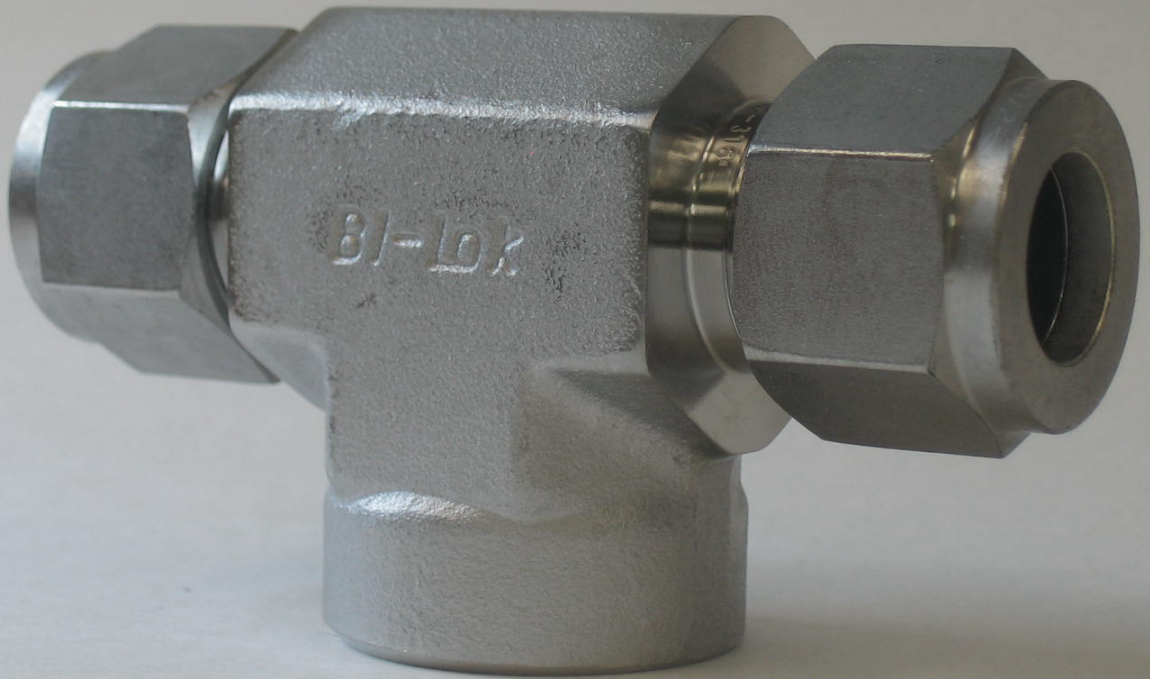




*IHARA
SCIENCE*

BI-Lok[®]




BI-LOK[®] SERIES-D, DOUBLE FERRULE TUBE FITTINGS











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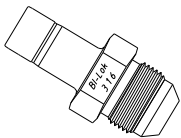

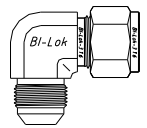
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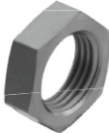
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Introduction

BI-Lok® tube fittings have been serving the industrial high pressure applications for nearly 4 decades and its growth still keeps on going. ~~Now Generant is proud to introduce the high quality BI-Lok® Series D, Double Ferrule Tube Fittings, to your industrial needs.~~ BI-Lok® tube fittings are manufactured by highly skilled workmanship with the state of the art machines, backed up by internationally recognized quality assurance system, ISO9001:2015. Our superior service and on-time delivery with the variety of configuration, from size 1/16" to 1", in stainless and brass, will assure the most suitable fittings for your system, project and application.



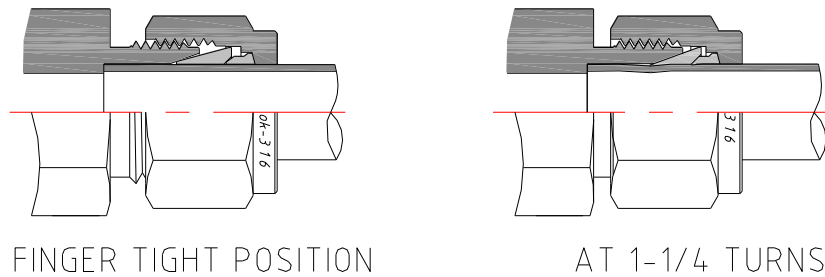
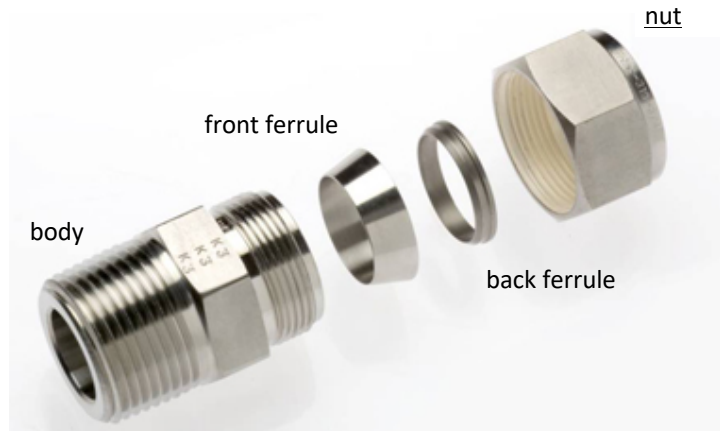
Quality

BI-Lok® tube fittings have been known for their impeccable and consistent quality and craftsmanship. Four production facilities are controlled and maintained by ISO9000 series since its first recognition in 1996. Our unique manufacturing methods and total quality control system gives the customer superior quality yet cost effective tube fittings. Currently BI-Lok® tube fittings are certified to ISO9001:2015 by DNV. Continued engineering research and development with an experience of over 80 years of fitting manufacturing have enabled us to service reliable, safe and clean products to the market. These high quality and cost effective BI-Lok® tube fittings have also been recognized by the other international organizations, such as ABS, TÜV, NK and LR. For the Canadian market, BI-Lok® tube fittings are also registered for respective provinces and territories.



Construction and operation

BI-Lok® Series D, Double Ferrule Tube Fitting, is composed of four precision machined component parts: 1) fitting body, 2) front ferrule, 3) back ferrule, and 4) nut. BI-Lok® Tube Fittings are delivered to you fully assembled and individually bagged. A leak free tight sealing will be achieved when the tubing is inserted and the nut is tightened. 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® high integrity sealing capacity and exceptional service life.



Material specifications

Raw materials, used for BI-Lok® tube fittings, are carefully selected and strictly controlled. All materials are satisfying industrial standard as follows.

Component		316 Stainless Steel	Brass
Fitting body	Hexagon	ASTM A479 S31600	ASTM B16 C36000
	Forged	ASTM A182 F316	ASTM B283 C37700
Front Ferrule		ASTM A479 S31600 ASTM A213 TP316	ASTM B16 C36000
Back Ferrule		ASTM A479 S31600 ASTM A213 TP316	ASTM B16 C36000
Nut		ASTM A479 S31600	ASTM B16 C36000

Heat code traceability

316 stainless steel BI-Lok® fitting bodies and nuts are traceable to the mill, which produces the specified materials per our specifications, by the heat code stamped on the fitting bodies and nuts. Simply contact our customer service and the material test report (MTR) will be readily available for your application and/or project. All other materials, upon request, can be supplied with a certificate of compliance.

Interchangeability and gageability

BI-Lok® Series-D, Double Ferrule Tube Fittings, are manufactured to be completely component intermixable with the ¹Swagelok® tube fittings and ²Parker A-Lok® 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® tube fittings are also fully compatible for use with Swagelok® brand gap inspection gages.

¹Swagelok® is a registered trade mark of the Swagelok Company

²A-Lok® is a registered trade mark of the Parker Hannifin Corporation

Tubing selection

Selecting an appropriate tubing for BI-Lok® tube fittings is critical in order fully and safely to perform and function the system. System pressure, media, flow and operating temperature must be carefully considered. The fitting material and tubing materials should always be the same. It is also important that the tubing, in order to achieve proper fitting make-up, should not be harder than the fitting body material.

Recommended tubing, scratch free, straight, no burrs	
BI-Lok® 316 stainless steel tube fittings	ASTM A269 – fully annealed seamless or welded ASTM A213 – fully annealed seamless or welded ASTM A249 – fully annealed seamless or welded maximum hardness – Rockwell B90
BI-Lok® brass tube fittings	ASTM B75 – seamless or soft annealed, temper 060 ASTM B88 – Type K or L (water tubing)

! Use of copper tubing for stainless steel tube fittings is not recommended.

! Use of stainless steel tubing for brass tube fittings is not recommended.

Pressure rating

The pressure rating of the fitting assembly is a direct function of the tubing selected. Proper tube selection is important and the ultimate responsibility of the system designer/user. The tables listed on page 8 provide the allowable pressure rating (APR) of a variety of commonly used tube sizes and materials.

STAINLESS STEEL TUBING																	PSI (MPa)
Tube OD in (mm)	Wall Thickness inch (mm)																
	0.010 (0.25)	0.012 (0.31)	0.014 (0.36)	0.016 (0.41)	0.020 (0.51)	0.028 (0.71)	0.035 (0.89)	0.039 (1.00)	0.049 (1.25)	0.059 (1.50)	0.065 (1.65)	0.079 (2.00)	0.083 (2.11)	0.095 (2.41)	0.098 (2.50)	0.109 (2.77)	0.120 (3.05)
1/16 (1.59)	5600 (38.6)	6800 (46.9)	8100 (55.8)	9400 (64.8)	12000 (82.7)												
1/8 (3.18)						8500 (58.6)	10900 (75.2)	12000 (82.7)									
3/16 (4.76)						5400 (37.2)	7000 (48.3)	8000 (55.2)	10200 (70.3)								
1/4 (6.35)						4000 (27.6)	5100 (35.2)	5800 (40.0)	7500 (51.7)	10200 (70.3)	10230 (70.6)						
5/16 (7.94)							4000 (27.6)	4500 (31.0)	5800 (40.0)	7200 (49.6)	8000 (55.2)						
3/8 (9.53)							3300 (22.8)	3700 (25.5)	4800 (27.6)	5900 (40.7)	6500 (44.8)						
1/2 (12.7)							2600 (17.9)	2900 (20.0)	3700 (25.5)	4500 (31.0)	5100 (35.2)	6300 (43.4)	6700 (46.2)				
5/8 (15.88)									2900 (20.0)	3600 (24.8)	4000 (27.6)	4900 (33.8)	5200 (35.9)	6000 (41.4)	6300 (43.4)		
3/4 (19.05)									2400 (16.5)	2900 (20.0)	3300 (22.8)	4000 (27.6)	4200 (29.0)	4900 (33.8)	5100 (35.2)	5800 (40.0)	
7/8 (22.23)									2000 (13.8)	2500 (17.2)	2800 (19.3)	3400 (23.4)	3600 (24.8)	4200 (29.0)	4300 (29.6)	4800 (27.6)	
1 (25.4)										2200 (15.2)	2400 (16.5)	2900 (20.0)	3100 (21.4)	3600 (24.8)	3700 (25.5)	4200 (29.0)	4700 (32.5)

COPPER TUBING															PSI (MPa)
Tube OD in (mm)	Wall Thickness, inch (mm)														
	0.01 (0.25)	0.012 (0.30)	0.014 (0.36)	0.016 (0.41)	0.02 (0.51)	0.028 (0.71)	0.035 (0.89)	0.049 (1.24)	0.065 (1.65)	0.083 (2.11)	0.095 (2.41)	0.109 (2.77)	0.120 (3.05)		
1/16 (1.59)	1500 (10.9)	2100 (14.5)	2600 (17.9)	3100 (21.4)	4200 (29.0)			2900 (20.0)							
1/8 (3.18)							2700 (18.6)	3600 (24.8)	5100 (35.1)						
3/16 (4.76)							1800 (12.4)	2300 (15.9)	3400 (23.4)						

1/4 (6.35)						1300 (9.0)	1600 (11.0)	2500 17.2	3500 (24.1)				
5/16 (7.94)							1300 (9.0)	1900 (13.1)	2700 (18.6)				
3/8 (9.53)							1000 (6.9)	1600 (11.0)	2200 (15.1)				
1/2 (12.7)							800 (5.5)	1100 (7.6)	1600 (11.0)	2100 (14.5)			
5/8 (15.88)								900 (6.2)	1200 (8.3)	1600 (11.0)	1900 (13.1)		
3/4 (19.05)								700 (4.8)	1000 (6.9)	1300 (9.0)	1500 (10.3)	1800 (12.4)	
7/8 (22.23)								600 (4.1)	800 (5.5)	1100 (7.6)	1300 (9.0)	1500 (10.3)	
1 (25.4)								500 (3.4)	700 (4.8)	900 (6.2)	1100 (7.6)	1300 (9.0)	1500 (10.3)

Usable temperature

BI-Lok® series D, Double Ferrule Tube Fittings, is designed for the use of various different temperatures. Stainless steel BI-Lok® tube fittings can be used in the temperature range between -320°F and 1110°F (-196°C and 600°C). Brass BI-Lok® tube fittings can be used in the temperature range between -320°F and 392°F (-196°C and 200°C).

! Use of brass BI-Lok® fittings in the environment, containing ammonium, oxygen and high humidity may cause stress corrosion crack. Also, brass BI-Lok® fittings are sensitive to dezincing corrosion in piping system of water with salt or pure water.

Stress factor

Stress factor is used to calculate the maximum allowable working pressures at elevated temperatures. Multiply the maximum allowable working pressure by the stress factor for the tube size and wall thickness from the pressure rating chart.

STRESS FACTORS				
Temperature		304 Stainless Steel	316 Stainless Steel	1 Copper
°F	°C			
-325 - 100	-198 - 38	1.0	1.0	1.0
200	93	1.0	1.0	0.97
400	204	0.93	0.96	0.45
600	316	0.82	0.85	
800	427	0.76	0.79	
1000	537	0.69	0.76	

¹Maximum recommended usable temperature 300°F (150°C).

Thermocouple fittings

BI-Lok® tube fittings are available in thermocouple use (bored through) and a letter Z is affixed on the part number (DCTZ, DCUZ, etc). The maximum allowable working pressure for thermocouple fittings can be found by using a stress factor shown in the table below.

Fitting Size	Stress Factor
1/16 – 1/2 (to and including)	0.75
(above) 1/2 – 3/4 (including)	0.5
(above) 3/4 - 1"	0.25

Pipe end pressure rating

Fittings with both Tube End and NPT/ISO threaded pipe end connections have different pressure ratings. When specifying these types of fittings, please refer to the chart for the maximum allowable pressure ratings. A thread sealant must always be used when using NPT/ISO connections.

PSI (MPa)
PIPE END PRESSURE RATINGS

NPT/ISO size	316 Stainless Steel		Brass	
	Male	Female	Male	Female
1/16	11000 (75.8)	6700 (46.2)	5500 (37.9)	3300 (22.8)
1/8	10000 (68.9)	6500 (44.8)	5000 (34.5)	3200 (22.1)
1/4	8000 (55.2)	6600 (45.5)	4000 (27.6)	3300 (22.8)
3/8	7800 (53.8)	5300 (36.5)	3900 (26.9)	2600 (17.9)
1/2	7700 (53.1)	4900 (33.8)	3800 (26.2)	2400 (16.5)
3/4	7300 (50.3)	4600 (31.7)	3600 (24.8)	2300 (15.9)
1	5300 (36.5)	4400 (30.3)	2600 (17.9)	2200 (15.2)
1-1/4	6000 (41.4)	5000 (34.5)	3000 (20.7)	2500 (17.2)
1-1/2	5000 (34.5)	4600 (31.7)	2500 (17.2)	2300 (15.9)
2	3900 (26.9)	3900 (26.9)	1900 (13.1)	1900 (13.1)

NPT threads per ANSI/ASME B1.20.1
 ISO (R/Rc) threads per ISO7-1, JIS B0203

¹SAE stud end pressure rating

For the ²straight thread connection, refer to the table below for the allowable working pressure.

Thread size	316 stainless steel		PSI (MPa)
	Nonpositional	Positional	
5/16-24	4568 (31.5)	4568 (31.5)	
3/8-24			
7/16-20			
1/2-20			
9/16-18			
3/4-16	3626 (25.0)	3626 (25.0)	
7/8-14			
1-1/16-12			
1-3/16-12	2900 (20.0)	2900 (20.0)	
1-5/16-12			

¹SAE J1926-3

²Part number DCU, DCUZ, DCO, DCF, DLO, DHB and DHO

¹AN end pressure rating

For the ²straight thread connection, refer to the table below for the allowable working pressure.

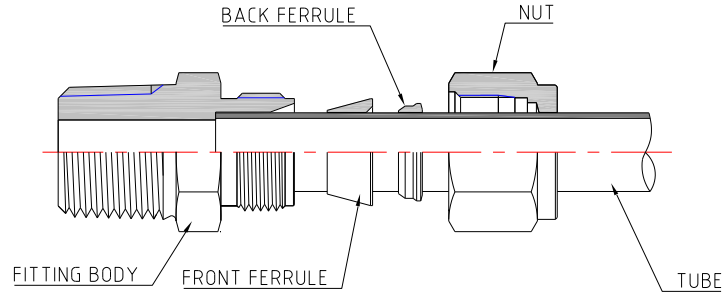
Thread size	316 stainless steel	Brass	PSI (MPa)
	5/16-24	3000 (20.7)	
7/16-20			
1/2-20			
9/16-18			
3/4-16			
7/8-14			
1-1/16-12			

¹SAE AS5174

²Part number DAN, DHN, DLC, DUC, and DUE

ISO straight threads pressure rating

Figure 1



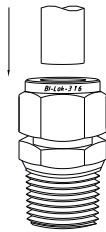
Assembly instructions

1. BI-Lok[®] Tube Fittings are supplied fully assembled and individually bagged, allowing for clean and efficient installation. When the fitting is disassembled, re-assemble the components in order as shown in Figure 1.

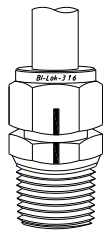
! Incorrect component assembly order not only the fitting will not be assembled properly but also causing a major malfunction.
! Keep fittings in the plastic bag until ready for assembly. Dirt, and foreign objects inside of the fitting will cause galling.

2. Prior to the installation, make sure the end of the tube is cut perpendicular without burrs. Use a deburr tool to smoothen out both inside and outside to make sure the burrs are removed.

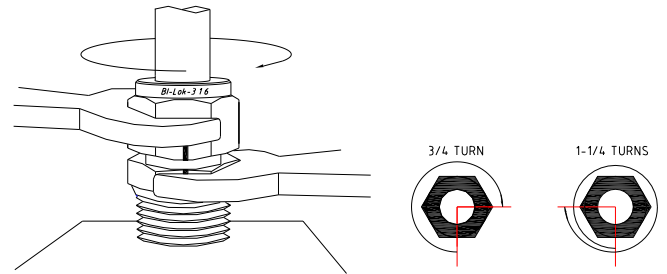
3. Insert the tube into the fitting body until it bottoms on the step inside.



4. Rotate the nut with fingers as much as possible until it stops. This position is called Finger Tight Position (FTP). Mark the nut and fitting body with a marker at the 6 o'clock position.



5. Secure the fitting body with a wrench and tighten the nut with another wrench. Number of turns of the nut will be determined by the sizes. See the table shown below.



Fitting size	All fittings except Plug and Port Connector	Plug, Port Connector
1/16 – 3/16	3/4 turns (at 3 o'clock position) from FTP	1/8 turn from FTP (between 7 and 8 o'clock position)
1/4 – 1"	1-1/4 turns from FTP (at 9 o'clock position, pass 6 o'clock position)	1/4 turn from FTP (at 9 o'clock position)

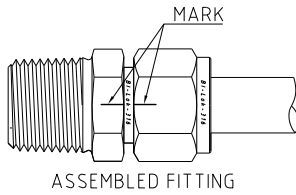
5. Now assembly is complete. Since the tightening torque is affected by the various factors such as tube OD, machined tolerances, tube hardness and etc., we do not recommend measuring torque as a guideline. A specified turn on the nut will enable the fitting to be assembled completely. BI-Lok[®] Series D, Double Ferrule Tube Fittings, however, is designed to lower the tightening torque for easier assembly.

! Over-tightening the fitting assembly may cause a fitting malfunction. Follow a proper assembly instruction

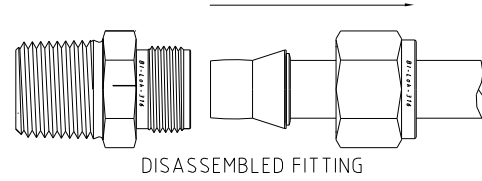
Reassembly instruction

BI-Lok® Series-D, Double Ferrule Tube Fittings, is designed to be re-used for many times. By following the disassembly and reassembly procedures, the fittings are secured and functional even after 25 times of repeated make-ups.

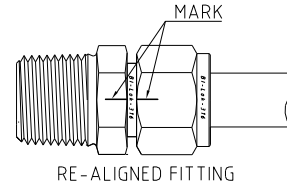
1. Before disassemble the fitting, put a mark with a marker on the nut and body.



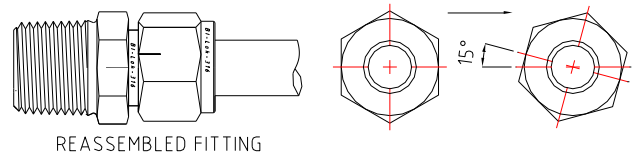
2. Using a wrench, loosen the nut and pull the tube.



3. Re-insert the tube with fixed ferrules until the ferrule settles on the fittings body. Slide back the nut and tighten the nut so that the mark will be re-aligned.

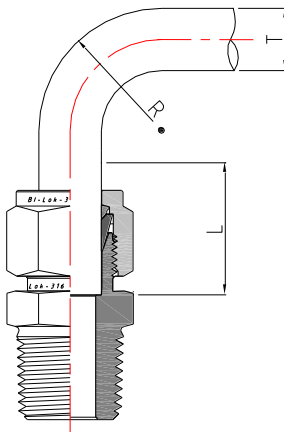


4. Tighten the nut with a wrench, 15° from the aligned position. Now reassembly is complete. Repeat the same procedure for further re-makeup.



Tube measuring and fitting

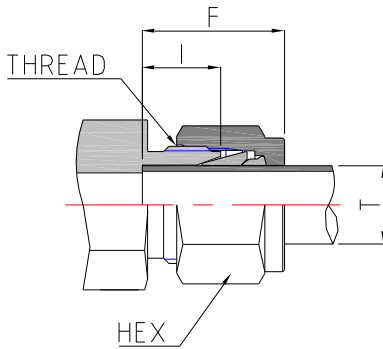
When measuring and bending tubing, it is important to be aware of two critical measurements. The first being the tube insertion depth (reference dimension F) into the fitting assembly which must be considered in the determining the overall length of tube required. The other being the minimum length of straight tubing required for a proper tube bend (reference dimension L). Both measurements are dependant on tube OD; see Figure XX for reference purposes.



inch (mm)

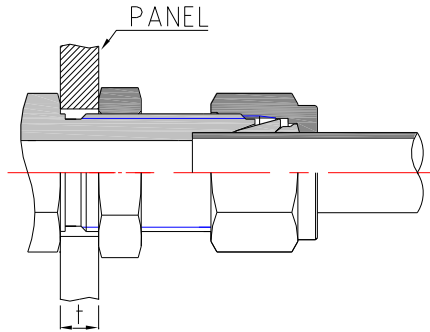
Fitting Size	T Tube OD	L
1	1/16 (1.59)	1/2 (12)
2	1/8 (3.18)	23/32 (17)
3	3/16 (4.76)	3/4 (17)
4	1/4 (6.35)	13/16 (19)
5	5/16 (7.94)	7/8 (20)
6	3/8 (9.53)	15/16 (21)
8	1/2 (12.7)	1-3/16 (27)
10	5/8 (15.88)	1-1/4 (27)
12	3/4 (19.05)	1-1/4 (28)
14	7/8 (22.23)	1-5/16 (29)
16	1 (25.4)	1-1/2 (34)

Tube End Dimensions



Fitting Size	F	I	Hex	Thread
1/16 (1.59)	0.35 (8.9)	0.19 (4.9)	5/16	10-32
1/8 (3.18)	0.51 (13.0)	0.25 (6.4)	7/16	5/16-20
3/16 (4.76)	0.54 (13.8)	0.28 (7.2)	1/2	3/8-20
1/4 (6.35)	0.61 (15.4)	0.31 (7.9)	9/16	7/16-20
5/16 (7.94)	0.64 (16.3)	0.35 (8.8)	5/8	1/2-20
3/8 (9.53)	0.67 (17.0)	0.37 (9.5)	11/16	9/16-20
1/2 (12.7)	0.91 (23.0)	0.50 (12.7)	7/8	3/4-20
5/8 (15.88)	0.97 (24.6)	0.56 (14.3)	1	7/8-20
3/4 (19.05)	0.97 (24.6)	0.56 (14.3)	1-1/8	1-20
7/8 (22.23)	1.03 (26.1)	0.63 (15.9)	1-1/4	1-1/8-20
1 (25.4)	1.24 (31.6)	0.75 (19.1)	1-1/2	1-5/16-20

Bulkhead Tube End Dimensions

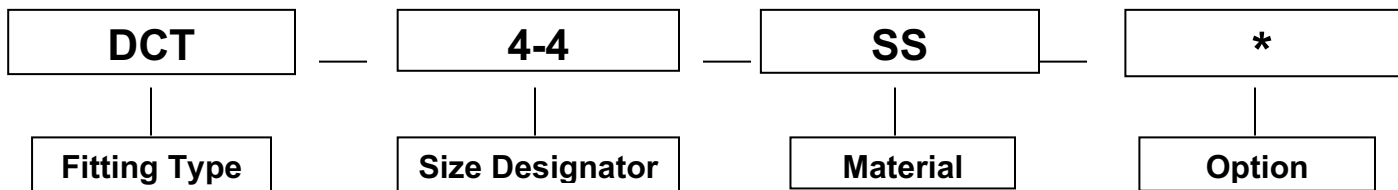


Fitting Size	Panel Hole Dia.	t, Panel Wall Thickness
1/16 (1.59)	0.21 (5.2)	0.12 (3.0)
1/8 (3.18)	0.33 (8.3)	0.50 (12.7)
3/16 (4.76)	0.39 (9.9)	0.50 (12.7)
1/4 (6.35)	0.45 (11.5)	0.40 (10.2)
5/16 (7.94)	0.52 (13.1)	0.43 (10.9)
3/8 (9.53)	0.58 (14.7)	0.44 (11.2)
1/2 (12.7)	0.76 (19.4)	0.50 (12.7)
5/8 (15.88)	0.89 (22.6)	0.50 (12.7)
3/4 (19.05)	1.02 (25.8)	0.66 (16.8)
7/8 (22.23)	1.14 (29.0)	0.77 (19.6)
1 (25.4)	1.33 (33.7)	0.75 (19.1)

ORDERING INFORMATION

How to order

BI-Lok® Tube Fittings are ordered by a part number 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. Part numbers from ¹Swagelok®, Parker ²A-Lok®, SSP ³Duolok®, ⁴Let-Lok®, and Hoke ⁵Gyrolok® can be quickly cross referenced by contacting our customer service department.



Type	Description	Page	End Connection 1	End Connection 2
DAN	AN 37° FLARE UNION	17	TUBE OD	AN 37° FLARE
DAH	HOSE ADAPTER	17	HOSE ID	TUBE ADAPTER
DAT	HOSE ADAPTER NPT/ISO CONNECTION	17	HOSE ID	MALE NPT/ISO
DBA	PLUG	18		TUBE OD
DCA	CAP	18		TUBE OD
DCB	MALE PIPE WELD CONNECTOR	19	TUBE OD	MALE WELD PIPE
DCF	O-RING SEAL MALE CONNECTOR FOR STRAIGHT THREAD	19	TUBE OD	STRAIGHT THREAD
DCG	COPPER GASKET SEAL MALE CONNECTOR		TUBE OD	MALE G THREAD
DCJ	COPPER GASKET SEAL MALE CONNECTOR		TUBE OD	MALE G THREAD
DCM	O-RING SEAL MALE CONNECTOR FOR NPT CONNECTION	20	TUBE OD	MALE NPT
DCC	O-RING SEAL MALE CONNECTOR FOR STRAIGHT THREAD	20	TUBE OD	STRAIGHT THREAD
DCT	MALE CONNECTOR	22-23	TUBE OD	MALE NPT/ISO
DCQ	BONDED SEAL CONNECTOR STRAIGHT THREADS		TUBE OD	MALE G THREAD

DCTZ	THERMOCOUPLE MALE CONNECTOR	23-24	TUBE OD		MALE NPT/ISO
DCU	O-RING SEAL MALE CONNECTOR FOR STRAIGHT THREAD	23	TUBE OD		STRAIGHT THREAD
DCUZ	THERMOCOUPLE O-RING SEAL MALE CONNECTOR FOR STRAIGHT THREAD	24	TUBE OD		STRAIGHT THREAD
DCW	TUBE SOCKET WELD CONNECTOR	24-25	TUBE OD		TUBE WELD
DHA	MALE ADAPTER	25	TUBE ADAPTER		MALE NPT/ISO
DHB	O-RING SEAL MALE ADAPTER	26	TUBE ADAPTER		STRAIGHT THREAD
DHC	FEMALE ADAPTER	26-27	TUBE ADAPTER		FEMALE NPT/ISO
DHJ	COPPER GASKET SEAL MALE ADAPTER		TUBE ADAPTER		MALE G THREAD
DHN	AN ADAPTER	27	TUBE ADAPTER		AN 37° FLARE
DHO	O-RING SEAL MALE ADAPTER FOR STRAIGHT THREAD	27	TUBE ADAPTER		STRAIGHT THREAD
DHQ	BONDED SEAL ADAPTER STRAIGHT THREADS		TUBE ADAPTER		MALE G THREAD
DLA	UNION ELBOW	28		TUBE OD	
DLB	MALE PIPE WELD ELBOW	28	TUBE OD		WELD PIPE
DLC	AN 37° FLARE ELBOW	29	TUBE OD		AN 37° FLARE
DLF	FEMALE ELBOW	29-30	TUBE OD		FEMALE NPT/ISO
DLN	MALE ELBOW	30-31	TUBE OD		MALE NPT/ISO
DLO	POSITIONAL MALE ELBOW	31	TUBE OD		STRAIGHT THREAD
DLR	REDUCING UNION ELBOW	31-32		TUBE OD	
DLW	TUBE SOCKET WELD ELBOW	32	TUBE OD		TUBE WELD
DMA	45° UNION ELBOW	32		TUBE OD	
DMN	45° MALE ELBOW	33	TUBE OD		MALE NPT
DNA	NUT	33		TUBE OD	
DNN	BULKHEAD NUT	33-34			
DOB	BACK FERRULE	34		TUBE OD	
DOF	FRONT FERRULE	34		TUBE OD	
DPC	PORT CONNECTOR	35	TUBE OD		(TUBE OD)
DRE	REDUCER	36-37	TUBE OD		TUBE ADAPTER
DREZ	THERMOCOUPLE REDUCER	37	TUBE OD		TUBE ADAPTER
DSA	FEMALE CONNECTOR	37-38	TUBE OD		FEMALE NPT/ISO
DSC	BULKHEAD MALE CONNECTOR	38	TUBE OD		MALE NPT/ISO
DSCZ	THERMOCOUPLE BULKHEAD MALE CONNECTOR	39	TUBE OD		MALE NPT/ISO
DSE	BULKHEAD REDUCER	39	TUBE OD		TUBE ADAPTER
DSL	BULKHEAD UNION ELBOW	40		TUBE OD	
DSLRL	BULKHEAD REDUCING UNION ELBOW	40-41	TUBE OD		TUBE OD
DSS	BULKHEAD FEMALE CONNECTOR	41	TUBE OD		FEMALE NPT/ISO
DSU	BULKHEAD UNION	42		TUBE OD	
DSUZ	THERMOCOUPLE BULKHEAD UNION	42		TUBE OD	
DSUR	REDUCING BULKHEAD UNION	43	TUBE OD		TUBE OD
DTA	UNION TEE	44		TUBE OD	
DTAZ	THERMOCOUPLE UNION TEE	44		TUBE OD	
DTF	FEMALE RUN TEE	45	TUBE OD		FEMALE NPT/ISO
DTH	FEMALE BRANCH TEE	45-46	TUBE OD		FEMALE NPT/ISO
DTI	TUBE INSERT	46	TUBE OD	TUBE ID	TUBE ID
DTK	MALE RUN TEE	47	TUBE OD		MALE NPT/ISO
DTN	MALE BRANCH TEE	47-48	TUBE OD		MALE NPT/ISO
DTR	REDUCING UNION TEE	48-50	TUBE OD	TUBE OD	TUBE OD
DUA	UNION	51		TUBE OD	
DUAZ	THERMOCOUPLE UNION	51		TUBE OD	
DUC	AN 37° FLARE UNION	52	TUBE OD		AN 37° FLARE
DUE	BULKHEAD AN 37° FLARE UNION	52-53	TUBE OD		AN 37° FLARE
DUR	REDUCING UNION	53	TUBE OD		TUBE OD
DURZ	THERMOCOUPLE REDUCING UNION	53	TUBE OD		TUBE OD
DXA	UNION CROSS	54		Tube OD	

¹Swagelok® is a registered trade mark of the Swagelok Company

²A-Lok® is a registered trade mark of the Parker Hannifin Corporation

³Duolok® is a registered trade mark of the SSP Fitting Corp.

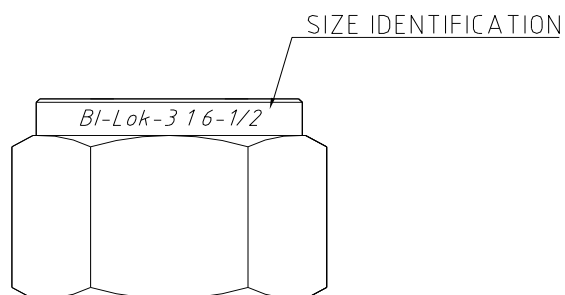
⁴Let-Lok® is a registered trademark of Ham-Let Valves and Fittings

⁵Gyrolok® is a registered trade mark of the Hoke Incorporated.

Fitting sizes (tube end)

BI-Lok® Tube Fittings are available from 1/16" to 1" tube OD. Fractional tube sizes are used in number 1 through 16 as shown in chart below. These numbers are used for the primary size designator. BI-Lok® nut is stamped with a tube size in fraction for easier size identification.

Tube Size	BI-Lok® Part Size
1/16" (1.59)	1
1/8" (3.18)	2
3/16" (4.76)	3
1/4" (6.35)	4
5/16" (7.94)	5
3/8" (9.53)	6
1/2" (12.7)	8
5/8" (15.88)	10



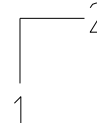
3/4" (19.05)	12
7/8" (22.23)	14
1" (25.4)	16


Union

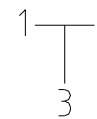
BI-Lok® Union comes with a few different designs and the tube ends may be different in sizes. They are called reducing unions and made from straight, elbow and tees. When ordering, follow the size designators as shown below.

1 — 2 Reducing Union (straight), larger end 1, smaller end 2, example DUR-6-4-SS,

1 ⊥ 2 Reducing Union (bulkhead), short end 1, long end 2, example DSUR-6-4-SS

 Reducing Union Elbow, larger end 1, smaller end 2, example DLR-6-4-SS

 Reducing Union Elbow (bulkhead), short end 1, long end 2, example DSLR-6-4-SS

 Reducing Union Tee, from left to right, then to branch, example DTR-8-6-4-SS

Fitting sizes (pipe thread end)

Connecting pipe end threads are also used for the size designator. Pipe threads are available from size 1/16" to 1".

Pipe Thread Size	BI-Lok® Part Size
1/16"	1
1/8"	2
1/4"	4
3/8"	6
1/2"	8
3/4"	12
1"	16

Pipe threads are both NPT (National Pipe Threads, ANSI/ASME B1.20.1) and ISO Pipe Threads (ISO7-1, JIS B0203). For ISO threads, add R before the part size. For example, 1/4-18 ISO pipe threads R4.

Fitting sizes (straight thread end)

Connecting straight thread ends are for another size designator. See table below. Straight threads are per ASME B1.1.

Straight Thread Size	BI-Lok® Part Size
5/16-24	2
3/8-24	3
7/16-20	4
1/2-20	5
9/16-18	6
3/4-16	8
7/8-14	10
1-1/16-12	12

1-3/16-12	14
1-5/16-12	16

Material

Add SS for 316 stainless steel or B for brass after the size designator.

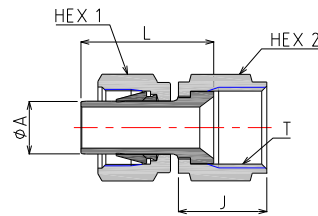
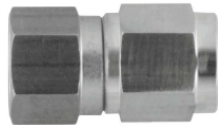
Option

BI-Lok® front ferrule and back ferrules are available in ¹Teflon® or Nylon. Add T for Teflon or N for Nylon. If the fittings are to be used for oxygen service, X must be added. We offer special cleaning and packaging for oxygen service BI-Lok® Tube Fittings. Please contact our customer service for more details.

! Oxygen is a hazardous material if handled incorrectly. Special care must be given and the design and safety are the responsibility of oxygen system users.

¹Teflon® is a registered trade mark of the DuPont.

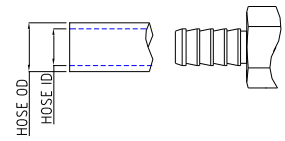
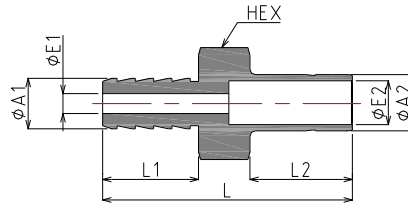
**DAN
AN 37° FLARE ADAPTER**



Part No.	ØA Tube OD	Hex 1	AN	L	J	Hex 2	T (UNF)
DAN-2-2-*	1/8 (3.18)	7/16	1/8	0.77 (19.6)	0.54 (13.8)	3/8	5/16-24
DAN-2-4-*	1/8 (3.18)	7/16	1/4	0.80 (20.2)	0.62 (15.7)	9/16	7/16-20
DAN-4-4-*	1/4 (6.35)	9/16	1/4	0.88 (22.3)	0.62 (15.7)	9/16	7/16-20
DAN-6-6-*	3/8 (9.53)	11/16	3/8	1.00 (25.3)	0.72 (18.3)	11/16	9/16-18
DAN-8-8-*	1/2 (12.7)	7/8	1/2	1.26 (32.0)	0.84 (21.3)	7/8	3/4-16
DAN-12-12-*	3/4 (19.05)	1-1/8	3/4	1.41 (35.9)	1.02 (25.9)	1-1/4	1-1/16-12
DAN-16-16-*	1 (25.4)	1-1/2	1	1.71 (43.5)	1.12 (28.4)	1-1/2	1-5/16-12

*Add suffix SS for 316 stainless steel or B for brass.

**DAH
Hose Adapter**

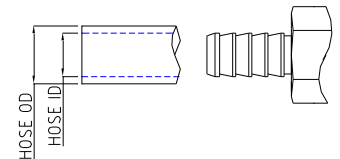
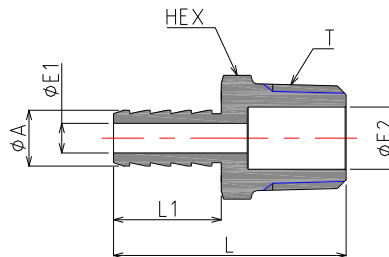


inch (mm)

Part No.	$\phi A1$ Hose ID	$\phi A2$ Tube OD	L	$\phi E1$	$\phi E2$	L1	L2	Hex
DAH-4-4-*	1/4 (6.35)	1/4 (6.35)	1.83 (46.5)	0.19 (4.8)	0.18 (4.6)	0.79 (20.0)	0.65 (16.5)	7/16
DAH-5-4-*	5/16 (7.94)	1/4 (6.35)	1.91 (48.5)	0.19 (4.8)	0.19 (4.8)	0.87 (22.0)	0.65 (16.5)	7/16
DAH-6-4-*	3/8 (9.53)	1/4 (6.35)	1.93 (49.0)	0.30 (7.6)	0.18 (4.6)	0.87 (22.0)	0.65 (16.5)	1/2
DAH-6-6-*	3/8 (9.53)	3/8 (9.53)	1.99 (50.5)	0.30 (7.6)	0.28 (7.1)	0.87 (22.0)	0.71 (18.0)	9/16
DAH-8-6-*	1/2 (12.7)	3/8 (9.53)	2.05 (52.0)	0.37 (9.5)	0.28 (7.1)	0.94 (24.0)	0.71 (18.0)	11/16
DAH-8-8-*	1/2 (12.7)	1/2 (12.7)	2.26 (57.5)	0.37 (9.5)	0.37 (9.5)	0.94 (24.0)	0.93 (23.5)	11/16
DAH-12-12-*	3/4 (19.05)	3/4 (19.05)	2.44 (62.0)	0.59 (15.0)	0.59 (15.0)	1.06 (27.0)	0.99 (25.2)	1-1/16

*Add suffix SS for 316 stainless steel or B for brass. *Use of hose clamp is recommended.

DAT
Hose Adapter NPT/ISO Connection

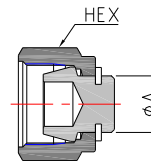


inch (mm)

Part No.	ϕA Hose ID	$\phi E1$	$\phi E2$	L	L1	T (NPT/ISO)	Hex
DAT-2-2-*	1/8 (3.18)	0.08 (2.0)	0.19 (4.8)	1.08 (27.4)	0.40 (10.1)	1/8-27	7/16
DAT-3-2-*	3/16 (4.76)	0.12 (3.0)	0.12 (3.0)	1.27 (32.3)	0.59 (15.0)	1/8-27	7/16
DAT-4-2-*	1/4 (6.35)	0.19 (4.8)	0.19 (4.8)	1.47 (37.3)	0.79 (20.0)	1/8-27	7/16
DAT-6-6-*	3/8 (9.53)	0.30 (7.6)	0.30 (7.6)	1.74 (44.2)	0.87 (22.0)	3/8-18	11/16
DAT-8-6-*	1/2 (12.7)	0.37 (9.5)	0.37 (9.5)	1.81 (46.0)	0.94 (24.0)	3/8-18	11/16

*Add suffix SS for 316 stainless steel or B for brass. *Use of hose clamp is recommended. *ISO thread is available. Add R before thread size. Example, DAT-4-R2-SS

DBA
Plug

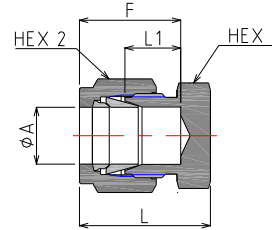


Part No.	ϕA Tube OD	Hex
DBA-1-*	1/16 (1.59)	5/16
DBA-2-*	1/8 (3.18)	7/16
DBA-3-*	3/16 (4.76)	1/2
DBA-4-*	1/4 (6.35)	9/16
DBA-5-*	5/16 (7.94)	5/8
DBA-6-*	3/8 (9.53)	11/16
DBA-8-*	1/2 (12.7)	7/8
DBA-10-*	5/8 (15.88)	1
DBA-12-*	3/4 (19.05)	1-1/8

DBA-14-*	7/8 (22.23)	1-1/4
DBA-16-*	1 (25.4)	1-1/2

*Add suffix SS for 316 stainless steel or B for brass. *Turn 1/8 from FTP for size 3/16 and under, 1/4 turn from FTP for size 1/4 through 1".

DCA
Cap

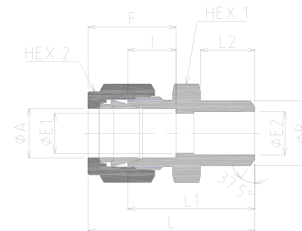


inch (mm)

Part No.	ϕA Tube OD	l	L	L1	F	Hex 1	Hex 2
DCA-1-*	1/16 (1.59)	0.19 (4.9)	0.59 (15.0)	0.43 (11.0)	0.35 (8.9)	5/16	5/16
DCA-2-*	1/8 (3.18)	0.25 (6.4)	0.80 (20.2)	0.53 (13.5)	0.51 (13.0)	7/16	7/16
DCA-3-*	3/16 (4.76)	0.28 (7.2)	0.85 (21.7)	0.59 (15.0)	0.54 (13.8)	7/16	1/2
DCA-4-*	1/4 (6.35)	0.31 (7.9)	0.93 (23.5)	0.63 (16.0)	0.61 (15.4)	1/2	9/16
DCA-5-*	5/16 (7.94)	0.35 (8.8)	0.96 (24.5)	0.67 (17.0)	0.64 (16.3)	9/16	5/8
DCA-6-*	3/8 (9.53)	0.37 (9.5)	1.02 (26.0)	0.73 (18.5)	0.67 (17.0)	5/8	11/16
DCA-8-*	1/2 (12.7)	0.50 (12.7)	1.17 (29.8)	0.77 (19.5)	0.91 (23.0)	13/16	7/8
DCA-10-*	5/8 (15.88)	0.56 (14.3)	1.19 (30.3)	0.79 (20.0)	0.97 (24.6)	15/16	1
DCA-12-*	3/4 (19.05)	0.56 (14.3)	1.25 (31.8)	0.85 (21.5)	0.97 (24.6)	1-1/16	1-1/8
DCA-14-*	7/8 (22.23)	0.63 (15.9)	1.34 (34.1)	0.94 (23.9)	1.03 (26.1)	1-3/16	1-1/4
DCA-16-*	1 (25.4)	0.75 (19.1)	1.52 (38.7)	1.03 (26.1)	1.24 (31.6)	1-3/8	1-1/2

*Add suffix SS for 316 stainless steel or B for brass.

DCB
Male Pipe Weld Connector



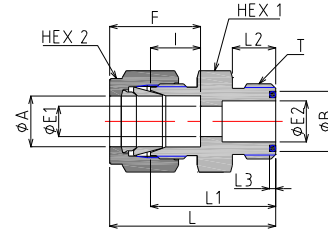
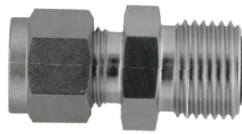
inch (mm)

Part No	ϕA Tube OD	ϕB Pipe Nominal	$\phi E1$	$\phi E2$	L	l	L2	L1	F	Hex 1	Hex 2
DCB-2-2-*	1/8 (3.18)	1/8 (10.3)	0.09 (2.3)	0.22 (5.5)	1.17 (29.8)	0.25 (6.4)	0.38 (9.7)	0.91 (23.1)	0.51 (13.0)	7/16	7/16
DCB-3-2-*	3/16 (4.76)	1/8 (10.3)	0.12 (3.0)	0.22 (5.5)	1.22 (31.1)	0.28 (7.2)	0.38 (9.7)	0.96 (24.4)	0.54 (13.8)	7/16	1/2
DCB-4-2-*	1/4 (6.35)	1/8 (10.3)	0.19 (4.8)	0.22 (5.5)	1.31 (33.2)	0.31 (7.9)	0.38 (9.7)	1.01 (25.7)	0.61 (15.4)	1/2	9/16
DCB-4-4-*	1/4 (6.35)	1/4 (13.7)	0.19 (4.8)	0.30 (7.7)	1.49 (37.8)	0.31 (7.9)	0.56 (14.2)	1.19 (30.3)	0.61 (15.4)	9/16	9/16
DCB-4-6-*	1/4 (6.35)	3/8 (17.0)	0.19 (4.8)	0.41 (10.4)	1.52 (38.7)	0.31 (7.9)	0.56 (14.2)	1.23 (31.2)	0.61 (15.4)	11/16	9/16
DCB-4-8-*	1/4 (6.35)	1/2 (21.3)	0.19 (4.8)	0.55 (13.9)	1.74 (44.2)	0.31 (7.9)	0.75 (19.1)	1.44 (36.7)	0.61 (15.4)	7/8	9/16
DCB-6-4-*	3/8 (9.53)	1/4 (13.7)	0.28 (7.1)	0.30 (7.7)	1.57 (40.0)	0.37 (9.5)	0.56 (14.2)	1.28 (32.5)	0.67 (17.0)	5/8	11/16
DCB-6-6-*	3/8 (9.53)	3/8 (17.0)	0.28 (7.1)	0.41 (10.4)	1.57 (40.0)	0.37 (9.5)	0.56 (14.2)	1.28 (32.5)	0.67 (17.0)	11/16	11/16
DCB-6-8-*	3/8 (9.53)	1/2 (21.3)	0.28 (7.1)	0.55 (13.9)	1.80 (45.6)	0.37 (9.5)	0.75 (19.1)	1.50 (38.1)	0.67 (17.0)	7/8	11/16
DCB-8-4-*	1/2 (12.7)	1/4 (13.7)	0.41 (10.4)	0.30 (7.7)	1.72 (43.6)	0.50 (12.7)	0.56 (14.2)	1.31 (33.3)	0.91 (23.0)	13/16	7/8
DCB-8-6-*	1/2 (12.7)	3/8 (17.0)	0.41 (10.4)	0.41 (10.4)	1.72 (43.6)	0.50 (12.7)	0.56 (14.2)	1.31 (33.3)	0.91 (23.0)	13/16	7/8
DCB-8-8-*	1/2 (12.7)	1/2 (21.3)	0.41 (10.4)	0.55 (13.9)	1.91 (48.4)	0.50 (12.7)	0.75 (19.1)	1.50 (38.1)	0.91 (23.0)	7/8	7/8
DCB-8-12-*	1/2 (12.7)	3/4 (26.5)	0.41 (10.4)	0.74 (18.8)	2.00 (50.9)	0.50 (12.7)	0.75 (19.1)	1.60 (40.6)	0.91 (23.0)	1-1/16	7/8
DCB-8-16-*	1/2 (12.7)	1 (33.4)	0.41 (10.4)	0.96 (24.3)	2.26 (57.3)	0.50 (12.7)	0.94 (23.9)	1.85 (47.0)	0.91 (23.0)	1-3/8	7/8
DCB-10-8-*	5/8 (15.88)	1/2 (21.3)	0.50 (12.7)	0.55 (13.9)	1.94 (49.2)	0.56 (14.3)	0.75 (19.1)	1.53 (38.9)	0.97 (24.6)	15/16	1
DCB-12-6-*	3/4 (19.05)	3/8 (17.0)	0.62 (15.8)	0.41 (10.4)	1.81 (45.9)	0.56 (14.3)	0.56 (14.2)	1.40 (35.6)	0.97 (24.6)	1-1/16	1-1/8
DCB-12-8-*	3/4 (19.05)	1/2 (21.3)	0.62 (15.8)	0.55 (13.9)	2.00 (50.8)	0.56 (14.3)	0.75 (19.1)	1.59 (40.5)	0.97 (24.6)	1-1/16	1-1/8
DCB-12-12-*	3/4 (19.05)	3/4 (26.5)	0.62 (15.8)	0.74 (18.8)	2.00 (50.9)	0.56 (14.3)	0.75 (19.1)	1.60 (40.6)	0.97 (24.6)	1-1/16	1-1/8
DCB-12-16-*	3/4 (19.05)	1 (33.4)	0.62 (15.8)	0.96 (24.3)	2.28 (57.9)	0.56 (14.3)	0.94 (23.9)	1.87 (47.6)	0.97 (24.6)	1-3/8	1-1/8

DCB-16-8-*	1 (25.4)	1/2 (21.3)	0.89 (22.5)	0.55 (13.9)	2.27 (57.6)	0.75 (19.1)	0.75 (19.1)	1.77 (45.0)	1.24 (31.6)	1-3/8	1-1/2
DCB-16-12-*	1 (25.4)	3/4 (26.5)	0.89 (22.5)	0.74 (18.8)	2.28 (57.9)	0.75 (19.1)	0.75 (19.1)	1.78 (45.3)	1.24 (31.6)	1-3/8	1-1/2
DCB-16-16-*	1 (25.4)	1 (33.4)	0.89 (22.5)	0.96 (24.3)	2.46 (62.6)	0.75 (19.1)	0.94 (23.9)	1.97 (50.0)	1.24 (31.6)	1-3/8	1-1/2

*Add suffix SS for 316 stainless steel or B for brass. **Disassemble fittings when welding.

DCF
O-Ring Seal Male Connector for Straight Thread

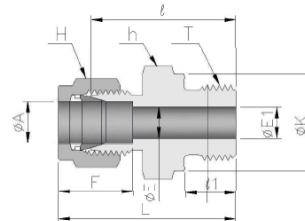


inch (mm)

Part No.	ØA Tube OD	ØB	ØE1	ØE2	L	L	L2	L3	L1	F	Hex 1	Hex 2	T (UNF)	¹ O-Ring AS568
DCF-4-4-*	1/4 (6.35)	0.43 (11.0)	0.19 (4.8)	0.19 (4.8)	1.48 (37.7)	0.31 (7.9)	0.55 (14.0)	0.06 (1.4)	1.19 (30.2)	0.61 (15.4)	5/8	9/16	9/16-18	-011
DCF-6-6-*	3/8 (9.53)	0.50 (12.6)	0.28 (7.1)	0.26 (6.6)	1.57 (39.9)	0.37 (9.5)	0.55 (14.0)	0.06 (1.4)	1.28 (32.4)	0.67 (17.0)	3/4	11/16	11/16-16	-012
DCF-8-8-*	1/2 (12.7)	0.62 (15.8)	0.41 (10.4)	0.38 (9.6)	1.91 (48.4)	0.50 (12.7)	0.75 (19.0)	0.06 (1.4)	1.50 (38.1)	0.91 (23.0)	7/8	7/8	13/16-16	-014
DCF-12-12-*	3/4 (19.05)	0.87 (22.2)	0.62 (15.8)	0.62 (15.8)	2.02 (51.3)	0.56 (14.3)	0.75 (19.0)	0.06 (1.4)	1.61 (41.0)	0.97 (24.6)	1-1/4	1-1/8	1-3/16-12	-018
DCF-16-16-*	1 (25.4)	1.02 (26.9)	0.89 (22.5)	0.81 (20.6)	2.47 (62.6)	0.75 (19.1)	0.94 (24.0)	0.06 (1.4)	1.97 (50.0)	1.24 (31.6)	1-1/2	1-1/2	1-5/16-12	-021

*Add suffix SS for 316 stainless steel or B for brass. ¹O-Ring is Buna 90.

DCG
Copper Gasket Seal Male Connector

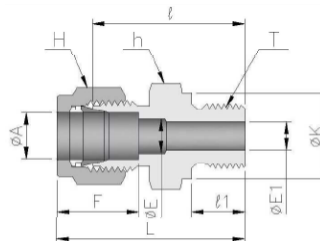


inch (mm)

Part No.	ØA Tube OD	ØK	ØE	ØE1	L	ℓ	ℓ1	F	H	h	T (G)	¹ Gasket
DCG-4-G4	1/4 (6.35)	0.71 (18.0)	0.19 (4.8)	0.23 (5.9)	1.48 (37.7)	1.19 (30.2)	0.44 (11.2)	0.61 (15.4)	9/16	3/4	1/4	KP-A-03
DCG-6-G6	3/8 (9.53)	0.86 (21.8)	0.28 (7.1)	0.31 (7.9)	1.59 (40.5)	1.30 (33.0)	0.44 (11.2)	0.67 (17.0)	11/16	7/8	3/8	KP-A-05

¹copper gasket

DCJ
Copper Gasket Seal Male Connector (BI-Lok® original)



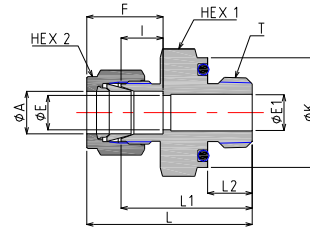
inch (mm)

Part No.	ØA Tube OD	ØK	ØE	ØE1	L	ℓ	ℓ1	F	H	h	T (G)	¹ Gasket
DCJ-2-G2	1/8 (3.18)	0.54 (13.8)	0.09 (2.3)	0.16 (4.1)	1.19 (30.1)	0.92 (23.4)	0.28 (7.1)	0.51 (13.0)	7/16	9/16	1/8	KP-A-01
DCJ-2-G4	1/8 (3.18)	0.71 (18.0)	0.09 (2.3)	0.23 (5.9)	1.36 (34.5)	1.09 (27.8)	0.44 (11.2)	0.51 (13.0)	7/16	3/4	1/4	KP-A-03
DCJ-4-G2	1/4 (6.35)	0.54 (13.8)	0.19 (4.8)	0.16 (4.1)	1.28 (32.4)	0.98 (24.9)	0.28 (7.1)	0.61 (15.4)	9/16	9/16	1/8	KP-A-01
DCJ-4-G4	1/4 (6.35)	0.71 (18.0)	0.19 (4.8)	0.23 (5.9)	1.48 (37.7)	1.19 (30.2)	0.44 (11.2)	0.61 (15.4)	9/16	3/4	1/4	KP-A-03
DCJ-4-G6	1/4 (6.35)	0.86 (21.8)	0.19 (4.8)	0.31 (7.9)	1.54 (39.0)	1.24 (31.5)	0.44 (11.2)	0.61 (15.4)	9/16	7/8	3/8	KP-A-05

DCJ-6-G4	3/8 (9.53)	0.71 (18.0)	0.28 (7.1)	0.23 (5.9)	1.55 (39.3)	1.25 (31.8)	0.44 (11.2)	0.67 (17.0)	11/16	3/4	1/4	KP-A-03
DCJ-6-G6	3/8 (9.53)	0.86 (21.8)	0.28 (7.1)	0.31 (7.9)	1.59 (40.5)	1.30 (33.0)	0.44 (11.2)	0.67 (17.0)	11/16	7/8	3/8	KP-A-05
DCJ-6-G8	3/8 (9.53)	1.02 (26.0)	0.28 (7.1)	0.47 (11.9)	1.83 (46.4)	1.53 (38.9)	0.56 (14.2)	0.67 (17.0)	11/16	1-1/16	1/2	KP-A-07
DCJ-8-G4	1/2 (12.7)	0.71 (18.0)	0.41 (10.4)	0.23 (5.9)	1.66 (42.1)	1.25 (31.8)	0.44 (11.2)	0.91 (23.0)	7/8	13/16	1/4	KP-A-03
DCJ-8-G6	1/2 (12.7)	0.86 (21.8)	0.41 (10.4)	0.31 (7.9)	1.70 (43.3)	1.30 (33.0)	0.44 (11.2)	0.91 (23.0)	7/8	7/8	3/8	KP-A-05
DCJ-8-G8	1/2 (12.7)	1.02 (26.0)	0.41 (10.4)	0.47 (11.9)	1.94 (49.2)	1.53 (38.9)	0.56 (14.2)	0.91 (23.0)	7/8	1-1/16	1/2	KP-A-07
DCJ-12-G4	3/4 (19.05)	0.71 (18.0)	0.62 (15.8)	0.23 (5.9)	1.78 (45.2)	1.37 (34.9)	0.44 (11.2)	0.97 (24.6)	1-1/8	1-1/16	1/4	KP-A-03
DCJ-12-G6	3/4 (19.05)	0.86 (21.8)	0.62 (15.8)	0.31 (7.9)	1.80 (45.7)	1.39 (35.4)	0.44 (11.2)	0.97 (24.6)	1-1/8	1-1/16	3/8	KP-A-05
DCJ-12-G8	3/4 (19.05)	1.02 (26.0)	0.62 (15.8)	0.47 (11.9)	1.94 (49.20)	1.53 (38.9)	0.56 (14.2)	0.97 (24.6)	1-1/8	1-1/16	1/2	KP-A-07

*Add suffix SS for 316 stainless steel or B for brass. ¹ copper gasket

DCM
O-Ring Seal Male Connector for NPT Connection

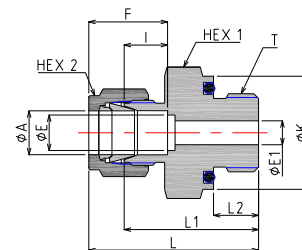
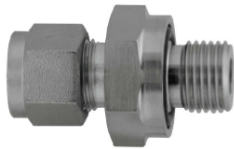


inch (mm)

Part No.	ØA Tube OD	ØE	ØE1	L	I	L1	L2	F	ØK	Hex 1	Hex 2	T (NPT)	O-Ring AS568
DCM-1-4-*	1/16 (1.59)	0.05 (1.3)	0.19 (4.8)	1.27 (32.3)	0.19 (4.9)	1.11 (28.3)	0.38 (9.7)	0.35 (8.9)	0.93 (23.6)	15/16	5/16	1/4-18	-113
DCM-2-2-*	1/8 (3.18)	0.09 (2.3)	0.19 (4.8)	1.30 (32.9)	0.25 (6.4)	1.03 (26.2)	0.28 (7.1)	0.51 (13.0)	0.74 (18.9)	3/4	7/16	1/8-27	-111
DCM-2-4-*	1/8 (3.18)	0.09 (2.3)	0.19 (4.8)	1.44 (36.6)	0.25 (6.4)	1.18 (29.9)	0.28 (7.1)	0.51 (13.0)	0.74 (18.9)	15/16	7/16	1/4-18	-113
DCM-4-2-*	1/4 (6.35)	0.19 (4.8)	0.19 (4.8)	1.39 (35.4)	0.31 (7.9)	1.10 (27.9)	0.28 (7.1)	0.61 (15.4)	0.74 (18.9)	3/4	9/16	1/8-27	-111
DCM-4-4-*	1/4 (6.35)	0.19 (4.8)	0.19 (4.8)	1.52 (38.7)	0.31 (7.9)	1.23 (31.2)	0.38 (9.7)	0.61 (15.4)	0.93 (23.6)	15/16	9/16	1/4-18	-113
DCM-6-2-*	3/8 (9.53)	0.28 (7.1)	0.19 (4.8)	1.47 (37.4)	0.37 (9.5)	1.18 (29.9)	0.28 (7.1)	0.67 (17.0)	0.74 (18.9)	3/4	11/16	1/8-27	-111
DCM-6-4-*	3/8 (9.53)	0.28 (7.1)	0.19 (4.8)	1.59 (40.3)	0.37 (9.5)	1.29 (32.8)	0.38 (9.7)	0.67 (17.0)	0.93 (23.6)	15/16	11/16	1/4-18	-113
DCM-6-6-*	3/8 (9.53)	0.28 (7.1)	0.28 (7.1)	1.63 (41.5)	0.37 (9.5)	1.34 (34.0)	0.41 (10.4)	0.67 (17.0)	1.10 (28.0)	1-1/8	11/16	3/8-18	-116
DCM-6-8-*	3/8 (9.53)	0.28 (7.1)	0.41 (10.4)	1.86 (47.2)	0.37 (9.5)	1.56 (39.7)	0.53 (13.5)	0.67 (17.0)	1.30 (33.1)	1-5/16	11/16	1/2-14	-212
DCM-8-8-*	1/2 (12.7)	0.41 (10.4)	0.41 (10.4)	1.97 (50.0)	0.50 (12.7)	1.56 (39.7)	0.53 (13.5)	0.91 (23.0)	1.30 (33.1)	1-5/16	7/8	1/2-14	-212

*Add suffix SS for 316 stainless steel or B for brass. O-Ring is Buna 90.

DCO
O-Ring Seal Male Connector for Straight Thread



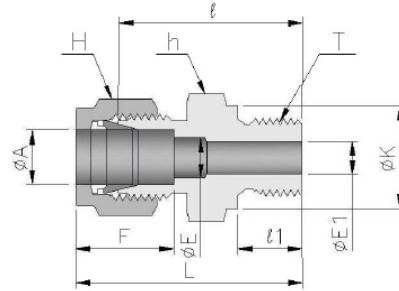
inch (mm)

Part No.	ØA Tube OD	ØE	ØE1	L	I	L1	L2	F	ØK	Hex 1	Hex 2	T (UNF)	O-Ring AS568
DCO-1-2-*	1/16 (1.59)	0.05 (1.3)	0.09 (2.3)	1.06 (26.9)	0.19 (4.9)	0.90 (22.9)	0.34 (8.6)	0.35 (8.9)	0.55 (14.0)	9/16	5/16	5/16-24	-011
DCO-2-2-*	1/8 (3.18)	0.09 (2.3)	0.09 (2.3)	1.29 (32.7)	0.25 (6.4)	20.24 (6.0)	0.34 (8.6)	0.51 (13.0)	0.55 (14.0)	9/16	7/16	5/16-24	-011
DCO-3-3-*	3/16 (4.76)	0.12 (3.0)	0.12 (3.0)	1.37 (34.7)	0.28 (7.2)	1.10 (28.0)	0.38 (9.7)	0.54 (13.8)	0.61 (15.4)	5/8	1/2	3/8-24	-012
DCO-4-4-*	1/4 (6.35)	0.19 (4.8)	0.19 (4.8)	1.52 (38.7)	0.31 (7.9)	1.23 (31.2)	0.41 (10.4)	0.61 (15.4)	0.73 (18.5)	3/4	9/16	7/16-20	-111
DCO-5-5-*	5/16 (7.94)	0.25 (6.4)	0.25 (6.4)	1.61 (41.0)	0.35 (8.8)	1.32 (33.5)	0.44 (11.2)	0.64 (16.3)	0.86 (21.9)	7/8	5/8	1/2-20	-112
DCO-6-6-*	3/8 (9.53)	0.28 (7.1)	0.28 (7.1)	1.67 (42.5)	0.37 (9.5)	1.38 (35.0)	0.47 (11.9)	0.67 (17.0)	0.93 (23.6)	15/16	11/16	9/16-18	-113
DCO-8-8-*	1/2 (12.7)	0.41 (10.4)	0.41 (10.4)	1.81 (46.1)	0.50 (12.7)	1.41 (35.8)	0.47 (11.9)	0.91 (23.0)	1.10 (28.0)	1-1/8	7/8	3/4-16	-116
DCO-8-12-*	1/2 (12.7)	0.41 (10.4)	0.62 (15.8)	2.06 (52.3)	0.50 (12.7)	1.65 (42.0)	0.56 (14.2)	0.91 (23.0)	1.48 (37.6)	1-1/2	7/8	1-1/16-12	-215
DCO-10-10-*	5/8 (15.88)	0.50 (12.7)	0.50 (12.7)	1.94 (49.3)	0.56 (14.3)	1.54 (39.0)	0.51 (13.0)	0.97 (24.6)	1.35 (34.4)	1-3/8	1	7/8-14	-119
DCO-12-12-*	3/4 (19.05)	0.62 (15.8)	0.62 (15.8)	2.06 (52.3)	0.56 (14.3)	1.65 (42.0)	0.56 (14.2)	0.97 (24.6)	1.48 (37.6)	1-1/2	1-1/8	1-1/16-12	-215

DCO-16-16*	1 (25.4)	0.89 (22.5)	0.89 (22.5)	2.31 (58.6)	0.75 (19.1)	1.81 (46.0)	0.56 (14.2)	1.24 (31.6)	1.73 (44.0)	1-3/4	1-1/2	1-5/16-12	-219
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*Add suffix SS for 316 stainless steel or B for brass. *O-Ring is Buna 90.

DCQ
Bonded Seal Male Connector for ISO straight thread

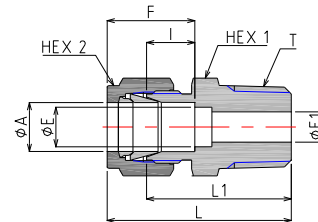
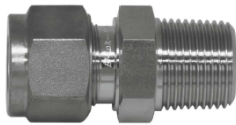


inch (mm)

Part No.	ϕA Tube OD	ϕE	$\phi E1$	L	ℓ	$\ell 1$	F	ϕK	H	h	T (G)	¹ Gasket
DCQ-2-G2	1/8 (3.18)	0.09 (2.3)	0.09 (2.3)	1.19 (30.1)	0.92 (23.4)	0.28 (7.1)	0.51 (13.0)	0.54 (13.8)	7/16	9/16	1/8	KP-C-01
DCQ-2-G4	1/8 (3.18)	0.09 (2.3)	0.09 (2.3)	1.36 (34.5)	1.09 (27.8)	0.44 (11.2)	0.51 (13.0)	0.71 (18.0)	7/16	3/4	1/4	KP-C-02
DCQ-4-G2	1/4 (6.35)	0.19 (4.8)	0.16 (4.1)	1.28 (32.4)	0.98 (24.9)	0.28 (7.1)	0.61 (15.4)	0.54 (13.8)	9/16	9/16	1/8	KP-C-01
DCQ-4-G4	1/4 (6.35)	0.19 (4.8)	0.19 (4.8)	1.48 (37.7)	1.19 (30.2)	0.44 (11.2)	0.61 (15.4)	0.71 (18.0)	9/16	3/4	1/4	KP-C-02
DCQ-4-G6	1/4 (6.35)	0.19 (4.8)	0.19 (4.8)	1.54 (39.0)	1.24 (31.5)	0.44 (11.2)	0.61 (15.4)	0.86 (21.8)	9/16	7/8	3/8	KP-C-03
DCQ-6-G4	3/8 (9.53)	0.28 (7.1)	0.23 (5.9)	1.55 (39.3)	1.25 (31.8)	0.44 (11.2)	0.67 (17.0)	0.71 (18.0)	11/16	3/4	1/4	KP-C-02
DCQ-6-G6	3/8 (9.53)	0.28 (7.1)	0.28 (7.1)	1.59 (40.5)	1.30 (33.0)	0.44 (11.2)	0.67 (17.0)	0.86 (21.8)	11/16	7/8	3/8	KP-C-03
DCQ-6-G8	3/8 (9.53)	0.28 (7.1)	0.28 (7.1)	1.83 (46.4)	1.53 (38.9)	0.56 (14.2)	0.67 (17.0)	1.02 (26.0)	11/16	1-1/16	1/2	KP-C-04
DCQ-8-G4	1/2 (12.7)	0.41 (10.4)	0.23 (5.9)	1.69 (42.8)	1.28 (32.5)	0.44 (11.2)	0.91 (23.0)	0.71 (18.0)	7/8	13/16	1/4	KP-C-02
DCQ-8-G6	1/2 (12.7)	0.41 (10.4)	0.31 (7.9)	1.70 (43.3)	1.30 (33.0)	0.44 (11.2)	0.91 (23.0)	0.86 (21.8)	7/8	7/8	3/8	KP-C-03
DCQ-8-G8	1/2 (12.7)	0.41 (10.4)	0.41 (10.4)	1.94 (49.2)	1.53 (38.9)	0.56 (14.2)	0.91 (23.0)	1.02 (26.0)	7/8	1-1/16	1/2	KP-C-04

¹ Metal ring/rubber gasket.

DCT
Male Connector



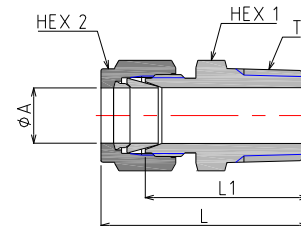
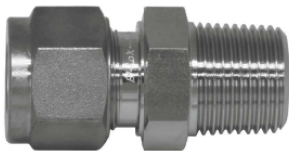
inch (mm)

Part No.	ϕA Tube OD	ϕE	$\phi E1$	L	I	L1	F	Hex 1	Hex 2	T (NPT/ISO)
DCT-1-1*	1/16 (1.59)	0.05 (1.3)	0.12 (3.0)	0.94 (24.0)	0.19 (4.9)	0.79 (20.0)	0.35 (8.9)	5/16	5/16	1/16-27
DCT-1-2*	1/16 (1.59)	0.05 (1.3)	0.19 (4.8)	1.00 (25.5)	0.19 (4.9)	0.85 (21.5)	0.35 (8.9)	7/16	5/16	1/8-27
DCT-1-4*	1/16 (1.59)	0.05 (1.3)	0.28 (7.1)	1.22 (30.9)	0.19 (4.9)	1.06 (26.9)	0.35 (8.9)	9/16	5/16	1/4-18
DCT-2-1*	1/8 (3.18)	0.09 (2.3)	0.12 (3.0)	1.17 (29.8)	0.25 (6.4)	0.91 (23.1)	0.51 (13.0)	7/16	7/16	1/16-27
DCT-2-2*	1/8 (3.18)	0.09 (2.3)	0.19 (4.8)	1.17 (29.8)	0.25 (6.4)	0.91 (23.1)	0.51 (13.0)	7/16	7/16	1/8-27
DCT-2-4*	1/8 (3.18)	0.09 (2.3)	0.28 (7.1)	1.39 (35.2)	0.25 (6.4)	1.12 (28.5)	0.51 (13.0)	9/16	7/16	1/4-18
DCT-2-6*	1/8 (3.18)	0.09 (2.3)	0.41 (10.4)	1.42 (36.1)	0.25 (6.4)	1.16 (29.4)	0.51 (13.0)	11/16	7/16	3/8-18
DCT-2-8*	1/8 (3.18)	0.09 (2.3)	0.50 (12.7)	1.64 (41.7)	0.25 (6.4)	1.38 (35.0)	0.51 (13.0)	7/8	7/16	1/2-14
DCT-3-1*	3/16 (4.76)	0.12 (3.0)	0.12 (3.0)	1.21 (30.7)	0.28 (7.2)	0.94 (24.0)	0.54 (13.8)	7/16	1/2	1/16-27
DCT-3-2*	3/16 (4.76)	0.12 (3.0)	0.12 (3.0)	1.21 (30.7)	0.28 (7.2)	0.94 (24.0)	0.54 (13.8)	7/16	1/2	1/8-27
DCT-3-4*	3/16 (4.76)	0.12 (3.0)	0.12 (3.0)	1.43 (36.2)	0.28 (7.2)	1.16 (29.5)	0.54 (13.8)	9/16	1/2	1/4-18
DCT-3-6*	3/16 (4.76)	0.12 (3.0)	0.12 (3.0)	1.44 (36.7)	0.28 (7.2)	1.18 (30.0)	0.54 (13.8)	11/16	1/2	3/8-18
DCT-3-8*	3/16 (4.76)	0.12 (3.0)	0.50 (12.7)	1.67 (42.5)	0.28 (7.2)	1.41 (35.8)	0.54 (13.8)	7/8	1/2	1/2-14
DCT-4-1*	1/4 (6.35)	0.19 (4.8)	0.12 (3.0)	1.30 (32.9)	0.31 (7.9)	1.00 (25.4)	0.61 (15.4)	1/2	9/16	1/16-27
DCT-4-2*	1/4 (6.35)	0.19 (4.8)	0.19 (4.8)	1.30 (32.9)	0.31 (7.9)	1.00 (25.4)	0.61 (15.4)	1/2	9/16	1/8-27
DCT-4-4*	1/4 (6.35)	0.19 (4.8)	0.19 (4.8)	1.49 (37.8)	0.31 (7.9)	1.19 (30.3)	0.61 (15.4)	9/16	9/16	1/4-18

DCT-4-6-*	1/4 (6.35)	0.19 (4.8)	0.19 (4.8)	1.52 (38.5)	0.31 (7.9)	1.22 (31.0)	0.61 (15.4)	11/16	9/16	3/8-18
DCT-4-8-*	1/4 (6.35)	0.19 (4.8)	0.19 (4.8)	1.74 (44.1)	0.31 (7.9)	1.44 (36.6)	0.61 (15.4)	7/8	9/16	1/2-14
DCT-4-12-*	1/4 (6.35)	0.19 (4.8)	0.19 (4.8)	1.77 (44.9)	0.31 (7.9)	1.47 (37.4)	0.61 (15.4)	1-1/16	9/16	3/4-14
DCT-4-16-*	1/4 (6.35)	0.19 (4.8)	0.19 (4.8)	2.11 (53.5)	0.31 (7.9)	1.81 (46.0)	0.61 (15.4)	1-3/8	9/16	1-1.15
DCT-5-2-*	5/16 (7.94)	0.25 (6.4)	0.19 (4.8)	1.35 (34.2)	0.35 (8.8)	1.05 (26.7)	0.64 (16.3)	9/16	5/8	1/8-27
DCT-5-4-*	5/16 (7.94)	0.25 (6.4)	0.25 (6.4)	1.53 (38.8)	0.35 (8.8)	1.23 (31.3)	0.64 (16.3)	9/16	5/8	1/4-18
DCT-5-6-*	5/16 (7.94)	0.25 (6.4)	0.25 (6.4)	1.55 (39.3)	0.35 (8.8)	1.25 (31.8)	0.64 (16.3)	11/16	5/8	3/8-18
DCT-5-8-*	5/16 (7.94)	0.25 (6.4)	0.25 (6.4)	1.76 (44.8)	0.35 (8.8)	1.47 (37.3)	0.64 (16.3)	7/8	5/8	1/2-14
DCT-5-12-*	5/16 (7.94)	0.25 (6.4)	0.25 (6.4)	1.80 (45.7)	0.35 (8.8)	1.50 (38.2)	0.64 (16.3)	1-1/16	5/8	3/4-14
DCT-6-2-*	3/8 (9.53)	0.28 (7.1)	0.19 (4.8)	1.39 (35.2)	0.37 (9.5)	1.09 (27.7)	0.67 (17.0)	5/8	11/16	1/8-27
DCT-6-4-*	3/8 (9.53)	0.28 (7.1)	0.28 (7.1)	1.57 (40.0)	0.37 (9.5)	1.28 (32.5)	0.67 (17.0)	5/8	11/16	1/4-18
DCT-6-6-*	3/8 (9.53)	0.28 (7.1)	0.28 (7.1)	1.57 (40.0)	0.37 (9.5)	1.28 (32.5)	0.67 (17.0)	11/16	11/16	3/8-18
DCT-6-8-*	3/8 (9.53)	0.28 (7.1)	0.28 (7.1)	1.80 (45.6)	0.37 (9.5)	1.50 (38.1)	0.67 (17.0)	7/8	11/16	1/2-14
DCT-6-12-*	3/8 (9.53)	0.28 (7.1)	0.28 (7.1)	1.83 (46.5)	0.37 (9.5)	1.54 (39.0)	0.67 (17.0)	1-1/16	11/16	3/4-14
DCT-6-16-*	3/8 (9.53)	0.28 (7.1)	0.28 (7.1)	2.17 (55.1)	0.37 (9.5)	1.87 (47.6)	0.67 (17.0)	1-3/8	11/16	1-1.15
DCT-8-2-*	1/2 (12.7)	0.41 (10.4)	0.19 (4.8)	1.52 (38.7)	0.50 (12.7)	1.12 (28.4)	0.91 (23.0)	13/16	7/8	1/8-27
DCT-8-4-*	1/2 (12.7)	0.41 (10.4)	0.28 (7.1)	1.72 (43.6)	0.50 (12.7)	1.31 (33.3)	0.91 (23.0)	13/16	7/8	1/4-18
DCT-8-6-*	1/2 (12.7)	0.41 (10.4)	0.41 (10.4)	1.72 (43.6)	0.50 (12.7)	1.31 (33.3)	0.91 (23.0)	13/16	7/8	3/8-18
DCT-8-8-*	1/2 (12.7)	0.41 (10.4)	0.41 (10.4)	1.91 (48.4)	0.50 (12.7)	1.50 (38.1)	0.91 (23.0)	7/8	7/8	1/2-14
DCT-8-12-*	1/2 (12.7)	0.41 (10.4)	0.41 (10.4)	1.94 (49.3)	0.50 (12.7)	1.54 (39.0)	0.91 (23.0)	1-1/16	7/8	3/4-14
DCT-8-16-*	1/2 (12.7)	0.41 (10.4)	0.41 (10.4)	2.28 (57.9)	0.50 (12.7)	1.87 (47.6)	0.91 (23.0)	1-3/8	7/8	1-1.15
DCT-10-4-*	5/8 (15.88)	0.50 (12.7)	0.28 (7.1)	1.74 (44.3)	0.56 (14.3)	1.34 (34.0)	0.97 (24.6)	15/16	1	1/4-18
DCT-10-6-*	5/8 (15.88)	0.50 (12.7)	0.41 (10.4)	1.74 (44.3)	0.56 (14.3)	1.34 (34.0)	0.97 (24.6)	15/16	1	3/8-18
DCT-10-8-*	5/8 (15.88)	0.50 (12.7)	0.50 (12.7)	1.94 (49.3)	0.56 (14.3)	1.54 (39.0)	0.97 (24.6)	15/16	1	1/2-14
DCT-10-12-*	5/8 (15.88)	0.50 (12.7)	0.50 (12.7)	1.94 (49.2)	0.56 (14.3)	1.53 (38.9)	0.97 (24.6)	1-1/16	1	3/4-14
DCT-12-4-*	3/4 (19.05)	0.62 (15.8)	0.28 (7.1)	1.80 (45.7)	0.56 (14.3)	1.39 (35.4)	0.97 (24.6)	1-1/16	1-1/8	1/4-18
DCT-12-6-*	3/4 (19.05)	0.62 (15.8)	0.41 (10.4)	1.80 (45.7)	0.56 (14.3)	1.39 (35.4)	0.97 (24.6)	1-1/16	1-1/8	3/8-18
DCT-12-8-*	3/4 (19.05)	0.62 (15.8)	0.50 (12.7)	2.00 (50.7)	0.56 (14.3)	1.59 (40.4)	0.97 (24.6)	1-1/16	1-1/8	1/2-14
DCT-12-12-*	3/4 (19.05)	0.62 (15.8)	0.62 (15.8)	2.00 (50.7)	0.56 (14.3)	1.59 (40.4)	0.97 (24.6)	1-1/16	1-1/8	3/4-14
DCT-12-16-*	3/4 (19.05)	0.62 (15.8)	0.62 (15.8)	2.28 (57.9)	0.56 (14.3)	1.87 (47.6)	0.97 (24.6)	1-3/8	1-1/8	1-1.15
DCT-14-8-*	7/8 (22.23)	0.72 (18.3)	0.50 (12.7)	1.99 (50.6)	0.63 (15.9)	1.59 (40.4)	1.03 (26.1)	1-3/16	1-1/4	1/2-14
DCT-14-12-*	7/8 (22.23)	0.72 (18.3)	0.72 (18.3)	1.99 (50.6)	0.63 (15.9)	1.59 (40.4)	1.03 (26.1)	1-3/16	1-1/4	3/4-14
DCT-14-16-*	7/8 (22.23)	0.72 (18.3)	0.72 (18.3)	2.28 (57.8)	0.63 (15.9)	1.87 (47.6)	1.03 (26.1)	1-3/8	1-1/4	1-1.15
DCT-16-6-*	1 (25.4)	0.89 (22.5)	0.41 (10.4)	2.11 (53.6)	0.75 (19.1)	1.61 (41.0)	1.24 (31.6)	1-3/8	1-1/2	3/8-18
DCT-16-8-*	1 (25.4)	0.89 (22.5)	0.50 (12.7)	2.27 (57.6)	0.75 (19.1)	1.77 (45.0)	1.24 (31.6)	1-3/8	1-1/2	1/2-14
DCT-16-12-*	1 (25.4)	0.89 (22.5)	0.72 (18.3)	2.27 (57.6)	0.75 (19.1)	1.77 (45.0)	1.24 (31.6)	1-3/8	1-1/2	3/4-14
DCT-16-16-*	1 (25.4)	0.89 (22.5)	0.89 (22.5)	2.46 (62.6)	0.75 (19.1)	1.97 (50.0)	1.24 (31.6)	1-3/8	1-1/2	1-1.15

*Add suffix SS for 316 stainless steel or B for brass. ISO thread is available. Add R before thread size. Example, DCT-4-R4-SS

DCTZ
Thermocouple (bored through) Male Connector



inch (mm)

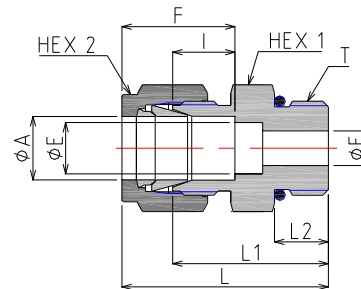
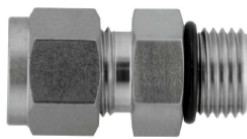
Part No.	ϕA Tube OD	L	L1	Hex 1	Hex 2	T (NPT/ISO)
DCTZ-1-1-*	1/16 (1.59)	0.94 (24.0)	0.79 (20.0)	5/16	5/16	1/16-27
DCTZ-1-2-*	1/16 (1.59)	1.00 (25.5)	0.79 (20.0)	7/16	5/16	1/8-1
DCTZ-1-4-*	1/16 (1.59)	1.22 (30.9)	1.06 (26.9)	9/16	5/16	1/4
DCTZ-2-1-*	1/8 (3.18)	1.17 (29.8)	0.91 (23.1)	7/16	7/16	1/16
DCTZ-2-2-*	1/8 (3.18)	1.17 (29.8)	0.91 (23.1)	7/16	7/16	1/8
DCTZ-2-4-*	1/8 (3.18)	1.39 (35.2)	1.12 (28.5)	9/16	7/16	1/4
DCTZ-2-6-*	1/8 (3.18)	1.42 (36.1)	1.16 (29.4)	11/16	7/16	3/8
DCTZ-2-8-*	1/8 (3.18)	1.64 (41.7)	1.38 (35.0)	7/8	7/16	1/2
DCTZ-3-2-*	3/16 (4.76)	1.21 (30.7)	0.94 (24.0)	7/16	1/2	1/8
DCTZ-3-4-*	3/16 (4.76)	1.43 (36.2)	1.16 (29.5)	9/16	1/2	1/4
DCTZ-4-2-*	1/4 (6.35)	1.30 (32.9)	1.00 (25.4)	1/2	9/16	1/8

DCTZ-4-4-*	1/4 (6.35)	1.49 (37.8)	1.19 (30.3)	9/16	9/16	1/4
DCTZ-4-6-*	1/4 (6.35)	1.52 (38.5)	1.22 (31.0)	11/16	9/16	3/8
DCTZ-4-8-*	1/4 (6.35)	1.74 (44.1)	1.44 (36.6)	7/8	9/16	1/2
DCTZ-4-12-*	1/4 (6.35)	1.77 (44.9)	1.47 (37.4)	1-1/16	9/16	3/4
DCTZ-4-16-*	1/4 (6.35)	2.11 (53.5)	1.81 (46.0)	1-3/8	9/16	1
DCTZ-5-4-*	5/16 (7.94)	1.53 (38.8)	1.23 (31.3)	9/16	5/8	1/4
DCTZ-5-6-*	5/16 (7.94)	1.59 (40.3)	1.29 (32.8)	11/16	5/8	3/8
DCTZ-5-8-*	5/16 (7.94)	1.76 (44.8)	1.47 (37.3)	7/8	5/8	1/2
DCTZ-6-4-*	3/8 (9.53)	1.57 (40.0)	1.28 (32.5)	5/8	11/16	1/4
DCTZ-6-6-*	3/8 (9.53)	1.57 (40.0)	1.28 (32.5)	11/16	11/16	3/8
DCTZ-6-8-*	3/8 (9.53)	1.80 (45.6)	1.50 (38.1)	7/8	11/16	1/2
DCTZ-6-12-*	3/8 (9.53)	1.83 (46.5)	1.54 (39.0)	1-1/16	11/16	3/4
DCTZ-6-16-*	3/8 (9.53)	2.17 (55.1)	1.87 (47.6)	1-3/8	11/16	1
DCTZ-8-6-*	1/2 (12.7)	1.72 (43.6)	1.31 (33.3)	13/16	7/8	3/8
DCTZ-8-8-*	1/2 (12.7)	1.91 (48.4)	1.50 (38.1)	7/8	7/8	1/2
DCTZ-8-12-*	1/2 (12.7)	1.94 (49.3)	1.54 (39.0)	1-1/16	7/8	3/4
DCTZ-8-16-*	1/2 (12.7)	2.28 (57.9)	1.87 (47.6)	1-3/8	7/8	1
DCTZ-10-8-*	5/8 (15.88)	1.94 (49.3)	1.54 (39.0)	15/16	1	1/2
DCTZ-10-12-*	5/8 (15.88)	1.94 (49.2)	1.53 (38.9)	1-1/16	1	3/4
DCTZ-12-12-*	3/4 (19.05)	2.00 (50.7)	1.59 (40.4)	1-1/16	1-1/8	3/4
DCTZ-12-16-*	3/4 (19.05)	2.28 (57.9)	1.87 (47.6)	1-3/8	1-1/8	1
DCTZ-14-16-*	7/8 (22.23)	2.28 (57.8)	1.87 (47.6)	1-3/8	1-1/4	1
DCTZ-16-16-*	1 (25.4)	2.46 (62.6)	1.97 (50.0)	1-3/8	1-1/2	1

*Add suffix SS for 316 stainless steel or B for brass. ** See page 11 for stress factor. ISO thread is available. Add R before thread size. Example, DCTZ-4-R4-SS

DCU

O-Ring Seal Male Connector for Straight Thread



inch (mm)

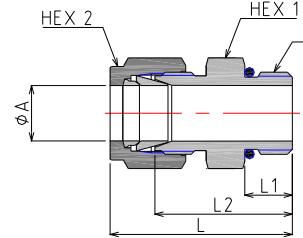
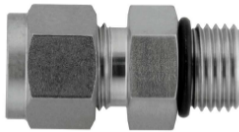
Part No.	ØA Tube OD	ØE	ØE1	L	I	L2	L1	F	Hex 1	Hex 2	T (UNF)	O-Ring AS568
DCU-1-2-*	1/16 (1.59)	0.05 (1.3)	0.14 (3.5)	1.02 (25.8)	0.19 (4.9)	0.30 (7.5)	0.86 (21.8)	0.35 (8.9)	7/16	5/16	5/16-24	-902
DCU-2-2-*	1/8 (3.18)	0.09 (2.3)	0.09 (2.3)	1.19 (30.1)	0.25 (6.4)	0.30 (7.5)	0.92 (23.4)	0.51 (13.0)	7/16	7/16	5/16-24	-902
DCU-2-4-*	1/8 (3.18)	0.09 (2.3)	0.19 (4.8)	1.24 (31.6)	0.25 (6.4)	0.35 (9.0)	0.98 (24.9)	0.51 (13.0)	9/16	7/16	7/16-20	-904
DCU-2-6-*	1/8 (3.18)	0.09 (2.3)	0.28 (7.1)	1.31 (33.4)	0.25 (6.4)	0.39 (10.0)	1.05 (26.7)	0.51 (13.0)	11/16	7/16	9/16-18	-906
DCU-2-8-*	1/8 (3.18)	0.09 (2.3)	0.41 (10.4)	1.33 (33.7)	0.25 (6.4)	0.43 (11.0)	1.06 (27.0)	0.51 (13.0)	7/8	7/16	3/4-16	-908
DCU-3-4-*	3/16 (4.76)	0.12 (3.0)	0.19 (4.8)	1.28 (32.4)	0.28 (7.2)	0.35 (9.0)	1.01 (25.7)	0.54 (13.8)	9/16	1/2	7/16-20	-904
DCU-4-2-*	1/4 (6.35)	0.19 (4.8)	0.14 (3.5)	1.30 (32.9)	0.31 (7.9)	0.30 (7.5)	1.00 (25.4)	0.61 (15.4)	1/2	9/16	5/16-24	-902
DCU-4-4-*	1/4 (6.35)	0.19 (4.8)	0.19 (4.8)	1.35 (34.2)	0.31 (7.9)	0.35 (9.0)	1.05 (26.7)	0.61 (15.4)	9/16	9/16	7/16-20	-904
DCU-4-5-*	1/4 (6.35)	0.19 (4.8)	0.25 (6.4)	1.40 (35.5)	0.31 (7.9)	0.43 (11.0)	1.10 (28.0)	0.61 (15.4)	5/8	9/16	1/2-20	-905
DCU-4-6-*	1/4 (6.35)	0.19 (4.8)	0.19 (4.8)	1.41 (35.7)	0.31 (7.9)	0.39 (10.0)	1.11 (28.2)	0.61 (15.4)	11/16	9/16	9/16-18	-906
DCU-4-8-*	1/4 (6.35)	0.19 (4.8)	0.19 (4.8)	1.48 (37.5)	0.31 (7.9)	0.43 (11.0)	1.18 (30.0)	0.61 (15.4)	7/8	9/16	3/4-16	-908
DCU-4-10-*	1/4 (6.35)	0.19 (4.8)	0.41 (10.4)	1.59 (40.5)	0.31 (7.9)	0.49 (12.5)	1.30 (33.0)	0.61 (15.4)	1	9/16	7/8-14	-910
DCU-6-4-*	3/8 (9.53)	0.28 (7.1)	0.20 (5.1)	1.41 (35.7)	0.37 (9.5)	0.35 (9.0)	1.11 (28.2)	0.67 (17.0)	5/8	11/16	7/16-20	-904
DCU-6-6-*	3/8 (9.53)	0.28 (7.1)	0.28 (7.1)	1.46 (37.2)	0.37 (9.5)	0.39 (10.0)	1.17 (29.7)	0.67 (17.0)	11/16	11/16	9/16-18	-906
DCU-6-8-*	3/8 (9.53)	0.28 (7.1)	0.28 (7.1)	1.55 (39.3)	0.37 (9.5)	0.43 (11.0)	1.25 (31.8)	0.67 (17.0)	7/8	11/16	3/4-16	-908
DCU-6-10-*	3/8 (9.53)	0.28 (7.1)	0.41 (10.4)	1.67 (42.5)	0.37 (9.5)	0.49 (12.5)	1.38 (35.0)	0.67 (17.0)	1	11/16	7/8-14	-910
DCU-8-4-*	1/2 (12.7)	0.41 (10.4)	0.20 (5.1)	1.51 (38.3)	0.50 (12.7)	0.35 (9.0)	1.10 (28.0)	0.91 (23.0)	13/16	7/8	7/16-20	-904
DCU-8-6-*	1/2 (12.7)	0.41 (10.4)	0.28 (7.1)	1.55 (39.3)	0.50 (12.7)	0.39 (10.0)	1.14 (29.0)	0.91 (23.0)	13/16	7/8	9/16-18	-906
DCU-8-8-*	1/2 (12.7)	0.41 (10.4)	0.41 (10.4)	1.66 (42.1)	0.50 (12.7)	0.43 (11.0)	1.25 (31.8)	0.91 (23.0)	7/8	7/8	3/4-16	-908
DCU-8-10-*	1/2 (12.7)	0.41 (10.4)	0.41 (10.4)	1.79 (45.4)	0.50 (12.7)	0.49 (12.5)	1.38 (35.1)	0.91 (23.0)	1	7/8	7/8-14	-910
DCU-8-12-*	1/2 (12.7)	0.41 (10.4)	0.41 (10.4)	1.94 (49.2)	0.50 (12.7)	0.59 (15.0)	1.53 (38.9)	0.91 (23.0)	1-1/4	7/8	1-1/16-12	-912
DCU-8-16-*	1/2 (12.7)	0.41 (10.4)	0.41 (10.4)	1.96 (49.8)	0.50 (12.7)	0.59 (15.0)	1.56 (39.5)	0.91 (23.0)	1-1/2	7/8	1-5/16-12	-916
DCU-10-8-*	5/8 (15.88)	0.50 (12.7)	0.41 (10.4)	1.66 (42.1)	0.56 (14.3)	0.43 (11.0)	1.25 (31.8)	0.97 (24.6)	15/16	1	3/4-16	-908

DCU-10-10-*	5/8 (15.88)	0.50 (12.7)	0.50 (12.7)	1.79 (45.4)	0.56 (14.3)	0.49 (12.5)	1.38 (35.1)	0.97 (24.6)	1	1	7/8-14	-910
DCU-12-8-*	3/4 (19.05)	0.62 (15.8)	0.41 (10.4)	1.69 (43.1)	0.56 (14.3)	0.43 (11.0)	1.29 (32.8)	0.97 (24.6)	1-1/16	1-1/8	3/4-16	-908
DCU-12-12-*	3/4 (19.05)	0.62 (15.8)	0.62 (15.8)	1.94 (49.2)	0.56 (14.3)	0.59 (15.0)	1.53 (38.9)	0.97 (24.6)	1-1/4	1-1/8	1-1/16-12	-912
DCU-12-16-*	3/4 (19.05)	0.62 (15.8)	0.62 (15.8)	19.7 (50.0)	0.56 (14.3)	0.59 (15.0)	1.56 (39.7)	0.97 (24.6)	1-1/2	1-1/8	1-5/16-12	-916
DCU-16-12-*	1 (25.4)	0.89 (22.5)	0.66 (16.8)	2.13 (54.0)	0.75 (19.1)	0.59 (15.0)	1.63 (41.4)	1.24 (31.6)	1-3/8	1-1/2	1-1/16-12	-912
DCU-16-16-*	1 (25.4)	0.89 (22.5)	0.89 (22.5)	2.16 (54.8)	0.75 (19.1)	0.59 (15.0)	1.66 (42.2)	1.24 (31.6)	1-1/2	1-1/2	1-5/16-12	-916

*Add suffix SS for 316 stainless steel or B for brass. *O-Ring is Viton® (FKM, fluorocarbon) 90

DCUZ

Thermocouple (bored through) O-Ring Seal Male Connector for Straight Thread



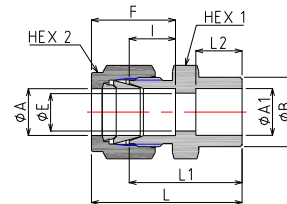
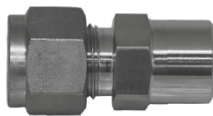
inch (mm)

Part No.	ϕA Tube OD	L	L1	L2	Hex 1	Hex 2	T (UNF)	O-Ring AS568
DCUZ-2-2-*	1/8 (3.18)	1.19 (30.1)	0.30 (7.5)	0.92 (23.4)	7/16	7/16	5/16-24	-902
DCUZ-2-4-*	1/8 (3.18)	1.24 (31.6)	0.35 (9.0)	0.98 (24.9)	9/16	7/16	7/16-20	-904
DCUZ-2-6-*	1/8 (3.18)	1.31 (33.4)	0.39 (10.0)	1.05 (26.7)	11/16	7/16	9/16-18	-906
DCUZ-2-8-*	1/8 (3.18)	1.33 (33.7)	0.43 (11.0)	1.06 (27.0)	7/8	7/16	3/4-16	-908
DCUZ-3-3-*	3/16 (4.76)	1.22 (30.9)	0.30 (7.5)	0.95 (24.2)	1/2	1/2	3/8-24	-903
DCUZ-4-4-*	1/4 (6.35)	1.35 (34.2)	0.35 (9.0)	1.05 (26.7)	9/16	9/16	7/16-20	-904
DCUZ-4-6-*	1/4 (6.35)	1.41 (35.7)	0.39 (10.0)	1.11 (28.2)	11/16	9/16	9/16-18	-906
DCUZ-4-8-*	1/4 (6.35)	1.48 (37.5)	0.43 (11.0)	1.18 (30.0)	7/8	9/16	3/4-16	-908
DCUZ-4-10-*	1/4 (6.35)	1.59 (40.5)	0.49 (12.5)	1.30 (33.0)	1	9/16	7/8-14	-910
DCUZ-6-6-*	3/8 (9.53)	1.46 (37.2)	0.39 (10.0)	1.17 (29.7)	11/16	11/16	9/16-18	-906
DCUZ-6-8-*	3/8 (9.53)	1.55 (39.3)	0.43 (11.0)	1.25 (31.8)	7/8	11/16	3/4-16	-908
DCUZ-6-10-*	3/8 (9.53)	1.67 (42.5)	0.49 (12.5)	1.38 (35.0)	1	11/16	7/8-14	-910
DCUZ-8-8-*	1/2 (12.7)	1.66 (42.1)	0.43 (11.0)	1.25 (31.8)	1-1/16	7/8	3/4-16	-908
DCUZ-8-10-*	1/2 (12.7)	1.79 (45.4)	0.49 (12.5)	1.38 (35.1)	1	7/8	7/8-14	-910
DCUZ-8-12-*	1/2 (12.7)	1.94 (49.2)	0.59 (15.0)	1.53 (38.9)	1-1/4	7/8	1-1/16-12	-912
DCUZ-10-10-*	5/8 (15.88)	1.79 (45.4)	0.49 (12.5)	1.38 (35.1)	1	1	7/8-14	-910
DCUZ-12-12-*	3/4 (19.05)	1.94 (49.2)	0.59 (15.0)	1.53 (38.9)	1-1/4	1-1/8	1-1/16-12	-912
DCUZ-16-16-*	1 (25.4)	2.16 (54.8)	0.59 (15.0)	1.66 (42.2)	1-1/2	1-1/2	1-5/16-12	-916

*Add suffix SS for 316 stainless steel or B for brass. **O-Ring is Viton® (FKM, fluorocarbon) 90. *** See page 11 for stress factor.

DCW

Tube Socket Weld Connector



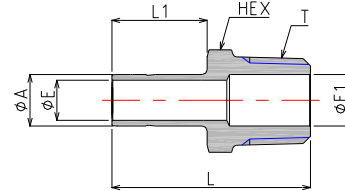
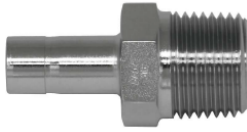
inch (mm)

Part No.	ϕA Tube OD	$\phi A1$ Tube OD	ϕB	ϕE	L	I	L2	L1	F	Hex 1	Hex 2
DCW-2-2-*	1/8 (3.18)	1/8 (3.18)	0.31 (7.9)	0.09 (2.3)	1.15 (29.1)	0.25 (6.4)	0.25 (6.4)	0.88 (22.4)	0.51 (13.0)	7/16	7/16
DCW-4-4-*	1/4 (6.35)	1/4 (6.35)	0.44 (11.2)	0.19 (4.8)	1.33 (33.7)	0.31 (7.9)	0.31 (7.9)	1.03 (26.2)	0.61 (15.4)	1/2	9/16
DCW-4-6-*	1/4 (6.35)	3/8 (9.53)	0.61 (15.4)	0.19 (4.8)	1.42 (36.0)	0.31 (7.9)	0.38 (9.7)	1.12 (28.5)	0.61 (15.4)	5/8	9/16
DCW-5-5-*	5/16 (7.94)	5/16 (7.94)	10.12 (3.0)	0.25 (6.4)	1.38 (35.0)	0.35 (8.8)	0.35 (9.0)	1.08 (27.5)	0.64 (16.3)	9/16	5/8
DCW-6-6-*	3/8 (9.53)	3/8 (9.53)	0.62 (15.7)	0.28 (7.1)	1.48 (37.7)	0.37 (9.5)	0.38 (9.7)	1.19 (30.2)	0.67 (17.0)	5/8	11/16
DCW-6-8-*	3/8 (9.53)	1/2 (12.7)	0.75 (19.1)	0.28 (7.1)	1.52 (38.5)	0.37 (9.5)	0.50 (12.7)	1.22 (31.0)	0.67 (17.0)	13/16	11/16
DCW-8-8-*	1/2 (12.7)	1/2 (12.7)	0.75 (19.1)	0.41 (10.4)	1.63 (41.3)	0.50 (12.7)	0.50 (12.7)	1.22 (31.0)	0.91 (23.0)	13/16	7/8

DCW-8-12-*	1/2 (12.7)	3/4 (19.05)	1.05 (26.7)	0.41 (10.4)	1.72 (43.6)	0.50 (12.7)	0.56 (14.2)	1.31 (33.3)	0.91 (23.0)	1-1/16	7/8
DCW-8-16-*	1/2 (12.7)	1 (25.4)	1.31 (33.3)	0.89 (22.5)	1.86 (47.3)	0.50 (12.7)	0.75 (19.1)	1.46 (37.0)	0.91 (23.0)	1-3/8	7/8
DCW-10-10-*	5/8 (15.88)	5/8 (15.88)	0.91 (23.2)	0.50 (12.7)	1.66 (42.1)	0.56 (14.3)	0.56 (14.2)	1.25 (31.8)	0.97 (24.6)	15/16	1
DCW-12-8-*	3/4 (19.05)	1/2 (12.7)	0.75 (19.1)	0.62 (15.8)	1.70 (43.3)	0.56 (14.3)	0.50 (12.7)	1.30 (33.0)	0.97 (24.6)	1-1/16	1-1/8
DCW-12-12-*	3/4 (19.05)	3/4 (19.05)	1.05 (26.7)	0.62 (15.8)	1.72 (43.6)	0.56 (14.3)	0.56 (14.2)	1.31 (33.3)	0.97 (24.6)	1-1/16	1-1/8
DCW-16-16-*	1 (25.4)	1 (25.4)	1.31 (33.3)	0.89 (22.5)	2.09 (53.1)	0.75 (19.1)	0.75 (19.1)	1.59 (40.5)	1.24 (31.6)	1-3/8	1-1/2

*Add suffix SS for 316 stainless steel or B for brass. **Disassemble fittings when welding.

DHA
Male Adapter

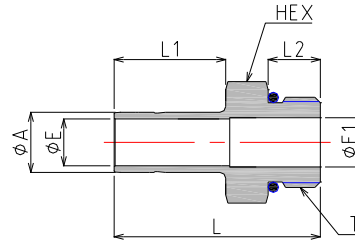


inch (mm)

Part No.	ØA Tube OD	ØE	ØE1	L	L1	Hex	T (NPT/ISO)
DHA-2-1-*	1/8 (3.18)	0.07 (1.8)	0.12 (3.0)	1.06 (26.9)	0.55 (14.0)	7/16	1/16
DHA-2-2-*	1/8 (3.18)	0.07 (1.8)	0.18 (4.6)	1.12 (28.4)	0.55 (14.0)	7/16	1/8
DHA-2-4-*	1/8 (3.18)	0.07 (1.8)	0.28 (7.1)	1.32 (33.5)	0.55 (14.0)	9/16	1/4
DHA-3-2-*	3/16 (4.76)	0.12 (3.0)	0.18 (4.6)	1.15 (29.2)	0.58 (14.8)	7/16	1/8
DHA-3-4-*	3/16 (4.76)	0.12 (3.0)	0.28 (7.1)	1.34 (34.0)	0.58 (14.8)	9/16	1/4
DHA-4-2-*	1/4 (6.35)	0.18 (4.6)	0.18 (4.6)	1.22 (31.0)	0.65 (16.5)	7/16	1/8
DHA-4-4-*	1/4 (6.35)	0.18 (4.6)	0.28 (7.1)	1.40 (35.5)	0.65 (16.5)	9/16	1/4
DHA-4-6-*	1/4 (6.35)	0.18 (4.6)	0.41 (10.4)	1.44 (36.5)	0.65 (16.5)	11/16	3/8
DHA-4-8-*	1/4 (6.35)	0.18 (4.6)	0.50 (12.7)	1.65 (42.0)	0.65 (16.5)	7/8	1/2
DHA-5-2-*	5/16 (7.94)	0.25 (6.4)	0.18 (4.6)	1.25 (31.8)	0.68 (17.2)	7/16	1/8
DHA-5-4-*	5/16 (7.94)	0.25 (6.4)	0.28 (7.1)	1.46 (37.1)	0.68 (17.2)	9/16	1/4
DHA-6-2-*	3/8 (9.53)	0.28 (7.1)	0.18 (4.6)	1.31 (33.3)	0.71 (18.0)	7/16	1/8
DHA-6-4-*	3/8 (9.53)	0.28 (7.1)	0.28 (7.1)	1.50 (38.0)	0.71 (18.0)	9/16	1/4
DHA-6-6-*	3/8 (9.53)	0.28 (7.1)	0.41 (10.4)	1.50 (38.0)	0.71 (18.0)	11/16	3/8
DHA-6-8-*	3/8 (9.53)	0.28 (7.1)	0.50 (12.7)	1.71 (43.5)	0.71 (18.0)	7/8	1/2
DHA-8-2-*	1/2 (12.7)	0.39 (9.9)	0.18 (4.6)	1.56 (39.6)	0.93 (23.5)	9/16	1/8
DHA-8-4-*	1/2 (12.7)	0.39 (9.9)	0.28 (7.1)	1.71 (43.5)	0.93 (23.5)	9/16	1/4
DHA-8-6-*	1/2 (12.7)	0.39 (9.9)	0.41 (10.4)	1.75 (44.5)	0.93 (23.5)	11/16	3/8
DHA-8-8-*	1/2 (12.7)	0.39 (9.9)	0.50 (12.7)	1.93 (49.0)	0.93 (23.5)	7/8	1/2
DHA-8-12-*	1/2 (12.7)	0.39 (9.9)	0.62 (15.8)	1.96 (49.9)	0.93 (23.5)	1-1/16	3/4
DHA-8-16-*	1/2 (12.7)	0.39 (9.9)	0.89 (22.5)	2.21 (56.2)	0.93 (23.5)	1-3/8	1
DHA-10-6-*	5/8 (15.88)	0.50 (12.7)	0.41 (10.4)	1.81 (46.0)	0.99 (25.2)	11/16	3/8
DHA-10-8-*	5/8 (15.88)	0.50 (12.7)	0.50 (12.7)	2.00 (50.8)	0.99 (25.2)	7/8	1/2
DHA-10-12-*	5/8 (15.88)	0.50 (12.7)	0.72 (18.3)	2.03 (51.6)	0.99 (25.2)	1-1/16	3/4
DHA-12-4-*	3/4 (19.05)	0.59 (15.0)	0.28 (7.1)	1.81 (46.0)	0.99 (25.2)	7/8	1/4
DHA-12-6-*	3/4 (19.05)	0.59 (15.0)	0.41 (10.4)	1.80 (45.7)	0.99 (25.2)	7/8	3/8
DHA-12-8-*	3/4 (19.05)	0.59 (15.0)	0.50 (12.7)	2.00 (50.7)	0.99 (25.2)	7/8	1/2
DHA-12-12-*	3/4 (19.05)	0.59 (15.0)	0.72 (18.3)	2.03 (51.6)	0.99 (25.2)	1-1/16	3/4
DHA-12-16-*	3/4 (19.05)	0.59 (15.0)	0.89 (22.5)	2.28 (57.9)	0.99 (25.2)	1-3/8	1
DHA-14-12-*	7/8 (22.23)	0.68 (17.3)	0.72 (18.3)	2.09 (53.1)	1.06 (27.0)	1-1/16	3/4
DHA-16-12-*	1 (25.4)	0.79 (20.1)	0.72 (18.3)	2.28 (58.0)	1.28 (32.5)	1-1/16	3/4
DHA-16-16-*	1 (25.4)	0.79 (20.1)	0.89 (22.5)	2.56 (65.0)	1.28 (32.5)	1-3/8	1

*Add suffix SS for 316 stainless steel or B for brass. ISO thread is available. Add R before thread size. Example, DHA-4-R4-SS

DHB
O-Ring Seal Male Adapter

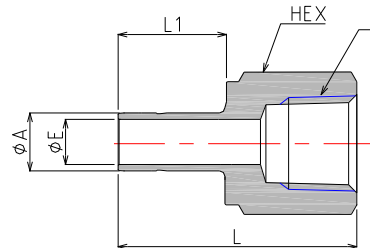
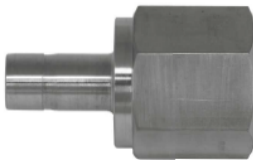


inch (mm)

Part No.	ØA Tube OD	ØE	ØE1	L	L1	L2	Hex	T (UNF)	O-Ring AS568
DHB-2-2-*	1/8 (3.18)	0.07 (1.8)	0.09 (2.3)	1.06 (27.0)	0.55 (14.0)	0.30 (7.5)	7/16	5/16-24	-902
DHB-4-4-*	1/4 (6.35)	0.18 (4.6)	0.18 (4.6)	1.30 (33.0)	0.65 (16.5)	0.35 (9.0)	9/16	7/16-20	-904
DHB-4-6-*	1/4 (6.35)	0.18 (4.6)	0.28 (7.1)	1.34 (34.0)	0.65 (16.5)	0.39 (10.0)	11/16	9/16-18	-906
DHB-4-8-*	1/4 (6.35)	0.18 (4.6)	0.39 (9.9)	1.38 (35.0)	0.65 (16.5)	0.43 (11.0)	7/8	3/4-16	-908
DHB-6-4-*	3/8 (9.53)	0.28 (7.1)	0.18 (4.6)	1.36 (34.5)	0.71 (18.0)	0.35 (9.0)	9/16	7/16-20	-904
DHB-6-6-*	3/8 (9.53)	0.28 (7.1)	0.28 (7.1)	1.37 (34.7)	0.71 (18.0)	0.39 (10.0)	11/16	9/16-18	-906
DHB-6-8-*	3/8 (9.53)	0.28 (7.1)	0.39 (9.9)	1.42 (36.0)	0.71 (18.0)	0.43 (11.0)	7/8	3/4-16	-908
DHB-8-6-*	1/2 (12.7)	0.28 (7.1)	0.39 (9.9)	1.57 (40.0)	0.93 (23.5)	0.39 (10.0)	11/16	9/16-18	-906
DHB-8-8-*	1/2 (12.7)	0.39 (9.9)	0.39 (9.9)	1.63 (41.5)	0.93 (23.5)	0.43 (11.0)	7/8	3/4-16	-908
DHB-10-10-*	5/8 (15.88)	0.50 (12.7)	0.50 (12.7)	1.79 (45.5)	0.99 (25.2)	0.49 (12.5)	1	7/8-14	-910
DHB-12-12-*	3/4 (19.05)	0.59 (15.0)	0.62 (15.8)	2.06 (52.2)	0.99 (25.2)	0.59 (15.0)	1-1/4	1-1/16-12	-912
DHB-12-16-*	3/4 (19.05)	0.59 (15.0)	0.89 (22.5)	2.17 (55.0)	0.99 (25.2)	0.59 (15.0)	1-1/2	1-5/16-12	-916
DHB-16-16-*	1 (25.4)	0.79 (20.1)	0.89 (22.5)	2.41 (61.2)	1.28 (32.5)	0.59 (15.0)	1-1/2	1-5/16-12	-916

*Add suffix SS for 316 stainless steel or B for brass. **O-Ring is Viton® (FKM, fluorocarbon) 90.

DHC
Female Adapter



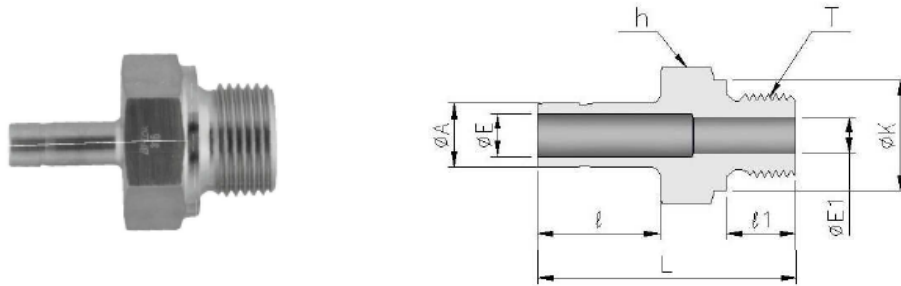
inch (mm)

Part No.	ØA Tube OD	ØE	L	L1	Hex	T (NPT/ISO)
DHC-2-2-*	1/8 (3.18)	0.07 (1.8)	1.22 (31.0)	0.55 (14.0)	9/16	1/8
DHC-2-4-*	1/8 (3.18)	0.07 (1.8)	1.34 (34.0)	0.55 (14.0)	3/4	1/4
DHC-3-2-*	3/16 (4.76)	0.13 (3.2)	1.26 (32.1)	10.19 (4.8)	9/16	1/8
DHC-3-4-*	3/16 (4.76)	0.13 (3.2)	1.37 (34.8)	10.19 (4.8)	3/4	1/4
DHC-4-2-*	1/4 (6.35)	0.18 (4.6)	1.32 (33.5)	0.65 (16.5)	9/16	1/8
DHC-4-4-*	1/4 (6.35)	0.18 (4.6)	1.44 (36.5)	0.65 (16.5)	3/4	1/4
DHC-4-6-*	1/4 (6.35)	0.18 (4.6)	1.56 (39.5)	0.65 (16.5)	7/8	3/8
DHC-4-8-*	1/4 (6.35)	0.18 (4.6)	1.78 (45.2)	0.65 (16.5)	1-1/16	1/2
DHC-5-2-*	5/16 (7.94)	0.25 (6.4)	1.35 (34.3)	0.68 (17.2)	9/16	1/8
DHC-5-4-*	5/16 (7.94)	0.25 (6.4)	1.46 (37.1)	0.68 (17.2)	3/4	1/4
DHC-6-2-*	3/8 (9.53)	0.28 (7.1)	1.39 (35.3)	0.71 (18.0)	9/16	1/8
DHC-6-4-*	3/8 (9.53)	0.28 (7.1)	1.50 (38.0)	0.71 (18.0)	3/4	1/4
DHC-6-6-*	3/8 (9.53)	0.28 (7.1)	1.61 (41.0)	0.71 (18.0)	7/8	3/8
DHC-6-8-*	3/8 (9.53)	0.28 (7.1)	1.83 (46.5)	0.71 (18.0)	1-1/16	1/2
DHC-8-2-*	1/2 (12.7)	0.39 (9.9)	1.59 (40.5)	0.93 (23.5)	9/16	1/8
DHC-8-4-*	1/2 (12.7)	0.39 (9.9)	1.71 (43.5)	0.93 (23.5)	3/4	1/4
DHC-8-6-*	1/2 (12.7)	0.39 (9.9)	1.85 (47.0)	0.93 (23.5)	7/8	3/8
DHC-8-8-*	1/2 (12.7)	0.39 (9.9)	2.07 (52.5)	0.93 (23.5)	1-1/16	1/2

DHC-8-12-*	1/2 (12.7)	0.39 (9.9)	2.13 (54.0)	0.93 (23.5)	1-1/4	3/4
DHC-10-6-*	5/8 (15.88)	0.50 (12.7)	1.90 (48.3)	0.99 (25.2)	7/8	3/8
DHC-10-8-*	5/8 (15.88)	0.50 (12.7)	2.12 (53.8)	0.99 (25.2)	1-1/16	1/2
DHC-10-12-*	5/8 (15.88)	0.50 (12.7)	2.18 (55.4)	0.99 (25.2)	1-1/4	3/4
DHC-12-8-*	3/4 (19.05)	0.59 (15.0)	2.13 (54.0)	0.99 (25.2)	1-1/16	1/2
DHC-12-12-*	3/4 (19.05)	0.59 (15.0)	2.18 (55.4)	0.99 (25.2)	1-1/4	3/4
DHC-12-16-*	3/4 (19.05)	0.59 (15.0)	2.46 (62.5)	0.99 (25.2)	1-5/8	1
DHC-14-12-*	7/8 (22.23)	0.68 (17.3)	2.25 (57.2)	1.06 (27.0)	1-1/4	3/4
DHC-16-8-*	1 (25.4)	0.79 (20.1)	2.40 (61.0)	1.28 (32.5)	1-1/16	1/2
DHC-16-12-*	1 (25.4)	0.79 (20.1)	2.44 (62.0)	1.28 (32.5)	1-1/4	3/4
DHC-16-16-*	1 (25.4)	0.79 (20.1)	2.71 (68.8)	1.28 (32.5)	1-5/8	1

*Add suffix SS for 316 stainless steel or B for brass. ISO thread is available. Add R before thread size. Example, DHC-4-R4-SS

DHJ
COPPER GASKET SEAL MALE ADAPTER



Part No.	ØA Tube OD	ØE	ØE1	ØK	L	l	l1	h	T (G)	Gasket
DHJ-4-G2	1/4 (6.35)	0.18 (4.6)	0.16 (4.1)	0.55 (13.8)	1.31 (33.3)	0.65 (16.5)	0.28 (7.1)	9/16	1/8	
DHJ-4-G4	1/4 (6.35)	0.18 (4.6)	0.23 (5.9)	0.71 (18.0)	1.43 (36.4)	0.65 (16.5)	0.44 (11.2)	3/4	1/4	
DHJ-4-G6	1/4 (6.35)	0.18 (4.6)	0.18 (4.6)	0.86 (21.8)	1.53 (38.8)	0.65 (16.5)	0.44 (11.2)	7/8	3/8	
DHJ-6-G4	3/8 (9.53)	0.28 (7.1)	0.23 (5.9)	0.71 (18.0)	1.57 (39.9)	0.71 (18.0)	0.44 (11.2)	3/4	1/4	
DHJ-6-G6	3/8 (9.53)	0.28 (7.1)	0.31 (7.9)	0.86 (21.8)	1.54 (39.2)	0.71 (18.0)	0.44 (11.2)	7/8	3/8	
DHJ-6-G8	3/8 (9.53)	0.28 (7.1)	0.28 (7.1)	1.02 (26.0)	1.72 (43.7)	0.71 (18.0)	0.56 (14.2)	1-1/16	1/2	
DHJ-8-G4	1/2 (12.7)	0.39 (9.9)	0.23 (5.9)	0.71 (18.0)	1.79 (45.5)	0.93 (23.5)	0.44 (11.2)	3/4	1/4	
DHJ-8-G6	1/2 (12.7)	0.39 (9.9)	0.31 (7.9)	0.86 (21.8)	1.82 (46.2)	0.93 (23.5)	0.44 (11.2)	7/8	3/8	
DHJ-8-G8	1/2 (12.7)	0.39 (9.9)	0.39 (9.9)	1.02 (26.0)	1.94 (49.3)	0.93 (23.5)	0.56 (14.2)	1-1/16	1/2	

*Add suffix SS for 316 stainless steel or B for brass.

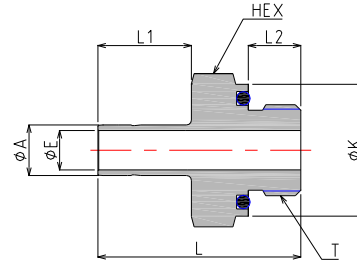
DHN
AN 37° Adapter



Part No.	ØA Tube OD	ØE	ØE1	L	L1	Hex	T (UNF)
DHN-4-4-*	1/4 (6.35)	0.18 (4.6)	0.17 (4.3)	1.46 (37.0)	0.65 (16.5)	1/2	7/16-20
DHN-6-4-*	3/8 (9.53)	0.28 (7.1)	0.17 (4.3)	1.52 (38.5)	0.71 (18.0)	1/2	7/16-20
DHN-6-6-*	3/8 (9.53)	0.28 (7.1)	0.28 (7.1)	1.56 (39.5)	0.71 (18.0)	5/8	9/16-18
DHN-8-6-*	1/2 (12.7)	0.39 (9.9)	0.28 (7.1)	1.77 (45.0)	0.93 (23.5)	5/8	9/16-18
DHN-8-8-*	1/2 (12.7)	0.39 (9.9)	0.39 (9.9)	1.91 (48.5)	0.93 (23.5)	13/16	3/4-16
DHN-10-10-*	5/8 (15.88)	0.50 (12.7)	0.48 (12.3)	2.09 (53.0)	0.99 (25.2)	15/16	7/8-14
DHN-12-12-*	3/4 (19.05)	0.59 (15.0)	0.62 (15.8)	2.20 (56.0)	0.99 (25.2)	1-1/8	1-1/16-12
DHN-16-16-*	1 (25.4)	0.79 (20.1)	0.85 (21.5)	2.58 (65.5)	1.28 (32.5)	1-3/8	1-5/16-12

*Add suffix SS for 316 stainless steel or B for brass.

DHO
O-Ring Seal Male Adapter for Straight Thread

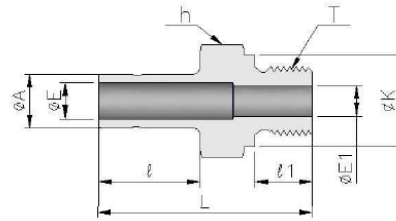


inch (mm)

Part No.	ØA Tube OD	ØE	ØK	L	L1	L2	Hex	T (UNF)	O-Ring AS568
DHO-2-2*	1/8 (3.18)	0.07 (1.8)	0.55 (14.0)	1.28 (32.5)	0.55 (14.0)	0.34 (8.6)	9/16	5/16-24	-011
DHO-3-3*	3/16 (4.76)	0.13 (3.2)	0.61 (15.4)	1.38 (35.1)	0.58 (14.8)	0.38 (9.7)	5/8	3/8-24	-012
DHO-4-4*	1/4 (6.35)	0.18 (4.6)	0.73 (18.5)	1.54 (39.1)	0.65 (16.5)	0.41 (10.4)	3/4	7/16-20	-111
DHO-5-5*	5/16 (7.94)	0.25 (6.4)	0.86 (21.8)	1.64 (41.7)	0.68 (17.2)	0.44 (11.2)	7/8	1/2-20	-112
DHO-6-6*	3/8 (9.53)	0.28 (7.1)	0.93 (23.6)	1.70 (43.2)	0.71 (18.0)	0.47 (11.9)	15/16	9/16-18	-113
DHO-8-8*	1/2 (12.7)	0.39 (9.9)	1.10 (28.0)	1.95 (49.5)	0.93 (23.5)	0.47 (11.9)	1-1/8	3/4-16	-116

*Add suffix SS for 316 stainless steel or B for brass. **O-Ring is Buna 90.

DHQ
BONDED SEAL ADAPTER STRAIGHT THREADS

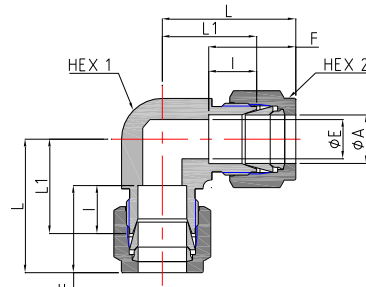


inch (mm)

Part No.	ØA Tube OD	ØE	ØE1	ØK	L	l	l1	h	T (G)	Gasket
DHQ-4-G2	1/4 (6.35)	0.18 (4.6)	0.16 (4.1)	0.55 (13.8)	1.31 (33.3)	0.65 (16.5)	0.28 (7.1)	9/16	1/8	
DHQ-4-G4	1/4 (6.35)	0.18 (4.6)	0.23 (5.9)	0.71 (18.0)	1.50 (38.1)	0.65 (16.5)	0.44 (11.2)	3/4	1/4	
DHQ-6-G4	3/8 (9.53)	0.28 (7.1)	0.23 (5.9)	0.71 (18.0)	1.57 (39.9)	0.71 (18.0)	0.44 (11.2)	3/4	1/4	
DHQ-6-G6	3/8 (9.53)	0.28 (7.1)	0.28 (7.1)	0.86 (21.8)	1.60 (40.6)	0.71 (18.0)	0.44 (11.2)	7/8	3/8	
DHQ-8-G4	1/2 (12.7)	0.39 (9.9)	0.23 (5.9)	0.71 (18.0)	1.79 (45.5)	0.93 (23.5)	0.44 (11.2)	3/4	1/4	
DHQ-8-G6	1/2 (12.7)	0.39 (9.9)	0.31 (7.9)	0.86 (21.8)	1.82 (46.2)	0.93 (23.5)	0.44 (11.2)	7/8	3/8	
DHQ-8-G8	1/2 (12.7)	0.39 (9.9)	0.39 (9.9)	1.02 (26.0)	1.94 (49.3)	0.93 (23.5)	0.56 (14.2)	1-1/16	1/2	

*Add suffix SS for 316 stainless steel or B for brass.

DLA
Union Elbow

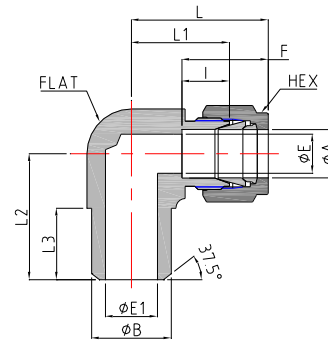


inch (mm)

Part No.	ØA Tube OD	ØE	L	I	L1	F	FLAT	Hex 2
DLA-1-*	1/16 (1.59)	0.05 (1.3)	0.72 (18.2)	0.19 (4.9)	0.56 (14.2)	0.35 (8.9)	3/8	5/16
DLA-2-*	1/8 (3.18)	0.09 (2.3)	0.89 (22.5)	0.25 (6.4)	0.62 (15.8)	0.51 (13.0)	3/8	7/16
DLA-3-*	3/16 (4.76)	0.12 (3.0)	1.01 (25.7)	0.28 (7.2)	0.75 (19.0)	0.54 (13.8)	1/2	1/2
DLA-4-*	1/4 (6.35)	0.19 (4.8)	1.08 (27.5)	0.31 (7.9)	0.79 (20.0)	0.61 (15.4)	1/2	9/16
DLA-5-*	5/16 (7.94)	0.25 (6.4)	1.18 (29.9)	0.35 (8.8)	0.88 (22.4)	0.64 (16.3)	5/8	5/8
DLA-6-*	3/8 (9.53)	0.28 (7.1)	1.20 (30.5)	0.37 (9.5)	0.91 (23.0)	0.67 (17.0)	5/8	11/16
DLA-8-*	1/2 (12.7)	0.41 (10.4)	1.39 (35.3)	0.50 (12.7)	0.98 (25.0)	0.91 (23.0)	13/16	7/8
DLA-10-*	5/8 (15.88)	0.50 (12.7)	1.47 (37.3)	0.56 (14.3)	1.06 (27.0)	0.97 (24.6)	15/16	1
DLA-12-*	3/4 (19.05)	0.62 (15.8)	1.52 (38.5)	0.56 (14.3)	1.11 (28.2)	0.97 (24.6)	1-1/16	1-1/8
DLA-14-*	7/8 (22.23)	0.72 (18.3)	1.68 (42.7)	0.63 (15.9)	1.28 (32.5)	1.03 (26.1)	1-1/4	1-1/4
DLA-16-*	1 (25.4)	0.89 (22.5)	1.81 (45.9)	0.75 (19.1)	1.31 (33.3)	1.24 (31.6)	1-5/16	1-1/2

*Add suffix SS for 316 stainless steel or B for brass.

DLB
Male Pipe Weld Elbow

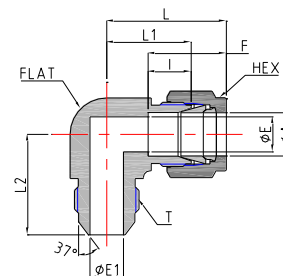
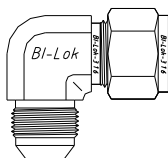


inch (mm)

Part No.	ØA Tube OD	ØB Pipe Nominal	ØE	ØE1	L	I	L1	L2	L3	F	Flat	Hex
DLB-2-2-*	1/8 (3.18)	1/8 (10.3)	0.09 (2.3)	0.22 (5.5)	0.93 (23.5)	0.25 (6.4)	0.66 (16.8)	0.75 (19.1)	0.38 (9.7)	0.51 (13.0)	7/16	7/16
DLB-3-2-*	3/16 (4.76)	1/8 (10.3)	0.12 (3.0)	0.22 (5.5)	1.01 (25.7)	0.28 (7.2)	0.75 (19.0)	0.75 (19.1)	0.38 (9.7)	0.54 (13.8)	1/2	1/2
DLB-4-2-*	1/4 (6.35)	1/8 (10.3)	0.19 (4.8)	0.22 (5.5)	1.07 (27.3)	0.31 (7.9)	0.78 (19.8)	0.75 (19.1)	0.38 (9.7)	0.61 (15.4)	1/2	9/16
DLB-4-4-*	1/4 (6.35)	1/4 (13.7)	0.19 (4.8)	0.30 (7.7)	1.08 (27.5)	0.31 (7.9)	0.78 (19.8)	0.94 (23.9)	0.56 (14.2)	0.61 (15.4)	1/2	9/16
DLB-6-4-*	3/8 (9.53)	1/4 (13.7)	0.28 (7.1)	0.30 (7.7)	1.20 (30.6)	0.37 (9.5)	0.91 (23.1)	1.00 (25.4)	0.56 (14.2)	0.67 (17.0)	5/8	11/16
DLB-6-6-*	3/8 (9.53)	3/8 (17.1)	0.28 (7.1)	0.41 (10.4)	1.24 (31.5)	0.37 (9.5)	0.94 (24.0)	1.12 (28.5)	0.56 (14.2)	0.67 (17.0)	11/16	11/16
DLB-6-8-*	3/8 (9.53)	1/2 (21.3)	0.28 (7.1)	0.55 (13.9)	1.33 (33.7)	0.37 (9.5)	1.03 (26.2)	1.32 (33.5)	0.75 (19.1)	0.67 (17.0)	15/16	11/16
DLB-8-6-*	1/2 (12.7)	3/8 (17.1)	0.41 (10.4)	0.41 (10.4)	1.39 (35.3)	0.50 (12.7)	0.98 (25.0)	1.08 (27.5)	0.56 (14.2)	0.91 (23.0)	13/16	7/8
DLB-8-8-*	1/2 (12.7)	1/2 (21.3)	0.41 (10.4)	0.55 (13.9)	1.44 (36.5)	0.50 (12.7)	1.03 (26.2)	1.32 (33.5)	0.75 (19.1)	0.91 (23.0)	15/16	7/8
DLB-10-8-*	5/8 (15.88)	1/2 (21.3)	0.50 (12.7)	0.55 (13.9)	1.47 (37.3)	0.56 (14.3)	1.06 (27.0)	1.32 (33.5)	0.75 (19.1)	0.97 (24.6)	15/16	1
DLB-12-12-*	3/4 (19.05)	3/4 (26.5)	0.62 (15.8)	0.74 (18.8)	1.52 (38.5)	0.56 (14.3)	1.11 (28.2)	1.40 (35.5)	0.75 (19.1)	0.97 (24.6)	1-1/16	1-1/8
DLB-16-12-*	1 (25.4)	3/4 (26.5)	0.89 (22.5)	0.74 (18.8)	1.81 (45.9)	0.75 (19.1)	1.31 (33.3)	1.56 (39.5)	0.75 (19.1)	1.24 (31.6)	1-5/16	1-1/2
DLB-16-16-*	1 (25.4)	1 (33.4)	0.89 (22.5)	0.96 (24.3)	1.81 (45.9)	0.75 (19.1)	1.31 (33.3)	1.84 (46.7)	1.05 (26.7)	1.24 (31.6)	1-5/16	1-1/2

*Add suffix SS for 316 stainless steel or B for brass. **Disassemble fittings when welding.

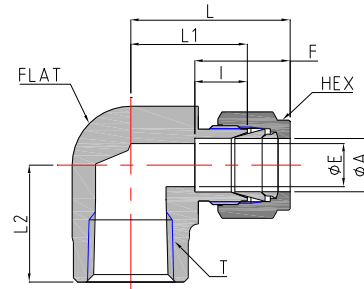
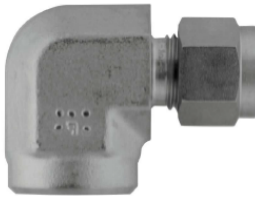
DLC
37° AN Flare Elbow



Part No.	ØA Tube OD	ØE	ØE1	L	F	I	L1	L2	T	Flat	Hex
DLC-2-2-*	1/8 (3.18)	0.09 (2.3)	0.06 (1.5)	0.93 (23.5)	0.51 (13.0)	0.25 (6.4)	0.66 (16.8)	0.77 (19.5)	5/16-24	7/16	7/16
DLC-2-4-*	3/16 (4.76)	0.12 (3.0)	0.17 (4.3)	0.98 (25.0)	0.51 (13.0)	0.25 (6.4)	0.72 (18.3)	0.94 (24.0)	7/16-20	7/16	7/16
DLC-4-2-*	1/4 (6.35)	0.19 (4.8)	0.06 (1.5)	1.08 (27.5)	0.61 (15.4)	0.31 (7.9)	0.79 (20.0)	0.80 (20.4)	5/16-24	1/2	9/16
DLC-4-4-*	1/4 (6.35)	0.19 (4.8)	0.17 (4.3)	1.08 (27.5)	0.61 (15.4)	0.31 (7.9)	0.79 (20.0)	0.94 (24)	7/16-20	1/2	9/16
DLC-5-5-*	5/16 (7.94)	0.25 (6.4)	0.24 (6.0)	1.18 (29.9)	0.64 (16.3)	0.35 (8.8)	0.88 (22.4)	1.00 (25.5)	1/2-20	5/8	5/8
DLC-6-4-*	3/8 (9.53)	0.28 (7.1)	0.17 (4.3)	1.20 (30.5)	0.67 (17.0)	0.37 (9.5)	0.91 (23.0)	1.00 (25.5)	7/16-20	5/8	11/16
DLC-6-6-*	3/8 (9.53)	0.28 (7.1)	0.28 (7.1)	1.20 (30.5)	0.67 (17.0)	0.37 (9.5)	0.91 (23.0)	1.00 (25.5)	9/16-18	5/8	11/16
DLC-8-6-*	1/2 (12.7)	0.41 (10.4)	0.28 (7.1)	1.39 (35.3)	0.91 (23.0)	0.50 (12.7)	0.98 (25.0)	1.08 (27.5)	9/16-18	13/16	7/8
DLC-8-8-*	1/2 (12.7)	0.41 (10.4)	0.39 (9.9)	1.39 (35.3)	0.91 (23.0)	0.50 (12.7)	0.98 (25.0)	1.18 (30.0)	3/4-16	13/16	7/8
DLC-10-8-*	5/8 (15.88)	0.50 (12.7)	0.39 (9.9)	1.47 (37.3)	0.97 (24.6)	0.56 (14.3)	1.06 (27.0)	1.34 (34.0)	3/4-16	15/16	1
DLC-10-10-*	5/8 (15.88)	0.50 (12.7)	0.48 (12.3)	1.47 (37.3)	0.97 (24.6)	0.56 (14.3)	1.06 (27.0)	1.38 (35.0)	7/8-14	15/16	1
DLC-12-8-*	3/4 (19.05)	0.62 (15.8)	0.39 (9.9)	1.52 (38.5)	0.97 (24.6)	0.56 (14.3)	1.11 (28.2)	1.40 (35.5)	3/4-16	1-1/16	1-1/8
DLC-12-12-*	3/4 (19.05)	0.62 (15.8)	0.61 (15.5)	1.52 (38.5)	0.97 (24.6)	0.56 (14.3)	1.26 (32.0)	1.52 (38.5)	1-1/16-12	1-1/16	1-1/8
DLC-16-12-*	1 (25.4)	0.89 (22.5)	0.61 (15.5)	1.81 (45.9)	1.24 (31.6)	0.75 (19.1)	1.31 (33.3)	1.73 (44.0)	1-1/16-12	1-5/16	1-1/2
DLC-16-16-*	1 (25.4)	0.89 (22.5)	0.85 (21.5)	1.81 (45.9)	1.24 (31.6)	0.75 (19.1)	1.31 (33.3)	1.85 (47.0)	1-5/16-12	1-5/16	1-1/2

*Add suffix SS for 316 stainless steel or B for brass.

DLF
Female Elbow

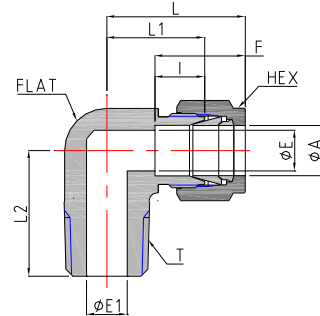


Part No.	ØA Tube OD	ØE	L	I	L1	L2	F	Flat	Hex	T (NPT/ISO)
DLF-2-2-*	1/8 (3.18)	0.09 (2.3)	0.95 (24.2)	0.25 (6.4)	0.69 (17.5)	0.75 (19.0)	0.51 (13.0)	5/8	7/16	1/8
DLF-2-4-*	1/8 (3.18)	0.09 (2.4)	1.07 (27.2)	0.25 (6.4)	0.81 (20.5)	0.89 (22.5)	0.51 (13.0)	13/16	7/16	1/4
DLF-2-8-*	1/8 (3.18)	0.09 (2.4)	1.28 (32.4)	0.25 (6.4)	1.01 (25.7)	1.12 (28.5)	0.51 (13.0)	1-1/16	7/16	1/2
DLF-3-2-*	3/16 (4.76)	0.12 (3.0)	0.98 (25.0)	0.28 (7.2)	0.72 (18.3)	0.75 (19.0)	0.54 (13.8)	5/8	1/2	1/8
DLF-4-2-*	1/4 (6.35)	0.19 (4.8)	1.04 (26.5)	0.31 (7.9)	0.75 (19.0)	0.75 (19.0)	0.61 (15.4)	5/8	9/16	1/8
DLF-4-4-*	1/4 (6.35)	0.19 (4.8)	1.18 (30.0)	0.31 (7.9)	0.89 (22.5)	0.89 (22.5)	0.61 (15.4)	13/16	9/16	1/4
DLF-4-6-*	1/4 (6.35)	0.19 (4.8)	1.27 (32.2)	0.31 (7.9)	0.97 (24.7)	0.89 (22.5)	0.61 (15.4)	15/16	9/16	3/8
DLF-4-8-*	1/4 (6.35)	0.19 (4.8)	1.41 (35.7)	0.31 (7.9)	1.11 (28.2)	1.12 (28.5)	0.61 (15.4)	1-1/16	9/16	1/2
DLF-5-2-*	5/16 (7.94)	0.25 (6.4)	1.18 (29.9)	0.35 (8.8)	0.89 (22.5)	0.75 (19.0)	0.64 (16.3)	5/8	5/8	1/8
DLF-5-4-*	5/16 (7.94)	0.25 (6.4)	1.20 (30.6)	0.35 (8.8)	0.91 (23.1)	0.89 (22.5)	0.64 (16.3)	13/16	5/8	1/4
DLF-5-6-*	5/16 (7.94)	0.25 (6.4)	1.33 (33.7)	0.35 (8.8)	1.03 (26.2)	0.89 (22.5)	0.64 (16.3)	15/16	5/8	3/8
DLF-6-2-*	3/8 (9.53)	0.28 (7.1)	1.20 (30.5)	0.37 (9.5)	0.91 (23.0)	0.75 (19.0)	0.67 (17.0)	5/8	11/16	1/8
DLF-6-4-*	3/8 (9.53)	0.28 (7.1)	1.24 (31.5)	0.37 (9.5)	0.94 (24.0)	0.89 (22.5)	0.67 (17.0)	13/16	11/16	1/4
DLF-6-6-*	3/8 (9.53)	0.28 (7.1)	1.33 (33.7)	0.37 (9.5)	1.03 (26.2)	0.89 (22.5)	0.67 (17.0)	15/16	11/16	3/8
DLF-6-8-*	3/8 (9.53)	0.28 (7.1)	1.42 (36.0)	0.37 (9.5)	1.11 (28.2)	1.12 (28.5)	0.67 (17.0)	1-1/16	11/16	1/2
DLF-6-12-*	3/8 (9.53)	0.28 (7.1)	1.55 (39.3)	0.37 (9.5)	1.25 (31.8)	1.25 (31.8)	0.67 (17.0)	1-5/16	11/16	3/4
DLF-8-2-*	1/2 (12.7)	0.41 (10.4)	1.39 (35.3)	0.50 (12.7)	0.98 (25.0)	0.89 (22.5)	0.91 (23.0)	13/16	7/8	1/8
DLF-8-4-*	1/2 (12.7)	0.41 (10.4)	1.39 (35.3)	0.50 (12.7)	0.98 (25.0)	0.89 (22.5)	0.91 (23.0)	13/16	7/8	1/4
DLF-8-6-*	1/2 (12.7)	0.41 (10.4)	1.44 (36.5)	0.50 (12.7)	1.03 (26.2)	0.89 (22.5)	0.91 (23.0)	15/16	7/8	3/8
DLF-8-8-*	1/2 (12.7)	0.41 (10.4)	1.52 (38.5)	0.50 (12.7)	1.11 (28.2)	1.12 (28.5)	0.91 (23.0)	1-1/16	7/8	1/2
DLF-8-12-*	1/2 (12.7)	0.41 (10.4)	1.67 (42.3)	0.50 (12.7)	1.25 (31.8)	1.25 (31.8)	0.91 (23.0)	1-5/16	7/8	3/4
DLF-10-6-*	5/8 (15.88)	0.50 (12.7)	1.46 (37.2)	0.56 (14.3)	1.06 (27.0)	0.89 (22.5)	0.97 (24.6)	15/16	1	3/8
DLF-10-8-*	5/8 (15.88)	0.50 (12.7)	1.52 (38.5)	0.56 (14.3)	1.11 (28.2)	1.12 (28.5)	0.97 (24.6)	1-1/16	1	1/2
DLF-12-6-*	3/4 (19.05)	0.62 (15.8)	1.52 (38.5)	0.56 (14.3)	1.11 (28.2)	1.12 (28.5)	0.97 (24.6)	1-1/16	1-1/8	3/8
DLF-12-8-*	3/4 (19.05)	0.62 (15.8)	1.52 (38.5)	0.56 (14.3)	1.11 (28.2)	1.12 (28.5)	0.97 (24.6)	1-1/16	1-1/8	1/2
DLF-12-12-*	3/4 (19.05)	0.62 (15.8)	1.66 (42.1)	0.56 (14.3)	1.25 (31.8)	1.25 (31.8)	0.97 (24.6)	1-5/16	1-1/8	3/4

DLF-14-12-*	7/8 (22.23)	0.72 (18.3)	1.68 (42.7)	0.63 (15.9)	1.28 (32.5)	1.25 (31.8)	1.03 (26.1)	1-5/16	1-1/4	3/4
DLF-16-6-*	1 (25.4)	0.89 (22.5)	1.81 (45.9)	0.75 (19.1)	1.31 (33.3)	1.12 (28.5)	1.24 (31.6)	1-5/16	1-1/2	3/8
DLF-16-8-*	1 (25.4)	0.89 (22.5)	1.81 (45.9)	0.75 (19.1)	1.31 (33.3)	1.25 (31.8)	1.24 (31.6)	1-5/16	1-1/2	1/2
DLF-16-12-*	1 (25.4)	0.89 (22.5)	1.81 (45.9)	0.75 (19.1)	1.31 (33.3)	1.25 (31.8)	1.24 (31.6)	1-5/16	1-1/2	3/4
DLF-16-16-*	1 (25.4)	0.89 (22.5)	2.07 (52.6)	0.75 (19.1)	1.57 (40.0)	1.50 (38.1)	1.24 (31.6)	1-13/16	1-1/2	1

*Add suffix SS for 316 stainless steel or B for brass. ISO thread is available. Add R before thread size. Example, DLF-4-R4-SS

**DLN
Male Elbow**



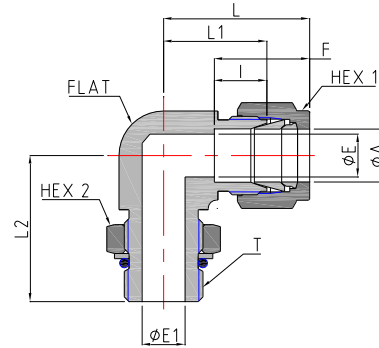
Part No.	ØA Tube OD	ØE	ØE1	L	I	L1	L2	F	Flat	Hex	T (NPT/ISO)
DLN-1-1-*	1/16 (1.59)	0.05 (1.3)	0.12 (3.0)	0.72 (18.2)	0.19 (4.9)	0.56 (14.2)	0.73 (18.5)	0.35 (8.9)	7/16	5/16	1/16
DLN-1-2-*	1/16 (1.59)	0.05 (1.3)	0.19 (4.8)	0.72 (18.2)	0.19 (4.9)	0.56 (14.2)	0.73 (18.5)	0.35 (8.9)	7/16	5/16	1/8
DLN-2-1-*	1/8 (3.18)	0.09 (2.3)	0.12 (3.0)	0.93 (23.5)	0.25 (6.4)	0.66 (16.8)	0.73 (18.5)	0.51 (13.0)	7/16	7/16	1/16
DLN-2-2-*	1/8 (3.18)	0.09 (2.3)	0.19 (4.8)	0.93 (23.5)	0.25 (6.4)	0.66 (16.8)	0.73 (18.5)	0.51 (13.0)	7/16	7/16	1/8
DLN-2-4-*	1/8 (3.18)	0.09 (2.3)	0.19 (4.8)	0.98 (25.0)	0.25 (6.4)	0.72 (18.3)	0.94 (24.0)	0.51 (13.0)	1/2	7/16	1/4
DLN-2-6-*	1/8 (3.18)	0.09 (2.3)	0.37 (9.4)	1.15 (29.2)	0.25 (6.4)	0.89 (22.5)	1.12 (28.5)	0.51 (13.0)	11/16	7/16	3/8
DLN-2-8-*	1/8 (3.18)	0.09 (2.3)	0.28 (7.1)	1.13 (28.7)	0.25 (6.4)	0.89 (22.5)	1.32 (33.5)	0.51 (13.0)	13/16	7/16	1/2
DLN-3-2-*	3/16 (4.76)	0.12 (3.0)	0.19 (4.8)	1.01 (25.7)	0.28 (7.2)	0.75 (19.0)	0.75 (19.0)	0.54 (13.8)	1/2	1/2	1/8
DLN-3-4-*	3/16 (4.76)	0.12 (3.0)	0.24 (6.0)	1.01 (25.7)	0.28 (7.2)	0.75 (19.0)	0.94 (24.0)	0.54 (13.8)	1/2	1/2	1/4
DLN-4-1-*	1/4 (6.35)	0.19 (4.8)	0.12 (3.0)	1.08 (27.5)	0.31 (7.9)	0.79 (20.0)	0.75 (19.0)	0.61 (15.4)	1/2	9/16	1/16
DLN-4-2-*	1/4 (6.35)	0.19 (4.8)	0.19 (4.8)	1.08 (27.5)	0.31 (7.9)	0.79 (20.0)	0.75 (19.0)	0.61 (15.4)	1/2	9/16	1/8
DLN-4-4-*	1/4 (6.35)	0.19 (4.8)	0.24 (6.0)	1.08 (27.5)	0.31 (7.9)	0.79 (20.0)	0.94 (24.0)	0.61 (15.4)	1/2	9/16	1/4
DLN-4-6-*	1/4 (6.35)	0.19 (4.8)	0.37 (9.4)	1.18 (30.0)	0.31 (7.9)	0.89 (22.5)	1.12 (28.5)	0.61 (15.4)	11/16	9/16	3/8
DLN-4-8-*	1/4 (6.35)	0.19 (4.8)	0.41 (10.4)	1.26 (32.0)	0.31 (7.9)	0.96 (24.5)	1.32 (33.5)	0.61 (15.4)	13/16	9/16	1/2
DLN-4-12-*	1/4 (6.35)	0.19 (4.8)	0.50 (12.7)	1.41 (35.7)	0.31 (7.9)	1.11 (28.2)	1.40 (35.5)	0.61 (15.4)	1-1/16	9/16	3/4
DLN-5-2-*	5/16 (7.94)	0.25 (6.4)	0.19 (4.8)	1.18 (29.9)	0.35 (8.8)	0.88 (22.4)	0.81 (20.5)	0.64 (16.3)	5/8	5/8	1/8
DLN-5-4-*	5/16 (7.94)	0.25 (6.4)	0.28 (7.1)	1.18 (29.9)	0.35 (8.8)	0.88 (22.4)	1.00 (25.5)	0.64 (16.3)	5/8	5/8	1/4
DLN-5-6-*	5/16 (7.94)	0.25 (6.4)	0.41 (10.4)	1.24 (31.5)	0.35 (8.8)	0.94 (24.0)	1.12 (28.5)	0.64 (16.3)	11/16	5/8	3/8
DLN-6-2-*	3/8 (9.53)	0.28 (7.1)	0.19 (4.8)	1.20 (30.5)	0.37 (9.5)	0.91 (23.0)	0.81 (20.5)	0.67 (17.0)	5/8	11/16	1/8
DLN-6-4-*	3/8 (9.53)	0.28 (7.1)	0.24 (6.0)	1.20 (30.5)	0.37 (9.5)	0.91 (23.0)	1.00 (25.5)	0.67 (17.0)	5/8	11/16	1/4
DLN-6-6-*	3/8 (9.53)	0.28 (7.1)	0.41 (10.4)	1.24 (31.5)	0.37 (9.5)	0.94 (24.0)	1.12 (28.5)	0.67 (17.0)	11/16	11/16	3/8
DLN-6-8-*	3/8 (9.53)	0.28 (7.1)	0.50 (12.7)	1.33 (33.7)	0.37 (9.5)	1.03 (26.2)	1.26 (32.0)	0.67 (17.0)	13/16	11/16	1/2
DLN-6-12-*	3/8 (9.53)	0.28 (7.1)	0.72 (18.3)	1.41 (35.7)	0.37 (9.5)	1.11 (28.2)	1.40 (35.5)	0.67 (17.0)	1-1/16	11/16	3/4
DLN-8-2-*	1/2 (12.7)	0.41 (10.4)	0.19 (4.8)	1.39 (35.3)	0.50 (12.7)	0.98 (25.0)	0.93 (23.5)	0.91 (23.0)	13/16	7/8	1/8
DLN-8-4-*	1/2 (12.7)	0.41 (10.4)	0.28 (7.1)	1.39 (35.3)	0.50 (12.7)	0.98 (25.0)	1.08 (27.5)	0.91 (23.0)	13/16	7/8	1/4
DLN-8-6-*	1/2 (12.7)	0.41 (10.4)	0.41 (10.4)	1.39 (35.3)	0.50 (12.7)	0.98 (25.0)	1.08 (27.5)	0.91 (23.0)	13/16	7/8	3/8
DLN-8-8-*	1/2 (12.7)	0.41 (10.4)	0.50 (12.7)	1.44 (36.5)	0.50 (12.7)	1.03 (26.2)	1.32 (33.5)	0.91 (23.0)	13/16	7/8	1/2
DLN-8-12-*	1/2 (12.7)	0.41 (10.4)	0.72 (18.3)	1.52 (38.5)	0.50 (12.7)	1.11 (28.2)	1.40 (35.5)	0.91 (23.0)	1-1/16	7/8	3/4
DLN-8-16-*	1/2 (12.7)	0.41 (10.4)	0.89 (22.5)	1.66 (42.1)	0.50 (12.7)	1.25 (31.8)	1.84 (46.7)	0.91 (23.0)	1-5/16	7/8	1
DLN-10-4-*	5/8 (15.88)	0.50 (12.7)	0.28 (7.1)	1.47 (37.3)	0.56 (14.3)	1.06 (27.0)	1.16 (29.5)	0.97 (24.6)	15/16	1	1/4
DLN-10-6-*	5/8 (15.88)	0.50 (12.7)	0.41 (10.4)	1.47 (37.3)	0.56 (14.3)	1.06 (27.0)	1.16 (29.5)	0.97 (24.6)	15/16	1	3/8
DLN-10-8-*	5/8 (15.88)	0.50 (12.7)	0.50 (12.7)	1.47 (37.3)	0.56 (14.3)	1.06 (27.0)	1.34 (34.0)	0.97 (24.6)	15/16	1	1/2
DLN-10-12-*	5/8 (15.88)	0.50 (12.7)	0.72 (18.3)	1.52 (38.5)	0.56 (14.3)	1.11 (28.2)	1.40 (35.5)	0.97 (24.6)	1-1/16	1	3/4
DLN-12-4-*	3/4 (19.05)	0.62 (15.8)	0.28 (7.1)	1.52 (38.5)	0.56 (14.3)	1.11 (28.2)	1.20 (30.5)	0.97 (24.6)	1-1/16	1-1/8	1/4
DLN-12-6-*	3/4 (19.05)	0.62 (15.8)	0.41 (10.4)	1.52 (38.5)	0.56 (14.3)	1.11 (28.2)	1.20 (30.5)	0.97 (24.6)	1-1/16	1-1/8	3/8
DLN-12-8-*	3/4 (19.05)	0.62 (15.8)	0.50 (12.7)	1.52 (38.5)	0.56 (14.3)	1.11 (28.2)	1.40 (35.5)	0.97 (24.6)	1-1/16	1-1/8	1/2
DLN-12-12-*	3/4 (19.05)	0.62 (15.8)	0.72 (18.3)	1.52 (38.5)	0.56 (14.3)	1.11 (28.2)	1.40 (35.5)	0.97 (24.6)	1-1/16	1-1/8	3/4
DLN-12-16-*	3/4 (19.05)	0.62 (15.8)	0.89 (22.5)	1.66 (42.1)	0.56 (14.3)	1.25 (31.8)	1.84 (46.7)	0.97 (24.6)	1-5/16	1-1/8	1

DLN-14-12-*	7/8 (22.23)	0.72 (18.3)	0.72 (18.3)	1.68 (42.7)	0.63 (15.9)	1.28 (32.5)	1.65 (42.0)	1.03 (26.1)	1-1/4	1-1/4	3/4
DLN-16-4-*	1 (25.4)	0.89 (22.5)	0.28 (7.1)	1.81 (45.9)	0.75 (19.1)	1.31 (33.3)	1.42 (36.0)	1.24 (31.6)	1-5/16	1-1/2	1/4
DLN-16-8-*	1 (25.4)	0.89 (22.5)	0.50 (12.7)	1.81 (45.9)	0.75 (19.1)	1.31 (33.3)	1.65 (42.0)	1.24 (31.6)	1-5/16	1-1/2	1/2
DLN-16-12-*	1 (25.4)	0.89 (22.5)	0.72 (18.3)	1.81 (45.9)	0.75 (19.1)	1.31 (33.3)	1.65 (42.0)	1.24 (31.6)	1-5/16	1-1/2	3/4
DLN-16-16-*	1 (25.4)	0.89 (22.5)	0.89 (22.5)	1.81 (45.9)	0.75 (19.1)	1.31 (33.3)	1.84 (46.7)	1.24 (31.6)	1-5/16	1-1/2	1

*Add suffix SS for 316 stainless steel or B for brass. ISO thread is available. Add R before thread size. Example, DLN-4-R4-SS.

DLO

Positional Male Elbow



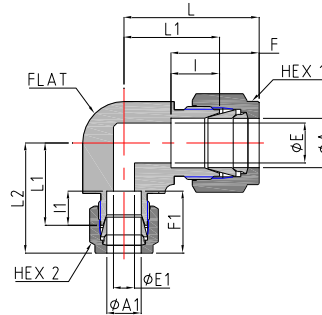
inch (mm)

Part No.	ØA Tube OD	ØE	ØE1	L	I	L1	L2	F	Hex 1	Hex 2	Flat	T (UNF)	O-Ring AS568
DLO-4-4-*	1/4 (6.35)	0.19 (4.8)	0.19 (4.8)	1.12 (28.5)	0.31 (7.9)	0.83 (21.0)	1.12 (28.5)	0.61 (15.4)	9/16	9/16	5/8	7/16-20	-904
DLO-4-6-*	1/4 (6.35)	0.19 (4.8)	0.28 (7.1)	1.20 (30.5)	0.31 (7.9)	20.12 (3.0)	1.28 (32.5)	0.61 (15.4)	9/16	11/16	5/8	9/16-18	-906
DLO-5-5-*	5/16 (7.94)	0.25 (6.4)	0.25 (6.4)	1.20 (30.5)	0.35 (8.8)	20.12 (3.0)	1.16 (29.5)	0.64 (16.3)	5/8	5/8	5/8	1/2-20	-905
DLO-6-6-*	3/8 (9.53)	0.28 (7.1)	0.28 (7.1)	30.08 (2.0)	0.37 (9.5)	0.96 (24.5)	1.28 (32.5)	0.67 (17.0)	11/16	11/16	5/8	9/16-18	-906
DLO-6-8-*	3/8 (9.53)	0.28 (7.1)	0.41 (10.4)	1.38 (35.0)	0.37 (9.5)	1.08 (27.5)	1.50 (38.0)	0.67 (17.0)	11/16	7/8	13/16	3/4-16	-908
DLO-8-8-*	1/2 (12.7)	0.41 (10.4)	0.41 (10.4)	1.49 (37.8)	0.50 (12.7)	1.08 (27.5)	1.50 (38.0)	0.91 (23.0)	7/8	7/8	13/16	3/4-16	-908

*Add suffix SS for 316 stainless steel or B for brass. **O-Ring is Viton® (FKM fluorocarbon) 90. *** See installation instruction on page **.

DLR

Reducing Union Elbow



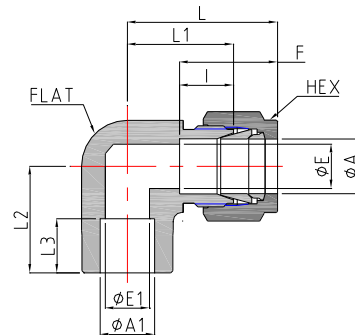
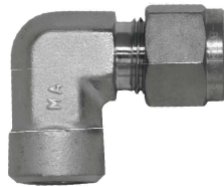
inch (mm)

Part No.	ØA Tube OD	ØA1 Tube OD	ØE	ØE1	L	I	I1	F	F1	L1	L2	Hex 1	Hex 2	Flat
DLR-2-1-*	1/8 (3.18)	1/16 (1.59)	0.09 (2.3)	0.05 (1.3)	0.89 (22.5)	0.25 (6.4)	0.19 (4.9)	0.51 (13.0)	0.35 (8.9)	0.62 (15.8)	0.78 (19.8)	7/16	5/16	7/16
DLR-3-2-*	3/16 (4.76)	1/8 (3.18)	0.12 (3.0)	0.09 (2.3)	1.01 (25.7)	0.28 (7.2)	0.25 (6.4)	0.54 (13.8)	0.51 (13.0)	0.75 (19.0)	0.89 (22.5)	1/2	7/16	1/2
DLR-4-2-*	1/4 (6.35)	1/8 (3.18)	0.19 (4.8)	0.09 (2.3)	1.08 (27.5)	0.31 (7.9)	0.25 (6.4)	0.61 (15.4)	0.51 (13.0)	0.79 (20.0)	1.05 (26.7)	9/16	7/16	1/2
DLR-4-3-*	1/4 (6.35)	3/16 (4.76)	0.19 (4.8)	0.12 (3.0)	1.08 (27.5)	0.31 (7.9)	0.28 (7.2)	0.61 (15.4)	0.54 (13.8)	0.79 (20.0)	1.05 (26.7)	9/16	1/2	1/2
DLR-5-2-*	5/16 (7.94)	1/8 (3.18)	0.25 (6.4)	0.09 (2.3)	1.18 (29.9)	0.35 (8.8)	0.25 (6.4)	0.64 (16.3)	0.51 (13.0)	0.88 (22.4)	1.15 (29.1)	5/8	7/16	5/8
DLR-5-4-*	5/16 (7.94)	1/4 (6.35)	0.25 (6.4)	0.19 (4.8)	1.18 (29.9)	0.35 (8.8)	0.31 (7.9)	0.64 (16.3)	0.61 (15.4)	0.88 (22.4)	1.18 (29.9)	5/8	9/16	5/8
DLR-6-2-*	3/8 (9.53)	1/8 (3.18)	0.28 (7.1)	0.09 (2.3)	1.20 (30.5)	0.37 (9.5)	0.25 (6.4)	0.67 (17.0)	0.51 (13.0)	0.91 (23.0)	1.17 (29.7)	11/16	7/16	5/8
DLR-6-4-*	3/8 (9.53)	1/4 (6.35)	0.28 (7.1)	0.19 (4.8)	1.20 (30.5)	0.37 (9.5)	0.31 (7.9)	0.67 (17.0)	0.61 (15.4)	0.91 (23.0)	1.20 (30.5)	11/16	9/16	5/8
DLR-6-5-*	3/8 (9.53)	5/16 (7.94)	0.28 (7.1)	0.25 (6.4)	1.20 (30.5)	0.37 (9.5)	0.35 (8.8)	0.67 (17.0)	0.64 (16.3)	0.91 (23.0)	1.20 (30.5)	11/16	5/8	5/8
DLR-8-2-*	1/2 (12.7)	1/8 (3.18)	0.41 (10.4)	0.09 (2.3)	1.39 (35.3)	0.50 (12.7)	0.25 (6.4)	0.91 (23.0)	0.51 (13.0)	0.98 (25.0)	1.25 (31.7)	7/8	7/16	13/16
DLR-8-4-*	1/2 (12.7)	1/4 (6.35)	0.41 (10.4)	0.19 (4.8)	1.39 (35.3)	0.50 (12.7)	0.31 (7.9)	0.91 (23.0)	0.61 (15.4)	0.98 (25.0)	1.28 (32.5)	7/8	9/16	13/16
DLR-8-5-*	1/2 (12.7)	5/16 (7.94)	0.41 (10.4)	0.25 (6.4)	1.39 (35.3)	0.50 (12.7)	0.35 (8.8)	0.91 (23.0)	0.64 (16.3)	0.98 (25.0)	1.28 (32.5)	7/8	5/8	13/16
DLR-8-6-*	1/2 (12.7)	3/8 (9.53)	0.41 (10.4)	0.28 (7.1)	1.39 (35.3)	0.50 (12.7)	0.37 (9.5)	0.91 (23.0)	0.67 (17.0)	0.98 (25.0)	1.28 (32.5)	7/8	11/16	13/16

DLR-10-4-*	5/8 (15.88)	1/4 (6.35)	0.50 (12.7)	0.19 (4.8)	1.47 (37.3)	0.56 (14.3)	0.31 (7.9)	0.97 (24.6)	0.61 (15.4)	1.06 (27.0)	1.36 (34.5)	1	9/16	15/16
DLR-10-6-*	5/8 (15.88)	3/8 (9.53)	0.50 (12.7)	0.28 (7.1)	1.47 (37.3)	0.56 (14.3)	0.37 (9.5)	0.97 (24.6)	0.67 (17.0)	1.06 (27.0)	1.36 (34.5)	1	11/16	15/16
DLR-10-8-*	5/8 (15.88)	1/2 (12.7)	0.50 (12.7)	0.41 (10.4)	1.47 (37.3)	0.56 (14.3)	0.50 (12.7)	0.97 (24.6)	0.91 (23.0)	1.06 (27.0)	1.47 (37.3)	1	7/8	15/16
DLR-12-4-*	3/4 (19.05)	1/4 (6.35)	0.62 (15.8)	0.19 (4.8)	1.52 (38.5)	0.56 (14.3)	0.31 (7.9)	0.97 (24.6)	0.61 (15.4)	1.11 (28.2)	1.41 (35.7)	1-1/8	9/16	1-1/16
DLR-12-6-*	3/4 (19.05)	3/8 (9.53)	0.62 (15.8)	0.28 (7.1)	1.52 (38.5)	0.56 (14.3)	0.37 (9.5)	0.97 (24.6)	0.67 (17.0)	1.11 (28.2)	1.41 (35.7)	1-1/8	11/16	1-1/16
DLR-12-8-*	3/4 (19.05)	1/2 (12.7)	0.62 (15.8)	0.41 (10.4)	1.52 (38.5)	0.56 (14.3)	0.50 (12.7)	0.97 (24.6)	0.91 (23.0)	1.11 (28.2)	1.52 (38.5)	1-1/8	7/8	1-1/16
DLR-12-10-*	3/4 (19.05)	5/8 (15.88)	0.62 (15.8)	0.50 (12.7)	1.52 (38.5)	0.56 (14.3)	0.56 (14.3)	0.97 (24.6)	0.97 (24.6)	1.11 (28.2)	1.52 (38.5)	1-1/8	1	1-1/16
DLR-14-4-*	7/8 (22.23)	1/4 (6.35)	0.72 (18.3)	0.19 (4.8)	1.68 (42.7)	0.63 (15.9)	0.31 (7.9)	1.03 (26.1)	0.61 (15.4)	1.28 (32.5)	1.68 (42.7)	1-1/4	9/16	1-1/4
DLR-16-8-*	1 (25.4)	1/2 (12.7)	0.89 (22.5)	0.41 (10.4)	1.81 (45.9)	0.75 (19.1)	0.50 (12.7)	1.24 (31.6)	0.91 (23.0)	1.31 (33.3)	1.72 (43.6)	1-1/2	7/8	1-5/16
DLR-16-10-*	1 (25.4)	5/8 (15.88)	0.89 (22.5)	0.50 (12.7)	1.81 (45.9)	0.75 (19.1)	0.56 (14.3)	1.24 (31.6)	0.97 (24.6)	1.31 (33.3)	1.72 (43.6)	1-1/2	1	1-5/16
DLR-16-12-*	1 (25.4)	3/4 (19.05)	0.89 (22.5)	0.62 (15.8)	1.81 (45.9)	0.75 (19.1)	0.56 (14.3)	1.24 (31.6)	0.97 (24.6)	1.31 (33.3)	1.72 (43.6)	1-1/2	1-1/8	1-5/16

*Add suffix SS for 316 stainless steel or B for brass.

DLW
Tube Socket Weld Elbow

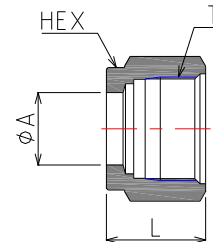
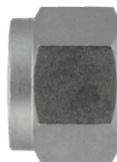


inch (mm)

Part No.	ØA Tube OD	ØA1	ØE	ØE1	L	I	L1	L2	L3	F	Hex	Flat
DLW-2-2-*	1/8 (3.18)	1/8 (3.18)	0.09 (2.3)	0.09 (2.3)	0.89 (22.5)	0.25 (6.4)	0.62 (15.8)	0.62 (15.8)	0.25 (6.4)	0.51 (13.0)	7/16	3/8
DLW-3-3-*	3/16 (4.76)	3/16 (4.76)	0.12 (3.0)	0.12 (3.0)	1.01 (25.7)	0.28 (7.2)	0.75 (19.0)	0.75 (19.0)	0.28 (7.1)	0.54 (13.8)	1/2	1/2
DLW-4-4-*	1/4 (6.35)	1/4 (6.35)	0.19 (4.8)	0.19 (4.8)	1.07 (27.3)	0.31 (7.9)	0.78 (19.8)	0.78 (19.8)	0.31 (7.9)	0.61 (15.4)	9/16	1/2
DLW-6-4-*	3/8 (9.53)	1/4 (6.35)	0.28 (7.1)	0.19 (4.8)	1.20 (30.5)	0.37 (9.5)	0.91 (23.0)	0.91 (23.0)	0.31 (7.9)	0.67 (17.0)	11/16	5/8
DLW-6-6-*	3/8 (9.53)	3/8 (9.53)	0.28 (7.1)	0.28 (7.1)	1.20 (30.5)	0.37 (9.5)	0.91 (23.1)	0.91 (23.1)	0.38 (9.7)	0.67 (17.0)	11/16	5/8
DLW-8-8-*	1/2 (12.7)	1/2 (12.7)	0.41 (10.4)	0.41 (10.4)	1.39 (35.3)	0.50 (12.7)	0.98 (25.0)	0.98 (25.0)	0.50 (12.7)	0.91 (23.0)	7/8	13/16
DLW-10-10-*	5/8 (15.88)	5/8 (15.88)	0.50 (12.7)	0.50 (12.7)	1.47 (37.3)	0.56 (14.3)	1.06 (27.0)	1.06 (27.0)	0.56 (14.2)	0.97 (24.6)	1	15/16
DLW-12-12-*	3/4 (19.05)	3/4 (19.05)	0.62 (15.8)	0.62 (15.8)	1.52 (38.5)	0.56 (14.3)	1.11 (28.2)	1.11 (28.2)	0.56 (14.2)	0.97 (24.6)	1-1/8	1-1/16
DLW-16-16-*	1 (25.4)	1 (25.4)	0.89 (22.5)	0.89 (22.5)	1.81 (45.9)	0.75 (19.1)	1.31 (33.3)	1.31 (33.3)	0.75 (19.1)	1.24 (31.6)	1-1/2	1-5/16

*Add suffix SS for 316 stainless steel or B for brass. **Disassemble fittings when welding.

DNA
Nut



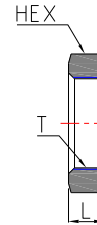
inch (mm)

Part No.	ØA Tube OD	L	Hex	T (UNF)
DNA-1-*	1/16 (1.59)	0.31 (8.0)	5/16	10-32
DNA-2-*	1/8 (3.18)	0.47 (11.9)	7/16	5/16-20
DNA-3-*	3/16 (4.76)	0.47 (11.9)	1/2	3/8-20
DNA-4-*	1/4 (6.35)	0.50 (12.7)	9/16	7/16-20
DNA-5-*	5/16 (7.94)	0.53 (13.5)	5/8	1/2-20

DNA-6-*	3/8 (9.53)	0.56 (14.2)	11/16	9/16-20
DNA-8-*	1/2 (12.7)	0.69 (17.5)	7/8	3/4-20
DNA-10-*	5/8 (15.88)	0.69 (17.5)	1	7/8-20
DNA-12-*	3/4 (19.05)	0.69 (17.5)	1-1/8	1-20
DNA-14-*	7/8 (22.23)	0.69 (17.5)	1-1/4	1-1/8-20
DNA-16-*	1 (25.4)	0.81 (20.6)	1-1/2	1-5/16-20

*Add suffix SS for 316 stainless steel or B for brass.

DNN
Bulkhead Nut

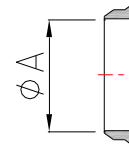


inch (mm)

Part No.	L	Hex	T (UNF)
DNN-1-*	0.16 (4.0)	5/16	10-32
DNN-2-*	0.18 (4.5)	1/2	5/16-20
DNN-3-*	0.22 (5.5)	9/16	3/8-20
DNN-4-*	0.24 (6.0)	5/8	7/16-20
DNN-5-*	0.24 (6.0)	11/16	1/2-20
DNN-6-*	0.24 (6.0)	3/4	9/16-20
DNN-8-*	0.28 (7.0)	15/16	3/4-20
DNN-10-*	0.31 (8.0)	1-1/16	7/8-20
DNN-12-*	0.35 (9.0)	1-3/16	1-20
DNN-14-*	0.43 (10.8)	1-3/8	1-1/8-20
DNN-16-*	0.47 (11.9)	1-5/8	1-5/16-20

*Add suffix SS for 316 stainless steel or B for brass.

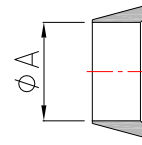
DOB
Back Ferrule



Part No.	ØA Tube OD
DOB-1-*	1/16 (1.59)
DOB-2-*	1/8 (3.18)
DOB-3-*	3/16 (4.76)
DOB-4-*	1/4 (6.35)
DOB-5-*	5/16 (7.94)
DOB-6-*	3/8 (9.53)
DOB-8-*	1/2 (12.7)
DOB-10-*	5/8 (15.88)
DOB-12-*	3/4 (19.05)
DOB-14-*	7/8 (22.23)
DOB-16-*	1 (25.4)

*Add suffix SS for 316 stainless steel or B for brass.

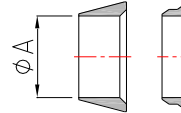
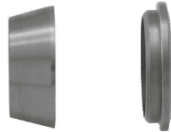
DOF
Front Ferrule



Part No.	ϕA Tube OD
DOF-1-*	1/16 (1.59)
DOF-2-*	1/8 (3.18)
DOF-3-*	3/16 (4.76)
DOF-4-*	1/4 (6.35)
DOF-5-*	5/16 (7.94)
DOF-6-*	3/8 (9.53)
DOF-8-*	1/2 (12.7)
DOF-10-*	5/8 (15.88)
DOF-12-*	3/4 (19.05)
DOF-14-*	7/8 (22.23)
DOF-16-*	1 (25.4)

*Add suffix SS for 316 stainless steel or B for brass.

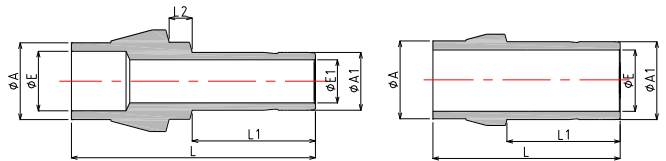
**DOS
Ferrule Set**



Part No.	ϕA Tube OD
DOS-1-*	1/16 (1.59)
DOS-2-*	1/8 (3.18)
DOS-3-*	3/16 (4.76)
¹ DOS-4-*	1/4 (6.35)
DOS-5-*	5/16 (7.94)
¹ DOS-6-*	3/8 (9.53)
¹ DOS-8-*	1/2 (12.7)
DOS-10-*	5/8 (15.88)
DOS-12-*	3/4 (19.05)
DOS-14-*	7/8 (22.23)
DOS-16-*	1 (25.4)

*Add suffix SS for 316 stainless steel or B for brass. ¹Sold in plastic tube stick.

**DPC
Port Connector**

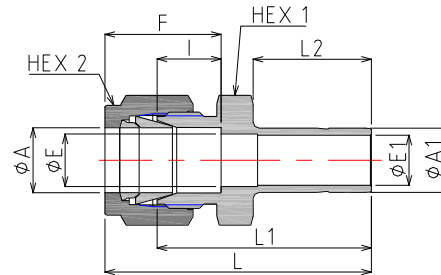


inch (mm)

Part No.	∅A Tube OD	∅A1 Tube OD	∅E	∅E1	L	L1	L2
DPC-1-1-*	1/16 (1.59)	1/16 (1.59)	0.02 (0.6)	0.02 (0.6)	0.61 (15.4)	0.39 (10.0)	-
DPC-2-1-*	1/8 (3.18)	1/16 (1.59)	0.08 (2.1)	0.02 (0.6)	0.83 (21.0)	0.39 (10.0)	0.11 (2.8)
DPC-2-2-*	1/8 (3.18)	1/8 (3.18)	0.08 (2.1)	0.08 (2.1)	0.97 (24.6)	0.64 (16.3)	-
DPC-4-1-*	1/4 (6.35)	1/16 (1.59)	0.19 (4.8)	0.02 (0.6)	0.88 (22.4)	0.42 (10.6)	0.14 (3.6)
DPC-4-2-*	1/4 (6.35)	1/8 (3.18)	0.19 (4.8)	0.08 (2.1)	1.13 (28.7)	0.64 (16.3)	0.14 (3.6)
DPC-4-4-*	1/4 (6.35)	1/4 (6.35)	0.19 (4.8)	0.19 (4.8)	1.09 (27.7)	0.74 (18.8)	-
DPC-5-5-*	5/16 (7.94)	5/16 (7.94)	0.25 (6.3)	0.25 (6.3)	1.14 (28.9)	0.79 (20.0)	-
DPC-6-2-*	3/8 (9.53)	1/8 (3.18)	0.30 (7.6)	0.08 (2.1)	1.14 (29.0)	0.64 (16.3)	0.14 (3.6)
DPC-6-4-*	3/8 (9.53)	1/4 (6.35)	0.30 (7.6)	0.19 (4.8)	1.24 (31.5)	0.74 (18.8)	0.14 (3.6)
DPC-6-6-*	3/8 (9.53)	3/8 (9.53)	0.30 (7.6)	0.30 (7.6)	1.16 (29.5)	0.80 (20.3)	-
DPC-8-4-*	1/2 (12.7)	1/4 (6.35)	0.39 (9.9)	0.19 (4.8)	1.52 (38.7)	0.74 (18.8)	0.15 (3.8)
DPC-8-6-*	1/2 (12.7)	3/8 (9.53)	0.39 (9.9)	0.30 (7.6)	1.58 (40.2)	0.80 (20.3)	0.15 (3.8)
DPC-8-8-*	1/2 (12.7)	1/2 (12.7)	0.39 (9.9)	0.39 (9.9)	1.67 (42.4)	1.03 (26.2)	-
DPC-10-10-*	5/8 (15.88)	5/8 (15.88)	0.50 (12.7)	0.50 (12.7)	1.80 (45.8)	1.09 (27.7)	-
DPC-12-6-*	3/4 (19.05)	3/8 (9.53)	0.59 (15.0)	0.30 (7.6)	1.66 (42.2)	0.80 (20.3)	0.15 (3.8)
DPC-12-8-*	3/4 (19.05)	1/2 (12.7)	0.59 (15.0)	0.39 (9.9)	1.77 (45.0)	0.91 (23.1)	0.15 (3.8)
DPC-12-12-*	3/4 (19.05)	3/4 (19.05)	0.59 (15.0)	0.59 (15.0)	1.80 (45.8)	1.09 (27.7)	-
DPC-16-8-*	1 (25.4)	1/2 (12.7)	0.79 (20.1)	0.39 (9.9)	2.06 (52.2)	0.91 (23.1)	0.15 (3.8)
DPC-16-12-*	1 (25.4)	3/4 (19.05)	0.79 (20.1)	0.59 (15.0)	2.11 (53.7)	1.09 (27.7)	0.16 (4.0)
DPC-16-16-*	1 (25.4)	1 (25.4)	0.79 (20.1)	0.79 (20.1)	2.28 (58.0)	1.42 (36.0)	-

*Add suffix SS for 316 stainless steel or B for brass.

**DRE
Reducer**



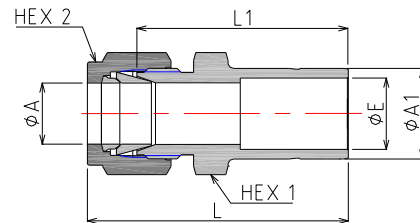
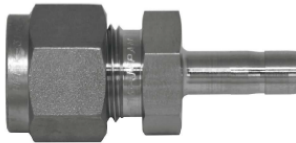
inch (mm)

Part No.	∅A Tube OD	∅A1 Tube OD	∅E	∅E1	L	I	L1	L2	F	Hex 1	Hex 2
DRE-1-2-*	1/16 (1.59)	1/8 (3.18)	0.05 (1.3)	0.08 (2.0)	1.16 (29.4)	0.19 (4.9)	1.00 (25.4)	0.55 (14.0)	0.35 (8.9)	5/16	5/16
DRE-1-4-*	1/16 (1.59)	1/4 (6.35)	0.05 (1.3)	0.19 (4.8)	1.26 (31.9)	0.19 (4.9)	1.10 (27.9)	0.65 (16.5)	0.35 (8.9)	5/16	5/16
DRE-1-6-*	1/16 (1.59)	3/8 (9.53)	0.05 (1.3)	0.28 (7.1)	1.34 (34.0)	0.19 (4.9)	1.18 (30.0)	0.71 (18.0)	0.35 (8.9)	7/16	5/16
DRE-2-1-*	1/8 (3.18)	1/16 (1.59)	0.09 (2.3)	0.02 (0.6)	1.17 (29.7)	0.25 (6.4)	0.91 (23.0)	0.39 (10.0)	0.51 (13.0)	7/16	7/16
DRE-2-2-*	1/8 (3.18)	1/8 (3.18)	0.09 (2.3)	0.08 (2.0)	1.33 (33.7)	0.25 (6.4)	1.06 (27.0)	0.55 (14.0)	0.51 (13.0)	7/16	7/16
DRE-2-3-*	1/8 (3.18)	3/16 (4.76)	0.09 (2.3)	0.12 (3.0)	1.35 (34.4)	0.25 (6.4)	1.09 (27.7)	0.58 (14.8)	0.51 (13.0)	7/16	7/16
DRE-2-4-*	1/8 (3.18)	1/4 (6.35)	0.09 (2.3)	0.19 (4.8)	1.43 (36.2)	0.25 (6.4)	1.16 (29.5)	0.65 (16.5)	0.51 (13.0)	7/16	7/16
DRE-2-5-*	1/8 (3.18)	5/16 (7.94)	0.09 (2.3)	0.25 (6.4)	1.45 (36.9)	0.25 (6.4)	1.16 (29.5)	0.68 (17.2)	0.51 (13.0)	7/16	7/16
DRE-2-6-*	1/8 (3.18)	3/8 (9.53)	0.09 (2.3)	0.28 (7.1)	1.48 (37.7)	0.25 (6.4)	1.22 (31.0)	0.71 (18.0)	0.51 (13.0)	7/16	7/16
DRE-2-8-*	1/8 (3.18)	1/2 (12.7)	0.09 (2.3)	0.39 (9.9)	1.74 (44.1)	0.25 (6.4)	1.47 (37.4)	0.93 (23.5)	0.51 (13.0)	9/16	7/16
DRE-3-2-*	3/16 (4.76)	1/8 (3.18)	0.12 (3.0)	0.08 (2.0)	1.37 (34.7)	0.28 (7.2)	1.10 (28.0)	0.55 (14.0)	0.54 (13.8)	7/16	1/2
DRE-3-4-*	3/16 (4.76)	1/4 (6.35)	0.12 (3.0)	0.19 (4.8)	1.46 (37.2)	0.28 (7.2)	1.20 (30.5)	0.65 (16.5)	0.54 (13.8)	7/16	1/2
DRE-3-5-*	3/16 (4.76)	5/16 (7.94)	0.12 (3.0)	0.25 (6.4)	1.49 (37.9)	0.28 (7.2)	1.23 (31.2)	0.68 (17.2)	0.54 (13.8)	7/16	1/2
DRE-3-8-*	3/16 (4.76)	1/2 (12.7)	0.12 (3.0)	0.39 (9.9)	1.84 (46.8)	0.28 (7.2)	1.50 (38.0)	0.93 (23.5)	0.54 (13.8)	9/16	1/2
DRE-4-2-*	1/4 (6.35)	1/8 (3.18)	0.19 (4.8)	0.08 (2.0)	1.46 (37.0)	0.31 (7.9)	1.16 (29.5)	0.55 (14.0)	0.61 (15.4)	1/2	9/16
DRE-4-3-*	1/4 (6.35)	3/16 (4.76)	0.19 (4.8)	0.12 (3.0)	1.48 (37.7)	0.31 (7.9)	1.19 (30.2)	0.58 (14.8)	0.61 (15.4)	1/2	9/16
DRE-4-4-*	1/4 (6.35)	1/4 (6.35)	0.19 (4.8)	0.19 (4.8)	1.55 (39.3)	0.31 (7.9)	1.25 (31.8)	0.65 (16.5)	0.61 (15.4)	1/2	9/16
DRE-4-5-*	1/4 (6.35)	5/16 (7.94)	0.19 (4.8)	0.25 (6.4)	1.57 (40.0)	0.31 (7.9)	1.28 (32.5)	0.68 (17.2)	0.61 (15.4)	1/2	9/16
DRE-4-6-*	1/4 (6.35)	3/8 (9.53)	0.19 (4.8)	0.28 (7.1)	1.61 (40.8)	0.31 (7.9)	1.31 (33.3)	0.71 (18.0)	0.61 (15.4)	1/2	9/16
DRE-4-8-*	1/4 (6.35)	1/2 (12.7)	0.19 (4.8)	0.39 (9.9)	1.83 (46.5)	0.31 (7.9)	1.54 (39.0)	0.93 (23.5)	0.61 (15.4)	9/16	9/16
DRE-4-10-*	1/4 (6.35)	5/8 (15.88)	0.19 (4.8)	0.50 (12.7)	1.90 (48.2)	0.31 (7.9)	1.60 (40.7)	0.99 (25.2)	0.61 (15.4)	11/16	9/16
DRE-4-12-*	1/4 (6.35)	3/4 (19.05)	0.19 (4.8)	0.59 (15.0)	1.99 (50.5)	0.31 (7.9)	1.69 (43.0)	0.99 (25.2)	0.61 (15.4)	7/8	9/16

DRE-4-16-*	1/4 (6.35)	1 (25.4)	0.19 (4.8)	0.79 (20.1)	2.26 (57.5)	0.31 (7.9)	1.97 (50.0)	1.28 (32.5)	0.61 (15.4)	1-1/16	9/16
DRE-5-6-*	5/16 (7.94)	3/8 (9.53)	0.25 (6.4)	0.28 (7.1)	1.66 (42.1)	0.35 (8.8)	1.36 (34.6)	0.71 (18.0)	0.64 (16.3)	9/16	5/8
DRE-5-8-*	5/16 (7.94)	1/2 (12.7)	0.25 (6.4)	0.39 (9.9)	1.87 (47.6)	0.35 (8.8)	1.58 (40.1)	0.93 (23.5)	0.64 (16.3)	9/16	5/8
DRE-6-2-*	3/8 (9.53)	1/8 (3.18)	0.28 (7.1)	0.08 (2.0)	1.54 (39.0)	0.37 (9.5)	1.24 (31.5)	0.55 (14.0)	0.67 (17.0)	5/8	11/16
DRE-6-3-*	3/8 (9.53)	3/16 (4.76)	0.28 (7.1)	0.12 (3.0)	1.57 (39.8)	0.37 (9.5)	1.27 (32.3)	0.58 (14.8)	0.67 (17.0)	5/8	11/16
DRE-6-4-*	3/8 (9.53)	1/4 (6.35)	0.28 (7.1)	0.19 (4.8)	1.63 (41.5)	0.37 (9.5)	1.34 (34.0)	0.65 (16.5)	0.67 (17.0)	5/8	11/16
DRE-6-5-*	3/8 (9.53)	5/16 (7.94)	0.28 (7.1)	0.25 (6.4)	1.66 (42.2)	0.37 (9.5)	1.37 (34.7)	0.68 (17.2)	0.67 (17.0)	5/8	11/16
DRE-6-6-*	3/8 (9.53)	3/8 (9.53)	0.28 (7.1)	0.28 (7.1)	1.69 (43.0)	0.37 (9.5)	1.40 (35.5)	0.71 (18.0)	0.67 (17.0)	5/8	11/16
DRE-6-8-*	3/8 (9.53)	1/2 (12.7)	0.28 (7.1)	0.39 (9.9)	1.91 (48.5)	0.37 (9.5)	1.61 (41.0)	0.93 (23.5)	0.67 (17.0)	5/8	11/16
DRE-6-10-*	3/8 (9.53)	5/8 (15.88)	0.28 (7.1)	0.50 (12.7)	1.98 (50.4)	0.37 (9.5)	1.69 (42.9)	0.99 (25.2)	0.67 (17.0)	11/16	11/16
DRE-6-12-*	3/8 (9.53)	3/4 (19.05)	0.28 (7.1)	0.59 (15.0)	1.99 (50.5)	0.37 (9.5)	1.69 (43.0)	0.99 (25.2)	0.67 (17.0)	13/16	11/16
DRE-6-14-*	3/8 (9.53)	7/8 (22.23)	0.28 (7.1)	0.50 (12.7)	2.11 (53.5)	0.37 (9.5)	1.81 (46.0)	1.06 (27.0)	0.67 (17.0)	15/16	11/16
DRE-6-16-*	3/8 (9.53)	1 (25.4)	0.28 (7.1)	0.79 (20.1)	2.26 (57.5)	0.37 (9.5)	1.97 (50.0)	1.28 (32.5)	0.67 (17.0)	1-1/16	11/16
DRE-8-4-*	1/2 (12.7)	1/4 (6.35)	0.41 (10.4)	0.19 (4.8)	1.80 (45.8)	0.50 (12.7)	1.40 (35.5)	0.65 (16.5)	0.91 (23.0)	13/16	7/8
DRE-8-6-*	1/2 (12.7)	3/8 (9.53)	0.41 (10.4)	0.28 (7.1)	1.86 (47.3)	0.50 (12.7)	1.46 (37.0)	0.71 (18.0)	0.91 (23.0)	13/16	7/8
DRE-8-8-*	1/2 (12.7)	1/2 (12.7)	0.41 (10.4)	0.39 (9.9)	2.08 (52.8)	0.50 (12.7)	1.67 (42.5)	0.93 (23.5)	0.91 (23.0)	13/16	7/8
DRE-8-10-*	1/2 (12.7)	5/8 (15.88)	0.41 (10.4)	0.50 (12.7)	2.13 (54.0)	0.50 (12.7)	1.72 (43.7)	0.99 (25.2)	0.91 (23.0)	13/16	7/8
DRE-8-12-*	1/2 (12.7)	3/4 (19.05)	0.41 (10.4)	0.59 (15.0)	2.13 (54.0)	0.50 (12.7)	1.72 (43.7)	0.99 (25.2)	0.91 (23.0)	13/16	7/8
DRE-8-16-*	1/2 (12.7)	1 (25.4)	0.41 (10.4)	0.79 (20.1)	2.37 (60.3)	0.50 (12.7)	1.97 (50.0)	1.28 (32.5)	0.91 (23.0)	1-1/16	7/8
DRE-10-8-*	5/8 (15.88)	1/2 (12.7)	0.50 (12.7)	0.39 (9.9)	2.10 (53.3)	0.56 (14.3)	1.69 (43.0)	0.93 (23.5)	0.97 (24.6)	15/16	1
DRE-10-12-*	5/8 (15.88)	3/4 (19.05)	0.50 (12.7)	0.59 (15.0)	2.16 (54.8)	0.56 (14.3)	1.75 (44.5)	0.99 (25.2)	0.97 (24.6)	15/16	1
DRE-10-14-*	5/8 (15.88)	7/8 (22.23)	0.50 (12.7)	0.68 (17.3)	2.22 (56.3)	0.56 (14.3)	1.81 (46.0)	1.06 (27.0)	0.97 (24.6)	15/16	1
DRE-10-16-*	5/8 (15.88)	1 (25.4)	0.50 (12.7)	0.79 (20.1)	2.43 (61.8)	0.56 (14.3)	2.03 (51.5)	1.28 (32.5)	0.97 (24.6)	1-1/16	1
DRE-12-4-*	3/4 (19.05)	1/4 (6.35)	0.62 (15.8)	0.19 (4.8)	1.90 (48.2)	0.56 (14.3)	1.49 (37.9)	0.65 (16.5)	0.97 (24.6)	1-1/16	1-1/8
DRE-12-6-*	3/4 (19.05)	3/8 (9.53)	0.62 (15.8)	0.28 (7.1)	1.96 (49.7)	0.56 (14.3)	1.55 (39.4)	0.71 (18.0)	0.97 (24.6)	1-1/16	1-1/8
DRE-12-8-*	3/4 (19.05)	1/2 (12.7)	0.62 (15.8)	0.39 (9.9)	2.20 (55.8)	0.56 (14.3)	1.79 (45.5)	0.93 (23.5)	0.97 (24.6)	1-1/16	1-1/8
DRE-12-10-*	3/4 (19.05)	5/8 (15.88)	0.62 (15.8)	0.50 (12.7)	2.22 (56.3)	0.56 (14.3)	1.81 (46.0)	0.99 (25.2)	0.97 (24.6)	1-1/16	1-1/8
DRE-12-14-*	3/4 (19.05)	7/8 (22.23)	0.62 (15.8)	0.68 (17.3)	2.26 (57.3)	0.56 (14.3)	1.85 (47.0)	1.06 (27.0)	0.97 (24.6)	1-1/16	1-1/8
DRE-12-16-*	3/4 (19.05)	1 (25.4)	0.62 (15.8)	0.79 (20.1)	2.47 (62.8)	0.56 (14.3)	2.07 (52.5)	1.28 (32.5)	0.97 (24.6)	1-1/16	1-1/8
DRE-14-6-*	7/8 (22.23)	3/8 (9.53)	0.72 (18.3)	0.28 (7.1)	2.04 (51.7)	0.63 (15.9)	1.63 (41.5)	0.71 (18.0)	1.03 (26.1)	1-3/16	1-1/4
DRE-14-12-*	7/8 (22.23)	3/4 (19.05)	0.72 (18.3)	0.59 (15.0)	2.30 (58.5)	0.63 (15.9)	1.90 (48.3)	0.99 (25.2)	1.03 (26.1)	1-3/16	1-1/4
DRE-16-8-*	1 (25.4)	1/2 (12.7)	0.89 (22.5)	0.39 (9.9)	2.52 (64.1)	0.75 (19.1)	2.03 (51.5)	0.93 (23.5)	1.24 (31.6)	1-3/8	1-1/2
DRE-16-12-*	1 (25.4)	3/4 (19.05)	0.89 (22.5)	0.59 (15.0)	2.59 (65.8)	0.75 (19.1)	2.09 (53.2)	0.99 (25.2)	1.24 (31.6)	1-3/8	1-1/2
DRE-16-14-*	1 (25.4)	7/8 (22.23)	0.89 (22.5)	0.68 (17.3)	2.59 (65.8)	0.75 (19.1)	2.09 (53.2)	1.06 (27.0)	1.24 (31.6)	1-3/8	1-1/2

*Add suffix SS for 316 stainless steel or B for brass.

DREZ
Thermocouple (bored through) Reducer

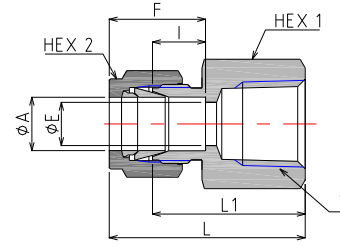
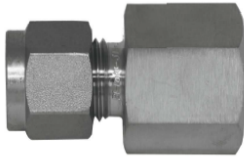


inch (mm)

Part No.	ØA Tube OD	ØA1 Tube OD	ØE	L	L1	Hex 1	Hex 2
DREZ-1-2-*	1/16 (1.59)	1/8 (3.18)	0.08 (2.0)	1.16 (29.4)	1.00 (25.4)	5/16	5/16
DREZ-1-4-*	1/16 (1.59)	1/4 (6.35)	0.19 (4.8)	1.26 (31.9)	1.10 (27.9)	5/16	5/16
DREZ-1-6-*	1/16 (1.59)	3/8 (9.53)	0.28 (7.1)	1.34 (34.0)	1.18 (30.0)	7/16	5/16
DREZ-2-4-*	1/8 (3.18)	1/4 (6.35)	0.19 (4.8)	1.43 (36.2)	1.16 (29.5)	7/16	7/16
DREZ-2-6-*	1/8 (3.18)	3/8 (9.53)	0.28 (7.1)	1.48 (37.7)	1.22 (31.0)	7/16	7/16
DREZ-3-4-*	3/16 (4.76)	1/4 (6.35)	0.19 (4.8)	1.46 (37.2)	1.20 (30.5)	7/16	1/2
DREZ-4-6-*	1/4 (6.35)	3/8 (9.53)	0.28 (7.1)	1.61 (40.8)	1.31 (33.3)	1/2	9/16
DREZ-4-8-*	1/4 (6.35)	1/2 (12.7)	0.39 (9.9)	1.83 (46.5)	1.54 (39.0)	9/16	9/16
DREZ-6-10-*	3/8 (9.53)	5/8 (15.88)	0.50 (12.7)	1.98 (50.4)	1.69 (42.9)	11/16	11/16
DREZ-6-12-*	3/8 (9.53)	3/4 (19.05)	0.59 (15.0)	1.99 (50.5)	1.69 (43.0)	13/16	11/16
DREZ-8-12-*	1/2 (12.7)	3/4 (19.05)	0.59 (15.0)	2.13 (54.0)	1.72 (43.7)	13/16	7/8

*Add suffix SS for 316 stainless steel or B for brass.

DSA
Female Connector

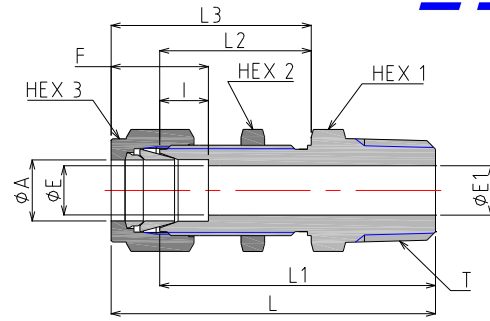
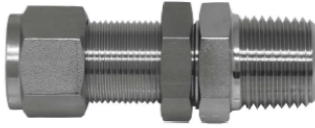


inch (mm)

Part No.	ØA Tube OD	ØE	L	I	L1	F	Hex 1	Hex 2	T (NPT/ISO)
DSA-1-1-*	1/16 (1.59)	0.05 (1.3)	0.98 (24.8)	0.19 (4.9)	0.82 (20.8)	0.35 (8.9)	1/2	5/16	1/16
DSA-1-2-*	1/16 (1.59)	0.05 (1.3)	0.98 (24.8)	0.19 (4.9)	0.82 (20.8)	0.35 (8.9)	9/16	5/16	1/8
DSA-1-4-*	1/16 (1.59)	0.05 (1.3)	1.22 (31.0)	0.19 (4.9)	1.06 (27.0)	0.35 (8.9)	3/4	5/16	1/4
DSA-2-2-*	1/8 (3.18)	0.09 (2.3)	1.15 (29.2)	0.25 (6.4)	0.89 (22.5)	0.51 (13.0)	9/16	7/16	1/8
DSA-2-4-*	1/8 (3.18)	0.09 (2.3)	1.33 (33.7)	0.25 (6.4)	1.06 (27.0)	0.51 (13.0)	3/4	7/16	1/4
DSA-2-8-*	1/8 (3.18)	0.09 (2.3)	1.60 (40.7)	0.25 (6.4)	1.34 (34.0)	0.51 (13.0)	1-1/16	7/16	1/2
DSA-3-2-*	3/16 (4.76)	0.12 (3.0)	1.17 (29.7)	0.28 (7.2)	0.91 (23.0)	0.54 (13.8)	9/16	1/2	1/8
DSA-3-4-*	3/16 (4.76)	0.12 (3.0)	1.37 (34.7)	0.28 (7.2)	1.10 (28.0)	0.54 (13.8)	3/4	1/2	1/4
DSA-4-1-*	1/4 (6.35)	0.19 (4.8)	1.24 (31.5)	0.31 (7.9)	0.94 (24.0)	0.61 (15.4)	1/2	9/16	1/16
DSA-4-2-*	1/4 (6.35)	0.19 (4.8)	1.24 (31.5)	0.31 (7.9)	0.94 (24.0)	0.61 (15.4)	9/16	9/16	1/8
DSA-4-4-*	1/4 (6.35)	0.19 (4.8)	1.42 (36.0)	0.31 (7.9)	1.12 (28.5)	0.61 (15.4)	3/4	9/16	1/4
DSA-4-6-*	1/4 (6.35)	0.19 (4.8)	1.49 (37.8)	0.31 (7.9)	1.19 (30.3)	0.61 (15.4)	7/8	9/16	3/8
DSA-4-8-*	1/4 (6.35)	0.19 (4.8)	1.71 (43.3)	0.31 (7.9)	1.41 (35.8)	0.61 (15.4)	1-1/16	9/16	1/2
DSA-4-12-*	1/4 (6.35)	0.19 (4.8)	1.78 (45.3)	0.31 (7.9)	1.49 (37.8)	0.61 (15.4)	1-5/16	9/16	3/4
DSA-5-2-*	5/16 (7.94)	0.25 (6.4)	1.27 (32.2)	0.35 (8.8)	0.97 (24.7)	0.64 (16.3)	9/16	5/8	1/8
DSA-5-4-*	5/16 (7.94)	0.25 (6.4)	1.46 (37.0)	0.35 (8.8)	1.16 (29.5)	0.64 (16.3)	3/4	5/8	1/4
DSA-5-6-*	5/16 (7.94)	0.25 (6.4)	1.52 (38.6)	0.35 (8.8)	1.22 (31.1)	0.64 (16.3)	7/8	5/8	3/8
DSA-5-8-*	5/16 (7.94)	0.25 (6.4)	1.74 (44.1)	0.35 (8.8)	1.44 (36.6)	0.64 (16.3)	1-1/16	5/8	1/2
DSA-6-2-*	3/8 (9.53)	0.28 (7.1)	1.30 (32.9)	0.37 (9.5)	1.00 (25.4)	0.67 (17.0)	5/8	11/16	1/8
DSA-6-4-*	3/8 (9.53)	0.28 (7.1)	1.48 (37.7)	0.37 (9.5)	1.19 (30.2)	0.67 (17.0)	3/4	11/16	1/4
DSA-6-6-*	3/8 (9.53)	0.28 (7.1)	1.55 (39.4)	0.37 (9.5)	1.26 (31.9)	0.67 (17.0)	7/8	11/16	3/8
DSA-6-8-*	3/8 (9.53)	0.28 (7.1)	1.73 (44.0)	0.37 (9.5)	1.44 (36.5)	0.67 (17.0)	1-1/16	11/16	1/2
DSA-6-12-*	3/8 (9.53)	0.28 (7.1)	1.84 (46.8)	0.37 (9.5)	1.55 (39.3)	0.67 (17.0)	1-5/16	11/16	3/4
DSA-6-16-*	3/8 (9.53)	0.28 (7.1)	2.17 (55.1)	0.37 (9.5)	1.87 (47.6)	0.67 (17.0)	1-5/8	11/16	1
DSA-8-2-*	1/2 (12.7)	0.41 (10.4)	1.41 (35.7)	0.50 (12.7)	1.00 (25.4)	0.91 (23.0)	13/16	7/8	1/8
DSA-8-4-*	1/2 (12.7)	0.41 (10.4)	1.66 (42.2)	0.50 (12.7)	1.26 (31.9)	0.91 (23.0)	13/16	7/8	1/4
DSA-8-6-*	1/2 (12.7)	0.41 (10.4)	1.66 (42.2)	0.50 (12.7)	1.26 (31.9)	0.91 (23.0)	7/8	7/8	3/8
DSA-8-8-*	1/2 (12.7)	0.41 (10.4)	1.85 (46.9)	0.50 (12.7)	1.44 (36.6)	0.91 (23.0)	1-1/16	7/8	1/2
DSA-8-12-*	1/2 (12.7)	0.41 (10.4)	1.91 (48.4)	0.50 (12.7)	1.50 (38.1)	0.91 (23.0)	1-5/16	7/8	3/4
DSA-8-16-*	1/2 (12.7)	0.41 (10.4)	2.28 (57.9)	0.50 (12.7)	1.87 (47.6)	0.91 (23.0)	1-5/8	7/8	1
DSA-10-4-*	5/8 (15.88)	0.50 (12.7)	1.67 (42.3)	0.56 (14.3)	1.26 (32.0)	0.97 (24.6)	15/16	1	1/4
DSA-10-6-*	5/8 (15.88)	0.50 (12.7)	1.67 (42.3)	0.56 (14.3)	1.26 (32.0)	0.97 (24.6)	15/16	1	3/8
DSA-10-8-*	5/8 (15.88)	0.50 (12.7)	1.85 (46.9)	0.56 (14.3)	1.44 (36.6)	0.97 (24.6)	1-1/16	1	1/2
DSA-10-12-*	5/8 (15.88)	0.50 (12.7)	1.91 (48.4)	0.56 (14.3)	1.50 (38.1)	0.97 (24.6)	1-5/16	1	3/4
DSA-10-16-*	5/8 (15.88)	0.50 (12.7)	2.28 (57.9)	0.56 (14.3)	1.87 (47.6)	0.97 (24.6)	1-5/8	1	1
DSA-12-6-*	3/4 (19.05)	0.62 (15.8)	1.74 (44.3)	0.56 (14.3)	1.34 (34.0)	0.97 (24.6)	1-1/16	1-1/8	3/8
DSA-12-8-*	3/4 (19.05)	0.62 (15.8)	1.85 (46.9)	0.56 (14.3)	1.44 (36.6)	0.97 (24.6)	1-1/16	1-1/8	1/2
DSA-12-12-*	3/4 (19.05)	0.62 (15.8)	1.91 (48.4)	0.56 (14.3)	1.50 (38.1)	0.97 (24.6)	1-5/16	1-1/8	3/4
DSA-12-16-*	3/4 (19.05)	0.62 (15.8)	2.28 (57.9)	0.56 (14.3)	1.87 (47.6)	0.97 (24.6)	1-5/8	1-1/8	1
DSA-14-12-*	7/8 (22.23)	0.72 (18.3)	1.98 (50.2)	0.63 (15.9)	1.57 (40.0)	1.03 (26.1)	1-5/16	1-1/4	3/4
DSA-16-8-*	1 (25.4)	0.89 (22.5)	2.11 (53.7)	0.75 (19.1)	1.62 (41.1)	1.24 (31.6)	1-3/8	1-1/2	1/2
DSA-16-12-*	1 (25.4)	0.89 (22.5)	2.11 (53.7)	0.75 (19.1)	1.62 (41.1)	1.24 (31.6)	1-3/8	1-1/2	3/4
DSA-16-16-*	1 (25.4)	0.89 (22.5)	2.46 (62.6)	0.75 (19.1)	1.97 (50.0)	1.24 (31.6)	1-5/8	1-1/2	1

*Add suffix SS for 316 stainless steel or B for brass. ISO thread is available. Add R before thread size. Example, DSA-4-R4-SS

DSC
Bulkhead Male Connector

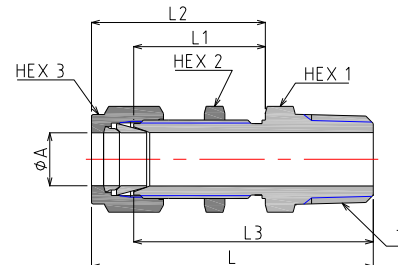
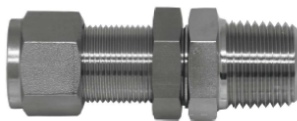


inch (mm)

Part No.	ØA Tube OD	ØE	ØE1	L	I	L2	L3	L1	F	Hex 1	Hex 2	Hex 3	T (NPT/ ISO)	Panel	
														Hole	Thickness
DSC-1-1-*	1/16 (1.59)	0.05 (1.3)	0.12 (3.0)	1.20 (30.5)	0.19 (4.9)	0.53 (13.5)	0.69 (17.5)	1.04 (26.5)	0.35 (8.9)	5/16	5/16	5/16	1/16	0.20 (5.2)	0.12 (3.0)
DSC-1-2-*	1/16 (1.59)	0.05 (1.3)	0.19 (4.8)	1.26 (32.0)	0.19 (4.9)	0.53 (13.5)	0.69 (17.5)	1.10 (28.0)	0.35 (8.9)	7/16	5/16	5/16	1/8	0.20 (5.2)	0.12 (3.0)
DSC-2-2-*	1/8 (3.18)	0.09 (2.3)	0.19 (4.8)	1.84 (46.7)	0.25 (6.4)	0.97 (24.6)	1.23 (31.3)	1.57 (40.0)	0.51 (13.0)	1/2	1/2	7/16	1/8	0.33 (8.3)	0.50 (12.7)
DSC-4-2-*	1/4 (6.35)	0.19 (4.8)	0.19 (4.8)	1.44 (36.5)	0.31 (7.9)	1.02 (26.0)	1.32 (33.5)	1.66 (42.2)	0.61 (15.4)	5/8	5/8	9/16	1/8	0.45 (11.5)	0.40 (10.2)
DSC-4-4-*	1/4 (6.35)	0.19 (4.8)	0.19 (4.8)	2.11 (53.5)	0.31 (7.9)	1.02 (26.0)	1.32 (33.5)	1.81 (46.0)	0.61 (15.4)	5/8	5/8	9/16	1/4	0.45 (11.5)	0.40 (10.2)
DSC-4-6-*	1/4 (6.35)	0.19 (4.8)	0.19 (4.8)	2.13 (54.2)	0.31 (7.9)	1.02 (26.0)	1.32 (33.5)	1.84 (46.7)	0.61 (15.4)	11/16	5/8	9/16	3/8	0.45 (11.5)	0.40 (10.2)
DSC-4-8-*	1/4 (6.35)	0.19 (4.8)	0.19 (4.8)	2.35 (59.8)	0.31 (7.9)	1.02 (26.0)	1.32 (33.5)	2.06 (52.3)	0.61 (15.4)	7/8	5/8	9/16	1/2	0.45 (11.5)	0.40 (10.2)
DSC-5-2-*	5/16 (7.94)	0.25 (6.4)	0.19 (4.8)	2.06 (52.4)	0.35 (8.8)	1.12 (28.5)	1.42 (36.0)	1.77 (44.9)	0.64 (16.3)	11/16	11/16	5/8	1/8	0.52 (13.1)	0.43 (10.9)
DSC-5-4-*	5/16 (7.94)	0.25 (6.4)	0.25 (6.4)	2.22 (56.4)	0.35 (8.8)	1.12 (28.5)	1.42 (36.0)	1.93 (48.9)	0.64 (16.3)	11/16	11/16	5/8	1/4	0.52 (13.1)	0.43 (10.9)
DSC-5-6-*	5/16 (7.94)	0.25 (6.4)	0.25 (6.4)	2.23 (56.7)	0.35 (8.8)	1.12 (28.5)	1.42 (36.0)	1.94 (49.2)	0.64 (16.3)	11/16	11/16	5/8	3/8	0.52 (13.1)	0.43 (10.9)
DSC-6-2-*	3/8 (9.53)	0.28 (7.1)	0.19 (4.8)	2.10 (53.4)	0.37 (9.5)	1.16 (29.5)	1.46 (37.0)	1.81 (45.9)	0.67 (17.0)	3/4	3/4	11/16	1/8	0.58 (14.7)	0.44 (11.2)
DSC-6-4-*	3/8 (9.53)	0.28 (7.1)	0.28 (7.1)	2.26 (57.5)	0.37 (9.5)	1.16 (29.5)	1.46 (37.0)	1.97 (50.0)	0.67 (17.0)	3/4	3/4	11/16	1/4	0.58 (14.7)	0.44 (11.2)
DSC-6-6-*	3/8 (9.53)	0.28 (7.1)	0.28 (7.1)	2.26 (57.5)	0.37 (9.5)	1.16 (29.5)	1.46 (37.0)	1.97 (50.0)	0.67 (17.0)	3/4	3/4	11/16	3/8	0.58 (14.7)	0.44 (11.2)
DSC-6-8-*	3/8 (9.53)	0.28 (7.1)	0.28 (7.1)	2.60 (66.0)	0.37 (9.5)	1.16 (29.5)	1.46 (37.0)	2.30 (58.5)	0.67 (17.0)	7/8	3/4	11/16	1/2	0.58 (14.7)	0.44 (11.2)
DSC-8-4-*	1/2 (12.7)	0.41 (10.4)	0.28 (7.1)	2.51 (63.7)	0.50 (12.7)	1.26 (32.0)	1.67 (42.3)	2.10 (53.4)	0.91 (23.0)	15/16	15/16	7/8	1/4	0.76 (19.4)	0.50 (12.7)
DSC-8-6-*	1/2 (12.7)	0.41 (10.4)	0.41 (10.4)	2.49 (63.3)	0.50 (12.7)	1.26 (32.0)	1.67 (42.3)	2.09 (53.0)	0.91 (23.0)	15/16	15/16	7/8	3/8	0.76 (19.4)	0.50 (12.7)
DSC-8-8-*	1/2 (12.7)	0.41 (10.4)	0.41 (10.4)	2.69 (68.3)	0.50 (12.7)	1.26 (32.0)	1.67 (42.3)	2.28 (58.0)	0.91 (23.0)	15/16	15/16	7/8	1/2	0.76 (19.4)	0.50 (12.7)
DSC-8-12-*	1/2 (12.7)	0.41 (10.4)	0.41 (10.4)	2.73 (69.4)	0.50 (12.7)	1.26 (32.0)	1.67 (42.3)	2.33 (59.1)	0.91 (23.0)	1-1/16	15/16	7/8	3/4	0.76 (19.4)	0.50 (12.7)
DSC-10-6-*	5/8 (15.88)	0.50 (12.7)	0.41 (10.4)	2.56 (64.9)	0.56 (14.3)	1.28 (32.5)	1.69 (42.8)	2.15 (54.6)	0.97 (24.6)	1-1/16	1-1/16	1	3/8	0.89 (22.6)	0.50 (12.7)
DSC-10-8-*	5/8 (15.88)	0.50 (12.7)	0.50 (12.7)	2.75 (69.9)	0.56 (14.3)	1.28 (32.5)	1.69 (42.8)	2.35 (59.6)	0.97 (24.6)	1-1/16	1-1/16	1	1/2	0.89 (22.6)	0.50 (12.7)
DSC-10-12-*	5/8 (15.88)	0.50 (12.7)	0.62 (15.8)	2.75 (69.8)	0.56 (14.3)	1.28 (32.5)	1.69 (42.8)	2.34 (59.5)	0.97 (24.6)	1-1/16	1-1/16	1	3/4	0.89 (22.6)	0.50 (12.7)
DSC-12-8-*	3/4 (19.05)	0.62 (15.8)	0.50 (12.7)	3.00 (76.1)	0.56 (14.3)	1.47 (37.3)	1.87 (47.6)	2.59 (65.8)	0.97 (24.6)	1-3/16	1-3/16	1-1/8	1/2	1.02 (25.8)	0.66 (16.8)
DSC-12-12-*	3/4 (19.05)	0.62 (15.8)	0.62 (15.8)	3.00 (76.1)	0.56 (14.3)	1.47 (37.3)	1.87 (47.6)	2.59 (65.8)	0.97 (24.6)	1-3/16	1-3/16	1-1/8	3/4	1.02 (25.8)	0.66 (16.8)
DSC-14-12-*	7/8 (22.23)	0.72 (18.3)	0.72 (18.3)	3.18 (80.7)	0.63 (15.9)	1.62 (41.2)	2.02 (51.4)	2.78 (70.5)	1.03 (26.1)	1-3/8	1-3/8	1-1/8	3/4	1.14 (29.0)	0.77 (19.6)
DSC-16-16-*	1 (25.4)	0.89 (22.5)	0.89 (22.5)	3.69 (93.7)	0.75 (19.1)	1.78 (45.2)	2.28 (57.8)	3.19 (81.1)	1.24 (31.6)	1-5/8	1-5/8	1-1/2	1	1.33 (33.7)	0.75 (19.1)

*Add suffix SS for 316 stainless steel or B for brass. ISO thread is available. Add R before thread size. Example, DSC-4-R4-SS

DSCZ
Thermocouple (bored through) Bulkhead Male Connector



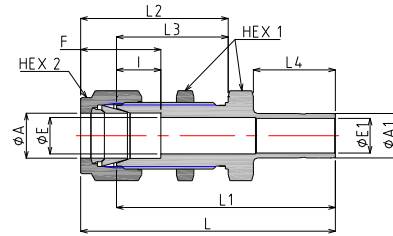
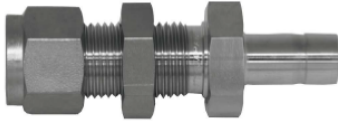
inch (mm)

Part No.	ØA Tube OD	L	L1	L2	L3	Hex 1	Hex 2	Hex 3	T (NPT/ ISO)	Panel	
										Hole	Thickness
DSCZ-4-2-*	1/4 (6.35)	1.44 (36.5)	1.02 (26.0)	1.32 (33.5)	1.66 (42.2)	5/8	5/8	9/16	1/8	0.45 (11.5)	0.40 (10.2)
DSCZ-4-4-*	1/4 (6.35)	2.11 (53.5)	1.02 (26.0)	1.32 (33.5)	1.81 (46.0)	5/8	5/8	9/16	1/4	0.45 (11.5)	0.40 (10.2)
DSCZ-4-6-*	1/4 (6.35)	2.13 (54.2)	1.02 (26.0)	1.32 (33.5)	1.84 (46.7)	11/16	5/8	9/16	3/8	0.45 (11.5)	0.40 (10.2)

DSCZ-4-8-*	1/4 (6.35)	2.35 (59.8)	1.02 (26.0)	1.32 (33.5)	2.06 (52.3)	7/8	5/8	9/16	1/2	0.45 (11.5)	0.40 (10.2)
DSCZ-6-6-*	3/8 (9.53)	2.26 (57.5)	1.16 (29.5)	1.46 (37.0)	1.97 (50.0)	3/4	3/4	11/16	3/8	0.58 (14.7)	0.44 (11.2)
DSCZ-6-8-*	3/8 (9.53)	2.60 (66.0)	1.16 (29.5)	1.46 (37.0)	2.30 (58.5)	7/8	3/4	11/16	1/2	0.58 (14.7)	0.44 (11.2)
DSCZ-8-8-*	1/2 (12.7)	2.69 (68.3)	1.26 (32.0)	1.67 (42.3)	2.28 (58.0)	15/16	15/16	7/8	1/2	0.76 (19.4)	0.50 (12.7)
DSCZ-8-12-*	1/2 (12.7)	2.73 (69.4)	1.26 (32.0)	1.67 (42.3)	2.33 (59.1)	1-1/16	15/16	7/8	3/4	0.76 (19.4)	0.50 (12.7)
DSCZ-12-12-*	3/4 (19.05)	3.00 (76.1)	1.47 (37.3)	1.87 (47.6)	2.59 (65.8)	1-3/16	1-3/16	1-1/8	3/4	1.02 (25.8)	0.66 (16.8)
DSCZ-16-16-*	1 (25.4)	3.69 (93.7)	1.78 (45.2)	2.28 (57.8)	3.19 (81.1)	1-5/8	1-5/8	1-1/2	1	1.33 (33.7)	0.75 (19.1)

*Add suffix SS for 316 stainless steel or B for brass. ISO thread is available. Add R before thread size. Example, DSCZ-4-R4-SS

DSE
Bulkhead Reducer

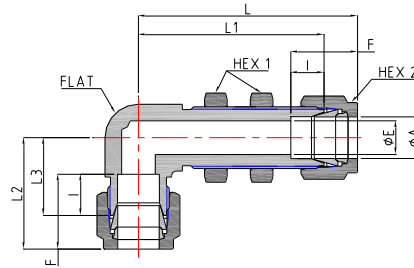
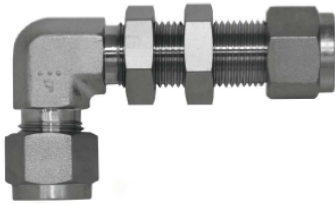


inch (mm)

Part No	ØA Tube OD	ØA1 Tube OD	ØE	ØE1	F	I	L	L1	L2	L3	L4	Hex 1	Hex 2	Panel	
														Hole	Thickness
DSE-2-2-*	1/8 (3.18)	1/8 (3.18)	0.09 (2.3)	0.07 (1.8)	0.51 (13.0)	0.25 (6.4)	1.95 (49.6)	1.69 (42.9)	1.23 (31.3)	0.97 (24.6)	0.55 (14.0)	1/2	7/16	0.33 (8.3)	0.50 (12.7)
DSE-4-4-*	1/4 (6.35)	1/4 (6.35)	0.19 (4.8)	0.19 (4.8)	0.61 (15.4)	0.31 (7.9)	2.20 (55.8)	1.90 (48.3)	1.32 (33.5)	1.02 (26.0)	0.65 (16.5)	5/8	9/16	0.45 (11.5)	0.40 (10.2)
DSE-5-5-*	5/16 (7.94)	5/16 (7.94)	0.25 (6.4)	0.25 (6.4)	0.64 (16.3)	0.35 (8.8)	2.35 (59.6)	2.05 (52.1)	1.42 (36.0)	1.12 (28.5)	0.68 (17.2)	11/16	5/8	0.52 (13.1)	0.43 (10.9)
DSE-6-6-*	3/8 (9.53)	3/8 (9.53)	0.28 (7.1)	0.28 (7.1)	0.67 (17.0)	0.37 (9.5)	2.43 (61.6)	2.13 (54.1)	1.46 (37.0)	1.16 (29.5)	0.71 (18.0)	3/4	11/16	0.58 (14.7)	0.44 (11.2)
DSE-8-8-*	1/2 (12.7)	1/2 (12.7)	0.41 (10.4)	0.39 (9.9)	0.91 (23.0)	0.50 (12.7)	2.87 (73.0)	2.47 (62.7)	1.67 (42.3)	1.26 (32.0)	0.93 (23.5)	15/16	7/8	0.76 (19.4)	0.50 (12.7)
DSE-10-10-*	5/8 (15.88)	5/8 (15.88)	0.50 (12.7)	0.50 (12.7)	0.97 (24.6)	0.56 (14.3)	2.96 (75.3)	2.56 (65.0)	1.69 (42.8)	1.28 (32.5)	0.99 (25.2)	1-1/16	1	0.89 (22.6)	0.50 (12.7)
DSE-12-12-*	3/4 (19.05)	3/4 (19.05)	0.62 (15.8)	0.59 (15.0)	0.97 (24.6)	0.56 (14.3)	3.24 (82.3)	2.83 (72.0)	1.87 (47.6)	1.47 (37.3)	0.99 (25.2)	1-3/16	1-1/8	1.02 (25.8)	0.66 (16.8)
DSE-16-16-*	1 (25.4)	1 (25.4)	0.89 (22.5)	0.79 (20.1)	1.24 (31.6)	0.75 (19.1)	4.03 (102.3)	3.53 (89.7)	2.28 (57.8)	1.78 (45.2)	1.28 (32.5)	1-5/8	1-1/2	1.33 (33.7)	0.75 (19.1)

*Add suffix SS for 316 stainless steel or B for brass.

DSL
Bulkhead Union Elbow

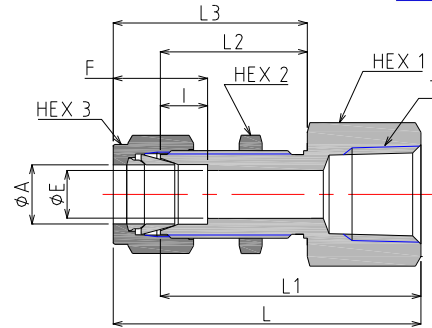
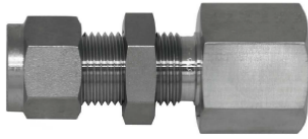


inch (mm)

Part No.	ØA Tube OD	ØE	L	I	L1	L2	L3	F	Hex 1	Hex 2	Flat	Panel	
												Hole	Thickness
DSL-2-SS	1/8 (3.18)	0.09 (2.3)	1.94 (49.2)	0.25 (6.4)	1.67 (42.5)	0.89 (22.5)	0.62 (15.8)	0.51 (13.0)	1/2	7/16	3/8	0.33 (8.3)	0.50 (12.7)
DSL-3-SS	3/16 (4.76)	0.12 (3.0)	2.04 (51.7)	0.28 (7.2)	1.77 (45.0)	1.01 (25.7)	0.75 (19.0)	0.54 (13.8)	9/16	1/2	1/2	0.39 (9.9)	0.50 (12.7)
DSL-4-SS	1/4 (6.35)	0.19 (4.8)	2.11 (53.5)	0.31 (7.9)	1.81 (46.0)	1.08 (27.5)	0.79 (20.0)	0.61 (15.4)	5/8	9/16	1/2	0.45 (11.5)	0.40 (10.2)
DSL-5-SS	5/16 (7.94)	0.25 (6.4)	2.32 (59.0)	0.35 (8.8)	2.03 (51.5)	1.18 (30.0)	0.89 (22.5)	0.64 (16.3)	11/16	5/8	5/8	0.52 (13.1)	0.43 (10.9)
DSL-6-SS	3/8 (9.53)	0.28 (7.1)	2.36 (60.0)	0.37 (9.5)	2.07 (52.5)	1.20 (30.5)	0.91 (23.0)	0.67 (17.0)	3/4	11/16	5/8	0.58 (14.7)	0.44 (11.2)
DSL-8-SS	1/2 (12.7)	0.41 (10.4)	2.67 (67.8)	0.50 (12.7)	2.26 (57.5)	1.39 (35.3)	0.94 (24.0)	0.91 (23.0)	15/16	7/8	13/16	0.76 (19.4)	0.50 (12.7)
DSL-10-SS	5/8 (15.88)	0.50 (12.7)	2.83 (71.8)	0.56 (14.3)	2.42 (61.5)	1.47 (37.3)	1.06 (27.0)	0.97 (24.6)	1-1/16	1	15/16	0.89 (22.6)	0.50 (12.7)
DSL-12-SS	3/4 (19.05)	0.62 (15.8)	3.08 (78.3)	0.56 (14.3)	2.68 (68.0)	1.52 (38.5)	1.11 (28.2)	0.97 (24.6)	1-3/16	1-1/8	1-1/16	1.02 (25.8)	0.66 (16.8)

*Available in 316 stainless steel only.

DSS
Bulkhead Female Connector

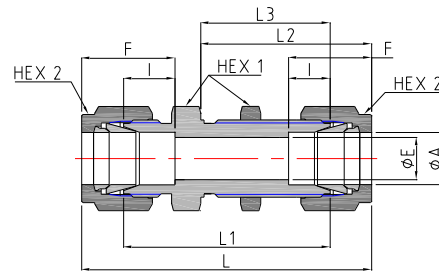
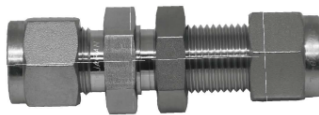


inch (mm)

Part No.	ØA Tube OD	ØE	L	I	L2	L3	L1	F	Hex 1	Hex 2	Hex 3	T (NPT/IS O)	Panel	
													Hole	Thickness
DSS-2-2-*	1/8 (3.18)	0.09 (2.3)	1.76 (44.7)	0.25 (6.4)	0.97 (24.6)	1.23 (31.3)	1.50 (38.0)	0.51 (13.0)	9/16	1/2	7/16	1/8	0.33 (8.3)	0.50 (12.7)
DSS-3-2-*	3/16 (4.76)	0.12 (3.0)	1.80 (45.7)	0.28 (7.2)	1.00 (25.5)	1.27 (32.2)	1.54 (39.0)	0.54 (13.8)	9/16	9/16	1/2	1/8	0.39 (9.9)	0.50 (12.7)
DSS-4-2-*	1/4 (6.35)	0.19 (4.8)	1.85 (47.0)	0.31 (7.9)	1.02 (26.0)	1.32 (33.5)	1.56 (39.5)	0.61 (15.4)	5/8	5/8	9/16	1/8	0.45 (11.5)	0.40 (10.2)
DSS-4-4-*	1/4 (6.35)	0.19 (4.8)	2.05 (52.0)	0.31 (7.9)	1.02 (26.0)	1.32 (33.5)	1.75 (44.5)	0.61 (15.4)	3/4	5/8	9/16	1/4	0.45 (11.5)	0.40 (10.2)
DSS-5-2-*	5/16 (7.94)	0.25 (6.4)	1.95 (49.5)	0.35 (8.8)	1.12 (28.5)	1.42 (36.0)	1.65 (42.0)	0.64 (16.3)	11/16	11/16	5/8	1/8	0.52 (13.1)	0.43 (10.9)
DSS-5-4-*	5/16 (7.94)	0.25 (6.4)	2.14 (54.4)	0.35 (8.8)	1.12 (28.5)	1.42 (36.0)	1.85 (46.9)	0.64 (16.3)	3/4	11/16	5/8	1/4	0.52 (13.1)	0.43 (10.9)
DSS-5-8-*	5/16 (7.94)	0.25 (6.4)	2.42 (61.5)	0.35 (8.8)	1.12 (28.5)	1.42 (36.0)	2.13 (54.0)	0.64 (16.3)	1-1/16	11/16	5/8	1/2	0.52 (13.1)	0.43 (10.9)
DSS-6-2-*	3/8 (9.53)	0.28 (7.1)	1.99 (50.5)	0.37 (9.5)	1.16 (29.5)	1.46 (37.0)	1.69 (43.0)	0.67 (17.0)	5/8	3/4	11/16	1/8	0.58 (14.7)	0.44 (11.2)
DSS-6-4-*	3/8 (9.53)	0.28 (7.1)	2.16 (55.5)	0.37 (9.5)	1.16 (29.5)	1.46 (37.0)	1.89 (48.0)	0.67 (17.0)	3/4	3/4	11/16	1/4	0.58 (14.7)	0.44 (11.2)
DSS-6-6-*	3/8 (9.53)	0.28 (7.1)	2.22 (56.5)	0.37 (9.5)	1.16 (29.5)	1.46 (37.0)	1.93 (49.0)	0.67 (17.0)	7/8	3/4	11/16	3/8	0.58 (14.7)	0.44 (11.2)
DSS-6-8-*	3/8 (9.53)	0.28 (7.1)	2.43 (61.6)	0.37 (9.5)	1.16 (29.5)	1.46 (37.0)	2.13 (54.1)	0.67 (17.0)	1-1/16	3/4	11/16	1/2	0.58 (14.7)	0.44 (11.2)
DSS-8-2-*	1/2 (12.7)	0.41 (10.4)	2.20 (55.8)	0.50 (12.7)	1.26 (32.0)	1.67 (42.3)	1.79 (45.5)	0.91 (23.0)	13/16	15/16	7/8	1/8	0.76 (19.4)	0.50 (12.7)
DSS-8-4-*	1/2 (12.7)	0.41 (10.4)	2.43 (61.8)	0.50 (12.7)	1.26 (32.0)	1.67 (42.3)	2.03 (51.5)	0.91 (23.0)	13/16	15/16	7/8	1/8	0.76 (19.4)	0.50 (12.7)
DSS-8-6-*	1/2 (12.7)	0.41 (10.4)	2.43 (61.8)	0.50 (12.7)	1.26 (32.0)	1.67 (42.3)	2.03 (51.5)	0.91 (23.0)	15/16	15/16	7/8	3/8	0.76 (19.4)	0.50 (12.7)
DSS-8-8-*	1/2 (12.7)	0.41 (10.4)	2.63 (66.8)	0.50 (12.7)	1.26 (32.0)	1.67 (42.3)	2.22 (56.5)	0.91 (23.0)	1-1/16	15/16	7/8	1/2	0.76 (19.4)	0.50 (12.7)
DSS-10-8-*	5/8 (15.88)	0.50 (12.7)	2.65 (67.4)	0.56 (14.3)	1.28 (32.5)	1.69 (42.8)	2.25 (57.1)	0.97 (24.6)	1-1/16	1-1/16	1	1/2	0.89 (22.6)	0.50 (12.7)
DSS-12-8-*	3/4 (19.05)	0.62 (15.8)	2.85 (72.3)	0.56 (14.3)	1.47 (37.3)	1.87 (47.6)	2.43 (61.8)	0.97 (24.6)	1-1/16	1-3/16	1-1/8	1/2	1.02 (25.8)	0.66 (16.8)
DSS-12-12-*	3/4 (19.05)	0.62 (15.8)	2.91 (73.8)	0.56 (14.3)	1.47 (37.3)	1.87 (47.6)	2.50 (63.5)	0.97 (24.6)	1-5/16	1-3/16	1-1/8	3/4	1.02 (25.8)	0.66 (16.8)
DSS-14-12-*	7/8 (22.23)	0.72 (18.3)	3.09 (78.4)	0.63 (15.9)	1.62 (41.2)	2.02 (51.4)	2.69 (68.2)	1.03 (26.1)	1-5/16	1-3/8	1-1/4	3/4	1.14 (29.0)	0.77 (19.6)
DSS-16-16-*	1 (25.4)	0.89 (22.5)	3.69 (93.6)	0.75 (19.1)	1.78 (45.2)	2.28 (57.8)	3.19 (81.0)	1.24 (31.6)	1-5/8	1-5/8	1-1/2	1	1.33 (33.7)	0.75 (19.1)

*Add suffix SS for 316 stainless steel or B for brass. ISO thread is available. Add R before thread size. Example, DSS-4-R4-SS

**DSU
Bulkhead Union**



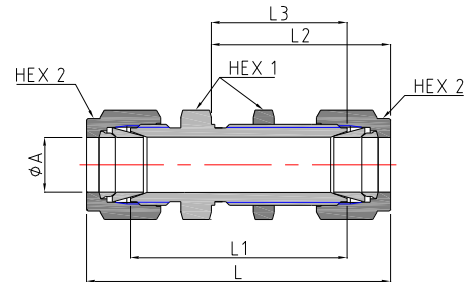
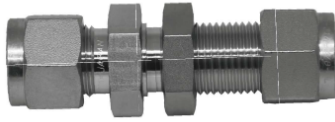
inch (mm)

Part No.	ØA Tube OD	ØE	I	F	L	L1	L2	L3	Hex 1	Hex 2	Panel	
											Hole	Thickness
DSU-1-*	1/16 (1.59)	0.05 (1.3)	0.19 (4.9)	0.35 (8.9)	1.26 (32.0)	0.94 (24.0)	0.69 (17.5)	0.53 (13.5)	5/16	5/16	0.21 (5.2)	0.12 (3.0)
DSU-2-*	1/8 (3.18)	0.09 (2.3)	0.25 (6.4)	0.51 (13.0)	2.02 (51.4)	1.50 (38.0)	1.23 (31.3)	0.97 (24.6)	1/2	7/16	0.33 (8.3)	0.50 (12.7)
DSU-3-*	3/16 (4.76)	0.12 (3.0)	0.28 (7.2)	0.54 (13.8)	2.12 (53.9)	1.59 (40.5)	1.27 (32.2)	1.00 (25.5)	9/16	1/2	0.39 (9.9)	0.50 (12.7)
DSU-4-*	1/4 (6.35)	0.19 (4.8)	0.31 (7.9)	0.61 (15.4)	2.28 (58.0)	1.69 (43.0)	1.32 (33.5)	1.02 (26.0)	5/8	9/16	0.45 (11.5)	0.40 (10.2)
DSU-5-*	5/16 (7.94)	0.25 (6.4)	0.35 (8.8)	0.64 (16.3)	2.40 (61.0)	1.81 (46.0)	1.42 (36.0)	1.12 (28.5)	11/16	5/8	0.52 (13.1)	0.43 (10.9)
DSU-6-*	3/8 (9.53)	0.28 (7.1)	0.37 (9.5)	0.67 (17.0)	2.47 (62.8)	1.88 (47.8)	1.46 (37.0)	1.16 (29.5)	3/4	11/16	0.58 (14.7)	0.44 (11.2)
DSU-8-*	1/2 (12.7)	0.41 (10.4)	0.50 (12.7)	0.91 (23.0)	2.81 (71.4)	2.00 (50.8)	1.67 (42.3)	1.26 (32.0)	15/16	7/8	0.76 (19.4)	0.50 (12.7)
DSU-10-*	5/8 (15.88)	0.50 (12.7)	0.56 (14.3)	0.97 (24.6)	2.88 (73.1)	2.07 (52.5)	1.69 (42.8)	1.28 (32.5)	1-1/16	1	0.89 (22.6)	0.50 (12.7)
DSU-12-*	3/4 (19.05)	0.62 (15.8)	0.56 (14.3)	0.97 (24.6)	3.12 (79.3)	2.31 (58.7)	1.87 (47.6)	1.47 (37.3)	1-3/16	1-1/8	1.02 (25.8)	0.66 (16.8)
DSU-14-*	7/8 (22.23)	0.72 (18.3)	0.63 (15.9)	0.97 (24.6)	3.30 (83.8)	2.50 (63.4)	2.06 (52.2)	1.65 (42.0)	1-3/8	1-1/4	1.14 (29.0)	0.77 (19.6)

DSU-16-*	1 (25.4)	0.89 (22.5)	0.75 (19.1)	1.24 (31.6)	3.80 (96.6)	2.81 (71.4)	2.28 (57.8)	1.78 (45.2)	1-5/8	1-1/2	1.33 (33.7)	0.75 (19.1)
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*Add suffix SS for 316 stainless steel or B for brass.

DSUZ
Thermocouple (bored through) Bulkhead Unio

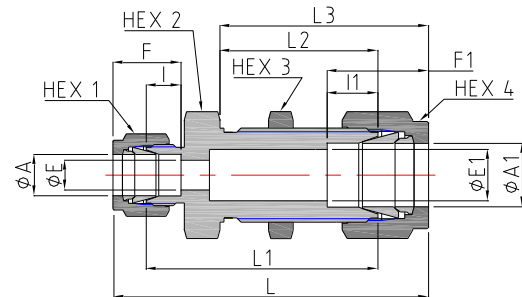
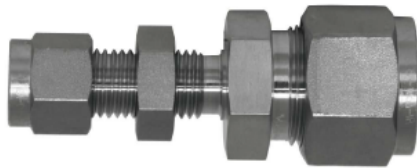


inch (mm)

Part No.	ØA Tube OD	L	L1	L2	L3	Hex 1	Hex 2	Panel	
								Hole	Thickness
DSUZ-1-*	1/16 (1.59)	1.26 (32.0)	0.94 (24.0)	0.69 (17.5)	0.53 (13.5)	5/16	5/16	0.21 (5.2)	0.12 (3.0)
DSUZ-2-*	1/8 (3.18)	2.02 (51.4)	1.50 (38.0)	1.23 (31.3)	0.97 (24.6)	1/2	7/16	0.33 (8.3)	0.50 (12.7)
DSUZ-3-*	3/16 (4.76)	2.12 (53.9)	1.59 (40.5)	1.27 (32.2)	1.00 (25.5)	9/16	1/2	0.39 (9.9)	0.50 (12.7)
DSUZ-4-*	1/4 (6.35)	2.28 (58.0)	1.69 (43.0)	1.32 (33.5)	1.02 (26.0)	5/8	9/16	0.45 (11.5)	0.40 (10.2)
DSUZ-5-*	5/16 (7.94)	2.40 (61.0)	1.81 (46.0)	1.42 (36.0)	1.12 (28.5)	11/16	5/8	0.52 (13.1)	0.43 (10.9)
DSUZ-6-*	3/8 (9.53)	2.47 (62.8)	1.88 (47.8)	1.46 (37.0)	1.16 (29.5)	3/4	11/16	0.58 (14.7)	0.44 (11.2)
DSUZ-8-*	1/2 (12.7)	2.81 (71.4)	2.00 (50.8)	1.67 (42.3)	1.26 (32.0)	15/16	7/8	0.76 (19.4)	0.50 (12.7)
DSUZ-10-*	5/8 (15.88)	2.88 (73.1)	2.07 (52.5)	1.69 (42.8)	1.28 (32.5)	1-1/16	1	0.89 (22.6)	0.50 (12.7)
DSUZ-12-*	3/4 (19.05)	3.12 (79.3)	2.31 (58.7)	1.87 (47.6)	1.47 (37.3)	1-3/16	1-1/8	1.02 (25.8)	0.66 (16.8)
DSUZ-14-*	7/8 (22.23)	3.30 (83.8)	2.50 (63.4)	2.06 (52.2)	1.65 (42.0)	1-3/8	1-1/4	1.14 (29.0)	0.77 (19.6)
DSUZ-16-*	1 (25.4)	3.80 (96.6)	2.81 (71.4)	2.28 (57.8)	1.78 (45.2)	1-3/16	1-1/2	1.33 (33.7)	0.75 (19.1)

*Add suffix SS for 316 stainless steel or B for brass.

DSUR
Bulkhead Reducing Union



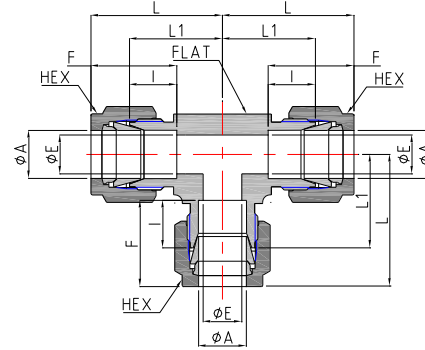
inch (mm)

Part No.	ØA Tube OD	ØA1 Tube OD	ØE	ØE1	I	I1	L	L1	L2	L3	F	F1	Hex 1	Hex 2	Hex 3	Hex 4	Panel	
																	Hole	Thickness
DSUR-1-2-*	1/16 (1.59)	1/8 (3.18)	0.05 (1.3)	0.09 (2.3)	0.19 (4.9)	0.25 (6.4)	1.85 (47.1)	1.43 (36.4)	0.97 (24.6)	1.23 (31.3)	0.35 (8.9)	0.51 (13.0)	5/16	1/2	1/2	7/16	0.33 (8.3)	0.50 (12.7)
DSUR-2-1-*	1/8 (3.18)	1/16 (1.59)	0.09 (2.3)	0.05 (1.3)	0.25 (6.4)	0.19 (4.9)	1.48 (37.7)	1.06 (27.0)	0.53 (13.5)	0.69 (17.5)	0.51 (13.0)	0.35 (8.9)	7/16	7/16	5/16	5/16	0.21 (5.2)	0.12 (3.0)
DSUR-2-4-*	1/8 (3.18)	1/4 (6.35)	0.09 (2.3)	0.19 (4.8)	0.25 (6.4)	0.31 (7.9)	2.20 (55.8)	1.64 (41.6)	1.02 (26.0)	1.32 (33.5)	0.51 (13.0)	0.61 (15.4)	7/16	5/8	5/8	9/16	0.45 (11.5)	0.40 (10.2)
DSUR-4-2-*	1/4 (6.35)	1/8 (3.18)	0.19 (4.8)	0.09 (2.3)	0.31 (7.9)	0.25 (6.4)	2.20 (55.8)	1.64 (41.6)	1.23 (31.3)	1.23 (31.3)	0.61 (15.4)	0.51 (13.0)	9/16	1/2	1/2	7/16	0.33 (8.3)	0.50 (12.7)
DSUR-4-6-*	1/4 (6.35)	3/8 (9.53)	0.19 (4.8)	0.28 (7.1)	0.31 (7.9)	0.37 (9.5)	2.40 (61.0)	1.81 (46.0)	1.16 (29.5)	1.46 (37.0)	0.61 (15.4)	0.67 (17.0)	9/16	3/4	3/4	11/16	0.58 (14.7)	0.44 (11.2)
DSUR-4-8-*	1/4 (6.35)	1/2 (12.7)	0.19 (4.8)	0.41 (10.4)	0.31 (7.9)	0.50 (12.7)	2.64 (67.1)	1.94 (49.3)	1.26 (32.0)	1.67 (42.3)	0.61 (15.4)	0.91 (23.0)	9/16	15/16	15/16	7/8	0.76 (19.4)	0.50 (12.7)
DSUR-6-4-*	3/8 (9.53)	1/4 (6.35)	0.28 (7.1)	0.19 (4.8)	0.37 (9.5)	0.31 (7.9)	2.32 (59.0)	1.73 (44.0)	1.02 (26.0)	1.32 (33.5)	0.67 (17.0)	0.61 (15.4)	11/16	5/8	5/8	9/16	0.45 (11.5)	0.40 (10.2)
DSUR-6-8-*	3/8 (9.53)	1/2 (12.7)	0.28 (7.1)	0.41 (10.4)	0.37 (9.5)	0.50 (12.7)	2.70 (68.6)	2.00 (50.8)	1.26 (32.0)	1.67 (42.3)	0.67 (17.0)	0.91 (23.0)	11/16	15/16	15/16	7/8	0.76 (19.4)	0.50 (12.7)
DSUR-6-14-*	3/8 (9.53)	7/8 (22.23)	0.28 (7.1)	0.72 (18.3)	0.37 (9.5)	0.63 (15.9)	3.20 (81.2)	2.50 (63.5)	1.65 (42.0)	2.06 (52.2)	0.67 (17.0)	1.03 (26.1)	11/16	1-3/8	1-3/8	1-1/4	1.14 (29.0)	0.77 (19.6)

DSUR-8-4-*	1/2 (12.7)	1/4 (6.35)	0.41 (10.4)	0.19 (4.8)	0.50 (12.7)	0.31 (7.9)	2.46 (62.6)	1.76 (44.8)	1.02 (26.0)	1.32 (33.5)	0.91 (23.0)	0.61 (15.4)	7/8	13/16	5/8	9/16	0.45 (11.5)	0.40 (10.2)
DSUR-8-6-*	1/2 (12.7)	3/8 (9.53)	0.41 (10.4)	0.28 (7.1)	0.50 (12.7)	0.37 (9.5)	2.60 (66.1)	1.90 (48.3)	1.16 (29.5)	1.46 (37.0)	0.91 (23.0)	0.67 (17.0)	7/8	13/16	3/4	11/16	0.58 (14.7)	0.44 (11.2)
DSUR-8-12-*	1/2 (12.7)	3/4 (19.05)	0.41 (10.4)	0.62 (15.8)	0.50 (12.7)	0.56 (14.3)	3.12 (79.3)	2.31 (58.7)	1.47 (37.3)	1.87 (47.6)	0.91 (23.0)	0.97 (24.6)	7/8	1-3/16	1-3/16	1-1/8	1.02 (25.8)	0.66 (16.8)
DSUR-12-8-*	3/4 (19.05)	1/2 (12.7)	0.62 (15.8)	0.41 (10.4)	0.56 (14.3)	0.50 (12.7)	2.91 (74.0)	2.10 (53.4)	1.26 (32.0)	1.67 (42.3)	0.97 (24.6)	0.91 (23.0)	1-1/8	1-1/16	15/16	7/8	0.76 (19.4)	0.50 (12.7)
DSUR-12-16-*	3/4 (19.05)	1 (25.4)	0.62 (15.8)	0.89 (22.5)	0.56 (14.3)	0.75 (19.1)	3.62 (91.9)	2.72 (69.0)	1.78 (45.2)	2.28 (57.8)	0.97 (24.6)	1.24 (31.6)	1-1/8	1-5/8	1-5/8	1-1/2	1.33 (33.7)	0.75 (19.1)
DSUR-14-8-*	7/8 (22.23)	1/2 (12.7)	0.72 (18.3)	0.41 (10.4)	0.63 (15.9)	0.50 (12.7)	2.98 (75.6)	2.17 (55.0)	1.26 (32.0)	1.67 (42.3)	1.03 (26.1)	0.91 (23.0)	1-1/4	1-3/16	15/16	7/8	0.76 (19.4)	0.50 (12.7)

*Add suffix SS for 316 stainless steel or B for brass

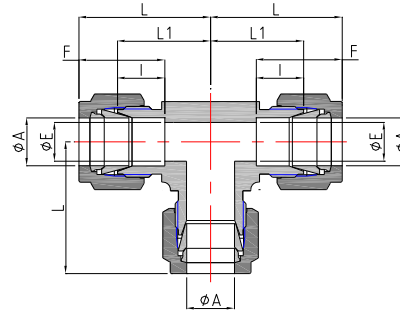
**DTA
Union Tee**



Part No.	ØA	ØE	L	I	L1	F	Hex	Flat
DTA-1-*	1/16 (1.59)	0.05 (1.3)	0.72 (18.2)	0.19 (4.9)	0.56 (14.2)	0.35 (8.9)	5/16	3/8
DTA-2-*	1/8 (3.18)	0.09 (2.3)	0.89 (22.5)	0.25 (6.4)	0.62 (15.8)	0.51 (13.0)	7/16	3/8
DTA-3-*	3/16 (4.76)	0.12 (3.0)	1.01 (25.7)	0.28 (7.2)	0.75 (19.0)	0.54 (13.8)	1/2	1/2
DTA-4-*	1/4 (6.35)	0.19 (4.8)	1.08 (27.5)	0.31 (7.9)	0.79 (20.0)	0.61 (15.4)	9/16	1/2
DTA-5-*	5/16 (7.94)	0.25 (6.4)	1.18 (29.9)	0.35 (8.8)	0.88 (22.4)	0.64 (16.3)	5/8	5/8
DTA-6-*	3/8 (9.53)	0.28 (7.1)	1.20 (30.5)	0.37 (9.5)	0.91 (23.0)	0.67 (17.0)	11/16	5/8
DTA-8-*	1/2 (12.7)	0.41 (10.4)	1.39 (35.3)	0.50 (12.7)	0.98 (25.0)	0.91 (23.0)	7/8	13/16
DTA-10-*	5/8 (15.88)	0.50 (12.7)	1.47 (37.3)	0.56 (14.3)	1.06 (27.0)	0.97 (24.6)	1	15/16
DTA-12-*	3/4 (19.05)	0.62 (15.7)	1.52 (38.5)	0.56 (14.3)	1.11 (28.2)	0.97 (24.6)	1-1/8	1-1/16
DTA-14-*	7/8 (22.23)	0.72 (18.3)	1.68 (42.7)	0.63 (15.9)	1.28 (32.5)	1.03 (26.1)	1-1/4	1-1/4
DTA-16-*	1 (25.4)	0.88 (22.4)	1.81 (45.9)	0.75 (19.1)	1.31 (33.3)	1.24 (31.6)	1-1/2	1-5/16

*Add suffix SS for 316 stainless steel or B for brass.

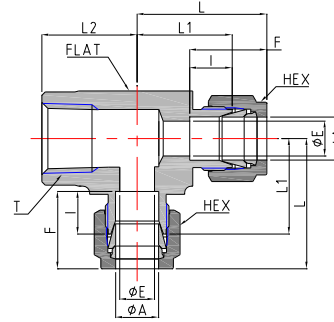
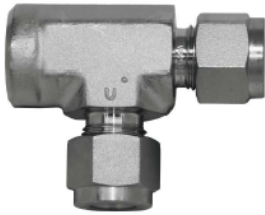
**DTAZ
Thermocouple (bored through) Union Tee**



Part No.	ØA	ØE	I	F	L	L1	Hex	Flat
DTAZ-4-*	1/4 (6.35)	0.19 (4.8)	0.31 (7.9)	0.61 (15.4)	1.08 (27.5)	0.79 (20.0)	9/16	1/2
DTAZ-6-*	3/8 (9.53)	0.28 (7.1)	0.37 (9.5)	0.67 (17.0)	1.20 (30.5)	0.91 (23.0)	11/16	5/8

*Add suffix SS for 316 stainless steel or B for brass. **Branch to be bored through.

DTF
Female Run Tee

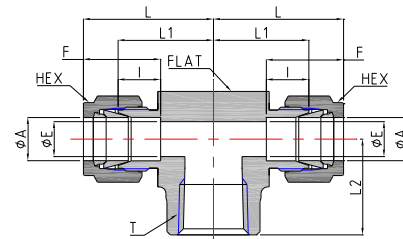


inch (mm)

Part No.	ØA Tube OD	ØE	L	I	L1	L2	F	Hex	Flat	T (NPT/ISO)
DTF-1-2-*	1/16 (1.59)	0.05 (1.3)	0.85 (21.5)	0.19 (4.9)	0.69 (17.5)	0.75 (19.0)	0.35 (8.9)	5/16	5/8	1/8
DTF-2-2-*	1/8 (3.18)	0.09 (2.3)	0.95 (24.2)	0.25 (6.4)	0.69 (17.5)	0.75 (19.0)	0.51 (13.0)	7/16	5/8	1/8
DTF-3-2-*	3/16 (4.76)	0.12 (3.0)	0.98 (25.0)	0.28 (7.2)	0.72 (18.3)	0.75 (19.0)	0.54 (13.8)	1/2	5/8	1/8
DTF-4-2-*	1/4 (6.35)	0.19 (4.8)	1.04 (26.5)	0.31 (7.9)	0.75 (19.0)	0.75 (19.0)	0.61 (15.4)	9/16	5/8	1/8
DTF-4-4-*	1/4 (6.35)	0.19 (4.8)	1.18 (30.0)	0.31 (7.9)	0.89 (22.5)	0.89 (22.5)	0.61 (15.4)	9/16	13/16	1/4
DTF-5-2-*	5/16 (7.94)	0.25 (6.4)	1.18 (29.9)	0.35 (8.8)	0.89 (22.5)	0.75 (19.0)	0.64 (16.3)	5/8	5/8	1/8
DTF-5-4-*	5/16 (7.94)	0.25 (6.4)	1.20 (30.6)	0.35 (8.8)	0.91 (23.1)	0.89 (22.5)	0.64 (16.3)	5/8	13/16	1/4
DTF-6-2-*	3/8 (9.53)	0.28 (7.1)	1.20 (30.5)	0.37 (9.5)	0.91 (23.0)	0.75 (19.0)	0.67 (17.0)	11/16	5/8	1/8
DTF-6-4-*	3/8 (9.53)	0.28 (7.1)	1.24 (31.5)	0.37 (9.5)	0.94 (24.0)	0.89 (22.5)	0.67 (17.0)	11/16	13/16	1/4
DTF-6-6-*	3/8 (9.53)	0.28 (7.1)	1.33 (33.7)	0.37 (9.5)	1.03 (26.2)	0.89 (22.5)	0.67 (17.0)	11/16	15/16	3/8
DTF-8-2-*	1/2 (12.7)	0.41 (10.4)	1.39 (35.3)	0.50 (12.7)	0.98 (25.0)	0.89 (22.5)	0.91 (23.0)	7/8	13/16	1/8
DTF-8-4-*	1/2 (12.7)	0.41 (10.4)	1.39 (35.3)	0.50 (12.7)	0.98 (25.0)	0.89 (22.5)	0.91 (23.0)	7/8	13/16	1/4
DTF-8-6-*	1/2 (12.7)	0.41 (10.4)	1.44 (36.5)	0.50 (12.7)	1.03 (26.2)	0.89 (22.5)	0.91 (23.0)	7/8	15/16	3/8
DTF-8-8-*	1/2 (12.7)	0.41 (10.4)	1.53 (38.8)	0.50 (12.7)	1.11 (28.2)	1.12 (28.5)	0.91 (23.0)	7/8	1-1/16	1/2
DTF-10-2-*	5/8 (15.88)	0.50 (12.7)	1.47 (37.3)	0.56 (14.3)	1.06 (27.0)	0.89 (22.5)	0.97 (24.6)	1	15/16	1/8
DTF-10-8-*	5/8 (15.88)	0.50 (12.7)	1.53 (38.8)	0.56 (14.3)	1.11 (28.2)	1.12 (28.5)	0.97 (24.6)	1	1-1/16	1/2
DTF-12-4-*	3/4 (19.05)	0.62 (15.8)	1.50 (38.6)	0.56 (14.3)	1.11 (28.2)	1.12 (28.5)	0.97 (24.6)	1-1/8	1-1/16	1/4
DTF-12-8-*	3/4 (19.05)	0.62 (15.8)	1.66 (42.1)	0.56 (14.3)	1.11 (28.2)	1.12 (28.5)	0.97 (24.6)	1-1/8	1-1/16	1/2
DTF-12-12-*	3/4 (19.05)	0.62 (15.8)	1.66 (42.1)	0.56 (14.3)	1.25 (31.8)	1.25 (31.8)	0.97 (24.6)	1-1/8	1-5/16	3/4
DTF-14-8-*	7/8 (22.23)	0.72 (18.3)	1.68 (42.7)	0.63 (15.9)	1.28 (32.5)	1.28 (32.5)	1.03 (26.1)	1-1/4	1-1/4	1/2
DTF-16-2-*	1 (25.4)	0.89 (22.5)	1.81 (45.9)	0.75 (19.1)	1.31 (33.3)	1.12 (28.5)	1.24 (31.6)	1-1/2	1-5/16	1/8
DTF-16-4-*	1 (25.4)	0.89 (22.5)	1.81 (45.9)	0.75 (19.1)	1.31 (33.3)	1.12 (28.5)	1.24 (31.6)	1-1/2	1-5/16	1/4
DTF-16-6-*	1 (25.4)	0.89 (22.5)	1.81 (45.9)	0.75 (19.1)	1.31 (33.3)	1.12 (28.5)	1.24 (31.6)	1-1/2	1-5/16	3/8
DTF-16-8-*	1 (25.4)	0.89 (22.5)	1.81 (45.9)	0.75 (19.1)	1.31 (33.3)	1.12 (33.3)	1.24 (31.6)	1-1/2	1-5/16	1/2
DTF-16-12-*	1 (25.4)	0.89 (22.5)	1.81 (45.9)	0.75 (19.1)	1.31 (33.3)	1.25 (31.8)	1.24 (31.6)	1-1/2	1-5/16	3/4
DTF-16-16-SS	1 (25.4)	0.89 (22.5)	2.02 (51.2)	0.75 (19.1)	1.50 (38.6)	1.50 (38.1)	1.24 (31.6)	1-1/2	1-7/8	1

*Add suffix SS for 316 stainless steel or B for brass. ISO thread is available. Add R before thread size. Example, DTF-4-R4-SS. ¹ from block

DTH
Female Branch Tee



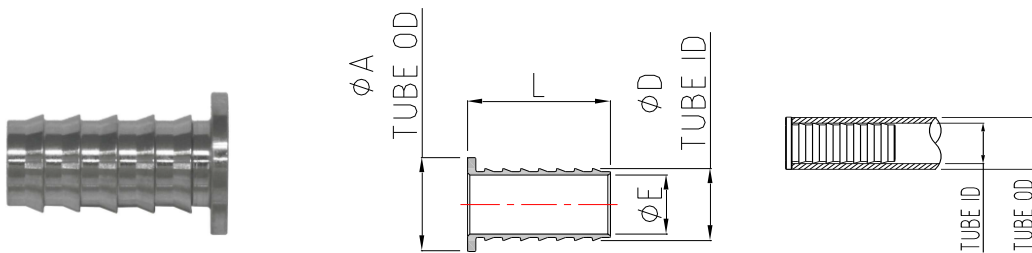
inch (mm)

Part No.	ØA Tube OD	ØE	I	L	L1	L2	F	Hex	Flat	T (NPT/ISO)
DTH-2-2-*	1/8 (3.18)	0.09 (2.3)	0.25 (6.4)	0.95 (24.2)	0.69 (17.5)	0.75 (19.0)	0.51 (13.0)	7/16	5/8	1/8
DTH-2-4-*	1/8 (3.18)	0.09 (2.3)	0.25 (6.4)	1.07 (27.2)	0.81 (20.5)	0.89 (22.5)	0.51 (13.0)	7/16	13/16	1/4
DTH-2-6-*	1/8 (3.18)	0.09 (2.3)	0.25 (6.4)	1.30 (32.9)	1.03 (26.2)	0.89 (22.5)	0.51 (13.0)	7/16	13/16	3/8
DTH-3-2-*	3/16 (4.76)	0.12 (3.0)	0.28 (7.2)	0.98 (25.0)	0.72 (18.3)	0.75 (19.0)	0.54 (13.8)	1/2	5/8	1/8

DTH-4-2-*	1/4 (6.35)	0.19 (4.8)	0.31 (7.9)	1.04 (26.5)	0.75 (19.0)	0.75 (19.0)	0.61 (15.4)	9/16	5/8	1/8
DTH-4-4-*	1/4 (6.35)	0.19 (4.8)	0.31 (7.9)	1.18 (30.0)	0.89 (22.5)	0.89 (22.5)	0.61 (15.4)	9/16	13/16	1/4
DTH-4-6-*	1/4 (6.35)	0.19 (4.8)	0.31 (7.9)	1.27 (32.2)	0.97 (24.7)	0.89 (22.5)	0.61 (15.4)	9/16	15/16	3/8
DTH-4-8-*	1/4 (6.35)	0.19 (4.8)	0.31 (7.9)	1.41 (35.7)	1.11 (28.2)	1.12 (28.5)	0.61 (15.4)	9/16	1-1/16	1/2
DTH-5-2-*	5/16 (7.94)	0.25 (6.4)	0.35 (8.8)	1.18 (29.9)	1.11 (28.2)	0.75 (19.0)	0.64 (16.3)	5/8	5/8	1/8
DTH-5-4-*	5/16 (7.94)	0.25 (6.4)	0.35 (8.8)	1.20 (30.6)	0.91 (23.1)	0.89 (22.5)	0.64 (16.3)	5/8	13/16	1/4
DTH-6-2-*	3/8 (9.53)	0.28 (7.1)	0.37 (9.5)	1.20 (30.5)	0.91 (23.0)	0.75 (19.0)	0.67 (17.0)	11/16	5/8	1/8
DTH-6-4-*	3/8 (9.53)	0.28 (7.1)	0.37 (9.5)	1.24 (31.5)	0.94 (24.0)	0.89 (22.5)	0.67 (17.0)	11/16	13/16	1/4
DTH-6-6-*	3/8 (9.53)	0.28 (7.1)	0.37 (9.5)	1.33 (33.7)	1.03 (26.2)	0.89 (22.5)	0.67 (17.0)	11/16	15/16	3/8
DTH-6-8-*	3/8 (9.53)	0.28 (7.1)	0.37 (9.5)	1.42 (36.0)	1.11 (28.2)	1.12 (28.5)	0.67 (17.0)	11/16	1-1/16	1/2
DTH-8-2-*	1/2 (12.7)	0.41 (10.4)	0.50 (12.7)	1.39 (35.3)	0.98 (25.0)	0.89 (22.5)	0.91 (23.0)	7/8	13/16	1/8
DTH-8-4-*	1/2 (12.7)	0.41 (10.4)	0.50 (12.7)	1.39 (35.3)	0.98 (25.0)	0.89 (22.5)	0.91 (23.0)	7/8	13/16	1/4
DTH-8-6-*	1/2 (12.7)	0.41 (10.4)	0.50 (12.7)	1.44 (36.5)	1.03 (26.2)	0.89 (22.5)	0.91 (23.0)	7/8	15/16	3/8
DTH-8-8-*	1/2 (12.7)	0.41 (10.4)	0.50 (12.7)	1.52 (38.5)	1.11 (28.2)	1.12 (28.5)	0.91 (23.0)	7/8	1-1/16	1/2
DTH-8-12-*	1/2 (12.7)	0.41 (10.4)	0.50 (12.7)	1.66 (42.1)	1.25 (31.8)	1.25 (31.8)	0.91 (23.0)	7/8	1-5/16	3/4
DTH-10-2-*	5/8 (15.88)	0.50 (12.7)	0.56 (14.3)	1.47 (37.3)	1.06 (27.0)	0.89 (22.5)	0.97 (24.6)	1	15/16	1/8
DTH-10-6-*	5/8 (15.88)	0.50 (12.7)	0.56 (14.3)	1.47 (37.3)	1.06 (27.0)	0.89 (22.5)	0.97 (24.6)	1	15/16	3/8
DTH-10-8-*	5/8 (15.88)	0.50 (12.7)	0.56 (14.3)	1.52 (38.5)	1.11 (28.2)	1.12 (28.5)	0.97 (24.6)	1	1-1/16	1/2
DTH-12-2-*	3/4 (19.05)	0.62 (15.8)	0.56 (14.3)	1.52 (38.5)	1.11 (28.2)	1.12 (28.5)	0.97 (24.6)	1-1/8	1-1/16	1/8
DTH-12-4-*	3/4 (19.05)	0.62 (15.8)	0.56 (14.3)	1.52 (38.5)	1.11 (28.2)	1.12 (28.5)	0.97 (24.6)	1-1/8	1-1/16	1/4
DTH-12-6-*	3/4 (19.05)	0.62 (15.8)	0.56 (14.3)	1.52 (38.5)	1.11 (28.2)	1.12 (28.5)	0.97 (24.6)	1-1/8	1-1/16	3/8
DTH-12-8-*	3/4 (19.05)	0.62 (15.8)	0.56 (14.3)	1.52 (38.5)	1.11 (28.2)	1.12 (28.5)	0.97 (24.6)	1-1/8	1-1/16	1/2
DTH-12-12-*	3/4 (19.05)	0.62 (15.8)	0.56 (14.3)	1.66 (42.1)	1.25 (31.8)	1.25 (31.8)	0.97 (24.6)	1-1/8	1-5/16	3/4
DTH-14-12-*	7/8 (22.23)	0.72 (18.3)	0.63 (15.9)	1.68 (42.7)	1.28 (32.5)	1.25 (31.8)	1.03 (26.1)	1-1/4	1-5/16	3/4
DTH-16-12-*	1 (25.4)	0.89 (22.5)	0.75 (19.1)	1.81 (45.9)	1.31 (33.3)	1.25 (31.8)	1.24 (31.6)	1-1/2	1-5/16	3/4
DTH-16-16-SS	1 (25.4)	0.89 (22.5)	0.75 (19.1)	2.02 (51.2)	1.50 (38.6)	1.50 (38.1)	1.24 (31.6)	1-1/2	¹ 1-7/8	1

*Add suffix SS for 316 stainless steel or B for brass. ISO thread is available. Add R before thread size. Example, DTH-4-R4-SS. ¹From block.

DTI
Tube Insert

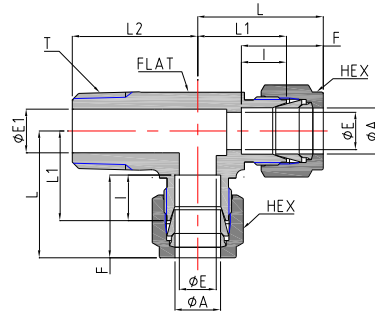
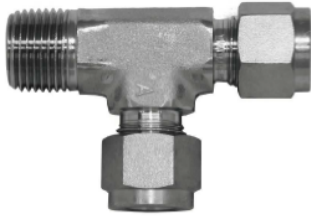


Inch (mm)

Part No.	ØA Tube OD	ØD Tube ID	ØE	L
DTI-3-2-*	3/16 (4.76)	1/8	0.09 (2.3)	0.47 (11.9)
DTI-4-2-*	1/4 (6.35)	1/8 (3.18)	0.09 (2.3)	0.47 (11.9)
DTI-4-3-*	1/4 (6.35)	3/16 (4.76)	0.14 (3.5)	0.47 (11.9)
DTI-5-2-*	5/16 (7.94)	1/8 (3.18)	0.09 (2.3)	0.47 (11.9)
DTI-5-3-*	5/16 (7.94)	3/16 (4.76)	0.12 (3.0)	0.56 (14.3)
DTI-5-4-*	5/16 (7.94)	1/4 (6.35)	0.19 (4.8)	0.56 (14.3)
DTI-6-3-*	3/8 (9.53)	3/16 (4.76)	0.12 (3.0)	0.56 (14.3)
DTI-6-4-*	3/8 (9.53)	1/4 (6.35)	0.19 (4.8)	0.56 (14.3)
DTI-8-4-*	1/2 (12.7)	1/4 (6.35)	0.19 (4.8)	0.75 (19.1)
DTI-8-6-*	1/2 (12.7)	3/8 (9.53)	0.31 (7.9)	0.75 (19.1)
DTI-10-6-*	5/8 (15.88)	3/8 (9.53)	0.31 (7.9)	0.85 (21.5)
DTI-10-8-*	5/8 (15.88)	1/2 (12.7)	0.44 (11.2)	0.86 (21.8)
DTI-12-8-*	3/4 (19.05)	1/2 (12.7)	0.44 (11.2)	0.86 (21.8)
DTI-12-10-*	3/4 (19.05)	5/8 (15.88)	0.56 (14.2)	0.86 (21.8)
DTI-16-12-*	1 (25.4)	3/4 (19.05)	0.69 (17.5)	0.94 (23.8)
DTI-16-14-*	1 (25.4)	7/8 (22.23)	0.81 (20.6)	0.94 (23.8)

*Add suffix SS for 316 stainless steel or B for brass. ** See page 55 for assembly instructions.

DTK
Male Run Tee

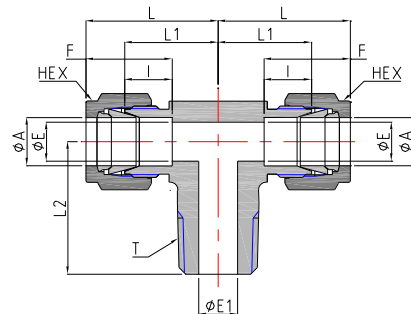


inch (mm)

Part No.	ØA Tube OD	ØE	ØE1	I	L	L1	L2	Hex	Flat	F	T (NPT/ISO)
DTK-1-2-*	1/16 (1.59)	0.05 (1.3)	0.19 (4.8)	0.19 (4.9)	0.72 (18.2)	0.56 (14.2)	0.73 (18.5)	5/16	7/16	0.35 (8.9)	1/8
DTK-2-2-*	1/8 (3.18)	0.09 (2.3)	0.19 (4.8)	0.25 (6.4)	0.93 (23.5)	0.66 (16.8)	0.73 (18.5)	7/16	7/16	0.51 (13.0)	1/8
DTK-2-4-*	1/8 (3.18)	0.09 (2.3)	0.19 (4.8)	0.25 (6.4)	0.98 (25.0)	0.72 (18.3)	0.94 (24.0)	7/16	1/2	0.51 (13.0)	1/4
DTK-3-2-*	3/16 (4.76)	0.12 (3.0)	0.19 (4.8)	0.28 (7.2)	1.01 (25.7)	0.75 (19.0)	0.75 (19.0)	1/2	1/2	0.54 (13.8)	1/8
DTK-4-2-*	1/4 (6.35)	0.19 (4.8)	0.19 (4.8)	0.31 (7.9)	1.08 (27.5)	0.79 (20.0)	0.75 (19.0)	9/16	1/2	0.61 (15.4)	1/8
DTK-4-4-*	1/4 (6.35)	0.19 (4.8)	0.24 (6.0)	0.31 (7.9)	1.08 (27.5)	0.79 (20.0)	0.94 (24.0)	9/16	1/2	0.61 (15.4)	1/4
DTK-4-6-*	1/4 (6.35)	0.19 (4.8)	0.37 (9.4)	0.31 (7.9)	1.18 (30.0)	0.89 (22.5)	1.12 (28.5)	9/16	11/16	0.61 (15.4)	3/8
DTK-5-2-*	5/16 (7.94)	0.25 (6.4)	0.19 (4.8)	0.35 (8.8)	1.18 (29.9)	0.88 (22.4)	0.81 (20.5)	5/8	5/8	0.64 (16.3)	1/8
DTK-5-4-*	5/16 (7.94)	0.25 (6.4)	0.28 (7.1)	0.35 (8.8)	1.18 (29.9)	0.88 (22.4)	1.00 (25.5)	5/8	5/8	0.64 (16.3)	1/4
DTK-5-6-*	5/16 (7.94)	0.25 (6.4)	0.41 (10.4)	0.35 (8.8)	1.24 (31.5)	0.94 (24.0)	1.12 (28.5)	5/8	11/16	0.64 (16.3)	3/8
DTK-6-2-*	3/8 (9.53)	0.28 (7.1)	0.19 (4.8)	0.37 (9.5)	1.20 (30.5)	0.91 (23.0)	0.81 (20.5)	11/16	5/8	0.67 (17.0)	1/8
DTK-6-4-*	3/8 (9.53)	0.28 (7.1)	0.28 (7.1)	0.37 (9.5)	1.20 (30.5)	0.91 (23.0)	1.00 (25.5)	11/16	5/8	0.67 (17.0)	1/4
DTK-6-6-*	3/8 (9.53)	0.24 (6.0)	0.37 (9.4)	0.37 (9.5)	1.24 (31.5)	0.94 (24.0)	1.12 (28.5)	11/16	11/16	0.67 (17.0)	3/8
DTK-8-4-*	1/2 (12.7)	0.41 (10.4)	0.28 (7.1)	0.50 (12.7)	1.39 (35.3)	0.98 (25.0)	1.08 (27.5)	7/8	13/16	0.91 (23.0)	1/4
DTK-8-6-*	1/2 (12.7)	0.41 (10.4)	0.41 (10.4)	0.50 (12.7)	1.39 (35.3)	0.98 (25.0)	1.08 (27.5)	7/8	13/16	0.91 (23.0)	3/8
DTK-8-8-*	1/2 (12.7)	0.41 (10.4)	0.50 (12.7)	0.50 (12.7)	1.44 (36.5)	1.03 (26.2)	1.31 (33.4)	7/8	13/16	0.91 (23.0)	1/2
DTK-10-6-*	5/8 (15.88)	0.50 (12.7)	0.37 (9.4)	0.56 (14.3)	1.47 (37.3)	1.06 (27.0)	1.08 (27.5)	1	15/16	0.97 (24.6)	3/8
DTK-10-8-*	5/8 (15.88)	0.50 (12.7)	0.50 (12.7)	0.56 (14.3)	1.47 (37.3)	1.06 (27.0)	1.34 (34.0)	1	15/16	0.97 (24.6)	1/2
DTK-12-6-*	3/4 (19.05)	0.62 (15.8)	0.37 (9.4)	0.56 (14.3)	1.52 (38.5)	1.11 (28.2)	1.08 (27.5)	1-1/8	1-1/16	0.97 (24.6)	3/8
DTK-12-8-*	3/4 (19.05)	0.62 (15.8)	0.50 (12.7)	0.56 (14.3)	1.52 (38.5)	1.11 (28.2)	1.40 (35.5)	1-1/8	1-1/16	0.97 (24.6)	1/2
DTK-12-12-*	3/4 (19.05)	0.62 (15.8)	0.72 (18.3)	0.56 (14.3)	1.52 (38.5)	1.11 (28.2)	1.40 (35.5)	1-1/8	1-1/16	0.97 (24.6)	3/4
DTK-14-8-*	7/8 (22.23)	0.72 (18.3)	0.50 (12.7)	0.63 (15.9)	1.68 (42.7)	1.28 (32.5)	1.65 (42.0)	1-1/4	1-1/4	1.03 (26.1)	1/2
DTK-14-12-*	7/8 (22.23)	0.72 (18.3)	0.72 (18.3)	0.63 (15.9)	1.68 (42.7)	1.28 (32.5)	1.65 (42.0)	1-1/4	1-1/4	1.03 (26.1)	3/4
DTK-16-8-*	1 (25.4)	0.89 (22.5)	0.50 (12.7)	0.75 (19.1)	1.81 (45.9)	1.31 (33.3)	1.65 (42.0)	1-1/2	1-5/16	1.24 (31.6)	1/2
DTK-16-12-*	1 (25.4)	0.89 (22.5)	0.72 (18.3)	0.75 (19.1)	1.81 (45.9)	1.31 (33.3)	1.65 (42.0)	1-1/2	1-5/16	1.24 (31.6)	3/4
DTK-16-16-*	1 (25.4)	0.89 (22.5)	0.89 (22.5)	0.75 (19.1)	1.81 (45.9)	1.31 (33.3)	1.84 (46.7)	1-1/2	1-5/16	1.24 (31.6)	1

*Add suffix SS for 316 stainless steel or B for brass. ISO thread is available. Add R before thread size. Example, DTK-4-R4-SS

DTN
Male Branch Tee



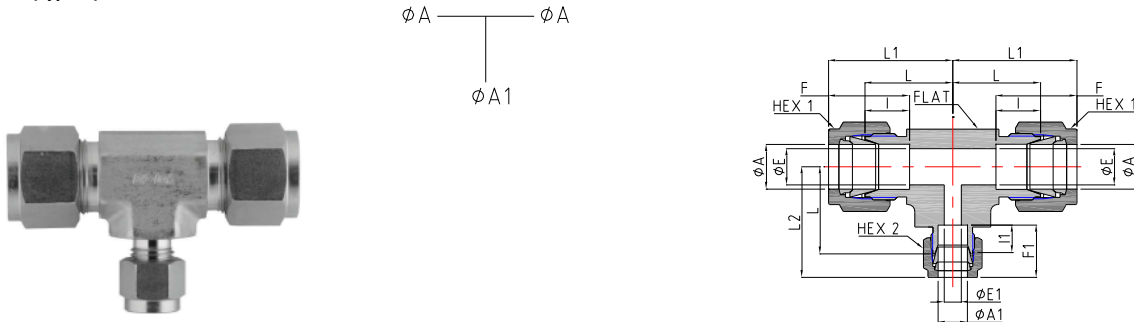
inch (mm)

Part No.	ØA	ØE	ØE1	I	L	L1	L2	Hex	Flat	F	T
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	Tube OD												(NPT/ISO)
DTN-2-2-*	1/8 (3.18)	0.09 (2.3)	0.19 (4.8)	0.25 (6.4)	0.93 (23.5)	0.66 (16.8)	0.73 (18.5)	7/16	7/16	0.51 (13.0)	1/8		1/8
DTN-2-4-*	1/8 (3.18)	0.09 (2.3)	0.19 (4.8)	0.25 (6.4)	0.98 (25.0)	0.72 (18.3)	0.94 (24.0)	7/16	1/2	0.51 (13.0)	1/4		1/4
DTN-3-2-*	3/16 (4.76)	0.12 (3.0)	0.19 (4.8)	0.28 (7.2)	1.01 (25.7)	0.75 (19.0)	0.75 (19.0)	1/2	1/2	0.54 (13.8)	1/8		1/8
DTN-4-2-*	1/4 (6.35)	0.19 (4.8)	0.19 (4.8)	0.31 (7.9)	1.08 (27.5)	0.79 (20.0)	0.75 (19.0)	9/16	1/2	0.61 (15.4)	1/8		1/8
DTN-4-4-*	1/4 (6.35)	0.19 (4.8)	0.24 (6.0)	0.31 (7.9)	1.08 (27.5)	0.79 (20.0)	0.94 (24.0)	9/16	1/2	0.61 (15.4)	1/4		1/4
DTN-4-6-*	1/4 (6.35)	0.19 (4.8)	0.37 (9.4)	0.31 (7.9)	1.18 (30.0)	0.89 (22.5)	1.12 (28.5)	9/16	11/16	0.61 (15.4)	3/8		3/8
DTN-4-8-*	1/4 (6.35)	0.19 (4.8)	0.41 (10.4)	0.31 (7.9)	1.26 (32.0)	0.96 (24.5)	1.32 (33.5)	9/16	13/16	0.61 (15.4)	1/2		1/2
DTN-5-2-*	5/16 (7.94)	0.25 (6.4)	0.19 (4.8)	0.35 (8.8)	1.18 (29.9)	0.88 (22.4)	0.81 (20.5)	5/8	5/8	0.64 (16.3)	1/8		1/8
DTN-5-4-*	5/16 (7.94)	0.25 (6.4)	0.28 (7.1)	0.35 (8.8)	1.18 (29.9)	0.88 (22.4)	1.00 (25.5)	5/8	5/8	0.64 (16.3)	1/4		1/4
DTN-5-6-*	5/16 (7.94)	0.25 (6.4)	0.41 (10.4)	0.35 (8.8)	1.24 (31.5)	0.94 (24.0)	1.12 (28.5)	5/8	11/16	0.64 (16.3)	3/8		3/8
DTN-6-2-*	3/8 (9.53)	0.28 (7.1)	0.19 (4.8)	0.37 (9.5)	1.20 (30.5)	0.91 (23.0)	0.81 (20.5)	11/16	5/8	0.67 (17.0)	1/8		1/8
DTN-6-4-*	3/8 (9.53)	0.28 (7.1)	0.28 (7.1)	0.37 (9.5)	1.20 (30.5)	0.91 (23.0)	1.00 (25.5)	11/16	5/8	0.67 (17.0)	1/4		1/4
DTN-6-6-*	3/8 (9.53)	0.28 (7.1)	0.37 (9.4)	0.37 (9.5)	1.24 (31.5)	0.94 (24.0)	1.12 (28.5)	11/16	11/16	0.67 (17.0)	3/8		3/8
DTN-6-8-*	3/8 (9.53)	0.28 (7.1)	0.50 (12.7)	0.37 (9.5)	1.33 (33.7)	1.03 (26.2)	1.26 (32.0)	11/16	13/16	0.67 (17.0)	1/2		1/2
DTN-8-4-*	1/2 (12.7)	0.41 (10.4)	0.28 (7.1)	0.50 (12.7)	1.39 (35.3)	0.98 (25.0)	1.08 (27.5)	7/8	13/16	0.91 (23.0)	1/4		1/4
DTN-8-6-*	1/2 (12.7)	0.41 (10.4)	0.41 (10.4)	0.50 (12.7)	1.39 (35.3)	0.98 (25.0)	1.08 (27.5)	7/8	13/16	0.91 (23.0)	3/8		3/8
DTN-8-8-*	1/2 (12.7)	0.41 (10.4)	0.50 (12.7)	0.50 (12.7)	1.44 (36.5)	1.03 (26.2)	1.32 (33.5)	7/8	13/16	0.91 (23.0)	1/2		1/2
DTN-8-12-*	1/2 (12.7)	0.41 (10.4)	0.72 (18.3)	0.50 (12.7)	1.52 (38.5)	1.11 (28.2)	1.40 (35.5)	7/8	1-1/16	0.91 (23.0)	3/4		3/4
DTN-10-8-*	5/8 (15.88)	0.50 (12.7)	0.50 (12.7)	0.56 (14.3)	1.47 (37.3)	1.06 (27.0)	1.34 (34.0)	1	15/16	0.97 (24.6)	1/2		1/2
DTN-12-4-*	3/4 (19.05)	0.62 (15.8)	0.28 (7.1)	0.56 (14.3)	1.52 (38.5)	1.11 (28.2)	1.20 (30.5)	1-1/8	1-1/16	0.97 (24.6)	1/4		1/4
DTN-12-6-*	3/4 (19.05)	0.62 (15.8)	0.37 (9.4)	0.56 (14.3)	1.52 (38.5)	1.11 (28.2)	1.26 (32.0)	1-1/8	1-1/16	0.97 (24.6)	3/8		3/8
DTN-12-8-*	3/4 (19.05)	0.62 (15.8)	0.50 (12.7)	0.56 (14.3)	1.52 (38.5)	1.11 (28.2)	1.40 (35.5)	1-1/8	1-1/16	0.97 (24.6)	1/2		1/2
DTN-12-12-*	3/4 (19.05)	0.62 (15.8)	0.72 (18.3)	0.56 (14.3)	1.52 (38.5)	1.11 (28.2)	1.40 (35.5)	1-1/8	1-1/16	0.97 (24.6)	3/4		3/4
DTN-12-16-*	3/4 (19.05)	0.62 (15.8)	0.89 (22.5)	0.56 (14.3)	1.66 (42.1)	1.25 (31.8)	1.84 (46.7)	1-1/8	1-5/16	0.97 (24.6)	1		1
DTN-14-12-*	7/8 (22.23)	0.72 (18.3)	0.72 (18.3)	0.63 (15.9)	1.68 (42.7)	1.28 (32.5)	1.65 (42.0)	1-1/4	1-1/4	1.03 (26.1)	3/4		3/4
DTN-16-6-*	1 (25.4)	0.89 (22.5)	0.41 (10.4)	0.75 (19.1)	1.81 (45.9)	1.31 (33.3)	1.50 (38.0)	1-1/2	1-5/16	1.24 (31.6)	3/8		3/8
DTN-16-8-*	1 (25.4)	0.89 (22.5)	0.50 (12.7)	0.75 (19.1)	1.81 (45.9)	1.31 (33.3)	1.65 (42.0)	1-1/2	1-5/16	1.24 (31.6)	1/2		1/2
DTN-16-12-*	1 (25.4)	0.89 (22.5)	0.72 (18.3)	0.75 (19.1)	1.81 (45.9)	1.31 (33.3)	1.65 (42.0)	1-1/2	1-5/16	1.24 (31.6)	3/4		3/4
DTN-16-16-*	1 (25.4)	0.89 (22.5)	0.89 (22.5)	0.75 (19.1)	1.81 (45.9)	1.31 (33.3)	1.84 (46.7)	1-1/2	1-5/16	1.24 (31.6)	1		1

*Add suffix SS for 316 stainless steel or B for brass. ISO thread is available. Add R before thread size. Example, DTN-4-R4-SS

DTR
Reducing Union Tee (type 1)



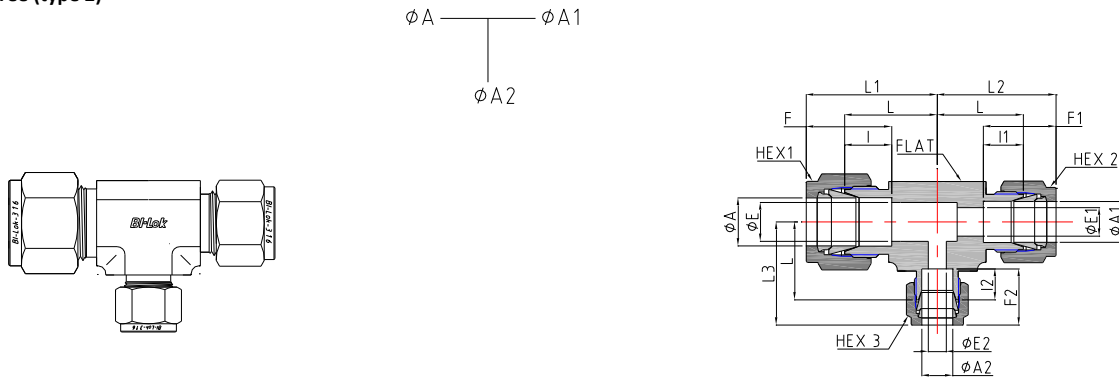
inch (mm)

Part No.	ΦA	ΦA1	ΦE	ΦE1	I	I1	F	F1	L	L1	L2	Hex 1	Hex 2	Flat
DTR-4-4-2-*	1/4 (6.35)	1/8 (3.18)	0.19 (4.8)	0.09 (2.3)	0.31 (7.9)	0.25 (6.4)	0.61 (15.4)	0.51 (13.0)	0.79 (20.0)	1.08 (27.5)	1.05 (26.7)	9/16	7/16	1/2
DTR-4-4-6-*	1/4 (6.35)	3/8 (9.53)	0.19 (4.8)	0.28 (7.1)	0.31 (7.9)	0.37 (9.5)	0.61 (15.4)	0.67 (17.0)	1.20 (30.5)	0.91 (23.0)	1.20 (30.5)	9/16	11/16	5/8
DTR-4-4-8-*	1/4 (6.35)	1/2 (12.7)	0.19 (4.8)	0.41 (10.4)	0.31 (7.9)	0.50 (12.7)	0.61 (15.4)	0.91 (23.0)	0.98 (25.0)	1.28 (32.5)	1.39 (35.3)	9/16	7/8	13/16
DTR-6-6-4-*	3/8 (9.53)	1/4 (6.35)	0.28 (7.1)	0.19 (4.8)	0.37 (9.5)	0.31 (7.9)	0.67 (17.0)	0.61 (15.4)	0.91 (23.0)	1.20 (30.5)	1.20 (30.5)	11/16	9/16	5/8
DTR-6-6-5-*	3/8 (9.53)	5/16 (7.94)	0.28 (7.1)	0.25 (6.4)	0.37 (9.5)	0.35 (8.8)	0.67 (17.0)	0.64 (16.3)	0.91 (23.0)	1.20 (30.5)	1.20 (30.5)	11/16	5/8	5/8
DTR-6-6-8-*	3/8 (9.53)	1/2 (12.7)	0.28 (7.1)	0.41 (10.4)	0.37 (9.5)	0.50 (12.7)	0.67 (17.0)	0.91 (23.0)	1.28 (32.5)	0.98 (25.0)	1.39 (35.3)	11/16	7/16	13/16
DTR-6-6-10-*	3/8 (9.53)	5/8 (15.88)	0.28 (7.1)	0.50 (12.7)	0.37 (9.5)	0.31 (7.9)	0.67 (17.0)	0.61 (15.4)	1.20 (30.5)	0.91 (23.0)	1.20 (30.5)	11/16	9/16	15/16
DTR-8-8-2-*	1/2 (12.7)	1/8 (3.18)	0.41 (10.4)	0.09 (2.3)	0.50 (12.7)	0.25 (6.4)	0.91 (23.0)	0.51 (13.0)	0.98 (25.0)	1.39 (35.3)	1.25 (31.7)	7/8	7/16	13/16
DTR-8-8-4-*	1/2 (12.7)	1/4 (6.35)	0.41 (10.4)	0.19 (4.8)	0.50 (12.7)	0.31 (7.9)	0.91 (23.0)	0.61 (15.4)	0.98 (25.0)	1.39 (35.3)	1.28 (32.5)	7/8	9/16	13/16
DTR-8-8-5-*	1/2 (12.7)	5/16 (7.94)	0.41 (10.4)	0.25 (6.4)	0.50 (12.7)	0.35 (8.8)	0.91 (23.0)	0.64 (16.3)	0.98 (25.0)	1.39 (35.3)	1.28 (32.5)	7/8	5/8	13/16
DTR-8-8-6-*	1/2 (12.7)	3/8 (9.53)	0.41 (10.4)	0.28 (7.1)	0.50 (12.7)	0.37 (9.5)	0.91 (23.0)	0.67 (17.0)	0.98 (25.0)	1.39 (35.3)	1.28 (32.5)	7/8	11/16	13/16
DTR-8-8-10-*	1/2 (12.7)	5/8 (15.88)	0.41 (10.4)	0.50 (12.7)	0.50 (12.7)	0.31 (7.9)	0.91 (23.0)	0.61 (15.4)	1.06 (27.0)	1.47 (37.3)	1.47 (37.3)	7/8	1	15/16
DTR-8-8-12-*	1/2 (12.7)	3/4 (19.05)	0.41 (10.4)	0.62 (15.8)	0.50 (12.7)	0.37 (9.5)	0.91 (23.0)	0.67 (17.0)	1.11 (28.2)	1.52 (38.5)	1.52 (38.5)	7/8	1-1/8	1-1/16
DTR-10-10-6-*	5/8 (15.88)	3/8 (9.53)	0.50 (12.7)	0.28 (7.1)	0.56 (14.3)	0.37 (9.5)	0.97 (24.6)	0.67 (17.0)	1.06 (27.0)	1.47 (37.3)	1.36 (34.5)	1	11/16	15/16
DTR-10-10-8-*	5/8 (15.88)	1/2 (12.7)	0.50 (12.7)	0.41 (10.4)	0.56 (14.3)	0.50 (12.7)	0.97 (24.6)	0.91 (23.0)	1.06 (27.0)	1.47 (37.3)	1.47 (37.3)	1	7/8	15/16
DTR-10-10-12-*	5/8 (15.88)	3/4 (19.05)	0.50 (12.7)	0.72 (18.3)	0.56 (14.3)	0.56 (14.3)	0.97 (24.6)	0.97 (24.6)	1.11 (28.2)	1.52 (38.5)	1.52 (38.5)	1	1-1/8	1-1/16

DTR-10-10-16-*	5/8 (15.88)	1 (25.4)	0.50 (12.7)	0.89 (22.5)	0.56 (14.3)	0.50 (12.7)	0.97 (24.6)	1.24 (31.6)	1.31 (33.3)	1.72 (43.6)	1.81 (45.9)	1	1-1/2	1-5/16
DTR-12-12-4-*	3/4 (19.05)	1/4 (6.35)	0.62 (15.8)	0.19 (4.8)	0.56 (14.3)	0.31 (7.9)	0.97 (24.6)	0.61 (15.4)	1.11 (28.2)	1.52 (38.5)	1.41 (35.7)	1-1/8	9/16	1-1/16
DTR-12-12-6-*	3/4 (19.05)	3/8 (9.53)	0.62 (15.8)	0.28 (7.1)	0.56 (14.3)	0.37 (9.5)	0.97 (24.6)	0.67 (17.0)	1.11 (28.2)	1.52 (38.5)	1.41 (35.7)	1-1/8	11/16	1-1/16
DTR-12-12-8-*	3/4 (19.05)	1/2 (12.7)	0.62 (15.8)	0.41 (10.4)	0.56 (14.3)	0.50 (12.7)	0.97 (24.6)	0.91 (23.0)	1.11 (28.2)	1.52 (38.5)	1.52 (38.5)	1-1/8	7/8	1-1/16
DTR-12-12-10-*	3/4 (19.05)	5/8 (15.88)	0.62 (15.8)	0.50 (12.7)	0.56 (14.3)	0.56 (14.3)	0.97 (24.6)	0.97 (24.6)	1.11 (28.2)	1.52 (38.5)	1.52 (38.5)	1-1/8	1	1-1/16
DTR-12-12-16-*	3/4 (19.05)	1 (25.4)	0.62 (15.8)	0.89 (22.5)	0.56 (14.3)	0.75 (19.1)	0.97 (24.6)	1.24 (31.6)	1.31 (33.3)	1.72 (43.6)	1.81 (45.9)	1-1/8	1-1/2	1-5/16
DTR-14-14-6-*	7/8 (22.23)	3/8 (9.53)	0.72 (18.3)	0.28 (7.1)	0.63 (15.9)	0.37 (9.5)	1.03 (26.1)	0.67 (17.0)	1.28 (32.5)	1.68 (42.7)	1.57 (40.0)	1-1/4	11/16	1-1/4
DTR-14-14-8-*	7/8 (22.23)	1/2 (12.7)	0.72 (18.3)	0.41 (10.4)	0.63 (15.9)	0.50 (12.7)	1.03 (26.1)	0.91 (23.0)	1.28 (32.5)	1.68 (42.7)	1.69 (42.8)	1-1/4	7/8	1-1/4
DTR-14-14-10-*	7/8 (22.23)	5/8 (15.88)	0.72 (18.3)	0.50 (12.7)	0.63 (15.9)	0.56 (14.3)	1.03 (26.1)	0.97 (24.6)	1.28 (32.5)	1.68 (42.7)	1.69 (42.8)	1-1/4	1	1-1/4
DTR-14-14-12-*	7/8 (22.23)	3/4 (19.05)	0.72 (18.3)	0.50 (12.7)	0.63 (15.9)	0.56 (14.3)	1.03 (26.1)	0.97 (24.6)	1.28 (32.5)	1.68 (42.7)	1.69 (42.8)	1-1/4	1-1/8	1-1/4
DTR-14-14-16-*	7/8 (22.23)	1 (25.4)	0.72 (18.3)	0.89 (22.5)	0.63 (15.9)	0.75 (19.1)	1.03 (26.1)	1.24 (31.6)	1.31 (33.3)	1.71 (43.5)	1.81 (45.9)	1-1/4	1-1/2	1-5/16
DTR-16-16-4-*	1 (25.4)	1/4 (6.35)	0.89 (22.5)	0.19 (4.8)	0.75 (19.1)	0.31 (7.9)	1.24 (31.6)	0.61 (15.4)	1.31 (33.3)	1.81 (45.9)	1.61 (40.8)	1-1/2	9/16	1-5/16
DTR-16-16-6-*	1 (25.4)	3/8 (9.53)	0.89 (22.5)	0.28 (7.1)	0.75 (19.1)	0.37 (9.5)	1.24 (31.6)	0.67 (17.0)	1.31 (33.3)	1.81 (45.9)	1.61 (40.8)	1-1/2	11/16	1-5/16
DTR-16-16-8-*	1 (25.4)	1/2 (12.7)	0.89 (22.5)	0.41 (10.4)	0.75 (19.1)	0.50 (12.7)	1.24 (31.6)	0.91 (23.0)	1.31 (33.3)	1.81 (45.9)	1.72 (43.6)	1-1/2	7/8	1-5/16
DTR-16-16-10-*	1 (25.4)	5/8 (15.88)	0.89 (22.5)	0.50 (12.7)	0.75 (19.1)	0.56 (14.3)	1.24 (31.6)	0.97 (24.6)	1.31 (33.3)	1.81 (45.9)	1.72 (43.6)	1-1/2	1	1-5/16
DTR-16-16-12-*	1 (25.4)	3/4 (19.05)	0.89 (22.5)	0.62 (15.8)	0.75 (19.1)	0.56 (14.3)	1.24 (31.6)	0.97 (24.6)	1.31 (33.3)	1.81 (45.9)	1.72 (43.6)	1-1/2	1-1/8	1-5/16
DTR-16-16-14-*	1 (25.4)	7/8 (22.23)	0.89 (22.5)	0.72 (18.3)	0.75 (19.1)	0.63 (15.9)	1.24 (31.6)	1.03 (26.1)	1.31 (33.3)	1.81 (45.9)	1.71 (43.5)	1-1/2	1-1/4	1-5/16

*Add suffix SS for 316 stainless steel or B for brass.

DTR
Reducing Union Tee (type 2)

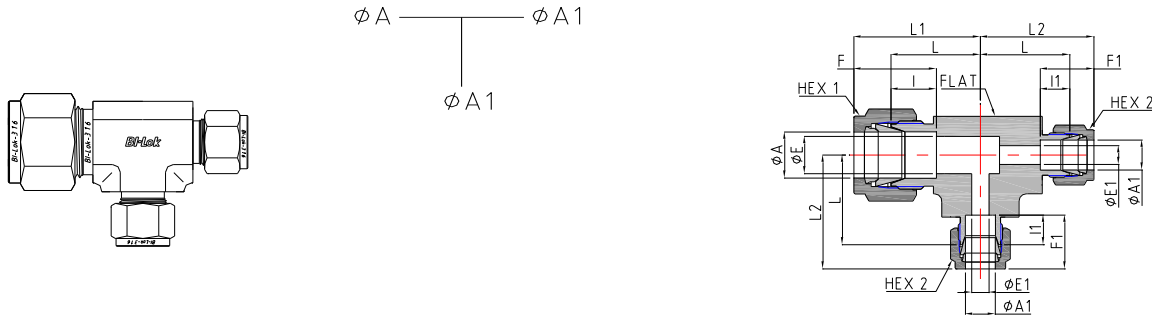


inch (mm)

Part No.	ϕA	$\phi A1$	$\phi A2$	ϕE	$\phi E1$	$\phi E2$	I	I1	I2	F	F1	F2	L	L1	L2	L3	Hex 1	Hex 2	Hex 3	Flat
DTR-8-4-6-*	1/2 (12.7)	1/4 (6.35)	3/8 (9.53)	0.41 (10.4)	0.19 (4.8)	0.28 (7.1)	0.50 (12.7)	0.31 (7.9)	0.37 (9.5)	0.91 (23.0)	0.61 (15.4)	0.67 (17.0)	0.98 (25.0)	1.39 (35.3)	1.28 (32.5)	1.28 (32.5)	7/8	9/16	11/16	13/16
DTR-10-4-6-*	5/8 (15.88)	1/4 (6.35)	3/8 (9.53)	0.50 (12.7)	0.19 (4.8)	0.28 (7.1)	0.56 (14.3)	0.31 (7.9)	0.37 (9.5)	0.97 (24.6)	0.61 (15.4)	0.67 (17.0)	1.06 (27.0)	1.47 (37.3)	1.36 (34.5)	1.36 (34.5)	1	9/16	11/16	15/16
DTR-10-6-4-*	5/8 (15.88)	3/8 (9.53)	1/4 (6.35)	0.50 (12.7)	0.28 (7.1)	0.19 (4.8)	0.56 (14.3)	0.37 (9.5)	0.31 (7.9)	0.97 (24.6)	0.67 (17.0)	0.61 (15.4)	1.06 (27.0)	1.47 (37.3)	1.36 (34.5)	1.36 (34.5)	1	11/16	9/16	15/16
DTR-10-8-6-*	5/8 (15.88)	1/2 (12.7)	3/8 (9.53)	0.50 (12.7)	0.41 (10.4)	0.28 (7.1)	0.56 (14.3)	0.50 (12.7)	0.37 (9.5)	0.97 (24.6)	0.91 (23.0)	0.67 (17.0)	1.06 (27.0)	1.47 (37.3)	1.47 (37.3)	1.36 (34.5)	1	7/8	11/16	15/16
DTR-12-8-6-*	3/4 (19.05)	1/2 (12.7)	3/8 (9.53)	0.62 (15.8)	0.41 (10.4)	0.28 (7.1)	0.56 (14.3)	0.50 (12.7)	0.37 (9.5)	0.97 (24.6)	0.91 (23.0)	0.67 (17.0)	1.11 (28.2)	1.52 (38.5)	1.52 (38.5)	1.41 (35.7)	1-1/8	7/8	11/16	1-1/16
DTR-12-6-8-*	3/4 (19.05)	3/8 (9.53)	1/2 (12.7)	0.62 (15.8)	0.28 (7.1)	0.41 (10.4)	0.56 (14.3)	0.37 (9.5)	0.50 (12.7)	0.97 (24.6)	0.67 (17.0)	0.91 (23.0)	1.11 (28.2)	1.52 (38.5)	1.41 (35.7)	1.52 (38.5)	1-1/8	11/16	7/8	1-1/16
DTR-12-8-10-*	3/4 (19.05)	1/2 (12.7)	5/8 (15.88)	0.62 (15.8)	0.41 (10.4)	0.50 (12.7)	0.56 (14.3)	0.50 (12.7)	0.56 (14.3)	0.97 (24.6)	0.91 (23.0)	0.97 (24.6)	1.11 (28.2)	1.52 (38.5)	1.52 (38.5)	1.52 (38.5)	1-1/8	7/8	1	1-1/16
DTR-12-10-6-*	3/4 (19.05)	5/8 (15.88)	3/8 (9.53)	0.62 (15.8)	0.50 (12.7)	0.28 (7.1)	0.56 (14.3)	0.56 (14.3)	0.37 (9.5)	0.97 (24.6)	0.97 (24.6)	0.67 (17.0)	1.11 (28.2)	1.52 (38.5)	1.52 (38.5)	1.41 (35.7)	1-1/8	1	11/16	1-1/16
DTR-12-10-8-*	3/4 (19.05)	5/8 (15.88)	1/2 (12.7)	0.62 (15.8)	0.50 (12.7)	0.41 (10.4)	0.56 (14.3)	0.56 (14.3)	0.50 (12.7)	0.97 (24.6)	0.97 (24.6)	0.91 (23.0)	1.11 (28.2)	1.52 (38.5)	1.52 (38.5)	1.52 (38.5)	1-1/8	1	7/8	1-1/16
DTR-16-12-4-*	1 (25.4)	3/4 (19.05)	1/4 (6.35)	0.89 (22.5)	0.62 (15.8)	0.19 (4.8)	0.75 (19.1)	0.56 (14.3)	0.31 (7.9)	1.24 (31.6)	0.97 (24.6)	0.61 (15.4)	1.31 (33.3)	1.81 (45.9)	1.72 (43.6)	1.61 (40.8)	1-1/2	1-1/8	9/16	1-5/16
DTR-16-12-6-*	1 (25.4)	3/4 (19.05)	3/8 (9.53)	0.89 (22.5)	0.62 (15.8)	0.28 (7.1)	0.75 (19.1)	0.56 (14.3)	0.37 (9.5)	1.24 (31.6)	0.97 (24.6)	0.67 (17.0)	1.31 (33.3)	1.81 (45.9)	1.72 (43.6)	1.61 (40.8)	1-1/2	1-1/8	11/16	1-5/16
DTR-16-12-8-*	1 (25.4)	3/4 (19.05)	1/2 (12.7)	0.89 (22.5)	0.62 (15.8)	0.41 (10.4)	0.75 (19.1)	0.56 (14.3)	0.50 (12.7)	1.24 (31.6)	0.97 (24.6)	0.91 (23.0)	1.31 (33.3)	1.81 (45.9)	1.72 (43.6)	1.72 (43.6)	1-1/2	1-1/8	7/8	1-5/16

*Add suffix SS for 316 stainless steel or B for brass.

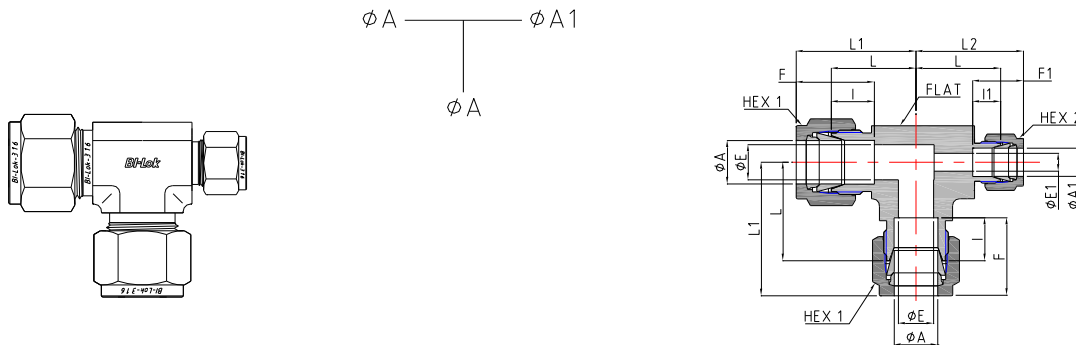
DTR
Reducing Union Tee (type 3)



inch (mm)														
Part No.	ϕA Tube OD	$\phi A1$ Tube OD	ϕE	$\phi E1$	I	I1	F	F1	L	L1	L2	Hex 1	Hex 2	Flat
DTR-4-2-2-*	1/4 (6.35)	1/8 (3.18)	0.19 (4.8)	0.09 (2.3)	0.31 (7.9)	0.25 (6.4)	0.61 (15.4)	0.51 (13.0)	0.79 (20.0)	1.08 (27.5)	1.05 (26.7)	9/16	7/16	1/2
DTR-6-4-4-*	3/8 (9.53)	1/4 (6.35)	0.28 (7.1)	0.19 (4.8)	0.37 (9.5)	0.31 (7.9)	0.67 (17.0)	0.61 (15.4)	0.91 (23.0)	1.20 (30.5)	1.20 (30.5)	11/16	9/16	5/8
DTR-8-4-4-*	1/2 (12.7)	1/4 (6.35)	0.41 (10.4)	0.19 (4.8)	0.50 (12.7)	0.31 (7.9)	0.91 (23.0)	0.61 (15.4)	0.98 (25.0)	1.39 (35.3)	1.28 (32.5)	7/8	9/16	13/16
DTR-8-6-6-*	1/2 (12.7)	3/8 (9.53)	0.41 (10.4)	0.28 (7.1)	0.50 (12.7)	0.37 (9.5)	0.91 (23.0)	0.67 (17.0)	0.98 (25.0)	1.39 (35.3)	1.28 (32.5)	7/8	11/16	13/16
DTR-10-6-6-*	5/8 (15.88)	3/8 (9.53)	0.50 (12.7)	0.28 (7.1)	0.56 (14.3)	0.37 (9.5)	0.97 (24.6)	0.67 (17.0)	1.06 (27.0)	1.47 (37.3)	1.36 (34.5)	1	11/16	15/16
DTR-10-8-8-*	5/8 (15.88)	1/2 (12.7)	0.50 (12.7)	0.41 (10.4)	0.56 (14.3)	0.50 (12.7)	0.97 (24.6)	0.91 (23.0)	1.06 (27.0)	1.47 (37.3)	1.47 (37.3)	1	7/8	15/16
DTR-12-4-4-*	3/4 (19.05)	1/4 (6.35)	0.62 (15.8)	0.19 (4.8)	0.56 (14.3)	0.31 (7.9)	0.97 (24.6)	0.61 (15.4)	1.11 (28.2)	1.52 (38.5)	1.41 (35.7)	1-1/8	9/16	1-1/16
DTR-12-6-6-*	3/4 (19.05)	3/8 (9.53)	0.62 (15.8)	0.28 (7.1)	0.56 (14.3)	0.37 (9.5)	0.97 (24.6)	0.67 (17.0)	1.11 (28.2)	1.52 (38.5)	1.41 (35.7)	1-1/8	11/16	1-1/16
DTR-12-8-8-*	3/4 (19.05)	1/2 (12.7)	0.62 (15.8)	0.41 (10.4)	0.56 (14.3)	0.50 (12.7)	0.97 (24.6)	0.91 (23.0)	1.11 (28.2)	1.52 (38.5)	1.52 (38.5)	1-1/8	7/8	1-1/16
DTR-12-10-10-*	3/4 (19.05)	5/8 (15.88)	0.62 (15.8)	0.50 (12.7)	0.56 (14.3)	0.56 (14.3)	0.97 (24.6)	0.97 (24.6)	1.11 (28.2)	1.52 (38.5)	1.52 (38.5)	1-1/8	1	1-1/16
DTR-16-6-6-*	1 (25.4)	3/8 (9.53)	0.89 (22.5)	0.28 (7.1)	0.75 (19.1)	0.37 (9.5)	1.24 (31.6)	0.67 (17.0)	1.31 (33.3)	1.81 (45.9)	1.61 (40.8)	1-1/2	11/16	1-5/16
DTR-16-8-8-*	1 (25.4)	1/2 (12.7)	0.89 (22.5)	0.41 (10.4)	0.75 (19.1)	0.50 (12.7)	1.24 (31.6)	0.91 (23.0)	1.31 (33.3)	1.81 (45.9)	1.72 (43.6)	1-1/2	7/8	1-5/16
DTR-16-10-10-*	1 (25.4)	5/8 (15.88)	0.89 (22.5)	0.50 (12.7)	0.75 (19.1)	0.56 (14.3)	1.24 (31.6)	0.97 (24.6)	1.31 (33.3)	1.81 (45.9)	1.72 (43.6)	1-1/2	1	1-5/16
DTR-16-12-12-*	1 (25.4)	3/4 (19.05)	0.89 (22.5)	0.62 (15.8)	0.75 (19.1)	0.56 (14.3)	1.24 (31.6)	0.97 (24.6)	1.31 (33.3)	1.81 (45.9)	1.72 (43.6)	1-1/2	1-1/8	1-5/16

*Add suffix SS for 316 stainless steel or B for brass.

DTR
Reducing Union Tee (type 4)

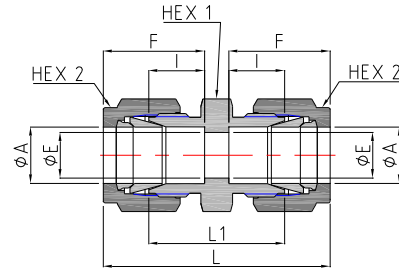


inch (mm)														
Part No.	ϕA Tube OD	$\phi A1$ Tube OD	ϕE	$\phi E1$	I	I1	F	F1	L	L1	L2	Hex 1	Hex 2	Flat
DTR-4-2-4-*	1/4 (6.35)	1/8 (3.18)	0.19 (4.8)	0.09 (2.3)	0.31 (7.9)	0.25 (6.4)	0.61 (15.4)	0.51 (13.0)	0.79 (20.0)	1.08 (27.5)	1.05 (26.7)	9/16	7/16	1/2
DTR-6-2-6-*	3/8 (9.53)	1/8 (3.18)	0.28 (7.1)	0.09 (2.3)	0.37 (9.5)	0.25 (6.4)	0.67 (17.0)	0.51 (13.0)	0.91 (23.0)	1.20 (30.5)	1.17 (29.7)	11/16	7/16	5/8
DTR-6-4-6-*	3/8 (9.53)	1/4 (6.35)	0.28 (7.1)	0.19 (4.8)	0.37 (9.5)	0.31 (7.9)	0.67 (17.0)	0.61 (15.4)	0.91 (23.0)	1.20 (30.5)	1.20 (30.5)	11/16	9/16	5/8
DTR-8-4-8-*	1/2 (12.7)	1/4 (6.35)	0.41 (10.4)	0.19 (4.8)	0.50 (12.7)	0.31 (7.9)	0.91 (23.0)	0.61 (15.4)	0.98 (25.0)	1.39 (35.3)	1.28 (32.5)	7/8	9/16	13/16
DTR-8-6-8-*	1/2 (12.7)	3/8 (9.53)	0.41 (10.4)	0.28 (7.1)	0.50 (12.7)	0.37 (9.5)	0.91 (23.0)	0.67 (17.0)	0.98 (25.0)	1.39 (35.3)	1.28 (32.5)	7/8	11/16	13/16
DTR-10-6-10-*	5/8 (15.88)	3/8 (9.53)	0.50 (12.7)	0.28 (7.1)	0.56 (14.3)	0.37 (9.5)	0.97 (24.6)	0.67 (17.0)	1.06 (27.0)	1.47 (37.3)	1.36 (34.5)	1	11/16	15/16
DTR-10-8-10-*	5/8 (15.88)	1/2 (12.7)	0.50 (12.7)	0.41 (10.4)	0.56 (14.3)	0.50 (12.7)	0.97 (24.6)	0.91 (23.0)	1.06 (27.0)	1.47 (37.3)	1.47 (37.3)	1	7/8	15/16
DTR-12-6-12-*	3/4 (19.05)	3/8 (9.53)	0.62 (15.8)	0.28 (7.1)	0.56 (14.3)	0.37 (9.5)	0.97 (24.6)	0.67 (17.0)	1.11 (28.2)	1.52 (38.5)	1.41 (35.7)	1-1/8	11/16	1-1/16
DTR-12-8-12-*	3/4 (19.05)	1/2 (12.7)	0.62 (15.8)	0.41 (10.4)	0.56 (14.3)	0.50 (12.7)	0.97 (24.6)	0.91 (23.0)	1.11 (28.2)	1.52 (38.5)	1.52 (38.5)	1-1/8	7/8	1-1/16
DTR-12-10-12-*	3/4 (19.05)	5/8 (15.88)	0.62 (15.8)	0.50 (12.7)	0.56 (14.3)	0.56 (14.3)	0.97 (24.6)	0.97 (24.6)	1.11 (28.2)	1.52 (38.5)	1.52 (38.5)	1-1/8	1	1-1/16
DTR-16-8-16-*	1 (25.4)	1/2 (12.7)	0.89 (22.5)	0.41 (10.4)	0.75 (19.1)	0.50 (12.7)	1.24 (31.6)	0.91 (23.0)	1.31 (33.3)	1.81 (45.9)	1.31 (33.3)	1-1/2	7/8	1-5/16
DTR-16-10-16-*	1 (25.4)	5/8 (15.88)	0.89 (22.5)	0.50 (12.7)	0.75 (19.1)	0.56 (14.3)	1.24 (31.6)	0.97 (24.6)	1.31 (33.3)	1.81 (45.9)	1.31 (33.3)	1-1/2	1	1-5/16

DTR-16-12-16-*	1 (25.4)	3/4 (19.05)	0.89 (22.5)	0.62 (15.8)	0.75 (19.1)	0.56 (14.3)	1.24 (31.6)	0.97 (24.6)	1.31 (33.3)	1.81 (45.9)	1.31 (33.3)	1-1/2	1-1/8	1-5/16
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*Add suffix SS for 316 stainless steel or B for brass.

DUA
Union

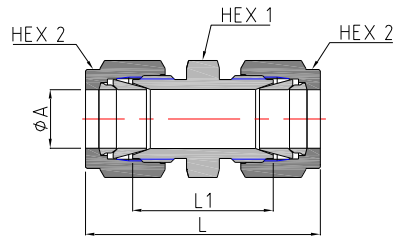


inch (mm)

Part No.	ϕA Tube OD	ϕE	I	F	L	L1	Hex 1	Hex 2
DUA-1-*	1/16 (1.59)	0.05 (1.3)	0.19 (4.9)	0.35 (8.9)	1.00 (25.5)	0.69 (17.5)	5/16	5/16
DUA-2-*	1/8 (3.18)	0.09 (2.3)	0.25 (6.4)	0.51 (13.0)	1.41 (35.8)	0.88 (22.4)	7/16	7/16
DUA-3-*	3/16 (4.76)	0.12 (3.0)	0.28 (7.2)	0.54 (13.8)	1.47 (37.4)	0.94 (24.0)	7/16	1/2
DUA-4-*	1/4 (6.35)	0.19 (4.8)	0.31 (7.9)	0.61 (15.4)	1.62 (41.1)	1.03 (26.1)	1/2	9/16
DUA-5-*	5/16 (7.94)	0.25 (6.4)	0.35 (8.8)	0.64 (16.3)	1.69 (43.0)	1.10 (28.0)	9/16	5/8
DUA-6-*	3/8 (9.53)	0.28 (7.1)	0.37 (9.5)	0.67 (17.0)	1.78 (45.2)	1.19 (30.2)	5/8	11/16
DUA-8-*	1/2 (12.7)	0.41 (10.4)	0.50 (12.7)	0.91 (23.0)	2.03 (51.6)	1.22 (31.0)	13/16	7/8
DUA-10-*	5/8 (15.88)	0.50 (12.7)	0.56 (14.3)	0.97 (24.6)	2.06 (52.4)	1.25 (31.8)	15/16	1
DUA-12-*	3/4 (19.05)	0.62 (15.8)	0.56 (14.3)	0.97 (24.6)	2.12 (53.9)	1.31 (33.3)	1-1/16	1-1/8
DUA-14-*	7/8 (22.23)	0.72 (18.3)	0.63 (15.9)	1.03 (26.1)	2.18 (55.4)	1.38 (35.0)	1-3/16	1-1/4
DUA-16-*	1 (25.4)	0.88 (22.4)	0.75 (19.1)	1.24 (31.6)	2.59 (65.7)	1.59 (40.5)	1-3/8	1-1/2

*Add suffix SS for 316 stainless steel or B for brass.

DUAZ
Thermocouple (bored through) Union

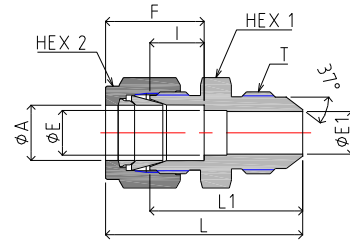


inch (mm)

Part No.	ϕA Tube OD	L	L1	Hex 1	Hex 2
DUAZ-1-*	1/16 (1.59)	1.00 (25.5)	0.69 (17.5)	5/16	5/16
DUAZ-2-*	1/8 (3.18)	1.41 (35.8)	0.88 (22.4)	7/16	7/16
DUAZ-3-*	3/16 (4.76)	1.47 (37.4)	0.94 (24.0)	7/16	1/2
DUAZ-4-*	1/4 (6.35)	1.62 (41.1)	1.03 (26.1)	1/2	9/16
DUAZ-5-*	5/16 (7.94)	1.69 (43.0)	1.10 (28.0)	9/16	5/8
DUAZ-6-*	3/8 (9.53)	1.78 (45.2)	1.19 (30.2)	5/8	11/16
DUAZ-8-*	1/2 (12.7)	2.03 (51.6)	1.22 (31.0)	13/16	7/8
DUAZ-10-*	5/8 (15.88)	2.06 (52.4)	1.25 (31.8)	15/16	1
DUAZ-12-*	3/4 (19.05)	2.12 (53.9)	1.31 (33.3)	1-1/16	1-1/8
DUAZ-14-*	7/8 (22.23)	2.18 (55.4)	1.38 (35.0)	1-3/16	1-1/4
DUAZ-16-*	1 (25.4)	2.59 (65.7)	1.59 (40.5)	1-3/8	1-1/2

*Add suffix SS for 316 stainless steel or B for brass.

DUC
AN 37° Flare Union

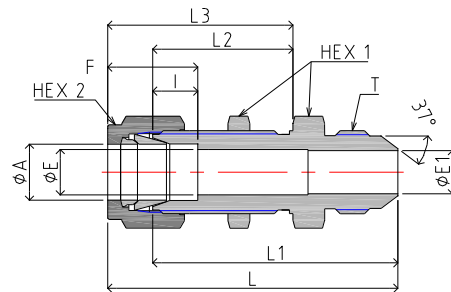
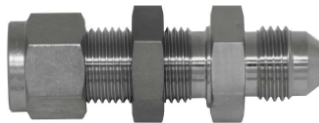


inch (mm)

Part No.	ØA Tube OD	AN	ØE	ØE1	I	F	L	L1	Hex 1	Hex 2	T (UNF)
DUC-1-2-*	1/16 (1.59)	1/8	0.05 (1.3)	0.05 (1.3)	0.19 (4.9)	0.35 (8.9)	1.08 (27.4)	0.92 (23.4)	7/16	5/16	5/16-24
DUC-1-4-*	1/16 (1.59)	1/4	0.05 (1.3)	0.17 (4.3)	0.19 (4.9)	0.35 (8.9)	1.22 (31.0)	1.06 (27.0)	1/2	5/16	7/16-20
DUC-2-2-*	1/8 (3.18)	1/8	0.09 (2.3)	0.06 (1.5)	0.25 (6.4)	0.51 (13.0)	1.24 (31.6)	0.98 (24.9)	7/16	7/16	5/16-24
DUC-2-3-*	1/8 (3.18)	3/16	0.09 (2.3)	0.12 (3.1)	0.25 (6.4)	0.51 (13.0)	1.28 (32.6)	1.02 (25.9)	7/16	7/16	3/8-24
DUC-2-4-*	1/8 (3.18)	1/4	0.09 (2.3)	0.17 (4.3)	0.25 (6.4)	0.51 (13.0)	1.38 (35.1)	1.12 (28.4)	1/2	7/16	7/16-20
DUC-3-2-*	3/16 (4.76)	3/16	0.12 (3.0)	0.06 (1.5)	0.28 (7.2)	0.54 (13.8)	1.29 (32.7)	1.02 (26.0)	7/16	1/2	5/16-24
DUC-3-3-*	3/16 (4.76)	3/16	0.12 (3.0)	0.12 (3.1)	0.28 (7.2)	0.54 (13.8)	1.33 (33.7)	1.06 (27.0)	7/16	1/2	3/8-24
DUC-4-2-*	1/4 (6.35)	1/8	0.19 (4.8)	0.06 (1.5)	0.31 (7.9)	0.61 (15.4)	1.38 (35.0)	1.08 (27.5)	1/2	9/16	5/16-24
DUC-4-4-*	1/4 (6.35)	1/4	0.19 (4.8)	0.17 (4.3)	0.31 (7.9)	0.61 (15.4)	1.48 (37.7)	1.19 (30.2)	1/2	9/16	7/16-20
DUC-4-6-*	1/4 (6.35)	3/8	0.19 (4.8)	0.28 (7.1)	0.31 (7.9)	0.61 (15.4)	1.50 (38.0)	1.20 (30.5)	5/8	9/16	9/16-18
DUC-5-5-*	5/16 (7.94)	5/16	0.24 (6.0)	0.24 (6.0)	0.35 (8.8)	0.64 (16.3)	1.53 (38.8)	1.23 (31.3)	9/16	5/8	1/2-20
DUC-6-4-*	3/8 (9.53)	1/4	0.28 (7.1)	0.17 (4.3)	0.37 (9.5)	0.67 (17.0)	1.57 (39.8)	1.27 (32.3)	5/8	11/16	7/16-20
DUC-6-5-*	3/8 (9.53)	5/16	0.28 (7.1)	0.24 (6.0)	0.37 (9.5)	0.67 (17.0)	1.57 (39.8)	1.27 (32.3)	5/8	11/16	1/2-20
DUC-6-6-*	3/8 (9.53)	3/8	0.28 (7.1)	0.28 (7.1)	0.37 (9.5)	0.67 (17.0)	1.57 (39.8)	1.27 (32.3)	5/8	11/16	9/16-18
DUC-8-4-*	1/2 (12.7)	1/4	0.41 (10.4)	0.17 (4.3)	0.50 (12.7)	0.91 (23.0)	1.70 (43.3)	1.30 (33.0)	13/16	7/8	7/16-20
DUC-8-6-*	1/2 (12.7)	3/8	0.41 (10.4)	0.28 (7.1)	0.50 (12.7)	0.91 (23.0)	1.70 (43.3)	1.30 (33.0)	13/16	7/8	9/16-18
DUC-8-8-*	1/2 (12.7)	1/2	0.41 (10.4)	0.39 (9.9)	0.50 (12.7)	0.91 (23.0)	1.81 (45.9)	1.40 (35.6)	13/16	7/8	3/4-16
DUC-10-8-*	5/8 (15.88)	1/2	0.50 (12.7)	0.39 (9.9)	0.56 (14.3)	0.97 (24.6)	1.84 (46.8)	1.44 (36.5)	15/16	1	3/4-16
DUC-10-10-*	5/8 (15.88)	5/8	0.50 (12.7)	0.48 (12.3)	0.56 (14.3)	0.97 (24.6)	1.95 (49.5)	1.54 (39.2)	15/16	1	7/8-14
DUC-12-8-*	3/4 (19.05)	1/2	0.62 (15.8)	0.39 (9.9)	0.56 (14.3)	0.97 (24.6)	1.94 (49.3)	1.54 (39.0)	1-1/8	1-1/8	3/4-16
DUC-12-12-*	3/4 (19.05)	3/4	0.62 (15.8)	0.62 (15.8)	0.56 (14.3)	0.97 (24.6)	2.15 (54.5)	1.74 (44.2)	1-1/8	1-1/8	1-1/16-12
DUC-12-16-*	3/4 (19.05)	1	0.62 (15.8)	0.62 (15.8)	0.56 (14.3)	0.97 (24.6)	2.22 (56.3)	1.81 (46.0)	1-3/8	1-1/8	1-5/16-12
DUC-16-12-*	1 (25.4)	3/4	0.89 (22.5)	0.61 (15.5)	0.75 (19.1)	1.24 (31.6)	2.39 (60.7)	1.89 (48.1)	1-3/8	1-1/2	1-1/16-12
DUC-16-16-*	1 (25.4)	1	0.89 (22.5)	0.85 (21.5)	0.75 (19.1)	1.24 (31.6)	2.44 (61.9)	1.94 (49.3)	1-3/8	1-1/2	1-5/16-12

*Add suffix SS for 316 stainless steel or B for brass.

DUE
Bulkhead AN 37° Flare Union



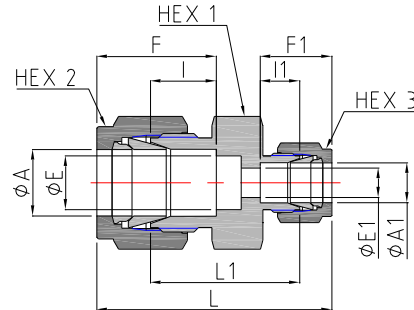
Inch (mm)

Part No.	ØA Tube OD	AN	ØE	ØE1	I	F	L	L1	L2	L3	Hex 1	Hex 2	T (UNF)	Panel	
														Hole	Thickness
DUE-2-2-*	1/8 (3.18)	1/8	0.09 (2.3)	0.06 (1.5)	0.25 (6.4)	0.51 (13.0)	1.88 (47.7)	1.61 (41.0)	0.97 (24.6)	1.23 (31.3)	1/2	7/16	5/16-24	0.33 (8.3)	0.50 (12.7)
DUE-2-3-*	1/8 (3.18)	3/16	0.09 (2.3)	0.12 (3.1)	0.25 (6.4)	0.51 (13.0)	1.92 (48.7)	1.65 (42.0)	0.97 (24.6)	1.23 (31.3)	1/2	7/16	7/16-20	0.33 (8.3)	0.50 (12.7)
DUE-3-2-*	3/16 (4.76)	1/8	0.12 (3.0)	0.06 (1.5)	0.28 (7.2)	0.54 (13.8)	1.92 (48.7)	1.65 (42.0)	1.00 (25.5)	1.27 (32.2)	9/16	1/2	5/16-24	0.39 (9.9)	0.50 (12.7)

DUE-3-3-*	3/16 (4.76)	3/16	0.12 (3.0)	0.12 (3.1)	0.28 (7.2)	0.54 (13.8)	1.96 (49.7)	1.69 (43.0)	1.00 (25.5)	1.27 (32.2)	9/16	1/2	3/8-24	0.39 (9.9)	0.50 (12.7)
DUE-4-4-*	1/4 (6.35)	1/4	0.19 (4.8)	0.17 (4.3)	0.31 (7.9)	0.61 (15.4)	2.13 (54.0)	1.83 (46.5)	1.02 (26.0)	1.32 (33.5)	5/8	9/16	7/16-20	10.06 (1.5)	0.40 (10.2)
DUE-6-4-*	3/8 (9.53)	1/4	0.28 (7.1)	0.17 (4.3)	0.37 (9.5)	0.67 (17.0)	2.26 (57.3)	1.96 (49.9)	1.46 (37.0)	1.16 (29.5)	3/4	11/16	7/16-20	0.58 (14.7)	0.44 (11.2)
DUE-6-6-*	3/8 (9.53)	3/8	0.28 (7.1)	0.28 (7.1)	0.37 (9.5)	0.67 (17.0)	2.26 (57.3)	1.96 (49.8)	1.16 (29.5)	1.46 (37.0)	3/4	11/16	9/16-18	0.58 (14.7)	0.44 (11.2)
DUE-8-6-*	1/2 (12.7)	3/8	0.41 (10.4)	0.28 (7.1)	0.50 (12.7)	0.91 (23.0)	2.49 (63.3)	2.09 (53.0)	1.26 (32.0)	1.67 (42.3)	15/16	11/16	9/16-18	0.76 (19.4)	0.50 (12.7)
DUE-8-8-*	1/2 (12.7)	1/2	0.41 (10.4)	0.39 (9.9)	0.50 (12.7)	0.91 (23.0)	2.60 (66.0)	2.19 (55.7)	1.26 (32.0)	1.67 (42.3)	15/16	7/8	3/4-16	0.76 (19.4)	0.50 (12.7)
DUE-12-12-*	3/4 (19.05)	3/4	0.62 (15.8)	0.62 (15.8)	0.56 (14.3)	0.97 (24.6)	3.11 (79.1)	2.71 (68.8)	1.47 (37.3)	1.87 (47.6)	1-3/16	1-1/8	1-1/16-12	1.02 (25.8)	0.66 (16.8)
DUE-16-16-*	1 (25.4)	1	0.89 (22.5)	0.85 (21.5)	0.75 (19.1)	1.24 (31.6)	3.65 (92.8)	3.16 (80.2)	1.78 (45.2)	2.28 (57.8)	1-5/8	1-1/12	1-5/16-12	1.33 (33.7)	0.75 (19.1)

*Add suffix SS for 316 stainless steel or B for brass.

DUR
Reducing Union

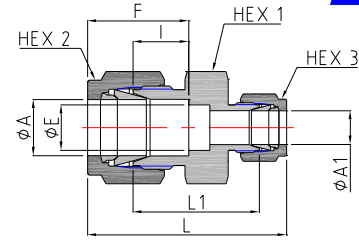


Inch (mm)

Part No.	ØA Tube OD	ØA1 Tube OD	ØE	ØE1	I	I1	F	F1	L	L1	Hex 1	Hex 2	Hex 3
DUR-2-1-*	1/8 (3.18)	1/16 (1.59)	0.09 (2.3)	0.05 (1.3)	0.25 (6.4)	0.19 (4.9)	0.51 (13.0)	0.35 (8.9)	1.23 (31.3)	0.81 (20.6)	7/16	7/16	5/16
DUR-3-1-*	3/16 (4.76)	1/16 (1.59)	0.12 (3.0)	0.05 (1.3)	0.28 (7.2)	0.19 (4.9)	0.54 (13.8)	0.35 (8.9)	1.27 (32.3)	0.85 (21.6)	7/16	1/2	5/16
DUR-3-2-*	3/16 (4.76)	1/8 (3.18)	0.12 (3.0)	0.09 (2.3)	0.28 (7.2)	0.25 (6.4)	0.54 (13.8)	0.51 (13.0)	1.45 (36.8)	0.92 (23.4)	7/16	1/2	7/16
DUR-4-1-*	1/4 (6.35)	1/16 (1.59)	0.19 (4.8)	0.05 (1.3)	0.31 (7.9)	0.19 (4.9)	0.61 (15.4)	0.35 (8.9)	1.36 (34.6)	0.91 (23.1)	1/2	9/16	5/16
DUR-4-2-*	1/4 (6.35)	1/8 (3.18)	0.19 (4.8)	0.09 (2.3)	0.31 (7.9)	0.25 (6.4)	0.61 (15.4)	0.51 (13.0)	1.53 (38.8)	0.97 (24.6)	1/2	9/16	7/16
DUR-4-3-*	1/4 (6.35)	3/16 (4.76)	0.19 (4.8)	0.12 (3.0)	0.31 (7.9)	0.28 (7.2)	0.61 (15.4)	0.54 (13.8)	1.56 (39.6)	1.00 (25.4)	1/2	9/16	1/2
DUR-5-2-*	5/16 (7.94)	1/8 (3.18)	0.25 (6.4)	0.09 (2.3)	0.35 (8.8)	0.25 (6.4)	0.64 (16.3)	0.51 (13.0)	1.56 (39.6)	1.00 (25.4)	9/16	5/8	7/16
DUR-5-4-*	5/16 (7.94)	1/4 (6.35)	0.25 (6.4)	0.19 (4.8)	0.35 (8.8)	0.31 (7.9)	0.64 (16.3)	0.61 (15.4)	1.67 (42.4)	1.08 (27.4)	9/16	5/8	9/16
DUR-6-1-*	3/8 (9.53)	1/16 (1.59)	0.28 (7.1)	0.05 (1.3)	0.37 (9.5)	0.19 (4.9)	0.67 (17.0)	0.35 (8.9)	1.45 (36.9)	1.00 (25.4)	5/8	11/16	5/16
DUR-6-2-*	3/8 (9.53)	1/8 (3.18)	0.28 (7.1)	0.09 (2.3)	0.37 (9.5)	0.25 (6.4)	0.67 (17.0)	0.51 (13.0)	1.62 (41.2)	1.06 (27.0)	5/8	11/16	7/16
DUR-6-4-*	3/8 (9.53)	1/4 (6.35)	0.28 (7.1)	0.19 (4.8)	0.37 (9.5)	0.31 (7.9)	0.67 (17.0)	0.61 (15.4)	1.71 (43.4)	1.12 (28.4)	5/8	11/16	9/16
DUR-6-5-*	3/8 (9.53)	5/16 (7.94)	0.28 (7.1)	0.25 (6.4)	0.37 (9.5)	0.35 (8.8)	0.67 (17.0)	0.64 (16.3)	1.75 (44.5)	1.16 (29.5)	5/8	11/16	5/8
DUR-8-2-*	1/2 (12.7)	1/8 (3.18)	0.41 (10.4)	0.09 (2.3)	0.50 (12.7)	0.25 (6.4)	0.91 (23.0)	0.51 (13.0)	1.81 (46.0)	1.14 (29.0)	13/16	7/8	7/16
DUR-8-4-*	1/2 (12.7)	1/4 (6.35)	0.41 (10.4)	0.19 (4.8)	0.50 (12.7)	0.31 (7.9)	0.91 (23.0)	0.61 (15.4)	1.86 (47.3)	1.16 (29.5)	13/16	7/8	9/16
DUR-8-6-*	1/2 (12.7)	3/8 (9.53)	0.41 (10.4)	0.28 (7.1)	0.50 (12.7)	0.37 (9.5)	0.91 (23.0)	0.67 (17.0)	1.92 (48.8)	1.22 (31.0)	13/16	7/8	11/16
DUR-10-4-*	5/8 (15.88)	1/4 (6.35)	0.50 (12.7)	0.19 (4.8)	0.56 (14.3)	0.31 (7.9)	0.97 (24.6)	0.61 (15.4)	1.89 (48.1)	1.19 (30.3)	15/16	1	9/16
DUR-10-6-*	5/8 (15.88)	3/8 (9.53)	0.50 (12.7)	0.28 (7.1)	0.56 (14.3)	0.37 (9.5)	0.97 (24.6)	0.67 (17.0)	1.95 (49.6)	1.25 (31.8)	15/16	1	11/16
DUR-10-8-*	5/8 (15.88)	1/2 (12.7)	0.50 (12.7)	0.41 (10.4)	0.56 (14.3)	0.50 (12.7)	0.97 (24.6)	0.91 (23.0)	2.06 (52.4)	1.25 (31.8)	15/16	1	7/8
DUR-12-4-*	3/4 (19.05)	1/4 (6.35)	0.62 (15.8)	0.19 (4.8)	0.56 (14.3)	0.31 (7.9)	0.97 (24.6)	0.61 (15.4)	1.95 (49.5)	1.25 (31.7)	1-1/16	1-1/8	9/16
DUR-12-6-*	3/4 (19.05)	3/8 (9.53)	0.62 (15.8)	0.28 (7.1)	0.56 (14.3)	0.37 (9.5)	0.97 (24.6)	0.67 (17.0)	2.01 (51.1)	1.31 (33.3)	1-1/16	1-1/8	11/16
DUR-12-8-*	3/4 (19.05)	1/2 (12.7)	0.62 (15.8)	0.41 (10.4)	0.56 (14.3)	0.50 (12.7)	0.97 (24.6)	0.91 (23.0)	2.12 (53.9)	1.31 (33.3)	1-1/16	1-1/8	7/8
DUR-12-10-*	3/4 (19.05)	5/8 (15.88)	0.62 (15.8)	0.50 (12.7)	0.56 (14.3)	0.56 (14.3)	0.97 (24.6)	0.97 (24.6)	2.12 (53.9)	1.31 (33.3)	1-1/16	1-1/8	1
DUR-14-6-*	7/8 (22.23)	3/8 (9.53)	0.72 (18.3)	0.28 (7.1)	0.63 (15.9)	0.37 (9.5)	1.03 (26.1)	0.67 (17.0)	2.07 (52.7)	1.38 (35.0)	1-3/16	1-1/4	11/16
DUR-14-12-*	7/8 (22.23)	3/4 (19.05)	0.72 (18.3)	0.62 (15.8)	0.63 (15.9)	0.56 (14.3)	1.03 (26.1)	0.97 (24.6)	2.07 (52.7)	1.38 (35.0)	1-3/16	1-1/4	1-1/8
DUR-16-6-*	1 (25.4)	3/8 (9.53)	0.89 (22.5)	0.28 (7.1)	0.75 (19.1)	0.37 (9.5)	1.24 (31.6)	0.67 (17.0)	2.33 (59.1)	1.54 (39.0)	1-3/8	1-1/2	11/16
DUR-16-8-*	1 (25.4)	1/2 (12.7)	0.89 (22.5)	0.41 (10.4)	0.75 (19.1)	0.50 (12.7)	1.24 (31.6)	0.91 (23.0)	2.44 (62.1)	1.54 (39.2)	1-3/8	1-1/2	7/8
DUR-16-10-*	1 (25.4)	5/8 (15.88)	0.89 (22.5)	0.50 (12.7)	0.75 (19.1)	0.56 (14.3)	1.24 (31.6)	0.97 (24.6)	2.44 (62.1)	1.54 (39.2)	1-3/8	1-1/2	1
DUR-16-12-*	1 (25.4)	3/4 (19.05)	0.89 (22.5)	0.62 (15.8)	0.75 (19.1)	0.56 (14.3)	1.24 (31.6)	0.97 (24.6)	2.40 (61.0)	1.50 (38.1)	1-3/8	1-1/2	1-1/8

*Add suffix SS for 316 stainless steel or B for brass.

DURZ
Thermocouple (bored through) Reducing Union

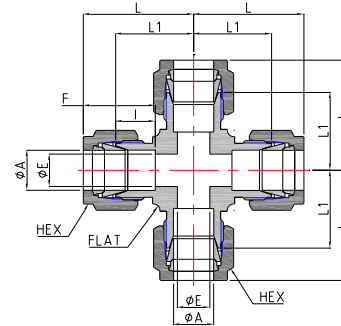


inch (mm)

Part No.	ϕA Tube OD	$\phi A1$ Tube OD	ϕE	I	F	L	L1	Hex 1	Hex 2	Hex 3
DURZ-2-1-*	1/8 (3.18)	1/16 (1.59)	0.09 (2.3)	0.25 (6.4)	0.51 (13.0)	1.23 (31.3)	0.81 (20.6)	7/16	7/16	5/16
DURZ-4-1-*	1/4 (6.35)	1/16 (1.59)	0.19 (4.8)	0.31 (7.9)	0.61 (15.4)	1.36 (34.6)	0.91 (23.1)	1/2	9/16	5/16
DURZ-4-2-*	1/4 (6.35)	1/8 (3.18)	0.19 (4.8)	0.31 (7.9)	0.61 (15.4)	1.53 (38.8)	0.97 (24.6)	1/2	9/16	7/16
DURZ-6-4-*	3/8 (9.53)	1/4 (6.35)	0.28 (7.1)	0.37 (9.5)	0.67 (17.0)	1.71 (43.4)	1.12 (28.4)	5/8	11/16	9/16
DURZ-8-2-*	1/2 (12.7)	1/8 (3.18)	0.41 (10.4)	0.50 (12.7)	0.91 (23.0)	1.95 (49.6) 1.81 (46.0)	1.14 (29.0)	13/16	7/8	7/16
DURZ-8-4-*	1/2 (12.7)	1/4 (6.35)	0.41 (10.4)	0.50 (12.7)	0.91 (23.0)	1.86 (47.3)	1.16 (29.5)	13/16	7/8	9/16

*Add suffix SS for 316 stainless steel or B for brass. **Smaller end to be bored through.

**DXA
Union Cross**



inch (mm)

Part No.	ϕA Tube OD	ϕE	I	F	L	L1	Flat	Hex
DXA-1-*	1/16 (1.59)	0.05 (1.3)	0.19 (4.9)	0.35 (8.9)	0.72 (18.2)	0.56 (14.2)	3/8	5/16
DXA-2-*	1/8 (3.18)	0.09 (2.3)	0.25 (6.4)	0.51 (13.0)	0.89 (22.5)	0.62 (15.8)	3/8	7/16
DXA-3-*	3/16 (4.76)	0.12 (3.0)	0.28 (7.2)	0.54 (13.8)	1.01 (25.7)	0.75 (19.0)	1/2	1/2
DXA-4-*	1/4 (6.35)	0.19 (4.8)	0.31 (7.9)	0.61 (15.4)	1.08 (27.5)	0.79 (20.0)	1/2	9/16
DXA-5-*	5/16 (7.94)	0.25 (6.4)	0.35 (8.8)	0.64 (16.3)	1.18 (29.9)	0.88 (22.4)	5/8	5/8
DXA-6-*	3/8 (9.53)	0.28 (7.1)	0.37 (9.5)	0.67 (17.0)	1.20 (30.5)	0.91 (23.0)	5/8	11/16
DXA-8-*	1/2 (12.7)	0.41 (10.4)	0.50 (12.7)	0.91 (23.0)	1.39 (35.3)	0.98 (25.0)	13/16	7/8
DXA-10-*	5/8 (15.88)	0.50 (12.7)	0.56 (14.3)	0.97 (24.6)	1.47 (37.3)	1.06 (27.0)	15/16	1
DXA-12-*	3/4 (19.05)	0.62 (15.8)	0.56 (14.3)	0.97 (24.6)	1.52 (38.5)	1.11 (28.2)	1-1/16	1-1/8
**DXA-14-SS	7/8 (22.23)	0.72 (18.3)	0.63 (15.9)	1.03 (26.1)	1.68 (42.7)	1.28 (32.5)	¹ 1-1/4	1-1/4
**DXA-16-SS	1 (25.4)	0.89 (22.5)	0.75 (19.1)	1.24 (31.6)	1.81 (45.9)	1.31 (33.3)	¹ 1-3/8	1-1/2

*Add suffix SS for 316 stainless steel or B for brass.

**Currently available 316 stainless steel only.

¹From block

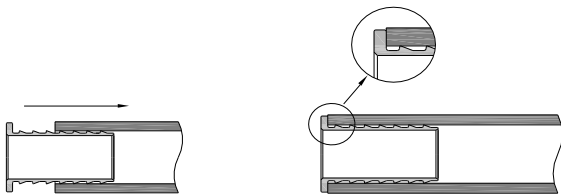
Plastic tubing

BI-Lok® tube fittings can be used with a plastic tubing, such as nylon, polyethylene, polypropylene and TFE (Teflon®). To secure the connection, a tube insert (part number DTI, see instruction in this page) should be used. See page XX for available sizes.

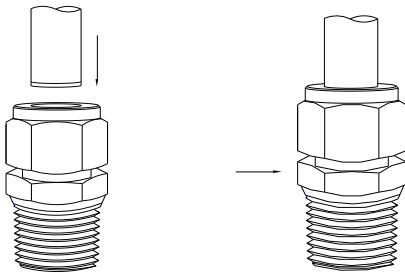
¹Teflon® is a registered trademark of E.I. du Pont de Nemours and Company

Tube insert (DTI) assembly instruction

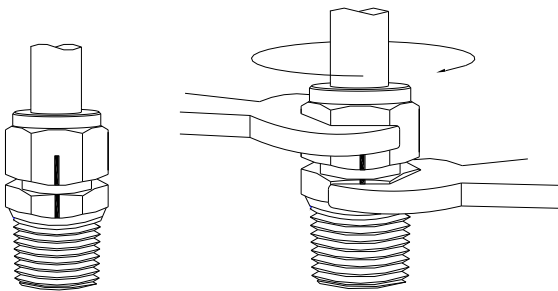
1. First, cut the plastic tubing perpendicular without any burrs at the end. Then, push it in the insert until the face of tube contacts the rim of insert.



2. A plastic tube with the insert will be pushed into the fitting until the bottom reaches to the step inside.



3. Tighten the nut with fingers as much as possible and mark the nut and fitting body with a marker. This position is Finger Tight Position (FTP). Turn the nut clockwise with a wrench by a specified turn in the table while the fitting body is held with another wrench. The assembly is now complete.

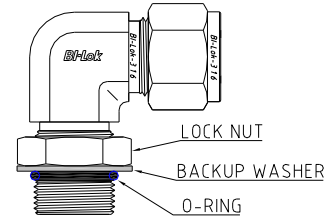


Tube Size	1/8, 3/16OD	1/4-1OD
Initial installation	3/4 turn	1 turn

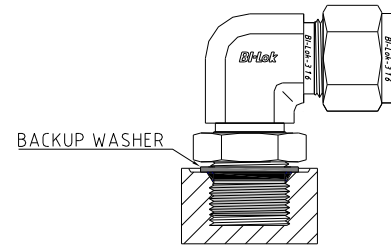
For reassembly, follow the reassembly instruction in page **. The maximum reassembly times are 5.

! Overtightening may cause the ferrules damage the tube.

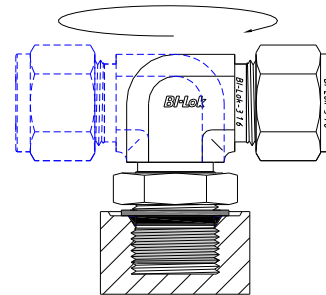
Positional elbow (DLO) assembly instruction



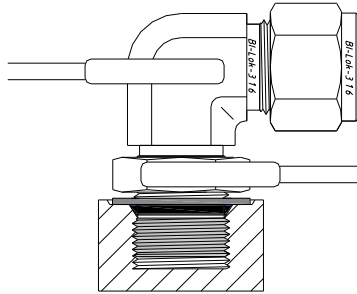
1. Screw the positional end to the mating female threads so that the backup washer touches the face of the female end.



2. Adjust the direction of the tube end to the desired position (within 1 turn).



3. Once the tube end position is determined, hold the fitting body with a wrench and tighten the locknut until the backup washer contacts the face of the female end.



Disclaimer

BI-Lok® is a registered trade mark of the Ihara Science Corporation, Tokyo, Japan. All dimensions listed in this catalog are subject to change without notice.

4. For proper installation, a use of torque wrench is recommended. See the table below for the recommended tightening torque on the lock nut:

Fitting Size	Thread size	Torque
DLO-*-4-SS	7/16-20 (4)	20-22N·m (14.8-16.2lb/ft)
DLO-*-6-SS	9/16-18 (6)	35-38.5N·m (25.8-28.4lb/ft)
DLO-*-8-SS	3/4-16 (8)	70-77N·m (51.6-56.8lb/ft)

5. Refer to the table in page 9 for the straight thread end pressure ratings.

Weld fittings

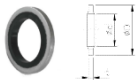
We recommend that the nut and ferrules should be removed from the fitting body prior to welding. When the fittings are re-assembled, make sure the fittings and their components are free from dirt and any foreign objects.

O-Rings

O-Rings used for BI-Lok® fittings are in accordance with SAE AS568. Buna (NBR) and Viton® are available. See visual index for O-Ring seal fittings.

Gasket






















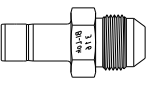


















Gaskets are used for BI-Lok® p/n DCJ, DCG, DCQ DHJ and DHQ.


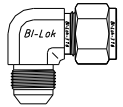















Part No	T	D	d	t
KP-C-01	G1/8	0.67 (17)	0.39 (9.9)	0.08 (2)
KP-C-02	G1/4	0.81 (20.5)	0.52 (13.3)	0.08 (2)
KP-C-03	G3/8	0.94 (24)	0.66 (16.8)	0.08 (2)
KP-C-04	G1/2	1.14 (29)	0.83 (21.1)	0.08 (2)

Part No.	T	D	d	t
KP-C-01	G1/8	17	9.9	2
KP-C-02	G1/4	20.5	13.3	2
KP-C-03	G3/8	24	16.8	2
KP-C-04	G1/2	29	21.1	2

Visual Index (alphabetical order)

DAN AN 37° FLARE ADAPTER		DCW TUBE SOCKET WELD UNION		DLR REDUCING UNION ELBOW		DSU DSUZ BULKHEAD UNION	
DAH HOSE ADAPTER		DHA MALE ADAPTER		DLW TUBE SOCKET WELD ELBOW		DSUR REDUCING BULKHEAD UNION	
DAT HOSE ADAPTER NPT CONNECTION		DHB O-RING SEAL MALE ADAPTER		DNA NUT		DTA DTAZ UNION TEE	
DBA PLUG		DHC FEMALE ADAPTER		DNN BULKHEAD NUT		DTF FEMALE NPT RUN TEE	
DCA CAP		DHJ COPPER GASKET SEAL MALE ADAPTER		DOB BUCK FERRULE		DTH FEMALE NPT BRANCH TEE	
DCB MALE PIPE WELD UNION		DHN AN ADAPTER		DOF FRONT FERRULE		DTI TUBE INSERT	
DCF O-RING SEAL MALE CONNECTOR		DHO O-RING SEAL MALE ADAPTER FOR STRAIGHT THREAD		DOS FERRULE SET		DTK MALE NPT RUN TEE	
DCG COPPER GASKET SEAL MALE CONNECTOR		DHQ BONDED SEAL ADAPTER STRAIGHT THREADS		DPC PORT CONNECTOR		DTN MALE NPT BRANCH TEE	
DCJ COPPER GASKET SEAL MALE CONNECTOR		DLA UNION ELBOW		DRE DREZ REDUCER		DTR REDUCING UNION TEE	
DCM O-RING SEAL NPT CONNECTOR		DLB Bulkhead Union		DSA FEMALE CONNECTOR		DUA DUAZ UNION	

DCO O-RING SEAL MALE CONNECTOR		DLC AN 37° FLARE ELBOW		DSE BULKHEAD REDUCER		DUC AN 37° FLARE UNION	
DCQ BONDED SEAL CONNECTOR STRAIGHT THREADS		DLF FEMALE ELBOW		DSC DSCZ BULKHEAD MALE CONNECTOR		DUE BULKHEAD AN 37° FLARE UNION	
DCT DCTZ MALE CONNECTOR		DLN MALE ELBOW		DSL BULKHEAD UNION ELBOW		DUR DURZ REDUCING UNION	
DCU DCUZ O-RING SEAL MALE CONNECTOR		DLO POSITIONAL ELBOW		DSS BULKHEAD FEMALE CONNECTOR		DXA UNION CROSS	