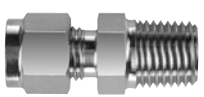


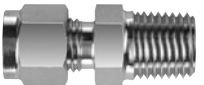
BI-Lok[®]
**Series D Dual Ferrule
Instrument Tube Fittings**

GENERANT Fluid Connectors

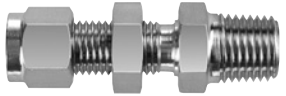
BI-LOK to MALE NPT



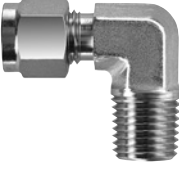
DCT
Male NPT Connector Page 8



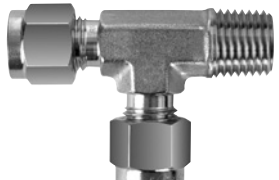
DCTZ
Thermocouple Connector Page 10



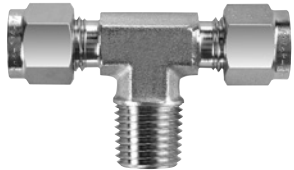
DSC
Bulkhead Male NPT Connector Page 19




DLN
Male NPT Elbow Page 14



DTK
Male NPT Run Tee Page 24

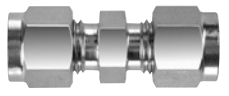


DTN
Male NPT Branch Tee Page 24




DHA
Tube Stub to Male NPT Adapter Page 11


BI-LOK UNION




DUA
Union Page 26



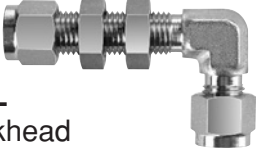
DUR
Reducing Union Page 27



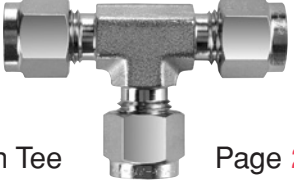
DSU
Bulkhead Union Page 21



DLA
Union Elbow Page 12



DSL
Bulkhead Union Elbow Page 20



DTA
Union Tee Page 22

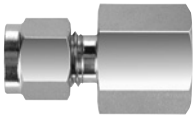


DTR
Reducing Union Tee Page 25

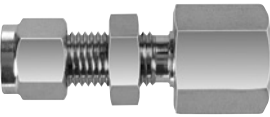


DXA
Union Cross Page 28

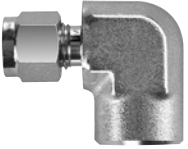
BI-LOK to FEMALE NPT



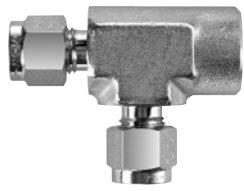
DSA
Female NPT Connector Page 18-19



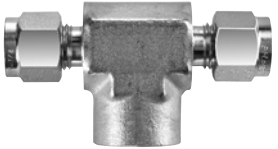
DSS
Bulkhead Female NPT Connector Page 21



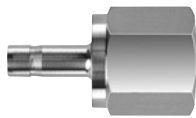
DLF
Female NPT Elbow Page 13



DTF
Female NPT Run Tee Page 22



DTH
Female NPT Branch Tee Page 23

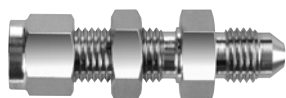


DHC
Tube Stub to Female NPT Adapter Page 12

BI-LOK to AN 37° FLARE



DUC
AN 37° Flare Union Page 26



DUE
Bulkhead AN 37° Flare Union Page 27

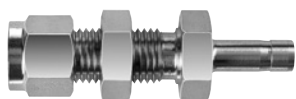


DAN
AN 37° Flare Adapter Page 5

TUBE STUB



DRE
Reducer Page 17-18

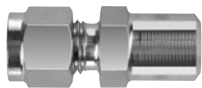


DSE
Bulkhead Adapter Page 20



DPC
Port Connector Page 17

BI-LOK to WELD



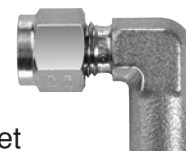
DCB
Male Pipe Weld Connector Page 6



DLB
Male Pipe Weld Elbow Page 13



DCW
Tube Socket Weld Union Page 9



DLW
Tube Socket Weld Elbow Page 15

PLUG AND CAP



DBA
Plug Page 5

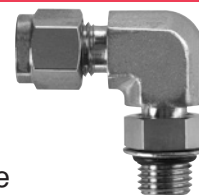


DCA
Cap Page 6

BI-LOK to SAE/MS STRAIGHT THREAD

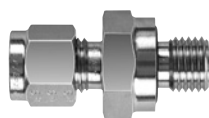


DCU
SAE/MS Male Straight Thread Connector Page 9

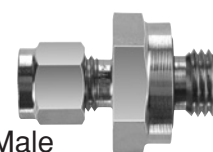


DLO
Positionable SAE/MS Male Straight Thread Elbow Page 15

BI-LOK to O-SEAL



DCO
O-Seal Male Straight Thread Connector Page 7



DCM
O-Seal Male NPT Connector Page 7

COMPONENTS



DOF
Front Ferrule Page 16



DOB
Back Ferrule Page 16



DNA
Nut Page 15



DOS
Ferrule Set Page 16



DTI
Tube Insert Page 23

CONSTRUCTION AND OPERATION

BI-Lok Series D Dual Ferrule Tube Fittings are composed of four precision machined component parts: 1) fitting body, 2) front ferrule, 3) back ferrule, 4) nut. BI-Lok Tube Fittings are shipped fully assembled and individually bagged. Once the tubing has been fully inserted into the fitting, a leak tight seal is achieved through the simple action of tightening the nut against the fitting body. The tightening of the nut provides the axial thrust required to engage the captively held ferrules against the outside diameter of the tubing. The staged swaging action of the ferrules, with minimal torque transfer to the tubing during make-up, provides the key to BI-Lok's high integrity sealing capability and exceptional service life.

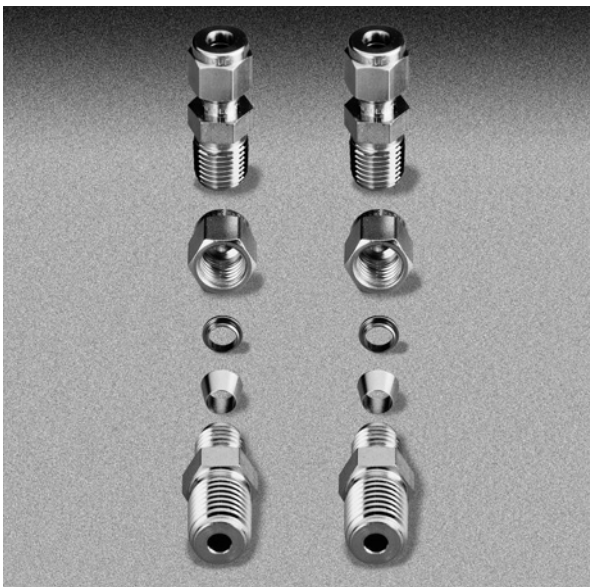
MATERIALS OF CONSTRUCTION

| Component | | Fitting Material | |
|--------------------------------------|-----------|--------------------|---------------------|
| | | Brass | 316 Stainless Steel |
| Fitting Body | Forged | ASTM B124, CDA 377 | ASTM A182 |
| | Bar Stock | ASTM B16, CDA 360 | ASTM A479 |
| Front Ferrule Back Ferrule Nut | | | |

Stainless Steel Fitting Bodies and Nuts are Heat /Lot code traceable. Stainless steel nuts are silver plated to prevent gauling and reduce make-up torque.

QUALITY CONTROL

BI-Lok Tube Fittings are designed, manufactured and inspected to the rigid quality requirements of our ISO certified production facility. All Stainless Steel Fittings are Heat/Lot code traceable. BI-Lok Tube Fittings have been tested and certified to a variety of Global International Industry standards and regulatory agencies.



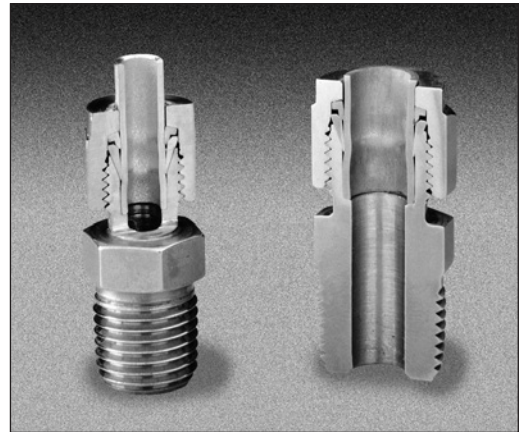
*Swagelok® is a registered trade mark of the Swagelok Company

INTERCHANGEABILITY AND GAGEABILITY

BI-Lok Series D Dual Ferrule Tube Fittings are manufactured to be completely component intermixable with the Swagelok® brand of tube fittings. Independent third party testing concluded that piece by piece intermixing of each manufacturer's component parts, in various combinations, yielded no performance degradation of the fitting connection. BI-Lok Dual Ferrule Tube Fittings are fully compatible for use with the Swagelok® brand Gap Inspection Gauges.

TUBING SELECTION AND PREPARATION

The selection of the proper tubing is essential to both the performance and safety of a tubing system. Careful consideration should be applied to the following variables; system pressure, media, flow, operating temperature and environmental conditions. Tube fittings should always be used with similar tube materials. i.e.; Stainless Steel fittings with Stainless Steel tubing and Brass fittings with copper tubing. In order to achieve proper fitting make-up, the tubing must be softer than the fitting material. For stainless steel tubing, we recommend fully annealed seamless or welded and drawn tubing of ASTM A269, A213 and A249. Tubing hardness should not exceed Rockwell B-90. For copper tubing, seamless or soft annealed ASTM B-75, or seamless soft annealed Type K or Type L water tubing ASTM B-88 is recommended. Care should be taken in tube handling to ensure that tubing is reasonably straight and is cut in a manner to create smooth square ends, free of burrs. Handling practices should consider that surface scratches on the tube OD may be a potential source of leaks.



PRESSURE RATINGS

The BI-Lok Dual Series D Ferrule Tube Fitting consists of four elements – nut, front ferrule, back ferrule and fitting body. However, the actual sealing function is accomplished with the addition of a fifth element, the tubing itself. Therefore, the pressure rating of the fitting assembly is a direct function of the tubing selected. Proper tube selection is critical and the ultimate responsibility of the system designer/user. The tables listed on page 2 provide the allowable pressure ratings of a variety of commonly used tube sizes and materials.

| STAINLESS STEEL TUBING | | | | | | | | | | | | |
|------------------------|------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Tube OD | Tube Wall Thickness (Inches) | | | | | | | | | | | |
| | 0.010 | 0.012 | 0.014 | 0.016 | 0.020 | 0.028 | 0.035 | 0.049 | 0.065 | 0.083 | 0.095 | 0.109 |
| 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 | | |
| 3/4" | | | | | | | | 2400 | 3300 | 4200 | 4900 | 5800 |
| 7/8" | | | | | | | | 2000 | 2800 | 3600 | 4200 | 4800 |
| 1" | | | | | | | | | 2400 | 3100 | 3600 | 4200 |

304 and 316 annealed seamless tubing per ASTM A-269 or equivalent working pressure are based on allowable stress of 20,000 psi between -20° F and 100° F (Reference: ANSI B31.3)

| COPPER TUBING | | | | | | | | |
|---------------|------------------------------|-------|-------|-------|-------|-------|-------|-------|
| Tube OD | Tube Wall Thickness (Inches) | | | | | | | |
| | 0.028 | 0.035 | 0.049 | 0.065 | 0.083 | 0.095 | 0.109 | 0.120 |
| 1/8" | 2700 | 3600 | 5100 | | | | | |
| 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 |

Copper tubing per ASTM B-75 or equivalent. Working pressures are based on allowable stress of 6,000 psi between -70°F and 100° F (Reference: ANSI B31.3)

| STRESS FACTORS | | | | |
|---|---------------------|---------------------|--------------|--------|
| Stress Factor used to calculate maximum allowable working pressures at elevated temperatures. | | | | |
| NOTE: To find the maximum allowable working pressures for various tube materials at elevated temperatures, simply multiply the maximum allowable working pressure for the tube size and wall thickness found in these charts by the correct Stress Factor found in the table below: | | | | |
| Temperature Stress Factor | | | | |
| TEMP (°F) | 304 Stainless Steel | 316 Stainless Steel | Carbon Steel | Copper |
| 200 | 1.00 | 1.00 | .95 | .80 |
| 400 | .93 | .96 | .87 | .50 |
| 600 | .82 | .85 | | |
| 800 | .76 | .79 | | |
| 1000 | .69 | .76 | | |

| CARBON STEEL TUBING | | | | | | | | |
|---------------------|-------------------------------|-------|-------|-------|-------|-------|-------|-------|
| Tube OD | Tube Wall Thickness, (Inches) | | | | | | | |
| | 0.028 | 0.035 | 0.049 | 0.065 | 0.083 | 0.095 | 0.109 | 0.120 |
| 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" | | 1800 | 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 |

Carbon steel hydraulic tubing per ASTM A-179 or equivalent. Working pressures are based on allowable stress of 15,700 psi between -70°F and 100° F (Reference: ANSI B31.3)

| PIPE END PRESSURE RATINGS | | | | |
|---------------------------|--------------------------------|--------|-------|--------|
| NPT Pipe Size | 316 Stainless and Carbon Steel | | Brass | |
| | Male | Female | Male | Female |
| 1/8" | 10000 | 6500 | 5000 | 3200 |
| 1/4" | 8000 | 6600 | 4000 | 3300 |
| 3/8" | 7800 | 5300 | 3900 | 2600 |
| 1/2" | 7700 | 4900 | 3800 | 2400 |
| 3/4" | 7300 | 4600 | 3600 | 2300 |
| 1" | 5300 | 4400 | 2600 | 2200 |

Fittings with both Tube and NPT threaded pipe end connections have different pressure ratings. When specifying these type fittings, please refer to this chart for maximum allowable pressure ratings. A thread sealant is recommended when using NPT connections.

ASSEMBLY INSTRUCTIONS

Assembly Instructions

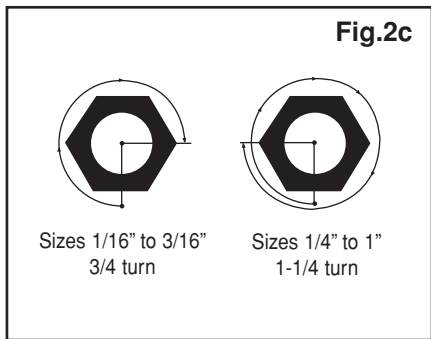
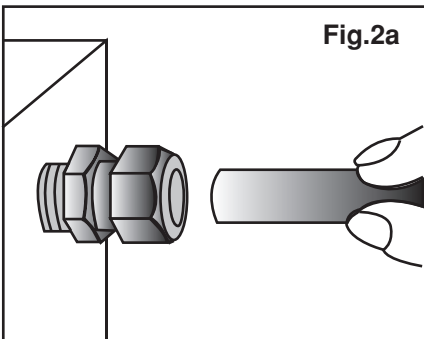
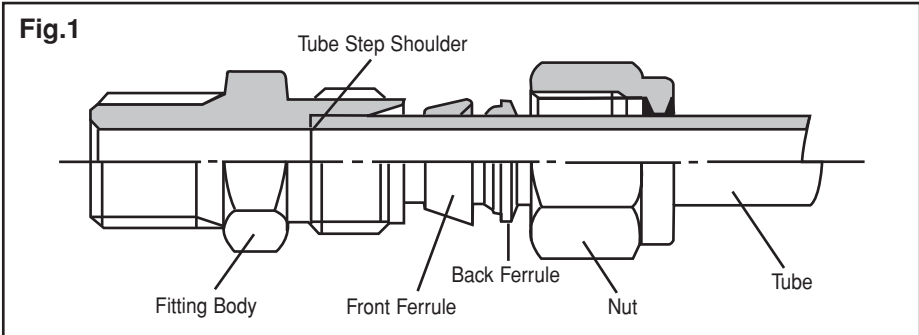
The following procedures refer to the proper assembly of the BI-Lok Series D Dual Ferrule Tube Fittings.

1. BI-Lok Tube Fittings are supplied fully assembled and individually bagged, allowing for clean efficient make-up. Should component assembly be required, please note that the order of assembly is the front ferrule into the cone of fitting body, back ferrule and fitting nut as noted in Fig. 1.

2. Insert the tubing into the fitting body until it bottoms out against the tube stop shoulder of the fitting. Please note that tubing should be cut squarely and free of burrs.

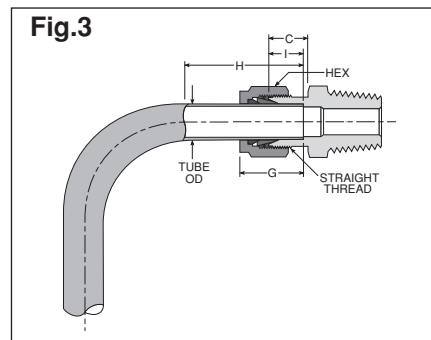
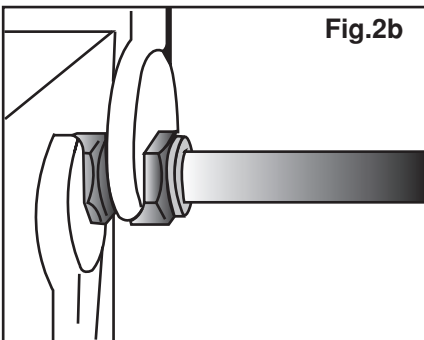
3. Hand tighten the nut as much as possible, bringing the fitting to what is called the "finger tight" position.

4. Secure the fitting body with a wrench and tighten the nut with another wrench an additional 3/4 of a turn for tube sizes 1/16" thru 3/16" or for sizes 1/4" and above 1-1/4 turns. (refer to Fig. 2a, 2b, and 2c).



Reassembly Instructions

To reassemble a BI-Lok Series D Dual Ferrule Tube Fitting, simply insert the tube assembly (nut, front and back ferrule pre-swaged on the tube) into the fitting body and hand tighten the nut. Next, using a wrench, rotate the nut approximately 1/4 of a turn (back to the original make-up position) and then tighten the nut slightly.



Tube Measuring and Fitting

When measuring and bending tubing it is important to be aware of two critical measurements. The first being the tube insertion depth (reference dimension G) into the fitting assembly which must be considered in the determining the over all length of tube required. The other being the minimum length of straight tubing required for a proper tube bend (reference dimension H). Both measurements are dependant on tube OD; please use Fig. 3 for reference purposes.

| Tube Size | A Tube OD | Straight Thread | Hex Tube Nut | C | G | H | I |
|-----------|--------------|--------------------|-----------------|------|------|---------|------|
| 1 | 1/16" | 10-32 | 5/16" | 0.27 | 0.34 | 1/2" | 0.19 |
| 2 | 1/8" | 5/16"-20 | 7/16" | 0.34 | 0.50 | 23/32" | 0.25 |
| 3 | 3/16" | 3/8"-20 | 1/2" | 0.37 | 0.54 | 3/4" | 0.28 |
| 4 | 1/4" | 7/16"-20 | 9/16" | 0.40 | 0.60 | 13/16" | 0.31 |
| 5 | 5/16" | 1/2"-20 | 5/8" | 0.44 | 0.64 | 7/8" | 0.34 |
| 6 | 3/8" | 9/16"-20 | 11/16" | 0.47 | 0.66 | 15/16" | 0.37 |
| 8 | 1/2" | 3/4"-20 | 7/8" | 0.47 | 0.90 | 13/16" | 0.50 |
| 10 | 5/8" | 7/8"-20 | 1" | 0.47 | 0.96 | 1 1/4" | 0.56 |
| 12 | 3/4" | 1"-20 | 1 1/8" | 0.47 | 0.96 | 1 1/4" | 0.56 |
| 14 | 7/8" | 1 1/8"-20 | 1 1/4" | 0.47 | 1.02 | 1 5/16" | 0.63 |
| 16 | 1" | 1 5/16"-20 | 1 1/2" | 0.56 | 1.23 | 1 1/2" | 0.75 |

ORDERING INFORMATION

How To Order

BI-Lok tube fittings are ordered by part number as listed in this catalog. The part numbering system is designed so that you can easily identify the type, configuration, size and material of the fitting. Using the example below, specify the Fitting Type, Size Designator, Material and any additional Options desired.

DCT

Fitting Type

-

4-4

Size Designator

-

SS

Material

-

*

Option

N - Nylon Ferrules
 T - Teflon Ferrules
 X - Cleaned and packaged for oxygen service

SS - 316 stainless steel, ASTM A479
 B - Brass, ASTM B16

| Size Indicator | Tube OD or Threaded Connection |
|----------------|--------------------------------|
| 1 | 1/16" |
| 2 | 1/8" |
| 3 | 3/16" |
| 4 | 1/4" |
| 5 | 5/16" |
| 6 | 3/8" |
| 8 | 1/2" |
| 10 | 5/8" |
| 12 | 3/4" |
| 14 | 7/8" |
| 16 | 1" |

| Type | Description | Page | End Connection 1 | End Connection 2 |
|------|--|-------|------------------|------------------|
| DAN | AN 37° Flare Union | 5 | Tube OD | AN Flare |
| DBA | Plug | 5 | | Tube OD |
| DCA | Cap | 6 | | Tube OD |
| DCB | Male Pipe Weld Connector | 6 | Tube OD | Male Weld Pipe |
| DCM | O-Seal Male NPT Connector | 7 | Tube OD | Male NPT |
| DCO | O-Seal Male Straight Thread Connector | 7 | Tube OD | Straight Thread |
| DCT | Male NPT Connector | 8 | Tube OD | Male NPT |
| DCU | SAE/MS Male Straight Thread Connector | 9 | Tube OD | Straight Thread |
| DCW | Tube Socket Weld Union | 9 | | Tube OD |
| DCTZ | Male NPT Connector | 10 | Tube OD | Male NPT |
| DHA | Tube Stub to Male NPT Adapter | 11 | Tube Stub | Male NPT |
| DHC | Tube Stub to Female NPT Adapter | 12 | Tube Stub | Female NPT |
| DLA | Union Elbow | 12 | | Tube OD |
| DLB | Male Pipe Weld Elbow | 13 | Tube OD | Male Weld Pipe |
| DLF | Female NPT Elbow | 13 | Tube OD | Female NPT |
| DLN | Male NPT Elbow | 14 | Tube OD | Male NPT |
| DLO | Positionalbe SAE/MS Male Straight Thread Elbow | 15 | Tube OD | Straight Thread |
| DLW | Tube Socket Weld Elbow | 15 | | Tube OD |
| DNA | Nut | 15 | | Tube OD |
| DOB | Back Ferrule | 16 | | Tube OD |
| DOF | Front Ferrule | 16 | | Tube OD |
| DOS | Ferrule Set | 16 | | Tube OD |
| DPC | Port Connector | 17 | Tube OD | Tube Stub |
| DRE | Reducer | 17-18 | Tube OD | Tube Stub |
| DSA | Female NPT Connector | 18-19 | Tube OD | Female NPT |
| DSC | Bulkhead Male NPT Connector | 19 | Tube OD | Male NPT |
| DSE | Bulkhead Reducer | 20 | Tube OD | Tube Stub |
| DSL | Bulkhead Union Elbow | 20 | | Tube OD |
| DSS | Bulkhead Female NPT Connector | 21 | Tube OD | Female NPT |
| DSU | Bulkhead Union | 21 | | Tube OD |
| DTA | Union Tee | 22 | | Tube OD |
| DTF | Female NPT Run Tee | 22 | Tube OD | Female NPT |
| DTH | Female NPT Branch Tee | 23 | Tube OD | Female NPT |
| DTI | Tube Insert | 23 | Tube OD | Tube ID |
| DTK | Male NPT Run Tee | 24 | Tube OD | Male NPT |
| DTN | Male NPT Branch Tee | 24 | Tube OD | Male NPT |
| DTR | Reducing Union Tee | 25 | Tube OD | Tube OD* |
| DUA | Union | 26 | | Tube OD |
| DUC | AN 37° Flare Union | 26 | Tube OD | AN Flare |
| DUE | Bulkhead AN 37° Flare Union | 27 | Tube OD | AN Flare |
| DUR | Reducing Union | 27 | Tube OD | Tube OD |
| DXA | Union Cross | 28 | | Tube OD |

*For DTR specify end connection, 1, 2 and 3, see page 25.

AN 37° FLARE ADAPTER



| PART No. | A Tube OD | Hex Tube Nut | AN Tube Size | L | J | Hex Body |
|-------------|--------------|-----------------|-----------------|------|------|-------------|
| DAN-2-2-* | 1/8" | 7/16" | 1/8" | 0.77 | 0.54 | 3/8" |
| DAN-2-4-* | 1/8" | 7/16" | 1/4" | 0.80 | 0.62 | 9/16" |
| DAN-4-4-* | 1/4" | 9/16" | 1/4" | 0.88 | 0.62 | 9/16" |
| DAN-6-6* | 3/8" | 11/16" | 3/8" | 0.98 | 0.72 | 11/16" |
| DAN-8-8-* | 1/2" | 7/8" | 1/2" | 1.25 | 0.85 | 7/8" |
| DAN-16-16-* | 1" | 1 1/2" | 1" | 1.71 | 1.12 | 1 1/2" |

* Add Suffix "SS" for 316 Stainless Steel or "B" for Brass.

PLUG

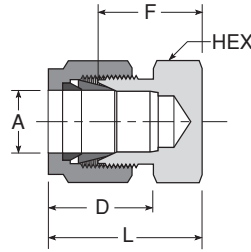
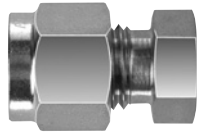


| PART No. | A Tube OD | Hex Tube Nut | L |
|----------|--------------|-----------------|------|
| DBA-1-* | 1/16" | 5/16" | 0.31 |
| DBA-2-* | 1/8" | 7/16" | 0.47 |
| DBA-3-* | 3/16" | 1/2" | 0.47 |
| DBA-4-* | 1/4" | 9/16" | 0.50 |
| DBA-5-* | 5/16" | 5/8" | 0.53 |
| DBA-6-* | 3/8" | 11/16" | 0.56 |
| DBA-8-* | 1/2" | 7/8" | 0.69 |
| DBA-10-* | 5/8" | 1" | 0.69 |
| DBA-12-* | 3/4" | 1 1/8" | 0.69 |
| DBA-14-* | 7/8" | 1 1/4" | 0.69 |
| DBA-16-* | 1" | 1 1/2" | 0.81 |

* Add Suffix "SS" for 316 Stainless Steel or "B" for Brass.

Dimensions are provided in inches and are for reference only, subject to change. Dimensions shown are with the nut in the finger-tight position.

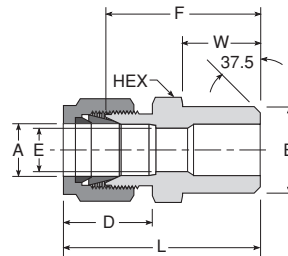
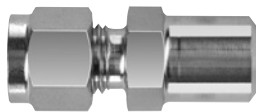
CAP



| PART No. | A Tube OD | Hex Tube Nut | D | F | L OAL | Hex Body |
|----------|--------------|-----------------|------|------|----------|-------------|
| DCA-1-* | 1/16" | 5/16" | 0.44 | 0.44 | 0.59 | 5/16" |
| DCA-2-* | 1/8" | 7/16" | 0.60 | 0.53 | 0.79 | 7/16" |
| DCA-3-* | 3/16" | 1/2" | 0.63 | 0.58 | 0.84 | 7/16" |
| DCA-4-* | 1/4" | 9/16" | 0.70 | 0.63 | 0.92 | 1/2" |
| DCA-5-* | 5/16" | 5/8" | 0.73 | 0.67 | 0.96 | 9/16" |
| DCA-6-* | 3/8" | 11/16" | 0.76 | 0.72 | 1.01 | 5/8" |
| DCA-8-* | 1/2" | 7/8" | 0.86 | 0.75 | 1.14 | 13/16" |
| DCA-10-* | 5/8" | 1" | 0.86 | 0.78 | 1.17 | 15/16" |
| DCA-12-* | 3/4" | 1 1/8" | 0.86 | 0.84 | 1.23 | 1 1/16" |
| DCA-14-* | 7/8" | 1 1/4" | 0.86 | 0.94 | 1.34 | 1 3/16" |
| DCA-16-* | 1" | 1 1/2" | 1.04 | 1.03 | 1.51 | 1 3/8" |

* Add Suffix "SS" for 316 Stainless Steel or "B" for Brass.

MALE PIPE WELD CONNECTOR

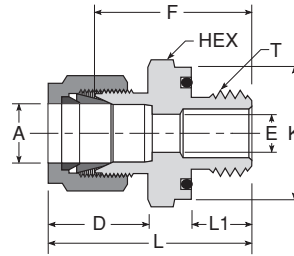
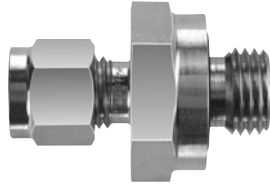


| PART No. | A Tube OD | Hex Tube Nut | D | Pipe Size | B | W | E Min Orifice | F | L OAL | Hex Body |
|-------------|--------------|-----------------|------|--------------|-------|------|------------------|------|----------|-------------|
| DCB-2-2-* | 1/8" | 7/16" | 0.44 | 1/8" | 0.405 | 0.38 | 0.09 | 0.92 | 1.18 | 7/16" |
| DCB-3-2-* | 3/16" | 1/2" | 0.63 | 1/8" | 0.405 | 0.38 | 0.12 | 0.97 | 1.23 | 7/16" |
| DCB-4-2-* | 1/4" | 9/16" | 0.70 | 1/8" | 0.405 | 0.38 | 0.19 | 1.00 | 1.30 | 1/2" |
| DCB-4-4-* | 1/4" | 9/16" | 0.70 | 1/4" | 0.540 | 0.56 | 0.19 | 1.20 | 1.49 | 9/16" |
| DCB-6-4-* | 3/8" | 11/16" | 0.76 | 1/4" | 0.540 | 0.56 | 0.28 | 1.28 | 1.57 | 5/8" |
| DCB-6-6-* | 3/8" | 11/16" | 0.76 | 3/8" | 0.675 | 0.56 | 0.28 | 1.28 | 1.57 | 11/16" |
| DCB-6-8-* | 3/8" | 11/16" | 0.76 | 1/2" | 0.840 | 0.75 | 0.28 | 1.51 | 1.81 | 7/8" |
| DCB-8-4-* | 1/2" | 7/8" | 0.86 | 1/4" | 0.540 | 0.56 | 0.41 | 1.31 | 1.72 | 13/16" |
| DCB-8-6-* | 1/2" | 7/8" | 0.86 | 3/8" | 0.675 | 0.56 | 0.41 | 1.31 | 1.71 | 13/16" |
| DCB-8-8-* | 1/2" | 7/8" | 0.86 | 1/2" | 0.840 | 0.75 | 0.41 | 1.51 | 1.92 | 7/8" |
| DCB-8-12-* | 1/2" | 7/8" | 0.86 | 3/4" | 1.050 | 0.75 | 0.41 | 1.59 | 2.00 | 1 1/16" |
| DCB-10-8-* | 5/8" | 1" | 0.86 | 1/2" | 0.840 | 0.75 | 0.50 | 1.53 | 1.93 | 15/16" |
| DCB-12-12-* | 3/4" | 1 1/8" | 0.86 | 3/4" | 1.050 | 0.75 | 0.62 | 1.59 | 1.99 | 1 1/16" |
| DCB-12-16-* | 3/4" | 1 1/8" | 0.86 | 1" | 1.315 | 0.94 | 0.62 | 1.87 | 2.28 | 1 3/8" |
| DCB-16-8-* | 1" | 1 1/2" | 1.04 | 1/2" | 0.840 | 0.75 | 0.88 | 1.77 | 2.27 | 1 3/8" |
| DCB-16-16-* | 1" | 1 1/2" | 1.04 | 1" | 1.315 | 0.94 | 0.88 | 1.97 | 2.45 | 1 3/8" |

* Add Suffix "SS" for 316 Stainless Steel or "B" for Brass.

Dimensions are provided in inches and are for reference only, subject to change. Dimensions shown are with the nut in the finger-tight position.

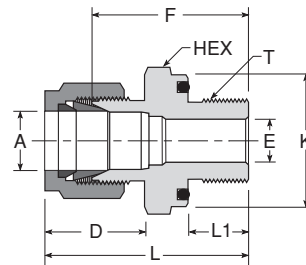
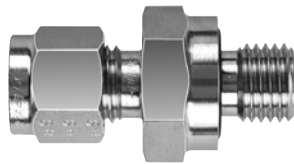
O-SEAL MALE NPT CONNECTOR



| PART No. | A Tube OD | Hex Tube Nut | D | T NPT | L1 | K | E Min Orifice | F | L OAL | Hex Body | O-Ring Size |
|-----------|--------------|-----------------|------|----------|------|------|------------------|------|----------|-------------|----------------|
| DCM-2-2-* | 1/8" | 7/16" | 0.60 | 1/8" | 0.28 | 0.74 | 0.09 | 1.03 | 1.29 | 3/4" | - 111 |
| DCM-4-2-* | 1/4" | 9/16" | 0.70 | 1/8" | 0.28 | 0.74 | 0.19 | 1.09 | 1.38 | 3/4" | - 111 |
| DCM-4-4-* | 1/4" | 9/16" | 0.70 | 1/4" | 0.38 | 0.93 | 0.19 | 1.22 | 1.51 | 15/16" | - 113 |
| DCM-6-2-* | 3/8" | 11/16" | 0.76 | 1/8" | 0.28 | 0.74 | 0.28 | 1.18 | 1.47 | 3/4" | - 111 |
| DCM-6-4-* | 3/8" | 11/16" | 0.76 | 1/4" | 0.38 | 0.93 | 0.28 | 1.28 | 1.58 | 15/16" | - 113 |
| DCM-8-8-* | 1/2" | 7/8" | 0.86 | 1/2" | 0.53 | 1.30 | 0.41 | 1.56 | 1.95 | 15/16" | - 212 |

* Add Suffix "SS" for 316 Stainless Steel or "B" for Brass.

O-SEAL MALE STRAIGHT THREAD CONNECTOR



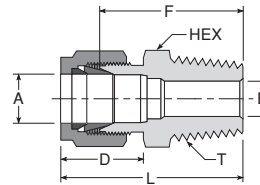
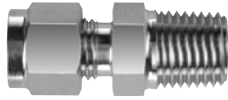
| PART No. | A Tube OD | Hex Tube Nut | D | T Straight Thread | L1 | K | E Min Orifice | F | L OAL | Hex Body | O-Ring Size |
|-------------|--------------|-----------------|------|----------------------|------|------|------------------|------|----------|-------------|----------------|
| DCO-1-2-* | 1/16" | 5/16" | 0.44 | 5/16"-24 | 0.34 | 0.55 | 0.05 | 0.90 | 1.05 | 9/16" | - 011 |
| DCO-2-2-* | 1/8" | 7/16" | 0.60 | 5/16"-24 | 0.34 | 0.55 | 0.09 | 1.02 | 1.29 | 9/16" | - 011 |
| DCO-3-3-* | 3/16" | 1/2" | 0.63 | 3/8"-24 | 0.38 | 0.62 | 0.12 | 1.10 | 1.36 | 5/8" | - 012 |
| DCO-4-4-* | 1/4" | 9/16" | 0.70 | 7/16"-20 | 0.41 | 0.74 | 0.19 | 1.23 | 1.51 | 3/4" | - 111 |
| DCO-5-5-* | 5/16" | 5/8" | 0.73 | 1/2"-20 | 0.44 | 0.86 | 0.25 | 1.32 | 1.60 | 7/8" | - 112 |
| DCO-6-6-* | 3/8" | 11/16" | 0.76 | 9/16"-18 | 0.47 | 0.93 | 0.28 | 1.38 | 1.67 | 15/16" | - 113 |
| DCO-8-8-* | 1/2" | 7/8" | 0.86 | 3/4"-16 | 0.47 | 1.11 | 0.41 | 1.41 | 1.81 | 1 1/8" | - 116 |
| DCO-12-12-* | 3/4" | 1 1/8" | 0.86 | 1 1/16"-12 | 0.56 | 1.49 | 0.62 | 1.65 | 2.06 | 1 1/2" | - 215 |

* Add Suffix "SS" for 316 Stainless Steel or "B" for Brass.

Note: To achieve proper leak-tight seal, a smooth flat surface perpendicular to the threads is necessary.

Dimensions are provided in inches and are for reference only, subject to change. Dimensions shown are with the nut in the finger-tight position.

MALE NPT CONNECTOR

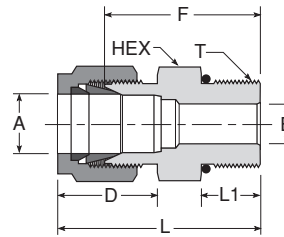
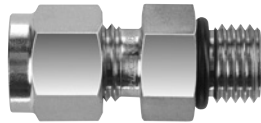


| PART No. | A Tube OD | Hex Tube Nut | D | T NPT | E Min Orifice | F | L OAL | Hex Body |
|-------------|--------------|-----------------|------|----------|------------------|------|----------|-------------|
| DCT-1-1-* | 1/16" | 5/16" | 0.44 | 1/16" | 0.05 | 0.79 | 0.94 | 5/16" |
| DCT-1-2-* | 1/16" | 5/16" | 0.44 | 1/8" | 0.05 | 0.85 | 1.00 | 7/16" |
| DCT-2-1-* | 1/8" | 7/16" | 0.60 | 1/16" | 0.09 | 0.91 | 1.17 | 7/16" |
| DCT-2-2-* | 1/8" | 7/16" | 0.60 | 1/8" | 0.09 | 0.91 | 1.17 | 7/16" |
| DCT-2-4-* | 1/8" | 7/16" | 0.60 | 1/4" | 0.09 | 1.12 | 1.39 | 9/16" |
| DCT-3-2-* | 3/16" | 1/2" | 0.63 | 1/8" | 0.12 | 0.94 | 1.21 | 7/16" |
| DCT-3-4-* | 3/16" | 1/2" | 0.63 | 1/4" | 0.12 | 1.16 | 1.43 | 9/16" |
| DCT-4-1-* | 1/4" | 9/16" | 0.70 | 1/16" | 0.19 | 1.00 | 1.30 | 1/2" |
| DCT-4-2-* | 1/4" | 9/16" | 0.70 | 1/8" | 0.19 | 1.00 | 1.30 | 1/2" |
| DCT-4-4-* | 1/4" | 9/16" | 0.70 | 1/4" | 0.19 | 1.19 | 1.49 | 9/16" |
| DCT-4-6-* | 1/4" | 9/16" | 0.70 | 3/8" | 0.19 | 1.22 | 1.52 | 11/16" |
| DCT-4-8-* | 1/4" | 9/16" | 0.70 | 1/2" | 0.19 | 1.44 | 1.76 | 7/8" |
| DCT-4-12-* | 1/4" | 9/16" | 0.70 | 3/4" | 0.19 | 1.47 | 1.77 | 11/16" |
| DCT-5-2-* | 5/16" | 5/8" | 0.73 | 1/8" | 0.25 | 1.05 | 1.35 | 9/16" |
| DCT-5-4-* | 5/16" | 5/8" | 0.73 | 1/4" | 0.25 | 1.23 | 1.53 | 9/16" |
| DCT-6-2-* | 3/8" | 11/16" | 0.76 | 1/8" | 0.28 | 1.09 | 1.39 | 5/8" |
| DCT-6-4-* | 3/8" | 11/16" | 0.76 | 1/4" | 0.28 | 1.28 | 1.57 | 5/8" |
| DCT-6-6-* | 3/8" | 11/16" | 0.76 | 3/8" | 0.28 | 1.28 | 1.57 | 11/16" |
| DCT-6-8-* | 3/8" | 11/16" | 0.76 | 1/2" | 0.28 | 1.50 | 1.80 | 7/8" |
| DCT-6-12-* | 3/8" | 11/16" | 0.76 | 3/4" | 0.28 | 1.54 | 1.83 | 11/16" |
| DCT-8-4-* | 1/2" | 7/8" | 0.86 | 1/4" | 0.28 | 1.31 | 1.72 | 13/16" |
| DCT-8-6-* | 1/2" | 7/8" | 0.86 | 3/8" | 0.41 | 1.31 | 1.72 | 13/16" |
| DCT-8-8-* | 1/2" | 7/8" | 0.86 | 1/2" | 0.41 | 1.50 | 1.91 | 7/8" |
| DCT-8-12-* | 1/2" | 7/8" | 0.86 | 3/4" | 0.41 | 1.54 | 1.94 | 11/16" |
| DCT-8-16-* | 1/2" | 7/8" | 0.86 | 1" | 0.41 | 1.87 | 2.28 | 13/8" |
| DCT-10-6-* | 5/8" | 1" | 0.86 | 3/8" | 0.41 | 1.34 | 1.74 | 15/16" |
| DCT-10-8-* | 5/8" | 1" | 0.86 | 1/2" | 0.50 | 1.54 | 1.94 | 15/16" |
| DCT-10-12-* | 5/8" | 1" | 0.86 | 3/4" | 0.50 | 1.53 | 1.94 | 11/16" |
| DCT-12-8-* | 3/4" | 11/8" | 0.86 | 1/2" | 0.50 | 1.59 | 2.00 | 11/16" |
| DCT-12-12-* | 3/4" | 11/8" | 0.86 | 3/4" | 0.62 | 1.59 | 2.00 | 11/16" |
| DCT-12-16-* | 3/4" | 11/8" | 0.86 | 1" | 0.62 | 1.87 | 2.28 | 13/8" |
| DCT-14-12-* | 7/8" | 11/4" | 0.86 | 3/4" | 0.72 | 1.59 | 1.99 | 113/16" |
| DCT-16-8-* | 1" | 11/2" | 1.04 | 1/2" | 0.50 | 1.77 | 2.27 | 13/8" |
| DCT-16-12-* | 1" | 11/2" | 1.04 | 3/4" | 0.72 | 1.77 | 2.27 | 13/8" |
| DCT-16-16-* | 1" | 11/2" | 1.04 | 1" | 0.88 | 1.97 | 2.46 | 13/8" |

* Add Suffix "SS" for 316 Stainless Steel or "B" for Brass.

Dimensions are provided in inches and are for reference only, subject to change. Dimensions shown are with the nut in the finger-tight position.

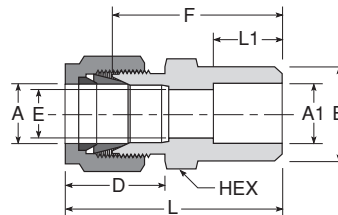
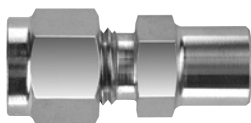
SAE/MS MALE STRAIGHT THREAD CONNECTOR



| PART No. | A Tube OD | Hex Tube Nut | D | T Straight Thread | L1 | E Min Orifice | F | L OAL | Hex Body | O-Ring Size |
|-------------|--------------|-----------------|------|----------------------|------|------------------|------|----------|-------------|----------------|
| DCU-2-2-* | 1/8" | 7/16" | 0.60 | 5/16"-24 | 0.30 | 0.09 | 0.92 | 1.19 | 7/16" | -902 |
| DCU-4-4-* | 1/4" | 9/16" | 0.70 | 7/16"-20 | 0.36 | 0.19 | 1.05 | 1.35 | 9/16" | -904 |
| DCU-4-6-* | 1/4" | 9/16" | 0.70 | 9/16"-18 | 0.39 | 0.19 | 1.11 | 1.41 | 11/16" | -906 |
| DCU-4-8-* | 1/4" | 9/16" | 0.70 | 3/4"-16 | 0.44 | 0.19 | 1.18 | 1.48 | 7/8" | -908 |
| DCU-6-4-* | 3/8" | 11/16" | 0.76 | 7/16"-20 | 0.36 | 0.28 | 1.11 | 1.41 | 5/8" | -904 |
| DCU-6-6-* | 3/8" | 11/16" | 0.76 | 9/16"-18 | 0.39 | 0.28 | 1.17 | 1.46 | 11/16" | -906 |
| DCU-6-8-* | 3/8" | 11/16" | 0.76 | 3/4"-16 | 0.44 | 0.28 | 1.25 | 1.55 | 7/8" | -908 |
| DCU-6-10-* | 3/8" | 11/16" | 0.76 | 7/8"-14 | 0.50 | 0.28 | 1.38 | 1.67 | 1" | -910 |
| DCU-8-6-* | 1/2" | 7/8" | 0.86 | 9/16"-18 | 0.39 | 0.41 | 1.14 | 1.55 | 13/16" | -906 |
| DCU-8-8-* | 1/2" | 7/8" | 0.86 | 3/4"-16 | 0.44 | 0.41 | 1.25 | 1.66 | 7/8" | -908 |
| DCU-8-10-* | 1/2" | 7/8" | 0.86 | 7/8"-14 | 0.50 | 0.41 | 1.38 | 1.79 | 1" | -910 |
| DCU-8-12-* | 1/2" | 7/8" | 0.86 | 1 1/16"-12 | 0.59 | 0.41 | 1.53 | 1.94 | 1 1/4" | -912 |
| DCU-10-8-* | 5/8" | 1" | 0.86 | 3/4"-16 | 0.44 | 0.50 | 1.25 | 1.66 | 15/16" | -908 |
| DCU-10-10-* | 5/8" | 1" | 0.86 | 7/8"-14 | 0.50 | 0.50 | 1.38 | 1.79 | 1" | -910 |
| DCU-12-8-* | 3/4" | 1 1/8" | 0.86 | 3/4"-16 | 0.44 | 0.62 | 1.29 | 1.70 | 1 1/16" | -908 |
| DCU-12-12-* | 3/4" | 1 1/8" | 0.86 | 1 1/16"-12 | 0.59 | 0.62 | 1.53 | 1.94 | 1 1/4" | -912 |
| DCU-16-12-* | 1" | 1 1/2" | 1.04 | 1 1/16"-12 | 0.59 | 0.89 | 1.63 | 2.13 | 1 3/8" | -912 |
| DCU-16-16-* | 1" | 1 1/2" | 1.04 | 1 5/16"-12 | 0.59 | 0.89 | 1.66 | 2.16 | 1 1/2" | -916 |

* Add Suffix "SS" for 316 Stainless Steel or "B" for Brass.

TUBE SOCKET WELD UNION



| DCW | A Tube OD | Hex Tube Nut | D | A1 Tube OD | L1 | B | E Min Orifice | F | L OAL | Hex Body |
|----------|--------------|-----------------|------|---------------|------|------|------------------|------|----------|-------------|
| DCW-2-* | 1/8" | 5/16" | 0.60 | 1/8" | 0.25 | 0.31 | 0.09 | 0.88 | 1.14 | 7/16" |
| DCW-4-* | 1/4" | 9/16" | 0.70 | 1/4" | 0.31 | 0.44 | 0.19 | 1.03 | 1.32 | 1/2" |
| DCW-6-* | 3/8" | 11/16" | 0.76 | 3/8" | 0.38 | 0.62 | 0.28 | 1.19 | 1.48 | 5/8" |
| DCW-8-* | 1/2" | 7/8" | 0.86 | 1/2" | 0.50 | 0.75 | 0.41 | 1.22 | 1.62 | 13/16" |
| DCW-12-* | 3/4" | 1 1/8" | 0.86 | 3/4" | 0.56 | 1.05 | 0.62 | 1.31 | 1.71 | 1 1/16" |
| DCW-16-* | 1" | 1 1/2" | 1.04 | 1" | 0.75 | 1.31 | 0.89 | 1.59 | 2.07 | 1 3/8" |

* Add Suffix "SS" for 316 Stainless Steel or "B" for Brass.

Dimensions are provided in inches and are for reference only, subject to change. Dimensions shown are with the nut in the finger-tight position.

THERMOCOUPLE CONNECTOR



| PART No. | A Tube OD | Hex Tube Nut | D | T NPT | F | L OAL | Hex Body |
|--------------|--------------|-----------------|------|----------|------|----------|-------------|
| DCTZ-1-1-* | 1/16" | 5/16" | 0.44 | 1/16" | 0.78 | 0.94 | 5/16" |
| DCTZ-1-2-* | 1/16" | 5/16" | 0.44 | 1/8" | 0.85 | 1.00 | 7/16" |
| DCTZ-1-4-* | 1/16" | 5/16" | 0.44 | 1/4" | 1.07 | 1.22 | 9/16" |
| DCTZ-2-1-* | 1/8" | 7/16" | 0.60 | 1/16" | 0.91 | 1.17 | 7/16" |
| DCTZ-2-2-* | 1/8" | 7/16" | 0.60 | 1/8" | 0.92 | 1.17 | 7/16" |
| DCTZ-2-4-* | 1/8" | 7/16" | 0.60 | 1/4" | 1.13 | 1.40 | 9/16" |
| DCTZ-2-6-* | 1/8" | 7/16" | 0.60 | 3/8" | 1.15 | 1.41 | 11/16" |
| DCTZ-2-8-* | 1/8" | 7/16" | 0.60 | 1/2" | 1.39 | 1.65 | 7/8" |
| DCTZ-3-2-* | 3/16" | 1/2" | 0.63 | 1/8" | 0.96 | 1.22 | 7/16" |
| DCTZ-3-4-* | 3/16" | 1/2" | 0.63 | 1/4" | 1.17 | 1.43 | 9/16" |
| DCTZ-4-2-* | 1/4" | 9/16" | 0.70 | 1/8" | 1.00 | 1.29 | 1/2" |
| DCTZ-4-4-* | 1/4" | 9/16" | 0.70 | 1/4" | 1.20 | 1.49 | 9/16" |
| DCTZ-4-6-* | 1/4" | 9/16" | 0.70 | 3/8" | 1.22 | 1.51 | 11/16" |
| DCTZ-4-8-* | 1/4" | 9/16" | 0.70 | 1/2" | 1.44 | 1.75 | 7/8" |
| DCTZ-5-4-* | 5/16" | 5/8" | 0.73 | 1/4" | 1.23 | 1.52 | 9/16" |
| DCTZ-5-8-* | 5/16" | 5/8" | 0.73 | 1/2" | 1.47 | 1.76 | 7/8" |
| DCTZ-6-4-* | 3/8" | 11/16" | 0.76 | 1/4" | 1.28 | 1.57 | 5/8" |
| DCTZ-6-6-* | 3/8" | 11/16" | 0.76 | 3/8" | 1.28 | 1.57 | 11/16" |
| DCTZ-6-8-* | 3/8" | 11/16" | 0.76 | 1/2" | 1.50 | 1.81 | 7/8" |
| DCTZ-8-6-* | 1/2" | 7/8" | 0.86 | 3/8" | 1.31 | 1.71 | 13/16" |
| DCTZ-8-8-* | 1/2" | 7/8" | 0.86 | 1/2" | 1.50 | 1.92 | 7/8" |
| DCTZ-8-12-* | 1/2" | 7/8" | 0.86 | 3/4" | 1.54 | 1.94 | 11/16" |
| DCTZ-10-8-* | 5/8" | 1" | 0.86 | 1/2" | 1.53 | 1.93 | 15/16" |
| DCTZ-10-12-* | 5/8" | 1" | 0.86 | 3/4" | 1.54 | 1.94 | 11/16" |
| DCTZ-12-12-* | 3/4" | 1 1/8" | 0.86 | 3/4" | 1.59 | 1.99 | 11/16" |
| DCTZ-14-16-* | 7/8" | 1 1/4" | 0.86 | 1" | 1.85 | 2.27 | 1 3/8" |
| DCTZ-16-16-* | 1" | 1 1/2" | 1.04 | 1" | 1.97 | 2.45 | 1 3/8" |

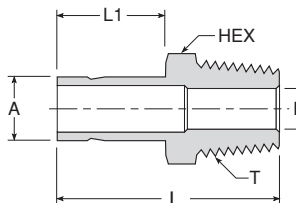
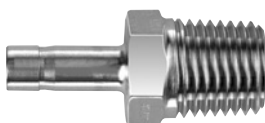
* Add Suffix "SS" for 316 Stainless Steel or "B" for Brass.

Dimensions are provided in inches and are for reference only, subject to change. Dimensions shown are with the nut in the finger-tight position.

For use with thermocouples or other types of probes. Bored through fittings carry a reduced pressure rating. Please apply the following factor to the allowable working pressure of the tubing as stated on page 2.

| Tube OD | Factor |
|--------------------|--------|
| Up to 1/2" | .75 |
| Above 1/2" to 3/4" | .50 |
| Above 3/4" | .25 |

TUBE STUB TO MALE NPT ADAPTER

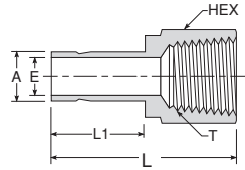
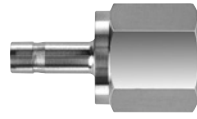


| PART No. | A Tube OD | L1 | T NPT | E Min Orifice | L OAL | Hex Body |
|-------------|--------------|------|----------|------------------|----------|-------------|
| DHA-2-2-* | 1/8" | 0.55 | 1/8" | 0.08 | 1.12 | 7/16" |
| DHA-2-4-* | 1/8" | 0.55 | 1/4" | 0.08 | 1.32 | 9/16" |
| DHA-3-2-* | 3/16" | 0.58 | 1/8" | 0.12 | 1.15 | 7/16" |
| DHA-3-4-* | 3/16" | 0.58 | 1/4" | 0.12 | 1.34 | 9/16" |
| DHA-4-2-* | 1/4" | 0.65 | 1/8" | 0.19 | 1.22 | 7/16" |
| DHA-4-4-* | 1/4" | 0.65 | 1/4" | 0.19 | 1.40 | 9/16" |
| DHA-4-6-* | 1/4" | 0.65 | 3/8" | 0.19 | 1.44 | 11/16" |
| DHA-4-8-* | 1/4" | 0.65 | 1/2" | 0.19 | 1.65 | 7/8" |
| DHA-5-2-* | 5/16" | 0.68 | 1/8" | 0.25 | 1.25 | 7/16" |
| DHA-5-4-* | 5/16" | 0.68 | 1/4" | 0.25 | 1.46 | 9/16" |
| DHA-6-2-* | 3/8" | 0.71 | 1/8" | 0.28 | 1.31 | 7/16" |
| DHA-6-4-* | 3/8" | 0.71 | 1/4" | 0.28 | 1.50 | 9/16" |
| DHA-6-6-* | 3/8" | 0.71 | 3/8" | 0.28 | 1.50 | 11/16" |
| DHA-6-8-* | 3/8" | 0.71 | 1/2" | 0.28 | 1.71 | 7/8" |
| DHA-8-4-* | 1/2" | 0.93 | 1/4" | 0.39 | 1.71 | 9/16" |
| DHA-8-6-* | 1/2" | 0.93 | 3/8" | 0.39 | 1.75 | 11/16" |
| DHA-8-8-* | 1/2" | 0.93 | 1/2" | 0.39 | 1.93 | 7/8" |
| DHA-10-8-* | 5/8" | 0.99 | 1/2" | 0.50 | 2.00 | 7/8" |
| DHA-12-8-* | 3/4" | 0.99 | 1/2" | 0.59 | 2.00 | 7/8" |
| DHA-12-12-* | 3/4" | 0.99 | 3/4" | 0.59 | 2.03 | 11/16" |
| DHA-12-16-* | 3/4" | 0.99 | 1" | 0.59 | 2.28 | 13/8" |
| DHA-16-12-* | 1" | 1.28 | 3/4" | 0.60 | 2.28 | 11/16" |

* Add Suffix "SS" for 316 Stainless Steel or "B" for Brass.

Dimensions are provided in inches and are for reference only, subject to change. Dimensions shown are with the nut in the finger-tight position.

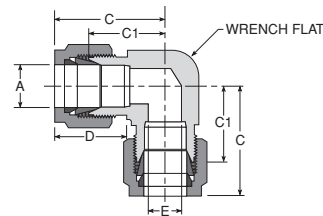
TUBE STUB TO FEMALE NPT ADAPTER



| PART No. | A Tube OD | L1 | T NPT | E Min Orifice | L OAL | Hex Body |
|-------------|--------------|------|----------|------------------|----------|-------------|
| DHC-2-2-* | 1/8" | 0.55 | 1/8" | 0.08 | 1.22 | 9/16" |
| DHC-2-4-* | 1/8" | 0.55 | 1/4" | 0.08 | 1.34 | 3/4" |
| DHC-3-2-* | 3/16" | 0.58 | 1/8" | 0.13 | 1.26 | 9/16" |
| DHC-3-4-* | 3/16" | 0.58 | 1/4" | 0.13 | 1.37 | 3/4" |
| DHC-4-2-* | 1/4" | 0.65 | 1/8" | 0.19 | 1.32 | 9/16" |
| DHC-4-4-* | 1/4" | 0.65 | 1/4" | 0.19 | 1.44 | 3/4" |
| DHC-4-8-* | 1/4" | 0.65 | 1/2" | 0.19 | 1.78 | 1 1/16" |
| DHC-5-2-* | 5/16" | 0.68 | 1/8" | 0.25 | 1.35 | 9/16" |
| DHC-5-4-* | 5/16" | 0.68 | 1/4" | 0.25 | 1.46 | 3/4" |
| DHC-6-2-* | 3/8" | 0.71 | 1/8" | 0.28 | 1.39 | 9/16" |
| DHC-6-4-* | 3/8" | 0.71 | 1/4" | 0.28 | 1.50 | 3/4" |
| DHC-6-6-* | 3/8" | 0.71 | 3/8" | 0.28 | 1.61 | 7/8" |
| DHC-6-8-* | 3/8" | 0.71 | 1/2" | 0.28 | 1.83 | 1 1/16" |
| DHC-8-4-* | 1/2" | 0.93 | 1/4" | 0.39 | 1.71 | 3/4" |
| DHC-8-6-* | 1/2" | 0.93 | 3/8" | 0.39 | 1.85 | 7/8" |
| DHC-8-8-* | 1/2" | 0.93 | 1/2" | 0.39 | 2.07 | 1 1/16" |
| DHC-10-6-* | 5/8" | 0.99 | 3/8" | 0.50 | 1.90 | 7/8" |
| DHC-12-8-* | 3/4" | 0.99 | 1/2" | 0.59 | 2.13 | 1 1/16" |
| DHC-12-12-* | 3/4" | 0.99 | 3/4" | 0.59 | 2.18 | 1 1/4" |

* Add Suffix "SS" for 316 Stainless Steel or "B" for Brass.

UNION ELBOW



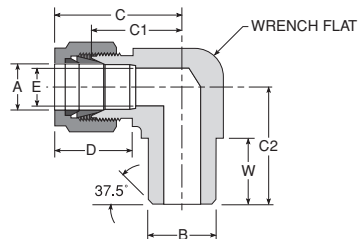
| PART No. | A Tube OD | Hex Tube Nut | D | E Min Orifice | C | C1 | Wrench Flat |
|----------|--------------|-----------------|------|------------------|------|------|----------------|
| DLA-1-* | 1/16" | 5/16" | 0.44 | 0.05 | 0.71 | 0.55 | 3/8" |
| DLA-2-* | 1/8" | 7/16" | 0.60 | 0.09 | 0.88 | 0.62 | 3/8" |
| DLA-3-* | 3/16" | 1/2" | 0.63 | 0.12 | 1.00 | 0.74 | 1/2" |
| DLA-4-* | 1/4" | 9/16" | 0.70 | 0.19 | 1.06 | 0.77 | 1/2" |
| DLA-5-* | 5/16" | 5/8" | 0.73 | 0.25 | 1.13 | 0.84 | 5/8" |
| DLA-6-* | 3/8" | 11/16" | 0.76 | 0.28 | 1.20 | 0.91 | 5/8" |
| DLA-8-* | 1/2" | 7/8" | 0.86 | 0.41 | 1.40 | 0.99 | 13/16" |
| DLA-10-* | 5/8" | 1" | 0.86 | 0.50 | 1.48 | 1.07 | 15/16" |
| DLA-12-* | 3/4" | 1 1/8" | 0.86 | 0.62 | 1.53 | 1.12 | 1 1/16" |
| DLA-14-* | 7/8" | 1 1/4" | 0.86 | 0.72 | 1.69 | 1.29 | 1 1/4" |
| DLA-16-* | 1" | 1 1/2" | 1.04 | 0.88 | 1.81 | 1.30 | 1 5/16" |

* Add Suffix "SS" for 316 Stainless Steel or "B" for Brass.

Dimensions are provided in inches and are for reference only, subject to change. Dimensions shown are with the nut in the finger-tight position.

DLB

MALE PIPE WELD ELBOW

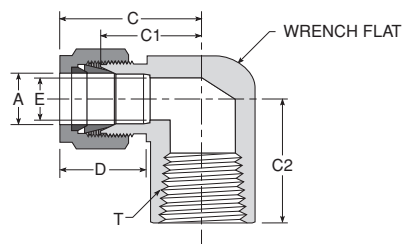
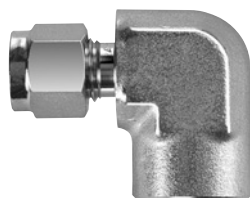


| PART No. | A Tube OD | Hex Tube Nut | D | Pipe Size | B | W | E Min Orifice | C | C1 | C2 | Wrench Flat |
|------------|--------------|-----------------|------|--------------|-------|------|------------------|------|------|------|----------------|
| DLB-4-2-* | 1/4" | 9/16" | 0.70 | 1/8" | 0.405 | 0.38 | 0.19 | 1.06 | 0.78 | 0.74 | 1/2" |
| DLB-4-4-* | 1/4" | 9/16" | 0.70 | 1/4" | 0.540 | 0.56 | 0.19 | 1.06 | 0.78 | 0.93 | 1/2" |
| DLB-6-4-* | 3/8" | 11/16" | 0.76 | 1/4" | 0.540 | 0.56 | 0.19 | 1.06 | 0.78 | 1.00 | 5/8" |
| DLB-6-6-* | 3/8" | 11/16" | 0.76 | 3/8" | 0.675 | 0.56 | 0.28 | 1.24 | 0.94 | 1.12 | 11/16" |
| DLB-8-8-* | 1/2" | 7/8" | 0.86 | 1/2" | 0.840 | 0.75 | 0.41 | 1.43 | 1.03 | 1.30 | 15/16" |
| DLB-16-16* | 1" | 1 1/2" | 1.04 | 1" | 1.315 | 1.05 | 0.89 | 1.81 | 1.31 | 1.84 | 15/16" |

* Add Suffix "SS" for 316 Stainless Steel or "B" for Brass.

DLF

FEMALE NPT ELBOW

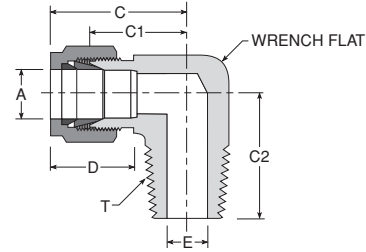
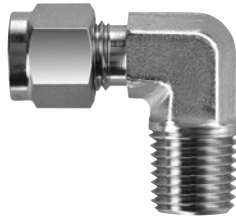


| PART No. | A Tube OD | Hex Tube Nut | D | T NPT | E Min Orifice | C | C1 | C2 | Wrench Flat |
|-------------|--------------|-----------------|------|----------|------------------|------|------|------|----------------|
| DLF-2-2-* | 1/8" | 7/16" | 0.60 | 1/8" | 0.09 | 0.96 | 0.69 | 0.75 | 5/8" |
| DLF-2-4-* | 1/8" | 7/16" | 0.60 | 1/4" | 0.09 | 1.08 | 0.81 | 0.89 | 13/16" |
| DLF-4-2-* | 1/4" | 9/16" | 0.70 | 1/8" | 0.19 | 1.05 | 0.75 | 0.75 | 5/8" |
| DLF-4-4-* | 1/4" | 9/16" | 0.70 | 1/4" | 0.19 | 1.17 | 0.89 | 0.89 | 13/16" |
| DLF-4-6-* | 1/4" | 9/16" | 0.70 | 3/8" | 0.19 | 1.26 | 0.97 | 0.89 | 15/16" |
| DLF-4-8-* | 1/4" | 9/16" | 0.70 | 1/2" | 0.19 | 1.40 | 1.11 | 1.12 | 1 1/16" |
| DLF-5-2-* | 5/16" | 5/8" | 0.73 | 1/8" | 0.25 | 1.18 | 0.89 | 0.75 | 5/8" |
| DLF-5-4-* | 5/16" | 5/8" | 0.73 | 1/4" | 0.25 | 1.20 | 0.91 | 0.89 | 13/16" |
| DLF-6-2-* | 3/8" | 11/16" | 0.76 | 1/8" | 0.28 | 1.20 | 0.91 | 0.75 | 5/8" |
| DLF-6-4-* | 3/8" | 11/16" | 0.76 | 1/4" | 0.28 | 1.23 | 0.94 | 0.89 | 13/16" |
| DLF-6-6-* | 3/8" | 11/16" | 0.76 | 3/8" | 0.28 | 1.32 | 1.03 | 0.89 | 15/16" |
| DLF-6-8-* | 3/8" | 11/16" | 0.76 | 1/2" | 0.28 | 1.42 | 1.11 | 1.12 | 1 1/16" |
| DLF-8-4-* | 1/2" | 7/8" | 0.86 | 1/4" | 0.41 | 1.40 | 0.98 | 0.89 | 13/16" |
| DLF-8-6-* | 1/2" | 7/8" | 0.86 | 3/8" | 0.41 | 1.43 | 1.03 | 0.89 | 15/16" |
| DLF-8-8-* | 1/2" | 7/8" | 0.86 | 1/2" | 0.41 | 1.53 | 1.11 | 1.12 | 1 1/16" |
| DLF-8-12-* | 1/2" | 7/8" | 0.86 | 3/4" | 0.41 | 1.67 | 1.25 | 1.25 | 15/16" |
| DLF-10-6-* | 5/8" | 1" | 0.86 | 3/8" | 0.50 | 1.47 | 1.06 | 0.89 | 15/16" |
| DLF-10-8-* | 5/8" | 1" | 0.86 | 1/2" | 0.50 | 1.53 | 1.11 | 1.12 | 1 1/16" |
| DLF-12-8-* | 3/4" | 1 1/8" | 0.86 | 1/2" | 0.62 | 1.52 | 1.11 | 1.12 | 1 1/16" |
| DLF-12-12-* | 3/4" | 1 1/8" | 0.86 | 3/4" | 0.62 | 1.66 | 1.25 | 1.25 | 15/16" |
| DLF-14-12-* | 7/8" | 1 1/4" | 0.86 | 3/4" | 0.72 | 1.68 | 1.28 | 1.25 | 15/16" |
| DLF-16-12-* | 1" | 1 1/2" | 1.04 | 3/4" | 0.88 | 1.81 | 1.31 | 1.25 | 15/16" |
| DLF-16-16-* | 1" | 1 1/2" | 1.04 | 1" | 0.88 | 2.07 | 1.67 | 1.50 | 13/4" |

* Add Suffix "SS" for 316 Stainless Steel or "B" for Brass.

Dimensions are provided in inches and are for reference only, subject to change. Dimensions shown are with the nut in the finger-tight position.

MALE NPT ELBOW



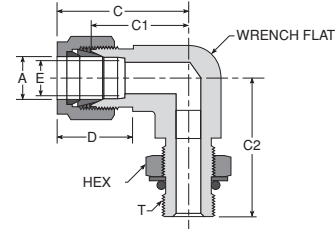
| PART No. | A Tube OD | Hex Tube Nut | D | T NPT | E Min Orifice | C | C1 | C2 | Wrench Flat |
|-------------|--------------|-----------------|------|----------|------------------|------|------|------|----------------|
| DLN-1-1-* | 1/16" | 5/16" | 0.44 | 1/16" | 0.05 | 0.72 | 0.56 | 0.73 | 7/16" |
| DLN-1-2-* | 1/16" | 5/16" | 0.44 | 1/8" | 0.05 | 0.72 | 0.56 | 0.73 | 7/16" |
| DLN-2-1-* | 1/8" | 7/16" | 0.60 | 1/16" | 0.09 | 0.93 | 0.67 | 0.73 | 7/16" |
| DLN-2-2-* | 1/8" | 7/16" | 0.60 | 1/8" | 0.09 | 0.93 | 0.67 | 0.73 | 7/16" |
| DLN-2-4-* | 1/8" | 7/16" | 0.60 | 1/4" | 0.09 | 0.97 | 0.71 | 0.93 | 1/2" |
| DLN-3-2-* | 3/16" | 1/2" | 0.63 | 1/8" | 0.12 | 1.00 | 0.74 | 0.74 | 1/2" |
| DLN-3-4-* | 3/16" | 1/2" | 0.63 | 1/4" | 0.12 | 1.00 | 0.74 | 0.83 | 1/2" |
| DLN-4-1-* | 1/4" | 9/16" | 0.70 | 1/16" | 0.19 | 1.00 | 0.78 | 0.74 | 1/2" |
| DLN-4-2-* | 1/4" | 9/16" | 0.70 | 1/8" | 0.19 | 1.06 | 0.78 | 0.74 | 1/2" |
| DLN-4-4-* | 1/4" | 9/16" | 0.70 | 1/4" | 0.19 | 1.06 | 0.78 | 0.92 | 1/2" |
| DLN-4-6-* | 1/4" | 9/16" | 0.70 | 3/8" | 0.19 | 1.17 | 0.88 | 1.12 | 11/16" |
| DLN-4-8-* | 1/4" | 9/16" | 0.70 | 1/2" | 0.19 | 1.25 | 0.96 | 1.30 | 13/16" |
| DLN-5-2-* | 5/16" | 5/8" | 0.73 | 1/8" | 0.25 | 1.18 | 0.88 | 0.81 | 5/8" |
| DLN-5-4-* | 5/16" | 5/8" | 0.73 | 1/4" | 0.25 | 1.18 | 0.88 | 1.00 | 5/8" |
| DLN-5-6-* | 5/16" | 5/8" | 0.73 | 3/8" | 0.25 | 1.24 | 0.94 | 1.12 | 11/16" |
| DLN-6-2-* | 3/8" | 11/16" | 0.76 | 1/8" | 0.28 | 1.20 | 0.91 | 0.82 | 5/8" |
| DLN-6-4-* | 3/8" | 11/16" | 0.76 | 1/4" | 0.28 | 1.20 | 0.91 | 1.00 | 5/8" |
| DLN-6-6-* | 3/8" | 11/16" | 0.76 | 3/8" | 0.28 | 1.23 | 0.94 | 1.12 | 11/16" |
| DLN-6-8-* | 3/8" | 11/16" | 0.76 | 1/2" | 0.28 | 1.31 | 1.02 | 1.26 | 13/16" |
| DLN-6-12-* | 3/8" | 11/16" | 0.76 | 3/4" | 0.28 | 1.41 | 1.11 | 1.40 | 11/16" |
| DLN-8-4-* | 1/2" | 7/8" | 0.86 | 1/4" | 0.41 | 1.39 | 0.98 | 1.08 | 13/16" |
| DLN-8-6-* | 1/2" | 7/8" | 0.86 | 3/8" | 0.41 | 1.39 | 0.98 | 1.08 | 13/16" |
| DLN-8-8-* | 1/2" | 7/8" | 0.86 | 1/2" | 0.41 | 1.44 | 1.03 | 1.32 | 13/16" |
| DLN-8-12-* | 1/2" | 7/8" | 0.86 | 3/4" | 0.41 | 1.52 | 1.11 | 1.40 | 11/16" |
| DLN-10-6-* | 5/8" | 1" | 0.86 | 3/8" | 0.50 | 1.47 | 1.06 | 1.16 | 15/16" |
| DLN-10-8-* | 5/8" | 1" | 0.86 | 1/2" | 0.50 | 1.47 | 1.06 | 1.34 | 15/16" |
| DLN-10-12-* | 5/8" | 1" | 0.86 | 3/4" | 0.50 | 1.52 | 1.11 | 1.40 | 11/16" |
| DLN-12-8-* | 3/4" | 1 1/8" | 0.86 | 1/2" | 0.62 | 1.52 | 1.11 | 1.39 | 11/16" |
| DLN-12-12-* | 3/4" | 1 1/8" | 0.86 | 3/4" | 0.62 | 1.52 | 1.11 | 1.39 | 11/16" |
| DLN-14-12-* | 7/8" | 1 1/4" | 0.86 | 3/4" | 0.72 | 1.68 | 1.28 | 1.65 | 11/4" |
| DLN-16-12-* | 1" | 1 1/2" | 1.04 | 3/4" | 0.88 | 1.81 | 1.31 | 1.65 | 15/16" |
| DLN-16-16-* | 1" | 1 1/2" | 1.04 | 1" | 0.88 | 1.81 | 1.31 | 1.84 | 15/16" |

* Add Suffix "SS" for 316 Stainless Steel or "B" for Brass.

Dimensions are provided in inches and are for reference only, subject to change. Dimensions shown are with the nut in the finger-tight position.

DLO

POSITIONABLE SAE/MS MALE STRAIGHT THREAD ELBOW

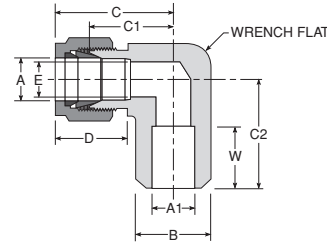
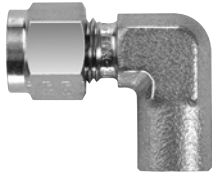


| PART No. | A Tube OD | Hex Tube Nut | D | T Straight Thread | E Min Orifice | C | C1 | C2 | Hex Lock Nut | Wrench Flat | O-Ring Size |
|-----------|--------------|-----------------|------|----------------------|------------------|------|------|------|-----------------|----------------|----------------|
| DLO-4-4-* | 1/4" | 9/16" | 0.70 | 7/16"-20 | 0.19 | 1.12 | 0.83 | 1.12 | 9/16" | 5/8" | -904 |
| DLO-4-6-* | 1/4" | 9/16" | 0.70 | 9/16"-18 | 0.19 | 1.20 | 0.91 | 1.27 | 11/16" | 5/8" | -906 |
| DLO-5-5-* | 5/16" | 5/8" | 0.73 | 1/2"-20 | 0.23 | 1.19 | 0.90 | 1.16 | 5/8" | 5/8" | -905 |
| DLO-6-6-* | 3/8" | 11/16" | 0.76 | 9/16"-18 | 0.28 | 1.26 | 0.97 | 1.27 | 11/16" | 5/8" | -906 |
| DLO-6-8-* | 3/8" | 11/16" | 0.76 | 3/4"-16 | 0.28 | 1.37 | 1.08 | 1.49 | 7/8" | 13/16" | -908 |
| DLO-8-8-* | 1/2" | 7/8" | 0.86 | 3/4"-16 | 0.41 | 1.48 | 1.08 | 1.49 | 7/8" | 13/16" | -908 |

* Add Suffix "SS" for 316 Stainless Steel or "B" for Brass.

DLW

TUBE SOCKET WELD ELBOW

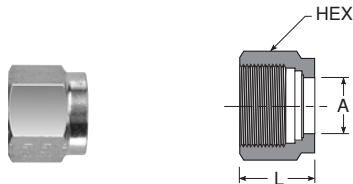


| PART No. | A Tube OD | Hex Tube Nut | D | A1 Tube OD | W | B | E Min Orifice | C | C1 | C2 | Wrench Flat |
|----------|--------------|-----------------|------|---------------|------|------|------------------|------|------|------|----------------|
| DLW-2-* | 1/8" | 5/16" | 0.60 | 1/8" | 0.25 | 0.44 | 0.09 | 0.89 | 0.62 | 0.89 | 3/8" |
| DLW-4-* | 1/4" | 9/16" | 0.70 | 1/4" | 0.31 | 0.57 | 0.19 | 1.06 | 0.77 | 1.07 | 1/2" |
| DLW-6-* | 3/8" | 11/16" | 0.76 | 3/8" | 0.38 | 0.70 | 0.28 | 1.20 | 0.91 | 1.20 | 5/8" |
| DLW-8-* | 1/2" | 7/8" | 0.86 | 1/2" | 0.50 | 0.84 | 0.41 | 1.40 | 0.98 | 1.39 | 13/16" |
| DLW-16-* | 1" | 1 1/2" | 1.04 | 1" | 0.75 | 1.40 | 0.88 | 1.81 | 1.31 | 1.81 | 1 5/16" |

* Add Suffix "SS" for 316 Stainless Steel or "B" for Brass.

DNA

NUT



| PART No. | A Tube OD | Hex Tube Nut | L OAL |
|----------|--------------|-----------------|----------|
| DNA-1-* | 1/16" | 5/16" | 0.31 |
| DNA-2-* | 1/8" | 7/16" | 0.47 |
| DNA-3-* | 3/16" | 1/2" | 0.47 |
| DNA-4-* | 1/4" | 9/16" | 0.50 |
| DNA-5-* | 5/16" | 5/8" | 0.53 |
| DNA-6-* | 3/8" | 11/16" | 0.56 |
| DNA-8-* | 1/2" | 7/8" | 0.69 |
| DNA-10-* | 5/8" | 1" | 0.69 |
| DNA-12-* | 3/4" | 1 1/8" | 0.69 |
| DNA-14-* | 7/8" | 1 1/4" | 0.69 |
| DNA-16-* | 1" | 1 1/2" | 0.81 |

* Add Suffix "SS" for 316 Stainless Steel or "B" for Brass.

Dimensions are provided in inches and are for reference only, subject to change. Dimensions shown are with the nut in the finger-tight position.

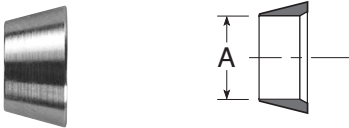
BACK FERRULE



| PART No. | A Tube OD |
|----------|--------------|
| DOB-1-* | 1/16" |
| DOB-2-* | 1/8" |
| DOB-3-* | 3/16" |
| DOB-4-* | 1/4" |
| DOB-5-* | 5/16" |
| DOB-6-* | 3/8" |
| DOB-8-* | 1/2" |
| DOB-10-* | 5/8" |
| DOB-12-* | 3/4" |
| DOB-14-* | 7/8" |
| DOB-16-* | 1" |

* Add Suffix "SS" for 316 Stainless Steel or "B" for Brass.

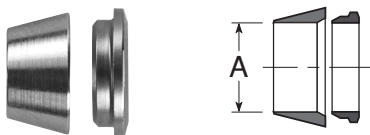
FRONT FERRULE



| PART No. | A Tube OD |
|----------|--------------|
| DOF-1-* | 1/16" |
| DOF-2-* | 1/8" |
| DOF-3-* | 3/16" |
| DOF-4-* | 1/4" |
| DOF-5-* | 5/16" |
| DOF-6-* | 3/8" |
| DOF-8-* | 1/2" |
| DOF-10-* | 5/8" |
| DOF-12-* | 3/4" |
| DOF-14-* | 7/8" |
| DOF-16-* | 1" |

* Add Suffix "SS" for 316 Stainless Steel or "B" for Brass.

FERRULE SET

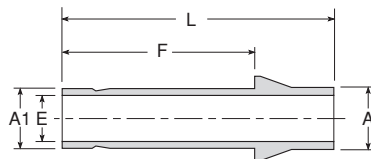


| PART No. | A Tube OD |
|----------|--------------|
| DOS-1-* | 1/16" |
| DOS-2-* | 1/8" |
| DOS-3-* | 3/16" |
| DOS-4-* | 1/4" |
| DOS-5-* | 5/16" |
| DOS-6-* | 3/8" |
| DOS-8-* | 1/2" |
| DOS-10-* | 5/8" |
| DOS-12-* | 3/4" |
| DOS-14-* | 7/8" |
| DOS-16-* | 1" |

* Add Suffix "SS" for 316 Stainless Steel or "B" for Brass.

DPC

PORT CONNECTOR



Note: SPECIAL INSTALLATION INSTRUCTIONS FOR MACHINED FERRULE END OF DPC.

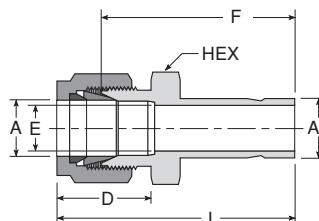
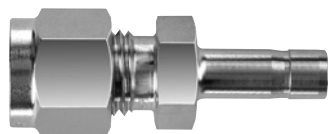
From the finger-tight position, tighten nut 1/4 turn only. Subsequent connections are made by tightening slightly with a wrench after snugging nut by hand.

| PART No. | A Tube OD | E Min Orifice | A1 Tube OD | F | L OAL |
|-----------|--------------|------------------|---------------|------|----------|
| DPC-2-1-* | 1/8" | 0.03 | 1/16" | 0.39 | 0.83 |
| DPC-2-* | 1/8" | 0.09 | 1/8" | 0.62 | 0.97 |
| DPC-4-1-* | 1/4" | 0.03 | 1/16" | 0.42 | 0.88 |
| DPC-4-2-* | 1/4" | 0.09 | 1/8" | 0.62 | 1.13 |
| DPC-4-* | 1/4" | 0.19 | 1/4" | 0.74 | 1.09 |
| DPC-6-4-* | 3/8" | 0.19 | 1/4" | 0.74 | 1.24 |
| DPC-8-6-* | 1/2" | 0.28 | 3/8" | 0.80 | 1.58 |
| DPC-8-* | 1/2" | 0.39 | 1/2" | 1.02 | 1.67 |
| DPC-12-* | 3/4" | 0.59 | 3/4" | 1.09 | 1.80 |
| DPC-16-* | 1" | 0.80 | 1" | 1.42 | 2.28 |

* Add Suffix "SS" for 316 Stainless Steel or "B" for Brass.

DRE

REDUCER



| PART No. | A Tube OD | Hex Tube Nut | D | A1 Tube OD | E Min Orifice | F | L OAL | Hex Body |
|------------|--------------|-----------------|------|---------------|------------------|------|----------|-------------|
| DRE-1-2-* | 1/16" | 5/16" | 0.44 | 1/8" | 0.05 | 1.00 | 1.15 | 5/16" |
| DRE-2-2-* | 1/8" | 7/16" | 0.60 | 1/8" | 0.08 | 1.06 | 1.32 | 7/16" |
| DRE-2-3-* | 1/8" | 7/16" | 0.60 | 3/16" | 0.09 | 1.09 | 1.36 | 7/16" |
| DRE-2-4-* | 1/8" | 7/16" | 0.60 | 1/4" | 0.09 | 1.16 | 1.42 | 7/16" |
| DRE-2-6-* | 1/8" | 7/16" | 0.60 | 3/8" | 0.09 | 1.22 | 1.48 | 7/16" |
| DRE-2-8-* | 1/8" | 7/16" | 0.60 | 1/2" | 0.09 | 1.48 | 1.74 | 9/16" |
| DRE-3-4-* | 3/16" | 1/2" | 0.63 | 1/4" | 0.08 | 1.20 | 1.46 | 7/16" |
| DRE-3-8-* | 3/16" | 1/2" | 0.63 | 1/2" | 0.12 | 1.50 | 1.84 | 9/16" |
| DRE-4-2-* | 1/4" | 9/16" | 0.70 | 1/8" | 0.08 | 1.16 | 1.45 | 1/2" |
| DRE-4-3-* | 1/4" | 9/16" | 0.70 | 3/16" | 0.12 | 1.19 | 1.48 | 1/2" |
| DRE-4-4-* | 1/4" | 9/16" | 0.70 | 1/4" | 0.19 | 1.25 | 1.54 | 1/2" |
| DRE-4-5-* | 1/4" | 9/16" | 0.70 | 5/16" | 0.19 | 1.28 | 1.57 | 1/2" |
| DRE-4-6-* | 1/4" | 9/16" | 0.70 | 3/8" | 0.19 | 1.31 | 1.60 | 1/2" |
| DRE-4-8-* | 1/4" | 9/16" | 0.70 | 1/2" | 0.19 | 1.54 | 1.82 | 9/16" |
| DRE-4-10-* | 1/4" | 9/16" | 0.70 | 5/8" | 0.19 | 1.53 | 1.89 | 11/16" |
| DRE-4-12-* | 1/4" | 9/16" | 0.70 | 3/4" | 0.19 | 1.69 | 1.89 | 7/8" |
| DRE-5-6-* | 5/16" | 5/8" | 0.73 | 3/8" | 0.25 | 1.36 | 1.65 | 9/16" |
| DRE-5-8-* | 5/16" | 5/8" | 0.73 | 1/2" | 0.25 | 1.58 | 1.87 | 9/16" |

* Add Suffix "SS" for 316 Stainless Steel or "B" for Brass.

(CONTINUED ON NEXT PAGE)

Dimensions are provided in inches and are for reference only, subject to change. Dimensions shown are with the nut in the finger-tight position.

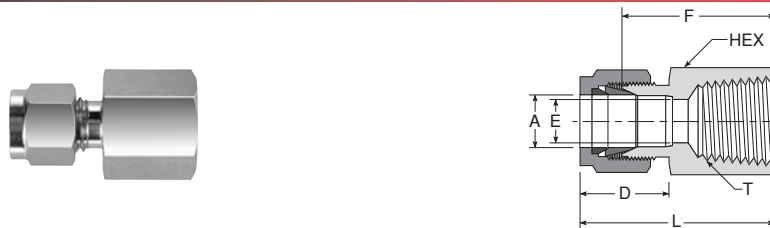
REDUCER CONTINUED



| PART No. | A Tube OD | Hex Tube Nut | D | A1 Tube OD | E Min Orifice | F | L OAL | Hex Body |
|-------------|--------------|-----------------|------|---------------|------------------|------|----------|-------------|
| DRE-6-2-* | 3/8" | 11/16" | 0.76 | 1/8" | 0.08 | 1.24 | 1.54 | 5/8" |
| DRE-6-4-* | 3/8" | 11/16" | 0.76 | 1/4" | 0.19 | 1.27 | 1.57 | 5/8" |
| DRE-6-5-* | 3/8" | 11/16" | 0.76 | 5/16" | 0.19 | 1.34 | 1.63 | 5/8" |
| DRE-6-6-* | 3/8" | 11/16" | 0.76 | 3/8" | 0.28 | 1.41 | 1.70 | 5/8" |
| DRE-6-8-* | 3/8" | 11/16" | 0.76 | 1/2" | 0.28 | 1.62 | 1.91 | 5/8" |
| DRE-6-10-* | 3/8" | 11/16" | 0.76 | 5/8" | 0.28 | 1.69 | 1.98 | 11/16" |
| DRE-6-12-* | 3/8" | 11/16" | 0.76 | 3/4" | 0.28 | 1.69 | 1.98 | 13/16" |
| DRE-8-4-* | 1/2" | 7/8" | 0.86 | 1/4" | 0.19 | 1.39 | 1.79 | 13/16" |
| DRE-8-6-* | 1/2" | 7/8" | 0.86 | 3/8" | 0.28 | 1.45 | 1.85 | 13/16" |
| DRE-8-8-* | 1/2" | 7/8" | 0.86 | 1/2" | 0.39 | 1.66 | 2.07 | 13/16" |
| DRE-8-10-* | 1/2" | 7/8" | 0.86 | 5/8" | 0.41 | 1.72 | 2.12 | 13/16" |
| DRE-8-12-* | 1/2" | 7/8" | 0.86 | 3/4" | 0.41 | 1.72 | 2.12 | 13/16" |
| DRE-8-16-* | 1/2" | 7/8" | 0.86 | 1" | 0.41 | 1.97 | 2.37 | 1 1/16" |
| DRE-10-12-* | 5/8" | 1" | 0.86 | 3/4" | 0.50 | 1.75 | 2.15 | 15/16" |
| DRE-10-14-* | 5/8" | 1" | 0.86 | 7/8" | 0.50 | 1.81 | 2.21 | 15/16" |
| DRE-10-16-* | 5/8" | 1" | 0.86 | 1" | 0.50 | 2.02 | 2.42 | 1 1/16" |
| DRE-12-6-* | 3/4" | 1 1/8" | 0.86 | 3/8" | 0.62 | 1.55 | 1.96 | 1 1/16" |
| DRE-12-8-* | 3/4" | 1 1/8" | 0.86 | 1/2" | 0.39 | 1.79 | 2.19 | 1 1/16" |
| DRE-12-14-* | 3/4" | 1 1/8" | 0.86 | 7/8" | 0.62 | 1.85 | 2.26 | 1 1/16" |
| DRE-12-16-* | 3/4" | 1 1/8" | 0.86 | 1" | 0.62 | 2.07 | 2.46 | 1 1/16" |
| DRE-14-6-* | 7/8" | 1 1/4" | 0.86 | 3/8" | 0.72 | 1.63 | 2.04 | 1 3/16" |
| DRE-14-12-* | 7/8" | 1 1/4" | 0.86 | 3/4" | 0.72 | 1.90 | 2.30 | 1 3/16" |
| DRE-16-8-* | 1" | 1 1/2" | 1.04 | 1/2" | 0.88 | 2.03 | 2.52 | 1 3/8" |
| DRE-16-14-* | 1" | 1 1/2" | 1.04 | 7/8" | 0.88 | 2.09 | 2.59 | 1 3/8" |

* Add Suffix "SS" for 316 Stainless Steel or "B" for Brass.

FEMALE NPT CONNECTOR



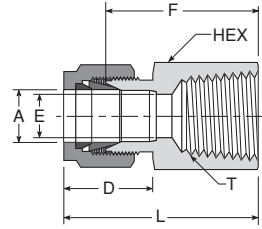
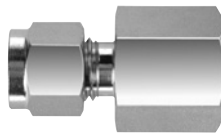
| PART No. | A Tube OD | Hex Tube Nut | D | T NPT | E Min Orifice | F | L OAL | Hex Body |
|-----------|--------------|-----------------|------|----------|------------------|------|----------|-------------|
| DSA-2-2-* | 1/8" | 7/16" | 0.60 | 1/8" | 0.09 | 0.80 | 1.14 | 9/16" |
| DSA-2-4-* | 1/8" | 7/16" | 0.60 | 1/4" | 0.09 | 1.06 | 1.32 | 3/4" |
| DSA-2-8-* | 1/8" | 7/16" | 0.60 | 1/2" | 0.09 | 1.34 | 1.80 | 1 1/16" |
| DSA-3-2-* | 3/16" | 1/2" | 0.63 | 1/8" | 0.12 | 0.91 | 1.17 | 9/16" |
| DSA-4-1-* | 1/4" | 9/16" | 0.70 | 1/16" | 0.19 | 0.94 | 1.23 | 1/2" |
| DSA-4-2-* | 1/4" | 9/16" | 0.70 | 1/8" | 0.19 | 0.94 | 1.23 | 9/16" |
| DSA-4-4-* | 1/4" | 9/16" | 0.70 | 1/4" | 0.19 | 1.12 | 1.41 | 3/4" |
| DSA-4-6-* | 1/4" | 9/16" | 0.70 | 3/8" | 0.19 | 1.19 | 1.48 | 7/8" |
| DSA-4-8-* | 1/4" | 9/16" | 0.70 | 1/2" | 0.19 | 1.40 | 1.70 | 1 1/16" |

* Add Suffix "SS" for 316 Stainless Steel or "B" for Brass.

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Dimensions are provided in inches and are for reference only, subject to change. Dimensions shown are with the nut in the finger-tight position.

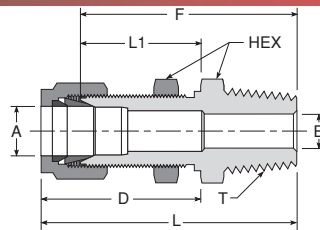
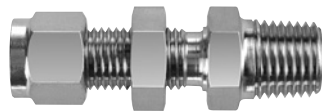
FEMALE NPT CONNECTOR CONTINUED



| PART No. | A Tube OD | Hex Tube Nut | D | T NPT | E Min Orifice | F | L OAL | Hex Body |
|-------------|--------------|-----------------|------|----------|------------------|------|----------|-------------|
| DSA-5-2-* | 5/16" | 5/8" | 0.73 | 1/8" | 0.25 | 0.97 | 1.26 | 9/16" |
| DSA-5-4-* | 5/16" | 5/8" | 0.73 | 1/4" | 0.25 | 1.16 | 1.45 | 3/4" |
| DSA-6-2-* | 3/8" | 11/16" | 0.76 | 1/8" | 0.28 | 1.00 | 1.29 | 5/8" |
| DSA-6-4-* | 3/8" | 11/16" | 0.76 | 1/4" | 0.28 | 1.19 | 1.48 | 3/4" |
| DSA-6-6-* | 3/8" | 11/16" | 0.76 | 3/8" | 0.28 | 1.25 | 1.54 | 7/8" |
| DSA-6-8-* | 3/8" | 11/16" | 0.76 | 1/2" | 0.28 | 1.44 | 1.73 | 1 1/16" |
| DSA-6-12-* | 3/8" | 11/16" | 0.76 | 3/4" | 0.28 | 1.55 | 1.84 | 1 5/16" |
| DSA-6-16-* | 3/8" | 11/16" | 0.76 | 1" | 0.28 | 1.87 | 2.17 | 1 5/8" |
| DSA-8-2-* | 1/2" | 7/8" | 0.86 | 1/8" | 0.41 | 1.00 | 1.41 | 1 1/16" |
| DSA-8-4-* | 1/2" | 7/8" | 0.86 | 1/4" | 0.41 | 1.25 | 1.64 | 1 3/16" |
| DSA-8-6-* | 1/2" | 7/8" | 0.86 | 3/8" | 0.41 | 1.25 | 1.64 | 7/8" |
| DSA-8-8-* | 1/2" | 7/8" | 0.86 | 1/2" | 0.41 | 1.44 | 1.83 | 1 1/16" |
| DSA-8-12-* | 1/2" | 7/8" | 0.86 | 3/4" | 0.41 | 1.50 | 1.89 | 1 5/16" |
| DSA-8-16-* | 1/2" | 7/8" | 0.86 | 1" | 0.41 | 1.87 | 2.25 | 1 5/8" |
| DSA-10-6-* | 5/8" | 1" | 0.86 | 3/8" | 0.50 | 1.25 | 1.64 | 1 5/16" |
| DSA-10-8-* | 5/8" | 1" | 0.86 | 1/2" | 0.50 | 1.44 | 1.83 | 1 1/16" |
| DSA-10-12-* | 5/8" | 1" | 0.86 | 3/4" | 0.50 | 1.50 | 1.90 | 1 5/16" |
| DSA-12-6-* | 3/4" | 1 1/8" | 0.86 | 3/8" | 0.62 | 1.34 | 1.74 | 1 1/16" |
| DSA-12-8-* | 3/4" | 1 1/8" | 0.86 | 1/2" | 0.62 | 1.44 | 1.83 | 1 1/16" |
| DSA-12-12-* | 3/4" | 1 1/8" | 0.86 | 3/4" | 0.62 | 1.50 | 1.89 | 1 5/16" |
| DSA-14-12-* | 7/8" | 1 1/4" | 0.86 | 3/4" | 0.72 | 1.56 | 1.95 | 1 5/16" |
| DSA-16-12-* | 1" | 1 1/2" | 1.04 | 3/4" | 0.88 | 1.62 | 2.10 | 1 3/8" |
| DSA-16-16-* | 1" | 1 1/2" | 1.04 | 1" | 0.88 | 1.97 | 2.45 | 1 5/8" |

* Add Suffix "SS" for 316 Stainless Steel or "B" for Brass.

BULKHEAD MALE NPT CONNECTOR

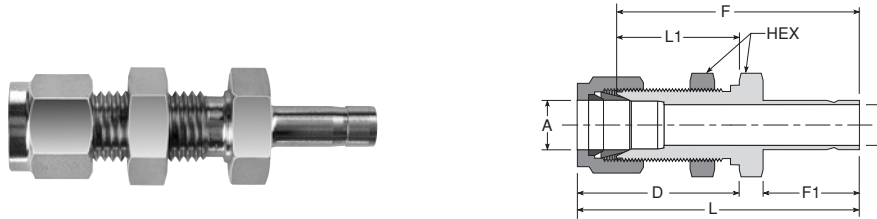


| PART No. | A Tube OD | Hex Tube Nut | D | T NPT | E Min Orifice | F | L1 | Hex Body | L OAL | Panel Hole Drill Size | Max Panel Thickness |
|-------------|--------------|-----------------|------|----------|------------------|------|------|-------------|----------|--------------------------|------------------------|
| DSC-2-2-* | 1/8" | 5/16" | 1.24 | 1/8" | 0.09 | 1.57 | 0.97 | 1/2" | 1.83 | 21/64" | 0.50 |
| DSC-4-2-* | 1/4" | 9/16" | 1.32 | 1/8" | 0.19 | 1.66 | 1.03 | 5/8" | 1.95 | 29/64" | 0.40 |
| DSC-4-4-* | 1/4" | 9/16" | 1.32 | 1/4" | 0.19 | 1.84 | 1.03 | 5/8" | 2.11 | 29/64" | 0.40 |
| DSC-6-4-* | 3/8" | 11/16" | 1.45 | 1/4" | 0.28 | 1.97 | 1.16 | 3/4" | 2.26 | 37/64" | 0.44 |
| DSC-6-6-* | 3/8" | 11/16" | 1.45 | 3/8" | 0.28 | 1.97 | 1.16 | 3/4" | 2.26 | 37/64" | 0.44 |
| DSC-6-8-* | 3/8" | 11/16" | 1.45 | 1/2" | 0.28 | 2.30 | 1.16 | 7/8" | 2.60 | 37/64" | 0.44 |
| DSC-8-6-* | 1/2" | 7/8" | 1.63 | 3/8" | 0.41 | 2.09 | 1.25 | 15/16" | 2.49 | 49/64" | 0.50 |
| DSC-8-8-* | 1/2" | 7/8" | 1.63 | 1/2" | 0.41 | 2.90 | 1.25 | 15/16" | 2.66 | 49/64" | 0.50 |
| DSC-12-12-* | 3/4" | 1 1/8" | 1.85 | 3/4" | 0.62 | 2.60 | 1.47 | 1 3/16" | 3.00 | 1 1/64" | 0.66 |
| DSC-16-16-* | 1" | 1 1/2" | 2.28 | 1" | 0.88 | 3.19 | 1.78 | 1 5/8" | 3.67 | 1 21/64" | 0.75 |

* Add Suffix "SS" for 316 Stainless Steel or "B" for Brass.

Dimensions are provided in inches and are for reference only, subject to change. Dimensions shown are with the nut in the finger-tight position.

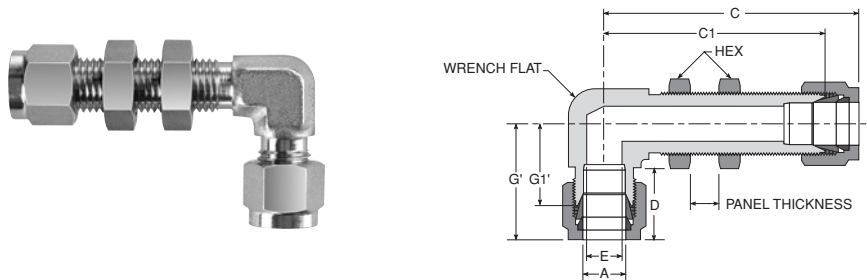
BULKHEAD ADAPTER



| PART No. | A Tube OD | Hex Tube Nut | D | E Min Orifice | F | F1 | L1 | L OAL | Hex Body | Panel Hole Drill Size | Max Panel Thickness |
|----------|--------------|-----------------|------|------------------|------|------|------|----------|-------------|--------------------------|------------------------|
| DSE-2-* | 1/8" | 5/16" | 1.23 | 0.09 | 1.69 | 0.55 | 0.97 | 1.95 | 1/2" | 21/64" | 0.50 |
| DSE-4-* | 1/4" | 9/16" | 1.32 | 0.19 | 1.91 | 0.65 | 1.03 | 2.20 | 5/8" | 29/64" | 0.40 |
| DSE-6-* | 3/8" | 11/16" | 1.45 | 0.28 | 2.12 | 0.71 | 1.16 | 2.41 | 3/4" | 37/64" | 0.44 |
| DSE-8-* | 1/2" | 7/8" | 1.64 | 0.39 | 2.47 | 0.93 | 1.26 | 2.87 | 15/16" | 49/64" | 0.50 |

* Add Suffix "SS" for 316 Stainless Steel or "B" for Brass.

BULKHEAD UNION ELBOW

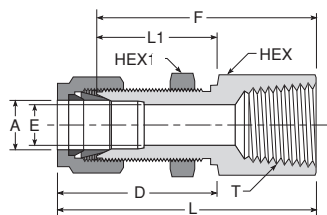
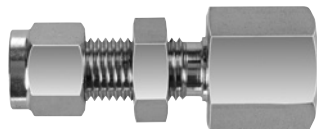


| PART No. | A Tube OD | Hex Tube Nut | D | C | C1 | E Min Orifice | G | G1 | Wrench Flat | Hex Panel Nut | Panel Hole Drill Size | Max Panel Thickness |
|----------|--------------|-----------------|------|------|------|------------------|------|------|----------------|------------------|--------------------------|------------------------|
| DSL-2-* | 1/8" | 7/16" | 0.60 | 1.93 | 1.67 | 0.09 | 0.88 | 0.62 | 3/8" | 1/2" | 21/64" | 0.60 |
| DSL-3-* | 3/16" | 1/2" | 0.63 | 2.03 | 1.77 | 0.12 | 1.01 | 0.75 | 1/2" | 9/16" | 25/64" | 0.61 |
| DSL-4-* | 1/4" | 9/16" | 0.70 | 2.10 | 1.81 | 0.19 | 1.07 | 0.79 | 1/2" | 5/8" | 29/64" | 0.61 |
| DSL-5-* | 5/16" | 5/8" | 0.73 | 2.30 | 2.01 | 0.25 | 1.17 | 0.89 | 5/8" | 11/16" | 33/64" | 0.74 |
| DSL-6-* | 3/8" | 11/16" | 0.76 | 2.36 | 2.07 | 0.28 | 1.20 | 0.91 | 5/8" | 3/4" | 37/64" | 0.74 |
| DSL-8-* | 1/2" | 7/8" | 0.86 | 2.67 | 2.27 | 0.41 | 1.38 | 0.94 | 13/16" | 15/16" | 49/64" | 0.74 |
| DSL-10-* | 5/8" | 1" | 0.86 | 2.82 | 2.42 | 0.50 | 1.46 | 1.06 | 15/16" | 11/16" | 57/64" | 0.50 |
| DSL-12-* | 3/4" | 1 1/8" | 0.86 | 3.08 | 2.68 | 0.62 | 1.51 | 1.11 | 1 1/16" | 1 3/16" | 1 3/16" | 0.66 |

* Add Suffix "SS" for 316 Stainless Steel or "B" for Brass.

Dimensions are provided in inches and are for reference only, subject to change. Dimensions shown are with the nut in the finger-tight position.

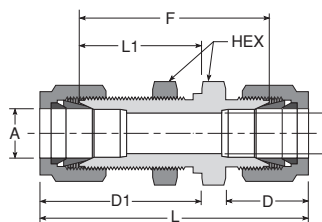
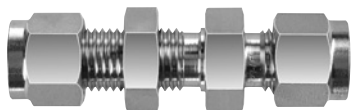
BULKHEAD FEMALE NPT CONNECTOR



| PART No. | A Tube OD | Hex Tube Nut | D | L1 | T NPT | E Min Orifice | F | L OAL | Hex Body | Hex Panel Nut | Panel Hole Drill Size | Max Panel Thickness |
|-----------|--------------|-----------------|------|------|----------|------------------|------|----------|-------------|------------------|--------------------------|------------------------|
| DSS-2-2-* | 1/8" | 7/16" | 1.23 | 0.97 | 1/8" | 0.09 | 1.50 | 1.76 | 9/16" | 1/2" | 21/64" | 0.50 |
| DSS-4-2-* | 1/4" | 9/16" | 1.32 | 1.03 | 1/8" | 0.19 | 1.56 | 1.85 | 5/8" | 5/8" | 29/64" | 0.40 |
| DSS-4-4-* | 1/4" | 9/16" | 1.32 | 1.03 | 1/4" | 0.19 | 1.75 | 2.04 | 3/4" | 5/8" | 29/64" | 0.40 |
| DSS-6-4-* | 3/8" | 11/16" | 1.45 | 1.16 | 1/4" | 0.28 | 1.88 | 2.17 | 3/4" | 3/4" | 37/64" | 0.44 |
| DSS-6-6-* | 3/8" | 11/16" | 1.45 | 1.16 | 3/8" | 0.28 | 1.93 | 2.22 | 7/8" | 3/4" | 37/64" | 0.44 |
| DSS-6-8-* | 3/8" | 11/16" | 1.45 | 1.16 | 1/2" | 0.28 | 2.13 | 2.43 | 1 1/16" | 3/4" | 37/64" | 0.44 |
| DSS-8-6-* | 1/2" | 7/8" | 1.65 | 1.25 | 3/8" | 0.41 | 2.03 | 2.43 | 15/16" | 15/16" | 49/64" | 0.50 |
| DSS-8-8-* | 1/2" | 7/8" | 1.65 | 1.25 | 1/2" | 0.41 | 2.22 | 2.62 | 1 1/16" | 15/16" | 49/64" | 0.50 |

* Add Suffix "SS" for 316 Stainless Steel or "B" for Brass.

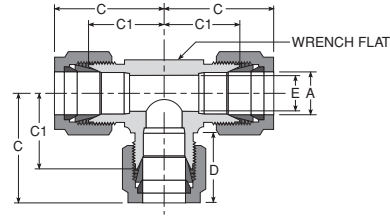
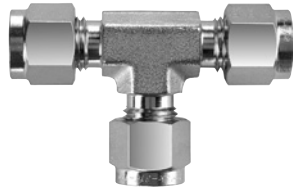
BULKHEAD UNION



| PART No. | A Tube OD | Hex Tube Nut | D1 | L1 | E Min Orifice | F | D | L OAL | Hex Body | Panel Hole Drill Size | Max Panel Thickness |
|----------|--------------|-----------------|------|------|------------------|------|------|----------|-------------|--------------------------|------------------------|
| DSU-2-* | 1/8" | 7/16" | 1.23 | 0.97 | 0.09 | 1.50 | 0.60 | 2.02 | 1/2" | 21/64" | 0.50 |
| DSU-3-* | 3/16" | 1/2" | 1.27 | 1.00 | 0.12 | 1.59 | 0.63 | 2.11 | 9/16" | 25/64" | 0.50 |
| DSU-4-* | 1/4" | 9/16" | 1.32 | 1.03 | 0.19 | 1.69 | 0.70 | 2.27 | 5/8" | 29/64" | 0.40 |
| DSU-5-* | 5/16" | 5/8" | 1.42 | 1.12 | 0.25 | 1.81 | 0.73 | 2.39 | 11/16" | 33/64" | 0.43 |
| DSU-6-* | 3/8" | 11/16" | 1.46 | 1.16 | 0.28 | 1.88 | 0.76 | 2.46 | 3/4" | 37/64" | 0.44 |
| DSU-8-* | 1/2" | 7/8" | 1.67 | 1.25 | 0.41 | 2.00 | 0.86 | 2.80 | 15/16" | 49/64" | 0.50 |
| DSU-10-* | 5/8" | 1" | 1.69 | 1.28 | 0.50 | 2.07 | 0.86 | 2.87 | 1 1/16" | 57/64" | 0.50 |
| DSU-12-* | 3/4" | 1 1/8" | 1.87 | 1.47 | 0.63 | 2.31 | 0.86 | 3.11 | 1 3/16" | 1 1/64" | 0.66 |
| DSU-16-* | 1" | 1 1/4" | 2.28 | 1.78 | 0.80 | 2.81 | 1.04 | 3.79 | 1 5/8" | 1 21/64" | 0.75 |

* Add Suffix "SS" for 316 Stainless Steel or "B" for Brass.

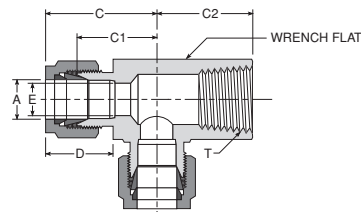
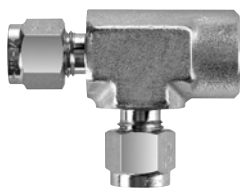
UNION TEE



| PART No. | A Tube OD | Hex Tube Nut | D | E Min Orifice | C | C1 | Wrench Flat |
|----------|--------------|-----------------|------|------------------|------|------|----------------|
| DTA-1-* | 1/16" | 5/16" | 0.44 | 0.05 | 0.71 | 0.55 | 3/8" |
| DTA-2-* | 1/8" | 7/16" | 0.60 | 0.09 | 0.88 | 0.62 | 3/8" |
| DTA-3-* | 3/16" | 1/2" | 0.63 | 0.12 | 1.01 | 0.75 | 1/2" |
| DTA-4-* | 1/4" | 9/16" | 0.70 | 0.19 | 1.07 | 0.77 | 1/2" |
| DTA-5-* | 5/16" | 5/8" | 0.73 | 0.25 | 1.17 | 0.88 | 5/8" |
| DTA-6-* | 3/8" | 11/16" | 0.76 | 0.28 | 1.20 | 0.91 | 5/8" |
| DTA-8-* | 1/2" | 7/8" | 0.86 | 0.41 | 1.40 | 0.99 | 13/16" |
| DTA-10-* | 5/8" | 1" | 0.86 | 0.50 | 1.47 | 1.06 | 15/16" |
| DTA-12-* | 3/4" | 1 1/8" | 0.86 | 0.62 | 1.52 | 1.11 | 1 1/16" |
| DTA-14-* | 7/8" | 1 1/4" | 0.86 | 0.72 | 1.68 | 1.28 | 1 1/4" |
| DTA-16-* | 1" | 1 1/2" | 1.04 | 0.88 | 1.81 | 1.31 | 1 5/16" |

* Add Suffix "SS" for 316 Stainless Steel or "B" for Brass.

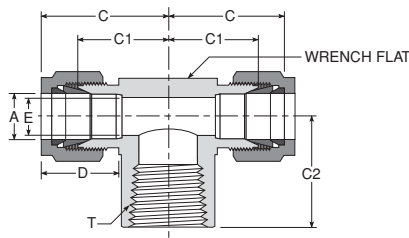
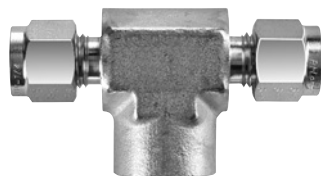
FEMALE NPT RUN TEE



| PART No. | A Tube OD | Hex Tube Nut | D | T NPT | E Min Orifice | C | C1 | C2 | Wrench Flat |
|-------------|--------------|-----------------|------|----------|------------------|------|------|------|----------------|
| DTF-2-2-* | 1/8" | 7/16" | 0.60 | 1/8" | 0.09 | 0.96 | 0.70 | 0.75 | 5/8" |
| DTF-4-2-* | 1/4" | 9/16" | 0.70 | 1/8" | 0.19 | 1.05 | 0.76 | 0.75 | 5/8" |
| DTF-4-4-* | 1/4" | 9/16" | 0.70 | 1/4" | 0.19 | 1.17 | 0.88 | 0.88 | 13/16" |
| DTF-6-4-* | 3/8" | 11/16" | 0.76 | 1/4" | 0.28 | 1.23 | 0.94 | 0.88 | 13/16" |
| DTF-6-6-* | 3/8" | 11/16" | 0.76 | 3/8" | 0.28 | 1.33 | 1.03 | 0.89 | 15/16" |
| DTF-8-6-* | 1/2" | 7/8" | 0.86 | 3/8" | 0.41 | 1.43 | 1.02 | 0.88 | 15/16" |
| DTF-8-8-* | 1/2" | 7/8" | 0.86 | 1/2" | 0.41 | 1.53 | 1.11 | 1.12 | 1 1/16" |
| DTF-12-12-* | 3/4" | 1 1/8" | 0.86 | 3/4" | 0.62 | 1.66 | 1.25 | 1.25 | 1 5/16" |

* Add Suffix "SS" for 316 Stainless Steel or "B" for Brass.

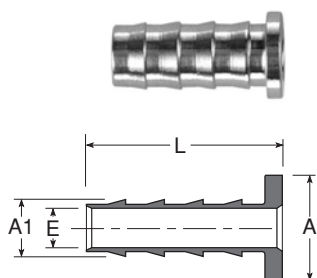
FEMALE NPT BRANCH TEE



| PART No. | A Tube OD | Hex Tube Nut | D | T NPT | E Min Orifice | C | C1 | C2 | Wrench Flat |
|-------------|--------------|-----------------|------|----------|------------------|------|------|------|----------------|
| DTH-2-2-* | 1/8" | 7/16" | 0.60 | 1/8" | 0.09 | 0.96 | 0.70 | 0.75 | 5/8" |
| DTH-4-2-* | 1/4" | 9/16" | 0.70 | 1/8" | 0.19 | 1.05 | 0.76 | 0.75 | 5/8" |
| DTH-4-4-* | 1/4" | 9/16" | 0.70 | 1/4" | 0.19 | 1.17 | 0.88 | 0.88 | 13/16" |
| DTH-6-4-* | 3/8" | 11/16" | 0.76 | 1/4" | 0.28 | 1.23 | 0.94 | 0.88 | 13/16" |
| DTH-6-6-* | 3/8" | 11/16" | 0.76 | 3/8" | 0.28 | 1.32 | 1.02 | 0.88 | 15/16" |
| DTH-8-4-* | 1/2" | 7/8" | 0.86 | 1/4" | 0.41 | 1.40 | 0.99 | 0.88 | 13/16" |
| DTH-8-6-* | 1/2" | 7/8" | 0.86 | 3/8" | 0.41 | 1.43 | 1.02 | 0.88 | 15/16" |
| DTH-8-8-* | 1/2" | 7/8" | 0.86 | 1/2" | 0.41 | 1.53 | 1.12 | 1.12 | 11/16" |
| DTH-8-12-* | 1/2" | 7/8" | 0.86 | 3/4" | 0.41 | 1.66 | 1.25 | 1.25 | 15/16" |
| DTH-10-8-* | 5/8" | 1" | 0.86 | 1/2" | 0.50 | 1.52 | 1.12 | 1.12 | 11/16" |
| DTH-12-12-* | 3/4" | 1 1/8" | 0.86 | 3/4" | 0.62 | 1.66 | 1.25 | 1.25 | 15/16" |
| DTH-14-12-* | 7/8" | 1 1/4" | 0.86 | 3/4" | 0.72 | 1.68 | 1.28 | 1.25 | 15/16" |

* Add Suffix "SS" for 316 Stainless Steel or "B" for Brass.

TUBE INSERT

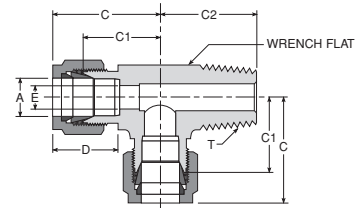
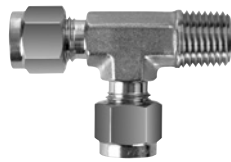


Used with soft polymer tubing

| PART No. | A Tube OD | A1 Tube ID | E Min Orifice | L OAL |
|-------------|--------------|---------------|------------------|----------|
| DTI-3-2-* | 3/16" | 1/8" | 0.09 | 0.47 |
| DTI-4-2-* | 1/4" | 1/8" | 0.09 | 0.47 |
| DTI-4-3-* | 1/4" | 3/16" | 0.14 | 0.47 |
| DTI-5-4-* | 5/16" | 1/4" | 0.12 | 0.56 |
| DTI-6-3-* | 3/8" | 3/16" | 0.12 | 0.56 |
| DTI-6-4-* | 3/8" | 1/4" | 0.19 | 0.56 |
| DTI-8-6-* | 1/2" | 3/8" | 0.31 | 0.75 |
| DTI-10-8-* | 5/8" | 1/2" | 0.44 | 0.86 |
| DTI-16-12-* | 1" | 3/4" | 0.69 | 0.94 |

* Add Suffix "SS" for 316 Stainless Steel or "B" for Brass.

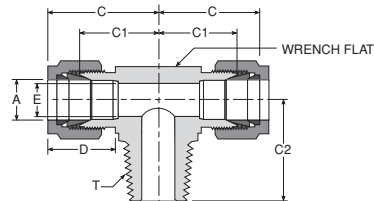
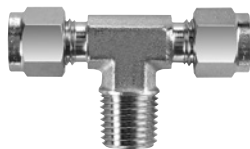
MALE NPT RUN TEE



| PART No. | A Tube OD | Hex Tube Nut | D | T NPT | E Min Orifice | C | C1 | C2 | Wrench Flat |
|-------------|--------------|-----------------|------|----------|------------------|------|------|------|----------------|
| DTK-2-2-* | 1/8" | 7/16" | 0.60 | 1/8" | 0.09 | 0.93 | 0.67 | 0.72 | 7/16" |
| DTK-2-4-* | 1/8" | 7/16" | 0.60 | 1/4" | 0.09 | 0.97 | 0.71 | 0.98 | 1/2" |
| DTK-3-2-* | 3/16" | 1/2" | 0.63 | 1/8" | 0.12 | 1.01 | 0.75 | 0.74 | 1/2" |
| DTK-4-2-* | 1/4" | 9/16" | 0.70 | 1/8" | 0.19 | 1.07 | 0.78 | 0.74 | 1/2" |
| DTK-4-4-* | 1/4" | 9/16" | 0.70 | 1/4" | 0.19 | 1.07 | 0.78 | 0.93 | 1/2" |
| DTK-4-6-* | 1/4" | 9/16" | 0.70 | 3/8" | 0.19 | 1.18 | 0.89 | 1.12 | 5/8" |
| DTK-5-2-* | 5/16" | 5/8" | 0.73 | 1/8" | 0.25 | 1.17 | 0.88 | 0.82 | 5/8" |
| DTK-5-4-* | 5/16" | 5/8" | 0.73 | 1/4" | 0.25 | 1.18 | 0.88 | 1.00 | 5/8" |
| DTK-6-4-* | 3/8" | 11/16" | 0.76 | 1/4" | 0.28 | 1.20 | 0.91 | 1.00 | 5/8" |
| DTK-6-6-* | 3/8" | 11/16" | 0.76 | 3/8" | 0.28 | 1.24 | 0.94 | 1.11 | 11/16" |
| DTK-8-6-* | 1/2" | 7/8" | 0.86 | 3/8" | 0.41 | 1.40 | 0.98 | 1.09 | 13/16" |
| DTK-8-8-* | 1/2" | 7/8" | 0.86 | 1/2" | 0.41 | 1.43 | 1.20 | 1.31 | 13/16" |
| DTK-10-8-* | 5/8" | 1" | 0.86 | 1/2" | 0.50 | 1.48 | 1.06 | 1.35 | 15/16" |
| DTK-12-12-* | 3/4" | 1 1/8" | 0.86 | 3/4" | 0.62 | 1.52 | 1.11 | 1.41 | 1 1/4" |
| DTK-14-12-* | 7/8" | 1 1/4" | 0.86 | 3/4" | 0.72 | 1.68 | 1.28 | 1.65 | 1 5/16" |

* Add Suffix "SS" for 316 Stainless Steel or "B" for Brass.

MALE NPT BRANCH TEE

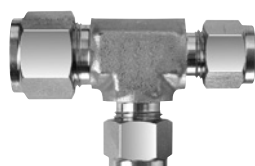


| PART No. | A Tube OD | Hex Tube Nut | D | T NPT | E Min Orifice | C | C1 | C2 | Wrench Flat |
|-------------|--------------|-----------------|------|----------|------------------|------|------|------|----------------|
| DTN-2-2-* | 1/8" | 7/16" | 0.60 | 1/8" | 0.09 | 0.93 | 0.67 | 0.72 | 7/16" |
| DTN-2-4-* | 1/8" | 7/16" | 0.60 | 1/4" | 0.09 | 0.97 | 0.71 | 0.93 | 1/2" |
| DTN-3-2-* | 3/16" | 1/2" | 0.63 | 1/8" | 0.12 | 1.00 | 0.75 | 0.75 | 1/2" |
| DTN-4-2-* | 1/4" | 9/16" | 0.70 | 1/8" | 0.19 | 1.07 | 0.78 | 0.75 | 1/2" |
| DTN-4-4-* | 1/4" | 9/16" | 0.70 | 1/4" | 0.19 | 1.07 | 0.78 | 0.93 | 1/2" |
| DTN-4-8-* | 1/4" | 9/16" | 0.70 | 1/2" | 0.19 | 1.26 | 0.96 | 1.32 | 13/16" |
| DTN-5-2-* | 5/16" | 5/8" | 0.73 | 1/8" | 0.19 | 1.17 | 0.88 | 0.82 | 5/8" |
| DTN-5-4-* | 5/16" | 5/8" | 0.73 | 1/4" | 0.25 | 1.18 | 0.88 | 1.00 | 5/8" |
| DTN-6-4-* | 3/8" | 11/16" | 0.76 | 1/4" | 0.28 | 1.20 | 0.91 | 1.00 | 5/8" |
| DTN-6-6-* | 3/8" | 11/16" | 0.76 | 3/8" | 0.28 | 1.20 | 0.94 | 1.11 | 11/16" |
| DTN-8-6-* | 1/2" | 7/8" | 0.86 | 3/8" | 0.41 | 1.40 | 0.98 | 1.09 | 13/16" |
| DTN-8-8-* | 1/2" | 7/8" | 0.86 | 1/2" | 0.41 | 1.43 | 1.02 | 1.31 | 13/16" |
| DTN-8-12-* | 1/2" | 7/8" | 0.86 | 3/4" | 0.41 | 1.52 | 1.11 | 1.40 | 1 1/16" |
| DTN-10-8-* | 5/8" | 1" | 0.86 | 1/2" | 0.50 | 1.47 | 1.06 | 1.34 | 15/16" |
| DTN-12-12-* | 3/4" | 1 1/8" | 0.86 | 3/4" | 0.62 | 1.52 | 1.11 | 1.40 | 1 1/16" |
| DTN-14-12-* | 7/8" | 1 1/4" | 0.86 | 3/4" | 0.72 | 1.68 | 1.28 | 1.65 | 1 1/4" |

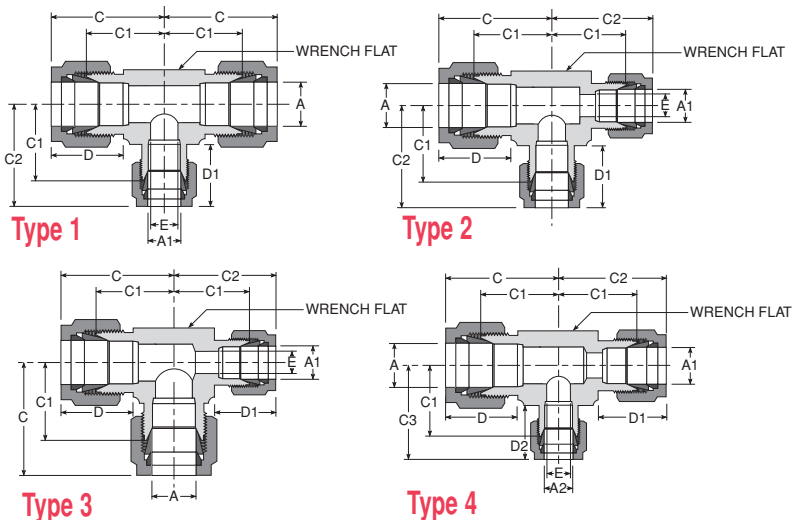
* Add Suffix "SS" for 316 Stainless Steel or "B" for Brass.

Dimensions are provided in inches and are for reference only, subject to change. Dimensions shown are with the nut in the finger-tight position.

REDUCING UNION TEE



(Type 2 Shown)



TYPE 1

| PART No. | A Tube OD | Hex Tube Nut | D | E Min Orifice | A1 Tube OD | Hex 1 Tube Nut | D1 | C | C1 | C2 | Wrench Flat |
|----------------|--------------|-----------------|------|------------------|---------------|-------------------|------|------|------|------|----------------|
| DTR-6-6-4-* | 3/8" | 11/16" | 0.76 | 0.19 | 1/4" | 9/16" | 0.70 | 1.20 | 0.91 | 1.20 | 5/8" |
| DTR-8-8-4-* | 1/2" | 7/8" | 0.86 | 0.19 | 1/4" | 9/16" | 0.70 | 1.39 | 0.98 | 1.28 | 13/16" |
| DTR-8-8-6-* | 1/2" | 7/8" | 0.86 | 0.28 | 3/8" | 11/16" | 0.76 | 1.39 | 0.98 | 1.28 | 13/16" |
| DTR-10-10-6-* | 5/8" | 1" | 0.86 | 0.28 | 3/8" | 11/16" | 0.76 | 1.47 | 1.06 | 1.36 | 15/16" |
| DTR-12-12-6-* | 3/4" | 1 1/8" | 0.86 | 0.28 | 3/8" | 11/16" | 0.76 | 1.52 | 1.11 | 1.41 | 1 1/16" |
| DTR-12-12-8-* | 3/4" | 1 1/8" | 0.86 | 0.41 | 1/2" | 7/8" | 0.86 | 1.52 | 1.11 | 1.52 | 1 1/16" |
| DTR-16-16-6-* | 1" | 1 1/2" | 1.04 | 0.28 | 3/8" | 11/16" | 0.76 | 1.81 | 1.31 | 1.61 | 1 5/16" |
| DTR-16-16-8-* | 1" | 1 1/2" | 1.04 | 0.41 | 1/2" | 7/8" | 0.86 | 1.81 | 1.31 | 1.72 | 1 5/16" |
| DTR-16-16-12-* | 1" | 1 1/2" | 1.04 | 0.62 | 3/4" | 1 1/8" | 0.86 | 1.81 | 1.31 | 1.72 | 1 5/16" |

TYPE 2

| PART No. | A Tube OD | Hex Tube Nut | D | E Min Orifice | A1 Tube OD | Hex 1 Tube Nut | D1 | C | C1 | C2 | Wrench Flat |
|----------------|--------------|-----------------|------|------------------|---------------|-------------------|------|------|------|------|----------------|
| DTR-10-8-8-* | 5/8" | 1" | 0.86 | 0.41 | 1/2" | 7/8" | 0.86 | 1.47 | 1.06 | 1.47 | 15/16" |
| DTR-12-6-6-* | 3/4" | 1 1/8" | 0.86 | 0.28 | 3/8" | 11/16" | 0.76 | 1.52 | 1.11 | 1.41 | 1 1/8" |
| DTR-12-10-10-* | 3/4" | 1 1/8" | 0.86 | 0.50 | 5/8" | 1" | 0.86 | 1.52 | 1.11 | 1.52 | 1 1/8" |

TYPE 3

| PART No. | A Tube OD | Hex Tube Nut | D | E Min Orifice | A1 Tube OD | Hex 1 Tube Nut | D1 | C | C1 | C2 | Wrench Flat |
|----------------|--------------|-----------------|------|------------------|---------------|-------------------|------|------|------|------|----------------|
| DTR-8-6-8-* | 1/2" | 7/8" | 0.86 | 0.28 | 3/8" | 11/16" | 0.76 | 1.39 | 0.98 | 1.28 | 1 1/8" |
| DTR-16-12-16-* | 1" | 1 1/8" | 1.04 | 0.62 | 3/4" | 1 1/8" | 0.86 | 1.81 | 1.31 | 1.72 | 1 5/16" |

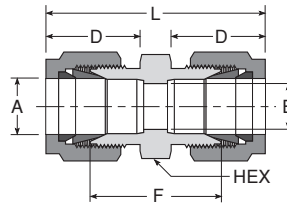
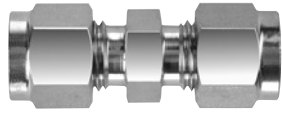
TYPE 4

| PART No. | A Tube OD | Hex Tube Nut | D | E Min | A1 Tube OD | Hex 1 Tube Nut | D1 | A2 Tube OD | Hex 2 Tube Nut | D2 | C | C1 | C2 | C3 | Wrench Flat |
|---------------|--------------|-----------------|------|----------|---------------|-------------------|------|---------------|-------------------|------|------|------|------|------|----------------|
| DTR-10-8-6-* | 5/8" | 1" | 0.86 | 0.28 | 1/2" | 7/8" | 0.86 | 3/8" | 11/16" | 0.76 | 1.47 | 1.06 | 1.11 | 1.47 | 15/16" |
| DTR-12-8-6-* | 3/4" | 1 1/8" | 0.86 | 0.28 | 1/2" | 7/8" | 0.86 | 3/8" | " | 0.76 | 1.52 | 1.11 | 1.06 | 1.52 | 1 1/16" |
| DTR-16-12-6-* | 1" | 1 1/2" | 1.04 | 0.28 | 3/4" | 1 1/8" | 0.86 | 3/8" | 11/16" | 0.76 | 1.81 | 1.31 | 1.11 | 1.72 | 1 5/16" |

* Add Suffix "SS" for 316 Stainless Steel or "B" for Brass.

Dimensions are provided in inches and are for reference only, subject to change. Dimensions shown are with the nut in the finger-tight position.

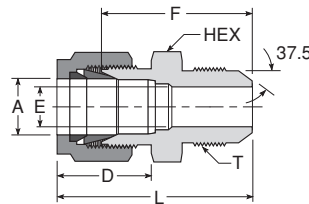
UNION



| PART No. | A Tube OD | Hex Tube Nut | D | E Min Orifice | F | L OAL | Hex Body |
|----------|--------------|-----------------|------|------------------|------|----------|-------------|
| DUA-1-* | 1/16" | 5/16" | 0.44 | 0.05 | 0.69 | 0.99 | 5/16" |
| DUA-2-* | 1/8" | 7/16" | 0.60 | 0.09 | 0.88 | 1.40 | 7/16" |
| DUA-3-* | 3/16" | 1/2" | 0.63 | 0.12 | 0.95 | 1.47 | 7/16" |
| DUA-4-* | 1/4" | 9/16" | 0.70 | 0.19 | 1.03 | 1.61 | 1/2" |
| DUA-5-* | 5/16" | 5/8" | 0.73 | 0.25 | 1.11 | 1.69 | 9/16" |
| DUA-6-* | 3/8" | 11/16" | 0.76 | 0.28 | 1.19 | 1.78 | 5/8" |
| DUA-8-* | 1/2" | 7/8" | 0.86 | 0.41 | 1.22 | 2.02 | 13/16" |
| DUA-10-* | 5/8" | 1" | 0.86 | 0.50 | 1.25 | 2.05 | 15/16" |
| DUA-12-* | 3/4" | 1 1/8" | 0.86 | 0.62 | 1.31 | 2.11 | 1 1/16" |
| DUA-14-* | 7/8" | 1 1/4" | 0.86 | 0.72 | 1.37 | 2.17 | 1 3/16" |
| DUA-16-* | 1" | 1 1/2" | 1.04 | 0.88 | 1.59 | 2.58 | 1 3/16" |

* Add Suffix "SS" for 316 Stainless Steel or "B" for Brass.

AN 37° FLARE UNION

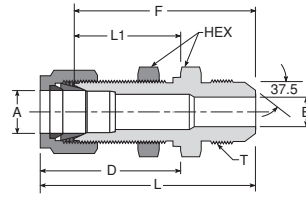
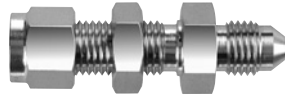


| PART No. | A Tube OD | Hex Tube Nut | D | AN Tube Size | T Straight Thread | E Min Orifice | F | L OAL | Hex Body |
|-------------|--------------|-----------------|------|-----------------|----------------------|------------------|------|----------|-------------|
| DUC-2-2-* | 1/8" | 7/16" | 0.60 | 1/8" | 5/16"-24 | 0.09 | 0.99 | 1.24 | 7/16" |
| DUC-2-4-* | 1/8" | 7/16" | 0.60 | 1/4" | 7/16"-20 | 0.09 | 1.12 | 1.38 | 1/2" |
| DUC-4-4-* | 1/4" | 9/16" | 0.70 | 1/4" | 7/16"-20 | 0.18 | 1.19 | 1.48 | 1/2" |
| DUC-5-5-* | 5/16" | 5/8" | 0.73 | 5/16" | 1/2"-20 | 0.23 | 1.22 | 1.52 | 9/16" |
| DUC-6-4-* | 3/8" | 11/16" | 0.76 | 1/4" | 7/16"-20 | 0.28 | 1.27 | 1.56 | 5/8" |
| DUC-6-6-* | 3/8" | 11/16" | 0.76 | 3/8" | 9/16"-18 | 0.28 | 1.27 | 1.56 | 5/8" |
| DUC-8-8-* | 1/2" | 7/8" | 0.86 | 1/2" | 3/4"-16 | 0.40 | 1.40 | 1.81 | 13/16" |
| DUC-10-8-* | 5/8" | 1" | 0.86 | 1/2" | 3/4"-16 | 0.50 | 1.44 | 1.84 | 15/16" |
| DUC-10-10-* | 5/8" | 1" | 0.86 | 5/8" | 7/8"-14 | 0.48 | 1.54 | 1.95 | 15/16" |
| DUC-12-12* | 3/4" | 1 1/8" | 0.86 | 3/4" | 1 1/16"-12 | 0.61 | 1.74 | 2.14 | 1 1/8" |
| DUC-16-16-* | 1" | 1 1/2" | 1.04 | 1" | 1 5/16"-12 | 0.89 | 1.94 | 2.43 | 1 3/16" |

* Add Suffix "SS" for 316 Stainless Steel or "B" for Brass.

Dimensions are provided in inches and are for reference only, subject to change. Dimensions shown are with the nut in the finger-tight position.

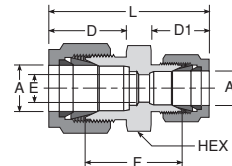
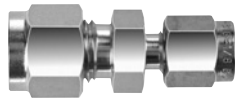
BULKHEAD AN 37° FLARE UNION



| PART No. | A Tube OD | Hex Tube Nut | D | AN Tube Size | T Straight Thread | E Min Orifice | F | L OAL | L1 | Hex Body | Panel Hole Drill Size | Max Panel Thickness |
|-------------|--------------|-----------------|------|-----------------|-------------------------|---------------------|------|----------|------|-------------|--------------------------|------------------------|
| DUE-4-4-* | 1/4" | 17.42 | 0.70 | 1/4" | 7/16"-20 | 0.18 | 1.83 | 2.12 | 1.03 | 5/8" | 29/64" | 0.40 |
| DUE-6-4-* | 3/8" | 19.23 | 0.76 | 1/4" | 7/16"-20 | 0.28 | 1.96 | 2.26 | 1.16 | 3/4" | 37/64" | 0.44 |
| DUE-6-6-* | 3/8" | 19.23 | 0.76 | 3/8" | 9/16"-18 | 0.28 | 1.96 | 2.25 | 1.16 | 3/4" | 37/64" | 0.44 |
| DUE-8-8-* | 1/2" | 21.54 | 0.86 | 1/2" | 3/4"-16 | 0.40 | 2.19 | 2.59 | 1.26 | 15/16" | 49/64" | 0.50 |
| DUE-12-12-* | 3/4" | 21.6 | 0.86 | 3/4" | 1 1/16"-12 | 0.61 | 2.71 | 3.11 | 1.47 | 1 3/16" | 1 1/16" | 0.66 |
| DUE-16-16-* | 1" | 25.4 | 1.04 | 1" | 1 5/16"-12 | 0.88 | 3.16 | 3.64 | 1.78 | 1 5/8" | 1 21/64" | 0.75 |

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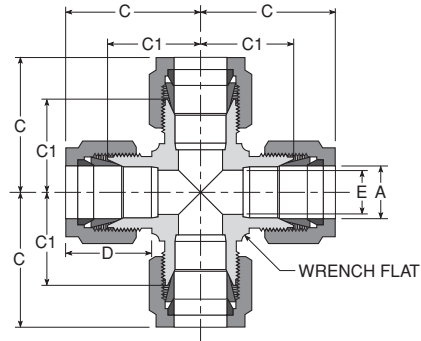
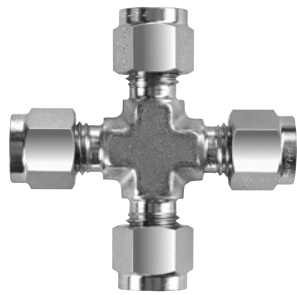
REDUCING UNION



| PART No. | A Tube OD | Hex Tube Nut | D | A1 Tube OD | Hex Tube Nut | D1 | E Min Orifice | F | L OAL | Hex Body |
|-------------|--------------|-----------------|------|---------------|-----------------|------|------------------|------|----------|-------------|
| DUR-2-1-* | 1/8" | 7/16" | 0.60 | 1/16" | 5/16" | 0.44 | 0.05 | 0.81 | 1.22 | 7/16" |
| DUR-3-1-* | 3/16" | 1/2" | 0.63 | 1/16" | 5/16" | 0.44 | 0.05 | 0.86 | 1.27 | 7/16" |
| DUR-3-2-* | 3/16" | 1/2" | 0.63 | 1/8" | 7/16" | 0.60 | 0.09 | 0.92 | 1.44 | 7/16" |
| DUR-4-1-* | 1/4" | 9/16" | 0.70 | 1/16" | 5/16" | 0.44 | 0.05 | 0.91 | 1.35 | 1/2" |
| DUR-4-2-* | 1/4" | 9/16" | 0.70 | 1/8" | 7/16" | 0.60 | 0.09 | 0.97 | 1.52 | 1/2" |
| DUR-4-3-* | 1/4" | 9/16" | 0.70 | 3/16" | 1/2" | 0.63 | 0.12 | 1.00 | 1.55 | 1/2" |
| DUR-5-4-* | 5/16" | 5/8" | 0.73 | 1/4" | 9/16" | 0.70 | 0.19 | 1.08 | 1.66 | 9/16" |
| DUR-6-2-* | 3/8" | 11/16" | 0.76 | 1/8" | 7/16" | 0.60 | 0.09 | 1.06 | 1.61 | 5/8" |
| DUR-6-4-* | 3/8" | 11/16" | 0.76 | 1/4" | 9/16" | 0.70 | 0.19 | 1.12 | 1.70 | 5/8" |
| DUR-6-5-* | 3/8" | 11/16" | 0.76 | 5/16" | 5/8" | 0.73 | 0.25 | 1.16 | 1.74 | 5/8" |
| DUR-8-2-* | 1/2" | 7/8" | 0.86 | 1/8" | 7/16" | 0.60 | 0.09 | 1.13 | 1.78 | 13/16" |
| DUR-8-4-* | 1/2" | 7/8" | 0.86 | 1/4" | 9/16" | 0.70 | 0.19 | 1.16 | 1.85 | 13/16" |
| DUR-8-6-* | 1/2" | 7/8" | 0.86 | 3/8" | 11/16" | 0.76 | 0.28 | 1.22 | 1.91 | 13/16" |
| DUR-10-6-* | 5/8" | 1" | 0.86 | 3/8" | 11/16" | 0.76 | 0.28 | 1.25 | 1.94 | 15/16" |
| DUR-10-8-* | 5/8" | 1" | 0.86 | 1/2" | 7/8" | 0.86 | 0.41 | 1.25 | 2.05 | 15/16" |
| DUR-12-4-* | 3/4" | 1 1/8" | 0.86 | 1/4" | 9/16" | 0.70 | 0.19 | 1.25 | 1.93 | 1 1/16" |
| DUR-12-6-* | 3/4" | 1 1/8" | 0.86 | 3/8" | 11/16" | 0.76 | 0.28 | 1.31 | 2.00 | 1 1/16" |
| DUR-12-8-* | 3/4" | 1 1/8" | 0.86 | 1/2" | 7/8" | 0.86 | 0.41 | 1.31 | 2.11 | 1 1/16" |
| DUR-12-10-* | 3/4" | 1 1/8" | 0.86 | 5/8" | 1" | 0.86 | 0.50 | 1.31 | 2.11 | 1 1/16" |
| DUR-14-12-* | 7/8" | 1 1/4" | 0.86 | 3/4" | 1 1/8" | 0.86 | 0.62 | 1.38 | 2.14 | 1 3/16" |
| DUR-16-8-* | 1" | 1 1/2" | 1.04 | 1/2" | 7/8" | 0.86 | 0.41 | 1.54 | 2.40 | 1 3/8" |
| DUR-16-12-* | 1" | 1 1/2" | 1.04 | 3/4" | 1 1/4" | 0.86 | 0.62 | 1.50 | 2.39 | 1 3/8" |

* Add Suffix "SS" for 316 Stainless Steel or "B" for Brass.

UNION CROSS



| PART No. | A Tube OD | Hex Tube Nut | D | E Min Orifice | C | C1 | Wrench Flat |
|----------|--------------|-----------------|------|------------------|------|------|----------------|
| DXA-2-* | 1/8" | 7/16" | 0.60 | 0.09 | 0.88 | 0.62 | 3/8" |
| DXA-3-* | 3/16" | 1/2" | 0.63 | 0.12 | 1.01 | 0.75 | 1/2" |
| DXA-4-* | 1/4" | 9/16" | 0.70 | 0.19 | 1.07 | 0.78 | 1/2" |
| DXA-5-* | 5/16" | 5/8" | 0.73 | 0.25 | 1.17 | 0.88 | 5/8" |
| DXA-6-* | 3/8" | 11/16" | 0.76 | 0.28 | 1.20 | 0.91 | 5/8" |
| DXA-8-* | 1/2" | 7/8" | 0.86 | 0.41 | 1.40 | 0.98 | 13/16" |
| DXA-10-* | 5/8" | 1" | 0.86 | 0.50 | 1.47 | 1.06 | 15/16" |
| DXA-12-* | 3/4" | 1 1/8" | 0.86 | 0.62 | 1.52 | 1.11 | 1 1/16" |
| DXA-16-* | 1" | 1 1/2" | 1.04 | 0.88 | 1.81 | 1.31 | 1 5/16" |

* Add Suffix "SS" for 316 Stainless Steel or "B" for Brass.

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A GLOBAL CONNECTION



BI-Lok Tube Fittings are manufactured in four State-of-the-art facilities, in two countries, and are marketed worldwide through a network of authorized stocking distributors and representatives.

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For over 75 years, Generant, a leading designer and manufacturer of pressure and flow control products, has built a reputation synonymous with innovative and advanced design, application engineering expertise, quality manufacturing and unparalleled service.

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