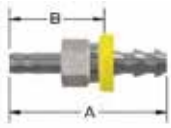
The working pressure of multipurpose push-on hose does not de-rate when used in its normal operating range: -40 to 200 °F (-40 to 93 °C). It is not recommended that this hose be used outside of this range.

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



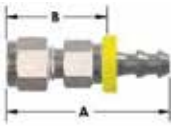
# Hose & Hose Connectors

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



### CBC-Lok® Tube Adapter<sup>1</sup>

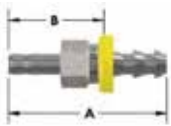
1/4	1/4	-4-DATHB-4	PB4 -TA4	1.91	(48.5)	1.51	(29.2)	0.15	(3.8)	0.68	(17.3)
3/8	3/8	-6-DATHB-6	PB6 -TA6	2.00	(50.8)	0.13	(28.7)	0.24	(6.1)	0.87	(22.1)
1/2	1/2	-8-DATHB-8	PB8 -TA8	2.42	(61.5)	1.37	(34.8)	0.34	(8.7)	0.98	(24.9)
3/4	3/4	-12-DATHB-12	PB12 -TA12	3.10	(78.7)	1.43	(36.2)	0.57	(14.5)	1.27	(32.3)



### CBC-Lok® Tube Fitting<sup>1</sup>

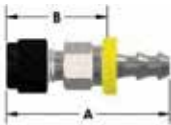
1/4	1/4	-4-DTHB-4	PB4 -SL4	1.97	(50.0)	1.21	(30.7)	0.15	(3.8)	0.68	(17.3)
3/8	3/8	-6-DTHB-6	PB6 -SL6	2.11	(53.6)	1.24	(31.5)	0.27	(6.9)	0.87	(22.1)
1/2	1/2	-8-DTHB-8	PB8 -SL8	2.47	(62.7)	1.42	(36.1)	0.37	(9.5)	0.98	(24.9)

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



### CS-Lok® Tube Adapter<sup>2</sup>

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



### CS-Lok® Tube Fitting<sup>2</sup>

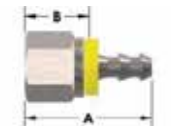
1/4	1/4	-4-STHB-4	-	1.97	(50.0)	1.21	(30.7)	0.15	(3.8)	0.68	(17.3)
3/8	3/8	-6-STHB-6	-	2.11	(53.6)	1.24	(31.5)	0.27	(6.9)	0.87	(22.1)
1/2	1/2	-8-STHB-8	-	2.47	(62.7)	1.42	(36.1)	0.37	(9.5)	0.98	(24.9)

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



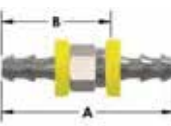
### Male Pipe Threads

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



### Female Pipe Threads

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



### Union

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

# HC Series End Connections

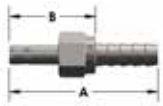
## Design Features

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



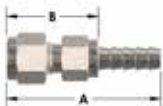
Fitting Size in.	Hose Size in.	Part Number	Interchanges With	A in (mm)	B in (mm)	Minimum Inside Diameter in (mm)	Maximum Outside Dimension in (mm)
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### CBC-Lok® Tube Adapter<sup>1</sup>



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

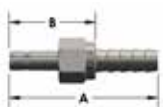
### CBC-Lok® Tube Fitting<sup>1</sup>



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

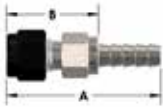
<sup>1</sup>CBC-Lok® double ferrule tube ends are completely interchangeable with Swagelok® and Parker A-Lok® tube ends.

### CS-Lok® Tube Adapter<sup>2</sup>



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

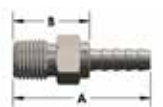
### CS-Lok® Tube Fitting<sup>2</sup>



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

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

### Male Pipe Threads



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

### Female Pipe Threads



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

Consider the following categories below when selecting a hose:

# S

Size

# T

Temperature

# A

Application

# M

Media

# P

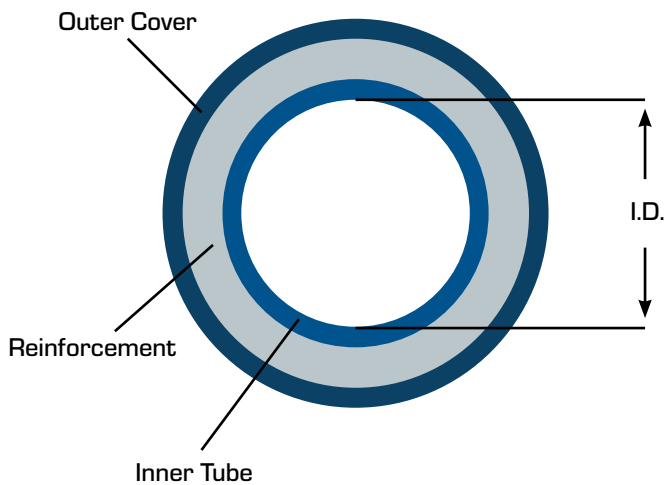
Pressure

# E

Ends

# D

Delivery



## Size

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

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

## Temperature

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

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

## Application

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

# Hose Selection

## Typical Applications Include:

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

## Media

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

## Pressure

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

## End Connections

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

## Delivery

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



Pressure Gauge

## Features and Benefits

- Gauge Orientation made easy with tube stub connection.
- NPT threads and PTFE tape eliminated from system.
- Reduces potential for improper installations as most installers screw the gauge on by hand.
- All welded design through to the bourdon tube eliminates potential leakage due to mechanical connections.
- All gauges are 100% tested
- Specials available upon request
- 2 1/2" stainless pressure gauges
- Many pressure range available
- Standard glycerin liquid filled case dry/liquid fillable cases are also available.

## Liquid filled used for:

- Dampening vibration
- Dampening pressure pulsations
- Permanent lubrication

## Technical Specifications

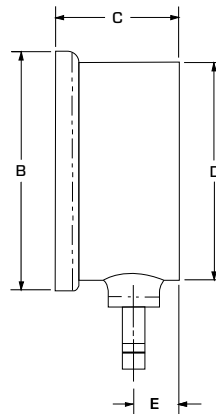
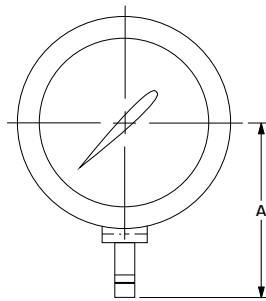
- Accuracy:  $\pm 1.6\%$  Full Scale
- Maximum Temperature Rating:
  - Liquid filled gauges 150°F (65°C)
  - Dry gauges 250°F (121°C)



### Leak Free Connection-

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

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



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

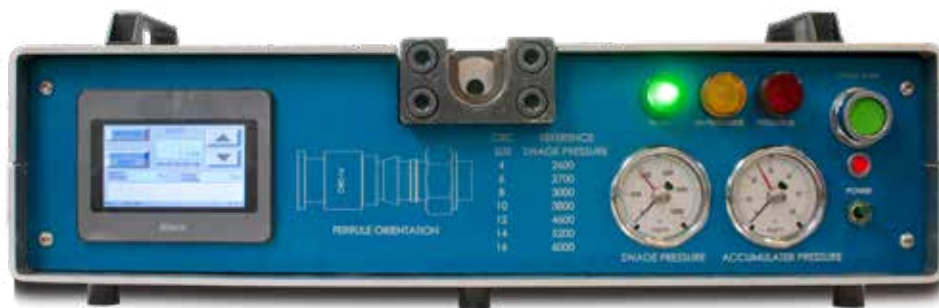
Part Number PG25-A4-(1/4") Series	Part Number PG25-A6-(3/8") Series	Range
SS-PG25-A4-30VAC	SS-PG25-A6-30VAC	30" HG to 0
SS-PG25-A4-15	SS-PG25-A6-15	0 to 15 psi
SS-PG25-A4-30	SS-PG25-A6-30	0 to 30 psi
SS-PG25-A4-60	SS-PG25-A6-60	0 to 60 psi
SS-PG25-A4-100	SS-PG25-A6-100	0 to 100 psi
SS-PG25-A4-160	SS-PG25-A6-160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

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





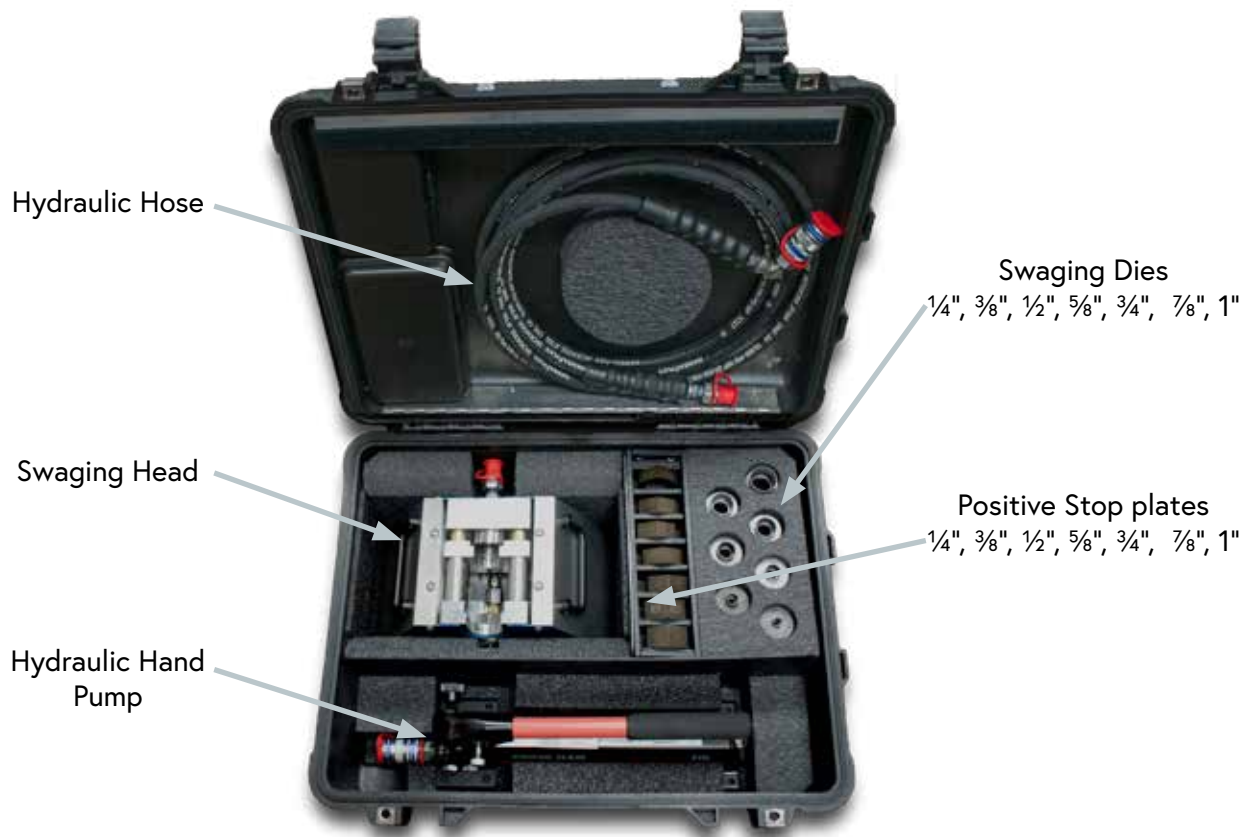
**1/4" to 1" and 1" to 2" Bench Top Swaging Unit (BTSU)**



**1/4" to 1" Digital Swaging Unit (DSU)**

The Tylok Bench Top Swaging Unit (BTSU) and Digital Swaging Units (DSU) are designed to easily pre-swage nut and ferrule sets onto tubing. Both units use hydraulics to control the pre-swaging.

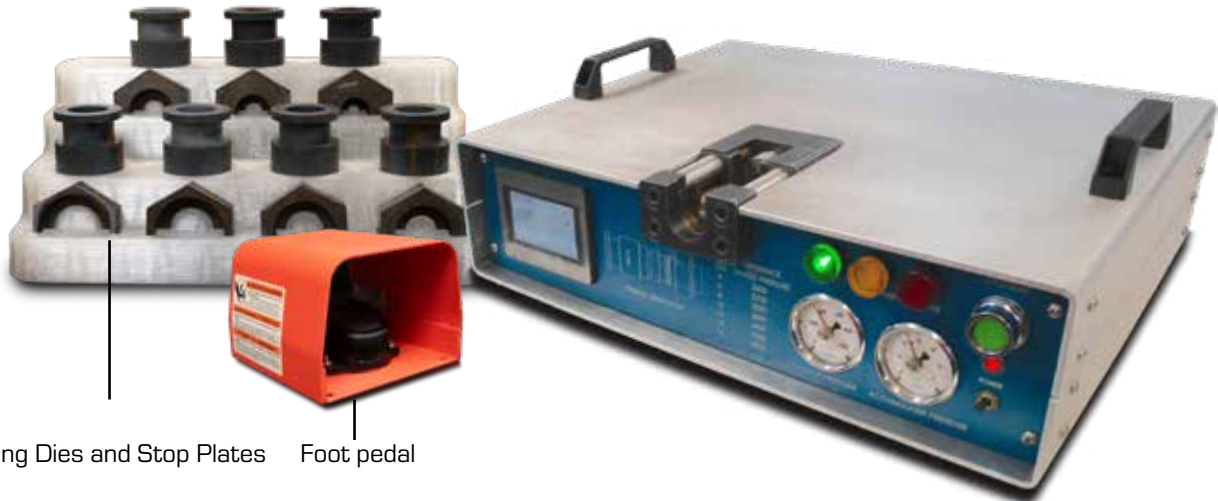
# BTSU Bench Top Swaging Unit



## BTSU Features:

- Designed to pre-swage the nut and ferrules of either the Tylok CBC-Lok or CS-Lok style fittings onto tubing in tube sizes ranging from 1/4" to 1" and 1" to 2" for all typical wall thicknesses.
- Reduces installation time up to 50%
- Pre-swaging provides process control eliminating variation associated with manual swaging
- Can be configured with an electric pump with foot pedal control for semi-automatic operation





Swaging Dies and Stop Plates    Foot pedal

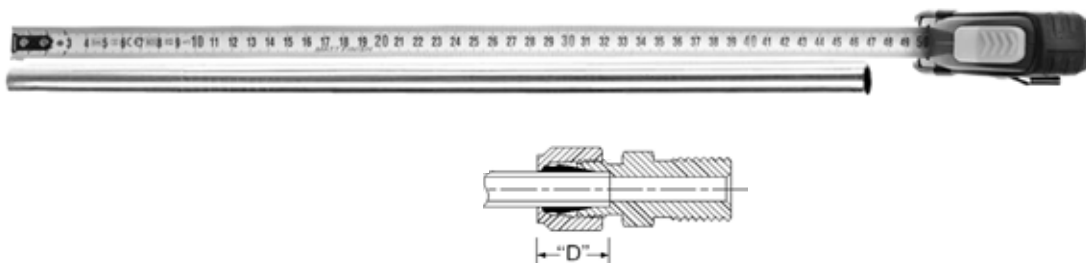
## DSU Features:

- Designed to pre-swage the nut and ferrules of either the Tylok CBC-Lok or CS-Lok style fitting onto tubing in tube sizes ranging from 1/4" to 1" for all typical wall thicknesses.
- The DSU 4-16 is a digitally controlled hydraulic press that uses 110V AC current, and produces enough force to swage all of the tubes sizes with one touch of a button.
- The DSU 4-16 is a bench top unit that is designed to give precise control over the pre-swaging process, with positioning accuracy of  $\pm .002$ ".
- A Foot Switch is also included for hands free operation, permitting swages on long or awkward bends.
- Changing tube sizes require threadless, quick change dies, which are made in seconds without any tools required.
- Pre-swaging ferrules onto the tube reduces installation torque up to 50%, depending on the tube size, tube wall thickness and tube hardness.
- Pre-swaging reduces the number of turns required to make up the fitting. Typically about a half turn past finger tight is required to make up the fitting after pre-swaging, making installation in tight spaces easier.

# Pre-Swaging Units

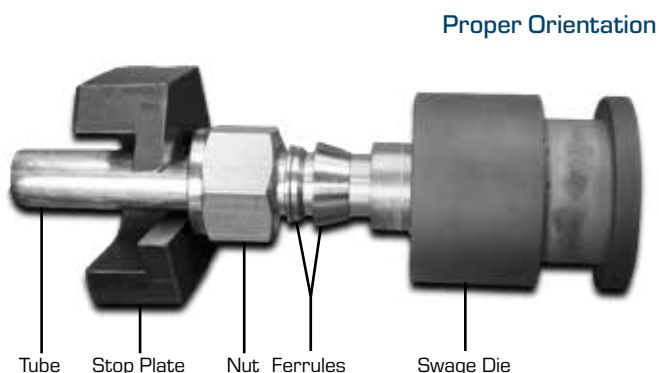
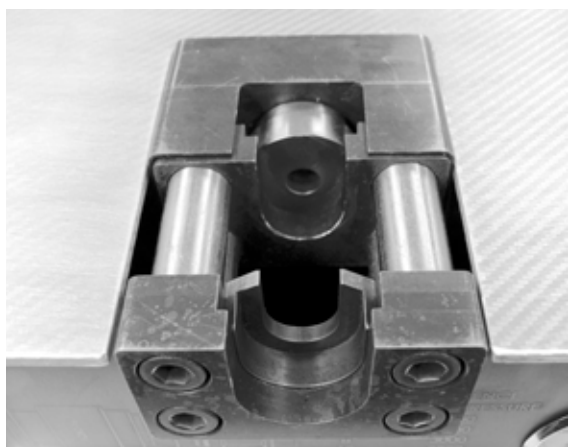
## Setup:

1. Measure and pre-cut tube length, adding fitting insertion depths to each end:

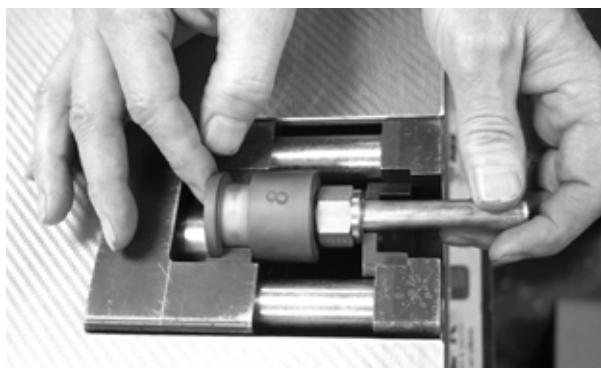


Tube O.D. Inches	1/16	1/8	3/16	1/4	5/16	3/8	1/2	5/8	3/4	7/8	1	1 1/4	1 1/2	2
"D" Tube Insertion Depth (in.)	0.38	0.52	0.56	0.61	0.66	0.69	0.94	0.98	0.98	1.05	1.22	1.61	1.96	2.65

2. Insert Stop Plate into Swaging head. Slide loose nut and ferrules onto tube and insert into swage die:



3. Insert tubing and swage die into Swaging head and pump to pressure for corresponding tube diameter:

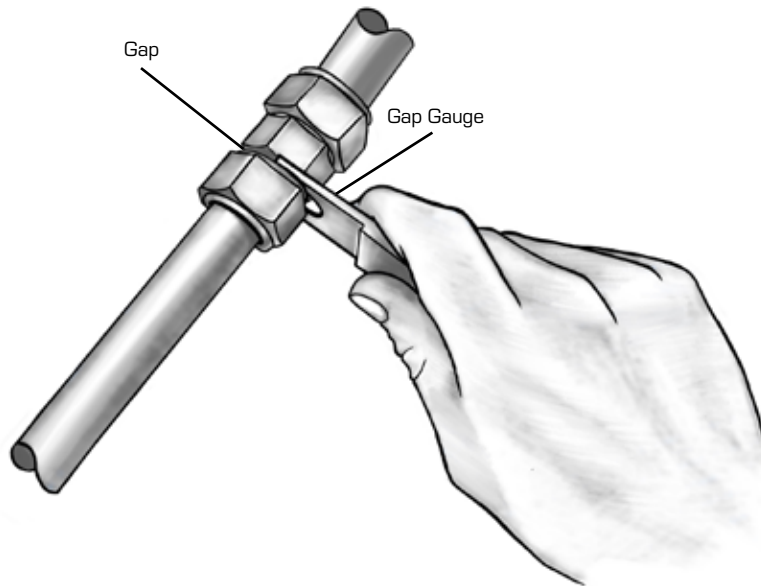


CBC SIZE	REFERENCE SWAGE PRESSURE
4	2600
6	2700
7	2900
8	3000
10	3800
12	4600
14	5200
16	6000

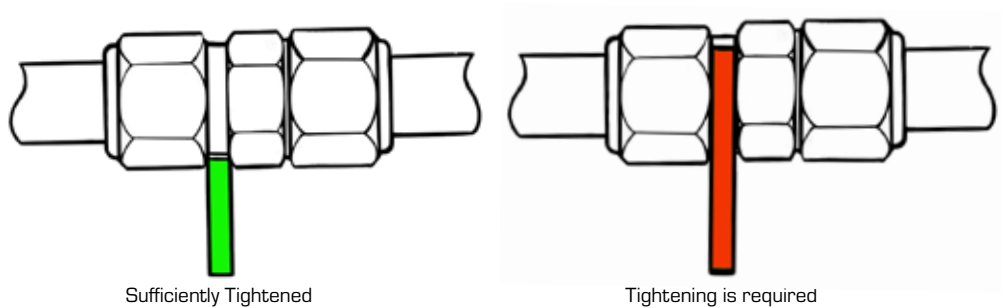
MAX. PRESSURE 7500 PSI

NOTE: This chart can be found on the front of the BTSU and DSU

4. Repeat process on second end of tube and install pre-swaged tube to the instructions below:



The gauge should NOT fit into the gap when tightened properly



## Gauging Instructions:

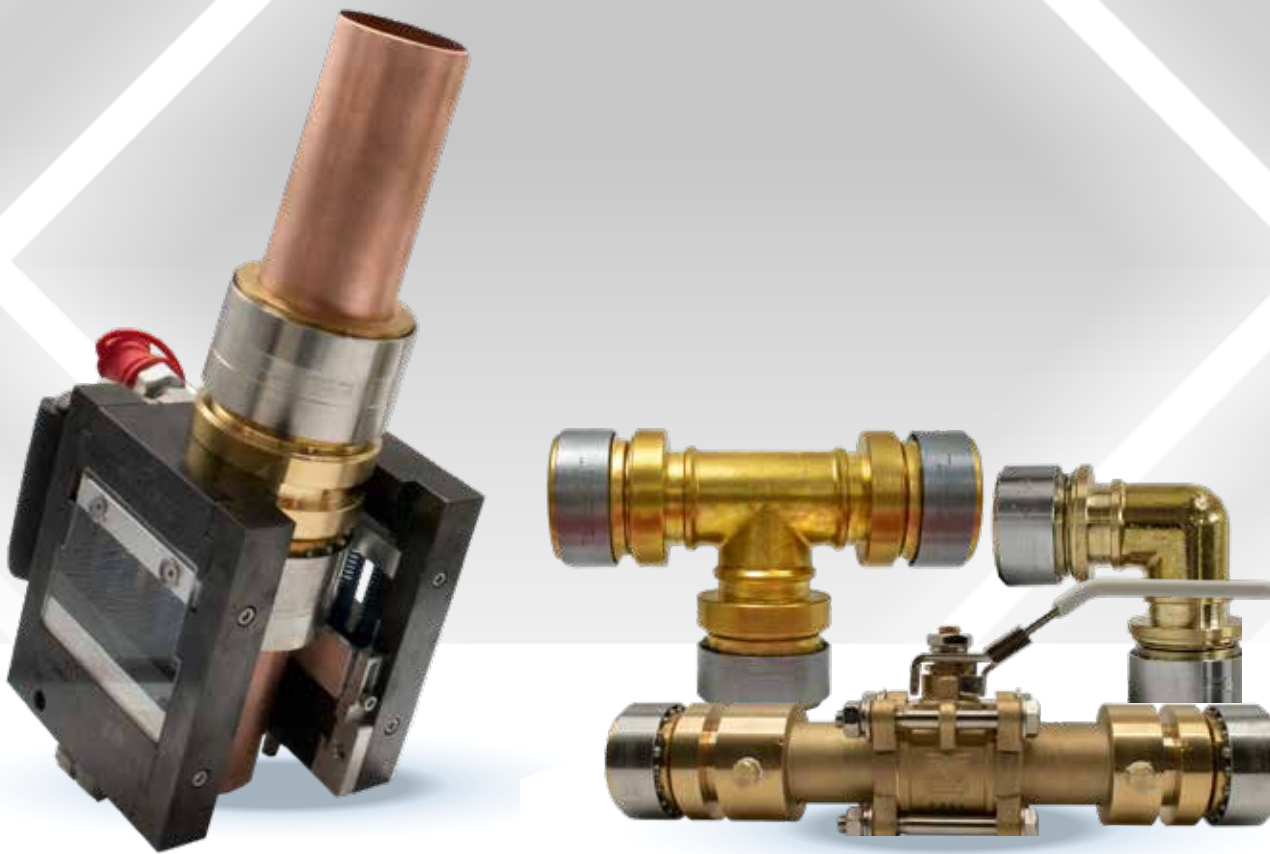
Position the Tylok BTSU gap inspection gauge adjacent to the gap between the nut and body hex.

- If the gauge will not enter the gap, the fitting is sufficiently tightened.
- If the gauge will enter the gap, additional tightening is required.

Part Number	Description
DSU-615	Digital Swaging Unit 1/4" - 1"
BTSU-617	Bench Top Swaging Unit 1/4" - 1"
BTSU-16-32	Bench Top Swaging Unit 1" - 2"

# MEDLOK<sup>®</sup>

Axially Swaged Medical Gas Fittings from **TYLOK**



Reduce downtime on medical gas projects up to 80-90%



Eliminate burn permits, open flames, fire watch & nitrogen purge

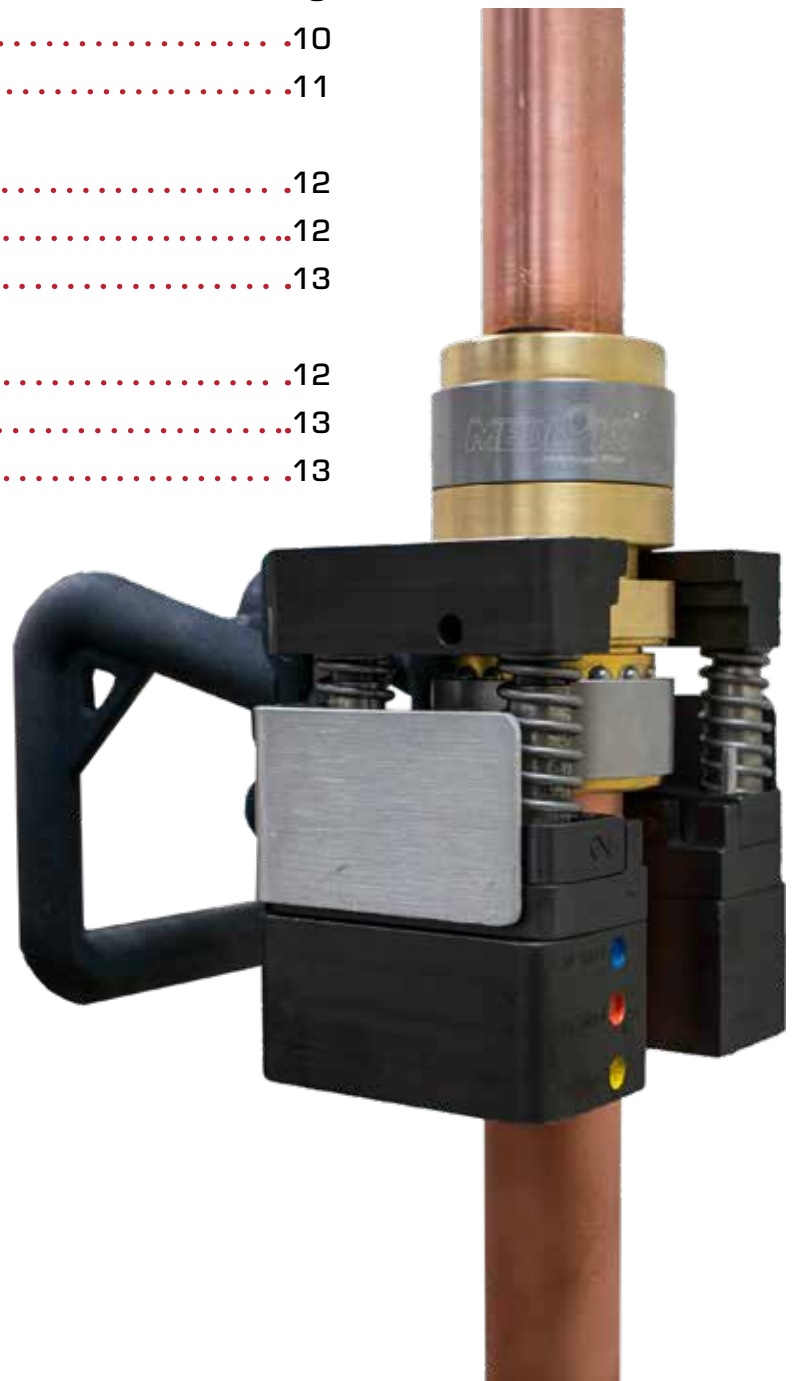


Eliminate all braze contamination & dirty joints from inadequate purge

**Fast, Flame-Free & NFPA 99 Code Compliant Valves and Fittings**

## FITTINGS & VALVES

Caps .....	5
Gage Port Caps .....	5
Couplings .....	6
Reducing Couplings .....	6
Gage Port Couplings .....	7
Reducing Gage Port Couplings .....	7
90° Elbows .....	8
90° Reducing Elbows .....	8
Tees .....	9
Reducing Run Tees .....	9
Reducing Branch Tees .....	10
Valves .....	11
Female NPT to Medlok	
Female Connector .....	12
Female Reducing Connector .....	12
Female Cap .....	13
Male NPT to Medlok	
Male Connector .....	12
Male Reducing Connectors .....	13
Male Plugs .....	13



MEDLOK® Axially Swaged Fittings are an NFPA 99 code compliant alternative to brazing. These types of mechanical connections were added to the code in 2005 as the 4th approved method based on section 5.1.10.3 and have maintained compliance in all subsequent editions. MEDLOK was specifically designed to meet the requirements of the following sections:

- 5.1.10.7: metal-to-metal seals, suitable for service at 300 psig at 1000°F, permanent and nonseparable
- 5.1.10.9: permanent joint with sealing integrity of a brazed joint

To comply with CMS standards, all healthcare systems nationwide must adhere to the 2012 edition or later of the code, effectively making MEDLOK an acceptable connection method in every state!





## The MEDLOK Advantage

- Faster & safer alternative to brazing
  - Eliminate risks associated with open flames such as setting off sprinklers and burning critical IT, electrical, and alarm wiring
- Eliminates Nitrogen purge, brazing, brazing contaminants and cool-down time
- Up to 90% reduction in facility downtime, no need for hot work permit or fire watch
  - Reduce backup bottled gases during a shutdown
  - Reduce staff and patient disruptions
- Consistent installation with an audible “snap”
- Seals on rigid or annealed tubing
  - Can be used close to a brazed joint
- Tested for use with Type K & Type L copper
- High strength collars provide elasticity assuring a permanent, leak-free connection
- Over 100 configurations from 1/2” up to 2”
- Cleaned & packaged for oxygen service in accordance with CGA G-4.1
- Valves available in sizes 1/2” to 2”
- Environmentally friendly



EX: Part Number: KIT-MEDLOK-DBLPMP-02



### 3/8" - 2" MEDLOK Contractor Double Pump Installation Kit

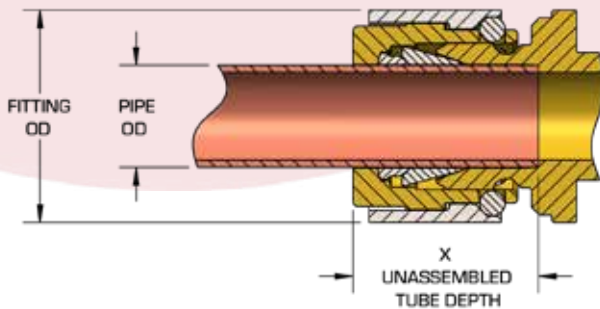
**Includes:**

- Tool Head
- Trigger
- 3' & 15' Hoses and Quick Connects
- 10KSI Wired Electric Pump with Quick Connects
- Manual Pump with Quick Connects
- Gauges
- Die Sets
- Case

\* Tool Kits are available for purchase and rental

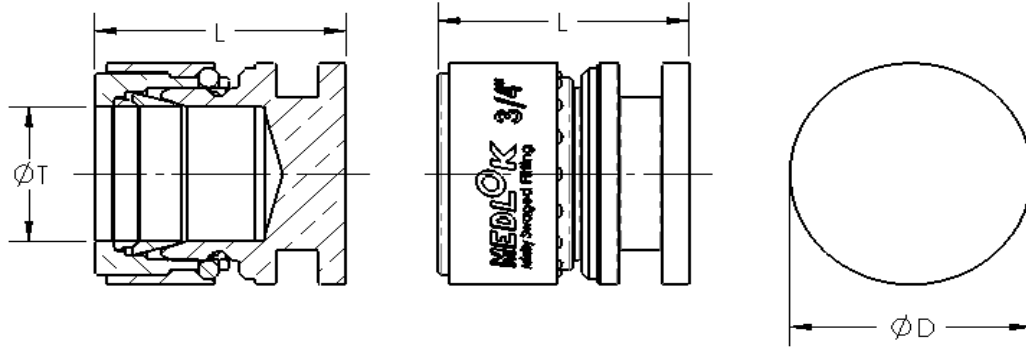
### Tube Insertion Chart

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



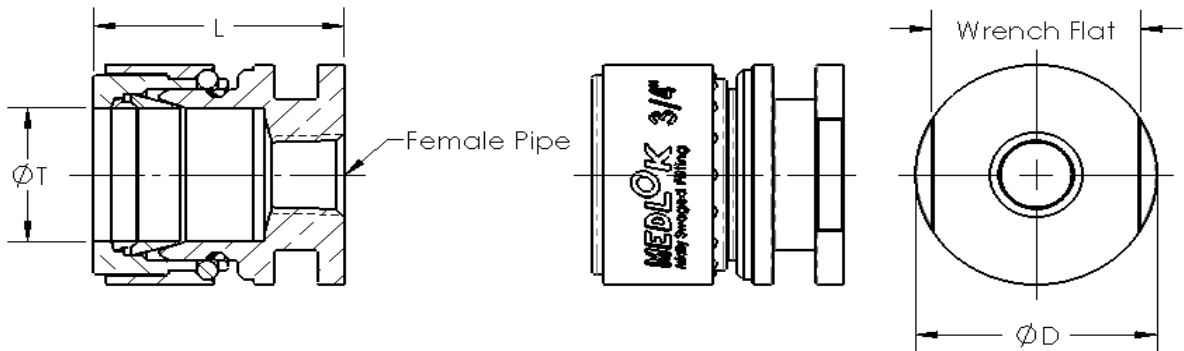
MEDLOK DESIGNATOR	SIZE	X	PIPE OD	FITTING OD
T06	3/8"	15/16"	1/2"	1-1/16"
T08	1/2"	1"	5/8"	1-3/16"
T12	3/4"	1-1/16"	7/8"	1-1/2"
T16	1"	1-1/4"	1-1/8"	1-15/16"
T20	1-1/4"	1-7/8"	1-3/8"	2-1/4"
T24	1-1/2"	2-1/16"	1-5/8"	2-1/2"
T32	2"	2-11/16"	2-1/8"	3"

## Caps

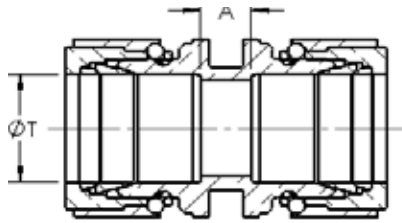


SIZE	PART NUMBER	FITTING LENGTH L
3/8"	B-T06-ASCAP	1-9/16"
1/2"	B-T08-ASCAP	1-9/16"
3/4"	B-T12-ASCAP	1-9/16"
1"	B-T16-ASCAP	2-5/16"
1-1/4"	B-T20-ASCAP	2-5/16"
1-1/2"	B-T24-ASCAP	3"
2"	B-T32-ASCAP	3-3/8"

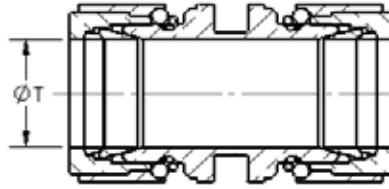
## Gauge Port Cap



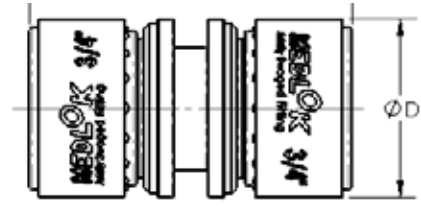
SIZE	PART NUMBER	FEMALE PIPE SIZE	FITTING LENGTH L	WRENCH FLAT
3/8"	B-T06-ASCAP-2FPT	1/8"	1-9/16"	15/16"
3/8"	B-T06-ASCAP-4FPT	1/4"	2-1/16"	15/16"
1/2"	B-T08-ASCAP-2FPT	1/8"	1-9/16"	1"
1/2"	B-T08-ASCAP-4FPT	1/4"	1-9/16"	1"
3/4"	B-T12-ASCAP-2FPT	1/8"	1-9/16"	1-1/4"
3/4"	B-T12-ASCAP-4FPT	1/4"	1-9/16"	1-1/4"
1"	B-T16-ASCAP-2FPT	1/8"	2-5/16"	1-3/4"
1"	B-T16-ASCAP-4FPT	1/4"	2-5/16"	1-3/4"
1-1/4"	B-T20-ASCAP-4FPT	1/4"	2-5/16"	2"
1-1/2"	B-T24-ASCAP-4FPT	1/4"	3"	2-1/4"
2"	B-T32-ASCAP-4FPT	1/4"	3-3/8"	2-3/4"



w/ Stops

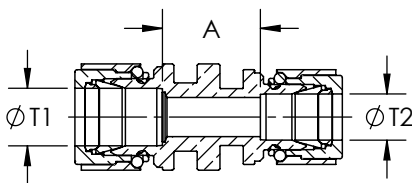


Slip (-BT)

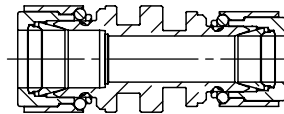


SIZE	PART NUMBER	FITTING LENGTH L	TAKE OUT A
3/8"	B-T06-ASCPL	2-1/2"	5/8"
1/2"	B-T08-ASCPL	2-7/16"	1/2"
3/4"	B-T12-ASCPL	2-7/16"	3/8"
1"	B-T16-ASCPL	3-3/8"	13/16"
1-1/4"	B-T20-ASCPL	4-5/8"	7/8"
1-1/2"	B-T24-ASCPL	4-11/16"	11/16"
2"	B-T32-ASCPL	5-1/2"	1/8"
3/8"	B-T06-ASCPL-BT	2-1/2"	5/8"
1/2"	B-T08-ASCPL-BT	2-7/16"	1/2"
3/4"	B-T12-ASCPL-BT	2-7/16"	3/8"
1"	B-T16-ASCPL-BT	3-7/8"	13/16"
1-1/4"	B-T20-ASCPL-BT	4-5/8"	7/8"
1-1/2"	B-T24-ASCPL-BT	4-11/16"	11/16"
2"	B-T32-ASCPL-BT	5-1/2"	1/8"

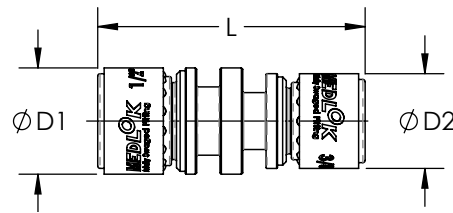
## Reducing Couplings with Stop or Slip Body Styles



w/ Stops

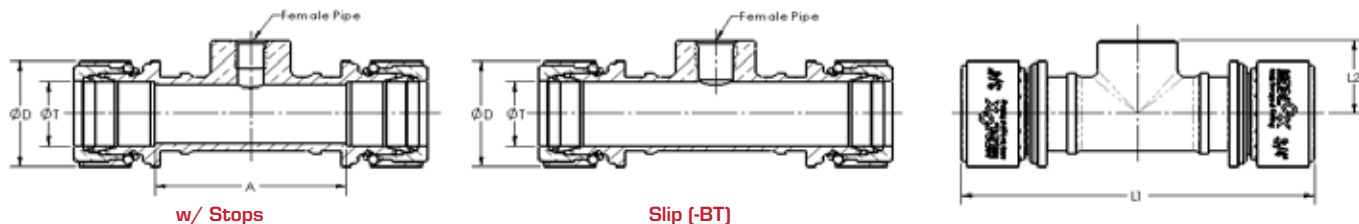


w/ Slips (-BT)



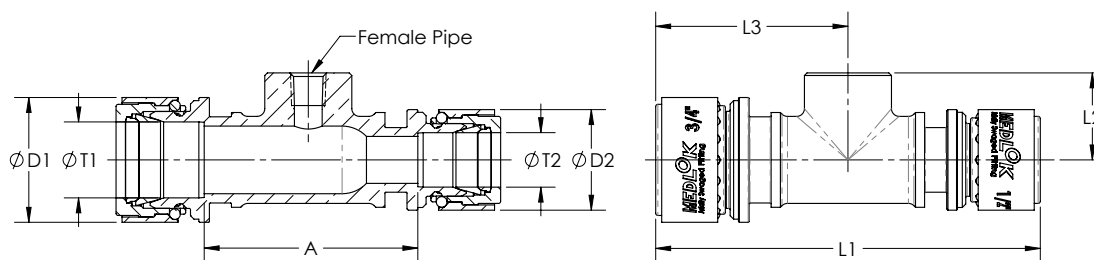
SIZE	PART NUMBER	FITTING LENGTH L	TAKE OUT A
1/2" TO 3/8"	B-T08-ASREDCPL-T06	3"	1"
3/4" TO 3/8"	B-T12-ASREDCPL-T06	3"	1"
3/4" TO 1/2"	B-T16-ASREDCPL-T08	3"	15/16"
1" TO 1/2"	B-T16-ASREDCPL-T08	3"	15/16"
1" TO 3/4"	B-T16-ASREDCPL-T12	3-7/16"	1-1/8"
1-1/4" TO 1"	B-T20-ASREDCPL-T16	4-1/16"	7/8"
1-1/2" TO 1"	B-T24-ASREDCPL-T16	4-1/8"	13/16"
1-1/2" TO 1-1/4"	B-T24-ASREDCPL-T20	4-5/8"	3/4"
2" TO 1"	B-T32-ASREDCPL-T16	4-7/8"	15/16"
2" TO 1-1/4"	B-T32-ASREDCPL-T20	5-3/8"	7/8"
2" TO 1-1/2"	B-T32-ASREDCPL-T24	5-1/16"	3/8"
1/2" TO 3/8"	B-T08-ASREDCPL-T06-BT	3"	1"
3/4" TO 3/8"	B-T12-ASREDCPL-T06-BT	3"	1"
3/4" TO 1/2"	B-T12-ASREDCPL-T08-BT	3"	15/16"
1" TO 1/2"	B-T16-ASREDCPL-T08-BT	3"	15/16"
1" TO 3/4"	B-T16-ASREDCPL-T12-BT	3-7/16"	1-1/8"
1-1/4" TO 1"	B-T20-ASREDCPL-T16-BT	4-1/16"	7/8"
1-1/2" TO 1"	B-T24-ASREDCPL-T16-BT	4-1/8"	13/16"
1-1/2" TO 1-1/4"	B-T24-ASREDCPL-T20-BT	4-5/8"	3/4"
2" TO 1"	B-T32-ASREDCPL-T16-BT	4-7/8"	15/16"
2" TO 1-1/4"	B-T32-ASREDCPL-T20-BT	5-3/8"	7/8"
2" TO 1-1/2"	B-T32-ASREDCPL-T24-BT	5-1/16"	3/8"

## Gauge Port Couplings with Stop or Slip Body Styles



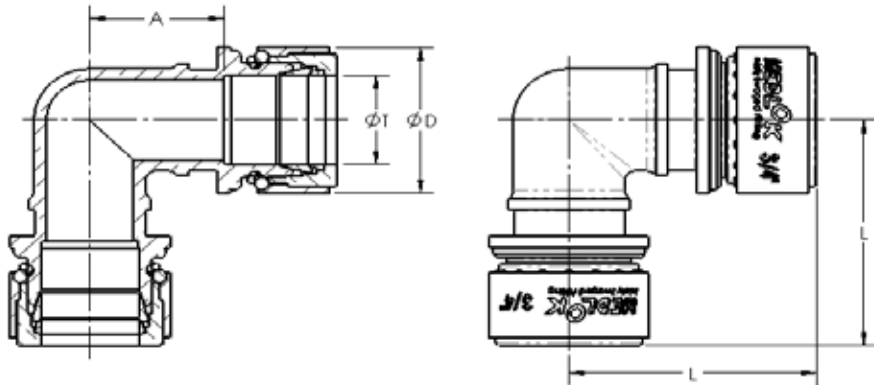
SIZE	PART NUMBER	FEMALE PIPE SIZE	FITTING LENGTH L1	FITTING LENGTH L2	TAKE OUT A
1/2"	B-T08-ASCPL-2FPT	4-3/16"	4.18	15/16"	2-1/4"
1/2"	B-T08-ASCPL-4FPT	4-3/16"	4.18	15/16"	2-1/4"
3/4"	B-T12-ASCPL-2FPT	4-1/2"	4.46	1"	2-7/16"
3/4"	B-T12-ASCPL-4FPT	4-1/2"	4.46	1"	2-7/16"
1"	B-T16-ASCPL-2FPT	5-7/8"	5.84	1-1/8"	3-5/16"
1"	B-T16-ASCPL-4FPT	5-7/8"	5.84	1-1/8"	3-5/16"
1-1/4"	B-T20-ASCPL-4FPT	5-3/4"	5.75	1-1/8"	2-1/16"
1-1/2"	B-T24-ASCPL-4FPT	5-7/8"	5.88	1-1/4"	1-7/8"
2"	B-T32-ASCPL-4FPT	6-11/16"	6.65	1-1/2"	1-5/16"
1/2"	B-T08-ASCPL-2FPT-BT	4-3/16"	4.18	15/16"	2-1/4"
1/2"	B-T08-ASCPL-4FPT-BT	4-3/16"	4.18	15/16"	2-1/4"
3/4"	B-T12-ASCPL-2FPT-BT	4-7/16"	4.46	1"	2-7/16"
3/4"	B-T12-ASCPL-4FPT-BT	4-7/16"	4.46	1"	2-7/16"
1"	B-T16-ASCPL-2FPT-BT	5-7/8"	5.84	1-1/8"	3-5/16"
1"	B-T16-ASCPL-4FPT-BT	5-7/8"	5.84	1-1/8"	3-5/16"
1-1/4"	B-T20-ASCPL-4FPT-BT	5-3/4"	5.75	1-1/8"	2-1/16"
1-1/2"	B-T24-ASCPL-4FPT-BT	5-7/8"	5.88	1-1/4"	1-7/8"
2"	B-T32-ASCPL-4FPT-BT	6-11/16"	6.65	1-1/2"	1-5/16"

## Reducing Gauge Port Couplings with Stop Body Styles



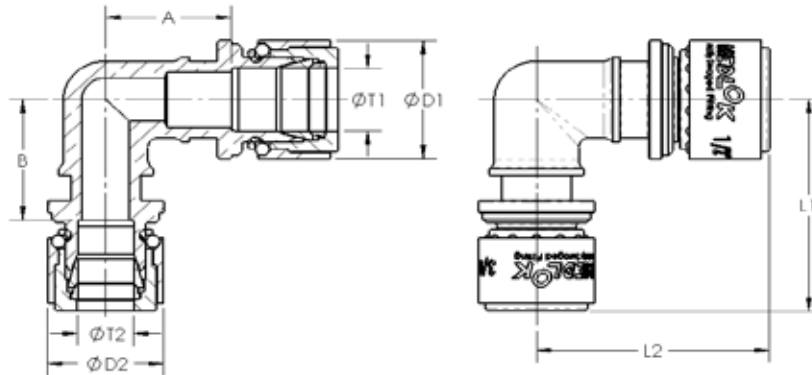
SIZE	PART NUMBER	FEMALE PIPE SIZE	FITTING LENGTH L1	CENTER LENGTH L2	CENTER LENGTH L3	TAKE OUT A
3/4" TO 1/2"	B-T12-ASREDCPL-T08-2FPT	4-1/2"	4.46	1"	2-1/4"	2-1/2"
3/4" TO 1/2"	B-T12-ASREDCPL-T08-4FPT	4-1/2"	4.46	1"	2-1/4"	2-1/2"
1" TO 3/4"	B-T16-ASREDCPL-T12-2FPT	5-3/4"	5.72	1-1/8"	2-15/16"	3-7/16"
1" TO 3/4"	B-T16-ASREDCPL-T12-4FPT	5-3/4"	5.72	1-1/8"	2-15/16"	3-7/16"

## Elbows with Stop Body Style



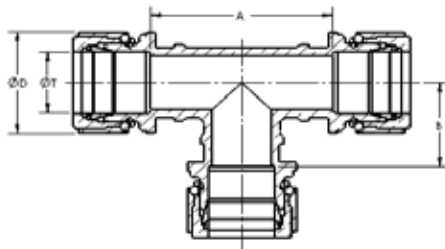
SIZE	PART NUMBER	CENTER LENGTH L	TAKE OUT A
1/2"	B-T08-ASEL90	2-1/8"	1-1/8"
3/4"	B-T12-ASEL90	2-1/4"	1-3/16"
1"	B-T16-ASEL90	2-15/16"	1-11/16"
1-1/4"	B-T20-ASEL90	2-13/16"	1-15/16"
1-1/2"	BT24-ASEL90	4"	1-15/16"
2"	B-T32-ASEL90	4-5/8"	1-15/16"

## Reducing Elbows with Stop Body Style

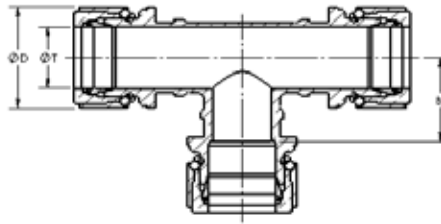


SIZE	PART NUMBER	CENTER LENGTH L1	CENTER LENGTH L2	TAKE OUT A	TAKE OUT B
1/2" TO 3/8"	B-T08-ASREDEL90-T06	2-1/8"	2-1/8"	1-1/8"	1-3/16"
3/4" TO 1/2"	B-T12-ASREDEL90-T08	2-1/4"	2-1/4"	1-1/4"	1-1/4"
1" TO 1/2"	B-T16-ASREDEL90-T08	2-13/16"	2-15/16"	1-11/16"	1-13/16"
1" TO 3/4"	B-T16-ASREDEL90-T12	2-13/16"	2-15/16"	1-11/16"	1-3/4"

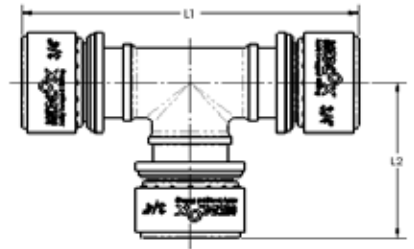
## Tees with Stop or *Half-Slip™* Body Style



w/ Stops

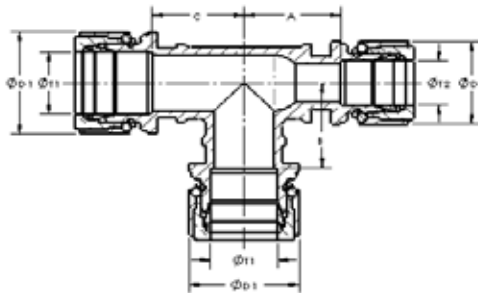


Slip (-BT)

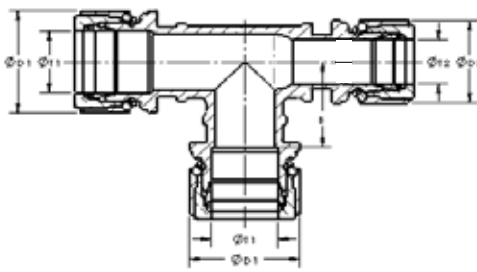


SIZE	PART NUMBER	FITTING LENGTH L1	CENTER LENGTH L2	TAKE OUT A	TAKE OUT B
1/2" TO 1/2" TO 1/2"	B-T08-ASTEE	4-3/16"	2-1/8"	2-1/4"	1-1/8"
3/4" TO 3/4" TO 3/4"	B-T12-ASTEE	4-7/16"	2-1/4"	2-7/16"	1-3/16"
1" TO 1" TO 1"	B-T16-ASTEE	5-7/8"	2-7/8"	3-5/16"	1-11/16"
1-1/4" TO 1-1/4" TO 1-1/4"	B-T20-ASTEE	7-9/16"	2-13/16"	3-7/8"	1-15/16"
1-1/2" TO 1-1/2" TO 1-1/2"	B-T24-ASTEE	7-15/16"	4"	3-7/8"	1-15/16"
2" TO 2" TO 2"	B-T32-ASTEE	9-1/4"	4-5/8"	3-7/8"	1-15/16"
1-1/4" TO 1-1/4" TO 1-1/4"	B-T20-ASTEE-HS	7-9/16"	3-13/16"	3-7/8"	1-15/16"
1-1/2" TO 1-1/2" TO 1-1/2"	B-T24-ASTEE-HS	7-15/16"	4"	3-7/8"	1-15/16"
2" TO 2" TO 2"	B-T32-ASTEE-HS	9-1/4"	4-5/8"	3-7/8"	1-15/16"

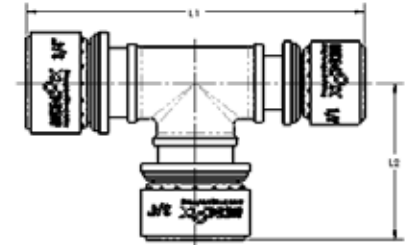
## Reducing Run Tees with Stop or *Half-Slip™* Body Style



w/ Stops



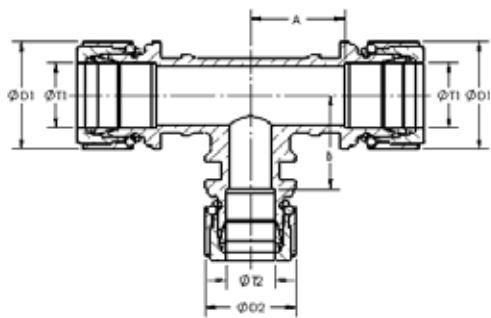
Slip (-BT)



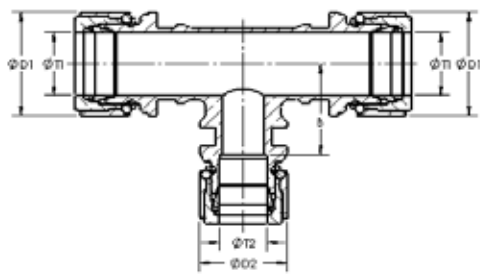
SIZE	PART NUMBER	FITTING LENGTH L1	CENTER LENGTH L2	TAKE OUT A	TAKE OUT B	TAKE OUT C
1/2" TO 3/8" TO 1/2"	B-T08-ASREDTEE-T06-T08	4-1/4"	2-1/8"	1-3/16"	1-1/8"	1-1/8"
3/4" TO 1/2" TO 3/4"	B-T12-ASREDTEE-T08-T12	4-1/2"	2-1/4"	1-1/4"	1-3/16"	1-3/16"
1" TO 3/4" TO 1"	B-T16-ASREDTEE-T12-T16	5-3/4"	2-15/16"	1-7/8"	1-11/16"	1-11/16"

<sup>1</sup> Slip Tee is on run only

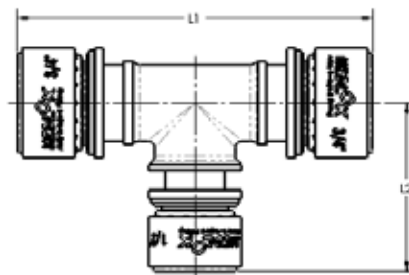
## Reducing Branch Tees with Stop or *Half-Slip™* Body Style



w/ Stops



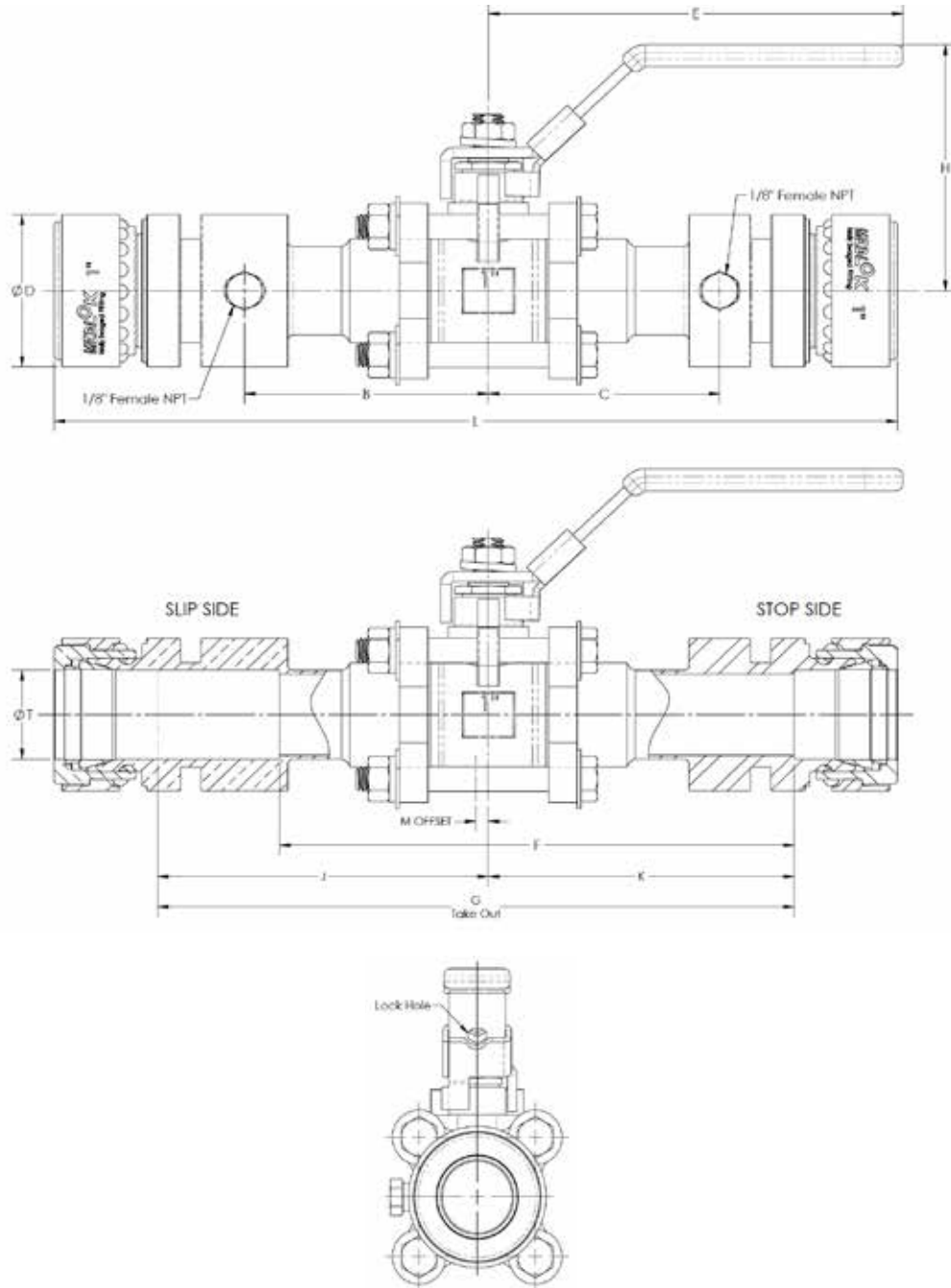
Slip (-BT)



SIZE	PART NUMBER	FITTING LENGTH L1	CENTER LENGTH L2	TAKE OUT A	TAKE OUT B
1/2" TO 1/2" TO 3/8"	B-T08-ASREDTEE-T08-T06	4-3/16"	2-1/3"	1-1/8"	1-3/16"
3/4" TO 3/4" TO 1/2"	B-T12-ASREDTEE-T12-T08	4-1/2"	2-1/4"	1-3/16"	1-1/4"
1" TO 1" 3/4"	B-T16-ASREDTEE-T16-T12	5-7/8"	2-13/16"	1-11/16"	1-3/4"
1" TO 1" TO 1/2"	B-T16-ASREDTEE-T16-T08	5-7/8"	2-13/16"	1-11/16"	1-3/4"

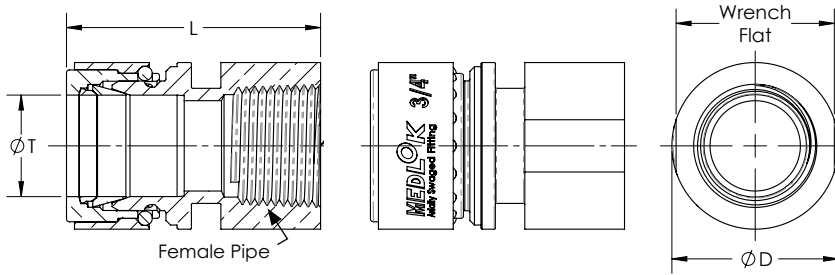


## Valves with *Half-Slip™* Body Style



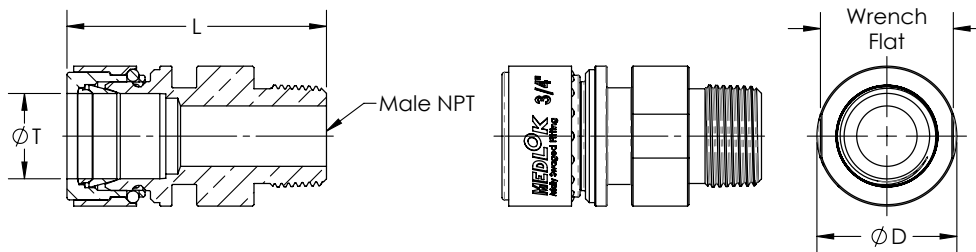
SIZE	PART NUMBER	B	C	E	F	TAKE OUT G	H	J	K	OVERALL LENGTH L	OFFSET M
1/2"	B-T08-ASBV-T08	2-1/4"	2-3/16"	4-1/8"	4-7/8"	5-7/8"	2-3/8"	1-7/8"	2-15/16"	7-13/16"	1/16"
3/4"	B-T12-ASBV-T12	2-7/16"	2-3/8"	4-3/8"	5-1/8"	6-1/4"	2-5/8"	2-1/16"	3-1/16"	8-5/16"	1/8"
1"	B-T16-ASBV-T16	3"	2-7/8"	4-3/8"	6-5/16"	7-7/8"	3-1/8"	4-1/16"	3-3/4"	10-5/16"	3/16"
1-1/4"	B-T20-ASBV-T20	3-1/2"	3-1/8"	5-1/8"	6-15/16"	8-7/8"	3-3/8"	4-7/8"	4-1/4"	12-5/8"	3/8"
1-1/2"	B-T24-ASBV-T24	3-7/8"	3-3/8"	6-5/16"	7-5/16"	9-1/2"	3-11/16"	5-1/4"	4-1/8"	13-1/2"	1/2"
2"	B-T32-ASBV-T32	4-15/16"	3-15/16"	6-5/16"	8-1/4"	11"	4"	6-1/2"	4-9/16"	16-3/8"	1"

## Female NPT Connector with Stop Body Style



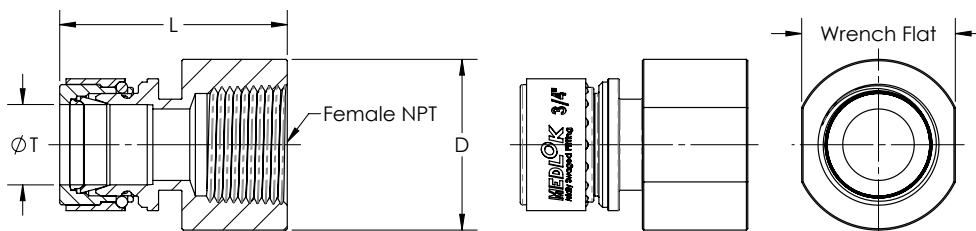
SIZE	FEMALE PIPE SIZE	FITTING LENGTH L1	PART NUMBER	WRENCH FLAT
1/2"	1/2"	2-1/4"	B-T08-ASFC-8FPT	1-1/16"
3/4"	3/4"	2-1/4"	B-T12-ASFC-12FPT	1-3/8"
1"	1"	2-15/16"	B-T16-ASFC-16FPT	1-3/4"
1-1/4"	1-1/4"	3-11/16"	B-T20-ASFC-20FPT	2"
1-1/2"	1-1/2"	3-7/8"	B-T24-ASFC-24FPT	2-1/4"
2"	2"	4-1/4"	B-T32-ASFC-32FPT	2-3/4"

## Male NPT Connector with Stop Body Style



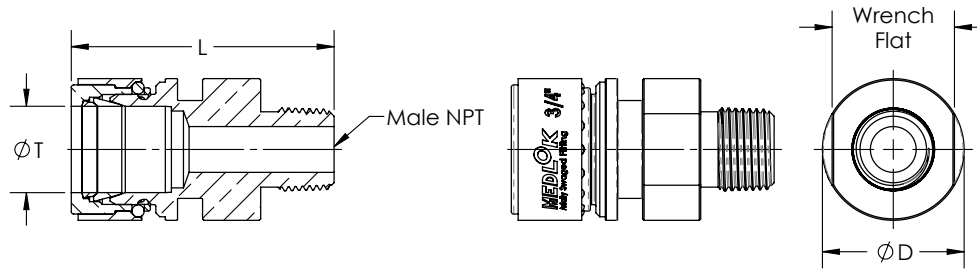
SIZE	MALE PIPE SIZE	PART NUMBER	FITTING LENGTH L1	WRENCH FLAT
1/2"	1/2"	B-T08-ASMC-8MPT	2-5/8"	1-1/16"
3/4"	3/4"	B-T12-ASMC-12MPT	2-11/16"	1-3/8"
1"	1"	B-T16-ASMC-16MPT	3-1/2"	1-3/4"
1-1/4"	1-1/4"	B-T20-ASMC-20MPT	3-7/8"	2"
1-1/2"	1-1/2"	B-T24-ASMC-24MPT	4"	2-1/4"
2"	2"	B-T32-ASMC-32MPT	4-7/16"	2-3/4"

## Reducing Female NPT Connector with Stop Body Style



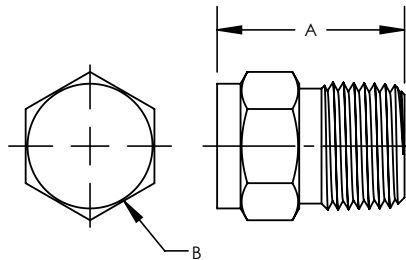
SIZE	PART NUMBER	FEMALE PIPE SIZE	FITTING LENGTH L	WRENCH FLAT
1/2" TO 3/4"	B-T08-ASFC-12FPT	3/4"	2-5/16"	1-5/16"
3/4" TO 1/2"	B-T12-ASFC-8FPT	1/2"	2-3/16"	1-1/4"
3/4" TO 1"	B-T12-ASFC-16FPT	1"	2-1/2"	1-11/16"
1" TO 3/4"	B-T16-ASFC-12FPT	3/4"	2-15/16"	1-3/4"

## Reducing Male NPT Connector with Stop Body Style



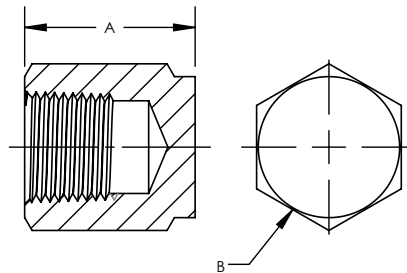
SIZE	MALE PIPE SIZE	PART NUMBER	FITTING LENGTH L	WRENCH FLAT
1/2" TO 1/4"	1/4"	B-T08-ASMC-4MPT	2-7/16"	1-1/16"
1/2" TO 3/4"	3/4"	B-T08-ASMC-12MPT	2-5/8"	1-1/16"
3/4" TO 1/2"	1/2"	B-T12-ASMC-8MPT	2-11/16"	1-1/4"
3/4" TO 1"	1"	B-T12-ASMC-16MPT	2-7/8"	1-3/8"
1" TO 3/4"	3/4"	B-T16-ASMC-12MPT	3-5/16"	1-3/4"

## Male NPT Plugs



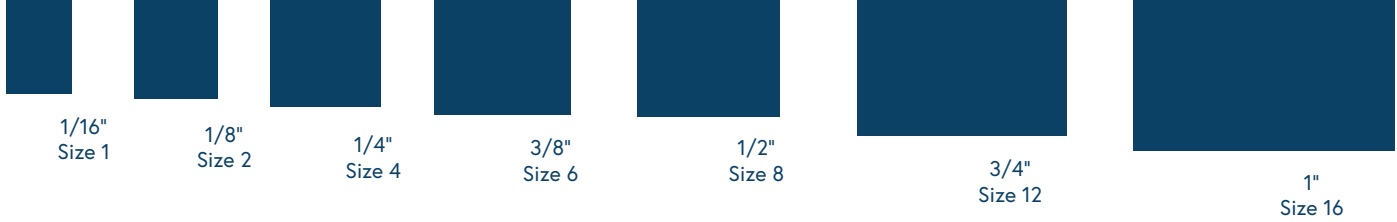
SIZE	PART NUMBER	A	B HEX
1/2"	B-8-1MPP-SPCL	1-5/16"	7/8"
3/4"	B-12-1MPP-SPCL	1-3/8"	1-1/16"
1"	B-16-1MPP-SPCL	1-1/2"	1-3/8"
1-1/4"	B-20-1MPP-SPCL	1-5/8"	1-3/4"
1-1/2"	B-24-1MPP-SPCL	1-13/16"	2"
2"	B-32-1MPP-SPCL	1-7/8"	2-1/2"

## Female NPT Cap

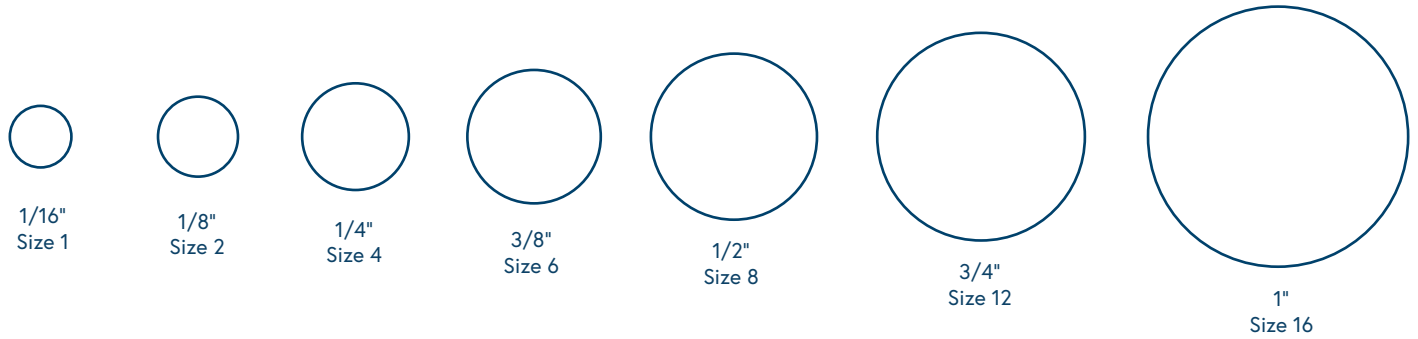


SIZE	PART NUMBER	A	B HEX
1/2"	B-8-1FPC-SPCL	1-3/8"	1-1/16"
3/4"	B-12-1FPC-SPCL	1-7/16"	1-5/16"
1"	B-16-1FPC-SPCL	1-5/8"	1-5/8"
1-1/4"	B-20-1FPC-SPCL	1-13/16"	2-1/2"
1-1/2"	B-24-1FPC-SPCL	1-7/8"	3"
2"	B-32-1FPC-SPCL	2"	3-5/8"

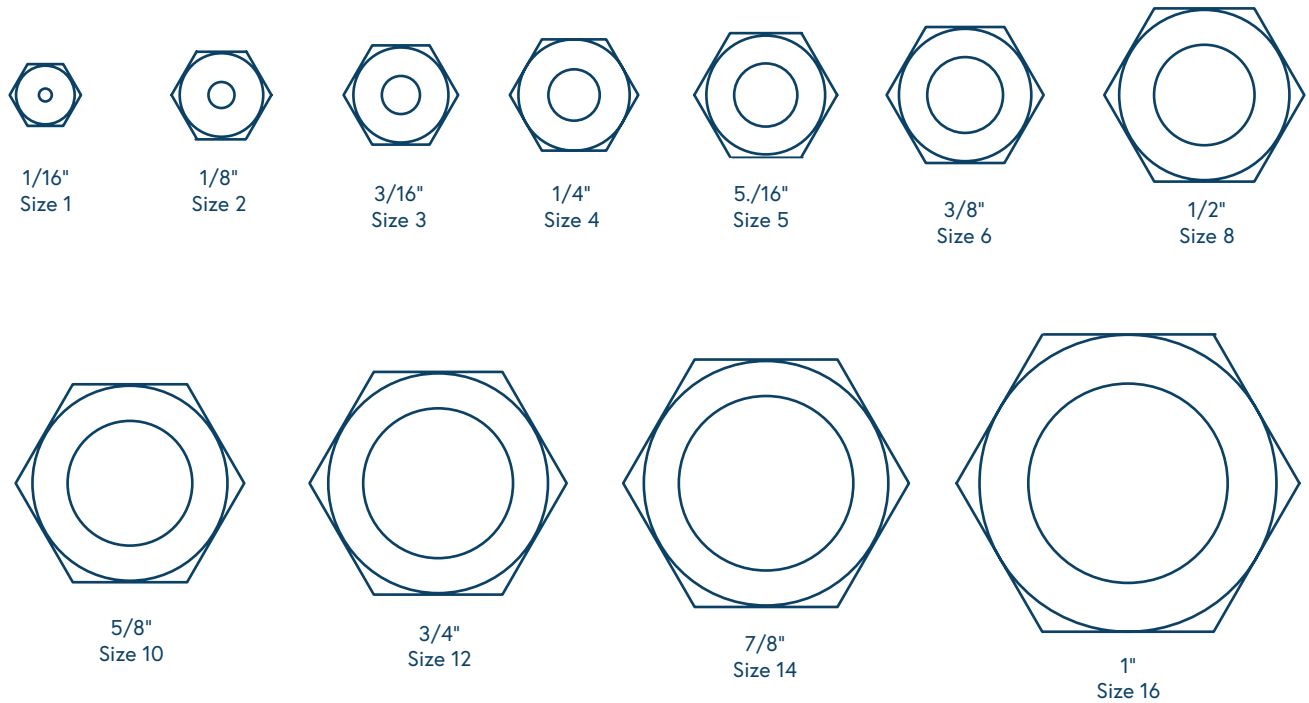




### Female Pipe Threads - Major Diameters



### Male Pipe Threads - Major Diameters



### Nut Sizes



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