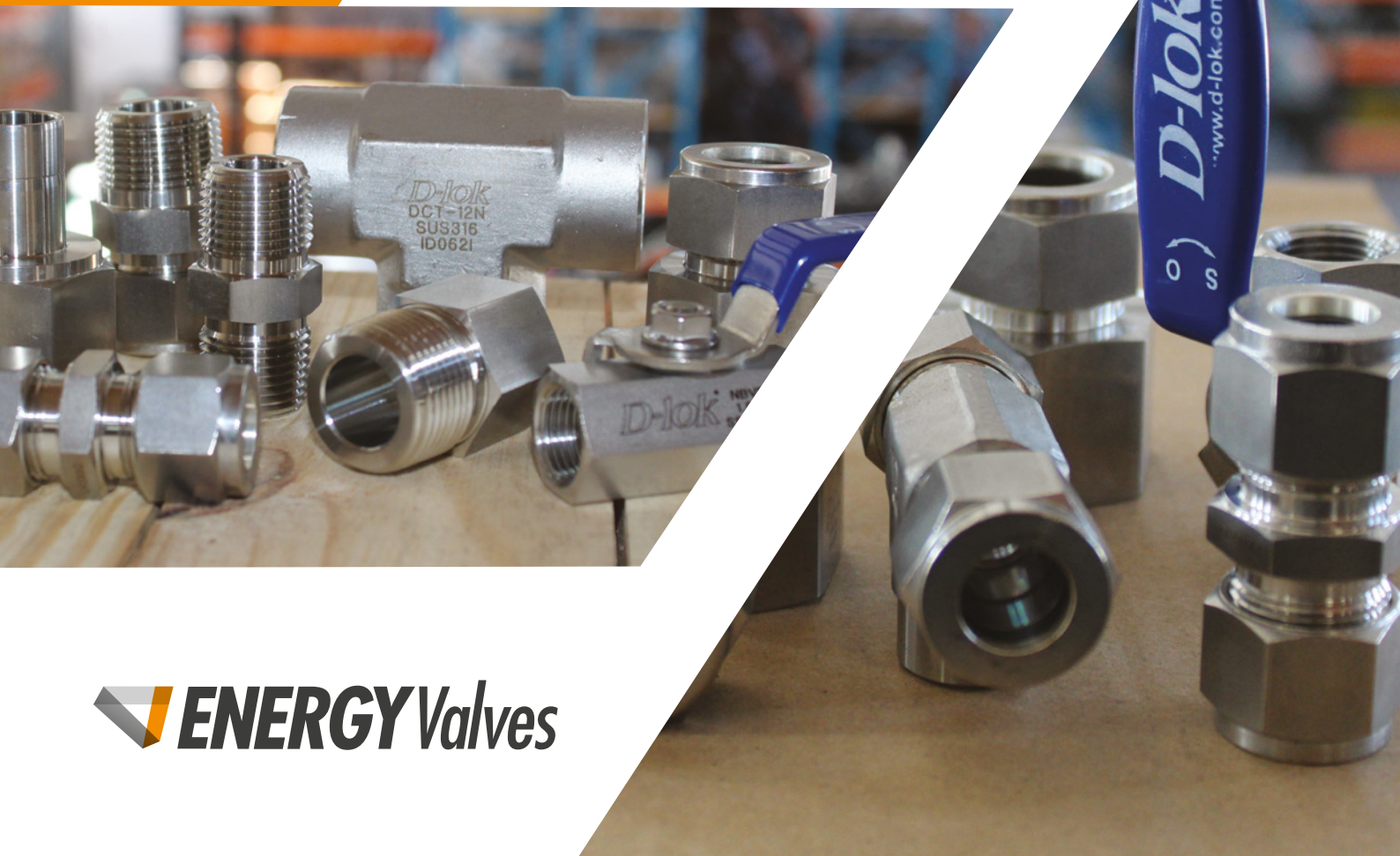


OUR RANGE OF INSTRUMENTATION FITTINGS



 **ENERGY Valves**

D-lok[®]
TUBE FITTINGS



energyvalves.co.za



As part of the dynamic EMVAfrica group, Energy Valves is positioned as more than a supplier of valves, we offer complete solutions.

Energy Valves is proudly the official sole distributor of the D-lok range of compression fittings and instrumentation tubes in Southern Africa. D-lok is a market-leading industrial fitting manufacturer providing affordable high-quality products to a wide spectrum of industries worldwide, including process, chemical and nuclear power plants, pulp & paper mills, marine (vessels), gas terminals and offshore oil production. Energy Valves is focused on establishing long-term relationships with suppliers and regularly audits their quality standards, as well as providing material and test certificates for all instrumentation products.

Energy Valves complements its extensive D-lok instrumentation range of tube fittings, adapters and pipes with a valve actuation service. The division has a fully equipped workshop stocked with a range of pneumatic double-acting/ spring return quarter-turn actuators. Together with a comprehensive service offering including valve repairs, servicing and technical advice.



Instrumentation Tube Fittings Metric Size

How to Order

Nomenclature

DL

D-lok

BCF

Fitting Type*
(Bulkhead Connector,
Female)

4-4

Tube O.D.
in sixteenths of
an inch 1/4"O.D.

Pipe Size
in sixteenths of
an inch 1/4"NPT

Fitting Size**

SS

Material***
SS304=Stainless
Steel, Type 304
SS316=Stainless
Steel, Type 316
B = Brass
S = Steel
M = Monel
IN=Inconel

* See Table 7 for fitting type designators.

** See Table 6 for fitting size information.

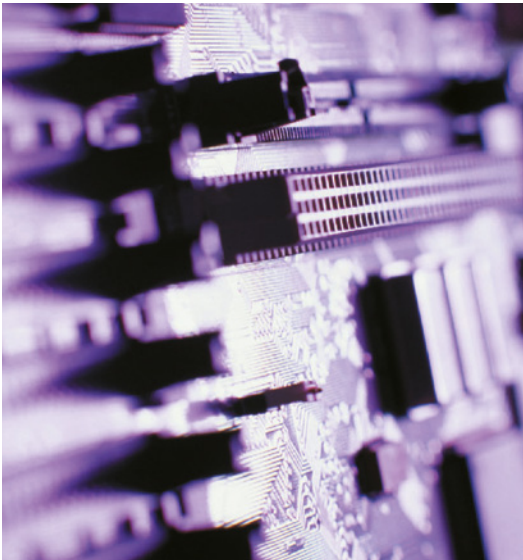
*** See Table 5 for information on materials used

D-lok tube fittings listed in this catalog are ordered by part number. The D-lok part numbering system consists of Identifiers representing size and style of the fitting and materials used. The part number describes fittings that are completely assembled; with reference to the tubing outside diameter (O.D.) first, then followed by the pipe size, in the largest end is indicated first.



Table 1. Maximum Allowable Working Pressure AT

Various Temperatures
Using Allowable Stress Factors Table 1.



°F	°C	Copper	304SS	316SS	Monel
200	93	0.8	1.00	1.00	0.88
400	204	0.50	0.93	0.96	0.79
600	316	-	0.82	0.85	0.79
800	427	-	0.76	0.79	0.76
1000	538	-	0.69	0.76	-
1200	649	-	0.30	0.37	-

To determine maximum allowable working pressure at elevated temperatures, multiply working pressure from tables 2,3, and 4 by factor shown in Table 1.

EXAMPLE:
Type 316SS 3/81" O.D. X 0.035" wall
at 1200°F 3300 psi x 0.37 = 1221 psi
Allowable working pressure for 3/8" O.D. x 0.035" wall type 316SS tubing is therefore 1221 psi at 1200°F.



Table 2. COPPER TUBING

High quality soft annealed seamless copper tubing ASTM B-75 or equivalent.

Tube O.D. (millimeters)	TUBE WALL THICKNESS (millimeters)							
	0.028	0.035	0.049	0.065	0.083	0.095	0.109	0.120
3	2700	3600						
4	1800	2300	3400					
6	1300	1600	2500	3500				
8		1300	1900	2700				
10		1000	1600	2200				
12		800	1100	1600	2100			
14			900	1200	1600	1900		
16			700	1000	1300	1500	1800	
18			600	800	1100	1300	1500	
22			500	700	900	1100	1300	1500

Allowable Stress = 6,500 psi between -20°F and 100°F

* working pressure(ksi)

Safety Factor = 5 (considering tensile strength to be 30,000 psi at room temperature)

Table 3. STAINLESS STEEL TUBING

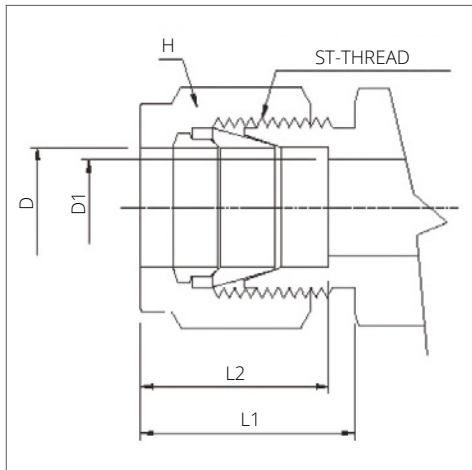
Fully annealed high quality (Type 304, 316, etc.) (Seamless or Welded)
 Stainless Steel hydraulic tubing ASTM A-269 or A-213 or equivalent.
 Hardness = Rb80 or less
 Tubing free of scratches, suitable for bending and flaring.

Tube O.D. (millimeters)	TUBE WALL THICKNESS (inches)												
	.010	.012	.014	.016	.020	.028	.035	.049	.065	.083	.095	.109	.120
3	5600	6800	8100	9400	12000								
4						8500	10900			For Seamless Tubing			
6						8400	7000	10200					
8						4000	5100	7500	10200				
10							4000	5800	8000				
12							3300	4800	6500				
14							2400	3500	4700	6200			
16								2900	4000	5200	6000		
18								2400	3300	4200	4900	5800	
22								2000	2800	3600	4200	4800	
25									2400	3100	3600	4200	4700

Allowable Stress = 19,500 psi between -20°F and 100°F

* working pressure(ksi)

Safety Factor = 4 (considering tensile strength to be 75,000 psi at room temperature)

Table 4. MONEL TUBING

SIZE	tube O.D	STAIRIGHT THREAD	L1	L2	D1	HEX
M3	3	5/16-20UN	15.3	12.9	2.4	12
M4	4	3/8-20UN	16.1	13.7	2.4	12
M6	6	7/16-20UN	17.7	15.3	4.8	14
M8	8	1/2-20UN	18.6	16.2	6.4	16
M10	10	5/8-20 UN	19.5	17.2	7.9	19
M12	12	3/4-20UN	22.0	22.8	9.5	22
M15	15	7/8-20UN	22.0	24.4	11.9	25
M16	16	7/8-20UN	22.0	24.4	12.7	25
M18	18	1-20UN	22.0	24.4	15.1	30
M20	20	1-1/8-20UN	22.0	26.0	15.9	32
M22	22	1-1/8-20UN	22.0	26.0	18.3	32
M25	25	1-5/16-20UN	26.5	31.3	21.8	38

Table 5.

Typical Raw Material Specifications			
Type of Material	Bar Stock	Forging	Tube Specification
Brass	ASTM B16 ASTM B453 ALLOY 360 ALLOY 345	ASIM B124 ALLOY 377	ASTM B75 ASME SB75
	JIS H3250 C3604	JIS H3250 C3771	JIS H3300
Stainless Steel	ASTM A479 ASME SA479, ASTM A276 ALLOY S30400 (304) ALLOY S30403 (304L) ALLOY S31600 (316) ALLOT S31603 (316L)	ASWI A182 ASME SA182 F304 F304L F316 F316L	ASTM A213 ASME SA213 ASTM A249 ASTM A269 MIL T8504 MIL T8506
	JIS G4303 SUS 304 SUS 304L SUS 316 SUS 316L	JIS G3214 SUS 304 SUS 304L SUS 316 SUS 316L	JIS G3459
Steel	ASTM A108	ASTM A576	SAE J524B SAE J525B ASTM A179
	JIS G4051	JIS G3201	JIS G3452
Nickel Alloy Monel Inconel	ASTM B164	ASTM B164	ASTM B165
	ASTM B166 ASTM SB166	ASTM B564	ASTM B163

Table 6.

Fitting Sizes		
identifier	Tube O.D.	P-NPT
M3-2	3	1/8
M3-4	3	1/4
M4-2	4	1/8
M4-4	4	1/4
M6-2	6	1/8
M6-4	6	1/4
M6-6	6	3/8
M6-8	6	1/2
M8-2	8	1/8
M8-4	8	1/4
M8-6	8	3/8
M8-8	8	1/2
M10-2	10	1/8
M10-4	10	1/4
M10-6	10	3/8
M10-8	10	1/2
M12-4	12	1/4
M12-6	12	3/8
M12-8	12	1/2
M12-12	12	3/4
M12-8	12	1/2
M12-12	12	3/4
M15-8	15	1/2
M16-4	16	1/4
M16-6	16	3/8
M16-8	16	1/2
M16-12	16	3/4
M18-8	18	1/2
M18-12	18	3/4
M20-8	20	1/2
M20-12	20	3/4
M22-12	22	3/4
M22-16	22	1
M25-12	25	3/4
M25-16	25	1

Table 7.

Fitting Type Designator	
identifier	Description
DLAA	Adaptor, AN
DLAF	Adaptor, Female
DLAM	Adaptor, Male
DLBTF	Branch Tee, Female
DLBTM	Branch Tee, Male
DLBA	Bulkhead Adaptor
DLBCF	Bulkhead Connector, Female
DLBCM	Bulkhead Connector, Male
DLBU	Bulkhead Union
DLBUA	Bulkhead Union, AN
DLC	Cap
DLCB	Connector, Buttweld
DLCF	Connector, Female
DLCM	Connector, Male
DLCW	Connector, Socketweld
DLCOM	Connector, 'O' Seal Pipe Thread, Male
DLCOS	Connector, 'O' Seal Straight Thread
DLEB	Elbow, Buttweld
DLEF	Elbow, Female
DLEM	Elbow, Male
DLE 45M	Elbow, 45 Degree, Male
DLEW	Elbow, Socketweld
DLFB	Ferrule, Back
DLFF	Ferrule, Front
DLFS	Ferrule, Set
DLN	Nut
DLP	Plug
DLPC	Port Connector
DLR	Reducer
DLRU	Reducing Union
DLRTF	Run Tee, Female
DLRTM	Run Tee, Male
DLU	Union
DLUA	Union, AN

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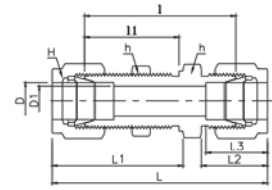
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UNION

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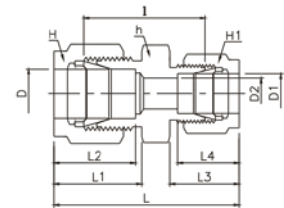
Bulkhead Union, DLBU



* These figures are for reference purposes only.

Part No.	Tube O.D	D1 Min	Widrh across flat		L3	L2	I	I1	L	L1	Panel Hole Drill Size	Panel Max Thick- ness
	D		h	H								
DLBU-M3	3	2.4	14	12	12.9	15.3	38.1	24.6	51.3	31.2	8.3	12.7
DLBU-M4	4	2.4	14	12	13.7	16.1	40.4	25.4	53.6	32.0	9.9	12.7
DLBU-M6	6	4.8	16	14	15.3	16.1	42.9	26.2	57.7	33.6	11.5	10.2
DLBU-M8	8	6.4	18	16	16.2	17.7	46.0	28.6	61.0	36.1	13.1	11.2
DLBU-M10	10	7.9	22	19	17.2	18.6	48.5	29.4	63.7	37.0	16.2	11.2
DLBU-M12	12	9.5	24	22	22.8	19.5	50.8	31.8	71.0	41.9	19.5	12.7
DLBU-M15	15	11.9	27	25	24.4	22.0	52.3	32.5	72.5	42.6	22.8	12.7
DLBU-M16	16	12.7	27	25	24.4	22.0	52.3	32.5	72.5	42.6	22.8	12.7
DLBU-M18	18	15.1	30	30	24.4	22.0	58.7	37.3	78.9	47.4	26.0	16.8
DLBU-M20	20	15.9	35	32	26.0	22.0	64.3	42.9	84.5	53.0	29.0	17.0
DLBU-M22	22	18.3	35	32	26.0	22.0	64.3	42.9	84.5	53.0	29.0	19.1
DLBU-M25	25	21.8	41.3	38	31.3	26.5	71.4	45.2	95.9	57.5	33.7	19.1

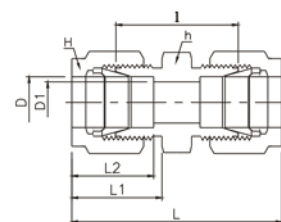
Reducing Union DLRU



* These figures are for reference purposes only.

Part No.	D	Tube O.D		D2 Min	Widrh across flat			L2	L4	L1	L3	I	L
		D1			h	H	H1						
		h	H										
DLRU M3-2	3	1/8	3.17	2.4	12	12	11.1	12.9	12.8	15.3	15.2	22.1	35.2
DLRU M4-2	4	1/8	3.17	2.4	12	12	11.1	13.7	12.8	16.1	15.2	23.4	36.5
DLRU M4-4	4	1/4	6.35	2.4	14	12	14.3	13.7	15.3	16.1	17.7	25.4	39.4
DLRU M6-2	6	1/8	3.17	2.4	14	14	11.1	15.3	12.8	17.7	15.2	24.6	38.5
DLRU M6-4	6	1/4	6.35	4.8	14	14	14.3	15.3	15.8	17.7	17.7	26.2	41.0
DLRU M6-5	6	5/16	7.93	4.8	14	14	15.9	15.3	16.2	17.7	18.6	27.4	42.3
DLRU M8-4	8	1/4	6.35	4.8	15	16	14.3	16.2	15.3	18.6	17.7	27.4	42.3
DLRU M10-2	10	1/8	3.17	2.4	18	19	11.1	17.2	12.8	19.5	15.2	27.7	41.8
DLRU M10-4	10	1/4	6.35	4.8	18	19	14.3	17.2	15.3	19.5	17.7	29.5	44.5
DLRU M10-5	10	5/16	7.93	6.4	18	19	15.9	17.2	16.2	19.5	18.6	30.3	45.1
DLRU M10-6	10	3/8	9.52	7.1	18	19	17.5	17.2	16.9	19.5	18.6	31.0	45.9
DLRU M12-5	12	5/16	7.93	6.4	22	22	15.9	22.8	16.2	22.0	18.6	30.2	47.8
DLRU M12-6	12	3/8	9.52	7.1	22	22	17.5	22.8	16.9	22.0	19.2	31.0	48.4
DLRU M12-8	12	1/2	12.70	9.5	22	22	22.2	22.8	22.8	22.0	22.0	31.0	51.2
DLRU M15-8	15	1/2	12.70	10.3	24	25	22.2	24.4	22.8	22.0	22.0	31.8	52.0
DLRU M16-10	16	5/8	15.87	12.7	24	25	25.4	24.4	24.4	22.0	22.0	31.8	52.0
DLRU M18-12	18	3/4	19.05	15.1	27	30	28.6	24.4	24.4	22.0	22.0	33.3	53.5
DLRU M20-12	20	3/4	19.05	15.9	30	32	28.3	26.0	24.4	22.0	22.0	34.8	54.9
DLRU M20-16	20	1	25.4	15.9	34.9	32	38.1	26.0	31.2	22.0	26.4	38.2	60.3
DLRU M22-16	22	1	25.4	18.3	34.9	32	38.1	26.0	31.2	22.0	26.4	38.2	60.3

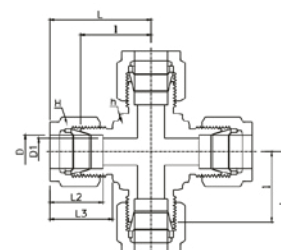
Union DLU



* These figures are for reference purposes only.

Part No.	Tube O.D	D1 Min	Width across flat		L2	L1	I	L
	D		h	H				
DLU-M3	3	2.4	12	12	12.9	15.3	22.1	35.3
DLU-M4	4	2.4	12	12	13.7	16.1	24.1	37.3
DLU-M6	6	4.8	14	14	15.3	17.7	26.2	41.0
DLU-M8	8	6.4	15	16	16.2	18.6	28.2	43.2
DLU-M10	10	7.9	18	19	17.2	19.5	31.0	46.2
DLU-M12	12	9.5	22	22	22.8	22.0	31.0	51.2
DLU-M15	15	11.9	24	25	24.4	22.0	31.8	52.0
DLU-M16	16	12.7	24	25	24.4	22.0	31.8	52.0
DLU-M18	18	15.1	27	30	24.4	22.0	33.3	53.5
DLU-M20	20	15.9	30	32	26.0	22.0	34.8	55.0
DLU-M22	22	18.3	30	32	26.0	22.0	34.8	55.0
DLU-M25	25	21.8	35	38	31.3	26.5	40.4	65.0

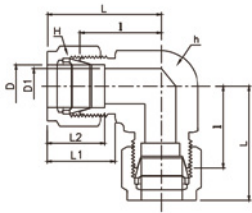
Union Cross DLUC



* These figures are for reference purposes only.

Part No.	Tube O.D	D1 Min	Width across flat		L2	L3	I	L
	D		h	H				
DLUC-M3	3	2.4	9.5	12	12.9	15.3	15.7	22.3
DLUC-M4	4	2.4	12.7	12	13.7	16.1	18.8	25.4
DLUC-M6	6	4.8	12.7	14	15.3	17.7	19.6	27.0
DLUC-M8	8	6.4	14.3	16	16.2	18.6	21.3	28.8
DLUC-M10	10	7.9	17.5	19	17.2	19.5	23.9	31.5
DLUC-M12	12	9.5	20.6	22	22.8	22.0	25.9	36.0
DLUC-M15	15	11.9	25.4	25	24.4	22.0	28.7	38.8
DLUC-M16	16	12.7	25.4	25	24.4	22.0	28.7	38.8
DLUC-M18	18	15.1	27.0	30	24.4	22.0	29.7	39.8
DLUC-M20	20	15.9	31.8	32	26.0	22.0	32.5	42.6
DLUC-M22	22	18.3	31.8	32	26.0	22.0	32.5	42.6
DLUC-M25	25	21.8	36.0	38	31.3	26.5	36.8	49.1

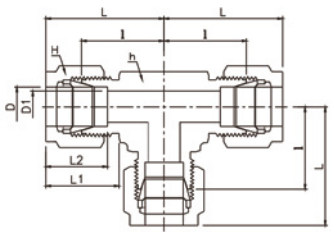
Union
Elbow
DLUE



* These figures are for reference purposes only.

Part No.	Tube O.D	D1 Min	Widrh across flat		L2	L1	I	L
	D		h	H				
DLUE-M3	3	2.4	9.5	12	12.9	15.3	15.7	22.3
DLUE-M4	4	2.4	12.7	12	13.7	16.4	18.8	25.4
DLUE-M6	6	4.8	12.7	14	15.3	17.7	19.6	27.0
DLUE-M8	8	6.4	14.3	16	16.2	18.6	21.3	28.8
DLUE-M10	10	7.9	17.5	19	17.2	19.5	23.9	31.5
DLUE-M12	12	9.5	20.6	22	22.8	22.0	25.9	36.0
DLUE-M15	15	11.9	25.4	25	24.4	22.0	28.7	38.8
DLUE-M16	16	12.7	25.4	25	24.4	22.0	28.7	38.8
DLUE-M18	18	15.1	27.0	30	24.4	22.0	29.7	39.8
DLUE-M20	20	15.9	31.8	32	26.0	22.0	32.5	42.6
DLUE-M22	22	18.3	31.8	32	26.0	22.0	32.5	42.6
DLUE-M25	25	21.8	36.0	38	31.3	26.5	36.8	49.1

Union
Tee
DLUT

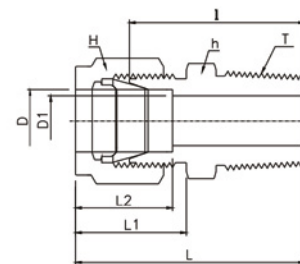


* These figures are for reference purposes only.

Part No.	Tube O.D	D1 Min	Widrh across flat		L2	L1	I	L
	D		h	H				
DLUT-M3	3	2.4	9.5	12	12.9	15.3	15.7	22.3
DLUT-M4	4	2.4	12.7	12	13.7	16.4	18.8	25.4
DLUT-M6	6	4.8	12.7	14	15.3	17.7	19.6	27.0
DLUT-M8	8	6.4	14.3	16	16.2	18.6	21.3	28.8
DLUT-M10	10	7.9	17.5	19	17.2	19.5	23.9	31.5
DLUT-M12	12	9.5	20.6	22	22.8	22.0	25.9	36.0
DLUT-M15	15	11.9	25.4	25	24.4	22.0	28.7	38.8
DLUT-M16	16	12.7	25.4	25	24.4	22.0	28.7	38.8
DLUT-M18	18	15.1	27.0	30	24.4	22.0	29.7	39.8
DLUT-M20	20	15.9	31.8	32	26.0	22.0	32.5	42.6
DLUT-M22	22	18.3	31.8	32	26.0	22.0	32.5	42.6
DLUT-M25	25	21.8	36.0	38	31.3	26.5	36.8	49.1

Connector, Male

DLCM

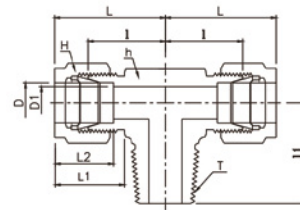


* These figures are for reference purposes only.

Part No.	Tube O.D	T R(PT)	D1 Min	Widrh across flat		L2	L1	I	L
	D			h	H				
DLCM M3-2	3	1/8	2.4	12	12	12.9	15.3	23.1	29.7
DLCM M3-4	3	1/4	2.4	14	12	12.9	15.3	29.0	35.6
DLCM M4-2	4	1/8	2.4	12	12	13.7	16.1	24.6	31.2
DLCM M4-4	4	1/4	2.4	14	12	13.7	16.1	29.7	36.3
DLCM M6-2	6	1/8	4.8	14	14	15.3	17.7	25.4	32.8
DLCM M6-4	6	1/4	4.8	14	14	15.3	17.7	30.2	37.6
DLCM M6-6	6	3/8	4.8	17	14	15.3	17.7	31.0	38.4
DLCM M6-8	6	1/2	4.8	22	14	15.3	17.7	36.6	44.0
DLCM M8-2	8	1/8	4.8	15	16	16.2	18.6	26.7	34.2
DLCM M8-4	8	1/4	6.4	15	16	16.2	18.6	31.2	38.7
DLCM M8-6	8	3/8	6.4	17	16	16.2	18.6	31.8	39.2
DLCM M8-8	8	1/2	6.4	22	16	16.2	18.6	37.3	44.8
DLCM M10-2	10	1/8	4.8	18	19	17.2	19.5	28.7	36.3
DLCM M10-4	10	1/4	7.1	18	19	17.2	19.5	33.3	40.9
DLCM M10-6	10	3/8	7.9	18	19	17.2	19.5	33.3	40.9
DLCM M10-8	10	1/2	7.9	22	19	17.2	19.5	38.1	45.7
DLCM M12-4	12	1/4	7.1	22	22	22.8	22.0	33.3	43.4
DLCM M12-6	12	3/8	9.5	22	22	22.8	22.0	33.3	43.4
DLCM M12-8	12	1/2	9.5	22	22	22.8	22.0	38.1	48.2
DLCM M12-12	12	3/4	9.5	27	22	22.8	22.0	38.9	49.0
DLCM M15-8	15	1/2	11.9	24	25	24.4	22.0	38.9	49.0
DLCM M16-4	16	1/4	7.1	24	25	24.4	22.0	34.1	44.1
DLCM M16-6	16	3/8	9.5	24	25	24.4	22.0	34.0	44.1
DLCM M16-8	16	1/2	11.9	24	25	24.4	22.0	38.9	49.0
DLCM M16-12	16	3/4	12.7	27	25	24.4	22.0	38.9	49.0
DLCM M18-8	18	1/2	11.9	27	30	24.4	22.0	40.4	50.5
DLCM M18-12	18	3/4	15.1	27	30	24.4	22.0	40.4	50.5
DLCM M20-8	20	1/2	11.9	30	32	26.0	22.0	42.2	52.3
DLCM M20-12	20	3/4	15.9	30	32	26.0	22.0	42.2	52.3
DLCM M22-12	22	3/4	15.9	30	32	26.0	22.0	42.2	52.3
DLCM M22-16	22	1	18.3	35	32	26.0	22.0	47.8	57.9
DLCM M25-12	25	3/4	15.9	35	38	31.3	26.5	45.2	57.5
DLCM M25-16	25	1	21.8	35	38	31.3	26.5	50.0	62.3

Branch Tee, Male

DLBTM

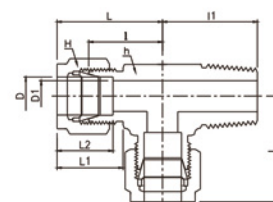


* These figures are for reference purposes only.

Part No.	Tube O.D	T R(PT)	D1 Min	Widrh across flat		L2	L1	I	L	I1
	D			h	H					
DLBTM M3-2	3	1/8	2.4	12.7	12	12.9	15.3	17.0	23.6	17.8
DLBTM M3-4	3	1/4	2.4	12.7	12	12.9	15.3	18.0	24.6	23.4
DLBTM M4-2	4	1/8	2.4	12.7	12	13.7	16.1	18.8	25.4	18.8
DLBTM M6-2	6	1/8	4.8	12.7	14	15.3	17.7	19.6	27.0	18.8
DLBTM M6-4	6	1/4	4.8	14.2	14	15.3	17.7	19.6	27.0	23.4
DLBTM M8-2	8	1/8	4.8	14.3	16	16.2	18.6	21.3	28.8	19.8
DLBTM M8-4	8	1/4	6.4	14.3	16	16.2	18.6	21.3	28.8	24.4
DLBTM M10-4	10	1/4	7.1	17.5	19	17.2	19.5	23.9	31.5	28.2
DLBTM M10-6	10	3/8	7.9	17.5	19	17.2	19.5	23.9	31.5	28.2
DLBTM M12-4	12	1/4	7.1	20.6	22	22.8	22.0	25.9	36.0	28.2
DLBTM M12-6	12	3/8	9.5	20.6	22	22.8	22.0	25.9	36.0	28.2
DLBTM M12-8	12	1/2	9.5	20.6	22	22.8	22.0	25.9	36.0	33.0
DLBTM M16-6	16	3/8	9.5	25.4	25	24.4	22.0	27.9	38.0	30.2
DLBTM M16-8	16	1/2	11.9	25.4	25	24.4	22.0	27.9	38.0	35.1
DLBTM M20-12	20	3/4	15.9	31.8	32	26.0	22.0	34.5	44.6	41.7

Run Tee, Male

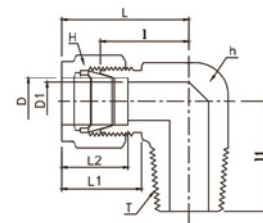
DLRTM



* These figures are for reference purposes only.

Part No.	Tube O.D	T R(PT)	D1 Min	Widrh across flat		L2	L1	I	L	I1
	D			h	H					
DLRTM M3-2	3	1/8	2.4	12.7	12	12.9	15.3	17.0	23.6	17.8
DLRTM M3-4	3	1/4	2.4	12.7	12	12.9	15.3	18.0	24.6	23.4
DLRTM M4-2	4	1/8	2.4	12.7	12	13.7	16.1	18.8	25.4	18.8
DLRTM M6-2	6	1/8	4.8	12.7	14	15.3	17.7	19.6	27.0	18.8
DLRTM M6-4	6	1/4	4.8	14.2	14	15.3	17.7	19.6	27.0	23.4
DLRTM M8-2	8	1/8	4.8	14.3	16	16.2	18.6	21.3	28.8	19.8
DLRTM M8-4	8	1/4	6.4	14.3	16	16.2	18.6	21.3	28.8	24.4
DLRTM M10-4	10	1/4	7.1	17.5	19	17.2	19.5	23.9	31.5	28.2
DLRTM M10-6	10	3/8	7.9	17.5	19	17.2	19.5	23.9	31.5	28.2
DLRTM M12-4	12	1/4	7.1	20.6	22	22.8	22.0	25.9	36.0	28.2
DLRTM M12-6	12	3/8	9.5	20.6	22	22.8	22.0	25.9	36.0	28.2
DLRTM M12-8	12	1/2	9.5	20.6	22	22.8	22.0	25.9	36.0	33.0
DLRTM M16-6	16	3/8	9.5	25.4	25	24.4	22.0	27.9	38.0	30.2
DLRTM M16-8	16	1/2	11.9	25.4	25	24.4	22.0	27.9	38.0	35.1
DLRTM M20-12	20	3/4	15.9	31.8	32	26.0	22.0	34.5	44.6	41.7

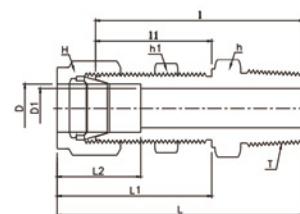
Elbow, Male DLEM



* These figures are for reference purposes only.

Part No.	Tube O.D	T R(PT)	D1 Min	Widrh across flat		L2	L1	I	L	I1
	D			h	H					
DLEM M3-2	3	1/8	2.4	12.7	12	12.9	15.3	17.0	23.6	17.8
DLEM M3-4	3	1/4	2.4	12.7	12	12.9	15.3	18.0	24.6	23.4
DLEM M4-2	4	1/8	2.4	12.7	12	13.7	16.1	18.8	25.4	18.8
DLEM M4-4	4	1/4	2.4	12.7	12	13.7	16.1	18.8	25.4	23.4
DLEM M6-2	6	1/8	4.8	12.7	14	15.3	17.7	19.6	27.0	18.8
DLEM M6-4	6	1/4	4.8	12.7	14	15.3	17.7	19.6	27.0	23.4
DLEM M6-6	6	3/8	4.8	17.5	14	15.3	17.7	22.4	29.8	26.2
DLEM M6-8	6	1/2	4.8	20.6	14	15.3	17.7	24.4	31.8	33.0
DLEM M8-2	8	1/8	4.8	14.3	16	16.2	18.6	21.3	28.8	19.8
DLEM M8-4	8	1/4	6.4	14.3	16	16.2	18.6	21.3	28.8	24.4
DLEM M8-6	8	3/8	6.4	17.5	16	16.2	18.6	23.9	31.4	28.5
DLEM M8-8	8	1/2	6.4	20.6	16	16.2	18.6	25.1	32.6	33.0
DLEM M10-2	10	1/8	4.8	17.5	19	17.2	19.5	23.9	31.5	23.6
DLEM M10-4	10	1/4	7.1	17.5	19	17.2	19.5	23.9	31.5	28.2
DLEM M10-6	10	3/8	7.9	17.5	19	17.2	19.5	23.9	31.5	28.2
DLEM M10-8	10	1/2	7.9	20.6	19	17.2	19.5	25.9	33.5	33.0
DLEM M12-2	12	1/8	4.8	20.6	22	22.8	22.0	25.9	36.0	23.6
DLEM M12-4	12	1/4	7.1	20.6	22	22.8	22.0	25.9	36.0	28.2
DLEM M12-6	12	3/8	9.5	20.6	22	22.8	22.0	25.9	36.0	28.2
DLEM M12-8	12	1/2	9.5	20.6	22	22.8	22.0	25.9	36.0	33.0
DLEM M12-12	12	3/4	9.5	27.0	22	22.8	22.0	29.7	39.8	36.8
DLEM M16-6	16	3/8	9.5	25.4	25	24.4	22.0	27.9	38.0	30.2
DLEM M16-8	16	1/2	11.9	25.4	25	24.4	22.0	27.9	38.0	35.1
DLEM M16-12	16	3/4	12.7	27.0	25	24.4	22.0	29.7	39.8	36.8
DLEM M18-8	18	1/2	11.98	27.0	30	24.4	22.0	29.7	39.8	36.8
DLEM M18-12	18	3/4	15.1	27.0	30	24.4	22.0	29.7	39.8	36.8
DLEM M20-8	20	1/2	11.9	31.8	32	26.0	22.0	34.5	44.6	41.7
DLEM M20-12	20	3/4	15.9	31.8	32	26.0	22.0	34.5	44.6	41.7
DLEM M22-12	22	3/4	15.9	31.8	32	26.0	22.0	34.5	44.6	41.7
DLEM M22-16	22	1	18.3	36.0	32	26.0	22.0	34.5	44.6	46.5
DLEM M25-12	25	3/4	15.9	36.0	38	31.3	26.5	36.8	49.1	41.7
DLEM M25-16	25	1	21.8	36.0	38	31.3	26.5	36.8	49.1	46.5

Bulkhead Connector, Male DLBCM

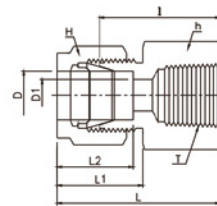


* These figures are for reference purposes only.

Part No.	Tube O.D	T R(PT)	D1 Min	Widrh across flat		L	L1	L2	I	I1
	D			h	H					
DLBCM M6-2	6	1/8	4.8	16	14	48.65	33.6	15.3	41.75	26.2
DLBCM M6-4	6	1/4	4.8	16	14	53.22	33.6	15.3	46.32	26.2
DLBCM M8-4	8	1/4	6.4	18	16	56.12	36.1	16.2	49.02	28.6
DLBCM M10-4	10	1/4	7.9	22	19	57.92	37.0	17.2	50.72	29.4
DLBCM M10-6	10	3/8	7.9	22	19	57.92	37.0	17.2	50.72	29.4
DLBCM M10-8	10	1/2	7.9	22	19	62.75	37.0	17.2	55.55	29.4
DLBCM M12-6	12	3/8	9.5	24	22	62.7	41.9	22.8	53.0	31.8
DLBCM M12-8	12	1/2	9.5	24	22	67.53	41.9	22.8	57.83	31.8
DLBCM M15-6	15	3/8	11.9	27	25	64.7	32.4	24.4	54.5	32.5
DLBCM M15-8	15	1/2	11.9	27	25	69.53	32.4	24.4	59.33	32.5

Connector, Female

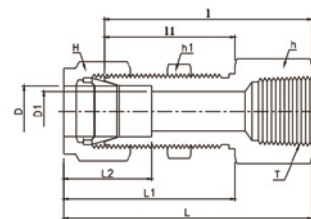
DLCF



* These figures are for reference purposes only.

Part No.	Tube O.D	T R(PT)	D1 Min	Width across flat		L2	L1	I	L
	D			h	H				
DLCF M3-2	3	1/8	2.4	14	12	12.9	15.3	22.1	28.7
DLCF M3-4	3	1/4	2.4	19	12	12.9	15.3	26.9	33.5
DLCF M4-2	4	1/8	2.4	14	12	13.7	16.1	23.1	29.7
DLCF M6-2	6	1/8	4.8	14	14	15.3	17.7	23.9	31.3
DLCF M6-4	6	1/4	4.8	19	14	15.3	17.7	28.4	35.8
DLCF M6-6	6	3/8	4.8	22	14	15.3	17.7	29.5	36.9
DLCF M6-8	6	1/2	4.8	27	14	15.3	17.7	35.1	42.5
DLCF M8-2	8	1/8	6.4	15	16	16.2	18.6	24.6	32.1
DLCF M8-4	8	1/4	6.4	19	16	16.2	18.6	29.5	37.0
DLCF M8-6	8	3/8	6.4	22	16	16.2	18.6	30.2	37.7
DLCF M8-8	8	1/2	6.4	27	16	16.2	18.6	35.8	43.3
DLCF M10-2	10	1/8	7.9	18	19	17.2	19.5	25.4	33.0
DLCF M10-4	10	1/4	7.9	19	19	17.2	19.5	30.2	37.8
DLCF M10-6	10	3/8	7.9	22	19	17.2	19.5	31.0	38.6
DLCF M10-8	10	1/2	7.9	27	19	17.2	19.5	36.6	44.2
DLCF M12-2	12	1/8	8.3	22	22	22.8	22.0	28.4	38.5
DLCF M12-4	12	1/4	9.5	22	22	22.8	22.0	30.2	40.3
DLCF M12-6	12	3/8	9.5	22	22	22.8	22.0	31.0	41.1
DLCF M12-8	12	1/2	9.5	27	22	22.8	22.0	36.6	46.7
DLCF M12-12	12	3/4	9.5	35	22	22.8	22.0	38.9	49.0
DLCF M15-8	15	1/2	11.9	27	25	24.4	22.0	36.6	46.7
DLCF M16-8	16	1/2	12.7	27	25	24.4	22.0	36.8	46.9
DLCF M20-8	20	1/2	15.9	30	32	26.0	22.0	37.8	47.9
DLCF M20-12	20	3/4	15.9	35	32	26.0	22.0	39.6	49.7
DLCF M22-12	22	3/4	18.3	35	32	26.0	22.0	39.6	49.7
DLCF M22-16	22	1	18.3	41	32	26.0	22.0	47.8	57.9
DLCF M25-12	25	3/4	21.8	35	38	31.3	26.5	41.1	53.4
DLCF M25-16	25	1	21.8	41	38	31.3	26.5	50.0	62.3

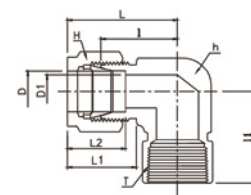
Bulkhead Connector, Female DLBCF



* These figures are for reference purposes only.

Part No.	Tube O.D	T R(PT)	D1 Min	h	Widrh across flat		L2	I	I1	L	L1	Panel Hole Drill Size	Panel Max Thickness
	D				h1	H							
DLBCF M6-2	6	1/8	4.8	15.8	15.8	14	15.3	39.6	26.2	46.90	33.6	11.5	10.2
DLBCF M6-4	6	1/4	4.8	19.0	16.0	14	15.3	44.4	26.2	51.80	33.6	11.5	10.2
DLBCF M8-4	8	1/4	6.3	19.0	17.4	16	16.2	46.7	28.6	53.85	36.1	13.1	11.2
DLBCF M12-8	12	1/2	9.5	27.0	24.0	22	22.8	56.4	31.8	66.50	41.9	19.5	12.7

Elbow, Female DLEF

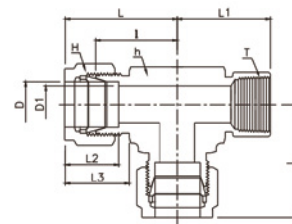


* These figures are for reference purposes only.

Part No.	Tube O.D	T (NPT)	D1 Min	Widrh across flat		L2	L1	I	L	I1
	D			h	H					
DLEF-M6-4	6	1/4	4.8	17.46	14	15.3	17.7	22.4	29.8	22.40
DLEF-M6-6	6	3/8	4.8	20.63	14	15.3	17.7	24.4	31.7	22.40
DLEF-M6-8	6	1/2	4.8	25.40	14	15.3	17.7	27.2	34.6	28.40
DLEF-M8-4	8	1/4	6.4	17.46	16	16.2	18.6	23.1	30.6	22.40
DLEF-M8-8	8	1/2	6.4	20.63	16	16.2	18.6	28.0	35.2	28.40
DLEF-M10-4	10	1/4	7.9	17.46	19	17.2	19.5	25.9	33.5	22.35
DLEF-M10-6	10	3/8	7.9	20.63	19	17.2	19.5	25.9	33.5	22.40
DLEF-M10-8	10	1/2	7.9	25.40	19	17.2	19.5	28.7	36.1	28.40
DLEF-M12-6	12	3/8	9.5	20.63	22	22.8	22.0	25.9	36.2	22.35
DLEF-M12-8	12	1/2	9.5	25.40	22	22.8	22.0	28.7	38.8	28.40

RUN Tee, Female

DLRTF

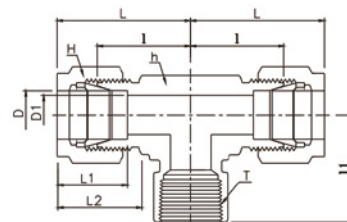


* These figures are for reference purposes only.

Part No.	Tube O.D	T (NPT)	D1 Min	Widrh across flat		L2	L3	I	L	L
	D			h	H					
DLRTF M6-2	6	1/8	4.8	12.70	14	15.3	17.7	19.6	46.0	19.00
DLRTF M6-4	6	1/4	4.8	17.46	14	15.3	17.7	22.4	52.1	22.40
DLRTF M6-8	6	1/2	4.8	25.40	14	15.3	17.7	27.2	34.5	28.40
DLRTF M8-2	8	1/8	6.4	15.87	16	16.2	18.6	22.4	48.9	19.00
DLRTF M8-4	8	1/4	6.4	17.46	16	16.2	18.6	23.1	53.0	22.40
DLRTF M8-6	8	3/8	6.4	20.63	16	16.2	18.6	25.2	32.4	22.40
DLRTF M8-8	8	1/2	6.4	25.40	16	16.2	18.6	28.0	35.2	28.40
DLRTF M12-4	12	1/4	9.5	20.63	22	22.8	22.0	25.9	58.4	22.40
DLRTF M12-6	12	3/8	9.5	20.63	22	22.8	22.0	25.9	58.4	22.40
DLRTF M12-8	12	1/2	9.5	26.98	22	22.8	22.0	29.7	40.0	28.40
DLRTF M16-8	16	1/2	12.7	25.40	25	24.4	22.0	29.7	39.9	28.40

Branch Tee, Female

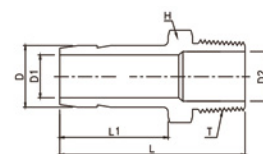
DLBTF



* These figures are for reference purposes only.

Part No.	Tube O.D	T (NPT)	D1 Min	Widrh across flat		L1	L2	I	L	I1
	D			h	H					
DLBTF M6-2	6	1/8	4.8	12.70	14	15.3	17.7	19.6	27.0	19.00
DLBTF M6-4	6	1/4	4.8	17.46	14	15.3	17.7	22.4	29.8	22.40
DLBTF M6-6	6	3/8	4.8	20.63	14	15.3	17.7	24.4	31.7	22.40
DLBTF M6-8	6	1/2	4.8	25.40	14	15.3	17.7	27.2	34.5	28.40
DLBTF M8-2	8	1/8	6.4	15.87	16	16.2	18.6	23.1	29.9	19.00
DLBTF M8-4	8	1/4	6.4	17.46	16	16.2	18.6	23.1	30.6	22.40
DLBTF M8-6	8	3/8	6.4	20.63	16	16.2	18.6	25.2	32.4	22.40
DLBTF M8-8	8	1/2	6.4	25.40	16	16.2	18.6	28.0	35.2	28.40
DLBTF M10-4	10	1/4	7.9	20.63	19	17.2	19.5	25.9	33.5	22.40
DLBTF M10-6	10	3/8	7.9	20.63	19	17.2	19.5	25.9	33.3	22.40
DLBTF M10-8	10	1/2	9.5	25.40	19	17.2	19.5	26.2	33.6	22.40
DLBTF M12-4	12	1/4	9.5	20.63	22	22.8	22.0	25.9	36.0	22.40
DLBTF M12-6	12	3/8	9.5	20.63	22	22.8	22.0	25.9	36.0	22.40
DLBTF M12-8	12	1/2	9.5	25.40	22	22.8	22.0	29.7	40.0	28.40
DLBTF M16-8	16	1/2	12.7	25.40	25	24.4	22.0	29.7	38.8	28.70

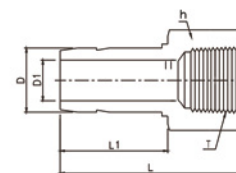
Adaptor, Male DLAM



* These figures are for reference purposes only.

Part No.	Tube O.D	T R(PT)	D1 Min	D2 Min	Widrh across flat	L1	L
	D				H		
DLAM M3-2	3	1/8	4.0	1.8	12	13.15	29.4
DLAM M6-2	6	1/8	4.6	4.6	12	15.75	32.8
DLAM M6-4	6	1/4	4.6	4.6	14	15.75	38.1
DLAM M8-4	8	1/4	6.3	6.3	14	16.50	39.1
DLAM M10-4	10	1/4	7.7	7.7	14	17.50	39.9
DLAM M10-6	10	3/8	7.7	7.7	17	17.50	40.6
DLAM M10-8	10	1/2	11.9	7.7	22	17.50	45.2
DLAM M12-4	12	1/4	7.1	9.1	14	23.50	46.5
DLAM M12-6	12	3/8	9.1	9.1	17	23.50	46.2
DLAM M12-8	12	1/2	11.9	9.1	22	23.50	51.8
DLAM M18-8	18	1/2	11.9	13.9	22	24.90	53.2
DLAM M18-12	18	3/4	15.9	13.9	27	24.90	53.2

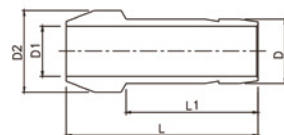
Adaptor, Female DLAF



* These figures are for reference purposes only.

Part No.	Tube O.D	T R(PT)	D1 Min	Widrh across flat	L1	L
	D			H		
DLAF M3-2	3	1/8	1.8	14	13.15	31.15
DLAF M6-2	6	1/8	4.6	14	15.75	32.5
DLAF M6-4	6	1/4	4.6	19	15.75	37.1
DLAF M8-4	8	1/4	6.3	19	16.50	37.6
DLAF M10-4	10	1/4	7.7	19	17.50	38.1
DLAF M10-6	10	3/8	7.7	22	17.50	40.1
DLAF M10-8	10	1/2	7.7	27	17.50	46.5
DLAF M12-4	12	1/4	9.1	19	23.50	43.7
DLAF M12-6	12	3/8	9.1	22	23.50	46.0
DLAF M12-8	12	1/2	9.1	27	23.50	52.3
DLAF M18-12	18	3/4	13.9	32	24.90	54.8

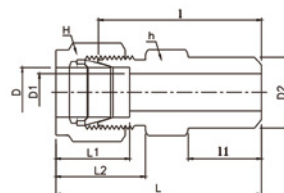
Port Connector DLPC



* These figures are for reference purposes only.

Part No.	Tube O.D	D1 Min	D2	L2	L
	D				
DLPC-M3	3	2.1	6.0	15.7	22.2
DLPC-M6	6	4.4	9.0	18.7	24.6
DLPC-M8	8	6.2	11.0	20.0	25.9
DLPC-M10	10	8.2	13.1	20.2	26.1
DLPC-M12	12	9.1	15.0	26.0	35.8
DLPC-M16	16	12.7	19.0	27.6	37.4

Connector Butt weld DLCB

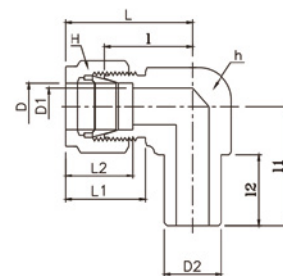


* These figures are for reference purposes only.

Part No.	Tube O.D	Male Pipe Size D2		D1 Min	Width across flat		L1	L2	I	I1	L
	D	nom.	O.D.		h	H					
DLCB M3-2	3	1/8	10.3	2.4	12	12	12.9	15.3	23.1	9.7	29.7
DLCB M4-2	4	1/8	10.3	2.4	12	12	13.7	16.1	24.1	9.7	30.7
DLCB M6-2	6	1/8	10.3	4.8	14	14	15.3	17.7	25.4	9.7	32.8
DLCB M6-4	6	1/4	13.7	4.8	14	14	15.3	17.7	30.2	14.2	37.6
DLCB M8-2	8	1/8	10.3	5.1	15	16	16.2	18.6	26.7	9.7	34.2
DLCB M8-4	8	1/4	13.7	6.4	15	16	16.2	18.6	31.2	14.2	38.7
DLCB M8-8	8	1/2	21.3	6.4	22	16	16.2	18.6	37.3	19.0	44.8
DLCB M10-4	10	1/4	13.7	7.1	18	19	17.2	19.5	33.3	14.2	40.9
DLCB M10-6	10	3/8	17.1	7.9	18	19	17.2	19.5	32.5	14.2	40.1
DLCB M10-8	10	1/2	21.3	7.9	22	19	17.2	19.5	38.1	19.0	45.7
DLCB M12-4	12	1/4	13.7	7.1	22	22	22.8	22.0	33.3	14.2	43.4
DLCB M12-6	12	3/8	17.1	9.5	22	22	22.8	22.0	33.3	14.2	43.4
DLCB M12-8	12	1/2	21.3	9.5	22	22	22.8	22.0	38.1	19.0	48.2
DLCB M15-8	15	1/2	21.3	11.9	24	25	24.4	22.0	38.9	19.0	49.0
DLCB M16-8	16	1/2	21.3	12.7	24	25	24.4	22.0	38.9	19.0	49.0
DLCB M18-8	18	1/2	21.3	13.5	27	30	24.4	22.0	40.4	19.0	50.5

Elbow, Butt weld

DLEB

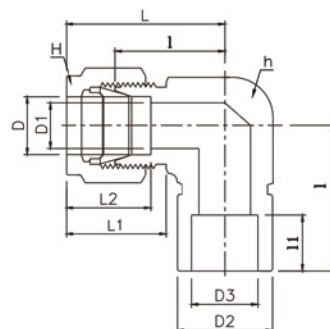


* These figures are for reference purposes only.

Part No.	Male Pipe Size		D	D1	h	H	L	L1	L2	I	I1	I2
	NOM. D2	O.D D2										
DLEB M6-4	1/4	13.7	6	4.8	12.7	14	27.0	17.7	15.3	19.6	23.45	14.2
DLEB M8-4	1/4	13.7	8	6.4	14.3	16	28.8	18.6	16.2	21.3	24.4	14.2
DLEB M10-6	3/8	17.1	10	7.9	17.5	19	31.5	19.5	17.2	23.9	33.3	14.2
DLEB M12-8	1/2	21.3	12	9.5	20.6	22	36.0	22.0	22.8	25.9	32.15	19.0
DLEB M15-8	1/2	21.3	15	11.9	25.4	25	38.8	22.0	24.4	28.7	33.5	19.0
DLEB M16-8	1/2	21.3	16	12.7	25.4	25	38.8	22.0	24.4	28.7	33.5	19.0
DLEB M18-8	1/2	21.3	18	15.1	27.0	30	39.8	22.0	24.4	29.7	34.5	19.0

Elbow, Socket weld

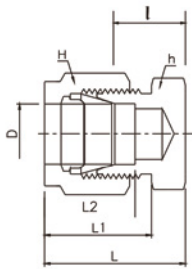
DLEW



* These figures are for reference purposes only.

Part No.	Male Pipe Size		D1	D2	D3	h	H	L	L1	L2	I	I1
	NOM. D2											
DLEW M6-6	6		4.8	12.3	6.15	12.7	12	27.0	17.7	15.3	19.6	7.87
DLEW M8-8	8		6.4	14.35	8.15	14.3	16	28.8	18.6	16.2	21.3	8.76
DLEW M12-12	12		9.5	19.97	12.2	20.6	22	36.0	22.0	22.8	25.9	12.7

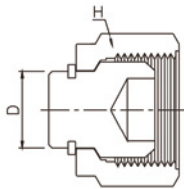
Cap
DLC



* These figures are for reference purposes only.

Part No.	Tube O.D	Widrh across flat		L2	L1	I	L
	D	h	H				
DLC-M3	3	12	12	12.9	15.3	13.5	20.1
DLC-M4	4	12	12	13.7	16.1	14.7	21.3
DLC-M6	6	14	14	15.3	17.7	15.7	23.1
DLC-M8	8	15	16	16.2	18.6	17.0	24.5
DLC-M10	10	18	19	17.2	19.5	19.0	26.6
DLC-M12	12	22	22	22.8	22.0	19.0	29.1
DLC-M15	15	24	25	24.4	22.0	19.8	29.9
DLC-M16	16	24	25	24.4	22.0	19.8	29.9
DLC-M18	18	27	30	24.4	22.0	21.3	31.4
DLC-M20	20	30	32	26.0	22.0	23.9	34.0
DLC-M22	22	30	32	26.0	22.0	23.9	34.0
DLC-M25	25	35	38	31.3	26.5	26.2	38.5

Plug
DLP

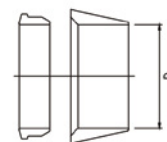


* These figures are for reference purposes only.

Part No.	Tube O.D	H	Part No.	Tube O.D	H
	D			D	
DLP-M2	2	12	DLP-M16	16	25
DLP-M3	3	12	DLP-M18	18	30
DLP-M4	4	12	DLP-M20	20	32
DLP-M6	6	14	DLP-M22	22	32
DLP-M8	8	16	DLP-M25	25	38
DLP-M10	10	19	DLP-M28	28	46
DLP-M12	12	22	DLP-M32	32	50
DLP-M15	15	25	DLP-M38	38	60

Ferrule, Set

DLFS

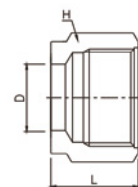


* These figures are for reference purposes only.

Part No.	Tube O.D
	D
DLFS-M2	2
DLFS-M3	3
DLFS-M4	4
DLFS-M6	6
DLFS-M8	8
DLFS-M10	10
DLFS-M12	12
DLFS-M15	15
DLFS-M16	16
DLFS-M18	18
DLFS-M20	20
DLFS-M22	22
DLFS-M25	25

Nut

DLN



* These figures are for reference purposes only.

Part No.	Tube O.D	Width across flat	L
	D	H	
DLN-M3	3	12	11.9
DLN-M4	4	12	11.9
DLN-M6	6	14	12.7
DLN-M8	8	16	13.5
DLN-M10	10	19	15.1
DLN-M12	12	22	17.4
DLN-M15	15	25	17.4
DLN-M16	16	25	17.4
DLN-M18	18	30	17.4
DLN-M20	20	32	17.4
DLN-M22	22	32	17.4
DLN-M25	25	38	20.6

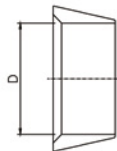
Ferrule,
Back
DLFB



* These figures are for reference purposes only.

Part No.	Tube O.D
	D
DLFB-M3	3
DLFB-M4	4
DLFB-M6	6
DLFB-M8	8
DLFB-M10	10
DLFB-M12	12
DLFB-M15	15
DLFB-M16	16
DLFB-M18	18
DLFB-M20	20
DLFB-M22	22
DLFB-M25	25

Ferrule,
Front
DLFF



* These figures are for reference purposes only.

Part No.	Tube O.D	Width across flat	L
	D	H	
DLFF- M3	3	12	11.9
DLFF-M4	4	12	11.9
DLFF- M6	6	14	12.7
DLFF- M8	8	16	13.5
DLFF- M10	10	19	15.1
DLFF- M12	12	22	17.4
DLFF- M15	15	25	17.4
DLFF- M16	16	25	17.4
DLFF- M18	18	30	17.4
DLFF- M20	20	32	17.4
DLFF- M22	22	32	17.4
DLFF- M25	25	38	20.6

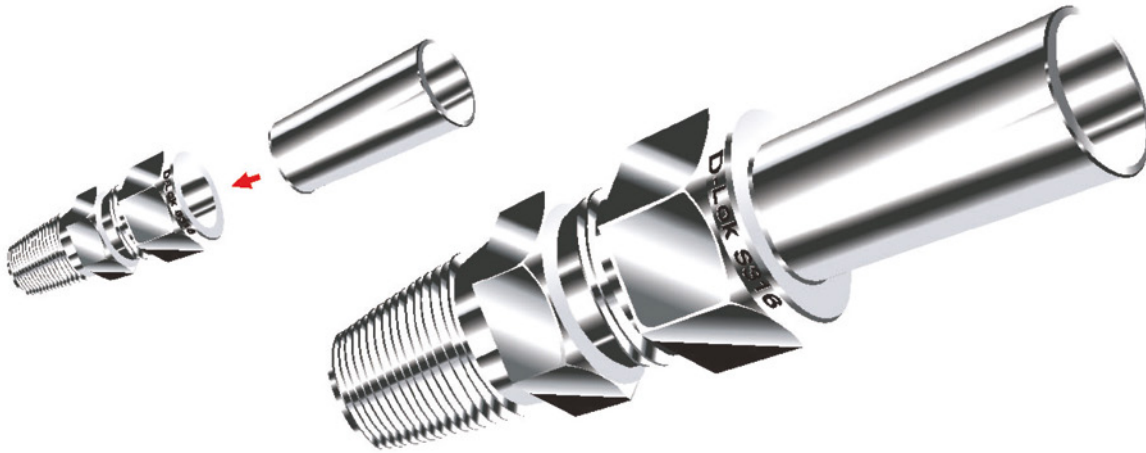
* These figures are for reference purposes only.

Installation

ASSEMBLY INSTRUCTIONS

D-lok tube fittings can be installed by using readily available wrenches.

1. Insert the tubing into the D-lok fitting until the tubing sits on the shoulder of the body. Make sure the nut is finger-tight.
2. From the finger-tight position, rotate the nut $\frac{3}{4}$ for sizes between $\frac{1}{16}$ -inch and $\frac{3}{16}$ -inch; and $1\frac{1}{4}$ turn for the sizes between $\frac{1}{4}$ -inch and 1-inch

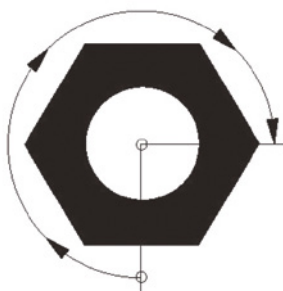


Reassembly Instructions

D-lok tube fittings can be assembled and disassembled repeatedly. The following instructions should be carried out to reassemble a fitting.

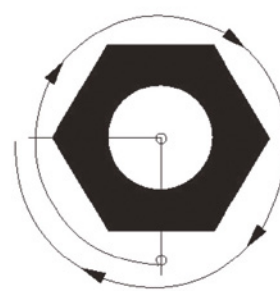
1. Insert the tubing with the previously set ferrules into the D-lok fitting until the tubing sits on the shoulder of the body. Make sure the nut is finger-tight.
2. Using a wrench, from the finger-tight position, rotate the nut $\frac{3}{4}$ for sizes between $\frac{1}{16}$ -inch and $\frac{3}{16}$ -inch; and $1\frac{1}{4}$ turn for the size between $\frac{1}{4}$ -inch and 1-inch until snug. Then tighten a little more.

Size 1 thru ($\frac{1}{16}$ " thru $\frac{3}{16}$ ")



Only $\frac{3}{4}$ turn from finger-tight position

Size 4 thru 16 ($\frac{1}{4}$ " thru 1")



$1\frac{1}{4}$ turn from finger-tight position



As part of the dynamic EMVAfrica group, Energy Valves is positioned as more than a supplier of valves, we offer complete solutions.

Energy Valves is proudly the official sole distributor of the D-lok range of compression fittings and instrumentation tubes in Southern Africa. D-lok is a market-leading industrial fitting manufacturer providing affordable high-quality products to a wide spectrum of industries worldwide, including process, chemical and nuclear power plants, pulp & paper mills, marine (vessels), gas terminals and offshore oil production. Energy Valves is focused on establishing long-term relationships with suppliers and regularly audits their quality standards, as well as providing material and test certificates for all instrumentation products.



Energy Valves complements its extensive D-lok instrumentation range of tube fittings, adapters and pipes with a valve actuation service. The division has a fully equipped workshop stocked with a range of pneumatic double-acting/ spring return quarter-turn actuators. Together with a comprehensive service offering including valve repairs, servicing and technical advice.

Instrumentation Tube Fittings Inch Size

How to Order

Nomenclature			
DL	BCF	4-4	SS
D-lok	Fitting Type* (Bulkhead Connector, Female)	Tube O.D. in sixteenths of an inch 1/4"O.D. Pipe Size in sixteenths of an inch 1/4"NPT Fitting Size**	Material*** SS304=Stainless Steel, Type 304 SS316=Stainless Steel, Type 316 B = Brass S = Steel M = Monel IN=Inconel

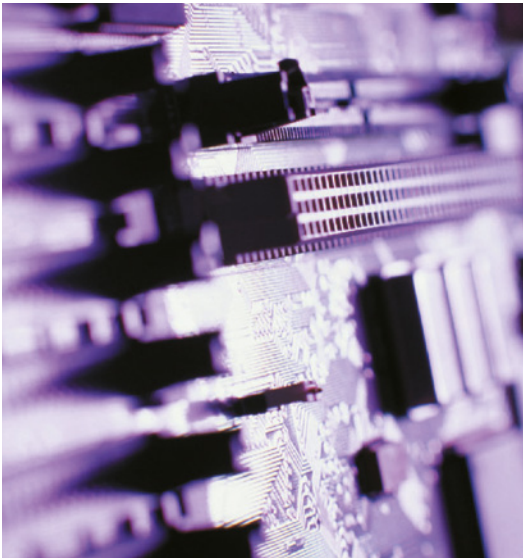
* See Table 7 for fitting type designators. ** See Table 6 for fitting size information. *** See Table 5 for information on materials used

D-lok tube fittings listed in this catalog are ordered by part number. The D-lok part numbering system consists of Identifiers representing size and style of the fitting and materials used. The part number describes fittings that are completely assembled; with reference to the tubing outside diameter (O.D.) first, then followed by the pipe size, in the largest end is indicated first.



Table 1. Maximum Allowable Working Pressure AT

Various Temperatures
Using Allowable Stress Factors Table 1.



°F	°C	Copper	304SS	316SS	Monel
200	93	0.8	1.00	1.00	0.88
400	204	0.50	0.93	0.96	0.79
600	316	-	0.82	0.85	0.79
800	427	-	0.76	0.79	0.76
1000	538	-	0.69	0.76	-
1200	649	-	0.30	0.37	-

To determine maximum allowable working pressure at elevated temperatures, multiply working pressure from tables 2,3, and 4 by factor shown in Table 1.

EXAMPLE:
Type 316SS 3/81" O.D. X 0.035" wall
at 1200°F 3300 psi x 0.37 = 1221 psi
Allowable working pressure for 3/8" O.D. x 0.035" wall type 316SS tubing is therefore 1221 psi at 1200°F.

Table 2. COPPER TUBING

High quality soft annealed seamless copper tubing ASTM B-75 or equivalent.

Tube O.D (millimeters)	TUBE WALL THICKNESS (millimeters)							
	0.028	0.035	0.049	0.065	0.083	0.095	0.109	0.120
3	2700	3600						
4	1800	2300	3400					
6	1300	1600	2500	3500				
8		1300	1900	2700				
10		1000	1600	2200				
12		800	1100	1600	2100			
14			900	1200	1600	1900		
16			700	1000	1300	1500	1800	
18			600	800	1100	1300	1500	
22			500	700	900	1100	1300	1500

Allowable Stress = 6,500 psi between -20°F and 100°F
Safety Factor = 5 (considering tensile strength to be 30,000 psi at room temperature)

* working pressure(psi)

Table 3. STAINLESS STEEL TUBING

Fully annealed high quality (Type 340, 316, etc.) (Seamless or Welded)
 Stainless Steel hydraulic tubing ASTM A-269 or A-213 or equivalent.
 Hardness = Rb80 or less
 Tubing free of scratches, suitable for bending and flaring.

Tube O.D. (millimeters)	TUBE WALL THICKNESS (inches)												
	.010	.012	.014	.016	.020	.028	.035	.049	.065	.083	.095	.109	.120
3	5600	6800	8100	9400	12000								
4						8500	10900			For Seamless Tubing			
6						8400	7000	10200					
8						4000	5100	7500	10200				
10							4000	5800	8000				
12							3300	4800	6500				
14							2400	3500	4700	6200			
16								2900	4000	5200	6000		
18								2400	3300	4200	4900	5800	
22								2000	2800	3600	4200	4800	
25									2400	3100	3600	4200	4700

Allowable Stress = 19,500 psi between -20°F and 100°F

* working pressure(psi)

Safety Factor = 4 (considering tensile strength to be 75,000 psi at room temperature)

Table 4. MONEL TUBING

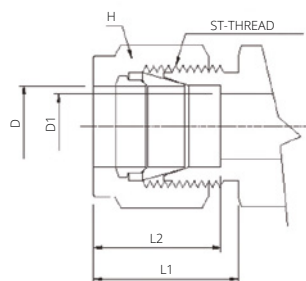
Fully annealed quality Seamless MONEL400 hydraulic tubing ASTM B-165 or equivalent.
 Hardness = Rb75
 tubing free of scratches, suitable for bending and flaring.

Tube O.D. (inch)	TUBE WALL THICKNESS (inches)							
	0.028	0.035	0.049	0.065	0.083	0.095	0.109	0.120
1/83	7900	10100						
1/4	3700	4800	7000	9500				
3/8		3100	4400	6100				
1/2		2300	3200	4400				
3/4			2200	3000	4000	4600		
1				2200	2900	3400	3900	4300

Allowable Stress = 18,500 psi between -20°F and 100°F

* working pressure(psi)

Safety Factor = 4 (considering tensile strength to be 70,000 psi at room temperature)



Tube End Dimensional Data						
Size	Tube O.D	Staright Thread	Minimum Opening	Tube Insertion Depth	Finger-Tight	Hexagonal
NO	D	ST	D1	LI	L2	H
1	1/16	10-321	0.05	0.34	0.43	5/16
2	1/8	5/16-20	0.09	0.50	0.60	7/16
3	3/16	3/8-20	0.12	0.54	0.63	1/2
4	1/4	7/16-20	0.19	0.60	0.70	9/16
5	5/16	1/2-20	0.25	0.64	0.73	5/8
6	3/8	9/16-20	0.28	0.66	0.76	11/16
8	1/2	3/4-20	0.41	0.90	0.86	7/8
10	5/8	7/8-20	0.50	0.96	0.86	1
12	3/4	1-20	0.62	0.96	0.86	1.1/8
14	7/8	1.1/8-20	0.72	1.02	0.86	1.1/4
16	1	1.5/16-20	0.88	1.23	1.04	1.1/2

Table 5.

Typical Raw Material Specifications			
Type of Material	Bar Stock	Forging	Tube Specification
Brass	ASTM B16 ASTM B453 ALLOY 360 ALLOY 345	ASIM B124 ALLOY 377	ASTM B75 ASME SB75
	JIS H3250 C3604	JIS H3250 C3771	JIS H3300
Stainless Steel	ASTM A479 ASME SA479, ASTM A276 ALLOY S30400 (304) ALLOY S30403 (304L) ALLOY S31600 (316) ALLOT S31603 (316L)	ASWI A182 ASME SA182 F304 F304L F316 F316L	ASTM A213 ASME SA213 ASTM A249 ASTM A269 MIL T8504 MIL T8506
	JIS G4303 SUS 304 SUS 304L SUS 316 SUS 316L	JIS G3214 SUS 304 SUS 304L SUS 316 SUS 316L	JIS G3459
Steel	ASTM A108	ASTM A576	SAE J524B SAE J525B ASTM A179
	JIS G4051	JIS G3201	JIS G3452
Nickel Alloy Monel Inconel	ASTM B164	ASTM B164	ASTM B165
	ASTM B166 ASTM SB166	ASTM B564	ASTM B163

Table 6.

Fitting Sizes		
Identifier	Tube O.D.	P-NPT or Tube O.D.
1-1	1/16	1/16
2-2	1/8	1/8
2-4	1/8	1/4
3-2	3/16	1/8
3-4	3/16	1/4
4-2	1/4	1/8
4-4	1/4	1/4
4-6	1/4	3/8
4-8	1/4	1/2
5-2	5/16	1/8
5-4	5/16	1/4
6-2	3/8	1/8
6-4	3/8	1/4
6-6	3/8	3/8
6-8	3/8	1/2
8-4	1/2	1/4
8-6	1/2	3/8
8-8	1/2	1/2
8-12	1/2	3/4
10-6	5/8	3/8
10-8	5/8	1/2
10-12	5/8	3/4
12-8	3/4	1/2
12-12	3/4	3/4
14-12	7/8	3/4
14-16	7/8	1
16-12	1	3/4
16-16	1	1

Table 7.

Fitting Type Designator	
Identifier	Description
DLAA	Adaptor, AN
DLAF	Adaptor, Female
DLAM	Adaptor, Male
DLBTF	Branch Tee, Female
DLBTM	Branch Tee, Male
DLBA	Bulkhead Adaptor
DLBCF	Bulkhead Connector, Female
DLBCM	Bulkhead Connector, Male
DLBU	Bulkhead Union
DLBUA	Bulkhead Union, AN
DLC	Cap
DLCB	Connector, Buttweld
DLCF	Connector, Female
DLCM	Connector, Male
DLCW	Connector, Socketweld
DLCOM	Connector, 'O' Seal Pipe Thread. Male
DLCOS	Connector, 'O' Seal Straight Thread
DLEB	Elbow; Buttweld
DLEF	Elbow, Female
DLEM	Elbow, Male
DLE 45M	Elbow, 45 Degree, Male
DLEW	Elbow, Socketweld
DLFB	Ferrule, Back
DLEF	Ferrule, Front
DLFS	Ferrule, Set
DLN	Nut
DLP	Plug
DLPC	Part Connector
DLR	Reducer
DLRU	Reducing Union
DLRTF	Run Tee. Female
DLRTM	Run Tee. Male
DLU	Union
DLUA	Union, AN
DLUC	Union Cross
DLUE	Union Elbow
DLUT	Union Tee
DLHF-T	Hose Fitting Tube Adapter
DLHF-M	Hose Fitting Male Adapter
DLHF-D	Hose Fitting Tube Connector

VISUAL INDEX

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MALE THREAD

	Branch Tee, Male DLBTM		Elbow, 45 Degree, Male DLE45M	16
	Connector, Male DLCM			17
	Elbow, Male DLEM		Bulkhead Connector, Male DLBCM	18
	Run Tee, Male DLRTM			19

FEMALE THREAD

	Branch Tee, Female DLBTF			19
	Bulkhead Connector Female DLBCF		Connector, Female DLCF	20
	Run Tee, Female DLRTF		Elbow, Female DLEF	21

ADAPTOR

	Adaptor AN DLAA		Adaptor, Male DLAM	22
	Adaptor, Female DLAF		Port Connector DLPC	23
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SOCKET AND BUTT WELD FITTING

	Connector, Butt Weld DLCB		Elbow, Butt Weld DLEB	25
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"O"SEAL (STRAIGHT THREAD)

	Connector, Pipe Thread, Male DLCOM		Connector, Straight Thread, Male DLCOS	27
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PLUG AND CAP

	Cap DLC		Plug DLP	28
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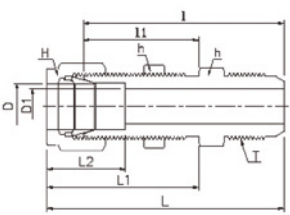
SPARE PART

	Ferrule, Set DLFS	28		Nut DLN	29
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HOSE FITTING

	Hose Fitting Tube Adapter DLHF-T		Hose Fitting Male Adapter DLHF-M	30
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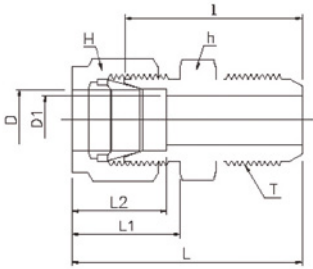
Bulkhead Union
AN
DLBUA



* These figures are for reference purposes only.

Part No.	Tube O.D D		AN Tube Flare Size		Stright Thread T(U)	D1 Min	Width across flat				L2	I	I1	L	L1	Panel Hole Drill Size	Panel Max Thick- ness
	in	mm	in	mm			h		H								
							in	mm	in	mm							
DLBUA4-4	1/4	6.35	1/4	6.35	7/16-20	4.31	5/8	15.87	9/16	14.28	15.24	46.48	26.16	53.84	33.52	11.50	10.16
DLBUA6-6	3/8	9.52	3/8	9.52	9/16-18	7.11	3/4	19.05	11/16	17.46	16.76	49.78	29.46	57.15	36.83	14.68	11.17
DLBUA8-8	1/2	12.70	1/2	12.70	3/4-16	9.90	5/16	23.81	7/8	22.22	22.86	55.62	31.75	65.78	41.91	19.44	12.7
DLBUA12-12	3/4	19.05	3/4	19.05	1-1/16-12	15.49	1-3/16	30.16	1-1/8	28.57	24.38	68.83	37.33	78.99	47.49	25.79	16.76
DLBUA16-16	1	25.40	1	25.40	1-5/16-12	21.33	1-5/8	41.27	1-1/2	38.10	31.24	80.26	45.21	92.45	57.40	33.73	19.05

Union,
AN
DLUA

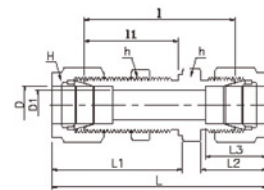


* These figures are for reference purposes only.

Part No.	Tube O.D D		AN Tube Flare Size		Stright Thread T(U)	D1 Min	Width across flat				L2	LI	I1	L
							h		H					
	in	mm	in	mm			in	mm	in	mm				
DLUA2-2	1/8	3.17	1/8	3.17	5/16-24	1.52	7/16	11.11	7/16	11.11	12.70	15.24	24.89	31.49
DLUA2-4	1/8	3.17	1/4	6.35	7/16-20	2.28	1/2	12.70	7/16	11.11	12.70	15.24	28.44	35.05
DLUA4-4	1/4	6.35	1/4	6.35	7/16-20	4.31	1/2	12.70	9/16	14.28	15.24	17.78	30.22	37.59
DLUA5-5	5/16	7.93	5/16	7.93	1/2-20	5.84	9/16	14.28	5/8	15.87	16.25	18.54	30.98	38.35
DLUA6-4	3/8	9.52	1/4	6.35	7/16-20	4.31	5/8	15.87	11/16	17.46	16.76	19.30	32.25	39.62
DLUA6-6	3/8	9.52	3/8	9.52	9/16-18	7.11	5/8	15.87	11/16	17.46	16.76	19.30	32.25	39.62
DLUA8-8	1/2	12.70	1/2	12.70	3/4-16	9.90	13/16	20.63	7/8	22.22	22.86	21.84	35.81	45.97
DLUA12-12	3/4	19.05	3/4	19.05	1-1/16-12	15.49	1-1/8	28.57	1-1/8	28.57	24.38	21.84	43.18	53.34
DLUA16-16	1	25.40	1	25.40	1-5/16-12	21.33	1-3/8	34.92	1-1/2	38.10	31.24	26.41	49.27	61.46

Bulkhead Union

DLBU

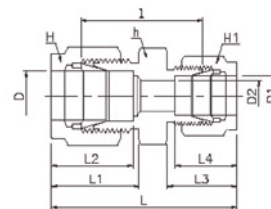


* These figures are for reference purposes only.

Part No.	Tube O.D D		D1 Min	Width across flat				L3	L2	I	I1	L	L1	Panel Hole Drill Size	Panel Max Thick- ness
				h		H									
	in	mm		in	mm	in	mm								
DLBU-2	1/8	3.17	2.28	1/2	12.70	7/16	11.11	12.70	15.24	38.10	24.63	51.30	31.24	8.33	12.70
DLBU-3	3/16	4.76	3.04	9/16	14.28	1/2	12.70	13.71	16.00	40.38	25.40	53.59	32.00	9.92	12.70
DLBU-4	1/4	6.35	4.82	5/8	15.87	9/16	14.28	15.24	17.78	42.92	26.16	57.65	33.52	11.50	10.16
DLBU-5	5/16	7.93	6.35	11/16	17.46	5/8	15.87	16.25	18.54	45.97	28.44	60.70	35.81	13.09	11.17
DLBU-6	3/8	9.52	7.11	3/4	19.05	11/16	17.46	16.76	19.30	47.49	29.46	62.23	36.83	14.68	11.17
DLBU-8	1/2	12.70	10.41	15/16	23.81	7/8	22.22	22.86	21.84	50.80	31.75	71.12	41.91	19.44	12.70
DLBU-10	5/8	15.87	12.70	1-1/16	26.98	1	25.40	24.38	21.84	52.32	32.51	72.64	42.67	22.62	12.70
DUBU-12	3/4	19.05	15.74	1-3/16	30.16	1-1/8	28.57	24.38	21.84	58.67	37.33	78.99	47.49	25.79	16.76
DLBU-14	7/8	22.22	18.28	1-3/8	34.92	1-1/4	31.75	25.90	21.84	64.26	42.92	84.58	53.08	28.97	19.05
DLBU-16	1	25.40	22.35	1-5/8	41.27	1-1/2	38.10	31.24	26.41	71.37	45.21	95.75	57.40	33.73	19.05

Reducing Union

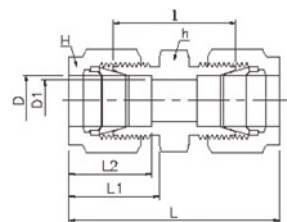
DLRU



* These figures are for reference purposes only.

Part No.	Tube O.D				D2 Min	Width across flat						L2	L4	L1	L3	I	L
	D		D1			h		H		H1							
	in	mm	in	mm		in	mm	in	mm	in	mm						
DLRU-3-2	3/16	4.76	1/8	3.17	2.28	7/16	11.11	1/2	12.70	7/16	11.11	13.71	12.70	16.00	15.24	23.36	36.57
DLRU-4-2	1/4	6.35	1/8	3.17	2.28	1/2	12.70	9/16	14.28	7/16	11.11	15.24	12.70	17.78	15.24	24.63	38.60
DLRU-4-3	1/4	6.35	3/16	4.76	3.04	1/2	12.70	9/16	14.28	1/2	12.70	15.24	13.71	17.78	16.00	25.40	39.37
DLRU-5-2	5/16	7.93	1/8	3.17	2.28	9/16	14.28	5/8	15.87	7/16	11.11	16.25	12.70	18.54	15.24	25.90	39.87
DLRU-5-4	5/16	7.93	1/4	6.35	4.82	9/16	14.28	5/8	15.87	9/16	14.28	16.25	15.24	18.54	17.78	27.43	42.16
DLRU-6-2	3/8	9.52	1/8	3.17	2.28	5/8	15.87	11/16	17.46	7/16	11.11	16.76	12.70	19.30	15.24	26.92	40.89
DLRU-6-4	3/8	9.52	1/4	6.35	4.82	5/8	15.87	11/16	17.46	9/16	14.28	16.76	15.24	19.30	17.78	28.44	43.18
DLRU-6-5	3/8	9.52	5/16	7.93	6.35	5/8	15.87	11/16	17.46	5/8	15.87	16.76	16.25	19.30	18.54	29.46	44.19
DLRU-8-2	1/2	12.70	1/8	3.17	2.28	13/16	20.63	7/8	22.22	7/16	11.11	22.86	12.70	21.84	15.24	28.44	45.21
DLRU-8-4	1/2	12.70	1/4	6.35	4.82	13/16	20.63	7/8	22.22	9/16	14.28	22.86	15.24	21.84	17.78	29.46	46.99
DLRU-8-6	1/2	12.70	3/8	9.52	7.11	13/16	20.63	7/8	22.22	11/16	17.46	22.86	16.76	17.78	19.30	30.98	48.51
DLRU-10-6	5/8	15.87	3/8	9.52	7.11	15/16	23.81	1	25.40	11/16	17.46	24.38	16.76	21.84	19.30	31.75	49.27
DLRU-10-8	5/8	15.87	1/2	12.70	10.41	15/16	23.81	1	25.40	7/8	22.22	24.38	22.86	21.84	21.84	31.75	52.07
DLRU-12-4	3/4	19.05	1/4	6.35	4.82	1-1/16	26.98	1-1/8	28.57	9/16	14.48	24.38	15.24	21.84	17.78	31.75	49.27
DLRU-12-6	3/4	19.05	3/8	9.52	7.11	1-1/16	26.98	1-1/8	28.57	11/16	17.46	24.38	16.76	21.84	19.30	33.27	50.80
DLRU-12-8	3/4	19.05	1/2	12.70	10.41	1-1/16	26.98	1-1/8	28.57	7/8	22.22	24.38	22.86	21.84	21.84	33.27	53.59
DLRU-12-10	3/4	19.05	5/8	15.87	12.70	1-1/16	26.98	1-1/8	28.57	1	25.40	24.38	24.38	21.84	21.84	33.27	53.59
DLRU-16-8	1	25.40	1/2	12.70	10.41	1-3/8	34.92	1-1/2	38.10	7/8	22.22	31.24	22.86	26.41	21.84	40.89	63.24
DLRU-16-12	1	25.40	3/4	19.05	15.74	1-3/8	34.92	1-1/2	38.10	1-1/8	28.57	31.24	24.38	26.41	21.84	40.38	62.73

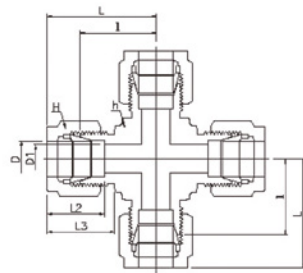
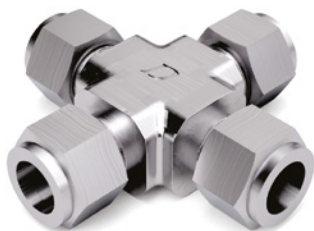
Union
DLU



* These figures are for reference purposes only.

Part No.	Tube O.D D		D1 Min	Width across flat				L2	L1	I	L
	h			H							
	in	mm		in	mm	in	mm				
DLU-2	1/8	3.17	2.28	7/16	11.11	7/16	11.11	12.70	15.24	22.35	35.56
DLU-3	3/16	4.76	3.04	7/16	11.11	1/2	12.70	13.71	16.00	24.13	37.33
DLU-4	1/4	6.35	4.82	1/2	12.70	9/16	14.28	15.24	17.78	26.16	40.89
DLU-5	5/16	7.93	6.35	9/16	14.28	5/8	15.87	16.25	18.54	28.19	42.92
DLU-6	3/8	9.52	7.11	5/8	15.87	11/16	17.46	16.76	19.30	30.22	44.95
DLU-8	1/2	12.70	10.41	13/16	20.63	7/8	22.22	22.86	21.84	30.98	51.30
DLU-10	5/8	15.87	12.70	15/16	23.81	1	25.40	24.38	21.84	31.75	52.07
DLU-12	3/4	19.05	15.74	1-1/16	26.98	1-1/8	28.57	24.38	21.84	33.27	53.59
DLU-14	7/8	22.22	18.28	1-3/16	30.16	1-1/4	31.75	25.90	21.84	35.05	55.37
DLU-16	1	25.40	22.35	1-3/8	34.92	1-1/2	38.10	31.24	26.41	40.38	64.77

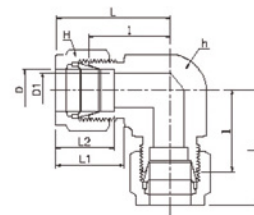
Union
Cross
DLUC



* These figures are for reference purposes only.

Part No.	TubeO.D D		D1 Min	Width across flat				L2	L3	I	L
	h			H							
	in	mm		in	mm	in	mm				
DLUC-1	1/16	1.59	1.27	3/8	9.52	5/16	7.93	8.63	10.92	14.00	17.88
DLUC-2	1/8	3.17	2.28	3/8	9.52	7/16	11.11	12.70	15.24	15.74	22.35
DLUC-3	3/16	4.76	3.04	1/2	12.70	1/2	12.70	13.71	16.00	17.78	24.38
DLUC-4	1/4	6.35	4.82	1/2	12.70	9/16	14.28	15.24	17.78	19.55	26.92
DLUC-5	5/16	7.93	6.35	9/16	14.28	5/8	15.67	16.25	18.54	21.33	28.70
DLUC-6	3/8	9.52	7.11	5/8	15.87	11/16	17.46	16.76	19.30	23.11	30.48
DLUC-8	1/2	12.70	10.41	13/16	20.64	7/8	22.22	22.86	21.84	25.90	36.06
DLUC-10	5/8	15.87	12.7	15/16	23.81	1	25.40	24.38	21.84	28.70	38.80
DLUC-12	3/4	19.05	15.74	1-1/16	26.98	1-1/8	28.58	24.38	21.84	29.71	39.87
DLUC-14	7/8	22.22	18.28	1-1/4	31.75	1-1/4	31.75	25.90	21.84	34.54	44.70
DLUC-16	1	25.40	22.35	1-27/64	36.12	1-1/2	38.10	31.24	26.41	36.83	49.02

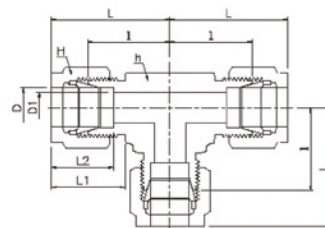
Union Elbow DLUE



* These figures are for reference purposes only.

Part No.	Tube O.D D		D1 Min	Width across flat				L2	L1	I	L
	h			H							
	in	mm		in	mm	in	mm				
DLUE-2	1/8	3.17	2.28	3/8	9.52	7/16	11.11	12.70	15.24	15.74	22.35
DLUB-3	3/16	4.76	3.04	1/2	12.70	1/2	12.70	13.71	16.00	17.78	24.38
DLUE-4	1/4	6.35	4.82	1/2	12.70	9/16	14.28	15.24	17.78	19.55	26.92
DLUE-5	5/16	7.93	6.35	9/16	14.28	5/8	15.87	16.25	18.54	21.33	28.70
DLUE-6	3/8	9.52	7.11	5/8	15.87	11/16	17.46	16.76	19.30	23.11	30.48
DLUE-8	1/2	12.70	10.41	13/16	20.63	7/8	22.22	22.86	21.84	25.90	36.06
DLUE-10	5/8	15.87	12.70	15/16	23.80	1	25.40	24.38	21.84	28.70	38.80
DLUE-12	3/4	19.05	15.74	1-1/16	26.98	1-1/8	28.57	24.38	21.84	29.71	39.87
DLUE-14	7/8	22.22	18.28	1-1/4	31.75	1-1/4	31.75	25.90	21.84	34.54	44.70
DLUE-16	1	25.40	22.35	1-27/64	36.12	1-1/2	38.10	31.24	26.41	36.83	49.02

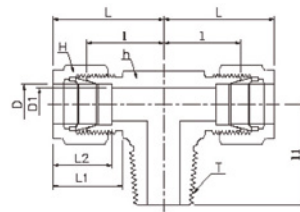
Union Tee DLUT



* These figures are for reference purposes only.

Part No.	Tube O.D D		D1 Min	Width across flat				L2	L1	I	L
	h			H							
	in	mm		in	mm	in	mm				
DLUT-2	1/8	3.17	2.28	3/8	9.52	7/16	11.11	12.70	15.24	15.74	22.35
DLUT-3	3/16	4.76	3.04	1/2	12.70	1/2	12.70	13.71	16.00	17.78	24.38
DLUT-4	1/4	6.35	4.82	1/2	12.70	9/16	14.28	15.24	17.78	19.55	26.92
DLUT-5	5/16	7.93	6.35	9/16	14.28	5/8	15.87	16.25	18.54	21.33	28.70
DLUT-6	3/8	9.52	7.11	5/8	15.87	11/16	17.46	16.76	19.30	23.11	30.48
DLUT-8	1/2	12.70	10.41	13/16	20.63	7/8	22.22	22.86	21.84	25.90	36.06
DLUT-10	5/8	15.87	12.70	15/16	23.80	1	25.40	24.38	21.84	28.70	38.80
DLUT-12	3/4	19.05	15.74	1-1/16	26.98	1-1/8	28.57	24.38	21.84	29.71	39.87
DLUT-14	7/8	22.22	18.28	1-1/4	31.75	1-1/4	31.75	25.90	21.84	34.54	44.70
DLUT-16	1	25.40	22.35	1-27/64	36.12	1-1/2	38.10	31.24	26.41	36.83	49.02

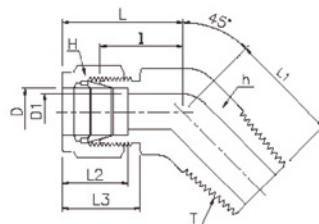
Branch Tee,
Male
DLBTM



* These figures are for reference purposes only.

Part No.	TubeO.D D		T (NPT)	D1 Min	Width across flat				L2	L1	I	L	I1
	in	mm			h		H						
					in	mm	in	mm					
DLBTM2-2N	1/8	3.17	1/8	2.28	1/2	12.70	7/16	11.11	12.70	15.24	18.30	24.91	18.90
DLBTM2-4N	1/8	3.17	1/4	2.28	1/2	12.70	7/16	11.11	12.70	15.24	18.30	24.91	23.36
DLBTM3-2N	3/16	4.76	1/8	3.04	1/2	12.70	1/2	12.70	13.71	16.00	17.78	24.38	17.78
DLBTM4-2N	1/4	6.35	1/8	4.82	1/2	12.70	9/16	14.28	15.24	17.78	19.55	26.92	18.79
DLBTM4-4N	1/4	6.35	1/4	4.82	1/2	12.70	9/16	14.28	15.24	17.78	19.71	27.08	23.87
DLBTM5-2N	5/16	7.93	1/8	4.82	9/16	14.28	5/8	15.87	16.25	18.54	22.35	29.71	20.82
DLBTM6-4N	3/8	9.52	1/4	7.11	5/8	15.87	11/16	17.46	16.76	19.30	23.11	30.48	25.40
DLBTM6-6N	3/8	9.52	3/8	7.11	11/16	17.46	11/16	17.46	16.76	19.30	23.87	31.24	26.20
DLBTM8-6N	1/2	12.70	3/8	10.41	13/16	20.63	7/8	22.22	22.86	21.84	25.90	36.06	28.19
DLBTM8-8N	1/2	12.70	1/2	10.41	13/16	20.63	7/8	22.22	22.86	21.84	25.90	36.06	33.02
DLBTM5-8N	5/8	15.87	1/2	11.93	15/16	23.80	1	25.40	24.38	21.84	27.94	38.10	35.05
DLBTM12-12N	3/4	19.05	3/4	15.74	1-1/16	26.98	1-1/8	28.57	24.38	21.84	28.19	38.35	35.30

Elbow, 45 Degree,
Male
DLE45M

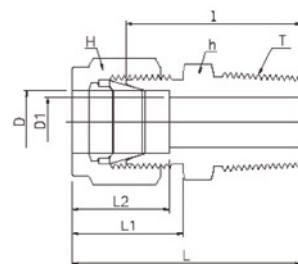


* These figures are for reference purposes only.

Part No.	Tube O.D D		T (NPT)	D1 Min	Width across flat				L2	L3	I	L	L1
	in	mm			h		H						
					in	mm	in	mm					
DLE45M4-2N	1/4	6.35	1/8	4.82	1/2	12.70	9/16	14.28	15.24	17.78	17.27	24.63	16.51
DLE45M4-4N	1/4	6,35	1/4	4.82	1/2	12.70	9/16	14.28	15.24	17.78	17.27	24.63	21.08
DLE45M6-2N	3/8	9.52	1/8	4.82	5/8	15.87	11/16	17.46	16.76	19.30	20.57	27.94	18.28
DLE45M6-4N	3/8	9.52	1/4	7.11	5/8	15.87	11/16	17.46	16.76	19.30	20.57	27.94	22.86
DLE45M6-6N	3/8	9.52	3/8	7.11	13/16	20.63	11/16	17.46	16.76	19.30	21.84	29.21	24.13
DLE45M8-6N	1/2	12.7	3/8	9.65	13/16	20.63	7/8	22.22	22.86	21.84	21.84	32.00	24.13

Connector, Male

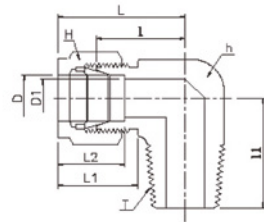
DLCM



* These figures are for reference purposes only.

Part No.	Tube O.D D		T (NPT)	D1 Min	Width across flat				L2	L1	I	L
	h				H							
	in	mm			in	mm	in	mm				
DLCM2-2N	1/8	3,17	1/8	2.28	7/16	11.11	7/16	11.11	12.70	15.24	23.87	30.48
DLCM2-4N	1/8	3.17	1/4	2.28	9/16	14.58	7/16	11.11	12.70	15.24	28.95	35.56
DLCM2-6N	1/8	3.17	3/8	2.28	11/16	17.46	7/16	11.11	12.70	15.24	29.21	35.81
DLCM2-8N	1/8	3.17	1/2	2.28	7/8	22.22	7/16	11.11	12.70	15.24	35.56	42.16
DLCM3-2N	3/16	4.76	1/8	3.04	7/16	11.11	1/2	12.70	13.71	16.00	24.63	31.24
DLCM3-4N	3/16	4.76	1/4	3.04	9/16	14.28	1/2	12.70	13.71	16.00	29.71	36.32
DLCM4-2N	1/4	6.35	1/8	4.82	1/2	12.70	9/16	14.28	15.24	17.78	25.40	32.76
DLCM4-4N	1/4	6.35	1/4	4.82	9/16	14.28	9/16	14.28	15.24	17.78	30.48	37.84
DLCM4-6N	1/4	6.35	3/8	4.82	11/16	17.46	9/16	14.28	15.24	17.78	30.98	38.35
DLCM4-8N	1/4	6.35	1/2	4.82	7/8	22.22	9/16	14.28	15.24	17.78	37.33	44.70
DLCM4-12N	1/4	6.35	3/4	4.82	1-1/16	26.98	9/16	14.28	15.24	17.78	38.86	46.22
DLCM5-2N	5/16	7.93	1/8	4.82	9/16	14.28	5/8	15.87	16.25	18.54	26.67	34.03
DLCM5-4N	5/16	7.93	1/4	6.35	9/16	14.28	5/8	15.87	16.25	18.54	31.24	38.60
DLCM5-6N	5/16	7.93	3/8	6.35	U/16	17.46	5/8	15.87	16.25	18.54	31.75	39.11
DLCM6-2N	3/8	9.52	1/8	4.82	5/8	15.87	11/16	17.46	16.76	19.30	27.94	35.30
DLCM6-4N	3/8	9.52	1/4	7.11	5/8	15.87	11/16	17.46	16.76	19.30	32.51	39.87
DLCM6-6N	3/8	9.52	3/8	7.11	11/16	17.46	11/16	17.46	16.76	19.30	32.51	39.87
DLCM6-8N	3/8	9.52	1/2	7.11	7/8	22.22	11/16	17.46	16.76	19.30	38.86	46.22
DLCM6-12N	3/8	9.52	3/4	7.11	1-1/16	26.98	11/16	17.46	16.76	19.30	40.38	47.75
DLCM8-2N	1/2	12.70	1/8	4.82	13/16	20.63	7/8	22.22	22.86	21.84	28.70	38.86
DLCM8-4N	1/2	12.70	1/4	7.11	13/16	20.63	7/8	22.22	22.86	21.84	33.27	43.43
DLCM8-6N	1/2	12.70	3/8	9.65	13/16	20.63	7/8	22.22	22.86	21.84	33.27	43.43
DLCM8-8N	1/2	12.70	1/2	10.41	7/8	22.22	7/8	22.22	22.86	21.84	38.86	49.02
DLCM8-12N	1/2	12.70	3/4	10.41	1-1/16	26.98	7/8	22.22	22.86	21.84	40.38	50.54
DLCM8-16N	1/2	12.70	1	10.41	1-3/8	34.92	7/8	22.22	22.86	21.84	46.99	57.15
DLCM10-6N	5/8	15.87	3/8	9.65	15/16	23.81	1	25.40	24.38	21.84	34.03	44.19
DLCM10-8N	5/8	15.87	1/2	11.93	15/16	23.81	1	25.40	24.38	21.84	38.86	49.02
DLCM10-12N	5/8	15.87	3/4	12.70	14/16	26.98	1	25.40	24.38	21.84	40.38	50.54
DLCM12-8N	3/4	19.05	1/2	11.93	1-1/16	26.98	1-1/8	28.57	24.38	21.84	40.38	50.54
DLCM12-12N	3/4	19.05	3/4	15.74	1-1/16	26.98	1-1/8	28.57	24.38	21.84	40.38	50.54
DLCM12-16N	3/4	19.05	1	15.74	1-3/8	34.92	1-1/8	28.57	24.38	21.84	16.99	57.15
DLCM14-12N	7/8	22.22	3/4	15.74	1-3/16	30.16	1-1/4	31.75	25.90	21.84	40.38	50.54
DLCM14-16N	7/8	22.22	1	18.28	1-3/8	34.92	1-1/4	31.75	25.90	21.84	46.99	57.15
DLCM16-8N	1	25.40	1/2	11.93	1-3/8	34.92	1-1/2	38.10	31.24	26.41	45.21	57.40
DLCM16-12N	1	25.40	3/4	15.74	1-3/8	34.92	1-1/2	38.10	31.24	26.41	45.21	57.40
DLCM16-16N	1	25.40	1	22.35	1-3/8	34.92	1-1/2	38.10	31.24	26.41	50.03	62.23

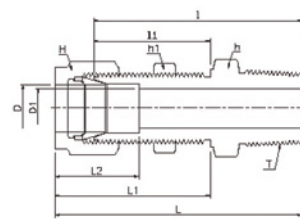
Elbow, Male DLEM



* These figures are for reference purposes only.

Part No.	Tube O.D D		T (NPT)	D1 Min	Width across flat				L2	L1	I	L	I1
	in	mm			h		H						
					in	mm	in	mm					
DLEM2-2N	1/8	3.17	1/8	2.28	1/2	12.70	7/16	11.11	12.70	15.24	18.30	24.91	18.90
DLEM2-4N	1/8	3.17	1/4	2.28	1/2	12.70	7/16	11.11	12.70	15.24	18.30	24.91	23.36
DLEM3-2N	3/16	4.76	1/8	3.04	1/2	12.70	1/2	12.70	13.71	16.00	18.79	25.40	18.79
DLEM3-4N	3/16	4.76	1/4	3.04	1/2	12.70	1/2	12.70	13.71	16.00	18.79	25.40	23.36
DLEM4-2N	1/4	6.35	1/8	4.82	1/2	12.70	9/16	14.28	15.24	17.78	19.10	26.47	19.10
DLEM4-4N	1/4	6.35	1/4	4.82	1/2	12.70	9/16	14.28	15.24	17.78	19.81	27.18	23.87
DLEM4-6N	1/4	6.35	3/8	4.82	11/16	17.46	9/16	14.28	15.24	17.78	22.35	29.71	28.40
DLEM4-8N	1/4	6.35	1/2	4.82	13/16	20.63	9/16	14.28	15.24	17.78	24.60	31.97	35.10
DLEM5-2N	5/16	7.93	1/8	4.82	9/16	14.28	5/8	15.87	16.25	18.54	21.33	28.70	19.81
DLEM5-4N	5/16	7.93	1/4	6.35	9/16	14.28	5/8	15.87	16.25	18.54	22.40	29.77	24.40
DLEM5-6N	5/16	7.93	3/8	6.35	11/16	17.46	5/8	15.87	16.25	18.54	23.11	30.48	28.40
DLEM6-2N	3/8	9.52	1/8	4.82	5/8	15.87	11/16	17.46	16.76	19.30	23.11	30.48	20.60
DLEM6-4N	3/8	9.52	1/4	7.11	5/8	15.87	11/16	17.46	16.76	19.30	23.11	30.48	25.40
DLEM6-6N	3/8	9.52	3/8	7.11	11/16	17.46	11/16	17.46	16.76	19.30	23.87	31.24	28.44
DLEM6-8N	3/8	9.52	1/2	7.11	13/16	20.63	11/16	17.46	16.76	19.30	23.80	31.42	33.02
DLEM6-12N	3/8	9.52	3/4	7.11	1-1/16	26.98	11/16	17.46	16.76	19.30	29.71	37.08	36.83
DLEM8-4N	1/2	12.70	1/4	7.11	13/16	20.63	7/8	22.22	22.86	21.84	25.90	36.06	28.30
DLEM8-6N	1/2	12.70	3/8	9.65	13/16	20.63	7/8	22.22	22.86	21.84	25.90	36.06	28.30
DLEM8-8N	1/2	12.70	1/2	10.41	13/16	20.63	7/8	22.22	22.86	21.84	25.90	36.06	33.02
DLEM8-12N	1/2	12.70	3/4	10.41	1-1/16	26.98	7/8	22.22	22.86	21.84	29.71	39.87	36.83
DLEM10-6N	5/8	15.87	3/8	9.65	15/16	26.98	1	25.40	24.38	21.84	26.90	37.06	29.40
DLEM10-8N	5/8	15.87	1/2	11.93	15/16	23.80	1	25.40	24.38	21.84	26.90	37.06	34.00
DLEM10-12N	5/8	15.87	3/4	12.70	1-1/16	26.98	1	25.40	24.38	21.84	29.71	39.87	36.83
DLEM12-8N	3/4	19.05	1/2	11.93	1-1/16	26.98	1-1/8	28.57	24.38	21.84	29.71	39.87	37.00
DLEM12-12N	3/4	19.05	3/4	15.74	1-1/16	26.98	1-1/8	28.57	24.38	21.84	29.71	39.87	36.83
DLEM14-12N	7/8	22.22	3/4	15.74	1-1/4	31.75	1-1/4	31.75	25.90	21.84	34.54	44.70	41.65
DLEM12-12N	1	25.40	3/4	15.74	1-27/64	36.00	1-1/2	38.10	31.24	26.41	36.83	49.02	42.20
DLEM12-16N	1	25.40	1	22.35	1-27/64	36.00	1-1/2	38.10	31.24	26.41	36.83	49.02	46.70

Bulkhead Connector, Male DLBCM

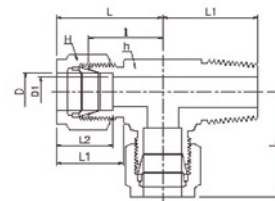


* These figures are for reference purposes only.

Part No.	Tube O.D D		T (NPT)	D1 Min	Width across flat						L2	I	I1	L	L1	Panel Hole Drill Size	Panel Max Thick rtess
					h		h1		H								
	in	mm			in	mm	in	mm	in	mm							
DLBCM2-2N	1/8	3.17	1/8	2.28	1/2	12.70	1/2	12.7	7/16	11.11	12.70	39.87	24.63	46.48	31.24	8.33	12.70
DLBCM4-2N	1/4	6.35	1/8	4.82	5/8	15.87	5/8	15.87	9/16	14.28	15.24	42.16	26.16	49.53	33.52	11.50	10.16
DLBCM4-4N	1/4	6.35	1/4	4.82	5/8	15.87	5/8	15.87	9/16	14.28	15.24	45.97	26.16	53.34	33.52	11.50	10.16
DLBCM6-4N	3/8	9.52	1/4	7.11	3/4	19.05	3/4	19.05	11/16	17.46	16.76	50.03	29.46	57.40	36.83	14.68	11.17
DLBCM8-6N	1/2	12.70	3/8	9.39	15/16	23.81	15/16	23.81	7/8	22.22	22.86	53.08	31.75	63.24	41.91	19.44	12.70
DLBCM8-8N	1/2	12.70	1/2	10.41	15/16	23.81	15/16	23.81	7/8	22.22	22.86	58.67	31.75	68.83	41.91	19.44	12.70

Run Tee, Male

DLRTM

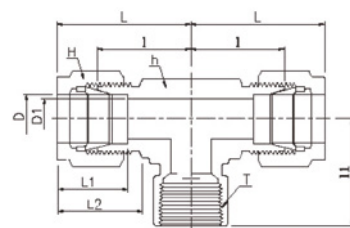


* These figures are for reference purposes only.

Part No.	Tube O.D D		T (NPT)	D1 Min	Width across flat				L2	L1	I	L	L1
					h		H						
					in	mm	in	mm					
DLRTM2-2N	1/8	3.17	1/8	2.28	1/2	12.70	7/16	11.11	12.70	15.24	18.30	24.91	18.90
DLRTM2-4N	1/8	3.17	1/4	2.28	1/2	12.70	7/16	11.11	12.70	15.24	18.30	24.91	23.36
DLRTM3-2N	3/16	4.76	1/8	3.04	1/2	12.70	1/2	12.70	13.71	16.00	17.78	24.38	17.78
DLRTM4-2N	1/4	6.35	1/8	4.82	1/2	12.70	9/16	14.28	15.24	17.78	19.55	26.92	18.79
DLRTM4-4N	1/4	6.35	1/4	4.82	1/2	12.70	9/16	14.28	15.24	17.78	19.71	27.08	23.87
DLRTM5-2N	5/16	7.93	1/8	4.82	9/16	14.28	5/8	15.87	16.25	18.54	22.35	29.71	20.82
DLRTM6-4N	3/8	9.52	1/4	7.11	5/8	15.87	1/16	17.46	16.76	19.30	23.11	30.48	25.40
DLRTM6-6N	3/8	9.52	3/8	7.11	11/16	17.46	11/16	17.46	16.76	19.30	23.87	31.24	26.20
DLRTM8-6N	1/2	12.70	3/8	9.65	13/16	20.63	7/8	22.22	22.86	21.84	25.90	36.06	28.19
DLRTM8-8N	1/2	12.70	1/2	10.41	13/16	20.63	7/8	22.22	22.86	21.84	25.90	36.06	33.02
DLRTM10-8N	5/8	15.87	1/2	11.93	15/16	23.80	1	25.40	24.38	21.84	27.94	38.10	35.05
DLRTM12-12N	3/4	19.05	3/4	15.74	1-1/16	26.98	1-1/8	28.57	24.38	21.84	28.19	38.35	35.30

Branch Tee, Female

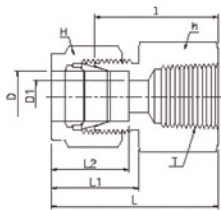
DLBTF



* These figures are for reference purposes only.

Part No.	Tube O.D D		T (NPT)	D1 Min	Width across flat				L2	L1	I	L	I1
					h		H						
					in	mm	in	mm					
DLBTF2-2N	1/8	3.17	1/8	2.28	1/2	12.70	7/16	11.11	12.70	15.24	18.03	24.38	19.05
DLBTF4-2N	1/4	6.35	1/8	4.82	1/2	12.70	9/16	14.28	15.24	17.78	19.55	26.92	19.05
DLBTF4-4N	1/4	6.35	1/4	4.82	11/16	17.46	9/16	14.28	15.24	17.78	22.35	29.71	22.35
DLBTF6-4N	3/8	9.52	1/4	7.11	11/16	17.46	11/16	17.46	16.76	19.30	23.87	31.24	22.35
DLBTF8-4N	1/2	12.70	1/4	10.41	13/16	20.63	7/8	22.22	22.86	21.84	25.90	36.06	22.35
DLBTF8-6N	1/2	12.70	3/8	10.41	13/16	20.63	7/8	22.22	22.86	21.84	25.90	36.06	22.35
DLBTF8-8N	1/2	12.70	1/2	10.41	1	25.40	7/8	22.22	22.86	21.84	28.70	38.86	28.44
DLBTF10-8N	5/8	15.87	1/2	12.70	1	25.40	1	25.40	24.38	21.84	28.70	38.86	28.44
DLBTF12-12N	3/4	19.05	3/4	15.74	1-1/4	31.75	1-1/8	28.57	24.38	21.84	34.54	44.70	31.75
DLBTF16-12N	1	25.40	3/4	22.35	1-27/64	36.00	1-1/2	38.10	31.24	26.41	36.83	49.02	31.75
DLBTF16-16N	1	25.40	1	22.35	1-11/16	42.86	1-1/2	38.10	31.24	26.41	44.20	53.59	38.10

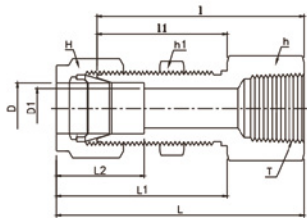
Connector,
Female
DLCF



* These figures are for reference purposes only.

Part No.	TubeO.D D		T (NPT)	D1 Min	Width across flat				L2	L1	I	L
	in	mm			h		H					
					in	mm	in	mm				
DLCF2-2N	1/8	3.17	1/8	2.28	9/16	14.28	7/16	11.11	12.70	15.24	22.09	28.70
DLCF2-4N	1/8	3.17	1/4	2.28	3/4	19.05	7/16	11.11	12.70	15.24	26.92	33.52
DLCF3-2N	3/16	4.76	1/8	3.04	9/16	14.28	1/2	12.70	13.71	16.00	23.11	29.71
DLCF4-2N	1/4	6.35	1/8	4.82	9/16	14.28	9/16	14.28	15.24	17.78	23.87	31.24
DLCF4-4N	1/4	6.35	1/4	4.82	3/4	19.05	9/16	14.28	15.24	17.78	28.44	35.81
DLCF4-6N	1/4	6.35	3/8	4.82	7/8	22.22	9/16	14.28	15.24	17.78	30.22	37.59
DLCF4-8N	1/4	6.35	1/2	4.82	1-1/16	26.98	9/16	14.28	15.24	17.78	35.05	42.41
DLCF5-2N	5/16	7.93	1/8	6.35	9/16	14.28	5/8	15.87	16.25	18.54	24.63	31.00
DLCF5-4N	5/16	7.93	1/4	6.35	3/4	19.05	5/8	15.87	16.25	18.54	29.46	36.83
DLCF6-2N	3/8	9.52	1/8	7.11	5/8	15.87	11/16	17.46	16.76	19.30	25.40	32.76
DLCF6-4N	3/8	9.52	1/4	7.11	3/4	19.05	11/16	17.46	16.76	19.30	30.22	37.59
DLCF6-6N	3/8	9.52	3/8	7.11	7/8	22.22	11/16	17.46	16.76	19.30	31.75	39.11
DLCF6-8N	3/8	9.52	1/2	7.11	1-1/16	26.98	11/16	17.46	16.76	19.30	36.57	43.94
DLCF6-12N	3/8	9.52	3/4	7.11	1-5/16	33.33	11/16	17.46	16.76	19.30	40.38	47.75
DLCF8-4N	1/2	12.70	1/4	10.41	1-3/16	20.63	7/8	22.22	22.86	21.84	30.22	40.38
DLCF8-6N	1/2	12.70	3/8	10.41	7/8	22.22	7/8	22.22	22.86	21.84	31.75	41.91
DLCF8-8N	1/2	12.70	1/2	10.41	1-1/16	26.98	7/8	22.22	22.86	21.84	36.57	46.73
DLCF8-12N	1/2	12.70	3/4	10.41	1-5/16	33.33	7/8	22.22	22.86	21.84	38.10	48.26
DLCF10-6N	5/8	15.87	3/8	12.70	15/16	23.80	1	25.40	24.38	21.84	31.75	41.91
DLCF10-8N	5/8	15.87	1/2	12.70	1-1/16	26.98	1	25.40	24.38	21.84	36.57	46.73
DLCF12-8N	3/4	19.05	1/2	15.74	1-1/16	26.98	1-1/8	28.57	24.38	21.84	36.57	46.73
DLCF12-12N	3/4	19.05	3/4	15.74	1-5/16	33.33	1-1/8	28.57	24.38	21.8	38.10	48.26
DLCF14-12N	7/8	22.22	3/4	18.28	1-5/16	33.33	1-1/4	31.75	25.90	21.84	39.62	49.78
DLCF16-12N	1	25.40	3/4	22.35	1-3/8	34.52	1-1/2	38.10	31.24	26.41	41.14	53.34
DLCF16-16N	1	25.40	1	22.35	1-5/8	41.27	1-1/2	38.10	31.24	26.41	50.03	62.23

Bulkhead Connetor,
Female
DLBCF

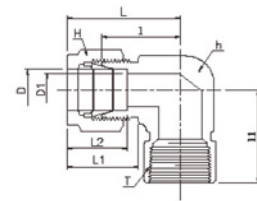


* These figures are for reference purposes only.

Part No.	TubeO.D D		T (NPT)	D1 Min	Width across flat						L2	I	I1	L	L1	Panel Hole Dril Size	Panel Max Thick rtess
					h		h1		H								
					in	mm	in	mm	in	mm							
DLBCF2-2N	1/8	3.17	1/8	2,28	9/16	14.28	1/2	12.70	7/16	11.11	12.70	38.10	24.63	44.70	31.24	8.33	12.70
DLBCF4-2N	1/4	6.35	1/8	4.82	5/8	15.87	5/8	15.87	9/16	14.28	15.24	39.62	26.16	46.99	33.52	11.50	10.16
DLBCF4-4N	1/4	6.35	1/4	4.82	3/4	19.05	5/8	15.87	9/16	14.28	15.24	44.45	26.16	51.81	33.52	11.50	10.16
DLBCF6-4N	3/8	9.52	1/4	7.11	3/4	19.05	3/4	19.05	11/16	17.46	16.76	47.75	29.46	55.11	36.83	14.68	11.17
DLBCF8-6N	1/2	12.70	3/8	10.41	15/16	23.81	15/16	23.81	7/8	22.22	22.86	51.56	31.75	61.72	41.91	19.44	12.70
DLBCF8-8N	1/2	12.70	1/2	10.41	1-1/16	26.98	15/16	23.81	7/8	22.22	22.86	56.38	31.75	66.54	41.91	19.44	12.70
DLBCF12-12N	3/4	19.05	3/4	15.74	1-1/4	31.75	1-3/16	30.16	1-1/8	28.57	24.38	63.60	38.30	73.51	47.21	25.79	16.76

Elbow, Female

DLEF

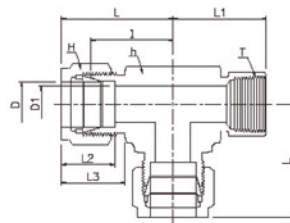


* These figures are for reference purposes only.

Part No.	Tube O.D D		T (NPT)	D1 Min	Width across flat				L2	L1	I	L	I1
					h		H						
					in	mm	in	mm					
DLEF2-2N	1/8	3.17	1/8	2.28	1/2	12.70	7/16	11.11	12.70	15.24	18.03	24.63	19.05
DUEF2-4N	1/8	3.17	1/4	2.28	11/16	17.46	7/16	11.11	12.70	15.24	20.82	27.43	22.35
DLEF3-2N	3/16	4.76	1/8	3.04	1/2	12.70	1/2	12.70	13.71	16.00	18.79	25.40	19.05
DLEF4-2N	1/4	6.35	1/8	4.82	1/2	12.70	9/16	14.28	15.24	17.78	19.55	26.92	19.05
DLEF4-4N	1/4	6.35	1/4	4.82	11/16	17.46	9/16	14.28	15.24	17.78	22.35	29.71	22.35
DLEF4-6N	1/4	6.35	3/8	4.82	13/16	20.63	9/16	14.28	15.24	17.78	24.38	31.75	22.35
DLEF4-8N	1/4	6.35	1/2	4.82	1	25.40	9/16	14.28	15.24	17.78	27.17	34.54	28.44
DLBF5-2N	5/16	7.93	1/8	6.35	9/16	14.28	5/8	15.87	16.25	18.54	21.33	28.70	19.05
DLEF5-4N	5/16	7.93	1/4	6.35	11/16	17.46	5/8	15.87	16.25	18.54	23.11	30.48	22.35
DLBF6-2N	3/8	9.52	1/8	7.11	5/8	15.87	11/16	17.46	16.76	19.30	23.11	30.48	19.05
DLEF6-4N	3/8	9.52	1/4	7.11	11/16	17.46	11/16	17.46	16.76	19.30	23.87	31.24	22.35
DLEF6-6N	3/8	9.52	3/8	7.11	13/16	20.63	11/16	17.46	16.76	19.30	25.90	33.27	22.35
DLEP6-8N	3/8	9.52	1/2	7.11	1	25.40	11/16	17.46	16.76	19.30	28.70	36.06	28.44
DLEF8-4N	1/2	12.70	1/4	10.41	13/16	20.63	7/8	22.22	22.86	21.84	25.90	36.06	22.35
DLEF8-6N	1/2	12.70	3/8	10.41	13/16	20.63	7/8	22.22	22.86	21.84	25.90	36.06	22.35
DLEF8-8N	1/2	12.70	1/2	10.41	1	25.40	7/8	22.22	22.86	21.84	28.70	38.86	28.44
DLEF10-6N	5/8	15.87	3/8	12.70	15/16	23.80	1	25.40	24.38	21.84	27.94	38.10	22.35
DLEF10-8N	5/8	15.87	1/2	12.70	1	25.40	1	25.40	24.38	21.84	29.71	39.87	28.44
DLEF12-8N	3/4	19.05	1/2	15.74	1-1/16	26.98	1-1/8	28.57	24.38	21.84	29.71	39.87	28.44
DLEF12-12N	3/4	19.05	3/4	15.74	1-1/4	31.75	1-1/8	28.57	24.38	21.84	34.54	44.70	31.75
DLEF14-12N	7/8	22.22	3/4	18.28	1-1/4	31.75	1-1/4	31.75	25.90	21.84	34.54	44.70	31.75
DLBF16-12N	1	25.40	3/4	22.35	1-27/64	36.00	1-1/2	38.10	31.24	26.41	36.83	49.02	31.75
DLEF16-16N	1	25.40	1	22.35	1-1/16	42.86	1-1/2	38.10	31.24	26.41	38.10	50.29	38.10

RUN Tee, Female

DLRTF

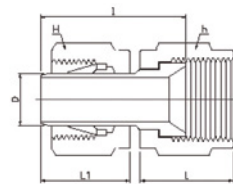


* These figures are for reference purposes only.

Part No.	Tube O.D D		T (NPT)	D1 Min	Width across flat				L2	L1	I	L	I1
					h		H						
					in	mm	in	mm					
DLRTF2-2N	1/8	3.17	1/8	2.28	1/2	12.70	7/16	11.11	12.70	15.24	18.03	24.63	19.05
DLRTT4-2N	1/4	6.35	1/8	4.82	1/2	12.70	9/16	14.28	15.24	17.78	19.55	26.92	19.05
DLRTF4-4N	1/4	6.35	1/4	4.82	11/16	17.46	9/16	14.28	15.24	17.78	22.86	29.71	22.35
DLRT6-4N	3/8	9.52	1/4	7.11	11/16	17.46	11/16	17.46	16.76	19.30	23.87	31.24	22.35
DLRTF8-6N	1/2	12.70	3/8	10.41	13/16	20.63	7/8	22.22	22.86	21.84	25.90	26.06	22.35
DLRTF8-8N	1/2	12.70	1/2	10.41	1	25.40	7/8	22.22	22.86	21.84	29.71	39.87	28.44
DLRTF12-12N	3/4	19.05	3/4	15.74	1-1/4	31.75	1-1/8	28.57	24.38	21.84	34.54	44.70	31.75

Adaptor, AN

DLAA

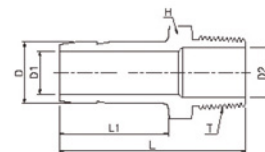


* These figures are for reference purposes only.

Part No.	Tube O.D D		AN Tube Flare Size		Stight Thread T(U)	Width across flat				L	L1	I
	in	mm	in	mm		h		H				
						in	mm	in	mm			
DLAA2-2	1/8	3.17	1/8	3.17	5/16-24	3/8	9.52	7/16	11.11	13.71	13.46	18.54
DLAA2-4	1/8	3.17	1/4	6.35	7/16-20	9/16	14.28	7/16	11.11	15.74	13.46	19.05
DLAA4-4	1/4	6.35	1/4	6.35	7/16-20	9/16	14.28	9/16	14.28	15.74	15.74	21.33
DLAA6-6	3/8	9.52	3/8	9.52	9/16-18	11/16	17.46	11/16	17.46	18.28	17.52	24.89
DLAA8-8	1/2	12.70	1/2	12.70	3/4-16	7/8	22.22	7/8	22.22	21.59	23.11	31.75

Adaptor, Male

DLAM

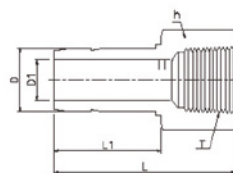


* These figures are for reference purposes only.

Part No.	Tube O.D D		T (NPT)	D2 Min	D1	Width across flat		L1	L
	in	mm				h			
						in	mm		
DLAM2-2N	1/8	3.17	1/8	4.57	1.77	7/16	11.11	13.45	29.50
DLAM2-4N	1/8	3.17	1/4	7.11	1.77	9/16	14.28	13.45	34.80
DLAM3-2N	3/16	4.76	1/8	4.57	3.04	7/16	11.11	14.20	30.22
DLAM3-4N	3/16	4.76	1/4	7.11	3.04	9/16	14.28	14.20	35.56
DLAM4-2N	1/4	6.35	1/8	4.57	4.57	7/16	11.11	15.75	31.80
DLAM4-4N	1/4	6.35	1/4	7.11	4.57	9/16	14.28	15.75	37.08
DLAM4-6N	1/4	6.35	3/8	10.41	4.57	11/16	17.46	15.75	37.84
DLAM4-8N	1/4	6.35	1/2	12.70	4.57	7/8	22.22	15.75	43.43
DLAM5-2N	5/16	7.93	1/8	4.57	6.35	7/16	11.11	16.80	32.76
DLAM5-4N	5/16	7.93	1/4	7.11	6.35	9/16	14.28	16.80	38.10
DLAM6-2N	3/8	9.52	1/8	4.57	7.11	7/16	11.11	17.50	33.50
DLAM6-4N	3/8	9.52	1/4	7.11	7.11	9/16	14.28	17.50	38.90
DLAM6-6N	3/8	9.52	3/8	10.41	7.11	11/16	17.46	17.50	39.60
DLAM6-8N	3/8	9.52	1/2	12.70	7.11	7/8	22.22	17.50	45.20
DLAM8-4N	1/2	12.70	1/4	7.11	9.90	9/16	14.28	23.20	44.50
DLAM8-6N	1/2	12.70	3/8	10.41	9.90	11/16	17.46	23.20	45.20
DLAM8-8N	1/2	12.70	1/2	12.70	9.90	7/8	22.22	23.20	50.50
DLAM10-6N	5/8	15.87	3/9	10.41	12.70	11/16	17.46	24.70	47.40
DLAM10-8N	5/8	15.87	1/2	12.70	12.70	7/8	22.22	24.70	52.30
DLAM10-12N	5/8	15.87	3/4	18.28	12.70	1-1/16	26.98	24.70	52.30
DLAM12-8N	3/4	19.05	1/2	12.70	14.98	7/8	22.22	24.70	52.30
DLAM12-12N	3/4	19.05	3/4	18.28	14.98	1-1/16	26.98	24.70	52.30
DLAM12-16N	3/4	19.05	1	22.35	14.98	1-3/8	34.92	24.70	57.91
DLAM14-12N	7/8	22.22	3/4	18.28	17.27	1-1/16	26.98	26.70	54.30
DLAM16-12N	1	25.40	3/4	18.28	20.06	1-1/16	26.98	31.70	58.70
DLAM16-16N	1	25.40	1	22.35	20.06	1-3/8	34.92	31.70	66.00

Adaptor, Female

DLAF

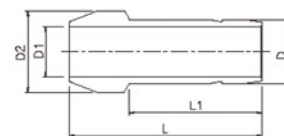


* These figures are for reference purposes only.

Part No.	Tube O.D D		T (NPT)	D1 Min	Width across flat		L1	L
	in	mm			h			
					in	mm		
DLAF2-2N	1/8	3.17	1/8	1.77	9/16	14.28	13.45	31.50
DLAF2-4N	1/8	3.17	1/4	1.77	3/4	19.05	13.45	35.30
DLAF3-2N	3/16	4.76	1/8	3.04	9/16	14.28	14.20	32.00
DLAF3-4N	3/16	4.76	1/4	3.04	3/4	19.05	14.20	35.81
DLAF4-2N	1/4	6.35	1/8	4.57	9/16	14.28	15.75	33.02
DLAF4-4N	1/4	6.35	1/4	4.57	3/4	19.05	15.75	37.10
DLAF4-6N	1/4	6.35	3/8	4.57	7/8	22.22	15.75	39.37
DLAF4-8N	1/4	6.35	1/2	4.57	1-1/16	26.98	15.75	45.50
DLAF5-2N	5/16	7.93	1/8	6.35	9/16	14.28	16.80	34.29
DLAF5-4N	5/16	7.93	1/4	6.35	3/4	19.05	16.80	37.59
DLAF6-2N	3/8	9.52	1/8	7.11	9/16	14.28	17.50	34.29
DLAF6-4N	3/8	9.52	1/4	7.11	3/4	19.05	17.50	38.10
DLAF6-6N	3/8	9.52	3/8	7.11	7/8	22.22	17.50	40.38
DLAF6-8N	3/8	9.52	1/2	7.11	1-1/16	26.98	17.50	46.73
DLAF8-4N	1/2	12.70	1/4	9.90	3/4	19.05	23.20	43.43
DLAF8-6N	1/2	12.70	3/8	9.90	7/8	22.22	23.20	45.46
DLAF8-8N	1/2	12.70	1/2	9.90	1-1/16	26.98	23.20	51.80
DLAF10-6N	5/8	15.87	3/8	12.70	7/8	22.22	24.70	48.26
DLAF10-8N	5/8	15.87	1/2	12.70	1-1/16	26.98	24.70	53.84
DLAF10-12N	5/8	15.87	3/4	12.70	1-1/4	31.75	24.70	55.37
DLAF12-8N	3/4	19.05	1/2	14.98	1-1/16	26.98	24.70	52.83
DLAF12-12N	3/4	19.05	3/4	14.98	1-1/4	31.75	24.70	54.86
DLAF12-16N	3/4	19.05	1	14.98	1-5/8	41.27	24.70	58.42
DLAF14-12N	7/8	22.22	3/4	17.27	1-1/4	31.75	26.70	57.15
DLAF16-12N	1	25.40	3/4	20.06	1-1/4	31.75	31.70	60.70
DLAF16-16N	1	25.40	1	20.06	1-5/8	41.27	31.70	64.26

Port Connector

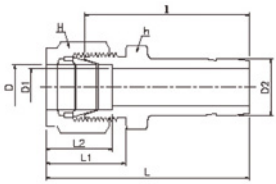
DLPC



* These figures are for reference purposes only.

Part No.	Tube O.D D		D1 Min	D2	L1	L
	in	mm				
DLPC-2	1/8	3.17	1.77	6.09	15.75	22.35
DLPC-4	1/4	6.35	4.57	9.39	18.79	24.63
DLPC-5	5/16	7.93	6.35	10.92	20.06	25.90
DLPC-6	3/8	9.52	7.11	12.70	20.32	26.16
DLPC-8	1/2	12.70	9.90	15.74	25.90	35.81
DLPC-12	3/4	19.05	14.98	22.09	27.68	37.33
DLPC-16	1	25.40	20.06	28.44	34.54	48.26

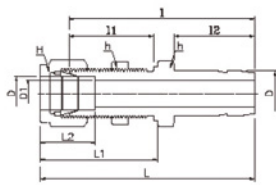
Reducer
DLR



* These figures are for reference purposes only.

Part No.	TubeO.D D				D1 Min	Width across flat				L2	L1	I	L
	D		D2			h		H					
	in	mm	in	mm		in	mm	in	mm				
DLR 2-2	1/8	3.17	1/8	3.17	2.03	7/16	11.11	7/16	11.11	12.70	15.24	26.92	33.52
DLR 2-3	1/8	3.17	3/16	4.76	2.28	7/16	11.11	7/16	11.11	12.70	15.24	27.68	34.29
DLR 2-4	1/8	3.17	1/4	6.35	2.28	7/16	11.11	7/16	11.11	12.70	15.24	29.46	36.06
DLR 2-6	1/8	3.17	3/8	9.52	2.28	7/16	11.11	7/16	11.11	12.70	15.24	30.98	37.59
DLR 2-8	1/8	3.17	1/2	12.70	2.28	9/16	14.28	7/16	11.11	12.70	15.24	37.59	44.19
DLR 3-2	3/16	4.76	1/8	3.17	2.03	7/16	11.11	1/2	12.70	13.71	16.00	28.19	34.79
DLR 3-4	3/16	4.76	1/4	6.35	3.04	7/16	11,11	1/2	12.70	13.71	16.00	30.48	37.08
DLR 4-2	1/4	6.35	1/8	3.17	2.03	1/2	12.70	9/16	14.28	15.24	17.78	29.46	36.83
DLR 4-3	1/4	6.35	3/16	4.76	3.04	1/2	12.70	9/16	14.28	15.24	17.78	30.22	37.59
DLR 4-4	1/4	6.35	1/4	6.35	4.82	1/2	12.70	9/16	14.28	15.24	17.78	31.75	39.11
DLR 4-5	1/4	6.35	5/16	7.93	4.82	1/2	12.70	9/16	14.28	15.24	17.78	32.51	36.87
DLR 4-6	1/4	6.35	3/8	9.52	4.82	1/2	12.70	9/16	14.28	15.24	17.78	33.27	40.64
DLR 4-8	1/4	6.35	1/2	12.70	4.82	9/16	14.28	9/16	14.28	15.24	17.78	38.86	46.22
DLR 4-10	1/4	6.35	5/8	15.87	4.82	11/16	17.46	9/16	14.28	15.24	17.78	40.64	48.00
DLR 4-12	1/4	6.35	3/4	19.05	4.82	13/16	20.63	9/16	14.28	15.24	17.78	40.38	47.75
DLR 5-6	5/16	7.93	3/8	9.52	6.35	9/16	14.28	5/8	15.87	16.25	18.54	34.54	41.91
DLR 5-8	5/16	7.93	1/2	12.70	6.35	9/16	14.28	5/8	15.87	16.25	18.54	40.13	47.79
DLR 6-4	3/8	9.52	1/4	6.35	4.82	5/8	15.87	11/16	17.46	16.76	19.30	34.03	41.40
DLR 6-6	3/8	9.52	3/8	9.52	7.11	5/8	15.87	11/16	17.46	16.76	19.30	35.81	43.18
DLR 6-8	3/8	9.52	1/2	12.70	7.11	5/8	15,87	11/16	17.46	16.76	19.30	41.16	48.51
DLR 6-10	3/8	9.52	5/8	15.87	7.11	11/16	17.46	11/16	17.46	16.76	19.30	42.92	50.29
DLR 6-12	3/8	9.52	3/4	19.05	7.11	13/16	20.63	11/16	17.46	16.76	19.30	42.92	50.29
DLR 8-4	1/2	12.70	1/4	6.35	4.82	13/16	20.63	7/8	22.22	22.86	21.84	34.79	44.95
DLR 8-6	1/2	12.70	3/8	9,52	7.11	13/16	20.63	7/8	22.22	22.86	21.84	36.57	46.73
DLR 8-8	1/2	12.70	1/2	12.70	9.90	13/16	20.63	7/8	22.22	22.86	21.84	42.16	52,32
DLR 8-10	1/2	12,70	5/8	15.87	10.41	13/16	20.63	7/8	22.22	22.86	21.84	43.68	53.84
DLR 8-12	1/2	12.70	3/4	19.05	10.41	13/16	20.63	7/8	22.22	22.86	21.84	43.68	53.84
DLR 8-16	1/2	12.70	1	25.40	10.41	1-1/16	26.98	7/8	22.22	22.86	21.84	50.03	60.19
DLR 10-12	5/8	15.87	3/4	19.05	12.70	15/16	23.81	1	25.40	24.38	21.84	44.45	54.16
DLR 10-14	5/8	15.87	7/8	22.22	12.70	15/16	23.81	1	25.40	24.38	21.84	45.97	56.13
DLR 10-16	5/8	15.87	1	25.40	12.70	1-1/16	26.98	1	25.40	24.38	21.84	50.80	60.96
DLR 12-8	3/4	19.05	1/2	12.70	9.90	1-1/16	26.98	1-1/8	28.57	24.38	21.84	44.45	54.61
DLR 12-16	3/4	19.05	1	25.40	15.74	1-1/16	26.98	1-1/8	28.57	24.38	21.84	52.32	62.48

Bulkhead
Adaptor
DLBA

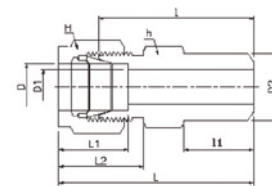


* These figures are for reference purposes only.

Part No.	TubeO.D D		D1 Min	Width across flat				L2	1	I1	I2	L	L1	Panel Hole Drill Size	Panel Max Thick ness
				h		H									
	in	mm		in	mm	in	mm								
DLBA 2-2	1/8	3.17	2.03	1/2	12.70	7/16	11.11	12.70	42.92	24.63	13.46	31.24	31.24	8.33	12.70
DLBA 4-4	1/4	6.35	4.82	5/8	15.87	9/16	14.28	15.24	48.51	26.16	15.74	33.52	33.52	11.50	10.16
DLBA 6-6	3/8	9.52	7.11	3/4	19.05	11/16	17.46	16.76	53.84	29.46	17.52	36.83	36.83	14.68	11.17
DLBA 8-8	1/2	12.70	10.41	15/16	23.81	7/8	22.22	22.86	62.73	31.75	23.11	41.91	41.91	19.44	12.70

Connector Butt weld

DLCB

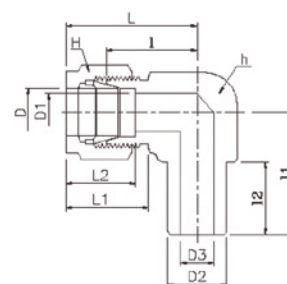


* These figures are for reference purposes only.

Part No.	Tube O.D D		Male Pipe Size		D1 Min	Width across flat				L1	L2	I	I1	L
	D		D2			h		H						
	in	mm	in	mm		in	mm	in	mm					
DLCB2-2P	1/8	3.17	1/8	10.30	2.28	7/16	11.11	7/16	11.11	12.70	15.24	23.87	9.65	31.24
DLCB3-2P	3/16	4.76	1/8	10.30	3.04	7/16	11.11	1/2	12.70	13.71	16.00	24.63	9.65	31.24
DLCB4-2P	1/4	6.35	1/8	10.30	4.82	1/2	12.70	9/16	14.28	15.24	17.78	25.40	9.65	32.76
DLCB4-4P	1/4	6.35	1/4	13.70	4.82	9/16	14.28	9/16	14.28	15.24	17.78	30.48	14.22	37.84
DLCB5-2P	5/16	7.93	1/8	10.30	5.08	9/16	14.28	5/8	15.87	16.25	18.54	26.67	9.65	34.03
DLCB5-4P	5/16	7.93	1/4	13.70	6.35	9/16	14.28	5/8	15.87	16.25	18.54	31.24	14.22	38.60
DLCB6-4P	3/8	9.52	1/4	13.70	7.11	4/7	15.87	11/16	17.46	16.76	19.30	32.51	14.22	39.87
DLCB6-6P	3/8	9.52	3/8	17.10	7.11	11/16	17.46	11/16	17.46	16.76	19.30	32.51	14.22	39.87
DLCB6-8P	3/8	9.52	1/2	21.30	7.11	7/8	22.22	11/16	17.46	16.76	19.30	38.86	11.05	43.23
DLCB8-6P	1/2	12.70	3/8	17.10	10.41	13/16	20.63	7/8	22.22	22.86	21.84	33.27	14.22	43.43
DLCB8-8P	1/2	12.70	1/2	21.30	10.41	7/8	22.22	7/8	22.22	22.86	21.84	38.86	19.05	49.02
DLCB8-12P	1/2	12.70	3/4	26.67	10.41	1-1/16	26.98	7/8	22.22	22.86	21.84	40.38	19.05	50.54
DLCB10-8P	5/8	15.87	1/2	21.30	12.70	15/16	23.81	1	25.40	24.38	21.84	38.86	19.05	49.02
DLCB12-12P	3/4	19.05	3/4	26.67	15.74	1-1/16	26.98	1-1/8	28.57	24.38	21.84	40.38	19.05	50.54
DLCB16-16P	1	25.40	1	33.40	22.35	1-3/8	34.92	1-1/2	38.10	31.24	26.41	50.03	23.87	62.23

Elbow, Butt weld

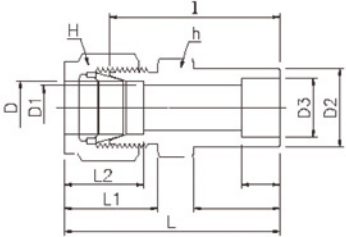
DLEB



* These figures are for reference purposes only.

Part No.	Tube O.D D		Male Pipe Size		D1 Min	Width across flat				L2	L1	I	I2	L	I1
	D		D2			h		H							
	in	mm	in	mm		in	mm	in	mm						
DLEB2-2P	1/8	3.17	1/8	10.30	4.82	1/2	12.70	9/16	14.28	15.24	17.78	19.55	9.65	26.92	18.79
DLEB4-4P	1/4	6.35	1/4	13.70	4.82	1/2	12.70	9/16	14.28	15.24	17.78	19.55	14.22	26.92	23.36
DLEB6-4P	3/8	9.52	1/4	13.70	7.11	5/8	15.87	11/16	17.46	16.76	19.30	23.11	14.22	30.48	25.40
DLEB8-8P	1/2	12.70	1/2	21.30	10.41	13/16	20.63	7/8	22.22	22.86	21.84	25.90	19.05	36.06	33.02
DLEB12-12P	3/4	19.05	3/4	26.67	15.74	1-1/16	26.98	1-1/8	28.57	24.38	21.84	29.71	19.05	39.87	36.83

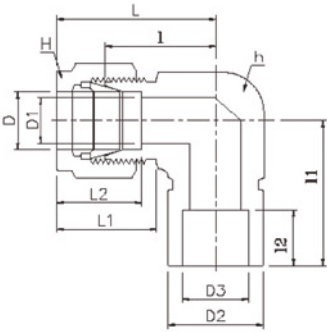
Connector,
Socket weld
DLCW



* These figures are for reference purposes only.

Part No.	Tube O.D D		D1 Min	D2	Width across flat				L2	L1	I	I1	I2	L
	D				h		H							
	in	mm			in	mm	in	mm						
DLCW 2-2	1/8	3.17	2.28	7.87	7/16	11.11	7/16	11.11	12.70	15.24	22.35	8.63	6.35	28.95
DLCW 4-4	1/4	6.35	4.82	11.17	1/2	12.70	9/16	14.28	15.24	17.78	26.16	10.41	7.87	33.52
DLCW 6-6	3/8	9.52	7.11	15.74	5/8	15.87	11/16	17.46	16.76	19.30	30.22	11.93	9.65	37.59
DLCW 8-8	1/2	12.70	10.41	19.05	13/16	20.63	7/8	22.22	22.86	21.84	30.98	11.93	12.70	41.14
DLCW 12-12	3/4	19.05	15.74	26.67	1-1/16	26.98	1-1/8	28.57	24.38	21.84	33.27	11.93	14.22	43.43
DLCW 16-16	1	25.40	22.35	33.27	1-3/8	34.92	1-1/2	38.10	31.24	26.41	40.38	14.22	19.05	52.57

Elbow,
Socket weld
DLEW

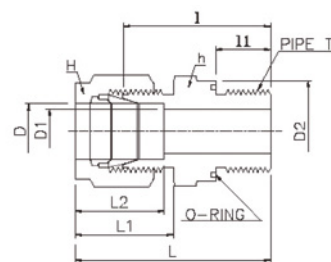


* These figures are for reference purposes only.

Part No.	Tube O.D D		D1 Min	D2	Width across flat				L2	L1	I	I2	L	I1
	D				h		H							
	in	mm			in	mm	in	mm						
DLBW4-4	1/4	6.35	4.82	12.70	1/2	12.70	9/16	14.28	15.24	17.78	19.55	7.87	26.92	19.55
DLEW6-6	3/8	9.52	7.11	15.74	5/8	15.87	11/16	17.46	16.76	19.30	23.11	9.65	30.48	23.11
DLBW8-8	1/2	12.70	10.41	20.57	13/16	20.63	7/8	22.22	22.86	21.84	25.90	12.70	36.06	25.90

Connector, 'O' Seal Pipe Thread, Male

DLCOM

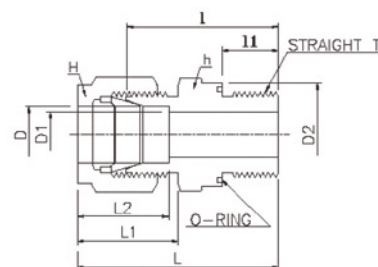


* These figures are for reference purposes only.

Part No.	Tube O.D D		PIPE T	D1	h	H	L	L1	L2	I	I1	D2	O-RING
	D												
	in	mm											
DLOP2-2N	1/8	3.17	1/8	2.28	3/4	7/16	32.76	15.24	12.70	26.16	7.11	18.8	-013
DLOP4-2N	1/4	6.35	1/4	4.82	3/4	9/16	35.05	17.78	15.24	27.68	7.11	18.8	-013
DLOP4-4N	1/4	6.35	1/4	4.82	15/16	9/16	38.35	17.78	15.24	30.98	9.65	23.62	-113
DLOP6-4N	3/8	9.52	3/8	7.11	15/16	11/16	39.87	19.30	16.76	32.51	9.65	23.62	-113
DLOP6-6N	3/8	9.52	3/8	7.11	1-1/8	11/16	41.40	19.30	16.76	34.03	10.41	28.45	-116
DLOP6-8N	3/8	9.52	3/8	7.11	1-5/16	11/16	46.99	19.30	16.76	39.62	13.46	33.02	-118
DLOP8-8N	1/2	12.7	1/2	10.41	1-5/16	7/8	49.78	21.84	22.86	39.62	13.46	33.02	-118

Connector, 'O' Seal Straight Thread, Male

DLCOS

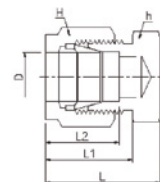


* These figures are for reference purposes only.

Part No.	Tube O.D D		Width across flat										
	D		STRAIGHT T	D1	h	H	L	L1	L2	I	I1	D2	O-RING
	in	mm											
DCOS2-2U	1/8	3.17	5/16-20	2.28	9/16	7/16	32.76	15.24	12.70	26.16	8.63	13.97	-011
DCOS3-3U	3/16	4.76	3/8-24	3.04	5/8	1/2	34.29	16.00	13.71	27.68	9.65	15.75	-012
DCOS4-4U	1/4	6.35	7/16-20	4.82	3/4	9/16	38.35	17.78	15.24	30.98	10.41	18.8	-113
DCOS5-5U	5/16	7.93	1/2-20	6.35	7/8	5/8	40.64	18.54	16.25	33.27	11.17	21.85	-112
DCOS6-6U	3/8	9.52	9/16-18	7.11	15/16	11/16	42.41	19.3	16.76	35.05	11.93	23.62	-113
DCOS8-8U	1/2	12.7	3/4-16	10.41	1-1/8	7/8	45.97	21.84	22.86	35.81	11.93	28.45	-116
DCOS12-12U	3/4	19.05	1-1/16-12	15.74	1-1/2	1-1/8	52.32	21.84	24.38	42.16	14.22	37.85	-121
DCOS16-16U	1	25.4	1-5/16-12	22.35	1-3/4	1-1/2	58.16	26.41	31.24	45.97	14.52	44.2	-125

Cap DLC

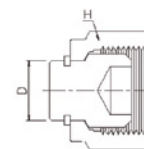
Part No.	Tube O.D D		Width across flat				L2	L1	I	L
	D		h		H					
	in	mm	in	mm	in	mm				
DLC-2	1/8	3.17	7/16	11.11	7/16	11.11	12.70	15.24	13.46	20.06
DLC-3	3/16	4.76	7/16	11.11	1/2	12.70	13.71	16.00	14.73	21.33
DLC-4	1/4	6.35	1/2	12.70	9/16	14.28	15.24	17.78	16.00	23.26
DLC-5	5/16	7.93	9/16	14.28	5/8	15.87	16.25	18.95	17.01	24.38
DLC-6	3/8	9.52	5/8	15.87	11/16	17.46	16.76	19.30	18.28	25.65
DLC-8	1/2	12.70	13/16	20.63	7/8	22.22	22.86	21.84	19.05	29.21
DLC-10	5/8	15.87	15/16	23.81	1	25.40	24.38	21.84	19.81	29.97
DLC-12	3/4	19.05	1-1/16	26.98	1-1/8	28.57	24.38	21.84	21.33	31.49
DLC-14	7/8	22.22	1-3/16	30.16	1-1/4	31.75	25.90	21.84	23.87	34.03
DLC-16	1	25.40	1-3/8	34.92	1-1/2	38.10	31.24	26.41	26.16	38.35



* These figures are for reference purposes only.

Plug DLP

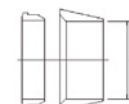
Part No.	Tube O.D D		Width across flat	
	D		h	
	in	mm	in	mm
DLP-2	1/8	3.17	7/16	11.11
DLP-3	3/16	4.76	1/2	12.70
DLP-4	1/4	6.35	9/16	14.28
DLP-5	5/16	7.93	5/8	15.87
DLP-6	3/8	9.52	11/16	17.46
DLP-8	1/2	12.7	7/8	22.22
DLP-10	5/8	15.87	1	25.40
DLP-12	3/4	19.05	1-1/8	28.57
DLP-14	7/8	22.22	1-1/4	31.75
DLP-16	1	25.40	1-1/2	38.10



* These figures are for reference purposes only.

Ferrule Set DLFS

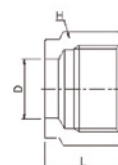
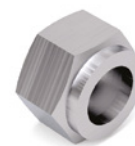
Part No.	Tube O.D D	
	D	
	in	mm
DLFS-2	1/8	3.17
DLFS-3	3/16	4.76
DLFS-4	1/4	6.35
DLFS-5	5/16	7.93
DLFS-6	3/8	9.52
DLFS-8	1/2	12.70
DLFS-10	5/8	15.87
DLFS-12	3/4	19.05
DLFS-14	7/8	22.22
DLFS-16	1	25.40



* These figures are for reference purposes only.

Nut DLN

Part No.	Tube O.D D		Width across flat		L
	D		h		
	in	mm	in	mm	
DLN-2	1/8	3.17	7/16	11.11	11.93
DLN-3	3/16	4.76	1/2	12.70	11.93
DLN-4	1/4	6.35	9/16	14.28	12.70
DLN-5	5/16	7.93	5/8	15.87	13.46
DLN-6	3/8	9.52	11/16	17.46	14.22
DLN-8	1/2	12.70	7/8	22.22	17.52
DLN-10	5/8	15.87	1	25.40	17.52
DLN-12	3/4	19.05	1-1/8	28.57	17.52
DLN-14	7/8	22.22	1-1/4	31.75	17.52
DLN-16	1	25.40	1-1/2	38.10	20.57



* These figures are for reference purposes only.

Ferrule, Back DLFB

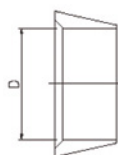
Part No.	Tube O.D D	
	D	
	in	mm
DLFB-2	1/8	3.17
DLFB-3	3/16	4.76
DLFB-4	1/4	6.35
DLFB-5	5/16	7.93
DLFB-6	3/8	9.52
DLFB-8	1/2	12.70
DLFB-10	5/8	15.87
DLFB-12	3/4	19.05
DLFB-14	7/8	22.22
DLFB-16	1	25.40



* These figures are for reference purposes only.

Ferrule, Front DLFF

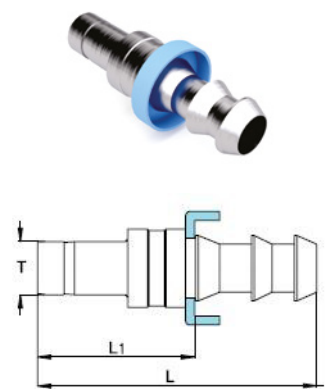
Part No.	Tube O.D D	
	D	
	in	mm
DLEF-2	1/8	3.17
DUBF-3	3/16	4.76
DLEF-4	1/4	6.35
DLEF-5	5/16	7.93
DLEF-6	3/8	9.52
DLEF-8	1/2	12.70
DLEF-10	5/8	15.87
DLEF-12	3/4	19.05
DLEF-14	7/8	22.22
DLEF-16	1	25.40



* These figures are for reference purposes only.

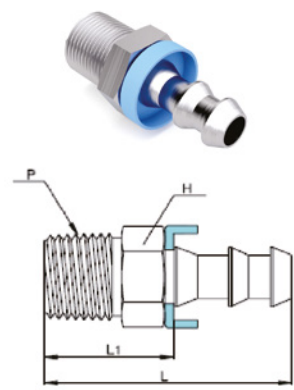
Hose Fitting Tube Adapter **DLHF-T**

Part No.	Hose Size	T	L	L1
		Tube	Overall	Cut-off
		OD	Length	Length
DLHF4-4	4	1/4"	1.91"	1.15"
DLHF6-6	6	3/8"	2.02"	1.15"
DLHF8-8	8	1/2"	2.42"	1.37"
DLHF12-12	12	3/4"	3.14"	1.49"
DLHF16-16	16	1"	3.58"	1.89"



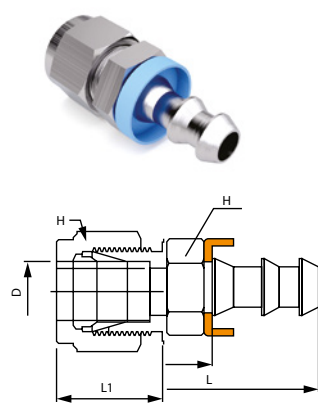
Hose Fitting Male Adapter **DLHF-M**

Part No.	Hose Size	P	H	L	L1
		NPT	Hex	Overall	Cut-off
		PT	Flat	Length	Length
DLHF4-4N®	4	1/4"	9/16"	1.68"	0.92"
DLHF6-4N®	6	3/8"	11/16"	1.80"	0.93"
DLHF6-6N®	8	1/2"	11/16"	1.80"	0.93"
DLHF8-8N®	12	3/4"	7/8"	2.19"	1.15"



Hose Fitting Tube Connector **DLHF-D**

Part No.	Hose Size	D	H	L	L1
		TUBE	Hex	Overall	Cut-off
		OD	Flat	Length	Length
DLHF4-4D	4	1/4"	9/16"	1.07"	0.70"
DLHF6-6D	6	3/8"	11/16"	1.19"	0.76"
DLHF8-8D	8	1/2"	7/8"	1.44"	0.86"
DLHF12-12D	12	3/4"	1-1/8"	2.10"	0.86"



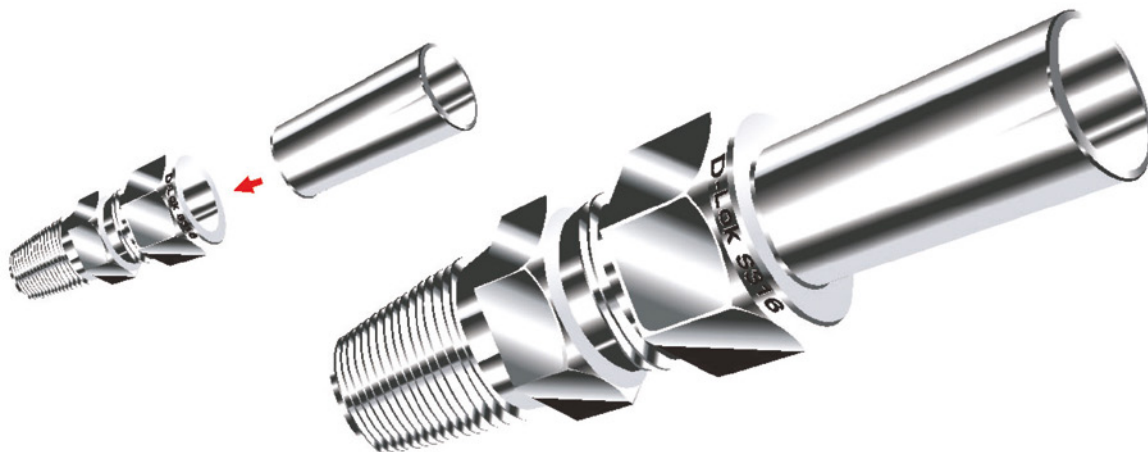
Max operating : 362Psi (25 bar)
Operating Temp Range : 56°(-49°) to 300°(149°)

Installation

ASSEMBLY INSTRUCTIONS

D-lok tube fittings can be installed by using readily available wrenches.

1. Insert the tubing into the D-lok fitting until the tubing sits on the shoulder of the body. Make sure the nut is finger-tight.
2. From the finger-tight position, rotate the nut $\frac{3}{4}$ for sizes between $\frac{1}{16}$ -inch and $\frac{3}{16}$ -inch; and $1\frac{1}{4}$ turn for the sizes between $\frac{1}{4}$ -inch and 1-inch

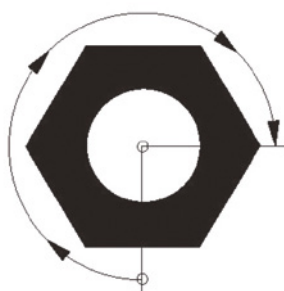


Reassembly Instructions

D-lok tube fittings can be assembled and disassembled repeatedly. The following instructions should be carried out to reassemble a fitting.

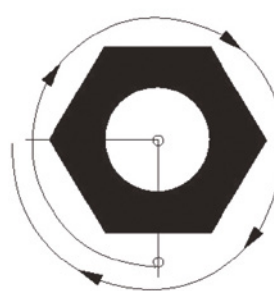
1. Insert the tubing with the previously set ferrules into the D-lok fitting until the tubing sits on the shoulder of the body. Make sure the nut is finger-tight.
2. Using a wrench, from the finger-tight position, rotate the nut $\frac{3}{4}$ for sizes between $\frac{1}{16}$ -inch and $\frac{3}{16}$ -inch; and $1\frac{1}{4}$ turn for the size between $\frac{1}{4}$ -inch and 1-inch until snug. Then tighten a little more.

Size 1 thru ($\frac{1}{16}$ " thru $\frac{3}{16}$ ")



Only $\frac{3}{4}$ turn from finger-tight position

Size 4 thru 16 ($\frac{1}{4}$ " thru 1")



$1\frac{1}{4}$ turn from finger-tight position

INSTRUMENT PIPE FITTINGS INCH SIZE

Features

D-lok Pipe fittings have been specifically designed for use on instrumentation, process and control systems, equipment employed in chemical, petroleum, nuclear power generation, and pulp and paper plants. The D-lok Pipe fitting has also found extensive application in other fields where a very high quality Pipe fitting is required.

Temperature Ratings

SS316	-325°F ~ 1200°F (-198°C ~ 648°C)
Brass	-325°F ~ 400°F (-198°C ~ 204°C)
Carbon steel	-20°F ~ 350°F (-29°C ~ 176°C)

PTFE tape applie to male threads limits the maximum temperature+450°F (232°C)

Part Number Example & How to Order

1) ALL PORTS BOTH ENDS TYPE

DC	T	8N	SS316
DYCON (Pipe Fitting)	Name of Fitting (DYCON TEE)	Pipe Thread Size	Material

2) REDUCED TYPE

DC	HRN	8	4N	BRASS
DYCON (Pipe Fitting)	Name of Fitting (HEX REDUCING NIPPLE)	Pipe Thread Size	REDUCING Size	Material

3) ADAPTER TYPE

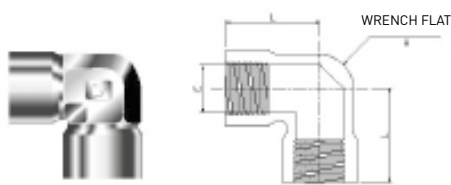
DC	RA	4	8N	STEEL
DYCON (Pipe Fitting)	Name of Fitting (REDUCING ADAPTER)	Female Pipe Thread	Pipe Thread	Material

Pressure Ratings

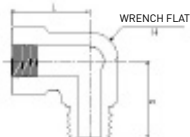
Size Designator	PIPE Size	316 Stainless Steel				Brass				Carbon steel			
		Male		Female		Male		Female		Male		Female	
		Psig	bar	Psig	bar	Psig	bar	Psig	bar	Psig	bar	Psig	bar
2	1/8	10,000	689	6500	447	5000	344	3200	220	10,000	689	6500	447
4	1/4	8000	551	6600	454	4000	275	3300	227	8000	551	6600	454
6	3/8	7800	537	5300	365	3900	268	2600	179	7800	537	5300	365
8	1/2	7700	530	4900	337	3800	261	2400	165	7700	530	4900	337
12	3/4	7300	502	4600	316	3600	248	2300	158	7300	502	4600	316
16	1	5300	365	4400	303	2600	179	2200	151	5300	365	4400	303

- Working pressures calculated are reference only
- Working pressures calculated as per process Piping Code ANSI B31.3 with allowable stress 20,000psi / SS316, 10,000psi / Brass, 20,000psi/Carbon steel and for working pressure in accordance with power Piping Code ANSI B31.1 simply calculate applying a factor of 94(94%) to above chart
- Due to larger outer diameter of female threads pressure ratings of female are lower than male threads
- To determine KPa, multiply psig by 6.89
- Pressure ratings of Hex Bushing(H-SHB) are not covered with this rating table therefore indicated in its dimensional table

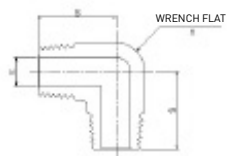
ELBOW (DCE) female NPT both ends.



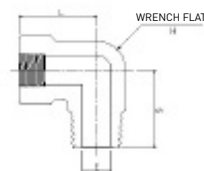
PART NO.	PIPE SIZE	L	E	WRENCH FLAT
DCE-2N	1/8	26.4	8.1	12.7
DCE-4N	1/4	28.9	10.6	17.46
DCE-6N	3/8	35.3	14.3	20.64
DCE-8N	1/2	38.8	17.5	25.4
DCE-12N	3/4	45.2	23.5	31.8
DCE-16N	1	48.52	29.7	42.9

REDUCIGN STREET ELBOW (DCRSE) female to male NPT.

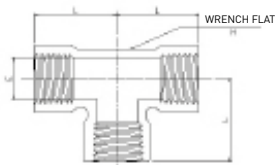
PART NO.	PIPE SIZE	MALE PIPE SIZE	L	S	E	WRENCH FLAT
DCRSE4-2N	1/4	1/8	29.0	22.4	4.8	17.46
DCRSE6-4N	3/8	1/4	34.5	28.2	7.1	20.64
DCRSE8-4N	1/2	1/4	37.0	30.5	7.1	25.4
DCRSE8-6N	1/2	3/8	37.0	30.5	9.6	25.4
DCRSE12-8N	3/4	1/2	46.5	39.6	11.9	31.8
DCRSE16-8N	1	1/2	48.8	44.5	11.9	42.9
DCRSE16-12N	1	3/4	48.8	44.5	15.7	42.9

MALE ELBOW (DCME) male NPT bot ends.

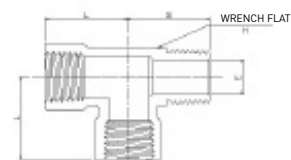
PART NO.	PIPE SIZE	S	E	WRENCH FLAT
DCME-2N	1/8	19.1	4.83	12.7
DCME-4N	1/4	27.0	7.11	15.8
DCME-6N	3/8	27.0	9.5	17.46
DCME-8N	1/2	34.2	11.9	20.64
DCME-12N	3/4	35.3	15.7	25.4
DCME-16N	1	44.5	22.4	31.8

STREET ELBOW (DCSE) female to male NPT.

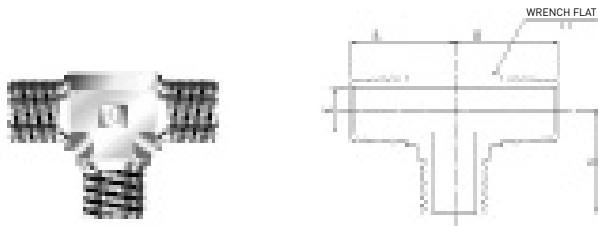
PART NO.	PIPE SIZE	L	S	E	WRENCH FLAT
DCSE-2N	1/8	26.4	19.8	4.8	12.7
DCSE-4N	1/4	28.9	28.9	7.11	17.46
DCSE-6N	3/8	35.3	33.0	9.45	20.64
DCSE-8N	1/2	38.8	35.3	11.94	25.4
DCSE-12N	3/4	45.2	42.8	15.7	31.8
DCSE-16N	1	48.5	49.3	22.4	42.9

TEE (DCT) female NPT all ports.

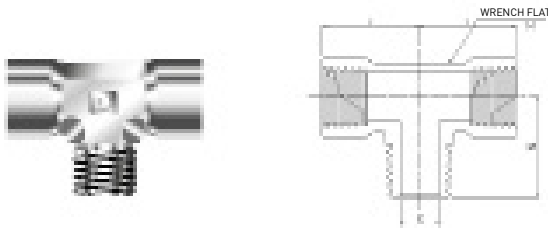
PART NO.	PIPE SIZE	L	E	WRENCH FLAT
DCT-2N	1/8	23.4	8.0	12.7
DCT-4N	1/4	28.9	10.6	17.46
DCT-6N	3/8	35.3	14.3	20.64
DCT-8N	1/2	35.8	17.4	25.4
DCT-12N	3/4	46.5	23.5	31.8
DCT-16N	1	48.5	29.7	42.9

STREET TEE (DCST) female to male NPT.

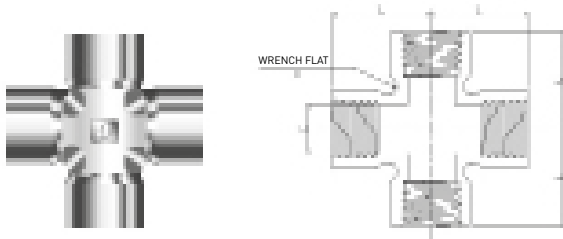
PART NO.	PIPE SIZE	L	S	E	WRENCH FLAT
DCST-2N	1/8	23.4	19.6	4.83	12.7
DCST-4N	1/4	28.9	28.9	7.11	17.46
DCST-6N	3/8	35.3	28.2	9.45	20.64
DCST-8N	1/2	35.8	35.3	11.94	25.4
DCST-12N	3/4	46.5	39.6	15.7	31.8
DCST-16N	1	48.8	49.3	22.4	42.9

MALE TEE (DCTM) male NPT all ports.

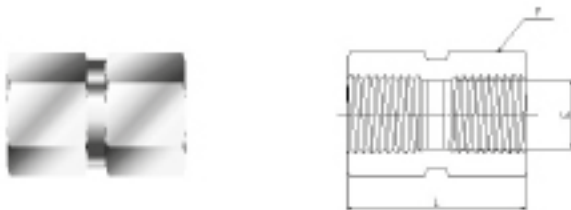
PART NO.	PIPE SIZE	S	E	WRENCH FLAT
DCTM-2N	1/8	19.1	4.83	12.7
DCTM-4N	1/4	25.4	7.11	15.8
DCTM-6N	3/8	26.7	9.65	17.46
DCTM-8N	1/2	33.3	11.9	20.64
DCTM-12N	3/4	35.3	15.7	25.4
DCTM-16N	1	44.5	22.4	31.8

BRANCN TEE (DCBT) female to female to male NPT.

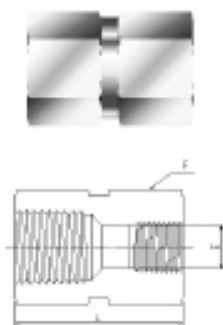
PART NO.	PIPE SIZE	L	S	E	WRENCH FLAT
DCBT-2N	1/8	23.4	19.6	4.83	12.7
DCBT-4N	1/4	28.9	28.9	7.11	17.46
DCBT-6N	3/8	35.3	30.2	9.4	20.64
DCBT-8N	1/2	35.8	35.3	11.94	25.4
DCBT-12N	3/4	46.5	39.6	15.7	31.8
DCBT-16N	1	48.5	49.3	22.4	42.9

CROSS (DCCS) female NPT all ports.

PART NO.	PIPE SIZE	L	E	WRENCH FLAT
DCCS-2N	1/8	26.4	8.3	12.7
DCCS-4N	1/4	28.9	10.7	17.46
DCCS-6N	3/8	35.3	14.1	20.64
DCCS-8N	1/2	38.8	18.2	25.4
DCCS-12N	3/4	46.5	23.5	31.8
DCCS-16N	1	48.5	29.7	42.9

HEX COUPLING (DCHCG) female NPT both ends.

PART NO.	PIPE SIZE	L	E	F HEX
DCHCG-2N	1/8	20.3	8.6	14.28
DCHCG-4N	1/4	30.2	10.6	19.05
DCHCG-6N	3/8	33.2	14.3	22.22
DCHCG-8N	1/2	39.6	17.4	26.98
DCHCG-12N	3/4	41.1	22.7	31.75
DCHCG-16N	1	50.8	28.4	41.28

HEX REDUCING COUPLING (DCHRCG) female NPT to reduced female NPT.

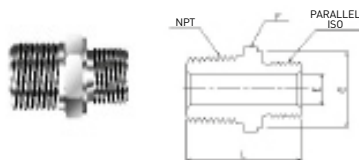
PART NO.	PIPE SIZE	REDUCED PIPE SIZE	L	E	F HEX
DCHRCG 4-2N	1/4	1/8	30.9	8.0	19.05
DCHRCG 6-N	3/8	1/4	35.1	11.4	22.22
DCHRCG 8-2N	1/2	1/8	39.4	8.64	26.98
DCHRCG 8-4N	1/2	1/4	44.4	10.6	26.98
DCHRCG 8-6N	1/2	3/8	45.2	14.1	26.98
DCHRCG 12-4N	3/4	1/4	45.7	11.4	31.75
DCHRCG 12-8N	1	1/2	50.8	11.4	41.28
DCHRCG 16-4N	1	1/4	55.6	18.5	41.28
DCHRCG 16-8N	1	1/2	57.2	23.8	41.28

PIPE CAP (DCC) female NPT.

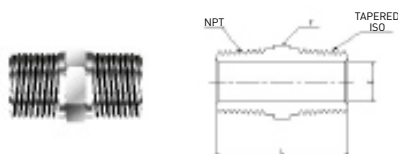
PART NO.	PIPE SIZE	L	F HEX
DCC-2N	1/8	19.1	14.28
DCC-4N	1/4	23.1	19.5
DCC-6N	3/8	26.2	22.22
DCC-8N	1/2	34.0	26.98
DCC-12N	3/4	36.6	31.8
DCC-16N	1	41.2	41.28

PIPE PLUG (DCP) male NPT.

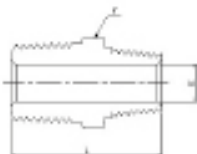
PART NO.	PIPE SIZE	L	F HEX
DCP-2N	1/8	19.1	11.11
DCP-4N	1/4	24.4	14.28
DCP-6N	3/8	25.2	17.46
DCP-8N	1/2	30.7	22.22
DCP-12N	3/4	30.7	26.98
DCP-16N	1	38.1	34.92

HEX NIPPLE (DCHN) male NPT to male ISO parallel.

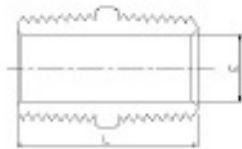
PART NO.	NPT THREAD SIZE	BSP/ISO THREAD SIZE	L	C	E	F HEX
DCHN-2NG	1/8	1/8-28 228/1	27.4	13.7	4.06	14.28
DCHN-4NG	1/4	1/4-19 228/1	36.8	18.5	5.8	19.05
DCHN-6NG	3/8	3/8-19 228/1	37.3	21.8	7.87	22.22
DCHN-8NG	1/2	1/2-14 228/1	46.7	26.7	11.9	26.98
DCHN-12NG	3/4	3/4-14 228/1	49.5	31.8	15.7	33.3
DCHN-16NG	1	1-11 228/1	57.9	39.6	19.8	41.28

HEX NIPPLE (DCHN) male NPT to male ISO tapered.

PART NO.	NPT THREAD SIZE	BSP/ISO THREAD SIZE	L	E	F HEX
DCHN-2NR	1/8	1/8-28 7/1	24.6	4.06	11.11
DCHN-4NR	1/4	1/4-19 7/1	35.3	7.11	14.28
DCHN-6NR	3/8	3/8-19 7/1	35.5	9.65	17.4
DCHN-8NR	1/2	1/2-14 7/1	46.7	11.9	22.22
DCHN-12NR	3/4	3/4-14 7/1	50.0	15.7	26.98
DCHN-16NR	1	1-11 7/1	58.7	22.4	34.92

HEX REDUCING NIPPLE (DCHRN) male NPT to reduced male NPT.

PART NO.	PIPE SIZE	REDUCED PIPE SIZE	L	E	F HEX
DCHRN 4-2N	1/4	1/8	30.9	4.83	14.28
DCHRN 6-2N	3/8	1/8	32.0	4.83	17.46
DCHRN 6-4N	3/8	1/4	35.7	7.11	17.46
DCHRN 8-2N	1/2	1/8	37.3	4.83	22.22
DCHRN 8-4N	1/2	1/4	41.3	7.11	22.22
DCHRN 8-6N	1/2	3/8	41.3	9.5	22.22
DCHRN 12-4N	3/4	1/4	46.4	7.11	26.98
DCHRN 12-8N	3/4	1/2	46.1	11.9	26.98
DCHRN 16-4N	1	1/4	49.3	7.11	34.92
DCHRN 16-8N	1	1/2	54.1	11.9	34.92
DCHRN 16-12N	1	3/4	54.1	15.7	34.92

CLOSE NIPPLE (DCCN) male NPT both ends.

PART NO.	PIPE SIZE	L	E
DCCN-2N	1/8	19.1	4.83
DCCN-4N	1/4	28.5	7.11
DCCN-6N	3/8	28.5	9.65
DCCN-8N	1/2	31.8	11.9
DCCN-12N	3/4	31.8	15.7
DCCN-16N	1	47.8	22.4

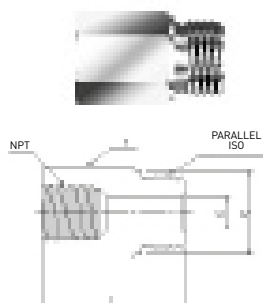
HEX LONG NIPPLE (DCHLN) male NPT both ends.

PART NO.	PIPE SIZE	L	E	F HEX
DCHLN-2N	1/8		4.1	11.11
DCHLN-4N	1/4		7.11	14.28
DCHLN-6N	3/8		9.65	17.46
DCHLN-8N	1/2		11.9	22.22
DCHLN-12N	3/4		15.7	26.98
DCHLN-16N	1		22.4	34.92

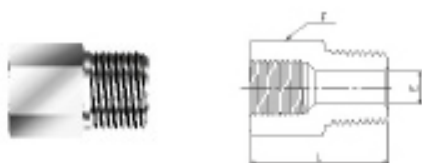
*Specified length to be shown as designator in part number.
Example : DCHLN-4N-2.00(2.00=2"length)

HEX NIPPLE (DCHN) male NPT both ends.

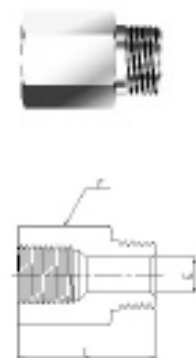
PART NO.	PIPE SIZE	L	E	F HEX
DCHN-2N	1/8	24.6	4.06	11.11
DCHN-4N	1/4	35.5	7.11	14.28
DCHN-6N	3/8	35.5	9.65	17.46
DCHN-8N	1/2	46.7	11.9	22.22
DCHN-12N	3/4	46.7	15.7	26.98
DCHN-16N	1	58.7	22.4	34.92

ADAPTER (DCA) female NPT to male ISO parallel.

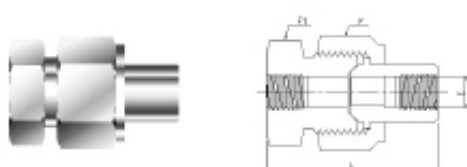
PART NO.	NPT THREAD SIZE	BSP/ISO THREAD SIZE	L	C	E	F HEX
DCA-2GN	1/8	1/8-28 228/1	24.9	13.7	4.06	14.2
DCA-4GN	1/4	1/4-19 228/1	33.3	17.8	5.8	19.05
DCA-6GN	3/8	3/8-19 228/1	37.8	21.8	7.87	22.22
DCA-8GN	1/2	1/2-14 228/1	43.9	26.1	11.9	26.9
DCA-12GN	3/4	3/4-14 228/1	50.8	31.5	15.7	33.3
DCA-16GN	1	1-11 228/1	53.1	38.9	19.8	41.28

ADAPTER (DCA) female NPT to same size mate NPT.

PART NO.	NPT THREAD SIZE	L	E	F HEX
DCA-2N	1/8	27.4	4.83	14.2
DCA-4N	1/4	35.6	7.11	19.05
DCA-6N	3/8	38.1	9.65	22.22
DCA-8N	1/2	49.3	11.4	26.9
DCA-12N	3/4	51.1	15.7	33.3
DCA-16N	1	57.9	22.4	41.28

REDUCING ADAPTER (DCRA) female NPT to reduced male NPT.

PART NO.	FEMALE PIPE SIZE	MALE PIPE SIZE	L	E	F HEX
DCRA4-2N	1/4	1/8	30.9	3.05	19.05
DCRA6-2N	3/8	1/8	33.4	4.06	22.22
DCRA6-4N	3/8	1/4	38.1	7.11	22.22
DCRA8-2N	1/2	1/8	40.1	4.83	26.98
DCRA8-4N	1/2	1/4	44.7	7.11	26.98
DCRA8-6N	1/2	3/8	44.7	9.65	26.98
DCRA12-4N	3/4	1/4	46.1	7.11	33.33
DCRA12-6N	3/4	3/8	46.1	9.65	33.33
DCRA12-8N	3/4	1/2	50.8	11.4	33.33
DCRA16-4N	1	1/4	48.3	7.11	41.28
DCRA16-8N	1	1/2	53.1	11.4	41.28
DCRA16-12N	1	3/4	53.1	15.7	41.28

UNION BALL JOINT (DCUBT) female NPT both ends.

PART NO.	PIPE SIZE	L	E	F HEX	F1 HEX
DCUBT-2N	1/8	45.7	6.86	1 1/8	15/16
DCUBT-4N	1/4	59.4	9.14	1 3/8	1 3/16
DCUBT-6N	3/8	63.5	13.2	1 1/2	1 5/16
DCUBT-8N	1/2	68.6	15.7	1 3/4	1 5/8
DCUBT-12N	3/4	79.2	22.4	2	1 7/8
DCUBT-16N	1	90.4	26.2	2 1/2	2 3/8

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