www.dklok.com

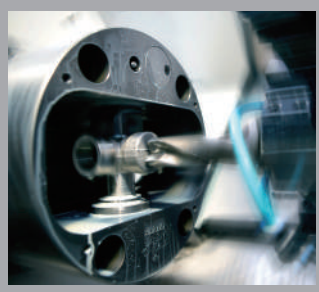
DK-LOK

high · quality · fittings ·
trust · WE · innovative · premium ·
CONNECT · well
made · chalLenge ·
ge · service · age
file · THE · WORLD
manufacturing ·
growth with us

COMPANY PROFILE







DK-Lok Corporation is a South Korean company that manufactures Instrumentation Fittings & Valves, Ultra High Purity (UHP) Products, and high performance Process Ball Valves. DK-Lok was established in 1986 and has been listed in the Korean Stock Market, KOSDAQ, since 2010. We at DK-Lok Corp. strive to ensure customer satisfaction by providing products of the highest performance and quality.

We serve major global companies in various business sectors, including Oil & Gas, Shipbuilding, EPC Plant, Petro Chemical, Analytical Equipment, Hydrogen Fuel Cell & CNG, Semiconductor, and Rolling Stock industries. We have successfully expanded into global markets and export our products to nearly 50 different countries through over 100 distributors.

DK-Lok provides the product performance and quality you can trust, which is demonstrated through various certificates. The API Q1, ASME N, ASME NS, ASME NPT, ISO, AS9100, and KEPIC certificates ensure that DK-Lok QA systems meet the industry's most up-to-date standards. As for specific product design and performance, API 6D, API 6DSS, ABS, BV, DNV-GL, KR, and LR are key certificates applicable for instrumentation fittings and valves as well as process ball valves. In addition, DK-Lok maintains country-specific certificates for Canada (CRN), Russia (TR-CU), and Netherlands (SNCH).

Above all, our priority is our customers. We aim to become the world's best manufacturing company in the industry by consistently exceeding our customer's expectations and achieving the highest product quality and technical capacity.

HISTORY

2020 Achievement

2022 Received **USD 500 MIL Export Award**
Gold Tower Order of Industrial Merit
2021 Purchased Factory No. 3

2010 Growth

2019 Reached **the biggest revenue of USD 650 MIL**
2017 Create **Ball Valve Div.**
Start **UHP Div.**
National Global Leading Company by Korea Industrial Complex Corporation
2016 Celebrated **30-year anniversary** of Corporate Foundation
2015 Selected as **World Class 300 Corporation** by Small and Medium Business Administration
2014 Received **USD 300 MIL Export Award**
Selected as IP Star Corporation by Gyeong-Nam Intellectual Property Center
2013 Moved to the current location at Golden-root Ro, Gimhae
2012 Received **USD 20 MIL Export Award**
2011 Selected as Excellent Job Creating Company by Gyeong-Nam Provincial Government
2010 Changed corporate name to **DK-Lok Corporation**
listed in the Korean Stock Market, **KOSDAQ**

2000 Development

2008 Received **USD 10 MIL Export Award**
Presidential Award on Annual Trade Day
2006 Received USD 5 MIL Export Award
Selected as MAIN-BIZ for Management Innovation
2005 Received USD 3 MIL Export Award
Selected as INNO-BIZ for Tech Innovation
2004 Registered as a supplier to **POSCO E&C**
2003 Registered as a supplier to **Korea Hydro & Nuclear Power Co., Ltd**
2002 Received **USD 1 MIL Export Award** from the Korean Government

1980 Preparation

1999 Selected as a Promising Small And Medium-Sized Export Firm by Small and Medium Business Bureau (SMBB)
1998 Registered as a supplier to **Hyundai Heavy Industries**
1996 Moved to a new location in Sasang, Busan
1995 Received Best Supplier Award from **Samsung Heavy Industries**
1992 Converted into a Corporation
1986 Established as **Dae-Kwang Nipple**

Instrumentation Fittings

DK-Lok
Tube Fittings



JIS Bite Type Tube Fittings
(DIN/JIS)



Instrumentation
Pipe & Weld Fittings



Hydraulic
Pipe Fittings



K Series JIC
Tube Fittings



HD Series
O-Ring Face Seal Fittings



Metal Flexible
Hose & Tube



High pressure
Fitting & Valves



Instrumentation Valves

Ball & Plug Valves



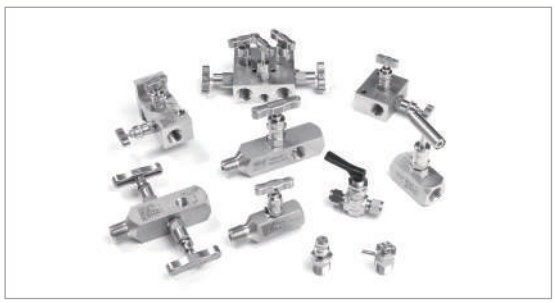
Check & Relief Valves



Metering, Needle & Regulator Valves



Manifolds, Gauge Root, Rising Plug, Toggle, Dlaphragm, Bleed & Purge Valves



Quick Connect, Filters



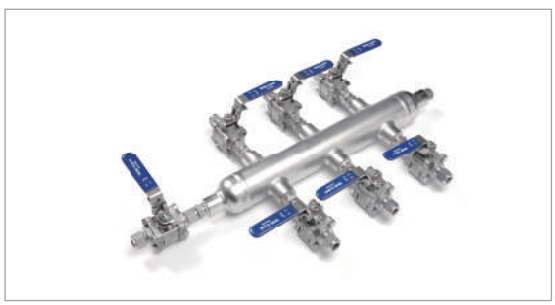
Block & Bleed Valves / Monoflange



Cryogenic Valves



J Series Air Distribution Manifolds



Ultra High Purity Products

Weld Fittings



DCR Fittings



Bend Fittings



Diaphragm Valves



Bellows Valves



Casting Bellows Valves



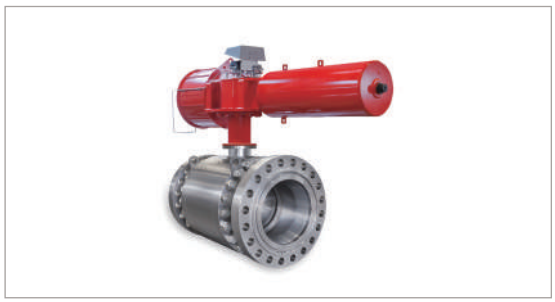
Regulator





Process Ball Valves

Trunnion Side Entry Ball Valves



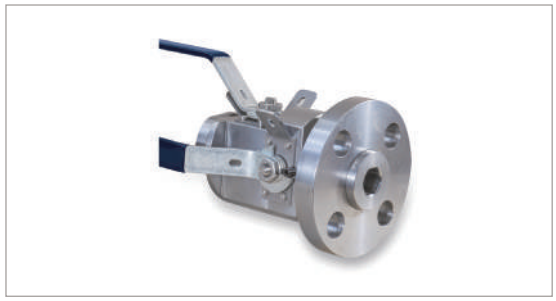
Trunnion Top Entry Ball Valves



Trunnion Welded Body Ball Valves



Floating Split Body Ball Valves



DBB Trunnion Side Entry Ball Valves

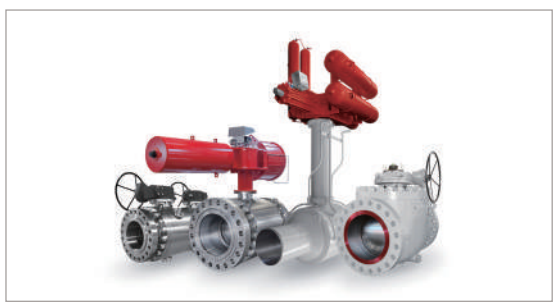


DBB Trunnion Top Entry Ball Valves



Floating Split Body Ball Valves





DK-Lok VR Series Tube Fittings

Rev. 01-01
Aug. 2023

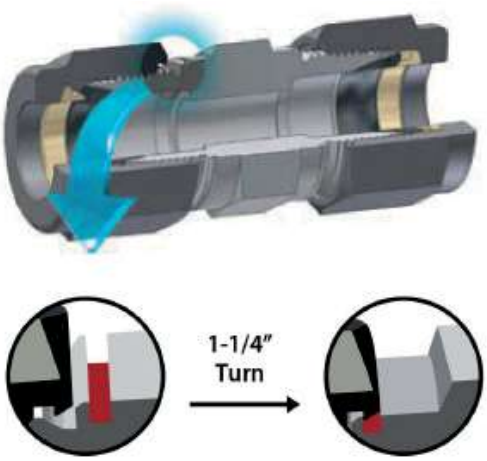
DK-LOK® VR Series Tube Fittings

DK-LOK VR Series Tube Fitting is an inventive solution for safe installation & leak-tight tubing system, and facilitates visual inspection in installation as well as in service.

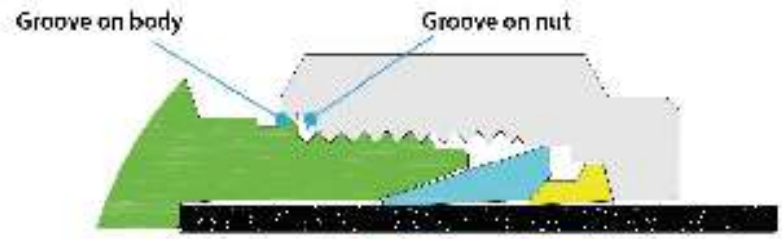
Features

- Outstanding **V**ibration **R**esistant Design with patented **HOOK**
- Red Ring in Body facilitates Visual Inspection in Make-Up as well as in Operation
- Sturdy Stainless Steel Construction

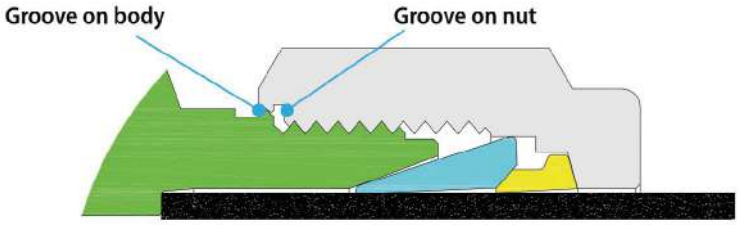




Patented "HOOK" Design



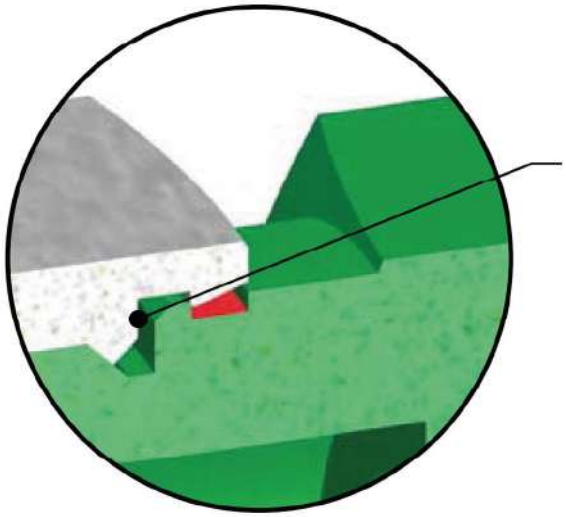
The **Patented Groove** constructed both on Stainless Steel DK-LOK Tube Fitting **Nut** and **Body** locks the Nut up on the Body mechanically at 1 1/4 turns beyond the finger tight.



The Hooked (made-up) DK-LOK tube fitting provides LIFETIME Leak-Tight Sealing unless the fitting is manually un-tightened by span-

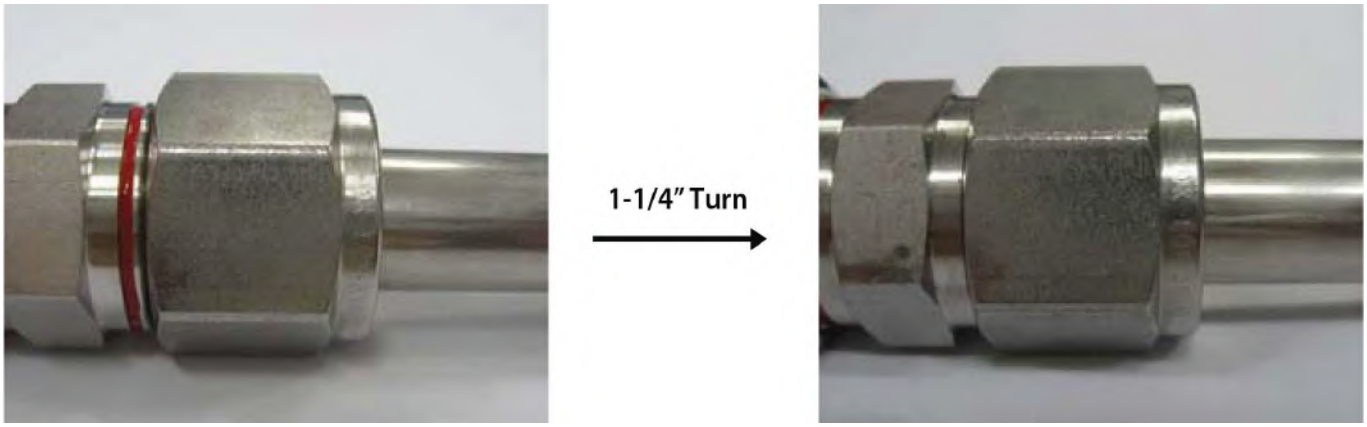
All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Prevention of Over-Tightening



The patented GROOVE constructed both on Nut and Body allows no over-tightening beyond 1 1/4 turns in the initial & re-tightening installation.
Over-tightening is not feasible in the DK-LOK VR Series Tube Fitting mechanically that is designed to provide precise 1 1/4 make-up turns keeping the four components of front, back ferrule, nut and body fatigue-free for extended lifetime service.

Product Identification / Visual Inspection



The red color on body identifies DK-LOK VR Series Tube Fittings. It is disappeared by the nut when the fitting's make-up is completed with 1 1/4 turns beyond finger tight position.
The identification helps fitters eliminate the make-up inspection with a gap gauge; it further facilitates operator's visual inspection on the running system.

Pressure-Temperature Ratings

illustration

As shown on above illustration, nothing is defferent from the design of Standard DK-LOK Tube Fittings except the construction area of groove on body. The gap between body and tube thread is enhanced where the groove is on.

DK-LOK VR Series Tube Fitting is identical to the standard DK-LOK Twin Ferrule Tube Fitting in pressure-temperature rating, installation and re-installation.

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

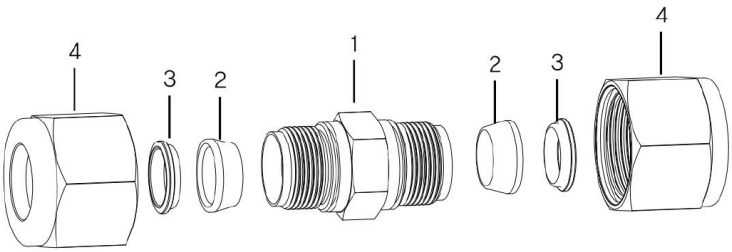
Applications






The outstanding feature of HOOK design never allows DK-LOK VR Series Tube Fitting in service to loose the nut resulting in system failure & leakage. the application includes where extreme vibration is going on such as turbine, compressor, machine, automotive, CNG and NGV industries, where thermal shock, extreme impulse such as power generation, equipment, where leak-tight service must be in place such as hazardous gas and offshore industries.

Materials of Construction



Components	Materials
1.BODY	ASTM A276/473TYPE316
2. FRONT FERRULE	ASTM A276/473TYPE316
3. BACK FERRULE	ASTM A276/473TYPE316
4. NUT	ASTM A276/473TYPE316

Ordering Information

To order VR Series Tube Fitting, select an applicable part number in the DK-LOK Tube Fitting Catalog, and insert **VR** in the part number.
Example: DMC 8-8N-**VR**-SA

1/4", 3/8" 1/2" 3/4", and 1"OD are available for supply.

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

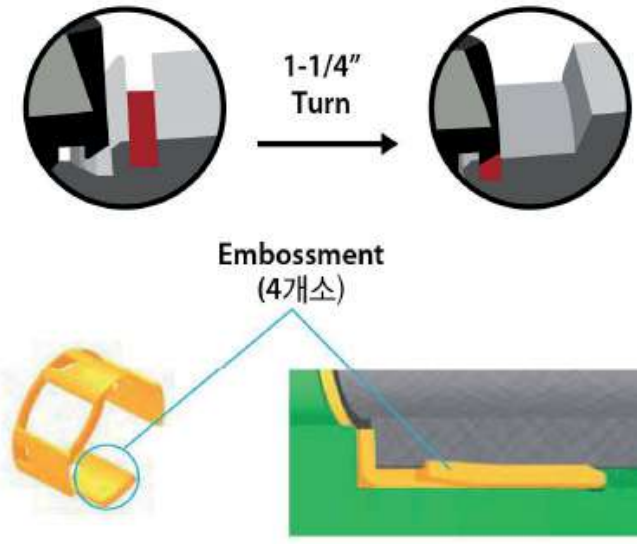
Features of VR Series With Bushing Tube Fitting

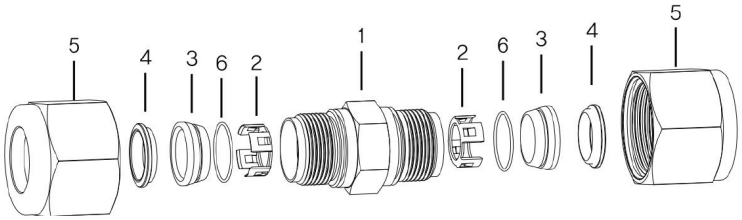


- Outstanding **V**ibration **R**esistant Design
- Stainless Steel Construction
- Improve on production efficiency by preventing of tube pull-out After tube insert
- Prevent Secondary leakage by O-Ring.
- Integration tube fitting with check markig.

Materials of Construction







Components	Materials
1. BODY	ASTM A276/473 TYPE316
2. BUSHING	ASTM A276/473 TYPE316
3. FRONT FERRULE	ASTM A276/473 TYPE316
4. BACK FERRULE	ASTM A276/473 TYPE316
5. NUT	ASTM A276/473 TYPE316
6. O-RING	NBR

Product Identification

DK-LOK VRB Series Tube Fittings is identified with "**VR**" marking on NUT and "**VRB**" marking on Body.

Ordering Information

Due to its identity with standard DK-LOK Tube Fitting, to order VRB Series, select an applicable part number in the DK-LOK Tube Fitting Catalog, and insert **VRB** in the part number.

Example: DMC 8-8N-VRB-SA
The following sizes of DK-LOK **VRB** Series fittings are available for supply.
1/4", 3/8", 1/2"," OD

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

DK-LOK

경상남도 김해시 주촌면 골든루트로 129번길 7 50969
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DK-LOK

DK-Lok Tube Fittings

Rev. 01-01
Aug. 2023



DK-LOK®
DK-Lok Tube Fittings

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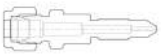
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The Premium Quality DK-Lok Tube Fittings

DK-Lok Tube Fitting is designed using industrial codes and specifications with additional Cutting-Edge Engineering on swaging action and sealing integrity. DK-Lok provides excellent leak-free sealing on high pressure gas, vacuum, impulse, thermal shock, heavy vibration, and many other stringent applications.

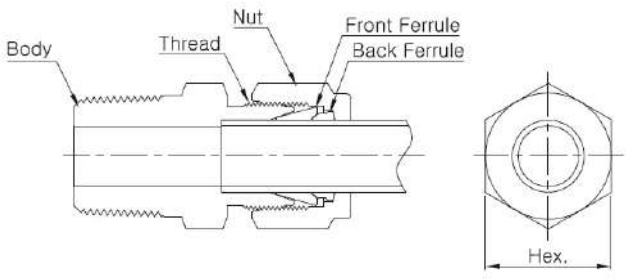
DK-Lok brings you truly excellent quality, outstanding customer service, and availability.

Enjoy DK-Lok tube Fitting working on your application!

Construction of DK-Lok Tube Fittings

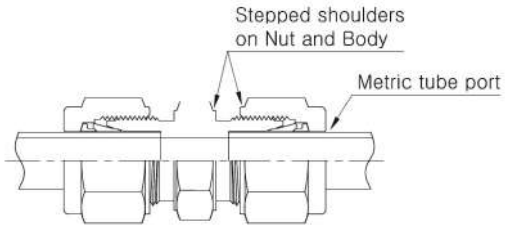
DK-Lok Tube Fitting consists of body, front ferrule, back ferrule and nut. The features include;

- Excellent product range up to 2 in. and 50 mm OD.
- Additional engineering on sealing integrity and swaging action.
- Re-usable and predictable quality.
- Gaugable.
- Excellent leak-free sealing integrity on heavy vibration, vacuum and impulse.
- Heat-Code Traceability.
- No torque transferring to connective tubing during installation.



Identification of Metric DK-Lok Tube Fitting

Metric DK-Lok Tube Fitting has stepped shoulder on body and nut hex. Shaped fitting such as tee, elbow, and cross forging has such step on body as well.



Identification of Metric DK-Lok Tube Fitting

Every DK-Lok Tube Fitting is cleaned to remove surface contamination, iron particles from cutting tools, oil from cutting fluid, and loose particles. For further information refer to DK cleaning standard DC-01.

Special cleaning for oxygen service application is available on request. Refer to special cleaning standard DC-11.

Table 1. DK-Lok Material Standards

DK-Lok Tube Fitting are supplied in various materials to satisfy the needs of various applications including on shore oil&gas, refinery, offshore oil& gas, chemical, petrochamical, analytical instrmentation, steel mill, power plant, shipbuilding, pharmaceutical, and alternative fuel.

Material	Bar stock	Forging
Stainless Steel316	ASTMA276	ASTM A182 ASME SA182 JIS G3214
	ASTMA479	
	ASME SA479	
	JIS G4303	
Brass	ASTM B16 UNS C36000	ASTM B283 UNS C37700 JIS H3250 Alloy C3771
	ASTM B453 UNS C35300	
	JIS H3250Alloy C3604	
Carbon Steel	ASTM A675 Gr.60-90	ASTM A105 J IS G4051 S20C - S48C
	JIS G4051 S20C - S48C	
Duplex	ASTM A276 S31803	ASTM A182 F51
	ASTM A479 S31803	
Super Duplex	ASTM A479 S32750	ASTM A182 F53
Aluminum	ASTM B211 Alloy 2024 T6	ASTM B247
Alloy 20	ASTM B473 UNS N08020	ASTM B462 UNSN08020
Hastelloy C276	ASTM B574 UNS N10276	ASTM B564 UNSN10276
Alloy 400	ASTM B164 UNS N04400	ASTM B564 UNSN04400
Alloy 600	ASTM B166 UNS N06600	ASTM B564 UNSN06600
Alloy 625	ASTM B446 UNS N06625	ASTM B564 UNSN06625
Alloy 825	ASTM B425 UNS N08825	ASTM B564 UNSN08825
Titanium Gr. 2	ASTM B348 Gr.2	ASTM B381 F3
PTFE	ASTM D1710	ASTM D3293

Carbon Steel DK-Lok Tube Fittings



Carbon steel fittings are white zinc plated. Every carbon steel fitting is supplied with SS316 back ferrule and carbon steel front ferrule with black fast plated.

O-ring

DK-Lok fitting pipe end with O-ring is supplied; 70 durometer NBR O-ring on brass and carbon steel fittings, 90 durometer FKM O-ring on stainless steel fitting.
Other O-ring is available on request.

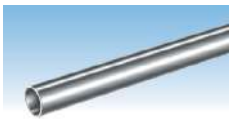
DK-Lok Port Dimension

Dimensions on DK-Lok Port in the catalog are approximate figures and shown in finger-tight position.

DK-Lok Port Dimension

Stainless steel316 DK-Lok Tube Fittings are tested to the requirements of ECE R110, DIHP Draft, ECE R67 and certified by TUV.

Tubing



For safe, reliable and leak-free DK-Lok fitting system, tubing should be considered as one of fitting components.

- Tubing is assembled by simple wrench make-up on DK-Lok fitting. This results in less assembly and maintenance costs.
- Tubing assembly on DK-Lok Fitting is re-usable.
- Tubing is bendable. It allows lower pressure drop with fewer connections. This in turn reduces system costs because of less fabricating manpower
- Pipe threading or welding is diffcult to disassemble and re-assemble.
- Piping requires skilled worker for welding & threading.

Tubing Selection

Hardness

- Tubing must be softer than fitting material. The metal tubing must be fully annealed and suitable for bending and flaring.
- Tubing hardness must be selected according to the information in the table 2 to 13.

Surface

- Tubing must have a surface free from scratches, draw mark, dirt, dust and at spots.

Ovality

- Tubing in oval or out-of-roundness way not fit into the fitting. Do not force the tubing into the fitting; it may damage the fitting sealing system on nut, ferrules, and body.

Wallthickness

- The table 2 to 13 list tubing working pressure ratings in a wide range of wall thickness. A too thin wall may collapse and a too thick wall may not properly be deformed by the ferrule action.
- Do not use tubing wall thickness not listed in the table 2 to 13.

Weld tubing

- Welded tubing should have a not measurable bead on its outside diameter.

Tubing Handling

Careful handling and storage practices will protect tubing from unnecessary scratches, nicks, or degrading the good tubing surface finish.

- Tubing ends should be capped so any foreign materials will not fall inside during transportation and storage.
- Do not drag across tubing rack, cement, gravel or any rough surface.
- Do use correct tube cutter for tube material. The wrong cutter may result in excessive deformation of the tube end.
- Do not cut deep with each turn of cutting.
- Tube cutters and hacksaws should be sharp enough.
- Hacksaw blades should have at least 32 teeth per inch.
- Do deburr tube ends before inserting in fittings.

DK-Lok Tube Fitting Pressure Rating

- The pressure rating of DK-Lok Tube Fitting is rated to the working pressure of connective tubing.
- The allowable working pressure of tubing in various materials is listed in the table 2 to 13.

Material

Using like tubing and fitting material is essential for leak-free sealing system.

Unlike material may have different mechanical properties that may adversely affect the fitting seal on tubing.
The only exception is copper tubing with brass DK-Lok fitting.

Gas Application

DK-Lok Tube Fitting is designed for a wide rang of leak-free application including gas leak proof and vacuum tight service.

Gases (helium, hydrogen, nitrogen, air, etc.) can escape even the most minute leak-path due to their very small molecules.

Tube therefore must be handled not to have scratches, draw mark, nicks, flat sports, dirt, and dust

Use NOT thin wall tubing for gas applications.

Heavier wall tubing resists the ferrule action whereas thin walltubing may collapse with little resistance to ferrule action.

For Gas service, use the tubing wall listed on un-shadowed section in table 2 to 13.

Vacuum Application

DK-Lok Tube Fittings have been proved to be excellent vacuum tight seal in many applications including analytical industry.

DK-Lok Tube Fittings comply with the leakage requirements of TA-LUFT 2002.

Cryogenic Application

DK-Lok Fittings in SS316 Stainless Steel provide highly reliable performance on cryogenic application.

Cryogenic temperature is considered to be temperatures below -100°F (-73°C).

Cryogenic Application

Pressure 500 psig (34.5 bar) or higher is considered generally high pressure. In the high pressure system scratches, draw mark, nicks, flat sports, and dirt on tubing may cause leakage.

- For gas application, select the gas applicable tubing wall thickness from Table 2 to 13.
- Follow the suggestion on tubing selection, handling, and installation.

Stainless Steel Tubing

Table 2. **Fractional Seamless Stainless Steel Tubing**

Fully annealed austenitic Type 304 or 316 seamless tubing ASTM A269 or ASTM A213, or equivalent. Tubing to be free from scratches, draw mark, dirt, dust, flat spots, and suitable for bending and flaring. Recommended hardness:90 HRB or less.

OD in.	Wall Thickness (in.)														
	0.012	0.014	0.016	0.02	0.028	0.035	0.049	0.065	0.083	0.095	0.109	0.12	0.134	0.156	0.188
1/16	6800	8100	9400	12000											
1/8					8500	10900									
3/16					5400	7000	10200								
1/4					4000	5100	7500	10200			Working Pressure in psig				
5/16						4000	5800	8000							
3/8						3300	4800	6500	7500						
1/2						2400	3500	4700	6200						
5/8							2900	4000	5200	6000					
3/4							2400	3300	4200	4900	5800				
7/8							2000	2800	3600	4200	4800				
1								2400	3100	3600	4200	4700			
1 1/4									2400	2800	3300	3600	4100	4900	
1 1/2										2300	2700	3000	3400	4000	4900
2											2000	2200	2500	2900	3600

Table 3. **Metric Seamless Stainless Steel Tubing**

OD mm	Wall Thickness (mm)												
	0.8	1.0	1.2	1.5	1.8	2.0	2.2	2.5	2.8	3.0	3.5	4.0	4.5
3	710												
6	330	420	520	670									
8		310	380	490									
10		240	300	380									
12		200	240	310	380	430				Working Pressure in bar			
14		180	220	280	340	390	430						
15		170	200	260	320	360	400						
16			190	240	300	330	370						
18			170	210	260	290	320	370					
20			150	190	230	260	290	330	380				
22			130	170	210	230	260	300	340				
25					180	200	230	260	300	320			
28						180	200	230	260	280	330		
30						170	190	210	240	260	310		
32						160	170	200	230	240	290	330	
38							140	170	190	200	240	280	310
50										150	180	210	240

- According to the requirements of ASME B31.3 Process Piping Code and ASME B31.1 Power Piping Code, allowable working pressure calculated at -20 to 100°F (-28 to 37°C) using S value of 20,000 psi.
- Pressure calculations are based on maximum O.D. and minimum wall thickness and no allowance is made for corrosion and erosion. i.e., ASTM A269 1/2 in. OD x 0.035 in.WT: OD tolerance ± 0.005 in., WT tolerance ± 15%. Calculations are based on 0.505 in.OD x 0.0298 in. WT.
- Safety Factor is 3.75 to 1, considering ultimate tensile strength of 75,000 psi.

Weld Stainless Steel Tubing Allowable Working Pressure

To determine the working pressure of weld tubing to the requirements of ASME B31.3 Code, de-rating factors below must be applied. For single weld tubing multiply by 0.80, and for double weld tubing multiply by 0.85.

Example: SS316 seamless 1/2 in. O.D. x 0.065 in. WT allowable working pressure: 4700 psi.
To determine the work pressure of the single weld tubing, multiply 4700 psi by 0.80.
4700 psig x 0.80 = 3760 psig at -20 to 100°F (-28 to 37°C).

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Copper Tubing

Table 4. **Fractional Seamless Copper Tubing**

Soft annealed seamless copper tubing ASME B75 or equivalent. Soft annealed (Temper 0) copper water tube, type K or Type L to ASTM B88. Recommended hardness: 60 HRB or less.

OD in.	Wall Thickness (in.)									
	0.010	0.012	0.028	0.035	0.049	0.065	0.083	0.095	0.109	0.120
1/8			2700	3600						
3/16			1800	2300	3400			Working Pressure in psig		
1/4			1300	1600	2500	3500				
5/16				1300	1900	2700				
3/8				1000	1600	2200				
1/2				800	1100	1600	2100			
5/8					900	1200	1600	1900		
3/4					700	1000	1300	1500	1800	
7/8					600	800	1100	1300	1500	
1					500	700	900	1100	1300	1500

Table 5. **Metric Seamless Copper Tubing**

OD mm	Wall Thickness (mm)								
	0.7	0.8	1.0	1.2	1.5	1.8	2.0	2.2	2.5
3	225	260							
4	165	191	244	295				Working Pressure in bar	
6		122	157	192	245				
8			114	140	179				
10			89	109	140				
12			73	89	114	140	158		
14			62	76	96	118	133		
16					83	102	114	127	147
18					74	90	101	112	129
22					59	72	81	90	103
25					52	63	71	78	90

- According to the requirements of ASME B31.3 Process Piping Code and ASME B31.1 Power Piping Code, allowable working pressure calculated at -20 to 100°F (-28 to 37°C) using S value of 6000 psi.
- Safety Factor is 5 to 1, considering ultimate tensile strength of 30,000 psi.

Carbon Steel Tubing

Table 6. **Fractional Seamless Carbon Steel Tubing**

Soft annealed seamless carbon steel hydraulic tubing ASTM A179 or equivalent. Tubing to be free from scratches, draw mark, dirt, durst, flat sports, and suitable for bending and flaring. Recommended hardness: 72 HRB or less.

OD in.	Wall Thickness (in.)												
	0.028	0.035	0.049	0.065	0.083	0.095	0.109	0.120	0.134	0.148	0.165	0.180	0.220
1/8	8000	10200											
3/16	5100	6600	9600										
1/4	3700	3700	7000	9600						Working Pressure in psig			
5/16		3800	5500	7600									
3/8		3100	4500	6200									
1/2		2300	3300	4500	5900								
5/8		1800	2600	3500	4600	5300							
3/4			2100	2900	3700	4300	5100						
7/8			1800	2400	3200	3700	4300						
1			1500	2100	2700	3200	3700	4100					
1 1/4				1600	2100	2500	2900	3200	3600	4000	4600	5000	
1 1/2					1800	2000	2400	2600	3000	3300	3700	4100	5100
2						1500	1700	1900	2200	2400	2700	3000	3700

Table 7. **Metric Seamless Carbon Steel Tubing**

OD mm	Wall Thickness (mm)												
	0.8	1.0	1.2	1.5	1.8	2.0	2.2	2.5	2.8	3.0	3.5	4.0	4.5
3	670	830											
6	310	400	490	630									
8		290	360	460									
10		230	280	360						Working Pressure in bar			
12		190	230	290	360	410	450						
14		160	190	250	300	340	380						
15		150	180	230	280	320	350						
16			170	210	260	290	330	380					
18			150	190	230	260	290	330					
20			130	170	200	230	250	290	330				
22			120	150	180	210	230	260	300				
25					160	180	200	230	260	280			
28						160	180	200	230	250	290		
30						150	160	190	210	230	270		
32						140	150	170	200	210	250	290	
38							130	140	160	180	210	240	280

- Allowable working pressure calculated at -20 to 100°F (-28 to 37°C) using S value of 15,700 psi according to ASME B31.3 Process Piping Code.
- Safety Factor is 3 to 1, considering ultimate tensile strength of 47,000 psi.
- To determine working pressure of ASME B31.1 Power Piping Code, multiply the ASME B31.3 rating by 0.85

Table 8. Fractional Seamless Alloy 400 Tubing

Fully annealed seamless Alloy 400 Tubing ASTM B165 or equivalent. Tubing to be free from scratches, draw mark, dirt, dust, at spots, and suitable for bending and aring. Recommended hardness: 75 HRB or less.

OD in.	Wall Thickness (in.)							
	0.028	0.035	0.049	0.065	0.083	0.095	0.109	0.120
1/8	7900	10100						
1/4	3700	4800	7000	9500		Working Pressure in psig		
3/8		3100	4400	6100				
1/2		2300	3200	4400				
3/4			2200	3000	4000	4600		
1				2200	2900	3400	3900	4300

- According to the requirements of ASME B31.3 Process Piping Code and ASME B31.1 Power Piping Code, allowable working pressure calculated at -20 to 100°F (-28 to 37°C) using S value of 18,700 psi.
- Safety Factor is 3.74 to 1, considering ultimate tensile strength of 70,000 psi.

Table 9. Fractional Seamless Alloy C276 Tubing

Fully annealed seamless Alloy C276 Tubing ASTM B622 or equivalent. Tubing to be free from scratches, draw mark, dirt, dust, at spots, and suitable for bending and aring. Recommended hardness: 100 HRB or less.

OD in.	Wall Thickness (in.)			
	0.028	0.035	0.049	0.065
1/4	4000	5100	7500	10200
5/16		4000	5800	7800
3/8		3300	4800	6500
1/2		2600	3700	5100

* Working Pressure in psig

- According to the requirements of ASME B31.3 Process Piping Code and ASME B31.1 Power Piping Code, allowable working pressure calculated at ambient temperature using S value of 27,300 psi.
- Safety Factor is 3.66 to 1, considering ultimate tensile strength of 100,000 psi.

Table 10. Fractional Seamless Alloy 825 Tubing

Fully annealed seamless Alloy 825 Tubing ASTM B423 or equivalent. Tubing to be free from scratches, draw mark, dirt, dust, at spots, and suitable for bending and aring. Recommended hardness: 95 HRB or less.

OD in.	Wall Thickness (in.)		
	0.035	0.049	0.065
1/4	6400	9300	11600
3/8	4100	5900	8200
1/2	3000	4300	5900

* Working Pressure in psig

- According to the requirements of ASME B31.3 Process Piping Code and ASME B31.1 Power Piping Code, allowable working pressure calculated at ambient temperature using S value of 23,300 psi.
- Safety Factor is 3.64 to 1, considering ultimate te8200nsile strength of 85,000 psi.

Table 11. Fractional Seamless Alloy 625 Tubing

Fully annealed seamless Alloy 625 Tubing ASTM B444 Grade 1 or equivalent.
Tubing to be free from scratches, draw mark, dirt, dust, flat spots, and suitable for bending and flaring.

OD in.	Wall Thickness (in.)		
	0.035	0.049	0.065
1/4	7300	10700	14600
3/8	4700	6800	9400
1/2	3500	5000	6800

* Working Pressure in psig

- Allowable working pressure is calculated at ambient temperature using S value of 40,000 psi according to ASME B31.3 Code.
- Safety Factor is 3 to 1, considering ultimate tensile strength of 120,000 psi.
- To determine working pressure of ASME B31.1 Power Piping Code, multiply the ASME B31.3 rating by 0.86.

Table 12. Fractional Seamless Super Duplex Tubing

Fully annealed Super Duplex Tubing ASTM A789 S32750 or equivalent. Tubing to be free from scratches, draw mark, dirt, dust, at spots, and suitable for bending and aring. Recommended hardness: 32 HRC or less.

OD in.	Wall Thickness (in.)				
	0.035	0.049	0.065	0.083	0.095
1/4	10000	15000			
3/8	6500	10100	12700		
1/2	5000	7200	10100	12900	
5/8		5800	7600	10100	
3/4		4700	6300	8500	10000

* Working Pressure in psig

- Allowable working pressure calculated at ambient temperature using S value of 38,700 psi according to ASME B31.3 Code.
- Safety Factor is 3 to 1, considering ultimate tensile strength of 116,000 psi.

Table 13. Fractional Seamless Alloy 20 Tubing

Fully annealed seamless Alloy 20 Tubing ASTM B729 or equivalent. Tubing to be free from scratches, draw mark, dirt, dust, flat spots, and suitable for bending and flaring. Recommended hardness: 95 HRB or less.

OD in.	Wall Thickness (in.)			
	0.028	0.035	0.049	0.065
1/8			Working Pressure in psig	
3/16				
1/4	4500	5100	7500	10200
5/16				
3/8		3300	4800	6500
1/2		2600	3700	5100

* Working Pressure in psig

- Allowable working pressure calculated at ambient temperature using S value of 23,300 psi according to ASME B31.3 Process Piping Code.
- To determine working pressure of ASME B31.1 Power Piping Code, multiply the ASME B31.3 rating by 0.98.

Temperature De-rating Factors

The pressure rating of DK-Lok port is governed by the connective tubing pressure rating.
To determine allowable working pressure at elevated temperature, multiply working pressure by applicable factor shown in table 14.

Example: SS316 seamless tubing 1/2 in. O.D. x 0.065 in.WT at 700 °F. 4700 psig x 0.82 = 3854 psi.
Allowable working pressure of SS316 seamless 1/2 in. O.D. x 0.065 in. WT is 3854 psi at 700 °F.

Table 14.

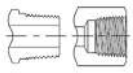
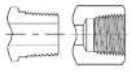
Temp.		Stainless		C.steel	Copper	825	C276	625	20	400	Super Duplex
°F	°C	304	316	A179	B75	B423	B622	B444	B729	B165	A789
100	38	1	1	1	1	1	1	1	1	1	1
200	93	1	1	0.96	0.8	0.92	1	1	0.9	0.88	0.9
300	149	1	1	0.9	0.78	0.87	1	1	0.86	0.79	0.85
400	204	0.94	0.97	0.86	0.5	0.83	1	1	0.83	0.79	0.82
500	260	0.88	0.9	0.82	0.13	0.79	0.98	0.97	0.79	0.79	0.81
600	316	0.82	0.85	0.77		0.76	0.93	0.95	0.77	0.79	0.8
700	371	0.8	0.82	0.73		0.74	0.87	0.93	0.76	0.79	
800	427	0.76	0.8	0.59		0.73	0.84	0.93	0.73	0.76	
900	482	0.73	0.78			0.73	0.81	0.93			
1000	538	0.69	0.77			0.71	0.79	0.93			
1200	649	0.3	0.37				0.35	0.33			

DK-Lok Pipe End Pressure Rating

Pressure ratings of DK-Lok tube port is governed by the connective tubing pressure rating. The allowable working pressure of those fittings with both DK-Lok port and pipe end port are determined by the lower pressure port.

Table 15. DK-Lok Pipe Thread Designator

Legends • DK: DK-Lok pipe thread designator. • E: Equivalent.

	DK	Reference Specification	Thread Configuration	E
Tapered Pipe Thread	N	ASME B1.20.1 (NPT) SAE AS71051		
	R	ISO 7-1 BS EN 10226-1 (BSPT) DIN 2999 (male thread only) JIS B0203 (PT)		RT
Parallel Pipe Thread	G	ISO 228-1 BS 2779 (BSPP) JIS B0202 (PF) DIN 3852 FORM A		RS
	GB	ISO 228-1 BS 2779 (BSPP) JIS B0202 (PF) DIN 3852 FORM B		RP
	GP	ISO 228-1 BS 2779 (BSPP) JIS B0202 (PF) SAE J475 SAE J1926		PR
Parallel Pipe Thread	GG	ISO 228-1 BS 2779 (BSPP) JIS B0202 (PF) EN 837-1& EN 837-3		RG
	GR	ISO 228-1 BS 2779 (BSPP) JIS B0202 (PF) DIN 3852 FORM Z		RP
	GY	ISO 228-1 BS 2779 (BSPP) JIS B0202 (PF) DIN 3852 FORM Y		RJ
SAE Straight Thread	U	ASME B1.1 ISO R725 SAE J475 SAE J514		SR
	UO	ASME B1.1 ISO R725 SAE J475 SAE J514		OR
	UP	ASME B1.1, ISO R725 SAE J475 SAE J514		ST
	NO	ASME B1.20.1, SAE AS71051 SAE J514		OR

Pipe Thread Sealants

Pipe thread sealant for tapered pipe thread assembly is essential to ensure leak-free thread sealing. Sealant usually contains a lubricant. Thread sealant fills the voids between the threads and prevents thread galling.

Wrap PTFE tape clockwise from first thread. Do not overhang the first thread; the tape may get into the fluid system.

Pressure Equivalents:
1 bar = 100 kPa = 14.503 psi
1 psi = 0.069 bar = 6.89 kPa
1 kPa = 0.01 bar = 0.145 psi
1 kg/Cm2 = 0.98 bar = 14.22 psi

Table 16. Tapered Pipe Thread Pressure Ratings

Applicable to DK-Lok thread designator: N and R

ISO/NPT Pipe Size	SS316 and Carbon Steel				Brass			
	Male		Female		Male		Female	
	psig	bar	psig	bar	psig	bar	psig	bar
S value	20ksi				10ksi			
1/16	14000	965	6600	455	7400	510	3300	227
1/8	10000	689	6400	441	5000	345	3200	220
1/4	8300	572	6500	448	4100	282	3200	220
3/8	8000	551	5200	358	4000	275	2600	179
1/2	7800	537	4800	331	3900	269	2400	165
3/4	7500	517	4600	317	3700	255	2300	158
1	5300	365	4400	303	2600	179	2200	152
1 1/4	6200	427	5000	345	3100	214	2500	172
1 1/2	5100	351	4500	310	2500	172	2200	152
2	4000	276	3900	269	2000	138	1900	131

Allowable Working Pressure

DK-Lok ISO Parallel Male Pipe Thread End

Applicable to DK-Lok thread designator: G, GB, and GP.
SS316 and carbon steel fitting thread ends up to 1 in. are rated to 5900 psi (406 bar)

DK-Lok SAE Straight Thread End

Applicable to DK-Lok thread designator: U, UO, and UP.
SS316 and carbon steel fitting thread ends up to 16U (1 5/16-12) are rated to 6000 psi (413 bar)

DK-Lok Tube Socket Weld End

Applicable to DK-Lok tube fitting part number: DCSW and DLSW.
SS316 and carbon steel fitting tube socket ends up to 1/2 in. (-8) are rated to 7,000 psi (482 bar)

DK-Lok Pipe Butt Weld End

Applicable to DK-Lok tube fitting part number: DCW and DLW.
SS316 and carbon steel fitting pipe butt weld ends up to 3/4 in. (-12P) are rated to 6,000 psi (413 bar)

- Pressure ratings are based on ASME B31.3 Process Piping Code, at ambient temperature.
- For further information about each size end rating, contact the authorized DK-Lok distributor in your region.

Table 17. **Elastomer seal temperature ratings**

Elastomer O-ring	Rating
NBR	-40 to 110°C (-40 to 230°F)
FKM	-28 to 204°C (-18 to 400°F)
FFKM (Kalrez®)	-30 to 275°C (-22 to 527°F)

Care must be taken as fitting with elastomer O-ring sealmay have lower temperature rating.
Kalrez®: DupPont™

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

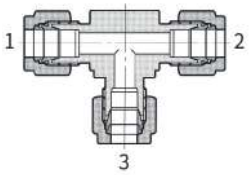
Ordering Information

Suffix the material designator to the part number. Example: DU-8-S

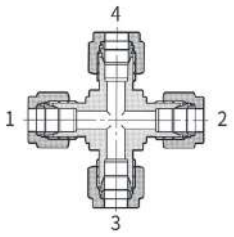
Table 18. Material Designator

Material	Designator
Stainless Steel 316	S
Dual Grade	
Brass	B
Carbon Steel	C
Stainless 310	310
Duplex	D
Super Duplex	SD
Aluminum	AL
Alloy 20	L20
Hastelloy C276	HC
Alloy 400	M
Alloy 600	IN
Alloy 625	L625
Alloy 825	L825
Titanium Gr. 2	TI
PTFE	PE

Tee and Cross Fittings



Tee fitting part number is described by first the run (1 and 2) and next the branch (3).



Cross fitting part number is described by first the run (1 and 2) and next the branch (3 and 4)

Table 19. Pipe Thread Size Designator

	1/16	1/8	1/4	3/8	1/2	3/4	1	1-1/4	1-1/2	2
Designator	1	2	4	6	8	12	16	20	24	32

Table 20. Tube O.D. Designator

OD in.	1/16	1/8	3/16	1/4	5/16	3/8	1/2	5/8	3/4	7/8	1	1 1/4	1 1/2	2		
Designator	1	2	3	4	5	6	8	10	12	14	16	20	24	32		
OD mm	2mm	3 mm	4 mm	6 mm	8mm	10 mm	12 mm	16 mm	20 mm	22 mm	25 mm	28 mm	32 mm	38 mm	42 mm	50 mm
Designator	2M	3 M	4 M	6 M	8 M	10 M	12 M	16 M	20 M	22 M	25 M	28 M	32 M	38 M	42 M	50 M

Z series DK-Lok





DK-Lok Z Series single ferrule tube fitting is designed and manufactured to the highest quality standards.
This fitting includes single ferrule with standard DK-Lok fitting body and nut.
To help identify DK-Lok Z series from DK-Lok Tube fitting, nut is black Molybdenum Disulfide (MoS2) coated.

Material

DK-Lok Z Series single ferrule tube fitting is manufactured in stainless steel316.

Dimensions

DK-Lok Z Series fittings are dimensionally identical to DK-Lok Tube Fittings.

Pressure and Temperature Ratings

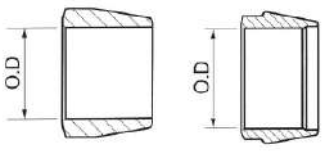
DK-Lok Z Series fittings are identical to DK-Lok Tube Fittings in pressure and temperature ratings.

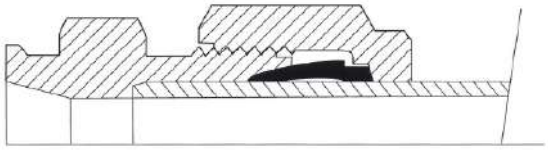
Ordering Information

To order Z series, insert Z in the standard DK-Lok tube fitting part number.
Examples: DUZ-8-S, DMCZ8-8N-S, DNZ-4-S

Z Series Ferrule

Part No.	Tube O.D.
DFZ-4-S	1/4
DFZ-6-S	3/8
DFZ-8-S	1/2
DFZ-12-S	3/4
DFZ-16-S	1



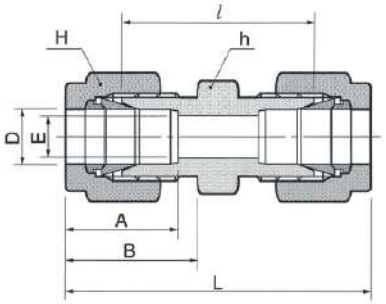


All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Union

DU





Connects fractional tube

Part No.	Tube O.D. D		E Min.	Width across flat				A	B	e	L
				h		H					
	in.	mm		in.	mm	in.	mm				
DU-1	1/16	1.59	1.27	5/16	7.93	5/16	7.93	8.63	10.92	17.50	25.15
DU-2	1/8	3.17	2.28	7/16	11.11	7/16	11.11	12.70	15.24	22.35	35.56
DU-3	3/16	4.76	3.04	7/16	11.11	1/2	12.70	13.71	16.00	24.13	37.33
DU-4	1/4	6.35	4.82	1/2	12.70	9/16	14.28	15.24	17.78	26.16	40.89
DU-5	5/16	7.93	6.35	9/16	14.28	5/8	15.87	16.25	18.54	28.19	42.92
DU-6	3/8	9.52	7.11	5/8	15.87	11/16	17.46	16.76	19.30	30.22	44.95
DU-8	1/2	12.70	10.41	13/16	20.64	7/8	22.22	22.86	21.84	30.98	51.30
DU-10	5/8	15.87	12.70	15/16	23.81	1	25.40	24.38	21.84	31.75	52.07
DU-12	3/4	19.05	15.74	1-1/16	26.98	1-1/8	28.58	24.38	21.84	33.27	53.59
DU-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
DU-16	1	25.40	22.35	1-3/8	34.92	1-1/2	38.10	31.24	26.41	40.38	64.77
DU-20	1-1/4	31.75	27.68	1-3/4	44.45	1-7/8	47.63	41.14	38.86	48.00	92.20
DU-24	1-1/2	38.10	33.90	2-1/8	53.97	2-1/4	57.15	50.03	45.21	53.60	107.95
DU-32	2	50.80	45.97	2-3/4	69.85	3	76.20	67.56	62.73	74.70	149.35

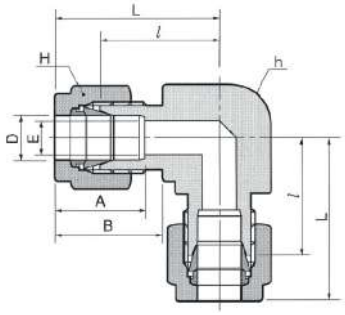
Connects metric tube

Part No.	Tube O.D. D	E Min.	Width across flat		A	B	e	L
			h	H				
DU-2M	2	1.7	12	12	12.9	15.3	22.4	35.6
DU-3M	3	2.4	12	12	12.9	15.3	22.1	35.3
DU-4M	4	2.4	12	12	13.7	16.1	24.1	37.3
DU-6M	6	4.8	14	14	15.3	17.7	26.2	41.0
DU-8M	8	6.4	15	16	16.2	18.6	28.2	43.2
DU-10M	10	7.9	18	19	17.2	19.5	31.0	46.2
DU-12M	12	9.5	22	22	22.8	22.0	31.0	51.2
DU-14M	14	11.1	24	25	24.4	22.0	31.8	52.0
DU-15M	15	11.9	24	25	24.4	22.0	31.8	52.0
DU-16M	16	12.7	24	25	24.4	22.0	31.8	52.0
DU-18M	18	15.1	27	30	24.4	22.0	33.3	53.5
DU-20M	20	15.9	30	32	26.0	22.0	34.8	55.0
DU-22M	22	18.3	30	32	26.0	22.0	34.8	55.0
DU-25M	25	21.8	35	38	31.3	26.5	40.4	65.0
DU-28M	28	21.8	41	46	36.6	36.6	43.4	85.0
DU-30M	30	26.2	46	50	39.7	39.3	49.5	92.9
DU-32M	32	28.6	46	50	42.0	41.6	51.3	97.3
DU-35M	35	31.5	50	55	42.1	41.7	51.3	97.6
DU-38M	38	33.7	55	60	49.4	47.9	58.4	113.6
DU-42M	42	36.8	60	65	49.3	47.8	58.4	113.4
DU-50M	50	45.2	70	76	67.2	62.5	74.7	149

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Union
DL





Connects fractional tube

Part No.	Tube O.D. D		E	Width across flat				A	B	ℓ	L
				h		H					
	in.	mm	Min.	in.	mm	in.	mm				
DL-1	1/16	1.59	1.27	3/8	9.52	5/16	7.93	8.63	10.92	14.00	17.88
DL-2	1/8	3.17	2.28	3/8	9.52	7/16	11.11	12.70	15.24	15.74	22.35
DL-3	3/16	4.76	3.04	1/2	12.70	1/2	12.70	13.71	16.00	17.78	24.38
DL-4	1/4	6.35	4.82	1/2	12.70	9/16	14.28	15.24	17.78	19.55	26.92
DL-5	5/16	7.93	6.35	9/16	14.28	5/8	15.87	16.25	18.54	21.33	28.70
DL-6	3/8	9.52	7.11	5/8	15.87	11/16	17.46	16.76	19.30	23.11	30.48
DL-8	1/2	12.70	10.41	13/16	20.64	7/8	22.22	22.86	21.84	25.90	36.06
DL-10	5/8	15.87	12.70	15/16	23.81	1	25.40	24.38	21.84	28.70	38.80
DL-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
DL-14	7/8	22.22	18.28	1-3/8	34.92	1-1/4	31.75	25.90	21.84	34.54	44.70
DL-16	1	25.40	22.35	1-3/8	34.92	1-1/2	38.10	31.24	26.41	36.83	49.02
DL-20	1-1/4	31.75	27.68	1-11/16	42.86	1-7/8	47.63	41.14	38.86	44.50	66.54
DL-24	1-1/2	38.10	33.90	2	50.80	2-1/4	57.15	50.03	45.21	50.80	77.97
DL-32	2	50.80	45.97	2-3/4	69.85	3	76.20	67.56	62.73	69.80	107.18

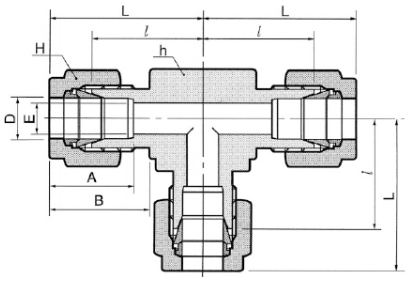
Connects metric tube

Part No.	Tube O.D. D	E Min.	Width across flat		A	B	ℓ	L
			h	H				
DL-2M	2	1.7	9.5	12	12.9	15.3	15.7	22.3
DL-3M	3	2.4	9.5	12	12.9	15.3	15.7	22.3
DL-4M	4	2.4	12.7	12	13.7	16.1	18.8	25.4
DL-6M	6	4.8	12.7	14	15.3	17.7	19.6	27.0
DL-8M	8	6.4	14.3	16	16.2	18.6	21.3	28.8
DL-10M	10	7.9	17.5	19	17.2	19.5	23.9	31.5
DL-12M	12	9.5	20.6	22	22.8	22.0	25.9	36.0
DL-15M	15	11.9	25.4	25	24.4	22.0	28.7	38.8
DL-16M	16	12.7	25.4	25	24.4	22.0	28.7	38.8
DL-18M	18	15.1	27.0	30	24.4	22.0	29.7	39.8
DL-20M	20	15.9	34.92	32	26.0	22.0	32.5	42.6
DL-22M	22	18.3	34.92	32	26.0	22.0	32.5	42.6
DL-25M	25	21.8	34.92	38	31.3	26.5	36.8	49.1
DL-28M	28	21.8	41.0	46	36.6	36.6	43.2	64.0
DL-32M	32	28.6	46.0	50	42.0	41.6	49.3	72.3
DL-38M	38	33.7	50.8	60	49.4	47.9	56.4	84.0
DL-42M	42	36.8	60	65	49.3	47.8	55	82.5
DL-50M	50	45.2	70	76	67.2	62.5	69.9	107

Union Tee

DT





Connects fractional tube

Part No.	Tube O.D. D		E Min.	Width across flat				A	B	ℓ	L
				h		H					
	in.	mm		in.	mm	in.	mm				
DT-1	1/16	1.59	1.27	3/8	9.52	5/16	7.93	8.63	10.92	14.00	17.88
DT-2	1/8	3.17	2.28	3/8	9.52	7/16	11.11	12.70	15.24	15.74	22.35
DT-3	3/16	4.76	3.04	1/2	12.70	1/2	12.70	13.71	16.00	17.78	24.38
DT-4	1/4	6.35	4.82	1/2	12.70	9/16	14.28	15.24	17.78	19.55	26.92
DT-5	5/16	7.93	6.35	9/16	14.28	5/8	15.87	16.25	18.54	21.33	28.70
DT-6	3/8	9.52	7.11	5/8	15.87	11/16	17.46	16.76	19.30	23.11	30.48
DT-8	1/2	12.70	10.41	13/16	20.64	7/8	22.22	22.86	21.84	25.90	36.06
DT-10	5/8	15.87	12.70	15/16	23.81	1	25.40	24.38	21.84	28.70	38.80
DT-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
DT-14	7/8	22.22	18.28	1-3/8	34.92	1-1/4	31.75	25.90	21.84	34.54	44.70
DT-16	1	25.40	22.35	1-3/8	34.92	1-1/2	38.10	31.24	26.41	36.83	49.02
DT-20	1-1/4	31.75	27.68	1-11/16	42.86	1-7/8	47.63	41.14	38.86	44.50	66.54
DT-24	1-1/2	38.10	33.90	2	50.80	2-1/4	57.15	50.03	45.21	50.80	77.97
DT-32	2	50.80	45.97	2-3/4	69.85	3	76.20	67.56	62.73	69.80	107.18

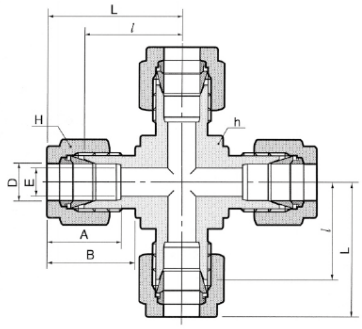
Connects metric tube

Part No.	Tube O.D. D	E Min.	Width across flat		A	B	ℓ	L
			h	H				
DT-2M	2	1.7	9.5	12	12.9	15.3	15.7	22.3
DT-3M	3	2.4	9.5	12	12.9	15.3	15.7	22.3
DT-4M	4	2.4	12.7	12	13.7	16.1	18.8	25.4
DT-6M	6	4.8	12.7	14	15.3	17.7	19.6	27.0
DT-8M	8	6.4	14.3	16	16.2	18.6	21.3	28.8
DT-10M	10	7.9	17.5	19	17.2	19.5	23.9	31.5
DT-12M	12	9.5	20.6	22	22.8	22.0	25.9	36.0
DT-15M	15	11.9	25.4	25	24.4	22.0	28.7	38.8
DT-16M	16	12.7	25.4	25	24.4	22.0	28.7	38.8
DT-18M	18	15.1	27.0	30	24.4	22.0	29.7	39.8
DT-20M	20	15.9	34.92	32	26.0	22.0	32.5	42.6
DT-22M	22	18.3	34.92	32	26.0	22.0	32.5	42.6
DT-25M	25	21.8	34.92	38	31.3	26.5	36.8	49.1
DT-28M	28	21.8	41.0	46	36.6	36.6	43.2	64.0
DT-32M	32	28.6	46.0	50	42.0	41.6	49.3	72.3
DT-38M	38	33.7	50.8	60	49.4	47.9	56.4	84.0
DT-42M	42	36.8	60	65	49.3	47.2	55	82.5
DT-50M	50	45.2	70	76	67.2	62.5	69.9	107

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Union
DX





Note : Cross may be made out of bar stock.

Connects fractional tube

Part No.	Tube O.D. D		E Min.	Width across flat				A	B	ℓ	L
				h		H					
	in.	mm		in.	mm	in.	mm				
DX-1	1/16	1.59	1.27	3/8	9.52	5/16	7.93	8.63	10.92	14.00	17.88
DX-2	1/8	3.17	2.28	3/8	9.52	7/16	11.11	12.70	15.24	15.74	22.35
DX-3	3/16	4.76	3.04	1/2	12.70	1/2	12.70	13.71	16.00	17.78	24.38
DX-4	1/4	6.35	4.82	1/2	12.70	9/16	14.28	15.24	17.78	19.55	26.92
DX-5	5/16	7.93	6.35	9/16	14.28	5/8	15.87	16.25	18.54	21.33	28.70
DX-6	3/8	9.52	7.11	5/8	15.87	11/16	17.46	16.76	19.30	23.11	30.48
DX-8	1/2	12.70	10.41	13/16	20.64	7/8	22.22	22.86	21.84	25.90	36.06
DX-10	5/8	15.87	12.70	15/16	23.81	1	25.40	24.38	21.84	28.70	38.80
DX-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
DX-14	7/8	22.22	18.28	1-3/8	34.92	1-1/4	31.75	25.90	21.84	34.54	44.70
DX-16	1	25.40	22.35	1-3/8	34.92	1-1/2	38.10	31.24	26.41	36.83	49.02
DX-20	1-1/4	31.75	27.68	1-11/16	42.86	1-7/8	47.63	41.14	38.86	44.50	66.54
DX-24	1-1/2	38.10	33.90	2	50.80	2-1/4	57.15	50.03	45.21	50.80	77.97
DX-32	2	50.80	45.97	2-3/4	69.85	3	76.20	67.56	62.73	69.80	107.18

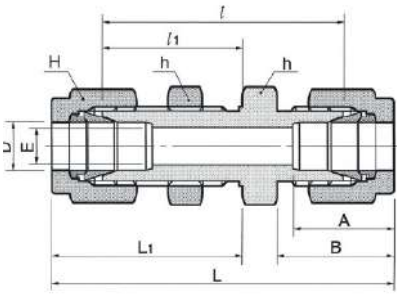
Connects metric tube

Part No.	Tube O.D. D	E Min.	Width across flat		A	B	ℓ	L
			h	H				
DX-3M	3	2.4	9.5	12	12.9	15.3	15.7	22.3
DX-4M	4	2.4	12.7	12	13.7	16.1	18.8	25.4
DX-6M	6	4.8	12.7	14	15.3	17.7	19.6	27.0
DX-8M	8	6.4	14.3	16	16.2	18.6	21.3	28.8
DX-10M	10	7.9	17.5	19	17.2	19.5	23.9	31.5
DX-12M	12	9.5	20.6	22	22.8	22.0	25.9	36.0
DX-15M	15	11.9	25.4	25	24.4	22.0	28.7	38.8
DX-16M	16	12.7	25.4	25	24.4	22.0	28.7	38.8
DX-18M	18	15.1	27.0	30	24.4	22.0	29.7	39.8
DX-20M	20	15.9	34.92	32	26.0	22.0	32.5	42.6
DX-22M	22	18.3	34.92	32	26.0	22.0	32.5	42.6
DX-25M	25	21.8	34.92	38	31.3	26.5	36.8	49.1
DX-28M	28	21.8	41.0	46	36.6	36.6	43.2	64.0
DX-32M	32	28.6	46.0	50	42.0	41.6	49.3	72.3
DX-38M	38	33.7	50.8	60	49.4	47.9	56.4	84.0

Bulkhead Union

DUB





Connects fractional tube

Part No.	Tube O.D. D		E	Width across flat				A	B	ℓ	ℓ1	L	L1	Panel Hole Drill size	Panel Max Thickness
				h		H									
	in.	mm	Min.	in.	mm	in.	mm								
DUB-1	1/16	1.59	1.27	5/16	7.93	5/16	7.93	8.63	10.92	23.87	13.46	31.50	17.27	5.16	3.05
DUB-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
DUB-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
DUB-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
DUB-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
DUB-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
DUB-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
DUB-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
DUB-12	3/4	19.05	15.74	1-3/16	30.16	1-1/8	28.58	24.38	21.84	58.67	37.33	78.99	47.49	25.79	16.76
DUB-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
DUB-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
DUB-20	1-1/4	31.75	27.68	1-7/8	47.63	1-7/8	47.63	41.14	38.86	78.99	47.75	123.19	69.85	41.67	19.05
DUB-24	1-1/2	38.10	33.90	2-1/4	57.15	2-1/4	57.15	50.03	45.21	84.83	49.27	139.19	76.45	49.61	19.05
DUB-32	2	50.80	45.97	2-3/4	69.85	3	76.20	67.56	62.73	105.66	56.38	180.34	93.72	57.94	19.05

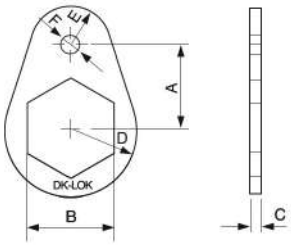
Connects metric tube

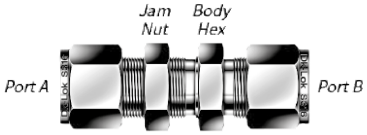
Part No.	Tube O.D. D	E Min.	Width across flat		A	B	ℓ	ℓ1	L	L1	Panel Hole Drill size	Panel Max Thickness
			h	H								
DUB-3M	3	2.4	14	12	12.9	15.3	38.1	24.6	51.3	31.2	8.3	12.7
DUB-4M	4	2.4	14	12	13.7	16.1	40.4	25.4	53.6	32.0	9.9	12.7
DUB-6M	6	4.8	16	14	15.3	17.7	42.9	26.2	57.7	33.6	11.5	10.2
DUB-8M	8	6.4	18	16	16.2	18.6	46.0	28.6	61.0	36.1	13.1	11.2
DUB-10M	10	7.9	22	19	17.2	19.5	48.5	29.4	63.7	37.0	16.2	11.2
DUB-12M	12	9.5	24	22	22.8	22.0	50.8	31.8	71.0	41.9	19.5	12.7
DUB-15M	15	11.9	27	25	24.4	22.0	52.3	32.5	72.5	42.6	22.8	12.7
DUB-16M	16	12.7	27	25	24.4	22.0	52.3	32.5	72.5	42.6	22.8	12.7
DUB-18M	18	15.1	30	30	24.4	22.0	58.7	37.3	78.9	47.4	26.0	16.8
DUB-20M	20	15.9	35	32	26.0	22.0	64.3	42.9	84.5	53.0	29.0	17.0
DUB-22M	22	18.3	35	32	26.0	22.0	64.3	42.9	84.5	53.0	29.0	19.0
DUB-25M	25	21.8	41.3	38	31.3	26.5	71.4	45.2	95.9	57.5	33.7	19.0
DUB-32M	32	28.6	50	50	42.0	41.6	82.3	49.5	128.3	72.5	42.5	19.0
DUB-38M	38	33.7	60	60	49.4	47.9	89.4	51.5	144.6	79.1	50.5	19.0

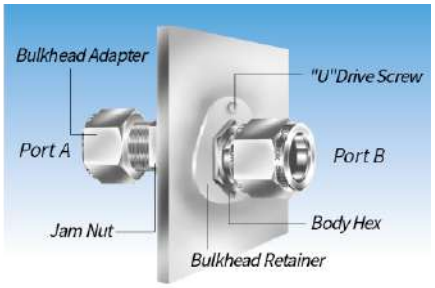
All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Bulkhead Retainer
DBR









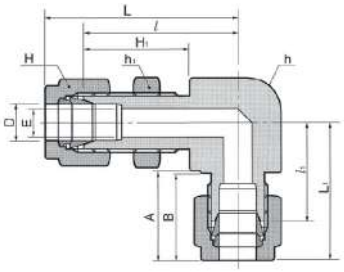
Bulkhead retainer acts as a backup wrench on panel construction. This allows one person to tighten the jam nut on port A side and following tubing connection on port A and B without a backup wrench.

Connects fractional tube

Part No.	DK-Lok O.D.		A	B	C	D	E	F	"U" Drive Screw	Drill Number	Drill Holl Dia
	in.	mm									
DBR-1-S	1/16		9.52	7.94	3.00	7.94	3.97	4.10	#6-3/8	31	3.05
DBR-2-S	1/8		12.70	12.70	3.00	10.31	5.55	4.10	#6-3/8	31	3.05
DBR-3M4M3	3/16	3M,4M	14.28	14.28	3.00	11.90	6.35	4.10	#6-3/8	31	3.05
DBR-6M4	1/4	6M	15.87	15.87	3.00	12.70	7.14	4.10	#6-3/8	31	3.05
DBR-5-S	5/16		17.46	17.46	3.00	14.28	7.94	4.10	#6-3/8	31	3.05
DBR-8M-S		8M	17.46	18.00	3.00	14.28	7.94	4.10	#6-3/8	31	3.05
DBR-6-S	3/8		19.05	19.05	3.00	15.87	8.73	4.10	#6-3/8	31	3.05
DBR-10M-S		10M	23.81	22.00	3.00	19.05	10.31	5.56	#10-1/2	27	3.66
DBR-12M8	1/2	12M	23.81	23.81	3.00	19.05	10.31	5.56	#10-1/2	27	3.66
DBR-15M16M10	5/8	15M,16M	25.40	26.98	3.00	20.64	10.31	5.56	#10-1/2	27	3.66
DBR-18M12	3/4	18M	26.98	30.16	3.00	23.02	11.90	5.56	#10-1/2	27	3.66
DBR-20M22M14	7/8	20M, 22M	28.57	34.92	3.00	26.19	13.49	5.56	#10-1/2	27	3.66
DBR-16-S	1		32.54	41.27	3.00	29.37	14.28	5.56	#10-1/2	27	3.66

Bulkhead Elbow Union
DBL





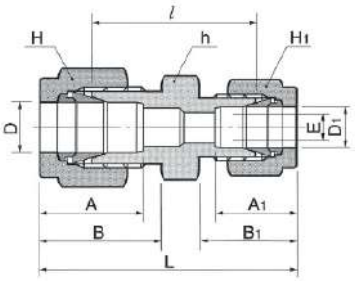
Connects metric tube

Part No.	Tube O.D.	E Min.	Width across flat			A	B	ℓ	ℓ1	L	L1	Panel Hole Drill size	Panel Max Thickness
	mm		h	h1	H								
DBL-6M	6	4.8	15.8	14.2	14.0	15.3	17.7	36.5	20.6	43.9	30.0	11.5	10.2
DBL-8M	8	6.4	17.4	17.4	16.0	18.6	46.0	40.9	23.2	48.4	30.7	13.1	11.2
DBL-10M	10	7.9	22.0	22.0	19.0	19.5	48.5	44.5	26.9	52.1	34.5	16.2	11.2
DBL-12M	12	9.5	24.0	23.8	22.0	22.0	50.8	46.9	26.9	57.0	37.0	19.5	12.7
DBL-16M	16	13.5	27.0	27.0	25.0	22.0	52.3	53.5	34.1	63.7	44.5	22.8	12.7
DBL-20M	20	15.9	34.9	35.0	32.0	26.0	22.0	68.4	39.0	78.2	48.7	29.0	17.0
DBL-25M	25	21.8	41.0	41.0	38.0	31.3	26.5	74.2	46.1	86.5	58.4	33.7	19.1

Reducing Union

DUR





Connects fractional tube

Part No.	Tube O.D.				E Min.	Width across flat						A	A1	B	B1	ℓ	L
	D		D1			h		H		H1							
	in.	mm	in.	mm		in.	mm	in.	mm	in.	mm						
DUR2-1	1/8	3.18	1/16	1.59	1.27	7/16	11.11	7/16	11.11	5/16	7.93	12.70	8.63	15.24	10.92	20.60	30.91
DUR3-1	3/16	4.76	1/16	1.59	1.27	7/16	11.11	1/2	12.70	5/16	7.93	13.71	8.63	16.00	10.92	21.84	32.25
DUR3-2	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
DUR4-1	1/4	6.35	1/16	1.59	1.27	1/2	12.70	9/16	14.28	5/16	7.93	15.24	8.63	17.78	10.92	23.11	34.29
DUR4-2	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
DUR4-3	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
DUR5-2	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
DUR5-4	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
DUR6-1	3/8	9.52	1/16	1.59	1.27	5/8	15.87	11/16	17.46	5/16	7.93	16.76	8.63	19.30	10.92	25.40	36.57
DUR6-2	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
DUR6-4	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
DUR6-5	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
DUR8-2	1/2	12.70	1/8	3.17	2.28	13/16	20.64	7/8	22.22	7/16	11.11	22.86	12.70	21.84	15.24	28.44	45.21
DUR8-4	1/2	12.70	1/4	6.35	4.82	13/16	20.64	7/8	22.22	9/16	14.28	22.86	15.24	21.84	17.78	29.46	46.99
DUR8-6	1/2	12.70	3/8	9.52	7.11	13/16	20.64	7/8	22.22	11/16	17.46	22.86	16.76	21.84	19.30	30.98	48.51
DUR10-6	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
DUR10-8	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
DUR12-4	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
DUR12-6	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
DUR12-8	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
DUR12-10	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
DUR16-8	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
DUR16-12	1	25.40	3/4	19.05	15.74	1-3/8	34.92	1-1/2	38.10	1-1/8	28.58	31.24	24.38	26.41	21.84	40.38	62.73

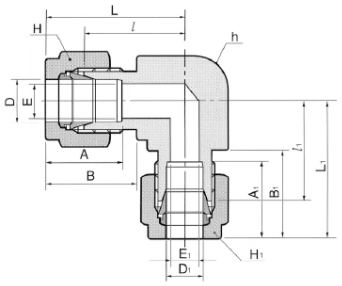
Connects metric tube

Part No.	Tube O.D.		E Min.	Width across flat			A	A1	B	B1	ℓ	L
	D	D1		h	H	H1						
DUR3M-2M	3	2	1.7	12	12	12	12.9	12.9	15.3	15.3	22.1	35.3
DUR6M-2M	6	2	1.7	14	14	12	15.3	12.9	17.7	15.3	24.6	38.6
DUR6M-3M	6	3	2.4	14	14	12	15.3	12.9	17.7	15.3	24.6	38.6
DUR6M-4M	6	4	2.4	14	14	12	15.3	13.7	17.7	16.1	25.4	39.4
DUR8M-6M	8	6	4.8	15	16	14	16.2	15.3	18.6	17.7	27.4	42.3
DUR10M-3M	10	3	2.4	18	19	12	17.2	12.9	19.5	15.3	27.7	41.9
DUR10M-4M	10	4	2.4	18	19	12	17.2	13.7	19.5	16.1	28.7	42.9
DUR10M-6M	10	6	4.8	18	19	14	17.2	15.3	19.5	17.7	29.5	44.5
DUR10M-8M	10	8	6.4	18	19	16	17.2	16.2	19.5	18.6	30.0	45.1
DUR12M-6M	12	6	4.8	22	22	14	22.8	15.3	22.0	17.7	29.5	47.0
DUR12M-8M	12	8	6.4	22	22	16	22.8	16.2	22.0	18.6	30.2	47.8
DUR12M-10M	12	10	7.9	22	22	19	22.8	17.2	22.0	19.5	31.0	48.7
DUR15M-12M	15	12	9.8	24	25	22	24.4	17.2	22.0	19.5	31.8	52.5
DUR16M-10M	16	10	7.9	24	25	19	24.4	17.2	22.0	19.5	31.8	49.5
DUR16M-12M	16	12	9.5	24	25	22	24.4	22.8	22.0	22.0	31.8	52.0
DUR18M-10M	18	10	7.9	27	30	19	24.4	17.2	22.0	19.5	33.0	51.0
DUR18M-12M	18	12	9.5	27	30	22	24.4	22.8	22.0	22.0	33.3	53.5
DUR25M-18M	25	18	15.1	35	38	30	31.3	24.4	26.5	22.0	38.6	61.0
DUR25M-20M	25	20	15.9	35	38	32	31.3	26.0	26.5	22.0	39.9	62.3
DUR30M-18M	30	18	15.1	46	50	30	39.7	24.4	39.3	22.0	43.7	75.4
DUR30M-20M	30	20	15.9	46	50	32	39.7	26.0	39.3	22.0	43.7	75.4
DUR30M-25M	30	25	21.8	46	50	38	39.7	31.3	39.3	26.5	46.2	80.1
DUR32M-18M	32	18	15.1	46	50	30	42.0	24.4	41.6	22.0	44.7	77.8
DUR32M-20M	32	20	15.9	46	50	32	42.0	26.0	41.6	22.0	44.7	77.8
DUR32M-25M	32	25	21.8	46	50	38	42.0	31.3	41.6	26.5	47.0	82.3
DUR38M-20M	38	20	15.9	55	60	32	49.4	26.0	47.9	22.0	49.8	87.5
DUR38M-25M	38	25	21.8	55	60	38	49.4	31.3	47.9	26.5	52.1	92.0
DUR38M-30M	30	30	26.2	55	60	50	49.4	39.7	47.9	39.3	55.4	104.6

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Reducing Union Elbow
DLR





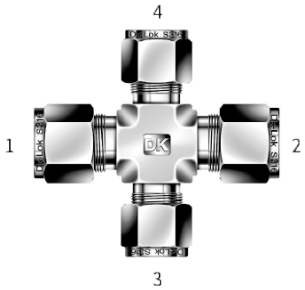
Connects fractional tube

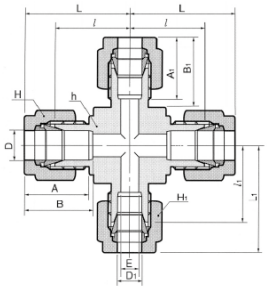
Part No.	Tube O.D.				Width across flat						E	E1	A	A1	B	B1	ℓ	ℓ1	L	L1
	D		D1		h		H		H1											
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm										
DLR2-1	1/8	3.17	1/16	1.59	3/8	9.52	7/6	11.11	5/16	7.93	2.40	1.30	12.70	8.63	15.24	10.93	15.74	14.20	22.35	18.00
DLR4-2	1/4	6.35	1/8	3.17	1/2	12.70	9/16	14.28	7/6	11.11	4.80	2.40	15.24	12.70	17.78	15.24	19.55	17.90	26.92	24.50
DLR6-4	3/8	9.52	1/4	6.35	5/8	15.87	11/16	17.46	9/16	14.28	7.10	4.80	16.76	15.24	19.30	17.78	23.10	21.92	30.47	29.29
DLR8-4	1/2	12.70	1/4	6.35	13/16	20.64	7/8	22.22	9/16	14.28	10.41	4.80	22.86	15.24	21.84	17.78	25.90	24.40	36.06	31.77
DLR8-6	1/2	12.70	3/8	9.52	13/16	20.64	7/8	22.22	11/16	17.46	10.41	7.10	22.86	16.76	21.84	19.30	25.90	25.90	36.06	33.27

Connects metric tube

Part No.	Tube O.D.			Width across flat					E	E1	A	A1	B	B1	ℓ	ℓ1	L	L1
	D	D1		h		H	H1											
		in.	mm	in.	mm	mm	in.	mm										
DLR8M-4	8.0	1/4	6.35	9/16	14.28	16.0	9/16	14.28	6.4	4.8	16.2	15.24	18.6	17.78	21.3	20.6	28.7	28.0

Reducing Union Cross
DXR





Connects fractional tube

Part No.	Port 1	Port 2	Port 3	Port 4	E Min.	Width across flat						A	A1	B	B1	ℓ	ℓ1	L	L1
	D		D1			h		H		H1									
	in.	mm	in.	mm		in.	mm	in.	mm	in.	mm								
DXR12-12-6-6	3/4	19.05	3/8	9.52	7.10	1-1/16	26.98	1-1/8	28.57	11/16	17.46	24.38	16.76	21.84	19.30	29.71	29.71	39.87	37.07

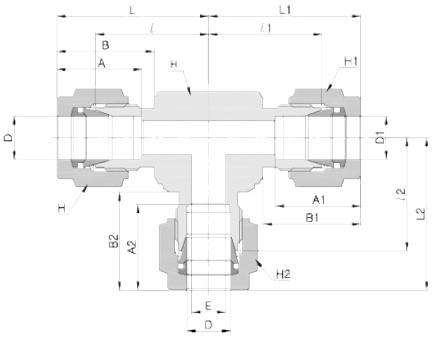
Connects metric tube

Part No.	Port 1 D	Port 2	Port 3	Port 4	E Min.	Width across flat			A	A1	B	B1	ℓ	ℓ1	L	L1
		D1				h	H	H1								
DXR16M-6M-6M-6M	16.0	6.0			4.8	25.4	25.0	14.0	24.4	15.3	22.0	17.7	28.7	27.2	38.8	34.6

Reducing Union Tee

DTR





Connects fractional tube

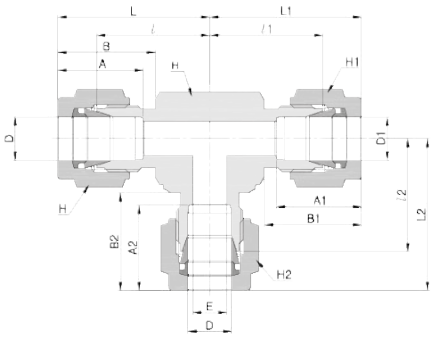
Part No.	Port 1 D		Port 1 D1		Port 1 D2		E Min.	A	A1	A2	B	B1	B2	Width across flat								ℓ	ℓ1	ℓ1	L	L1	L2
														h		H		H1		H2							
	in.	mm	in.	mm	in.	mm								in.	mm	in.	mm	in.	mm	in.	mm						
DTR4-4-2	1/4	6.35	1/4	6.35	1/8	3.17	2.4	15.24	15.24	12.7	17.78	17.78	15.24	1/2	12.7	9/16	14.28	9/16	14.28	7/16	11.11	19.55	19.55	17.9	26.91	26.91	24.5
DTR4-4-6	1/4	6.35	1/4	6.35	3/8	9.52	4.8	15.24	15.24	16.76	17.78	17.78	19.3	5/8	15.87	9/16	14.28	9/16	14.28	11/16	17.46	21.92	21.92	23.1	29.28	29.28	30.46
DTR4-8-8	1/4	6.35	1/2	12.7	1/2	12.7	4.8	15.24	22.86	22.86	17.78	21.84	21.84	13/16	20.64	9/16	14.28	7/8	22.22	7/8	22.22	24.4	25.9	25.9	31.76	36.06	36.06
DTR6-4-6	3/8	9.52	1/4	6.35	3/8	9.52	4.8	16.76	15.24	16.76	19.3	17.78	19.3	5/8	15.87	11/16	17.46	9/16	14.28	11/16	17.46	23.1	21.92	23.1	30.46	29.28	30.46
DTR6-6-4	3/8	9.52	3/8	9.52	1/4	6.35	4.8	16.76	16.76	15.24	19.3	19.3	17.78	5/8	15.87	11/16	17.46	11/16	17.46	9/16	14.28	23.1	23.1	21.92	30.46	30.46	29.28
DTR6-6-8	3/8	9.52	3/8	9.52	1/2	12.7	7.1	16.76	16.76	22.86	19.3	19.3	21.84	13/16	20.64	11/16	17.46	11/16	17.46	7/8	22.22	25.9	25.9	25.9	33.26	33.26	36.06
DTR8-4-6	1/2	12.7	1/4	6.35	3/8	9.52	4.8	22.86	15.24	16.76	21.84	17.78	19.3	13/16	20.64	7/8	22.22	9/16	14.28	11/16	17.46	25.9	25.9	25.9	36.06	33.26	33.26
DTR8-4-8	1/2	12.7	1/4	6.35	1/2	12.7	7.1	22.86	15.24	22.86	21.84	17.78	21.84	13/16	20.64	7/8	22.22	9/16	14.28	7/8	22.22	25.9	24.4	25.9	36.06	31.76	36.06
DTR8-6-6	1/2	12.7	3/8	9.52	3/8	9.52	7.1	22.86	16.76	16.76	21.84	19.3	19.3	13/16	20.64	7/8	22.22	11/16	17.46	11/16	17.46	25.9	25.9	25.9	36.06	33.26	33.26
DTR8-8-4	1/2	12.7	1/2	12.7	1/4	6.35	4.8	22.86	22.86	15.24	21.84	21.84	17.78	13/16	20.64	7/8	22.22	7/8	22.22	9/16	14.28	25.9	25.9	24.4	36.06	36.06	31.76
DTR8-8-6	1/2	12.7	1/2	12.7	3/8	9.52	7.1	22.86	22.86	16.76	21.84	21.84	19.3	13/16	20.64	7/8	22.22	7/8	22.22	11/16	17.46	25.9	25.9	25.9	36.06	36.06	33.26
DTR10-10-6	5/8	15.87	5/8	15.87	3/8	9.52	7.1	24.38	24.38	16.76	21.84	21.84	19.3	15/16	23.81	1	25.4	1	25.4	11/16	17.46	28.7	28.7	28.7	38.86	38.86	36.06
DTR12-8-12	3/4	19.05	1/2	12.7	3/4	19.05	10.41	24.38	22.86	24.38	21.84	21.84	21.84	1-1/16	26.98	1-1/8	28.57	7/8	22.22	1-1/8	28.57	29.71	29.71	29.71	39.87	39.87	39.87
DTR12-12-4	3/4	19.05	3/4	19.05	1/4	6.35	4.8	24.38	24.38	15.24	21.84	21.84	17.78	1-1/16	26.98	1-1/8	28.57	1-1/8	28.57	9/16	14.28	29.71	29.71	28.21	39.87	39.87	35.57
DTR12-12-6	3/4	19.05	3/4	19.05	3/8	9.52	7.1	24.38	24.38	16.76	21.84	21.84	19.3	1-1/16	26.98	1-1/8	28.57	1-1/8	28.57	11/16	17.46	29.71	29.71	29.71	39.87	39.87	35.57
DTR12-12-8	3/4	19.05	3/4	19.05	1/2	12.7	10.41	24.38	24.38	22.86	21.84	21.84	21.84	1-1/16	26.98	1-1/8	28.57	1-1/8	28.57	7/8	22.22	29.71	29.71	29.71	39.87	39.87	38.37
DTR12-12-16	3/4	19.05	3/4	19.05	1	25.4	16.0	24.38	24.38	31.24	21.84	21.84	26.41	1-3/8	34.92	1-1/8	28.57	1-1/8	28.57	1-1/2	38.10	34.43	34.43	36.83	49.02	49.02	45.7
DTR12-12-20	3/4	19.05	3/4	19.05	1-1/4	31.75	16.0	24.38	24.38	41.14	21.84	21.84	38.86	1-11/16	42.86	1-1/8	28.57	1-1/8	28.57	1-7/8	47.63	39.41	39.41	44.45	49.57	49.57	66.55
DTR14-14-8	7/8	22.22	7/8	22.22	1/2	12.7	10.41	25.9	25.9	22.86	21.84	21.84	21.84	1-1/4	31.75	1-1/4	31.75	1-1/4	31.75	7/8	22.22	34.54	34.54	34.54	44.7	44.7	44.7
DTR16-12-12	1	25.4	3/4	19.05	3/4	19.05	16.0	31.24	24.38	24.38	26.41	21.84	21.84	1-3/8	34.92	1-1/2	38.10	1-1/8	28.57	1-1/8	28.57	36.83	35.54	35.54	49.02	45.7	45.7
DTR16-16-4	1	25.4	1	25.4	1/4	6.35	4.8	31.24	31.24	15.24	26.41	26.41	17.78	1-3/8	34.92	1-1/2	38.10	1-1/2	38.10	9/16	14.28	36.83	36.83	33.04	49.02	49.02	40.4
DTR16-16-6	1	25.4	1	25.4	3/8	9.52	7.1	31.24	31.24	16.76	26.41	26.41	19.3	1-3/8	34.92	1-1/2	38.10	1-1/2	38.10	11/16	17.46	36.83	36.83	34.54	49.02	49.02	41.9
DTR16-16-8	1	25.4	1	25.4	1/2	12.7	10.41	31.24	31.24	22.86	26.41	26.41	21.84	1-3/8	34.92	1-1/2	38.10	1-1/2	38.10	7/8	22.22	36.83	36.83	34.54	49.02	49.02	44.7
DTR16-16-12	1	25.4	1	25.4	3/4	19.05	16.0	31.24	31.24	24.38	26.41	26.41	21.84	1-3/8	34.92	1-1/2	38.10	1-1/2	38.10	1-1/8	28.57	36.83	36.83	35.54	49.02	49.02	45.7
DTR20-12-12	1 1/4	31.75	3/4	19.05	3/4	19.05	16.0	41.14	24.38	24.38	38.86	21.84	21.84	1-11/16	42.86	1-7/8	47.63	1-1/8	28.57	1-1/8	28.57	44.45	39.41	39.41	66.55	49.57	49.57
DTR20-20-12	1 1/4	31.75	1 1/4	31.75	3/4	19.05	16.0	41.14	41.14	24.38	38.86	38.86	21.84	1-11/16	42.86	1-7/8	47.63	1-7/8	47.63	1-1/8	28.57	44.45	44.45	39.41	66.55	66.55	49.57
DTR24-20-20	1 1/2	38.10	1 1/4	31.75	1 1/4	31.75	27.69	50.03	41.14	41.14	45.21	38.86	38.86	2	50.8	2-1/4	57.15	1-7/8	47.63	1-7/8	47.63	50.8	49.62	49.62	77.97	71.72	71.72
DTR24-24-8	1 1/2	38.10	1 1/2	38.10	1/2	12.7	10.41	50.03	50.03	22.86	45.21	45.21	21.84	2	50.8	2-1/4	57.15	2-1/4	57.15	7/8	22.22	50.8	50.8	44.58	77.97	77.97	54.74
DTR24-24-12	1 1/2	38.10	1 1/2	38.10	3/4	19.05	16.0	50.03	50.03	24.38	45.21	45.21	21.84	2	50.8	2-1/4	57.15	2-1/4	57.15	1-1/8	28.57	50.8	50.8	44.58	77.97	77.97	54.74
DTR24-24-16	1 1/2	38.10	1 1/2	38.10	1	25.4	22.3	50.03	50.03	31.24	45.21	45.21	26.41	2	50.8	2-1/4	57.15	2-1/4	57.15	1-1/2	38.10	50.8	50.8	47.75	77.97	77.97	59.94

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Reducing Union Tee

DTR





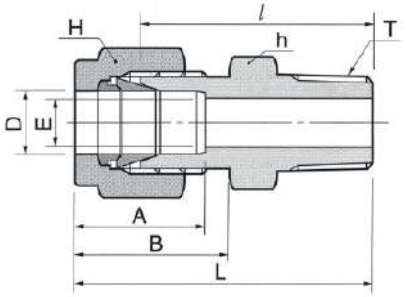
Connects metric tube

Part No.	Port 1 D	Port 2 D1	Port 3 D2	E Min.	Width across flat				A	A1	A2	B	B1	B2	ℓ	ℓ1	ℓ1	L	L1	L2
					h	H	H1	H2												
DTR3M-3M-6M	3	3	6	2.4	12.7	12	12	14	12.9	12.9	15.3	15.3	15.3	17.7	18.0	18.0	19.6	24.6	24.6	27.0
DTR8M-8M-6M	8	8	6	4.8	15	16	16	14	16.2	16.2	15.3	18.6	18.6	17.7	21.3	21.3	20.5	28.8	28.8	28.0
DTR10M-10M-6M	10	10	6	4.8	17.4	19	19	14	17.2	17.2	15.3	19.5	19.5	17.7	23.9	23.9	22.4	31.5	31.5	29.8
DTR10M-10M-12M	10	10	12	7.9	20.6	19	19	22	17.2	17.2	22.8	19.5	19.5	22.0	25.9	25.9	25.9	33.5	33.5	36.0
DTR12M-6M-10M	12	6	10	4.8	20.6	22	14	19	22.8	15.3	17.2	22.0	17.7	19.5	25.9	24.4	25.9	36.0	31.8	33.5
DTR12M-6M-12M	12	6	12	4.8	20.6	22	14	22	22.8	15.3	22.8	22.0	17.7	22.0	25.9	24.4	25.9	36.0	31.8	36.0
DTR12M-10M-10M	12	10	10	7.9	20.6	22	19	19	22.8	17.2	17.2	22.0	19.5	19.5	25.9	25.9	25.9	36.0	33.5	33.5
DTR12M-12M-10M	12	12	10	7.9	20.6	22	22	19	22.8	22.8	17.2	22.0	22.0	19.5	25.9	25.9	25.9	36.0	36.0	33.5
DTR12M-12M-6M	12	12	6	4.8	20.6	22	22	14	22.8	22.8	15.3	22.0	22.0	17.7	25.9	25.9	24.4	36.0	36.0	31.8
DTR15M-15M-12M	15	15	12	9.8	25.4	25	25	22	24.4	24.4	22.8	22.0	22.0	22.0	28.7	28.7	28.7	38.8	38.8	38.8
DTR16M-16M-12M	16	16	12	9.8	25.4	25	25	22	24.4	24.4	22.8	22.0	22.0	22.0	28.7	28.7	28.7	38.8	38.8	38.8
DTR18M-18M-12M	18	18	12	9.8	27	30	30	22	24.4	24.4	22.8	22.0	22.0	22.0	29.7	29.7	28.2	39.8	39.8	38.3
DTR20M-12M-20M	20	12	20	9.8	34.9	32	22	32	26.0	22.8	26.0	22.0	22.0	22.0	32.5	32.5	32.5	42.6	42.6	42.6
DTR20M-20M-6M	20	20	6	4.8	34.9	32	32	14	26.0	26.0	15.3	22.0	22.0	17.7	32.5	32.5	31.0	42.6	42.6	38.4
DTR20M-20M-10M	20	20	10	7.9	34.9	32	32	19	26.0	26.0	17.2	22.0	22.0	19.5	32.5	32.5	32.5	42.6	42.6	40.1
DTR20M-20M-12M	20	20	12	9.8	34.9	32	32	22	26.0	26.0	22.8	22.0	22.0	22.0	32.5	32.5	32.5	42.6	42.6	42.6
DTR20M-20M-25M	20	20	25	15.9	34.9	32	32	38	26.0	26.0	31.3	22.0	22.0	26.5	34.3	34.3	36.8	44.4	44.4	49.1
DTR20M-20M-32M	20	20	32	15.9	46	32	32	50	26.0	26.0	42.0	22.0	22.0	41.6	42.5	42.5	49.3	52.6	52.6	72.3
DTR22M-22M-12M	22	22	12	9.8	34.9	32	32	22	26.0	26.0	22.8	22.0	22.0	22.0	32.5	32.5	32.5	42.6	42.6	42.6
DTR25M-20M-20M	25	20	20	15.9	34.9	38	32	32	31.3	26.0	26.0	26.5	22.0	22.0	36.8	34.3	34.3	49.1	44.4	44.4
DTR25M-25M-10M	25	25	10	7.9	34.9	38	38	19	31.3	31.3	17.2	26.5	26.5	19.5	36.8	36.8	34.3	49.1	49.1	38.9
DTR25M-25M-12M	25	25	12	9.8	34.9	38	38	22	31.3	31.3	22.8	26.5	26.5	22.0	36.8	36.8	34.3	49.1	49.1	44.4
DTR25M-25M-20M	25	25	20	15.9	34.9	38	38	32	31.3	31.3	26.0	26.5	26.5	22.0	36.8	36.8	34.3	49.1	49.1	44.4
DTR32M-32M-20M	32	32	20	15.9	46	38	38	32	42.0	42.0	26.0	41.6	41.6	22.0	49.3	49.3	42.5	72.3	72.3	52.6
DTR38M-32M-32M	38	32	32	28.6	50.8	60	38	38	49.4	42.0	42.0	47.9	41.6	41.6	56.4	54.7	54.7	84.0	77.7	77.7
DTR38M-38M-20M	38	38	20	15.9	50.8	60	60	32	49.4	49.4	26.0	47.9	47.9	22.0	56.4	56.4	47.9	84.0	84.0	58.0
DTR38M-38M-25M	38	38	25	21.8	50.8	60	60	38	49.4	49.4	31.3	47.9	47.9	26.5	56.4	56.4	50.4	84.0	84.0	62.7

Male Connector

DMC-N





Connects fractional tube to female NPT thread

Part No.	Tube O.D. D		T NPT	E Min.	Width across flat				A	B	ℓ	L
					h		H					
	in.	mm			in.	mm	in.	mm				
DMC1-1N	1/16	1.59	1/16	1.27	5/16	7.93	5/16	7.93	8.63	10.92	20.00	23.83
DMC1-2N	1/16	1.59	1/8	1.27	7/16	11.11	5/16	7.93	8.63	10.92	22.35	26.23
DMC1-4N	1/16	1.59	1/4	1.27	9/16	14.28	5/16	7.93	8.63	10.92	27.17	30.98
DMC2-1N	1/8	3.17	1/16	2.28	7/16	11.11	7/16	11.11	12.70	15.24	23.11	29.71
DMC2-2N	1/8	3.17	1/8	2.28	7/16	11.11	7/16	11.11	12.70	15.24	23.87	30.48
DMC2-4N	1/8	3.17	1/4	2.28	9/16	14.28	7/16	11.11	12.70	15.24	28.95	35.56
DMC2-6N	1/8	3.17	3/8	2.28	11/16	17.46	7/16	11.11	12.70	15.24	29.21	35.81
DMC2-8N	1/8	3.17	1/2	2.28	7/8	22.22	7/16	11.11	12.70	15.24	35.56	42.16
DMC3-2N	3/16	4.76	1/8	3.04	7/16	11.11	1/2	12.70	13.71	16.00	24.63	31.24
DMC3-4N	3/16	4.76	1/4	3.04	9/16	14.28	1/2	12.70	13.71	16.00	29.71	36.32
DMC4-1N	1/4	6.35	1/16	4.82	1/2	12.70	9/16	14.28	15.24	17.78	25.40	32.76
DMC4-2N	1/4	6.35	1/8	4.82	1/2	12.70	9/16	14.28	15.24	17.78	25.40	32.76
DMC4-4N	1/4	6.35	1/4	4.82	9/16	14.28	9/16	14.28	15.24	17.78	30.48	37.84
DMC4-6N	1/4	6.35	3/8	4.82	11/16	17.46	9/16	14.28	15.24	17.78	30.98	38.35
DMC4-8N	1/4	6.35	1/2	4.82	7/8	22.22	9/16	14.28	15.24	17.78	37.33	44.70
DMC4-12N	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
DMC5-2N	5/16	7.93	1/8	4.82	9/16	14.28	5/8	15.87	16.25	18.54	26.67	34.03
DMC5-4N	5/16	7.93	1/4	6.35	9/16	14.28	5/8	15.87	16.25	18.54	31.24	38.60
DMC5-6N	5/16	7.93	3/8	6.35	11/16	17.46	5/8	15.87	16.25	18.54	31.75	39.11
DMC5-8N	5/16	7.93	1/2	6.35	7/8	22.22	5/8	15.87	16.25	18.54	38.11	45.60
DMC6-2N	3/8	9.52	1/8	4.82	5/8	15.87	11/16	17.46	16.76	19.30	27.94	35.30
DMC6-4N	3/8	9.52	1/4	7.11	5/8	15.87	11/16	17.46	16.76	19.30	32.51	39.87
DMC6-6N	3/8	9.52	3/8	7.11	11/16	17.46	11/16	17.46	16.76	19.30	32.51	39.87
DMC6-8N	3/8	9.52	1/2	7.11	7/8	22.22	11/16	17.46	16.76	19.30	38.86	46.22
DMC6-12N	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
DMC6-16N	3/8	9.52	1	7.11	1-3/8	34.92	11/16	17.46	16.76	19.30	47.0	54.37
DMC8-2N	1/2	12.70	1/8	4.82	13/16	20.64	7/8	22.22	22.86	21.84	28.70	38.86
DMC8-4N	1/2	12.70	1/4	7.11	13/16	20.64	7/8	22.22	22.86	21.84	33.27	43.43
DMC8-6N	1/2	12.70	3/8	9.65	13/16	20.64	7/8	22.22	22.86	21.84	33.27	43.43
DMC8-8N	1/2	12.70	1/2	10.41	7/8	22.22	7/8	22.22	22.86	21.84	38.86	49.02
DMC8-12N	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
DMC8-16N	1/2	12.70	1	10.41	1-3/8	34.92	7/8	22.22	22.86	21.84	46.99	57.15
DMC10-4N	5/8	15.87	1/4	6.35	15/16	23.81	1	25.40	24.38	21.84	33.80	43.96
DMC10-6N	5/8	15.87	3/8	9.65	15/16	23.81	1	25.40	24.38	21.84	34.03	44.19
DMC10-8N	5/8	15.87	1/2	11.93	15/16	23.81	1	25.40	24.38	21.84	38.86	49.02
DMC10-12N	5/8	15.87	3/4	12.70	1-1/16	26.98	1	25.40	24.38	21.84	40.38	50.54
DMC12-6N	3/4	19.05	3/8	9.65	1-1/16	26.98	1-1/8	28.58	24.38	21.84	34.03	44.19
DMC12-8N	3/4	19.05	1/2	11.93	1-1/16	26.98	1-1/8	28.58	24.38	21.84	40.38	50.54
DMC12-12N	3/4	19.05	3/4	15.74	1-1/16	26.98	1-1/8	28.58	24.38	21.84	40.38	50.54
DMC12-16N	3/4	19.05	1	15.74	1-3/8	34.92	1-1/8	28.58	24.38	21.84	46.99	57.15
DMC14-8N	7/8	22.22	1/2	11.9	1-3/16	30.16	1-1/4	31.75	25.90	21.84	40.38	50.54
DMC14-12N	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
DMC14-16N	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
DMC16-6N	1	25.40	3/8	9.65	1-3/8	34.92	1-1/2	38.10	31.24	26.41	40.30	52.49
DMC16-8N	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
DMC16-12N	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
DMC16-16N	1	25.40	1	22.35	1-3/8	34.62	1-1/2	38.10	31.24	26.41	50.03	62.23

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Connects fractional tube to female NPT thread

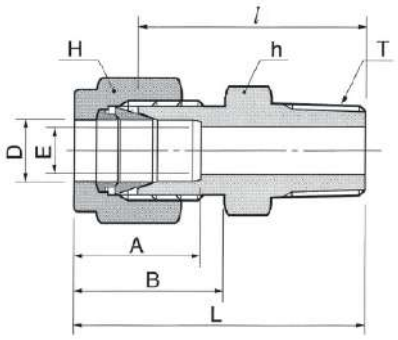
Part No.	Tube O.D. D		T NPT	E Min.	Width across flat				A	B	ℓ	L
					h		H					
	in.	mm			in.	mm	in.	mm				
DMC20-16N	1-1/4	31.75	1	22.35	1-3/4	44.45	1-7/8	47.63	41.14	38.86	55.11	77.21
DMC20-20N	1-1/4	31.75	1-1/4	27.68	1-3/4	44.45	1-7/8	47.63	41.14	38.86	55.11	77.21
DMC20-24N	1-1/4	31.75	1-1/2	27.68	1-3/4	44.45	1-7/8	47.63	41.14	38.86	60.54	82.64
DMC24-16N	1-1/2	38.10	1	22.30	2-1/8	53.98	2-1/4	57.15	50.03	45.21	59.42	86.60
DMC24-20N	1-1/2	38.10	1-1/4	27.68	2-1/8	53.98	2-1/4	57.15	50.03	45.21	59.42	86.60
DMC24-24N	1-1/2	38.10	1-1/2	33.90	2-1/8	53.98	2-1/4	57.15	50.03	45.21	61.72	88.90
DMC24-32N	1-1/2	38.10	2	33.90	2-3/4	69.85	2-1/4	57.15	50.03	45.21	62.42	99.75
DMC32-8N	2	50.80	1/2	11.93	2-3/4	69.85	3	76.20	67.56	62.73	68.40	105.73
DMC32-20N	2	50.80	1-1/4	45.97	2-3/4	69.85	3	76.20	67.56	62.73	71.40	108.73
DMC32-24N	2	50.80	1-1/2	45.97	2-3/4	69.85	3	76.20	67.56	62.73	75.50	112.83
DMC32-32N	2	50.80	2	45.97	2-3/4	69.85	3	76.20	67.56	62.73	76.20	113.53

Connects metric tube to female NPT thread

Part No.	Tube O.D. D	T NPT	E Min.	Width across flat		A	B	ℓ	L
				h	H				
DMC2M-2N	2	1/8	1.7	12	12	12.9	15.3	23.9	30.5
DMC3M-2N	3	1/8	2.4	12	12	12.9	15.3	23.1	29.7
DMC3M-4N	3	1/4	2.4	14	12	12.9	15.3	29.0	35.6
DMC4M-2N	4	1/8	2.4	12	12	13.7	16.1	24.6	31.2
DMC4M-4N	4	1/4	2.4	14	12	13.7	16.1	29.7	36.3
DMC6M-2N	6	1/8	4.8	14	14	15.3	17.7	25.4	32.8
DMC6M-4N	6	1/4	4.8	14	14	15.3	17.7	30.2	37.6
DMC6M-6N	6	3/8	4.8	18	14	15.3	17.7	31.0	38.4
DMC6M-8N	6	1/2	4.8	22	14	15.3	17.7	37.3	44.0
DMC8M-2N	8	1/8	4.8	15	16	16.2	18.6	26.7	34.2
DMC8M-4N	8	1/4	6.4	15	16	16.2	18.6	31.2	38.7
DMC8M-6N	8	3/8	6.4	18	16	16.2	18.6	31.8	39.2
DMC8M-8N	8	1/2	6.4	22	16	16.2	18.6	37.3	44.8
DMC10M-2N	10	1/8	4.8	18	19	17.2	19.5	28.7	36.3
DMC10M-4N	10	1/4	7.1	18	19	17.2	19.5	33.3	40.9
DMC10M-6N	10	3/8	7.9	18	19	17.2	19.5	33.3	40.9
DMC10M-8N	10	1/2	7.9	22	19	17.2	19.5	38.1	45.7
DMC10M-12N	10	3/4	7.9	27	19	17.2	19.5	38.9	46.5
DMC12M-2N	12	1/8	4.8	22	22	22.8	22.0	28.7	38.8
DMC12M-4N	12	1/4	7.1	22	22	22.8	22.0	33.3	43.4
DMC12M-6N	12	3/8	9.5	22	22	22.8	22.0	33.3	43.4
DMC12M-8N	12	1/2	9.5	22	22	22.8	22.0	38.1	48.2
DMC12M-12N	12	3/4	9.5	27	22	22.8	22.0	38.9	49.0
DMC14M-4N	14	1/4	6.4	24	25	24.4	22.0	34.0	44.1
DMC14M-6N	14	3/8	9.5	24	25	24.4	22.0	34.0	44.1
DMC14M-8N	14	1/2	11.1	24	25	24.4	22.0	34.0	44.1
DMC15M-8N	15	1/2	11.9	24	25	24.4	22.0	38.9	49.0
DMC16M-4N	16	1/4	7.1	24	25	24.4	22.0	34.0	44.1
DMC16M-6N	16	3/8	9.5	24	25	24.4	22.0	34.0	44.1
DMC16M-8N	16	1/2	11.9	24	25	24.4	22.0	38.9	49.0
DMC16M-12N	16	3/4	12.7	27	25	24.4	22.0	38.9	49.0
DMC18M-8N	18	1/2	11.9	27	30	24.4	22.0	40.4	50.5
DMC18M-12N	18	3/4	15.1	27	30	24.4	22.0	40.4	50.5
DMC20M-8N	20	1/2	11.9	30	32	26.0	22.0	42.2	52.3
DMC20M-12N	20	3/4	15.9	30	32	26.0	22.0	42.2	52.3
DMC22M-12N	22	3/4	15.9	30	32	26.0	22.0	42.2	52.3
DMC22M-16N	22	1	18.3	35	32	26.0	22.0	47.8	57.9
DMC25M-8N	25	1/2	11.9	35	38	31.3	26.5	45.2	57.5
DMC25M-12N	25	3/4	15.9	35	38	31.3	26.5	45.2	57.5
DMC25M-16N	25	1	21.8	35	38	31.3	26.5	50.0	62.3
DMC28M-16N	28	1	21.8	41	46	36.6	36.6	51.6	72.4
DMC28M-20N	28	1-1/4	21.8	46	46	36.6	36.6	52.3	73.1
DMC30M-20N	30	1-1/4	26.2	46	50	39.6	39.2	55.6	77.2
DMC32M-20N	32	1-1/4	28.6	46	50	42.0	41.6	56.6	79.6
DMC38M-24N	38	1-1/2	33.7	55	60	49.4	47.9	64.0	91.6

Male Connector
DMC-R





Connects fractional tube to female ISO tapered thread

Part No.	Tube O.D. D		T NPT	E Min.	Width across flat				A	B	ℓ	L
					h		H					
	in.	mm			in.	mm	in.	mm				
DMC2-2R	1/8	3.17	1/8	2.28	7/16	11.11	7/16	11.11	12.70	15.24	23.87	30.48
DMC2-4R	1/8	3.17	1/4	2.28	9/16	14.28	7/16	11.11	12.70	15.24	28.95	35.56
DMC4-2R	1/4	6.35	1/8	4.82	1/2	12.70	9/16	14.28	15.24	17.78	25.40	32.76
DMC4-4R	1/4	6.35	1/4	4.82	9/16	14.28	9/16	14.28	15.24	17.78	30.48	37.84
DMC4-6R	1/4	6.35	3/8	4.82	11/16	17.46	9/16	14.28	15.24	17.78	30.98	38.35
DMC4-8R	1/4	6.35	1/2	4.82	7/8	22.22	9/16	14.28	15.24	17.78	37.33	44.70
DMC5-2R	5/16	7.93	1/8	4.82	9/16	14.28	5/8	15.87	16.25	18.54	26.67	34.03
DMC5-4R	5/16	7.93	1/4	6.35	9/16	14.28	5/8	15.87	16.25	18.54	31.24	38.60
DMC5-16R	5/16	7.93	1	6.35	1-3/8	34.92	5/8	15.87	16.25	18.54	46.2	50.0
DMC6-2R	3/8	9.52	1/8	4.82	5/8	15.87	11/16	17.46	16.76	19.30	27.94	35.30
DMC6-4R	3/8	9.52	1/4	7.11	5/8	15.87	11/16	17.46	16.76	19.30	32.51	39.87
DMC6-6R	3/8	9.52	3/8	7.11	11/16	17.46	11/16	17.46	16.76	19.30	32.51	39.87
DMC6-8R	3/8	9.52	1/2	7.11	7/8	22.22	11/16	17.46	16.76	19.30	38.86	46.22
DMC6-12R	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
DMC8-2R	1/2	12.70	1/8	4.82	13/16	20.64	7/8	22.22	22.86	21.84	28.70	38.86
DMC8-4R	1/2	12.70	1/4	7.11	13/16	20.64	7/8	22.22	22.86	21.84	33.27	43.43
DMC8-6R	1/2	12.70	3/8	9.65	13/16	20.64	7/8	22.22	22.86	21.84	33.27	43.43
DMC8-8R	1/2	12.70	1/2	10.41	7/8	22.22	7/8	22.22	22.86	21.84	38.86	49.02
DMC8-12R	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
DMC8-16R	1/2	12.70	1	10.41	1-3/8	34.92	7/8	22.22	22.86	21.84	46.99	57.15
DMC10-6R	5/8	15.87	3/8	9.65	15/16	23.81	1	25.40	24.38	21.84	34.03	44.19
DMC10-8R	5/8	15.87	1/2	11.93	15/16	23.81	1	25.40	24.38	21.84	38.86	49.02
DMC10-12R	5/8	15.87	3/4	12.70	1-1/16	26.98	1	25.40	24.38	21.84	40.38	50.54
DMC12-8R	3/4	19.05	1/2	11.93	1-1/16	26.98	1-1/8	28.58	24.38	21.84	40.38	50.54
DMC12-12R	3/4	19.05	3/4	15.74	1-1/16	26.98	1-1/8	28.58	24.38	21.84	40.38	50.54
DMC12-16R	3/4	19.05	1	15.74	1-3/8	34.92	1-1/8	28.58	24.38	21.84	46.99	57.15
DMC16-12R	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
DMC16-16R	1	25.40	1	22.35	1-3/8	34.62	1-1/2	38.10	31.24	26.41	50.03	62.23
DMC20-12R	1-1/4	31.75	3/4	15.74	1-3/4	44.45	1-7/8	47.63	41.14	38.86	50.0	72.10
DMC20-16R	1-1/4	31.75	1	22.35	1-3/4	44.45	1-7/8	47.63	41.14	38.86	55.11	77.21
DMC20-20R	1-1/4	31.75	1-1/4	27.68	1-3/4	44.45	1-7/8	47.63	41.14	38.86	55.11	77.21
DMC32-32R	2	50.80	2	45.97	2-3/4	69.85	3	76.20	67.56	62.73	76.20	113.53

Thermocouple Connector
DMCT



Most DK-Lok male connectors can be bored-through thermocouple fittings except those fittings with small male thread like 1/8 in.
To order, insert T in DMC male connector part number. Example: DMCT8-8N-S

DK-Lok bored-through fittings have no shoulder or sizing angle inside the body. This allows thermocouples or dip tubes to pass beyond the fitting male thread.

Assembly instruction

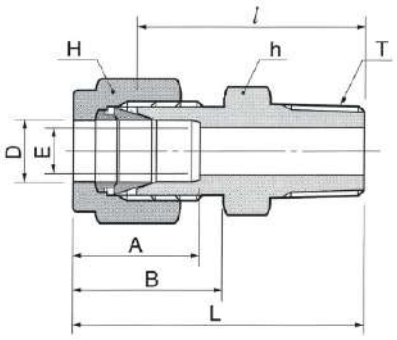
1. Position the length of thermocouple to pass through fitting male thread and hold it to prevent shifting during assembly.
2. Wrench tightens the nut 1 1/4 turns from finger tight position, keeping the body steady with backup wrench.
   • Tighten the nut 3/4 turn for 1/8, and 3/16; 3, and 4mm Tube Fittings.

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Male Connector

DMC-R



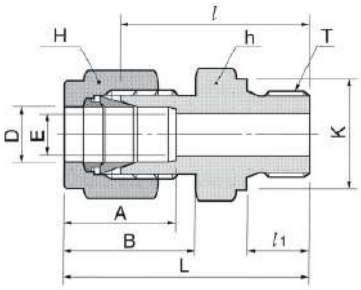


Connects metric tube to female ISO tapered thread

Part No.	Tube O.D. D	T NPT	E Min.	Width across flat		A	B	ℓ	L
				h	H				
DMC2M-2R	2	1/8	1.7	12	12	12.9	15.3	23.9	30.5
DMC3M-2R	3	1/8	2.4	12	12	12.9	15.3	23.1	29.7
DMC3M-4R	3	1/4	2.4	14	12	12.9	15.3	29.0	35.6
DMC4M-2R	4	1/8	2.4	12	12	13.7	16.1	24.6	31.2
DMC4M-4R	4	1/4	2.4	14	12	13.7	16.1	29.7	36.3
DMC6M-2R	6	1/8	4.8	14	14	15.3	17.7	25.4	32.8
DMC6M-4R	6	1/4	4.8	14	14	15.3	17.7	30.2	37.6
DMC6M-6R	6	3/8	4.8	18	14	15.3	17.7	31.0	38.4
DMC6M-8R	6	1/2	4.8	22	14	15.3	17.7	37.3	44.0
DMC8M-2R	8	1/8	4.8	15	16	16.2	18.6	26.7	34.2
DMC8M-4R	8	1/4	6.4	15	16	16.2	18.6	31.2	38.7
DMC8M-6R	8	3/8	6.4	18	16	16.2	18.6	31.8	39.2
DMC8M-8R	8	1/2	6.4	22	16	16.2	18.6	37.3	44.8
DMC10M-2R	10	1/8	4.8	18	19	17.2	19.5	28.7	36.3
DMC10M-4R	10	1/4	7.1	18	19	17.2	19.5	33.3	40.9
DMC10M-6R	10	3/8	7.9	18	19	17.2	19.5	33.3	40.9
DMC10M-8R	10	1/2	7.9	22	19	17.2	19.5	38.1	45.7
DMC10M-12R	10	3/4	7.9	27	19	17.2	19.5	38.9	46.5
DMC12M-4R	12	1/4	7.1	22	22	22.8	22.0	33.3	43.4
DMC12M-6R	12	3/8	9.5	22	22	22.8	22.0	33.3	43.4
DMC12M-8R	12	1/2	9.5	22	22	22.8	22.0	38.1	48.2
DMC12M-12R	12	3/4	9.5	27	22	22.8	22.0	38.9	49.0
DMC14M-6R	14	3/8	9.5	24	25	24.4	22.0	34.0	44.1
DMC14M-8R	14	1/2	11.1	24	25	24.4	22.0	34.0	44.1
DMC15M-6R	15	3/8	9.5	24	25	24.4	22.0	34.0	44.1
DMC15M-8R	15	1/2	11.9	24	25	24.4	22.0	38.9	49.0
DMC16M-4R	16	1/4	7.1	24	25	24.4	22.0	34.0	44.1
DMC16M-6R	16	3/8	9.5	24	25	24.4	22.0	34.0	44.1
DMC16M-8R	16	1/2	11.9	24	25	24.4	22.0	38.9	49.0
DMC16M-12R	16	3/4	12.7	27	25	24.4	22.0	38.9	49.0
DMC18M-8R	18	1/2	11.9	27	30	24.4	22.0	40.4	50.5
DMC18M-12R	18	3/4	15.1	27	30	24.4	22.0	40.4	50.5
DMC20M-8R	20	1/2	11.9	30	32	26.0	22.0	42.2	52.3
DMC20M-12R	20	3/4	15.9	30	32	26.0	22.0	42.2	52.3
DMC22M-8R	22	1/2	11.9	30	32	26.0	22.0	42.2	52.3
DMC22M-12R	22	3/4	15.9	30	32	26.0	22.0	42.2	52.3
DMC22M-16R	22	1	18.3	35	32	26.0	22.0	47.8	57.9
DMC25M-8R	25	1/2	11.9	35	38	31.3	26.5	45.2	57.5
DMC25M-12R	25	3/4	15.9	35	38	31.3	26.5	45.2	57.5
DMC25M-16R	25	1	21.8	35	38	31.3	26.5	50.0	62.3
DMC28M-16R	28	1	21.8	41	46	36.6	36.6	51.6	72.4
DMC28M-20R	28	1-1/4	21.8	46	46	36.6	36.6	52.3	73.1
DMC30M-20R	30	1-1/4	26.2	46	50	39.6	39.2	55.6	77.2
DMC32M-20R	32	1-1/4	28.6	46	50	42.0	41.6	56.6	79.6
DMC38M-24R	38	1-1/2	33.7	55	60	49.4	47.9	64.0	91.6

Male Connector
DMC-G

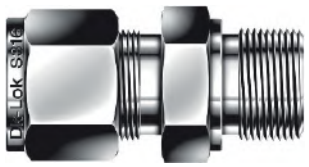


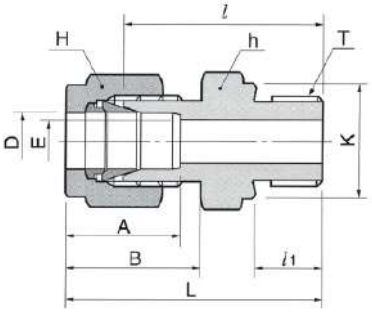


Connects fractional tube to female ISO tapered thread

Part No.	Tube O.D. D		T PF	E Min.	Width across flat				A	B	ℓ	ℓ1	L	K
					h		H							
	in.	mm			in.	mm	in.	mm						
DMC2-2G	1/8	3.17	1/8	2.28	9/16	14.28	7/16	11.11	12.70	15.24	23.37	7.11	29.97	13.80
DMC2-4G	1/8	3.17	1/4	2.28	3/4	19.05	7/16	11.11	12.70	15.24	28.70	11.18	35.31	18.00
DMC2-6G	1/8	3.17	3/8	2.28	7/8	22.22	7/16	11.11	12.70	15.24	29.72	11.18	36.21	21.80
DMC4-2G	1/4	6.35	1/8	2.28	9/16	14.28	9/16	14.28	15.24	17.78	24.89	7.11	32.26	13.80
DMC4-4G	1/4	6.35	1/4	4.8	3/4	19.05	9/16	14.28	15.24	17.78	30.23	11.18	37.59	18.00
DMC4-6G	1/4	6.35	3/8	4.8	7/8	22.22	9/16	14.28	15.24	17.78	31.50	11.18	38.86	21.80
DMC4-8G	1/4	6.35	1/2	4.8	1-1/16	26.98	9/16	14.28	15.24	17.78	37.34	14.22	44.70	26.00
DMC6-2G	3/8	9.52	1/8	4.8	5/8	15.87	11/16	17.46	16.76	19.30	26.40	7.11	33.77	13.80
DMC6-4G	3/8	9.53	1/4	4.82	3/4	19.05	11/16	17.46	16.76	19.30	31.75	11.18	39.12	18.00
DMC6-6G	3/8	9.53	3/8	7.11	7/8	22.22	11/16	17.46	16.76	19.30	33.02	11.18	40.39	21.80
DMC6-8G	3/8	9.53	1/2	7.11	1-1/16	26.98	11/16	17.46	16.76	19.30	38.86	14.22	46.23	26.00
DMC8-4G	1/2	12.70	1/4	7.11	13/16	20.64	7/8	22.22	22.86	21.84	32.51	11.18	42.67	18.00
DMC8-6G	1/2	12.70	3/8	7.90	7/8	22.22	7/8	22.22	22.86	21.84	33.02	11.18	43.18	21.80
DMC8-8G	1/2	12.70	1/2	10.41	1-1/16	26.98	7/8	22.22	22.86	21.84	38.86	14.22	49.02	26.00
DMC12-8G	3/4	19.05	1/2	11.93	1-1/16	26.98	1-1/8	28.58	24.38	21.84	38.86	14.22	49.02	26.00
DMC12-12G	3/4	19.05	3/4	15.74	1-5/16	33.33	1-1/8	28.58	24.38	21.84	42.67	15.75	52.83	32.00
DMC16-8G	1	25.40	1/2	11.93	1-3/8	34.92	1-1/2	38.10	31.24	26.41	43.69	14.22	55.88	26.00
DMC16-12G	1	25.40	3/4	15.74	1-3/8	34.92	1-1/2	38.10	31.24	26.41	43.69	15.75	55.88	32.00
DMC16-16G	1	25.40	1	22.35	1-5/8	41.27	1-1/2	38.10	31.24	26.41	47.75	18.29	59.94	39.00
DMC20-20G	1-1/4	31.75	1-1/4	27.68	2	50.80	1-7/8	47.63	41.14	38.86	51.16	20.00	73.26	49.00
DMC24-24G	1-1/2	38.10	1-1/2	34.03	2-1/4	57.15	2-1/4	57.15	50.03	45.21	57.57	22.00	84.75	54.70

Male Connector for Metal Gasket(previously DOM)
DMC-GB





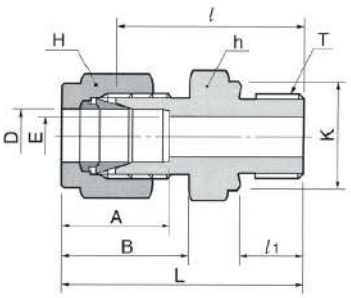
Connects fractional tube to female ISO parallel thread

Part No.	Tube O.D.D		T PF	E Min.	Width across flat				A	B	ℓ	ℓ1	L	K
					h		H							
	in.	mm			in.	mm	in.	mm						
DMC2-2GB	1/8	3.17	1/8	2.28	9/16	14.28	7/16	11.11	12.70	15.24	23.37	7.11	29.97	13.72
DMC2-4GB	1/8	3.17	1/4	2.28	3/4	19.05	7/16	11.11	12.70	15.24	28.70	11.18	35.31	18.03
DMC2-6GB	1/8	3.17	3/8	2.28	7/8	22.22	7/16	11.11	12.70	15.24	29.72	11.18	36.21	21.84
DMC4-2GB	1/4	6.35	1/8	2.28	9/16	14.28	9/16	14.28	15.24	17.78	24.89	7.11	32.26	13.72
DMC4-4GB	1/4	6.35	1/4	4.82	3/4	19.05	9/16	14.28	15.24	17.78	30.23	11.18	37.59	18.03
DMC4-6GB	1/4	6.35	3/8	4.82	7/8	22.22	9/16	14.28	15.24	17.78	31.50	11.18	38.86	21.84
DMC4-8GB	1/4	6.35	1/2	4.82	1-1/16	26.98	9/16	14.28	15.24	17.78	37.34	14.22	44.70	25.91
DMC6-4GB	3/8	9.53	1/4	4.82	3/4	19.05	11/16	17.46	16.76	19.30	31.75	11.18	39.12	18.03
DMC6-6GB	3/8	9.53	3/8	7.11	7/8	22.22	11/16	17.46	16.76	19.30	33.02	11.18	40.39	21.84
DMC6-8GB	3/8	9.53	1/2	7.11	1-1/16	26.98	11/16	17.46	16.76	19.30	38.86	14.22	46.23	25.91
DMC8-4GB	1/2	12.70	1/4	7.11	13/16	20.64	7/8	22.22	22.86	21.84	32.51	11.18	42.67	18.03
DMC8-6GB	1/2	12.70	3/8	9.65	7/8	22.22	7/8	22.22	22.86	21.84	33.02	11.18	43.18	21.84
DMC8-8GB	1/2	12.70	1/2	10.41	1-1/16	26.98	7/8	22.22	22.86	21.84	38.86	14.22	49.02	25.91
DMC12-8GB	3/4	19.05	1/2	11.93	1-1/16	26.98	1-1/8	28.58	24.38	21.84	38.86	14.22	49.02	25.91
DMC12-12GB	3/4	19.05	3/4	15.74	1-5/16	33.33	1-1/8	28.58	24.38	21.84	42.67	15.75	52.83	32.00
DMC16-8GB	1	25.40	1/2	11.93	1-3/8	34.92	1-1/2	38.10	31.24	26.41	43.69	14.22	55.88	25.91
DMC16-16GB	1	25.40	1	22.35	1-5/8	41.27	1-1/2	38.10	31.24	26.41	47.75	18.29	59.94	39.12
DMC20-20GB	1-1/4	31.75	1-1/4	27.68	2	50.80	1-7/8	47.63	41.14	38.86	51.16	20.00	73.26	49.00
DMC24-24GB	1-1/2	38.10	1-1/2	34.03	2-1/4	57.15	2-1/4	57.15	50.03	45.21	57.57	22.00	84.75	54.70

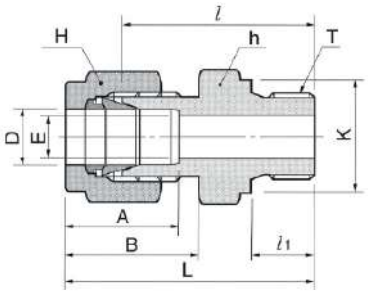
Male Connector for Metal Gasket (previously DOM)

DMC-GB, DMC-G





DMC-GB



DMC-G

Connects metric tube to female ISO tapered thread

Part No.	Tube O.D. D	T PF	E Min.	Width across flat		A	B	ℓ	ℓ1	L	K
				h	H						
DMC3M-2GB(-2G)	3	1/8	2.4	14	12	12.9	15.3	23.4	7.1	30.0	13.8
DMC3M-4GB(-4G)	3	1/4	2.4	19	12	12.9	15.3	28.7	11.2	35.3	18.0
DMC4M-2GB(-2G)	4	1/8	2.4	14	12	13.7	16.1	24.1	7.1	30.7	13.8
DMC6M-2GB(-2G)	6	1/8	4.0	14	14	15.3	17.7	24.9	7.1	32.3	13.8
DMC6M-4GB(-4G)	6	1/4	4.8	19	14	15.3	17.7	30.2	11.2	37.6	18.0
DMC6M-6GB(-6G)	6	3/8	4.8	22	14	15.3	17.7	31.5	11.2	38.9	21.8
DMC6M-8GB(-8G)	6	1/2	4.8	27	14	15.3	17.7	37.3	14.2	44.7	26.0
DMC8M-2GB(-2G)	8	1/8	4.0	15	16	16.2	18.6	25.7	7.1	33.2	13.8
DMC8M-4GB(-4G)	8	1/4	6.4	19	16	16.2	18.6	31.0	11.2	38.5	13.8
DMC8M-6GB(-6G)	8	3/8	6.4	22	16	16.2	18.6	32.3	11.2	39.8	21.8
DMC8M-8GB(-8G)	8	1/2	6.4	27	16	16.2	18.6	38.1	14.2	45.6	26.0
DMC10M-4GB(-4G)	10	1/4	5.9	19	19	17.2	19.5	31.8	11.2	39.4	18.0
DMC10M-6GB(-6G)	10	3/8	7.9	22	19	17.2	19.5	33.0	11.2	40.6	21.8
DMC10M-8GB(-8G)	10	1/2	7.9	27	19	17.2	19.5	38.9	14.2	46.5	26.0
DMC12M-4GB(-4G)	12	1/4	5.9	22	22	22.8	22.0	32.5	11.2	42.6	18.0
DMC12M-6GB(-6G)	12	3/8	7.9	22	22	22.8	22.0	33	11.2	43.1	21.8
DMC12M-8GB(-8G)	12	1/2	9.5	27	22	22.8	22.0	38.9	14.2	49.0	26.0
DMC12M-12GB(-12G)	12	3/4	9.5	35	22	22.8	22.0	42.7	15.7	52.8	32.0
DMC15M-8GB(-8G)	15	1/2	11.9	27	25	24.4	22.0	33.9	14.2	49.0	26.0
DMC16M-6GB(-6G)	16	3/8	7.9	24	25	24.4	22.0	33.8	11.2	43.9	21.8
DMC16M-8GB(-8G)	16	1/2	11.9	27	25	24.4	22.0	38.9	14.2	49.0	26.0
DMC18M-8GB(-8G)	18	1/2	11.9	27	30	24.4	22.0	38.9	14.2	49.0	26.0
DMC18M-12GB(-12G)	18	3/4	15.1	35	30	24.4	22.0	42.7	15.7	52.8	32.0
DMC20M-8GB(-8G)	20	1/2	11.9	30	32	26.0	22.0	40.4	14.2	50.5	26.0
DMC20M-12GB(-12G)	20	3/4	15.9	35	32	26.0	22.0	42.7	15.7	52.8	32.0
DMC22M-12GB(-12G)	22	3/4	15.9	35	32	26.0	22.0	42.7	15.7	52.8	32.0
DMC22M-16GB(-16G)	22	1	18.3	41	32	26.0	22.0	45.2	18.3	55.3	39.0
DMC25M-12GB(-12G)	25	3/4	15.9	35	38	31.3	26.5	45.2	15.7	57.5	32.0
DMC25M-16GB(-16G)	25	1	19.8	41	38	31.3	26.5	47.8	18.3	60.1	39.0
DMC28M-16GB(-16G)	28	1	19.8	41	46	36.6	36.6	49.3	18.3	70.1	39.0
DMC28M-20GB(-20G)	28	1-1/4	21.8	50	46	36.6	36.6	53.1	19.8	73.9	49.0
DMC30M-20GB(-20G)	30	1-1/4	21.8	50	46	36.6	36.6	53.1	19.8	73.9	49.0
DMC32M-20GB(-20G)	32	1-1/4	28.6	50	50	42.0	41.6	55.9	19.8	78.9	49.0
DMC38M-24GB(-24G)	38	1-1/2	31.8	55	60	49.4	47.9	61.7	20.6	89.3	54.7

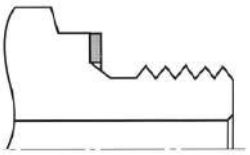
ISO Pipe Thread

The International Standards Organization prepares the ISO 228-1 and ISO 7-1 international standard to standardize the nomenclature of several international pipe threads.

ISO 228-1

ISO 228-1 represents internal and external parallel pipe threads where pressure-tight joints are not made on the threads. Compressing two tightening surfaces outside the threads or interposing a gasket seal will make the internal and external thread assembly pressure-tight joint.

ISO 228-1 standardizes the following internationalpipe threads.
1. BS 2779 (BSPP) 2. DIN-ISO 228/1 3. JIS B0202 (PF)

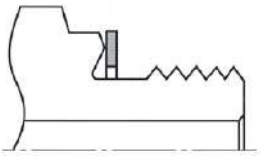


Sealing by compression against the face of the female threaded component.
Reference DIN 3852 Form A
See page on 9
for G end connection

A self-centering taper is constructed at male thread end. This taper centers a bonded gasket to seal up on the face of the female threaded component.
DGB: NBR inner ring bonded to carbon steel outer ring.
DGV: FKM inner ring bonded to stainless steel outer ring.

Part Number		E		H		D	
		mm	in.	mm	in.	mm	in.
DGB-2-C	DGV-2-S	10.4	0.41	2.0	0.08	16	0.63
DGB-4-C	DGV-4-S	13.7	0.54	2.0	0.08	20.6	0.81
DGB-6-C	DGV-6-S	17.3	0.68	2.0	0.08	23.9	0.94
DGB-8-C	DGV-8-S	21.6	0.85	2.5	0.1	28.7	1.13
DGB-12-C	DGV-12-S	26.9	1.06	2.5	0.1	35.1	1.38
DGB-16-C	DGV-16-S	33.8	1.33	2.5	0.1	42.9	1.69
DGB-20-C	DGV-20-S	42.4	1.67	2.5	0.1	51.05	2.01
DGB-24-C	DGV-24-S	48.8	1.92	2.5	0.1	59.18	2.33





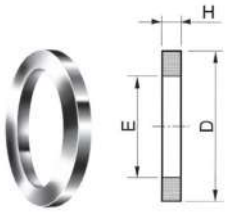
Sealing by gasket.
Reference DIN 3852 Form B

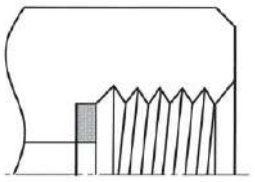
See page on 9
for GB end connection

A Metal Gasket performs the sealing between the reverse bevel of the fitting and the face of the female threaded component.

DGC Copper Gasket

Part Number	E		H		D	
	mm	in.	mm	in.	mm	in.
DGC-2-G	9.9	0.39	1.0	0.04	15.0	0.59
DGC-4-G	13.2	0.52	1.5	0.06	19.1	0.75
DGC-6-G	16.8	0.66	1.5	0.06	23.1	0.91
DGC-8-G	21.1	0.83	1.5	0.06	26.9	1.06
DGC12-G	26.7	1.05	2.0	0.08	33.0	1.30
DGC-16-G	33.3	1.31	2.0	0.08	40.1	1.58
DGC-20-G	42.2	1.66	2.0	0.08	49.8	1.96
DGC-24-G	48.0	1.89	2.0	0.08	58.4	2.30



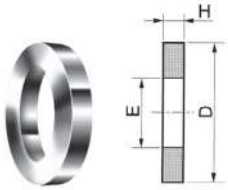


Sealing by gasket.
Reference DIN 3852 Form Y
See page on 9
for GY end connection

A gasket is dropped into the flat bottom of the female thread. The face of the male thread exerts a load on the gasket to seal

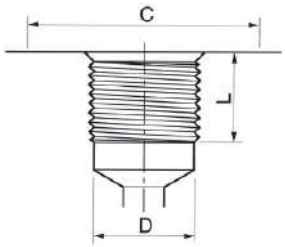
DGC Copper Gasket

Part Number	E		H		D	
	mm	in.	mm	in.	mm	in.
DGG-4-	7.6	0.30	1.8	0.07	10.7	0.42
DGG-6-	8.6	0.34	2.3	0.09	14.2	0.56
DGG-8-	9.1	0.36	2.5	0.10	17.8	0.70



Gasket Temperature Ratings	Gasket	Material	Ratings
	DGB	NBR	-40 to 110°C (-40 to 230°F)
	DGV	FKM	-28 to 204°C (-20 to 400°F)
	DGC, DGG	Copper	-198 to 204°C (-325 to 400°F)

ISO Internal Parallel Pipe Thread



DK-Lok Pipe Thread Designator	ISO Female Parallel Pipe Size	Minimum Full Thread Depth L	Thread Minor Diameter D	Minimum Flat Diameter for DGB & DGC C
2	1/8	0.31	0.337/0.348	0.59
4	1/4	0.47	0.450/0.468	0.75
6	3/8	0.47	0.588/0.606	0.91
8	1/2	0.55	0.733/0.755	1.06
12	3/4	0.63	0.949/0.971	1.30
16	1	0.71	1.193/1.218	1.58

ISO 7-1

ISO 7-1 represents internal and external pipe tapered threads where pressure-tight joints are made by interference fit.
This thread requires sealant to fillthe voids between male and female threads that also prevents galling on threads.
The sealant usually contains lubricant.

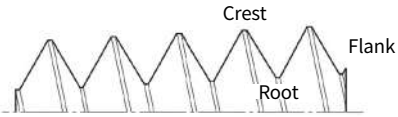
ISO 7-1 standardizes the following international pipe threads.
1. BS 21(BSPT) 2. JIS B0203(PT) 3.DIN 2999 (male thread only)

ISO 7-1 tapered pipe thread



- 55° thread angle
- Pitch measured in millimeters
- Truncation of root and crest are round
- Taper angle 1° 47’

NPT tapered pipe thread

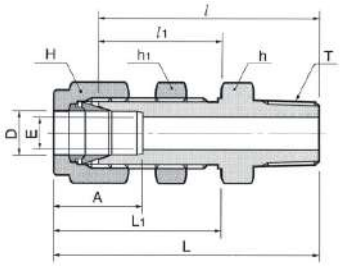


- 60° thread angle
- Pitch measured in inches
- Truncation of root and crest are flat
- Taper angle 1° 47’

Bulkhead Male Connector

DMCB-N



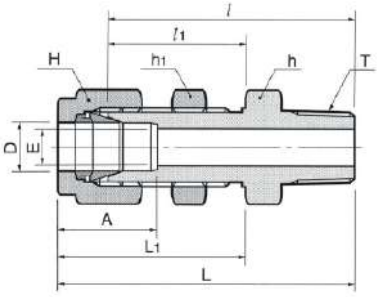


Connects fractional tube to female NPT thread

Part No.	Tube O.D. D		T NPT	TE Min.	Width across flat						A	ℓ	ℓ1	L	L1	Panel Hole Drill size	Panel Max Thickness
					h		h1		H								
	in.	mm			in.	mm	in.	mm	in.	mm							
DMCB2-2N	1/8	3.17	1/8	2.28	1/2	12.70	1/2	12.70	7/16	11.11	12.70	39.87	24.63	46.48	31.24	8.33	12.70
DMCB4-2N	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
DMCB4-4N	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
DMCB4-6N	1/4	6.35	3/8	4.8	3/4	19.05	5/8	15.87	9/16	14.28	15.24	45.97	26.16	53.34	33.52	11.50	10.16
DMCB4-8N	1/4	6.35	1/2	4.8	7/8	22.22	5/8	15.87	9/16	14.28	15.24	53.08	26.16	60.45	33.52	11.50	10.16
DMCB6-4N	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
DMCB6-6N	3/8	9.52	3/8	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
DMCB6-8N	3/8	9.52	1/2	7.11	7/8	22.22	3/4	19.05	11/16	17.46	16.76	56.38	29.46	63.75	36.83	14.68	11.17
DMCB8-6N	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
DMCB8-8N	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
DMCB10-6N	5/8	15.87	3/8	7.93	1-1/16	26.98	1-1/16	26.98	1	25.4	24.38	54.52	32.51	64.68	42.67	22.62	12.70
DMCB12-12N	3/4	19.05	3/4	15.74	1-3/16	30.16	1-3/16	30.16	1-1/8	28.58	24.38	66.04	37.33	76.20	47.49	25.76	16.76
DMCB16-16N	1	25.40	1	22.35	1-5/8	41.28	1-5/8	41.28	1-1/2	38.10	31.24	81.02	45.21	93.21	57.40	33.73	19.05
DMCB20-20N	1-1/4	31.75	1-1/4	27.68	1-7/8	47.63	1-7/8	47.63	1-7/8	47.63	41.14	85.97	47.75	108.07	69.85	41.67	19.05
DMCB24-24N	1-1/2	38.10	1-1/2	33.90	2-1/4	57.15	2-1/4	57.15	2-1/4	57.15	50.03	93.03	49.27	120.21	76.45	49.61	19.05
DMCB32-32N	2	50.80	2	45.97	2-3/4	69.85	2-3/4	69.85	3	76.20	67.56	107.29	56.38	144.62	93.71	16.27	19.05

Bulkhead Male Connector
DMCB-N



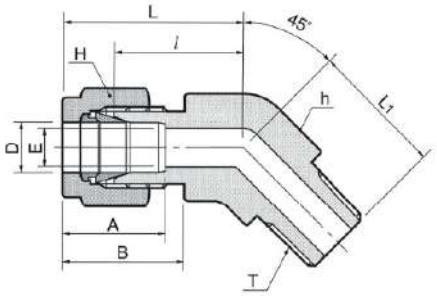


Connects metric tube to female NPT thread

Part No.	Tube O.D. D	T NPT	TE Min.	Width across flat			A	ℓ	ℓ1	L	L1	Panel Hole Drill size	Panel Max Thickness
				h	h1	H							
DMCB6M-2N	6	1/8	4.8	16	16	14	15.3	42.2	26.2	49.6	33.6	11.5	10.2
DMCB6M-4N	6	1/4	4.8	16	16	14	15.3	46.2	26.2	53.6	33.6	11.5	10.2
DMCB6M-6N	6	3/8	4.8	16	16	14	15.3	46.2	26.2	53.6	33.6	11.5	10.2
DMCB6M-8N	6	1/2	4.8	16	16	14	15.3	52.6	26.2	60.0	33.6	11.5	10.2
DMCB8M-6N	8	3/8	6.4	18	18	16	16.2	50.0	28.6	57.5	36.1	13.1	11.2
DMCB10M-4N	10	1/4	7.1	22	22	19	17.2	50.0	29.4	57.5	37.0	16.2	11.2
DMCB10M-6N	10	3/8	7.9	22	22	19	17.2	50.0	29.4	57.5	37.0	16.2	11.2
DMCB10M-8N	10	1/2	7.9	22	22	19	17.2	55.9	29.4	63.5	37.0	16.2	11.2
DMCB12M-6N	12	3/8	9.8	24	24	22	22.8	53.3	31.8	63.4	41.9	19.5	12.7
DMCB12M-8N	12	1/2	9.8	24	24	22	22.8	58.7	31.8	68.8	41.9	19.5	12.7

45° Male Elbow
DLBM





Connects fractional tube to female NPT thread

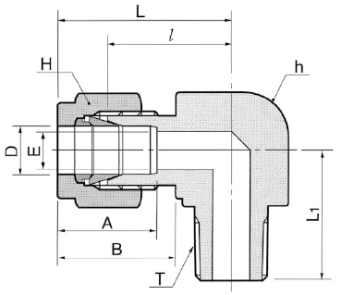
Part No.	Tube O.D. D		T NPT	E Min.	Width across flat				A	B	ℓ	L	L1
					h		H						
	in.	mm			in.	mm	in.	mm					
DLBM2-2N	1/8	3.17	1/8	2.4	1/2	12.70	7/16	11.11	12.70	15.24	15.77	22.38	16.51
DLBM4-2N	1/4	6.35	1/8	4.8	1/2	12.70	9/16	14.28	15.24	17.78	17.27	24.63	16.51
DLBM4-4N	1/4	6.35	1/4	4.8	1/2	12.70	9/16	14.28	15.24	17.78	17.27	24.63	21.08
DLBM6-2N	3/8	9.52	1/8	4.8	5/8	15.87	11/16	17.46	16.76	19.30	20.57	27.94	18.28
DLBM6-4N	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
DLBM6-6N	3/8	9.52	3/8	7.11	13/16	20.64	11/16	17.46	16.76	19.30	21.84	29.21	24.13
DLBM8-6N	1/2	12.70	3/8	9.65	13/16	20.64	7/8	22.22	22.86	21.84	21.84	32.00	24.13
DLBM8-8N	1/2	12.70	1/2	10.41	13/16	20.64	7/8	22.22	22.86	21.84	21.84	32.00	28.95
DLBM12-12N	3/4	19.05	3/4	15.74	1-1/8	28.58	1-1/8	28.58	24.38	21.84	23.87	34.03	30.98
DLBM16-16N	1	25.40	1	22.35	1-3/8	34.93	1-1/2	38.10	31.24	26.41	28.19	40.38	37.84

Connects metric tube to female NPT thread

Part No.	Tube O.D. D	T NPT	E Min.	Width across flat		A	B	ℓ	L	L1
				h	H					
DLBM6M-4N	6	1/4	4.8	12.7	14.0	15.3	17.7	21.8	29.4	22.9
DLBM12M-8N	12	1/2	9.5	20.64	22.0	22.8	22.0	21.8	31.9	29.0

Male Elbow
DLM-N



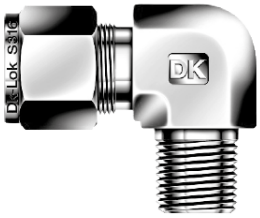


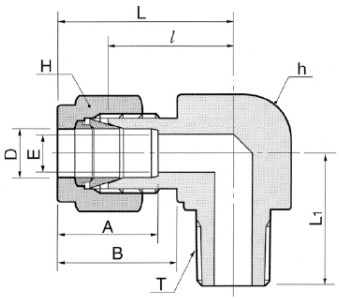
Connects fractional tube to female NPT thread

Part No.	Tube O.D. D		T NPT	E Min.	Width across flat				A	B	ℓ	L	L1
					h		H						
	in.	mm			in.	mm	in.	mm					
DLM1-1N	1/16	1.59	1/16	1.27	7/16	11.11	5/16	7.93	8.63	10.92	15.24	19.05	17.78
DLM1-2N	1/16	1.59	1/8	1.27	7/16	11.11	5/16	7.93	8.63	10.92	15.24	19.05	17.78
DLM2-1N	1/8	3.17	1/16	2.28	7/16	11.11	7/16	11.11	12.70	15.24	17.02	23.63	17.78
DLM2-2N	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
DLM2-4N	1/8	3.17	1/4	2.28	1/2	12.70	7/16	11.11	12.70	15.24	18.30	24.91	23.26
DLM3-2N	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
DLM3-4N	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
DLM4-1N	1/4	6.35	1/16	3.04	1/2	12.70	9/16	14.28	15.24	17.78	19.55	26.90	18.79
DLM4-2N	1/4	6.35	1/8	4.82	1/2	12.70	9/16	14.28	15.24	17.78	19.55	26.47	18.79
DLM4-4N	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
DLM4-6N	1/4	6.35	3/8	4.82	11/16	17.46	9/16	14.28	15.24	17.78	22.35	29.71	26.20
DLM4-8N	1/4	6.35	1/2	4.82	13/16	20.64	9/16	14.28	15.24	17.78	24.60	31.97	33.02
DLM5-2N	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
DLM5-4N	5/16	7.93	1/4	6.35	9/16	14.28	5/8	15.87	16.25	18.54	21.33	29.77	24.50
DLM5-6N	5/16	7.93	3/8	6.35	11/16	17.46	5/8	15.87	16.25	18.54	23.11	30.48	26.20
DLM6-2N	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
DLM6-4N	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
DLM6-6N	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
DLM6-8N	3/8	9.52	1/2	7.11	13/16	20.64	11/16	17.46	16.76	19.30	25.90	31.42	33.02
DLM6-12N	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
DLM8-4N	1/2	12.70	1/4	7.11	13/16	20.64	7/8	22.22	22.86	21.84	25.90	36.06	28.30
DLM8-6N	1/2	12.70	3/8	9.65	13/16	20.64	7/8	22.22	22.86	21.84	25.90	36.06	28.30
DLM8-8N	1/2	12.70	1/2	10.41	13/16	20.64	7/8	22.22	22.86	21.84	25.90	36.06	33.02
DLM8-12N	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
DLM10-6N	5/8	15.87	3/8	9.65	15/16	23.81	1	25.40	24.38	21.84	28.00	37.06	30.22
DLM10-8N	5/8	15.87	1/2	11.93	15/16	23.81	1	25.40	24.38	21.84	28.00	37.06	35.10
DLM10-12N	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
DLM12-8N	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
DLM12-12N	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
DLM14-12N	7/8	22.22	3/4	15.74	1-3/8	34.92	1-1/4	31.75	25.90	21.84	34.54	44.70	41.65
DLM16-12N	1	25.40	3/4	15.74	1-3/8	34.92	1-1/2	38.10	31.24	26.41	36.83	49.02	42.20
DLM16-16N	1	25.40	1	22.35	1-3/8	34.92	1-1/2	38.10	31.24	26.41	36.83	49.02	46.70
DLM20-20N	1-1/4	31.75	1-1/4	27.68	1-11/16	42.86	1-7/8	47.63	41.14	38.86	44.50	66.54	47.75
DLM24-24N	1-1/2	38.10	1-1/2	33.90	2	50.80	2-1/4	57.15	50.03	45.21	50.80	77.97	60.45
DLM32-32N	2	50.80	2	45.97	2-3/4	69.85	3	76.20	62.73	63.73	69.80	107.18	70.61

Male Elbow

DLM-N



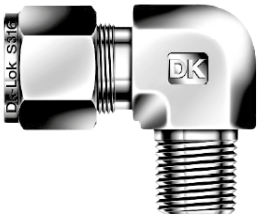


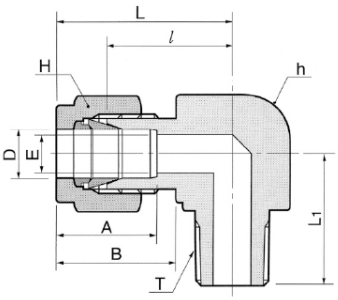
Connects metric tube to female NPT thread

Part No.	Tube O.D. D	T NPT	E Min.	Width across flat		A	B	ℓ	L	L1
				h	H					
DLM3M-1N	3	1/16	2.4	11.1	12	12.9	15.3	17.0	23.6	17.8
DLM3M-2N	3	1/8	2.4	12.7	12	12.9	15.3	17.0	23.6	17.8
DLM3M-4N	3	1/4	2.4	12.7	12	12.9	15.3	18.0	24.6	23.4
DLM4M-2N	4	1/8	2.4	12.7	12	13.7	16.1	18.8	25.4	18.8
DLM4M-4N	4	1/4	2.4	12.7	12	13.7	16.1	18.8	25.4	23.4
DLM6M-2N	6	1/8	4.8	12.7	14	15.3	17.7	19.6	27.0	18.8
DLM6M-4N	6	1/4	4.8	12.7	14	15.3	17.7	19.6	27.0	23.4
DLM6M-6N	6	3/8	4.8	17.5	14	15.3	17.7	22.4	29.8	26.2
DLM6M-8N	6	1/2	4.8	20.6	14	15.3	17.7	24.4	31.8	33.0
DLM8M-2N	8	1/8	4.8	14.3	16	16.2	18.6	21.3	28.8	19.8
DLM8M-4N	8	1/4	6.4	14.3	16	16.2	18.6	21.3	28.8	24.4
DLM8M-6N	8	3/8	6.4	17.5	16	16.2	18.6	23.1	30.6	26.2
DLM8M-8N	8	1/2	6.4	20.6	16	16.2	18.6	25.1	32.6	33.0
DLM10M-2N	10	1/8	4.8	17.5	19	17.2	19.5	23.9	31.5	23.6
DLM10M-4N	10	1/4	7.1	17.5	19	17.2	19.5	23.9	31.5	26.2
DLM10M-6N	10	3/8	7.9	17.5	19	17.2	19.5	23.9	31.5	26.2
DLM10M-8N	10	1/2	7.9	20.6	19	17.2	19.5	25.9	33.5	33.0
DLM12M-4N	12	1/4	7.1	20.6	22	22.8	22.0	25.9	36.0	28.2
DLM12M-6N	12	3/8	9.5	20.6	22	22.8	22.0	25.9	36.0	28.2
DLM12M-8N	12	1/2	9.5	20.6	22	22.8	22.0	25.9	36.0	33.0
DLM12M-12N	12	3/4	9.5	27.0	22	22.8	22.0	29.7	39.8	36.8
DLM15M-6N	15	3/8	9.5	23.81	25	24.4	22.0	27.9	38.0	30.2
DLM15M-8N	15	1/2	11.9	23.81	25	24.4	22.0	27.9	38.0	35.1
DLM16M-6N	16	3/8	9.5	25.4	25	24.4	22.0	27.9	38.0	30.2
DLM16M-8N	16	1/2	11.9	23.81	25	24.4	22.0	27.9	38.0	35.1
DLM16M-12N	16	3/4	12.7	23.81	25	24.4	22.0	29.7	39.8	36.8
DLM18M-8N	18	1/2	11.9	27.0	30	24.4	22.0	29.7	39.8	36.8
DLM18M-12N	18	3/4	15.1	27.0	30	24.4	22.0	29.7	39.8	36.8
DLM20M-8N	20	1/2	11.9	34.9	32	26.0	22.0	34.5	44.6	41.7
DLM20M-12N	20	3/4	15.9	34.9	32	26.0	22.0	34.5	44.6	41.7
DLM22M-8N	22	1/2	11.9	34.9	32	26.0	22.0	32.5	42.6	39.6
DLM22M-12N	22	3/4	15.9	34.9	32	26.0	22.0	34.5	44.6	41.7
DLM22M-16N	22	1	18.3	34.9	32	26.0	22.0	34.5	44.6	46.5
DLM25M-12N	25	3/4	15.9	34.9	38	31.3	26.5	36.8	49.1	41.7
DLM25M-16N	25	1	21.8	34.9	38	31.3	26.5	36.8	49.1	46.5
DLM28M-16N	28	1	21.8	41.0	46	36.6	36.6	43.2	64.0	53.7
DLM30M-20N	30	1-1/4	26.2	46.0	50	39.6	39.2	48.3	69.9	53.1
DLM32M-20N	32	1-1/4	27.8	46.0	50	42.0	41.6	49.3	72.3	53.1
DLM38M-24N	38	1-1/2	33.7	50.8	60	49.4	47.9	56.4	84.0	60.4

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Male Elbow
DLM-R





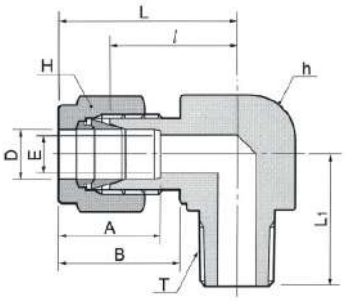
Connects fractional tube to female ISO tapered thread

Part No.	Tube O.D. D		T PT	E Min.	Width across flat				A	B	ℓ	L	L1
					h		H						
	in.	mm			in.	mm	in.	mm					
DLM2-2R	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
DLM2-4R	1/8	3.17	1/4	2.28	1/2	12.70	7/16	11.11	12.70	15.24	18.30	24.91	23.26
DLM3-4R	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
DLM4-2R	1/4	6.35	1/8	4.82	1/2	12.70	9/16	14.28	15.24	17.78	19.55	26.47	18.79
DLM4-4R	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
DLM4-6R	1/4	6.35	3/8	4.82	11/16	17.46	9/16	14.28	15.24	17.78	22.35	29.71	26.20
DLM4-8R	1/4	6.35	1/2	4.82	13/16	20.64	9/16	14.28	15.24	17.78	24.60	31.97	33.02
DLM5-4R	5/16	7.93	1/4	6.35	9/16	14.28	5/8	15.87	16.25	18.54	21.33	29.77	24.50
DLM5-6R	5/16	7.93	3/8	6.35	11/16	17.46	5/8	15.87	16.25	18.54	23.11	30.48	26.20
DLM6-2R	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
DLM6-4R	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
DLM6-6R	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
DLM6-8R	3/8	9.52	1/2	7.11	13/16	20.64	11/16	17.46	16.76	19.30	25.90	31.42	33.02
DLM6-12R	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
DLM8-4R	1/2	12.70	1/4	7.11	13/16	20.64	7/8	22.22	22.86	21.84	25.90	36.06	28.30
DLM8-6R	1/2	12.70	3/8	9.65	13/16	20.64	7/8	22.22	22.86	21.84	25.90	36.06	28.30
DLM8-8R	1/2	12.70	1/2	10.41	13/16	20.64	7/8	22.22	22.86	21.84	25.90	36.06	33.02
DLM8-12R	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
DLM10-6R	5/8	15.87	3/8	9.65	15/16	23.81	1	25.40	24.38	21.84	28.00	37.06	30.22
DLM10-8R	5/8	15.87	1/2	11.93	15/16	23.81	1	25.40	24.38	21.84	28.00	37.06	35.10
DLM10-12R	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
DLM12-8R	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
DLM12-12R	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
DLM12-16R	3/4	19.05	1	16.0	1-3/8	34.92	1-1/8	28.57	24.38	21.84	34.54	44.59	46.48
DLM16-12R	1	25.40	3/4	15.74	1-3/8	34.92	1-1/2	38.10	31.24	26.41	36.83	49.02	42.20
DLM16-16R	1	25.40	1	22.35	1-3/8	34.92	1-1/2	38.10	31.24	26.41	36.83	49.02	46.70
DLM20-12R	1-1/4	31.75	3/4	15.74	1-11/16	42.86	1-7/8	47.63	41.14	38.86	44.50	66.54	42.95
DLM20-20R	1-1/4	31.75	1-1/4	27.68	1-11/16	42.86	1-7/8	47.63	41.14	38.86	44.50	66.54	47.75

Male Elbow

DLM-R





Connects metric tube to female ISO tapered thread

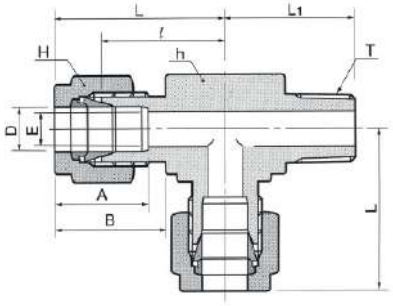
Part No.	Tube O.D. D	T NPT	E Min.	Width across flat		A	B	ℓ	L	L1
				h	H					
DLM3M-1R	3	1/16	2.4	11.1	12	12.9	15.3	17.0	23.6	17.8
DLM3M-2R	3	1/8	2.4	12.7	12	12.9	15.3	17.0	23.6	17.8
DLM3M-4R	3	1/4	2.4	12.7	12	12.9	15.3	18.0	24.6	23.4
DLM4M-2R	4	1/8	2.4	12.7	12	13.7	16.1	18.8	25.4	18.8
DLM4M-4R	4	1/4	2.4	12.7	12	13.7	16.1	18.8	25.4	23.4
DLM6M-2R	6	1/8	4.8	12.7	14	15.3	17.7	19.6	27.0	18.8
DLM6M-4R	6	1/4	4.8	12.7	14	15.3	17.7	19.6	27.0	23.4
DLM6M-6R	6	3/8	4.8	17.5	14	15.3	17.7	22.4	29.8	26.2
DLM6M-8R	6	1/2	4.8	20.6	14	15.3	17.7	24.4	31.8	33.0
DLM8M-2R	8	1/8	4.8	14.3	16	16.2	18.6	21.3	28.8	19.8
DLM8M-4R	8	1/4	6.4	14.3	16	16.2	18.6	21.3	28.8	24.4
DLM8M-6R	8	3/8	6.4	17.5	16	16.2	18.6	23.1	30.6	26.2
DLM8M-8R	8	1/2	6.4	20.6	16	16.2	18.6	25.1	32.6	33.0
DLM10M-2R	10	1/8	4.8	17.5	19	17.2	19.5	23.9	31.5	23.6
DLM10M-4R	10	1/4	7.1	17.5	19	17.2	19.5	23.9	31.5	26.2
DLM10M-6R	10	3/8	7.9	17.5	19	17.2	19.5	23.9	31.5	26.2
DLM10M-8R	10	1/2	7.9	20.6	19	17.2	19.5	25.9	33.5	33.0
DLM12M-2R	12	1/8	4.8	20.6	22	22.8	22.0	25.9	36.0	23.6
DLM12M-4R	12	1/4	7.1	20.6	22	22.8	22.0	25.9	36.0	28.2
DLM12M-6R	12	3/8	9.5	20.6	22	22.8	22.0	25.9	36.0	28.2
DLM12M-8R	12	1/2	9.5	20.6	22	22.8	22.0	25.9	36.0	33.0
DLM12M-12R	12	3/4	9.5	27.0	22	22.8	22.0	29.7	39.8	36.8
DLM14M-8R	14	1/2	11.1	23.81	25	24.4	22.0	27.9	38.0	30.2
DLM15M-6R	15	3/8	9.5	23.81	25	24.4	22.0	27.9	38.0	30.2
DLM15M-8R	15	1/2	11.9	23.81	25	24.4	22.0	27.9	38.0	35.1
DLM16M-6R	16	3/8	9.5	25.4	25	24.4	22.0	27.9	38.0	30.2
DLM16M-8R	16	1/2	11.9	23.81	25	24.4	22.0	27.9	38.0	35.1
DLM18M-8R	18	1/2	11.9	27.0	30	24.4	22.0	29.7	39.8	36.8
DLM18M-12R	18	3/4	15.1	27.0	30	24.4	22.0	29.7	39.8	36.8
DLM20M-8R	20	1/2	11.9	34.92	32	26.0	22.0	34.5	44.6	41.7
DLM20M-12R	20	3/4	15.9	34.92	32	26.0	22.0	34.5	44.6	41.7
DLM22M-8R	22	1/2	11.9	34.92	32	26.0	22.0	32.5	42.6	39.6
DLM22M-12R	22	3/4	15.9	34.92	32	26.0	22.0	34.5	44.6	41.7
DLM22M-16R	22	1	18.3	34.92	32	26.0	22.0	34.5	44.6	46.5
DLM25M-8R	25	1/2	11.9	34.92	38	31.3	26.5	36.8	49.1	41.7
DLM25M-12R	25	3/4	15.9	34.92	38	31.3	26.5	36.8	49.1	41.7
DLM25M-16R	25	1	21.8	34.92	38	31.3	26.5	36.8	49.1	46.5
DLM28M-16R	28	1	21.8	41.0	46	36.6	36.6	43.2	64.0	53.7

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Male Elbow

DTRM-N





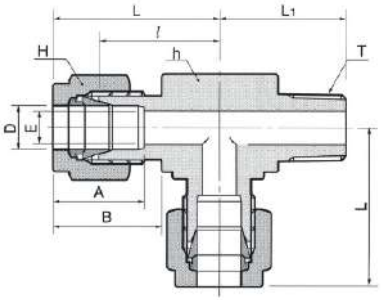
Connects fractional tube to female NPT thread

Part No.	Tube O.D. D		T PT	E Min.	Width across flat				A	B	ℓ	L	L1
					h		H						
	in.	mm			in.	mm	in.	mm					
DTRM1-1N	1/16	1.59	1/16	1.27	7/16	11.11	5/16	7.93	8.63	10.92	15.24	19.05	17.78
DTRM1-2N	1/16	1.59	1/8	1.27	7/16	11.11	5/16	7.93	8.63	10.92	15.24	19.05	17.78
DTRM2-2N	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
DTRM2-4N	1/8	3.17	1/4	2.28	1/2	12.70	7/16	11.11	12.70	15.24	18.30	24.91	23.26
DTRM3-2N	3/16	4.76	1/8	3.04	1/2	12.70	1/2	12.70	13.71	16.00	18.79	24.38	18.79
DTRM3-4N	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
DTRM4-1N	1/4	6.35	1/16	3.04	1/2	12.70	9/16	14.28	15.24	17.78	19.55	26.90	18.79
DTRM4-2N	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
DTRM4-4N	1/4	6.35	1/4	4.82	1/2	12.70	9/16	14.28	15.24	17.78	19.55	27.08	23.87
DTRM4-6N	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
DTRM4-8N	1/4	6.35	1/2	4.82	13/16	20.64	9/16	14.28	15.24	17.78	24.60	31.97	35.10
DTRM5-2N	5/16	7.93	1/8	4.82	9/16	14.28	5/8	15.87	16.25	18.54	22.35	29.71	19.81
DTRM5-4N	5/16	7.94	1/4	6.35	9/16	14.28	5/8	15.87	16.25	18.54	22.35	29.77	24.50
DTRM5-6N	5/16	7.94	3/8	6.35	11/16	17.46	5/8	15.87	16.25	18.54	23.11	30.48	28.40
DTRM6-4N	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
DTRM6-6N	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
DTRM6-8N	3/8	9.52	1/2	7.11	13/16	20.64	11/16	17.46	16.76	19.30	25.90	33.27	33.02
DTRM6-12N	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
DTRM8-4N	1/2	12.70	1/4	7.11	13/16	20.64	7/8	22.22	22.86	21.84	25.90	36.06	28.30
DTRM8-6N	1/2	12.70	3/8	9.65	13/16	20.64	7/8	22.22	22.86	21.84	25.90	36.06	28.30
DTRM8-8N	1/2	12.70	1/2	10.41	13/16	20.64	7/8	22.22	22.86	21.84	25.90	36.06	33.02
DTRM8-12N	1/2	12.70	3/4	10.41	1-1/16	26.98	7/8	22.22	22.86	21.84	29.71	39.84	36.83
DTRM10-6N	5/8	15.87	3/8	9.65	15/16	23.81	1	25.40	24.38	21.84	27.90	38.10	29.40
DTRM10-8N	5/8	15.87	1/2	11.93	15/16	23.81	1	25.40	24.38	21.84	27.90	38.10	34.00
DTRM10-12N	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
DTRM12-8N	3/4	19.05	1/2	11.93	1-1/16	26.98	1-1/8	28.58	24.38	21.84	29.71	39.87	37.00
DTRM12-12N	3/4	19.05	3/4	15.74	1-1/16	26.98	1-1/8	28.58	24.38	21.84	29.71	39.81	36.83
DTRM14-12N	7/8	22.23	3/4	15.74	1-3/8	34.92	1-1/4	31.75	25.90	21.84	34.54	44.70	41.65
DTRM16-12N	1	25.40	3/4	15.74	1-3/8	34.92	1-1/2	38.10	31.24	26.41	36.83	49.02	42.20
DTRM16-16N	1	25.40	1	22.35	1-3/8	34.92	1-1/2	38.10	31.24	26.41	36.83	49.02	46.70
DTRM20-20N	1-1/4	31.75	1-1/4	27.68	1-11/16	42.86	1-7/8	47.63	41.14	38.86	44.50	66.54	47.75
DTRM24-24N	1-1/2	38.10	1-1/2	33.90	2	50.80	2-14	57.15	50.03	45.21	50.80	77.97	60.45
DTRM32-32N	2	50.80	2	45.97	2-3/4	69.85	3	76.20	67.56	62.73	69.80	107.18	70.61

Male Run Tee

DTRM-R





Connects fractional tube to female ISO tapered thread

Part No.	Tube O.D. D		T PT	E Min.	Width across flat				A	B	ℓ	L	L1
					h		H						
	in.	mm			in.	mm	in.	mm					
DTRM6-4R	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
DTRM8-6R	1/2	12.70	3/8	9.65	13/16	20.64	7/8	22.22	22.86	21.84	25.90	36.06	28.30
DTRM8-8R	1/2	12.70	1/2	10.41	13/16	20.64	7/8	22.22	22.86	21.84	25.90	36.06	33.02
DTRM10-8R	5/8	15.87	1/2	11.93	15/16	23.81	1	25.40	24.38	21.84	27.90	38.10	34.00

Connects metric tube to female ISO tapered thread

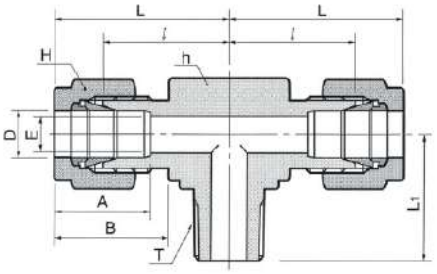
Part No.	Tube O.D. D	T NPT	E Min.	Width across flat		A	B	ℓ	L	L1
				h	H					
DTRM3M-2R	3	1/8	2.4	12.7	12	12.9	15.3	17.0	23.6	17.8
DTRM3M-4R	3	1/4	2.4	12.7	12	12.9	15.3	18.0	24.6	23.4
DTRM4M-2R	4	1/8	2.4	12.7	12	13.7	16.1	18.8	25.4	18.8
DTRM4M-4R	4	1/4	2.4	12.7	12	13.7	16.1	18.8	25.4	23.4
DTRM6M-2R	6	1/8	4.8	12.7	14	15.3	17.7	19.6	27.0	18.8
DTRM6M-4R	6	1/4	4.8	14.2	14	15.3	17.7	19.6	27.0	23.4
DTRM6M-6R	6	3/8	4.8	17.5	14	15.3	17.7	22.4	29.8	26.2
DTRM6M-8R	6	1/2	4.8	20.6	14	15.3	17.7	24.4	31.8	33.0
DTRM8M-2R	8	1/8	4.8	14.3	16	16.2	18.6	21.3	28.8	19.8
DTRM8M-4R	8	1/4	6.4	14.3	16	16.2	18.6	21.3	28.8	24.4
DTRM8M-6R	8	3/8	6.4	17.5	16	16.2	18.6	23.1	30.6	26.2
DTRM8M-8R	8	1/2	6.4	20.6	16	16.2	18.6	25.1	32.6	33.0
DTRM10M-2R	10	1/8	4.8	17.5	19	17.2	19.5	23.9	31.5	23.6
DTRM10M-4R	10	1/4	7.1	17.5	19	17.2	19.5	23.9	31.5	26.2
DTRM10M-6R	10	3/8	7.9	17.5	19	17.2	19.5	23.9	31.5	26.2
DTRM10M-8R	10	1/2	7.9	20.6	19	17.2	19.5	25.9	33.5	33.0
DTRM12M-2R	12	1/8	4.8	20.6	22	22.8	22.0	25.9	36.0	23.6
DTRM12M-4R	12	1/4	7.1	20.6	22	22.8	22.0	25.9	36.0	28.2
DTRM12M-6R	12	3/8	9.5	20.6	22	22.8	22.0	25.9	36.0	28.2
DTRM12M-8R	12	1/2	9.5	20.6	22	22.8	22.0	25.9	36.0	33.0
DTRM12M-12R	12	3/4	9.5	27.0	22	22.8	22.0	29.7	39.8	36.8
DTRM16M-6R	16	3/8	9.5	25.4	25	24.4	22.0	27.9	38.0	30.2
DTRM16M-8R	16	1/2	11.9	25.4	25	24.4	22.0	27.9	38.0	35.1
DTRM16M-12R	16	3/4	12.7	27.0	25	24.4	22.0	29.7	39.8	36.8
DTRM18M-8R	18	1/2	11.9	27.0	30	24.4	22.0	29.7	39.8	36.8
DTRM18M-12R	18	3/4	15.1	27.0	30	24.4	22.0	29.7	39.8	36.8
DTRM20M-8R	20	1/2	11.9	34.92	32	26.0	22.0	34.5	44.6	41.7
DTRM20M-12R	20	3/4	15.9	34.92	32	26.0	22.0	34.5	44.6	41.7
DTRM22M-12R	22	3/4	15.9	34.92	32	26.0	22.0	34.5	44.6	41.7
DTRM22M-16R	22	1	18.3	34.92	32	26.0	22.0	34.5	44.6	46.5
DTRM25M-12R	25	3/4	15.9	34.92	38	31.3	26.5	36.8	49.1	41.7
DTRM25M-16R	25	1	21.8	34.92	38	31.3	26.5	36.8	49.1	46.5

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Male Branch Tee

DTBM-N, -R





Connects fractional tube to female NPT thread

Part No.	Tube O.D. D		T PT	E Min.	Width across flat				A	B	ℓ	L	L1
					h		H						
	in.	mm			in.	mm	in.	mm					
DTBM1-1N	1/16	1.59	1/16	1.27	7/16	11.11	5/16	7.93	8.63	10.92	15.24	19.05	17.78
DTBM1-2N	1/16	1.59	1/8	1.27	7/16	11.11	5/16	7.93	8.63	10.92	15.24	19.05	17.78
DTBM2-2N	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
DTBM2-4N	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
DTBM3-2N	3/16	4.76	1/8	3.04	1/2	12.70	1/2	12.70	13.71	16.00	18.79	24.38	18.79
DTBM3-4N	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
DTBM4-1N	1/4	6.35	1/16	3.04	1/2	12.70	9/16	14.28	15.24	17.78	19.55	26.90	18.79
DTBM4-2N	1/4	6.35	1/8	4.82	1/2	12.70	9/16	14.28	15.24	17.78	19.55	26.92	19.10
DTBM4-4N	1/4	6.35	1/4	4.82	1/2	12.70	9/16	14.28	15.24	17.78	19.55	27.08	23.87
DTBM4-6N	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
DTBM4-8N	1/4	6.35	1/2	4.82	13/16	20.64	9/16	14.28	15.24	17.78	24.60	31.97	35.10
DTBM5-2N	5/16	7.93	1/8	4.82	9/16	14.28	5/8	15.87	16.25	18.54	22.35	29.71	19.81
DTBM5-4N	5/16	7.93	1/4	6.35	9/16	14.28	5/8	15.87	16.25	18.54	22.35	29.77	24.50
DTBM5-6N	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
DTBM6-4N	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
DTBM6-6N	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
DTBM6-8N	3/8	9.52	1/2	7.11	13/16	20.64	11/16	17.46	16.76	19.30	25.90	33.27	33.02
DTBM6-12N	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
DTBM8-4N	1/2	12.70	1/4	7.11	13/16	20.64	7/8	22.22	22.86	21.84	25.90	36.06	28.30
DTBM8-6N	1/2	12.70	3/8	10.41	13/16	20.64	7/8	22.22	22.86	21.84	25.90	36.06	28.30
DTBM8-8N	1/2	12.70	1/2	10.41	13/16	20.64	7/8	22.22	22.86	21.84	25.90	36.06	33.02
DTBM8-12N	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
DTBM10-6N	5/8	15.87	3/8	9.65	15/16	23.81	1	25.40	24.38	21.84	27.90	38.10	29.40
DTBM10-8N	5/8	15.87	1/2	11.93	15/16	23.81	1	25.40	24.38	21.84	27.90	38.10	34.00
DTBM10-12N	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
DTBM12-8N	3/4	19.05	1/2	11.93	1-1/16	26.98	1-1/8	28.58	24.38	21.84	29.71	39.87	37.00
DTBM12-12N	3/4	19.05	3/4	15.74	1-1/16	26.98	1-1/8	28.58	24.38	21.84	29.71	39.87	36.83
DTBM14-12N	7/8	22.22	3/4	15.74	1-3/8	34.92	1-1/4	31.75	25.90	21.84	34.54	44.70	41.65
DTBM16-12N	1	25.40	3/4	15.74	1-3/8	34.92	1-1/2	38.10	31.24	26.41	36.83	49.02	42.20
DTBM16-16N	1	25.40	1	22.35	1-3/8	34.92	1-1/2	38.10	31.24	26.41	36.83	49.02	46.70
DTBM20-20N	1-1/4	31.75	1-1/4	27.68	1-11/16	42.86	1-7/8	47.63	41.14	38.86	44.50	66.54	47.75
DTBM24-24N	1-1/2	38.10	1-1/2	33.90	2	50.80	2-1/4	57.15	50.03	45.21	50.80	77.97	60.45
DTBM32-32N	2	50.80	2	45.97	2-3/4	69.85	3	76.20	67.56	62.73	69.80	107.18	70.61

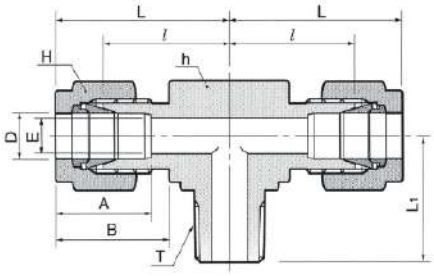
Connects fractional tube to female ISO tapered thread

Part No.	Tube O.D. D		T PT	E Min.	Width across flat				A	B	ℓ	L	L1
					h		H						
	in.	mm			in.	mm	in.	mm					
DTBM6-4R	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
DTBM8-6R	1/2	12.70	3/8	9.65	13/16	20.64	7/8	22.22	22.86	21.84	25.90	36.06	28.30
DTBM8-8R	1/2	12.70	1/2	10.41	13/16	20.64	7/8	22.22	22.86	21.84	25.90	36.06	33.02
DTBM10-8R	5/8	15.87	1/2	11.93	15/16	23.81	1	25.40	24.38	21.84	27.90	38.10	34.00

Male Branch Tee

DTBM-N





Connects metric tube to female NPT thread

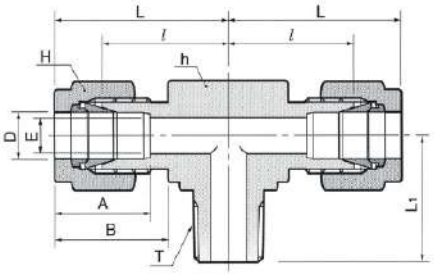
Part No.	Tube O.D. D	T NPT	E Min.	Width across flat		A	B	ℓ	L	L1
				h	H					
DTBM3M-2N	3	1/8	2.4	12.7	12	12.9	15.3	17.0	23.6	17.8
DTBM3M-4N	3	1/4	2.4	12.7	12	12.9	15.3	18.0	24.6	23.4
DTBM4M-2N	4	1/8	2.4	12.7	12	13.7	16.1	18.8	25.4	18.8
DTBM4M-4N	4	1/4	2.4	12.7	12	13.7	16.1	18.8	25.4	23.4
DTBM6M-2N	6	1/8	4.8	12.7	14	15.3	17.7	19.6	27.0	18.8
DTBM6M-4N	6	1/4	4.8	14.2	14	15.3	17.7	19.6	27.0	23.4
DTBM6M-6N	6	3/8	4.8	17.5	14	15.3	17.7	22.4	29.8	26.2
DTBM6M-8N	6	1/2	4.8	20.6	14	15.3	17.7	24.4	31.8	33.0
DTBM8M-2N	8	1/8	4.8	14.3	16	16.2	18.6	21.3	28.8	19.8
DTBM8M-4N	8	1/4	6.4	14.3	16	16.2	18.6	21.3	28.8	24.4
DTBM8M-6N	8	3/8	6.4	17.5	16	16.2	18.6	23.1	30.6	26.2
DTBM8M-8N	8	1/2	6.4	20.6	16	16.2	18.6	25.1	32.6	33.0
DTBM10M-2N	10	1/8	4.8	17.5	19	17.2	19.5	23.9	31.5	23.6
DTBM10M-4N	10	1/4	7.1	17.5	19	17.2	19.5	23.9	31.5	26.2
DTBM10M-6N	10	3/8	7.9	17.5	19	17.2	19.5	23.9	31.5	26.2
DTBM10M-8N	10	1/2	7.9	20.6	19	17.2	19.5	25.9	33.5	33.0
DTBM12M-2N	12	1/8	4.8	20.6	22	22.8	22.0	25.9	36.0	23.6
DTBM12M-4N	12	1/4	7.1	20.6	22	22.8	22.0	25.9	36.0	28.2
DTBM12M-6N	12	3/8	9.5	20.6	22	22.8	22.0	25.9	36.0	28.2
DTBM12M-8N	12	1/2	9.5	20.6	22	22.8	22.0	25.9	36.0	33.0
DTBM12M-12N	12	3/4	9.5	27.0	22	22.8	22.0	29.7	39.8	36.8
DTBM16M-6N	16	3/8	9.5	25.4	25	24.4	22.0	27.9	38.0	30.2
DTBM16M-8N	16	1/2	11.9	25.4	25	24.4	22.0	27.9	38.0	35.1
DTBM16M-12N	16	3/4	12.7	27.0	25	24.4	22.0	29.7	39.8	36.8
DTBM18M-8N	18	1/2	11.9	27.0	30	24.4	22.0	29.7	39.8	36.8
DTBM18M-12N	18	3/4	15.1	27.0	30	24.4	22.0	29.7	39.8	36.8
DTBM20M-8N	20	1/2	11.9	34.92	32	26.0	22.0	34.5	44.6	41.7
DTBM20M-12N	20	3/4	15.9	34.92	32	26.0	22.0	34.5	44.6	41.7
DTBM22M-12N	22	3/4	15.9	34.92	32	26.0	22.0	34.5	44.6	41.7
DTBM22M-16N	22	1	18.3	34.92	32	26.0	22.0	34.5	44.6	46.5
DTBM25M-12N	25	3/4	15.9	34.92	38	31.3	26.5	36.8	49.1	41.7
DTBM25M-16N	25	1	21.8	34.92	38	31.3	26.5	36.8	49.1	46.5

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Male Branch Tee

DTBM -R





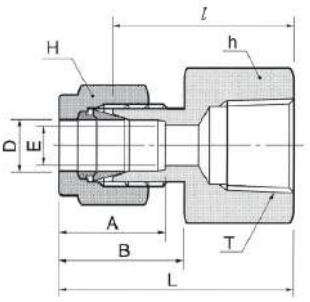
Connects metric tube to female ISO tapered thread

Part No.	Tube O.D. D	T NPT	E Min.	Width across flat		A	B	ℓ	L	L1
				h	H					
DTBM3M-2R	3	1/8	2.4	12.7	12	12.9	15.3	17.0	23.6	17.8
DTBM3M-4R	3	1/4	2.4	12.7	12	12.9	15.3	18.0	24.6	23.4
DTBM4M-2R	4	1/8	2.4	12.7	12	13.7	16.1	18.8	25.4	18.8
DTBM4M-4R	4	1/4	2.4	12.7	12	13.7	16.1	18.8	25.4	23.4
DTBM6M-2R	6	1/8	4.8	12.7	14	15.3	17.7	19.6	27.0	18.8
DTBM6M-4R	6	1/4	4.8	14.2	14	15.3	17.7	19.6	27.0	23.4
DTBM6M-6R	6	3/8	4.8	17.5	14	15.3	17.7	22.4	29.8	26.2
DTBM6M-8R	6	1/2	4.8	20.6	14	15.3	17.7	24.4	31.8	33.0
DTBM8M-2R	8	1/8	4.8	14.3	16	16.2	18.6	21.3	28.8	19.8
DTBM8M-4R	8	1/4	6.4	14.3	16	16.2	18.6	21.3	28.8	24.4
DTBM8M-6R	8	3/8	6.4	17.5	16	16.2	18.6	23.1	30.6	26.2
DTBM8M-8R	8	1/2	6.4	20.6	16	16.2	18.6	25.1	32.6	33.0
DTBM10M-2R	10	1/8	4.8	17.5	19	17.2	19.5	23.9	31.5	23.6
DTBM10M-4R	10	1/4	7.1	17.5	19	17.2	19.5	23.9	31.5	26.2
DTBM10M-6R	10	3/8	7.9	17.5	19	17.2	19.5	23.9	31.5	26.2
DTBM10M-8R	10	1/2	7.9	20.6	19	17.2	19.5	25.9	33.5	33.0
DTBM12M-2R	12	1/8	4.8	20.6	22	22.8	22.0	25.9	36.0	23.6
DTBM12M-4R	12	1/4	7.1	20.6	22	22.8	22.0	25.9	36.0	28.2
DTBM12M-6R	12	3/8	9.5	20.6	22	22.8	22.0	25.9	36.0	28.2
DTBM12M-8R	12	1/2	9.5	20.6	22	22.8	22.0	25.9	36.0	33.0
DTBM12M-12R	12	3/4	9.5	27.0	22	22.8	22.0	29.7	39.8	36.8
DTBM16M-6R	16	3/8	9.5	25.4	25	24.4	22.0	27.9	38.0	30.2
DTBM16M-8R	16	1/2	11.9	25.4	25	24.4	22.0	27.9	38.0	35.1
DTBM16M-12R	16	3/4	12.7	27.0	25	24.4	22.0	29.7	39.8	36.8
DTBM18M-8R	18	1/2	11.9	27.0	30	24.4	22.0	29.7	39.8	36.8
DTBM18M-12R	18	3/4	15.1	27.0	30	24.4	22.0	29.7	39.8	36.8
DTBM20M-8R	20	1/2	11.9	34.92	32	26.0	22.0	34.5	44.6	41.7
DTBM20M-12R	20	3/4	15.9	34.92	32	26.0	22.0	34.5	44.6	41.7
DTBM22M-12R	22	3/4	15.9	34.92	32	26.0	22.0	34.5	44.6	41.7
DTBM22M-16R	22	1	18.3	34.92	32	26.0	22.0	34.5	44.6	46.5
DTBM25M-12R	25	3/4	15.9	34.92	38	31.3	26.5	36.8	49.1	41.7
DTBM25M-16R	25	1	21.8	34.92	38	31.3	26.5	36.8	49.1	46.5

Female Connector

DCF-N





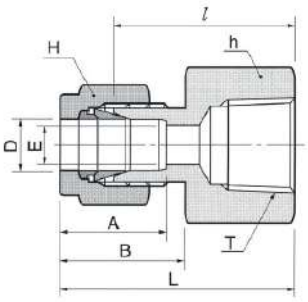
Connects fractional tube to male NPT thread

Part No.	Tube O.D. D		T NPT	E Min.	Width across flat				A	B	ℓ	L
					h		H					
	in.	mm			in.	mm	in.	mm				
DCF1-1N	1/16	1.59	1/16	1.27	7/16	11.11	5/16	7.93	8.63	10.92	19.81	23.62
DCF1-2N	1/16	1.59	1/8	1.27	9/16	14.28	5/16	7.93	8.63	10.92	20.57	24.38
DCF2-2N	1/8	3.17	1/8	2.28	9/16	14.28	7/16	11.11	12.70	15.24	22.09	28.70
DCF2-4N	1/8	3.17	1/4	2.28	3/4	19.05	7/16	11.11	12.70	15.24	26.92	33.52
DCF3-2N	3/16	4.76	1/8	3.04	9/16	14.28	1/2	12.70	13.71	16.00	23.11	29.71
DCF4-2N	1/4	6.35	1/8	4.82	9/16	14.28	9/16	14.28	15.24	17.78	23.87	31.24
DCF4-4N	1/4	6.35	1/4	4.82	3/4	19.05	9/16	14.28	15.24	17.78	28.44	35.81
DCF4-6N	1/4	6.35	3/8	4.82	7/8	22.22	9/16	14.28	15.24	17.78	30.22	37.59
DCF4-8N	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
DCF5-2N	5/16	7.93	1/8	6.35	9/16	14.28	5/8	15.87	16.25	18.54	24.63	32.00
DCF5-4N	5/16	7.93	1/4	6.35	3/4	19.05	5/8	15.87	16.25	18.54	29.46	36.83
DCF6-2N	3/8	9.52	1/8	7.11	5/8	15.87	11/16	17.46	16.76	19.30	25.40	32.76
DCF6-4N	3/8	9.52	1/4	7.11	3/4	19.05	11/16	17.46	16.76	19.30	30.22	37.59
DCF6-6N	3/8	9.52	3/8	7.11	7/8	22.22	11/16	17.46	16.76	19.30	31.75	39.11
DCF6-8N	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
DCF6-12N	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
DCF8-4N	1/2	12.70	1/4	10.41	1-3/16	20.64	7/8	22.22	22.86	21.84	30.22	40.38
DCF8-6N	1/2	12.70	3/8	10.41	7/8	22.22	7/8	22.22	22.86	21.84	31.75	41.91
DCF8-8N	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
DCF8-12N	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
DCF10-6N	5/8	15.87	3/8	12.70	15/16	23.81	1	25.40	24.38	21.84	31.75	41.91
DCF10-8N	5/8	15.87	1/2	12.70	1-1/16	26.98	1	25.40	24.38	21.84	36.57	46.73
DCF10-12N	5/8	15.87	3/4	12.70	1-5/16	33.33	1	25.40	24.38	21.84	38.10	48.26
DCF12-8N	3/4	19.05	1/2	15.74	1-1/16	26.98	1-1/8	28.58	24.38	21.84	36.57	46.73
DCF12-12N	3/4	19.05	3/4	15.74	1-5/16	33.33	1-1/8	28.58	24.38	21.84	38.10	48.26
DCF14-12N	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
DCF16-12N	1	25.40	3/4	22.35	1-3/8	34.92	1-1/2	38.10	31.24	26.41	41.14	53.34
DCF16-16N	1	25.40	1	22.35	1-5/8	41.27	1-1/2	38.10	31.24	26.41	50.03	62.23
DCF20-20N	1-1/4	31.75	1-1/4	27.68	2-1/8	53.98	1-7/8	47.63	41.14	38.86	52.57	74.67
DCF24-24N	1-1/2	38.10	1-1/2	34.03	2-3/8	60.33	2-1/4	57.15	50.03	45.21	56.13	83.81
DCF32-32N	2	50.80	2	45.97	2-1/8	73.03	3	76.20	67.56	62.73	64.26	101.60

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Female Connector
DCF-N





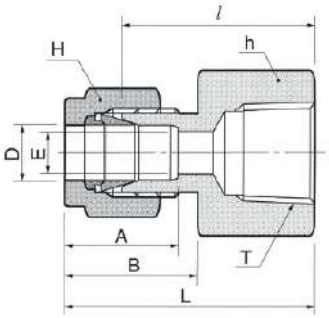
Connects metric tube to male NPT thread

Part No.	Tube O.D. D	T NPT	E Min.	Width across flat		A	B	ℓ	L
				h	H				
DCF3M-2N	3	1/8	2.4	14	12	12.9	15.3	22.1	28.7
DCF3M-4N	3	1/4	2.4	19	12	12.9	15.3	26.9	33.5
DCF4M-2N	4	1/8	2.4	14	12	13.7	16.1	23.1	29.7
DCF6M-2N	6	1/8	4.8	14	14	15.3	17.7	23.9	31.3
DCF6M-4N	6	1/4	4.8	19	14	15.3	17.7	28.4	35.8
DCF6M-6N	6	3/8	4.8	22	14	15.3	17.7	29.5	36.9
DCF6M-8N	6	1/2	4.8	27	14	15.3	17.7	35.1	42.5
DCF8M-2N	8	1/8	6.4	15	16	16.2	18.6	24.6	32.1
DCF8M-4N	8	1/4	6.4	19	16	16.2	18.6	29.5	37.0
DCF8M-6N	8	3/8	6.4	22	16	16.2	18.6	30.2	37.7
DCF8M-8N	8	1/2	6.4	27	16	16.2	18.6	35.8	43.3
DCF10M-2N	10	1/8	7.9	18	19	17.2	19.5	25.4	33.0
DCF10M-4N	10	1/4	7.9	19	19	17.2	19.5	30.2	37.8
DCF10M-6N	10	3/8	7.9	22	19	17.2	19.5	31.0	38.6
DCF10M-8N	10	1/2	7.9	27	19	17.2	19.5	36.6	44.2
DCF12M-2N	12	1/8	8.3	22	22	22.8	22.0	28.4	38.5
DCF12M-4N	12	1/4	9.5	22	22	22.8	22.0	30.2	40.3
DCF12M-6N	12	3/8	9.5	22	22	22.8	22.0	31.0	41.1
DCF12M-8N	12	1/2	9.5	27	22	22.8	22.0	36.6	46.7
DCF12M-12N	12	3/4	9.5	35	22	22.8	22.0	38.9	49.0
DCF15M-8N	15	1/2	11.9	27	25	24.4	22.0	36.6	46.7
DCF16M-8N	16	1/2	12.7	27	25	24.4	22.0	36.8	46.9
DCF20M-8N	20	1/2	15.9	30	32	26.0	22.0	37.8	47.9
DCF20M-12N	20	3/4	15.9	35	32	26.0	22.0	39.6	49.7
DCF22M-12N	22	3/4	18.3	35	32	26.0	22.0	39.6	49.7
DCF22M-16N	22	1	18.3	41	32	26.0	22.0	47.8	57.9
DCF25M-12N	25	3/4	21.8	35	38	31.3	26.5	41.1	53.4
DCF25M-16N	25	1	21.8	41	38	31.3	26.5	50.0	62.3

Female Connector

DCF-R





Connects fractional tube to male ISO tapered thread

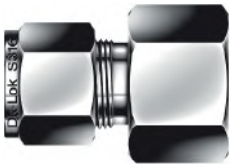
Part No.	Tube O.D. D		T PT	E Min.	Width across flat				A	B	ℓ	L
					h		H					
	in.	mm			in.	mm	in.	mm				
DCF2-2R	1/8	3.17	1/8	2.28	9/16	14.28	7/16	11.11	12.70	15.24	22.09	28.70
DCF4-2R	1/4	6.35	1/8	4.82	9/16	14.28	9/16	14.28	15.24	17.78	23.87	31.24
DCF4-4R	1/4	6.35	1/4	4.82	3/4	19.05	9/16	14.28	15.24	17.78	28.44	35.81
DCF4-6R	1/4	6.35	3/8	4.82	7/8	22.22	9/16	14.28	15.24	17.78	30.22	37.59
DCF4-8R	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
DCF6-4R	3/8	9.52	1/4	7.11	3/4	19.05	11/16	17.46	16.76	19.30	30.22	37.59
DCF6-6R	3/8	9.52	3/8	7.11	7/8	22.22	11/16	17.46	16.76	19.30	31.75	39.11
DCF6-8R	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
DCF8-2R	1/2	12.70	1/8	10.41	13/16	20.64	7/8	22.22	22.86	21.84	25.40	35.56
DCF8-4R	1/2	12.70	1/4	10.41	1-3/16	20.64	7/8	22.22	22.86	21.84	30.22	40.38
DCF8-6R	1/2	12.70	3/8	10.41	7/8	22.22	7/8	22.22	22.86	21.84	31.75	41.91
DCF8-8R	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
DCF8-12R	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
DCF10-6R	5/8	15.87	3/8	12.70	15/16	23.81	1	25.40	24.38	21.84	31.75	41.91
DCF10-8R	5/8	15.87	1/2	12.70	1-1/16	26.98	1	25.40	24.38	21.84	36.57	46.73
DCF10-12R	5/8	15.87	3/4	12.70	1-5/16	33.33	1	25.40	24.38	21.84	38.10	48.26
DCF12-8R	3/4	19.05	1/2	15.74	1-1/16	26.98	1-1/8	28.58	24.38	21.84	36.57	46.73
DCF12-12R	3/4	19.05	3/4	15.74	1-5/16	33.33	1-1/8	28.58	24.38	21.84	38.10	48.26
DCF16-12R	1	25.40	3/4	22.35	1-3/8	34.92	1-1/2	38.10	31.24	26.41	41.14	53.34
DCF16-16R	1	25.40	1	22.35	1-5/8	41.27	1-1/2	38.10	31.24	26.41	50.03	62.23
DCF20-16R	1-1/4	31.75	1	27.68	1-3/4	44.45	1-7/8	47.63	41.14	38.86	52.57	74.67
DCF20-20R	1-1/4	31.75	1-1/4	27.68	2-1/8	53.98	1-7/8	47.63	41.14	38.86	52.57	74.67
DCF24-24R	1-1/2	38.10	1-1/2	34.03	2-3/8	60.33	2-1/4	57.15	50.03	45.21	56.13	83.81

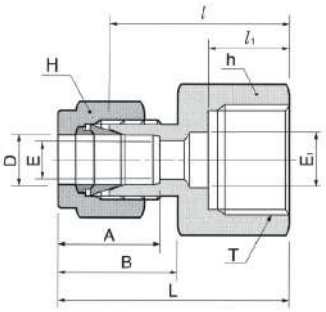
Connects metric tube to male ISO tapered thread

Part No.	Tube O.D. D	T PT	E Min.	Width across flat		A	B	ℓ	L
				h	H				
DCF3M-2R	3	1/8	2.4	14	12	12.9	15.3	22.1	28.7
DCF3M-4R	3	1/4	2.4	19	12	12.9	15.3	26.9	33.5
DCF4M-2R	4	1/8	2.4	14	12	13.7	16.1	23.1	29.7
DCF6M-2R	6	1/8	4.8	14	14	15.3	17.7	23.9	31.3
DCF6M-4R	6	1/4	4.8	19	14	15.3	17.7	28.4	35.8
DCF6M-6R	6	3/8	4.8	22	14	15.3	17.7	29.5	36.9
DCF6M-8R	6	1/2	4.8	27	14	15.3	17.7	35.1	42.5
DCF8M-2R	8	1/8	6.4	15	16	16.2	18.6	24.6	32.1
DCF8M-4R	8	1/4	6.4	19	16	16.2	18.6	29.5	37.0
DCF8M-6R	8	3/8	6.4	22	16	16.2	18.6	30.2	37.7
DCF8M-8R	8	1/2	6.4	27	16	16.2	18.6	35.8	43.3
DCF10M-2R	10	1/8	7.9	18	19	17.2	19.5	25.4	33.0
DCF10M-4R	10	1/4	7.9	19	19	17.2	19.5	30.2	37.8
DCF10M-6R	10	3/8	7.9	22	19	17.2	19.5	31.0	38.6
DCF10M-8R	10	1/2	7.9	27	19	17.2	19.5	36.6	44.2
DCF12M-2R	12	1/8	8.3	22	22	22.8	22.0	28.4	38.5
DCF12M-4R	12	1/4	9.5	22	22	22.8	22.0	30.2	40.3
DCF12M-6R	12	3/8	9.5	22	22	22.8	22.0	31.0	41.1
DCF12M-8R	12	1/2	9.5	27	22	22.8	22.0	36.6	46.7
DCF12M-12R	12	3/4	9.5	35	22	22.8	22.0	38.9	49.0
DCF15M-8R	15	1/2	11.9	27	25	24.4	22.0	36.6	46.7
DCF16M-8R	16	1/2	12.7	27	25	24.4	22.0	36.8	46.9
DCF20M-8R	20	1/2	15.9	30	32	26.0	22.0	37.8	47.9
DCF20M-12R	20	3/4	15.9	35	32	26.0	22.0	39.6	49.7
DCF22M-8R	22	1/2	18.3	30	32	26.0	22.0	38.0	48.1
DCF22M-12R	22	3/4	18.3	35	32	26.0	22.0	39.6	49.7
DCF22M-16R	22	1	18.3	41	32	26.0	22.0	47.8	57.9
DCF25M-8R	25	1/2	21.8	35	38	31.3	26.5	41.1	53.4
DCF25M-12R	25	3/4	21.8	35	38	31.3	26.5	41.1	53.4
DCF25M-16R	25	1	21.8	41	38	31.3	26.5	50.0	62.3

Gauge Connector (Previously DCG)

DCF-GG





Connects fractional tube to Gauge (Male ISO parallel thread)

Part No.	Tube O.D. D		T PF	E Min.	E1	Width across flat				A	B	ℓ	ℓ1	L
						h		H						
	in.	mm				in.	mm	in.	mm					
DCF2-4GG	1/8	3.17	1/4	2.4	5.5	3/4	19.05	7/16	11.11	12.70	15.24	28.70	13.00	35.31
DCF4-2GG	1/4	6.35	1/8	4.82	-	9/16	14.28	9/16	14.28	15.24	17.78	26.30	12.00	33.55
DCF4-4GG	1/4	6.35	1/4	4.82	5.5	3/4	19.05	9/16	14.28	15.24	17.78	30.22	13.00	37.59
DCF4-6GG	1/4	6.35	3/8	4.82	6.5	15/16	23.81	9/16	14.28	15.24	17.78	30.22	14.22	37.59
DCF4-8GG	1/4	6.35	1/2	4.82	7.0	1-1/16	26.98	9/16	14.28	15.24	17.78	30.07	18.80	43.43
DCF5-4GG	5/16	7.93	1/4	5.58	5.5	3/4	19.05	5/8	15.87	16.25	18.54	30.98	13.00	38.35
DCF5-8GG	5/16	7.93	1/2	7.11	7.0	1-1/16	26.98	5/8	15.87	16.25	18.54	33.02	18.80	40.38
DCF6-4GG	3/8	9.52	1/4	5.58	5.5	3/4	19.05	11/16	17.46	16.76	19.30	31.75	12.95	39.12
DCF6-6GG	3/8	9.52	3/8	6.60	6.5	15/16	23.81	11/16	17.46	16.76	19.30	31.24	14.22	38.61
DCF6-8GG	3/8	9.52	1/2	7.11	7.0	1-1/16	26.98	11/16	17.46	16.76	19.30	34.54	18.80	41.91
DCF8-4GG	1/2	12.70	1/4	5.50	5.5	7/8	22.22	7/8	22.22	22.86	21.84	31.80	13.00	41.95
DCF8-6GG	1/2	12.70	3/8	6.60	6.5	15/16	23.81	7/8	22.22	22.86	21.84	34.29	14.24	44.45
DCF8-8GG	1/2	12.70	1/2	7.11	7.0	1-1/16	26.98	7/8	22.22	22.86	21.84	38.10	18.80	48.26

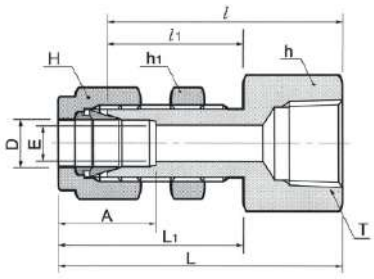
Connects Metric tube to Gauge (Male ISO parallel thread)

Part No.	Tube O.D. D	T PF	E Min.	E1	Width across flat		A	B	ℓ	ℓ1	L
					h	H					
DCF3M-4GG	3	1/4	2.4	5.5	19	12	12.9	15.3	28.7	13	35.3
DCF6M-4GG	6	1/4	4.8	5.5	19	14	15.3	17.7	30.2	13	37.6
DCF6M-6GG	6	3/8	4.8	6.5	24	14	15.3	17.7	30.2	14	37.6
DCF6M-8GG	6	1/2	4.8	7.0	27	14	15.3	17.7	36.3	19	43.0
DCF8M-4GG	8	1/4	5.5	5.5	19	16	16.2	18.6	31.0	13	38.5
DCF8M-6GG	8	3/8	6.5	6.5	24	16	16.2	18.6	28.7	14	36.2
DCF8M-8GG	8	1/2	7.0	7.0	27	16	16.2	18.6	33.0	19	40.5
DCF10M-4GG	10	1/4	5.5	5.5	19	19	17.2	19.5	31.8	13	39.4
DCF10M-6GG	10	3/8	6.5	6.5	24	19	17.2	19.5	31.2	14	38.8
DCF10M-8GG	10	1/2	7.0	7.0	27	19	17.2	19.5	33.8	19	41.4
DCF12M-4GG	12	1/4	5.5	5.5	22	22	22.8	22.0	31.8	13	41.9
DCF12M-6GG	12	3/8	6.5	6.5	24	22	22.8	22.0	34.3	14	44.4
DCF12M-8GG	12	1/2	7.0	7.0	27	22	22.8	22.0	38.1	19	48.2
DCF20M-8GG	20	1/2	7.0	7.0	30	32	26.0	22.0	44.2	19	54.3
DCF22M-8GG	22	1/2	7.0	7.0	30	32	26.0	22.0	44.2	19	54.3

Bulkhead Female Connector

DCBF-N





Connects fractional tube to male NPT thread

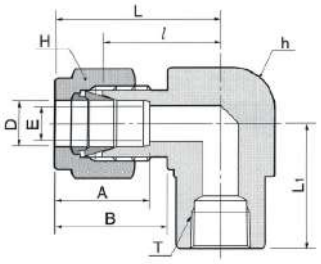
Part No.	Tube O.D. D		T NPT	E Min.	Width across flat						A	ℓ	ℓ1	L	L1	Panel Hole Drill size	Panel Max Thickness
					h		h1		H								
	in.	mm			in.	mm	in.	mm	in.	mm							
DCBF2-2N	1/8	3.17	1/8	2.28	9/16	14.28	1/2	12.70	7/16	11.11	12.70	38.10	24.63	44.70	31.24	8.33	12.70
DCBF4-2N	1/4	6.35	1/8	4.82	5/8	15.87	5/8	15.87	9/16	14.28	15.24	39.62	26.16	46.99	33.52	11.50	10.16
DCBF4-4N	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
DCBF6-4N	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
DCBF6-6N	3/8	9.52	3/8	7.11	7/8	22.22	3/4	19.05	11/16	17.46	16.76	49.41	29.46	56.77	36.83	14.68	11.17
DCBF8-6N	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
DCBF8-8N	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
DCBF12-12N	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
DCBF16-16N	1	25.40	1	22.35	1-5/8	41.27	1-5/8	41.27	1-1/2	38.10	31.24	81.04	45.21	93.23	57.40	33.73	19.05
DCBF20-20N	1-1/4	31.75	1-1/4	27.68	1-7/8	47.63	1-7/8	47.63	1-7/8	47.63	41.14	83.49	47.75	105.59	69.85	41.67	19.05
DCBF24-24N	1-1/2	38.10	1-1/2	33.90	1-1/4	57.15	2-1/4	57.15	2-1/4	57.15	50.03	87.39	49.27	114.57	76.45	49.61	19.05
DCBF32-32N	2	50.80	2	45.97	1-3/4	69.85	2-3/4	69.85	3	76.20	67.56	95.30	56.38	132.63	93.71	57.94	19.05

Connects metric tube to male NPT thread

Part No.	Tube O.D. D	T NPT	E Min.	Width across flat			A	ℓ	ℓ1	L	L1	Panel Hole Drill size	Panel Max Thickness
				h	h1	H							
DCBF6M-2N	6	1/8	4.8	15.8	15.8	14	15.3	39.6	26.2	46.90	35.00	11.5	10.2
DCBF6M-4N	6	1/4	4.8	19.0	16.0	14	15.3	44.4	26.2	51.80	33.60	11.5	10.2
DCBF8M-4N	8	1/4	6.3	19.0	17.4	16	16.2	46.7	28.6	53.85	35.55	13.1	11.2
DCBF12M-8N	12	1/2	9.5	27.0	24.0	22	22.8	56.4	31.8	66.50	41.90	19.5	12.7

Female Elbow
DLF-N





Connects fractional tube to male NPT thread

Part No.	Tube O.D. D		T NPT	E Min.	Width across flat				A	B	ℓ	L	L1
					h		H						
	in.	mm			in.	mm	in.	mm					
DLF2-2N	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
DLF2-4N	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
DLF3-2N	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
DLF4-2N	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
DLF4-4N	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
DLF4-6N	1/4	6.35	3/8	4.82	13/16	20.64	9/16	14.28	15.24	17.78	24.38	31.75	22.35
DLF4-8N	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
DLF5-2N	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
DLF5-4N	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
DLF6-2N	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
DLF6-4N	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
DLF6-6N	3/8	9.52	3/8	7.11	13/16	20.64	11/16	17.46	16.76	19.30	25.90	33.27	22.35
DLF6-8N	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
DLF8-4N	1/2	12.70	1/4	10.41	13/16	20.64	7/8	22.22	22.86	21.84	25.90	36.06	22.35
DLF8-6N	1/2	12.70	3/8	10.41	13/16	20.64	7/8	22.22	22.86	21.84	25.90	36.06	22.35
DLF8-8N	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
DLF10-6N	5/8	15.87	3/8	12.70	15/16	23.81	1	25.40	24.38	21.84	27.94	38.10	22.35
DLF10-8N	5/8	15.87	1/2	12.70	1	25.40	1	25.40	24.38	21.84	29.71	39.87	28.44
DLF12-8N	3/4	19.05	1/2	15.74	1-1/16	26.98	1-1/8	28.58	24.38	21.84	29.71	39.87	28.44
DLF12-12N	3/4	19.05	3/4	15.74	1-3/8	34.92	1-1/8	28.58	24.38	21.84	34.54	44.70	31.75
DLF14-12N	7/8	22.22	3/4	18.28	1-3/8	34.92	1-1/4	31.75	25.90	21.84	34.54	44.70	31.75
DLF16-12N	1	25.40	3/4	22.35	1-3/8	34.92	1-1/2	38.10	31.24	26.41	36.83	49.02	31.75
DLF16-16N	1	25.40	1	22.35	1-11/16	42.86	1-1/2	38.10	31.24	26.41	41.40	50.29	38.10

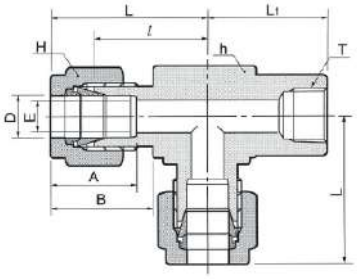
Connects metric tube to male NPT thread

Part No.	Tube O.D. D	T NPT	E Min.	Width across flat		A	B	ℓ	L	L1
				h	H					
DLF6M-2N	6	1/8	4.8	12.70	14	15.3	17.7	19.6	27.0	19.00
DLF6M-4N	6	1/4	4.8	17.46	14	15.3	17.7	22.4	29.8	22.40
DLF6M-6N	6	3/8	4.8	20.64	14	15.3	17.7	24.4	31.7	22.40
DLF6M-8N	6	1/2	4.8	25.40	14	15.3	17.7	27.2	34.6	28.40
DLF8M-2N	8	1/8	6.4	15.87	16	16.2	18.6	23.1	29.9	19.00
DLF8M-4N	8	1/4	6.4	17.46	16	16.2	18.6	23.1	30.6	22.40
DLF8M-8N	8	1/2	6.4	25.40	16	16.2	18.6	28.0	35.2	28.40
DLF10M-2N	10	1/8	7.9	17.46	19	17.2	19.5	23.9	31.5	19.00
DLF10M-4N	10	1/4	7.9	17.46	19	17.2	19.5	25.9	33.5	22.35
DLF10M-6N	10	3/8	7.9	20.64	19	17.2	19.5	25.9	33.5	22.40
DLF10M-8N	10	1/2	7.9	25.40	19	17.2	19.5	28.7	36.1	28.40
DLF12M-4N	12	1/4	9.5	20.64	22	22.8	22.0	25.9	36.0	22.40
DLF12M-6N	12	3/8	9.5	20.64	22	22.8	22.0	25.9	36.2	22.35
DLF12M-8N	12	1/2	9.5	25.40	22	22.8	22.0	28.7	38.8	28.40
DLF16M-8N	16	1/2	12.7	26.98	25	24.4	22.0	29.7	39.5	28.40

Female Run Tee

DTBF-N





Connects fractional tube to male NPT thread

Part No.	Tube O.D. D		T NPT	E Min.	Width across flat				A	B	ℓ	L	L1
					h		H						
	in.	mm			in.	mm	in.	mm					
DTRF2-2N	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
DTRF2-4N	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
DTRF3-2N	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
DTRF4-2N	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
DTRF4-4N	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
DTRF4-6N	1/4	6.35	3/8	4.82	13/16	20.64	9/16	14.28	15.24	17.78	24.38	31.75	22.35
DTRF4-8N	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
DTRF5-2N	5/16	7.94	1/8	6.35	9/16	14.28	5/8	15.87	16.25	18.54	21.33	28.70	19.05
DTRF5-4N	5/16	7.94	1/4	6.35	11/16	17.46	5/8	15.87	16.25	18.54	23.11	30.48	22.35
DTRF6-2N	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
DTRF6-4N	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
DTRF6-6N	3/8	9.52	3/8	6.35	13/16	20.64	11/16	17.46	16.76	19.30	25.90	33.27	22.35
DTRF6-8N	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
DTRF8-4N	1/2	12.70	1/4	10.41	13/16	20.64	7/8	22.22	22.86	21.84	25.90	36.06	22.35
DTRF8-6N	1/2	12.70	3/8	10.41	13/16	20.64	7/8	22.22	22.86	21.84	25.90	36.06	22.35
DTRF8-8N	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
DTRF10-6N	5/8	15.87	3/8	12.70	15/16	23.81	1	25.40	24.38	21.84	27.94	38.10	22.35
DTRF10-8N	5/8	15.87	1/2	12.70	1	25.40	1	25.40	24.38	21.84	28.70	38.86	28.44
DTRF12-8N	3/4	19.05	1/2	15.74	1-1/16	26.98	1-1/8	28.58	24.38	21.84	29.71	39.87	28.44
DTRF12-12N	3/4	19.05	3/4	15.74	1-3/8	34.92	1-1/8	28.58	24.38	21.84	34.54	44.70	31.75
DTRF14-12N	7/8	22.22	3/4	18.28	1-3/8	34.92	1-1/4	31.75	31.75	21.84	34.54	44.70	31.75
DTRF16-12N	1	25.40	3/4	22.35	1-3/8	34.92	1-1/2	38.10	38.10	26.41	36.83	49.02	31.75
DTRF16-16N	1	25.40	1	22.35	1-1/16	42.86	1-1/2	38.10	38.10	26.41	41.40	50.29	38.10

Connects metric tube to male NPT thread

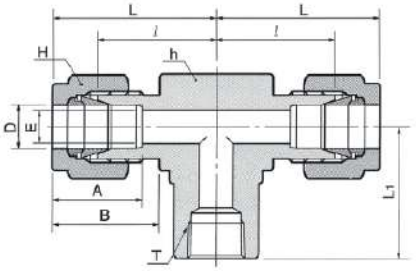
Part No.	Tube O.D. D	T NPT	E Min.	Width across flat		A	B	ℓ	L	L1
				h	H					
DTRF6M-2N	6	1/8	4.8	12.70	14	15.3	17.7	19.6	27.0	19.00
DTRF6M-4N	6	1/4	4.8	17.46	14	15.3	17.7	22.4	29.8	22.40
DTRF6M-6N	6	3/8	4.8	20.64	14	15.3	17.7	24.4	31.7	22.40
DTRF6M-8N	6	1/2	4.8	25.40	14	15.3	17.7	27.2	34.5	28.40
DTRF8M-2N	8	1/8	6.4	15.87	16	16.2	18.6	23.1	29.9	19.00
DTRF8M-4N	8	1/4	6.4	17.46	16	16.2	18.6	23.1	30.6	22.40
DTRF8M-6N	8	3/8	6.4	20.64	16	16.2	18.6	25.2	32.4	22.40
DTRF8M-8N	8	1/2	6.4	25.40	16	16.2	18.6	28.0	35.2	28.40
DTRF10M-2N	10	1/8	7.9	20.64	19	17.2	19.5	23.9	31.5	19.00
DTRF10M-4N	10	1/4	7.9	20.64	19	17.2	19.5	25.9	33.6	22.40
DTRF10M-6N	10	3/8	7.9	20.64	19	17.2	19.5	25.9	33.6	22.40
DTRF10M-8N	10	1/2	7.9	25.40	19	17.2	19.5	26.2	33.6	28.40
DTRF12M-4N	12	1/4	9.5	20.64	22	22.8	22.0	25.9	36.0	22.40
DTRF12M-6N	12	3/8	9.5	20.64	22	22.8	22.0	25.9	36.0	22.40
DTRF12M-8N	12	1/2	9.5	25.40	22	22.8	22.0	29.7	40.0	28.40
DTRF16M-8N	16	1/2	12.7	25.40	25	24.4	22.0	29.7	40.0	28.40

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Female Branch Tee

DTBF-N





Connects fractional tube to male NPT thread

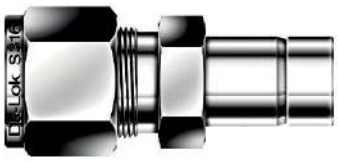
Part No.	Tube O.D. D		T NPT	E Min.	Width across flat				A	B	ℓ	L	L1
					h		H						
	in.	mm			in.	mm	in.	mm					
DTBF2-2N	1/8	3.17	1/8	2.28	1/2	12.70	7/16	11.11	12.70	15.24	18.03	24.38	19.05
DTBF2-4N	1/8	3.17	1/4	2.28	11/16	17.46	7/16	11.11	12.70	15.24	20.82	27.43	22.35
DTBF3-2N	3/16	4.76	1/8	3.04	1/2	12.70	1/2	12.70	13.71	16.00	18.79	25.40	19.05
DTBF4-2N	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
DTBF4-4N	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
DTBF4-6N	1/4	6.35	3/8	4.82	13/16	20.64	9/16	14.28	15.24	17.78	24.38	31.75	22.35
DTBF4-8N	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
DTBF5-2N	5/16	7.94	1/8	6.35	9/16	14.28	5/8	15.87	16.25	18.54	21.33	28.70	19.05
DTBF5-4N	5/16	7.94	1/4	6.35	11/16	17.46	5/8	15.87	16.25	18.54	23.11	30.48	22.35
DTBF6-2N	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
DTBF6-4N	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
DTBF6-6N	3/8	9.52	3/8	6.35	13/16	20.64	11/16	17.46	16.76	19.30	25.90	33.27	22.35
DTBF6-8N	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
DTBF8-4N	1/2	12.70	1/4	10.41	13/16	20.64	7/8	22.22	22.86	21.84	25.90	36.06	22.35
DTBF8-6N	1/2	12.70	3/8	10.41	13/16	20.64	7/8	22.22	22.86	21.84	25.90	36.06	22.35
DTBF8-8N	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
DTBF10-6N	5/8	15.87	3/8	12.70	15/16	23.81	1	25.40	24.38	21.84	27.94	38.10	22.35
DTBF10-8N	5/8	15.87	1/2	12.70	1	25.40	1	25.40	24.38	21.84	28.70	38.86	28.44
DTBF12-8N	3/4	19.05	1/2	15.74	1-1/16	26.98	1-1/8	28.58	24.38	21.84	29.71	39.87	28.44
DTBF12-12N	3/4	19.05	3/4	15.74	1-3/8	34.92	1-1/8	28.58	24.38	21.84	34.54	44.70	31.75
DTBF14-12N	7/8	22.22	3/4	18.28	1-3/8	34.92	1-1/4	31.75	25.90	21.84	34.54	44.70	31.75
DTBF16-12N	1	25.40	3/4	22.35	1-3/8	34.92	1-1/2	38.10	31.24	26.41	36.83	49.02	31.75
DTBF16-16N	1	25.40	1	22.35	1-11/16	42.86	1-1/2	38.10	31.24	26.41	41.40	53.59	38.10

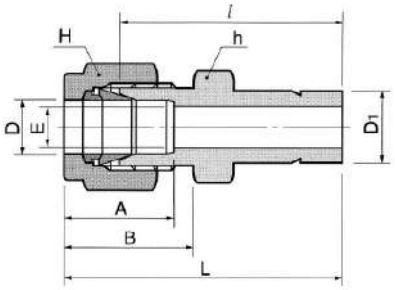
Connects metric tube to male NPT thread

Part No.	Tube O.D. D	T NPT	E Min.	Width across flat		A	B	ℓ	L	L1
				h	H					
DTBF6M-2N	6	1/8	4.8	12.70	14	15.3	17.7	19.6	27.0	19.00
DTBF6M-4N	6	1/4	4.8	17.46	14	15.3	17.7	22.4	29.8	22.40
DTBF6M-6N	6	3/8	4.8	20.64	14	15.3	17.7	24.4	31.7	22.40
DTBF6M-8N	6	1/2	4.8	25.40	14	15.3	17.7	27.2	34.5	28.40
DTBF8M-2N	8	1/8	6.4	15.87	16	16.2	18.6	23.1	29.9	19.00
DTBF8M-4N	8	1/4	6.4	17.46	16	16.2	18.6	23.1	30.6	22.40
DTBF8M-6N	8	3/8	6.4	20.64	16	16.2	18.6	25.2	32.4	22.40
DTBF8M-8N	8	1/2	6.4	25.40	16	16.2	18.6	28.0	35.2	28.40
DTBF10M-2N	10	1/8	7.9	17.50	19	17.2	19.5	23.9	31.5	19.00
DTBF10M-4N	10	1/4	7.9	20.64	19	17.2	19.5	25.9	33.5	22.40
DTBF10M-6N	10	3/8	7.9	20.64	19	17.2	19.5	25.9	33.5	22.40
DTBF10M-8N	10	1/2	9.5	25.40	19	17.2	19.5	26.2	33.6	22.40
DTBF12M-4N	12	1/4	9.5	20.64	22	22.8	22.0	25.9	36.0	22.40
DTBF12M-6N	12	3/8	9.5	20.64	22	22.8	22.0	25.9	36.0	22.40
DTBF12M-8N	12	1/2	9.5	25.40	22	22.8	22.0	29.7	40.0	28.70
DTBF16M-8N	16	1/2	12.7	25.40	25	24.4	22.0	29.7	40.0	28.70

Reducer

DR





Connects fractional tube to fractional DK-Lok port

Part No.	Tube O.D.				E Min.	Width across flat				A	B	ℓ	L
	D		D1			h		H					
	in.	mm	in.	mm		in.	mm	in.	mm				
DR1-2	1/16	1.59	1/8	3.17	1.27	5/16	7.93	5/16	7.93	8.63	10.92	25.40	29.21
DR1-4	1/16	1.59	1/4	6.35	1.27	5/16	7.93	5/16	7.93	8.63	10.92	27.68	31.49
DR2-1	1/8	3.17	1/16	1.59	1.76	7/16	11.11	7/16	11.11	12.70	15.24	22.35	28.95
DR2-2	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
DR2-3	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
DR2-4	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
DR2-6	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
DR2-8	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
DR3-2	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
DR3-4	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
DR4-2	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
DR4-3	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
DR4-4	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
DR4-5	1/4	6.35	5/16	7.93	4.82	1/2	12.70	9/16	14.28	15.24	17.78	32.51	39.87
DR4-6	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
DR4-8	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
DR4-10	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
DR4-12	1/4	6.35	3/4	19.05	4.82	13/16	20.64	9/16	14.28	15.24	17.78	40.38	47.75
DR5-6	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
DR5-8	5/16	7.93	1/2	12.70	6.35	9/16	14.28	5/8	15.87	16.25	18.54	40.13	47.49
DR6-4	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
DR6-6	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
DR6-8	3/8	9.52	1/2	12.70	7.11	5/8	15.87	11/16	17.46	16.76	19.30	41.14	45.81
DR6-10	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
DR6-12	3/8	9.52	3/4	19.05	7.11	13/16	20.64	11/16	17.46	16.76	19.30	42.92	50.29
DR8-4	1/2	12.70	1/4	6.35	4.82	13/16	20.64	7/8	22.22	22.86	21.84	34.79	44.95
DR8-6	1/2	12.70	3/8	9.52	7.11	13/16	20.64	7/8	22.22	22.86	21.84	36.57	46.73
DR8-8	1/2	12.70	1/2	12.70	9.90	13/16	20.64	7/8	22.22	22.86	21.84	42.16	52.32
DR8-10	1/2	12.70	5/8	15.87	10.41	13/16	20.64	7/8	22.22	22.86	21.84	43.68	53.84
DR8-12	1/2	12.70	3/4	19.05	10.41	13/16	20.64	7/8	22.22	22.86	21.84	43.68	53.84
DR8-16	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
DR10-12	5/8	15.87	3/4	19.05	12.70	15/16	23.81	1	25.40	24.38	21.84	44.45	54.61
DR10-14	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
DR10-16	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
DR12-8	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
DR12-16	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
DR16-20	1	25.40	1-1/4	31.75	22.35	1-3/8	34.93	1-1/2	38.10	31.24	26.41	68.32	80.51
DR16-24	1	25.40	1-1/2	38.10	22.35	1-5/8	41.28	1-1/2	38.10	31.24	26.41	76.96	89.15
DR16-32	1	25.40	2	50.80	22.35	2-1/8	53.98	1-1/2	38.10	31.24	26.41	100.33	112.52
DR20-24	1-1/4	31.75	1-1/2	38.10	27.68	1-7/8	47.63	1-7/8	57.15	41.14	38.86	82.04	104.14
DR20-32	1-1/4	31.75	2	50.80	27.68	1-7/8	47.63	1-7/8	76.20	41.14	38.86	103.12	125.22
DR24-32	1-1/2	38.10	2	50.80	34.03	2-1/4	57.15	2-1/4	76.20	50.03	45.21	104.14	131.31

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Connects metric tube to fractional DK-Lok port

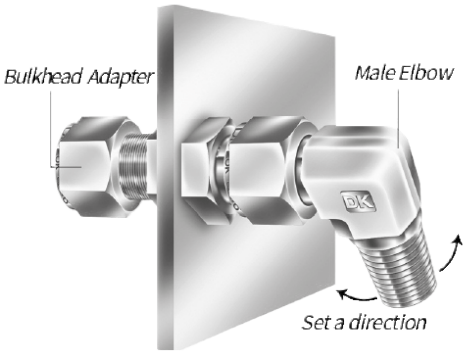
Part No.	Tube O.D.			E Min.	Width across flat		A	B	ℓ	L
	D	D1			h	H				
		in.	mm							
DR2M-2	2	1/8	3.17	1.7	12	12	12.9	15.3	26.9	33.5
DR3M-2	3	1/8	3.17	2.0	12	12	12.9	15.3	26.9	33.5
DR3M-4	3	1/4	6.35	2.4	12	12	12.9	15.3	29.5	36.1
DR4M-4	4	1/4	6.35	2.4	12	12	13.7	16.1	30.5	37.1
DR6M-2	6	1/8	3.18	2.0	14	14	15.3	17.7	29.5	36.9
DR6M-4	6	1/4	6.35	4.8	14	14	15.3	17.7	31.8	39.2
DR6M-5	6	5/16	7.93	4.8	14	14	15.3	17.7	32.5	39.9
DR6M-6	6	3/8	9.52	4.8	14	14	15.3	17.7	33.3	40.7
DR6M-8	6	1/2	12.70	4.8	14	14	15.3	17.7	38.9	46.3
DR8M-6	8	3/8	9.52	6.4	15	16	16.2	18.6	34.5	42.0
DR8M-8	8	1/2	12.70	6.4	15	16	16.2	18.6	40.1	47.6
DR10M-6	10	3/8	9.52	7.1	18	19	17.2	19.5	36.6	44.2
DR10M-8	10	1/2	12.70	7.9	18	19	17.2	19.5	42.2	49.8
DR12M-8	12	1/2	12.70	9.5	22	22	22.8	22.0	42.2	52.3
DR12M-12	12	3/4	19.05	9.5	22	22	22.8	22.0	43.7	53.8
DR18M-12	18	3/4	19.05	15.1	27	30	24.4	22.0	46.0	56.1
DR18M-16	18	1	25.40	15.1	27	30	24.4	22.0	52.3	62.4
DR25M-16	25	1	25.40	20.2	35	38	31.3	26.5	57.2	69.5

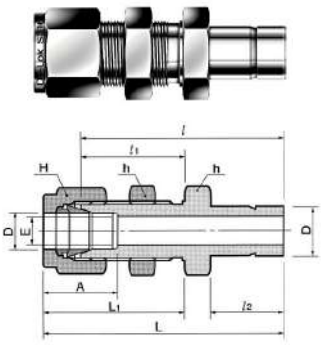
Connects metric tube to metric DK-Lok port

Part No.	Tube O.D.		E Min.	Width across flat		A	B	ℓ	L
	D	D1		h	H				
DR2M-3M	2	3	1.7	12	12	12.9	15.3	26.9	35.3
DR3M-4M	3	4	2.4	12	12	12.9	15.3	28.4	35.0
DR3M-6M	3	6	2.4	12	12	12.9	15.3	29.5	36.1
DR3M-10M	3	10	2.4	12	12	12.9	15.3	31.8	38.4
DR4M-6M	4	6	2.4	12	12	13.7	16.1	30.5	37.1
DR6M-3M	6	3	1.8	14	14	15.3	17.7	29.5	36.9
DR6M-8M	6	8	4.8	14	14	15.3	17.7	32.5	39.9
DR6M-10M	6	10	4.8	14	14	15.3	17.7	33.3	40.7
DR6M-12M	6	12	4.8	14	14	15.3	17.7	38.9	46.3
DR8M-6M	8	6	4.6	15	16	16.2	18.6	32.8	40.3
DR8M-10M	8	10	6.4	15	16	16.2	18.6	34.5	42.0
DR8M-12M	8	12	6.4	15	16	16.2	18.6	40.1	47.6
DR10M-6M	10	6	4.6	18	19	17.2	19.5	34.8	42.4
DR10M-12M	10	12	7.9	18	19	17.2	19.5	42.2	49.8
DR10M-15M	10	15	7.9	18	19	17.2	19.5	43.7	51.3
DR10M-18M	10	18	7.9	19	19	17.2	19.5	43.7	51.3
DR12M-6M	12	6	4.6	22	22	22.8	22.0	34.8	44.9
DR12M-10M	12	10	7.7	22	22	22.8	22.0	36.6	46.7
DR12M-16M	12	16	9.5	22	22	22.8	22.0	43.7	53.8
DR12M-18M	12	18	9.5	22	22	22.8	22.0	43.7	53.8
DR12M-20M	12	20	9.5	22	22	22.8	22.0	46.0	56.1
DR12M-22M	12	22	9.5	24	22	22.8	22.0	46.0	56.1
DR12M-25M	12	25	9.5	27	22	22.8	22.0	52.3	62.4
DR16M-12M	16	12	9.1	24	25	24.4	22.0	42.9	53.0
DR18M-12M	18	12	9.1	27	30	24.4	22.0	44.5	54.6
DR18M-16M	18	16	12.7	27	30	24.4	22.0	46.0	56.1
DR18M-20M	18	20	15.1	27	30	24.4	22.0	47.5	57.6
DR18M-22M	18	22	15.1	27	30	24.4	22.0	47.5	57.6
DR18M-25M	18	25	15.1	27	30	24.4	22.0	52.3	62.4
DR20M-16M	20	16	12.7	30	32	26.0	22.0	47.8	57.9
DR20M-18M	20	18	13.9	30	32	26.0	22.0	47.8	57.9
DR20M-22M	20	22	15.8	30	32	26.0	22.0	49.3	59.4
DR20M-25M	20	25	15.8	30	32	26.0	22.0	54.1	64.2
DR22M-18M	22	18	13.9	30	32	26.0	22.0	47.8	57.9
DR22M-20M	22	20	15.1	30	32	26.0	22.0	49.3	59.4
DR22M-25M	22	25	18.3	30	32	26.0	22.0	54.1	64.2
DR25M-18M	25	18	13.9	35	38	31.3	26.5	50.8	63.1
DR25M-20M	25	20	15.1	35	38	31.3	26.5	52.3	64.6

Bulkhead Adapter
DAB

The bulkhead adapter is useful to help set a direction through panelconstruction.

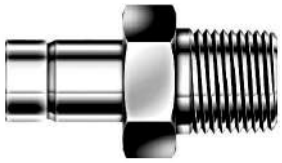


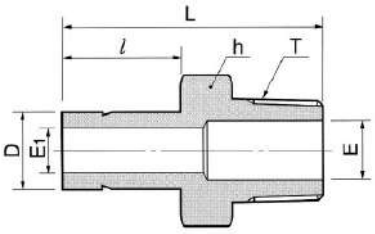


Connects fractional tube to fractional DK-Lok port

Part No.	Tube O.D. D		E Min.	Width across flat				A	ℓ	ℓ1	ℓ2	L	L1	Panel Hole Drill size	Panel Max Thickness
				h		H									
	in.	mm		in.	mm	in.	mm								
DAB2-2	1/8	3.17	2.03	1/2	12.70	7/16	11.11	12.70	42.92	24.63	13.45	49.53	31.24	8.33	12.70
DAB4-4	1/4	6.35	4.82	5/8	15.87	9/16	14.28	15.24	48.51	26.16	15.74	55.88	33.52	11.50	10.16
DAB6-6	3/8	9.52	7.11	3/4	19.05	11/16	17.46	16.76	53.84	29.46	17.50	61.21	36.83	14.68	11.17
DAB8-8	1/2	12.70	10.41	15/16	23.81	7/8	22.22	22.86	62.73	31.75	23.11	72.89	41.91	19.44	12.70
DAB10-10	5/8	15.87	12.70	1-1/16	26.98	1	25.40	24.38	65.02	32.51	24.70	75.18	42.67	22.62	12.70
DAB16-16	1	25.40	20.32	1-5/8	41.28	1-1/2	38.10	31.24	88.13	45.21	31.70	100.33	57.40	33.73	19.05
DAB20-20	1-1/4	31.75	27.68	1-7/8	47.63	1-7/8	47.63	41.14	102.07	47.75	40.00	124.17	69.85	41.67	19.05
DAB24-24	1-1/2	38.10	34.03	2-1/4	57.15	2-1/4	57.15	50.03	118.33	49.27	51.50	145.51	76.45	49.61	19.05
DAB32-32	2	50.80	45.97	2-3/4	69.85	3	76.20	67.56	148.79	56.38	68.40	185.82	93.71	57.94	19.05

Male Adapter
DAM-N





Connects metric DK-Lok port to female NPT thread

Part No.	Tube O.D. D	T PT	E Min.	E1 Min.	Width across flat h	ℓ	L
DAM3M-2N	3	1/8	4.0	1.9	12	13.15	29.4
DAM6M-2N	6	1/8	4.6	4.1	12	15.70	32.8
DAM6M-4N	6	1/4	4.6	4.1	14	15.70	38.1
DAM8M-4N	8	1/4	6.3	5.6	14	16.80	39.1
DAM10M-4N	10	1/4	7.7	7.1	14	17.50	39.9
DAM10M-6N	10	3/8	7.7	7.1	17	17.50	40.6
DAM10M-8N	10	1/2	11.9	7.1	22	17.50	45.2
DAM12M-4N	12	1/4	7.1	8.8	14	23.10	46.5
DAM12M-6N	12	3/8	9.1	8.8	17	23.10	46.5
DAM12M-8N	12	1/2	11.9	8.8	22	23.10	51.8
DAM18M-8N	18	1/2	11.9	13.9	22	24.60	53.2
DAM18M-12N	18	3/4	15.9	13.9	27	24.60	53.2
DAM28M-16N	28	1	22.2	-	35	31.70	74.7
DAM28M-20N	28	1-1/4	23.8	-	46	31.70	76.2
DAM32M-20N	32	1-1/4	27.4	-	46	40.00	81.0
DAM38M-24N	38	1-1/2	33.3	-	55	51.50	92.2

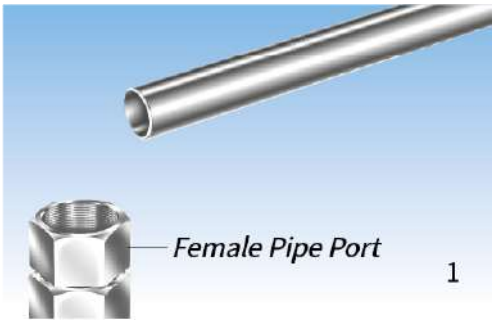
Male Adapter

DAM-N

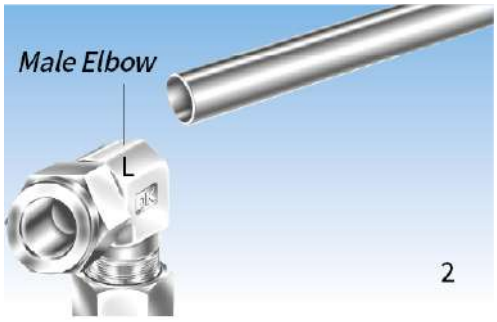
Connects fractional DK-Lok port to female NPT thread

Part No.	Tube O.D. D		T NPT	E Min.	E1	Width across flat h		ℓ	L
	in.	mm				in.	mm		
DAM2-2N	1/8	3.17	1/8	2.28	2.00	7/16	11.11	13.45	29.50
DAM2-4N	1/8	3.17	1/4	6.35	2.00	9/16	14.28	13.45	34.80
DAM3-2N	3/16	4.76	1/8	3.04	3.04	7/16	11.11	14.20	30.22
DAM3-4N	3/16	4.76	1/4	6.35	3.04	9/16	14.28	14.20	35.56
DAM4-2N	1/4	6.35	1/8	4.57	4.30	7/16	11.11	15.75	31.80
DAM4-4N	1/4	6.35	1/4	6.35	4.30	9/16	14.28	15.75	37.08
DAM4-6N	1/4	6.35	3/8	7.93	4.30	11/16	17.46	15.75	37.84
DAM4-8N	1/4	6.35	1/2	11.90	4.30	7/8	22.22	15.75	43.43
DAM5-2N	5/16	7.93	1/8	2.28	5.50	7/16	11.11	16.80	32.76
DAM5-4N	5/16	7.93	1/4	6.35	5.50	9/16	14.28	16.80	38.10
DAM6-2N	3/8	9.52	1/8	4.82	6.80	7/16	11.11	17.50	33.50
DAM6-4N	3/8	9.52	1/4	7.11	6.80	9/16	14.28	17.50	38.90
DAM6-6N	3/8	9.52	3/8	7.93	6.80	11/16	17.46	17.50	39.60
DAM6-8N	3/8	9.52	1/2	11.90	6.80	7/8	22.22	17.50	45.20
DAM8-4N	1/2	12.70	1/4	6.35	9.30	9/16	14.28	23.20	44.50
DAM8-6N	1/2	12.70	3/8	7.93	9.30	11/16	17.46	23.20	45.20

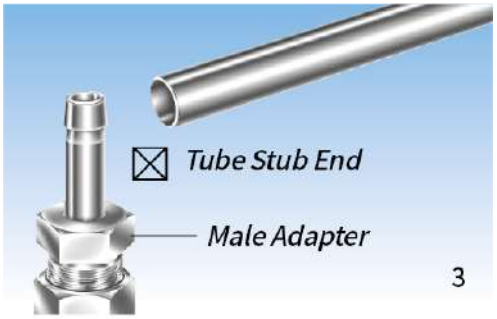
DK-Lok Tube Stub Adapter eliminates alignment problems.



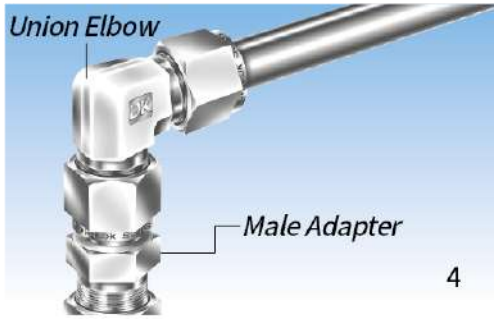
In the direction shown the female port is required to connect with tubing.



The male elbow is positioning in the wrong direction.



To eliminate the problem, use a male adapter into the female port.



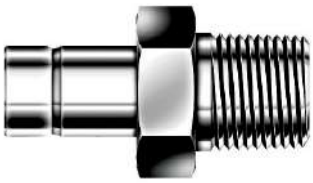
Installation instruction.

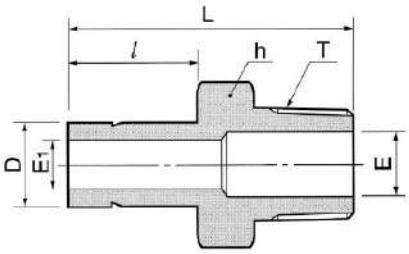
1. Insert the tube stub end into the DK-Lok port
   - Make sure that the tube stub end bottoms on the fitting body shoulder.
2. Spanner-tighten the nut 1 1/4 turns beyond the finger tight position.
   - Tighten the nut 3/4 turn for 1/8, and 3/16 in.; 3, and 4 mm Tube Fittings.

Note: For re-use, see re-assembly instruction.

Male Adapter

DAM-R





Connects fractional DK-Lok port to female ISO tapered thread

Part No.	Tube O.D. D		T PT	E Min.	E1	Width across flat h		ℓ	L
	in.	mm				in.	mm		
DAM2-2R	1/8	3.17	1/8	4.57	2.00	7/16	11.11	13.45	29.50
DAM2-4R	1/8	3.17	1/4	7.11	2.00	9/16	14.28	13.45	34.80
DAM4-2R	1/4	6.35	1/8	4.57	4.30	7/16	11.11	15.75	31.80
DAM4-4R	1/4	6.35	1/4	7.11	4.30	9/16	14.28	15.75	37.08
DAM4-6R	1/4	6.35	3/8	10.41	4.30	11/16	17.46	15.75	37.84
DAM6-4R	3/8	9.52	1/4	7.11	6.80	9/16	14.28	17.50	38.90
DAM6-6R	3/8	9.52	3/8	10.41	6.80	11/16	17.46	17.50	39.60
DAM6-8R	3/8	9.52	1/2	12.70	6.80	7/8	22.22	17.50	45.20
DAM8-4R	1/2	12.70	1/4	7.11	9.30	9/16	14.28	23.10	44.50
DAM8-6R	1/2	12.70	3/8	10.41	9.30	11/16	17.46	23.10	45.20
DAM8-8R	1/2	12.70	1/2	12.70	9.30	7/8	22.22	23.10	50.50
DAM8-12R	1/2	12.70	3/4	15.74	9.30	1-1/16	26.98	23.10	50.70
DAM12-8R	3/4	19.05	1/2	12.70	14.70	7/8	22.22	24.70	52.30
DAM12-12R	3/4	19.05	3/4	14.98	14.70	1-1/16	26.98	24.70	52.30

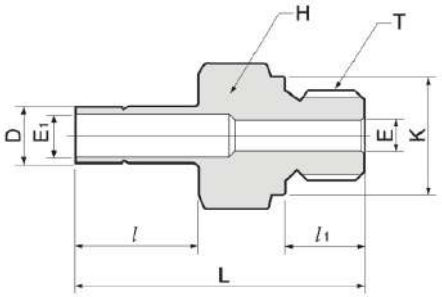
Connects metric DK-Lok port to female ISO tapered thread

Part No.	Tube O.D. D	T PT	E Min.	E1	Width across flat h	ℓ	L
DAM3M-2R	3	1/8	4.0	1.9	12	13.15	29.4
DAM6M-2R	6	1/8	4.6	4.1	12	15.70	32.8
DAM6M-4R	6	1/4	4.6	4.1	14	15.70	38.1
DAM8M-4R	8	1/4	6.3	5.6	14	16.80	39.1
DAM10M-4R	10	1/4	7.7	7.1	14	17.50	39.9
DAM10M-6R	10	3/8	7.7	7.1	17	17.50	40.6
DAM10M-8R	10	1/2	11.9	7.1	22	17.50	45.2
DAM12M-4R	12	1/4	7.1	8.8	14	23.10	46.5
DAM12M-6R	12	3/8	9.1	8.8	17	23.10	46.5
DAM12M-8R	12	1/2	11.9	8.8	22	23.10	51.8
DAM18M-8R	18	1/2	11.9	13.9	22	24.60	53.2
DAM18M-12R	18	3/4	15.9	13.9	27	24.60	53.2
DAM25M-16R	25	1	19.8	19.8	35	31.70	66.0
DAM28M-16R	28	1	22.2	-	35	31.70	74.7
DAM28M-20R	28	1-1/4	23.8	-	46	31.70	76.2
DAM30M-20R	30	1-1/4	24.6	-	46	40.60	80.0
DAM32M-20R	32	1-1/4	27.4	-	46	40.00	81.0
DAM38M-24R	38	1-1/2	33.3	-	55	51.50	92.2

Male Adapter

DAM-G





Connects fractional DK-Lok port to female ISO parallel thread

Part No.	Tube O.D. D		T PF	E Min.	E1	Width across flat h		ℓ	ℓ1	L	K
	in.	mm				in.	mm				
DAM2-2G	1/8	3.17	1/8	4	2.00	9/16	14.28	13.45	7.10	40.0	13.8
DAM2-4G	1/8	3.17	1/4	6.4	2.00	3/4	19.05	13.45	11.2	35.8	18.0
DAM4-2G	1/4	6.35	1/8	4.57	4.30	9/16	14.28	15.75	7.10	33.27	13.8
DAM4-4G	1/4	6.35	1/4	4.57	4.30	3/4	19.05	15.75	11.2	38.1	18.0
DAM6-4G	3/8	9.52	1/4	5.9	6.80	3/4	19.05	17.50	11.2	39.8	18.0
DAM6-6G	3/8	9.52	3/8	7.11	6.80	7/8	22.22	17.5	11.2	40.64	21.8
DAM8-4G	1/2	12.70	1/4	5.9	9.30	3/4	19.05	23.1	11.2	45.5	18.0
DAM8-6G	1/2	12.70	3/8	7.9	9.30	7/8	22.22	23.1	11.2	46.2	21.8
DAM8-8G	1/2	12.70	1/2	11.9	9.30	1-1/16	26.98	23.1	14.2	49.3	26.0
DAM12-12G	3/4	19.05	3/4	14.98	14.70	1-5/16	33.33	24.7	15.7	54.86	32.0
DAM16-16G	1	25.40	1	20.06	20.00	1-5/8	41.28	31.7	18.3	64.5	39.0

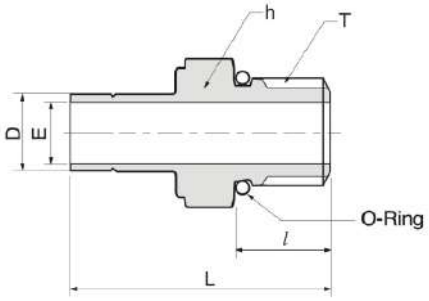
Connects metric DK-Lok port to female ISO parallel thread

Part No.	Tube O.D. D	T PF	E Min.	E1	Width across flat h	ℓ	ℓ1	L	K
DAM6M-2G	6	1/8	4.6	4.1	14	15.7	7.1	34.3	13.8
DAM6M-4G	6	1/4	4.6	4.1	19	15.7	11.2	39.1	18.0
DAM8M-4G	8	1/4	5.9	5.6	19	16.8	11.2	40.1	18.0
DAM10M-4G	10	1/4	5.9	7.1	19	17.5	11.2	40.9	18.0
DAM10M-6G	10	3/8	7.7	7.1	22	17.5	11.2	41.7	21.8
DAM10M-8G	10	1/2	7.7	7.1	27	17.5	14.2	44.7	26.0
DAM12M-4G	12	1/4	5.9	8.8	19	23.1	11.2	46.7	18.0
DAM12M-6G	12	3/8	7.9	8.8	22	23.1	11.2	47.2	21.8
DAM12M-8G	12	1/2	9.1	8.8	27	23.1	14.2	50.5	26.0
DAM18M-8G	18	1/2	11.9	13.9	27	24.6	14.2	52.1	26.0
DAM18M-12G	18	3/4	15.9	13.9	35	24.6	15.7	56.1	32.0
DAM22M-12G	22	3/4	15.9	18.3	35	26.6	15.7	57.4	32.0
DAM25M-16G	25	1	19.8	19.8	41	31.7	18.3	67.1	39.0
DAM28M-16G	28	1	19.8	22.2	41	37.5	18.3	72.9	39.0
DAM28M-20G	28	1-1/4	23.8	23.8	50	37.5	19.8	77.0	49.0
DAM30M-20G	30	1-1/4	24.6	24.3	50	40.66	19.8	80.8	49.0
DAM32M-20G	32	1-1/4	25.0	26.5	50	40.0	19.8	81.8	49.0
DAM38M-24G	38	1-1/2	31.8	31.6	55	50.4	22.1	94.5	54.7

Male Adapter

DAM-U





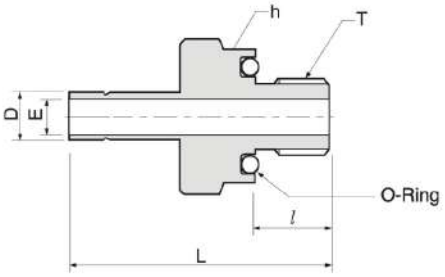
Connects fractional DK-Lok port to SAE straight thread boss

Part No.	Tube O.D. D		T U	E Min.	Width across flat h		ℓ	L	O-Ring Uniform Size Number
	in.	mm			in.	mm			
DAM2-2U	1/8	3.17	5/16-24	2.00	7/16	11.11	7.62	30.48	-902
DAM4-4U	1/4	6.35	7/16-20	4.30	9/16	14.28	9.14	35.30	-904
DAM6-4U	3/8	9.52	7/16-20	6.80	9/16	14.28	9.14	37.08	-904
DAM6-6U	3/8	9.52	9/16-18	6.80	11/16	17.46	9.90	38.60	-906
DAM6-8U	3/8	9.52	3/4-16	6.80	7/8	22.22	11.17	40.64	-908
DAM8-6U	1/2	12.70	9/16-18	9.30	11/16	17.46	9.90	44.20	-906
DAM8-8U	1/2	12.70	3/4-16	9.30	7/8	22.22	11.17	46.22	-908
DAM12-12U	3/4	19.05	1-1/16-12	14.70	1-1/4	31.75	14.98	53.34	-912
DAM16-16U	1	25.4	1-5/16-12	20.00	1-1/2	38.1	14.98	61.21	-916

Male Adapter

DAM-UO





Connects fractional DK-Lok port to SAE straight thread boss

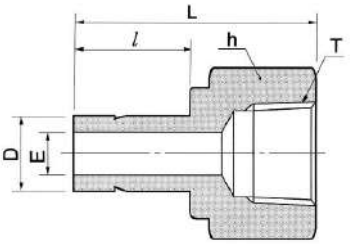
Part No.	Tube O.D. D		T U	E Min.	Width across flat h		ℓ	L	O-Ring Uniform Size Number
	in.	mm			in.	mm			
DAM2-2UO	1/8	3.17	5/16-24	2.00	9/16	14.28	8.63	32.51	-011
DAM3-3UO	3/16	4.76	3/8-24	3.05	5/8	15.87	9.65	35.05	-012
DAM4-4UO	1/4	6.35	7/16-20	4.30	3/4	19.05	10.41	39.11	-013
DAM5-5UO	5/16	7.93	1/2-20	5.50	7/8	22.22	11.17	41.65	-112
DAM6-6UO	3/8	9.52	9/16-18	6.80	15/16	23.81	11.93	43.18	-113
DAM8-8UO	1/2	12.7	3/4-16	9.30	1-1/8	28.57	11.93	49.53	-116

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Female Adapter

DAF-N





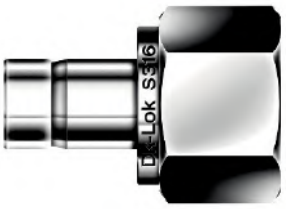
Connects fractional DK-Lok port to male NPT thread

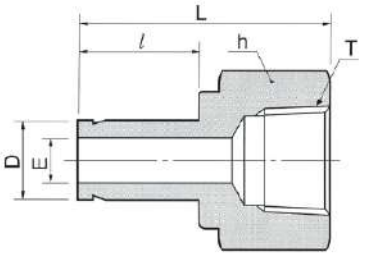
Part No.	Tube O.D. D		T NPT	E Min.	Width across flat h		ℓ	L
	in.	mm			in.	mm		
DAF2-2N	1/8	3.17	1/8	2.00	9/16	14.28	13.45	31.50
DAF2-4N	1/8	3.17	1/4	2.00	3/4	19.05	13.45	35.30
DAF3-2N	3/16	4.76	1/8	3.04	9/16	14.28	14.20	32.00
DAF3-4N	3/16	4.76	1/4	3.04	3/4	19.05	14.20	35.81
DAF4-2N	1/4	6.35	1/8	4.30	9/16	14.28	15.75	33.02
DAF4-4N	1/4	6.35	1/4	4.30	3/4	19.05	15.75	37.10
DAF4-6N	1/4	6.35	3/8	4.30	7/8	22.22	15.75	39.37
DAF4-8N	1/4	6.35	1/2	4.30	1-1/16	26.98	15.75	45.50
DAF5-2N	5/16	7.93	1/8	5.50	9/16	14.28	16.80	34.29
DAF5-4N	5/16	7.93	1/4	5.50	3/4	19.05	16.80	37.59
DAF6-2N	3/8	9.52	1/8	6.80	9/16	14.28	17.50	34.29
DAF6-4N	3/8	9.52	1/4	6.80	3/4	19.05	17.50	38.10
DAF6-6N	3/8	9.52	3/8	6.80	7/8	22.22	17.50	40.38
DAF6-8N	3/8	9.52	1/2	6.80	1-1/16	26.98	17.50	46.73
DAF8-4N	1/2	12.70	1/4	9.30	3/4	19.05	23.20	43.43
DAF8-6N	1/2	12.70	3/8	9.30	7/8	22.22	23.20	45.46
DAF8-8N	1/2	12.70	1/2	9.30	1-1/16	26.98	23.20	51.80
DAF10-6N	5/8	15.87	3/8	12.70	7/8	22.22	24.70	48.26
DAF10-8N	5/8	15.87	1/2	12.70	1-1/16	26.98	24.70	53.84
DAF10-12N	5/8	15.87	3/4	12.70	1-5/16	33.33	24.70	55.37
DAF12-8N	3/4	19.05	1/2	14.70	1-1/16	26.98	24.70	52.83
DAF12-12N	3/4	19.05	3/4	14.70	1-5/16	33.33	24.70	54.86
DAF12-16N	3/4	19.05	1	14.70	1-5/8	41.27	24.70	58.42
DAF14-12N	7/8	22.22	3/4	17.27	1-5/16	33.33	26.70	57.15
DAF16-12N	1	25.40	3/4	20.00	1-5/16	33.33	31.70	60.70
DAF16-16N	1	25.40	1	20.00	1-5/8	41.27	31.70	64.26
DAF20-20N	1-1/4	31.75	1-1/4	27.68	2-1/8	53.98	40.00	77.72
DAF24-24N	1-1/2	38.10	1-1/2	31.70	2-3/8	60.33	51.50	88.90
DAF32-32N	2	50.80	2	43.60	2-7/8	73.03	68.40	107.44

Connects metric DK-Lok port to male NPT thread

Part No.	Tube O.D. D	T NPT	E Min.	Width across flat h	E	L
DAF6M-2N	6	1/8	4.1	14	15.70	32.50
DAF6M-4N	6	1/4	4.1	19	15.70	37.10
DAF8M-4N	8	1/4	5.6	19	16.80	37.60
DAF10M-4N	10	1/4	7.1	19	17.50	38.10
DAF10M-6N	10	3/8	7.1	22	17.50	40.10
DAF10M-8N	10	1/2	7.1	27	17.50	46.50
DAF12M-4N	12	1/4	8.8	19	23.10	43.70
DAF12M-6N	12	3/8	8.8	22	23.10	46.00
DAF12M-8N	12	1/2	8.8	27	23.10	52.30

Female Adapter
DAF-R





Connects fractional DK-Lok port to male ISO tapered thread

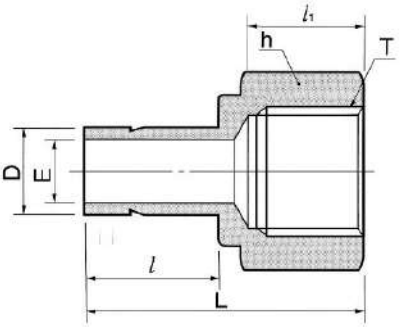
Part No.	Tube O.D. D		T PT	E Min.	Width across flat h		ℓ	L
	in.	mm			in.	mm		
DAF4-2R	1/4	6.35	1/8	4.30	9/16	14.28	15.75	33.02
DAF4-4R	1/4	6.35	1/4	4.30	3/4	19.05	15.75	37.10
DAF6-4R	3/8	9.52	1/4	6.80	3/4	19.05	17.50	38.10
DAF6-6R	3/8	9.52	3/8	6.80	7/8	22.22	17.50	40.38
DAF8-4R	1/2	12.70	1/4	9.30	3/4	19.05	23.20	43.43
DAF8-6R	1/2	12.70	3/8	9.30	7/8	22.22	23.20	45.46
DAF8-8R	1/2	12.70	1/2	9.30	1-1/16	26.98	23.20	51.80
DAF10-8R	5/8	15.87	1/2	12.70	1-1/16	26.98	24.70	53.84
DAF12-8R	3/4	19.05	1/2	14.70	1-1/16	26.98	24.70	52.83
DAF12-12R	3/4	19.05	3/4	14.70	1-5/16	33.33	24.70	54.86
DAF16-16R	1	25.40	1	20.00	1-5/8	41.27	31.70	64.26

Connects metric DK-Lok port to male ISO tapered thread

Part No.	Tube O.D. D	T PT	E Min.	Width across flat h	ℓ	L
DAF6M-2R	6	1/8	4.1	14	15.70	32.50
DAF6M-4R	6	1/4	4.1	19	15.70	37.10
DAF8M-4R	8	1/4	5.6	19	16.80	37.60
DAF10M-4R	10	1/4	7.1	19	17.50	38.10
DAF10M-6R	10	3/8	7.1	22	17.50	40.10
DAF12M-4R	12	1/4	8.8	19	23.10	43.70
DAF12M-6R	12	3/8	8.8	22	23.10	46.00
DAF12M-8R	12	1/2	8.8	27	23.10	52.30

Female Adapter
DAF-GR





Connects fractional DK-Lok port to male ISO parallel thread

Part No.	Tube O.D. D		T PF	E Min.	Width across flat h		ℓ	ℓ1	L
	in.	mm			in.	mm			
DAF4-2GR	1/4	6.35	1/8	4.30	9/16	14.28	15.75	13.0	31.75
DAF4-4GR	1/4	6.35	1/4	4.30	3/4	19.05	15.75	18.5	38.10
DAF6-4GR	3/8	9.52	1/4	6.80	3/4	19.05	17.50	18.5	39.40
DAF6-6GR	3/8	9.52	3/8	6.80	7/8	22.22	17.50	18.5	39.90
DAF8-8GR	1/2	12.70	1/2	9.30	1-1/16	26.98	23.20	22.1	49.50

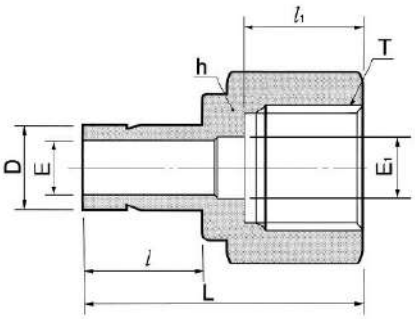
All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Connects metric DK-Lok port to male ISO parallel thread

Part No.	Tube O.D. D	T PF	E Min.	Width across flat h	ℓ	ℓ1	L
DAF6M-2GR	6	1/8	4.6	14	15.70	13.0	32.50
DAF6M-4GR	6	1/4	4.6	19	15.70	18.5	37.80
DAF12M-8GR	12	1/2	9.1	27	23.10	22.1	49.50

Female Gauge Adapter (previously DAG)
DAF-GG





Connects fractional DK-Lok port to Gauge (Male ISO parallel thread)

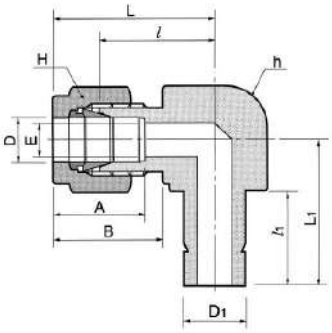
Part No.	Tube O.D. D		T G(PF)	E Min.	E1	Width across flat h		ℓ	ℓ1	L
	in.	mm				in.	mm			
DAF4-2GG	1/4	6.35	1/8	4.30	4.57	9/16	14.28	15.75	12.0	32.00
DAF4-4GG	1/4	6.35	1/4	4.30	5.5	3/4-	19.05	15.75	12.9	35.30
DAF6-6GG	3/8	9.52	3/8	6.80	6.5	15/16	23.81	17.50	14.1	39.37
DAF8-8GG	1/2	12.7	1/2	9.30	7.0	1-1/16	26.98	23.20	18.9	45.72

Connects Metric DK-Lok port to Gauge (Male ISO parallel thread)

Part No.	Tube O.D. D	T G(PF)	E Min.	E1	Width across flat h	ℓ	ℓ1	L
DAF6M-2GG	6M	1/8	4.1	4.0	14	15.7	12.0	32.0
DAF6M-4GG	6M	1/4	4.1	5.5	19	15.7	13.0	35.3
DAF6M-6GG	6M	3/8	4.1	6.5	24	15.7	14.22	38.4
DAF6M-8GG	6M	1/2	4.1	7.0	27	15.7	18.9	42.9
DAF8M-4GG	8M	1/4	5.6	5.5	19	16.8	13.0	33.0
DAF8M-6GG	8M	3/8	5.6	6.5	24	16.8	14.22	39.3
DAF8M-8GG	8M	1/2	5.6	7.0	27	16.8	18.9	43.7
DAF10M-4GG	10M	1/4	7.1	5.5	19	17.5	13.0	34.5
DAF10M-6GG	10M	3/8	7.1	6.5	24	17.5	14.22	39.3
DAF10M-8GG	10M	1/2	7.1	7.0	27	17.5	18.9	40.1
DAF12M-4GG	12M	1/4	8.8	5.5	19	23.1	13.0	40.1
DAF12M-6GG	12M	3/8	8.8	6.5	24	23.1	14.22	44.9
DAF12M-8GG	12M	1/2	8.8	7.0	27	23.1	18.9	48.8
DAF15M-8GG	15M	1/2	11.2	7.0	27	24.65	18.9	49.0
DAF16M-8GG	16M	1/2	12.0	7.0	27	24.6	18.9	49.0
DAF18M-8GG	18M	1/2	13.9	7.0	27	24.9	18.9	49.3
DAF22M-8GG	22M	1/2	18.3	7.0	27	26.6	18.9	52.0
DAF25M-8GG	25M	`1/2	19.8	7.0	30	31.7	18.9	56.1

Elbow Adapter
DLA



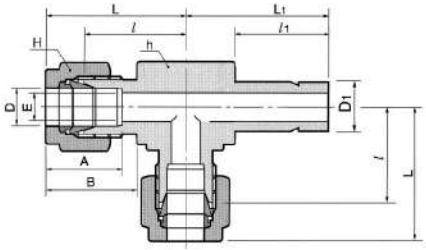


Connects metric tube to metric DK-Lok port

Part No.	Tube O.D. D	D1	E Min.	Width across flat		A	B	ℓ	ℓ1	L	L1
				h	H						
DLA-6M	6	6	4.6	12.7	14	15.3	17.7	19.6	15.7	27.0	25.0
DLA-8M	8	8	6.4	15.8	16	16.2	18.6	21.3	16.8	28.8	27.05
DLA-10M	10	10	7.7	17.4	19	17.2	19.5	23.9	17.5	31.5	30.0
DLA-12M	12	12	9.1	20.6	22	22.8	22.0	25.9	23.1	36.0	37.3
DLA-14M	14	14	11.1	25.4	25	24.4	22.0	28.7	24.6	38.8	41.5
DLA-15M	15	15	11.9	25.4	25	24.4	22.0	28.7	24.65	38.8	41.55
DLA-16M	16	16	12.7	25.4	25	24.4	22.0	28.7	24.6	38.8	41.5
DLA-18M	18	18	13.9	26.9	30	24.4	22.0	29.7	24.6	39.8	42.5
DLA-20M	20	20	15.1	31.8	32	26.0	22.0	32.5	26.2	42.6	47.0
DLA-22M	22	22	18.3	31.8	32	26.0	22.0	32.5	26.6	42.6	47.15
DLA-25M	25	25	19.8	34.9	38	31.3	26.5	36.8	31.7	49.1	55.2
DLA-28M	28	28	21.8	41.0	46	36.6	36.6	43.2	37.5	64.0	64.9

Run Tee Adapter
DTRA



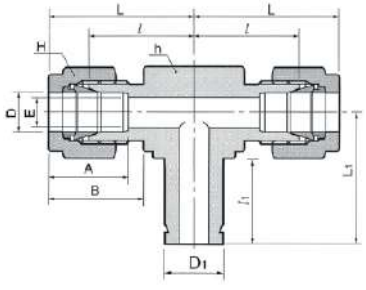


Connects metric tube to metric DK-Lok port

Part No.	Tube O.D. D	D1	E Min.	Width across flat		A	B	ℓ	ℓ1	L	L1
				h	H						
DTRA-8M	8	8	6.4	15.8	16	16.2	18.6	21.3	16.8	28.8	27.5
DTRA-10M	10	10	7.9	17.4	19	17.2	19.5	23.9	17.5	31.5	30.0

Branch Tee Adapter
DTBA





Connects metric tube to metric DK-Lok port

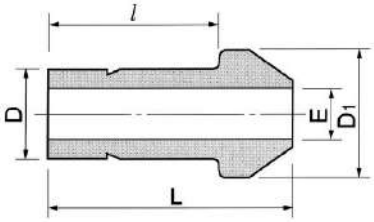
Part No.	Tube O.D. D	D1	E Min.	Width across flat		A	B	ℓ	ℓ1	L	L1
				h	H						
DTBA-8M	8	8	6.4	15.8	16	16.2	18.6	21.3	16.8	28.8	27.5

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Port Connector

DCP/DCPZ





Connects two fractional DK-Lok ports

Part No.	Tube O.D. D		E Min.	D1	ℓ	L
	in.	mm				
DCP-1	1/16	1.59	0.70	3.30	10.66	13.72
DCP-2	1/8	3.17	2.00	6.09	15.75	22.35
DCP-4	1/4	6.35	4.30	9.39	18.79	24.64
DCP-5	5/16	7.93	5.50	10.92	20.06	25.90
DCP-6	3/8	9.52	6.80	12.70	20.32	26.16
DCP-8	1/2	12.70	9.30	15.74	25.90	35.81
DCP-12	3/4	19.05	14.70	22.09	27.68	37.33
DCP-16	1	25.40	20.00	28.44	34.54	48.00
DCPZ-1	1/16	1.59	0.70	3.30	10.66	13.72
DCPZ-2	1/8	3.17	2.00	6.09	15.75	22.35
DCPZ-4	1/4	6.35	4.30	9.39	18.79	24.64
DCPZ-5	5/16	7.93	5.50	10.92	20.06	25.90
DCPZ-6	3/8	9.52	6.80	12.70	20.32	26.16
DCPZ-8	1/2	12.70	9.30	15.74	25.90	35.81
DCPZ-12	3/4	19.05	14.70	22.09	27.68	37.33
DCPZ-16	1	25.40	20.00	28.44	34.54	48.00

Connects two metric DK-Lok ports

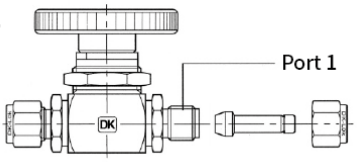
Part No.	Tube O.D. D	E Min.	D1	ℓ	L
DCP-3M	3	1.9	6.0	15.70	22.20
DCP-4M	4	1.9	7.0	16.67	25.81
DCP-6M	6	4.1	9.0	18.70	24.60
DCP-8M	8	5.6	11.0	20.00	25.90
DCP-10M	10	7.1	13.1	20.20	26.10
DCP-12M	12	8.8	15.0	26.00	35.80
DCP-15M	15	11.2	19.0	27.78	37.40
DCP-16M	16	12.0	19.0	27.60	37.40
DCP-18M	18	13.9	21.0	27.91	37.40
DCP-20M	20	15.1	23.0	29.20	38.90
DCP-22M	22	17.9	24.97	29.30	39.20
DCP-25M	25	19.8	28.0	35.60	49.50
DCP-28M	28	23.8	34.3	48.30	63.50
DCP-32M	32	26.5	39.5	52.40	69.70
DCP-38M	38	31.6	47.1	61.40	81.90

Installation Instructions

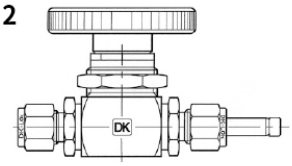
Machined Ferrule End and Tube Stub End

Port Connector is useful for close connection of two DK-Lok ports.

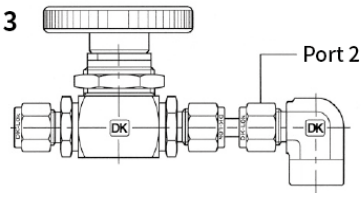
1



2



3



Be aware that Port Connector consists of machined ferrule end, and tube stub end.
These two ends require different installation.

Machined Ferrule End

Refers to Fig. 1 & 2.

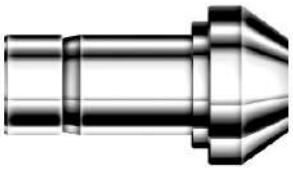
1. Remove the nut and ferrules from DK-Lok port 1.
2. Place the nut over the machined ferrule end of the port connector.
3. Finger-tighten the nut onto the port 1.
4. Wrench-tighten the nut 1/4 turn, keeping the body steady with a backup wrench.
   - Do not tighten 1 1/4 turns. This is not the standard ferrule.
   - Tightens 1/8 turn for 1/16, and 1/8 in.; 3, and 4mm Tube Fittings.

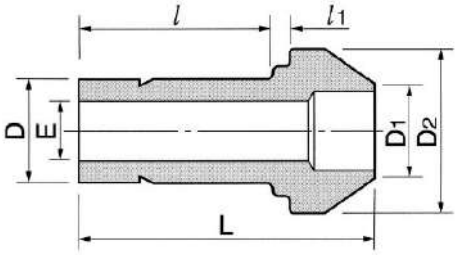
Tube Stub End

Refers to Fig. 3.

1. Insert the tube stub end into the port 2 until it is bottomed on the shoulder of the body.
2. Finger-tighten the nut on port 2.
3. Wrench-tighten the nut 1 1/4 turns, keeping the port 2 body steady with a backup wrench.
   - Tighten the nut 3/4 turn for 1/16. and 1/8 in.; and 3, and 4mm Tube Fittings.
   - For re-use, see re-assembly instruction.

Reducing Port Connector
DCRP





Connects two fractional DK-Lok ports

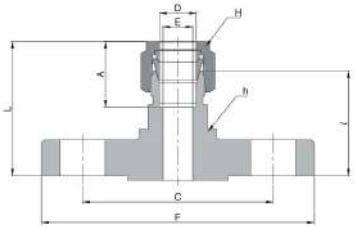
Part No.	Tube O.D.				E Min.	D2	ℓ	ℓ1	L
	D1		D						
	in.	mm	in.	mm					
DCRP2-1	1/8	3.17	1/16	1.59	0.70	6.10	8.64	2.03	17.27
DCRP4-2	1/4	6.35	1/8	3.17	2.00	9.39	13.45	3.30	22.60
DCRP6-2	3/8	9.52	1/8	3.17	2.00	12.70	13.45	3.81	23.11
DCRP6-4	3/8	9.52	1/4	6.35	4.30	12.70	15.75	3.30	24.89
DCRP8-4	1/2	12.70	1/4	6.35	4.30	15.74	15.75	3.81	29.21
DCRP8-6	1/2	12.70	3/8	9.52	6.80	15.74	17.67	3.30	30.48
DCRP12-8	3/4	19.05	1/2	12.70	9.30	22.09	23.20	3.81	37.85
DCRP16-8	1	25.40	1/2	12.70	9.30	28.40	24.47	4.82	42.67
DCRP16-12	1	25.40	3/4	19.05	14.70	28.40	25.90	4.06	43.43

Connects two Metric DK-Lok ports

Part No.	Tube O.D.		E Min.	D2	ℓ	ℓ1	L
	D1	D					
DCRP6M-3M	6	3	1.9	9.0	13.50	3.2	22.60
DCRP8M-6M	8	6	4.1	11.0	15.70	3.1	24.70
DCRP10M-6M	10	6	4.1	13.1	15.70	3.4	25.00
DCRP10M-8M	10	8	5.6	13.1	16.80	3.1	26.00
DCRP12M-6M	12	6	4.1	15.0	15.70	3.6	29.10
DCRP12M-8M	12	8	5.6	15.0	16.80	3.4	29.80
DCRP12M-10M	12	10	7.1	15.0	17.50	3.1	30.40
DCRP16M-6M	16	6	4.1	19.0	15.75	3.6	30.40
DCRP16M-12M	16	12	8.8	19.0	23.10	3.4	36.20
DCRP28M-25M	28	25	19.8	34.3	33.00	8.2	56.50
DCRP32M-25M	32	25	19.8	39.5	33.00	9.9	60.30
DCRP38M-25M	38	25	19.8	47.1	33.00	12.3	65.80

DK-Lok Flanges ANSI B16.5
DF





Pressure Class Ratings 150 to 2500 Nominal Flange Sizes NPS 1/2 to 2 in. Connects ANSI flange to fractional tube

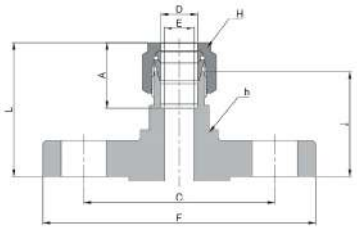
Part No.	Tube O.D. D		ANSI Flange NPS	ANSI Class	E	Wrench Flat h	A	ℓ	L	C	F
	in.	mm									
DF-4TF8-150	1/4	6.35	1/2	150	4.82	20.64	15.24	33.52	40.89	60.45	88.9
DF-4TF16-150			1	150	4.82	20.64	15.24	36.35	43.71	79.2	108
DF-6TF8-150	3/8.	9.52	1/2	150	4.82	20.64	16.76	34.85	42.21	60.45	88.9
DF-6TF8-300			1/2	300	7.11	20.64	16.76	38.1	45.46	66.54	95.25
DF-6TF16-150			1	150	7.11	20.64	16.76	37.85	45.21	79.2	108
DF-8TF8-150	1/2	12.7	1/2	150	10.41	20.64	22.86	30.05	45.21	60.45	88.9
DF-8TF8-300			1/2	300	10.41	20.64	22.86	37.85	48.01	66.54	95.25
DF-8TF8-1500			1/2	1500	10.41	20.64	22.86	46.05	56.21	82.6	121
DF-8TF16-150			1	150	10.41	20.64	22.86	38.1	48.26	79.24	48.26
DF-8TF32-150			2	150	10.41	20.64	22.86	42.92	53.08	42.92	53.08
DF-12TF16-150	3/4	19.05	1	150	15.74	31.75	24.38	40.13	50.29	79.24	107.95
DF-12TF16-900			1	900	15.74	31.75	24.38	46.05	56.21	101.6	149
DF-16TF16-150	1	25.4	1	150	22.35	34.92	31.24	48.26	60.45	79.24	107.95
DF-24TF32-150	1-1/2	38.1	2	150	34.03	53.97	50.03	59.18	86.36	120.65	152.4
DF-32TF32-150	2	50.8	2	150	45.97	69.85	67.56	67.05	104.39	120.65	152.4

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Dk-Lok Flanges DIN 2526/ DIN 2501

DF





Pressure Class Rating PN 40 to 320, Nominal Flange Sizes DN 15 to 50 Connects DIN flange to metric tube

Part No.	Tube O.D. D	DIN Flange Size, DN	DIN CLASS	E	Wrench Flat h	A	ℓ	L	C	F
DF-6MF25M-40	6 mm	25	40	4.8	20	15.3	40.1	47.5	85.0	115.0
DF-12MF15M-40	12 mm	15	40	9.5	20	22.8	38.4	48.5	65.0	95.0
DF-12MF25M-40		25	40	9.5	20	22.8	40.4	50.5	85.0	115.0
DF-12MF50M-40		50	40	9.5	20	22.8	45.2	55.3	125.0	165.0
DF-18MF15M-40	18 mm	15	40	15.1	32	24.4	41.7	51.8	65.0	95.0
DF-18MF25M-40		25	40	15.1	32	24.4	43.7	53.8	85.0	115.0
DF-25MF25M-40	25 mm	25	40	21.8	35	31.3	51.8	64.0	85.0	115.0
DF-38MF50M-40	38 mm	50	40	33.7	55	49.4	62.7	90.4	125.0	165.0
DF-50MF50M-40	50 mm	50	40	45.2	70	65.0	66.3	103.0	125.0	165.0

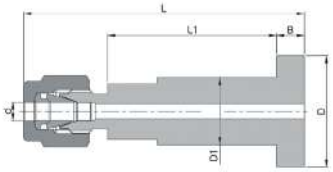
JIS B 2220: Pressure Class Rating 10 to 63K, Nominal Flange Sizes DN 15 to 50
Connects JIS flange to fractional or metric tube

Part No.	Tube O.D. D		JIS Flange Size, DN	JIS Class	E	Wrench Flat h	A	ℓ	L	C	F
	in.	mm									
DF-4T15A10RF	1/4	6.35	15	10K	4.82	23.81	15.24	34.79	42.16	70.10	94.99
DF-6T15A10RF	3/8	9.52	15	10K	7.11	23.81	16.76	36.32	43.68	70.10	94.99
DF-8T15A10RF	1/2	12.7	15	10K	10.41	23.81	22.86	36.32	46.48	70.10	94.99
DF-12T15A10RF	3/4	19.05	15	10K	15.74	31.75	24.38	38.35	48.51	70.10	94.99
DF-16T25A10RF	1	25.4	25	10K	22.35	34.91	31.24	48.76	60.96	89.91	124.96
DF-32T50A10RF	2	50.8	50	10K	45.97	69.85	67.56	64.51	101.85	119.88	154.94
DF-12M15A10FF	12 mm		15	10K	9.5	20	22.8	36.3	46.5	70.0	95.0
DF-18M15A10RF	18 mm		15	10K	15.1	32	24.4	38.4	48.5	70.0	95.0
DF-25M25A10RF	25 mm		25	10K	21.8	35	31.3	48.8	61.0	90.0	125.0

Lap Joint Flange Connector

DLJ

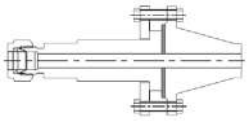




Connects flange to fractional tube

Part No.	Tube O.D.		Dimension					
	in.	mm	L	L1	ℓ	D	D1	d Min.
Serrated Seal Face Flange								
DLJ-4T8F-SR-S	1/4	6.35	80.8	56.5	6.5	35	22.2	4.8
DLJ-6T8F-SR-S	3/8	9.52	82.3	56.5	6.5	35	22.2	7.1
DLJ-8T8F-SR-S	1/2	12.7	84.8	56.5	6.5	35	22.2	10.4
Smooth Seal Face Flange								
DLJ-4T8F-SM-S	1/4	6.35	80.8	56.5	6.5	35	22.2	4.8
DLJ-6T8F-SM-S	3/8	9.52	82.3	56.5	6.5	35	22.2	7.1
DLJ-8T8F-SM-S	1/2	12.7	84.8	56.5	6.5	35	22.2	10.4

Installation



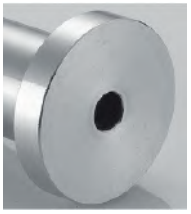
Lap joint flange connector installation with slip-on and welding neck flanges, using sealing gasket on the flange seal face.

Lap joint flange connector is designed to connect process flange to instrument. DK-Lok port is constructed integrally out of ANSI B16.5 Class 2500 flange,“Smooth” and“Concentric Serrated”flange seal face are available. External groove is provided to identify the serrated face.

Flange Seal Face



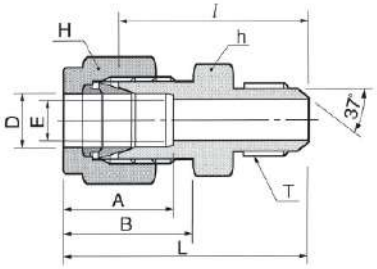
External Groove
Concentric Serrated : SR
Seal Face Roughness :
Ra 6.3 to 12.5 Micrometer



Smooth : SM
Seal Face Roughness:
Ra 3.2 to 6.3 Micrometer

AN Union
DUA



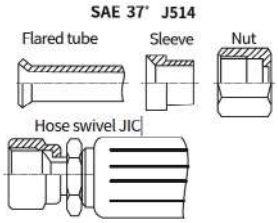


Connects fractional tube to AN flared tube

Part No.	Tube O.D. D		AN Tube Flare Size		Straight Thread T(U)	E Min.	Width across flat				A	B	ℓ	L
							h		H					
	in.	mm	in.	mm			in.	mm	in.	mm				
DUA1-2	1/16	1.59	1/8	3.17	5/16-24	1.27	7/16	11.11	5/16	7.93	8.63	10.92	23.36	27.17
DUA2-2	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
DUA2-4	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
DUA4-4	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
DUA5-5	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
DUA6-4	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
DUA6-6	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
DUA8-8	1/2	12.70	1/2	12.70	3/4-16	9.90	13/16	20.64	7/8	22.22	22.86	21.84	35.81	45.97
DUA12-12	3/4	19.05	3/4	19.05	1-1/16-12	15.49	1-1/8	28.58	1-1/8	28.58	24.38	21.84	43.18	53.34
DUA16-16	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
DUA20-20	1-1/4	31.75	1-1/4	31.75	1-5/8-12	27.68	1-3/4	44.45	1-7/8	47.63	41.14	38.86	55.46	77.56
DUA24-24	1-1/2	38.10	1-1/2	38.10	1-7/8-12	33.90	2-1/8	53.97	2-1/4	57.15	50.03	45.21	63.07	90.25
DUA32-32	2	50.80	2	50.80	2-1/2-12	45.97	2-3/4	69.85	3	76.20	67.56	62.73	83.24	120.57

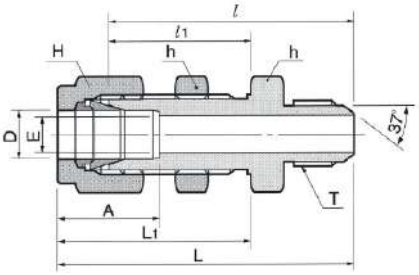
DK-Lok AN fitting 37° Flare is designed to SAE J514 standard. AN fittings are used normally in Army and Navy instrumentation.





AN Bulkhead Union
DUBA

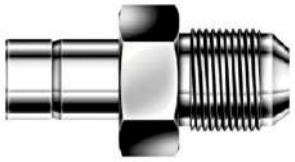


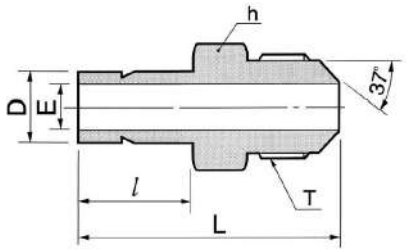


Connects fractional tube to AN flared tube

Part No.	Tube O.D. D		AN Tube Flare Size		Straight Thread T(U)	E Min.	Width across flat				A	ℓ	ℓ1	L	L1	Panel Hole Drill size	Panel Max Thickness
							h		H								
	in.	mm	in.	mm			in.	mm	in.	mm							
DUBA2-2	1/8	3.17	1/8	3.17	5/16-24	1.77	1/2	12.70	7/16	11.11	13.71	40.85	24.63	47.45	31.23	8.33	12.70
DUBA4-4	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
DUBA6-6	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
DUBA8-8	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	12.70
DUBA12-12	3/4	19.05	3/4	19.05	1-1/16-12	15.49	1-3/16	30.16	1-1/8	28.58	24.38	68.83	37.33	78.99	47.49	25.79	16.76
DUBA16-16	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
DUBA20-20	1-1/4	31.75	1-1/4	31.75	1-5/8-12	27.68	1-7/8	47.63	1-7/8	47.63	41.14	86.37	47.75	108.47	69.85	41.67	19.05
DUBA24-24	1-1/2	38.10	1-1/2	38.10	1-7/8-12	33.90	2-1/4	57.15	2-1/4	57.15	50.03	94.33	49.27	121.51	76.45	49.61	19.05
DUBA32-32	2	50.80	2	50.80	2-1/2-12	45.97	2-3/4	69.85	3	76.20	67.56	114.29	56.38	151.62	93.71	16.27	19.05

Male AN Adapter
DMAA



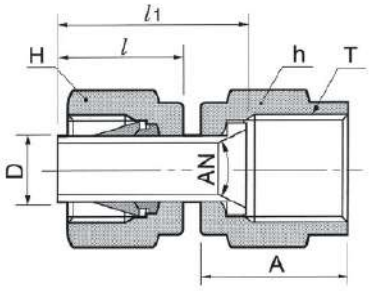


Connects Fractional DK-Lok port to AN flared tube

Part No.	Tube O.D. D		AN Tube Flare Size		Straight Thread T(U)	E Min.	Width across flat h		ℓ	L
	in.	mm	in.	mm			in.	mm		
DMAA4-4	1/4	6.35	1/4	6.35	7/16-20	4.30	1/2	12.70	15.75	37.10
DMAA6-6	3/8	9.52	3/8	9.52	9/16-18	6.80	5/8	15.87	17.50	39.63
DMAA8-6	1/2	12.70	3/8	9.52	9/16-18	6.80	5/8	15.87	23.10	45.70
DMAA8-8	1/2	12.70	1/2	12.70	3/4-16	9.30	13/16	20.64	23.10	48.52
DMAA8-10	1/2	12.70	5/8	15.87	7/8-14	9.30	15/16	23.81	23.10	52.00
DMAA10-10	5/8	15.87	5/8	15.87	7/8-14	12.30	15/16	23.81	27.68	56.13
DMAA12-12	3/4	19.05	3/4	19.05	1-1/16-12	14.70	1-1/8	28.57	24.70	56.13
DMAA16-16	1	25.40	1	25.40	1-5/16-12	20.00	1-3/8	34.92	31.70	65.33

AN Adapter
DAA

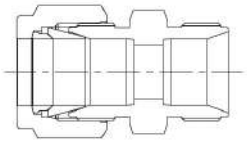


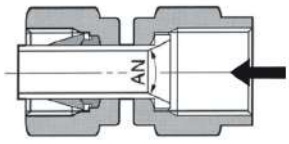


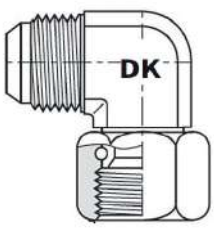
Connects fractional DK-Lok port tube to AN male

Part No.	Tube O.D. D		AN Tube Flare Size		Straight Thread T(U)	Width across flat				A	ℓ	ℓ1
						h		H				
	in.	mm	in.	mm		in.	mm	in.	mm			
DAA2-2	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
DAA2-4	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
DAA4-4	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
DAA6-6	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
DAA8-8	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

AN adapter is useful to connects DK-Lok port to SAE JIC 514 37 male Fitting.



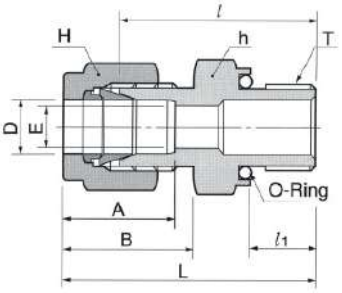




O-Seal Straight Thread Connector (Previously DCOS-U)

DMC-UO





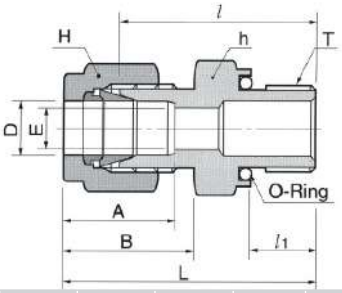
Connects Fractional tube to Female Straight thread

Part No.	Tube O.D. D		Straight Thread T(U)	E Min.	Width across flat				A	B	ℓ	ℓ1	L	O-Ring Uniform Size Number
					h		H							
	in.	mm			in.	mm	in.	mm						
DMC2-2UO	1/8	3.17	5/16-20	2.28	9/16	14.28	7/16	11.11	12.70	15.24	26.16	8.63	32.76	-011
DMC3-3UO	3/16	4.76	3/8-24	3.04	5/8	15.87	1/2	12.70	13.71	16.00	27.68	9.65	34.29	-012
DMC4-4UO	1/4	6.35	7/16-20	4.82	3/4	19.05	9/16	14.28	15.24	17.78	30.98	10.41	38.35	-013
DMC5-5UO	5/16	7.93	1/2-20	6.35	7/8	22.22	5/8	15.87	16.25	18.54	33.27	11.17	40.64	-112
DMC6-6UO	3/8	9.52	9/16-18	7.11	15/16	23.81	11/16	17.46	16.76	19.30	35.05	11.93	42.41	-113
DMC8-8UO	1/2	12.70	3/4-16	10.41	1-1/8	28.57	7/8	22.22	22.86	21.84	35.81	11.93	45.97	-116
DMC12-12UO	3/4	19.05	1-1/16-12	15.74	1-1/2	38.10	1-1/8	28.58	24.38	21.84	42.16	14.22	52.32	-121
DMC16-16UO	1	25.40	1-5/16-12	22.35	1-3/4	44.45	1-1/2	38.10	31.24	26.41	45.97	14.22	58.16	-125

O-Seal Pipe Thread Connector (Previously DCOP)

DMC-NO





Connects Fractional tube to Female NPT thread

Part No.	Tube O.D. D		T *(NPT)	E Min.	Width across flat				A	B	ℓ	ℓ1	L	O-Ring Uniform Size Number
					h		H							
	in.	mm			in.	mm	in.	mm						
DMC2-2NO	1/8	3.17	1/8	2.28	3/4	19.05	7/16	11.11	12.70	15.24	26.16	7.11	32.76	-013
DMC4-2NO	1/4	6.35	1/8	4.82	3/4	19.05	9/16	14.28	15.24	17.78	27.68	7.11	35.05	-013
DMC4-4NO	1/4	6.35	1/4	4.82	15/16	23.81	9/16	14.28	15.24	17.78	30.98	9.65	38.35	-113
DMC6-4NO	3/8	9.52	1/4	7.11	15/16	23.81	11/16	17.46	16.76	19.30	32.51	9.65	39.87	-113
DMC6-6NO	3/8	9.52	3/8	7.11	1-1/8	28.58	11/16	17.46	16.76	19.30	34.03	10.41	41.40	-116
DMC6-8NO	3/8	9.52	1/2	7.11	1-5/16	33.33	11/16	17.46	16.76	19.30	39.62	13.46	46.99	-118
DMC8-8NO	1/2	12.70	1/2	10.41	1-5/16	33.33	7/8	22.22	22.86	21.84	39.62	13.46	49.78	-118

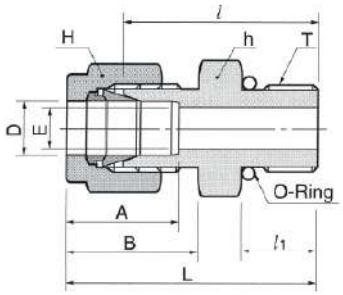
Installation Instructions

O-seal Connectors
1. Lubricate O-ring with a lubricant compatible with the O-ring material and the system fluid.
2. Finger-tighten the O-seal connector into the female port.
3. Hand-tighten until the O-ring squeezing on the face of the female port is felt.
4. Tighten slightly further with a wrench to completely compress the O-ring
   • Keep the O-seal body still during connecting or disconnecting.

Non-Positionable SAE Male Connector

DMCS-U





Connects fractional tubes

Part No.	Tube O.D. D		Straight-Thread T(U)	E Min.	Width across flat				A	B	ℓ	ℓ1	L	O-Ring Uniform Size Number
					h		H							
	in.	mm			in.	mm	in.	mm						
DMCS2-2U	1/8	3.17	5/16-24	2.28	7/16	11.11	7/16	11.11	12.70	15.24	23.26	7.62	29.97	-902
DMCS4-4U	1/4	6.35	7/16-20	4.82	9/16	14.28	9/16	14.28	15.24	17.78	26.67	9.14	34.03	-904
DMCS4-6U	1/4	6.35	9/16-18	4.82	11/16	17.46	9/16	14.28	15.24	17.78	28.19	9.90	35.56	-906
DMCS4-8U	1/4	6.35	3/4-16	4.82	7/8	22.22	9/16	14.28	15.24	17.78	30.22	11.17	37.59	-908
DMCS4-10U	1/4	6.35	7/8-14	4.82	1	25.40	9/16	14.28	15.24	17.78	33.27	12.70	40.64	-910
DMCS5-5U	5/16	7.93	1/2-20	5.84	5/8	15.87	5/8	15.87	16.25	18.54	27.43	9.14	34.79	-905
DMCS6-4U	3/8	9.52	7/16-20	5.08	5/8	15.87	11/16	17.46	16.76	19.30	28.19	9.14	35.56	-904
DMCS6-6U	3/8	9.52	9/16-18	7.11	11/16	17.46	11/16	17.46	16.76	19.30	29.71	9.90	37.08	-906
DMCS6-8U	3/8	9.52	3/4-16	7.11	7/8	22.22	11/16	17.46	16.76	19.30	31.75	11.17	39.11	-908
DMCS6-10U	3/8	9.52	7/8-14	7.11	1	25.40	11/16	17.46	16.76	19.30	34.79	12.70	42.16	-910
DMCS8-6U	1/2	12.70	9/16-18	7.11	13/16	20.64	7/8	22.22	22.86	21.84	28.95	9.90	39.11	-906
DMCS8-8U	1/2	12.70	3/4-16	10.41	7/8	22.22	7/8	22.22	22.86	21.84	31.75	11.17	41.91	-908
DMCS8-10U	1/2	12.70	7/8-14	10.41	1	25.40	7/8	22.22	22.86	21.84	34.79	12.70	44.95	-910
DMCS8-12U	1/2	12.70	1-1/16-12	10.41	1-1/4	31.75	7/8	22.22	22.86	21.84	38.86	14.98	49.02	-912
DMCS10-8U	5/8	15.87	3/4-16	10.66	15/16	23.81	1	25.40	24.38	21.84	31.75	11.17	41.91	-908
DMCS10-10U	5/8	15.87	7/8-14	12.70	1	25.40	1	25.40	24.38	21.84	35.05	12.70	45.21	-910
DMCS12-8U	3/4	19.05	3/4-16	10.66	1-1/16	26.98	1-1/8	28.57	24.38	21.84	35.81	11.17	45.97	-908
DMCS12-12U	3/4	19.05	1-1/16-12	15.74	1-1/4	31.75	1-1/8	28.57	24.38	21.84	38.86	14.98	49.02	-912
DMCS14-14U	7/8	22.22	1-3/16-12	18.28	1-3/8	34.92	1-1/4	31.75	25.90	21.84	38.86	14.98	49.02	-914
DMCS16-12U	1	25.40	1-1/16-12	16.76	1-3/8	34.92	1-1/2	38.10	31.24	26.41	41.14	14.98	53.34	-912
DMCS16-16U	1	25.40	1-5/16-12	22.35	1-1/2	38.10	1-1/2	38.10	31.24	26.41	42.16	14.98	54.35	-916
DMCS20-20U	1-1/4	31.75	1-5/8-12	27.68	1-7/8	47.63	1-7/8	47.63	41.14	38.86	46.22	14.98	68.32	-920
DMCS24-24U	1-1/2	38.10	1-7/8-12	33.90	2-1/8	53.98	2-1/4	57.15	50.03	45.21	50.54	14.98	77.72	-924
DMCS32-32U	2	50.80	2-1/2-12	45.97	2-3/4	69.85	3	76.20	67.56	62.73	64.26	14.98	101.60	-932

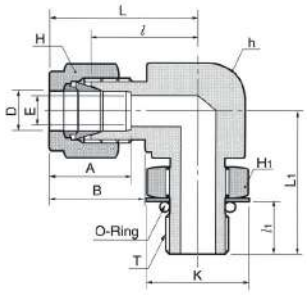
Connects metric tube to SAE straight thread boss

Part No.	Tube O.D. D	Straight Thread T(U)	E Min.	Width across flat		A	B	ℓ	ℓ1	L	O-Ring Uniform Size Number
				h	H						
DMCS6M-6U	6	9/16-18	4.8	18	14	15.3	17.7	28.2	9.90	36.5	-906
DMCS10M-6U	10	9/16-18	7.9	18	19	17.2	19.5	29.7	9.90	37.3	-906
DMCS10M-8U	10	3/4-16	7.9	22	19	17.2	19.5	31.8	11.17	39.4	-908
DMCS12M-4U	12	7/16-20	5.2	22	22	22.8	22.0	28.2	9.14	38.3	-904
DMCS12M-6U	12	9/16-18	7.5	22	22	22.8	22.0	29.0	9.90	39.1	-906

Positionable SAE Male Elbow

DLS-UP



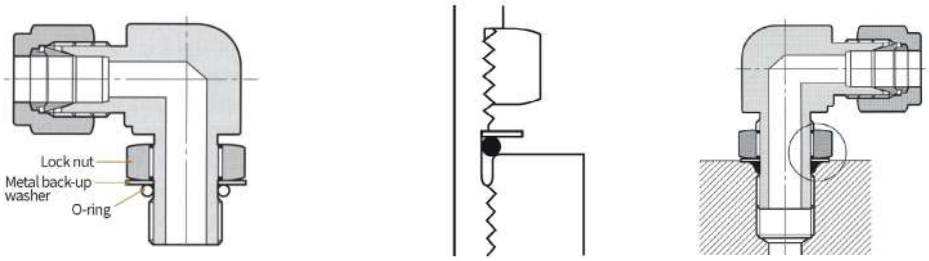


Connects fractional tube to SAE straight thread boss

Part No.	Tube O.D. D		Straight Thread T(U)	E Min.	Width across flat						A	B	ℓ	ℓ1	L	L1	K	O-Ring Uniform Size Number
					h		H		H1									
	in.	mm			in.	mm	in.	mm	in.	mm								
DLS4-4UP	1/4	6.35	7/16-20	4.82	1/2	12.70	9/16	14.28	9/16	14.28	15.24	17.78	21.08	9.90	28.44	28.44	16.51	-904
DLS5-5UP	5/16	7.93	1/2-20	5.84	9/16	14.28	5/8	15.87	5/8	15.87	16.25	18.54	22.86	9.90	30.22	29.46	18.28	-905
DLS6-6UP	3/8	9.52	9/16-18	7.11	5/8	15.87	11/16	17.46	11/16	17.46	16.76	19.30	24.63	11.17	32.00	32.25	20.06	-906
DLS6-8UP	3/8	9.52	3/4-16	7.11	13/16	20.64	11/16	17.46	7/8	22.22	16.76	19.30	27.43	12.70	34.79	37.84	25.65	-908
DLS8-8UP	1/2	12.70	3/4-16	10.41	13/16	20.64	7/8	22.22	7/8	22.22	22.86	21.84	27.43	12.70	37.59	37.84	25.65	-908
DLS10-10UP	5/8	15.87	7/8-14	12.70	1	25.40	1	25.40	1	25.40	24.38	21.84	29.46	14.22	39.62	43.43	29.46	-910
DLS12-12UP	3/4	19.05	1-1/16-12	15.74	1-1/16	26.98	1-1/8	28.57	1-1/4	31.75	24.38	21.84	31.24	16.76	41.40	48.76	36.57	-912
DLS14-14UP	7/8	22.22	1-3/16-12	18.28	1-1/4	31.75	1-1/4	31.75	1-3/8	34.92	25.90	21.84	33.02	16.76	43.18	50.54	40.38	-914
DLS16-16UP	1	25.40	1-5/16-12	22.35	1-3/8	34.92	1-1/2	38.10	1-1/2	38.10	31.24	26.41	38.35	16.76	50.54	53.59	43.94	-916
DLS20-20UP	1-1/4	31.75	1-5/8-12	27.68	1-11/16	42.76	1-7/8	47.63	1-7/8	47.63	41.14	38.86	45.72	16.76	67.81	58.16	54.86	-920
DLS24-24UP	1-1/2	38.10	1-7/8-12	33.90	2	50.80	2-1/4	57.15	2-1/8	53.98	50.03	45.21	50.80	16.76	77.97	60.45	62.23	-924
DLS32-32UP	2	50.80	2-1/2-12	45.97	2-3/4	69.85	3	76.20	2-3/4	69.85	67.56	62.73	69.85	16.76	107.18	71.62	80.26	-932

Installation Instructions

SAE and ISO parallel thread Fittings

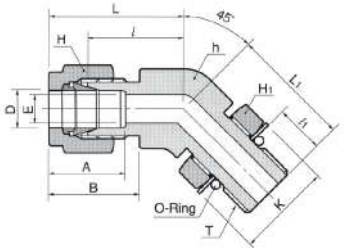


1. Lubricate O-ring with a lubricant compatible with the O-ring material and the system fluid.
2. Back the locknut out.
3. Finger-tighten the fitting into the straight thread boss until the metal backup washer contacts the face of the boss.
4. Position the fitting by backing it out until the fitting end is positioned in the desired direction.
   • No more than one turn backing out.
5. Hold the fitting in the direction and wrench-tighten the locknut until the washer contacts the face of the boss.

Positionable 45° SAE Male Elbow(previously DLBS-U)

DLBS-UP





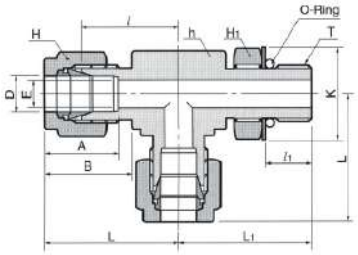
Connects fractional tube to SAE straight thread boss

Part No.	Tube O.D. D		Straight Thread T(U)	E Min.	Width across flat						A	B	ℓ	ℓ1	L	L1	K	O-Ring Uniform Size Number
					h		H		H1									
	in.	mm			in.	mm	in.	mm	in.	mm								
DLBS4-4UP	1/4	6.35	7/16-20	4.82	1/2	12.70	9/16	14.28	9/16	14.28	15.24	17.78	18.28	9.90	25.65	25.65	16.51	-904
DLBS6-6UP	3/8	9.52	9/16-18	7.11	5/8	15.87	11/16	17.46	11/16	17.46	16.76	19.30	20.57	11.17	27.94	28.19	20.06	-906
DLBS8-8UP	1/2	12.70	3/4-16	10.41	13/16	20.64	7/8	22.22	7/8	22.22	22.86	21.84	21.84	12.70	32.00	32.25	25.65	-908
DLBS12-12UP	3/4	19.05	1-1/16-12	15.74	1-1/8	28.58	1-1/8	28.58	1-1/4	31.75	24.38	21.84	29.71	16.76	39.87	47.24	36.57	-912
DLBS16-16UP	1	25.40	1-5/16-12	22.35	1-3/8	34.92	1-1/2	38.10	1-1/2	38.10	31.24	26.41	35.30	16.76	47.49	50.54	43.94	-916

Positionable SAE Male Run Tee(previously DTRS-U)

DTRS-UP





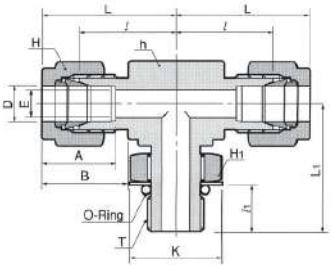
Connects fractional tube to SAE straight thread boss

Part No.	Tube O.D. D		Straight Thread T(U)	E Min.	Width across flat						A	B	ℓ	ℓ1	L	L1	K	O-Ring Uniform Size Number
					h		H		H1									
	in.	mm			in.	mm	in.	mm	in.	mm								
DTRS4-4UP	1/4	6.35	7/16-20	4.82	1/2	12.70	9/16	14.28	9/16	14.28	15.24	17.78	21.08	9.90	28.44	28.44	16.51	-904
DTRS6-6UP	3/8	9.52	9/16-18	7.11	5/8	15.87	11/16	17.46	11/16	17.46	16.76	19.30	24.63	11.17	32.00	32.25	20.06	-906
DTRS8-8UP	1/2	12.70	3/4-16	10.41	13/16	20.64	7/8	22.22	7/8	22.22	22.86	21.84	27.43	12.70	37.59	37.84	25.65	-908
DTRS12-12UP	3/4	19.05	1-1/16-12	15.74	1-1/8	26.98	1-1/8	28.58	1-1/4	31.75	24.38	21.84	31.24	16.76	41.40	48.76	36.57	-912
DTRS16-16UP	1	25.40	1-5/16-12	22.35	1-3/8	34.92	1-1/2	38.10	1-1/2	38.10	31.24	26.41	38.35	16.76	50.54	50.54	43.94	-916
DTRS20-20UP	1-1/4	31.75	1-5/8-12	27.68	1-11/16	42.86	1-7/8	47.63	1-7/8	47.63	41.14	38.86	45.72	16.76	67.81	58.16	54.86	-920
DTRS24-24UP	1-1/2	38.10	1-7/8-12	33.90	2	50.80	2-1/4	57.15	2-1/8	53.98	50.03	45.21	50.80	16.76	77.97	60.45	62.23	-924
DTRS32-32UP	2	50.80	2-1/2-12	45.97	2-3/4	69.85	3	76.20	2-3/4	69.85	67.56	62.73	69.85	16.76	107.18	71.62	80.26	-932

Positionable SAE Male Branch Tee(previously DTBS-U)

DTBS-UP





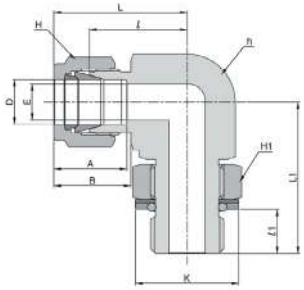
Connects fractional tube to SAE straight thread boss

Part No.	Tube O.D. D		Straight Thread T(U)	E Min.	Width across flat						A	B	ℓ	ℓ1	L	L1	K	O-Ring Uniform Size Number
					h		H		H1									
	in.	mm			in.	mm	in.	mm	in.	mm								
DTBS 4-4UP	1/4	6.35	7/16-20	4.82	1/2	12.70	9/16	14.28	9/16	14.28	15.24	17.78	21.08	9.90	28.44	28.44	16.51	-904
DTBS 6-6UP	3/8	9.52	9/16-18	7.11	5/8	15.87	11/16	17.46	11/16	17.46	16.76	19.30	24.63	11.17	32.00	32.25	20.06	-906
DTBS 8-8UP	1/2	12.70	3/4-16	10.41	13/16	20.64	7/8	22.22	7/8	22.22	22.86	21.84	27.43	12.70	37.59	37.84	25.65	-908
DTBS 12-12UP	3/4	19.05	1-1/16-12	15.74	1-1/16	26.98	1-1/8	28.58	1-1/4	31.75	24.38	21.84	31.24	16.76	41.40	48.76	36.57	-912
DTBS 16-16UP	1	25.40	1-5/16-12	22.35	1-3/8	34.92	1-1/2	38.10	1-1/2	38.10	31.24	26.41	38.35	16.76	50.54	53.59	43.94	-916
DTBS 20-20UP	1-1/4	31.75	1-5/8-12	27.68	1-11/16	42.86	1-7/8	47.63	1-7/8	47.63	41.14	38.86	45.72	16.76	67.81	58.16	54.86	-920
DTBS 24-24UP	1-1/2	38.10	1-7/8-12	33.90	2	50.80	2-1/4	57.15	2-1/8	53.98	50.03	45.21	50.80	16.76	77.97	60.45	62.23	-924
DTBS 32-32UP	2	50.80	2-1/2-12	45.97	2-3/4	69.85	3	76.20	2-3/4	69.85	67.56	62.73	69.85	16.76	107.18	71.62	80.26	-932

Positionable Male Elbow ISO Parallel thread

DLM-GP





Connects fractional tube to ISO parallel thread

Part No.	Tube O.D. D		T G(PF)	E Min.	Width across flat						A	B	ℓ	ℓ1	L	L1	K	O-Ring Uniform Size Number
					h		H		H1									
	in.	mm			in.	mm	in.	mm	in.	mm								
DLM4-2GP	1/4	6.35	1/8	4.06	1/2	12.70	9/16	14.28	9/16	14.28	15.24	17.78	19.6	8.12	26.92	26.42	15.20	P8
DLM4-4GP	1/4	6.35	1/4	4.82	5/8	15.87	11/16	17.46	3/4	19.05	15.24	17.78	21.6	9.14	28.95	32.30	20.30	-111
DLM6-4GP	3/8	9.52	1/4	5.84	5/8	15.87	11/16	17.46	3/4	19.05	16.76	19.30	23.1	9.14	30.48	32.30	20.30	-111
DLM6-6GP	3/8	9.52	3/8	7.11	13/16	20.64	11/16	17.46	3/4	19.05	16.76	19.30	25.9	9.39	33.27	37.10	24.40	-113
DLM8-4GP	1/2	12.70	1/4	5.84	13/16	20.64	7/8	22.22	7/8	22.22	22.86	21.84	25.9	9.14	36.06	35.10	20.30	-111
DLM8-6GP	1/2	12.70	3/8	7.87	13/16	20.64	7/8	22.22	7/8	22.22	22.86	21.84	25.9	9.39	36.06	37.10	24.40	-113
DLM8-8GP	1/2	12.70	1/2	10.41	15/16	23.81	7/8	22.22	1-1/16	26.98	22.86	21.84	27.9	12.95	38.10	43.40	29.50	P18
DLM12-8GP	3/4	19.05	1/2	11.93	1-1/16	26.98	1-1/8	28.57	1-1/16	26.98	24.38	21.84	29.7	12.95	39.87	45.21	29.50	P18
DLM12-12GP	3/4	19.05	3/4	15.74	1-1/16	26.98	1-1/8	28.57	1-3/8	34.92	24.38	21.84	29.7	12.95	39.87	48.77	36.30	-119
DLM16-16GP	1	25.40	1	19.81	1-3/8	34.92	1-1/2	38.10	1-5/8	41.28	31.24	26.41	36.8	13.97	49.02	53.60	46.20	-217

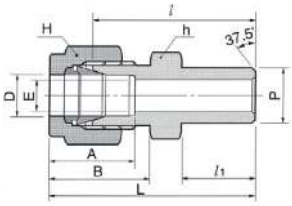
Connects metric tube to ISO parallel thread

Part No.	Tube O.D. D	T G(PF)	E Min.	Width across flat			A	B	ℓ	ℓ1	L	L1	K	O-Ring Uniform Size Number
				h	H	H1								
DLM6M-2GP	6	1/8	4.0	12.7	14	14.28	15.3	17.7	19.6	8.1	27.0	26.4	15.20	P8
DLM6M-4GP	6	1/4	4.8	15.8	14	19.05	15.3	17.7	21.6	9.1	29.0	32.3	20.30	-111
DLM6M-6GP	6	3/8	4.8	20.6	14	22.22	15.3	17.7	24.4	9.4	31.8	37.1	24.40	-113
DLM8M-2GP	8	1/8	4.0	14.2	16	14.28	16.2	18.6	21.3	8.1	28.8	27.4	15.20	P8
DLM8M-4GP	8	1/4	5.9	15.8	16	19.05	16.2	18.6	22.4	9.1	29.9	32.2	20.30	-111
DLM10M-4GP	10	1/4	5.9	20.6	19	19.05	17.2	19.5	25.9	9.1	33.5	35.0	20.30	-113
DLM10M-6GP	10	3/8	7.9	20.6	19	22.22	17.2	19.5	25.9	9.4	33.5	37.1	24.40	-111
DLM12M-4GP	12	1/4	5.9	20.6	22	19.05	22.8	22.0	25.9	9.1	36.0	35.0	20.30	-113
DLM12M-6GP	12	3/8	7.9	20.6	22	22.22	22.8	22.0	25.9	9.4	36.0	37.1	24.40	-113
DLM12M-8GP	12	1/2	9.5	23.8	22	26.98	22.8	22.0	27.9	13.0	38.0	43.4	29.50	P18

Male Pipe Weld Connector

DCW





Connects fractional tube to pipe

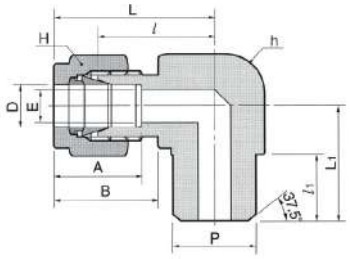
Part No.	Tube O.D. D		Male Pipe Size P		E Min.	Width across flat				A	B	ℓ	ℓ1	L
						h		H						
	in.	mm	Nom.	O.D.		in.	mm	in.	mm					
DCW2-2P	1/8	3.17	1/8	10.29	2.28	7/16	11.11	7/16	11.11	12.70	15.24	23.87	9.65	31.24
DCW3-2P	3/16	4.76	1/8	10.29	3.04	7/16	11.11	1/2	12.70	13.71	16.00	24.63	9.65	31.24
DCW4-2P	1/4	6.35	1/8	10.29	4.82	1/2	12.70	9/16	14.28	15.24	17.78	25.40	9.65	32.76
DCW4-4P	1/4	6.35	1/4	13.72	4.82	9/16	14.28	9/16	14.28	15.24	17.78	30.48	14.22	37.84
DCW5-2P	5/16	7.93	1/8	10.29	5.08	9/16	14.28	5/8	15.87	16.25	18.54	26.67	9.65	34.03
DCW5-4P	5/16	7.93	1/4	13.72	6.35	9/16	14.28	5/8	15.87	16.25	18.54	31.24	14.22	38.60
DCW6-4P	3/8	9.52	1/4	13.72	7.11	5/8	15.87	11/16	17.46	16.76	19.30	32.51	14.22	39.87
DCW6-6P	3/8	9.52	3/8	17.15	7.11	11/16	17.46	11/16	17.46	16.76	19.30	32.51	14.22	39.87
DCW6-8P	3/8	9.52	1/2	21.34	7.11	7/8	22.22	11/16	17.46	16.76	19.30	38.86	11.05	43.23
DCW8-6P	1/2	12.70	3/8	17.15	10.41	13/16	20.64	7/8	22.22	22.86	21.84	33.27	14.22	43.43
DCW8-8P	1/2	12.70	1/2	21.34	10.41	7/8	22.22	7/8	22.22	22.86	21.84	38.86	19.05	49.02
DCW8-12P	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
DCW10-8P	5/8	15.87	1/2	21.34	12.70	15/16	23.81	1	25.40	24.38	21.84	38.86	19.05	49.02
DCW12-12P	3/4	19.05	3/4	26.67	15.74	1-1/16	26.98	1-1/8	28.58	24.38	21.84	40.38	19.05	50.54
DCW16-16P	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
DCW20-20P	1-1/4	31.75	1-1/4	42.16	27.68	1-3/4	44.45	2	50.80	41.14	38.86	55.11	23.87	77.21
DCW24-24P	1-1/2	38.10	1-1/2	48.26	34.03	2-1/8	53.98	2-1/4	57.15	50.03	45.21	61.72	26.16	88.90
DCW32-32P	2	50.80	2	60.33	47.75	2-3/4	69.85	3	76.20	67.56	62.73	76.20	26.92	113.53

Connects metric tube to pipe

Part No.	Tube O.D. D	Male Pipe Size P		E Min.	Width across flat		A	B	ℓ	ℓ1	L2
		Nom.	O.D.		h	H					
DCW3M-2P	3	1/8	10.29	2.4	12	12	12.9	15.3	23.1	9.7	29.7
DCW4M-2P	4	1/8	10.29	2.4	12	12	13.7	16.1	24.1	9.7	30.7
DCW6M-2P	6	1/8	10.29	4.8	14	14	15.3	17.7	25.4	9.7	32.8
DCW6M-4P	6	1/4	13.72	4.8	14	14	15.3	17.7	30.2	14.2	37.6
DCW8M-2P	8	1/8	10.29	5.1	15	16	16.2	18.6	26.7	9.7	34.2
DCW8M-4P	8	1/4	13.72	6.4	15	16	16.2	18.6	31.2	14.2	38.7
DCW8M-8P	8	1/2	21.34	6.4	22	16	16.2	18.6	37.3	19.0	44.8
DCW10M-4P	10	1/4	13.72	7.1	18	19	17.2	19.5	33.3	14.2	40.9
DCW10M-6P	10	3/8	17.15	7.9	18	19	17.2	19.5	32.5	14.2	40.1
DCW10M-8P	10	1/2	21.34	7.9	22	19	17.2	19.5	38.1	19.0	45.7
DCW12M-4P	12	1/4	13.72	7.1	22	22	22.8	22.0	33.3	14.2	43.4
DCW12M-6P	12	3/8	17.15	9.5	22	22	22.8	22.0	33.3	14.2	43.4
DCW12M-8P	12	1/2	21.34	9.5	22	22	22.8	22.0	38.1	19.0	48.2
DCW14M-6P	14	3/8	17.15	10.3	24	25	24.4	22.0	34.0	14.2	44.1
DCW15M-8P	15	1/2	21.34	11.9	24	25	24.4	22.0	38.9	19.0	49.0
DCW16M-8P	16	1/2	21.34	12.7	24	25	24.4	22.0	38.9	19.0	49.0
DCW18M-8P	18	1/2	21.34	13.5	27	30	24.4	22.0	40.4	19.0	50.5
DCW32M-20P	32	1-1/4	42.16	28.6	46	50	42.0	41.6	56.6	23.9	79.6
DCW38M-24P	38	1-1/2	48.26	33.7	55	60	49.4	47.9	64.0	26.2	91.6

Male Pipe Weld Elbow
DLW



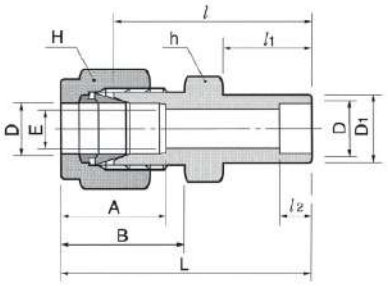


Connects fractional tubes

Part No.	Tube O.D. D		Male Pipe Size P		E Min.	Width across flat				A	B	ℓ	ℓ1	L	L1
						h		H							
	in.	mm	Nom.	O.D.		in.	mm	in.	mm						
DLW2-2P	1/8	3.17	1/8	10.29	4.82	1/2	12.70	9/16	14.28	15.24	17.78	19.55	9.65	26.92	18.79
DLW4-4P	1/4	6.35	1/4	13.72	4.82	1/2	12.70	9/16	14.28	15.24	17.78	19.55	14.22	26.92	23.36
DLW6-4P	3/8	9.52	1/4	13.72	7.11	5/8	15.87	11/16	17.46	16.76	19.30	23.11	14.22	30.48	25.40
DLW8-8P	1/2	12.70	1/2	21.34	10.41	13/16	20.64	7/8	22.22	22.86	21.84	25.90	19.05	36.06	33.02
DLW12-12P	3/4	19.05	3/4	26.67	15.74	1-1/16	26.98	1-1/8	28.58	24.38	21.84	29.71	19.05	39.87	36.83

Tube Socket Weld Connector
DCSW





Connects fractional tubes

Part No.	Tube O.D. D		E Min.	D1	Width across flat				A	B	ℓ	ℓ1	L	L1
					h		H							
	in.	mm			in.	mm	in.	mm						
DCSW2-2	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
DCSW4-4	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
DCSW6-6	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
DCSW8-8	1/2	12.70	10.41	19.05	13/16	20.64	7/8	22.22	22.86	21.84	30.98	11.93	12.70	41.14
DCSW12-12	3/4	19.05	15.74	26.67	1-1/16	26.98	1-1/8	28.58	24.38	21.84	33.27	11.93	14.22	43.43
DCSW16-16	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

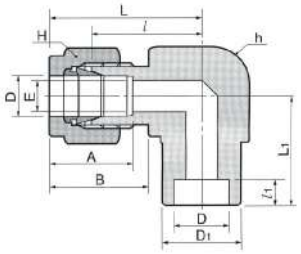
DK-Lok Welding Information

DK-Lok weld ends are constructed to SCH. 80 or greater

1. Remove the nut and ferrules from the DK-Lok port.
   • This protects the nut and ferrules from weld heat.
2. Cover the DK-Lok port threads with a protective device such as DK-Lok Plug (DP).
   • This protects threads and sealing surface on the DK-Lok port.
   • Finger-tighten the DP to use it many times.
3. Tack weld at four positions 90 degree apart.
   • This holds the fitting in alignment and concentricity.
4. Complete the welding.
5. Remove the protective device and replace the nut and ferrules.

Tube Socket Weld Elbow
DLSW



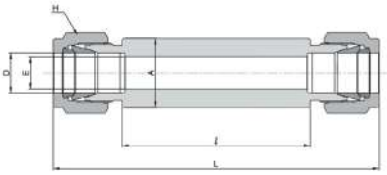


Connects fractional tubes

Part No.	Tube O.D. D		E Min.	D1	Width across flat				A	B	ℓ	ℓ1	L1	L2
					h		H							
	in.	mm			in.	mm	in.	mm						
DLSW4-4	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
DLSW6-6	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
DLSW8-8	1/2	12.70	10.41	20.57	13/16	20.64	7/8	22.22	22.86	21.84	25.90	12.70	36.06	25.90
DLSW12-12	3/4	19.05	15.74	26.92	1-1/16	26.98	1-1/8	28.58	24.38	21.84	29.71	14.22	39.87	29.71
DLSW16-16	1	25.40	22.35	35.05	1-3/8	34.93	1-1/2	38.10	31.24	26.41	36.83	19.05	49.02	36.83

Welding Bulkhead Union
DBUW



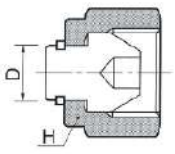


Connects fractional tubes

Part No.	Tube O.D. D		E Min.	A Diameter	Width across flat H		ℓ	L
	in.	mm			in.	mm		
DBUW-4	1/4	6.35	4.80	16.0	9/16	14.28	80.00	115.40
DBUW-6	3/8	9.52	7.10	19.0	11/16	17.46	80.00	118.40
DBUW-8	1/2	12.70	10.41	22.0	7/8	22.22	80.00	124.00

Plug
DP





Plugs metric DK-Lok Port

Part No.	Tube O.D. D	Width across flat H	Part No.	Tube O.D. D	Width across flat H
DP-2M	2	12	DP-16M	16	25
DP-3M	3	12	DP-18M	18	30
DP-4M	4	12	DP-20M	20	32
DP-6M	6	14	DP-22M	22	32
DP-8M	8	16	DP-25M	25	38
DP-10M	10	19	DP-28M	28	46
DP-12M	12	22	DP-32M	32	50
DP-15M	15	25	DP-38M	38	60

Plugs fractional DK-Lok port

Part No.	Tube O.D. D		Width across flat H	
	in.	mm	in.	mm
DP-1	1/16	1.59	5/16	7.93
DP-2	1/8	3.17	7/16	11.11
DP-3	3/16	4.76	1/2	12.70
DP-4	1/4	6.35	9/16	14.28
DP-5	5/16	7.93	5/8	15.87
DP-6	3/8	9.52	11/16	17.46
DP-8	1/2	12.70	7/8	22.22
DP-10	5/8	15.87	1	25.40
DP-12	3/4	19.05	1-1/8	28.58
DP-14	7/8	22.22	1-1/4	31.75
DP-16	1	25.40	1-1/2	38.10
DP-20	1-1/4	31.75	1-7/8	47.63
DP-24	1-1/2	38.10	2-1/4	57.15
DP-32	2	50.80	3	76.20



for plugging unused fitting port

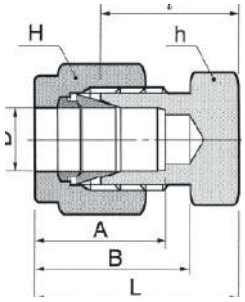
Installation Instructions

Plug is for plugging un-used DK-Lok port.

1. Remove the nut and ferrules from the DK-Lok fitting body.
2. Finger-tighten the plug.
3. Tighten the plug 1/4 turn beyond the finger-tight position, keeping the fitting body steady with a backup wrench.
   - Do not tighten 1 1/4 turns as this has machined ferrule not the standard ferrules.
   - Tighten 1/8 turn for 1/16, 1/8, and 3/16 in.; 2, 3, and 4 mm Tube Fittings.

Cap
DC





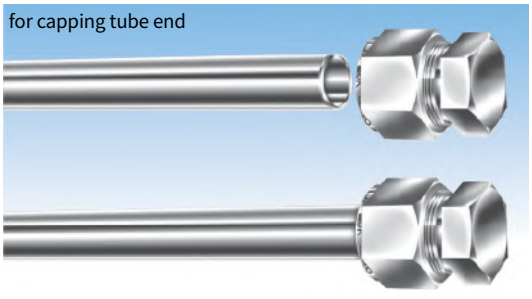
Caps fractional tube end

Part No.	Tube O.D. D		Width across flat h		Width across flat H		A	B	ℓ	L
	in.	mm	in.	mm	in.	mm				
DC-1	1/16	1.59	5/16	7.93	5/16	7.93	8.63	10.92	11.20	14.18
DC-2	1/8	3.17	7/16	11.11	7/16	11.11	12.70	15.24	13.46	20.06
DC-3	3/16	4.76	7/16	11.11	1/2	12.70	13.71	16.00	14.73	21.33
DC-4	1/4	6.35	1/2	12.70	9/16	14.28	15.24	17.78	16.00	23.26
DC-5	5/16	7.93	9/16	14.28	5/8	15.87	16.25	18.54	17.01	24.38
DC-6	3/8	9.52	5/8	15.87	11/16	17.46	16.76	19.30	18.28	25.65
DC-8	1/2	12.70	13/16	20.63	7/8	22.22	22.86	21.84	19.05	29.21
DC-10	5/8	15.87	15/16	23.81	1	25.40	24.38	21.84	19.81	29.97
DC-12	3/4	19.05	1-1/16	26.98	1-1/8	28.57	24.38	21.84	21.33	31.49
DC-14	7/8	22.22	1-3/16	30.16	1-1/4	31.75	25.90	21.84	23.87	34.03
DC-16	1	25.40	1-3/8	34.92	1-1/2	38.10	31.24	26.41	26.16	38.35
DC-20	1-1/4	31.75	1-3/4	44.45	1-7/8	47.63	41.14	38.86	31.24	53.34
DC-24	1-1/2	38.10	2-1/8	53.98	2-1/4	57.15	50.15	45.21	37.33	64.51
DC-32	2	50.80	2-3/4	69.85	3	76.20	67.56	62.73	49.27	86.61

Caps metric tube ends

Part No.	Tube O.D. D	Width across flat h	Width across flat H	A	B	ℓ	L
DC-2M	2	12	12	12.9	15.3	13.5	20.1
DC-3M	3	12	12	12.9	15.3	13.5	20.1
DC-4M	4	12	12	13.7	16.1	14.7	21.3
DC-6M	6	14	14	15.3	17.7	15.7	23.1
DC-8M	8	15	16	16.2	18.6	17.0	24.5
DC-10M	10	18	19	17.2	19.5	19.0	26.6
DC-12M	12	22	22	22.8	22.0	19.0	29.1
DC-15M	15	24	25	24.4	22.0	19.8	29.9
DC-16M	16	24	25	24.4	22.0	19.8	29.9
DC-18M	18	27	30	24.4	22.0	21.3	31.4
DC-20M	20	30	32	26.0	22.0	23.9	34.0
DC-22M	22	30	32	26.0	22.0	23.9	34.0
DC-25M	25	35	38	31.3	26.5	26.2	38.5
DC-28M	28	41	46	36.6	36.6	27.7	48.5
DC-32M	32	46	50	42.0	41.6	32.8	55.8
DC-38M	38	55	60	49.4	47.9	37.8	65.4

Installation Instructions

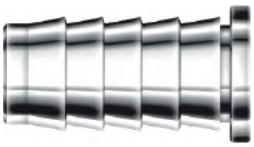


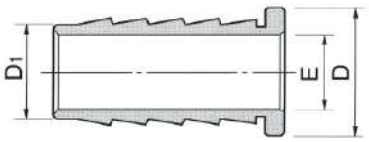
Cap

DK-Lok Cap is for capping tubing end

1. Insert tube end into the cap
   - Make sure tube end bottoms on the shoulder of the cap.
2. Finger-tighten the nut
3. Wrench-tighten the nut 1 1/4 turns beyond the finger tight position, keeping the body steady with a backup wrench.
   - Tightens 3/4 turns for 1/16, 1/8, and 3/16 in.; 2,3, and 4mm fittings.
   - For re-use, see re-assembly instruction

Tube Insert
DI



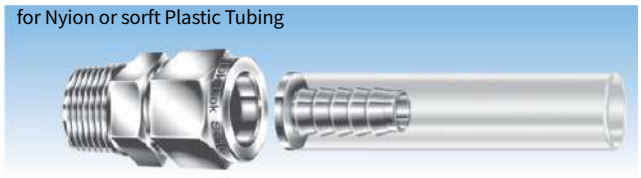


Fractional

Part No.	Plastic Tube				E
	D (Tube OD)		D1 (Tube ID)		
	in.	mm	in.	mm	
DI3-2	3/16	4.76	1/8	3.17	2.28
DI4-2	1/4	6.35	1/8	3.17	2.28
DI4-3	1/4	6.35	3/16	4.76	3.55
DI5-2	5/16	7.93	1/8	3.17	2.28
DI5-3	5/16	7.93	3/16	4.76	3.04
DI5-4	5/16	7.93	1/4	6.35	4.82
DI6-3	3/8	9.52	3/16	4.76	3.04
DI6-4	3/8	9.52	1/4	6.35	4.82
DI8-4	1/2	12.7	1/4	6.35	4.82
DI8-6	1/2	12.7	3/8	9.52	7.87
DI10-6	5/8	15.87	3/8	9.52	7.87
DI10-8	5/8	15.87	1/2	12.70	11.17
DI12-8	3/4	19.05	1/2	12.70	11.17
DI12-10	3/4	19.05	5/8	15.87	14.22
DI16-12	1	25.4	3/4	19.05	17.52

Installation Instructions

Tube Insert



DK-Lok tube insert supports the soft plastic tube internally.
This helps the soft tube to connect to DK-Lok port with no collapse.

1. Fully insert the tube insert into the soft plastic tube end. .
2. Insert the soft tube end into the DK-Lok port.
3. Finger-tighten the nut.
4. Tighten the nut 1 1/4 turns with a wrench, keeping the body steady with a backup wrench.

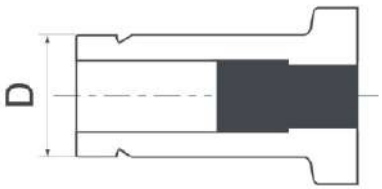
• Tighten 3/4 turn for 3/16 in. fittings.

Metric

Part No.	Plastic Tube		E
	D (Tube OD)	D1 (Tube ID)	
DI6M-4M	6	4	2.8
DI8M-6M	8	6	4.4
DI10M-8M	10	8	6.4
DI12M-8M	12	8	6.4
DI12M-10M	12	10	8.3

Fuse Plug
DFA





DK-Lok fuse plug is applicable where heat could initiate fire or an explosive chemical reaction. Fuse plug alloy metal melts or yields at the rated temperature. This is designed to use with DK-Lok port 3/8 in. OD.

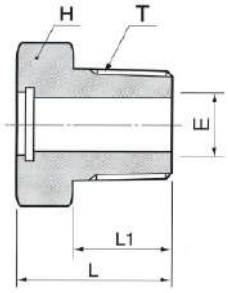
• Maximum applicable instrument pressure: 10 bar (145 psig)

Connects DK-Lok port 3/8 in. OD

Part No.	Tube O.D. D		Temperature Designator	Nominal Temperature Rating
	in.	mm		
DFA-6-160-S	3/8	9.52	160	160°F (71°C)
DFA-6-201-S	3/8	9.52	201	201°F (94°C)
DFA-6-255-S	3/8	9.52	255	255°F (124°C)
DFA-6-281-S	3/8	9.52	281	281°F (138°C)

Vent Protector
DMD





Connects to Female NPT thread

Part No.	T (NPT)	E Min.	H		L	L1
			in.	mm		
DMD-4N	1/4	7.11	9/16	15.87	20.57	14.22
DMD-6N	3/8	10.40	11/16	17.46	20.57	14.22
DMD-8N	1/2	12.70	7/8	23.81	26.92	19.05
DMD-12N	3/4	16.00	1-1/16	26.98	28.70	19.05

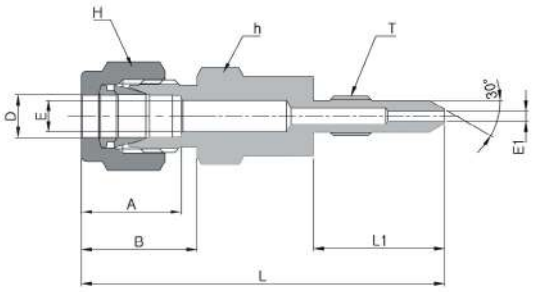
Construction with bored-through pipe plug and stainless steel 40 x 40 mesh, 0.010 in. diameter.

DK-Lok vent protector known as bug protector protects foreign particles like insects or debris from entering open ends of instruments or outlet vents.

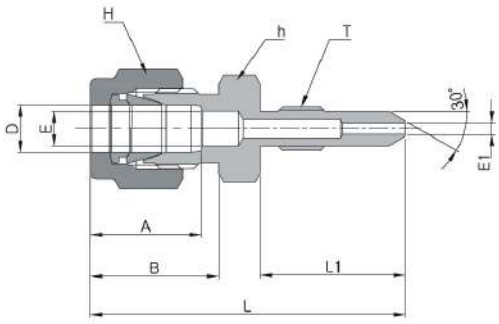
Calibration Fittings
DPCM

DP Transmitter Calibration fittings

DK-Lok Calibration fitting connects directly to the bleed port of a differential pressure transmitter. This helps simplify the calibration process. Two sizes of threads are available to fit the vent port of Yokogawa/Rosemount, and Honeywell differential pressure transmitters. The conical metal-to-metal sealing face on the straight thread requires no PTFE tape.



2U thread calibration fitting for Yokogawa/Rosemount DP transmitters



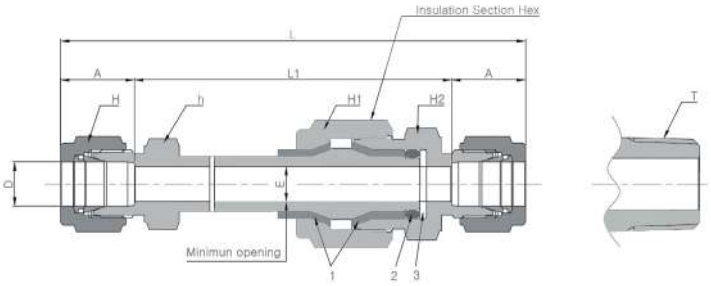
1U thread calibration fitting for Honeywell DP transmitters

Part No.	Tube O.D. D		Straight Thread	E	E1 Min.	Width across flat				A	B	L	L1
						h		H					
	in.	mm	T(U)			in.	mm	in.	mm				
DPCM 4-1U-S	1/4	6.35	1/4-28	4.8	1.5	1/2	12.7	9/16	14.28	15.24	17.78	43.08	19.90
DPCM 4-2U-S	1/4	6.35	5/16-24	4.8	1.5	1/2	12.7	9/16	14.28	15.24	17.78	59.23	35.75

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Dielectric Fittings

DEU



Materials & Technical Information

- Insulator: Molded Thermoplastic
- Standard O-ring & Back Up Ring : 90 Durometer FKM / Virgin PTFE for Temperature Rating of -40 to 200°F (-40 to 93°C)
- Optional Application : **Low Temperature Rating** of -76 to 200°F **(-60 to 93°C)**
- Pressure Rating: 4,000 psig (275 bar) @ 70°F (21°C)
- Electrical Resistance at 70°F(21°C): 10x106Ω @ 10 Volts DC, voltage breakdown resistance 3,000 Volts DC.
- Body, Ferrules, Nuts: Stainless Steel 316

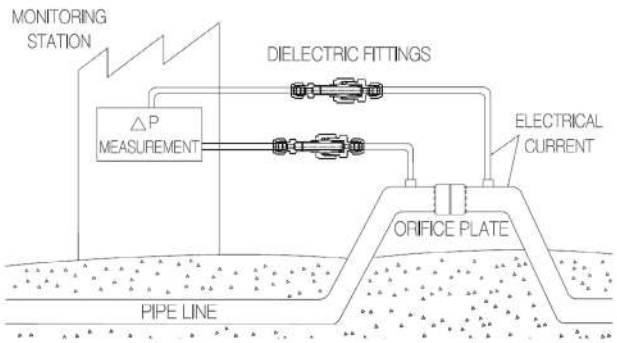
Ordering Information

To order, select Part Number listed below. Example : **DEU10M-S**
To order Low Temperature(-60C) application, Insert designator **–LT (Low Temperature)** into the basic Part Number.
Example: DEU10M-**LT**-S

Part No.	Tube O.D. D		Pipe Thread	E Min.		A	L	L1	Width across flat							
									h		H		H1		H2	
	in.	mm	T(NPT)	in.	mm				in.	mm	in.	mm	in.	mm	in.	mm
DEU4	1/4	6.35		0.19	4.8	15.21	100.8	70.3	1/2	12.7	9/16	14.28				
DEU6	3/8	9.52				16.78	104.3	70.8	5/8	15.87	11/16	17.46				
DEU8	1/2	12.7				22.85	110.9	65.2	13/16	20.6	7/8	22.22	7/8	22.22	13/16	20.64
DEU10M		10.0		0.28	7.1	17.03	106.2	72.2		18		19				
DEU12M		12.0				21.84	109.4	65.7		22		22				22
DEMC6-4N	3/8	9.52	1/4			16.87	99.72	-	5/8	15.87	11/16	17.46			13/16	20.64
Special Internal Bore																
DEU8-E10M	1/2	12.7			10.0	22.84	111.4	65.7		20.64		22.22	1	25.4	7/8	22.22
DEU6M-E4M		6.00			4.0	15.23	100.8	70.3		14		14	7/8	22.22	13/16	20.64
DEU8M-E6M		8.00			6.0	16.00	104.20	72.20		15		16	7/8	22.22	13/16	20.64
DEU10M-E8M		10.00			8.0	17.03	106.20	72.10		18		19	1	25.40		22
DEU12M-E10M		12.00			10.0	21.84	109.42	65.73		22		22	1	25.40		22
DEU14M-E10M		14.00			10.0	24.4	113.1	64.2		24		25	1	25.4		24

Di-electric tube fitting is designed to apply where electrical current flowing through a pipe or tubing line must be interrupted to protect instruments.
Di-electric Tube fitting is commonly used in the natural gas transmission station where installed on impulse lines ahead of stations. This fitting interrupts cathodic current flow while permitting full fluid flow.

GAS TRANSMISSION TYPICAL APPLICATION



Function

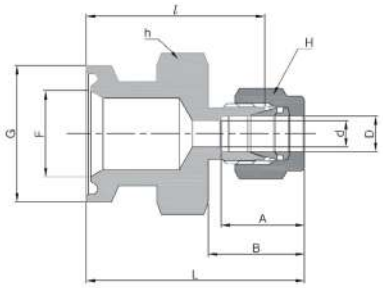
- The insulation function is performed by thermoplastic insulators.
- FKM O-ring and PTFE back up ring provide fluid containment function within the fitting.
- DK-Lok twin ferrule system provides reliable sealing in the impulse line tubing.

Caution



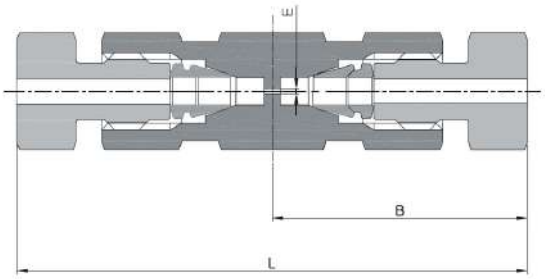
This “NO wrenching label” is placed on the insulation section hex.
This insulation connection must not be disconnected.

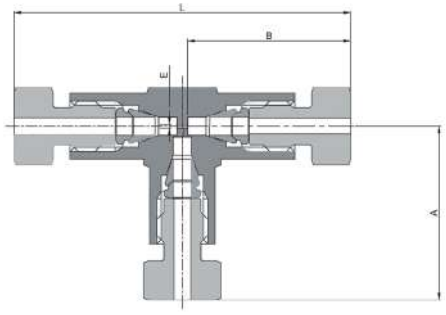
Sanitary Fitting
DSFC



Part No.	Tube O.D.		Flange Size	d min.	Width across flat				A	B	F	G	ℓ	L
	D				h		H							
	in.	mm			in.	mm	in.	mm						
DSFC4-8SC	1/4	6.35	1/2	4.8	1	25.4	9/16	14.28	15.24	17.78	9.4	24.9	32.64	39.9
DSFC4-12SC	1/4	6.35	3/4	4.8	1	25.4	9/16	14.28	15.24	17.78	15.7	24.9	32.64	39.9
DSFC4-16SC	1/4	6.35	1	4.8	1-3/8	34.92	9/16	14.28	15.24	17.78	22.1	50.3	32.64	39.9
DSFC4-24SC	1/4	6.35	1 1/2	4.8	1-3/8	34.92	9/16	14.28	15.24	17.78	34.8	50.3	32.64	39.9
DSFC6-8SC	3/8	9.52	1/2	7.11	1	25.4	11/16	17.46	16.76	19.3	9.4	24.9	34.08	41.4
DSFC6-12SC	3/8	9.52	3/4	7.11	1	25.4	11/16	17.46	16.76	19.3	15.7	24.9	34.08	41.4
DSFC6-16SC	3/8	9.52	1	7.11	1-3/8	34.92	11/16	17.46	16.76	19.3	22.1	50.3	34.08	41.4
DSFC6-24SC	3/8	9.52	1 1/2	7.11	1-3/8	34.92	11/16	17.46	16.76	19.3	34.8	50.3	34.08	41.4
DSFC8-8SC	1/2	12.7	1/2	10.41	1	25.4	7/8	22.22	22.86	21.84	9.4	24.9	34.05	44.2
DSFC8-12SC	1/2	12.7	3/4	10.41	1	25.4	7/8	22.22	22.86	21.84	15.7	24.9	34.05	44.2
DSFC8-16SC	1/2	12.7	1	10.41	1-3/8	34.92	7/8	22.22	22.86	21.84	22.1	50.3	34.05	44.2
DSFC8-24SC	1/2	12.7	1 1/2	10.41	1-3/8	34.92	7/8	22.22	22.86	21.84	34.8	50.3	34.05	44.2
DSFC16-16SC	1	25.4	1	22.35	1-3/8	34.92	1-1/2	38.1	31.24	26.41	22.1	50.3	36.32	48.5
DSFC16-32SC	1	25.4	2	22.35	2-3/4	69.85	1-1/2	38.1	31.24	26.41	47.5	64	51.02	63.2

Chromatography Fitting
DCHU





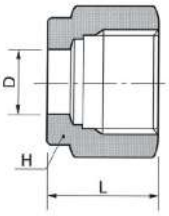
Materials & Technical Information
- Useable for gas or liquid chromatography
- Material is stainless steel 316
  - Bar stock: ASTM A276 TYPE316
  - Forging: ASTM A182 F316
- Available size are tube O.D 1/16

Ordering Information
To order, select part number listed below.

Part No.	Tube O.D.	E	A	B	L
DCHU-1	1/16	0.3 (0.012)	-	15.5 (0.61)	33.5 (1.32)
DCHT-1	1/16	0.3 (0.012)	16.75 (0.66)	15.5 (0.61)	33.5 (1.32)

Nut
DN





Fractional

Part No.	Tube O.D. D		With across flat H		L
	in.	mm	in.	mm	
DN-1	1/16	1.59	5/16	7.93	7.90
DN-2	1/8	3.17	7/16	11.11	11.93
DN-3	3/16	4.76	1/2	12.70	11.93
DN-4	1/4	6.35	9/16	14.28	12.70
DN-5	5/16	7.93	5/8	15.87	13.46
DN-6	3/8	9.52	11/16	17.46	14.22
DN-8	1/2	12.70	7/8	22.22	17.52
DN-10	5/8	15.87	1	25.40	17.52
DN-12	3/4	19.05	1-1/8	28.57	17.52
DN-14	7/8	22.22	1-1/4	31.75	17.52
DN-16	1	25.40	1-1/2	38.10	20.57
DN-20	1-1/4	31.75	1-7/8	47.63	31.75
DN-24	1-1/2	38.10	2-1/4	57.15	38.10
DN-32	2	50.80	3	76.20	52.32

Metric

Part No.	Tube O.D. D	With across flat H	L
DN-2M	2	12	11.90
DN-3M	3	12	11.90
DN-4M	4	12	11.90
DN-6M	6	14	12.70
DN-8M	8	16	13.50
DN-10M	10	19	15.10
DN-12M	12	22	17.40
DN-15M	15	25	17.40
DN-16M	16	25	17.40
DN-18M	18	30	17.40
DN-20M	20	32	17.40
DN-22M	22	32	17.40
DN-25M	25	38	20.60
DN-28M	28	46	30.60
DN-32M	32	50	34.40
DN-38M	38	60	40.60
DN-42M	42	65	40.60
DN-50M	50	76.2	52.60

Ferrule Set
DFS



Fractional

Part No.	Tube O.D. D	
	in.	mm
DFS-1	1/16	1.59
DFS-2	1/8	3.17
DFS-3	3/16	4.76
DFS-4	1/4	6.35
DFS-5	5/16	7.93
DFS-6	3/8	9.52
DFS-8	1/2	12.70
DFS-10	5/8	15.87
DFS-12	3/4	19.05
DFS-14	7/8	22.22
DFS-16	1	25.40
DFS-20	1-1/4	31.75
DFS-24	1-1/2	38.10
DFS-32	2	50.80

Metric

Part No.	Tube O.D.
DFS-2M	2
DFS-3M	3
DFS-4M	4
DFS-6M	6
DFS-8M	8
DFS-10M	10
DFS-12M	12
DFS-14M	14
DFS-15M	15
DFS-16M	16
DFS-18M	18
DFS-20M	20
DFS-22M	22
DFS-25M	25
DFS-28M	28
DFS-30M	30
DFS-32M	32
DFS-38M	38
DFS-42M	42
DFS-50M	50

Nut-Ferrule Set
DFSN



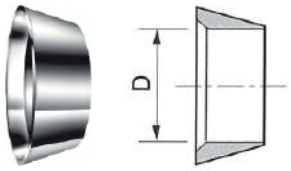
Fractional

Part No.	Tube O.D.
	in.
DFSN-1	1/16
DFSN-2	1/8
DFSN-3	3/16
DFSN-4	1/4
DFSN-5	5/16
DFSN-6	3/8
DFSN-8	1/2
DFSN-10	5/8
DFSN-12	3/4
DFSN-14	7/8
DFSN-16	1
DFSN-20	1-1/4
DFSN-24	1-1/2
DFSN-32	2

Metric

Part No.	Tube O.D.
DFSN-2M	2
DFSN-3M	3
DFSN-4M	4
DFSN-6M	6
DFSN-8M	8
DFSN-10M	10
DFSN-12M	12
DFSN-14M	14
DFSN-15M	15
DFSN-16M	16
DFSN-18M	18
DFSN-20M	20
DFSN-22M	22
DFSN-25M	25
DFSN-28M	28
DFSN-30M	30
DFSN-32M	32
DFSN-38M	38
DFSN-42M	42
DFSN-50M	50

Front Ferrule
DFF



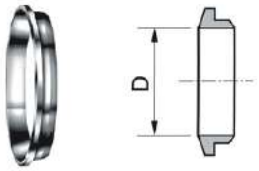
Fractional

Part No.	Tube O.D. D		Part No.	Tube O.D. D	
	in.	mm		in.	mm
DFF-1	1/16	1.59	DFF-10	5/8	15.87
DFF-2	1/8	3.17	DFF-12	3/4	19.05
DFF-3	3/16	4.76	DFF-14	7/8	22.22
DFF-4	1/4	6.35	DFF-16	1	25.40
DFF-5	5/16	7.93	DFF-20	1-1/4	31.75
DFF-6	3/8	9.52	DFF-24	1-1/2	38.10
DFF-8	1/2	12.70	DFF-32	2	50.80

Metric

Part No.	Tube O.D.	Part No.	Tube O.D.
DFF-2M	2	DFF-18M	18
DFF-3M	3	DFF-20M	20
DFF-4M	4	DFF-22M	22
DFF-6M	6	DFF-25M	25
DFF-8M	8	DFF-28M	28
DFF-10M	10	DFF-32M	32
DFF-12M	12	DFF-38M	38
DFF-15M	15	DFF-42M	42
DFF-16M	16	DFF-50M	50

Back Ferrule
DFB



Fractional

Part No.	Tube O.D. D		Part No.	Tube O.D. D	
	in.	mm		in.	mm
DFB-1	1/16	1.59	DFB-10	5/8	15.87
DFB-2	1/8	3.17	DFB-12	3/4	19.05
DFB-3	3/16	4.76	DFB-14	7/8	22.22
DFB-4	1/4	6.35	DFB-16	1	25.40
DFB-5	5/16	7.93	DFB-20	1-1/4	31.75
DFB-6	3/8	9.52	DFB-24	1-1/2	38.10
DFB-8	1/2	12.70	DFB-32	2	50.80

Metric

Part No.	Tube O.D.	Part No.	Tube O.D.
DFB-2M	2	DFB-18M	18
DFB-3M	3	DFB-20M	20
DFB-4M	4	DFB-22M	22
DFB-6M	6	DFB-25M	25
DFB-8M	8	DFB-28M	28
DFB-10M	10	DFB-32M	32
DFB-12M	12	DFB-38M	38
DFB-15M	15	DFB-42M	42
DFB-16M	16	DFB-50M	50

Preswaging Tool
DPS



Fractional DK-Lok

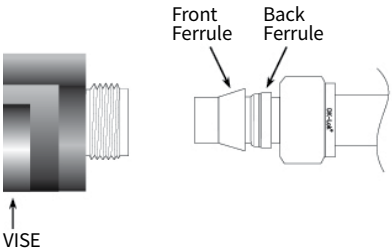
Part No.	Tube O.D.
DPS-4-C	1/4
DPS-5-C	5/16
DPS-6-C	3/8
DPS-8-C	1/2
DPS-12-C	3/4

Metric DK-Lok

Part No.	Tube O.D.
DPS-3M-C	3
DPS-6M-C	6
DPS-8M-C	8
DPS-10M-C	10
DPS-12M-C	12
DPS-16M-C	16
DPS-18M-C	18
DPS-20M-C	20

Operation Instructions

Pre-swaging Tool(DPS)



Operation on Pre-Swaging Tool

1. Clamp the DPS on the VISE steadily.
2. Install the DK-Lok nut, ferrules onto the tubing.
3. Insert the loose ferrules and loose nut installed tubing end into the DPS until it is bottomed on the shoulder of the DPS.
4. Finger-tighten the nut.
5. Scribe the nut at the 6 o'clock position.
6. Wrench-tighten the nut 1 1/4 turns to the 9 o'clock position.
   • Tighten the nut 3/4 turn to the 3 o'clock position for 1/16, 1/8, and 3/16 in.; 2, 3, and 4mm Tube Fittings.
7. Un-thread the nut.
8. Remove the tubing pre-swaged ferrules from the DPS.
   • In case the tubing is difficult to remove from DPS, gently rock the tubing back and forth. Do not rotate the tubing.

Assembly on Fitting

1. Insert the ferrules pre-swaged tubing into the fitting body until the front ferrule seats.
2. Hand-tighten the nut.
3. Wrench-tighten the nut to the previously pulled-up position; at this point, a sharp rise in torque is felt.
4. Tighten slightly with a wrench.

Gap Gauge
DIG

This no-go gap gauge is useful tool to inspect the DK-Lok initially pulled-up.

Operation Instructions



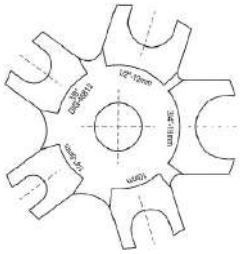
On initial assembly, apply DK-Lok no-go gap inspection gauge to make sure that the make-up distance is sufficiently pulled-up.

Refer to Fig 1.

1. The gap gauge does not fit the gap between the nut and the body hex. This ensures that the fitting is sufficiently tightened on initial assembly.

Refer to Fig 2.

2. The gap gauge fits the gap between the nut and the body hex. The fitting requires an additional tightening.



Part No.	Fitting Size	
	in	mm
DIG-46812	This gauge works on eight sizes	
	1/4, 3/8, 1/2, and 3/4.	6, 10, 12, and 18
DIG-5	5/16	-
DIG-12	3/4	-
DIG-16	1	25

Tube Depth Marking Tool
DTM

Marking on tubing prior to make-up with DK-Lok.



Operation Instructions

1. Insert tubing into DTM untilit is bottomed on tool.
2. Mark the tube at the top of the DTM with a pen.
3. Remove the tube from the DTM and insert into DK-Lok fitting untilit is bottomed on the shoulder of the fitting body.
4. If the marking can be seen above the fitting nut, it indicates the tube not fully bottomed inside the fitting.

Fractional

Part No.	Tube O.D. (in.)
DTM-4-C	1/4
DTM-6-C	3/8
DTM-8-C	1/2
DTM-10-C	5/8
DTM-12-C	3/4
DTM-16-C	1

Metric

Part No.	Tube O.D. (in.)
DTM-6M-C	6
DTM-8M-C	8
DTM-10M-C	10
DTM-12M-C	12
DTM-16M-C	16
DTM-25M-C	25

Units
Pre-Swaging



Hydraulic Swaging Unit
DHS-2A



Electric Swaging Unit
DES-1A

Pre-swaging DK-Lok ferrules onto tubing.

in.	1/2, 5/8, 3/4, 1, 1 1/4, 1 1/2, and 2.
mm	12, 14, 15, 16, 18, 20, 22, 25, 28, 30, 32, 38, 42 and 50.

Pre-swaging unit must be used to install 1 1/4, 1 1/2, and 2 in. and 28, 30, 32, and 38 mm fittings

Contact DK-Lok authorized distributor for operating manuals of DHA-2A and DES-1A

Hand Tube Bender
DHTB

DK-Lok hand tube benders provide consistent, high-quality bends in tubing made from materials that can be used with DK-Lok tube fittings.



Technical Information

- For 1/4” to 1/2” and 6mm to 12mm O.D. tubing.
- Accurate and tight bends up to 180° in stainless steel and other tough metals.
- Rollers reduce friction and bending eort; eliminate scoring of tubing.
- Vise lug for mounting in vise.
- Durable nickel nish.

Fractional

Part No.	Tube O.D. (in.)	Bend Radius (in.)
DHTB-4	1/4	9/16
DHTB-6	3/8	15/16
DHTB-8	1/2	1-1/2

Metric

Part No.	Tube O.D. (mm)	Bend Radius (mm)
DHTB-6M	6	15
DHTB-8M	8	24
DHTB-10M	10	24
DHTB-12M	12	38

Tube Cutter
DTC

DK-Lok tube cutter cuts stainless steel, soft copper, and tubing from 1/8 to 1 1/8 in. and 4 to 28mm outside diameter.



Technical Information

- Enclosed hardened steel, thrust bearing, feed mechanism for smoothest cutting action and trouble free operation.
- Rugged aluminum alloy body designed for handing ease.
- Body is hand buffed and nickel chrome plated to a high-luster nish.
- Rollers feature flare cut-off groove to reduce tube loss when damaged flare is removed.

Replacement Cutting Wheel Part No. : DTCW

Tube Deburring Tool
DTDT

After use of the tube cutter or tube sawing guide, DK-Lok deburring tools deburr stainless steel, steel, and hard alloy tube ends.



Technical Information

- For deburring inside and outside diameters of 3/16 to 1 1/2 in. and 4 to 38mm tubing.
- Tough die cast body.
- Steel blades for long life.
- Rugged, heavy-duty die-cast housing.

INSTALLATION INSTRUCTIONS

This instruction applies to DK-Lok Tube Fittings as well as DK-Lok Z series Tube Fittings.
DK-Lok is supplied finger-tight and ready for immediate use. Therefore fitting disassembly is not necessary for installation.

Tube-end preparation

Prior to installation, make sure to have tube-end cut 90 degree, and remove burrs from inside and outside tube ends.
Use proper tube cutter and maintain a sharp cutting wheel on it.

step1



Insert the tubing into the DK-Lok tube fitting until the tubing end bottoms on the shoulder of the fitting body.

- Make sure the nut finger-tight

step2



Scribe the nut at the 6 o'clock position and wrench-tighten the nut 1 1/4 turns to the 9 o'clock position, holding the body with a back up wrench.

- Tighten the nut 3/4 turn to the 3 o'clock position for 1/16, 1/8, and 3/16 in.; 2, 3, and 4mm Tube Fittings.

DK-Lok Installation for High Pressure or High Safety Applications

1. Insert tubing on the Dk-Lok tube fitting until the tubing end bottoms on the shoulder of the fitting body.
2. Wrench-tighten the nut until the tubing dose not rotate by hand or moves axially in the tting.
3. Scribe the nut at 6 o'clock position.
4. Wrench-tighten the nut to the 9 o'clock position, holding the body with a back up wrench.
   - Only 3/4 turn to the 3 o'clock position is required for 1/16, 1/8, and 3/16 in.; 2, 3 and 4mm Tube Fittings.

Inspection of Gaugeable Dk-Lok fitting initially pulled-up

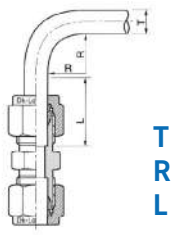
DK-Lok Tube Fittings are gaugeable. This allows insraller to inspect that the make-up distance is sufficiently pulled-up on initial assembly.
Refer to page on 77 for Gap Gauge Operation Instructions.
DK-Lok Gap Gauge is applicable to those Dk-Lok fittings made out of SS316, Carbon steel, Brass, and Exotic alloy materials

Re-Assembly Instructions

DK-Lok can be used many times. Prior to re-assembly, ensure the components are clean and free of defects.
1. Insert the ferrules swaged tubing into the body until the front ferrule seats rmly.
2. Hand-tighten the nut.
3. Wrench-tighten the nut to the previously pulled-up position; at this point, a sharp rise in torque is felt.
4. Tighten slightly with a wrench.

Tube handling during installation

Do not force the tubing into the tting when it dose not smoothly go in. It may be a deformed oval.



T : Tube O.D.
R : Radius
L : Straight tube length

In case tube bend is too close to a fitting, the bend section shall enter the fitting.
This may not allow the tube to be bottomed in the fitting, resulting in leaks.
Keep the proper straight length of tube as shown in the tables.

- Do not bend a tube in the fitting.
  Use tube bender prior to installation onto fitting.

Fractional tube, in.	
T	L
1/16	1/2
1/8	23/32
3/16	3/4
1/4	13/16
5/16	7/8
3/8	15/16
1/2	1 3/16
5/8	1 1/4
3/4	1 1/4
7/8	1 5/16
1	1 1/2
1 1/4	2
1 1/2	2 13/32
2	3 1/4

Metric tube, mm	
T	L
3	19
6	21
8	23
10	25
12	31
14	32
15	32
16	32
18	32
20	34
22	34
25	40
28	46
30	50
32	54
38	63
50	80

DK-LOK

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DK-LOK

Hose Adapter Fittings

Rev. 01-01
Aug. 2023

DK-LOK®
Hose Adapter Fittings

Hose Adapter Fittings

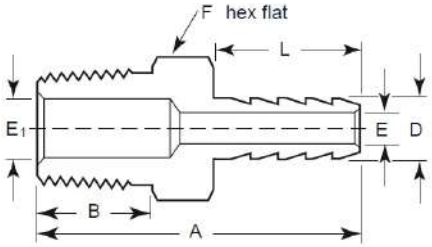
Rev.01-01
Aug.2023

DK-Lok Hose Adapter Fittings are designed for use with soft plastic or rubber tubing.

Features

- Standard hose barb design is for use with hose sleeve or hose clamp.
- DK-Lok hose adapter fittings are reusable.
- Stainless steel and brass construction.

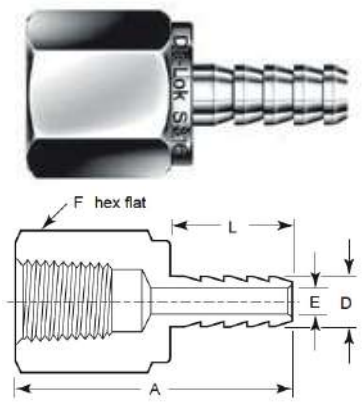




Male Adapter

Part No.	End Connections		Dimensions, in.						
	Hose ID	Male NPT	A	B	D	E	E1	F	L
DHAM 2-2N	1/8	1/8	1.08	0.38	0.15	0.08	0.19	7/16	0.40
DHAM 2-4N	1/8	1/4	1.26	0.56	0.15	0.08	0.28	9/16	0.40
DHAM 3-2N	3/16	1/8	1.27	0.38	0.23	0.12	0.12	7/16	0.59
DHAM 3-4N	3/16	1/4	1.45	0.56	0.23	0.12	0.28	9/16	0.59
DHAM 4-2N	1/4	1/8	1.47	0.38	0.30	0.19	0.19	7/16	0.79
DHAM 4-4N	1/4	1/4	1.65	0.56	0.30	0.19	0.19	9/16	0.79
DHAM 4-6N	1/4	3/8	1.66	0.56	0.30	0.19	0.19	11/16	0.79
DHAM 4-8N	1/4	1/2	1.85	0.75	0.30	0.19	0.47	7/8	0.79
DHAM 5-2N	5/16	1/8	1.55	0.38	0.38	0.19	0.19	7/16	0.87
DHAM 5-4N	5/16	1/4	1.73	0.56	0.38	0.19	0.19	9/16	0.87
DHAM 5-6N	5/16	3/8	1.74	0.56	0.38	0.19	0.19	11/16	0.87
DHAM 5-8N	5/16	1/2	1.96	0.75	0.38	0.19	0.47	7/8	0.87
DHAM 6-4N	3/8	1/4	1.73	0.56	0.45	0.30	0.30	9/16	0.87
DHAM 6-6N	3/8	3/8	1.74	0.56	0.45	0.30	0.30	11/16	0.87
DHAM 6-8N	3/8	1/2	1.96	0.75	0.45	0.30	0.30	7/8	0.87
DHAM 8-4N	1/2	1/4	1.80	0.56	0.60	0.38	0.28	11/16	0.94
DHAM 8-6N	1/2	3/8	1.81	0.56	0.60	0.38	0.38	11/16	0.94
DHAM 8-8N	1/2	1/2	2.03	0.75	0.60	0.38	0.38	7/8	0.94
DHAM 10-6N	5/8	3/8	1.88	0.56	0.75	0.50	0.38	1 1/16	0.98
DHAM 10-8N	5/8	1/2	2.07	0.75	0.75	0.47	0.47	1 1/16	0.98
DHAM 10-12N	5/8	3/4	2.07	0.75	0.75	0.50	0.63	1 1/16	0.98
DHAM 12-8N	3/4	1/2	2.14	0.75	0.90	0.63	0.47	1 1/16	1.05
DHAM 12-12N	3/4	3/4	2.14	0.75	0.90	0.63	0.63	1 1/16	1.05
DHAM 12-16N	3/4	1	2.13	0.94	0.90	0.63	0.88	1 3/8	1.05
DHAM 16-12N	1	3/4	2.38	0.75	1.20	0.88	0.63	1 3/8	1.19
DHAM 16-16N	1	1	2.57	0.94	1.20	0.88	0.88	1 3/8	1.19
Part No.	Hose ID	Male ISO 7-1	A	B	D	E	E1	F	L
DHAM 2-2R	1/8	1/8	1.28	0.38	0.15	0.08	0.19	7/16	0.40
DHAM 4-2R	1/4	1/8	1.47	0.38	0.30	0.19	0.19	7/16	0.79
DHAM 4-4R	1/4	1/4	1.65	0.56	0.30	0.19	0.19	9/16	0.79
DHAM 4-6R	1/4	3/8	1.66	0.56	0.30	0.19	0.19	11/16	0.79
DHAM 6-4R	3/8	1/4	1.73	0.56	0.45	0.30	0.30	9/16	0.87
DHAM 6-6R	3/8	3/8	1.74	0.56	0.45	0.30	0.30	11/16	0.87
DHAM 6-8R	3/8	1/2	1.96	0.75	0.45	0.30	0.30	7/8	0.87
DHAM 8-8R	1/2	1/2	2.03	0.75	0.60	0.38	0.47	7/8	0.94

Female Adapter

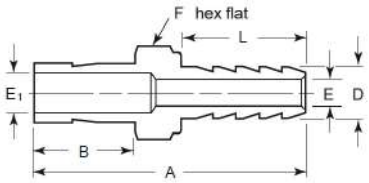


Part No.	End Connections		Dimensions, in.				
	Hose ID	NPT Size	A	D	E	F	L
DHAF 2-2N	1/8	1/8	1.11	0.15	0.08	9/16	0.40
DHAF 2-4N	1/8	1/4	1.26	0.15	0.08	3/4	0.40
DHAF 3-2N	3/16	1/8	1.29	0.23	0.12	9/16	0.59
DHAF 3-4N	3/16	1/4	1.44	0.23	0.12	3/4	0.59
DHAF 4-2N	1/4	1/8	1.47	0.30	0.19	9/16	0.79
DHAF 4-4N	1/4	1/4	1.64	0.30	0.19	3/4	0.79
DHAF 4-6N	1/4	3/8	1.71	0.30	0.19	7/8	0.79
DHAF 5-4N	5/16	1/4	1.73	0.38	0.19	3/4	0.87
DHAF 5-6N	5/16	3/8	1.82	0.38	0.19	7/8	0.87
DHAF 6-4N	3/8	1/4	1.69	0.45	0.30	3/4	0.87
DHAF 6-6N	3/8	3/8	1.78	0.45	0.30	7/8	0.87
DHAF 6-8N	3/8	1/2	2.03	0.45	0.30	1 1/16	0.87
DHAF 8-8N	1/2	1/2	2.13	0.60	0.38	1 1/16	0.94

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Tube Adapter

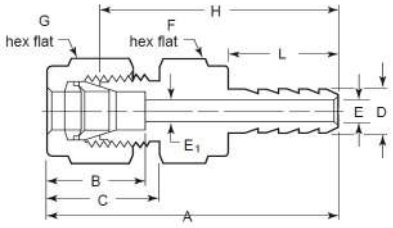




Part No.	End Connections		Dimensions, in.						
	Hose ID	Tube Size	A	B	D	E	E1	F	L
DHAT 2-2T	1/8	1/8	1.36	0.54	0.15	0.08	0.09	5/16	0.40
DHAT 2-4T	1/8	1/4	1.46	0.64	0.15	0.08	0.19	3/8	0.40
DHAT 4-4T	1/4	1/4	1.85	0.64	0.30	0.19	0.19	7/16	0.79
DHAT 4-6T	1/4	3/8	1.91	0.70	0.30	0.19	0.28	7/16	0.79
DHAT 4-6M	1/4	6mm	1.88	0.64	0.30	0.19	0.18	7/16	0.79
DHAT 5-4T	5/16	1/4	1.93	0.64	0.37	0.19	0.19	7/16	0.87
DHAT 6-4T	3/8	1/4	1.93	0.64	0.45	0.30	0.17	9/16	0.87
DHAT 6-6T	3/8	3/8	1.99	0.70	0.45	0.30	0.28	9/16	0.87
DHAT 6-8T	3/8	1/2	2.25	0.96	0.45	0.30	0.39	5/8	0.87
DHAT 8-6T	1/2	3/8	2.06	0.70	0.60	0.38	0.28	11/16	0.94
DHAT 8-8T	1/2	1/2	2.32	0.96	0.60	0.38	0.39	11/16	0.94
DHAT 12-12T	3/4	3/4	2.49	1.02	0.90	0.63	0.59	1 3/16	1.05
DHAT 16-16T	1	1	3.02	1.30	1.20	0.88	0.80	1 3/8	1.19

Dk-Lok Tube Fitting Adapter





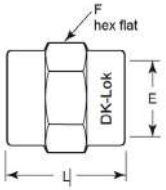
Part No.	End Connections		Dimensions, in.								
	Hose ID	Tube OD	A	B	D	E	E1	F	G	H	L
DHAD 2-2-	1/8	1/8	1.46	0.60	0.15	0.08	0.08	7/16	7/16	1.17	0.40
DHAD 4-2-	1/4	1/8	1.85	0.70	0.30	0.09	0.19	7/16	7/16	1.56	0.79
DHAD 4-4-	1/4	1/4	1.94	0.70	0.30	0.19	0.19	9/16	9/16	1.63	0.79
DHAD 6-4-	3/8	1/4	2.01	0.76	0.45	0.19	0.30	9/16	9/16	1.70	0.87
DHAD 6-6-	3/8	3/8	2.06	0.76	0.45	0.30	0.30	3/4	11/16	1.77	0.87
DHAD 8-8-	1/2	1/2	2.24	0.86	0.60	0.38	0.41	7/8	7/8	1.84	0.94

Hose Sleeve

Secure soft plastic or rubber hose using a hose sleeve.

- Light weight aluminum construction.
- Easy and quick installation with a wrench.
- Reusable.





Part No.	End Connections		Dimensions, in.		
	Hose ID	Hose OD	E	F	L
DHAS 2-4-AL	1/8	1/4	0.26	3/8	0.40
DHAS 4-6-AL	1/4	3/8	0.41	9/16	0.79
DHAS 4-7-AL	1/4	7/16	0.46	5/8	0.79
DHAS 4-8-AL	1/4	1/2	0.52	11/16	0.79
DHAS 5-7-AL	5/16	7/16	0.48	5/8	0.87
DHAS 6-8-AL	3/8	1/2	0.55	11/16	0.87
DHAS 6-9-AL	3/8	9/16	0.61	3/4	0.87
DHAS 7-10-AL	7/16	5/8	0.69	13/16	0.94
DHAS 8-11-AL	1/2	11/16	0.76	7/8	0.94
DHAS 12-16-AL	3/4	1	1.10	1 1/4	1.07

Field Assembly

1. Cut hose cleanly and squarely to the desired length.
2. Slide hose sleeve or clamp on hose
3. Lubricate hose.
4. Push hose on fitting barb end until hose bottoms up against fitting body hex.
4. Using a wrench tighten hose sleeve up to hose fitting hex. Or position hose clamp and secure with a screwdriver.

Note : Allow minimum 1/8" distance between hose clamp and body hex. to make sure of clamp being positioned on barbs.

Ordering information : Suffix **S** for stainless steel and **B** for brass fittings. Example : DHAD 4-4-**S**.

Safe Component Selection

The selection of component for any applications or system design must be considered to ensure safe performance. Component function, material compatibility, component ratings, proper installation, operation and maintenance remain the sole responsibility of the system designer and the user. DK-Lok accepts no liability for any improper selection, installation, operation or maintenance.

DK-LOK

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DK-Lok
Push-On Hose Fittings

Rev. 01-01
Aug. 2023

DK-LOK®
Push-On Hose Fittings

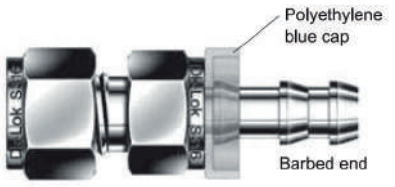
Push-On Hose Fittings

Rev.01-01
Aug.2023

DK-Lok Push-On hose fittings are designed for use with high-quality and low-pressure elastomeric compound hose such as textile braid reinforced synthetic rubber hose.

Features

- No special tools or clamps are required for installation.
- Assemblies can be done in seconds.
- DK-Lok Push-On fittings are reusable. Just replace the hose with no special tools.
- Faster and easier maintenance.



Design

Blue cap and barbed end of DK-Lok Push-On fittings are designed to use with low-pressure elastomeric hoses in table 1.

Table 1. **Hose dimensional and technical data**

Hose Size Designator	Nominal Hose Size inch	Average I.D		Average O.D.		Max. Working Pressure	
		inch	mm	inch	mm	psig	bar
4	1/4	1/4	6.3	0.50	12.7	350	24
6	3/8	3/8	10	0.63	16	300	20
8	1/2	1/2	12.5	0.78	20	300	20
10	5/8	5/8	16	0.91	23	300	20
12	3/4	3/4	19	1.03	26	300	20
16	1	1	25	1.28	32.6	175	12

Pressure ranges

Low pressure as indicated in Table 1.

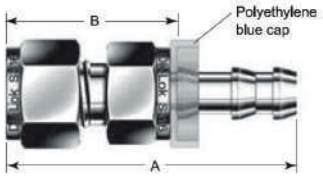
Temperature ranges

It depends on the materials of hose in use.

Applications

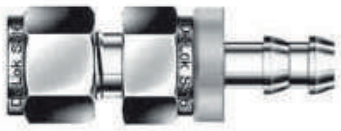
Instrument air system, vacuum, and general industrial applications.

Note: Use in the extreme pulsations is not recommended.



Dimensions are in inch unless otherwise specified.

DK-Lok Tube Fittings



Part No.	End Connections		Dimensions				
	Hose Nominal Sizes	DK-Lok Tube Fittings	Blue Cap OD	Body Hex	Nut Hex	A	B
						inch (mm)	
DPHD 4-4-S	1/4	1/4	0.68 (17.4)	1/2	9/16	1.97 (50.0)	1.21 (30.7)
DPHD 6-6-S	3/8	3/8	0.84 (21.5)	5/8	11/16	2.11 (53.6)	1.24 (31.5)
DPHD 8-8-S	1/2	1/2	0.98 (24.9)	13/16	7/8	2.47 (62.7)	1.42 (36.1)

Tube Adapters



Part No.	End Connections		Dimensions in. (mm)			
	Hose Nominal Sizes	DK-Lok Tube Adapter	Blue Cap OD	Body Hex	A	B
DPHA 4-4T-S	1/4	1/4	0.68 (17.4)	9/16	1.93 (49.0)	1.17 (29.7)
DPHA 6-6T-S	3/8	3/8	0.84 (21.5)	3/4	2.03 (51.6)	1.16 (29.5)
DPHA 8-8T-S	1/2	1/2	0.98 (24.9)	7/8	2.47 (62.7)	1.42 (36.1)
DPHA 12-12T-S	3/4	3/4	1.26 (32.2)	1-1/16	3.14 (79.8)	1.48 (37.6)
DPHA 4-6M-S	1/4 in.	6 mm	0.68 (17.4)	9/16	1.93 (49.0)	1.17 (29.7)
DPHA 4-8M-S		8 mm	0.68 (17.4)	9/16	1.97 (50.1)	1.16 (29.5)
DPHA 6-8M-S	3/8 in.		0.84 (21.5)	3/4	2.0 (50.9)	1.18 (30.0)
DPHA 6-10M-S		10 mm	0.84 (21.5)	3/4	2.03 (51.6)	1.16 (29.5)
DPHA 8-12M-S	1/2 in.	12 mm	0.98 (24.9)	7/8	2.47 (62.7)	1.42 (36.1)
DPHA 12-18M-S	3/4 in.	18 mm	1.26 (32.2)	1-1/16	3.14 (79.8)	1.48 (37.6)

Unions



Part No.	End Connections	Dimensions			
	Hose Nominal Sizes	Blue Cap OD	Body Hex	A	B
				inch (mm)	
DPHU 4-4-S	1/4	0.68 (17.4)	9/16	2.07 (52.6)	1.41 (36.0)
DPHU 6-6-S	3/8	0.84 (21.5)	3/4	2.25 (57.2)	1.38 (35.2)
DPHU 8-8-S	1/2	0.98 (24.9)	7/8	2.61 (66.3)	1.56 (39.8)
DPHU 12-12-S	3/4	1.26 (32.2)	1-1/16	3.87 (98.4)	2.21 (56.2)

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Male Connectors

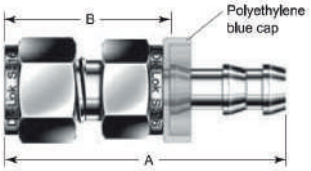


Part No.	End Connections		Dimensions in. (mm)			
	Hose Nominal Sizes	Male Pipe Thread	Blue Cap OD	Body Hex	A	B
DPHM 4-4N-S	1/4	1/4 NPT	0.68 (17.4)	9/16	1.68 (42.7)	0.92 (23.4)
DPHM 6-4N-S	3/8		0.84 (21.5)	11/16	1.80 (45.7)	0.93 (23.7)
DPHM 6-6N-S		3/8 NPT		11/16		
DPHM 8-8N-S	1/2	1/2 NPT	0.98 (24.9)	7/8	2.19 (55.6)	1.14 (29.1)
DPHM 12-12N-S	3/4	3/4 NPT	1.26 (32.2)	1-1/16	2.81 (71.4)	1.15 (29.2)
DPHM 4-4R-S	1/4	1/4 BSPT	0.68 (17.4)	9/16	1.68 (42.7)	0.92 (23.4)
DPHM 6-6R-S	3/8	3/8 BSPT	0.84 (21.5)	11/16	1.80 (45.7)	0.93 (23.7)
DPHM 8-8R-S	1/2	1/2 BSPT	0.98 (24.9)	7/8	2.19 (55.6)	1.14 (29.1)
DPHM 12-12R-S	3/4	3/4 BSPT	1.26 (32.2)	1-1/16	2.81 (71.4)	1.15 (29.2)

Field Assembly

Hose Length

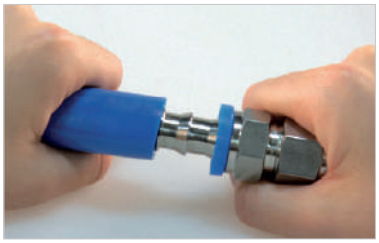
To determine the hose cut length out of bulk hose, subtract dimension B from the desired overall fitting and hose assembly length.



Assembly



❶ Using a sharp knife, cut hose end cleanly and squarely.

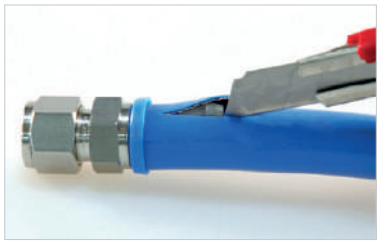


❷ With a light oil or soapy water, lubricate the barb end and/or hose I.D.
Note: Do not use heavy oil or grease to lubricate.
❸ Insert fitting barb end into hose until first barb is engaged in the hose.



❹ Hold fitting end against a flat surface. Grip hose approximately one inch from blue cap and push with a steady force until the hose bottoms inside the blue cap firmly.

Disassembly



❶ Place fitting and hose assembly in place and cut hose lengthwise from the blue cap approximately one inch.
Note: Not to nick barbs during cutting the hose.



❷ Grip hose and bend to expose barbs, then remove hose with a sharp downward tug.

Ordering Information

DPHD | 4-4 | S

DK-Lok Identification	Push-On Fitting Designator	End Connection Designator	Size Designator	Material Designator
D	**PH**	**D** : DK-Lok Tube Fitting **A** : DK-Lok Tube Adapter **U** : Barb to Barb **M** : Male Pipe Thread	• 4: 1/4” • 10: 5/8” • 5: 5/16” • 12: 3/4” • 6: 3/8” • 16: 1” • 8: 1/2”	**S** : SS316

The dimensions shown in this catalog are for reference only and are subject to change.

Safe Component Selection

The selection of component for any applications or system design must be considered to ensure safe performance. Component function, material compatibility, component ratings, proper installation, operation and maintenance remain the sole responsibility of the system designer and the user. DK-Lok accepts no liability for any improper selection, installation, operation or maintenance.

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JIS Bite TypeTube Fittings

Rev. 01-01
Aug. 2023

DK-LOK®
JIS Bite Type Tube Fittings

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Tube to Tube

BU Straight union

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BL Union Elbow

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BT Union Tee

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BBU Straight Bulkhead Union

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BBL Bulkhead Elbow

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BLMC Long Male Connector

8

BMC-R Male Connector

9

BMC-G Male Connector

10

BOM Male Connector (For O-ring)

11

BLM Male Elbow

12

BLLM Long Male Elbow

13

BOLM O-Seal Male Elbow

13

BBTM Male Branch Tee

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BRTM Male Run Tee

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Banjo Fittings

BSLM Banjo Elbow

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BC Cap

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BP Plug

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BHUF Hose Female Union

21

BHBM Hose Bulkhead Male Union

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BHBF Hose Bulkhead Female Union

22

BHLM Hose Male Elbow

23

BHLF Hose Female Elbow

23

BHBLM Hose Bulkhead Male Elbow

24

BHBLF Hose Bulkhead Female Elbow

24

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26

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26

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Positionable Tube

BLA Positionable Elbow

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BBTA Positionable Branch Tee

28

BRTA Positionable Run Tee

28

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Bite Type Tube Fittings

Rev.01-01
Aug.2023

DK Bite Type Tube Fitting is manufactured to JIS B2351 & KS B1535 under strict ISO 9001 procedure and Type approved by DNV - Norway.

Standard of DK Bite Type Fitting

Bite type fitting consists of three parts : Body, Sleeve and Nut, and is designed to work over medium and heavy wall tubing. See Fig-1

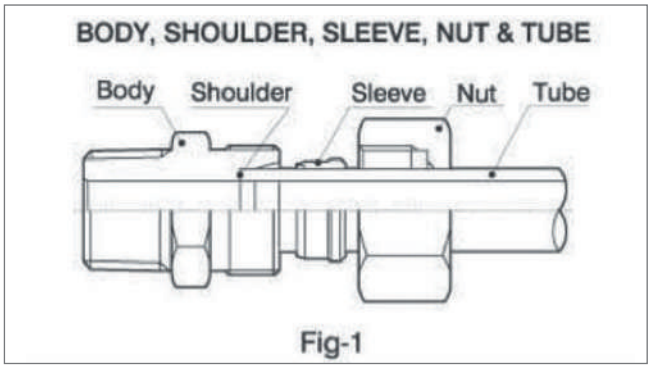


Fig-1

When tightening nut, sleeve is driven forward on the tube then bites the tube with the edge of sleeve, this is how sealing is achieved and results in internal ridge inside the tube. See Fig-2

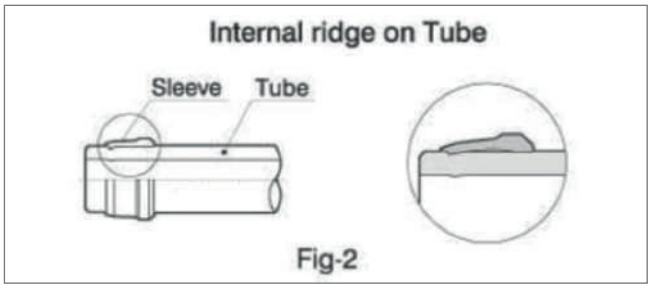


Fig-2

Typical Raw Material List

Parts	Carbon Steel	Stainless Steel	Brass
Forged Body	JISG4051 S20C-S48C	SUS316-SUS304	JIS H3250 C3771
Bar stock Body	JISG4051 S20C-S48C	SUS316-SUS304	JIS H3250 C3604
Cold Formed Nut	JISG4051 S10C-S20C	SUS316-SUS304	
Bar stock Nut	JISG4051 S20C-S48C	SUS316-SUS304	JIS H3250 03604
Sleeve	JISG4051 S10C	SUS316-SUS304	JIS H3250 C3604

Fitting Material Pressure Ranges

(Kg f/cm²)

O.D (mm)	6-12	15	16-20	22	25	28	30-35	38	40-42
S.Steel	500	400	400	350	350	250	250	210	210
C.Steel	500	500	400	400	350	350	250	250	210
Brass	250	-	210	210	170	170	150	150	120

O.D (inch)	1/8"~1/4"	3/8"-1/2"	3/4"	1"	1-1/4"	1-1/2"
S.Steel	500	400	350	250	210	210
C.Steel	500	400	350	250	210	210
Brass	250	210	170	150	120	120

Pressure is rated at ambient temperature.

Allowable working temperature

1. For fitting materials

Material	Temperature
Steel	-40°C to 12000 (DIN 3859)
Brass	-60°C to 175°C
Stainless Steel	-60°C to 400°C (DIN 17440)

Note : temperature limits can greatly depend on the medium.

2. For Elastomer seals

Material	Temperature
NBR (e.g. Perbunan®)	-35°C to 100°C
FPM (e.g. Viton®)	-25°C to 200°C
PTEF (e.g. Teflon®)	-60°C to 240°C

Note : When seal is used in the fitting, com pare allowable working temperature between seal and fitting material and apply the lowest temperature

Pressure reduction with temperature

Following pressure reduction is applicable to the rating in the fitting material pressure range for the elevated temperatures.

Materials of fittings	Temperature Range	Reduction of pressure
Steel	-40°C to 120°C	-
Brass	-60°C to 175°C	30%
Stainless Steel	-60°C to 20°C	-
Stainless Steel	50°C	4%
Stainless Steel	100°C	11%
Stainless Steel	200°C	20%
Stainless Steel	300°C	29%
Stainless Steel	400°C	33%

Using the same tube material as fitting is essential for the same pressure reduction, thermal compatibility and corrosion resistance.

Surface Protection

Steel Bite type fittings are black zinc plated. Yellow or white zinc plating is optional. Steel wieldable fittings are phosphated.

Stainless steel Bite type fittings are passivated.

Brass Bite type fittings are acid cleaned. Optional chrome plating on brass fitting is available.

Tubing Selection

* Carbon Steel :

Seamless, welded, fully annealed and redrawn tube suitable for bending with maximum hardness Rockwell B72

* Stainless Steel :

Seamless, welded, fully annealed and redrawn tube suitable for bending with maximum hardness Rockwell B90

* Copper :

For seamless coils, soft or light annealed, maximum hardness Rockwell F55. For straight lengths, light drawn and general purpose, maximum hardness 60 on Rockwell 30T scale.

Note : Do not bend a tube placed in the fittings.
This may cause leakage.

Assembly Instructions

Preparing the tube

Tube and Bite type tube fitting are an intrinsic part of a tube system, therefore Dk strongly advises you to take care in handling the tube in order to have the pressure tight system.

1. Cut the tube square
2. Deburr inside and outside tube end

Tube Bending

Keeping a certain length of tubing straight from fitting shoulder to the starting point of tube bend prevents the deformed section at a bend entering the fitting. This will ensure safety system.

1. Minimum straight length of tube from the starting point of tube bend to the tube end may be 3 times height of the nut

Assembly Instructions

Step 1. Cut the tube at right angle with a reliable tube cutter and de-burr inside and outside tube end with a deburring tool.

Step 2. Set a nut and sleeve on the tube. Make sure the sleeve and the nut are facing the fitting.

Step 3. Lubricate fitting threads and sleeve. Insert tube end into fitting body until it is firmly seated on bottom (fitting shoulder) and hand-tighten the nut

Step 4. Tighten nut 1-1/2 turns with a wrench by holding fitting body with a back up wrench. Marking the nut may be necessary for counting the number of turn.

Note : In case of thin wall tubing make-up, more than 1-1/2 turns may be required.

Checking up the Bite condition

To ensure pressure-tight connection, all Dk Bite type fittings must be disassembled prior to service to check up if small ridge inside the tube is completely formed around front edge of sleeve. Otherwise tighten slightly more to have it.

Sleeve may rotate on the tube that doesn't mean wrong installation. The sleeve shall be refitted once the nut is retightened.

Note : In case you see no ridge formed on the tube, this would be possibly resulted from not fully bottomed tube or not fully tightened nut. In heavy wall tubing, though you may not see the ridge, the pressure-tight seal is made as far as the sleeve firmly bites the tube and is constrained axially.

One of Dk Bite Type Fitting benefits is reusable many times. Further to check up the bite condition, you need to know how to do reassembly.

Reassembly Instructions

Fitting can be used many times. To ensure this, parts must be clean and free of defects.

Step 1. Insert the tube into fitting body until sleeve seats firmly in the fitting and hand-tighten the nut.

Step 2. Tighten the nut with a wrench by holding the fitting body with a backup wrench until a sharp rise in torque is felt. Further tighten the nut 1/4 to 1/2 turn.

Now the reassembly is complete and ready to service.

In most cases, leakage problem occurs :

1. When the tube is not fully bottomed
2. When the nut is not tightened enough
3. When the tube is of scratches or oval

If you still face a leakage problem even if you went through above 1 to 3, it may be the problem of extremely hard tube which is not suitable for bending.

Note : Steel sleeve is not supposed to be loose back and forth beyond bite point whereas Stainless sleeve could possibly move back and forth due to its more spring-like characteristics.

Safe Component Selection

The selection of component for any applications, system design must be considered to ensure safe performance.

Component function, material compatibility, component ratings, proper installation, operation and maintenance remain the sole responsibility of the system designer and the user. Dk Tech accepts no liability for any improper installation, operation and maintenance.

Note : All the information here are not for design purpose just reference only and the accuracy of information here is not liability of our company.

Ordering Information

Fittings ends and configuration are identified by symbolized letters and the series of numbers.

Example :	B	MC	06	-	02	R	-	C
	①	②	③		④	⑤		⑥

① DK Bite Type Fitting designated as B
② Name of Fittings : See products Index
③ Tube O.D. : See Tube and Pipe O.D. Designator
④ Pipe Threads : See Pipe Thread Designator
⑤ Pipe Thread Symbols : See Pipe Thread Symbol Designator
⑥ Material : See Fitting Material Designator

③ Tube and Pipe O.D. Designator

Metric Tube	O.D	4	6	8	10	12.....30.....50			
	Designation	04	06	08	10	12.....30.....50			
SCH. Pipe	Nominal Dia.	2/8	1/4	3/8	1/2	3/4	1	1-1/4	1-1/2
	O.D	10.5	13.8	17.3	21.7	27.2	34.0	42.7	48.6
	Designation	06A	08A	10A	15A	20A	25A	32A	40A

④ Pipe Thread Designator

Thread	1/8	1/4	3/8	1/2	3/4	1	1-1/4	1-1/2	2
Designation	01	02	03	04	06	08	10	12	16

⑤ Pipe Thread Symbol Designator

Type	Symbol	Specification
Taper Threads	R	JIS B 0203 (PT), ISO 7/1
	N	ANSI B1.20.1 (NPT)
Parallel Threads	G	JIS B0202 (PF), ISO 228/1

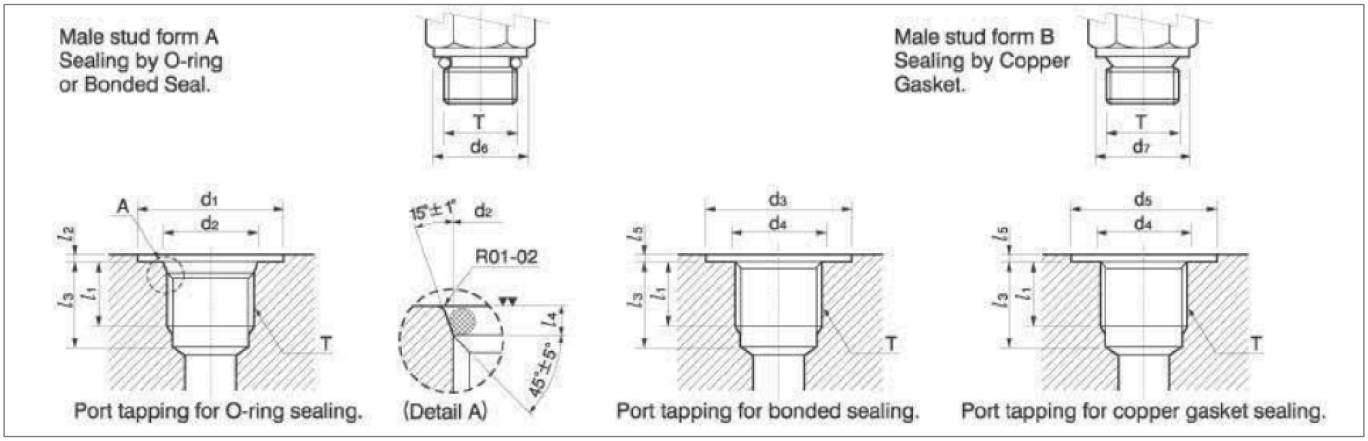
⑥ Fitting Material Designator

Fitting Material	S.S316	S.S304	C.Steel	Brass
Identifier	S	4	C	B

Custom designs

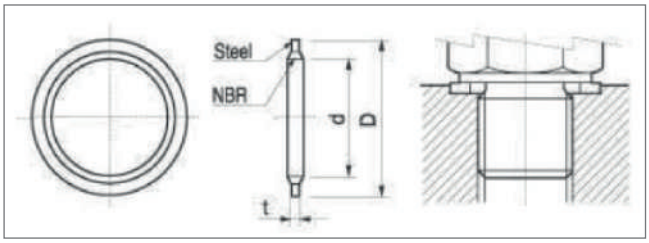
Custom designs are welcome to help our customer go round a problem. You may therefore no longer need to redesign or increase the cost of your installation by being with us next to you.

Male Stud form and Sealing to JIS B2351



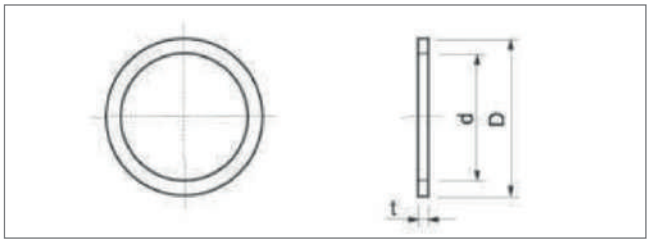
T	d1	d2 +0.1 0	d3 +0.3 0	Max d4	d5 +0.3 0	d6	d7	Min l1	Max l2	Min l3	l4 +0.4 0	l5	Suitable Seal		
													O-Ring	Bonded Seal	Copper Gasket
PF 1/8	18	11.6	17.4	9.7	18.2	14	14	10	1	15	2	1	P8	BBG-01	BCG-01
PF 1/4	24	15.6	20 9	13.1	13.1	19	18	14	1.5	20	2.5	1	P11	BBG-02	BCG-02
PF 3/8	28	18.6	24.4	16.6	16.6	22	21.5	14	2	20	2.5	1	P14	BBG-03	BCG-03
PF 1/2	34	22.6	29 4	20.9	20.9	27	25.5	17	2.5	25	2.5	1	P18	BBG-04	BCG-04
PF 3/4	45	29.8	34.9	26.4	26.4	36	31.5	19	2.5	27	3.5	1	P24	BBG-06	BCG-06
PF 1	51	35.8	41.9	33.2	33.2	41	38	22	2.5	31	3.5	1	P29	BBG-08	BCG-08
PF 1-1/4	62	44.8	50.9	41.9	41.9	50	48.5	24	2.5	33	3.5	1	P38	BBG-10	BCG-10
PF 1-1/2	68	50.8	57.4	47.8	47.8	55	53.5	25	2.5	34	3.5	1	P44	BBG-12	BCG-12
PF 2	76	67.2	69 4	59.6	59 6	75	66	29	2.5	38	3.5	1	P56	BBG-16	BCG-16

Bonded Seal



PART No.	Male Thread	d	D	t
BBG-01	PF 1/8	9.9	17	2
BBG-02	PF 1/4	13.3	20.5	2
BBG-03	PF 3/8	16.8	24	2
BBG-04	PF 1/2	21.1	29	2
BBG-06	PF 3/4	26.6	34.5	2
BBG-08	PF 1	33.4	41.5	2.3
BBG-10	PF 1-1/4	42.1	50.5	2.3
BBG-12	PF 1-1/2	48.0	57	2.3
BBG-16	PF 2	59.8	69	2.3

Copper Gasket

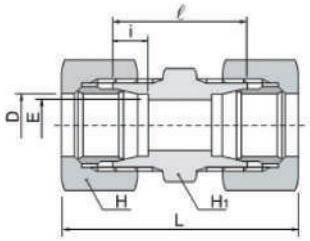


PART No.	Male Thread	d	D	t
BCG-01	PF 1/8	10	18	2
BCG-02	PF 1/4	14	22	2
BCG-03	PF 3/8	17	26	2
BCG-04	PF 1/2	22	32	2
BCG-06	PF 3/4	27	38	2
BCG-08	PF 1	34	42	2
BCG-10	PF 1-1/4	43	53	2
BCG-12	PF 1-1/2	49	60	2
BCG-16	PF 2	61	72	2

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

BU
Straight Union

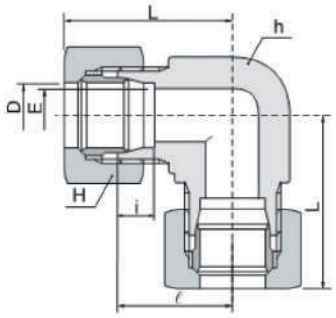




Designations	Tube O.D. D			E	Width across flat H1	Width across flat H	i	ℓ	Approx L
BU-06		6		4	14	14	7	30	51
BU-08		8		6	17	17	7	31	52
BU-10		10		8	17	19	7	31	54
BU-12		12		10	19	22	7	31	54
BU-15		15		12	24	27	7.5	36	61
BU-16		16		13	27	30	7.5	36	61
BU-18		18		14	27	32	8	36	61
BU-20		20		17	30	36	8	38	63
BU-22		22		18	32	36	9	38	63
BU-25		25		20	36	41	10	39	66
BU-28		28		22	41	46	10	43	71
BU-30		30		25	41	46	10	43	72
BU-32		32		26	46	50	11	44	73
BU-35		35		28	46	55	11	44	79
BU-38		38		32	50	60	12	46	85
BU-40		40		32	55	60	12	55	94
BU-42		42		34	55	60	12	55	94
BU-06A	1/8		10.5	8	17	19	7	31	54
BU-08A	1/4		13.8	11	22	24	7.5	36	60
BU-10A	3/8		17.3	14	27	32	8	36	61
BU-15A	1/2		21.7	18	32	36	9	38	63
BU-20A	3/4		27.2	22	41	46	10	43	71
BU-25A	1		34.0	28	46	55	11	44	79
BU-32A	1-1/4		42.7	34	60	65	12	57	98
BU-40A	1-1/2		48.6	40	65	75	12	60	103

BL
Union Elbow

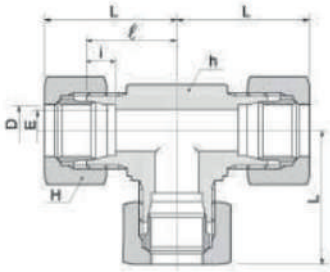




Designations	Tube O.D. D			E	Width across flat h	Width across flat H	i	ℓ	Approx L
BL-06		6		4	14	14	7	20	30.5
BL-08		8		6	17	17	7	23	33.5
BL-10		10		8	17	19	7	23	34.5
BL-12		12		10	19	22	7	24	35.5
BL-15		15		12	24	27	7.5	29	41.5
BL-16		16		13	27	30	7.5	32	44.5
BL-18		18		14	27	32	8	32	44.5
BL-20		20		17	30	36	8	33	45.5
BL-22		22		18	32	36	9	34	46.5
BL-25		25		20	36	41	10	36	49.5
BL-28		28		22	41	46	10	41	55
BL-30		30		25	41	46	10	41	55.5
BL-32		32		26	46	50	11	45	59.5
BL-35		35		28	46	55	11	46	63.5
BL-38		38		32	50	60	12	50	69.5
BL-40		40		32	55	60	12	55	74.5
BL-42		42		34	55	60	12	55	74.5
BL-06A	1/8		10.5	8	17	19	7	23	34.5
BL-08A	1/4		13.8	11	22	24	7.5	28	40
BL-10A	3/8		17.3	14	27	32	8	32	44.5
BL-15A	1/2		21.7	18	32	36	9	34	46.5
BL-20A	3/4		27.2	22	41	46	10	41	55
BL-25A	1		34.0	28	46	55	11	46	63.5
BL-32A	1-1/4		42.7	34	60	65	12	57	77.5
BL-40A	1-1/2		48.6	40	65	75	12	62	83.5

BT
Union Tee

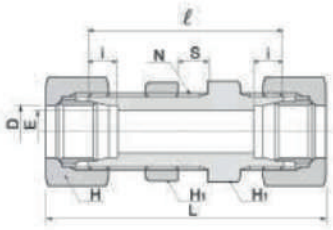




Designations	Tube O.D. D			E	Width across flat h	Width across flat H	i	ℓ	Approx L
BT-06		6		4	14	14	7	20	30.5
BT-08		8		6	17	17	7	23	33.5
BT-10		10		8	17	19	7	23	34.5
BT-12		12		10	19	22	7	24	35.5
BT-15		15		12	24	27	7.5	29	41.5
BT-16		16		13	27	30	7.5	32	44.5
BT-18		18		14	27	32	8	32	44.5
BT-20		20		17	30	36	8	33	45.5
BT-22		22		18	32	36	9	34	46.5
BT-25		25		20	36	41	10	36	49.5
BT-28		28		22	41	46	10	41	55
BT-30		30		25	41	46	10	41	55.5
BT-32		32		26	46	50	11	45	59.5
BT-35		35		28	46	55	11	46	63.5
BT-38		38		32	50	60	12	50	69.5
BT-40		40		32	55	60	12	55	74.5
BT-42		42		34	55	60	12	55	74.5
BT-06A	1/8		10.5	8	17	19	7	23	34.5
BT-08A	1/4		13.8	11	22	24	7.5	28	40
BT-10A	3/8		17.3	14	27	32	8	32	44.5
BT-15A	1/2		21.7	18	32	36	9	34	46.5
BT-20A	3/4		27.2	22	41	46	10	41	55
BT-25A	1		34.0	28	46	55	11	46	63.5
BT-32A	1-1/4		42.7	34	60	65	12	57	77.5
BT-40A	1-1/2		48.6	40	65	75	12	62	83.5

BBU
Straight Bulkhead Union

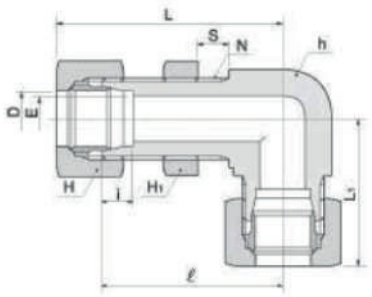




Designations	Tube O.D. D			E	Width across flat H1	Width across flat H	i	ℓ	Approx L	Panel Hole Drill Size N	Max.Panel Thickness S
BBU-06		6		4	17	14	7	51	72	12.5	13
BBU-08		8		6	19	17	7	51	72	14.5	13
BBU-10		10		8	22	19	7	52	75	16.5	13
BBU-12		12		10	24	22	7	52	75	18.5	13
BBU-15		15		12	27	27	7.5	59	84	22 5	15
BBU-16		16		13	30	30	7.5	61	86	24.5	15
BBU-18		18		14	32	32	8	63	88	26.5	15
BBU-20		20		17	36	36	8	63	88	28.5	15
BBU-22		22		18	36	36	9	64	89	30.5	15
BBU-25		25		20	41	41	10	64	91	35.5	15
BBU-28		28		22	46	46	10	69	97	38.5	15
BBU-30		30		25	46	46	10	69	98	40.5	15
BBU-32		32		26	50	50	11	73	102	42.5	15
BBU-35		35		28	50	55	11	73	108	45.5	15
BBU-38		38		32	55	60	12	76	115	48.5	15
BBU-40		40		32	60	60	12	87	126	52.5	15
BBU-06A	1/8		10.5	8	22	19	7	52	75	16.5	13
BBU-08A	1/4		13.8	11	27	24	7.5	59	83	20.5	15
BBU-10A	3/8		17.3	14	32	32	8	63	88	26.5	15
BBU-15A	1/2		21.7	18	36	36	9	64	89	30.5	15
BBU-20A	3/4		27.2	22	46	46	10	69	97	38.5	15
BBU-25A	1		34.0	28	50	55	11	73	108	45.5	15
BBU-32A	1-1/4		42.7	34	65	65	12	90	131	56.5	15
BBU-40A	1-1/2		48.6	40	70	75	12	93	136	64.5	15

BBL
Bulkhead Elbow

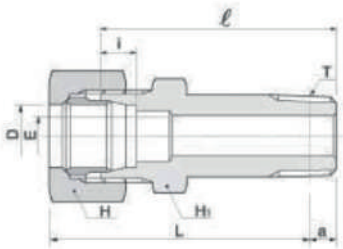




Designations	Tube O.D. D	E	Width across flat			i	ℓ	Approx		Panel Hole Drill Size N	Max.Panel Thickness S
			h	H1	H			L1	L		
BBL-06	6	4	17	17	14	7	45	33.5	55.5	12.5	13
BBL-08	8	6	19	19	17	7	46	34.5	56.5	14.5	13
BBL-10	10	8	22	22	19	7	48	37.5	59.5	16.5	13
BBL-12	12	10	24	24	22	7	49	38.5	60.5	18.5	13
BBL-15	15	12	27	27	27	7.5	57	43.5	69.5	22.5	15
BBL-16	16	13	30	30	30	7.5	59	45.5	71.5	24.5	15
BBL-18	18	14	32	32	32	8	63	45.5	75.5	26.5	15
BBL-20	20	17	36	36	36	8	65	45.5	77.5	28.5	15
BBL-22	22	18	36	36	36	9	65	48.5	77.5	30.5	15
BBL-25	25	20	41	41	41	10	68	52.5	81.5	35.5	15
BBL-28	28	22	46	46	46	10	70	55	84	38.5	15
BBL-30	30	25	46	46	46	10	74	60.5	88.5	40.5	15

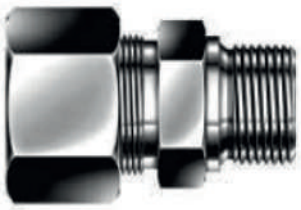
BLMC
Long Male Connector

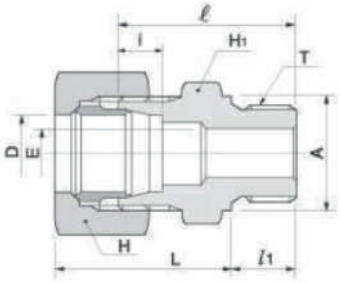




Designations	Tube O.D. D			(PT) T	E	Basic Gauge length a	Width across flat		i	ℓ	Approx
							H1	H			L
BLMC06-01R		6		1/8	4	3.97	14	14	7	63	69.5
BLMC08-02R		8		1/4	6	6.01	17	17	7	70	74.5
BLMC10-02R		10		1/4	7	6.01	17	19	7	71	76.5
BLMC10-03R		10		3/8	8	6.35	19	19	7	72	77
BLMC12-02R		12		1/4	7	6.01	19	22	7	71	76.5
BLMC12-03R		12		3/8	9	6.35	19	22	7	72	77
BLMC15-03R		15		3/8	9	6.35	24	27	7.5	81	87
BLMC15-04R		15		1/2	12	8.16	24	27	7.5	86	90.5
BLMC16-04R		16		1/2	12	8.16	27	30	7.5	86	90.5
BLMC18-04R		18		1/2	12	8.16	27	32	8	86	90.5
BLMC20-06R		20		3/4	16	9.53	30	36	8	92	95
BLMC22-06R		22		3/4	16	9.53	32	36	9	93	96
BLMC25-08R		25		1	20	10.39	36	41	10	99	102
BLMC28-08R		28		1	22	10.39	41	46	10	104	107.5
BLMC30-10R		30		1-1/4	25	12.70	46	46	10	109	111
BLMC32-10R		32		1-1/4	26	12.70	46	50	11	110	112
BLMC06A-02R	1/8		10.5	1/4	7	6.01	17	19	7	71	76.5
BLMC08A-03R	1/4		13.8	3/8	9	6.35	22	24	7.5	81	86.5
BLMC10A-03R	3/8		17.3	3/8	9	6.35	27	32	8	81	87
BLMC15A-06R	1/2		21.7	3/4	16	9.53	32	36	9	93	96
BLMC20A-08R	3/4		27.2	1	22	10.39	41	46	10	104	107.5

BMC-R
Male Connector





Designations	Tube O.D. D			(PT) T	E	Basic Gauge length a	Width across flat		i	ℓ	Approx
							H1	H			L
BMC06-01R		6		1/8	4	3.97	14	14	7	28	34.5
BMC06-02R		6		1/4	4	6.01	17	14	7	33	37.5
BMC06-03R		6		3/8	4	6.35	19	14	7	34	38.5
BMC08-01R		8		1/8	4	3.97	17	17	7	29	35.5
BMC08-02R		8		1/4	6	6.01	17	17	7	33	37.5
BMC10-02R		10		1/4	7	6.01	17	19	7	33	38.5
BMC10-03R		10		3/8	8	6.35	19	19	7	34	39
BMC10-04R		10		1/2	8	8.16	22	19	7	39	42.5
BMC12-02R		12		1/4	7	6.01	19	22	7	33	38.5
BMC12-03R		12		3/8	9	6.35	19	22	7	34	39
BMC12-04R		12		M2	10	8.16	24	22	7	39	42.5
BMC15-03R		15		3/8	9	6.35	24	27	7.5	37	43
BMC15-04R		15		1/2	12	8.16	24	27	7.5	41	45.5
BMC16-03R		16		3/8	9	6.35	27	30	7.5	37	43
BMC16-04R		16		1/2	12	8.16	27	30	7.5	41	45.5
BMC18-04R		18		1/2	12	8.16	27	32	8	41	45.5
BMC20-04R		20		1/2	12	8.16	30	36	8	43	47.5
BMC20-06R		20		3/4	16	9.53	30	36	8	45	48
BMC22-04R		22		1/2	12	8.16	32	36	9	43	47.5
BMC22-06R		22		3/4	16	9.53	32	36	9	45	48
BMC25-08R		25		1	20	10.39	36	41	10	49	52
BMC28-08R		28		1	22	10.39	41	46	10	51	54.5
BMC30-08R		30		1	22	10.39	41	46	10	51	55
BMC30-10R		30		1-1/4	25	12.70	46	46	10	55	57
BMC32-10R		32		1-1/4	26	12.70	46	50	11	55	57
BMC35-10R		35		1-1/4	28	12.70	46	55	11	55	60
BMC38-12R		38		1-1/2	32	12.70	50	60	12	57	64
BMC40-12R		40		1-1/2	32	12.70	55	60	12	62	69
BMC42-12R		42		1-1/2	34	12.70	55	60	12	62	69
BMC06A-01R	1/8		10.5	1/8	4	3.97	17	19	7	29	36.5
BMC06A-02R	1/8		10.5	1/4	7	6.01	17	19	7	33	38.5
BMC08A-02R	1/4		13.8	1/4	7	6.01	22	24	7.5	36	42
BMC08A-03R	1/4		13 8	3/8	9	6.35	22	24	7.5	37	42.5
BMC10A-03R	3/8		17.3	3/8	9	6.35	27	32	8	37	43
BMC10A-04R	3/8		17.3	1/2	12	8.16	27	32	8	41	45.5
BMC15A-04R	1/2		21.7	1/2	12	8.16	32	36	9	43	47.5
BMC15A-06R	1/2		21.7	3/4	16	9.53	32	36	9	45	48
BMC20A-06R	3/4		27.2	3/4	16	9.53	41	46	10	48	52.5
BMC20A-08R	3/4		27.2	1	22	10.39	41	46	10	51	54.5
BMC25A-08R	1		34.0	1	22	10.39	46	55	11	52	59
BMC25A-10R	1		34.0	1-1/4	28	12.70	46	55	11	55	60
BMC32A-10R	1-1/4		42.7	1-1/4	31	12.70	60	65	12	64	71
BMC32A-12R	1-1/4		42.7	1-1/2	34	12.70	60	65	12	64	71
BMC40A-12R	1-1/2		48.6	1-1/2	36	12.70	65	75	12	67	76
BMC40A-16R	1-1/2		486	2	40	15.88	65	75	12	71	76.5

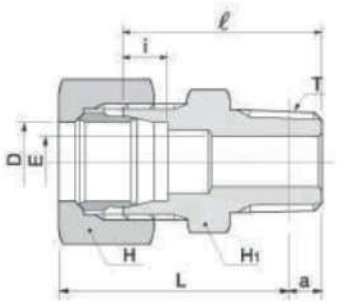
All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

BMC-G

Male Connector

Male Stud Form B sealing by copper gasket
See page 5





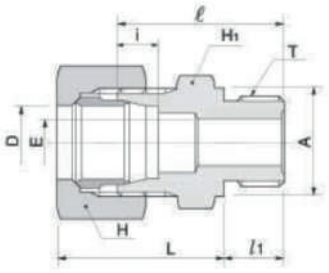
Designations	Tube O.D. D			(PT) T	E	Width across flat		i	ℓ	A	l1	Approx
						H1	H					L
BMC06-01G		6		1/8	4	14	14	7	28	14	8	30.5
BMC06-02G		6		1/4	4	19	14	7	33	18	12	31.5
BMC08-01G		8		1/8	4	17	17	7	28	14	8	30.5
BMC08-02G		8		1/4	6	19	17	7	33	18	12	31.5
BMC10-02G		10		1/4	6	19	19	7	33	18	12	32.5
BMC10-03G		10		3/8	8	22	19	7	34	21.5	12	33.5
BMC12-02G		12		1/4	6	19	22	7	33	18	12	32.5
BMC12-03G		12		3/8	8	22	22	7	34	21.5	12	33.5
BMC12-04G		12		1/2	10	27	22	7	39	25.5	14	36.5
BMC15-03G		15		3/8	8	24	27	7.5	37	21.5	12	37.5
BMC15-04G		15		1/2	12	27	27	7.5	41	25.5	14	39.5
BMC16-04G		16		1/2	12	27	30	7.5	41	25.5	14	39.5
BMC18-04G		18		1/2	12	27	32	8	41	25.5	14	39.5
BMC20-06G		20		3/4	16	32	36	8	46	31.5	16	42.5
BMC22-04G		22		1/2	12	32	36	9	43	25.5	14	41.5
BMC22-06G		22		3/4	16	32	36	9	46	31.5	16	42.5
BMC25-06G		25		3/4	16	36	41	10	46	31.5	16	43.5
BMC25-08G		25		1	20	41	41	10	50	38	18	45.5
BMC28-08G		28		1	22	41	46	10	52	38	18	48
BMC30-08G		30		1	22	41	46	10	52	38	18	48.5
BMC30-10G		30		1-1/4	25	50	46	10	57	48.5	20	51.5
BMC32-10G		32		1-1/4	26	50	50	11	57	48.5	20	51.5
BMC35-10G		35		1-1/4	28	50	55	11	57	48.5	20	54.5
BMC38-12G		38		1-1/2	32	55	60	12	58	53.5	21	56.5
BMC40-12G		40		1-1/2	32	55	60	12	62	53.5	21	60.5
BMC42-12G		42		1-1/2	34	55	60	12	62	53.5	21	60.5
BMC06A-01G	1/8		10.5	1/8	4	17	19	7	29	14	8	32.5
BMC06A-02G	1/8		10.5	1/4	6	19	19	7	33	18	12	32.5
BMC08A-02G	1/4		13.8	1/4	6	22	24	7.5	36	18	12	36
BMC08A-03G	1/4		13.8	3/8	8	22	24	7.5	36	21.5	12	36
BMC10A-03G	3/8		17.3	3/8	8	27	32	8	38	21.5	12	38.5
BMC10A-04G	3/8		17.3	1/2	12	27	32	8	41	25.5	14	39.5
BMC15A-04G	1/2		21.7	1/2	12	32	36	9	43	25.5	14	41.5
BMC15A-06G	1/2		21.7	3/4	16	32	36	9	46	31.5	16	42.5
BMC20A-06G	3/4		27.2	3/4	16	41	46	10	50	31.5	16	48
BMC20A-08G	3/4		27.2	1	22	41	46	10	52	38	18	48
BMC25A-08G	1		34.0	1	22	46	55	11	54	38	18	53.5
BMC25A-10G	1		34.0	1-1/4	28	50	55	11	57	48.5	20	54.5
BMC32A-10G	1-1/4		42.7	1-1/4	31	60	65	12	63	48.5	20	62.5
BMC32A-12G	1-1/4		42.7	1-1/2	34	60	65	12	64	53.5	21	62.5
BMC40A-12G	1-1/2		48.6	1-1/2	36	65	75	12	65	53.5	21	65.5
BMC40A-16G	1-1/2		48.6	2	40	70	75	12	73	66	25	69.5

BOM

Male Connector (For O-ring)

Male Stud Form A
sealing by O-ring
or Bonded seal
See page 5



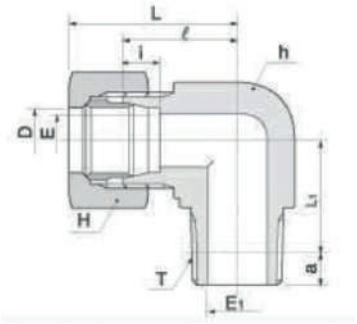


Designations	Tube O.D. D			(PF) T	E	Width across flat		i	A	l1	ℓ	Approx
						H1	H					L
BOM06-01G		6		1/8	4	14	14	7	14	8	28	30.5
BOM06-02G		6		1/4	4	19	14	7	19	12	33	31.5
BOM08-01G		8		1/8	4	17	17	7	14	8	28	30.5
BOM08-02G		8		1/4	6	19	17	7	19	12	33	31.5
BOM10-02G		10		1/4	6	19	19	7	19	12	33	32.5
BOM10-03G		10		3/8	8	22	19	7	22	12	34	33.5
BOM12-02G		12		1/4	6	19	22	7	19	12	33	32.5
BOM12-03G		12		3/8	8	22	22	7	22	12	34	33.5
BOM12-04G		12		1/2	10	27	22	7	27	14	39	36.5
BOM15-03G		15		3/8	8	24	27	7.5	22	12	37	37.5
BOM15-04G		15		1/2	12	27	27	7.5	27	14	41	39.5
BOM16-04G		16		1/2	12	27	30	7.5	27	14	41	39.5
BOM18-04G		18		1/2	12	27	32	8	27	14	41	39.5
BOM20-06G		20		3/4	16	36	36	8	36	16	46	42.5
BOM22-06G		22		3/4	16	36	36	9	36	16	46	42.5
BOM25-06G		25		3/4	16	36	41	10	36	16	46	43 5
BOM25-08G		25		1	20	41	41	10	41	18	50	45.5
BOM28-08G		28		1	22	41	46	10	41	18	52	48
BOM30-08G		30		1	22	41	46	10	41	18	52	48.5
BOM30-10G		30		1-1/4	25	50	46	10	50	20	57	51.5
BOM32-10G		32		1-1/4	26	50	50	11	50	20	57	51.5
BOM35-10G		35		1-1/4	28	50	55	11	50	20	57	54.5
BOM38-12G		38		1-1/2	32	55	60	12	55	21	58	56.5
BOM40-12G		40		1-1/2	32	55	60	12	55	21	62	60.5
BOM42-12G		42		1-1/2	34	55	60	12	55	21	62	60.5
BOM06A-01G	1/8		10.5	1/8	4	17	19	7	14	8	29	32.5
BOM06A-02G	1/8		10.5	1/4	6	19	19	7	19	12	33	32.5
BOM08A-02G	1/4		13.8	1/4	6	22	24	7.5	19	12	36	36
BOM08A-03G	1/4		13.8	3/8	8	22	24	7.5	22	12	36	36
BOM10A-03G	3/8		17.3	3/8	8	27	32	8	22	12	38	38.5
BOM10A-04G	3/8		17.3	1/2	12	27	32	8	27	14	41	39.5
BOM15A-04G	1/2		21.7	1/2	12	32	36	9	27	14	43	41.5
BOM15A-06G	1/2		21.7	3/4	16	36	36	9	36	16	46	42.5
BOM20A-06G	3/4		27.2	3/4	16	41	46	10	36	16	50	48
BOM20A-08G	3/4		27.2	1	22	41	46	10	41	18	52	48
BOM25A-08G	1		34.0	1	22	46	55	11	41	18	54	53.5
BOM25A-10G	1		34.0	1-1/4	28	50	55	11	50	20	57	54.5
BOM32A-10G	1-1/4		42.7	1-1/4	31	60	65	12	50	20	63	62.5
BOM32A-12G	1-1/4		42.7	1-1/2	34	60	65	12	55	21	64	62.5
BOM40A-12G	1-1/2		48.6	1-1/2	36	65	75	12	55	21	65	65.5
BOM40A-16G	1-1/2		48.6	2	40	75	75	12	75	25	73	69.5

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

BLM
Male Elbow

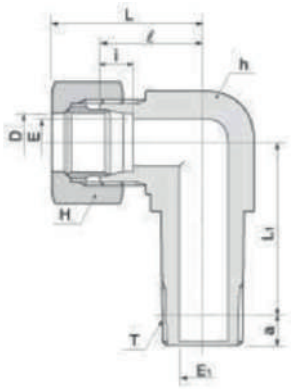




Designations	Tube O.D. D			(PT) T	E	E1	Base Gauge length a	Width across flat		i	ℓ	Approx	
								h	H			L	L1
BLM06-01R		6		1/8	4	4	3.97	14	14	7	20	30.5	14
BLM06-02R		6		1/4	4	7	6.01	17	14	7	23	33.5	17
BLM08-01R		8		1/8	6	4	3.97	17	17	7	23	33.5	16
BLM08-02R		8		1/4	6	7	6.01	17	17	7	23	33.5	18
BLM10-02R		10		1/4	8	7	6.01	17	19	7	23	34.5	19
BLM10-03R		10		3/8	8	9	6.35	19	19	7	24	35.5	19.5
BLM10-04R		10		1/2	8	12	8.16	24	19	7	29	40.5	26
BLM12-02R		12		1/4	10	7	6.01	19	22	7	24	35.5	20
BLM12-03R		12		3/8	10	9	6.35	19	22	7	24	35.5	20.5
BLM12-04R		12		1/2	10	12	8.16	24	22	7	29	40.5	26
BLM15-03R		15		3/8	12	9	6.35	24	27	7.5	29	41.5	23.5
BLM15-04R		15		1/2	12	12	8.16	24	27	7.5	29	41.5	26
BLM16-03R		16		3/8	13	9	6.35	27	30	7.5	32	44.5	25.5
BLM16-04R		16		1/2	13	12	8.16	27	30	7.5	32	44.5	27
BLM18-03R		18		3/8	14	9	6.35	27	32	8	32	44.5	27.5
BLM18-04R		18		1/2	14	12	8.16	27	32	8	32	44.5	30
BLM20-04R		20		1/2	17	12	8.16	30	36	8	33	45.5	32
BLM20-06R		20		3/4	17	16	9.53	30	36	8	33	45.5	30.5
BLM22-04R		22		1/2	18	12	8.16	32	36	9	34	46.5	32
BLM22-06R		22		3/4	18	16	9.53	32	36	9	34	46.5	32.5
BLM25-06R		25		3/4	20	16	9.53	36	41	10	36	49.5	33.5
BLM25-08R		25		1	20	22	10.39	36	41	10	36	49.5	35.5
BLM28-06R		28		3/4	22	16	9.53	41	46	10	41	55	37.5
BLM28-08R		28		1	22	22	10.39	41	46	10	41	55	39.5
BLM30-08R		30		1	25	22	10.39	41	46	10	41	55.5	39.5
BLM30-10R		30		1-1/4	25	31	12.70	46	46	10	46	60.5	42.5
BLM32-10R		32		1-1/4	26	31	12.70	46	50	11	46	60.5	43.5
BLM35-10R		35		1-1/4	28	31	12.70	46	55	11	46	63.5	45.5
BLM38-12R		38		1-1/2	32	36	12.70	50	60	12	50	69.5	48 5
BLM40-12R		40		1-1/2	32	36	12.70	55	60	12	55	74.5	49.5
BLM42-12R		42		1-1/2	34	36	12.70	55	60	12	55	74.5	49.5
BLM06A-01R	1/8		10.5	1/8	8	4	3.97	17	19	7	23	34.5	17
BLM06A-02R	1/8		10.5	1/4	8	7	6.01	17	19	7	23	34.5	19
BLM08A-02R	1/4		13.8	1/4	11	7	6.01	22	24	7.5	28	40	22
BLM08A-03R	1/4		13.8	3/8	11	9	6.35	22	24	7.5	28	40	22.5
BLM10A-03R	3/8		17.3	3/8	14	9	6.35	27	32	8	32	44.5	27.5
BLM10A-04R	3/8		17.3	1/2	14	12	8.16	27	32	8	32	44.5	30
BLM15A-04R	1/2		21.7	1/2	18	12	8.16	32	36	9	34	46.5	32
BLM15A-06R	1/2		21.7	3/4	18	16	9.53	32	36	9	34	46.5	32.5
BLM20A-06R	3/4		21.2	3/4	22	16	9.53	41	46	10	41	55	37.5
BLM20A-08R	3/4		27.2	1	22	22	10.39	41	46	10	41	55	39.5
BLM25A-08R	1		34.0	1	28	22	10.39	46	55	11	46	63.5	44.5
BLM25A-10R	1		34.0	1-1/4	28	31	12.70	46	55	11	46	63.5	44.5
BLM32A-10R	1-1/4		42.7	1-1/4	34	31	12.70	60	65	12	57	77.5	51.5
BLM32A-12R	1-1/4		42.7	1-1/2	34	36	12.70	60	75	12	57	77.5	51.5
BLM40A-12R	1-1/2		48.6	1-1/2	40	36	12.70	65	75	12	62	83.5	57.5
BLM40A-16R	1-1/2		48.6	2	40	46	15.88	65	75	12	62	83.5	58

BLLM
Long Male Elbow

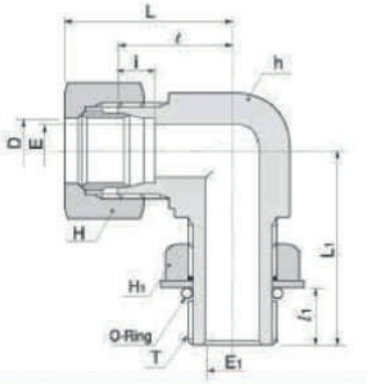




Designations	Tube O.D. D	(PT) T	E	E1	Base Gauge length a	Width across flat		i	ℓ	Approx	
						h	H			L	L1
BLLM06-01R	6	1/8	4	4	3.97	14	14	7	20	30.5	36
BLLM08-02R	8	1/4	6	7	6.01	17	17	7	23	33.5	43
BLLM10-02R	10	1/4	8	7	6.01	17	19	7	23	34.5	46
BLLM12-02R	12	1/4	10	7	6.01	19	22	7	24	35.5	52
BLLM12-03R	12	3/8	10	9	6.35	19	22	7	24	35.5	53
BLLM15-03R	15	3/8	12	9	6.35	22	27	7.5	29	41.5	61.5
BLLM15-04R	15	1/2	12	12	8.16	24	27	7.5	29	41.5	67
BLLM16-04R	16	1/2	13	12	8.16	24	30	7.5	32	44.5	70
BLLM18-04R	18	1/2	14	12	8.16	27	32	8	32	44.5	77
BLLM20-06R	20	3/4	17	16	9.53	30	36	8	33	45.5	82.5
BLLM22-06R	22	3/4	18	16	9.53	32	36	9	34	46.5	83.5
BLLM25-06R	25	3/4	20	16	9.53	36	41	10	36	49.5	90.5
BLLM25-08R	25	1	20	22	10.39	36	41	10	36	49.5	91.5
BLLM28-08R	28	1	22	22	10.39	41	46	10	41	55	104.5
BLLM30-10R	30	1-1/4	25	31	12.70	46	46	10	46	60.5	104.5
BLLM32-10R	32	1-1/4	26	31	12.70	46	50	11	46	60.5	104.5
BLLM35-10R	35	1-1/4	28	31	12.70	46	55	11	46	63.5	121.5

BOLM
O-Seal Male Elbow



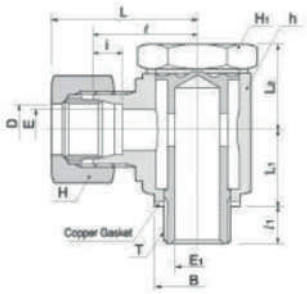


Designations	Tube O.D. D	(PF) T	E	E1	Width across flat			i	l1	ℓ	Approx	
					h	H1	H				L1	L
BOLM06-01G	6	1/8	4	4	14	14	14	7	10	20	30	30.5
BOLM08-02G	8	1/4	6	7	17	19	17	7	12	23	34	33.5
BOLM10-02G	10	1/4	8	7	17	19	19	7	12	23	35	34.5
BOLM12-02G	12	1/4	10	7	19	19	22	7	12	24	36	35.5
BOLM12-03G	12	3/8	10	9	19	22	22	7	12	24	36	35.5
BOLM12-04G	12	1/2	10	12	24	27	22	7	16	24	46	35.5
BOLM15-03G	15	3/8	12	9	24	22	27	7.5	12	29	40	41.5
BOLM15-04G	15	1/2	12	12	24	27	27	7.5	16	29	46	41.5
BOLM16-04G	16	1/2	13	12	24	27	30	7.5	16	32	46	44.5
BOLM18-04G	18	1/2	14	12	30	27	32	8	16	32	52	44.5
BOLM20-06G	20	3/4	17	16	30	36	36	8	17	33	52	45.5
BOLM22-06G	22	3/4	18	16	32	36	36	9	17	34	52	46.5
BOLM25-06G	25	3/4	20	16	36	36	41	10	17	36	60	49.5
BOLM25-08G	25	1	20	22	36	41	41	10	21	36	62	49.5
BOLM28-08G	28	1	22	22	41	41	46	10	21	41	62	55
BOLM30-08G	30	1	25	22	41	41	46	10	21	41	66	55.5
BOLM30-10G	30	1-1/4	25	31	41	50	46	10	21	44	66	58.5
BOLM32-10G	32	1-1/4	26	31	46	50	50	11	21	46	66	60.5
BOLM35-10G	35	1-1/4	28	31	46	50	55	11	21	46	66	63 5
BOLM38-12G	38	1-1/2	32	36	50	55	60	12	21	50	73	69.5

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

BSLM
Banjo Elbow

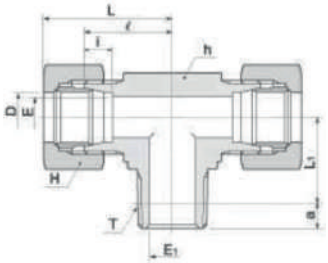




Designations	Tube O.D. D		(PT) T	E1	E	Width across flat h	H1	H	i	l1	ℓ	Approx L1	L2	L	B
BSLM06-01G	6		1/8	4	4	17	17	14	7	8	23	13	14	33.5	14
BSLM08-02G	8		1/4	7	6	22	22	17	7	12	25	16	17	35.5	18
BSLM10-02G	10		1/4	7	8	22	22	19	7	12	25	16	17	36.5	18
BSLM12-03G	12		3/8	9	10	27	27	22	7	12	29	19	22	40.5	21.5
BSLM15-04G	15		1/2	12	12	36	30	27	7.5	14	36	24	28	48.5	25.5
BSLM16-04G	16		1/2	12	13	36	30	30	7.5	14	36	24	28	48.5	25.5
BSLM18-04G	18		1/2	12	14	36	30	32	8	14	36	24	28	48.5	25.5
BSLM20-06G	20		3/4	16	17	41	41	36	8	16	38	28	32	50.5	31.5
BSLM22-06G	22		3/4	16	18	42	41	36	9	16	38	28	32	50.5	31.5
BSLM25-08G	25		1	22	20	50	50	41	10	18	42	37	38	55.5	38
BSLM28-08G	28		1	22	22	50	50	46	10	18	42	37	38	56	38
BSLM06A-02G	1/8	10.5	1/4	7	8	22	22	19	7	12	25	16	17	36.5	18
BSLM08A-03G	1/4	13.8	3/8	9	11	27	27	24	7.5	12	29	19	22	41	21.5
BSLM10A-04G	3/8	17.3	1/2	12	14	36	30	32	8	14	36	24	28	48.5	25.5
BSLM15A-06G	1/2	21.7	3/4	16	18	41	41	36	9	16	38	28	32	50.5	31.5
BSLM20A-08G	3/4	27.2	1	22	22	50	50	46	10	18	42	37	38	56	38

BBTM
Male Branch Tee

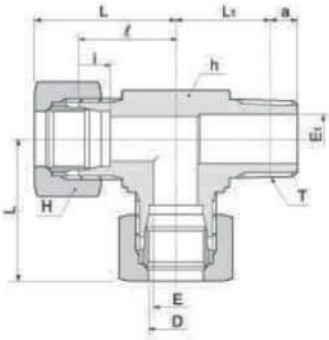




Designations	Tube O.D. D		(PT) T	E	E1	Base Gauge length a	Width across flat H1	H	i	ℓ	Approx L	L1
BBTM06-01R	6		1/8	4	4	3.97	14	14	7	20	30.5	14
BBTM06-02R	6		1/4	4	7	6.01	17	14	7	23	33.5	17
BBTM08-01R	8		1/8	6	4	3.97	17	17	7	23	33.5	16
BBTM08-02R	8		1/4	6	7	6.01	17	17	7	23	33.5	18
BBTM10-02R	10		1/4	8	7	6.01	17	19	7	23	34.5	19
BBTM10-03R	10		3/8	8	9	6.35	19	19	7	24	35.5	19 5
BBTM12-02R	12		1/4	10	7	6.01	19	22	7	24	35.5	18
BBTM12-03R	12		3/8	10	9	6.35	19	22	7	24	35.5	20.5
BBTM15-03R	15		3/8	12	9	6.35	24	27	7.5	29	41.5	23 5
BBTM15-04R	15		1/2	12	12	8.16	24	27	7.5	29	41.5	26
BBTM16-04R	16		1/2	13	12	8.16	27	30	7.5	32	44.5	27
BBTM18-04R	18		1/2	14	12	8.16	27	32	8	32	44.5	30
BBTM20-06R	20		3/4	17	16	9.53	30	36	8	33	45.5	30.5
BBTM22-06R	22		3/4	18	16	9.53	32	36	9	34	46.5	32 5
BBTM25-06R	25		3/4	20	16	9.53	36	41	10	36	49.5	33.5
BBTM25-08R	25		1	20	22	10.39	36	41	10	36	49.5	35.5
BBTM28-08R	28		1	22	22	10.39	41	46	10	41	55	39.5
BBTM30-08R	30		1	25	22	10.39	41	46	10	41	55.5	39 5
BBTM30-10R	30		1-1/4	25	31	12.70	46	46	10	46	60.5	42.5
BBTM32-10R	32		1-1/4	26	31	12.70	46	50	11	46	605	43.5
BBTM35-10R	35		1-1/4	28	31	12.70	46	55	11	46	63.5	45.5
BBTM38-12R	38		1-1/2	32	36	12.70	50	60	12	50	69.5	48.5
BBTM40-12R	40		1-1/2	32	36	12.70	55	60	12	55	74.5	49.5
BBTM06A-02R	1/8	10.5	1/4	8	7	6.01	17	19	7	23	34.5	19
BBTM08A-03R	1/4	13.8	3/8	11	9	3.35	22	24	7.5	28	40	22.5
BBTM10A-04R	3/8	17.3	1/2	14	12	8.16	27	32	8	32	44.5	30
BBTM15A-06R	1/2	21.7	3/4	18	16	9.53	32	36	9	34	46.5	32.5
BBTM20A-08R	3/4	27.2	1	22	22	10.39	41	46	10	41	55	39.5
BBTM25A-10R	1	34.0	1-1/4	28	31	12.70	46	55	11	46	63.5	45.5
BBTM32A-12R	1-1/4	42.7	1-1/2	34	36	12.70	60	65	12	57	77.5	51.5
BBTM40A-16R	1-1/2	48.6	2	40	46	15.88	65	75	12	62	83.5	58

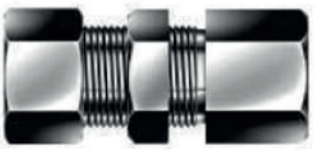
BRTM
Male Run Tee

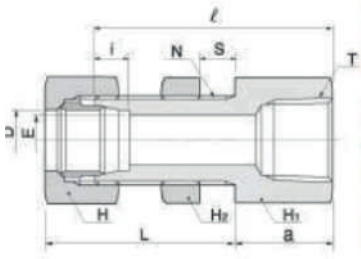




Designations	Tube O.D. D		(PT) T	E	E1	Base Gauge length a	Width across flat h	Width across flat H	i	ℓ	Approx L	Approx L1
BRTM06-01R	6		1/8	4	4	3.97	14	14	7	20	30.5	14
BRTM06-02R	6		1/4	4	7	6.01	17	14	7	23	33.5	17
BRTM08-01R	8		1/8	6	4	3.97	17	17	7	23	33.5	16
BRTM08-02R	8		1/4	6	7	6.01	17	17	7	23	33.5	18
BRTM10-02R	10		1/4	8	7	6.01	17	19	7	23	34.5	19
BRTM10-03R	10		3/8	8	9	6.35	19	19	7	24	35.5	19.5
BRTM12-02R	12		1/4	10	7	6.01	19	22	7	24	35.5	18
BRTM12-03R	12		3/8	10	9	6.35	19	22	7	24	35.5	20.5
BRTM15-03R	15		3/8	12	9	6.35	24	27	7.5	29	41.5	23.5
BRTM15-04R	15		1/2	12	12	8.16	24	27	7.5	29	41.5	26
BRTM16-04R	16		1/2	13	12	8.16	27	30	7.5	32	44.5	27
BRTM18-04R	18		1/2	14	12	8.16	27	32	8	32	44.5	30
BRTM20-06R	20		3/4	17	16	9.53	30	36	8	33	45.5	30.5
BRTM22-06R	22		3/4	18	16	9.53	32	36	9	34	46.5	32.5
BRTM25-06R	25		3/4	20	16	9.53	36	41	10	36	49.5	33.5
BRTM25-08R	25		1	20	22	10.39	36	41	10	36	49.5	35.5
BRTM28-08R	28		1	22	22	10.39	41	46	10	41	55	39.5
BRTM30-08R	30		1	25	22	10.39	41	46	10	41	55.5	39.5
BRTM30-10R	30		1-1/4	25	31	12.70	46	46	10	46	60.5	42.5
BRTM32-10R	32		1-1/4	26	31	12.70	46	50	11	46	60.5	43.5
BRTM35-10R	35		1-1/4	28	31	12.70	46	55	11	46	63.5	45.5
BRTM38-12R	38		1-1/2	32	36	12.70	50	60	12	50	69.5	48.5
BRTM40-12R	40		1-1/2	32	36	12.70	55	60	12	55	74.5	49.5
BRTM06A-02R	1/8	10.5	1/4	8	7	6.01	17	19	7	23	34.5	19
BRTM08A-03R	1/4	13.8	3/8	11	9	3.35	22	24	7.5	28	40	22.5
BRTM10A-04R	3/8	17.3	1/2	14	12	8.16	27	32	8	32	44.5	30
BRTM15A-06R	1/2	21.7	3/4	18	16	9.53	32	36	9	34	46.5	32.5
BRTM20A-08R	3/4	27.2	1	22	22	10.39	41	46	10	41	55	39.5
BRTM25A-10R	1	34.0	1-1/4	28	31	12.70	46	55	11	46	63.5	45.5
BRTM32A-12R	1-1/4	42.7	1-1/2	34	36	12.70	60	65	12	57	77.5	51.5
BRTM40A-16R	1-1/2	48.6	2	40	46	15.88	65	75	12	62	83.5	58

BBFC
Bulkhead Female Connector

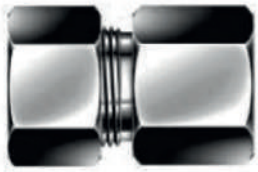


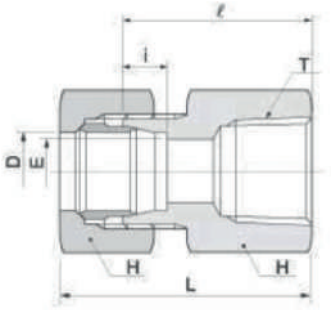


Designations	Tube O.D. D	(PT) T	E	Width across flat H1	Width across flat H2	Width across flat H	i	ℓ	a	Approx L	Panel Hole Drill Size N	Max.Panel Thickness S
BBFC06-01R	6	1/8	4	17	17	14	7	45	13	42.5	12.5	13
BBFC08-02R	8	1/4	6	19	19	17	7	50	18	42.5	14.5	13
BBFC10-02R	10	1/4	8	19	22	19	7	50	18	43.5	16.5	13
BBFC10-03R	10	3/8	8	24	22	19	7	52	20	43.5	16.5	13
BBFC12-02R	12	1/4	10	22	24	22	7	50	18	43.5	18.5	13
BBFC12-03R	12	3/8	10	24	24	22	7	52	20	43.5	18.5	13
BBFC15-03R	15	3/8	12	27	27	27	7.5	57	20	49.5	22.5	15
BBFC15-04R	15	1/2	12	30	27	27	7.5	62	25	49.5	22.5	15
BBFC16-04R	16	1/2	13	30	30	30	7.5	62	25	49.5	24.5	15
BBFC18-04R	18	1/2	14	30	32	32	8	64	25	51.5	26.5	15
BBFC20-06R	20	3/4	17	36	36	36	8	66	27	51.5	28.5	15
BBFC22-06R	22	3/4	18	36	36	36	9	66	27	51.5	30.5	15
BBFC25-08R	25	1	20	46	41	41	10	70	31	52.5	35.5	15
BBFC28-08R	28	1	22	46	46	46	10	72	31	55	38.5	15
BBFC30-08R	30	1	25	46	46	46	10	72	31	55.5	40.5	15
BBFC32-10R	32	1-1/4	26	55	46	50	11	78	35	57.5	42.5	15

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

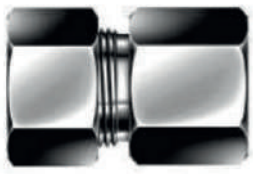
BFC
Female Connector

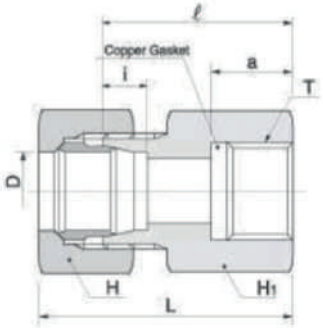




Designations	Tube O.D. D			(PT) T	E	Width across flat H1	Width across flat H	i	ℓ	Approx L
BFC06-01R		6		1/8	4	17	14	7	25	35.5
BFC08-02R		8		1/4	6	19	17	7	30	40.5
BFC10-02R		10		1/4	8	19	19	7	30	41.5
BFC10-03R		10		3/8	8	24	19	7	32	43.5
BFC12-02R		12		1/4	10	19	22	7	30	41.5
BFC12-03R		12		3/8	10	24	22	7	32	43.5
BFC15-03R		15		1/2	12	24	27	7.5	34	46.5
BFC15-04R		15		1/2	12	30	27	7.5	39	51.5
BFC16-04R		16		1/2	13	30	30	7.5	39	51.5
BFC18-04R		18		1/2	14	30	32	8	39	51.5
BFC20-06R		20		3/4	17	36	36	8	41	53.5
BFC22-06R		22		3/4	18	36	36	9	41	53.5
BFC25-06R		25		3/4	20	36	41	10	41	54.5
BFC25-08R		25		1	20	46	41	10	45	58.5
BFC28-08R		28		1	22	46	46	10	47	61
BFC30-08R		30		1	25	46	46	10	47	61.5
BFC30-10R		30		1-1/4	25	55	46	10	51	65.5
BFC32-10R		32		1-1/4	26	55	50	11	51	65.5
BFC35-10R		35		1-1/4	28	55	55	11	51	68.5
BFC38-12R		38		1-1/2	32	65	60	12	51	70.5
BFC40-12R		40		1-1/2	32	65	60	12	55	74.5
BFC42-12R		42		1-1/2	34	65	60	12	55	74.5
BFC06A-02R	1/8		10.5	1/4	8	19	19	7	30	41.5
BFC08A-03R	1/4		13.8	3/8	11	24	24	7.5	34	46
BFC10A-04R	3/8		17.3	1/2	14	30	32	8	39	51.5
BFC15A-06R	1/2		21.7	3/4	18	36	36	9	41	53.5
BFC20A-08R	3/4		27.2	1	22	46	46	10	47	61
BFC25A-10R	1		34.0	1-1/4	28	55	55	11	51	68.5
BFC32A-12R	1-1/4		42.7	1-1/2	34	65	65	12	55	78.5
BFC40A-16R	1-1/2		48.6	2	40	80	75	12	60	81.5

BGC
Gauge Connector

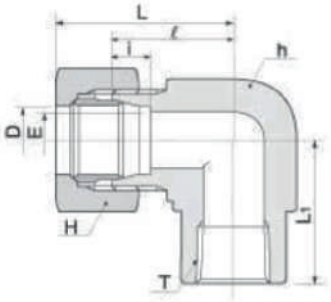




Designations	Tube O.D. D	(PT) T	a	Width across flat H1	Width across flat H	i	ℓ	Approx L	Gasket Part No
BGC06-02G	6	1/4	14	19	14	7	32	42.5	BGG-02
BGC06-03G	6	3/8	15	24	14	7	34	44.5	BGG-03
BGC06-04G	6	1/2	16	30	14	7	36	46.5	BGG-04
BGC08-02G	8	1/4	14	19	17	7	32	42.5	BGG-02
BGC08-03G	8	3/8	15	24	17	7	34	44.5	BGG-03
BGC08-04G	8	1/2	16	30	17	7	36	46.5	BGG-04
BGC10-02G	10	1/4	14	19	19	7	32	43.5	BGG-02
BGC10-03G	10	3/8	15	24	19	7	34	45.5	BGG-03
BGC10-04G	10	1/2	16	30	19	7	36	47.5	BGG-04
BGC12-02G	12	1/4	14	19	22	7	32	43.5	BGG-02
BGC12-03G	12	3/8	15	24	22	7	34	45.5	BGG-03
BGC12-04G	12	1/2	16	30	22	7	36	47.5	BGG-04

BLF
Female Elbow

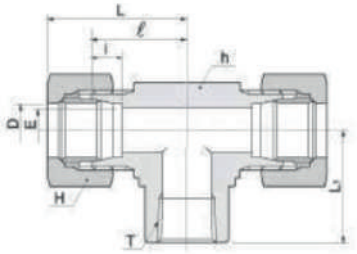




Designations	Tube O.D. D	(PT) T	E	Width across flat		i	ℓ	Approx	
				h	H			L1	L
BLF08-02R	8	1/4	6	19	17	7	24	24	34.5
BLF10-02R	10	1/4	8	19	19	7	24	24	35.5
BLF12-02R	12	1/4	10	19	22	7	24	24	35.5
BLF12-03R	12	3/8	10	24	22	7	29	29	40.5
BLF15-03R	15	3/8	12	24	27	7.5	29	29	41.5
BLF15-04R	15	1/2	12	30	27	7.5	33	33	45.5
BLF16-04R	16	1/2	13	30	30	7.5	33	33	45.5
BLF18-04R	18	1/2	14	30	32	8	33	33	45.5
BLF20-06R	20	3/4	17	36	36	8	36	36	48.5
BLF22-06R	22	3/4	18	36	36	9	36	36	48.5
BLF25-06R	25	3/4	20	36	41	10	36	36	49.5
BLF25-08R	25	1	20	46	41	10	46	46	59.5
BLF28-08R	28	1	22	46	46	10	46	46	60
BLF30-10R	30	1-1/4	25	55	46	10	55	55	69.5
BLF32-10R	32	1-1/4	26	55	50	11	55	55	69.5
BLF35-10R	35	1-1/4	28	55	55	11	55	55	72.5

BBTF
Female Branch Tee

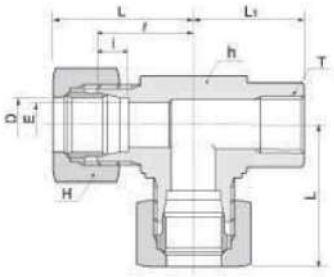




Designations	Tube O.D. D			(PT) T	E	Width across flat		i	ℓ	Approx	
						h	H			L	L1
BBTF06-01R		6		1/8	4	17	14	7	23	34.5	24
BBTF08-02R		8		1/4	6	19	17	7	24	34.5	24
BBTF10-02R		10		1/4	8	19	19	7	24	35.5	24
BBTF12-02R		12		1/4	10	19	22	7	24	35.5	24
BBTF12-03R		12		3/8	10	24	22	7	29	40.5	29
BBTF15-03R		15		3/8	12	24	27	7.5	29	41.5	29
BBTF15-04R		15		1/2	12	30	27	7.5	33	45.5	33
BBTF16-04R		16		1/2	13	30	30	7.5	33	45.5	33
BBTF18-04R		18		1/2	14	30	32	8	33	45.5	33
BBTF20-06R		20		3/4	17	36	36	8	36	48.5	36
BBTF22-06R		22		3/4	18	36	36	9	36	48.5	36
BBTF25-06R		25		3/4	20	36	41	10	36	49.5	36
BBTF25-08R		25		1	20	46	41	10	46	59.5	46
BBTF28-08R		28		1	22	46	46	10	46	60	46
BBTF30-08R		30		1	25	46	46	10	46	60.5	46
BBTF30-10R		30		1-1/4	25	55	46	10	55	69.5	55
BBTF32-10R		32		1-1/4	26	55	50	11	55	69.5	55
BBTF35-10R		35		1-1/4	28	55	55	11	55	72.5	55
BBTF06A-02R	1/8		10.5	1/4	8	19	19	7	24	35.5	24
BBTF08A-03R	1/4		13.8	3/8	11	24	24	7.5	29	41	29
BBTF10A-04R	3/8		17.3	1/2	14	30	32	8	33	45.5	33
BBTF15A-06R	1/2		21.7	3/4	18	36	36	9	36	48.5	36
BBTF20A-08R	3/4		27.2	1	22	46	46	10	46	60	46
BBTF25A-10R	1		34.0	1-1/4	28	55	55	11	55	72.5	55

BRTF
Female Run Tee

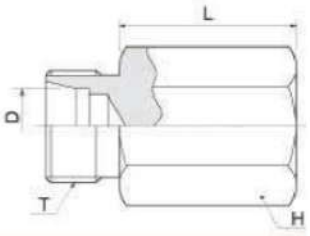


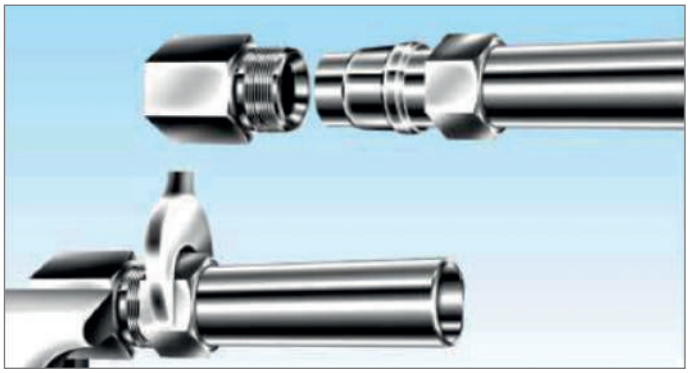


Designations	Tube O.D. D			(PT) T	E	Width across flat h	Width across flat H	i	ℓ	Approx L	Approx L1
BRTF08-02R		8		1/4	6	19	17	7	24	34.5	24
BRTF10-02R		10		1/4	8	19	19	7	24	35.5	24
BRTF12-02R		12		1/4	10	19	22	7	24	35.5	24
BRTF12-03R		12		3/8	10	24	22	7	29	40.5	29
BRTF15-03R		15		3/8	12	24	27	7.5	29	41.5	29
BRTF15-04R		15		1/2	12	30	27	7.5	33	45.5	33
BRTF16-04R		16		1/2	13	30	30	7.5	33	45.5	33
BRTF18-04R		18		1/2	14	30	32	8	33	45.5	33
BRTF20-06R		20		3/4	17	36	36	8	36	48.5	36
BRTF22-06R		22		3/4	18	36	36	9	36	48.5	36
BRTF25-06R		25		3/4	20	36	41	10	36	49.5	36
BRTF25-08R		25		1	20	46	41	10	46	59.5	46
BRTF28-08R		28		1	22	46	46	10	46	60	46
BRTF30-08R		30		1	25	46	46	10	46	60.5	46
BRTF30-10R		30		1-1/4	25	55	46	10	55	69.5	55
BRTF32-10R		32		1-1/4	26	55	50	11	55	69.5	55
BRTF35-10R		35		1-1/4	28	55	55	11	55	72.5	55
BRTF06A-02R	1/8		10.5	1/4	8	19	19	7	24	35.5	24
BRTF08A-03R	1/4		13.8	3/8	11	24	24	7.5	29	41	29
BRTF10A-04R	3/8		17.3	1/2	14	30	32	8	33	45.5	33
BRTF15A-06R	1/2		21.7	3/4	18	36	36	9	36	48.5	36
BRTF20A-08R	3/4		27.2	1	22	46	46	10	46	60	46
BRTF25A-10R	1		34.0	1-1/4	28	55	55	11	55	72.5	55

BJ
Presetting Jig





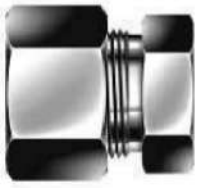


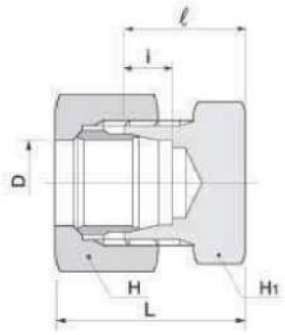
Designations	Tube O.D. D			L	H	h
BJ-06		6		40	17	M12 x 1.5
BJ-08		8		40	17	M14 x 1.5
BJ-10		10		40	17	M16 x 1.5
BJ-12		12		40	27	M18 x 1.5
BJ-15		15		40	27	M22 x 1.5
BJ-16		16		40	27	M24 x 1.5
BJ-18		18		40	27	M26 x 1.5
BJ-20		20		40	41	M28 x 1.5
BJ-22		22		40	41	M30 x 1 5
BJ-25		25		40	41	M35 x 1.5
BJ-28		28		40	41	M38 x 1.5
BJ-30		30		40	41	M40 x 1.5
BJ-32		32		40	55	M42 x 1.5
BJ-35		35		40	55	M45 x 1.5
BJ-38		38		50	55	M48 x 1 5
BJ-40		40		50	55	M52 x 2.0
BJ-42		42		50	55	M52 x 2.0
BJ-06A	1/8		10.5	40	17	M16 x 1.5
BJ-08A	1/4		13.8	40	27	M20 x 1.5
BJ-10A	3/8		17.3	40	27	M26 x 1.5
BJ-15A	1/2		21.7	40	41	M30 x 1.5
BJ-20A	3/4		27.2	40	41	M38 x 1.5
BJ-25A	1		34.0	40	55	M45 x 1.5
BJ-32A	1-1/4		42.7	50	65	M56 x 2.0
BJ-40A	1-1/2		48.6	50	65	M64 x 2.0

When assembling Bite type fitting in close corner or in cabinet it may be advantageous to use this jig.
It allows the presetting of sleeve on to the tube in a more open or safe area.
After using this jig. follow the reassembly instruction.

Tubing may occasionally stick in the jig after pull-up. In this case, remove the tube by gently rocking back and forth.
Do not rock up and down or turn the tube as this may damage sealing surfaces of fitting.

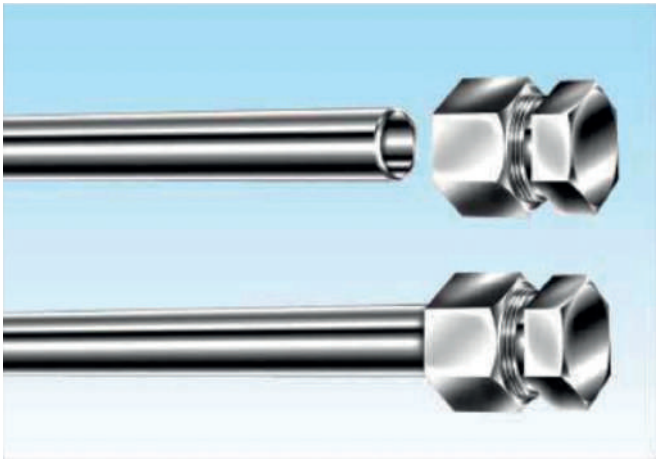
BC
Cap





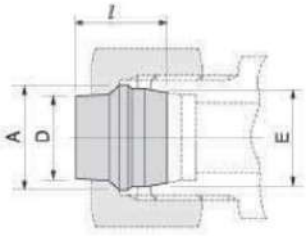
Designations	Tube O.D. D	Width across flat		i	ℓ	Approx
		H1	H			L
BC-06	6	14	14	7	18	28.5
BC-08	8	17	17	7	19	29.5
BC-10	10	17	19	7	20	31.5
BC-12	12	19	22	7	20	31.5
BC-15	15	24	27	7.5	22	34.5
BC-16	16	27	30	7.5	24	36.5
BC-18	18	27	32	8	24	36.5
BC-20	20	30	36	8	24	36.5
BC-22	22	32	36	9	25	37.5
BC-25	25	36	41	10	25	38.5
BC-28	28	41	46	10	28	42
BC-30	30	41	46	10	28	42.5
BC-32	32	46	50	11	30	44.5

Cap for capping tube end



BP
Plug





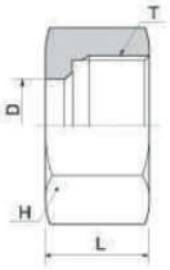
Designations	Tube O.D. D	E	A	l
BP-06	6	8	9.5	19
BP-08	8	10	11.5	19
BP-10	10	12	13.5	19
BP-12	12	14	15.5	19
BP-15	15	17	19	20
BP-16	16	18	20	20
BP-18	18	20	22.5	20
BP-20	20	22	25	20
BP-22	22	24	27	20
BP-25	25	27.4	30	24
BP-28	28	30.4	33	24
BP-30	30	32.4	35.5	24
BP-32	32	34.4	37.5	24

Plug for plugging unused Bite type fitting port



BN
Nut

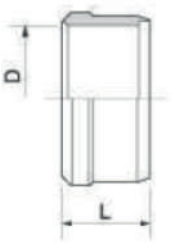




Designations	Tube O.D. D			T	Width across flat H	L
BN-06		6		M12 x 1.5	14	15
BN-08		8		M14 x 1.5	17	15
BN-10		10		M16 x 1.5	19	16
BN-12		12		M18 x 1.5	22	16
BN-15		15		M22 x 1.5	27	19
BN-16		16		M24 x 1.5	30	19
BN-18		18		M26 x 1.5	32	19
BN-20		20		M28 x 1.5	36	19
BN-22		22		M30 x 1.5	36	19
BN-25		25		M35 x 1.5	41	20
BN-28		28		M38 x 1.5	46	21
BN-30		30		M40 x 1.5	46	22
BN-32		32		M42 x 1.5	50	22
BN-35		35		M45 x 1.5	55	25
BN-38		38		M48 x 1.5	60	27
BN-40		40		M52 x 2.0	60	29.5
BN-42		42		M52 x 2.0	60	29.5
BN-06A	1/8		10.5	M16 x 1.5	19	16
BN-08A	1/4		13.8	M20 x 1.5	24	18
BN-10A	3/8		17.3	M26 x 1.5	32	19
BN-15A	1/2		21.7	M30 x 1.5	36	19
BN-20A	3/4		27.2	M38 x 1.5	46	21
BN-25A	1		34.0	M45 x 1.5	55	25
BN-32A	1-1/4		42.7	M56 x 2.0	65	30.5
BN-40A	1-1/2		48.6	M64 x 2.0	75	31.5

BS
Sleeve

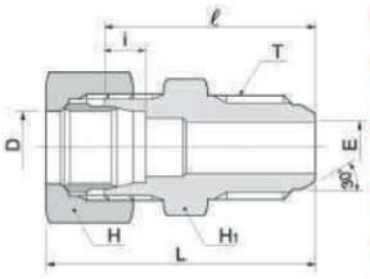




Designations	Tube O.D. D			L
BS-06		6		9
BS-08		8		9
BS-10		10		10
BS-12		12		10
BS-15		15		10
BS-16		16		10
BS-18		18		10
BS-20		20		10
BS-22		22		10
BS-25		25		11
BS-28		28		11
BS-30		30		11
BS-32		32		11
BS-35		35		14
BS-38		38		14
BS-40		40		14
BS-42		42		14
BS-06A	1/8		10.5	10
BS-08A	1/4		13.8	10
BS-10A	3/8		17.3	10
BS-15A	1/2		21.7	10
BS-20A	3/4		27.2	11
BS-25A	1		34.0	14
BS-32A	1-1/4		42.7	14
BS-40A	1-1/2		48.6	14

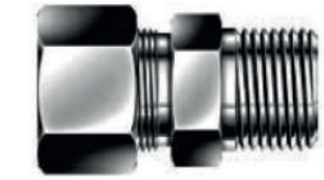
BHUM
Hose Male Union

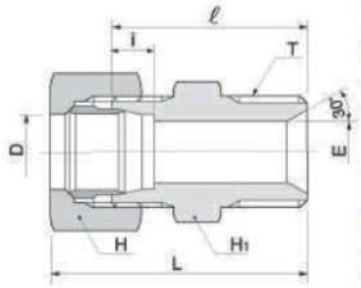




Designations	Tube O.D. D	(PF) T	E	Width across flat		i	ℓ	Approx
				H1	H			L
BHUM06-01G	6	1/8	4	14	14	7	34	44.5
BHUM08-02G	8	1/4	5.5	17	17	7	35	45.5
BHUM08-03G	8	3/8	6	19	17	7	37	47.5
BHUM10-02G	10	1/4	5.5	17	19	7	35	46.5
BHUM10-03G	10	3/8	8	19	19	7	37	48.5
BHUM10-04G	10	1/2	8	22	19	7	40	51.5
BHUM12-02G	12	1/4	5.5	19	22	7	35	46.5
BHUM12-03G	12	3/8	8	19	22	7	37	48.5
BHUM12-04G	12	1/2	10	22	22	7	40	51.5
BHUM15-03G	15	3/8	8	24	27	7.5	40	52.5
BHUM15-04G	15	1/2	11	24	27	7.5	42	54.5
BHUM16-03G	16	3/8	8	27	30	7.5	40	52.5
BHUM16-04G	16	1/2	11	27	30	7.5	42	54.5
BHUM18-04G	18	1/2	11	27	32	8	42	54.5
BHUM20-06G	20	3/4	16	30	36	8	46	58.5
BHUM22-04G	22	1/2	11	32	36	9	44	56.5
BHUM22-06G	22	3/4	16	32	36	9	46	58.5
BHUM25-06G	25	3/4	16	36	41	10	47	60.5
BHUM25-08G	25	1	20	36	41	10	49	62.5
BHUM28-06G	28	3/4	16	41	46	10	49	63
BHUM28-08G	28	1	21.5	41	46	10	51	65
BHUM30-06G	30	3/4	16	41	46	10	49	63.5
BHUM30-08G	30	1	21.5	41	46	10	51	65.5
BHUM32-08G	32	1	22	46	50	11	52	66.5
BHUM32-10G	32	1-1/4	28	46	50	11	56	70.5

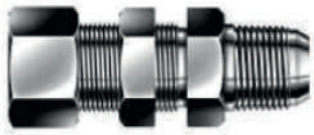
BHUF
Hose Female Union

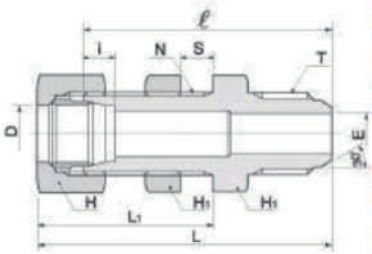




Designations	Tube O.D. D	(PF) T	E	Width across flat		i	ℓ	Approx
				H1	H			L
BHUF06-01G	6	1/8	4	14	14	7	32	43.5
BHUF08-02G	8	1/4	5.5	17	17	7	33	43.5
BHUF08-03G	8	3/8	6	19	17	7	34	44.5
BHUF10-02G	10	1/4	5.5	17	19	7	33	44.5
BHUF10-03G	10	3/8	8	19	19	7	34	45.5
BHUF10-04G	10	1/2	8	22	19	7	38	49.5
BHUF12-02G	12	1/4	5.5	19	22	7	33	44.5
BHUF12-03G	12	3/8	8	19	22	7	34	45.5
BHUF12-04G	12	1/2	10	22	22	7	38	49.5
BHUF15-03G	15	3/8	8	24	27	7.5	37	49.5
BHUF15-04G	15	1/2	11	24	27	7.5	40	52.5
BHUF16-03G	16	3/8	8	27	30	7.5	37	49.5
BHUF16-04G	16	1/2	11	27	30	7.5	40	52.5
BHUF18-04G	18	1/2	11	27	32	8	40	52.5
BHUF20-06G	20	3/4	16	30	36	8	43	55.5
BHUF22-04G	22	1/2	11	32	36	9	42	54.5
BHUF22-06G	22	3/4	16	32	36	9	43	55.5
BHUF25-06G	25	3/4	16	36	41	10	44	57.5
BHUF25-08G	25	1	20	36	41	10	46	59.5
BHUF28-06G	28	3/4	16	41	46	10	46	60
BHUF28-08G	28	1	21.5	41	46	10	48	62
BHUF30-06G	30	3/4	16	41	46	10	46	60.5
BHUF30-08G	30	1	21.5	41	46	10	48	62.5
BHUF32-08G	32	1	21.5	46	50	11	49	63.5
BHUF32-10G	32	1-1/4	28	46	50	11	55	69.5
BHUF38-12G	38	1-1/2	32	50	60	12	57	76.5
BHUF40-12G	40	1-1/2	32	55	60	12	62	81.5

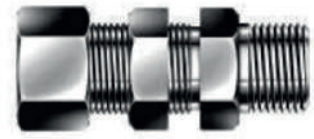
BHBM
Hose Bulkhead Male Union

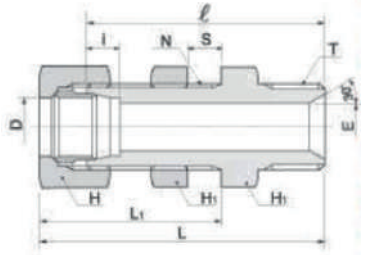




Designations	Tube O.D. D	(PF) T	E	Width across flat		i	ℓ	Approx		Panel Hole Drill Size N	Max.Panel Thickness S
				H1	H			L	L1		
BHBM06-01G	6	1/8	4	17	14	7	54	42.5	63.5	12.5	13
BHBM08-02G	8	1/4	5.5	19	17	7	55	42.5	65.5	14.5	13
BHBM08-03G	8	3/8	6	19	17	7	57	42.5	67.5	14.5	13
BHBM10-02G	10	1/4	5.5	22	19	7	56	43.5	67.5	16.5	13
BHBM10-03G	10	3/8	8	22	19	7	58	43.5	69.5	16.5	13
BHBM10-04G	10	1/2	8	22	19	7	60	43.5	71.5	16.5	13
BHBM12-02G	12	1/4	5.5	24	22	7	56	43.5	67.5	18.5	13
BHBM12-03G	12	3/8	8	24	22	7	58	43.5	69.5	18.5	13
BHBM12-04G	12	1/2	10	24	22	7	60	43.5	71.5	18.5	13
BHBM15-03G	15	3/8	8	27	27	7.5	63	49.5	75.5	22.5	15
BHBM15-04G	15	1/2	11	27	27	7.5	65	49.5	77.5	22.5	15
BHBM16-03G	16	3/8	8	30	30	7.5	65	49.5	77.5	24.5	15
BHBM16-04G	16	1/2	11	30	30	7.5	67	49.5	79.5	24.5	15
BHBM18-04G	18	1/2	11	32	32	8	69	51.5	81.5	26.5	15
BHBM20-06G	20	3/4	16	32	36	8	71	51.5	83.5	28.5	15
BHBM22-04G	22	1/2	11	36	36	9	70	51.5	82.5	30.5	15
BHBM22-06G	22	3/4	16	36	36	9	72	51.5	84.5	30.5	15
BHBM25-06G	25	3/4	16	41	41	10	72	52.5	87.5	35.5	15
BHBM25-08G	25	1	20	41	41	10	74	52.5	89.5	35.5	15
BHBM28-06G	28	3/4	16	46	46	10	75	55	89	38.5	15
BHBM28-08G	28	1	21.5	46	46	10	77	55	91	38.5	15
BHBM30-06G	30	3/4	16	46	46	10	75	55.5	89.5	40.5	15
BHBM30-08G	30	1	21.5	46	46	10	77	55.5	91.5	40.5	15
BHBM32-08G	32	1	22	50	50	11	81	57.5	95.5	42.5	15
BHBM32-10G	32	1-1/4	28	50	50	11	85	57.5	99.5	42.5	15

BHBF
Hose Bulkhead Female Union

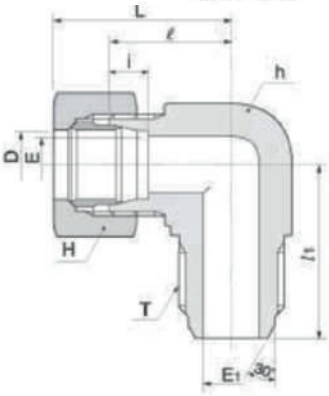




Designations	Tube O.D. D	(PF) T	E	Width across flat		i	ℓ	Approx		Panel Hole Drill Size N	Max.Panel Thickness S
				H1	H			L1	L		
BHBF06-01G	6	1/8	4	17	14	7	52	42.5	62.5	12.5	13
BHBF08-02G	8	1/4	5.5	19	17	7	53	42.5	63.5	14.5	13
BHBF08-03G	8	3/8	6	19	17	7	54	42.5	64.5	14.5	13
BHBF10-02G	10	1/4	5.5	22	19	7	54	43.5	65.5	16.5	13
BHBF10-03G	10	3/8	8	22	19	7	55	43.5	66.5	16.5	13
BHBF10-04G	10	1/2	8	22	19	7	58	43.5	69.5	16.5	13
BHBF12-02G	12	1/4	5.5	24	22	7	54	43.5	65.5	18.5	13
BHBF12-03G	12	3/8	8	24	22	7	55	43.5	66.5	18.5	13
BHBF12-04G	12	1/2	10	24	22	7	58	43.5	69.5	18.5	13
BHBF15-03G	15	3/8	8	27	27	7.5	60	49.5	72.5	22.5	15
BHBF15-04G	15	1/2	11	27	27	7.5	63	49.5	75.5	22.5	15
BHBF16-03G	16	3/8	8	30	30	7.5	62	49.5	74.5	24.5	15
BHBF16-04G	16	1/2	11	30	30	7.5	65	49.5	77.5	24.5	15
BHBF18-04G	18	1/2	11	32	32	8	67	51.5	79.5	26.5	15
BHBF20-06G	20	3/4	16	32	36	8	68	51.5	80.5	28.5	15
BHBF22-04G	22	1/2	11	36	36	9	68	51.5	80.5	30.5	15
BHBF22-06G	22	3/4	16	36	36	9	69	51.5	81.5	30.5	15
BHBF25-06G	25	3/4	16	41	41	10	69	52.5	82.5	35.5	15
BHBF25-08G	25	1	20	41	41	10	71	52.5	84.5	35.5	15
BHBF28-08G	28	1	21.5	46	46	10	74	55	88	38.5	15
BHBF30-06G	30	3/4	16	46	46	10	72	55.5	86.5	40.5	15
BHBF30-08G	30	1	21.5	46	46	10	74	55.5	88.5	40.5	15
BHBF32-08G	32	1	22	50	50	11	78	57.5	92.5	42.5	15
BHBF32-10G	32	1-1/4	28	50	50	11	84	57.5	98.5	42.5	15
BHBF38-12G	38	1-1/2	31	55	60	12	87	64.5	106.5	48.5	15
BHBF40-12G	40	1-1/2	32	60	60	12	94	69.5	113.5	52.5	15

BHLM
Hose Male Elbow

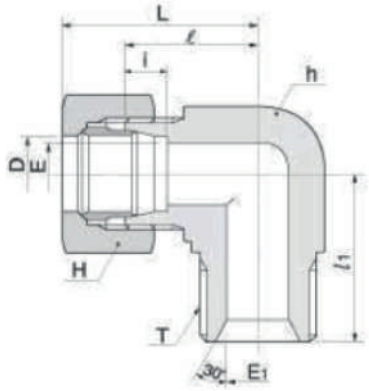




Designations	Tube O.D. D	(PF) T	E	E1	Width across flat		i	ℓ	l1	Approx
					h	H				L
BHLM06-01G	6	1/8	4	4	14	14	7	20	25	33.5
BHLM08-02G	8	1/4	6	5.5	17	17	7	23	25	33.5
BHLM08-03G	8	3/8	6	8	19	17	7	24	28	34.5
BHLM10-02G	10	1/4	8	5.5	19	19	7	24	28	35.5
BHLM10-03G	10	3/8	8	8	19	19	7	24	28	35.5
BHLM10-04G	10	1/2	8	11	24	19	7	29	34	40.5
BHLM12-02G	12	1/4	10	5.5	19	22	7	24	28	35.5
BHLM12-03G	12	3/8	10	8	19	22	7	24	28	35.5
BHLM12-04G	12	1/2	10	11	24	22	7	29	34	40.5
BHLM15-03G	15	3/8	12	8	24	27	7.5	29	33	41.5
BHLM15-04G	15	1/2	12	11	24	27	7.5	29	34	41.5
BHLM16-03G	16	3/8	13	8	27	30	7.5	32	36	44.5
BHLM16-04G	16	1/2	13	11	27	30	7.5	32	38	44.5
BHLM18-04G	18	1/2	14	11	27	32	8	32	38	44.5
BHLM20-06G	20	3/4	17	16	30	36	8	33	41	45.5
BHLM22-04G	22	1/2	18	11	32	36	9	34	40	46.5
BHLM22-06G	22	3/4	18	16	32	36	9	34	42	46.5
BHLM25-06G	25	3/4	20	16	36	41	10	36	44	49.5
BHLM25-08G	25	1	20	21.5	36	41	10	36	46	49.5
BHLM28-06G	28	3/4	22	16	41	46	10	41	47	55
BHLM28-08G	28	1	22	21.5	41	46	10	41	49	55
BHLM30-06G	30	3/4	25	16	41	46	10	41	47	55.5
BHLM30-08G	30	1	25	21.5	41	46	10	41	49	55.5
BHLM32-08G	32	1	26	22	46	50	11	46	54	60.5
BHLM32-10G	32	1-1/4	26	28	46	50	11	46	56	60.5

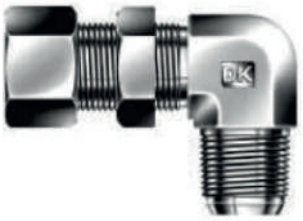
BHLF
Hose Female Elbow

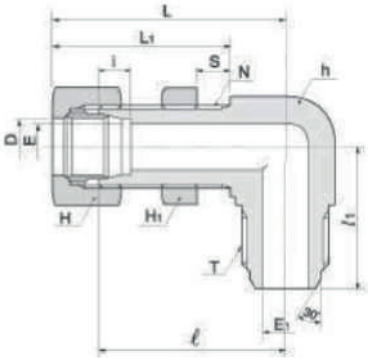




Designations	Tube O.D. D	(PF) T	E	E1	Width across flat		i	ℓ	l1	Approx
					h	H				L
BHLF08-02G	8	1/4	6	5.5	17	17	7	23	25	33.5
BHLF08-03G	8	3/8	6	8	19	17	7	24	27	34.5
BHLF10-02G	10	1/4	8	5.5	19	19	7	24	26	35.5
BHLF10-03G	10	3/8	8	8	19	19	7	24	27	35.5
BHLF10-04G	10	1/2	8	11	24	19	7	29	23	40.5
BHLF12-02G	12	1/4	10	5.5	19	22	7	24	26	35.5
BHLF12-03G	12	3/8	10	8	19	22	7	24	27	35.5
BHLF12-04G	12	1/2	10	11	24	22	7	29	33	40.5
BHLF15-03G	15	3/8	12	8	24	27	7.5	29	30	41.5
BHLF15-04G	15	1/2	12	11	24	27	7.5	29	33	41.5
BHLF16-03G	16	3/8	13	8	27	30	7.5	32	33	44.5
BHLF16-04G	16	1/2	13	11	27	30	7.5	32	36	44.5
BHLF18-04G	18	1/2	14	11	27	32	8	32	36	44.5
BHLF20-06G	20	3/4	17	16	30	36	8	33	38	45.5
BHLF22-04G	22	1/2	18	11	32	36	9	34	38	46.5
BHLF22-06G	22	3/4	18	16	32	36	9	34	39	46.5
BHLF25-06G	25	3/4	20	16	36	41	10	36	41	49.5
BHLF25-08G	25	1	20	21.5	36	41	10	36	43	49.5
BHLF28-06G	28	3/4	22	16	41	46	10	41	44	55
BHLF28-08G	28	1	22	21.5	41	46	10	41	46	55
BHLF30-06G	30	3/4	25	16	41	46	10	41	44	55.5
BHLF30-08G	30	1	25	21.5	41	46	10	41	46	55.5
BHLF32-08G	32	1	26	22	46	50	11	46	51	60.5
BHLF32-10G	32	1-1/4	26	28	46	50	11	46	57	60.5
BHLF38-12G	38	1-1/2	32	34	50	60	12	50	61	69.5
BHLF40-12G	40	1-1/2	32	34	55	60	12	55	62	74.5

BHBLM
Hose Bulkhead Male Elbow

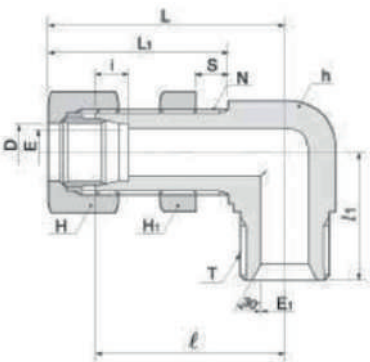




Designations	Tube O.D. D	(PF) T	E	E1	Width across flat			i	ℓ	l1	Approx		Panel Hole Drill Size N	Max.Panel Thickness S
					h	H1	H				L1	L		
BHBLM06-01G	6	1/8	4	4	17	17	14	7	45	28	42.5	56.5	14.5	13
BHBLM08-02G	8	1/4	6	5.5	19	19	17	7	46	28	42.5	56.5	14.5	13
BHBLM08-03G	8	3/8	6	8	19	19	17	7	46	30	42.5	56.5	14.5	13
BHBLM10-02G	10	1/4	8	5.5	22	22	19	7	48	30	43.5	59.5	16.5	13
BHBLM10-03G	10	3/8	8	8	22	22	19	7	48	32	43.5	59.5	16.5	13
BHBLM10-04G	10	1/2	8	11	24	22	19	7	49	35	43.5	60.5	16.5	13
BHBLM12-02G	12	1/4	10	5.5	24	24	22	7	49	31	43.5	60.5	18.5	13
BHBLM12-03G	12	3/8	10	8	24	24	22	7	49	33	13.5	60.5	18.5	13
BHBLM12-04G	12	1/2	10	11	24	24	22	7	49	35	43.5	60.5	18.5	13
BHBLM15-03G	15	3/8	12	8	27	27	27	7.5	57	36	49.5	69.5	22.5	15
BHBLM15-04G	15	1/2	12	11	27	27	27	7.5	57	37	49.5	69.5	22.5	15
BHBLM16-03G	16	3/8	13	8	30	30	30	7.5	59	37	49.5	71.5	24.5	15
BHBLM16-04G	16	1/2	13	11	30	30	30	7.5	59	38	49.5	71 5	245	15
BHBLM18-04G	18	1/2	14	11	32	32	32	8	63	39	51.5	75.5	26.5	15
BHBLM20-06G	20	3/4	16	16	36	36	36	8	65	40	51.5	77.5	28.5	15
BHBLM22-04G	22	1/2	18	11	36	36	36	9	65	40	51.5	77.5	30.5	15
BHBLM22-06G	22	3/4	18	16	36	36	36	9	65	40	51.5	77.5	30.5	15
BHBLM25-06G	25	3/4	20	16	41	41	41	10	68	43	52.5	81.5	35.5	15
BHBLM25-08G	25	1	20	21.5	41	41	41	10	68	48	52.5	81.5	35.5	15
BHBLM28-06G	28	3/4	22	16	46	46	46	10	74	48	55	88	38.5	15
BHBLM28-08G	28	1	22	21.5	46	46	46	10	74	48	55	88	38.5	15
BHBLM30-06G	30	3/4	25	16	46	46	46	10	74	48	55.5	88.5	40.5	15
BHBLM30-08G	30	1	25	21.5	46	46	46	10	74	51	55.5	88.5	40.5	15

BHBLF
Hose Bulkhead Female Elbow

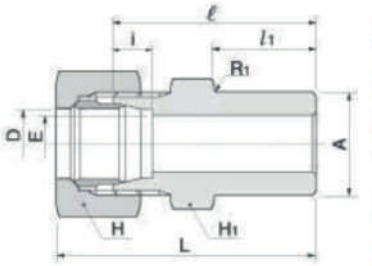




Designations	Tube O.D. D	(PF) T	E	E1	Width across flat			i	ℓ	l1	Approx		Panel Hole Drill Size N	Max.Panel Thickness S
					h	H1	H				L1	L		
BHBLF06-01G	6	1/8	4	4	17	17	14	7	45	28	42.5	56.5	14.5	13
BHBLF08-02G	8	1/4	6	5.5	19	19	17	7	46	26	42.5	56.5	14.5	13
BHBLF08-03G	8	3/8	6	8	19	19	17	7	46	27	42.5	56.5	14.5	13
BHBLF10-02G	10	1/4	8	5.5	22	22	19	7	48	28	43.5	59.5	16.5	13
BHBLF10-03G	10	3/8	8	8	22	22	19	7	48	29	43.5	59.5	16.5	13
BHBLF10-04G	10	1/2	8	11	24	22	19	7	49	33	43.5	60.5	16.5	13
BHBLF12-02G	12	1/4	10	5.5	24	24	22	7	49	30	43.5	60.5	18.5	13
BHBLF12-03G	12	3/8	10	8	24	24	22	7	49	30	43.5	60.5	18.5	13
BHBLF12-04G	12	1/2	10	11	24	24	22	7	49	33	43.5	60.5	18.5	13
BHBLF15-03G	15	3/8	12	8	27	27	27	7.5	57	33	49.5	69.5	22.5	15
BHBLF15-04G	15	1/2	12	11	27	27	27	7.5	57	36	49.5	69.5	22.5	15
BHBLF16-03G	16	3/8	13	8	30	30	30	7.5	59	34	49.5	71.5	24.5	15
BHBLF16-04G	16	1/2	13	11	30	30	30	7.5	59	37	49.5	71.5	24.5	15
BHBLF18-04G	18	1/2	14	11	32	32	32	8	63	37	51.5	75.5	26.5	15
BHBLF20-06G	20	3/4	16	16	32	32	36	8	65	40	51.5	77.5	28.5	15
BHBLF22-04G	22	1/2	18	11	36	36	36	9	65	40	51.5	77.5	30.5	15
BHBLF22-06G	22	3/4	18	16	36	36	36	9	65	40	51.5	77.5	30.5	15
BHBLF25-06G	25	3/4	20	16	41	41	41	10	68	43	52.5	81.5	35.5	15
BHBLF25-08G	25	1	20	21.5	41	41	41	10	68	43	52.5	81.5	35.5	15
BHBLF28-06G	28	3/4	22	16	46	46	46	10	74	48	55	88	38.5	15
BHBLF28-08G	28	1	22	21.5	46	46	46	10	74	48	55	88	38.5	15
BHBLF30-06G	30	3/4	25	16	46	46	46	10	74	48	55.5	88.5	40.5	15
BHBLF30-08G	30	1	25	21.5	46	46	46	10	74	48	55.5	88.5	40.5	15

BCW
Welding Connector

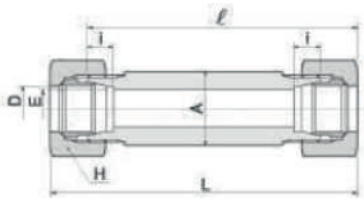




Designations	Tube O.D. D			A	E	Width across flat H1	Width across flat H	ℓ	i	l1	Approx L
BCW-06		6		12	4	14	14	29	7	11	39.5
BCW-08		8		14	6	17	17	34	7	15	44.5
BCW-10		10		16	8	17	19	34	7	15	45.5
BCW-12		12		18	10	19	22	34	7	15	45.5
BCW-15		15		21	12	24	27	40	7.5	18	52.5
BCW-16		16		22	13	27	30	44	7.5	22	56.5
BCW-18		18		25	14	27	32	44	8	22	56.5
BCW-20		20		28	17	30	36	46	8	22	58.5
BCW-22		22		28	18	32	36	46	9	22	58.5
BCW-25		25		33	20	36	41	51	10	26	64.5
BCW-28		28		36	22	41	46	55	10	28	69
BCW-30		30		39	25	41	46	55	10	28	69.5
BCW-32		32		40	26	46	50	56	11	28	70.5
BCW-35		35		43	28	46	55	56	11	28	73.5
BCW-38		38		45	32	50	60	58	12	28	77.5
BCW-40		40		46	32	55	60	65	12	30	84.5
BCW-06A	1/8		10.5	16	8	17	19	34	7	15	45.5
BCW-08A	1/4		13.8	19	11	22	24	40	7.5	18	52
BCW-10A	3/8		17.3	24	14	27	32	44	8	22	56.5
BCW-15A	1/2		21.7	28	18	32	36	46	9	22	58.5
BCW-20A	3/4		27.2	33	22	41	46	52	10	25	66
BCW-25A	1		34.0	40	28	46	55	56	11	28	73.5
BCW-32A	1-1/4		42.7	47	34	60	65	65	12	28	85.5
BCW-40A	1-1/2		48.6	55	40	65	75	70	12	30	91.5

BBUW
Welding Bulkhead Union



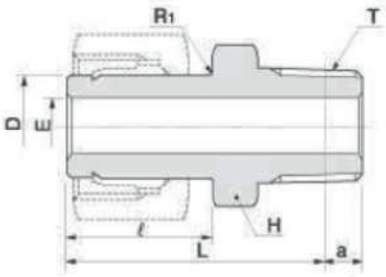


Designations	Tube O.D. D			A	E	Width across flat H	ℓ	i	Approx L
BBUW-06		6		16	4	14	74	7	95
BBUW-08		8		16	6	17	74	7	95
BBUW-10		10		19	8	19	74	7	97
BBUW-12		12		20	10	22	74	7	97
BBUW-15		15		25	12	27	78	7.5	103
BBUW-16		16		28	13	30	78	7.5	103
BBUW-18		18		28	14	32	78	8	103
BBUW-20		20		32	17	36	78	8	103
BBUW-22		22		32	18	36	78	9	103
BBUW-25		25		38	20	41	78	10	105
BBUW-28		28		39	22	46	82	10	110
BBUW-30		30		46	25	46	82	10	111
BBUW-32		32		46	26	50	82	11	111
BBUW-35		35		46	28	55	82	11	117
BBUW-38		38		55	32	60	82	12	121
BBUW-40		40		55	32	60	90	12	129
BBUW-06A	1/8		10.5	19	8	19	74	7	97
BBUW-08A	1/4		13.8	22	11	24	78	7.5	102
BBUW-10A	3/8		17.3	28	14	32	78	8	103
BBUW-15A	1/2		21.7	32	18	36	78	9	103
BBUW-20A	3/4		27.2	39	22	46	82	10	110
BBUW-25A	1		34.0	46	28	55	82	11	117
BBUW-32A	1-1/4		42.7	58	34	65	90	12	131
BBUW-40A	1-1/2		48.6	65	40	75	90	12	133

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

BA-R
Adapter

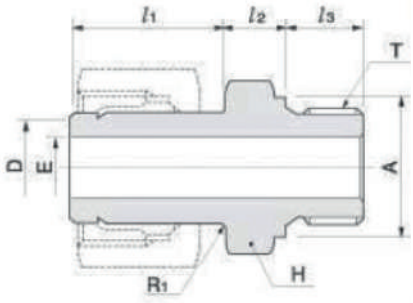




Designations	Tube O.D. D			(PT) T	E	Base Gauge length a	Width across flat H	ℓ	Approx L
BA06-01R		6		1/8	3	3.97	12	20	32
BA08-02R		8		1/4	5	6.01	14	20	35
BA10-02R		10		1/4	6	6.01	14	21	36
BA10-03R		10		3/8	6	6.35	19	21	36.5
BA12-02R		12		1/4	7	6.01	14	22	37
BA12-03R		12		3/8	8	6.35	19	22	37.5
BA15-03R		15		3/8	8	6.35	19	24	40.5
BA15-04R		15		1/2	10	8.16	22	24	43
BA16-04R		16		1/2	11	8.16	22	24	43
BA18-04R		18		1/2	12	8.16	22	24	43
BA20-06R		20		3/4	14	9.53	27	25	46.5
BA22-06R		22		3/4	14	9.53	27	26	47.5
BA25-06R		25		3/4	16	9 53	27	28	49.5
BA25-08R		25		1	17	10.39	36	28	52.5
BA28-08R		28		1	18	10.39	36	28	52.5
BA30-08R		30		1	20	10.39	36	29	53.5
BA30-10R		30		1-1/4	20	12.70	46	29	55
BA32-10R		32		1-1/4	22	12.70	46	30	56
BA38-12R		38		1-1/2	26	12.70	50	36	64.5
BA40-12R		40		1-1/2	28	12.70	50	36	64
BA06A-02R	1/8		10.5	1/4	6	6.01	14	21	36
BA08A-03R	1/4		13.8	3/8	9	6.35	19	22	38.5
BA10A-04R	3/8		17.3	1/2	11	8.16	22	24	43
BA15A-06R	1/2		21.7	3/4	14	9.53	27	26	47.5
BA20A-08R	3/4		27.2	1	18	10.39	36	28	52.5
BA25A-10R	1		34.0	1-1/4	23	12.70	46	33	59
BA32A-12R	1-1/4		42.7	1-1/2	29	12.70	50	36	67
BA40A-16R	1-1/2		48.6	2	33	15.88	65	37	72

BA-G
Adapter
(For Copper Gasket)



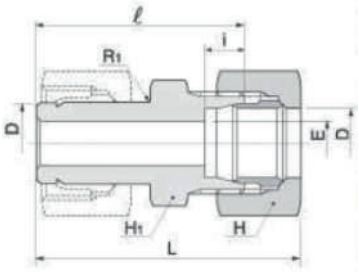


Designations	Tube O.D. D			(PF) T	E	Width across flat H	A	Approx l1	l2	l3
BA06-01G		6		1/8	3	14	14	20	8	8
BA08-02G		8		1/4	5	19	18	20	9	12
BA10-02G		10		1/4	6	19	18	21	9	12
BA10-03G		10		3/8	6	22	21.5	21	10	12
BA12-02G		12		1/4	7	19	18	22	9	12
BA12-03G		12		3/8	8	22	21.5	22	10	12
BA15-03G		15		3/8	8	22	21.5	24	10	12
BA15-04G		15		1/2	10	27	25.5	24	13	14
BA16-04G		16		1/2	11	27	25.5	24	13	14
BA18-04G		18		1/2	12	27	25.5	24	13	14
BA20-06G		20		3/4	14	32	31.5	25	16	16
BA22-06G		22		3/4	14	32	31.5	26	16	16
BA25-06G		25		3/4	16	32	31.5	28	16	16
BA25-08G		25		1	17	41	38	28	18	18
BA28-08G		28		1	18	41	38	28	18	18
BA30-08G		30		1	20	41	38	29	21	18
BA30-10G		30		1-1/4	20	50	48.5	29	21	20
BA32-10G		32		1-1/4	22	50	48.5	30	21	20
BA38-12G		38		1-1/2	26	55	53.5	36	21	21
BA40-12G		40		1-1/2	28	55	53.5	36	21	21
BA06A-02G	1/8		10.5	1/4	6		18	21	9	12
BA08A-03G	1/4		13.8	3/8	9		21.5	22	10	12
BA10A-04G	3/8		17.3	1/2	11		25.5	24	13	14
BA15A-06G	1/2		21.7	3/4	14		31.5	26	16	16
BA20A-08G	3/4		27.2	1	18		38	28	18	18
BA25A-10G	1		34.0	1-1/4	23		48.5	33	21	20
BA32A-12G	1-1/4		42.7	1-1/2	29		53.5	36	23	21
BA40A-16G	1-1/2		48.6	2	33		66	37	28	24

Male Stud Form B
sealing by copper
gasket
See page 6

BR
Reducer

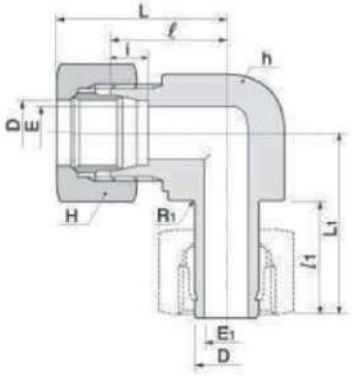




Designations	Tube O.D. D1			Tube O.D. D			E	Width across flat H1	Width across flat H	i	ℓ	Approx L
BR08-06		8			6		4	14	14	7	39	49.5
BR10-06		10			6		4	14	14	7	40	50.5
BR10-08		10			8		6	17	17	7	40	50.5
BR12-06		12			6		4	14	14	7	41	51.5
BR12-08		12			8		6	17	17	7	41	51.5
BR12-10		12			10		8	17	19	7	41	52.5
BR15-08		15			8		6	17	17	7	43	53.5
BR15-10		15			10		8	17	19	7	43	54.5
BR16-06		16			6		4	17	14	7	43	53.5
BR16-10		16			10		8	17	19	7	43	54.5
BR16-12		16			12		10	19	22	7	43	54.5
BR18-10		18			10		8	19	19	7	44	55.5
BR18-15		18			15		12	24	27	7.5	45	57.5
BR20-06		20			6		4	22	14	7	45	55.5
BR20-12		20			12		10	22	22	7	45	56.5
BR20-16		20			16		13	27	30	7.5	47	59.5
BR22-15		22			15		12	24	27	7.5	48	60.5
BR22-18		22			18		14	27	32	8	48	60.5
BR25-16		25			16		13	27	30	7.5	50	62.5
BR25-20		25			20		17	30	36	8	52	64.5
BR28-18		28			18		14	30	32	8	52	64.5
BR28-22		28			22		18	32	36	9	52	64.5
BR30-20		30			20		17	32	36	8	53	65.5
BR30-25		30			25		20	36	41	10	54	67.5
BR32-25		32			25		20	36	41	10	55	68.5
BR35-22		35			22		18	36	36	9	58	70.5
BR35-28		35			28		22	36	46	10	60	74
BR38-25		38			25		20	41	41	10	61	74.5
BR38-30		38			30		25	41	46	10	63	77.5
BR08A-6A	1/4		13.8	1/8		10.5	8	17	19	7	41	52.5
BR10A-6A	3/8		17.3	1/8		10.5	8	19	19	7	44	55.5
BR10A-8A	3/8		17.3	1/4		13.8	11	22	24	7.5	46	58
BR15A-8A	1/2		21.7	1/4		13.8	11	24	24	7.5	48	60
BR15A-10A	1/2		21.7	3/8		17.3	14	27	32	8	48	60.5
BR20A-10A	3/4		27.2	3/8		17.3	14	30	32	8	52	64.5
BR20A-15A	3/4		27.2	1/2		21.7	18	32	36	9	52	64.5
BR25A-15A	1		34	1/2		21.7	18	36	36	9	58	70.5
BR25A-20A	1		34	3/4		27.2	22	41	46	10	60	74

BLA
Positionable Elbow

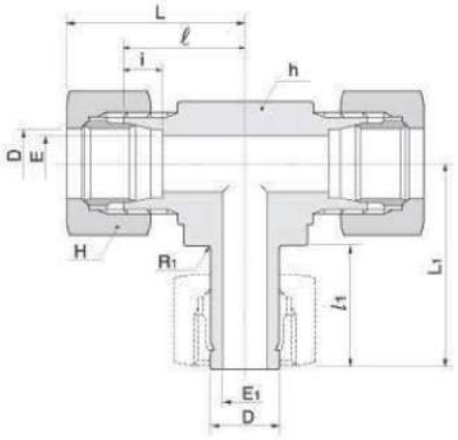




Designations	Tube O.D. D	E	E1	Width across flat h	Width across flat H	i	ℓ	l1	Approx L	Approx L1
BLA-10	10	8	6	17	19	7	23	21	34.5	35
BLA-12	12	10	8	19	22	7	24	22	35.5	37
BLA-15	15	12	10	24	27	7.5	29	24	44.5	40
BLA-16	16	13	11	27	30	7.5	32	24	44.5	43
BLA-18	18	14	12	27	32	8	32	24	44.5	43
BLA-20	20	17	14	30	36	8	33	25	45.5	45
BLA-22	22	18	14	32	36	9	34	26	46.5	46
BLA-25	25	20	17	36	41	10	36	28	49.5	49
BLA-28	28	22	18	41	46	10	41	28	55	53
BLA-30	30	25	20	41	46	10	41	29	55.5	54
BLA-32	32	26	22	46	50	11	50	30	64.5	66
BLA-38	38	32	26	50	60	12	50	36	69.5	72

BBTA
Positionable Branch Tee

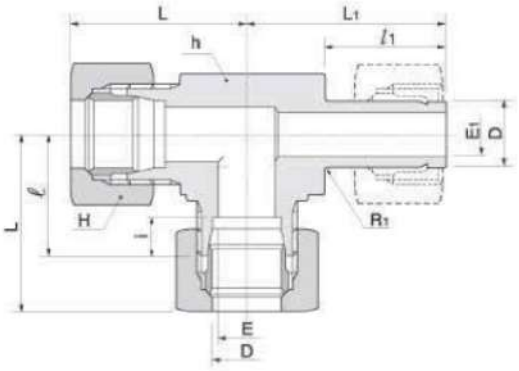




Designations	Tube O.D. D	E	E1	Width across flat		i	ℓ	l1	Approx	
				h	H				L	L1
BBTA-10	10	8	6	17	19	7	23	21	34.5	35
BBTA-12	12	10	8	19	22	7	24	22	35.5	37
BBTA-15	15	12	10	24	27	7.5	32	24	44.5	43
BBTA-16	16	13	11	27	30	7.5	32	24	44.5	43
BBTA-18	18	14	12	27	32	8	32	24	44.5	43
BBTA-20	20	17	14	30	36	8	33	25	45.5	45
BBTA-22	22	18	14	32	36	9	34	26	46.5	46
BBTA-25	25	20	17	36	41	10	36	28	49.5	49

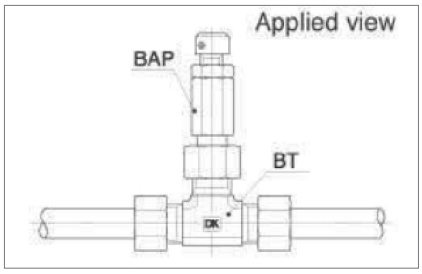
BRTA
Positionable Run Tee



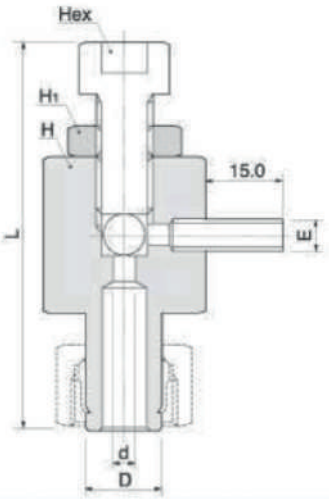


Designations	Tube O.D. D	E	E1	Width across flat		i	ℓ	l1	Approx	
				h	H				L	L1
BRTA-10	10	8	6	17	19	7	23	21	34.5	35
BRTA-12	12	10	8	19	22	7	24	22	35.5	37
BRTA-15	15	12	10	24	27	7.5	32	24	44.5	43
BRTA-16	16	13	11	27	30	7.5	32	24	44.5	43
BRTA-18	18	14	12	27	32	8	32	24	44.5	43
BRTA-20	20	17	14	30	36	8	33	25	45.5	45
BRTA-22	22	18	14	32	36	9	34	26	46.5	46
BRTA-25	25	20	17	36	41	10	36	28	49.5	49

BAP-1
Air Purge Valve (Tube End)



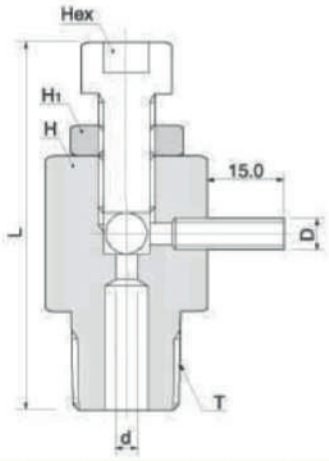




Designations	D			E	d	Width across flat		L	Ball
						H1	H		
BAP-06		6		4	3	13	14	56	7/32
BAP-08		8		4	3	13	14	56	7/32
BAP-10		10		4	3	13	14	57	7/32
BAP-12		12		4	3	13	14	58	7/32
BAP-15		15		6	4	19	27	74	5/16
BAP-16		16		6	4	19	27	74	5/16
BAP-18		18		6	4	19	27	74	5/16
BAP-20		20		6	4	19	27	75	5/16
BAP-22		22		6	4	19	27	76	5/16
BAP-25		25		6	4	19	27	78	5/16
BAP-28		28		6	4	19	30	78	5/16
BAP-06A	1/8		10.5	4	3	13	14	57	7/32
BAP-08A	1/4		13.8	6	4	19	27	72	5/16
BAP-10A	3/8		17.3	6	4	19	27	74	5/16
BAP-15A	1/2		21.7	6	4	19	27	76	5/16
BAP-20A	3/4		27.2	6	4	19	30	79	5/16

BAP-2
Air Purge Valve (Thread End)





Designations	(PT) T	E	d	Width across flat		L	Ball
				H1	H		
BAP-01R	1/8	4	3	13	14	51	7/32
BAP-02R	1/4	4	3	13	14	53	7/32
BAP-03R	3/8	6	4	13	19	54	7/32
BAP-04R	1/2	6	4	19	27	69	5/16

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Bite Type Fitting Material Chemical & Mechanical Properties in different Code

Fitting Material	Chemical Compositions					Mechanical Properties			
	C %	Si %	Mn %	P %	S %	Tensile Strength Kgf/mm²	Yield Point Kgf/mm²	Elongation %	Hardness HB
JIS G4051 S45C	0.42~0.48	0.15~0.45	0.60~0.90	0.030 MAX.	0.035 MAX.	58 (MIN.)	35 (MIN.)	20 (MIN.)	167~229 Normalizing
AISIG1045 & SAE1045	0.43~0.50	0.10~0.20	0.60~0.90	0.040 MAX.	0.050 MAX.	56	49	15	163
DIN 1652 C45	0.42~0.50	0.15~0.35	0.50~0.80	0.045 MAX.	0.045 MAX.	60 (MIN.)	34 (MIN.)	18 (MIN.)	206(MIN.) Normalizing

Applicable Tubing

The listed below is recommended.

Unit: mm

Tube	Thickness Tolerance	0.5 ± 0.1	1.0 ± 0.15	1.5 ± 0.2	2.0 ± 0.2	2.5 ± 0.25	3.0 ± 0.3	3.3 ± 0.33	3.5 ± 0.35	4.0 ± 0.4	4.5 ± 0.45	5.0 ± 0.5	5.5 ± 0.55	6.0 ± 0.6	7.0 ± 0.7	8.0	9.0
O.D.	O.D. Tolerance																
4	±0.1	O	O														
6			O	O													
8			O	O													
10			O	O	O												
12			O	O		O											
15				O		O											
16				O	O		O										
18						O		O									
20					O	O			O								
22					O			O		O							
25							O				O						
28	±0.15					O			O			O					
30						O				O			O				
35								O			O			O			
38						O				O	O				O		
42	±0.2					O				O			O			O	
50								O			O			O			O

Note: 1. The Dark area in the table indicates tube thickness to corresponding tube outer diameters as per JOHS-102-1964-Hydraulic Line Service.
2. Tube Thickness indicated by O mark is recommended.

Bite Type Fitting

Type Approval Certifications

LR	01 / 10048
DNV	P13044
GL	40 505 - 01 HH
ABS	BK720958 - X
BV	14034 / A1
NK	TA06112M
KR	CWN80397 - PE001

Safe Component Selection

The Selection of component for any applications or system design must be considered to ensure safe performance Component function, material compatibility, component ratings, proper installation, operation and maintenance remain the sole responsibility of the system designer and the user. DK Tech accepts no liability for any improper selection, installation, operation or maintenance.

DK-LOK

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DK-LOK

Fittings & Valves

DK DIN Bite Type Tube Fitting

for DIN 2353/ISO 8434-1

No. 04-03
June. 2015



DK DIN Bite Type Tube Fitting





























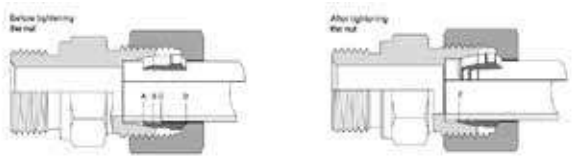
Design



The DK DIN bite type tube fitting is a flareless metric fitting that consists of a body, a progressive ring (sleeve) and a nut. On assembly, two cutting edges of the progressive ring bite into the outer surface of the tube ensuring the holding for high Tube pressure.
Available in three series, DK DIN bite type tube fittings and accessories are manufactured in accordance with DIN2353/DIN EN ISO8434-1
The fittings and components in this catalog are intended solely for the assembly of connections for fluid applications.

Function of DK DIN bite type tube fitting

DK DIN bite type tube fitting produces a low to high pressure, leak free connection of tubes and components in fluid systems. The basic function of the DK DIN bite type tube fitting is the controlled progressive bite of the ring (sleeve) into the tube due to a unique internal geometry.
The front cutting edge (A) has already started cutting into the tube before the second cutting edge (B) starts. As soon as both cutting edges have cut the tube to the designed depth further advance is limited by the stop edge (C).
Owing to the design of both cutting edges and stop edge all forces arising are equally distributed. This distribution along with the specially designed interior collar (D) of the ring guarantees increased safety, particularly with regard to vibration and flexure stresses. The design and function of the cutting ring ensure that service vibration loading is not present in the areas of the tubing where the bite is made.
The stop edge causes a sharp increase in tightening forces which is clearly perceptible. After assembly, a visible collar (E) of cut tube material must completely fill the space in front of the first cutting edge. With stainless steel tube and hose connections made from free cutting steel, the collar is less due to the harder material.
During assembly, it is absolutely essential that the tube is held firmly against the stop in the inner cone of the fitting; if not, the cutting process will not take place satisfactorily. Re-assembly can be performed an unlimited number of times.



Material specification

Fitting Materials	Steel	DIN 3859
	Brass	CuZn35Ni2 in accordance with DIN17660/17672, Material No. 2.0540
	Stainless Steel	X6CrNiMoTi 17122 to DIN17440 Material No, 1.4571 or ASTM A479 type 316
Elastomer Materials	Buna-N	
	Viton	DIN 17660 FPM(VITON)

Pressure and temperature load Capability

Pressure Load Capability

Definition of pressures specified in the catalog:

a)Nominal pressure PN

The nominal pressure as referred to in DIN 2401, part 1 draft.

b)Working pressure PB

The permissible working pressure for a component is based on the material and the operation temperature (TB) during trouble- free operation (DIN 2401, part 1 draft).

Pressure Ranges

Series	Steel / Brass*		1.4571(SS316)	
	Size	Pressure	Size	Pressure
LL	4-12	100 bar	4-8	100 bar
L	6-18	315 bar	6-15	250 bar
	-	-	18-22	160 bar
	22-42	160 bar	28-42	100 bar
S	6-14	630 bar	6-14	630 bar
	16-30	400 bar	16-25	400 bar
	38	315 bar	30-38	315 bar

Brass*:Pressure range of brass should be adapter 30% below of the steel.

Pressure reductions

Recommended pressure reductions (determined by the fluid medium) for higher service temperatures.

Materials Of fittings	Temperature range		Pressure Reductions
	°C	°F	
Steel	-40° to + 120°C	-40°F to 250°F	-
Brass	-60° to + 175°C	-75°F to 350°F	30%
1.4571	-60° to + 20°C	-75°F to 70°F	-
1.4571	+ 50°C	+120°F	4%
1.4571	+ 100°C	+212°F	11%
1.4571	+ 200°C	+400°F	20%
1.4571	+ 300°C	+570°F	29%
1.4571	+ 400°C	+750°F	33%

If the tube material used deviates from the fitting material, the tube is to be checked separately with regard to the permissible temperature range and the possible pressure reductions required. Male stud fittings may require additional pressure reductions, due to the mating port material, and the sealing mechanism must also be taken into account. For male stud fittings with cutting face, additional sealants may be required.

Fluids

DK DIN fittings are designed for the use of commercial hydraulic oils. If special fluids please contact our application engineers.

Permissible operating temperature(TB) range

A) For fittings materials

Material	Temperature
Steel	-40°C to + 120°C (DIN 3859)
Brass	-60°C to + 175°C (DIN 17660/17672)
Stainless steel	-60°C to + 400°C (DIN 17440)

Please refer to the information given in the section “Reduction of Pressure”

B) For sealing materials

Material	Temperature
NBR (e.g. Perbunan)	-35°C to + 100°C
FPM (eg. Viton)	-25°C to + 200°C
PTFE (e.g.Teflon)	-60°C to + 240°C

Tubing guide

· Seamless precision steel tube St 37.4

We recommend the use of seamless precision steel tubes with dimensions to DIN 2391, part 1, material St 37.4 to DIN 1630, type NBK. The following tube wall thickness are suitable for use;

Tube O.D (D)	Tolerance	Wall Thickness (t)	Design Pressure DIN 2413 I Static	Design Pressure DIN 2413 III Dynamic	Weight
4	±0.1	0.5	313	274	0.047
		0.75	409	391	0.060
		1	522	500	0.074
6	±0.1	0.75	333	289	0.103
		1	389	372	0.123
		1.5	549	526	0.166
		2	692	662	0.197
		2.25	757	725	0.208
8	±0.1	1	333	288	0.173
		1.5	431	412	0.240
		2	549	526	0.296
		2.5	658	630	0.339
10	±0.1	1	282	248	0.222
		1.5	373	357	0.314
		2	479	458	0.395
		2.5	576	551	0.462
		3	666	638	0.518
12	±0.08	1	235	209	0.271
		1.5	353	303	0.389
		2	409	391	0.493
		2.5	495	474	0.586
		3	576	551	0.606
		3.5	651	624	0.734
15	±0.08	1	188	171	0.345
		1.5	282	248	0.499
		2	336	321	0.641
		2.5	409	391	0.771
		3	478	458	0.888
16	±0.08	1	176	160	0.370
		1.5	264	234	0.536
		2	353	303	0.691
		2.5	386	370	0.832
		3	452	433	0.962
18	±0.08	1	157	143	0.419
		1.5	235	209	0.610
		2	313	273	0.789
		2.5	348	333	0.956
		3	409	391	1.110
20	±0.08	1.5	212	191	0.684
		2	282	249	0.888
		2.5	353	303	1.08
		3	373	357	1.26
		3.5	426	408	1.424
		4	478	458	1.578
22	±0.08	1	128	118	0.518
		1.5	192	174	0.758
		2	256	227	0.986
		2.5	320	278	1.202
		3	343	328	1.406

Tube O.D (D)	Tolerance	Wall Thickness (t)	Design Pressure DIN 2413 I Static	Design Pressure DIN 2413 III Dynamic	Weight
25	±0.08	2	226	201	1.134
		2.5	282	248	1.387
		3	338	292	1.628
		4	394	378	2.072
		4.5	437	418	2.275
		5	478	458	2.446
28	±0.08	1.5	151	139	0.980
		2	201	181	1.282
		2.5	252	223	1.572
		3	302	264	1.850
		4	357	342	2.368
		5	434	415	2.836
30	±0.08	2	188	171	1.381
		2.5	235	210	1.695
		3	282	248	2.00
		4	336	321	2.57
		5	409	391	3.08
35	±0.15	2	161	147	1.63
		2.5	201	181	2.00
		3	242	215	2.37
		4	322	280	3.06
		5	357	342	3.69
		6	409	401	4.29
38	±0.15	2.5	186	168	2.189
		3	223	200	2.589
		4	297	260	3.35
		5	332	318	4.07
		6	390	373	4.74
		7	446	427	5.35
42	±0.2	2	134	124	1.973
		3	201	181	2.89
		4	269	237	3.75

· Seamless precision stainless steel 1.4571

Stainless steel tubes (e,g. 1.4571), code X6CrNiMoTi 17122, must be cold-drawn and seamless, heat-treated without formation of scales, type me to Din 17458, provide tolerances to DIN 2391, Part 1.
The following tube wall thickness are suitable for use ;

Tube O.D (D)	Tolerance	Wall Thickness (t)	Design Pressure DIN 2413 I Static	Design Pressure DIN 2413 III Dynamic	Weight
mm	mm	mm	bar	bar	Kg/m
4	±0.1	0.75	391	376	0.061
4		1	500	480	0.075
6	±0.1	1	372	357	0.125
6		1.5	526	505	0.168
6		2	662	637	0.200
6		2.25	725	696	0.211
8	±0.1	1	347	277	0.175
8		1.5	412	396	0.244
8		2	526	505	0.300
8		2.5	630	604	0.344
10	±0.08	1	294	238	0.225
10		1.5	357	343	0.319
10		2	458	439	0.401
10		2.5	551	529	0.469
10		3	638	612	0.525
12	±0.08	1	245	201	0.275
12		1.5	368	291	0.394
12		2	391	376	0.501
12		2.5	474	455	0.594
12		3	551	529	0.615
12		3.5	624	599	0.744
15	±0.08	1.5	294	238	0.507
15		2	321	309	0.651
15		2.5	391	376	0.782
15		3	458	439	0.901
16	±0.08	2	368	291	0.701
16		2.5	370	355	0.845
16		3	433	416	0.977
18	±0.08	1.5	245	201	0.620
18		2	327	262	0.801
18		2.5	333	320	0.967
18		3	391	376	1.126

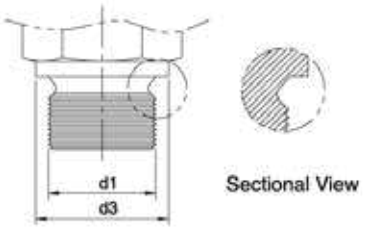
Tube O.D (D)	Tolerance	Wall Thickness (t)	Design Pressure DIN 2413 I Static	Design Pressure DIN 2413 III Dynamic	Weight
20	±0.08	2.5	368	291	1.095
20		3	357	343	1.277
20		3.5	408	392	1.433
20		4	458	439	1.600
22	±0.08	2	267	218	1.002
22		2.5	334	267	1.220
22		3	328	315	1.426
25	±0.08	2	235	193	1.152
25		2.5	294	238	1.408
25		3	353	281	1.635
25		4	378	363	2.092
25		4.5	418	402	2.307
25		5	458	439	2.501
28	±0.08	2	210	174	1.302
28		2.5	263	214	1.594
28		3	315	253	1.874
28		4	342	328	2.402
28		5	415	399	2.876
30	±0.08	3	294	238	2.028
30		4	321	309	2.605
30		5	391	376	3.400
35	±0.15	2	168	141	1.644
35		2.5	210	174	2.018
35		3	252	206	2.392
35	±0.15	4	336	269	3.086
35		5	342	328	3.742
35		6	401	385	4.351
38	±0.15	4	309	249	3.405
38		5	318	305	4.131
38		6	373	358	4.807
38		7	427	410	5.426
42	±0.2	3	210	174	2.930
42		4	280	227	3.798

Stud Ends & Tapped Hole Forms for tube Fittings.

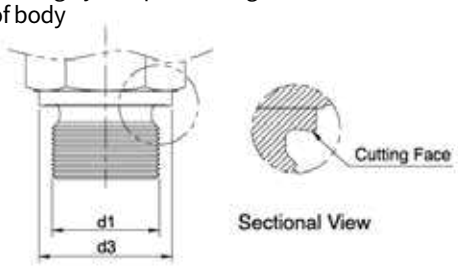
This standard specifies dimensions for stud ends and tapped holes with metric fine pitch thread and pipe thread for use with Compression fittings, valves and screw plugs, general outlay of types.

Forms of stud Ends

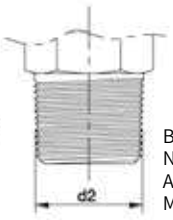
Form A (DIN 3852 Part1+2)
With sealing by washer



Form B (DIN 3852 Part 1+2)
With sealing by compression against face of body

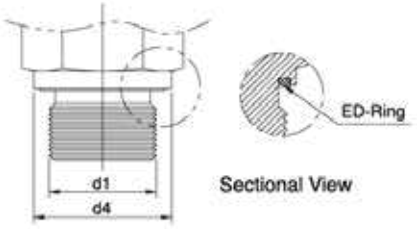


Form C (DIN 3852 Part 1+2)
With sealing in tapered thread

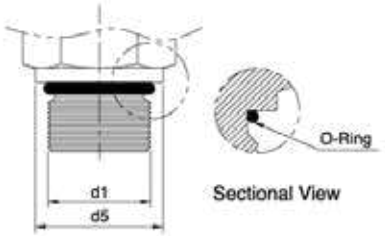


B.S.P (keg) DIN 2999
NPT (keg) ANSI / ASME B 1.20.1-1983
Metric (keg) DIN 158

Form E (DIN 3852 Part 11)
With sealing by DIN 3869 ring seals (* ED-Ring)



Form F (DIN 3852 Part 3)
With sealing by O-Ring



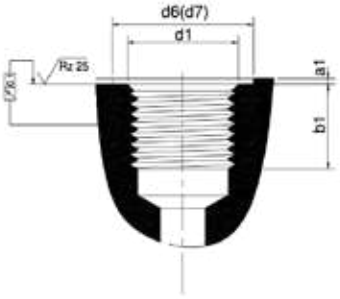
Thread size for		d3	d4-0.2	d5±0.1
Form A,B and E,F d1	Form C stud ends d2			
M8 x 1.0	M8 x 1.0 keg.	-	-	10.9
M10 x 1.0	M1.0 x 1.0 keg.	14	13.9	12.9
M12 x 1.5	M12 x 1.5 keg.	17	16.9	16.9
M14 x 1.5	M14 x 1.5 keg.	19	18.9	18.9
M16 x 1.5	M16 x 1.5 keg.	21	21.9	20.9
M18 x 1.5	M18 x 1.5 keg.	23	23.9	22.9
M20 x 1.5	M20 x 1.5 keg.	25	25.9	24.9
M22 x 1.5	M12 x 1.5 keg.	27	26.9	26.9
M26 x 1.5	-	31	31.9	30.9
M27 x 2.0	-	32	31.9	31.9
M33 x 2.0	-	39	39.9	37.9
M42 x 2.0	-	49	49.9	47.9
M48 x 2.0	-	55	54.9	54.9
G 1/8	1/8 NPT	14	13.9	-
G 1/4	1/4 NPT	18	18.9	-
G 3/8	3/8 NPT	22	21.9	-
G 1/2	1/2 NPT	26	26.9	-
G 3/4	3/4 NPT	32	31.9	-
G 1	1 NPT	39	39.9	-
G 1 1/4	1 1/4 NPT	49	49.9	-
G 1 1/2	1 1/2 NPT	55	54.9	-

Thread size for		d3	d4-0.2	d5±0.1
Form A,B and E,F d1	Form C stud ends d2			
7/16 - 20UNF	R 1/8 keg.	-	-	14.4
9/16 - 18UNF	R 1/4 keg.	-	-	17.6
3/4 - 16UNF	R 3/8 keg.	-	-	22.3
7/8 - 14UNF	R 1/2 keg.	-	-	25.5
1 1/16 - 12UN	R 3/4 keg.	-	-	31.9
1 5/16 - 12UN	R 1 keg.	-	-	38.2

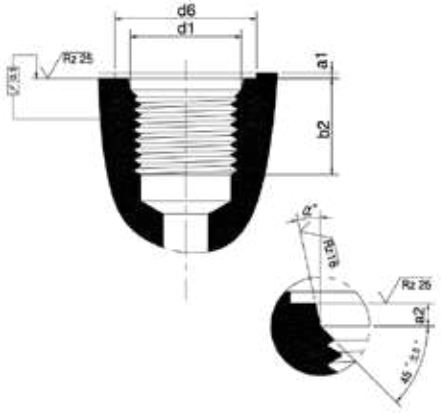
Note : DK Standards Sealing Material is NBR (-20°C to + 100°C)
Other Sealing Materials are available on Request.

Forms of tapped holes

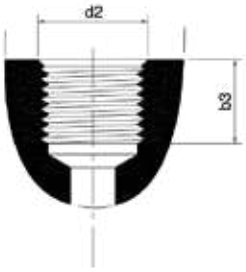
Form X (DIN 3852 Part 1+2)
For parallel Stud Ends. (From A,B)
* d7 is for Stud Ends From E



Form W (DIN 3852 Part 3)
For Stud Ends with O-Ring. (From F)



Form Z (DIN 3852 Part 1+2)
For tapered thread Stud Ends.



Thread size for		d6 min	d7	a1 max	a2 + 0.4	b1 min	b2 min	b3 min	α°±1°
Form X, W Tapped Holes d1	Form Z Tapped Holes d2								
M 8 x 1.0	M 8 x 1.0 keg.	13	-	1	1.6	-	10	5.5	12
M 10 x 1.0	M 1.0 x 1.0 keg.	15	15	1	1.6	8	10	5.5	12
M 12 x 1.5	M 12 x 1.5 keg.	18	18	1.5	2.4	12	11.5	8.5	12
M 14 x 1.5	M 14 x 1.5 keg.	20	20	1.5	2.4	12	11.5	8.5	15
M 16 x 1.5	M 16 x 1.5 keg.	22	23	1.5	2.4	12	13	8.5	15
M 18 x 1.5	M 18 x 1.5 keg.	24	25	2	2.4	12	14.5	8.5	15
M 20 x 1.5	M 20 x 1.5 keg.	26	27	2	2.4	14	14	10.5	15
M 22 x 1.5	M 12 x 1.5 keg.	28	28	2.5	2.4	14	15.5	10.5	15
M 26 x 1.5	-	32	33	2.5	3.1	16	16	-	15
M 27 x 2.0	-	33	33	2.5	3.1	16	19	-	15
M 33 x 2.0	-	40	41	2.5	3.1	18	19	-	15
M 42 x 2.0	-	50	51	2.5	3.1	20	19.5	-	15
M 48 x 2.0	-	56	56	2.5	3.1	22	22	-	15
G 1/8	1/8 NPT	15	15	1	-	8	-	6.9	-
G 1/4	1/4 NPT	19	20	1.5	-	12	-	10	-
G 3/8	3/8 NPT	23	23	2	-	12	-	10.3	-
G 1/2	1/2 NPT	27	28	2.5	-	14	-	13.6	-
G 3/4	3/4 NPT	33	33	2.5	-	16	-	14.1	-
G 1	1 NPT	40	41	2.5	-	18	-	16.8	-
G 1 1/4	1 1/4 NPT	50	51	2.5	-	20	-	17.3	-
G 1 1/2	1 1/2 NPT	56	56	2.5	-	22	-	17.3	-
7/16 - 20UNF	R 1/8 keg.	21	-	1.6	2.4	-	11.5	5.5	12
9/16 - 18UNF	R 1/4 keg.	25		1.6	2.5	-	12.7	8.5	12
3/4 - 16UNF	R 3/8 keg.	30	-	2.4	2.5	-	14.3	8.5	15
7/8 - 14UNF	R 1/2 keg.	34	-	2.4	2.5	-	16.7	10.5	15
1 1/16 - 12UN	R 3/4 keg.	41	-	2.4	3.3	-	19	13	15
1 5/16 - 12UN	R 1 keg.	49	-	3.2	3.3	-	19	16	15
1 5/8 - 12UN	R 1 1/4 keg.	58	-	3.2	3.3	-	19	17	15
-	R 1 1/2 keg.	-	-	-	-	-	-	17	-

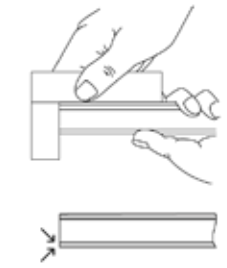
This assembly instruction applicable to DIN 2353 fittings shows suitable make-up of fittings into seamless pipe in accordance with DIN 3859.

3 Methods might be employed for assembling -

- Assemble the fitting body directly.
- Using pre-swaging tool for assembly.
- Assemble standpipe & cone fitting with O-ring

In order to ensure positive assembly, stainless steel fittings should be always pre-assembly In and oiled pre-assembly tool. (see page 8)

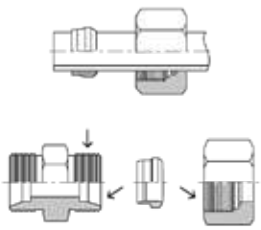
◆ **Assemble the fitting body directly.**



1.0 Saw the tube at right angle. An angular offset of 1/2° in relation to the tube axis is permissible.

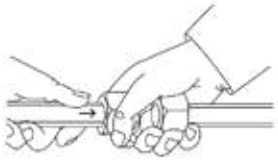
1.1 After clean, lightly deburr tube ends at the inside and outside edge.

1.2 Don't use a tube cutter because this would cause formation of considerable burrs and an angular cut.
Use sawing machine or device instead.

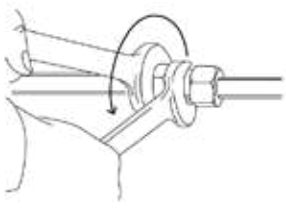


2.0 Lubricate thread and inside of fitting body also cutting ring and thread of nut.
Don't use grease.

2.1 Place nut and cutting ring on tube shown.
Ensure cutting ring and nut are facin g the right way.

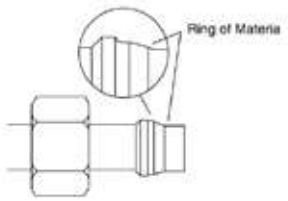


3.0 Press tube into fitting body, up to tube abutment, then hand-tighten the nut.

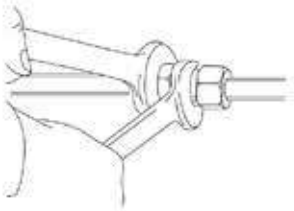


4.0 Make sure the nut is in hand tight position, then the 1 1/2 turns with wrench by holding fitting body with a second wrench. (Never turn fitting body, hold body and turn nut)

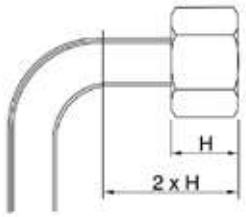
Caution!
Any deviating number of tighting turns reduces the nominal pressure and the service life of the fitting and may cause leakages or slipping of the tube.



5.0 Check penetration of cutting edge.
A visible ring of material should fill the space in front of the cutting ring and face.
Cutting ring may turn on tube, but should not be capable of axial displacement.

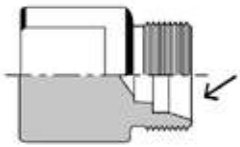


6.0 Each time the fitting is disassembled, the nut must be retightened firmly using the same torque as required for final assembly.

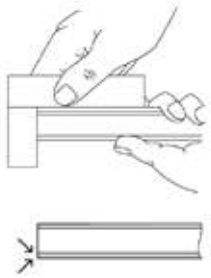


7.0 Minimum length of straight tube and for tube bends, up to start of the bending radius must be at least twice(2 X H) the nut length(H)

◆ **Using pre-swaging tool for assembly.**



1.0 In order to ensure positive assembly DK-Lok Corporation DIN fittings should always be pre-assembled in on oiled pre-assembly tool.
For direct assembly, torque-controled assembly or mechanical pre-assembly, which are also possible.
Please refer to separate assembly instructions.

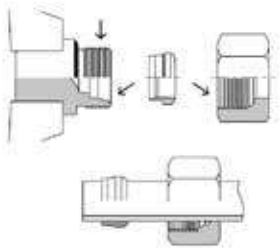


2.0 Saw the tube at right angle. An angular offset of 1/2° in relation to the tube axis is permissible.

2.1 After clean, lightly deburr tube end at the inside and outside edge.

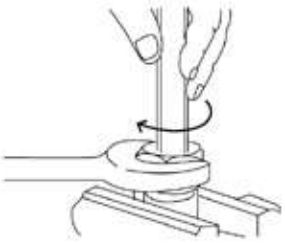
0.2

2.2 Don't use a tube cutter because this would cause formation of considerable burrs and an angular cut.
Use sawing machine or device instead.



3.0 Lubricate thread and inside of fittings body also cutting ring and thread of nut. Don't use grease.

3.1 Please nut and cutting ring on tube shown.
Ensure cutting ring and nut are facting the right away.



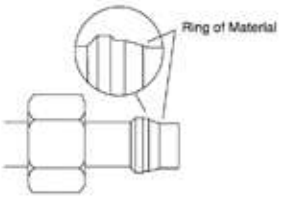
4.0 Press tube into fitting body, up to tube abutment, then hand-tighten the nut.



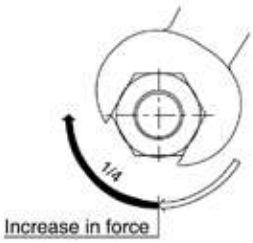
5.0 Make sure the nut is in hand tight position, then the 1 1/4 turns with wrench by holding fitting body with a second wrench(Never turn fitting body, hold body and turn nut)

Caution!

Application of deviating numbers of tightening turns reduces the nominal pressure rating and the life of the fitting which cause leakage or slipping of the tube.



6.0 Check penetration of cutting edge.
A visible ring of material should fill the space in front of the cutting ring and face.
Cutting ring may turn on tube but should not be capable of axial displacement.

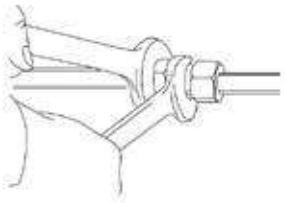


7.0 Tighten nut until a noticeable increase in force is required.
Beyond this point, tighten the nut by 1/4 turn with wrench for final assembly.
Hold fitting body by means of a wrench.

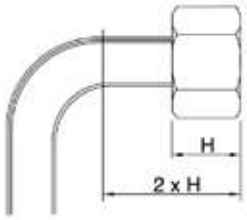
7.1 With unfavorable mounting conditions and great tube dimensions, final assembly must be completed in via with the fitting body.

Caution!

Any deviating number of tightening turns reduces the nominal pressure and the service life of the fitting and may cause leakages or slipping of the fitting.

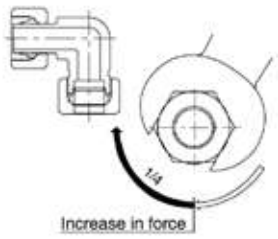


8.0 Each time the fitting is disassembled, the nut must be retightened firmly using the same torque as required for final assembly.



9.0 Minimum lingth of straight tube and for tube bends, up to start of the bending radius must be at least twice(2XH) the nut length(H)

◆Assemble standpipe & cone fitting with O-ring.

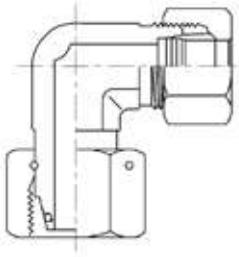


1.0 Standpipes are generally supplied with pre-assembled cutting ring
Tighten the nut 1/4 turn with wrench beyond the point of a noticeable increase in force.
Hold fitting body firmly by means of wrench

1.1 With unfavorable mounting conditions and great tube dimensions, final assembly must be completed in a vice with the fitting body to be subsequently installed.

Caution!

Any deviating number of tightening turns reduces the nominal pressure and the service life of the fitting and may cause leakages or slipping of the fitting.



2.0 Oil O-ring
Tighten nut 1/4 of a turn beyond the point of a noticeable increase in force.
Hold fitting body firmly by means of wrench.

2.1 With unfavorable mounting conditions and great tube dimensions, final assembly must be completed in a vice with the fitting body to be subsequently installed.

Caution!

Any deviating number of tightening turns reduces the nominal pressure and the service life of the fitting and may cause leakages or slipping of the fitting.

Ordering Information

Example

1. Tube to Tube Connection

NT	-	12	S	S
①		②	③	⑥

2. Tube to Thread Connection

NMC	-	10	L	- 02G	ED	-	S
①		②	③	④	⑤		⑥

3. Tube to Tube Port

NEW	-	16	S	S
①		②	③	⑥

4. Tube Port to Female Port

NMGE	-	16	S	- 04G	ED	-	C
①		②	③	④	⑤		⑥

5. Male /Female Adapter

NAMF	-	04G	- 03G	-	C
①		④			⑥

① Name of Fitting : “Refer to Index”

② Tube O.D. Designator

Tube O.D	4mm	6mm	8mm	……	38mm	42mm
Identifier	04	06	08	……	38	42

③ Series Designator

Series	Very Light	Light	Heavy
Identifier	LL	L	S

④-a.Thread Designator (Pipe Thread)

	Nominal Size	1/8"	1/4"	3/8"	1/2"	3/4”	1"	1 1/4"	1 1/2"
Identifier	ANSI/ASME B1.20.1 NPT	01N	02N	03N	04N	06N	08N	10N	12N
	DIN-ISO 228(DIN 259) BSP/Parallel	01G	02G	03G	04G	06G	08G	10G	12G
	DIN-2999 BSP Tapered	01R	02R	03R	04R	06R	08R	10R	12R

④-b. Thread Designator (Metric Thread)

	Nominal Size	M8 x 1.0	M10 x 1.0	M12 x 1.5	M14 x 1.5	……	M27 x 2.0	M33 x 2.0	M42 x 2.0	M48 x 2.0
Identifier	DIN 158 Taper (Keg)	M8K	M10K	M12K	M14K	……				
	DIN-13 Parallel	M8 x 1.0	M10 x 1.0	M12 x 1.5	M14 x 1.5	……	M27 x 2.0	M33 x 2.0	M42 x 2.0	M48 x 2.0

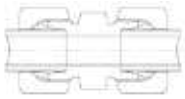
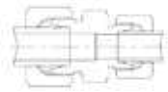
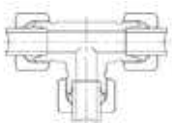
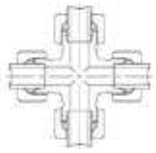
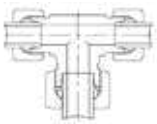
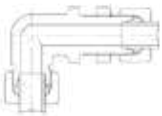
④-c. Thread Designator (Unified)

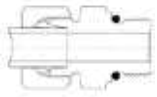
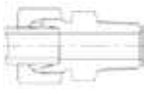
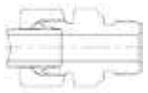
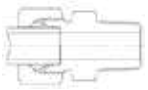
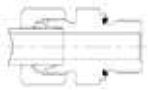
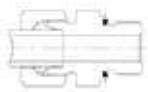
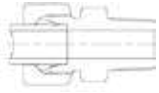
Size	7/16-20UNF	9/16-18UNF	3/4-16UNF	7/8-14UNF	1.1/16-12UN	1.5/16-12UN	1.5/8-12UN
identifier	4U	6U	8U	10U	12U	16U	20U

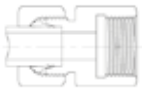
⑤ Elastomer Seal: ED-Ring & O-Ring (Refer to Sealing Material)

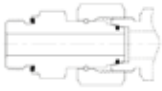
⑥ Material Designator

Material	Carbon Steel (DIN 3859)	Stainless Steel		Brass
		DIN 17440/1.4571	ASTM A276/A479 TYPE 316	DIN 17660/17672 MN. 2.0540
Identifier	C	4571	S	B

Tube To Tube	EO	EMB	VOLZ	VOSS	WALPRO
NU Straight Union  16	G	E	G-V	111.. 112..	P-GV
NL Union Elbow  16	W	F	W-V	119... 120...	P-WV
NUR Reducing Union  17	GR		GR-V		P-GV
NT Uni on Tee  18	T	G	T-V	133... 134...	P-TV
NX Union Cross  18	K	H	K-V	135... 136..	P-KV
NTR Reducing Tee  19	TR				P-TV
NBU Bulkhead Union  16	SV	K	GS-V	137...	P-GSV
NBUW Welding Bulkhead Union  16	ESV	N	ES-V	141...	P-ESV
NBL Bulkhead Union Elbow  16	WSV	L	WS-V	138...	P-WSV

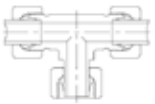
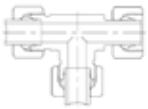
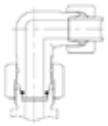
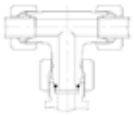
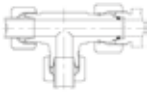
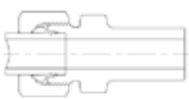
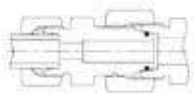
Tube To Male Thread	EO	EMB	VOLZ	VOSS	WALPRO
NOM-U/M Male Connector (Unified and Metric Parallel) with O-Ring  22	GEUNF/ UN GEO			182...	P-GEV...U P-GEV...M -FO.F
NMC-R Male Connector (BSP Tapered)  23, 24	GE-R	AP-R	GE-V...RK	103... 104...	P-GEV...RK
NMC-G Male Connector (BSP Parallel)  23, 24	GE-M	A-M	GE-V...M	110...	P-GEV...R
NMC-M Male Connector (Metric Parallel)  25	GE-M	A-M	GE-V...M	109...	P-GEV-M
NMC-MK Male Connector (Metric Taper)  25	GE-M	A-M	GE-V... RWD	109...	P-GEV-M
NMC-GE Male Connector (BSP Parallel) With ED-Ring  26	GE-R-ED	A-RWD	GE-V RWD	184...	P-GEV...R-WD
NMC-ME Male Connector (Metric Parallel) With ED-Ring  27	GE-M-ED	A-MWD	GE-V... MWD	184...	P-GEV...M-WD
NMC-N Male Connector (NPT Thread)  28	GE-NPT	A/NPT	GE-V... NPT	105... 106	P-GEV... NPT
NLM-R/M Male Elbow (BSP Tapered / Metric Taper)  29	WE-R -M	B-R -M	WE-V...R ...M	115... 116 113... 114	P-WEV... RK ...MK

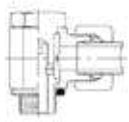
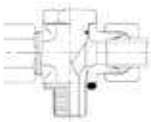
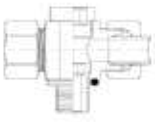
Tube To Female Thread	EO	EMB	VOLZ	VOSS	WALPRO
NFC-G/M Female Connector (BSP Tapered / Metric Parallel) 30 	GAI-R -M	AL-R -M	GAIV... R...M	144... 134...	P-GAV..R ..M

Tube Stud To Female Port	EO	EMB	VOLZ	VOSS	WALPRO
NA-GE / ME Adaptor (BSP Tapered / Metric Parallel) with ED-Ring 31 	EVGE-R-ED -M-ED	VA-Rwd -Mwd	EGV... RWD -MWD	177... 174...	P-EGES... R-WD-SV M-WD-SV
NEGE-GE / ME Swivel Adaptor (BSP Tapered /Metric Parallel) with ED-Ring 32 	EVGE-R-ED -M-ED	VAD-KO -Rwd -Mwd	EGVD ...RWD ...MWD		EGESD... R-WD M-WD

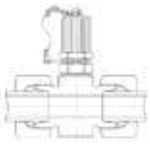
Tube To Tube (Swivel)	EO	EMB	VOLZ	VOSS	WAL-PRO
NUE Swivel Union with Cone 33 	GAI-R -M	AL-R -M	GAIV... R...M	144... 134...	P-GAV..R ..M

Weld Fittings	EO	EMB	VOLZ	VOSS	WALPRO
NAS Welding Connector 34 	AS	V	GAS-V	139...	P-ASV
NASK Welding Connector with NC 34 	AS	ESNO	ASKK ..OD		
NC Welding Nipple with O-ring 35 	SKA	SNO	SK-A ..OD	070..	SN
NCR Reducing Welding Nipple with O-ring 35 	SKAR	SNR			

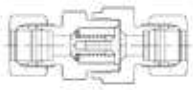
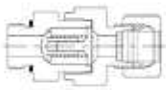
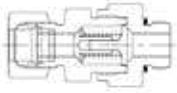
Tube To Tube Stud	EO	EMB	VOLZ	VOSS	WALPRO
NLA Adjustable Elbow with Standpipe 37 	EW	vb	EW-V	158..	P-EWV-SV
NBTA Adjustable Branch Tee with Standpipe 37 	GE-R	AP-R	GE-V..RK	103... 104...	P-GEV..RK
NRTA Adjustable Run Tee with Standpipe 38 	EVL	vd	EL-V	162...	P-ELV-SV
NEW Swivel Adjustable Elbow with Cone 38 	EW	VB-DKO	EWVD		P-EWVD
NET Swivel Adjustable Branch Tee with Cone 39 	ET	VCD-KO	ETVD		P-ETVD
NEL Swivel Adjustable Run Teewith Cone 39 	EL	VD-DKO	ELVD		P-ELVD
NKOR Standpipe Reducer 40 	KOR	RL, RS			
NR Reducer 41 			KOR-V	148 ...78	P-REDV-SV
NRED Swivel Reducing Adaptor with Cone 42 	RED	RLDKO RSDKO	REDV		P-REDVD

Banjo Fittings	EO	EMB	VOLZ	VOSS	WALPRO
NSLM-G/M Banjo Fitting (BSP Parallel / Metric Parallel) **43** 	SWVE- R -M	SBD-R -M		152.../153... 150.../151...	
NWH-G/M High Pressure Banjo Fitting (BSP Parallel / Metric Parallel) **44** 		SBE-R -M	EWHV -...R -...M	157... 155...	P-RSWV...R ...M
NTH-G/M High Pressure Banjo Fitting (BSP Parallel / Metric Parallel) **45** 			ETHV -...R -...M		P-RSTV...R ...M
NSVW-G/M Throttlefree Banjo Fitting (BSP Parallel / Metric Parallel) **46** 	DSVW- R -M	SB-R -M			
NSVT-G/M Throttlefree Banjo Fitting (BSP Parallel / Metric Parallel) **47** 	DSVT- R -M	SG-R -M			

Gauge Connector	EO	EMB	VOLZ	VOSS	WALPRO
NGC-G Pressure Gauge Connector (BSP Parallel) **48** 	MAV-	O	MA- V...R	142...	V-MAV...R
NGE-G Swivel Gauge Connector (BSP Parallel) **48** 	MAVE	VOD- KO	MAVD...R		EMASD...
NGA-G Gauge Adaptor (BSP Parallel) **48** 			MAEV...R		P-EMAS ...R-SV

Test Coupling	EO	EMB	VOLZ	VOSS	WALPRO
NGMA Tee Test Coupling with Threaded Connection **49** 	GMA3				
NEMA Test Coupling with Threaded Connection **49** 	GE- MA3				

V87 Ball Valves	EO	EMB	VOLZ	VOSS	WALPRO
V87 Ball Valves **50** 					

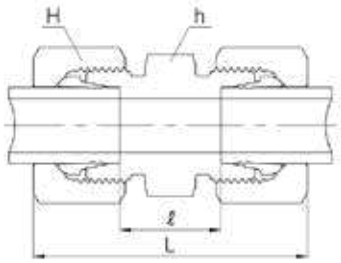
Non Return Valves	EO	EMB	VOLZ	VOSS	WALPRO
NCVU Non Return Valves **52** 	RHD	RD	RS-V	600...	P-RV
NCV GE-L/S **NCV ME-L/S** Non Return Valves **53** 	RHV-R ED -M-ED	RV- Rwd -Mwd	RSW -...RWD -...MWD	602... 601...	P-RVV ...R-WD ...M-WD
NCV L/S-GE **NCV L/S-ME** Non Return Valves **54** 	RHZ-R- ED -M-ED	RZ- Rwd -Mwd	RSVZ -...RWD -...MWD	604... 603...	P-RVZ ...R-WD ...M-WD

Male & Female Adaptors	EO	EMB	VOLZ	VOSS	WALPRO
NHB Male Female Adaptor (BSP Parallel) 55	RI	RI	RIAS	149...	RED
NABMF Male Female Adaptor (BSP Parallel) 55	RI	RI	RIBS	149...	RED
NHB-GE Male Female Adaptor (BSP Parallel) with ED-Ring 56	RI-ED	RI-WD	RIAS-WD		RED...WD
NABMF-GE Male Female Adaptor (BSP Parallel) with ED-Ring 56	RI-ED	RI-WD	RIBS-WD		RED...WD

Plugs and Caps	EO	EMB	VOLZ	VOSS	WALPRO
NVSTI Blanking Plugs with O-Ring for ports 57	VSIT M-OR				
NVSTI-GED / MED Blanking Plugs with ED-Ring for ports 57	VSIT R-ED M-ED	VSCH-Rwd -Mwd	VSCH..WD	189...	VS-R-WD -M-WD
NP Blanking Plug with O-Ring 58	VKA	STO-O	VSTO.OD		VS...
NCA Tube Cap 58	ROV	VSCHK	EVSV		

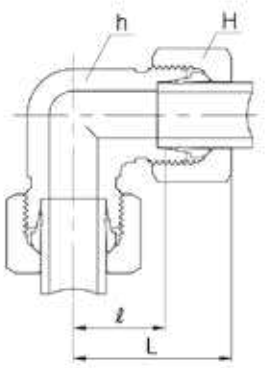
Spare Parts	EO	EMB	VOLZ	VOSS	WALPRO
NIL Tube insert 59	VH	VSH	VS-H	020...	EH
NBUN Bulkhead Lock Nut 59	GM	GM	G-M	080...	
NKA Sealing Ring for NWH, NTH & NSWVE 59	DKA	DKA	DKRA	080...	
NKAZ Sealing Ring for NSVW, NSVT 59	DKAZ			081...	
NKI Sealing Ring for NGC 59	DKI	DKI	DKRI	080...	DKR
NED ED-Ring 60	ED		WD-R		
NOR O-Ring 60	OR		OD-R		
NN Nut 60	M	m	U-M	004	M
NS Cutting Ring 60	DPR	s	S-DR	007...	S-R P-R

Straight Union
NU



Series	Part No.	Tube O.D	H	h	L	ℓ
LL very light PN 100	NU-04LL	4	10	9	31	12
	NU-06LL	6	12	11	32	9
	NU-08LL	8	14	12	35	12
	NU-10LL	10	17	14	35	12
	NU-12LL	12	19	17	35	11
L light PN 315	NU-06L	6	14	12	39	10
	NU-08L	8	17	14	40	11
	NU-10L	10	19	17	42	13
	NU-12L	12	22	19	43	14
	NU-15L	15	27	24	46	16
	NU-18L	18	32	27	48	16
PN 160	NU-22L	22	36	32	52	20
	NU-28L	28	41	41	54	21
	NU-35L	35	50	46	63	20
	NU-42L	42	60	55	66	21
S heavy PN 630	NU-06S	6	17	14	45	16
	NU-08S	8	19	17	47	18
	NU-10S	10	22	19	49	17
	NU-12S	12	24	22	51	19
	NU-14S	14	27	24	57	22
PN 400	NU-16S	16	30	27	57	21
	NU-20S	20	36	32	66	23
	NU-25S	25	46	41	74	26
	NU-30S	30	50	46	80	27
PN 315	NU-38S	38	60	55	90	29

Union Elbow
NL

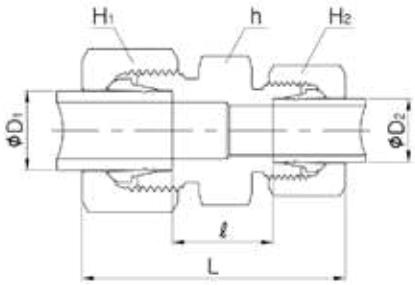


Series	Part No.	Tube O.D	H	h	L	ℓ
LL very light PN 100	NL-04LL	4	10	9	21	11
	NL-06LL	6	12	9	21	9.5
	NL-08LL	8	14	12	23	11.5
	NL-10LL	10	17	14	24	12.5
	NL-12LL	12	19	17	25	13
L light PN 315	NL-06L	6	14	12	27	12
	NL-08L	8	17	12	29	14
	NL-10L	10	19	14	30	15
	NL-12L	12	22	17	32	17
	NL-15L	15	27	19	36	21
	NL-18L	18	32	24	40	23.5
PN 160	NL-22L	22	36	27	44	27.5
	NL-28L	28	41	36	47	30.5
	NL-35L	35	50	41	56	34.5
	NL-42L	42	60	50	63	40
S heavy PN 630	NL-06S	6	17	12	31	16
	NL-08S	8	19	14	32	17
	NL-10S	10	22	17	34	17.5
	NL-12S	12	24	17	38	21.5
	NL-14S	14	27	19	40	22
PN 400	NL-16S	16	30	24	43	24.5
	NL-20S	20	36	27	48	26.5
	NL-25S	25	46	36	54	30
	NL-30S	30	50	41	62	35.5
PN 315	NL-38S	38	60	50	72	41

All dimensions given approx. figure with tighten nut. All dimensions are in millimeters.

Reducing Union

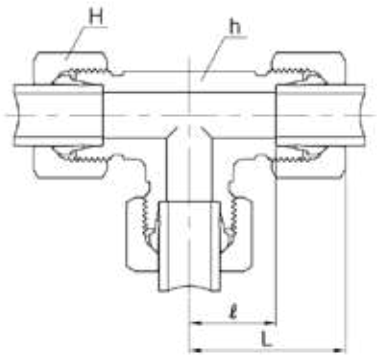
NUR



Series	Part No.	Tube O.D		H1	H2	h	L	ℓ
		D1	D2					
L light PN 315	NUR08L-06L	8	6	17	14	14	40	11
	NUR10L-06L	10	6	19	14	17	41	12
	NUR10L-08L	10	8	19	17	17	41	12
	NUR12L-06L	12	6	22	14	19	42	13
	NUR12L-08L	12	8	22	17	19	42	13
	NUR12L-10L	12	10	22	19	19	43	14
	NUR15L-10L	15	10	27	19	24	45	15
	NUR15L-12L	15	12	27	22	24	45	15
	NUR18L-10L	18	10	32	19	27	46	15.5
	NUR18L-12L	18	12	32	22	27	46	15.5
	NUR18L-15L	18	15	32	27	27	48	16.5
PN 160	NUR22L-12L	22	12	36	22	32	48	17.5
	NUR22L-15L	22	15	36	27	32	50	18.5
	NUR22L-18L	22	18	36	32	32	50	18
	NUR28L-18L	28	18	41	32	41	52	19
	NUR28L-22L	28	22	41	36	41	54	21
	NUR35L-22L	35	22	50	36	46	59	21
	NUR35L-28L	35	28	50	41	46	59	21
S heavy PN 630	NUR08S-06S	8	6	19	17	17	47	18
	NUR10S-06S	10	6	22	17	19	48	17.5
	NUR10S-08S	10	8	22	19	19	48	17.5
	NUR12S-06S	12	6	24	17	22	50	19.5
	NUR12S-08S	12	8	24	19	22	50	19.5
	NUR12S-10S	12	10	24	22	22	51	19
	NUR14S-10S	14	10	27	22	24	54	20.5
	NUR14S-12S	14	12	27	24	24	54	20.5
PN 400	NUR16S-12S	16	12	30	24	27	54	20
	NUR16S-14S	16	14	30	27	27	57	21.5
	NUR20S-10S	20	10	36	22	32	60	22
	NUR20S-12S	20	12	36	24	32	60	22
	NUR20S-16S	20	16	36	30	32	63	23
	NUR25S-16S	25	16	46	30	41	68	25
	NUR25S-20S	25	20	46	36	41	71	25.5
	NUR30S-20S	30	20	50	36	46	74	26
	NUR30S-25S	30	25	50	46	46	77	26.5
PN 315	NUR38S-30S	38	30	60	50	55	87	29.5

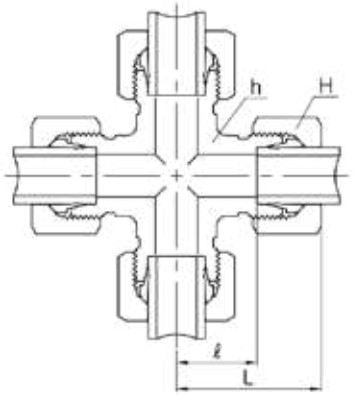
All dimensions given approx. figure with tighten nut. All dimensions are in millimeters.

Union Tee
NT



Series	Part No.	Tube O.D	H	h	L	ℓ
LL very light PN 100	NT-04LL	4	10	9	21	11
	NT-06LL	6	12	9	21	9.5
	NT-08LL	8	14	12	23	11.5
	NT-10LL	10	17	14	24	12.5
	NT-12LL	12	19	14	27	15
L light PN 315	NT-06L	6	14	12	27	12
	NT-08L	8	17	12	29	14
	NT-10L	10	19	14	30	15
	NT-12L	12	22	17	32	17
	NT-15L	15	27	19	36	21
	NT-18L	18	32	24	40	23.5
PN 160	NT-22L	22	36	27	44	27.5
	NT-28L	28	41	36	47	30.5
	NT-35L	35	50	41	56	34.5
	NT-42L	42	60	50	63	40
S heavy PN 630	NT-06S	6	17	12	31	16
	NT-08S	8	19	14	32	17
	NT-10S	10	22	17	34	17.5
	NT-12S	12	24	17	38	21.5
	NT-14S	14	27	19	40	22
PN 400	NT-16S	16	30	24	43	24.5
	NT-20S	20	36	27	48	26.5
	NT-25S	25	46	36	54	30
	NT-30S	30	50	41	62	35.5
PN 315	NT-38S	38	60	50	72	41

Union Cross
NX

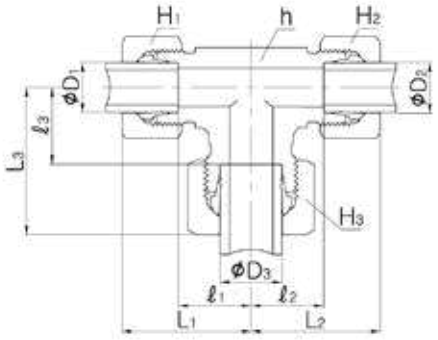


Series	Part No.	Tube O.D	H	h	L	ℓ
LL very light PN 100	NX-04LL	4	10	9	21	11
	NX-06LL	6	12	9	21	9.5
	NX-08LL	8	14	12	23	11.5
	NX-10LL	10	17	14	24	12.5
	NX-12LL	12	19	14	27	15
L light PN 315	NX-06L	6	14	12	27	12
	NX-08L	8	17	12	29	14
	NX-10L	10	19	14	30	15
	NX-12L	12	22	17	32	17
	NX-15L	15	27	19	36	21
	NX-18L	18	32	24	40	23.5
PN 160	NX-22L	22	36	27	44	27.5
	NX-28L	28	41	36	47	30.5
	NX-35L	35	50	41	56	34.5
	NX-42L	42	60	50	63	40
S heavy PN 630	NX-06S	6	17	12	31	16
	NX-08S	8	19	14	32	17
	NX-10S	10	22	17	34	17.5
	NX-12S	12	24	17	38	21.5
	NX-14S	14	27	19	40	22
PN 400	NX-16S	16	30	24	43	24.5
	NX-20S	20	36	27	48	26.5
	NX-25S	25	46	36	54	30
	NX-30S	30	50	41	62	35.5
PN 315	NX-38S	38	60	50	72	41

All dimensions given approx. figure with tighten nut. All dimensions are in millimeters.

Reducing Tee

NTR

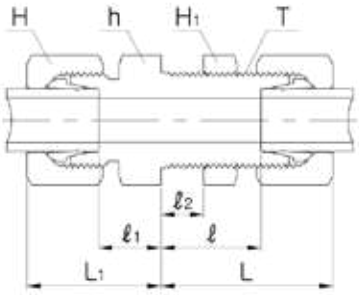


Series	Part No.	Tube O.D			H1	H2	H3	h	L1	L2	L3	ℓ1	ℓ2	ℓ3
		D1	D2	D3										
L light PN 315	NTR06L-06L-08L	6	6	8	14	14	17	14	29	29	29	14	14	14
	NTR08L-08L-06L	8	8	6	17	17	14	14	29	29	29	14	14	14
	NTR06L-06L-10L	6	6	10	14	14	19	14	30	30	30	15	15	15
	NTR08L-08L-10L	8	8	10	17	17	19	14	30	30	30	15	15	15
	NTR10L-10L-06L	10	10	6	19	19	14	14	30	30	30	15	15	15
	NTR10L-10L-08L	10	10	8	19	19	17	14	30	30	30	15	15	15
	NTR10L-06L-10L	10	6	10	19	14	19	14	30	30	30	15	15	15
PN 315	NTR08L-08L-12L	8	8	12	17	17	22	17	32	32	32	17	17	17
	NTR12L-12L-06L	12	12	6	22	22	14	17	32	32	32	17	17	17
	NTR12L-08L-08L	12	8	8	22	17	17	17	32	32	32	17	17	17
	NTR12L-12L-08L	12	12	8	22	22	17	17	32	32	32	17	17	17
	NTR12L-10L-10L	12	10	10	22	19	19	17	32	32	32	17	17	17
	NTR12L-12L-10L	12	12	10	22	22	19	17	32	32	32	17	17	17
	NTR12L-10L-12L	12	10	12	22	19	22	17	32	32	32	17	17	17
PN 315	NTR10L-10L-15L	10	10	15	19	19	27	19	36	36	36	21	21	21
	NTR12L-12L-15L	12	12	15	22	22	27	19	36	36	36	21	21	21
	NTR15L-15L-06L	15	15	6	27	27	14	19	36	36	36	21	21	21
	NTR15L-15L-10L	15	15	10	27	27	19	19	36	36	36	21	21	21
	NTR15L-12L-12L	15	12	12	27	22	22	19	36	36	36	21	21	21
	NTR15L-15L-12L	15	15	12	27	27	22	19	36	36	36	21	21	21
	NTR15L-12L-15L	15	12	15	27	22	27	19	36	36	36	21	21	21
PN 315	NTR12L-12L-18L	12	12	18	22	22	32	24	39	39	40	24	24	23.5
	NTR18L-10L-10L	18	10	10	32	19	19	24	40	39	39	23.5	24	24
	NTR18L-18L-10L	18	18	10	32	32	19	24	40	40	39	23.5	23.5	24
	NTR18L-18L-12L	18	18	12	32	32	22	24	40	40	39	23.5	23.5	24
	NTR18L 18L-15L	18	18	15	32	32	27	24	40	40	39	23.5	23.5	24
	NTR18L-10L-18L	18	10	18	32	19	32	24	40	39	40	23.5	24	23.5
PN 160	NTR22L-22L-10L	22	22	10	36	36	19	27	44	44	43	27.5	27.5	28
	NTR22L-22L-12L	22	22	12	36	36	22	27	44	44	43	27.5	27.5	28
	NTR22L-15L-15L	22	15	15	36	27	27	27	44	43	43	27.5	28	28
	NTR22L-22L-15L	22	22	15	36	36	27	27	44	44	43	27.5	27.5	28
	NTR22L-18L-18L	22	18	18	36	32	32	27	44	44	44	27.5	27.5	27.5
	NTR22L-22L-18L	22	22	18	36	36	32	27	44	44	44	27.5	27.5	27.5
	NTR22L-18L-22L	22	18	22	36	32	36	27	44	44	44	27.5	27.5	27.5
PN 160	NTR28L-28L-10L	28	28	10	41	41	19	36	47	44	46	30.5	30.5	31
	NTR28L-28L-12L	28	28	12	41	41	22	36	47	47	46	30.5	30.5	31
	NTR28L-28L-15L	28	28	15	41	41	27	36	47	47	46	30.5	30.5	31
	NTR28L-28L-18L	28	28	18	41	41	32	36	47	47	47	30.5	30.5	30.5
	NTR28L-22L-22L	28	22	22	41	36	36	36	47	47	47	30.5	30.5	30.5
	NTR28L-28L-22L	28	28	22	41	41	36	36	47	47	47	30.5	30.5	30.5
S heavy PN630	NTR10S-10S-06S	10	10	6	22	22	17	17	34	34	33	17.5	17.5	18
	NTR12S-08S-08S	12	8	8	24	19	19	17	38	37	37	21.5	22	22
	NTR12S-12S-08S	12	12	8	24	24	19	17	38	38	37	21.5	21.5	22
	NTR12S-12S-10S	12	12	10	24	24	22	17	38	38	38	21.5	21.5	21.5
PN400	NTR12S-12S-16S	12	12	16	24	24	30	24	42	42	43	25.5	25.5	24.5
	NTR16S-16S-06S	16	16	6	30	30	17	24	43	43	41	24.5	24.5	26
	NTR16S-16S-08S	16	16	8	30	30	19	24	43	43	41	24.5	24.5	26
	NTR16S-16S-10S	16	16	10	30	30	22	24	43	43	42	24.5	24.5	25.5
	NTR16S-16S-12S	16	16	12	30	30	24	24	43	43	42	24.5	24.5	25.5
PN400	NTR16S-16S-20S	16	16	20	30	30	36	27	47	47	48	28.5	28.5	26.5
	NTR20S-20S-10S	20	20	10	36	36	22	27	48	48	46	26.5	26.5	29.5
	NTR20S-20S-12S	20	20	12	36	36	24	27	48	48	46	26.5	26.5	29.5
	NTR20S-20S-16S	20	20	16	36	36	30	27	48	48	47	26.5	26.5	28.5
PN400	NTR20S-20S-25S	20	20	25	36	36	46	36	53	53	54	31.5	31.5	30
	NTR25S-25S-16S	25	25	16	46	46	30	36	54	54	52	30	30	33.5
	NTR25S-25S-20S	25	25	20	46	46	36	36	54	54	53	30	30	31.5
PN400	NTR25S-25S-30S	25	25	30	46	46	50	41	61	61	62	37	37	35.5

All dimensions given approx. figure with tighten nut. All dimensions are in millimeters.

Bulkhead Union

NBU



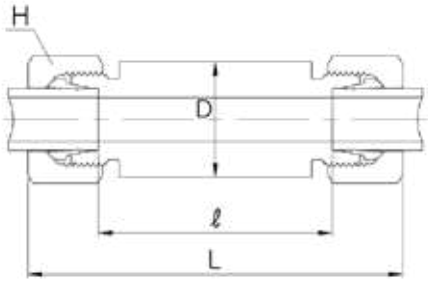
*ℓ 2 = max. 16 mm

Series	Part No.	Tube O.D	H	H1	h	L	L1	ℓ	ℓ1	T
L light PN 315	NBU-06L	6	14	17	17	42	22	27	7	M 12 x 1.5
	NBU-08L	8	17	19	19	42	23	27	8	M 14 x 1.5
	NBU-10L	10	19	22	22	43	25	28	10	M 16 x 1.5
	NBU-12L	12	22	24	24	44	25	29	10	M 18 x 1.5
	NBU-15L	15	27	30	27	46	27	31	12	M 22 x 1.5
	NBU-18L	18	32	36	32	49	30	32.5	13.5	M 26 x 1.5
PN 160	NBU-22L	22	36	41	36	51	33	34.5	16.5	M 30 x 2
	NBU-28L	28	41	46	41	52	35	35.5	18.5	M 36 x 2
	NBU-35L	35	50	55	50	58	40	36.5	18.5	M 45 x 2
	NBU-42L	42	60	65	60	59	42	36	19	M 52 x 2
S heavy PN 630	NBU-06S	6	17	19	19	44	27	29	12	M 14 x 1.5
	NBU-08S	8	19	22	22	44	28	29	13	M 16 x 1.5
	NBU-10S	10	22	24	24	46	31	29.5	14.5	M 18 x 1.5
	NBU-12S	12	24	27	27	47	31	30.5	14.5	M 20 x 1.5
	NBU-14S	14	27	30	30	50	35	32	17	M 22 x 1.5
PN 400	NBU-16S	16	30	32	32	50	35	31.5	16.5	M 24 x 1.5
	NBU-20S	20	36	41	41	55	39	33.5	17.5	M 30 x 2
	NBU-25S	25	46	46	46	59	44	35	20	M 36 x 2
	NBU-30S	30	50	50	50	64	48	37.5	21.5	M 42 x 2
PN 315	NBU-38S	38	60	65	65	68	53	37	22	M 52 x 2

All dimensions given approx. figure with tighten nut. All dimensions are in millimeters.

Welding Bulkhead Union

NBUW

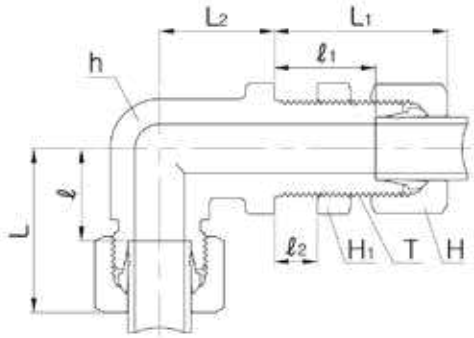


Series	Part No.	Tube O.D	D	H	L	ℓ
L light PN 315	NBUW-06L	6	18	14	85	56
	NBUW-08L	8	20	17	85	56
	NBUW-10L	10	22	19	87	58
	NBUW-12L	12	25	22	87	58
	NBUW-15L	15	28	27	100	70
	NBUW-18L	18	32	32	101	69
PN 315	NBUW-22L	22	36	36	105	73
	NBUW-28L	28	40	41	106	73
	NBUW-35L	35	50	50	114	71
	NBUW-42L	42	60	60	115	70
S heavy PN 630	NBUW-06S	6	20	17	89	60
	NBUW-08S	8	22	19	89	60
	NBUW-10S	10	25	22	91	59
	NBUW-12S	12	28	24	91	59
	NBUW-14S	14	30	27	107	72
PN 400	NBUW-16S	16	35	30	107	71
	NBUW-20S	20	38	36	114	71
	NBUW-25S	25	45	46	120	72
	NBUW-30S	30	50	50	126	73
PN 315	NBUW-38S	38	60	60	133	72

All dimensions given approx. figure with tighten nut. All dimensions are in millimeters.

Bulkhead Union Elbow

NBL



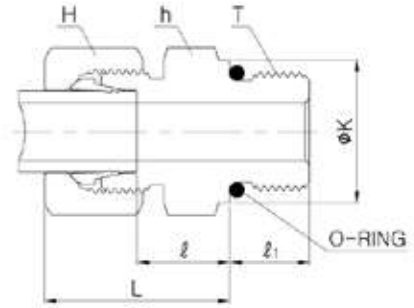
•ℓ 2 = max. 16 mm

Series	Part No.	Tube O.D	H	H1	h	L	L1	L2	ℓ	ℓ1	T
L light PN 315	NBL-06L	6	14	17	12	27	42	14	12	27	M 12 x 1.5
	NBL-08L	8	17	19	12	29	42	17	14	27	M 14 x 1.5
	NBL-10L	10	19	22	14	30	43	18	15	28	M 16 x 1.5
	NBL-12L	12	22	24	17	32	44	20	17	29	M 18 x 1.5
	NBL-15L	15	27	30	19	36	46	23	21	31	M 22 x 1.5
	NBL-18L	18	32	36	24	40	49	24	23.5	32.5	M 26 x 1.5
PN 160	NBL-22L	22	36	41	27	44	51	30	27.5	34.5	M 30 x 2
	NBL-28L	28	41	46	36	47	52	34	30.5	35.5	M 36 x 2
	NBL-35L	35	50	55	41	56	58	39	34.5	36.5	M 45 x 2
	NBL-42L	42	60	65	50	63	59	43	40	36	M 52 x 2
S heavy PN 630	NBL-06S	6	17	19	12	31	44	17	16	29	M 14 x 1.5
	NBL-08S	8	19	22	14	32	44	18	17	29	M 16 x 1.5
	NBL-10S	10	22	24	17	34	46	20	17.5	29.5	M 18 x 1.5
	NBL-12S	12	24	27	17	38	47	21	21.5	30.5	M 20 x 1.5
	NBL-14S	14	27	30	19	40	50	23	22	32	M 22 x 1.5
PN 400	NBL-16S	16	30	32	24	43	50	24	24.5	31.5	M 24 x 1.5
	NBL-20S	20	36	41	27	48	55	30	26.5	33.5	M 30 x 2
	NBL-25S	25	46	46	36	54	59	34	30	35	M 36 x 2
	NBL-30S	30	50	50	41	62	64	39	35.5	37.5	M 42 x 2
PN 315	NBL-38S	38	60	65	50	72	68	43	41	37	M 52 x 2

All dimensions given approx. figure with tighten nut. All dimensions are in millimeters.

Male Connector(Unified and Metric Parallel) with *O-Ring

NOM-U/M



* DIN 3852 Form "F" stud end
* O-ring of NBR standard, of FPM on request

for Unified

Series	Part No.	Tube O.D	H	h	K	L	ℓ1	ℓ	T U(Unified)
L light PN 315	NOM 08L-4U	8	17	17	14.4	25	9	10	7/16-20 UNF-2A
	NOM 10L-4U	10	19	17	14.4	26	10	11	7/16-20 UNF-2A
	NOM 12L-6U	12	22	19	17.6	26	10	11	9/16-18 UNF-2A
	NOM 12L-8U	12	22	24	22.3	28	11	13	3/4-16 UNF-2A
	NOM 12L-10U	12	22	27	25.5	29	12.7	14.3	7/8-14 UNF-2A
	NOM 15L-8U	15	27	24	22.3	29	11	14	3/4-16 UNF-2A
	NOM 15L-10U	15	27	27	25.5	30	12.7	15.3	7/8-14 UNF-2A
	NOM 18L-8U	18	32	27	22.3	31	11	14.5	3/4-16 UNF-2A
	NOM 18L-10U	18	32	27	25.5	31	12.7	14.8	7/8-14 UNF-2A
PN 160	NOM 22L-10U	22	36	32	25.5	33	12.7	16.8	7/8-14 UNF-2A
	NOM 22L-12U	22	36	32	31.9	33	15	16.5	1 1/16-12 UN-2A
	NOM 22L-16U	22	36	41	38.2	34	15	17.5	1 5/16-12 UN-2A
	NOM 28L-12U	28	41	41	31.9	34	15	17.5	1 1/16-12 UN-2A
	NOM 28L-16U	28	41	41	38.2	34	15	17.5	1 5/16-12 UN-2A
	NOM 35L-16U	35	50	46	38.2	39	15	17.5	1 5/16-12 UN-2A
	NOM 35L-20U	35	50	50	47.7	39	15	17.5	1 5/8-12 UN-2A
	NOM 42L-20U	42	60	55	47.7	42	15	19	1 5/8-12 UN-2A
S heavy PN 630	NOM 08S-4U	8	19	17	16	30	9	15	7/16-20 UNF-2A
	NOM 10S-6U	10	22	19	17.6	31	10	14.5	9/16-18 UNF-2A
	NOM 12S-6U	12	24	22	17.6	31	10	14.5	9/16-18 UNF-2A
	NOM 12S-8U	12	24	24	22.3	34	11	17.5	3/4-16 UNF-2A
PN 400	NOM 16S-8U	16	30	24	22.3	34	11	15.5	3/4-16 UNF-2A
	NOM 16S-10U	16	30	27	25.5	37	12.7	18.8	7/8-14 UNF-2A
	NOM 20S-8U	20	36	32	22.3	42	11	20.5	3/4-16 UNF-2A
	NOM 20S-10U	20	36	32	25.5	42	12.7	20.8	7/8-14 UNF-2A
	NOM 20S-12U	20	36	32	31.9	42	15	20.5	1 1/16-12 UN-2A
	NOM 25S-12U	25	46	36	31.9	47	15	23	1 1/16-12 UN-2A
	NOM 25S-16U	25	46	41	38.2	47	15	23	1 5/16-12 UN-2A
	NOM 30S-16U	30	50	46	38.2	50	15	23.5	1 5/16-12 UN-2A
	NOM 30S-20U	30	50	50	47.7	50	15	23.5	1 5/8-12 UN-2A
PN 315	NOM 38S-20U	38	60	55	47.7	57	15	26	1 5/8-12 UN-2A

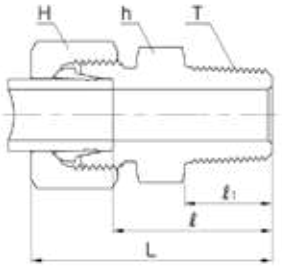
for Metric Parallel

Series	Part No.	Tube O.D	H	h	K	L	ℓ1	ℓ	T M(Metric)
L light PN 315	NOM 06L-10M10	6	14	14	-	23	10	8.5	M 10 x 1
	NOM 08L-12M15	8	17	17	-	25	11.5	10	M 12 x 1.5
	NOM 10L-14M15	10	19	19	-	26	11.5	11	M 14 x 1.5
	NOM 12L-16M15	12	22	22	-	27	13	12	M 16 x 1.5
	NOM 15L-18M15	15	27	24	-	29	14.5	13.5	M 18 x 1.5
	NOM 18L-22M15	18	32	27	-	30	15.5	14	M 22 x 1.5
PN 160	NOM 22L-26M15	22	36	32	-	32	16	16	M 26 x 1.5
	NOM 28L-33M20	28	41	41	38	34	19	17.5	M 33 x 2
	NOM 35L-42M20	35	50	50	48	39	19.5	17.5	M 42 x 2
S heavy PN 630	NOM 06S-12M15	6	17	17	-	27	11.5	12	M 12 x 1.5
	NOM 08S-14M15	8	19	19	-	27	11.5	12	M 14 x 1.5
	NOM 10S-16M15	10	22	22	-	29	13	12.5	M 16 x 1.5
	NOM 12S-18M15	12	24	24	-	29	14.5	13	M 18 x 1.5
PN 400	NOM 16S-22M15	16	30	27	-	33	15.5	15	M 22 x 1.5
	NOM 20S-27M20	20	36	32	-	37	19	15	M 27 x 2
	NOM 25S-33M20	25	46	41	38	41	19	17	M 33 x 2
	NOM 30S-42M20	30	50	50	48	45	19.5	18.5	M 42 x 2

All dimensions given approx. figure with tighten nut. All dimensions are in millimeters.

Male Connector(BSP Tapered)

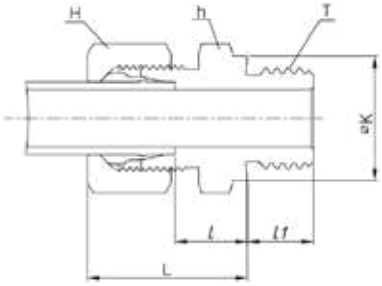
NMC-R



* DIN 3852 Form "C" stud end

Male Connector (BSP Parallel)

NMC-G



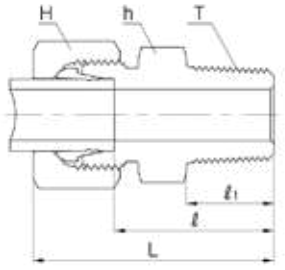
* DIN 3852 Form "B" stud end

Series	Part No.	Tube O.D	H	h	K	L	ℓ	ℓ1	T R(PT), G(PF)
LL very light PN 100	NMC 04LL-01R	4	10	11	-	26	16	8	PT 1/8
	NMC 06LL-01R	6	12	11	-	26	14.5	8	PT 1/8
	NMC 08LL-01R	8	14	12	-	28	16.5	8	PT 1/8
	NMC 08LL-02R	8	14	14	.	32	20.5	12	PT 1/4
	NMC 10LL-02R	10	17	14	-	32	20.5	12	PT 1/4
	NMC 12LL-02R	12	19	17	-	32	20	12	PT 1/4
	NMC 12LL-03R	12	19	17	-	32	20	12	PT 3/8
L light PN 315	NMC 06L-01G	6	14	14	14	23	8.5	8	PF 1/8
	NMC 06L-01R	6	14	12	-	30	15	8	PT 1/8
	NMC 06L-02G	6	14	19	18	25	10	12	PF 1/4
	NMC 06L-03G	6	14	22	22	26	11.5	12	PF 3/8
	NMC 06L-04G	6	14	27	26	27	12	14	PF 1/2
	NMC 08L-01G	8	17	14	14	23	8.5	8	PF 1/8
	NMC 08L-02G	8	17	19	18	25	10	12	PF 1/4
	NMC 08L-02R	8	17	17	-	35	20	12	PT 1/4
	NMC 08L-03G	8	17	22	22	26	11.5	12	PF 3/8
	NMC 08L-04G	8	17	27	26	27	12	14	PF 1/2
	NMC 10L-02G	10	19	19	18	26	11	12	PF 1/4
	NMC 10L-02R	10	19	17	-	36	21	12	PT 1/4
	NMC 10L-03G	10	19	22	22	27	12.5	12	PF 3/8
	NMC 10L-04G	10	19	27	26	28	13	14	PF 1/2
	NMC 12L-02R	12	22	19	-	37	22	12	PT 1/4"
	NMC 12L-02G	12	22	19	18	27	12	12	PF 1/4"
	NMC 12L-03G	12	22	22	22	27	12.5	12	PF 3/8
	NMC 12L-03R	12	22	19		37	22	12	PT 3/8
	NMC 12L-04G	12	22	27	26	28	13	14	PF 1/2
	NMC 12L-04R	12	22	24	-	39	24	14	PT 1/2
	NMC 12L-06G	12	22	32	32	29	14	16	PF 3/4
	NMC 15L-03R	15	27	24	-	38	23	12	PT 3/8
	NMC 15L-03G	15	27	24	22	29	13.5	12	PF 3/8
	NMC 15L-04G	15	27	27	26	29	14	14	PF 1/2
	NMC 15L-04R	15	27	24	-	40	25	14	PT 1/2
	NMC 15L-06G	15	27	32	32	30	15	16	PF 3/4
	NMC 18L-03G	18	32	27	22	29.5	14	12	PF 3/8
	NMC 18L-04G	18	32	27	26	31	14.5	14	PF 1/2
	NMC 18L-04R	18	32	27	-	41	25.5	14	PT 1/2
	NMC 18L-06G	22	32	32	32	30	14.5	16	PF 3/4

All dimensions given approx. figure with tighten nut. All dimensions are in millimeters.

Male Connector(BSP Tapered)

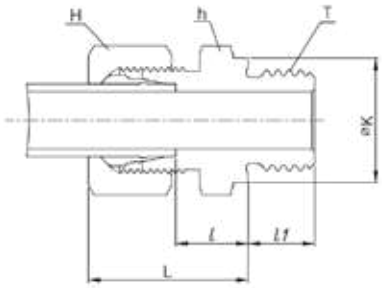
NMC-R



* DIN 3852 Form "C" stud end

Male Connector (BSP Parallel)

NMC-G



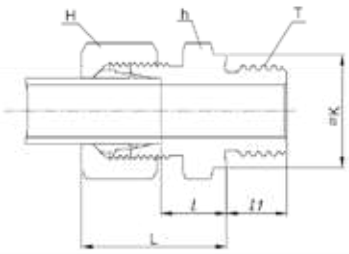
* DIN 3852 Form "B" stud end

Series	Part No.	Tube O.D	H	h	K	L	ℓ	ℓ1	T R(PT), G(PF)
L light PN 160	NMC 22L-06G	22	36	32	32	33	16.5	16	PF 3/4
	NMC 22L-04G	22	36	32	26	33	16.5	14	PF 1/2
	NMC 22L-06R	22	36	32	-	46	29.5	16	PT 3/4
	NMC 28L-08G	28	41	41	39	34	17.5	18	PF 1
	NMC 28L-06G	28	41	41	32	34	17.5	16	PF 3/4
	NMC 35L-08G	35	50	46	39	39	17.5	18	PF 1
	NMC 35L-10G	35	50	50	49	39	17.5	20	PF 1 1/4
	NMC 42L-12G	42	60	55	55	42	19	22	PF 1 1/2
S heavy PN 630	NMC 06S-02G	6	17	19	18	28	13	12	PF 1/4
	NMC 06S-04G	6	17	27	26	33	18	14	PF 1/2
	NMC 08S-02G	8	19	19	18	30	15	12	PF 1/4
	NMC 08S-03G	8	19	22	22	30	15.5	12	PF 3/8
	NMC 10S-02G	10	22	19	18	31	14.5	12	PF 1/4
	NMC 10S-03G	10	22	22	22	31	15	12	PF 3/8
	NMC 10S-04G	10	22	27	26	34	17.5	14	PF 1/2
	NMC 12S-02G	12	24	22	18	33	16.5	12	PF 1/4
	NMC 12S-03G	12	24	22	22	33	17	12	PF 3/8
	NMC 12S-04G	12	24	27	26	34	17.5	14	PF 1/2
	NMC 14S-03G	14	27	24	22	36	18.5	12	PF 3/8
	NMC 14S-04G	14	27	27	26	37	19	14	PF 1/2
PN 400	NMC 16S-04G	16	30	27	26	37	18.5	14	PF 1/2
	NMC 16S-03G	16	30	27	22	36	18	12	PF 3/8
	NMC 16S-06G	16	30	32	32	39	20.5	16	PF 3/4
	NMC 20S-04G	20	36	32	26	42	20.5	14	PF 1/2
	NMC 20S-06G	20	36	32	32	42	20.5	16	PF 3/4
	NMC 25S-08G	25	46	41	39	47	23	18	PF 1
	NMC 25S-06G	25	46	41	32	47	23	16	PF 3/4
PN 250	NMC 30S-08G	30	50	46	39	50	23.5	18	PF 1
	NMC 30S-10G	30	50	50	49	50	23.5	20	PF 1 1/4
	NMC 38S-10G	38	60	55	49	57	26	20	PF 1 1/4
	NMC 38S-12G	38	60	55	55	57	26	22	PF 1 1/2

All dimensions given approx. figure with tighten nut. All dimensions are in millimeters.

Male Connector(Metric Parallel)

NMC-M

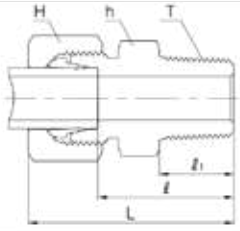


Series	Part No.	Tube O.D	H	h	K	L	ℓ	ℓ1	T M(Metric)
L light PN 315	NMC 06L-10M10	6	14	14	14	23	8.5	8	M 10 x 1
	NMC 08L-12M15	8	17	17	17	25	10	12	M 12 x 1.5
	NMC 08L-18M15	8	17	24	23	26	11.5	12	M 18 x 1.5
	NMC 10L-14M15	10	19	19	19	26	11	12	M 14 x 1.5
	NMC 10L-16M15	10	19	22	21	27	12	12	M 16 x 1.5
	NMC 10L-18M15	10	19	24	23	27	12.5	12	M 18 x 1.5
	NMC 10L-22M15	10	19	27	27	29	14	14	M 22 x 1.5
	NMC 12L-14M15	12	22	19	19	26	11	12	M 14 x 1.5
	NMC 12L-16M15	12	22	22	21	27	12.5	12	M 16 x 1.5
	NMC 12L-18M15	12	22	24	23	27	12.5	12	M 18 x 1.5
	NMC 12L-22M15	12	22	27	27	29	14	14	M 22 x 1.5
	NMC 15L-16M15	15	27	24	21	28	13	12	M 16 x 1.5
	NMC 15L-18M15	15	27	24	23	29	13.5	12	M 18 x 1.5
	NMC 15L-22M15	15	27	27	27	30	15	14	M 22 x 1.5
	NMC 18L-18M15	18	32	27	23	30	14	12	M 18 x 1.5
	NMC 18L-22M15	18	32	27	27	31	14.5	14	M 22 x 1.5
PN 160	NMC 22L-22M15	22	36	32	27	33	16.5	14	M 22 x 1.5
	NMC 22L-26M15	22	36	32	31	33	16.5	16	M 26 x 1.5
	NMC 28L-33M20	28	41	41	39	34	17.5	18	M 33 x 2
	NMC 35L-42M20	35	50	50	49	39	17.5	20	M 42 x 2
	NMC 42L-48M20	42	60	55	55	42	19	22	M 48 x 2
S heavy PN 630	NMC 06S-12M15	6	17	17	17	28	13	12	M 12 x 1.5
	NMC 08S-14M15	8	19	19	19	30	15	12	M 14 x 1.5
	NMC 10S-16M15	10	22	22	21	31	15	12	M 16 x 1.5
	NMC 12S-18M15	12	24	24	23	33	17	12	M 18 x 1.5
	NMC 12S-22M15	12	24	27	27	34	17.5	14	M 22 x 1.5
	NMC 14S-20M15	14	27	27	25	37	19	14	M 20 x 1.5
PN 400	NMC 16S-18M15	16	30	27	23	36	18	12	M 18 x 1.5
	NMC 16S-22M15	16	30	27	27	37	18.5	14	M 22 x 1.5
	NMC 20S-27M20	20	36	32	32	42	20.5	16	M 27 x 2
	NMC 25S-33M20	25	46	41	39	47	23	18	M 33 x 2
PN 250	NMC 30S-42M20	30	50	50	49	50	23.5	20	M 42 x 2
	NMC 38S-48M20	38	60	55	55	57	26	22	M 48 x 2

All dimensions given approx. figure with tighten nut. All dimensions are in millimeters.

Male Connector(Metric Tapered)

NMC-MK



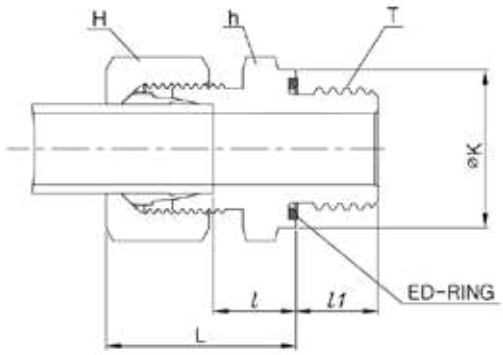
* DIN 3852 Form "C" stud end

Series	Part No.	Tube O.D	H	h	K	L	ℓ	ℓ1	T M(Metric)
LL very light PN 100	NMC 04LL-6M10K	4	10	9	-	26	16	8	M 6 x 1 Keg
	NMC 04LL-8M10K	4	10	10	-	26	16	8	M 8 x 1 Keg
	NMC 06LL-10M10K	6	12	11	-	26	14.5	8	M 10 x 1 Keg
	NMC 08LL-10M10K	8	14	12	-	28	16.5	8	M 10 x 1 Keg

All dimensions given approx. figure with tighten nut. All dimensions are in millimeters.

Male Connector (BSP Parallel) with *ED-Ring

NMC-GE



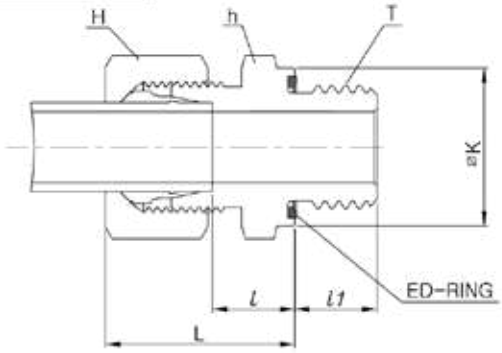
* DIN 3852 Form "E" stud end
* ED-ring of NBR standard, of FPM on request

Series	Part No.	Tube O.D	H	h	K	L	ℓ	ℓ1	T G(PF)
L light PN 315	NMC 06L-01GE	6	14	14	14	23	8.5	8	1/8
	NMC 06L-02GE	6	14	19	19	25	10	12	1/4
	NMC 08L-01GE	8	17	14	14	24	9.5	8	1/8
	NMC 08L-02GE	8	17	19	19	25	10	12	1/4
	NMC 08L-03GE	8	17	22	22	26	11.5	12	3/8
	NMC 10L-02GE	10	19	19	19	26	11	12	1/4
	NMC 10L-03GE	10	19	22	22	27	12.5	12	3/8
	NMC 10L-04GE	10	19	27	27	28	13	14	1/2
	NMC 12L-02GE	12	22	19	19	27	12	12	1/4
	NMC 12L-03GE	12	22	22	22	27	12.5	12	3/8
	NMC 12L-04GE	12	22	27	27	28	13	14	1/2
	NMC 15L-03GE	15	27	24	22	29	13.5	12	3/8
	NMC 15L-04GE	15	27	27	27	29	14	14	1/2
	NMC 18L-04GE	18	32	27	27	31	14.5	14	1/2
	NMC 18L-06GE	18	32	32	32	31	14.5	16	3/4
PN 160	NMC 22L-06GE	22	36	32	32	33	16.5	16	3/4
	NMC 28L-08GE	28	41	41	40	34	17.5	18	1
	NMC 35L-10GE	35	50	50	50	39	17.5	20	1 1/4
	NMC 42L-12GE	42	60	55	55	42	19	22	1 1/2
S heavy PN 630	NMC 06S-02GE	6	17	19	19	28	13	12	1/4
	NMC 08S-02GE	8	19	19	19	30	15	12	1/4
	NMC 08S-03GE	8	19	22	22	30	15.5	12	3/8
	NMC 10S-02GE	10	22	19	19	31	14.5	12	1/4
	NMC 10S-03GE	10	22	22	22	31	15	12	3/8
	NMC 10S-04GE	10	22	27	27	34	17.5	14	1/2
	NMC 12S-02GE	12	24	22	19	33	16.5	12	1/4
	NMC 12S-03GE	12	24	22	22	33	17	12	3/8
	NMC 12S-04GE	12	24	27	32	34	17.5	14	1/2
	NMC 14S-04GE	14	27	27	27	37	19	14	1/2
PN 400	NMC 16S-03GE	16	30	27	22	36	18	12	3/8
	NMC 16S-04GE	16	30	27	27	37	18.5	14	1/2
	NMC 16S-06GE	16	30	32	27	39	20.5	16	3/4
	NMC 20S-06GE	20	36	32	32	42	20.5	16	3/4
	NMC 25S-04GE	25	46	41	27	47	23	14	1/2
	NMC 25S-06GE	25	46	41	32	47	23	16	3/4
	NMC 25S-08GE	25	46	41	40	47	23	18	1
	NMC 30S-10GE	30	50	50	50	50	23.5	20	1 1/4
PN 315	NMC 38S-12GE	38	60	55	55	57	26	22	1 1/2

All dimensions given approx. figure with tighten nut. All dimensions are in millimeters.

Male Connector(Metric Parallel) with *ED-Ring

NMC-ME



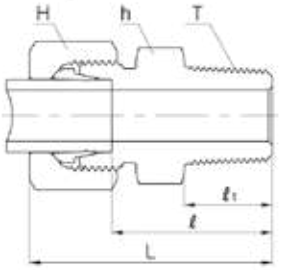
* DIN 3852 Form "E" stud end
* ED-ring of NBR standard, of FPM on request

Series	Part No.	Tube O.D	H	h	K	L	ℓ	ℓ1	T M(Metric)
L light PN 315	NMC 06L-10M10E	6	14	14	14	23	8.5	8	M 10 x 1
	NMC 08L-12M15E	8	17	17	17	25	10	12	M 12 x 1.5
	NMC 10L-14M15E	10	19	19	19	26	11	12	M 14 x 1.5
	NMC 12L-16M15E	12	22	22	22	27	12.5	12	M 16 x 1.5
	NMC 12L-18M15E	12	22	24	24	27	12.5	12	M 18 x 1.5
	NMC 12L-22M15E	12	22	27	27	29	14	14	M 22 x 1.5
	NMC 15L-18M15E	15	27	24	24	29	13.5	12	M 18 x 1.5
	NMC 15L-22M15E	15	27	27	27	30	15	14	M 22 x 1.5
	NMC 18L-22M15E	18	32	27	27	31	14.5	14	M 22 x 1.5
PN 160	NMC 22L-26M15E	22	36	32	32	33	16.5	16	M 26 x 1.5
	NMC 28L-33M20E	28	41	41	40	34	17.5	18	M 33 x 2
	NMC 35L-42M20E	35	50	50	50	39	17.5	20	M 42 x 2
	NMC 42L-48M20E	42	60	55	55	42	19	22	M 48 x 2
S heavy PN 630	NMC 06S-12M15E	6	17	17	17	28	13	12	M 12 x 1.5
	NMC 08S-14M15E	8	19	19	19	30	15	12	M 14 x 1.5
	NMC 10S-16M15E	10	22	22	22	31	15	12	M 16 x 1.5
	NMC 12S-18M15E	12	24	24	24	33	17	12	M 18 x 1.5
	NMC 14S-20M15E	14	27	27	26	37	19	14	M 20 x 1.5
PN 400	NMC 16S-22M15E	16	30	27	27	37	18.5	14	M 22 x 1.5
	NMC 20S-27M20E	20	36	32	32	42	20.5	16	M 27 x 2
	NMC 25S-33M20E	25	46	41	40	47	23	18	M 33 x 2
	NMC 30S-42M20E	30	50	50	50	50	23.5	20	M 42 x 2
PN 315	NMC 38S-48M20E	38	60	55	55	57	26	22	M 48 x 2

All dimensions given approx. figure with tighten nut. All dimensions are in millimeters.

Male Connector(NPT Thread)

NMC-N



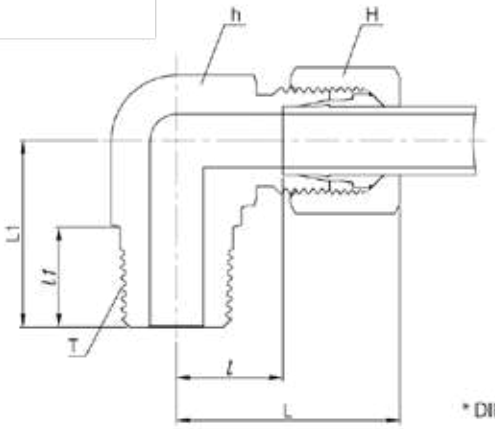
* DIN 3852 Form "C" stud end

Series	Part No.	Tube O.D	H	h	L	ℓ	ℓ1	T N(NPT)
LL very light PN 100	NMC 04LL-01N	4	10	11	28	18.5	9.9	1/8-27
	NMC 06LL-01N	6	12	11	28	16.5	9.9	1/8-27
	NMC 08LL-01N	8	14	12	30	18.5	9.9	1/8-27
L light PN 315	NMC 06L-01N	6	14	12	32	17	9.9	1/8-27
	NMC 06L-02N	6	14	17	38	23	14.2	1/4-18
	NMC 08L-02N	8	17	17	38	23	14.2	1/4-18
	NMC 10L-02N	10	19	17	39	24	14.2	1/4-18
	NMC 10L-03N	10	19	19	40	25	14.2	3/8-18
	NMC 12L-02N	12	22	19	40	25	14.2	1/4-18
	NMC 12L-03N	12	22	19	40	25	14.2	3/8-18
	NMC 12L-04N	12	22	22	45	30	19.1	1/2-14
	NMC 15L-04N	15	27	24	46	31	19.1	1/2-14
	NMC 18L-04N	18	32	27	48	31.5	19.1	1/2-14
PN 160	NMC 22L-06N	22	36	32	50	33.5	19.1	3/4-14
	NMC 28L-08N	28	41	41	56	39.5	23.9	1-1 1.5
	NMC 35L-10N	35	50	46	62	40.5	23.9	1 1/4-11.5
	NMC 42L-12N	42	60	55	65	42	25.4	1 1/2-11.5
S heavy PN 630	NMC 06S-02N	6	17	17	43	28	14.2	1/4-18
	NMC 08S-02N	8	19	17	43	28	14.2	1/4-18
	NMC 10S-02N	10	22	19	44	27.5	14.2	1/4-18
	NMC 10S-03N	10	22	19	44	27.5	14.2	3/8-18
	NMC 12S-02N	12	24	22	46	29.5	14.2	1/4-18
	NMC 12S-03N	12	24	22	46	29.5	14.2	3/8-18
	NMC 12S-04N	12	24	22	51	34.5	19.1	1/2-14
	NMC 14S-04N	14	27	24	54	36	19.1	1/2-14
PN 400	NMC 16S-04N	16	30	27	54	35.5	19.1	1/2-14
	NMC 20S-06N	20	36	32	59	37.5	19.1	3/4-14
	NMC 25S-08N	25	46	41	69	45	23.9	1-1 1.5
	NMC 30S-10N	30	50	46	73	46.5	23.9	1 1/4-11.5
PN 315	NMC 38S-12N	38	60	55	80	49	25.4	1 1/2-11.5

All dimensions given approx. figure with tighten nut. All dimensions are in millimeters.

Male Elbow(BSP Tapered/Metric Tapered)

NLM-R / M



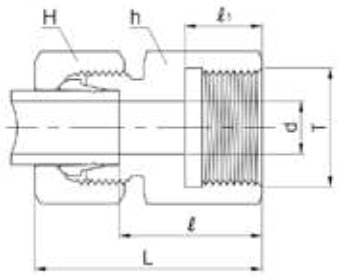
* DIN 3852 Form "C" stud end

Series	Part No.		Tube O.D	H	h	L	L1	ℓ	Metric Tape		R(PT)	
									T	ℓ1	T	ℓ1
LL very light PN 100	NLM 04LL-01R	NLM 04LL-8M10K	4	10	9	21	17	11	M 8 x 1 Keg	8	1/8	10
	NLM 06LL-01R	NLM 06LL-10M10K	6	12	9	21	17	9.5	M 10 x 1 Keg	8	1/8	10
	NLM 08LL-01R	NLM 08LL-10M10K	8	14	12	23	20	11.5	M 10 x 1 Keg	8	1/8	10
	NLM 10LL-02R	-	10	17	14	24	23	12.5	-	-	1/4	14
	NLM 12LL-02R	-	12	19	17	25	23	13	-	-	1/4	14
L light PN 315	NLM 06L-01R	NLM 06L-10M10K	6	14	12	27	20	12	M 10 x 1 Keg	8	1/8	10
	NLM 08L-02R	NLM 08L-12M15K	8	17	12	29	26	14	M 12 x 1.5 Keg	12	1 4	14
	NLM 10L-02R	NLM 10L-14M15K	10	19	14	30	27	15	M 14 x 1.5 Keg	12	1/4	14
	NLM 12L-03R	NLM 12L-16M15K	12	22	17	32	28	17	M 16 x 1.5 Keg	14	3/8	15
	NLM 15L-04R	NLM 15L-18M15K	15	27	19	36	34	21	M 18 x 1.5 Keg	14	1/2	19
	NLM 18L-04R	NLM 18L-22M15K	18	32	24	40	36	23.5	M 22 x 1.5 Keg	17	1/2	19
S heavy PN 400	NLM 06S-02R	NLM 06S-12M15K	6	17	12	31	26	16	M 12 x 1.5 Keg	12	1 4	14
	NLM 08S-02R	NLM 08S-14M15K	8	19	14	32	27	17	M 14 x 1.5 Keg	12	1/4	14
	NLM 10S-03R	NLM 10S-16M15K	10	22	17	34	28	17.5	M 16 x 1.5 Keg	12	3/8	15
	NLM 12S-03R	NLM 12S-18M15K	12	24	17	38	28	21.5	M 18 x 1.5 Keg	12	3/8	15
	NLM 14S-04R	NLM 14S-20M15K	14	27	19	40	32	22	M 20 x 1.5 Keg	14	1/2	19
	NLM 16S-04R	NLM 16S-22M15K	16	30	24	43	32	24.5	M 22 x 1.5 Keg	17	1/2	19

All dimensions given approx. figure with tighten nut. All dimensions are in millimeters.

Female Connector (BSP Parallel / Metric Parallel)

NFC-G / M



* DIN 3852 Form "Y" stud end

for BSP Parallel

Series	Part No.	Tube O.D	d	H	h	L	ℓ	ℓ1	T G(PF)
L light PN 315	NFC 06L-01G	6	4	14	14	34	19	12	1/8
	NFC 08L-02G	8	6	17	19	39	24	17	1/4
	NFC 08L-03G	8	6	17	24	40	25	17	3/8
	NFC 08L-04G	8	6	17	27	44	29	20	1/2
	NFC 10L-02G	10	8	19	19	40	25	17	1/4
	NFC 10L-03G	10	8	19	24	41	26	17	3/8
	NFC 10L-04G	10	8	19	27	45	30	20	1/2
	NFC 12L-03G	12	10	22	24	41	26	17	3/8
	NFC 12L-04G	12	10	22	27	45	30	20	1/2
	NFC 15L-04G	15	12	27	27	46	31	20	1/2
	NFC 18L-04G	18	15	32	27	47	30.5	20	1/2
PN 160	NFC 22L-06G	22	19	36	36	52	35.5	22	3/4
	NFC 28L-08G	28	24	41	41	55	38	24.5	1
	NFC 35L-10G	35	30	50	55	63	41	26.5	1 1/4
	NFC 42L-12G	42	36	60	60	65	42.5	28.5	1 1/2
S heavy PN 630	NFC 06S-02G	6	4	17	19	41	26	17	1/4
	NFC 08S-02G	8	5	19	19	41	26	17	1/4
	NFC 10S-03G	10	7	22	24	43	26.5	17	3/8
	NFC 12S-03G	12	8	24	24	43	26.5	17	3/8
	NFC 14S-04G	14	10	27	30	50	32	20	1/2
PN 400	NFC 16S-04G	16	12	30	30	50	31.5	20	1/2
	NFC 20S-06G	20	16	36	36	56	34.5	22	3/4
	NFC 25S-08G	25	20	46	41	62	37.5	24.5	1
	NFC 30S-10G	30	25	50	55	69	42	26.5	1 1/4
PN 315	NFC 38S-12G	38	32	60	60	74	43.5	28.5	1 1/2

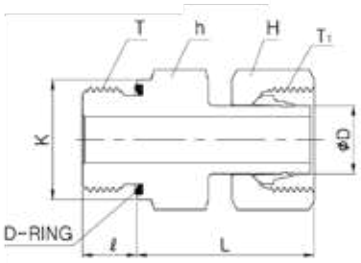
for Metric Parallel

Series	Part No.	Tube O.D	d	H	h	L	ℓ	ℓ1	T M(Metric)
L light PN 315	NFC 06L-10M10	6	4	14	14	34	19.5	12.5	M 10 x 1
	NFC 08L-12M15	8	6	17	17	39	24	17	M 12 x 1.5
	NFC 10L-14M15	10	8	19	19	40	25	17	M 14 x 1.5
	NFC 12L-16M15	12	10	22	22	41	26	17	M 16 x 1.5
	NFC 15L-18M15	15	12	27	24	43	28	17	M 18 x 1.5
	NFC 18L-22M15	18	15	32	30	46	29.5	19	M 22 x 1.5
PN 160	NFC 22L-26M15	22	19	36	32	51	34.5	21	M 26 x 1.5
	NFC 28L-33M20	28	24	41	41	54	37.5	24	M 33 x 2
	NFC 35L-42M20	35	30	50	55	62	40.5	26	M 42 x 2
	NFC 42L-48M20	42	36	60	60	65	42	28	M 48 x 2
S heavy PN 630	NFC 06S-12M15	6	4	17	17	41	26	17	M 12 x 1.5
	NFC 08S-14M15	8	5	19	19	41	26	17	M 14 x 1.5
	NFC 10S-16M15	10	7	22	22	43	26.5	17	M 16 x 1.5
	NFC 12S-18M15	12	8	24	24	44	27.5	17	M 18 x 1.5
	NFC 14S-20M15	14	10	27	27	49	31	19	M 20 x 1.5
PN 400	NFC 16S-22M15	16	12	30	30	49	30.5	19	M 22 x 1.5
	NFC 20S-27M20	20	16	36	36	56	34.5	22	M 27 x 2
	NFC 25S-33M20	25	20	46	41	61	37	24	M 33 x 2
	NFC 30S-42M20	30	25	50	55	68	41.5	26	M 42 x 2
PN 315	NFC 38S-48M20	38	32	60	60	74	43	28	M 48 x 2

All dimensions given approx. figure with tighten nut. All dimensions are in millimeters.

Adapter (BSP Parallel / Metric Parallel) with *ED-Ring

NA-GE / ME



* DIN 3852 Form "E" stud end
* ED-ring of NBR standard, of FPM on request

for BSP Parallel

Series	Part No.	Tube O.D D	H	h	K	L	ℓ	T G(PF)	T1 M(Metric)
L light PN 315	NA 06L-01GE	6	14	14	14	24.5	8	1/8	M 12 x 1.5
	NA 08L-02GE	8	17	19	19	29.5	12	1/4	M 14 x 1.5
	NA 10L-02GE	10	19	19	19	27.5	12	1/4	M 16 x 1.5
	NA 12L-03GE	12	22	22	22	34	12	3/8	M 18 x 1.5
	NA 15L-04GE	15	27	27	27	32	14	1/2	M 22 x 1.5
	NA 18L-04GE	18	32	27	27	31.5	14	1/2	M 26 x 1.5
PN 160	NA 22L-06GE	22	36	32	32	32.5	16	3/4	M 30 x 2
	NA 28L-08GE	28	41	41	40	35	18	1	M 36 x 2
	NA 35L-10GE	35	50	50	50	42.5	20	1 1/4	M 45 x 2
	NA 42L-12GE	42	60	55	55	46.5	22	1 1/2	M 52 x 2
S heavy PN 630	NA 06S-02GE	6	17	19	19	27	12	1/4	M 14 x 1.5
	NA 08S-02GE	8	19	19	19	29.5	12	1/4	M 16 x 1.5
	NA 10S-03GE	10	22	22	22	32	12	3/8	M 18 x 1.5
	NA 12S-03GE	12	24	22	22	34	12	3/8	M 20 x 1.5
	NA 12S-04GE	12	24	27	27	34.5	14	1/2	M 20 x 1.5
	NA 14S-04GE	14	27	27	27	36.5	14	1/2	M 22 x 1.5
PN 400	NA 16S-04GE	16	30	27	27	37	14	1/2	M 24 x 1.5
	NA 16S-06GE	16	30	32	32	39	16	3/4	M 24 x 1.5
	NA 20S-06GE	20	36	32	32	43	16	3/4	M 30 x 2
	NA 25S-08GE	25	46	41	40	48	18	1	M 36 x 2
	NA 30S-10GE	30	50	50	50	51	20	1 1/4	M 42 x 2
PN 315	NA 38S-12GE	38	60	55	55	60	22	1 1/2	M 52 x 2

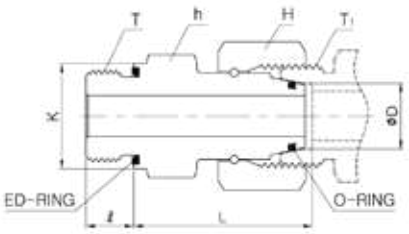
for Metric Parallel

Series	Part No.	Tube O.D	H	h	K	L	ℓ	T M(Metric)	T1 M(Metric)
L light PN 315	NA 06L-10M10E	6	14	14	14	24.5	8	M 10 x 1	M 12 x 1.5
	NA 08L-12M15E	8	17	17	17	26.5	12	M 12 x 1.5	M 14 x 1.5
	NA 10L-14M15E	10	19	19	19	27.5	12	M 14 x 1.5	M 16 x 1.5
	NA 12L-16M15E	12	22	22	22	30.5	12	M 16 x 1.5	M 18 x 1.5
	NA 15L-18M15E	15	27	24	24	31.5	14	M 18 x 1.5	M 22 x 1.5
	NA 18L-22M15E	18	32	27	27	31.5	14	M 22 x 1.5	M 26 x 1.5
PN 160	NA 22L-26M15E	22	36	32	32	32.5	16	M 26 x 1.5	M 30 x 2
	NA 28L-33M20E	28	41	41	40	35	18	M 33 x 2	M 36 x 2
	NA 35L-42M20E	35	50	50	50	42.5	20	M 42 x 2	M 45 x 2
	NA 42L-48M20E	42	60	55	55	46.5	22	M 48 x 2	M 52 x 2
S heavy PN 630	NA 06S-12M15E	6	17	17	17	27	12	M 12 x 1.5	M 14 x 1.5
	NA 08S-14M15E	8	19	19	19	29.5	12	M 14 x 1.5	M 16 x 1.5
	NA 10S-16M15E	10	22	22	22	32	12	M 16 x 1.5	M 18 x 1.5
	NA 12S-18M15E	12	24	24	24	34	12	M 18 x 1.5	M 20 x 1.5
	NA 14S-20M15E	14	27	27	27	36.5	14	M 20 x 1.5	M 22 x 1.5
PN 400	NA 16S-22M15E	16	30	27	27	37	14	M 22 x 1.5	M 24 x 1.5
	NA 20S-27M20E	20	36	32	32	43	16	M 27 x 2	M 30 x 2
	NA 25S-33M20E	25	46	41	40	48	18	M 33 x 2	M 36 x 2
	NA 30S-42M20E	30	50	50	50	51	20	M 42 x 2	M 42 x 2
PN 315	NA 38S-48M20E	38	60	55	55	60	22	M 48 x 2	M 52 x 2

All dimensions given approx. figure with tighten nut. All dimensions are in millimeters.
Tube stud have to swage for nut and cutting ring. Please see final assembly on page 10.
Nut and cutting ring are not supplied.

Swivel Adapter (BSP Parallel / Metric Parallel) with Cone and *ED-Ring

NEGE-GE / ME



* DIN 3852 Form "E" stud end
* ED-ring and O-ring of NBR standard, of FPM on request

for BSP Parallel

Series	Part No.	Tube O.D D	H	h	K	L	ℓ	T G(PF)	T1 M(Metric)
L light PN 315	NEGE 06L-01GE	6	14	14	14	24.5	8	1/8	M 12 x 1.5
	NEGE 08L-02GE	8	17	19	19	29.5	12	1/4	M 14 x 1.5
	NEGE 10L-02GE	10	19	19	19	27.5	12	1/4	M 16 x 1.5
	NEGE 12L-03GE	12	22	22	22	34	12	3/8	M 18 x 1.5
	NEGE 15L-04GE	15	27	27	27	32	14	1/2	M 22 x 1.5
	NEGE 18L-04GE	18	32	27	27	31.5	14	1/2	M 26 x 1.5
PN 160	NEGE 22L-06GE	22	36	32	32	32.5	16	3/4	M 30 x 2
	NEGE 28L-08GE	28	41	41	40	35	18	1	M 36 x 2
	NEGE 35L-10GE	35	50	50	50	42.5	20	1-1/4	M 45 x 2
	NEGE 42L-12GE	42	60	55	55	46.5	22	1-1/2	M 52 x 2
S light PN 315	NEGE 06S-02GE	6	17	19	19	27	12	1/4	M 14 x 1.5
	NEGE 08S-02GE	8	19	19	19	29.5	12	1/4	M 16 x 1.5
	NEGE 10S-03GE	10	22	22	22	32	12	3/8	M 18 x 1.5
	NEGE 12S-03GE	12	24	22	27	34	12	3/8	M 20 x 1.5
	NEGE 14S-04GE	14	27	27	27	36.5	14	1/2	M 22 x 1.5
PN 400	NEGE 16S-04GE	16	30	27	27	37	14	1/2	M 24 x 1.5
	NEGE 20S-06GE	20	36	32	32	43	16	3/4	M 30 x 2
	NEGE 25S-08GE	25	46	41	40	48	18	1	M 36 x 2
	NEGE 30S-10GE	30	50	50	50	51	20	1-1/4	M 42 x 2
PN 315	NEGE 38S-12GE	38	60	55	55	60	22	1-1/2	M 52 x 2

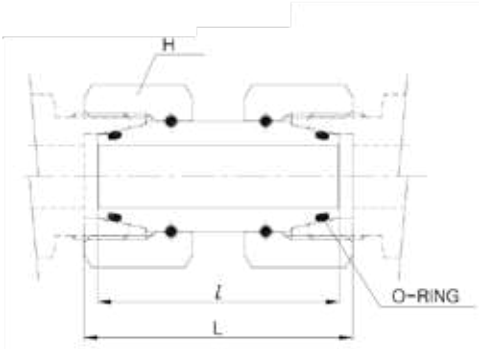
for Metric Parallel

Series	Part No.	Tube O.D D	H	h	K	L	ℓ	T M(Metric)	T1 M(Metric)
L light PN 315	NEGE 06L-10M10E	6	14	14	14	24.5	8	M 10 x 1	M 12 x 1.5
	NEGE 08L-12M15E	8	17	19	17	26.5	12	M 12 x 1.5	M 14 x 1.5
	NEGE 10L-14M15E	10	19	19	19	27.5	12	M 14 x 1.5	M 16 x 1.5
	NEGE 12L-16M15E	12	22	22	22	30.5	12	M 16 x 1.5	M 18 x 1.5
	NEGE 15L-18M15E	15	27	24	24	31.5	12	M 18 x 1.5	M 22 x 1.5
	NEGE 18L-22M15E	18	32	27	27	31.5	14	M 22 x 1.5	M 26 x 1.5
PN 160	NEGE 22L-26M15E	22	36	32	32	32.5	16	M 26 x 1.5	M 30 x 2
	NEGE 28L-33M20E	28	41	41	40	35	18	M 33 x 2	M 36 x 2
	NEGE 35L-42M20E	35	50	50	50	42.5	20	M 42 x 2	M 45 x 2
	NEGE 42L-48M20E	42	60	55	55	46.5	22	M 48 x 2	M 52 x 2
S light PN 315	NEGE 06S-12M15E	6	17	17	17	27	12	M 12 x 1.5	M 14 x 1.5
	NEGE 08S-14M15E	8	19	19	19	29.5	12	M 14 x 1.5	M 16 x 1.5
	NEGE 10S-16M15E	10	22	22	22	32	12	M 16 x 1.5	M 18 x 1.5
	NEGE 12S-18M15E	12	24	24	24	34	12	M 18 x 1.5	M 20 x 1.5
	NEGE 14S-20M15E	14	27	27	26	36.5	14	M 20 x 1.5	M 22 x 1.5
PN 400	NEGE 16S-22M15E	16	30	27	27	37	14	M 22 x 1.5	M 24 x 1.5
	NEGE 20S-27M20E	20	36	32	32	43	16	M 27 x 2	M 30 x 2
	NEGE 25S-33M20E	25	46	41	40	48	18	M 33 x 2	M 36 x 2
	NEGE 30S-42M20E	30	50	50	50	51	20	M 42 x 2	M 42 x 2
PN 315	NEGE 38S-48M20E	38	60	55	55	60	22	M 48 x 2	M 52 x 2

All dimensions given approx. figure with tighten nut. All dimensions are in millimeters.
Please see final assembly on page 10.

Swivel Union with Cone

NUE



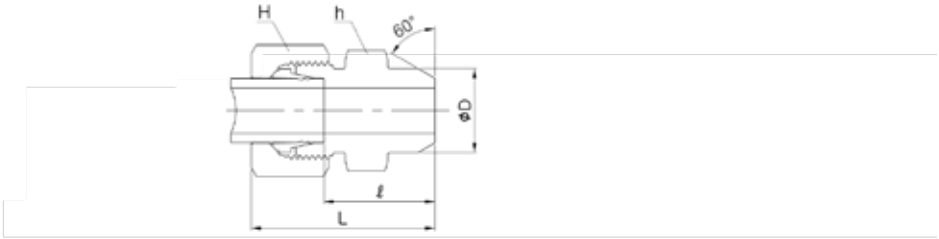
* O-ring of NBR standard, of FPM on request

Series	Part No.	Tube O.D	H	L	ℓ
L light PN 500	NUE-06L	6	17	36	34
	NUE-08L	8	17	36	34
	NUE-10L	10	19	37	36
PN 400	NUE-12L	12	22	37	36
	NUE-15L	15	27	40	39
	NUE-18L	18	32	42.5	40.5
PN 250	NUE-22L	22	36	47	45
	NUE-28L	28	46	49	47
	NUE-35L	35	50	58	53
	NUE-42L	42	60	59	53
S light PN 315	NUE-06S	6	17	39	37
	NUE-08S	8	19	39	37
	NUE-10S	10	22	43	41
PN 630	NUE-12S	12	24	44	43
	NUE-14S	14	27	48	45
	NUE-16S	16	30	50	46
PN 400	NUE-20S	20	36	60	55
	NUE-25S	25	46	66	58
	NUE-30S	30	50	73	62
	NUE-38S	38	60	83	67

All dimensions given approx. figure with tighten nut. All dimensions are in millimeters.
Please see final assembly on page 10.

Welding Connector

NAS

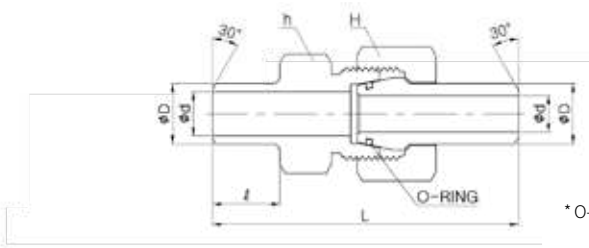


Series	Part No.	Tube O.D	D	H	h	L	ℓ
L light PN 315	NAS-06L	6	10	14	12	29	14
	NAS-08L	8	12	17	14	31	16
	NAS-10L	10	14	19	17	33	18
	NAS-12L	12	16	22	19	33	18
	NAS-15L	15	19	27	22	37	22
	NAS-18L	18	22	32	27	40	23.5
PN 160	NAS-22L	22	27	36	32	45	28.5
	NAS-28L	28	32	41	41	47	30.5
	NAS-35L	35	40	50	46	54	32.5
	NAS-42L	42	46	60	55	58	35
S heavy PN 360	NAS-06S	6	11	17	14	34	19
	NAS-08S	8	13	19	17	36	21
	NAS-10S	10	15	22	19	39	22.5
	NAS-12S	12	17	24	22	41	24.5
	NAS-14S	14	19	27	24	45	27
PN 400	NAS-16S	16	21	30	27	45	26.5
	NAS-20S	20	26	36	32	51	29.5
	NAS-25S	25	31	46	41	56	32
	NAS-30S	30	36	50	46	62	35.5
PN 315	NAS-38S	38	44	60	55	69	38

All dimensions given approx. figure with tighten nut. All dimensions are in millimeters.

Welding Connector with NC

NASK

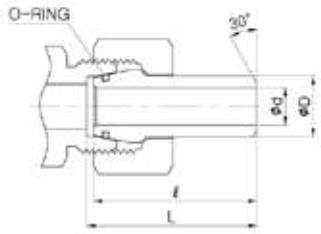


* O-ring of NBR standard, of FPM on request

Series	Part No.	Tube O.D	d	H	h	L	ℓ
PN 248	NASK 10 x 1.0	10	8	22	19	58	10
PN 357	NASK 10 x 1.5	10	7	22	19	58	10
PN 458	NASK 10 x 2.0	10	6	22	19	58	10
PN 303	NASK 12 x 1.5	12	9	24	22	65	15
PN 391	NASK 12 x 2.0	12	8	24	22	65	15
PN 474	NASK 12 x 2.5	12	7	24	22	65	15
PN 234	NASK 16 x 1.5	16	13	30	27	74.5	16.5
PN 303	NASK 16 x 2.0	16	12	30	27	74.5	16.5
PN 370	NASK 16 x 2.5	16	11	30	27	74.5	16.5
PN 433	NASK 16 x 3.0	16	10	30	27	74.5	16.5
PN 249	NASK 20 x 1.5	20	16	36	32	84	19
PN 305	NASK 20 x 2.5	20	15	36	32	84	19
PN 357	NASK 20 x 3.0	20	14	36	32	84	19
PN 458	NASK 20 x 4.0	20	12	36	32	84	19
PN 292	NASK 25 x 3.0	25	19	46	41	94.5	19.5
PN 348	NASK 25 x 4.0	25	17	46	41	94.5	19.5
PN 458	NASK 25 x 5.0	25	15	46	41	94.5	19.5
PN 248	NASK 30 x 3.0	30	24	50	46	102	23
PN 321	NASK 30 x 4.0	30	22	50	46	102	23
PN 391	NASK 30 x 5.0	30	20	50	46	102	23
PN 460	NASK 30 x 6.0	30	18	50	46	102	23
PN 260	NASK 38 x 4.0	38	30	60	55	111	23
PN 318	NASK 38 x 5.0	38	28	60	55	111	23
PN 373	NASK 38 x 6.0	38	26	60	55	111	23
PN 427	NASK 38 x 7.0	38	24	60	55	111	23

All dimensions given approx. figure with tighten nut. All dimensions are in millimeters.

Welding Nipple with *O-Ring
NC

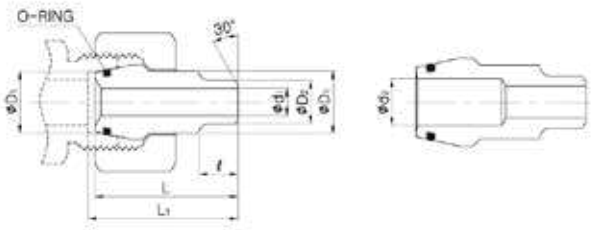


* O-ring of NBR standard, of FPM on request

Series		Part No.	Tube O.D D	d	L	ℓ
Fittings	NAK and Tube					
PN 630	PB 248	NC 10 x 1.0	10	8	35.5	33
	PB 357	NC 10 x 1.5	10	7	35.5	33
	PB 458	NC 10 x 2.0	10	6	35.5	33
PN 630	PB 303	NC 12 x 1.5	12	9	35.5	33
	PB 391	NC 12 x 2.0	12	8	35.5	33
	PB 474	NC 12 x 2.5	12	7	35.5	33
PN 400	PB 234	NC 16 x 1.5	16	13	42.5	39
	PB 303	NC 16 x 2.0	16	12	42.5	39
	PB 370	NC 16 x 2.5	16	11	42.5	39
	PB 433	NC 16 x 3.0	16	10	42.5	39
PN 400	PB 249	NC 20 x 2.0	20	16	47.5	43.5
	PB 305	NC 20 x 2.5	20	15	47.5	43.5
	PB 357	NC 20 x 3.0	20	14	47.5	43.5
	PB 458	NC 20 x 4.0	20	12	47.5	43.5
PN 400	PB 292	NC 25 x 3.0	25	19	55	49.5
	PB 348	NC 25 x 4.0	25	17	55	49.5
	PB 458	NC 25 x 5.0	25	15	55	49.5
PN 400	PB 248	NC 30 x 3.0	30	24	58.5	51.5
	PB 321	NC 30 x 4.0	30	22	58.5	51.5
	PB 391	NC 30 x 5.0	30	20	58.5	51.5
	PB 460	NC 30 x 6.0	30	18	58.5	51.5
PN 315	PB 260	NC 38 x 4.0	38	30	66	56.5
	PB 318	NC 38 x 5.0	38	28	66	56.5
	PB 373	NC 38 x 6.0	38	26	66	56.5
	PB 427	NC 38 x 7.0	38	24	66	56.5

All dimensions given approx. figure with tighten nut. All dimensions are in millimeters.

Reducing Welding Nipple with *O-Ring
NCR

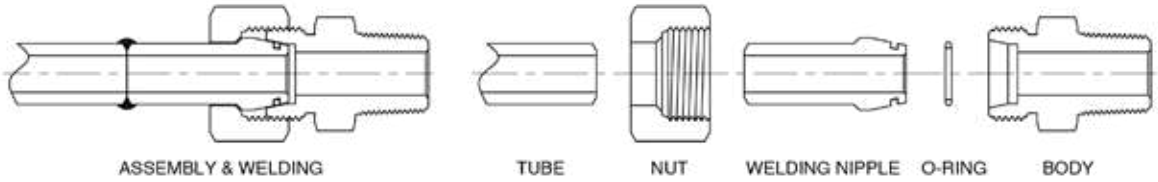


* O-ring of NBR standard, of FPM on request

Series		Part No.	Tube O.D		d1	d2	L1	L	ℓ
Fittings	NAKR and Tube		D1	D2					
PN 630	PB 526	NCR 1006 x 1.5	10	6	3	5	37.5	35	12
	PB 526	NCR 1008 x 2.0	10	8	4	-	37.5	35	12
	PB 526	NCR 1208 x 2.0	12	8	4	6	37.5	35	14
	PB 357	NCR 1210 x 1.5	12	10	7	-	37.5	35	14
PN 400	PB 474	NCR 1612 x 2.5	16	12	7	-	46.5	43	15
	PB 474	NCR 2012 x 2.5	20	12	7	-	51.5	47.5	15
	PB 433	NCR 2016 x 3.0	20	16	10	-	53.5	49.5	17
	PB 433	NCR 2516 x 3.0	25	16	10	-	56.5	51	17
	PB 458	NCR 2520 x 4.0	25	20	12	-	59.5	54	20
	PB 303	NCR 3016 x 2.0	30	16	12	-	67	60	17
	PB 303	NCR 3020 x 2.5	30	20	15	-	70	63	20
	PB 292	NCR 3025 x 3.0	30	25	19	-	70	63	20
PN 400	PB 303	NCR 3816 x 2.0	38	16	12	-	79	69.5	17
	PB 303	NCR 3820 x 2.5	38	20	15	-	82	72.5	20
	PB 292	NCR 3825 x 3.0	38	25	19	-	82	72.5	20
	PB 321	NCR 3830 x 4.0	38	30	22	-	82	72.5	20

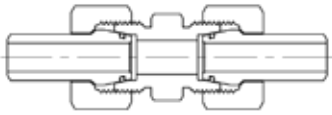
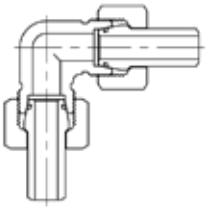
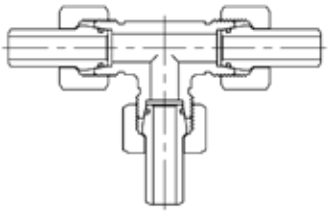
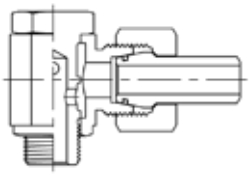
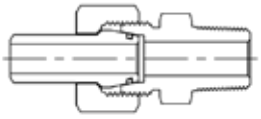
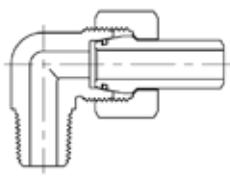
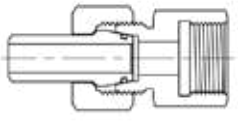
All dimensions given approx. figure with tighten nut. All dimensions are in millimeters.

Technical & Instruction for Welding Nipple

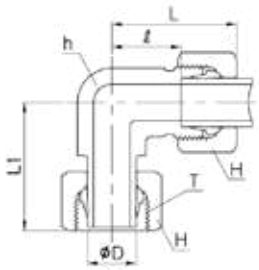


1. Cut the tube at right angle.
2. Deburr tube end at the inside and outside.
3. Place the nut on the welding nipple, as shown.
Welding nipple and tube according to the applicable guide lines for welding.
4. De-scable the weld and clean the o-ring groove.
5. Place the supplied o-ring into the body groove. O-ring must not be twisted.
6. Tighten nut by hand. The nut has to be tightened by 1/3 turn from hand tight with spanner.

Various Welding Nipple Assembly

Part No.	NGV	NWV	NTV
	NU (WITHOUT SLEEVE) + NAK	NL (WITHOUT SLEEVE) + NAK	NT (WITHOUT SLEEVE) + NAK
FIGURE			
Part No.	NWSEV	NGEV-N/R	NGEV-G/M
	NSWVE (WITHOUT SLEEVE) + NAK	NMC-N/R (WITHOUT SLEEVE) + NAK	NMC-G/M (WITHOUT SLEEVE) + NAK
FIGURE			
Part No.	NGUV	NWEV-R/M	NGM-G/M
	NMC-GE/ME (WITHOUT SLEEVE) + NAK	NLM-RM (WITHOUT SLEEVE) + NAK	NFC-G/M (WITHOUT SLEEVE) + NAK
FIGURE			

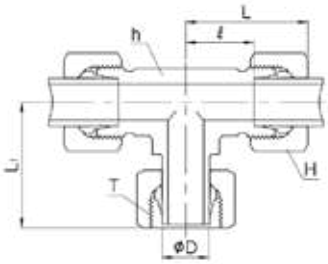
Adjustable Elbow with Standpipe
NLA



Series	Part No.	Tube O.D D	H	h	L	L1	ℓ	T
L light PN 315	NLA-06L	6	14	12	27	26	12	M 12 x 1.5
	NLA-08L	8	17	12	29	27.5	14	M 14 x 1.5
	NLA-10L	10	19	14	30	29	15	M 16 x 1.5
	NLA-12L	12	22	17	32	29.5	17	M 18 x 1.5
	NLA-15L	15	27	19	36	32.5	21	M 22 x 1.5
	NLA-18L	18	32	24	40	35.5	23.5	M 26 x 1.5
PN 160	NLA-22L	22	36	27	44	38.5	27.5	M 30 x 2
	NLA-28L	28	41	36	47	41.5	30.5	M 36 x 2
	NLA-35L	35	50	41	56	51	34.5	M 45 x 2
	NLA-42L	42	60	50	63	56	40	M 52 x 2
S heavy PN 630	NLA-06S	6	17	12	31	27	16	M 14 x 1.5
	NLA-08S	8	19	14	32	27.5	17	M 16 x 1.5
	NLA-10S	10	22	17	34	30	17.5	M 18 x 1.5
	NLA-12S	12	24	17	38	31	21.5	M 20 x 1.5
	NLA-14S	14	27	19	40	35	22	M 22 x 1.5
PN 400	NLA-16S	16	30	24	43	36.5	24.5	M 24 x 1.5
	NLA-20S	20	36	27	48	44.5	26.5	M 30 x 2
	NLA-25S	25	46	36	54	50	30	M 36 x 2
	NLA-30S	30	50	41	62	55	35.5	M 42 x 2
PN 315	NLA-38S	38	60	50	72	63	41	M 52 x 2

All dimensions given approx. figure with tighten nut. All dimensions are in millimeters.
Tube stud have to swage for nut and cutting ring. Please see final assembly on page 10. Nut and cutting ring are not supplied.

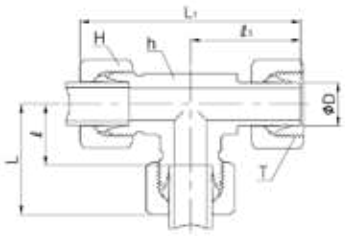
Adjustable Branch Tee with Standpipe
NBTA



Series	Part No.	Tube O.D D	H	h	L	L1	ℓ	T
L light PN 315	NBTA-06L	6	14	12	27	26	12	M 12 x 1.5
	NBTA-08L	8	17	12	29	27.5	14	M 14 x 1.5
	NBTA-10L	10	19	14	30	29	15	M 16 x 1.5
	NBTA-12L	12	22	17	32	29.5	17	M 18 x 1.5
	NBTA-15L	15	27	19	36	32.5	21	M 22 x 1.5
	NBTA-18L	18	32	24	40	35.5	23.5	M 26 x 1.5
PN 160	NBTA-22L	22	36	27	44	38.5	27.5	M 30 x 2
	NBTA-28L	28	41	36	47	41.5	30.5	M 36 x 2
	NBTA-35L	35	50	41	56	51	34.5	M 45 x 2
	NBTA-42L	42	60	50	63	56	40	M 52 x 2
S heavy PN 630	NBTA-06S	6	17	12	31	27	16	M 14 x 1.5
	NBTA-08S	8	19	14	32	27.5	17	M 16 x 1.5
	NBTA-10S	10	22	17	34	30	17.5	M 18 x 1.5
	NBTA-12S	12	24	17	38	31	21.5	M 20 x 1.5
	NBTA-14S	14	27	19	40	35	22	M 22 x 1.5
PN 400	NBTA-16S	16	30	24	43	36.5	24.5	M 24 x 1.5
	NBTA-20S	20	36	27	48	44.5	26.5	M 30 x 2
	NBTA-25S	25	46	36	54	50	30	M 36 x 2
	NBTA-30S	30	50	41	62	55	35.5	M 42 x 2
PN 315	NBTA-38S	38	60	50	72	63	41	M 52 x 2

All dimensions given approx. figure with tighten nut. All dimensions are in millimeters.
Tube stud have to swage for nut and cutting ring. Please see final assembly on page 10. Nut and cutting ring are not supplied.

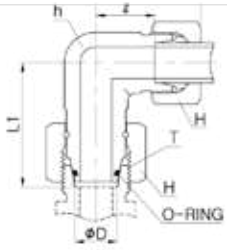
Adjustable Run Tee with Standpipe
NRTA



Series	Part No.	Tube O.D D	h	H	L	L1	ℓ	ℓ1	T
L light PN 315	NRTA-06L	6	12	14	27	53	12	26	M 12 x 1.5
	NRTA-08L	8	12	17	29	56	14	27.5	M 14 x 1.5
	NRTA-10L	10	14	19	30	59	15	29	M 16 x 1.5
	NRTA-12L	12	17	22	32	62	17	29.5	M 18 x 1.5
	NRTA-15L	15	19	27	36	69	21	32.5	M 22 x 1.5
	NRTA-18L	18	24	32	40	75	23.5	35.5	M 26 x 1.5
PN 160	NRTA-22L	22	27	36	44	83	27.5	38.5	M 30 x 2
	NRTA-28L	28	36	41	47	91	30.5	41.5	M 36 x 2
	NRTA-35L	35	41	50	56	111	34.5	51	M 45 x 2
	NRTA-42L	42	50	60	63	123	40	56	M 52 x 2
S heavy PN 630	NRTA-06S	6	12	17	31	58	16	27	M 14 x 1.5
	NRTA-08S	8	14	19	32	61	17	27.5	M 16 x 1.5
	NRTA-10S	10	17	22	34	66	17.5	30	M 18 x 1.5
	NRTA-12S	12	17	24	38	71	21.5	31	M 20 x 1.5
	NRTA-14S	14	19	27	40	75	22	35	M 22 x 1.5
PN 400	NRTA-16S	16	24	30	43	79	24.5	36.5	M 24 x 1.5
	NRTA-20S	20	27	36	48	93	26.5	44.5	M 30 x 2
	NRTA-25S	25	36	46	54	105	30	50	M 36 x 2
	NRTA-30S	30	41	50	62	119	35.5	55	M 42 x 2
PN 315	NRTA-38S	38	50	60	72	138	41	63	M 52 x 2

All dimensions given approx. figure with tighten nut. All dimensions are in millimeters.
Tube stud have to swage for nut and cutting ring. Please see final assembly on page 10. Nut and cutting ring are not supplied.

Swivel Adjustable Elbow with Cone
NEW



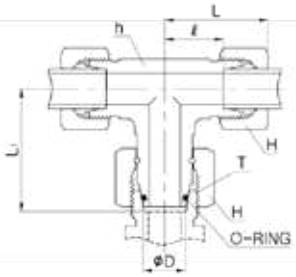
* O-ring of NBR standard, of FPM on request

Series	Part No.	Tube O.D D	H	h	L	ℓ	L1	T
L light PN 315	NEW-06L	6	14	12	27	12	26	M 12 x 1.5
	NEW-08L	8	17	12	29	14	27.5	M 14 x 1.5
	NEW-10L	10	19	14	30	15	29	M 16 x 1.5
	NEW-12L	12	22	17	32	17	29.5	M 18 x 1.5
	NEW-15L	15	27	19	36	21	32.5	M 22 x 1.5
	NEW-18L	18	32	24	40	23.5	35.5	M 26 x 1.5
PN 160	NEW-22L	22	36	27	44	27.5	38.5	M 30 x 2
	NEW-28L	28	41	36	47	30.5	41.5	M 36 x 2
	NEW-35L	35	50	41	56	34.5	51	M 45 x 2
	NEW-42L	42	60	50	63	40	56	M 52 x 2
S heavy PN 630	NEW-06S	6	17	12	31	16	27	M 14 x 1.5
	NEW-08S	8	19	14	32	17	27.5	M 16 x 1.5
	NEW-10S	10	22	17	34	17.5	30	M 18 x 1.5
	NEW-12S	12	24	17	38	21.5	31	M 20 x 1.5
	NEW-14S	14	27	19	40	22	35	M 22 x 1.5
PN 400	NEW-16S	16	30	24	43	24.5	36.5	M 24 x 1.5
	NEW-20S	20	36	27	48	26.5	44.5	M 30 x 2
	NEW-25S	25	36	36	54	30	50	M 36 x 2
	NEW-30S	30	50	41	62	35.5	55	M 42 x 2
PN 315	NEW-38S	38	60	50	72	41	63	M 52 x 2

All dimensions given approx. figure with tighten nut. All dimensions are in millimeters.
Please see final assembly on page 10.

Swivel Adjustable Branch Tee with Cone

NET



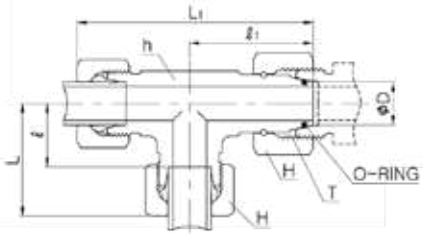
* O-ring of NBR standard, of FPM on request

Series	Part No.	Tube O.D D	H	h	L	L1	ℓ	T
L light PN 315	NET-06L	6	14	12	27	26	12	M 12 x 1.5
	NET-08L	8	17	12	29	27.5	14	M 14 x 1.5
	NET-10L	10	19	14	30	29	15	M 16 x 1.5
	NET-12L	12	22	17	32	29.5	17	M 18 x 1.5
	NET-15L	15	27	19	36	32.5	21	M 22 x 1.5
	NET-18L	18	32	24	40	35.5	23.5	M 26 x 1.5
PN 160	NET-22L	22	36	27	44	38.5	27.5	M 30 x 2
	NET-28L	28	41	36	47	41.5	30.5	M 36 x 2
	NET-35L	35	50	41	56	51	34.5	M 45 x 2
	NET-42L	42	60	50	63	56	40	M 52 x 2
S heavy PN 630	NET-06S	6	17	12	31	27	16	M 14 x 1.5
	NET-08S	8	19	14	32	27.5	17	M 16 x 1.5
	NET-10S	10	22	17	34	30	17.5	M 18 x 1.5
	NET-12S	12	24	17	38	31	21.5	M 20 x 1.5
	NET-14S	14	27	19	40	35	22	M 22 x 1.5
PN 400	NET-16S	16	30	24	43	36.5	24.5	M 24 x 1.5
	NET-20S	20	36	27	48	44.5	26.5	M 30 x 2
	NET-25S	25	46	36	54	50	30	M 36 x 2
	NET-30S	30	50	41	62	55	35.5	M 42 x 2
PN 315	NET-38S	38	60	50	72	63	41	M 52 x 2

All dimensions given approx. figure with tighten nut. All dimensions are in millimeters.
Please see final assembly on page 10.

Swivel Adjustable Run Tee with Cone

NEL



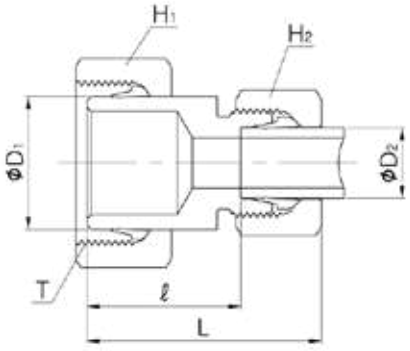
* O-ring of NBR standard, of FPM on request

Series	Part No.	Tube O.D D	H	h	L	L1	ℓ	ℓ1	T
L light PN 315	NEL-06L	6	14	12	27	53	12	26	M 12 x 1.5
	NEL-08L	8	17	12	29	56	14	27.5	M 14 x 1.5
	NEL-10L	10	19	14	30	59	15	29	M 16 x 1.5
	NEL-12L	12	22	17	32	61	17	29.5	M 18 x 1.5
	NEL-15L	15	27	19	36	69	21	32.5	M 22 x 1.5
	NEL-18L	18	32	24	40	75	23.5	35.5	M 26 x 1.5
PN 160	NEL-22L	22	36	27	44	82	27.5	38.5	M 30 x 2
	NEL-28L	28	41	36	47	89	30.5	41.5	M 36 x 2
	NEL-35L	35	50	41	56	107	34.5	51	M 45 x 2
	NEL-42L	42	60	50	63	119	40	56	M 52 x 2
S heavy PN 630	NEL-06S	6	17	12	31	58	16	27	M 14 x 1.5
	NEL-08S	8	19	14	32	59	17	27.5	M 16 x 1.5
	NEL-10S	10	22	17	34	64	17.5	30	M 18 x 1.5
	NEL-12S	12	24	17	38	69	21.5	31	M 20 x 1.5
	NEL-14S	14	27	19	40	75	22	35	M 22 x 1.5
PN 400	NEL-16S	16	30	24	43	79	24.5	36.5	M 24 x 1.5
	NEL-20S	20	36	27	48	93	26.5	44.5	M 30 x 2
	NEL-25S	25	46	36	54	104	30	50	M 36 x 2
	NEL-30S	30	50	41	62	117	35.5	55	M 42 x 2
PN 315	NEL-38S	38	60	50	72	135	41	63	M 52 x 2

All dimensions given approx. figure with tighten nut. All dimensions are in millimeters.
Please see final assembly on page 10.

Standpipe Reducer

NKOR



Series L

Series	Part No.	Tube O.D		H1	H2	L	ℓ	T
		D1	D2					
PN 315	NKOR 08L-06L	8	6	17	14	38	23.5	M 14 x 1.5
PN 315	NKOR 10L-06L	10	6	19	14	38	23.5	M 16 x 1.5
	NKOR 10L-08L	10	8	19	17	38	23.5	M 16 x 1.5
PN 315	NKOR 12L-06L	12	6	22	14	38	23.5	M 18 x 1.5
	NKOR 12L-08L	12	8	22	17	38	23.5	M 18 x 1.5
	NKOR 12L-10L	12	10	22	19	39	24.5	M 18 x 1.5
PN 315	NKOR 15L-06L	15	6	27	14	38	23.5	M 22 x 1.5
	NKOR 15L-08L	15	8	27	17	38	23.5	M 22 x 1.5
	NKOR 15L-10L	15	10	27	19	39	24.5	M 22 x 1.5
	NKOR 15L-12L	15	12	27	22	39	24.5	M 22 x 1.5
PN 315	NKOR 18L-06L	18	6	32	14	39	24.5	M 26 x 1.5
	NKOR 18L-08L	18	8	32	17	39	24.5	M 26 x 1.5
	NKOR 18L-10L	18	10	32	19	40	25.5	M 26 x 1.5
	NKOR 18L-12L	18	12	32	22	40	25.5	M 26 x 1.5
	NKOR 18L-15L	18	15	32	27	42	26.5	M 26 x 1.5
PN 160	NKOR 22L-06L	22	6	36	14	40	25.5	M 30 x 2
	NKOR 22L-08L	22	8	36	17	40	25.5	M 30 x 2
	NKOR 22L-10L	22	10	36	19	41	26.5	M 30 x 2
	NKOR 22L-12L	22	12	36	22	41	26.5	M 30 x 2
	NKOR 22L-15L	22	15	36	27	43	27.5	M 30 x 2
	NKOR 22L-18L	22	18	36	32	43	27	M 30 x 2
PN 160	NKOR 28L-06L	28	6	41	14	41	26.5	M 36 x 2
	NKOR 28L-08L	28	8	41	17	41	26.5	M 36 x 2
	NKOR 28L-10L	28	10	41	19	42	27.5	M 36 x 2
	NKOR 28L-12L	28	12	41	22	42	27.5	M 36 x 2
	NKOR 28L-15L	28	15	41	27	44	28.5	M 36 x 2
	NKOR 28L-18L	28	18	41	32	44	28	M 36 x 2
	NKOR 28L-22L	28	22	41	36	46	30	M 36 x 2
PN 160	NKOR 35L-06L	35	6	50	14	46	31.5	M 45 x 2
	NKOR 35L-08L	35	8	50	17	46	31.5	M 45 x 2
	NKOR 35L-10L	35	10	50	19	47	32.5	M 45 x 2
	NKOR 35L-12L	35	12	50	22	47	32.5	M 45 x 2
	NKOR 35L-15L	35	15	50	27	49	33.5	M 45 x 2
	NKOR 35L-18L	35	18	50	32	49	33	M 45 x 2
	NKOR 35L-22L	35	22	50	36	51	35	M 45 x 2
	NKOR 35L-28L	35	28	50	41	52	35	M 45 x 2
PN 160	NKOR 42L-10L	42	10	60	19	48	33.5	M 52 x 2
	NKOR 42L-12L	42	12	60	22	48	33.5	M 52 x 2
	NKOR 42L-15L	42	15	60	27	50	34.5	M 52 x 2
	NKOR 42L-18L	42	18	60	32	50	34	M 52 x 2
	NKOR 42L-22L	42	22	60	36	52	36	M 52 x 2
	NKOR 42L-28L	42	28	60	41	53	36	M 52 x 2
	NKOR 42L-35L	42	35	60	50	57	35	M 52 x 2

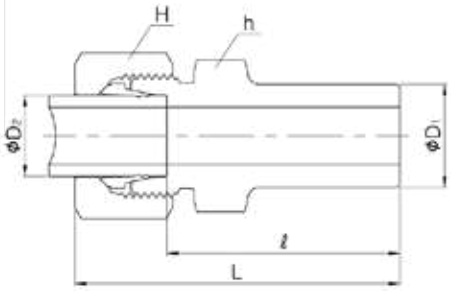
Series S

Series	Part No.	Tube O.D		H1	H2	L	ℓ	T
		D1	D2					
PN 630	NKOR 08S-06S	8	6	19	17	40	25	M 16 x 1.5
PN 630	NKOR 10S-06S	10	6	22	17	41	26	M 18 x 1.5
	NKOR 10S-08S	10	8	22	19	41	26	M 18 x 1.5
PN 630	NKOR 12S-06S	12	6	24	17	42	27	M 20 x 1.5
	NKOR 12S-08S	12	8	24	19	42	27	M 20 x 1.5
	NKOR 12S-10S	12	10	24	22	43	26.5	M 20 x 1.5
PN 630	NKOR 14S-06S	14	6	27	17	44	29	M 22 x 1.5
	NKOR 14S-08S	14	8	27	19	44	29	M 22 x 1.5
	NKOR 14S-10S	14	10	27	22	45	28.5	M 22 x 1.5
	NKOR 14S-12S	14	12	27	24	45	28.5	M 22 x 1.5
PN 400	NKOR 16S-06S	16	6	30	17	44	29	M 24 x 1.5
	NKOR 16S-08S	16	8	30	19	44	29	M 24 x 1.5
	NKOR 16S-10S	16	10	30	22	45	28.5	M 24 x 1.5
	NKOR 16S-12S	16	12	30	24	45	28.5	M 24 x 1.5
	NKOR 16S-14S	16	14	30	27	48	30	M 24 x 1.5
PN 400	NKOR 20S-06S	20	6	36	17	49	34	M 30 x 2
	NKOR 20S-08S	20	8	36	19	49	34	M 30 x 2
	NKOR 20S-10S	20	10	36	22	50	33.5	M 30 x 2
	NKOR 20S-12S	20	12	36	24	50	33.5	M 30 x 2
	NKOR 20S-14S	20	14	36	27	53	35	M 30 x 2
	NKOR 20S-16S	20	16	36	30	53	34.5	M 30 x 2
PN 400	NKOR 25S-06S	25	6	46	17	52	37	M 36 x 2
	NKOR 25S-08S	25	8	46	19	52	37	M 36 x 2
	NKOR 25S-10S	25	10	46	22	53	36.5	M 36 x 2
	NKOR 25S-12S	25	12	46	24	53	36.5	M 36 x 2
	NKOR 25S-14S	25	14	46	27	55	37	M 36 x 2
	NKOR 25S-16S	25	16	46	30	55	36.5	M 36 x 2
	NKOR 25S-20S	25	20	46	36	59	37.5	M 36 x 2
PN 400	NKOR 30S-06S	30	6	50	17	54	39	M 42 x 2
	NKOR 30S-08S	30	8	50	19	54	39	M 42 x 2
	NKOR 30S-10S	30	10	50	22	55	38.5	M 42 x 2
	NKOR 30S-12S	30	12	50	24	55	38.5	M 42 x 2
	NKOR 30S-14S	30	14	50	27	58	40	M 42 x 2
	NKOR 30S-16S	30	16	50	30	58	39.5	M 42 x 2
	NKOR 30S-20S	30	20	50	36	61	39.5	M 42 x 2
	NKOR 30S-25S	30	25	50	46	64	40	M 42 x 2
PN 315	NKOR 38S-06S	38	6	60	17	58	43	M 52 x 2
	NKOR 38S-08S	38	8	60	19	58	43	M 52 x 2
	NKOR 38S-10S	38	10	60	22	59	42.5	M 52 x 2
	NKOR 38S-12S	38	12	60	24	59	42.5	M 52 x 2
	NKOR 38S-14S	38	14	60	27	62	44	M 52 x 2
	NKOR 38S-16S	38	16	60	30	62	43.5	M 52 x 2
	NKOR 38S-20S	38	20	60	36	65	43.5	M 52 x 2
	NKOR 38S-25S	38	25	60	46	68	44	M 52 x 2
	NKOR 38S-30S	38	30	60	50	71	44.5	M 52 x 2

All dimensions given approx. figure with tighten nut. All dimensions are in millimeters.
Tube stud have to swage for nut and cutting ring. Please see final assembly on page 10.
Nut and cutting ring are not supplied.

Reducer

NR



Series L

Series	Part No.	Tube O.D		H	h	L	ℓ
		D1	D2				
L	NR 08L-06L	8	6	14	12	40	25.5
	NR 10L-06L	10	6	14	12	42	27.5
	NR 10L-08L	10	8	17	14	43	27.5
	NR 12L-06L	12	6	14	14	42	27.5
	NR 12L-08L	12	8	17	14	43	27.5
	NR 12L-10L	12	10	19	17	44	28.5
	NR 15L-06L	15	6	14	19	44	29
	NR 15L-08L	15	8	17	19	44	29
	NR 15L-10L	15	10	19	19	45	30
	NR 15L-12L	15	12	22	19	45	30
	NR 18L-06L	18	6	14	19	46	31
	NR 18L-08L	18	8	17	19	46	31
	NR 18L-10L	18	10	19	19	47	32
	NR 18L-12L	18	12	22	19	47	32
	NR 18L-15L	18	15	27	22	49	33
PN160	NR 22L-06L	22	6	14	24	48	33
	NR 22L-08L	22	8	17	24	48	33
	NR 22L-10L	22	10	19	24	49	34
	NR 22L-12L	22	12	22	24	49	34
	NR 22L-15L	22	15	27	24	50	35
	NR 22L-18L	22	18	32	27	51	34.5
	NR 28L-06L	28	6	14	30	48	33
	NR 28L-08L	28	8	17	30	48	33
	NR 28L-10L	28	10	19	30	49	34
	NR 28L-12L	28	12	22	30	49	34
	NR 28L-15L	28	15	27	30	50	35
	NR 28L-18L	28	18	32	30	51	36
	NR 28L-22L	28	22	36	32	53	36.5
	NR 35L-06L	35	6	14	36	53	38.5
	NR 35L-08L	35	8	17	36	53	38.5
	NR 35L-10L	35	10	19	36	55	39.5
	NR 35L-12L	35	12	22	36	55	39.5
	NR 35L-15L	35	15	27	36	56	40.5
	NR 35L-18L	35	18	32	36	56	40
	NR 35L-22L	35	22	36	36	58	42
	NR 35L-28L	35	28	41	36	59	42
	NR 42L-06L	42	6	14	46	56	41
	NR 42L-08L	42	8	17	46	56	41
	NR 42L-10L	42	10	19	46	58	42
	NR 42L-12L	42	12	22	46	58	42
	NR 42L-15L	42	15	27	46	60	43
	NR 42L-18L	42	18	32	46	60	42.5
	NR 42L-22L	42	22	36	46	62	44.5
	NR 42L-28L	42	28	41	46	64	44.5
	NR 42L-35L	42	35	50	46	67	43.5

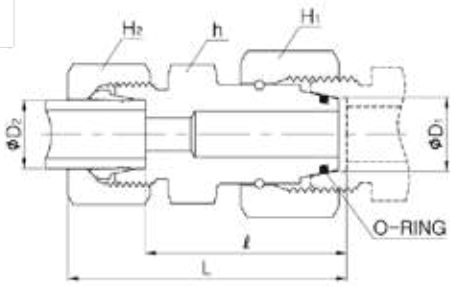
Series S

Series	Part No.	Tube O.D		H	h	L	ℓ
		D1	D2				
PN 630	NR 08S-06S	8	6	17	14	43	28
	NR 10S-06S	10	6	17	14	45	30.5
	NR 10S-08S	10	8	19	17	45	30.5
	NR 12S-06S	12	6	17	14	47	32.5
	NR 12S-08S	12	8	19	17	47	32.5
	NR 12S-10S	12	10	22	19	48	32
	NR 14S-06S	14	6	17	17	51	36.5
	NR 14S-08S	14	8	19	17	51	36.5
	NR 14S-10S	14	10	22	19	52	36
	NR 14S-12S	14	12	24	22	52	36
	NR 16S-06S	16	6	17	17	53	38.5
	NR 16S-08S	16	8	19	17	53	38.5
	NR 16S-10S	16	10	22	19	54	38
	NR 16S-12S	16	12	24	22	55	38.5
	NR 16S-14S	16	14	27	22	57	39.5
PN 400	NR 20S-06S	20	6	17	22	58	43
	NR 20S-08S	20	8	19	22	58	43
	NR 20S-10S	20	10	22	22	59	42.5
	NR 20S-12S	20	12	24	22	59	42.5
	NR 20S-14S	20	14	27	22	62	44
	NR 20S-16S	20	16	30	24	62	43.5
	NR 25S-06S	25	6	17	27	62	47.5
	NR 25S-08S	25	8	19	27	62	47.5
	NR 25S-10S	25	10	22	27	63	47
	NR 25S-12S	25	12	24	27	63	47
	NR 25S-14S	25	14	27	27	66	48.5
	NR 25S-16S	25	16	30	27	66	48
	NR 25S-20S	25	20	36	30	70	48
	NR 30S-06S	30	6	17	32	67	52
	NR 30S-08S	30	8	19	32	67	52
	NR 30S-10S	30	10	22	32	68	51.5
	NR 30S-12S	30	12	24	32	68	51.5
	NR 30S-14S	30	14	27	32	71	53
	NR 30S-16S	30	16	30	32	71	52.5
	NR 30S-20S	30	20	36	32	74	52.5
	NR 30S-25S	30	25	46	36	77	53
PN 315	NR 38S-06S	38	6	17	41	72	57
	NR 38S-08S	38	8	19	41	72	57
	NR 38S-10S	38	10	22	41	73	56.5
	NR 38S-12S	38	12	24	41	73	56.5
	NR 38S-14S	38	14	27	41	76	58
	NR 38S-16S	38	16	30	41	76	57.5
	NR 38S-20S	38	20	36	41	79	57.5
	NR 38S-25S	38	25	46	41	82	58
	NR 38S-30S	38	30	50	46	89	58.5

All dimensions given approx. figure with tighten nut. All dimensions are in millimeters.

Swivel Reducing Adapter with Cone

NRED



* O-ring of NBR standard, of FPM on request

Series L

Series	Part No.	Tube O.D		H1	H2	h	L	ℓ
		D1	D2					
PN 315	NRED 08L-06L	8	6	17	14	14	39	24.5
PN 315	NRED 10L-06L	10	6	19	14	17	39.5	24.5
	NRED 10L-08L	10	8	19	17	17	39.5	24.5
PN 315	NRED 12L-06L	12	6	22	14	17	40	25
	NRED 12L-08L	12	8	22	17	17	40	25
	NRED 12L-10L	12	10	22	19	17	41	26
PN 315	NRED 15L-06L	15	6	27	14	22	42	27.5
	NRED 15L-08L	15	8	27	17	22	42	27.5
	NRED 15L-10L	15	10	27	19	22	43	28.5
	NRED 15L-12L	15	12	27	22	22	43	28.5
PN 315	NRED 18L-06L	18	6	32	14	25	43	28
	NRED 18L-08L	18	8	32	17	25	43	28
	NRED 18L-10L	18	10	32	19	25	44.5	29.5
	NRED 18L-12L	18	12	32	22	25	44.5	29.5
	NRED 18L-15L	18	15	32	27	25	45.5	30.5
PN 160	NRED 22L-06L	22	6	36	14	28.5	47	32
	NRED 22L-08L	22	5	36	17	28.5	47	32
	NRED 22L-10L	22	10	36	19	28.5	48	33
	NRED 22L-12L	22	12	36	22	28.5	48	33
	NRED 22L-15L	22	15	36	27	28.5	49	34
	NRED 22L-18L	22	18	36	32	28.5	50	33.5
PN 160	NRED 28L-06L	28	6	41	14	36	49	34
	NRED 28L-08L	28	8	41	17	36	49	34
	NRED 28L-10L	28	10	41	19	36	50	35
	NRED 28L-12L	28	12	41	22	36	50	35
	NRED 28L-15L	28	15	41	27	36	51	36
	NRED 28L-18L	28	18	41	32	36	52	35.5
	NRED 28L-22L	28	22	41	36	36	54	37.5
PN 160	NRED 35L-06L	35	6	50	14	46	55	40
	NRED 35L-08L	35	8	50	17	46	55	40
	NRED 35L-10L	35	10	50	19	46	56	41
	NRED 35L-12L	35	12	50	22	46	56	41
	NRED 35L-15L	35	15	50	27	46	57	42
	NRED 35L-18L	35	18	50	32	46	58	41.5
	NRED 35L-22L	35	22	50	36	46	60	43.5
	NRED 35L-28L	35	28	50	41	46	60	43.5
PN 160	NRED 42L-06L	42	6	60	14	50	55	40.5
	NRED 42L-08L	42	8	60	17	50	55	40.5
	NRED 42L-10L	42	10	60	19	50	56	41.5
	NRED 42L-12L	42	12	60	22	50	56	41.5
	NRED 42L-15L	42	15	60	27	50	58	42.5
	NRED 42L-18L	42	18	60	32	50	58	42
	NRED 42L-22L	42	22	60	36	50	60	44
	NRED 42L-28L	42	28	60	41	50	61	44
	NRED 42L-35L	42	35	60	50	50	65	43

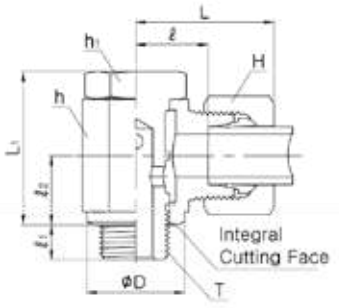
Series S

Series	Part No.	Tube O.D		H1	H2	h	L	ℓ
		D1	D2					
PN 630	NRED 08S-06S	8	6	19	17	17	44	28
PN 630	NRED 10S-06S	10	6	22	17	17	44	29.5
	NRED 10S-08S	10	8	22	19	17	44	29.5
PN 630	NRED 12S-06S	12	6	24	17	19	45	30
	NRED 12S-08S	12	8	24	19	19	45	30
	NRED 12S-10S	12	10	24	22	19	46	29.5
PN 630	NRED 14S-06S	14	6	27	17	22	47.5	33
	NRED 14S-08S	14	8	27	19	22	47.5	33
	NRED 14S-10S	14	10	27	22	22	48.5	32.5
	NRED 14S-12S	14	12	27	24	22	48.5	32.5
PN 630	NRED 16S-06S	16	6	30	17	24	50	35
	NRED 16S-08S	16	8	30	19	24	50	35
	NRED 16S-10S	16	10	30	22	24	51	34.5
	NRED 16S-12S	16	12	30	24	24	51	34.5
	NRED 16S-14S	16	14	30	27	24	54	36
PN 400	NRED 20S-06S	20	6	36	17	28.5	54	39
	NRED 20S-08S	20	8	36	19	28.5	54	39
	NRED 20S-10S	20	10	36	22	28.5	55	38.5
	NRED 20S-12S	20	12	36	24	28.5	55	38.5
	NRED 20S-14S	20	14	36	27	28.5	58	40
	NRED 20S-16S	20	16	36	30	28.5	58	39.5
PN 400	NRED 25S-06S	25	6	46	17	36	58	43.5
	NRED 25S-08S	25	8	46	19	36	58	43.5
	NRED 25S-10S	25	10	46	22	36	59	43
	NRED 25S-12S	25	12	46	24	36	59	43
	NRED 25S-14S	25	14	46	27	36	62	44.5
	NRED 25S-16S	25	16	46	30	36	62	44
	NRED 25S-20S	25	20	46	36	36	66	44
PN 400	NRED 30S-06S	30	6	50	17	41	66	51
	NRED 30S-08S	30	8	50	19	41	66	51
	NRED 30S-10S	30	10	50	22	41	67	50.5
	NRED 30S-12S	30	12	50	24	41	67	50.5
	NRED 30S-14S	30	14	50	27	41	70	52
	NRED 30S-16S	30	16	50	30	41	70	51.5
	NRED 30S-20S	30	20	50	36	41	73	51.5
	NRED 30S-25S	30	25	50	46	41	76	52
PN 400	NRED 38S-06S	38	6	60	17	50	70.5	56
	NRED 38S-08S	38	8	60	19	50	70.5	56
	NRED 38S-10S	38	10	60	22	50	71.5	55.5
	NRED 38S-12S	38	12	60	24	50	71.5	55.5
	NRED 38S-14S	38	14	60	27	50	74.5	57
	NRED 38S-16S	38	16	60	30	50	74.5	56.5
	NRED 38S-20S	38	20	60	36	50	78.5	56.5
	NRED 38S-25S	38	25	60	46	50	81.5	57
	NRED 38S-30S	38	30	60	50	50	85.5	58.5

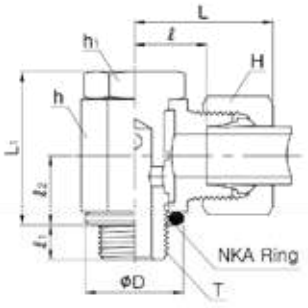
All dimensions given approx. figure with tighten nut. All dimensions are in millimeters.
Please see final assembly on page 10.

Banjo Fittings (BSP Parallel / Metric Parallel)

NSLM-G/M



For tube O.D up to 15mm



For tube O.D 16mm and larger

for BSP Parallel

Series	Part No.	Tube O.D	D	H	h	h1	L	L1	ℓ	ℓ1	ℓ2	T G(PF)	*MA
L light PN 315	NSLM 06L-01G	6	14.5	14	14	14	25	21	10.5	6	10	1/8	20
	NSLM 08L-02G	8	18.5	17	19	19	28	27	13	9	13	1/4	45
	NSLM 10L-02G	10	18.5	19	19	19	29	27	14	9	13	1/4	45
	NSLM 12L-03G	12	22.5	22	22	22	30	32	15.5	9	15	3/8	70
	NSLM 15L-04G	15	26.5	27	27	27	34	37.5	19	11	18	1/2	100
PB 160	NSLM 18L-04G	18	26	32	30	27	37	44	20.5	11	21.5	1/2	100
	NSLM 22L-06G	22	32	36	36	32	42	49	25.5	13	24	3/4	140
S heavy PB 250	NSLM 06S-02G	6	18.5	17	19	19	30	27	15	9	13	1/4	45
	NSLM 08S-02G	8	18.5	19	19	19	30	27	15	9	13	1/4	45
	NSLM 10S-03G	10	22.5	22	22	22	32	32	16	9	15	3/8	70
	NSLM 12S-03G	12	22.5	24	24	24	33	37	17	9	18	3/8	70
	NSLM 14S-04G	14	26.5	27	27	27	38	37	20	11	18	1/4	100
PN 400	NSLM 16S-04G	16	26	30	30	27	40	44	21.5	11	21.5	1/2	100
	NSLM 20S-06G	20	32	36	36	32	46	49	24.5	13	24	3/4	140

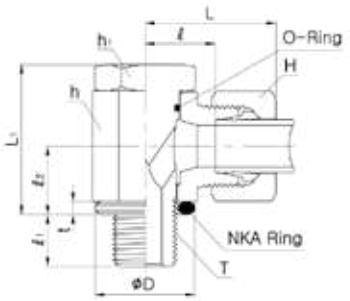
for Metric Parallel

Series	Part No.	Tube O.D	D	H	h	h1	L	L1	ℓ	ℓ1	ℓ2	T M(Metric)	*MA
L light PB 250	NSLM 06L-10M10	6	14.5	14	14	14	25	21.5	10.5	6	10	M 10 x 1	25
	NSLM 08L-12M15	8	17.5	17	17	17	27	25	12	9	12	M 12 x 1.5	40
	NSLM 10L-14M15	10	19.5	19	19	19	29	27	14	9	13	M 14 x 1.5	55
	NSLM 12L-16M15	12	21.5	22	22	22	30	32	15.5	9	15	M 16 x 1.5	65
	NSLM 15L-18M15	15	23.5	27	24	24	33	37.5	17.5	9	18	M 18 x 1.5	90
PB 160	NSLM 18L-22M15	18	27	32	30	27	37	44	20.5	11	21.5	M 22 x 1.5	130
	NSLM 22L-26M15	22	31	36	36	32	42	49	25.5	13	24	M 26 x 1.5	140
S heavy PB 250	NSLM 06S-12M15	6	17.5	17	17	17	29	25	14	9	12	M 12 x 1.5	40
	NSLM 08S-14M15	8	19.5	19	19	19	30	27	15	9	13	M 14 x 1.5	55
	NSLM 10S-16M15	10	21.5	22	22	22	32	32	16	9	15	M 16 x 1.5	65
	NSLM 12S-18M15	12	23.5	24	24	24	33	37	17	9	18	M 18 x 1.5	90
	NSLM 14S-20M15	14	25.5	27	27	27	38	37	20	11	18	M 20 x 1.5	120
PB 160ar	NSLM 16S-22M15	16	27	30	30	27	40	44	21.5	11	21.5	M 22 x 1.5	130
	NSLM 20S-27M20	20	32	36	36	32	46	49	24.5	13	24	M 27 x 2	150

All dimensions given approx. figure with tighten nut. All dimensions are in millimeters.
*MA is recommended tightening torque(Nm) for male G and M

High Pressure Banjo Fittings (BSP Parallel / Metric Parallel)

NWH-G/M



* O-ring of NBR standard, of FPM on request

for BSP Parallel

Series	Part No.	Tube O.D	D	H	h	h1	L	L1	ℓ	ℓ1	ℓ2	t	T G(PF)	*MA
L light PB 315	NWH 06L-01G	6	14	14	17	17	27	24	12	8	10.5	2.5	1/8	20
	NWH 08L-02G	8	18	17	22	19	29	30	14.5	12	14	3	1/4	50
	NWH 10L-02G	10	18	19	22	19	30	30	15.5	12	14	3	1/4	50
	NWH 12L-03G	12	22	22	27	24	33	36	18	12	16.5	3	3/8	75
	NWH 15L-04G	15	26	27	32	30	37	45	21.5	14	21.5	4.5	1/2	130
	NWH 18L-04G	18	26	32	32	30	37	45	21	14	21.5	4.5	1/2	130
PB 160	NWH 22L-06G	22	32	36	41	36	44	53	27.5	16	24	3.5	3/4	250
	NWH 28L-08G	28	39	41	50	46	49	66	32	18	30.5	3.5	1	350
	NWH 35L-10G	35	49	50	60	55	58	76	36	20	35.5	3.5	1-1/4	600
	NWH 42L-12G	42	55	60	70	60	63	87	40.5	22	40.5	3.5	1-1/2	800
S heavy PB 400	NWH 06S-02G	6	18	17	22	19	31	30	16.5	12	14	3	1/4	50
	NWH 08S-02G	8	18	19	22	19	31	30	16.5	12	14	3	1/4	50
	NWH 10S-03G	10	22	22	27	24	35	36	18.5	12	16.5	3	3/8	75
	NWH 12S-03G	12	22	24	27	24	35	36	18.5	12	16.5	3	3/8	75
	NWH 16S-04G	16	26	30	32	30	40	45	22	14	21.5	4.5	1/2	130
	NWH 20S-06G	20	32	36	41	36	48	53	26.5	16	24	3.5	3/4	250
PB 250	NWH 25S-08G	25	39	46	50	46	56	66	31.5	18	30.5	3.5	1	350
	NWH 30S-10G	30	49	50	60	55	64	76	37	20	34.5	3.5	1-1/4	600
	NWH 38S-12G	38	55	60	70	60	72	87	41.5	22	40.5	3.5	1-1/2	800

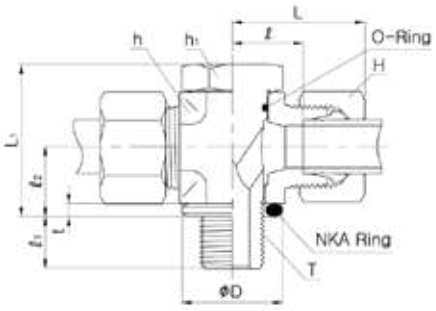
for Metric Parallel

Series	Part No.	Tube O.D	D	H	h	h1	L	L1	ℓ	ℓ1	ℓ2	t	T M(Metric)	*MA
L light PB 315	NWH 06L-10M10	6	14	14	17	17	27	24	12	8	10.5	2.5	M 10 x 1	25
	NWH 08L-12M15	8	17	17	22	19	29	30	14.5	12	14	3	M 12 x 1.5	50
	NWH 10L-14M15	10	19	19	22	19	30	30	15.5	12	14	3	M 14 x 1.5	60
	NWH 12L-16M15	12	21	22	27	24	33	36	18	12	16.5	3	M 16 x 1.5	90
	NWH 15L-18M15	15	23	27	30	27	36	39.5	20.5	12	18.5	3	M 18 x 1.5	110
	NWH 18L-22M15	18	27	32	32	30	37	45	21	14	21.5	4.5	M 22 x 1.5	150
PB 160	NWH 22L-26M15	22	31	36	41	36	44	53	27.5	16	24	3.5	M 26 x 1.5	350
	NWH 28L-33M20	28	39	41	50	46	49	66	32	18	30.5	3.5	M 33 x 2	400
	NWH 35L-42M20	35	49	50	60	55	58	76	36	20	35.5	3.5	M 42 x 2	600
	NWH 42L-48M20	42	55	60	70	60	63	87	40.5	22	40.5	3.5	M 48 x 2	800
L heavy PB 400	NWH 06S-12M15	6	17	17	22	19	31	30	16.5	12	14	3	M 12 x 1.5	50
	NWH 08S-14M15	8	19	19	22	19	31	30	16.5	12	14	3	M 14 x 1.5	60
	NWH 10S-16M15	10	21	22	27	24	35	36	18.5	12	16.5	3	M 16 x 1.5	90
	NWH 12S-18M16	12	23	24	30	27	36	39.5	20	12	18.5	3	M 18 x 1.5	110
	NWH 16S-22M15	16	27	30	32	30	40	45	22	14	21.5	4.5	M 22 x 1.5	150
	NWH 20S-27M20	20	32	36	41	36	48	53	26.5	16	24	3.5	M 27 x 2	350
PB 250	NWH 25S-33M20	25	39	46	50	46	56	66	31.5	18	30.5	3.5	M 33 x 2	400
	NWH 30S-42M20	30	49	50	60	55	64	76	37	20	35.5	3.5	M 42 x 2	600
	NWH 38S-48M20	38	55	60	70	60	72	87	41.5	22	40.5	3.5	M 48 x 2	800

All dimensions given approx. figure with tighten nut. All dimensions are in millimeters.
*MA is recommended tightening torque(Nm) for male G and M

High Pressure Banjo Fittings (BSP Parallel / Metric Parallel)

NTH-G/M



* O-ring of NBR standard, of FPM on request

for BSP Parallel

Series	Part No.	Tube O.D	D	H	h	h1	L	L1	ℓ	ℓ1	ℓ2	t	T G(PF)	*MA
L light PB 315	NTH 06L-01G	6	14	14	17	17	27	24	12	8	10.5	2.5	1/8	20
	NTH 08L-02G	8	18	17	22	19	29	30	14.5	12	14	3	1/4	50
	NTH 10L-02G	10	18	19	22	19	30	30	15.5	12	14	3	1/4	50
	NTH 12L-03G	12	22	22	27	24	33	36	18	12	16.5	3	3/8	75
	NTH 15L-04G	15	26	27	32	30	37	45	21.5	14	21.5	4.5	1/2	130
	NTH 18L-04G	18	26	32	32	30	37	45	21	14	21.5	4.5	1/2	130
PB 160	NTH 22L-06G	22	32	36	41	36	44	53	27.5	16	24	3.5	3/4	250
	NTH 28L-08G	28	39	41	50	46	49	66	32	18	30.5	3.5	1	350
	NTH 35L-10G	35	49	50	60	55	58	76	36	20	35.5	3.5	1-1/4	600
	NTH 42L-12G	42	55	60	70	60	63	87	40.5	22	40.5	3.5	1-1/2	800
S heavy PB 400	NTH 06S-02G	6	18	17	22	19	31	30	16.5	12	14	3	1/4	50
	NTH 08S-02G	8	18	19	22	19	31	30	16.5	12	14	3	1/4	50
	NTH 10S-03G	10	22	22	27	24	35	36	18.5	12	16.5	3	3/8	75
	NTH 12S-03G	12	22	24	27	24	35	36	18.5	12	16.5	3	3/8	75
	NTH 16S-04G	16	26	30	32	30	40	45	22	14	21.5	4.5	1/2	130
	NTH 20S-06G	20	32	36	41	36	48	53	26.5	16	24	3.5	3/4	250
PB 250	NTH 25S-08G	25	39	46	50	46	56	66	31.5	18	30.5	3.5	1	350
	NTH 30S-10G	30	49	50	60	55	64	76	37	20	35.5	3.5	1-1/4	600
	NTH 38S-12G	38	55	60	70	60	72	87	41.5	22	40.5	3.5	1-1/2	800

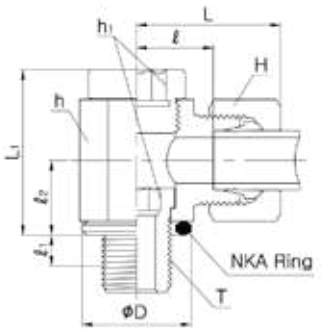
for Metric Parallel

Series	Part No.	Tube O.D	D	H	h	h1	L	L1	ℓ	ℓ1	ℓ2	t	T M(Metric)	*MA
L light PB 315	NTH 06L-10M10	6	14	14	17	17	27	24	12	8	10.5	2.5	M 10 x 1	25
	NTH 08L-12M15	8	17	17	22	19	29	30	14.5	12	14	3	M 12 x 1.5	50
	NTH 10L-14M15	10	19	19	22	19	30	30	15.5	12	14	3	M 14 x 1.5	60
	NTH 12L-16M15	12	21	22	27	24	33	36	18	12	16.5	3	M 16 x 1.5	90
	NTH 15L-18M15	15	23	27	30	27	36	39.5	20.5	12	18.5	3	M 18 x 1.5	110
	NTH 18L-22M15	18	27	32	32	30	37	45	21	14	21.5	4.5	M 22 x 1.5	150
PB 160	NTH 22L-26M15	22	31	36	41	36	44	53	27.5	16	24	3.5	M 26 x 1.5	350
	NTH 28L-33M20	28	39	41	50	46	49	66	32	18	30.5	3.5	M 33 x 2	400
	NTH 35L-42M20	35	49	50	60	55	58	76	36	20	35.5	3.5	M 42 x 2	600
	NTH 42L-48M20	42	55	60	70	60	63	87	40.5	22	40.5	3.5	M 48 x 2	800
L heavy PB 400	NTH 06S-12M15	6	17	17	22	19	31	30	16.5	12	14	3	M 12 x 1.5	50
	NTH 08S-14M15	8	19	19	22	19	31	30	16.5	12	14	3	M 14 x 1.5	60
	NTH 10S-16M15	10	21	22	27	24	35	36	18.5	12	16.5	3	M 16 x 1.5	90
	NTH 12S-18M15	12	23	24	30	27	36	39.5	20	12	18.5	3	M 18 x 1.5	110
	NTH 16S-22M15	16	27	30	32	30	40	45	22	14	21.5	4.5	M 22 x 1.5	150
	NTH 20S-27M20	20	32	36	41	36	48	53	26.5	16	24	3.5	M 27 x 2	350
PB 250	NTH 25S-33M20	25	39	46	50	46	56	66	31.5	18	30.5	3.5	M 33 x 2	400
	NTH 30S-42M20	30	49	50	60	55	64	76	37	20	35.5	3.5	M 42 x 2	600
	NTH 38S-48M20	38	55	60	70	60	72	87	41.5	22	40.5	3.5	M 48 x 2	800

All dimensions given approx. figure with tighten nut. All dimensions are in millimeters.
*MA is recommended tightening torque(Nm) for male G and M

Throttle-Free Banjo Fittings(BSP Paralle / Metric Parallel)

NSVW-G/M



for BSP Parallel

Series	Part No.	Tube O.D	D	H	h	h1	L	L1	ℓ	ℓ1	ℓ2	T G(PF)
L light PB 250	NSVW 06L-01G	6	14	14	19	6	27	24	12.5	8	12	1/8
	NSVW 08L-02G	8	18	17	22	8	29	30	14.5	12	16	1/4
	NSVW 10L-02G	10	18	19	22	8	30	30	15.5	12	16	1/4
	NSVW 12L-03G	12	22	22	27	10	33	37	18	12	18	3/8
	NSVW 15L-04G	15	26	27	32	12	37	42	22	14	21	1/2
PB 100	NSVW 18L-04G	18	26	32	36	12	38	46	21.5	14	23	1/2
	NSVW 22L-06G	22	32	36	46	17	45	58	28.5	16	28	3/4
	NSVW 28L-08G	28	39	41	50	22	48	64	31.5	18	32	1
	NSVW 35L-10G	35	49	50	60	27	57	76	35.5	20	37	1-1/4
	NSVW 42L-12G	42	55	60	65	32	63	85	40	22	42	1-1/2
S light PB 400	NSVW 06S-02G	6	18	17	22	8	31	30	16.5	12	16	1/4
	NSVW 08S-02G	8	18	19	22	8	31	30	16.5	12	16	1/4
	NSVW 10S-03G	10	22	22	27	10	35	37	18.5	12	18	3/8
	NSVW 12S-03G	12	22	24	27	10	35	37	18.5	12	18	3/8
	NSVW 14S-04G	14	26	27	32	12	41	42	23	14	21	1/2
	NSVW 16S-04G	16	26	30	36	12	41	46	22.5	14	23	1/2
	NSVW 20S-06G	20	32	36	46	17	49	58	27.5	16	28	3/4
PB 250	NSVW 25S-08G	25	39	46	50	22	55	64	31.5	18	32	1
	NSVW 30S-10G	30	49	50	60	27	63	76	36.5	20	37	1-1/4
	NSVW 38S-12G	38	55	60	70	32	72	85	41	22	42	1-1/2

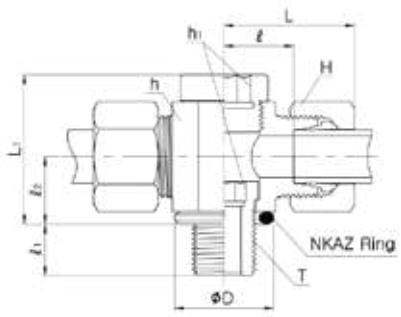
for Metric Parallel

Series	Part No.	Tube O.D	D	H	h	h1	L	L1	ℓ	ℓ1	ℓ2	T M(Metric)
L light PB 250	NSVW 06L-10M10	6	14	14	19	6	27	24	12.5	8	12	M 10 x 1
	NSVW 08L-12M15	8	17	17	22	6	29	30	14.5	12	15	M 12 x 1.5
	NSVW 10L-14M15	10	19	19	22	8	30	30	15.5	12	16	M 14 x 1.5
	NSVW 12L-16M15	12	21	22	27	10	33	37	18	12	18	M 16 x 1.5
	NSVW 15L-18M15	15	23	27	30	12	36	40	21	12	20	M 18 x 1.5
PB 100	NSVW 18L-22M15	18	27	32	36	14	38	46	21.5	14	23	M 22 x 1.5
	NSVW 22L-26M15	22	31	36	41	17	42	51	26	16	25	M 26 x 1.5
	NSVW 28L-33M20	28	39	41	50	22	48	64	31.5	18	32	M 33 x 2
	NSVW 35L-42M20	35	49	50	60	27	57	76	35.5	20	37	M 42 x 2
	NSVW 42L-48M20	42	55	60	65	32	63	85	40	22	42	M 48 x 2
L heavy PB 400	NSVW 06S-12M15	6	17	17	22	6	31	30	16.5	12	15	M 12 x 1.5
	NSVW 08S-14M15	8	19	19	22	8	31	30	16.5	12	16	M 14 x 1.5
	NSVW 10S-16M15	10	21	22	27	10	35	37	18.5	12	18	M 16 x 1.5
	NSVW 12S-18M15	12	23	24	30	12	37	41	20.5	12	20	M 18 x 1.5
	NSVW 14S-20M15	14	25	27	32	12	41	42	23	14	21	M 20 x 1.5
	NSVW 16S-22M15	16	27	30	36	14	41	46	22.5	14	23	M 22 x 1.5
	NSVW 20S-27M20	20	32	36	46	17	49	58	27.5	16	28	M 27 x 2
PB 250	NSVW 25S-33M20	25	39	46	50	22	55	64	31	18	32	M 33 x 2
	NSVW 30S-42M20	30	49	50	60	27	63	76	36.5	20	37	M 42 x 2
	NSVW 38S-48M20	38	55	60	70	32	72	85	41	22	42	M 48 x 2

All dimensions given approx. figure with tighten nut. All dimensions are in millimeters.

Throttle-Free Banjo Fittings(BSP Parallel / Metric Parallel)

NSVT-G/M



for BSP Parallel

Series	Part No.	Tube O.D	D	H	h	h1	L	L1	ℓ	ℓ1	ℓ2	T G(PF)
L light PB 250	NSVT 06L-01G	6	14	14	18	6	27	24	12	8	12	1/8
	NSVT 08L-02G	8	18	17	22	8	29	30	14	12	15	1/4
	NSVT 10L-02G	10	18	19	22	8	30	30	15	12	15	1/4
	NSVT 12L-03G	12	22	22	27	10	32	36	17.5	12	18	3/8
	NSVT 15L-04G	15	26	27	30	12	35	40	20	14	20	1/2
PB 100	NSVT 18L-04G	18	26	32	30	12	36	40	19.5	14	20	1/2
	NSVT 22L-06G	22	32	36	41	17	43	52	27	16	25	3/4
	NSVT 28L-08G	28	39	41	46	22	46	58	29.5	18	29	1
	NSVT 35L-10G	35	49	50	55	27	55	69	33	20	34	1-1/4
	NSVT 42L-12G	42	55	60	65	32	63	84	40	22	41	1-1/2
S heavy PB 400	NSVT 06S-02G	6	18	17	22	8	31	30	16	12	15	1/4
	NSVT 08S-02G	8	18	19	22	8	31	30	16	12	15	1/4
	NSVT 10S-03G	10	22	22	27	10	34	36	18	12	18	3/8
	NSVT 12S-03G	12	22	24	27	10	34	36	18	12	18	3/8
	NSVT 14S-04G	14	26	27	32	12	40	42	22	14	21	1/2
	NSVT 16S-04G	16	26	30	32	12	40	42	21.5	14	21	1/2
	NSVT 20S-06G	20	32	36	46	17	50	57	28.5	16	28	3/4
PB 250	NSVT 25S-08G	25	39	46	50	22	55	62	31	18	31	1
	NSVT 30S-10G	30	49	50	60	27	63	74	36.5	20	36	1-1/4
	NSVT 38S-12G	38	55	60	70	32	72	84	41	22	41	1-1/2

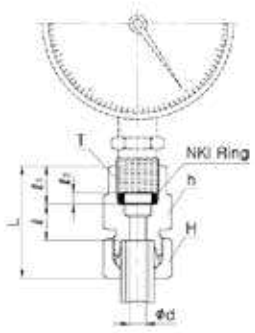
for Metric Parallel

Series	Part No.	Tube O.D	D	H	h	h1	L	L1	ℓ	ℓ1	ℓ2	T M(Metric)
L light PB 250	NSVT 06L-10M10	6	14	14	18	6	27	24	12	8	12	M 10 x 1
	NSVT 08L-12M15	8	17	17	20	6	28	27	13	12	14	M 12 x 1.5
	NSVT 10L-14M15	10	19	19	22	8	30	30	15	12	15	M 14 x 1.5
	NSVT 12L-16M15	12	21	22	27	10	32	36	17.5	12	18	M 16 x 1.5
	NSVT 15L-18M15	15	23	27	30	12	35	39	20	12	19	M 18 x 1.5
PB 100	NSVT 18L-22M15	18	27	32	32	14	37	41	20.5	14	20	M 22 x 1.5
	NSVT 22L-26M15	22	31	36	36	17	41	46	24.5	16	22	M 26 x 1.5
	NSVT 28L-33M20	28	39	41	46	22	46	55	29.5	18	29	M 33 x 2
	NSVT 35L-42M20	35	49	50	55	27	55	69	33	20	33	M 42 x 2
	NSVT 42L-48M20	42	55	60	65	32	63	84	40	22	41	M 48 x 2
L heavy PB 400	NSVT 06S-12M15	6	17	17	20	6	30	27	15	12	14	M 12 x 1.5
	NSVT 08S-14M15	8	19	19	22	8	31	30	16	12	15	M 14 x 1.5
	NSVT 10S-16M15	10	21	22	27	10	34	36	18	12	18	M 16 x 1.5
	NSVT 12S-18M15	12	23	24	30	12	36	39	19.5	12	19	M 18 x 1.5
	NSVT 14S-20M15	14	25	27	32	12	40	41	22	14	20	M 20 x 1.5
	NSVT 16S-22M15	16	27	30	36	14	42	45	23.5	14	22	M 22 x 1.5
	NSVT 20S-27M20	20	32	36	46	17	50	58	28.5	16	28	M 27 x 2
PB 250	NSVT 25S-33M20	25	39	46	50	22	55	62	31	18	31	M 33 x 2
	NSVT 30S-42M20	30	49	50	60	27	63	74	36.5	20	36	M 42 x 2
	NSVT 38S-48M20	38	55	60	70	32	72	84	41	22	41	M 48 x 2

All dimensions given approx. figure with tighten nut. All dimensions are in millimeters.

Pressure Gauge Connector (BSP Parallel)

NGC-G

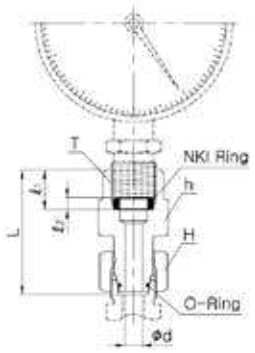


Series	Part No.	Tube O.D	d	H	h	L	ℓ	ℓ1	ℓ2	T G(PF)
L light PN 315	NGC 06L-02G	6	2.5	14	19	37	7.5	14.5	4.5	1/4
	NGC 08L-02G	8	5.5	17	19	37	7.5	14.5	4.5	1/4
	NGC 10L-02G	10	5.5	19	19	38	8.5	14.5	4.5	1/4
	NGC 12L-02G	12	5.5	22	19	38	8.5	14.5	4.5	1/4
S heavy PN 630	NGC 06S-04G	6	3.5	17	27	46	11	20	5	1/2
	NGC 08S-04G	8	3.5	19	27	46	11	20	5	1/2
	NGC 10S-04G	10	7	22	27	47	10.5	20	5	1/2
	NGC 12S-04G	12	7	24	27	47	10.5	20	5	1/2

All dimensions are in millimeters.

Swivel Gauge Connector (BSP Parallel)

NGE-G

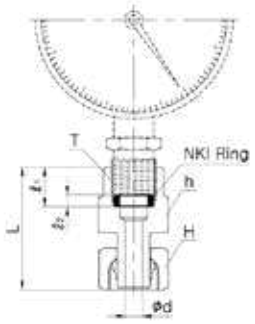


Series	Part No.	Tube O.D	d	H	h	L	ℓ1	ℓ2	T G(PF)
L light PN 315	NGE 06L-02G	6	2.5	14	19	35.5	14.5	4.5	1/4
	NGE 08L-02G	8	4	17	19	35.5	14.5	4.5	1/4
	NGE 10L-02G	10	5.5	19	19	36	14.5	4.5	1/4
	NGE 12L-02G	12	5.5	22	19	36	14.5	4.5	1/4
S heavy PN 630	NGE 06S-04G	6	2.5	17	27	42.5	20	5	1/2
	NGE 08S-04G	8	4	19	27	43	20	5	1/2
	NGE 10S-04G	10	6	22	27	43.5	20	5	1/2
	NGE 12S-04G	12	7	24	27	45	20	5	1/2
	NGE 06S-02G	6	2.5	17	19	35.5	14.5	4.5	1/4
	NGE 08S-02G	8	4	19	19	35.5	14.5	4.5	1/4
	NGE 10S-02G	10	6	22	19	36	14.5	4.5	1/4
	NGE 12S-02G	12	7	24	19	39	14.5	4.5	1/4

All dimensions are in millimeters.

Gauge Adaptor (BSP Parallel)

NGA-G

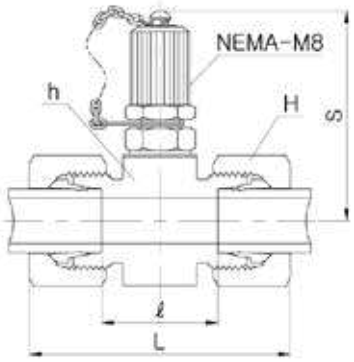


Series	Part No.	Tube O.D	d	H	h	L	ℓ1	ℓ2	T G(PF)
L light PN 315	NGA 06L-02G	6	3.5	14	19	38	14.5	4.5	1/4
	NGA 08L-02G	8	5.5	17	19	38	14.5	4.5	1/4
	NGA 10L-02G	10	7.5	19	19	39.5	14.5	4.5	1/4
	NGA 12L-02G	12	9	22	19	40.5	14.5	4.5	1/4
S heavy PN 630	NGA 06S-04G	6	3.5	17	27	45	20	5	1/2
	NGA 08S-04G	8	4.5	19	27	45	20	5	1/2
	NGA 10S-04G	10	6.5	22	27	47	20	5	1/2
	NGA 12S-04G	12	7.5	24	27	47.5	20	5	1/2

All dimensions are in millimeters.

Tee Test Coupling with Threaded Connection

NGMA

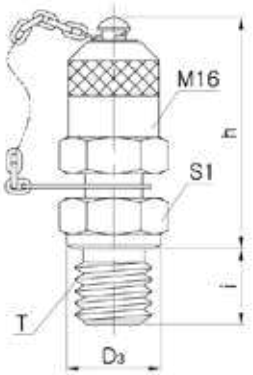


Series	Part No.	Tube O.D	H	h	L	ℓ	S
L light PB 315	NGMA-06L	6	14	24	50	20.5	45
	NGMA-08L	8	17	24	50	20.5	45
	NGMA-10L	10	19	24	52	22.5	45
	NGMA-12L	12	22	24	52	22.5	45
	NGMA-15L	15	27	30	55	24.5	48
	NGMA-18L	18	32	32	56	23.5	49
PB 160	NGMA-22L	22	36	36	60	27.5	51
	NGMA-28L	28	41	41	61	27.5	53
	NGMA-35L	35	50	46	69	25.5	56
	NGMA-42L	42	60	55	70	24.5	60
S heavy PB 360	NGMA-06S	6	17	24	54	24.5	45
	NGMA-08S	8	19	24	54	24.5	45
	NGMA-10S	10	22	24	56	23.5	45
	NGMA-12S	12	24	24	56	23.5	45
	NGMA-14S	14	27	27	62	26.5	46
PB 400	NGMA-16S	16	30	30	62	25.5	48
	NGMA-20S	20	36	36	69	25.5	51
	NGMA-25S	25	46	41	75	26.5	53
	NGMA-30S	30	50	46	81	27.5	56
PB 315	NGMA-38S	38	60	55	90	29	60

All dimensions are in millimeters.

Test Coupling with Threaded Connection

NEMA



Series	Part No.	D3	h	i	S1	T
PB 630	NEMA-01 G	14	36	8	17	PF 1/8
	NEMA-02G	18	36	10	19	PF 1/4
	NEMA-03G	22	36	12	22	PF 3/8
	NEMA-04G	26	36	14	27	PF 1/2
PB 630	NEMA-10M10	14	36	8	17	M 10 x 1
	NEMA-12M15	17	36	12	17	M 12 x 1.5
	NEMA-14M15	19	36	12	19	M 14 x 1.5
	NEMA-16M15	21	36	12	22	M 16 x 1.5

All dimensions are in millimeters.

General Standard For V87 Series Ball Valve

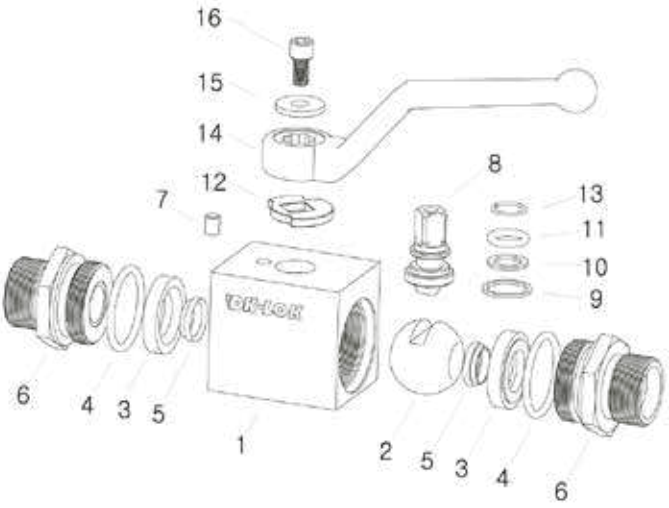


■ Feature

- Pressure Rating up to 500 bar (7,250 psi).
- Positive stop with robust stop pin.
- Various end ports including DIN Standard port.

■ Application

- Hydraulic fluids.
- Compressed Air
- Fuel oil system



■ Material of Construction

Component	Valve Body Material	
	DIN	ASTM
1. Body	DIN 1.4404	A276 SS316L
2. Ball	DIN 1.4404	A276 SS316L
3. Seat	POM	
4. o-ring	FKM	
5. Seat Guide	DIN 1.4404	A276 SS316L
6. Connector	DIN 1.4404	A276 SS316L
7. Pin	STAINLESS STEEL	
8. Stem	DIN 1.4404	A276 SS316L
9. Bearing	POM	
10. Stem ring	POM	
11. Stem o-ring	FKM	
12. Stopper	STAINLESS STEEL	
13. Snap ring	STAINLESS STEEL	
14. Handle	STAINLESS STEEL	
15. Washer	STAINLESS STEEL	
16. Screw	STAINLESS STEEL	

- Wetted parts and lubricants listed in blue.
- Fluorinated-based lubricant

■ Factory Testing

Every valve is tested with nitrogen gas @ 1,000 psig(68bar) for leakage at the seat to a maximum allowable leak rate of 0.1 SCCM. The stem packing is tested with nitrogen gas@1,000 psig for no detectable leakages.

■ Material of Construction

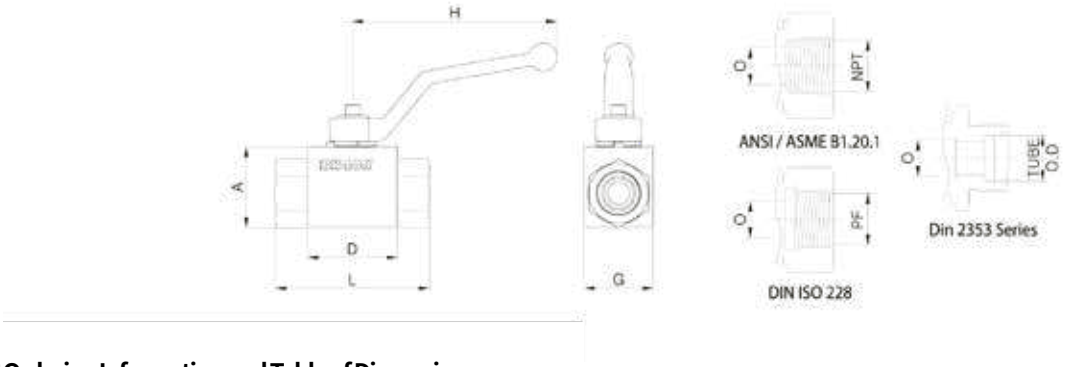
Rating based on valve with standard POM SEAT.

O-ring Materials	Designator	Temperature Rating °C (°F)
V87A V87B V87C	POM	-30 to 100 (-22 to 212)
	PTFE	-54 to 65 (-65 to 149)
V87D	POM	-30 to 90 (-22 to 194)
	PTFE	-54 to 57 (-22 to 135)
V87E	POM	-30 to 85 (-22 to 185)
	PTFE	-54 to 52 (-65 to 126)

■ Optional O-ring Materials

FKM O-Rings are standard. Add the designator to the ordering Number for valve with optional O-ring material.

O-ring Materials	Designator	Temperature Rating ° C (°F)
FKM	Nil	-23 ~ 190 (-10 ~ 375)
NBR	BN	-23 ~ 121 (-10 ~ 250)
EPDM	EP	-45 ~ 148 (-50 ~ 300)
FFKM	KZ	-30 ~ 210 (-22 ~ 410)



■ Ordering Information and Table of Dimensions

Basic Ordering Number		End Connections	DIN O	PN (bar)	Dimensions, mm A	G	D	L	H
V87A-	F2N	1/8 in. Female NPT	4	500	35	30	42	71	110
	F4N	1/4 in. Female NPT	6						
	F2G	1/8 in. Female PF	4						
	F4G	1/4 In. Female PF	6						
	N6L	6mm	6					76	
	N8L	8mm							
	N10L	10mm							
	N8S	8mm	4						
	N10S	10mm	6						
	N12S	12mm	8						
V87B-	F6N	3/8 in. Female NPT	10	500	40	35	44.4	73	110
	F6G	3/8 in. Female PF							
	N12L	12mm						79.5	
	N14S	14mm						82.5	
V87C-	F8N	1/2 in. Female NPT	13	500	43	37	48.4	83	110
	F8G	1/2 in. Female PF							
	N15L	15mm						87	
	N18L	18mm							
	N16S	16mm						89	
	N20S	20mm						93	
V87D-	F12N	3/4 in. Female NPT	20	400	55	45	62.5	95	175
	F12G	3/4 in. Female PF							
	N22L	22mm						110	
	N25S	25mm						111	
V87E-	F16N	1 in. Female NPT	20	350	65	55	66.5	112	175
	F16G	1 in. Female PF							
	N28L	28mm	25					117	
	N35L	35mm						119	
	N42L	42mm							
	N30S	30mm						121	
	N38S	38mm						131	

■ Factory Testing

Select valve basic ordering number, applicable options, and body material.

V87A - F4N -
V87B - N12L -
V87D - N30S -

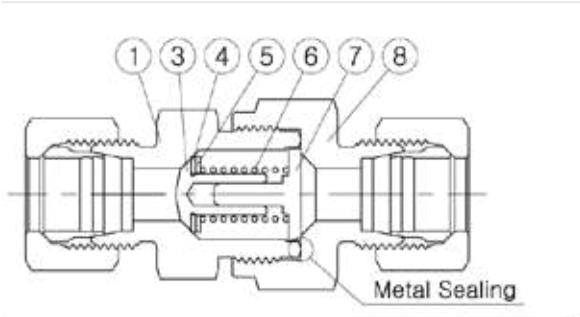
BN- **EP-** **KZ-** **PE** **S** **L**

O-ring Material Designator	Seat Material Designator	Valve Body Material Designator
Nil : FKM **BN** : NBR **EP** : EPDM **KZ** : FFKM	**PE** : PTFE **Nil** : POM	**S** : 316 stainless steel **L** : 316L stainless steel

■ Safe Valve Selection

The selection of a valve for any application or system design must be considered to ensure safe performance. Valve function, valve rating, material compatibility, proper installation, operation and maintenance remain the sole responsibillty of the system designer and the user. Dk Tech accepts no liability for any improper selection, installation, operation or maintenance.

General Standard for Non-Return Valves



■ Material of Construction

No.	Description	Material	Q'ty
*1	Body	Carbon Steel	1
*2	Connector	Carbon Steel	1
*3	Poppet	Carbon Steel	1
↑4	Seat	FKM	1
*5	Seat Support	Carbon Steel	1
6	Spring	Stainless Steel	1
*7	Stopper	Carbon Steel	1

* On request of stainless steel 316 or brass available
↑ On request of NBR or EPDM available

■ Feature

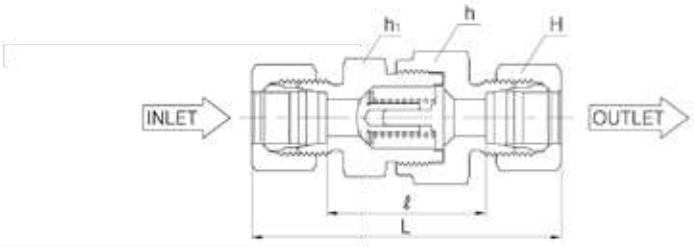
- Opening pressure : Standard setting is 14.5 psig (1 bar) and 7.3 to 43.5 psig (0.5 to 3 bar) available.
- Temperature range : -4 to 212°C (-20 to 100°C)
- Sealing is 90° tapered cone (item no.③).

■ Application

- Non Return valves are applicable with hydraulic fluid and compressed air.
- For other fluid contact for our sales department.

Non-Return Valves

NCVU

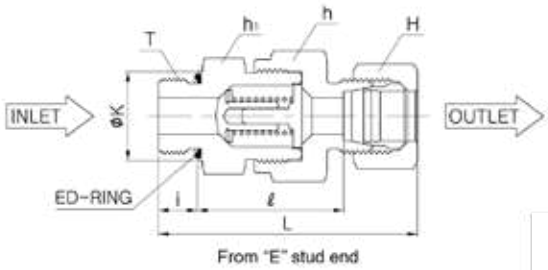


Series	Part No.	Tube O.D	H	h	h1	L	ℓ
L light PB 250	NCVU-06L	6	14	17	17	58	29
	NCVU-08L	8	17	19	19	59	30
	NCVU-10L	10	19	24	22	69.5	40.5
	NCVU-12L	12	22	30	27	72.5	43.5
	NCVU-15L	15	27	32	27	77.5	47.5
PB 100	NCVU-18L	18	32	36	36	83.5	51.5
	NCVU-22L	22	36	46	41	93.5	61.5
	NCVU-28L	28	41	55	50	102.5	69.5
	NCVU-35L	35	50	60	60	117.5	74.5
	NCVU-42L	42	60	70	65	119	74
S heavy PB 400	NCVU-06S	6	17	19	19	63.5	34.5
	NCVU-08S	8	19	19	19	63.5	34.5
	NCVU-10S	10	22	24	22	72.5	40.5
	NCVU-12S	12	24	27	24	74.5	42.5
	NCVU-14S	14	27	32	27	82.5	47.5
	NCVU-16S	16	30	36	32	86.5	50.5
	NCVU-20S	20	36	46	41	97.5	54.5
PB 250	NCVU-25S	25	46	50	46	106.5	58.5
	NCVU-30S	30	50	60	60	122.5	69.5
	NCVU-38S	38	60	70	65	136.5	75.5

All dimensions given approx. figure with tighten nut. All dimensions are in millimeters.

Non-Return Valves

NCV GE-L/S, NCV ME-L/S



* ED-ring of NBR standard, of FPM on request

for BSP Parallel

Series	Part No.	Tube O.D	H	h	h1	K	L	ℓ	i	T G(PF)
L light PB 250	NCV01GE-06L	6	14	17	17	14	42.5	28	8	1/8
	NCV02GE-08L	8	17	19	19	19	44.5	30	12	1/4
	NCV02GE-10L	10	19	24	22	19	53	38.5	12	1/4
	NCV03GE-12L	12	22	30	27	22	57	42.5	12	3/8
	NCV04GE-15L	15	27	32	27	27	60.5	45.5	14	1/2
PB 160	NCV04GE-18L	18	32	36	36	27	66	50	14	1/2
	NCV06GE-22L	22	36	46	41	32	71	53	16	3/4
PB 100	NCV08GE-28L	28	41	55	50	40	79.5	63	18	1
	NCV10GE-35L	35	50	60	60	50	90.5	69	20	1-1/4
	NCV12GE-42L	42	60	70	65	55	91	68.5	22	1-1/2
S heavy PB 400	NCV02GE-06S	6	17	19	19	19	46	31.5	12	1/4
	NCV02GE-08S	8	19	19	19	19	46	31.5	12	1/4
	NCV03GE 10S	10	22	24	22	22	54	38	12	3/8
	NCV03GE-12S	12	24	27	24	22	57	41	12	3/8
	NCV04GE-14S	14	27	32	27	27	62	44.5	14	1/2
	NCV04GE-16S	16	30	36	32	27	66	48	14	1/2
	NCV06GE-20S	20	36	46	41	32	73.5	52	16	3/4
PB 250	NCV08GE-25S	25	46	50	46	40	78.5	54.5	18	1
	NCV10GE-30S	30	50	60	60	50	90.5	64	20	1-1/4
	NCV12GE-38S	38	60	70	65	55	100	69.5	22	1-1/2

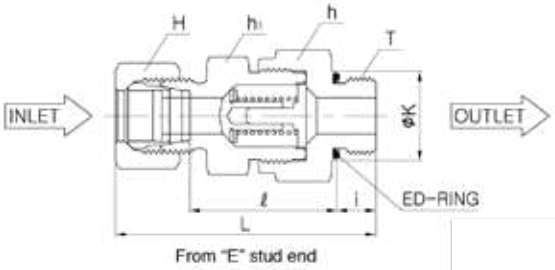
for Metric Parallel

Series	Part No.	Tube O.D	H	h	h1	K	L	ℓ	i	T M(Metric)
L light PB 250	NCV10M10E-06L	6	14	17	17	14	42.5	28	8	M 10 x 1.0
	NCV12M15E-08L	8	17	19	19	17	43.5	30	12	M 12 x 1.5
	NCV14M15E-10L	10	19	24	22	19	53	38.5	12	M 14 x 1.5
	NCV16M15E-12L	12	22	30	27	22	57	42.5	12	M 16 x 1.5
	NCV18M15E-15L	15	27	32	27	24	60.5	45.5	12	M 18 x 1.5
PB 160	NCV22M15E-18L	18	32	36	36	27	66	50	14	M 22 x 1.5
	NCV26M15E-22L	22	36	46	41	32	71	55	16	M 26 x 1.5
PB 100	NCV33M20E-28L	28	41	55	50	40	79.5	63	18	M 33 x 2.0
	NCV42M20E-35L	35	50	60	60	50	90.5	69	20	M 42 x 2.0
	NCV48M20E-42L	42	60	70	65	55	91	67.5	22	M 48 x 2.0
S heavy PB 400	NCV12M15E-06S	6	17	19	19	17	46	31.5	12	M 12 x 1.5
	NCV14M15E-08S	8	19	19	19	19	46	31.5	12	M 14 x 1.5
	NCV16M15E-10S	10	22	24	22	22	54	38	12	M 16 x 1.5
	NCV18M15E-12S	12	24	27	24	24	57	41	12	M 18 x 1.5
	NCV20M15E-14S	14	27	32	27	26	62	44.5	14	M 20 x 1.5
	NCV22M15E-16S	16	30	36	32	27	66	48	14	M 22 x 1.5
	NCV27M20E-20S	20	36	46	41	32	73.5	52	16	M 27 x 2.0
PB 250	NCV33M20E-25S	25	46	50	46	40	78.5	54.5	18	M 33 x 2.0
	NCV42M20E-30S	30	50	60	60	50	90.5	64	20	M 42 x 2.0
	NCV48M20E-38S	38	60	70	65	55	100	69.5	22	M 48 x 2.0

All dimensions given approx. figure with tighten nut. All dimensions are in millimeters.

Non-Return Valves

NCV L/S-GE, NCV L/S-ME



* ED-ring of NBR standard, of FPM on request

for BSP Parallel

Series	Part No.	Tube O.D	H	h	h1	K	L	ℓ	i	T G(PF)
L light PB 250	NCV06L-01GE	6	14	17	17	14	41	26.5	8	1/8
	NCV08L-02GE	8	17	19	19	19	43	28.5	12	1/4
	NCV10L-02GE	10	19	24	22	19	53	38.5	12	1/4
	NCV12L-03GE	12	22	30	27	22	55	40.5	12	3/8
	NCV15L-04GE	15	27	32	27	27	57.5	42.5	14	1/2
PB 160	NCV18L-04GE	18	32	36	36	27	64	48	14	1/2
	NCV22L-06GE	22	36	46	41	32	72	56	16	3/4
PB 100	NCV28L-08GE	28	41	55	50	40	80.5	64	18	1
	NCV35L-10GE	35	50	60	60	50	91.5	70	20	1-1/4
	NCV42L-12GE	42	60	70	65	55	93	70.5	22	1-1/2
S heavy PB 400	NCV06S-02GE	6	17	19	19	19	46	31.5	12	1/4
	NCV08S-02GE	8	19	19	19	19	46	31.5	12	1/4
	NCV10S-03GE	10	22	24	22	22	54	38	12	3/8
	NCV12S-03GE	12	24	27	24	22	57	41	12	3/8
	NCV14S-04GE	14	27	32	27	27	61	43.5	14	1/2
	NCV16S-04GE	16	30	36	32	27	64	46	14	1/2
	NCV20S-06GE	20	36	46	41	32	71.5	50	16	3/4
PB 250	NCV25S-08GE	25	46	50	46	40	78.5	54.5	18	1
	NCV30S-10GE	30	50	60	60	50	90.5	64	20	1-1/4
	NCV38S-12GE	38	60	70	65	55	102	71.5	22	1-1/2

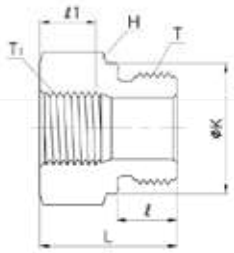
for Metric Parallel

Series	Part No.	Tube O.D	H	h	h1	K	L	ℓ	i	T M(Metric)
L light PB 250	NCV06L-10M10E	6	14	17	17	14	41	26.5	8	M 10 x 1.0
	NCV08L-12M15E	8	17	19	19	17	43	28.5	12	M 12 x 1.5
	NCV10L-14M15E	10	19	24	22	19	53	38.5	12	M 14 x 1.5
	NCV12L-16M15E	12	22	30	27	22	55	40.5	12	M 16 x 1.5
	NCV15L-18M15E	15	27	32	27	24	57.5	42.5	12	M 18 x 1.5
PB 160	NCV18L-22M15E	18	32	36	36	27	64	48	14	M 22 x 1.5
	NCV22L-26M15E	22	36	46	41	32	72	56	16	M 26 x 1.5
PB 100	NCV28L-33M20E	28	41	55	50	40	80.5	64	18	M 33 x 2.0
	NCV35L-42M20E	35	50	60	60	50	91.5	70	20	M 42 x 2.0
	NCV42L-48M20E	42	60	70	65	55	93	70.5	22	M 48 x 2.0
S heavy PB 400	NCV06S-12M15E	6	17	19	19	17	46	31.5	12	M 12 x 1.5
	NCV08S-14M15E	8	19	19	19	19	46	31.5	12	M 14 x 1.5
	NCV10S-16M15E	10	22	24	22	22	54	38	12	M 16 x 1.5
	NCV12S-18M15E	12	24	27	24	24	57	41	12	M 18 x 1.5
	NCV14S-20M15E	14	27	32	27	26	61	43.5	14	M 20 x 1.5
	NCV16S-22M15E	16	30	36	32	27	64	46	14	M 22 x 1.5
	NCV20S-27M20E	20	36	46	41	32	71.5	50	16	M 27 x 2.0
PB 250	NCV25S-33M20E	25	46	50	46	40	78.5	54.5	18	M 33 x 2.0
	NCV30S-42M20E	30	50	60	60	50	90.5	65	20	M 42 x 2.0
	NCV38S-48M20E	38	60	70	65	55	102	71.5	22	M 48 x 2.0

All dimensions given approx. figure with tighten nut. All dimensions are in millimeters.

Male Female Adapter (BSP Parallel)

NHB



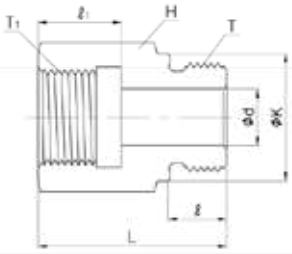
* DIN 3852 Form “B” stud end

PB	Part No.	H	K	L	ℓ	ℓ1	Male stud T G(PF)	Female stud T1 G(PF)
PB 630	NHB 03-01G	22	22	22.5	12	8	3/8	1/8
PB 630	NHB 04-01G	27	26	24	14	8	1/2	1/8
PB 400	NHB 04-02G	27	26	24	14	12	1/2	1/4
PB 400	NHB 06-02G	32	32	26	16	12	3/4	1/4
	NHB 06-03G	32	32	26	16	12	3/4	3/8
PB 400	NHB 08-02G	41	39	29	18	12	1	1/4
	NHB 08-03G	41	39	29	18	12	1	3/8
	NHB 08-04G	41	39	29	18	14	1	1/2
PB 250	NHB 10-04G	50	49	32	20	14	1 1/4	1/2
	NHB 10-06G	50	49	32	20	16	1 1/4	3/4
PB 250	NHB 12-04G	55	55	36	22	14	1 1/2	1/2
	NHB 12-06G	55	55	36	22	16	1 1/2	3/4
	NHB 12-08G	55	55	36	22	18	1 1/2	1

All dimensions are in millimeters.

Male Female Adapter (BSP Parallel)

NABMF



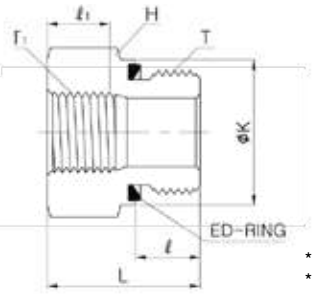
* DIN 3852 Form “B” stud end

PB	Part No.	d	H	K	L	ℓ	ℓ1	Male stud T G(PF)	Female stud T1 G(PF)
PB 630	NABMF 01-02G	4	19	14	31	8	17	1/8	1/4
	NABMF 01-03G	4	24	14	32	8	17	1/8	3/8
PB 630	NABMF 02-01G	5	19	18	28	12	12	1/4	1/8
	NABMF 02-03G	5	24	18	36	12	17	1/4	3/8
	NABMF 02-04G	5	30	18	40	12	20	1/4	1/2
PB 400	NABMF 02-06G	5	36	18	43	12	22	1/4	3/4
PB 630	NABMF 03-02G	8	22	22	36	12	17	3/8	1/4
	NABMF 03-04G	8	30	22	41	12	20	3/8	1/2
PB 250	NABMF 03-06G	8	36	22	44	12	22	3/8	3/4
PB 400	NABMF 04-03G	12	27	26	36	14	17	1/2	3/8
	NABMF 04-06G	12	36	26	46	14	22	1/2	3/4
	NABMF 04-08G	12	41	26	49	14	24.5	1/2	1
PB 250	NABMF 04-10G	10	55	26	53	14	26.5	1/2	1 1/4
PB 400	NABMF 06-04G	16	32	32	41	16	20	3/4	1/2
	NABMF 06-08G	16	41	32	51	16	24.5	3/4	1
	NABMF 06-10G	16	55	32	55	16	26.5	3/4	1 1/4
PB 250	NABMF 06-12G	16	60	32	57	16	28.5	3/4	1 1/2
PB 400	NABMF 08-06G	20	41	39	47	18	22	1	3/4
PB 250	NABMF 08-10G	20	55	39	57	18	26.5	1	1 1/4
	NABMF 08-12G	20	60	39	59	18	28.5	1	1 1/2
PB 250	NABMF 10-08G	25	50	49	52	20	24.5	1 1/4	1
	NABMF 10-12G	25	60	49	60	20	28.5	1 1/4	1 1/2
PB 250	NABMF 12-10G	32	55	55	58	22	26.5	1 1/2	1 1/4
PB 250	NABMF 16-12G	40	70	68	62	24	28.5	2	1 1/2

All dimensions are in millimeters.

Male Female Adaptor(BSP Parallel) with *ED-Ring

NHB-GE



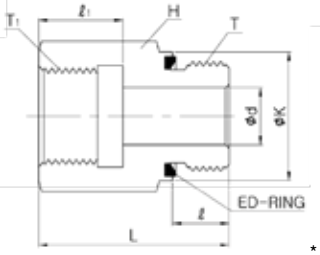
* DIN 3852 Form “E” stud end
* ED-ring of NBR standard, of FPM on request

PB	Part No.	H	K	L	ℓ	ℓ1	Male stud T G(PF)	Female stud T1 G(PF)
PB 630	NHB 03GE-01G	22	22	22.5	12	8	3/8	1/8
PB 630	NHB 04GE-01G	27	26	24	14	8	1/2	1/8
PB 400	NHB 04GE-02G	27	26	24	14	12	1/2	1/4
PB 400	NHB 06GE-02G	32	32	26	16	12	3/4	1/4
	NHB 06GE-03G	32	32	26	16	12	3/4	3/8
PB 400	NHB 08GE-02G	41	39	29	18	12	1	1/4
	NHB 08GE-03G	41	39	29	18	12	1	3/8
	NHB 08GE-04G	41	39	29	18	14	1	1/2
PB 250	NHB 10GE-04G	50	49	32	20	14	1 1/4	1/2
	NHB 10GE-06G	50	49	32	20	16	1 1/4	3/4
PB 250	NHB 12GE-04G	55	55	36	22	14	1 1/2	1/2
	NHB 12GE-06G	55	55	36	22	16	1 1/2	3/4
	NHB 12GE-08G	55	55	36	22	18	1 1/2	1

All dimensions are in millimeters.

Male Female Adaptor (BSP Parallel) with *ED-Ring

NABMF-GE



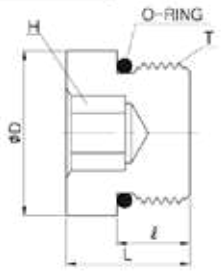
* DIN 3852 Form“E” stud end
* ED-ring of NBR standard, of FPM on request

PB	Part No.	d	H	K	L	ℓ	ℓ1	Male stud T G(PF)	Female stud T1 G(PF)
PB 630	NABMF 01GE-02G	4	19	14	31	8	17	1/8	1/4
	NABMF 01GE-03G	4	24	14	32	8	17	1/8	3/8
PB 630	NABMF 02GE-01G	5	19	18	28	12	12	1/4	1/8
	NABMF 02GE-03G	5	24	18	36	12	17	1/4	3/8
	NABMF 02GE-04G	5	30	18	40	12	20	1/4	1/2
PB 400	NABMF 02GE-06G	5	36	18	43	12	22	1/4	3/4
PB 630	NABMF 03GE-02G	8	22	22	36	12	17	3/8	1/4
	NABMF 03GE-04G	8	30	22	41	12	20	3/8	1/2
PB 250	NABMF 03GE-06G	8	36	22	44	12	22	3/8	3/4
PB 400	NABMF 04GE-03G	12	27	26	36	14	17	1/2	3/8
	NABMF 04GE-06G	12	36	26	46	14	22	1/2	3/4
	NABMF 04GE-08G	12	41	26	49	14	24.5	1/2	1
PB 250	NABMF 04GE-10G	10	55	26	53	14	26.5	1/2	1 1/4
PB 400	NABMF 06GE-04G	16	32	32	41	16	20	3/4	1/2
	NABMF 06GE-08G	16	41	32	51	16	24.5	3/4	1
	NABMF 06GE-10G	16	55	32	55	16	26.5	3/4	1 1/4
PB 250	NABMF 06GE-12G	16	60	32	57	16	28.5	3/4	1 1/2
PB 400	NABMF 08GE-06G	20	41	39	47	18	22	1	3/4
PB 250	NABMF 08GE-10G	20	55	39	57	18	26.5	1	1 1/4
	NABMF 08GE-12G	20	60	39	59	18	28.5	1	1 1/2
PB 250	NABMF 10GE-08G	25	50	49	52	20	24.5	1 1/4	1
	NABMF 10GE-12G	25	60	49	60	20	28.5	1 1/4	1 1/2
PB 250	NABMF 12GE-10G	32	55	55	58	22	26.5	1 1/2	1 1/4
PB 250	NABMF 16GE-12G	40	70	68	62	24	28.5	2	1 1/2

All dimensions are in millimeters.

Blanking Plugs with *O-Ring for Ports acc.to ISO 6149 / DIN3852

NVSTI



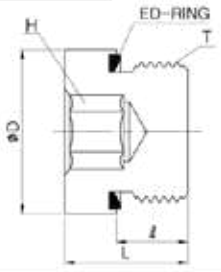
* O-ring of NBR standard, of FPM on request

Series	Part No.(M)	T M(Metric)	D	H	L	ℓ
PB 630	NVSTI-10M10	M 10 x 1	13	5	14	10
	NVSTI-12M15	M 12 x 1.5	17	6	16.5	11.5
	NVSTI-14M15	M 14 x 1.5	19	6	16.5	11.5
	NVSTI-16M15	M 16 x 1.5	21	6	18	13
	NVSTI-18M15	M 18 x 1.5	23	8	19.5	14.5
PB 400	NVSTI-22M15	M 22 x 1.5	27	10	20.5	15.5
	NVSTI-26M15	M 26 x 1.5	31	12	21	16
	NVSTI-27M20	M 27 x 2	32	12	24	19
	NVSTI-33M20	M 33 x 2	38	17	25.5	19
	NVSTI-42M20	M 42 x 2	48	22	26	19.5

All dimensions are in millimeters.

Blanking Plugs with *ED-Ring for Ports

NVSTI-GE / ME

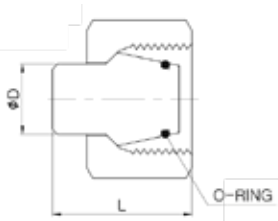


* ED-ring of NBR standard, of FPM on request

PB	Part No.	Part No.(G)	T M(Metric)	T G(PF)	D	H	L	ℓ
PB 400	NVSTI-10M10E	NVSTI-01GE	M 10 x 1	1/8	14	5	12	8
	NVSTI-12M15E	-	M 12 x 1.5	-	17	6	17	12
	NVSTI-14M15E	NVSTI-02GE	M 14 x 1.5	1/4	19	6	17	12
	NVSTI-16M15E	NVSTI-03GE	M 16 x 1.5	3/8	22	8	17	12
	NVSTI-18M15E	-	M 18 x 1.5	-	23.9	8	17	12
	NVSTI-20M15E	-	M 20 x 1.5	-	25.9	10	19	14
	NVSTI-22M15E	NVSTI-04GE	M 22 x 1.5	1/2	27	10	19	14
	NVSTI-26M15E	-	M 26 x 1.5	-	31.9	12	21	16
	NVSTI-27M20E	NVSTI-06GE	M 27 x 2	3/4	32	12	21	16
	NVSTI-33M20E	NVSTI-08GE	M 33 x 2	1	39.9	17	22.5	16
PB 250	NVSTI-42M20E	NVSTI-10GE	M 42 x 2	1 1/4	49.9	22	22.5	16
	NVSTI-48M20E	NVSTI-12GE	M 48 x 2	1 1/2	55	24	22.5	16

All dimensions are in millimeters.

Blanking Plug with *O-Ring
NP

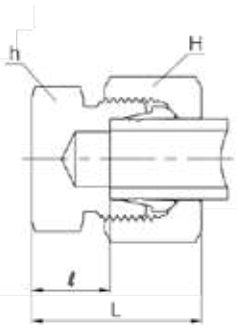


*O-ring of NBR standard, of FPM on request

Series	Part No.(M)	Tube O.D D	L
L light PN 315/PN 630	NP-06L/S	6	18.5
	NP-08L/S	8	18.5
	NP-10L/S	10	20
	NP-12L/S	12	20.5
	NP-15L	15	20.5
	NP-18L	18	22.5
PN 160	NP-22L	22	25
	NP-28L	28	25.5
	NP-35L	35	30
	NP-42L	42	30
S heavy PN 630	NP-14S	14	22.5
PN 400	NP-16S	16	23.5
	NP-20S	20	28.5
	NP-25S	25	29
	NP-30S	30	30.5
PN 315	NP-38S	38	33

All dimensions are in millimeters.

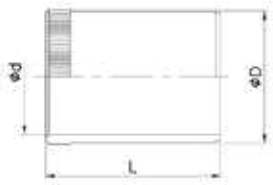
Tube Cap
NCA



Series	Part No.	Tube O.D	H	h	L	ℓ
L light PN 315	NCA-06L	6	14	12	22	7
	NCA-08L	8	17	14	23	8
	NCA-10L	10	19	17	24	9
	NCA-12L	12	22	19	25	10
	NCA-15L	15	27	24	26	11
	NCA-18L	18	32	27	28	11.5
PN 160	NCA-22L	22	36	32	30	13.5
	NCA-28L	28	41	41	31	14.5
	NCA-35L	35	50	46	36	14.5
	NCA-42L	42	60	55	39	16
S heavy PN 630	NCA-06S	6	17	14	26	11
	NCA-08S	8	19	17	28	13
	NCA-10S	10	22	19	29	12.5
	NCA-12S	12	24	22	31	14.5
	NCA-14S	14	27	24	34	16
PN 400	NCA-16S	16	30	27	34	15.5
	NCA-20S	20	36	32	39	17.5
	NCA-25S	25	46	41	44	20
	NCA-30S	30	50	46	47	20.5
PN 315	NCA-38S	38	60	55	54	23

All dimensions given approx. figure with tighten nut. All dimensions are in millimeters.

Tube Insurt
NIL



Part No.	Tube O.D	Tube I.D	d	D	L
NIL 6-1	6	4	2.6	3.8	15.5
NIL 6-0.75	6	4.5	3.1	4.3	12.5
NIL 6-0.5	6	5	3.6	4.8	15.5
NIL 8-1	8	6	4.6	5.8	15.5
NIL 10-1.5	10	7	5.6	6.8	17
NIL 10-1	10	8	6.6	7.8	16.5
NIL 12-1.5	12	9	7.6	8.8	16.5
NIL 12-1	12	10	8.6	9.8	16.5
NIL 15-1.5	15	12	10.2	11.8	17
NIL 5-1	15	13	11.2	12.8	17
NIL 16-1	16	14	12.2	13.8	17
NIL 8-1.5	18	15	13.2	14.8	17.5
NIL 18-1	18	16	14.2	15.8	17.5

Part No.	Tube O.D	Tube I.D	d	D	L
NIL 20-1.5	20	17	15.2	16.8	20
NIL 20-1	20	18	16.2	17.8	22
NIL 22-1.5	22	19	17.2	18.8	18
NIL 22-1	22	20	18.2	19.8	18
NIL 25-2	25	21	19.2	20.8	21.5
NIL 25-1.5	25	22	20.2	21.8	23.5
NIL 28-2	28	24	22.2	23.8	18
NIL 28-1.5	28	25	23.2	24.8	18
NIL 30-2	30	26	24.2	25.8	23.5
NIL 35-2	35	31	28.8	30.8	22.5
NIL 38-3	38	32	29.8	31.8	26.5
NIL 38-2.5	38	33	30.8	32.8	26.5
NIL 42-2	42	38	35.8	37.8	23.5

All dimensions are in millimeters.

Bulkhead Lock Nut
NBUN



Series	Part No.	Tube O.D		H	L	T
		Light	Heavy			
L	NBUN 06L	6	-	17	6	M 12 x 1.5
L/S	NBUN 08L-06S	8	6	19	6	M 14 x 1.5
L/S	NBUN 10L-08S	10	8	22	6	M 16 x 1.5
L/S	NBUN 12L-10S	12	1	24	6	M 18 x 1.5
S	NBUN 12S	-	12	27	6	M 20 x 1.5
L/S	NBUN 15L-14S	15	14	30	7	M 22 x 1.5
S	NBUN 16S	-	16	32	7	M 24 x 1.5
L	NBUN 18L	18	-	36	8	M 26 x 1.5
L/S	NBUN 22L-25S	22	20	41	8	M 30 x 2
L/S	NBUN 28L-25S	28	25	46	9	M 36 x 2
S	NBUN 30S	-	30	50	9	M 42 x 2
L	NBUN 35S	35	-	55	9	M 45 x 2
L/S	NBUN 42L-38S	42	38	65	10	M 52 x 2

All dimensions are in millimeters.

Sealing Ring for NWH/NTH and NSWVE
NKA



Part No.	External Thread
NKA-01G	PF 1/8
NKA-02G	PF 1/4
NKA-03G	PF 3/8
NKA-04G	PF 1/2
NKA-06G	PF 3/4
NKA-08G	PF 1
NKA-10G42M20	PF 1-1/4/M42 x 2
NKA-12G48M20	PF 1-1/2/M48 x 2
NKA-M10	M 10 x 1
NKA-M12	M 12 x 1.5
NKA-M14	M 14 x 1.5
NKA-M16	M 16 x 1.5
NKA-M18	M 18 x 1.5
NKA-M20	M 20 x 1.5
NKA-M22	M 22 x 1.5
NKA-M22 x 4.5	M 22 x 1.5
NKA-M26	M 26 x 1.5
NKA-M26 x 3.5	M 26 x 1.5
NKA-M27	M 27 x 2
NKA-M33	M 33 x 2

Sealing Ring for NGC
NKI

Part No.	Internal Thread
NKI-02G	PF 1/4
NKI-04G	PF 1/2

Sealing Ring for NSVW/NSVT
NKAZ

Part No.	External Thread
NKAZ-01G	PF 1/8
NKAZ-02G	PF 1/4
NKAZ-03G	PF 3/8
NKAZ-04G	PF 1/2
NKAZ-06G	PF 3/4
NKAZ-08G	PF 1
NKAZ-10G42M20	PF 1-1/4/M42 x 2
NKAZ-12G48M20	PF 1-1/2/M48 x 2
NKAZ-10M10	M 10 x 1
NKAZ-12M15	M 12 x 1.5
NKAZ-14M15	M 14 x 1.5
NKAZ-16M15	M 16 x 1.5
NKAZ-18M15	M 18 x 1.5
NKAZ-20M15	M 20 x 1.5
NKAZ-22M15	M 22 x 1.5
NKAZ 22M15 x 4.5	M 22 x 1.5
NKAZ-26M15	M 26 x 1.5
NKAZ-26M15 x 3.5	M 26 x 1.5
NKAZ-27M20	M 27 x 2
NKAZ-33M20	M 33 x 2

ED-Ring
NED



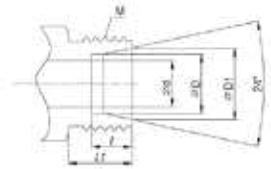
Part No.	For Male Thread	
	Metric	G(PF)
NED-NM8	M 8 x 1	-
NED-N01G	M 10 x 1	1/8
NED-NM12	M 12 x 1.5	
NED-N02G	M 14 x 1.5	1/4
NED-NM16	M 16 x 1.5	-
NED-N03G	-	3/8
NED-NM18	M 18 x 1.5	-
NED-NM20	M 20 x 1.5	-
NED-N04G	-	1/2
NED-NM22	M 22 x 1.5	-
NED-N06G	M 26 x 1.5	3/4
	M 27 x 1.5	
NED-N08G	M 33 x 2	1
NED-N10G	M 42 x 2	1 1/4
NED-N12G	M 48 x 2	1 1/2

O-Ring
NOR

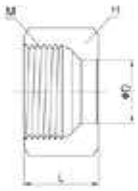


Part No.	D	t
NOR-NS06	4	1.5
NOR-NS08	6	1.5
NOR-NS10	7.5	1.5
NOR-NS12	9	1.5
NOR-NS14	10	2
NOR-NS16	12	2
NOR-NS18	15	2
NOR-NS20	16.3	2.4
NOR-NS22	20	2
NOR-NS25	20.3	2.4
NOR-NS30	25.3	2.4
NOR-NS28	26	2
NOR-NS35	32	2.5
NOR-NS38	33.3	2.4
NOR-NS42	38	2.5

Tube end Dimension



Nut
NN



Cutting Ring
NS



Series	Part No. Nut	Part No. Cutting Ring	Tube O.D	DN Size	D	D1	d	H	L	M	ℓ	ℓ1
LL very light	NN-04LL	NS-04LL	4	3	4	5	3	10	11.5	M 8 x 1.0	4	8
	NN-06LL	NS-06LL	6	4	6	7.5	4.5	12	12	M 10 x 1.0	5.5	8
	NN-08LL	NS-08LL	8	6	8	9.5	6	14	12.5	M 12 x 1.0	5.5	9
	NN-10LL	NS-10LL	10	8	10	11.5	8	17	12.5	M 14 x 1.0	6	9
	NN-12LL	NS-12LL	12	10	12	13.5	10	19	13	M 16 x 1.0	6	9
L light	NN-06L	NS-06	6	4	6	8.1	4	14	15	M 12 x 1.5	7	10
	NN-08L	NS-08	8	6	8	10.1	6	17	15	M 14 x 1.5	7	10
	NN-10L	NS-10	10	8	10	12.3	8	19	16	M 16 x 1.5	7	11
	NN-12L	NS-12	12	10	12	14.3	10	22	16	M 18 x 1.5	7	11
	NN-15L	NS-15	15	12	15	17.3	12	27	17.5	M 22 x 1.5	7	12
	NN-18L	NS-18	18	16	18	20.3	15	32	18	M 26 x 1.5	7.5	12
	NN-22L	NS-22	22	20	22	24.3	19	36	20.5	M 30 x 2	7.5	14
	NN-28L	NS-28	28	25	28	30.3	24	41	21	M 36 x 2	7.5	14
	NN-35L	NS-35	35	32	35	38	30	50	24	M 45 x 2	10.5	16
	NN-42L	NS-42	42	40	42	45	36	60	24	M 52 x 2	11	16
S heavy	NN-06S	NS-06	6	3	6	8.1	4	17	16.5	M 14 x 1.5	7	12
	NN-08S	NS-08	8	4	8	10.1	5	19	16.5	M 16 x 1.5	7	12
	NN-10S	NS-10	10	6	10	12.3	7	22	17.5	M 18 x 1.5	7.5	12
	NN-12S	NS-12	12	8	12	14.3	8	24	18	M 20 x 1.5	7.5	12
	NN-14S	NS-14	14	10	14	16.3	10	27	20.5	M 22 x 1.5	8	14
	NN-16S	NS-16	16	12	16	18.3	12	30	21	M 24 x 1.5	8.5	14
	NN-20S	NS-20	20	16	20	22.9	16	36	24	M 30 x 2	10.5	16
	NN-25S	NS-25	25	20	25	27.9	20	46	27	M 36 x 2	12	18
	NN-30S	NS-30	30	25	30	33	25	50	29.5	M 42 x 2	13.5	20
	NN-38S	NS-38	38	32	38	41	32	60	32.5	M 52 x 2	16	22

All dimensions are in millimeters.







DK-LOK
Fittings & Valves

Head Quartersand Factory
7, Golden root-ro 129beon-gil, Juchon-myeon, Gimhae-si, Gyeongsangnam-do, South Korea 621-842
Tel. (82) 55-338-0114 Fax. (82) 55-901-0141 **www.dklok.com**

DK-LOK

Hydraulic Pipe Fittings

Class 2000, 3000, 6000, 9000 Fittings

Rev. 01-01
Aug. 2023



DK-Lok Hydraulic Pipe Fittings are designed and manufactured to the following standards.

- ASME B 16.11-2005: Forged Fittings, Socket-welding and Threaded
- ASME B 16.14-1991: Ferrous Pipe Plugs, Bushings and Locknuts with Pipe Threads
- JIS B 2316-1991: Steel socket-welding pipe Fittings

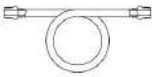
DK-LOK®
Hydraulic Pipe Fittings

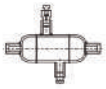
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Rev.01-01
Aug.2023

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Swaged Nipple **CNS Series**  06

Siphon **CY Series**  07

Condensate Pot **CP Series**  08

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90° Elbow **CL**  09

45° Elbow **CLB**  09

Tee **CT**  10

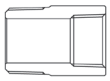
Cross **CX**  10

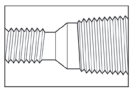
Full Coupling **CFC**  11

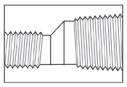
Half Coupling **CHC**  11

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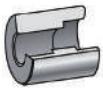
90° Elbow **CL-SW**  15

45° Elbow **CLB-SW**  15

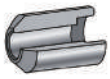
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Cross **CX-SW**  16

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Cap **CC-SW**  18

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All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Hydraulic Pipe Fittings

Class Ratings

ASME B16.11-2005 specifies the types of Fittings by class designation and DN (NOMINAL DIAMETER) and NPS (NOMINAL PIPE SIZE) range.

Table 1. Fitting Class Rating

DN (NPS)

Description	Socket-Weld			Threaded		
	Class Designation			Class Designation		
	3000	6000	9000	2000	3000	6000
45 DEG., 90 deg. Elbows	DN6-DN100 (1/8-4)	DN6-DN50 (1/8-2)	DN15-DN50 (1/2-2)	DN6-DN100 (1/8-4)	DN6-DN100 (1/8-4)	DN6-DN100 (1/8-4)
Tees, Crosses	DN6-DN100 (1/8-4)	DN6-DN50 (1/8-2)	DN15-DN50 (1/2-2)	DN6-DN100 (1/8-4)	DN6-DN100 (1/8-4)	DN6-DM100 (1/8-4)
Coupling, Half-Coupling	DN6-DN100 (1/8-4)	DN6-DN50 (1/8-2)	DN15-DN50 (1/2-2)	…	DN6-DN100 (1/8-4)	DN6-DN100 (1/8-4)
Cap	DN6-DN100 (1/8-4)	DN6-DN100 (1/8-4)	DN15-DN50 (1/2-2)	…	DN6-DN100 (1/8-4)	DN6-DN100 (1/8-4)
Square, Hex, Round Plug	…	…	…	DN6-DN100 (1/8-4) (See Note (1))		
Hex and Flush Bushing	…	…	…	DN6-DN100 (1/8-4) (See Note (1))		

Note: (1) Plugs and bushings are not identified by Class Designation. They may be used for ratings up through Class 6000 designation.

Table 2. NPS vs., DN

NPS	1/8	1/4	3/8	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4
DN	6	8	10	15	20	25	32	40	50	65	80	100
Pipe OD												Unit: mm
ANSI	10.29	13.72	17.14	21.34	26.67	33.40	42.16	48.26	60.32	73.02	88.90	114.30
JIS	10.50	13.80	17.30	21.70	27.20	34.00	42.70	48.60	60.50	76.30	89.10	114.30

* NPS: Nominal Pipe size used for inch dimensioned Fittings
* DN: Nominal diameter used for millimeter dimensioned Fittings

Table 3.

Correlation of Fittings class with schedule number or wall designation of pipe for calculation of rations.

Class Designation of Fitting	Type of Fitting	Pipe Used For Rating Basis (See Note)	
		Schedule No.	Wall Designation
2000	Threaded	80	XS
3000	Threaded	160	...
6000	Threaded	...	XXS
3000	Socket-Welding	80	XS
6000	Socket-Welding	160	...
9000	Socket-Welding	...	XXS

Note :
This table is not intended to restrict the use of pipe of thinner or thicker wall with Fittings. Pipe actually used may be thinner or thicker in nominal wall than that shown in table 3. When thinner pipe is used, its strength may govern the rating. When thicker pipe is used (e.g.,for mechanical strength), the strength of the Fittings governs the rating.

Fitting Surface Protection

- Stainless Steel Fittings are cleaned and passivated.
- Carbon Steel Fittings are cleaned and oiled.
- Carbon Steel Fittings with ASTM A123 Hot Dip Galvanized is optional with the ordering designator of "**HG**".

Marking

Every Fittings is permanently marked complying with the requirements of ASME B16. 11-2005.

Technical Data

Table 4. Pressure - Temperature Ratings

(Unit : psig)

Temperature C (F)	Class 2000 Threaded Fittings			Class 3000 Socket Welding & Threaded Fittings			Class 6000 Socket Welding & Threaded Fittings		
	Carbon Steel	F304	F316	Carbon Steel	F304	F316	Carbon Steel	F304	F316
37 (100)	2000	1715	2000	3000	2570	3000	6000	5145	6000
65 (150)	1970	1615	1970	2950	2425	2950	5915	4855	5915
93 (200)	1940	1520	1940	2915	2280	2915	5830	4565	5830
121 (250)	1915	1445	1915	2875	2170	2875	5750	4340	5750
148 (300)	1895	1370	1896	2845	2055	2845	5690	4115	5690
176 (350)	1875	1310	1875	2810	1965	2810	5625	3930	5625
204 (400)	1850	1245	1850	2775	1870	2775	5550	3745	5550
232 (450)	1810	1195	1810	2715	1790	2715	5430	3585	5430
260 (500)	1735	1140	1735	2605	1715	2605	5210	3430	5210
287 (550)	1640	1100	1640	2460	1650	2460	4925	3305	4925
315 (600)	1540	1060	1540	2310	1590	2310	4620	3180	4620
343 (650)	1430	1020	1430	2150	1535	2150	4300	3070	4300
371 (700)	1305	985	1370	1960	1480	2055	3920	2960	4110
398 (750)	1180	950	1305	1775	1425	1960	3550	2850	3920
426 (800)	1015	915	1240	1525	1370	1865	3050	2745	3730
454 (850)	830	880	1180	1250	1330	1770	2500	2660	3540
482 (900)	615	860	1115	925	1290	1675	1855	2580	3350
510 (950)	425	845	1055	640	1270	1580	1295	2540	3165
537 (1000)	235	830	990	350	1250	1485	715	2500	2975

Table 5. Wall Thickness of Welded and Seamless Pipe

(Unit : mm)

Nominal Pipe Size		Pipe Outside Diameter		Nominal Wall Thickness								
DN	NPS	JIS	ANSI	SPP SGP	Sch 5s	Sch 10s	Sch 10	Sch 20s	Sch 20	Sch 30	Sch 40s	Sch 40
6	1/8	10.50	10.29	-	-	1.24	-	1.5	-	-	1.73	1.73
8	1/4	13.80	13.72	-	-	1.65	-	2.0	-	-	2.24	2.24
10	3/8	17.30	17.14	-	-	1.65	-	2.0	-	-	2.31	2.31
15	1/2	21.70	21.34	2.8	1.65	2.11	-	2.5	-	-	2.77	2.77
20	3/4	27.20	26.67	2.8	1.65	2.11	-	2.5	-	-	2.87	2.87
25	1	34.00	33.40	3.2	1.65	2.77	-	3.0	-	-	3.38	3.38
32	1 1/4	42.70	42.16	3.5	1.65	2.77	-	3.0	-	-	3.56	3.56
40	1 1/2	48.60	48.26	3.5	1.65	2.77	-	3.0	-	-	3.68	3.68
50	2	60.50	60.32	3.8	1.65	2.77	-	3.5	3.20	-	3.91	3.91
65	2 1/2	76.30	73.02	4.2	2.11	3.05	-	3.5	4.50	-	5.16	5.16
80	3	89.10	88.90	4.2	2.11	3.05	-	4.0	4.50	-	5.49	5.49

(Unit : mm)

Nominal Pipe Size		Pipe Outside Diameter		Nominal Wall Thickness								
DN	NPS	JIS	ANSI	Sch 60	Sch 80s	X-S	Sch 80	Sch 100	Sch 120	Sch 140	Sch 160	XX-S
6	1/8	10.50	10.29	2.20	2.41	2.41	2.41	-	-	-	3.15	4.83
8	1/4	13.80	13.72	2.40	3.02	3.02	3.02	-	-	-	3.68	6.05
10	3/8	17.30	17.14	2.80	3.20	3.20	3.20	-	-	-	4.01	6.40
15	1/2	21.70	21.34	3.20	3.73	3.73	3.73	-	-	-	4.78	7.47
20	3/4	27.20	26.67	3.40	3.91	3.91	3.91	-	-	-	5.56	7.82
25	1	34.00	33.40	3.90	4.55	4.55	4.55	-	-	-	6.35	9.09
32	1 1/4	42.70	42.16	4.50	4.85	4.85	4.85	-	-	-	6.35	9.70
40	1 1/2	48.60	48.26	4.50	5.08	5.08	5.08	-	-	-	7.14	10.16
50	2	60.50	60.32	4.90	5.54	5.54	5.54	-	-	-	8.74	11.07
65	2 1/2	76.30	73.02	6.00	7.01	7.01	7.01	-	-	-	9.52	14.02
80	3	89.10	88.90	6.60	7.62	7.62	7.62	-	-	-	11.12	15.24

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Table 6. Pipe I.D. (Internal Diameter) at Class 3000, 6000, 9000

(Unit : mm)

Pipe Schedule No.		Sch 80	Sch 160	-
Pipe Wall Designation		X-S	-	XX-S
Threaded Pipe Rating		2000	3000	6000
Socket-Welding Pipe Rating		3000	6000	9000
NPS	ANSI PIPE O.D.	ANSI PIPE I.D.		
1/8	10.29	5.47	3.99	0.63
1/4	13.72	7.68	6.36	1.62
3/8	17.14	10.74	9.12	4.34
1/2	21.34	13.88	11.78	6.40
3/4	26.67	18.85	15.55	11.03
1	33.40	24.30	20.70	15.22
1-1/4	42.16	32.46	29.46	22.76
1-1/2	48.26	38.10	33.98	27.94
2	60.32	49.24	42.84	38.18

Fitting Ordering Information

Select an applicable part number and suffix the Fitting material designator to the part number.
Example : C2L-02R-**C**

Table 7. Fitting Material Designator

Fitting Materials	Standard	Identifier
Carbon Steel Forgings	ASTM A105	C
	ASTM A105 Normalized	CN
Forged Alloy Steel	ASTM A182 F316	S
	ASTM A182 F316L	L
	ASTM A182 Grade F44 UNS S31254 (6Mo)	M6
	ASTM A182 Grade F11, Class 1, UNS K11597	C1
	ASTM A182 Grade F11, Class 2, UNS K11572	C2
	ASTM A182 Grade F11, Class 3, UNS K11572	C3
Nickel Alloy Forgings	ASTM B564 UNS N04400	M
Forged Alloy	ASTM B462 UNS N08020	L20
Cold Drawn Bar Stock	ASTM A276 Type 316 / 316L	S
	ASTM A276 UNS S31254	M6
	ASTM A164 UNS N04400	M
	ASTM A473 UNS N08020	L20

Fitting with NPT thread

Fitting part number in this catalog is exhibited with ISO 7-1 taper pipe thread of **R**. To order ASME/ANSI B1.20.1 NPT threaded fitting, replace **R** with **N**. Example: C2L-02**N**-C

Hot Dip Galvanized / NACE MR 0175

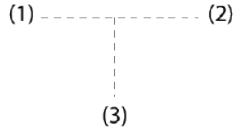
Insert "**HG**" to order hot dip Galvanized Fitting in the part number. To order H_2S Sour Gas service fittings meeting the requirements of NACE MR0175 latest revision, insert "**SG**" designator in the part number. Example: C2L-02N**HGSG**-C

Table 8. Pipe Thread Designator

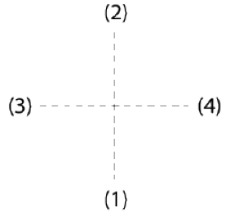
Designator	Standards
R	Taper Pipe Thread, ISO 7-1, BS21 (BSPT), JIS B 0203 (PT), DIN 2999
N	Taper Pipe Thread, ASME / ANSI B1.20.1 (NPT)

Fitting Ordering Information for reducing tees and crosses

Tees are described by first the runs(1), (2) and next the branch (3).



Crosses are described by first the branches (1),(2) and next the runs (3), (4).



Pipe Nipple
CN Series

Pipe Ordering Information

Example 1: PL	04	8	-	6M	-	CFA
Example 2: P	04	8	-	6M	-	CFA

- **PL** : Pipe Seamless
- **P** : Pipe Welded
- **04** : 1/2" Pipe OD. Refer to Table 10.
- **8** : SCH 80, Refer to Table 9.
- **6M** : 6 meter length pipe
- **CFA** : Refer to Table 11.



Table 9. Pipe Schedule Designator

Designator	Pipe SCH
4	SCH 40
8	SCH 80, XS
16	SCH 160
X	XXS

Pipe Nipple Ordering Information

Example : CN	08N	8	-	L100	HG	SG	-	CC

- **CN** : Pipe Nipple
- **08N** : 1" NPT Both Ends. Refer to Table 10.
- **8** : SCH 80 Pipe Wall. Refer to Table 9.
- **L100** : 100mm Length
- **HG** : Hot Dip Galvanized
- **SG** : H_2S Service
- **CC** : Refer to Table 11.

Full Length Pipe with Both End Threaded

Example : PL	04N	8	-	6M	SG	-	S

- **PL** : Pipe Seamless
- **04N** : 1/2" NPT Both Ends on 1/2" Pipe.
- **8** : SCH 80 Pipe Wall. Refer to Table 9.
- **6M** : 6 meter length pipe
- **SG** : H_2S Service
- **S** : Refer to Table 11.

Table 10. Pipe Size Designator

Nom.Size	1/8	1/4	3/8	1/2	3/4	1	1-1/4	1-1/2	2
Designator	01	02	03	04	06	08	10	12	16

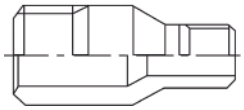
How to use with the pipe thread's designator.
- **04N** : 1/2" NPT pipe thread.
- **08R** : 1" ISO 7-1 taper pipe thread.

Table 11. Pipe Material Designator

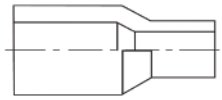
Pipe	Standard	Identifier
Black & Hot Dipped Galvanized Steel Pipe	ASTM A53 Type F Grade A - Welded	CFA
	ASTM A53 Type E Grade A - Welded	CEA
	ASTM A53 Type E Grade B - Welded	CEB
	ASTM A53 Type S Grade A - Seamless	CSA
	ASTM A53 Type S Grade B - Seamless	CSB
Seamless Carbon Steel Pipe	ASTM A106 Grade A	CA
	ASTM A106 Grade B	CB
	ASTM A106 Grade C	CC
Seamless and Welded Stainless Steel Pipe	ASTM A312 TP316	S
	ASTM A312 TP316L	L
	ASTM A312 TP304	4
	ASTM A312 TP304L	4L
	ASTM A312 UNS 31254	M6
Seamless Ferritic Alloy Steel Pipe	ASTM A335 P11	C11
	ASTM A335 P22	C22
Seamless Nickel-Copper alloy Pipe	ASTM B165 UNS N04400	M
Seamless Nickel Alloy Pipe	ASTM B729 UNS N08020	L20
Seamless Carbon Steel Pipe	API 5L GR. B	A5LB

Swaged Nipple

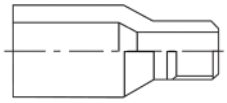
CNS Series Swaged Nipple



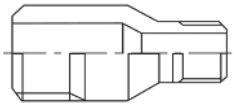
TBE



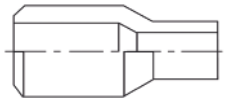
PBE



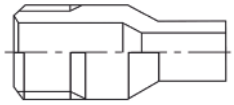
PLE / TSE



BLE / TSE



BLE / PSE



TLE / PSE

Legends

- TBE : Threaded Both End
- PBE : Plain Both End
- PLE / TSE : Plain Large End - Threaded Small End
- BLE / TSE : Beveled Large End - Threaded Small End
- BLE / PSE : Beveled Large End - Plain Small End
- TLE / PSE : Threaded Large End - Plain Small End

Ordering Information

To order CNS Series, prefix"CNS" and build up an ordering number by combining the designator in the sequence below.

Example 1 : CNS 0608N - 8 HG - CA

- **CNS** : Swaged Nipple
- **0608N** : 3/4” and 1” Male NPT Threaded Both End
- **8** : SCH 80 Pipe Wall. Refer to Table 9. Pipe Schedule Designator on page 6.
- **HG** : Hot Dip Galvanized
- **CA** : ASTM A106 Grade A. Refer to Table 11. Pipe Material Designator on page 6.

Example 2 : CNS 04N 08B - 8 - S

- **CNS** : Swaged Nipple
- **04N** : 1/2” NPT Male Threaded End
- **08B** : 1” Beveled End
- **8** : SCH 80 Pipe Wall
- **S** : ASTM A312 TP316.

Example 3 : CNS 04N 08P - 8 - S

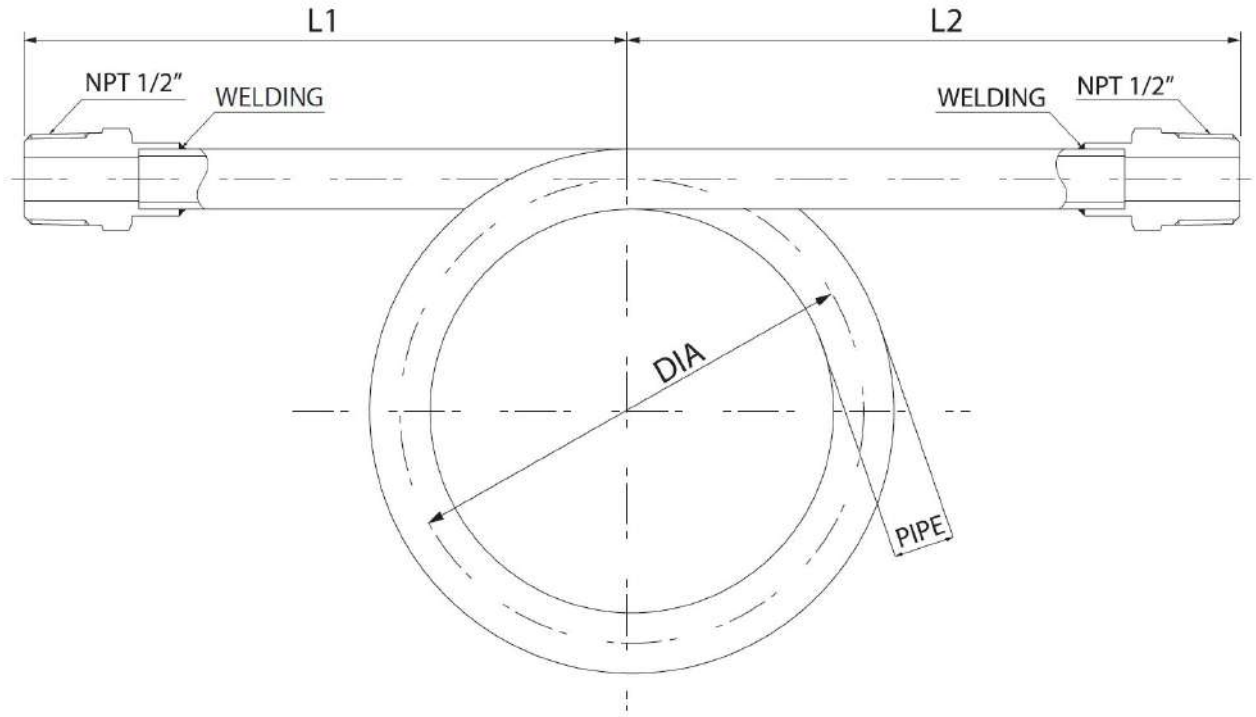
- **CNS** : Swaged Nipple
- **04N** : 1/2” NPT Male Threaded End
- **08P** : 1” Plain End
- **8** : SCH 80 Pipe Wall
- **S** : ASTM A312 TP316.

Example 4 : CNS 0408P - 8 - S

- **CNS** : Swaged Nipple
- **0408P** : 1/2” and 1” Plain Both Ends
- **8** : SCH 80 Pipe Wall
- **S** : ASTM A312 TP316.

Siphon Tube / Pipe

CY Series Shiphon



Ordering Information

Example : CY MF8N - 8T 065 - 700 S

- **CY** : Siphon
- **MF8N** : Male and Female 1/2" NPT Ends.
- **8T** : 1/2" Tube OD
- **065** : 0.065" Wall Thickness Tube
- **700** : 700 mm Length (L1 + L2)
- **S** : Stainless Steel 316

Example: CY M8N - 04 8 - 700 S

- **CY** : Siphon
- **M8N** : Male 1/2" NPT Both Ends.
- **04** : 1/2" Pipe
- **8** : SCH80 Pipe Wall
- **700** : 700 mm Length (L1 + L2)
- **S** : Stainless Steel 316

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Condensate Pot

CP Series

CP Series Hydraulic Condensate Pots are designed and configured in six layouts. Refer to POT Configuration.

"CP" Series Condensate Pot Part Listing

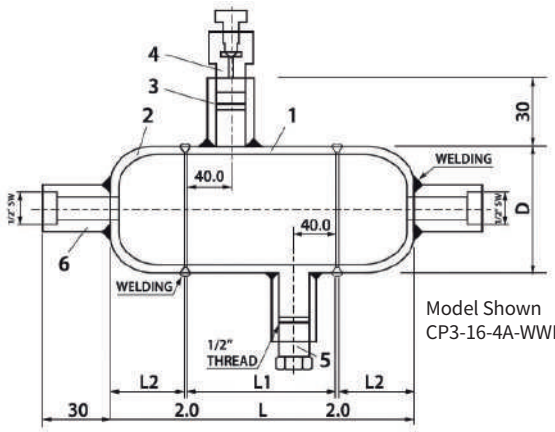
1	PIPE
2	CAP
3	HALF COUPLING (CHC)
4	VENT PLUG (CVP)
5	HEX HEAD PLUG (CHP)
6	SOCKET WELDING HALF COUPLING (CHCSW)

Table of Dimensions

(Unit : mm)

PIPE	D ANSI Pipe	L	L1*	L2
3"	88.9	214	110	50
4"	114.3	360	229	63.5

* L1 length is adjustable to fit client's requirements.



Model Shown
CP3-16-4A-WWPV-S

Ordering Information

To order CP Series, prefix "CP" and build up an ordering number by combining the designators in the sequence below.
An example of ordering number: CP3 or CPJ3-16-4A-WWPV-S

CP3 or CPJ3 | -16 | -4A | -WWPV | -S

ANSI Pipe Designator

Designator	Pipe OD	
2	2" ANSI	60.32 mm
3	3" ANSI	88.90 mm
4	4" ANSI	114.30 mm

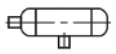
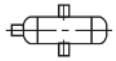
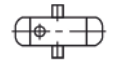
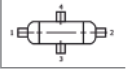
JIS Pipe Designator

Designator	Pipe OD	
J2	2" JIS	60.5 mm
J3	3" JIS	89.1 mm
J4	4" JIS	114.3 mm

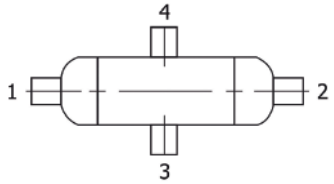
Pipe Schedule

Designator	Pipe SCH
4	SCH 40
8	SCH 80
16	SCH 160
X	SCH XXS

POT Configuration

Designator	Configuration
2A	
2B	
3A	
3B	
3C	
4A	

POT End Connections

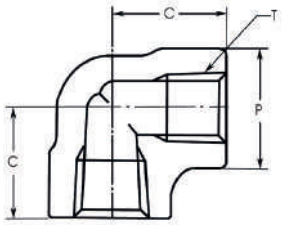
End connectors are described by first the run (1 and 2) and next the branch (3 and 4).	End Connection	Designator
	1/2" NPT Female	N
	1/2" PT Female	R
	1/2" SW Socket Weld	W
	1/2" DK-LOK	D
	Vent Plug (CVP)	V
	Hex head plug (CHP)	P

* Fitting Class on end connection is selected as per the Pipe Schedule Rating.

Pipe Material

Material	Designator
ASTM A312-TP304	4
ASTM A312-TP304L	4L
ASTM A312-TP316	S
ASTM A312-TP316L	L
ASTM A335-P11	C11
ASTM A335-P22	C22
ASTM A106 Grade B	CB

90° Elbow
CL



2000 lb

PART No	T(PT)	P	C
C2L-02R	1/4	26.5	25.4
C2L-03R	3/8	26.5	25.4
C2L-04R	1/2	34.0	28.5
C2L-06R	3/4	38.5	33.5
C2L-08R	1	46.5	38.1
C2L-10R	1 1/4	56.5	44.5
C2L-12R	1 1/2	63.5	50.8
C2L-16R	2	76.0	60.5

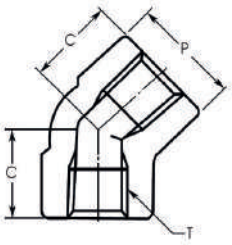
3000 lb

PART No	T(PT)	P	C
C3L-02R	1/4	26.5	25.4
C3L-03R	3/8	34.0	28.5
C3L-04R	1/2	38.5	33.5
C3L-06R	3/4	46.5	38.1
C3L-08R	1	56.5	44.5
C3L-10R	1 1/4	63.5	50.8
C3L-12R	1 1/2	76.0	60.5
C3L-16R	2	84.0	64.0

6000 lb

PART No	T(PT)	P	C
C6L-03R	3/8	38.5	33.5
C6L-04R	1/2	46.5	38.5
C6L-06R	3/4	56.5	44.5
C6L-08R	1	63.5	50.8
C6L-10R	1 1/4	76.0	60.5
C6L-12R	1 1/2	84.0	64.0
C6L-16R	2	110.0	85.0

45° Elbow
CLB



2000 lb

PART No	T(PT)	P	C
C2LB-02R	1/4	26.5	19.1
C2LB-03R	3/8	26.5	19.1
C2LB-04R	1/2	34.0	26.0
C2LB-06R	3/4	38.5	28.6
C2LB-08R	1	46.5	30.0
C2LB-10R	1 1/4	56.5	33.3
C2LB-12R	1 1/2	63.5	42.0
C2LB-16R	2	76.0	46.0

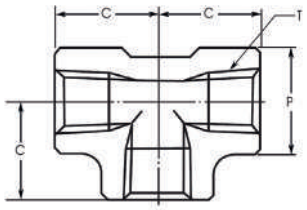
3000 lb

PART No	T(PT)	P	C
C3LB-02R	1/4	26.5	19.1
C3LB-03R	3/8	34.0	26.0
C3LB-04R	1/2	38.5	28.6
C3LB-06R	3/4	46.5	30.0
C3LB-08R	1	56.5	33.3
C3LB-10R	1 1/4	63.5	42.0
C3LB-12R	1 1/2	76.0	46.0
C3LB-16R	2	84.0	53.0

6000 lb

PART No	T(PT)	P	C
C6LB-03R	3/8	38.5	28.6
C6LB-04R	1/2	46.5	30.0
C6LB-06R	3/4	56.5	33.3
C6LB-08R	1	63.5	42.0
C6LB-10R	1 1/4	76.0	46.0
C6LB-12R	1 1/2	84.0	53.0
C6LB-16R	2	110.0	64.0

Tee
CT



2000 lb

PART No	T(PT)	P	C
C2T-02R	1/4	26.5	25.4
C2T-03R	3/8	26.5	25.4
C2T-04R	1/2	34.0	28.5
C2T-06R	3/4	38.5	33.5
C2T-08R	1	46.5	38.1
C2T-10R	1 1/4	56.5	44.5
C2T-12R	1 1/2	63.5	50.8
C2T-16R	2	76.0	60.5

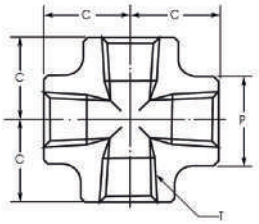
3000 lb

PART No	T(PT)	P	C
C3T-02R	1/4	26.5	25.4
C3T-03R	3/8	34.0	28.5
C3T-04R	1/2	38.5	33.5
C3T-06R	3/4	46.5	38.1
C3T-08R	1	56.5	44.5
C3T-10R	1 1/4	63.5	50.8
C3T-12R	1 1/2	76.0	60.5
C3T-16R	2	92.0	67.0

6000 lb

PART No	T(PT)	P	C
C6T-03R	3/8	38.5	33.5
C6T-04R	1/2	46.5	38.5
C6T-06R	3/4	56.5	44.5
C6T-08R	1	63.5	50.8
C6T-10R	1 1/4	76.0	60.5
C6T-12R	1 1/2	84.0	64.0
C6T-16R	2	110.0	85.0

Cross
CX



2000 lb

PART No	T(PT)	P	C
C2X-02R	1/4	26.5	25.4
C2X-03R	3/8	26.5	25.4
C2X-04R	1/2	34.0	28.5
C2X-06R	3/4	38.5	33.5
C2X-08R	1	46.5	38.1
C2X-10R	1 1/4	56.5	44.5
C2X-12R	1 1/2	63.5	50.8
C2X-16R	2	76.0	60.5

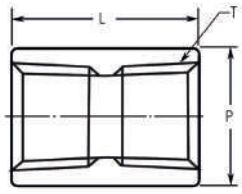
3000 lb

PART No	T(PT)	P	C
C3X-02R	1/4	26.5	25.4
C3X-03R	3/8	34.0	28.5
C3X-04R	1/2	38.5	33.5
C3X-06R	3/4	46.5	38.1
C3X-08R	1	56.5	44.5
C3X-10R	1 1/4	63.5	50.8
C3X-12R	1 1/2	76.0	60.5
C3X-16R	2	84.0	64.0

6000 lb

PART No	T(PT)	P	C
C6X-03R	3/8	38.5	33.5
C6X-04R	1/2	46.5	38.1
C6X-06R	3/4	56.5	44.5
C6X-08R	1	63.5	50.8
C6X-10R	1 1/4	76.0	60.5
C6X-12R	1 1/2	84.0	64.0
C6X-16R	2	110.0	83.0

Full Coupling
CFC



2000 lb

PART No	T(PT)	P	L
C2FC-02R	1/4	19.0	35.0
C2FC-03R	3/8	22.0	38.0
C2FC-04R	1/2	28.5	48.0
C2FC-06R	3/4	35.0	51.0
C2FC-08R	1	44.5	61.0
C2FC-10R	1 1/4	57.0	67.0
C2FC-12R	1 1/2	63.5	80.0
C2FC-16R	2	76.0	86.0

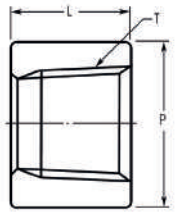
3000 lb

PART No	T(PT)	P	L
C3FC-02R	1/4	19.0	35.0
C3FC-03R	3/8	22.0	38.0
C3FC-04R	1/2	28.5	48.0
C3FC-06R	3/4	35.0	51.0
C3FC-08R	1	44.5	61.0
C3FC-10R	1 1/4	57.0	67.0
C3FC-12R	1 1/2	63.5	80.0
C3FC-16R	2	76.0	86.0

6000 lb

PART No	T(PT)	P	L
C6FC-02R	1/4	25.4	35.0
C6FC-03R	3/8	31.8	38.0
C6FC-04R	1/2	38.1	48.0
C6FC-06R	3/4	44.5	51.0
C6FC-08R	1	57.0	61.0
C6FC-10R	1 1/4	63.5	67.0
C6FC-12R	1 1/2	76.0	80.0
C6FC-16R	2	92.0	86.0

Half Coupling
CHC



2000 lb

PART No	T(PT)	P	L
C2HC-02R	1/4	19.0	17.5
C2HC-03R	3/8	22.0	19.0
C2HC-04R	1/2	28.5	24.0
C2HC-06R	3/4	35.0	25.5
C2HC-08R	1	44.5	30.5
C2HC-10R	1 1/4	57.0	33.5
C2HC-12R	1 1/2	63.5	40.0
C2HC-16R	2	76.0	43.0

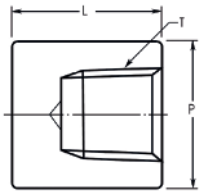
3000 lb

PART No	T(PT)	P	L
C3HC-02R	1/4	19.0	17.5
C3HC-03R	3/8	22.0	19.0
C3HC-04R	1/2	28.5	24.0
C3HC-06R	3/4	35.0	25.5
C3HC-08R	1	44.5	30.5
C3HC-10R	1 1/4	57.0	33.5
C3HC-12R	1 1/2	63.5	40.0
C3HC-16R	2	76.0	43.0

6000 lb

PART No	T(PT)	P	L
C6HC-02R	1/4	25.4	17.5
C6HC-03R	3/8	31.8	19.0
C6HC-04R	1/2	38.1	24.0
C6HC-06R	3/4	44.5	25.5
C6HC-08R	1	57.0	30.5
C6HC-10R	1 1/4	63.5	33.5
C6HC-12R	1 1/2	76.0	40.0
C6HC-16R	2	92.0	43.0

Cap
CC



2000 lb

PART No	T(PT)	P	L
C2C-02R	1/4	19.0	25.5
C2C-03R	3/8	22.0	25.0
C2C-04R	1/2	28.5	32.0
C2C-06R	3/4	35.0	37.0
C2C-08R	1	44.5	41.0
C2C-10R	1 1/4	57.0	44.0
C2C-12R	1 1/2	63.5	44.0
C2C-16R	2	76.0	48.0

3000 lb

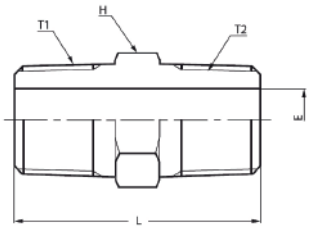
PART No	T(PT)	P	L
C3C-02R	1/4	19.0	25.5
C3C-03R	3/8	22.0	25.0
C3C-04R	1/2	28.5	32.0
C3C-06R	3/4	35.0	37.0
C3C-08R	1	44.5	41.0
C3C-10R	1 1/4	57.0	44.0
C3C-12R	1 1/2	63.5	44.0
C3C-16R	2	76.0	48.0

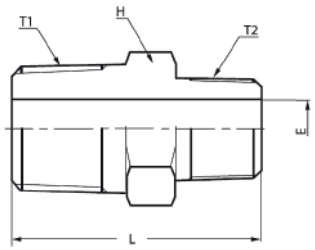
6000 lb

PART No	T(PT)	P	L
C6C-02R	1/4	25.4	27.0
C6C-03R	3/8	31.8	27.0
C6C-04R	1/2	38.1	33.0
C6C-06R	3/4	44.5	38.0
C6C-08R	1	57.0	43.0
C6C-10R	1 1/4	63.5	46.0
C6C-12R	1 1/2	76.0	48.0
C6C-16R	2	92.0	51.0

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Hex Nipple
CHN





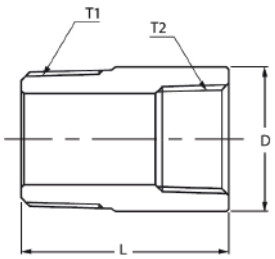
3000 lb/6000 lb

PART No	T1 - T2	E	H	L
C6HN-01R	1/8	4.1	12	26
C6HN-02R	1/4	7.1	17	36
C6HN-03R	3/8	8.9	19	36
C6HN-04R	1/2	11.9	24	47
C6HN-06R	3/4	16.0	30	48
C6HN-08R	1	20.1	36	59
C6HN-10R	1 1/4	27.9	46	60
C6HN-12R	1 1/2	32.0	50	64
C6HN-16R	2	39.9	65	68

3000 lb/6000 lb

PART No	T1 - T2	E	H	L
C6HN-0302R	3/8-1/4	7.1	19	36
C6HN-0402R	1/2-1/4	7.1	24	42
C6HN-0403R	1/2-3/8	8.9	24	42
C6HN-0602R	3/4-1/4	7.1	30	43
C6HN-0603R	3/4-3/8	8.9	30	43
C6HN-0604R	3/4-1/2	11.9	30	48
C6HN-0803R	1-3/8	8.9	36	49
C6HN-0804R	1-1/2	11.9	36	54
C6HN-0806R	1-3/4	16.0	36	54
C6HN-1004R	1 1/4-1/2	11.9	46	55
C6HN-1006R	1 1/4-3/4	16.0	46	55
C6HN-1008R	1 1/4-1	20.1	46	60
C6HN-1206R	1 1/2-3/4	16.0	50	58
C6HN-1208R	1 1/2-1	20.1	50	63
C6HN-1210R	1 1/2-1 1/4	27.9	50	63
C6HN-1608R	2 - 1	20.1	65	66
C6HN-1610R	2-1 1/4	27.9	65	66
C6HN-1612R	2-1 1/2	32.0	65	67
C6HN-2010R	2 1/2-1 1/4	27.9	80	80
C6HN-2012R	2 1/2-1 1/2	32.0	80	81
C6HN-2016R	2 1/2-2	39.9	80	82

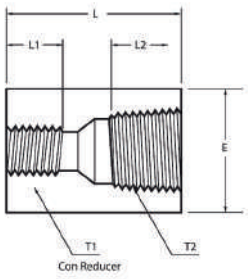
Male Female Reducer
CMFR



3000 lb

PART No	T1 - T2	L	D
C3MFR-0604R	3/4 - 1/2	44	29.0
C3MFR-0804R	1 - 1/2	51	33.4
C3MFR-0806R	1 - 3/4	51	35.0
C3MFR-1604R	2 - 1/2	70	60.3
C3MFR-1608R	2 - 1	70	60.3

Con Reducer
CR



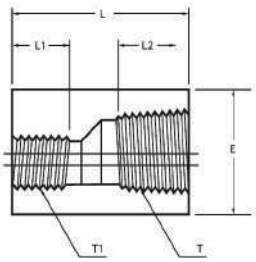
3000 lb

PART No	T1 - T2	E	L
C3R-0201R	1/4-1/8	19	35
C3R-0302R	3/8-1/4	22	38
C3R-0402R	1/2-1/4	29	48
C3R-0403R	1/2-3/8	29	48
C3R-0602R	3/4-1/4	35	51
C3R-0603R	3/4-3/8	35	51
C3R-0604R	3/4-1/2	35	51
C3R-0803R	1-3/8	44	60
C3R-0804R	1-1/2	44	60
C3R-0806R	1-3/4	44	60
C3R-1004R	1 1/4-1/2	57	67
C3R-1006R	1 1/4-3/4	57	67
C3R-1008R	1 1/4-1	57	67
C3R-1206R	1 1/2-3/4	64	79

6000 lb

PART No	T1 - T2	E	L
C6R-0201R	1/4-1/8	25	6.5
C6R-0302R	3/8-1/4	32	8.0
C6R-0402R	1/2-1/4	38	8.0
C6R-0403R	1/2-3/8	38	9.0
C6R-0602R	3/4-1/4	44	8.0
C6R-0603R	3/4-3/8	44	9.0
C6R-0604R	3/4-1/2	44	11.0
C6R-0803R	1-3/8	57	9.0
C6R-0804R	1-1/2	57	11.0
C6R-0806R	1-3/4	57	12.5
C6R-1004R	1 1/4-1/2	64	11.0
C6R-1006R	1 1/4-3/4	64	12.5
C6R-1008R	1 1/4-1	64	14.5
C6R-1206R	1 1/2-3/4	76	12.5

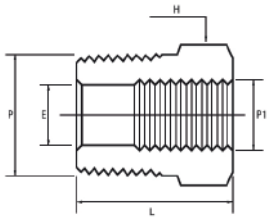
Eccentric Reducer
CER



Dimensions of Concentric Reducer (CR) and Eccentric Reducer (CER) are identical. To order CER, replace CR with CER.

Example:
Con Reducer's Part No.: C3R-0201R
Eccentric Reducer's Part No.: C3ER-0201R

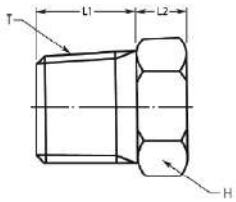
Reducing Hex Bushing
GHB



Refer GHB (Reducing Hex Bushing) to DK-LOK Instrumentation Pipe & Weld catalog # 03- latest revision.

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

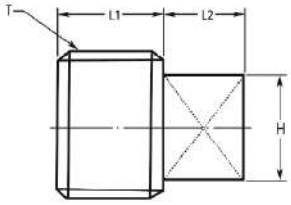
Hex Head Plug
CHP



3000 lb / 6000 lb

PART No	T(PT)	L1	L2	H
C6HP-01R	1/8	11.0	6.3	11.0
C6HP-02R	1/4	13.0	6.3	16.0
C6HP-03R	3/8	14.0	8.0	18.0
C6HP-04R	1/2	18.0	8.0	22.0
C6HP-06R	3/4	19.0	10.0	27.0
C6HP-08R	1	21.0	10.0	35.0
C6HP-10R	1 1/4	22.0	14.0	44.0
C6HP-12R	1 1/2	24.0	16.0	51.0
C6HP-16R	2	25.0	18.0	63.5

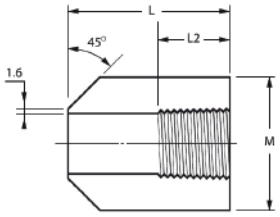
Square Head Plug
CSP



3000 lb / 6000 lb

PART No	T(PT)	L1	L2	H
C6SP-01R	1/8	9.9	6.6	7.0
C6SP-02R	1/4	13.0	6.6	9.5
C6SP-03R	3/8	13.0	7.9	11.0
C6SP-04R	1/2	15.0	9.9	14.5
C6SP-06R	3/4	16.0	11.0	16.0
C6SP-08R	1	20.1	13.0	21.0
C6SP-10R	1 1/4	21.1	15.0	24.0
C6SP-12R	1 1/2	21.1	16.0	28.5
C6SP-16R	2	23.1	18.0	33.5

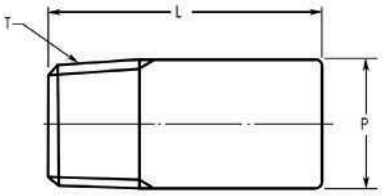
Boss
CB



3000 lb

PART No	T(PT)		M	L	L2
	B	A			
C3B-02R	1/4	8	19	40	8.0
C3B-03R	3/8	10	22	45	9.0
C3B-04R	1/2	15	29	50	11.0
C3B-06R	3/4	20	35	50	12.5
C3B-08R	1	25	44	50	14.5
C3B-10R	1 1/4	32	57	50	17.0
C3B-12R	1 1/2	40	64	50	18.0
C3B-16R	2	50	76	50	19.0

Round Head Plug(Cylindrical Head Plug)
CRP



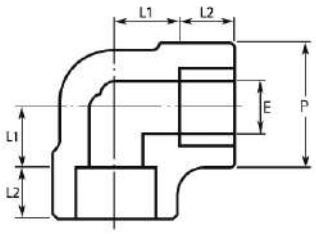
3000 lb / 6000 lb

PART No	T(PT)	P	L
C6RP-01R	1/8	10.3	35.0
C6RP-02R	1/4	13.5	41.3
C6RP-03R	3/8	17.5	41.3
C6RP-04R	1/2	21.4	44.5
C6RP-06R	3/4	27.0	44.5
C6RP-08R	1	33.4	50.8
C6RP-10R	1 1/4	42.9	50.8
C6RP-12R	1 1/2	48.4	50.8
C6RP-16R	2	60.3	63.5

6000 lb

PART No	T(PT)		M	L	L2
	B	A			
C6B-02R	1/4	8	25	40	8.0
C6B-03R	3/8	10	32	45	9.0
C6B-04R	1/2	15	38	50	11.0
C6B-06R	3/4	20	44	50	12.5
C6B-08R	1	25	57	50	14.5
C6B-10R	1 1/4	32	64	50	17.0
C6B-12R	1 1/2	40	76	50	18.0
C6B-16R	2	50	92	50	19.0

90° Elbow
CL-SW



3000 lb

PART No	SW	P	E	L1	L2
C3L-02SW	1/4	26.5	9.4	11.1	10.0
C3L-03SW	3/8	26.5	12.7	13.4	10.0
C3L-04SW	1/2	34.0	16.1	16.0	13.0
C3L-06SW	3/4	38.5	21.2	20.0	14.0
C3L-08SW	1	46.5	27.0	23.0	15.0
C3L-10SW	1 1/4	56.5	35.4	28.0	17.0
C3L-12SW	1 1/2	63.5	41.2	33.0	18.0
C3L-16SW	2	76.0	52.7	39.0	22.0

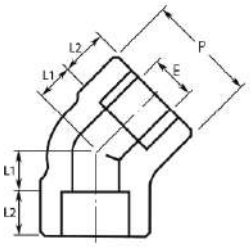
6000 lb

PART No	SW	P	E	L1	L2
C6L-04SW	1/2	38.5	12.0	20.0	16.0
C6L-06SW	3/4	46.5	15.8	23.0	16.0
C6L-08SW	1	56.5	21.0	28.0	18.0
C6L-10SW	1 1/4	63.5	29.7	33.0	20.0
C6L-12SW	1 1/2	76.0	34.2	40.0	22.0
C6L-16SW	2	84.0	43.1	42.0	24.0

9000 lb

PART No	SW	P	E	L1	L2
C9L-04SW	1/2	46.5	6.4	23.0	16.0
C9L-06SW	3/4	56.5	11.0	28.0	16.0
C9L-08SW	1	63.5	15.2	33.0	18.0
C9L-10SW	1 1/4	76.0	22.7	40.0	20.0
C9L-12SW	1 1/2	84.0	27.9	42.0	22.0
C9L-16SW	2	110.0	38.1	54.0	24.0

45° Elbow
CLB-SW



3000 lb

PART No	SW	P	E	L1	L2
C3LB-02SW	1/4	26.5	9.4	7.9	10.0
C3LB-03SW	3/8	26.5	12.7	7.9	10.0
C3LB-04SW	1/2	34.0	16.1	13.0	13.0
C3LB-06SW	3/4	38.5	21.2	13.0	14.0
C3LB-08SW	1	46.5	27.0	14.0	15.0
C3LB-10SW	1 1/4	56.5	35.4	18.0	17.0
C3LB-12SW	1 1/2	63.5	41.2	22.0	18.0
C3LB-16SW	2	76.0	52.7	24.0	22.0

6000 lb

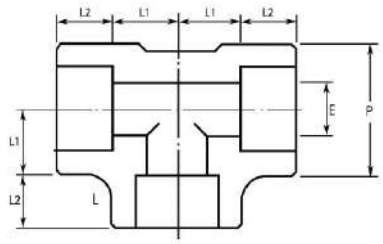
PART No	SW	P	E	L1	L2
C6LB-04SW	1/2	38.5	12.0	13.0	16.0
C6LB-06SW	3/4	46.5	15.8	14.0	16.0
C6LB-08SW	1	56.5	21.0	22.0	18.0
C6LB-10SW	1 1/4	63.5	29.7	22.0	20.0
C6LB-12SW	1 1/2	76.0	34.2	24.0	22.0
C6LB-16SW	2	84.0	43.1	29.0	24.0

9000 lb

PART No	SW	P	E	L1	L2
C9LB-04SW	1/2	46.5	6.4	14.0	16.0
C9LB-06SW	3/4	56.5	11.0	22.0	16.0
C9LB-08SW	1	63.5	15.2	22.0	18.0
C9LB-10SW	1 1/4	76.0	22.7	24.0	20.0
C9LB-12SW	1 1/2	84.0	27.9	29.0	22.0
C9LB-16SW	2	110.0	38.1	34.0	24.0

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Tee
CT-SW



3000 lb

PART No	SW	P	E	L1	L2
C3T-02SW	1/4	26.5	9.4	11.1	10.0
C3T-03SW	3/8	26.5	12.7	13.4	10.0
C3T-04SW	1/2	34.0	16.1	16.0	13.0
C3T-06SW	3/4	38.5	21.2	20.0	14.0
C3T-08SW	1	46.5	27.0	23.0	15.0
C3T-10SW	1 1/4	56.5	35.4	28.0	17.0
C3T-12SW	1 1/2	63.5	41.2	33.0	18.0
C3T-16SW	2	76.0	52.7	39.0	22.0

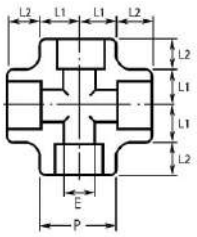
6000 lb

PART No	SW	P	E	L1	L2
C6T-04SW	1/2	38.5	12.0	20.0	16.0
C6T-06SW	3/4	46.5	15.8	23.0	16.0
C6T-08SW	1	56.5	21.0	28.0	18.0
C6T-10SW	1 1/4	63.5	29.7	33.0	20.0
C6T-12SW	1 1/2	76.0	34.2	40.0	22.0
C6T-16SW	2	84.0	43.1	42.0	24.0

9000 lb

PART No	SW	P	E	L1	L2
C9T-04SW	1/2	46.5	6.4	23.0	16.0
C9T-06SW	3/4	56.5	11.0	28.0	16.0
C9T-08SW	1	63.5	15.2	33.0	18.0
C9T-10SW	1 1/4	76.0	22.7	40.0	20.0
C9T-12SW	1 1/2	84.0	27.9	42.0	22.0
C9T-16SW	2	110.0	38.1	54.0	24.0

Cross
CX-SW



3000 lb

PART No	SW	P	E	L1	L2
C3X-02SW	1/4	26.5	9.4	7.9	10.0
C3X-03SW	3/8	26.5	12.7	7.9	10.0
C3X-04SW	1/2	34.0	16.1	13.0	13.0
C3X-06SW	3/4	38.5	21.2	13.0	14.0
C3X-08SW	1	46.5	27.0	14.0	15.0
C3X-10SW	1 1/4	56.5	35.4	18.0	17.0
C3X-12SW	1 1/2	63.5	41.2	22.0	18.0
C3X-16SW	2	76.0	52.7	24.0	22.0

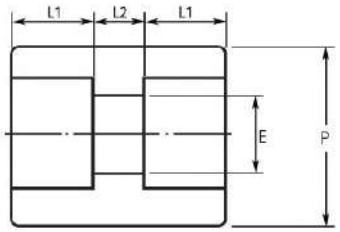
6000 lb

PART No	SW	P	E	L1	L2
C6X-04SW	1/2	38.5	12.0	13.0	16.0
C6X-06SW	3/4	46.5	15.8	14.0	16.0
C6X-08SW	1	56.5	21.0	22.0	18.0
C6X-10SW	1 1/4	63.5	29.7	22.0	20.0
C6X-12SW	1 1/2	76.0	34.2	24.0	22.0
C6X-16SW	2	84.0	43.1	29.0	24.0

9000 lb

PART No	SW	P	E	L1	L2
C9X-04SW	1/2	46.5	6.4	14.0	16.0
C9X-06SW	3/4	56.5	11.0	22.0	16.0
C9X-08SW	1	63.5	15.2	22.0	18.0
C9X-10SW	1 1/4	76.0	22.7	24.0	20.0
C9X-12SW	1 1/2	84.0	27.9	29.0	22.0
C9X-16SW	2	110.0	38.1	34.0	24.0

Full Coupling
CFC-SW



3000 lb

PART No	SW	P	E	L1	L2
C3FC-02SW	1/4	26.5	9.4	11.1	10.0
C3FC-03SW	3/8	26.5	12.7	13.4	10.0
C3FC-04SW	1/2	34.0	16.1	16.0	13.0
C3FC-06SW	3/4	38.5	21.2	20.0	14.0
C3FC-08SW	1	46.5	27.0	23.0	15.0
C3FC-10SW	1 1/4	56.5	35.4	28.0	17.0
C3FC-12SW	1 1/2	63.5	41.2	33.0	18.0
C3FC-16SW	2	76.0	52.7	39.0	22.0

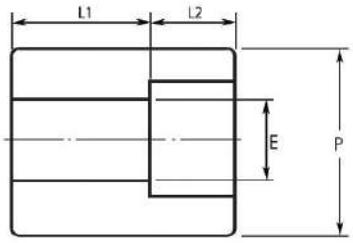
6000 lb

PART No	SW	P	E	L1	L2
C6FC-04SW	1/2	38.5	12.0	10.0	9.6
C6FC-06SW	3/4	46.5	15.8	13.0	9.6
C6FC-08SW	1	56.5	21.0	13.0	12.7
C6FC-10SW	1 1/4	63.5	29.7	13.0	12.7
C6FC-12SW	1 1/2	76.0	34.2	13.0	12.7
C6FC-16SW	2	84.0	43.1	16.0	19.1

9000 lb

PART No	SW	P	E	L1	L2
C9FC-04SW	1/2	46.5	6.4	10.0	9.6
C9FC-06SW	3/4	56.5	11.0	13.0	9.6
C9FC-08SW	1	63.5	15.2	13.0	12.7
C9FC-10SW	1 1/4	76.0	22.7	13.0	12.7
C9FC-12SW	1 1/2	84.0	27.9	13.0	12.7
C9FC-16SW	2	110.0	38.1	16.0	19.1

Half Coupling
CHC-SW



3000 lb

PART No	SW	P	E	L1	L2
C3HC-02SW	1/4	26.5	9.4	11.1	10.0
C3HC-03SW	3/8	26.5	12.7	13.4	10.0
C3HC-04SW	1/2	34.0	16.1	16.0	13.0
C3HC-06SW	3/4	38.5	21.2	20.0	14.0
C3HC-08SW	1	46.5	27.0	23.0	15.0
C3HC-10SW	1 1/4	56.5	35.4	28.0	17.0
C3HC-12SW	1 1/2	63.5	41.2	33.0	18.0
C3HC-16SW	2	76.0	52.7	39.0	22.0

6000 lb

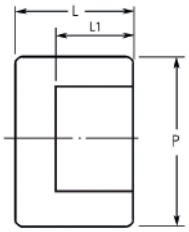
PART No	SW	P	E	L1	L2
C6HC-04SW	1/2	32.6	12.0	10.0	22.4
C6HC-06SW	3/4	40.0	15.8	13.0	23.9
C6HC-08SW	1	48.5	21.0	13.0	28.4
C6HC-10SW	1 1/4	57.2	29.7	13.0	30.2
C6HC-12SW	1 1/2	64.7	34.2	13.0	31.8
C6HC-16SW	2	80.3	43.1	16.0	41.1

9000 lb

PART No	SW	P	E	L1	L2
C9HC-04SW	1/2	40.4	6.4	10.0	22.4
C9HC-06SW	3/4	45.5	11.0	13.0	23.9
C9HC-08SW	1	55.0	15.2	13.0	28.4
C9HC-10SW	1 1/4	66.5	22.7	13.0	30.2
C9HC-12SW	1 1/2	73.0	27.9	13.0	31.8
C9HC-16SW	2	88.0	38.1	16.0	41.1

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Cap
CC-SW



3000 lb

PART No	SW	P	E	L	L1
C3C-02SW	1/4	21.0	10.0	20.0	10.0
C3C-03SW	3/8	25.0	10.0	20.0	10.0
C3C-04SW	1/2	31.0	10.0	20.0	13.0
C3C-06SW	3/4	36.3	13.0	25.0	14.0
C3C-08SW	1	44.5	13.0	27.0	15.0
C3C-10SW	1 1/4	54.0	13.0	30.0	17.0
C3C-12SW	1 1/2	60.3	13.0	30.0	18.0
C3C-16SW	2	73.5	16.0	36.0	22.0

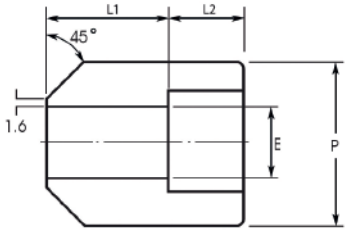
6000 lb

PART No	SW	P	E	L	L1
C6C-02SW	1/2	32.6	10.0	26.0	16.0
C6C-03SW	3/4	40.0	13.0	27.0	16.0
C6C-04SW	1	48.5	13.0	30.0	18.0
C6C-06SW	1 1/4	57.2	13.0	35.0	20.0
C6C-08SW	1 1/2	64.7	13.0	36.0	22.0
C6C-10SW	2	80.3	16.0	39.0	24.0

9000 lb

PART No	SW	P	E	L	L1
C9C-02SW	1/2	40.4	10.0	30.0	16.0
C9C-03SW	3/4	45.5	13.0	30.0	16.0
C9C-04SW	1	55.0	13.0	33.0	18.0
C9C-06SW	1 1/4	66.5	13.0	40.0	20.0
C9C-08SW	1 1/2	73.0	13.0	40.0	22.0
C9C-10SW	2	88.0	16.0	43.0	24.0

Boss
CB-SW



3000 lb

PART No	SW	P	E	L1	L2
C3B-02SW	1/4	21.0	9.4	10.0	20.0
C3B-03SW	3/8	25.0	12.7	10.0	20.0
C3B-04SW	1/2	31.0	16.1	10.0	23.0
C3B-06SW	3/4	36.3	21.2	13.0	22.0
C3B-08SW	1	44.5	27.0	13.0	30.0
C3B-10SW	1 1/4	54.0	35.4	13.0	33.0
C3B-12SW	1 1/2	60.3	41.2	13.0	37.0
C3B-16SW	2	73.5	52.7	16.0	41.0

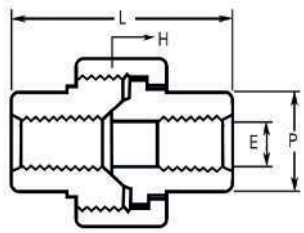
6000 lb

PART No	SW	P	E	L1	L2
C6B-04SW	1/2	32.6	12.0	10.0	23.0
C6B-06SW	3/4	40.0	15.8	13.0	22.0
C6B-08SW	1	48.5	21.0	13.0	30.0
C6B-10SW	1 1/4	57.2	29.7	13.0	33.0
C6B-12SW	1 1/2	64.7	34.2	13.0	37.0
C6B-16SW	2	80.3	43.1	16.0	41.0

9000 lb

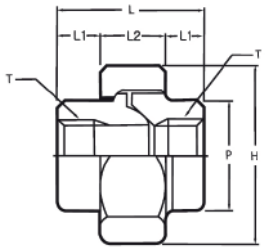
PART No	SW	P	E	L1	L2
C9B-04SW	1/2	38.1	6.4	10	23.0
C9B-06SW	3/4	44.3	11.0	13	22.0
C9B-08SW	1	64.2	15.2	13	30.0
C9B-10SW	1 1/4	63.8	22.7	13	33.0
C9B-12SW	1 1/2	71.1	27.9	13	37.0
C9B-16SW	2	85.5	38.1	16	41.0

Tread Union
CU



3000 lb

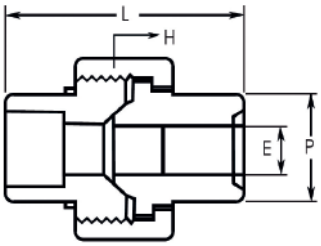
PART No	T(PT)	P	E	L	H
C3U-01R	1/8	14.7	6.43	41.4	16.0
C3U-02R	1/4	19.0	9.45	41.4	16.0
C3U-03R	3/8	22.9	13.51	46.0	14.0
C3U-04R	1/2	27.7	17.07	49.0	14.0
C3U-06R	3/4	33.5	21.39	56.9	11.0
C3U-08R	1	41.4	27.74	62.0	11.0
C3U-10R	1 1/4	50.5	35.36	71.1	11.0
C3U-12R	1 1/2	57.2	41.20	76.4	10.0
C3U-16R	2	70.1	52.12	86.1	10.0



6000 lb

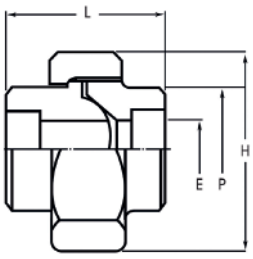
PART No	T(PT)	P	L1	L2	L	H
C6U-02R	1/4	25.4	13.5	19.0	46.0	40 HEX
C6U-03R	3/8	32.0	15.0	21.0	51.0	46 HEX
C6U-04R	1/2	40.0	17.0	23.0	57.0	56 HEX
C6U-06R	3/4	44.5	19.5	25.0	64.0	65 HEX
C6U-08R	1	51.0	22.5	27.0	72.0	74 OCT
C6U-10R	1 1/4	57.2	24.0	30.0	78.0	83 OCT
C6U-12R	1 1/2	71.5	26.0	36.0	88.0	103 OCT
C6U-16R	2	90.0	34.0	42.0	110.0	124 OCT

Socket Weld Union
CU-SW



3000 lb

PART No	SW	P	E	L	H
C3U-01SW	1/8	21.8	6.43	41.4	16.0
C3U-02SW	1/4	21.8	9.45	41.4	16.0
C3U-03SW	3/8	25.9	13.51	46.0	14.0
C3U-04SW	1/2	31.2	17.07	49.0	14.0
C3U-06SW	3/4	37.1	21.39	56.9	11.0
C3U-08SW	1	45.5	27.74	62.0	11.0
C3U-10SW	1 1/4	54.9	35.36	71.1	11.0
C3U-12SW	1 1/2	61.5	41.20	76.4	10.0
C3U-16SW	2	75.2	52.12	86.1	10.0

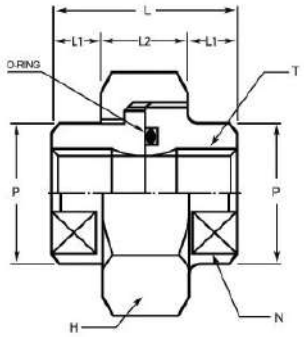


6000 lb

PART No	SW	P	E	L	H
C6U-04SW	1/2	40.0	12.0	57.0	56 HEX
C6U-06SW	3/4	44.5	15.8	64.0	65 HEX
C6U-08SW	1	51.0	21.0	72.0	74 OCT
C6U-10SW	1 1/4	57.2	29.7	78.0	83 OCT
C6U-12SW	1 1/2	71.5	34.2	88.0	103 OCT
C6U-16SW	2	90.0	43.1	110.0	124 OCT

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

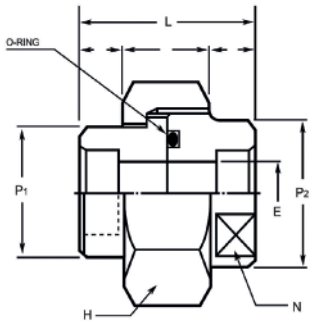
Thread Union O-ring Type
CUO



3000 lb

PART No	T(PT)	P	L1	L2	L	H	N	O-ring
C3UO-02R	1/4	22.0	10.0	18.0	38.0	35 HEX	21.0	P18
C3UO-03R	3/8	27.0	10.0	18.0	38.0	41 HEX	26.0	P20
C3UO-04R	1/2	32.0	12.0	20.0	44.0	46 HEX	32.0	G25
C3UO-06R	3/4	38.0	12.0	26.0	50.0	54 HEX	38.0	G30
C3UO-08R	1	47.0	15.0	26.0	56.0	63 OCT	46.0	G35
C3UO-10R	1 1/4	56.0	15.0	30.0	60.0	77 OCT	54.0	G45
C3UO-12R	1 1/2	63.0	18.0	36.0	72.0	80 OCT	63.0	G50
C3UO-16R	2	76.0	18.0	36.0	72.0	95 OCT	77.0	G65

Socket Weld Union O-ring Type
CUO-SW



3000 lb

PART No	SW	P1	P2	E	L1	L2	L	N	H	O-ring
C3UO-02SW	1/4	22.0	24.0	10.0	10.0	18.0	38.0	21.0	35 HEX	P18
C3UO-03SW	3/8	27.0	30.0	12.0	10.0	18.0	38.0	26.0	41 HEX	P20
C3UO-04SW	1/2	32.0	35.0	16.0	10.0	12.0	44.0	32.0	46 HEX	G25
C3UO-06SW	3/4	38.0	42.0	20.0	12.0	26.0	50.0	38.0	54 HEX	G30
C3UO-08SW	1	47.0	52.0	25.0	15.0	26.0	56.0	46.0	63 HEX	G35
C3UO-10SW	1 1/4	56.0	60.0	32.0	15.0	30.0	60.0	54.0	77 HEX	G45
C3UO-12SW	1 1/2	63.0	68.0	38.0	18.0	36.0	72.0	63.0	80 OCT	G50
C3UO-16SW	2	76.0	82.0	48.0	17.0	18.0	36.0	72.0	95 OCT	G65

The information shown in this catalog are not for design purpose, but for reference only.
The accuracy of information is not the liability of our company.

Safe Component Selection

The Selection of component for any applications or system design must be considered to ensure safe performance Component function, material compatibility, component ratings, proper installation, operation and maintenance remain the sole responsibility of the system designer and the user. DK-Lok accepts no liability for any improper selection, installation, operation or maintenance.

DK-LOK

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IDK-LOK

Instrumentation Pipe & Weld Fittings

Rev. 01-01
Aug. 2023



DK-LOK®
Instrumentation Pipe & Weld Fittings

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All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

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Technical Information

Rev.01-01
Aug.2023

6000psig, 10000psig and standard rating



DK-Lok Thread Fittings

Three different ratings are available to fit your specific application.
- Standard rating : page 3
- 10,000 psig : page 12
- 6,000 psig : page 15

DK-Lok Weld Fittings

See page 16
- Tube Socket Weld
- Pipe Butt-weld

Features of DK-Lok Thread Fittings

- Wrench flat body design allowing standard Hex. wrench assembly.
- Attractive finishes to suit precision equipment.
- Much less-weight design compared to Class 3000 pipe fittings.
- Fine pipe thread construction equals or exceeds the requirement of ASME B1.20.1 to ensure maximum thread engagement.
- Male pipe threads capped for protection from damages.
- Fitting materials available in SS316, Brass and Carbon Steel.

Thread Fittings - Standard Rating

DK-Lok Thread Fittings - Standard Rating are designed to the requirements of ASME B31.3 process piping code.
The pipe thread sizes are available 1/8” to 1”

Table 1. **Pressure Ratings**

Size Designator	NPT/ISO Pipe Size	Stainless Steel 316				Brass				Carbon Steel			
		Male		Female		Male		Female		Male		Female	
		bar	psig	bar	psig	bar	psig	bar	psig	bar	psig	bar	psig
2	1/8	689	10,000	420	6,100	337	4,900	207	3,000	689	10,000	420	6,100
4	1/4	558	8,100	434	6,300	275	4,000	214	3,200	558	8,100	434	6,300
6	3/8	524	7,600	345	5,000	262	3,800	172	2,500	524	7,600	345	5,000
8	1/2	517	7,500	324	4,700	255	3,700	158	2,300	517	7,500	324	4,700
12	3/4	496	7,200	303	4,400	248	3,600	152	2,200	496	7,200	303	4,400
16	1	365	5,300	296	4,300	172	2,500	145	2,100	365	5,300	296	4,300

- Pressure ratings listed are for temperature up to 37°C (100°F)
- Pressure rating is calculated at -28 to 37°C (-20 to 100°F) using allowable stress value of 20,000psi for SS316, 10,000psi for Brass, and 20,000psi for Carbon Steel as per ASME B31.3 Process Piping Code.
- To determine the working pressure of ASME B31.1 Power Piping Code, multiply the ASME B31.3 rating by 0.94. Brass pressure ratings remain the same.
- The pressure ratings of reducing hex bushing (GHB), pipe plug (GP), and shaped fittings such as Elbow, Tee, Crosses are not covered in this table. See the pressure rating in the dimensional table.

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Table 2. **Material Standards and Temperature Range**

Materials	Bar Stock	Forgings	Maximum Temperature
Stainless Steel 316	ASTM A276 Type 316 / ASTM A479 Type 316	ASTM A182 F316	537°C (1000°F)
Brass	JIS H3250 C3604 / ASTM B453 C35300	JIS H3250 C3771 / ASTM B283 C37700	204°C (400°F)
Carbon Steel	ASTM A108 / JIS G4051 S20C - S48C	ASTM A105 / JIS G4051 S20C - S48C	190°C (375°F)

Table 3. **Temperature De-rating Factors**

Temp.	°F	100	200	300	400	500	600	700	800	900	1,000	1,200
	°C	38	93	149	204	260	316	371	427	482	538	649
Factor	Stainless Steel	1.00	1.00	1.00	0.97	0.90	0.85	0.82	0.80	0.78	0.77	0.49
	Brass	1.00	0.78	0.69	0.13							
	Carbon Steel	1.00	0.94	0.91	0.88							

To determine the allowable working pressure at a specific temperature, multiply the working pressure by the applicable factor shown in table 3.
Example: The working pressure of GNC-2N-S at 700°F. 10,000 psig x 0.82 = 8200 psig.

Table 4. **Temperature Ratings of O-ring, Gasket Materials**

System temperature may be limited by the O-ring, Gasket material or thread sealant.

Component	Applicable Part #	Material	Temperature Ratings
O-ring	Designator : BN	NBR	-20 to 105°C (-4 to 221°F)
	Designator : VT	FKM	-28 to 204°C (-18 to 400°F)
	Designator : KZ	FFKM	-30 to 275°C (-22 to 527°F)
Copper Gasket	DGC-	Copper	-198 to 204°C (-324 to 400°F)
NBR bonded Gasket	DGB-	NBR bonded Carbon Steel Ring	-40 to 110°C (-40 to 230°F)
FKM bonded Gasket	DGV-	FKM bonded bonded Stainless Steel Ring	-28 to 204°C (-20 to 400°F)

Table 5. **Pipe Thread Designator**

Designator	Pipe	NPT ASME B1.20.1	ISO Thread	
			Tapered ISO 7-1	Parallel ISO 228-1
2	1/8	2N	2R	2G
4	1/4	4N	4R	4G
6	3/8	6N	6R	6G
8	1/2	8N	8R	8G
12	3/4	12N	12R	12G
16	1	16N	16R	16G

How to order

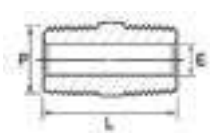
Select the desired fitting basic part number, and add a material designator below. Example: GL-2N-S

Material	SS 316 / 316L Dual Grade	Carbon Steel	Brass
Material Designator	S	C	B

CLOSE NIPPLE

GNC Male NPT both ends



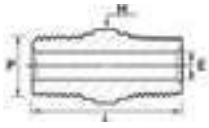


Part Number	P NPT in.	L mm	E mm
GNC- 2N	1/8	19.05	4.8
GNC- 4N	1/4	28.4	7.1
GNC- 6N	3/8	28.4	9.6
GNC- 8N	1/2	38.1	11.9
GNC-12N	3/4	38.1	15.7
GNC-16N	1	47.8	22.4

HEX NIPPLE

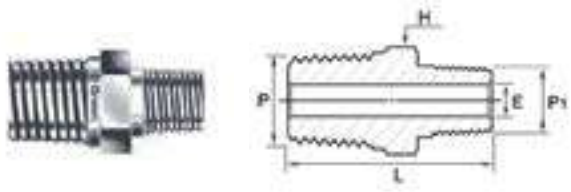
GNH Male NPT both ends





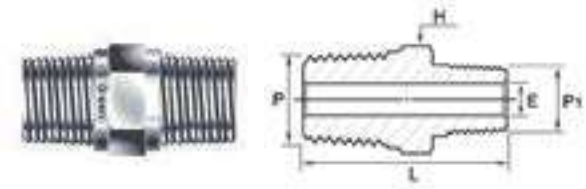
Part Number	P NPT in.	L mm	E mm	H HEX mm
GNH- 2N	1/8	25.65	4.8	11.1
GNH- 4N	1/4	35.56	7.1	14.2
GNH- 6N	3/8	36.32	9.6	17.4
GNH- 8N	1/2	46.73	11.9	22.2
GNH-12N	3/4	46.73	15.7	26.9
GNH-16N	1	58.92	22.3	34.9

HEX REDUCING NIPPLE
GNR Male NPT to reduced male NPT



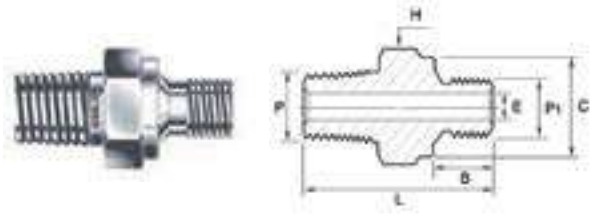
Part Number	P NPT in.	P1 Reduced NPT in.	L mm	E mm	H HEX mm
GNR 4-2N	1/4	1/8	30.7	4.8	14.2
GNR 6-2N	3/8	1/8	32.0	4.8	17.4
GNR 6-4N	3/8	1/4	36.1	7.1	17.4
GNR 8-2N	1/2	1/8	37.2	4.8	22.2
GNR 8-4N	1/2	1/4	41.7	7.1	22.2
GNR 8-6N	1/2	3/8	41.7	9.6	22.2
GNR 12-4N	3/4	1/4	41.7	7.1	26.9
GNR 12-8N	3/4	1/2	46.7	11.9	26.9
GNR 16-4N	1	1/4	49.3	7.1	34.9
GNR 16-8N	1	1/2	54.1	11.9	34.9

HEX NIPPLE
GNH Male NPT to ISO tapered



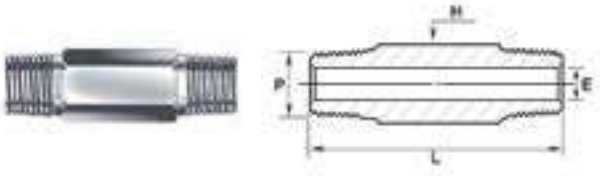
Part Number	P NPT in.	P1 ISO Thread Size	L mm	E mm	H HEX mm
GNH-2NR	1/8	1/8-28(7-1)	24.6	4.8	11.1
GNH-4NR	1/4	1/4-19(7-1)	35.6	7.1	14.2
GNH-6NR	3/8	3/8-19(7-1)	36.3	9.6	17.4
GNH-8NR	1/2	1/2-14(7-1)	46.7	11.9	22.2
GNH-12NR	3/4	3/4-14(7-1)	46.7	15.7	26.9
GNH-16NR	1	1-11(7-1)	58.9	22.4	34.9

HEX NIPPLE
GNH Male NPT to male ISO parallel



Part Number	P NPT in.	P1 ISO Thread Size	L mm	B mm	C mm	E mm	H HEX mm
GNH-2NG	1/8	1/8-28 (228-1)	27.4	7.1	13.7	4.1	14.2
GNH-4NG	1/4	1/4-19 (228-1)	36.8	11.2	17.8	5.8	19.05
GNH-6NG	3/8	3/8-19 (228-1)	37.6	11.2	21.8	7.9	22.2
GNH-8NG	1/2	1/2-14 (228-1)	45.0	14.2	26.1	11.9	26.9
GNH-12NG	3/4	3/4-14 (228-1)	49.0	15.7	31.5	15.7	33.3
GNH-16NG	1	1-11 (228-1)	56.9	18.3	38.9	19.8	41

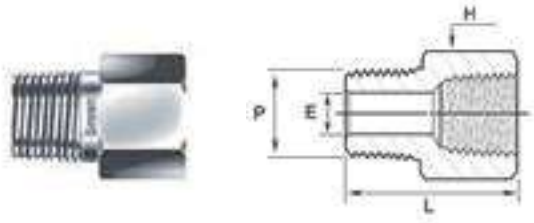
HEX LONG NIPPLE
GNL Male NPT both ends



Part Number	P NPT in.	L mm	E mm	H HEX mm
GNL-2N	1/8	★	4.8	11.1
GNL-4N	1/4	★	7.1	14.2
GNL-6N	3/8	★	9.7	17.4
GNL-8N	1/2	★	11.9	22.2
GNL-12N	3/4	★	15.7	26.9
GNL-16N	1	★	22.4	34.9

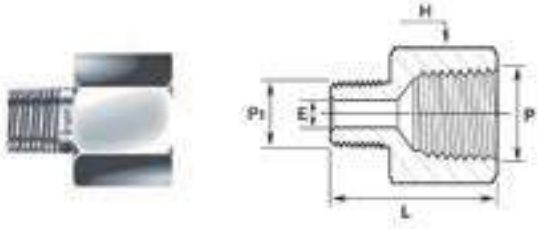
All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

ADAPTER
GAAMF Male NPT to equal female NPT



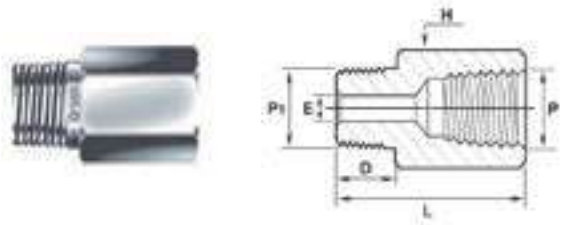
Part Number	P NPT in.	L mm	E mm	H HEX mm
GAAMF-2N	1/8	27.94	4.8	14.2
GAAMF-4N	1/4	35.56	7.1	19.05
GAAMF-6N	3/8	38.35	9.6	22.2
GAAMF-8N	1/2	49.27	11.9	26.9
GAAMF-12N	3/4	51.3	15.7	33.3
GAAMF-16N	1	57.91	22.3	41.2

REDUCING ADAPTER
GABMF Male NPT to larger female NPT



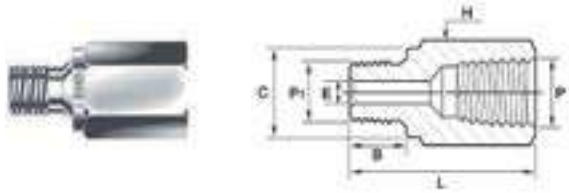
Part Number	P1 Male NPT in.	P Female NPT in.	L mm	E mm	H HEX mm
GABMF 2-4N	1/8	1/4	31.5	4.8	19.05
GABMF 2-6N	1/8	3/8	33.5	4.8	22.2
GABMF 4-6N	1/4	3/8	37.8	7.1	22.2
GABMF 2-8N	1/8	1/2	40.0	4.8	26.9
GABMF 4-8N	1/4	1/2	44.5	7.1	26.9
GABMF 6-8N	3/8	1/2	44.5	9.6	26.9
GABMF 4-12N	1/4	3/4	45.7	7.1	33.3
GABMF 6-12N	3/8	3/4	45.7	9.6	33.3
GABMF 8-12N	1/2	3/4	51.1	11.9	33.3
GABMF 4-16N	1/4	1	50.8	7.1	41.2
GABMF 8-16N	1/2	1	54.9	11.9	41.2
GABMF 12-16N	3/4	1	55.1	15.7	41.2

ADAPTER
GACMF Male ISO tapered to Female NPT



Part Number	P NPT in.	P1 ISO Thread Size	L mm	D mm	E mm	H HEX mm
GACMF-2RN	1/8	1/8-28 (7-1)	27.4	9.7	4.8	14.2
GACMF-4RN	1/4	1/4-19 (7-1)	35.8	14.2	7.1	19.05
GACMF-6RN	3/8	3/8-19 (7-1)	37.6	14.2	9.7	22.2
GACMF-8RN	1/2	1/2-14 (7-1)	49.0	19.1	11.9	26.9
GACMF-12RN	3/4	3/4-14 (7-1)	50.3	19.1	15.7	33.3
GACMF-16RN	1	1-11 (7-1)	58.0	23.9	22.3	41.2

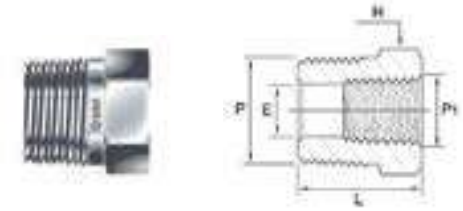
ADAPTER
GADMF Male ISO parallel to female NPT



Part Number	P NPT in.	P1 ISO Thread Size	L mm	B mm	C mm	E mm	H HEX mm
GADMF-2GN	1/8	1/8-28 (228-1)	24.9	7.1	13.7	4.1	14.2
GADMF-4GN	1/4	1/4-19 (228-1)	33.3	11.2	17.8	5.8	19.05
GADMF-6GN	3/8	3/8-19 (228-1)	37.8	11.2	21.8	7.9	22.2
GADMF-8GN	1/2	1/2-14 (228-1)	43.9	14.2	26.1	11.9	26.9
GADMF-12GN	3/4	3/4-14 (228-1)	50.8	15.7	31.5	15.7	33.3
GADMF-16GN	1	1-11 (228-1)	53.1	18.3	38.9	19.8	41.2

REDUCING HEX BUSHING

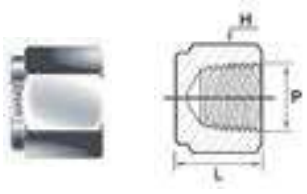
GHB Male NPT to reduced female NPT



Part Number	P Male NPT in.	P1 Female NPT in.	L mm	E mm	H HEX mm	Working Pressure bar (psig)	
						SS316,C.Steel	Brass
GHB4-2N	1/4	1/8	26.7	7.1	14.2	447 (6400)	227 (3200)
GHB6-2N	3/8	1/8	21.8	8.5	17.4	633 (9100)	323 (4600)
GHB6-4N	3/8	1/4	30.0	9.6	19.05	454 (6500)	227 (3200)
GHB8-2N	1/2	1/8	27.4	8.5	22.2	840 (12100)	427 (6100)
GHB8-4N	1/2	1/4	27.4	11.7	22.2	571 (8200)	303 (4300)
GHB8-6N	1/2	3/8	35.6	11.9	22.2	365 (5200)	179 (2500)
GHB12-4N	3/4	1/4	27.4	11.4	26.9	826 (11900)	413 (5900)
GHB12-6N	3/4	3/8	27.4	15.0	26.9	564 (8100)	296 (4200)
GHB12-8N	3/4	1/2	41.4	15.7	26.9	337 (4800)	165 (2300)
GHB16-4N	1	1/4	34.8	11.4	34.9	999 (14400)	509 (7300)
GHB16-8N	1	1/2	34.8	18.5	34.9	592 (8500)	296 (4200)
GHB16-12N	1	3/4	34.8	22.4	34.9	365 (5200)	179 (2500)

PIPE CAP

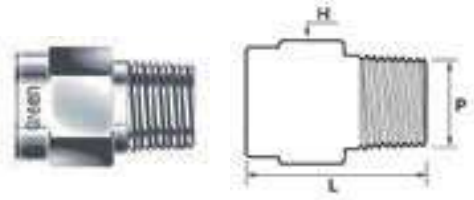
GC Female NPT



Part Number	P NPT in.	L mm	H HEX mm
GC-2N	1/8	19.1	14.2
GC-4N	1/4	22.9	19.05
GC-6N	3/8	26.2	22.2
GC-8N	1/2	34.0	26.9
GC-12N	3/4	36.6	33.3
GC-16N	1	41.1	41.2

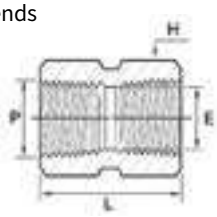
PIPE PLUG

GP Male NPT



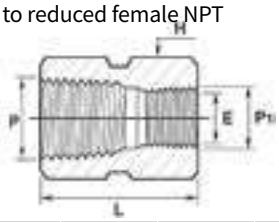
Part Number	P NPT in.	L mm	H HEX mm
GP-2N	1/8	19.05	11.1
GP-4N	1/4	24.1	14.2
GP-6N	3/8	25	17.4
GP-8N	1/2	30.5	22.2
GP-12N	3/4	30.5	26.9
GP-16N	1	38.1	34.9

HEX COUPLING
GCG Female NPT both ends

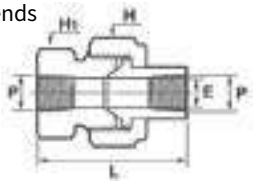
Part Number	P NPT in.	L mm	E mm	H HEX mm
GCG-2N	1/8	20.57	8.9	14.2
GCG-4N	1/4	30.22	10.87	19.05
GCG-6N	3/8	33.27	15.0	22.2
GCG-8N	1/2	39.62	18.7	26.9
GCG-12N	3/4	41.14	23.5	33.3
GCG-16N	1	50.8	29.7	41.2

HEX REDUCING COUPLING
GCGR Female NPT to reduced female NPT

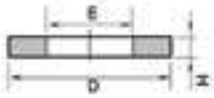
Part Number	P NPT in.	P1 Reduced NPT in.	L mm	E mm	H HEX mm
GCGR 4-2N	1/4	1/8	31.2	8.9	19.05
GCGR 6-4N	3/8	1/4	34.8	11.7	22.2
GCGR 8-2N	1/2	1/8	39.4	8.7	26.9
GCGR 8-4N	1/2	1/4	44.2	11.7	26.9
GCGR 8-6N	1/2	3/8	45.0	15.0	26.9
GCGR 12-4N	3/4	1/4	45.7	11.7	33.3
GCGR 16-12N	1	3/4	57.0	23.5	41.2

UNION BALL JOINT
GJU Female NPT both ends

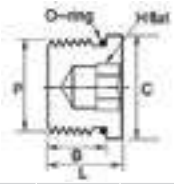
Part Number	P NPT in.	L mm	E mm	H HEX mm	H1 Wrench Flat mm
GJU-2N	1/8	45.7	6.9	28.6	23.8
GJU-4N	1/4	59.4	9.1	34.9	30.2
GJU-6N	3/8	63.5	13.2	38.1	33.3
GJU-8N	1/2	68.6	15.7	44.5	41.3
GJU-12N	3/4	79.2	22.4	50.8	47.6
GJU-16N	1	90.4	26.2	63.5	60.3

ISO PARALLEL COPPER GASKET
DGC For ISO Parallel male thread

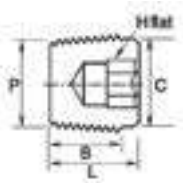
Part Number	ISO 228-1	E mm	H mm	D mm
DGC-2	1/8	9.9	1.0	15.0
DGC-4	1/4	13.2	1.5	19.1
DGC-6	3/8	16.8	1.5	23.1
DGC-8	1/2	21.1	1.5	26.9
DGC-12	3/4	26.7	2.0	33.0
DGC-16	1	33.3	2.0	40.1

HOLLOW HEX PLUG
GPA Male SAE/MS Straight Thread

Part Number	P SAE/MS Thread	L mm	B mm	C mm	H mm	Uniform O-ring Size
GPA- 4U	7/16-20	11.4	9.1	14.2	4.76	-904
GPA- 6U	9/16-18	12.2	9.9	17.5	6.35	-906
GPA- 8U	3/4-16	14.2	11.2	22.4	7.93	-908
GPA-12U	1 1/16-12	19.1	15.0	31.8	14.28	-912
GPA-16U	1 5/16-12	19.1	15.0	38.1	15.87	-916

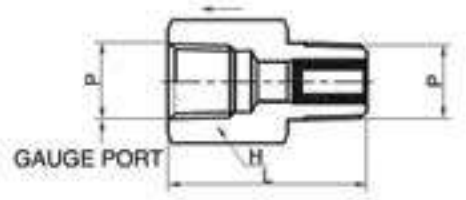
HOLLOW HEX PLUG
GPB Male NPT

Part Number	P NPT in.	L mm	B mm	C mm	H mm
GPB-2N	1/8	10.4	7.4	9.4	4.76
GPB-4N	1/4	15.5	12.4	12.1	6.35
GPB-6N	3/8	15.0	11.9	15.7	7.93
GPB-8N	1/2	19.3	16.2	19.3	9.52

SNUBBER FITTING GS

Snubber fitting consists of fitting and sintered SS316 element.
This protects pressure gauge or instruments from system pressure surge and shock.
The sintered element damps (snubs) the line pressure shock but It eventually allows the gauge to readout the line pressure, reducing the gauge's response time.

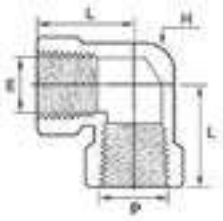


Part Number	P NPT in.	L mm	H mm	Working Pressure at 20°C (70°F) bar(psig)	
				SS316	Brass
GS-MF-4N-05*	1/4	35.6	3/4	303 (4400)	151 (2200)
GS-MF-8N-05*	1/2	49.3	1 1/16	337 (4900)	165 (2400)

Element Designator*	Pore Size Range,㎛	Element Porosity	Cv
05	0.5 - 2	17%	0.046
2	1 - 4	22%	0.056
7	5 - 10	27%	0.12
15	11 - 25	36%	0.13
60	50 - 75	44%	0.38
90	75 - 110	45%	0.50

ELBOW
GL Female NPT both ends

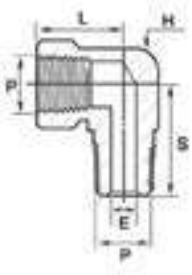




Part Number	P NPT in.	L mm	E mm	H Wrench Flat mm	Pressure Rating psi (bar)	
					SS316, C.Steel	Brass
GL-2N	1/8	24.1	8.9	12.7	6200 (427)	3100 (213)
GL-4N	1/4	29.0	11.7	17.5	7200 (496)	3600 (248)
GL-6N	3/8	34.5	15.0	20.6	5600 (385)	2800 (192)
GL-8N	1/2	37.0	18.7	25.4	5600 (385)	2800 (192)
GL-12N	3/4	46.5	23.5	31.8	5100 (351)	2500 (172)
GL-16N	1	48.8	29.7	42.9	6400 (440)	3200 (220)

STREET ELBOW
GLS Female to male NPT



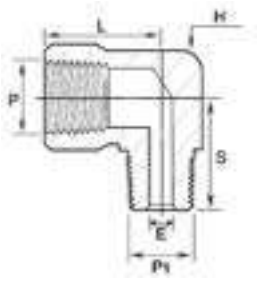


Part Number	P NPT in.	L mm	S mm	E mm	H Wrench Flat mm	Pressure Rating psi (bar)	
						SS316, C.Steel	Brass
GLS-2N	1/8	24.1	19.6	4.8	12.7	6200 (427)	3100 (213)
GLS-4N	1/4	29.0	26.5	7.1	17.5	7200 (496)	3600 (248)
GLS-6N	3/8	34.5	28.2	9.6	20.6	5600 (385)	2800 (192)
GLS-8N	1/2	37.0	35.3	11.9	25.4	5600 (385)	2800 (192)
GLS-12N	3/4	46.5	39.6	15.7	31.8	5100 (351)	2500 (172)
GLS-16N	1	48.8	49.2	22.3	42.9	5300 (365)	2600 (179)

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

REDUCING STREET ELBOW
GLSR Female to reduced Male NPT

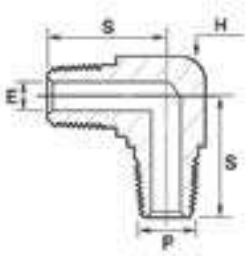




Part Number	P NPT in.	P1 Male NPT in.	L mm	S mm	E mm	H Wrench Flat mm	Pressure Rating psi (bar)	
							SS316, C.Steel	Brass
GLSR4-2N	1/4	1/8	29.0	22.4	4.8	17.5	7200 (496)	3600 (248)
GLSR6-4N	3/8	1/4	34.5	28.2	7.1	20.6	5600 (385)	2800 (192)
GLSR8-4N	1/2	1/4	37.0	30.5	7.1	25.4	5600 (385)	2800 (192)
GLSR8-6N	1/2	3/8	37.0	30.5	9.6	25.4	5600 (385)	2800 (192)
GLSR12-8N	3/4	1/2	46.5	41.6	11.9	31.8	5100 (351)	2500 (172)
GLSR16-8N	1	1/2	48.8	45.5	11.9	42.9	5300 (365)	2600 (179)

MALE ELBOW
GLM Male NPT both ends

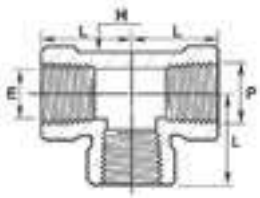




Part Number	P NPT in.	S mm	E mm	H Wrench Flat mm	Pressure Rating psi (bar)	
					SS316, C.Steel	Brass
GLM - 2N	1/8	19.05	4.8	12.7	10000 (689)	5000 (344)
GLM - 4N	1/4	24.5	7.1	12.7	8000 (551)	4000 (275)
GLM - 6N	3/8	26.9	9.6	17.5	7800 (537)	3900 (268)
GLM - 8N	1/2	33.2	11.9	20.6	7700 (530)	3800 (261)
GLM - 12N	3/4	35.3	15.7	25.4	7300 (502)	3600 (248)
GLM - 16N	1	44.5	22.3	31.8	5300 (365)	2600 (179)

TEE
GT Female NPT

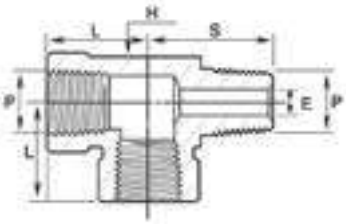




Part Number	P NPT in.	L mm	E mm	H Wrench Flat mm	Pressure Rating psi (bar)	
					SS316, C.Steel	Brass
GT-2N	1/8	24.1	8.9	12.7	6200 (437)	3100 (213)
GT-4N	1/4	29.0	11.7	17.5	7200 (496)	3600 (248)
GT-6N	3/8	34.5	15.0	20.6	5600 (385)	2800 (192)
GT-8N	1/2	37.0	18.7	25.4	5600 (385)	2800 (192)
GT-12N	3/4	46.5	23.5	31.8	5100 (351)	2500 (172)
GT-16N	1	48.8	29.7	42.9	6400 (440)	3200 (220)

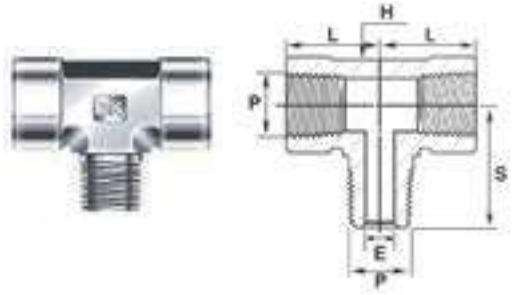
RUN TEE
GTR Female to male to female NPT





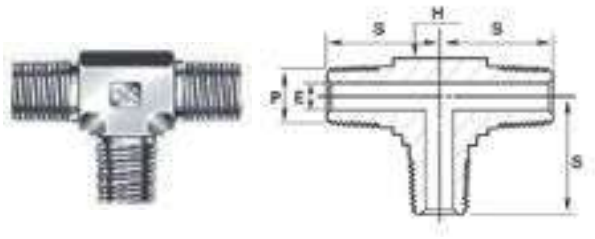
Part Number	P NPT in.	L mm	S mm	E mm	H Wrench Flat mm	Pressure Rating psi (bar)	
						SS316, C.Steel	Brass
GTR-2N	1/8	24.1	19.6	4.8	12.7	6200 (427)	3100 (213)
GTR-4N	1/4	29.0	26.5	7.1	17.5	7200 (496)	3600 (248)
GTR-6N	3/8	34.5	28.2	9.6	20.6	5600 (385)	2800 (192)
GTR-8N	1/2	37.0	35.3	11.9	25.4	5600 (385)	2800 (192)
GTR-12N	3/4	46.5	39.6	15.7	31.8	5100 (351)	2500 (172)
GTR-16N	1	48.8	49.2	22.3	42.9	5300 (365)	2600 (179)

BRANCH TEE
GTB Female to female to male NPT



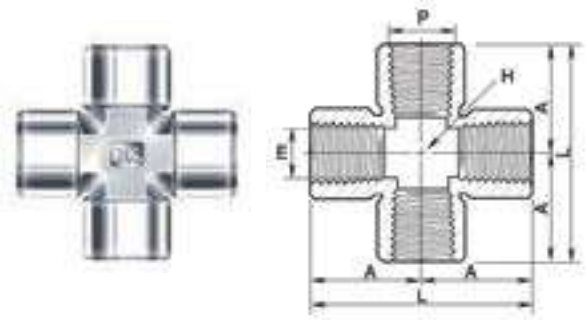
Part Number	P NPT in.	L mm	S mm	E mm	H Wrench Flat mm	Pressure Ratings, psig(bar)	
						SS316, C.Steel	Brass
GTB-2N	1/8	24.1	19.6	4.8	12.7	6200 (427)	3100 (213)
GTB-4N	1/4	29.0	26.5	7.1	17.5	7200 (496)	3600 (248)
GTB-6N	3/8	34.5	28.2	9.6	20.6	5600 (385)	2800 (192)
GTB-8N	1/2	37.0	35.3	11.9	25.4	5600 (385)	2800 (192)
GTB-12N	3/4	46.5	39.6	15.7	31.8	5100 (351)	2500 (172)
GTB-16N	1	48.8	49.2	22.3	42.9	5300 (365)	2600 (179)

MALE TEE
GTM Male NPT



Part Number	P NPT in.	S mm	E mm	H Wrench Flat mm	Pressure Ratings, psig(bar)	
					SS316, C.Steel	Brass
GTM-2N	1/8	19.05	4.8	12.7	10000 (689)	5000 (344)
GTM-4N	1/4	24.5	7.1	12.7	8000 (551)	4000 (275)
GTM-6N	3/8	26.9	9.6	17.5	7800 (537)	3900 (268)
GTM-8N	1/2	33.2	11.9	20.6	7700 (530)	3800 (261)
GTM-12N	3/4	35.3	15.7	25.4	7300 (502)	3600 (248)
GTM-16N	1	44.5	22.3	31.8	5300 (365)	2600 (179)

CROSS
GX Female NPT



Part Number	P NPT in.	L mm	E mm	H Wrench Flat mm	Pressure Ratings, psig(bar)	
					SS316, C.Steel	Brass
GX-2N	1/8	48.2	8.6	12.7	6200 (427)	3100 (213)
GX-4N	1/4	58.0	11.4	17.5	7200 (496)	3600 (248)
GX-6N	3/8	69.0	15.0	20.6	5600 (385)	2800 (192)
GX-8N	1/2	74.0	18.5	25.4	5600 (385)	2800 (192)
GX-12N	3/4	93.0	23.9	31.8	5100 (351)	2500 (172)
GX-16N	1	97.6	29.7	42.9	5300 (365)	2600 (179)

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

10K Thread Fittings

Rev.01-01
Aug.2023

Pressure Rating : 10,000 psi (690 bar)



10K Rating



Standard Rating

DK-Lok 10K Thread Fittings are especially designed to assure safe service in the high pressure application of 10 000psig.

The 10,000 psig working pressure satisfy the design requirements of ASME B31.3 Processing Pipe Code.

Features

- The fittings are available in 1/8” through 1” pipe threads.
- The Male Pipe Threads are precisely rolled for a high pressure application.
- Fittings are available only in stainless steel material. Therefore the part numbers of these fittings include the material designator -S.

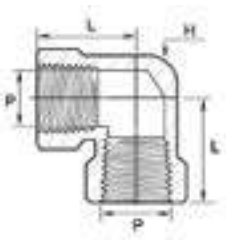
Table 5. **Material Standards**

Material	Form	Standards
Stainless Steel 316	Bar Stock	ASTM A276 Type 316 / ASTM A479 Type 316
	Forging	ASTM A182 F316

ELBOW

GL-10K Female NPT both ends



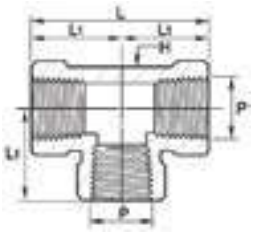


Part Number	P NPT in.	H Wrench Flat in.(mm)	L mm
GL-2N-10K-S	1/8	13/16(20.65)	26.0
GL-4N-10K-S	1/4	1(25.4)	37.0
GL-6N-10K-S	3/8	1-1/4(31.75)	46.5
GL-8N-10K-S	1/2	1-11/16(42.86)	50.0
GL-12N-10K-S	3/4	50	57.0
GL-16N-10K-S	1	55	57.0

TEE

GT-10K Female NPT

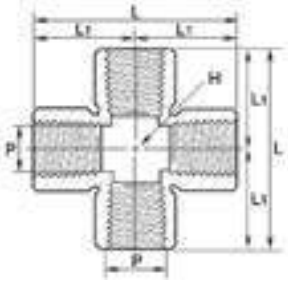




Part Number	P NPT in.	H Wrench Flat in.(mm)	L mm	L1 mm
GT-2N-10K-S	1/8	13/16(20.65)	52	26
GT-4N-10K-S	1/4	1(25.4)	74	37
GT-6N-10K-S	3/8	1-1/4(31.75)	93	46.5
GT-8N-10K-S	1/2	1-11/16(42.86)	100	50
GT-12N-10K-S	3/4	50	114	57
GT-16N-10K-S	1	55	114	57

CROSS
GX-10K Female NPT both ends

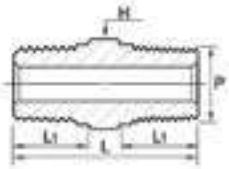




Part Number	P NPT in.	H Wrench Flat in.(mm)	L mm	L1 mm
GX-2N-10K-S	1/8	13/16 (20.65)	52	26
GX-4N-10K-S	1/4	1 (25.4)	74	37
GX-6N-10K-S	3/8	1-1/4 (31.75)	93	46.5
GX-8N-10K-S	1/2	1-11/16 (42.86)	100	50
GX-12N-10K-S	3/4	50	114	57
GX-16N-10K-S	1	55	114	57

HEX NIPPLE
GNH-10K Male NPT both ends

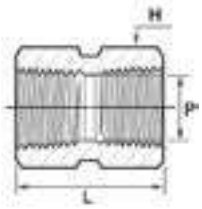




Part Number	P NPT in.	H HEX in.(mm)	L mm	L1 mm
GNH-2N-10K-S	1/8	7/16 (11.11)	25.6	7.4
GNH-4N-10K-S	1/4	9/16 (14.28)	35.5	14.2
GNH-6N-10K-S	3/8	11/16 (17.46)	36.3	19.1
GNH-8N-10K-S	1/2	7/8 (22.2)	46.7	19.1
GNH-12N-10K-S	3/4	1-1/16 (26.98)	46.7	19.1
GNH-16N-10K-S	1	1-3/8 (34.92)	58.9	23.9

HEX COUPLING
GCG-10K Female NPT both ends

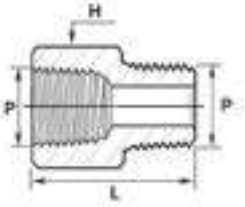




Part Number	P NPT in.	H HEX in.(mm)	L mm
GCG-2N-10K-S	1/8	13/16 (20.65)	20.5
GCG-4N-10K-S	1/4	1 (25.4)	30.2
GCG-6N-10K-S	3/8	1-1/4 (31.75)	33.2
GCG-8N-10K-S	1/2	1-1/2 (38.1)	39.6
GCG-12N-10K-S	3/4	1-3/4 (44.4)	41.1
GCG-16N-10K-S	1	2-1/8 (53.9)	50.8

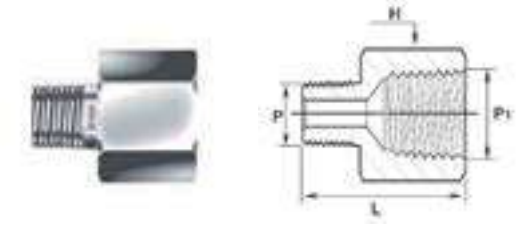
ADAPTER
GAAMF-10K Female NPT to male NPT





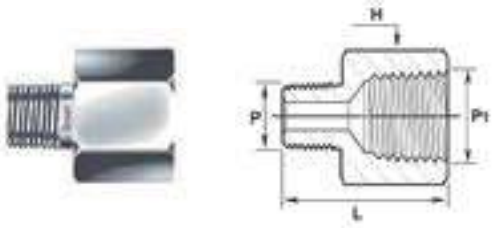
Part Number	P NPT in.	H HEX in.(mm)	L mm
GAAMF-2N-10K-S	1/8	13/16 (20.65)	27.9
GAAMF-4N-10K-S	1/4	1 (25.4)	36.7
GAAMF-6N-10K-S	3/8	1-1/4 (31.75)	38.5
GAAMF-8N-10K-S	1/2	1-1/2 (38.1)	51.3
GAAMF-12N-10K-S	3/4	1-3/4 (44.4)	52.1
GAAMF-16N-10K-S	1	2-1/8 (53.9)	58.7

REDUCING ADAPTER
GABMF-10K Male NPT to larger female NPT



Part Number	P NPT in.	P1 NPT in.	H HEX in.(mm)	L mm
GABMF2-4N-10K-S	1/8	1/4	1 (25.4)	32.2
GABMF4-6N-10K-S	1/4	3/8	1-1/4 (31.75)	38.5
GABMF4-8N-10K-S	1/4	1/2	1-1/2 (38.1)	46.4
GABMF4-12N-10K-S	1/4	3/4	1-3/4 (44.4)	47.2
GABMF6-8N-10K-S	3/8	1/2	1-1/2 (38.1)	46
GABMF6-12N-10K-S	3/8	3/4	1-3/4 (44.4)	47.2
GABMF6-16N-10K-S	3/8	1	2-1/8 (53.9)	49
GABMF8-12N-10K-S	1/2	3/4	1-3/4 (44.4)	52.1
GABMF8-16N-10K-S	1/2	1	2-1/8 (53.9)	53.9
GABMF12-16N-10K-S	3/4	1	2-1/8 (53.9)	53.9

REDUCING ADAPTER
GAMF-10K Male NPT to reduced female NPT



Part Number	P NPT in.	P1 NPT in.	H HEX in.(mm)	L mm
GAMF4-2N-10K-S	1/4	1/8	13/16 (20.65)	32.4
GAMF6-2N-10K-S	3/8	1/8	13/16 (20.65)	32.4
GAMF6-4N-10K-S	3/8	1/4	1 (25.4)	36.3
GAMF8-2N-10K-S	1/2	1/8	7/8 (22.2)	37.3
GAMF8-4N-10K-S	1/2	1/4	1 (25.4)	41.2
GAMF8-6N-10K-S	1/2	3/8	1-1/4 (31.75)	43.4
GAMF12-4N-10K-S	3/4	1/4	1-1/16 (26.98)	41.6
GAMF12-6N-10K-S	3/4	3/8	1-1/4 (31.75)	43.4
GAMF12-8N-10K-S	3/4	1/2	1-1/2 (38.1)	51.3
GAMF16-4N-10K-S	1	1/4	1-3/8 (34.92)	46.4
GAMF16-8N-10K-S	1	1/2	1-1/2 (38.1)	55.7
GAMF16-12N-10K-S	1	3/4	1-3/4 (44.4)	56.9

Thread Fittings for Over 1”

Rev.01-01
Aug.2023

Pressure Rating : 6,000 psi (413 bar)

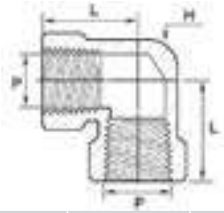
DK-Lok 6K Thread Fittings are developed especially for over 1” piping system where 6,000 psig pressure rating is required.
The 6,000 psig fittings are designed and rated specifically for 6,000 psi working pressure meeting the requirements of ASME B31.3 Processing Pipe Code.

Features

- The fittings are available in 1 1/4”, 1 1/2” and 2” pipe threads.
- Fittings are available only in stainless steel material. Therefore the part numbers of these fittings include the material designator -S.

ELBOW
GL-6K Female NPT both ends

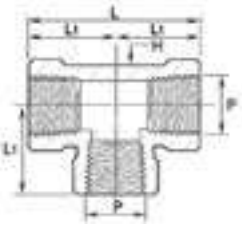




Part Number	Working Pressure	P NPT in.	H Wrench Flat in.(mm)	L mm
GL-20N-6K-S	6,000 psi 413 bar	1-1/4	2-3/4 (69.85)	70
GL-24N-6K-S	6,000 psi 413 bar	1-1/2	2-3/4 (69.85)	70
GL-32N-6K-S	6,000 psi 413 bar	2	3(76.2)	70

TEE
GT-6K Female NPT

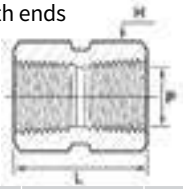




Part Number	Working Pressure	P NPT in.	H Wrench Flat in.(mm)	L mm	L1 mm
GT-20N-6K-S	6,000 psi 413 bar	1-1/4	2-3/4 (69.85)	140	70
GT-24N-6K-S	6,000 psi 413 bar	1-1/2	2-3/4 (69.85)	140	70
GT-32N-6K-S	6,000 psi 413 bar	2	3 (76.2)	140	70

HEX COUPLING
GCG-6K Female NPT both ends

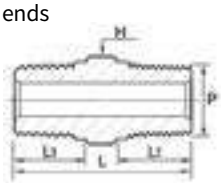




Part Number	Working Pressure	P NPT in.	H HEX in.(mm)	L mm
GCG-20N-6K-S	6,000 psi 413 bar	1-1/4	2-1/8 (53.9)	66.55
GCG-24N-6K-S	6,000 psi 413 bar	1-1/2	2-3/4 (69.85)	66.55
GCG-32N-6K-S	6,000 psi 413 bar	2	3 (76.2)	66.55

HEX NIPPLE
GNH-6K Male NPT both ends

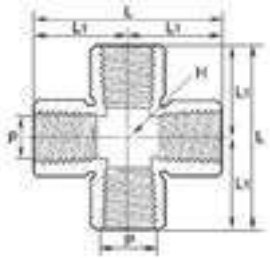




Part Number	Working Pressure	P NPT in.	H HEX in.(mm)	L mm	L1 mm
GNH-20N-6K-S	6,000 psi 413 bar	1-1/4	1-3/4 (44.45)	61.21	23.9
GNH-24N-6K-S	6,000 psi 413 bar	1-1/2	2 (50.8)	68	26.2
GNH-32N-6K-S	6,000 psi 413 bar	2	2-3/4 (69.85)	69.8	26.9

CROSS
GX-6K Female NPT





Part Number	Working Pressure	P NPT in.	H HEX in.(mm)	L mm	L1 mm
GX-20N-6K-S	6,000 psi 413 bar	1-1/4	2-3/4 (69.85)	140	70
GX-24N-6K-S	6,000 psi 413 bar	1-1/2	2-3/4 (69.85)	140	70
GX-32N-6K-S	6,000 psi 413 bar	2	3 (76.2)	140	70

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Weld Fittings

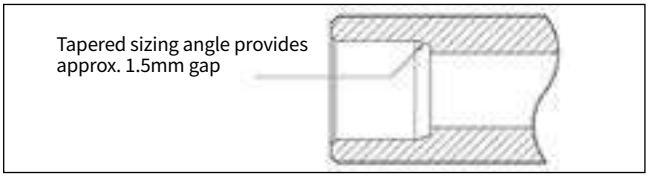
Rev.01-01
Aug.2023

DK-Lok weld fittings are designed to provide permanent weld connections in pressure impulse, system vibration, and temperature cycling.
Tube socket end design meets and exceeds the requirments of ASME B16.11 for ease of tube socket welding.

Features

- DK-Lok weld tube socket ports have a tapered sizing angle at the end that holds tubing properly and provides approx. 1.5mm(0.08") welding gap as specified in ASME B16.11.
  This feature allows consistent welding assembly as well as pre-assembly of many tubing runs before welding.
- Fittings are available in stainless steel only. Thus the part number of table below contains the material designator-S.

Tube socket weld fitting

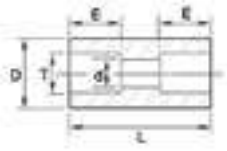


Technical information

Use like tubing and fitting material. This ensure the same coefficient of expansion & reduction in the thermal cycle and the same corrosion resistance.
Standard fitting material is Stainless steel ASTM A276 type 316 of bar stock and ASTM A182 F316 of forging.
Pressure ratings shown in the dimensional tables are calculated in accordance with the requirements of ASME B31.3

UNION
GUSW Tube to Tube

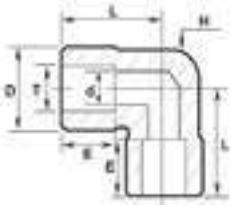




Part Number	T Tube O.D	d mm	D mm	E mm	L mm	Working psig	Pressure bar
GUSW-4T-S	1/4	4.6	13.0	7.1	19.0	10,000	689
GUSW-6T-S	3/8	7.1	15.8	7.9	22.4	7,600	523
GUSW-8T-S	1/2	10.2	19.0	9.7	26.9	6,200	427
GUSW-10T-S	5/8	12.7	24.0	10.4	30.2	6,400	440
GUSW-12T-S	3/4	15.7	26.9	11.2	33.3	5,500	378
GUSW-16T-S	1	22.1	35.0	15.7	36.6	5,200	358

UNION ELBOW
GLSW Tube to Tube

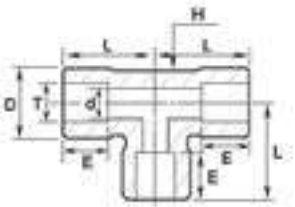




Part Number	T Tube O.D	d mm	D mm	E mm	H Wrench Flat mm	L mm	Working psig	Pressure bar
GLSW-4T-S	1/4	4.6	13.4	7.1	12.7	21.8	11,300	778
GLSW-6T-S	3/8	7.1	15.8	7.9	12.7	24.5	8,400	578
GLSW-8T-S	1/2	10.2	20.6	9.7	17.4	29.0	7,800	537
GLSW-10T-S	5/8	12.7	23.8	10.4	20.6	34.5	6,700	461
GLSW-12T-S	3/4	15.7	28.6	11.2	25.4	37.0	6,700	461
GLSW-16T-S	1	22.1	35.0	15.7	31.8	46.5	5,800	400

UNION TEE
GTSW Tubes

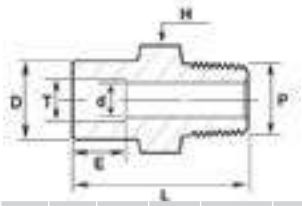




Part Number	T Tube O.D	d mm	D mm	E mm	H Wrench Flat mm	L mm	Working psig	Pressure bar
GTSW-2T-S	1/8	2.3	13.4	2.5	12.7	15.0	11,800	813
GTSW-4T-S	1/4	4.6	13.4	7.1	12.7	21.8	11,300	778
GTSW-6T-S	3/8	7.1	15.8	7.9	12.7	24.0	8,400	578
GTSW-8T-S	1/2	10.2	20.6	9.7	17.4	29.0	7,800	537
GTSW-10T-S	5/8	12.7	23.8	10.4	20.6	34.5	6,700	461
GTSW-12T-S	3/4	15.7	28.6	11.2	25.4	37.0	6,700	461
GTSW-16T-S	1	22.1	35.0	15.7	31.8	46.5	5,800	400

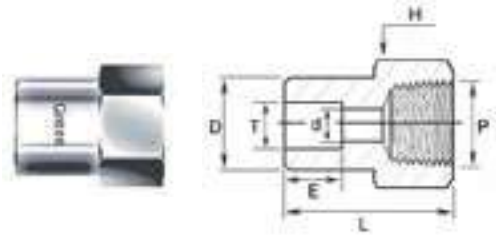
MALE CONNECTOR
GCMSW





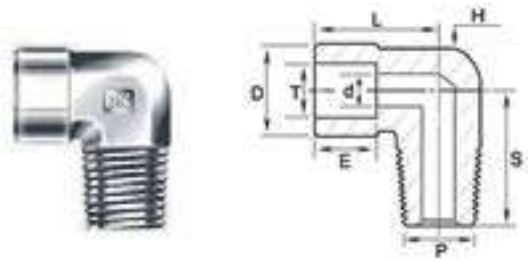
Part Number	T Tube O.D	P NPT in.	d mm	D mm	E mm	H HEX mm	L mm	Working psig	Pressure bar
GCMSW4T-4N-S	1/4	1/4	4.6	12.2	7.1	14.2	29.2	7,500	516
GCMSW6T-4N-S	3/8	1/4	7.1	15.3	7.9	15.8	31.8	7,500	516
GCMSW6T-6N-S	3/8	3/8	7.1	15.3	7.9	17.4	31.8	7,300	502
GCMSW6T-8N-S	3/8	1/2	7.1	15.3	7.9	22.2	37.8	7,200	496
GCMSW8T-4N-S	1/2	1/4	7.1	18.5	9.7	19.05	33.3	6,200	427
GCMSW8T-6N-S	1/2	3/8	9.4	18.5	9.7	19.05	33.3	6,200	427
GCMSW8T-8N-S	1/2	1/2	10.2	18.5	9.7	22.2	38.9	6,200	427

FEMALE CONNECTOR
GCFSW Tube to female NPT



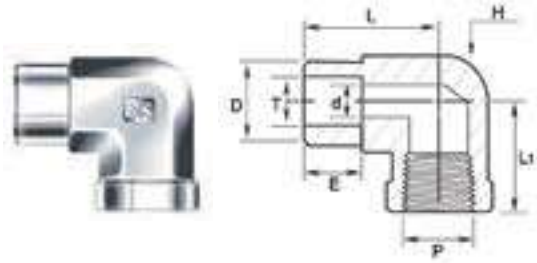
Part Number	T Tube O.D	P-NPT	d mm	D mm	E mm	H HEX mm	L mm	Working psig	Pressure bar
GCFSW2T-2N-S	1/8	1/8	2.3	7.4	2.5	14.2	21.1	6100	420
GCFSW4T-2N-S	1/4	1/8	4.6	12.2	7.1	14.2	26.7	6100	420
GCFSW4T-4N-S	1/4	1/4	4.6	12.2	7.1	19.05	30.0	6200	427
GCFSW6T-4N-S	3/8	1/4	7.1	15.3	7.9	19.05	31.5	6200	427
GCFSW8T-6N-S	1/2	3/8	10.2	18.5	9.7	22.2	34.5	5000	344
GCFSW8T-8N-S	1/2	1/2	10.2	18.5	9.7	26.9	40.4	4600	316
GCFSW10T-8N-S	5/8	1/2	12.7	23.4	10.4	26.9	41.9	4600	316
GCFSW12T-12N-S	3/4	3/4	15.7	26.7	11.2	33.3	43.9	4300	296

MALE ELBOW
GLMSW Tube to male NPT



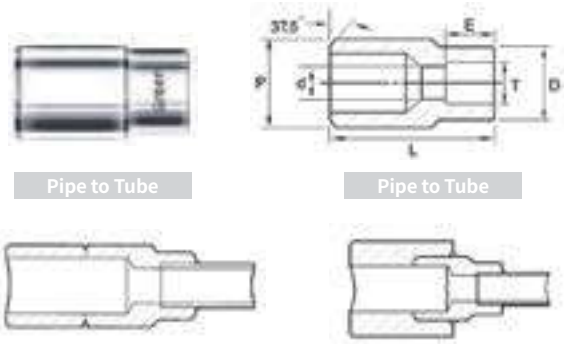
Part Number	T Tube O.D	P-NPT	d mm	D mm	E mm	H Wrench Flat mm	L mm	S mm	Working psig	Pressure bar
GLMSW4T-4N-S	1/4	1/4	4.6	15.8	7.1	12.7	20.1	24.5	7500	516
GLMSW6T-4N-S	3/8	1/4	7.1	15.8	7.9	12.7	24.1	24.5	7500	516
GLMSW6T-6N-S	3/8	3/8	7.1	20.6	7.9	17.4	24.6	29.0	7300	502
GLMSW6T-8N-S	3/8	1/2	7.1	15.2	7.9	20.6	25.9	34.5	7200	496
GLMSW8T-8N-S	1/2	1/2	10.2	20.6	9.7	20.6	27.4	34.5	6200	427
GLMSW12T-12N-S	3/4	3/4	15.7	28.6	11.2	25.4	37.0	37.0	6700	461

FEMALE ELBOW
GLFSW Tube to female NPT



Part Number	T Tube O.D	P-NPT	d mm	D mm	E mm	H Wrench Flat mm	L mm	L1 mm	Working Pressure	
									psig	bar
GLFSW4T-4N-S	1/4	1/4	4.6	12.2	7.1	17.4	22.9	29.7	6200	427
GLFSW6T-4N-S	3/8	1/4	7.1	15.3	7.9	17.4	25.1	29.7	7000	482
GLFSW6T-8N-S	3/8	1/2	7.1	15.3	7.9	25.4	28.7	37.0	5400	372
GLFSW8T-8N-S	1/2	1/2	10.2	18.5	9.7	25.4	30.2	37.0	5400	372

PIPE TO TUBE SOCKET WELD
GUWSW



Pipe to Tube

Pipe to Tube

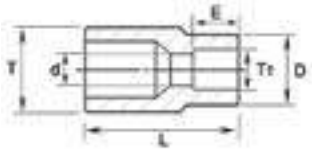
Part Number	P Pipe Size	T Tube Socket O.D	d mm	D mm	E mm	L mm	Working Pressure	
							psig	bar
GUWSW4P-4T-S	1/4	1/4	4.6	13.7	7.1	22.4	9600	661
GUWSW6P-6T-S	3/8	3/8	7.1	15.3	7.9	26.2	7600	523
GUWSW6P-8T-S	3/8	1/2	10.2	18.5	9.7	27.9	6200	427
GUWSW8P-4T-S	1/2	1/4	4.6	12.2	7.1	28.4	7300	502
GUWSW8P-6T-S	1/2	3/8	7.1	15.3	7.9	28.4	7300	502
GUWSW8P-8T-S	1/2	1/2	10.2	18.5	9.7	30.2	6200	427
GUWSW12P-6T-S	3/4	3/8	7.1	15.3	7.9	38.1	6200	427
GUWSW12P-8T-S	3/4	1/2	10.2	18.5	9.7	38.1	6200	427

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

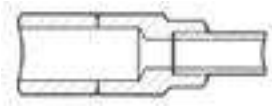
TUBE TO TUBE SOCKET WELD

GUTWSW





Tube to Tube



Part Number	T Tube O.D	T1 Tube Socket O.D	d mm	D mm	E mm	L mm	Working Pressure	
							psig	bar
GUTWSW 4T-2T-S	1/4	1/8	2.3	7.4	2.5	14.2	11800	813
GUTWSW 6T-4T-S	3/8	1/4	4.6	12.2	7.1	19.1	7700	530
GUTWSW 8T-4T-S	1/2	1/4	4.6	12.7	7.1	22.4	7000	482
GUTWSW 8T-6T-S	1/2	3/8	8.1	15.7	7.9	22.4	7000	482
GUTWSW 12T-8T-S	3/4	1/2	10.2	18.5	9.7	28.4	5900	406
GUTWSW 16T-8T-S	1	1/2	10.2	18.5	9.7	35.1	5600	386

NOTE

All dimensions are in millimeters unless otherwise specified and only for reference. All dimensions are subject to change.

All dimensions are subject to change. All the dimensions shown in this catalog are not for design purpose, but for reference only and the accuracy of information here is not the liability of our company.

Safe Component Selection

The selection of component for any applications or system design must be considered to ensure safe performance. Component function, material compatibility, component ratings, proper installation, operation and maintenance remain the sole responsibility of the system designer and the user. DK-Lok accepts no liability for any improper selection, installation, operation or maintenance.

DK-LOK

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IDK-LOK

Metal Flexible Hose

Rev. 01-01
Aug. 2023

Metal Flexible Hoses

Rev.01-01
Aug.2023



High Pressure
- MFH Series : 1page



Medium Pressure
- FH Series : 5page



PTFE Lined
- PFH Series : 7page

Factory Test, Cleaning and Packaging

Using cleaned and passivated parts, the hoses and end connection are welded. Every hose assembly of MFH, FH & PFH Series is factory tested using nitrogen or clean air @1000 psig (68 bar) at the room temperature, and individually packed in a plastic sealing bag with an external label. The hydrostatic test of 1.1 times the working pressure or helium leak test is optional.

High-Pressure - MFH Series

Pressure Rating up to 3,600psig (248bar)



Materials of Construction

1. Wire braid	ASTM A313 Type316L
2. Core Bellows Tube	ASTM A240 Type 316L
3. End Connection	ASTM A479 or A276 Type 316

Features

- High Pressure Application Up to 3600 psig with 316 Stainless Steel Construction.
- High Temperature Application up to 850°F (454°C).
- Wide Choices of End Connections of DK-Lok Tube Port, DK-Lok Tube Stub Adapter, Swivel 37 degree Female, Male and
- Female NPT/ISO Tapered thread.
- Products Type Approved by DNV : Certificate No. P-12877

Applications

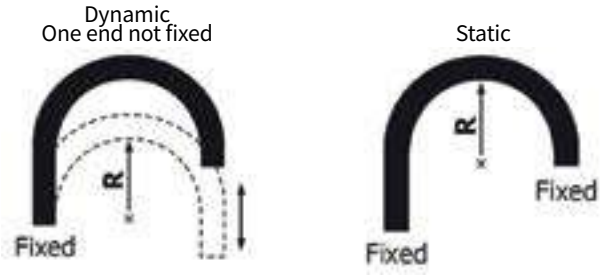
- Air, Gas, Steam, Vacuum and Water line.

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Table 1. **Working and Burst Pressure at Temperature**

Nominal Hose Size, in. (mm)	MFH Series Designator	Temperate Range	Working Pressure psig (bar)	Burst Pressure Minimum psig (bar)	Bending Radius (1) Minimum in (mm)	
			@ -325 to 100°F (-200 to 37°C)	@ 70°F(20°C)	Static	Dynamic
1/4 (6.35)	MFH4	-325 to 850°F (-200 to 454°C)	3600 (248)	14400(992)	2.25 (57.2)	10.0 (254.0)
3/8 (9.52)	MFH6		2500 (172)	10000(689)	3.00 (76.2)	12.0 (305.0)
1/2 (12.70)	MFH8		2200 (151)	8800(606)	4.50 (114.3)	16.0 (406.4)

(1) Radius measured to inside of bend



Pressure Temperature Ratings

To determine an allowable pressure at a specific temperature, multiply the working pressure on table 1 by an applicable factor shown on table 2. Example: MFH6 Series at 500°F(260°C). 2500 psig x 0.65 = 1,625psig

Table 2. **Temperature De-rating Factors**

Temperature, °F	-325	100	200	300	400	500	600	700	800	850
Temperature, °C	-200	37	93	148	204	260	315	371	426	454
Factors	1.00	1.00	0.84	0.76	0.70	0.65	0.62	0.59	0.57	0.56

Ordering Information and Table of Dimensions

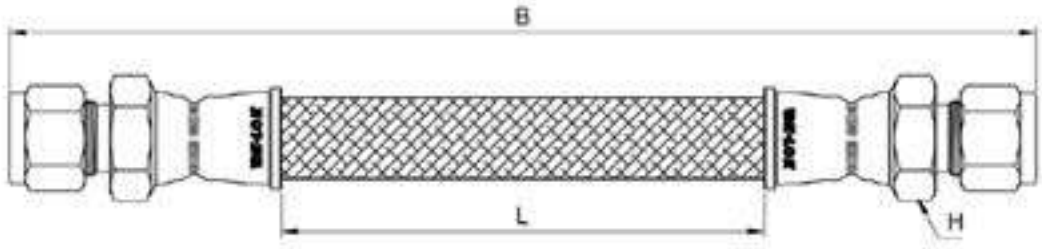


Table 3. **Hose Assembly of DK-Lok Tube Fittings at both Ends.**

Ordering Number		END Connections DK-Lok Tube Fittings	Overall Length B in. (cm)	Live Length L in. (cm)	Min. I.D. in. (mm)	Hex. Flat H in.
MFH4-	DL4DL4-12-S	1/4	12.0 (30.5)	8.12 (20.6)	0.19 (4.8)	13/16
	DL4DL4-36-S		36.0 (91.4)	32.1 (81.5)		
	DL4DL4-48-S		48.0 (122)	44.1 (112)		
MFH6-	DL6DL6-18-S	3/8	18.0 (45.7)	14.0 (35.6)	0.28 (7.1)	15/16
	DL6DL6-36-S		36.0 (91.4)	32.0 (81.3)		
	DL6DL6-48-S		48.0 (122)	44.1 (112)		
MFH8-	DL8DL8-18-S	1/2	18.0 (45.7)	13.5 (34.3)	0.40 (10.2)	1 1/16
	DL8DL8-48-S		48.0 (122)	43.5 (110)		

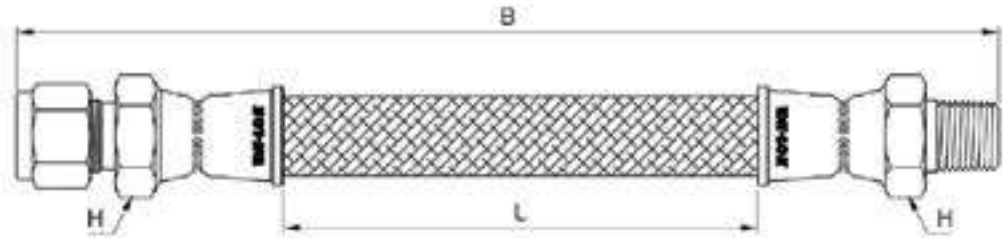


Table 4. **Hose Assembly of DK-Lok Tube Fitting end to Male NPT end**

Ordering Number		END Connections		Overall Length B in. (cm)	Live Length L in. (cm)	Min. I.D. in. (mm)	Hex. Flat H in.
		DK-Lok Tube Fittings	NPT Thread				
MFH4-	DL4M4N-12-S	1/4	1/4	12.0 (30.5)	8.26 (21.0)	0.19 (4.8)	13/16
	DL4M4N-36-S			36.0 (91.4)	32.3 (82.0)		
	DL4M4N-48-S			48.0 (122)	44.3 (112.5)		
MFH6-	DL6M6N-18-S	3/8	3/8	18.0 (45.7)	14.2 (36.1)	0.28 (7.1)	15/16
	DL6M6N-36-S			36.0 (91.4)	32.2 (81.8)		
	DL6M6N-48-S			48.0 (122)	44.2 (112.3)		
MFH8-	DL8M8N-18-S	1/2	1/2	18.0 (45.7)	13.6 (34.5)	0.40 (10.2)	1 1/16
	DL8M8N-48-S			48.0 (122)	43.6 (111.0)		

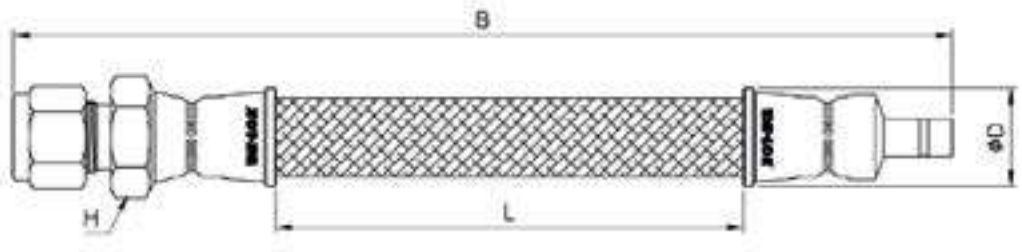


Table 5. **Hose Assembly of DK-Lok Tube Fitting end to Tube Stub Adapter end**

Ordering Number		END Connections		Overall Length B in. (cm)	Live Length L in. (cm)	Min. I.D. in. (mm)	Hex. Flat H in.	O.D. D in. (mm)
		DK-Lok Tube Fittings	Tube Stub Adapter					
MFH4-	DL4TA4-12-S	1/4	1/4	12.0 (30.5)	8.26 (21.0)	0.16 (4.1)	13/16	19.0 (0.75)
	DL4TA4-24-S			24.0 (61.0)	20.3 (51.5)			
	DL4TA4-36-S			36.0 (91.4)	32.3 (82.0)			
	DL4TA4-48-S			48.0 (122)	44.3 (112.5)			
MFH8-	DL8TA8-12-S	1/2	1/2	12.0 (30.5)	7.5 (19.0)	0.37 (9.40)	1 1/16	26.7 (1.05)
	DL8TA8-24-S			24.0 (61.0)	19.5 (49.0)			
	DL8TA8-36-S			36.0 (91.4)	31.5 (80.0)			
	DL8TA8-48-S			48.0 (122)	43.5 (110)			

End Connections

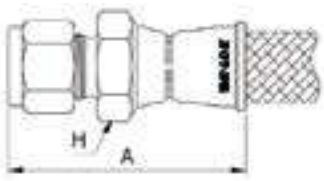


Table 6. **DK-Lok Tube Fitting Ends**

Applicable Hose Series	Designator	DK-LOK Tube Fittings	Dimensions, in. (mm)		
			Length A	Hex. Flat H	Min. I.D.
MFH4-	DL4	1/4	1.94 (49.3)	13/16 in.	0.19 (4.8)
MFH6-	DL6	3/8	2.02 (51.3)	15/16 in.	0.28 (7.1)
MFH8-	DL8	1/2	2.24 (56.9)	1 1/16 in.	0.41 (10.4)
MFH4-	DM6M	6M	2.45 (62.2)	13/16 in.	0.19 (4.8)
MFH6-	DM8M	8M	2.49 (63.2)	15/16 in.	0.25 (6.4)
MFH6-	DM10M	10M	2.03 (51.6)	15/16 in.	0.31 (7.9)
MFH8-	DM12M	12M	2.24 (56.9)	1 1/16 in	0.38 (9.7)

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

End Connections

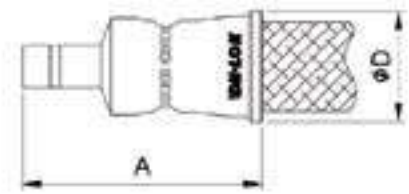


Table 7. **Tube Stub Adapter Ends**

Applicable Hose Series	Designator	Tube OD Size	Dimensions, in. (mm)		
			Length A	O.D. D	Min. I.D.
Fractional					
MFH4	TA4	1/4	1.76 (44.7)	19.0 (0.75)	0.16 (4.1)
MFH6	TA6	3/8	1.82 (46.2)	23.6 (0.93)	0.27 (6.9)
MFH8	TA8	1/2	2.22 (56.4)	26.7 (1.05)	0.37 (9.4)
Metric					
MFH4	TM6	6M	1.75 (44.4)	19.0 (0.75)	0.16 (4.1)
MFH6	TM10	10M	1.85 (47.0)	23.6 (0.93)	0.28 (7.1)
MFH8	TM12	12M	2.25 (57.2)	26.7 (1.05)	0.35 (8.9)

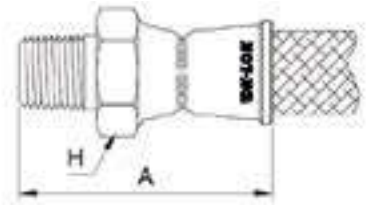


Table 8. **Male Pipe Ends**

Applicable Hose Series	Designator	Pipe Size	Dimensions, in. (mm)		
			Length A	Hex. Flat H	Min. I.D.
NPT Threads					
MFH4	M4N	1/4	1.80 (45.7)	13/16 in.	0.19 (4.8)
MFH6			1.81 (46.0)	15/16 in.	
MFH6	M6N	3/8	1.81 (46.0)	15/16 in.	0.38 (9.7)
MFH8	M8N	1/2	2.15 (54.5)	1 1/16 in.	0.47 (11.9)
BSP/ISO Threads					
MFH4	M4R	1/4	1.80 (45.7)	13/16 in.	0.28 (7.1)
MFH8	M8R	1/2	2.16 (54.9)	1 1/16 in.	0.47 (11.9)

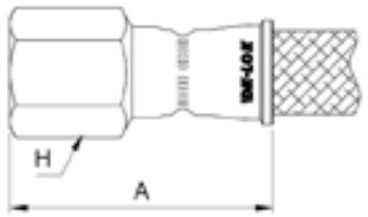


Table 9. **Female Pipe Ends**

Applicable Hose Series	Designator	NPT Thread Size	Dimensions, in. (mm)		
			Length A	Hex. Flat H	Min. I.D.
MFH4	F4N	1/4	1.81 (46.0)	13/16 in.	0.28 (7.1)
MFH6	F6N	3/8	1.85 (47.0)	15/16 in.	0.38 (9.7)
MFH8	F8N	1/2	2.18 (55.5)	1 1/16 in.	0.47 (11.9)

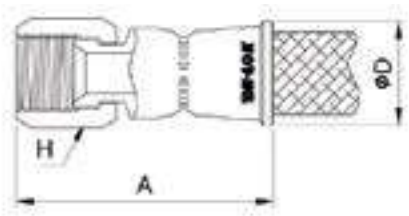


Table 10. **SAE J514, 37 degree Swivel Ends**

Applicable Hose Series	Designator	Female Size	Dimensions, in. (mm)		
			Length A	O.D. D	Min. I.D.
MFH4	KS4	1/4	1.87 (47.5)	19.0 (0.75)	0.17 (4.3)
MFH6	KS6	3/8	1.97 (50.0)	23.6 (0.93)	0.28 (7.1)
MFH8	KS8	1/2	2.15 (54.6)	26.7 (1.05)	0.42 (10.7)

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Medium-Pressure - FH Series

Rev.01-01
Aug.2023

Pressure Rating up to 1,600psig (110bar)

Features

- Designed for general purpose including positive pressure and vacuum service.
- Stainless steel construction of core bellows tube, wire braid, and end connection.
- Single braid layer for pressure containment.
- Custom length available.



Table 11. **Working / Burst Pressure and Temperature**

Nominal Hose Size, in. (mm)	FH Series	Temperature Range	Working Pressure psig (bar)	Burst Pressure psig (bar)	Minimum Bending Radius in (mm)	
			@ -325 to 300°F (-200 to 148°C)	@ 70°F (20°C)	Static	Dynamic
3/4 (19.05)	FH12	-325 to 800°F (-200 to 426°C)	860 (59.2)	3500 (241)	1.61 (40.9)	8.86 (225)
1 (25.4)	FH16		680 (46.8)	2680 (184)	1.89 (48.0)	10.2 (259)
1 1/4 (31.75)	FH20		680 (46.8)	2600 (179)	2.16 (54.9)	11.8 (300)
1 1/2 (38.10)	FH24		520 (35.8)	2200 (151)	2.33 (59.2)	13.4 (340)
2 (50.80)	FH32		450 (31.0)	1800 (124)	3.10 (78.7)	15.4 (391)

* For 1/4", 3/8" and 1/2" of FH Series Medium Pressure Metal Flexible Hoses,
They are no longer availble but they can be replaced with MFH Series High Pressure Metal Flexible Hoses.

Table 12. **Temperature De-rating Factors**

To determine an allowable pressure at a specific temperature, multiply the working pressure on table 11 by an applicable factor shown on table 12.
Example : FH12 Series at 750°F(398°C). 860 psig x 0.75 = 645psig

Temperature, °F	-325 to 300	400	500	600	700	750	800
Temperature, °C	-200 to 148	204	260	315	371	398	426
Factors	1.00	0.93	0.86	0.81	0.77	0.75	0.74

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Ordering Information and Table of Dimensions

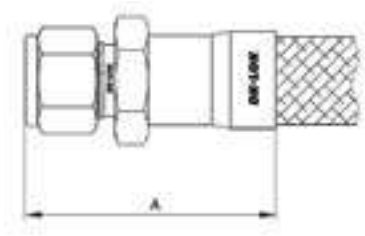


Table 13. **Hose Assembly of DK-LOK Tube Fittings at both Ends.**

Ordering Number		End Connections		Overall Length in. (cm)	A in. (mm)
		DK-LOK Tube Fittings			
FH12-	DL12DL12-48-S	3/4	3/4	48.0 (122)	2.62 (66.6)
FH16-	DL16DL16-12-S	1	1	12.0 (30.5)	3.20 (81.3)
FH20-	DL20DL20-18-S	1 1/4	1 1/4	18.0 (45.7)	3.79 (96.3)
FH24-	DL24DL24-36-S	1 1/2	1 1/2	36.0 (91.4)	4.25 (108)
FH32-	DL32-DL32-48-S	2	2	48.0 (122)	5.22 (133)

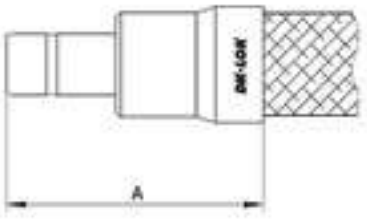


Table 14. **Hose Assembly of DK-LOK Tube Stub Adapter at both Ends.**

Ordering Number		End Connections		Overall Length in. (cm)	A in. (mm)
		Tube Adapter			
FH12-	TA12TA12-48-S	3/4	3/4	48.0 (122)	2.50 (63.5)
FH16-	TA16TA16-12-S	1	1	12.0 (30.5)	2.99 (75.9)
FH20-	TA20TA20-18-S	1 1/4	1 1/4	18.0 (45.7)	3.91 (99.3)
FH24-	TA24TA24-36-S	1 1/2	1 1/2	36.0 (91.4)	4.47 (114)
FH32-	TA32TA32-48-S	2	2	48.0 (122)	5.45 (138)

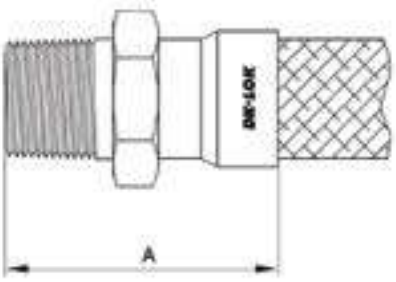


Table 15. **Hose Assembly of Male Pipe at both Ends.**

Ordering Number		End Connections		Overall Length in. (cm)	A in. (mm)
		Male NPT			
FH12-	M12NM12N-48-S	3/4	3/4	48.0 (122)	2.45 (62.2)
FH16-	M16NM16N-12-S	1	1	12.0 (30.5)	3.05 (77.5)
FH20-	M20NM20N-18-S	1 1/4	1 1/4	18.0 (45.7)	3.14 (79.8)
FH24-	M24NM24N-36-S	1 1/2	1 1/2	36.0 (91.4)	3.38 (85.9)
FH32-	M32NM32N-48-S	2	2	48.0 (122)	3.63 (92.2)

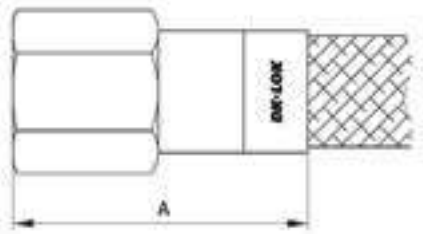


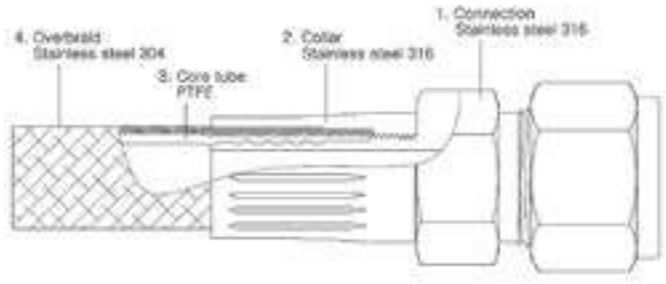
Table 16. **Hose Assembly of Male Pipe end to Female Pipe end**

Ordering Number		End Connections		Overall Length in. (cm)	A in. (mm)
		Male NPT	Female NPT		
FH12-	M12NF12N-48-S	1/4	1/4	48.0 (122)	2.62 (66.6)
FH16-	M12NF12N-12-S	1	1	12.0 (30.5)	3.20 (81.3)
FH20-	M20NF20N-18-S	1 1/4	1 1/4	18.0 (45.7)	3.79 (96.3)
FH24-	M24NF24N-36-S	1 1/2	1 1/2	36.0 (91.4)	4.25 (108)
FH32-	M32NF32N-48-S	2	2	48.0 (122)	5.22 (133)

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

PFH Series PTFE Flexible Metal Hose

Rev.01-01
Aug.2023



Features

- High pressure application up to 3,000 psig (206 bar)
- PTFE hose material has improve permeation resistant
- Applied with stainless steel 304 wire braid, its improve the internal pressure and protect the wear.
- Variable end connection available

Table 17. **Working / Burst Pressure at Temperature**

Nominal Hose Size, in. (mm)	PFH Series Designator	Temperature Range	Working Pressure psig (bar) @70°F (20°C)	Burst Pressure Minimum psig (bar) @ 70°F (20°C)	Bending Radius Minimum in. (cm)	
					Static	Dynamic
1/4 (6.35)	PFH4	-65 to 450°F (-53 to 230°C)	3000 (206)	12000 (826)	1.5 (3.8)	2.0 (5.1)
3/8 (9.52)	PFH6		2500 (172)	10000 (689)	3.5 (8.9)	5.0 (12.7)

Table 18. **Pressure-Temperature Ratings**

Temperature, °F	-65	0	100	200	300	400	450
Temperature, °C	-53	-17	37	93	148	204	230
Factors	0.75	1	1	0.58	0.52	0.48	0.46

Ordering Information and Table of Dimensions

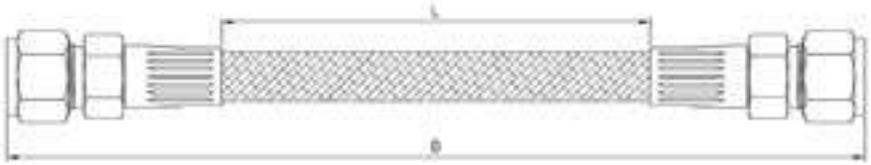


Table 19. **Hose Assembly of DK-LOK Tube Fittings at Both Ends**

Ordering Number		END Connections DK-Lok Tube Fittings	Overall Length B in. (cm)	Live Length L in. (cm)	Hose I.D Minimum in. (cm)	Hex. Flat Max. O.D on the assembly
PFH4-	DL4DL4-6	1/4"	8.0 (20.3)	5.97 (15.2)	0.16 (4.1)	9/16 (14.28)
	DL4DL4-12		14.0 (35.6)	12.0 (30.5)		
	DL4DL4-18		20.0 (50.8)	18.0 (45.7)		
	DL4DL4-24		26.0 (66.0)	24.0 (61.0)		
	DL4DL4-36		38.0 (96.5)	36.0 (91.4)		
	DL4DL4-48		50.0 (127.0)	48.0 (122.0)		
	DL4DL4-60		62.0 (157.0)	60.0 (152.0)		
	DL4DL4-72		74.0 (188.0)	72.0 (183.0)		
	DL4DL4-120		122.0 (310.0)	120.0 (305.0)		
PFH6-	DL6DL6-12	3/8"	14.0 (35.6)	11.8 (30.0)	0.27 (6.9)	13/16 (20.64)
	DL6DL6-18		20.0 (50.8)	17.8 (45.2)		
	DL6DL6-24		26.0 (66.0)	23.8 (60.5)		
	DL6DL6-36		38.0 (96.5)	35.8 (90.9)		
	DL6DL6-48		50.0 (127.0)	47.8 (121.0)		
	DL6DL6-60		62.0 (157.0)	59.8 (152.0)		
	DL6DL6-72		74.0 (188.0)	71.8 (182.0)		
	DL6DL6-96		98.0 (249.0)	95.8 (243.0)		
	DL6DL6-120		122.0 (310.0)	120.0 (305.0)		

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

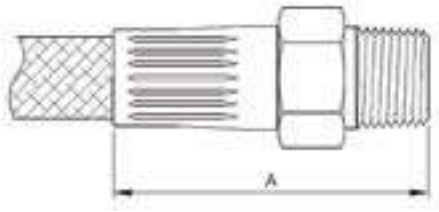


Table 20. **Male Pipe Ends**

Applicable Hose Series	Male Pipe End Conection				
	Designator	Pipe Size	Length A in. (mm)	Hex. Flat as a max. O.D	I.D Minimum in. (mm)
PFH4	M4N	1/4”	1.88 (47.8)	13/16”	0.16 (4.1)
PFH6	M6N	3/8”	1.98 (50.3)	15/16”	0.27 (6.9)

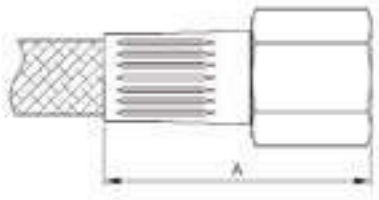


Table 21. **Female Pipe Ends**

Applicable Hose Series	Female Pipe End Conection				
	Designator	Pipe Size	Length A in. (mm)	Hex. Flat as a max. O.D	I.D Minimum in. (mm)
PFH4	F4N	1/4”	1.88 (47.8)	13/16”	0.16 (4.1)
PFH6	F6N	3/8”	2.02 (51.3)	15/16”	0.27 (6.9)

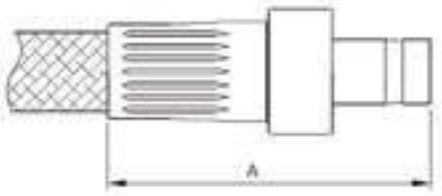


Table 22. **Tube Stub Adapter Ends**

Applicable Hose Series	Tube Stub Adapter End Conection				
	Designator	Pipe Size	Length A in. (mm)	Hex. Flat as a max. O.D	I.D Minimum in. (mm)
PFH4	TA4	1/4”	1.64 (41.7)	13/16”	0.16 (4.1)
PFH6	TA6	3/8”	1.81 (46.0)	15/16”	0.27 (6.9)

Ordering Information for MFH & FH Series

Hose Series	End Connection and Overall Length			Material Designator
	Standard End Connections and Standard Overall Length	Custom End Connections	Custom Overall Length	
MFH4- MFH6- MFH8-	Select the applicable order number from the hose assembly Table 3 to 5 for MFH Series and Table 13 to 16 for FH Series and Table 19 to 22 for PFH Series.	Select the designators of your hose assembly’s both end connections from Table 6 to 10 for MFH Series and Table 13 to 16 for FH Series and Table 19 to 22 PFH Series Insert them into your order No. For MFH Series, i.e., MFH4-**KS4F4N**-12- For FH Series, i.e., FH12-**DL12DL12**-12 For PFH Series, i.e., PFH4-**DL4M4N**-12-	When order in cm, use the unit of “CM” , when order in inch, do not use “inch” on your order No. Examples: For 100cm overall length, MFH4-DL4DL4-**100CM-** For 10 inch overall length, MFH4-DL4DL4-**10-**	**- S : SS316**
FH12- FH16- FH20- FH24- FH32-				
PFH4- PFH6-				

All dimensions shown in this catalog are for reference only and are subject to change. We reserve the right to change specifications stated in this catalog for our continuing program of product improvement.

Safe Component Selection

The Selection of component for any applications or system design must be considered to ensure safe performance. Component function, material compatibility, component ratings, proper installation, operation and maintenance remain the sole responsibility of the system designer and the user. DK-Lok accepts no liability for any improper selection, installation, operation or maintenance.

DK-LOK

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K Series JIC Tube Fittings
SAE J514 37° Flared

Rev. 01-01
Aug. 2023

Features

- Standard Materials: Stainless Steel, Carbon Steel and Brass.
- Universal Fittings for Inch and Metric tube.
- Fitting without sleeve and nut for connection to a female swivel on a hose assembly.



DK-LOK®
K Series JIC Tube Fittings

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Rev.01-01
Aug.2023

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Weld Bulkhead Union
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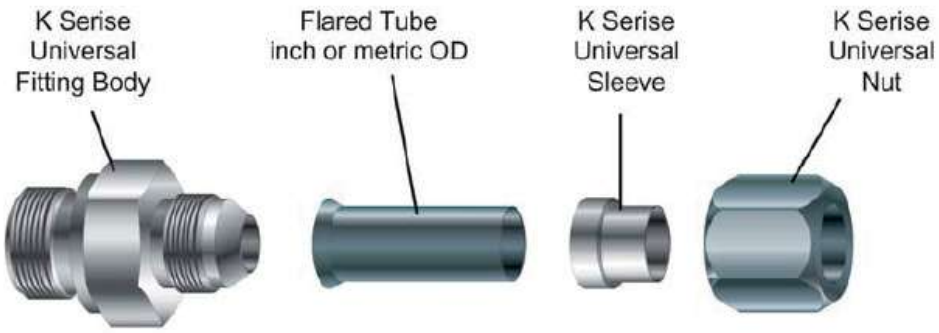
All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Design

DK-Lok K Series JIC Tube Fitting consists of body, sleeve and nut and meets the requirements of SAE J514 and ISO 8434-2 standards.

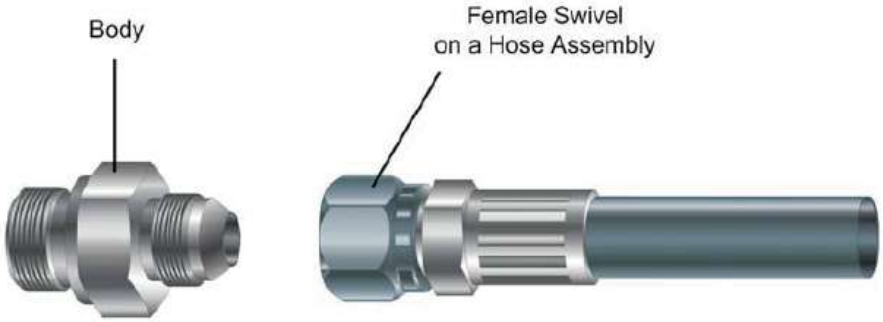


DK-Lok K Series JIC Tube Fitting are capable of connecting to inch and metric tube with no changing the Sleeve and Nut.



Example : KU-4T-SA fitting capable of connecting to 1/4″ OD Stainless steel tubing.

The fitting body without sleeve and nut is widely used as a hose adapter for connection to a female swivel on a hose assembly.



Technical Information

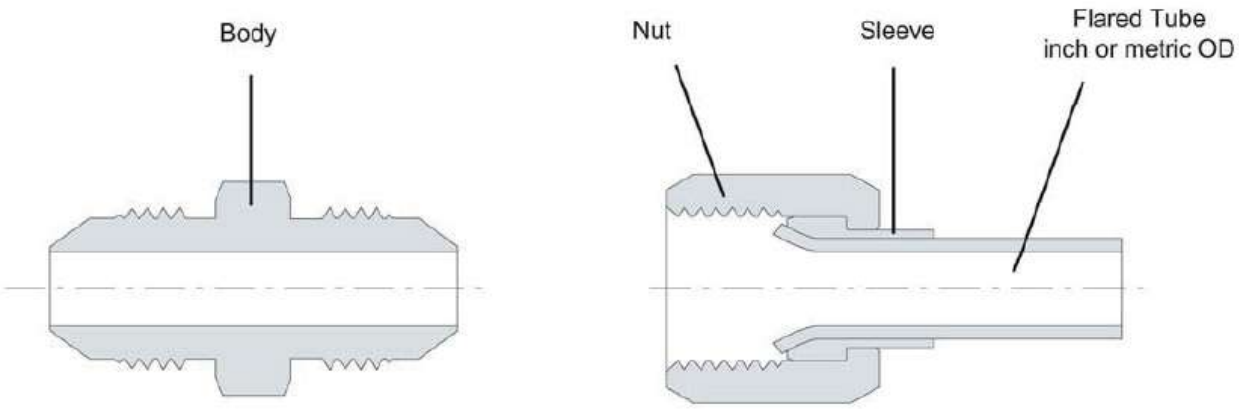


Table 1. **Material Standards**

Fitting Materials	Body		Nut and Sleeve	Flared Tubing (Not supplied)
	Bar Stock	Forging		
Stainless Steel 316	ASTM A276/A479 Type 316/316L	ASTM A182 F316/F316L	ASTM A276/A479 Type 316/316L Nut supplied with inside Molybdenum coated.	ASTM A269 ASTM A213
Carbon Steel	ASTM A108 JIS G4051 S20C - S48C	ASTM A105 JIS G4051 S20C - S48C	ASTM A108 JIS G4051 S20C - S48C Nut supplied with inside Molybdenum coated.	ASTM A179 ASTM A161
Brass	ASTM B453 UNS C35300 JIS H3250 Alloy C3604	ASTM B283 UNS 37700 JIS G4051 Alloy C3771	ASTM B453 UNS C35300 JIS H3250 Alloy C3604 Nut supplied with inside lubricated.	Copper Tubing ASTM B88 ASTM B75

Table 2. **Working Pressure Rating**

For fitting materials of Stainless steel and Carbon steel.

SAE Nominal Size	Tube OD		Union and Bulkheads		Fitting with Female Swival		Fitting with Pipe Thread	
	inch	mm	psi	bar	psi	bar	psi	bar
2	1/8	3	5000	345	5000	345	5000	345
3	3/16	4	5000	345	5000	345	5000	345
4	1/4	6	5000	345	4500	310	5000	345
5	5/16	8	5000	345	4000	275	5000	345
6	3/8	10	5000	345	4000	275	4000	275
8	1/2	12	4500	310	4000	275	3000	210
10	5/8	16	3500	240	3000	210	3000	210
12	3/4	18, 20	3500	240	3000	210	2500	170
14	7/8	22	3000	210	2500	170	2500	170
16	1	25	3000	210	2500	170	2000	140
20	1 1/4	32	2500	170	2000	140	1150	80
24	1 1/2	38	2000	140	1500	105	1000	70
32	2	50	1500	105	1125	80	1000	70

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Table 3. **Suggested Tubing Wall Thickness**

SAE Nominal Size	Inch Tube OD inch	Wall Thickness, inch		Metric Tube OD mm	Wall Thickness, mm	
		Min.	Max.		Min.	Max.
2	1/8	0.010	0.035	-	-	-
3	3/16	0.010	0.035	-	-	-
4	1/4	0.020	0.065	6	0.5	2.0
5	5/16	0.020	0.065	8	0.5	2.0
6	3/8	0.028	0.065	10	0.5	2.0
8	1/2	0.035	0.083	12	1.0	2.0
10	5/8	0.035	0.095	16	1.0	2.5
12	3/4	0.035	0.109	18, 20	1.0	3.0
14	7/8	0.035	0.109	22	1.0	3.0
16	1	0.035	0.120	25	1.0	3.0
20	1 1/4	0.049	0.120	32	1.5	3.0
24	1 1/2	0.049	0.120	38	1.5	3.0
32	2	0.058	0.134	50	1.5	3.5

Table 4. **Fitting s Surface Finish**

Sainless Steel	Carbon Steel	Brass
Passiveation	Yellow Zinc plated	Acid Cleaned. On request, chrome plated brass fitting can be supplied.

Ordering Information

To order a fitting with nut and sleeve, select an applicable part number and fitting material designator.
Example : KU-2T-S

To order a fitting with nut and sleeve factory assembled, select an applicable part number, fitting material designator and suffix **A** to the ordering number.
Example : KU-2T-S**A**

Table 5. **Fitting Material Designator**

Sainless Steel 316	Carbon Steel	Brass
S	C	B

Table 6. **Tube OD Designator**

OD inch	1/16	1/8	3/16	1/4	5/16	3/8	1/2	5/8	3/4	7/8	1	1 1/4	1 1/2	2
Designator	1	2	3	4	5	6	8	10	12	14	16	20	24	36
OD mm	4mm	6mm	8mm	10mm	12mm	16mm	18mm	20mm	22mm	25mm	25mm	32mm	38mm	50mm
Designator	4M	6M	8M	10M	12M	16M	18M	20M	22M	25M	25M	32M	38M	50M

Table 7. **Thread Symbol Designator**

Thread	Symbol	Standards
Taper Thread	N	ASME/ANSI B1.20.1
	R	ISO 7-1, BS 21, JIS B 0203
Parallel Thread	G	ISO 228-1, BS 2779, JIS B0202
	U	ASME B1.1

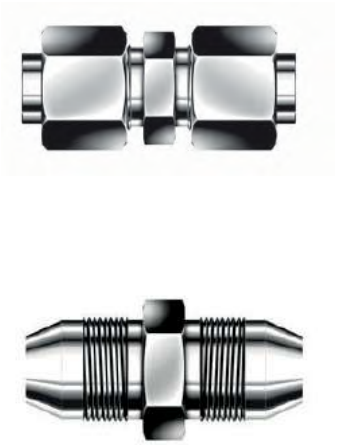
Table 8. **Taper Pipe Thread Designator**

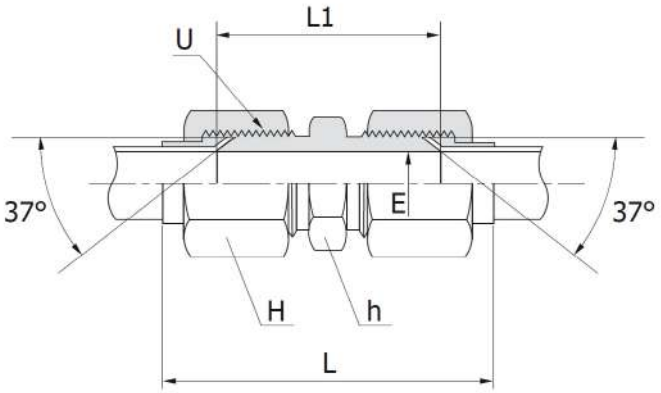
Nominal Size	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2
N	2N	4N	6N	8N	12N	16N	20N	24N	32N
R	2R	4R	6R	8R	12R	16R	20R	24R	32R

Table 9. **ASME B1.1 Unified Thread Designator**

Size	5/16	3/8	7/16	1/2	9/16	3/4	7/8	1 1/16	1 3/16	1 5/16	1 5/8	1 7/8	2 1/2
Size Designator	2	3	4	5	6	8	10	12	14	16	20	24	32

Union
KU





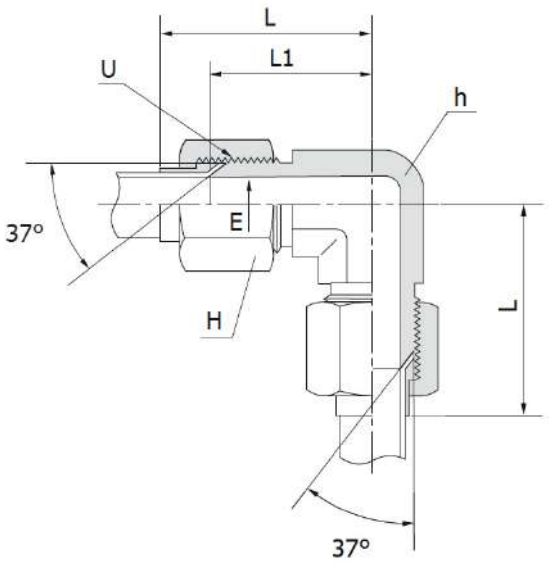
Tube to Tube Union

Part No.	Tube O.D.		U (UNF)	E	L	L1	h (HEX)	H (HEX)
	Inch	Metric						
KU-2T	1/8"	3	5/16”-24	1.6	45.3	29.7	11.1	9.5
KU-3T	3/16”	4	3/8”-24	3.2	50.0	31.2	11.1	11.1
KU-4T	1/4"	6	7/16”-20	4.4	53.0	34.8	12.7	14.2
KU-5T	5/16”	8	1/2”-20	6.0	55.6	34.8	14.2	15.8
KU-6T	3/8”	10	9/16”-18	7.5	59.6	35.8	15.8	17.4
KU-8T	1/2”	12	3/4”-16	9.9	66.5	41.1	20.6	22.2
KU-10T	5/8”	16	7/8”-14	12.3	81.0	47.8	23.8	25.4
KU-12T	3/4”	18, 20	1 1/16”-12	15.5	85.9	54.9	28.5	31.7
KU-14T	7/8”	22	1 3/16”-12	18.0	91.3	56.1	31.7	34.9
KU-16T	1”	25	1 5/16”-12	21.5	95.2	57.2	34.9	38.1
KU-20T	1-1/4”	32	1 5/8”-12	27.5	98.7	61.7	46.0	50
KU-24T	1-1/2”	38	1 7/8”-12	33.3	123.2	69.8	50.0	57.2
KU-32T	2”	50	2 1/2”-12	45.0	141.4	86.4	70	75

Union Elbow
KL







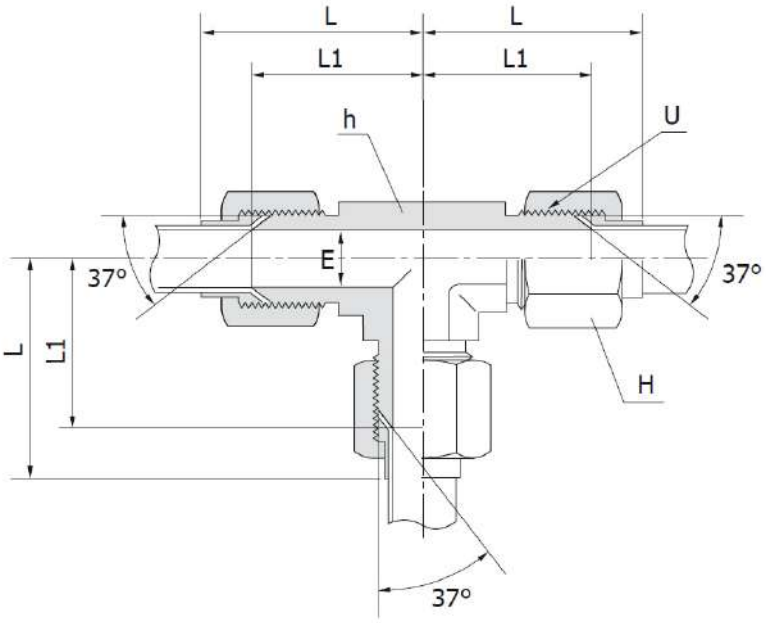
Tube to Tube Union

Part No.	Tube O.D.		U (UNF)	E	L	L1	h (HEX)	H (HEX)
	Inch	Metric						
KL-2T	1/8"	3	5/16”-24	1.6	27.4	19.6	11.1	9.5
KL-3T	3/16”	4	3/8”-24	3.2	30.5	21.1	11.1	11.1
KL-4T	1/4"	6	7/16”-20	4.4	31.7	22.6	11.1	14.2
KL-5T	5/16”	8	1/2”-20	6.0	34.5	24.1	14.2	15.8
KL-6T	3/8”	10	9/16”-18	7.5	38.8	26.9	14.2	17.4
KL-8T	1/2”	12	3/4”-16	9.9	44.5	31.8	19.1	22.2
KL-10T	5/8”	16	7/8”-14	12.3	53.4	36.8	22.2	25.4
KL-12T	3/4”	18, 20	1 1/16”-12	15.5	57.7	42.2	27.0	31.7
KL-14T	7/8”	22	1 3/16”-12	18.0	63.3	45.7	33.3	34.9
KL-16T	1”	25	1 5/16”-12	21.5	65.0	46.0	33.3	38.1
KL-20T	1-1/4”	32	1 5/8”-12	27.5	70.8	52.3	41.2	50
KL-24T	1-1/2”	38	1 7/8”-12	33.3	85.9	59.2	47.6	57.2
KL-32T	2”	50	2 1/2”-12	45.0	105.2	77.7	63.5	75

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Union Tee
KT





Tube to Tube Union

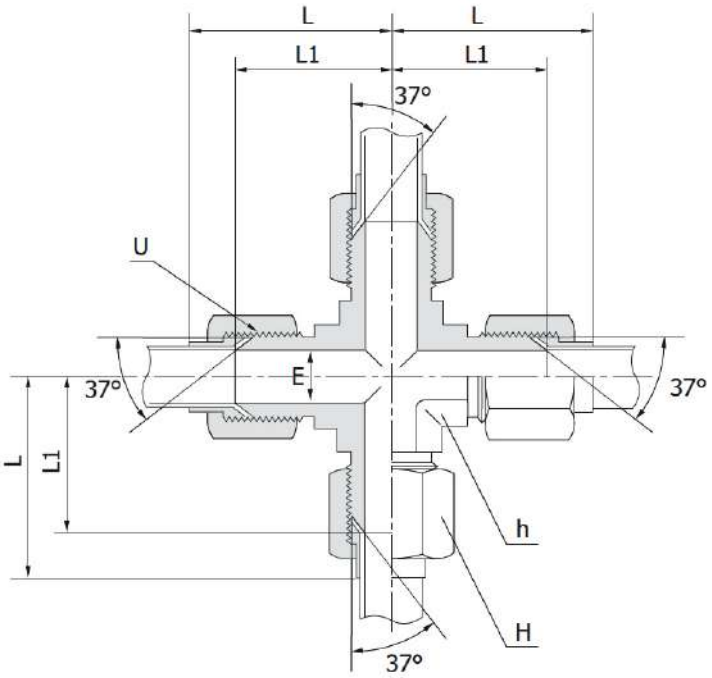
Part No.	Tube O.D.		U (UNF)	E	L	L1	h (HEX)	H (HEX)
	Inch	Metric						
KT-2T	1/8"	3	5/16”-24	1.6	27.4	19.6	11.1	9.5
KT-3T	3/16”	4	3/8”-24	3.2	30.5	21.1	11.1	11.1
KT-4T	1/4"	6	7/16”-20	4.4	31.7	22.6	11.1	14.2
KT-5T	5/16”	8	1/2”-20	6.0	34.5	24.1	14.2	15.8
KT-6T	3/8”	10	9/16”-18	7.5	38.8	26.9	14.2	17.4
KT-8T	1/2”	12	3/4”-16	9.9	44.5	31.8	19.1	22.2
KT-10T	5/8”	16	7/8”-14	12.3	53.4	36.8	22.2	25.4
KT-12T	3/4”	18, 20	1 1/16”-12	15.5	57.7	42.2	27.0	31.7
KT-14T	7/8”	22	1 3/16”-12	18.0	63.3	45.7	33.3	34.9
KT-16T	1”	25	1 5/16”-12	21.5	65.0	46.0	34.9	38.1
KT-20T	1-1/4”	32	1 5/8”-12	27.5	70.8	52.3	41.2	50
KT-24T	1-1/2”	38	1 7/8”-12	33.3	85.9	59.2	47.6	57.2
KT-32T	2”	50	2 1/2”-12	45.0	105.2	77.7	63.5	75

Union Cross

KX







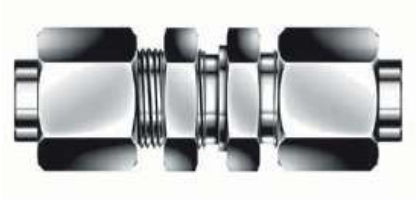
Tube to Tube Union

Part No.	Tube O.D.		U (UNF)	E	L	L1	h (HEX)	H (HEX)
	Inch	Metric						
KX-2T	1/8"	3	5/16”-24	1.6	27.4	19.6	11.1	9.5
KX-3T	3/16”	4	3/8”-24	3.2	30.5	21.1	11.1	11.0
KX-4T	1/4"	6	7/16”-20	4.4	31.7	22.6	11.1	14.2
KX-5T	5/16”	8	1/2”-20	6.0	34.5	24.1	14.2	15.8
KX-6T	3/8”	10	9/16”-18	7.5	38.8	26.9	14.2	17.4
KX-8T	1/2”	12	3/4”-16	9.9	44.5	31.8	19.1	22.2
KX-10T	5/8”	16	7/8”-14	12.3	53.4	36.8	22.2	25.4
KX-12T	3/4”	18, 20	1 1/16”-12	15.5	57.7	42.2	27.0	31.7
KX-14T	7/8”	22	1 3/16”-12	18.0	63.3	45.7	33.3	34.9
KX-16T	1”	25	1 5/16”-12	21.5	65.0	46.0	34.9	38.1
KX-20T	1-1/4”	32	1 5/8”-12	27.5	70.8	52.3	41.2	50
KX-24T	1-1/2”	38	1 7/8”-12	33.3	85.9	59.2	47.6	57.2
KX-32T	2”	50	2 1/2”-12	45.0	105.2	77.7	63.5	75

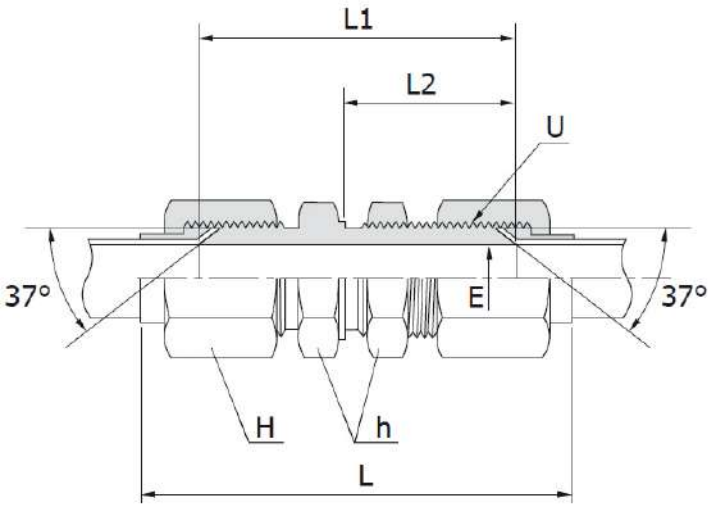
All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Bulkhead Union

KUB







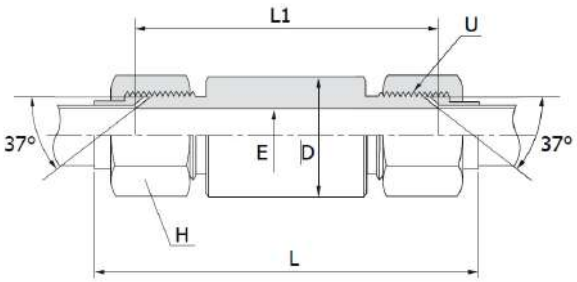
Tube to Tube Union

Part No.	Tube O.D.		U (UNF)	E	L	L1	L2	h (HEX)	H (HEX)
	Inch	Metric							
KUB-2T	1/8"	3	5/16”-24	1.6	63.1	47.5	28.2	14.2	9.5
KUB-3T	3/16”	4	3/8”-24	3.2	67.1	48.3	28.2	15.8	11.1
KUB-4T	1/4"	6	7/16”-20	4.4	70.8	52.6	30.5	17.4	14.2
KUB-5T	5/16”	8	1/2”-20	6.0	73.4	52.6	30.5	19.1	15.8
KUB-6T	3/8”	10	9/16”-18	7.5	79.2	55.4	32.5	20.6	17.4
KUB-8T	1/2”	12	3/4”-16	9.9	87.4	62.0	36.6	25.4	22.2
KUB-10T	5/8”	16	7/8”-14	12.3	102.8	69.6	40.1	28.5	25.4
KUB-12T	3/4”	18, 20	1 1/16”-12	15.5	109.5	78.5	44.4	34.9	31.7
KUB-14T	7/8”	22	1 3/16”-12	18.0	114.4	79.2	44.4	38.1	34.9
KUB-16T	1”	25	1 5/16”-12	21.5	117.8	79.8	44.4	41.2	38.1
KUB-20T	1-1/4”	32	1 5/8”-12	27.5	121.1	84.1	45.7	47.6	50
KUB-24T	1-1/2”	38	1 7/8”-12	33.3	142.8	89.4	46.0	53.9	57.2
KUB-32T	2”	50	2 1/2”-12	45.0	161.7	106.7	53.1	69.8	75

Weld Bulkhead Union

KBUW





Tube to Tube Union

Part No.	Tube O.D.		U (UNF)	E	D	L	L1	H (HEX)
	Inch	Metric						
KBUW-2T	1/8"	3	5/16”-24	1.6	11.0	85.6	70.0	9.5
KBUW-3T	3/16"	4	3/8”-24	3.2	11.0	88.8	70.0	11.1
KBUW-4T	1/4"	6	7/16”-20	4.4	14.0	98.2	80.0	14.2
KBUW-5T	5/16"	8	1/2”-20	6.0	16.0	120.8	100.0	15.8
KBUW-6T	3/8"	10	9/16”-18	7.5	17.0	123.8	100.0	17.4
KBUW-8T	1/2"	12	3/4”-16	9.9	22.0	125.4	100.0	22.2
KBUW-10T	5/8"	16	7/8”-14	12.3	25.0	143.2	110.0	25.4
KBUW-12T	3/4"	18, 20	1 1/16”-12	15.5	30.0	151.0	120.0	31.7
KBUW-14T	7/8"	22	1 3/16”-12	18.0	32.0	165.2	130.0	34.9
KBUW-16T	1"	25	1 5/16”-12	21.5	40.0	168.0	130.0	38.1
KBUW-20T	1-1/4"	32	1 5/8”-12	27.5	46.0	177.0	140.0	50
KBUW-24T	1-1/2"	38	1 7/8”-12	33.3	50.0	193.4	140.0	57.2
KBUW-32T	2"	50	2 1/2”-12	45.0	70.0	205.0	150.0	75

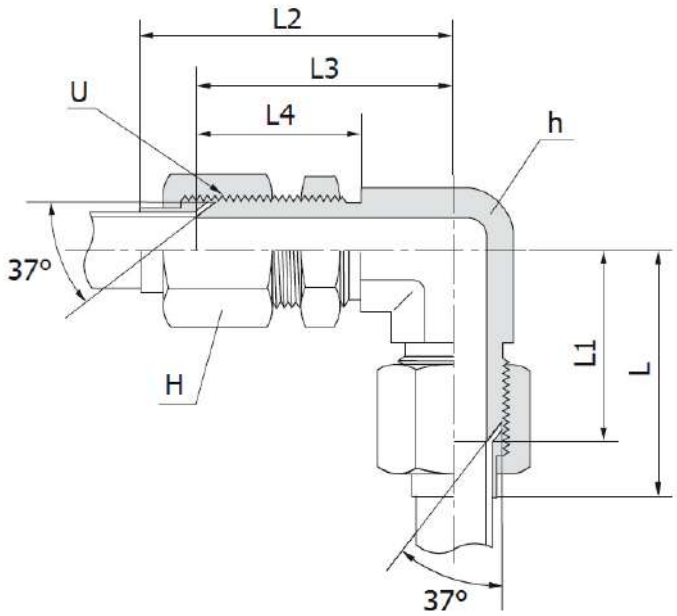
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Bulkhead Union Elbow

KBL







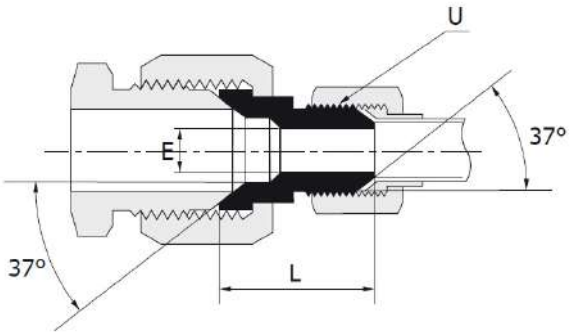
Tube to Tube Union

Part No.	Tube O.D.		U (UNF)	L	L1	L2	L3	L4	h (HEX)	H (HEX)
	Inch	Metric								
KBL-2T	1/8"	3	5/16”-24	30.2	22.4	45.9	38.1	23.4	11.1	9.5
KBL-3T	3/16”	4	3/8”-24	33.3	23.9	47.5	38.1	23.4	11.1	11.1
KBL-4T	1/4"	6	7/16”-20	33.7	24.6	49.5	40.4	25.9	11.1	14.2
KBL-5T	5/16”	8	1/2”-20	37.3	26.9	54.1	43.7	25.9	14.2	15.8
KBL-6T	3/8”	10	9/16”-18	39.6	27.7	57.9	46.0	27.7	14.2	17.4
KBL-8T	1/2”	12	3/4”-16	47.2	34.5	66.3	53.6	31.8	19.1	22.2
KBL-10T	5/8”	16	7/8”-14	56.2	39.6	77.3	60.7	35.8	22.2	25.4
KBL-12T	3/4”	18, 20	1 1/16”-12	60.7	45.2	83.1	67.6	39.6	27.0	31.7
KBL-14T	7/8”	22	1 3/16”-12	66.4	48.8	88.7	71.1	39.6	33.3	34.9
KBL-16T	1”	25	1 5/16”-12	68.3	49.3	90.1	71.1	39.6	33.3	38.1
KBL-20T	1-1/4”	32	1 5/8”-12	73.6	55.1	97.7	79.2	40.9	41.2	50.8
KBL-24T	1-1/2”	38	1 7/8”-12	86.1	59.4	113.6	86.9	41.1	47.6	57.1
KBL-32T	2”	50	2 1/2”-12	100.9	73.4	131.9	104.4	48.5	63.5	73.0

Fitting Port Reducer

KPR





Tube Port to Tube Port

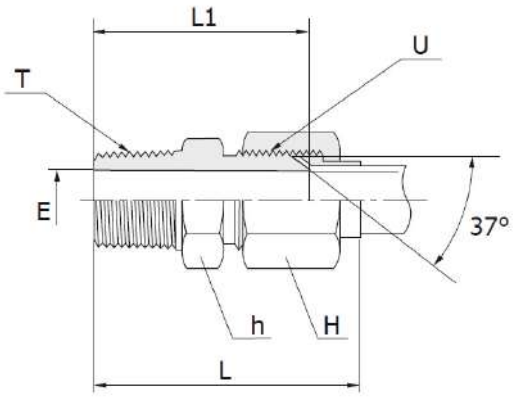
Part No.	Reducing Tube O.D	U (UNF)	E	L
KPR6T-4T	3/8" X 1/4"	7/16"-20	4.4	24.6
KPR8T-4T	1/2" X 1/4"	7/16"-20	4.4	25.4
KPR8T-6T	1/2" X 3/8"	9/16"-18	7.5	25.4
KPR10T-4T	5/8" X 1/4"	7/16"-20	4.4	26.2
KPR10T-6T	5/8" X 3/8"	9/16"-18	7.5	26.2
KPR12T-4T	3/4" X 1/4"	7/16"-20	4.4	27.7
KPR12T-6T	3/4" X 3/8"	9/16"-18	7.5	27.7
KPR12T-8T	3/4" X 1/2"	3/4"-16	10.0	30.2
KPR16T-12T	1" X 3/4"	1-1/16"-12	15.5	37.3
KPR20T-12T	1-1/4" X 3/4"	1-1/16"-12	15.5	38.3
KPR20T-16T	1-1/4" X 1"	1-5/16"-12	21.5	40.3
KPR24T-20T	1-1/2" X 1-1/4"	1 5/8"-12	27.5	42.9

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Male Connector

KMC





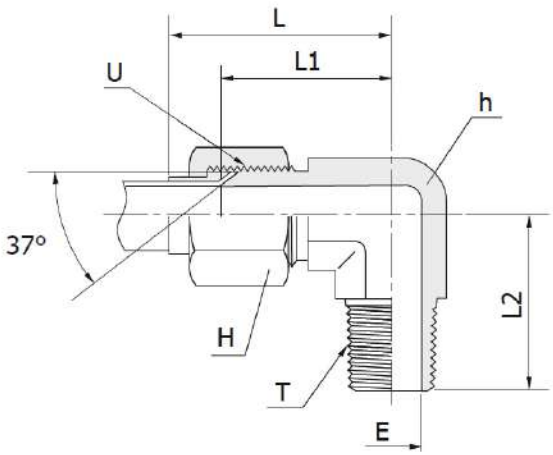
Tube to Male Pipe

Part No.	Tube O.D.		T (NPT)	U (UNF)	E	L	L1	h (HEX)	H (HEX)
	Inch	Metric							
KMC2T-2N	1/8"	3	1/8”	5/16”-24	1.6	36.0	28.2	11.1	9.5
KMC3T-2N	3/16”	4	1/8”	3/8”-24	3.2	38.4	29.0	11.1	11.1
KMC4T-2N	1/4"	6	1/8”	7/16”-20	4.4	40.1	31.0	12.7	14.2
KMC5T-2N	5/16”	8	1/8”	1/2”-20	6.0	41.4	31.0	14.2	15.8
KMC6T-4N	3/8”	10	1/4”	9/16”-18	7.5	48.2	36.3	15.8	17.4
KMC8T-6N	1/2”	12	3/8”	3/4”-16	9.9	51.6	38.9	20.6	22.2
KMC10T-8N	5/8”	16	1/2”	7/8”-14	12.3	64.6	48.0	20.6	25.4
KMC12T-12N	3/4”	18, 20	3/4”	1 1/16”-12	15.5	67.8	52.3	28.5	31.7
KMC14T-12N	7/8”	22	3/4”	1 3/16”-12	18.0	70.7	53.1	31.7	34.9
KMC16T-16N	1”	25	1”	1 5/16”-12	21.5	77.4	58.4	34.9	38.1
KMC20T-20N	1-1/4”	32	1-1/4”	1 5/8”-12	27.5	80.7	62.2	42.8	50
KMC24T-24N	1-1/2”	38	1-1/2”	1 7/8”-12	33.3	94.8	68.1	50.8	57.2
KMC32T-32N	2”	50	2”	2 1/2”-12	45.0	106.5	79.0	66.6	75

Male Elbow

KLM





Tube to Male Pipe

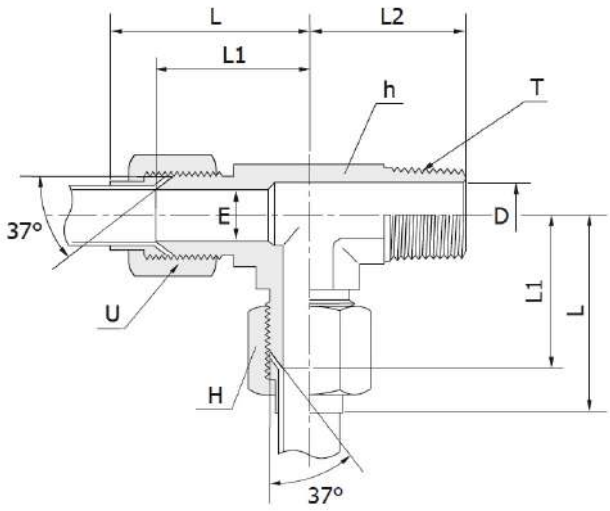
Part No.	Tube O.D.		T (NPT)	U (UNF)	E	L	L1	L2	h (HEX)	H (HEX)
	Inch	Metric								
KLM2T-2N	1/8"	3	1/8”	5/16”-24	1.6	27.4	19.6	18.3	11.1	9.5
KLM3T-2N	3/16”	4	1/8”	3/8”-24	3.2	30.5	21.1	18.3	11.1	11.1
KLM4T-2N	1/4"	6	1/8”	7/16”-20	4.4	31.7	22.6	19.8	11.1	14.2
KLM5T-2N	5/16”	8	1/8”	1/2”-20	6.0	34.5	24.1	19.8	14.2	15.8
KLM6T-4N	3/8”	10	1/4”	9/16”-18	7.5	38.8	26.9	27.7	14.2	17.4
KLM8T-6N	1/2”	12	3/8”	3/4”-16	9.9	44.5	31.8	31.0	19.1	22.2
KLM10T-8N	5/8”	16	1/2”	7/8”-14	12.3	53.4	36.8	37.3	22.2	25.4
KLM12T-12N	3/4”	18, 20	3/4”	1 1/16”-12	15.5	57.7	42.2	40.4	27.0	31.7
KLM14T-12N	7/8”	22	3/4”	1 3/16”-12	18.0	63.3	45.7	42.9	33.3	34.9
KLM16T-16N	1”	25	1”	1 5/16”-12	21.5	65.0	46.0	50.0	33.3	38.1
KLM20T-20N	1-1/4”	32	1-1/4”	1 5/8”-12	27.5	70.8	52.3	60.5	41.2	50
KLM24T-24N	1-1/2”	38	1-1/2”	1 7/8”-12	33.3	85.9	59.2	67.1	47.6	57.2
KLM32T-32N	2”	50	2”	2 1/2”-12	45.0	105.2	77.7	76.2	63.5	75

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Male Run Tee

KTRM





Tube to Male Pipe

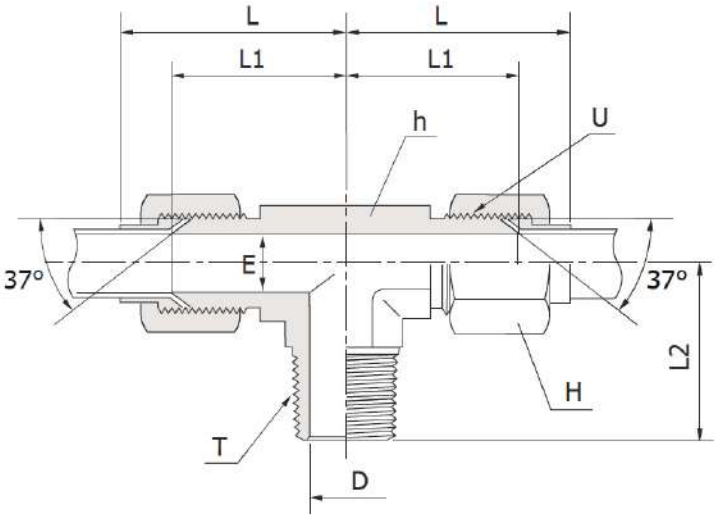
Part No.	Tube O.D.		T (NPT)	U (UNF)	E	D	L	L1	L2	h (HEX)	H (HEX)
	Inch	Metric									
KTRM2T-2N	1/8"	3	1/8"	5/16"-24	1.6	4.8	27.4	19.6	18.3	11.1	9.5
KTRM3T-2N	3/16"	4	1/8"	3/8"-24	3.2	4.8	30.5	21.1	18.3	11.1	11.1
KTRM4T-2N	1/4"	6	1/8"	7/16"-20	4.4	4.8	31.7	22.6	19.8	11.1	14.2
KTRM5T-2N	5/16"	8	1/8"	1/2"-20	6.0	4.8	34.5	24.1	19.8	14.2	15.8
KTRM6T-4N	3/8"	10	1/4"	9/16"-18	7.5	7.0	38.8	26.9	27.7	14.2	17.4
KTRM8T-6N	1/2"	12	3/8"	3/4"-16	9.9	10.3	44.5	31.8	31.0	19.1	22.2
KTRM10T-8N	5/8"	16	1/2"	7/8"-14	12.3	13.5	53.4	36.8	37.3	22.2	25.4
KTRM12T-12N	3/4"	18, 20	3/4"	1 1/16"-12	15.5	18.0	57.7	42.2	40.4	27.0	31.7
KTRM14T-12N	7/8"	22	3/4"	1 3/16"-12	18.0	18.0	63.3	45.7	42.9	33.3	34.9
KTRM16T-16N	1"	25	1"	1 5/16"-12	21.5	23.8	65.0	46.0	50.0	33.3	38.1
KTRM20T-20N	1-1/4"	32	1-1/4"	1 5/8"-12	27.5	31.7	70.8	52.3	60.5	41.2	50
KTRM24T-24N	1-1/2"	38	1-1/2"	1 7/8"-12	33.3	38.0	85.9	59.2	67.1	47.6	57.2
KTRM32T-32N	2"	50	2"	2 1/2"-12	45.0	49 .0	105.2	77.7	76.2	63.5	75

Male Branch Tee

KTBM







Tube to Male Pipe

Part No.	Tube O.D.		T (NPT)	U (UNF)	E	D	L	L1	L2	h (HEX)	H (HEX)
	Inch	Metric									
KTBM2T-2N	1/8"	3	1/8”	5/16”-24	1.6	4.8	27.4	19.6	18.3	11.1	9.5
KTBM3T-2N	3/16”	4	1/8”	3/8”-24	3.2	4.8	30.5	21.1	18.3	11.1	11.1
KTBM4T-2N	1/4"	6	1/8”	7/16”-20	4.4	4.8	31.7	22.6	19.8	11.1	14.2
KTBM5T-2N	5/16”	8	1/8”	1/2”-20	6.0	4.8	34.5	24.1	19.8	14.2	15.8
KTBM6T-4N	3/8”	10	1/4”	9/16"-18	7.5	7.0	38.8	26.9	27.7	14.2	17.4
KTBM8T-6N	1/2”	12	3/8”	3/4”-16	9.9	10.3	44.5	31.8	31.0	19.1	22.2
KTBM10T-8N	5/8”	16	1/2”	7/8”-14	12.3	13.5	53.4	36.8	37.3	22.2	25.4
KTBM12T-12N	3/4”	18, 20	3/4”	1 1/16”-12	15.5	18.0	57.7	42.2	40.4	27.0	31.7
KTBM14T-12N	7/8”	22	3/4”	1 3/16”-12	18.0	18.0	63.3	45.7	42.9	33.3	34.9
KTBM16T-16N	1”	25	1”	1 5/16”-12	21.5	23.8	65.0	46.0	50.0	33.3	38.1
KTBM20T-20N	1-1/4”	32	1-1/4”	1 5/8”-12	27.5	31.7	70.8	52.3	60.5	41.2	50
KTBM24T-24N	1-1/2”	38	1-1/2”	1 7/8”-12	33.3	38.0	85.9	59.2	67.1	47.6	57.2
KTBM32T-32N	2”	50	2”	2 1/2”-12	45.0	49.0	105.2	77.7	76.2	63.5	75

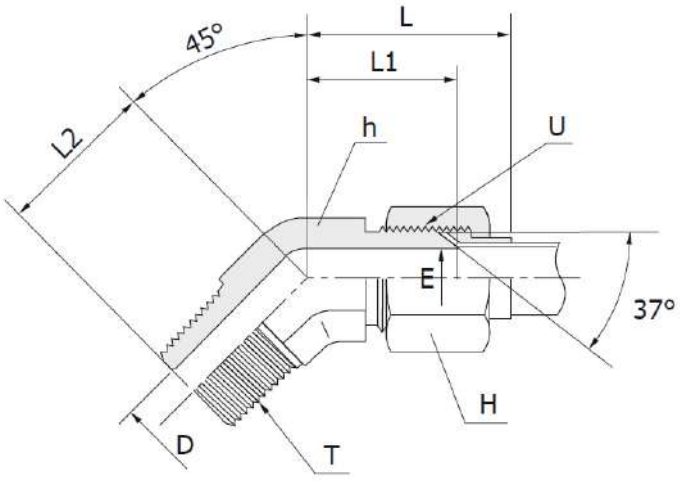
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45° Male Elbow

KLBM







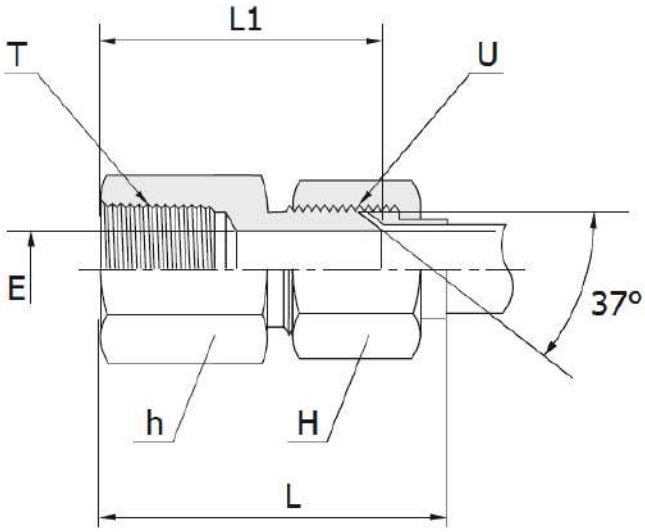
Tube to Male Pipe

Part No.	Tube O.D.		T (NPT)	U (UNF)	E	D	L	L1	L2	h (HEX)	H (HEX)
	Inch	Metric									
KLBM2T-2N	1/8"	3	1/8”	5/16”-24	1.6	1.6	25.3	17.5	13.2	11.1	9.5
KLBM3T-2N	3/16”	4	1/8”	3/8”-24	3.2	3.2	26.9	17.5	13.2	11.1	11.1
KLBM4T-2N	1/4"	6	1/8”	7/16”-20	4.4	4.4	27.4	18.3	16.3	11.1	14.2
KLBM5T-2N	5/16”	8	1/8”	1/2”-20	6.0	6.0	30.0	19.6	16.3	14.2	15.8
KLBM6T-4N	3/8”	10	1/4”	9/16"-18	7.5	7.5	33.0	21.1	21.8	14.2	17.4
KLBM8T-6N	1/2”	12	3/8”	3/4”-16	9.9	9.9	37.6	24.9	24.1	19.1	22.2
KLBM10T-8N	5/8”	16	1/2”	7/8”-14	12.3	12.3	44.8	28.2	29.7	22.2	25.4
KLBM12T-12N	3/4”	18, 20	3/4”	1 1/16”-12	15.5	15.5	48.0	32.5	30.5	27.0	31.7
KLBM14T-12N	7/8”	22	3/4”	1 3/16”-12	18.0	18.0	54.4	36.8	33.3	33.3	34.9
KLBM16T-16N	1”	25	1”	1 5/16”-12	21.5	21.5	56.3	37.3	37.6	35.0	38.1
KLBM20T-20N	1-1/4”	32	1-1/4”	1 5/8”-12	27.5	27.5	58.9	40.4	42.4	41.2	50
KLBM24T-24N	1-1/2”	38	1-1/2”	1 7/8”-12	33.3	33.3	71.9	45.2	45.0	47.6	57.2
KLBM32T-32N	2”	50	2”	2 1/2”-12	45.0	45.0	83.9	56.4	53.6	63.5	75

Female Connector

KCF





Tube to Female Pipe

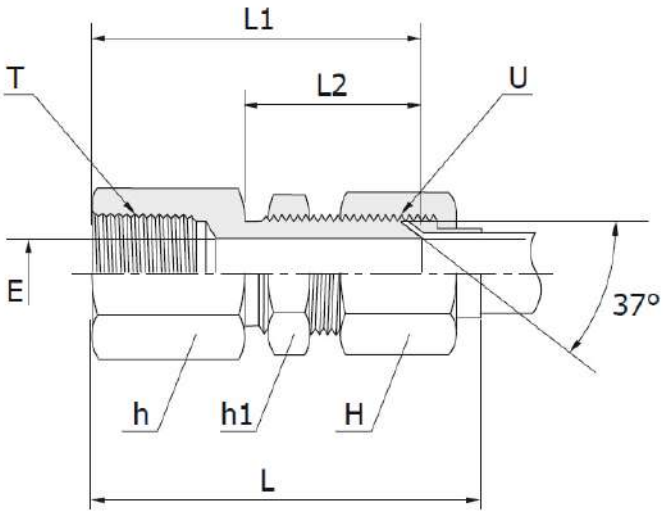
Part No.	Tube O.D.		T (NPT)	U (UNF)	E	L	L1	h (HEX)	H (HEX)
	Inch	Metric							
KCF2T-2N	1/8"	3	1/8”	5/16”-24	1.6	36.2	28.4	14.2	9.5
KCF3T-2N	3/16”	4	1/8”	3/8”-24	3.2	38.1	28.7	14.2	11.1
KCF4T-2N	1/4"	6	1/8”	7/16”-20	4.4	39.3	30.2	14.2	14.2
KCF5T-2N	5/16”	8	1/8”	1/2”-20	6.0	40.1	29.7	14.2	15.8
KCF6T-4N	3/8”	10	1/4”	9/16”-18	7.5	47.5	35.6	19.1	17.4
KCF8T-6N	1/2”	12	3/8”	3/4”-16	9.9	52.3	39.6	22.2	22.2
KCF10T-8N	5/8”	16	1/2”	7/8”-14	12.3	64.6	48.0	28.5	25.4
KCF12T-12N	3/4”	18, 20	3/4”	1 1/16”-12	15.5	67.8	52.3	34.9	31.7
KCF14T-12N	7/8”	22	3/4”	1 3/16”-12	18.0	69.9	52.3	34.9	34.9
KCF16T-16N	1”	25	1”	1 5/16”-12	21.5	78.7	59.7	41.2	38.1
KCF20T-20N	1-1/4”	32	1-1/4”	1 5/8”-12	27.5	81.7	63.2	50.8	50
KCF24T-24N	1-1/2”	38	1-1/2”	1 7/8”-12	33.3	93.2	66.5	60.3	57.2
KCF32T-32N	2”	50	2”	2 1/2”-12	45.0	102.9	75.4	73.0	75

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Bulkhead Female Connector

KCBF





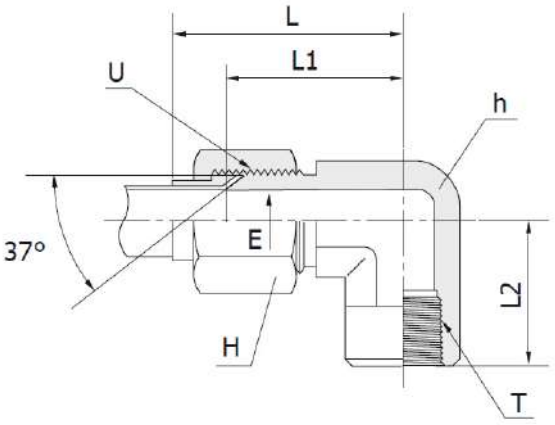
Tube to Female Pipe

Part No.	Tube O.D.		T (NPT)	U (UNF)	E	L	L1	L2	h (HEX)	h1 (HEX)	H (HEX)
	Inch	Metric									
KCBF2T-2N	1/8"	3	1/8”	5/16”-24	1.6	49.0	41.2	28.2	14.2	14.2	9.5
KCBF3T-2N	3/16”	4	1/8”	3/8”-24	3.2	50.6	41.2	28.2	14.2	15.8	11.1
KCBF4T-2N	1/4"	6	1/8”	7/16”-20	4.4	52.6	46.7	30.5	17.4	17.4	14.2
KCBF5T-2N	5/16”	8	1/8”	1/2”-20	6.0	53.9	43.5	30.5	19.1	19.1	15.8
KCBF6T-4N	3/8”	10	1/4”	9/16"-18	7.5	62.5	52.3	32.5	20.6	20.6	17.4
KCBF8T-6N	1/2”	12	3/8”	3/4”-16	9.9	69.3	54.4	36.6	25.4	25.4	22.2
KCBF10T-8N	5/8”	16	1/2”	7/8”-14	12.3	82.7	67.5	40.1	28.5	28.5	25.4
KCBF12T-12N	3/4”	18, 20	3/4”	1 1/16”-12	15.5	86.0	73.9	44.4	34.9	34.9	31.7
KCBF14T-12N	7/8”	22	3/4”	1 3/16”-12	18.0	89.0	73.4	44.4	38.1	38.1	34.9
KCBF16T-16N	1”	25	1”	1 5/16”-12	21.5	94.4	78.5	44.4	41.2	41.2	38.1
KCBF20T-20N	1-1/4”	32	1-1/4”	1 5/8”-12	27.5	99.2	80.7	45.7	50.8	47.6	50
KCBF24T-24N	1-1/2”	38	1-1/2”	1 7/8”-12	33.3	107.7	85.1	46.0	53.9	53.9	57.2
KCBF32T-32N	2”	50	2”	2 1/2”-12	45.0	120.6	93.1	53.1	75	69.8	75

Female Elbow

KLF





Tube to Female Pipe

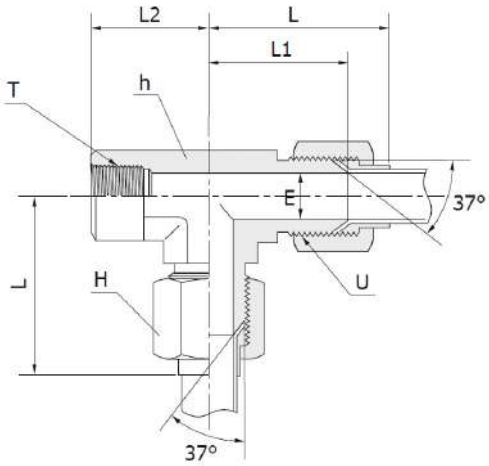
Part No.	Tube O.D.		T (NPT)	U (UNF)	E	L	L1	L2	h (HEX)	H (HEX)
	Inch	Metric								
KLF2T-2N	1/8"	3	1/8”	5/16”-24	1.6	33.2	25.4	16.8	14.2	9.5
KLF3T-2N	3/16”	4	1/8”	3/8”-24	3.2	35.6	26.2	16.8	14.2	11.1
KLF4T-2N	1/4"	6	1/8”	7/16”-20	4.4	36.5	27.4	16.8	14.2	14.2
KLF5T-2N	5/16”	8	1/8”	1/2”-20	6.0	37.8	27.4	16.8	14.2	15.8
KLF6T-4N	3/8”	10	1/4”	9/16”-18	7.5	43.1	31.2	22.4	19.1	17.4
KLF8T-6N	1/2”	12	3/8”	3/4”-16	9.9	48.8	36.1	25.9	22.2	22.2
KLF10T-8N	5/8”	16	1/2”	7/8”-14	12.3	58.3	41.7	31.2	27.0	25.4
KLF12T-12N	3/4”	18, 20	3/4”	1 1/16”-12	15.5	63.5	48.0	34.5	33.3	31.7
KLF14T-12N	7/8”	22	3/4”	1 3/16”-12	18.0	64.8	47.2	36.1	33.3	34.9
KLF16T-16N	1”	25	1”	1 5/16”-12	21.5	74.1	55.1	41.1	41.2	38.1
KLF20T-20N	1-1/4”	32	1-1/4”	1 5/8”-12	27.5	77.7	59.2	43.2	47.6	50
KLF24T-24N	1-1/2”	38	1-1/2”	1 7/8”-12	33.3	100.1	73.4	52.8	65.1	57.2
KLF32T-32N	2”	50	2”	2 1/2”-12	45.0	111.3	83.8	60.7	71.4	75

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Female Run Tee

KTRF





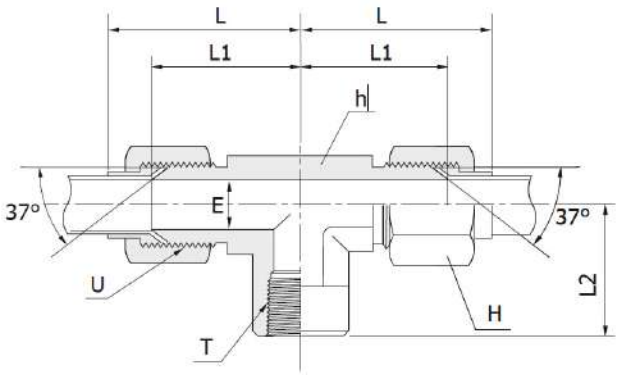
Tube to Female Pipe

Part No.	Tube O.D.		T (NPT)	U (UNF)	E	L	L1	L2	h (HEX)	H (HEX)
	Inch	Metric								
KTRF2T-2N	1/8"	3	1/8”	5/16”-24	1.6	33.2	25.4	16.8	14.2	9.5
KTRF3T-2N	3/16”	4	1/8”	3/8”-24	3.2	35.6	26.2	16.8	14.2	11.1
KTRF4T-2N	1/4"	6	1/8”	7/16”-20	4.4	36.5	27.4	16.8	14.2	14.2
KTRF5T-2N	5/16”	8	1/8”	1/2”-20	6.0	37.8	27.4	16.8	14.2	15.8
KTRF6T-4N	3/8”	10	1/4”	9/16"-18	7.5	43.1	31.2	22.4	19.1	17.4
KTRF8T-6N	1/2”	12	3/8”	3/4”-16	9.9	48.8	36.1	25.9	22.2	22.2
KTRF10T-8N	5/8”	16	1/2”	7/8”-14	12.3	58.3	41.7	31.2	27.0	25.4
KTRF12T-12N	3/4”	18, 20	3/4”	1 1/16”-12	15.5	63.5	48.0	34.5	33.3	31.7
KTRF14T-12N	7/8”	22	3/4”	1 3/16”-12	18.0	64.8	47.2	36.1	33.3	34.9
KTRF16T-16N	1”	25	1”	1 5/16”-12	21.5	74.1	55.1	41.1	41.2	38.1
KTRF20T-20N	1-1/4”	32	1-1/4”	1 5/8”-12	27.5	77.7	59.2	43.2	47.6	50
KTRF24T-24N	1-1/2”	38	1-1/2”	1 7/8”-12	33.3	100.1	73.4	52.8	65.1	57.2
KTRF32T-32N	2”	50	2”	2 1/2”-12	45.0	111.3	83.8	60.7	71.4	75

Female Branch Tee

KTBF





Tube to Female Pipe

Part No.	Tube O.D.		T (NPT)	U (UNF)	E	L	L1	L2	h (HEX)	H (HEX)
	Inch	Metric								
KTBF2T-2N	1/8"	3	1/8"	5/16"-24	1.6	33.2	25.4	16.8	14.2	9.5
KTBF3T-2N	3/16"	4	1/8"	3/8"-24	3.2	35.6	26.2	16.8	14.2	11.1
KTBF4T-2N	1/4"	6	1/8"	7/16"-20	4.4	36.5	27.4	16.8	14.2	14.2
KTBF5T-2N	5/16"	8	1/8"	1/2"-20	6.0	37.8	27.4	16.8	14.2	15.8
KTBF6T-4N	3/8"	10	1/4"	9/16"-18	7.5	43.1	31.2	22.4	19.1	17.4
KTBF8T-6N	1/2"	12	3/8"	3/4"-16	9.9	48.8	36.1	25.9	22.2	22.2
KTBF10T-8N	5/8"	16	1/2"	7/8"-14	12.3	58.3	41.7	31.2	27.0	25.4
KTBF12T-12N	3/4"	18, 20	3/4"	1 1/16"-12	15.5	63.5	48.0	34.5	33.3	31.7
KTBF14T-12N	7/8"	22	3/4"	1 3/16"-12	18.0	64.8	47.2	36.1	33.3	34.9
KTBF16T-16N	1"	25	1"	1 5/16"-12	21.5	74.1	55.1	41.1	41.2	38.1
KTBF20T-20N	1-1/4"	32	1-1/4"	1 5/8"-12	27.5	77.7	59.2	43.2	47.6	50
KTBF24T-24N	1-1/2"	38	1-1/2"	1 7/8"-12	33.3	100.1	73.4	52.8	65.1	57.2
KTBF32T-32N	2"	50	2"	2 1/2"-12	45.0	111.3	83.8	60.7	71.4	75

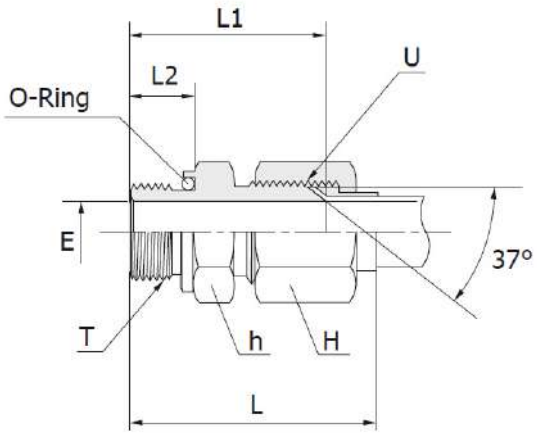
All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

O-Seal G Male Connector

KMC-GO







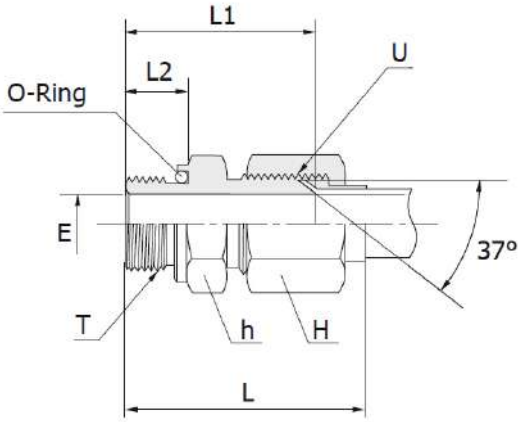
Tube to Straight Thread

Part No.	Tube O.D.		T (PF)	U (UNF)	E	L	L1	L2	h (HEX)	H (HEX)
	Inch	Metric								
KMC2T-2GO	1/8"	3	1/8"	5/16"-24	1.6	35.3	27.5	8.0	11.1	9.5
KMC3T-2GO	3/16"	4	1/8"	3/8"-24	3.2	37.9	28.5	8.0	12.7	11.0
KMC4T-2GO	1/4"	6	1/8"	7/16"-20	4.4	39.3	30.2	8.0	14.2	14.2
KMC5T-2GO	5/16"	8	1/8"	1/2"-20	6.0	40.6	30.2	8.0	15.8	16.0
KMC6T-4GO	3/8"	10	1/4"	9/16"-18	7.5	46.9	35.0	12.0	17.4	17.4
KMC8T-6GO	1/2"	12	3/8"	3/4"-16	9.9	51.4	38.7	12.0	22.2	22.2
KMC10T-8GO	5/8"	16	1/2"	7/8"-14	12.3	61.1	44.5	14.0	25.4	25.4
KMC12T-12GO	3/4"	18, 20	3/4"	1 1/16"-12	15.5	66.4	50.9	16.0	31.7	32.0
KMC14T-12GO	7/8"	22	3/4"	1 3/16"-12	18.0	69.0	51.4	16.0	34.9	35.0
KMC16T-16GO	1"	25	1"	1 5/16"-12	21.5	71.7	52.7	18.0	38.0	38.0
KMC20T-20GO	1-1/4"	32	1-1/4"	1 5/8"-12	37.5	78.5	60.0	20.0	42.8	50.8
KMC24T-24GO	1-1/2"	38	1-1/2"	1 7/8"-12	33.0	92.8	66.1	21.0	55.0	57.0
KMC32T-32GO	2"	50	2"	2 1/2"-12	45.0	108.0	80.5	25.0	70.0	73.0

O-Seal UNF Male Connector

KMCS-U





Tube to Straight Thread

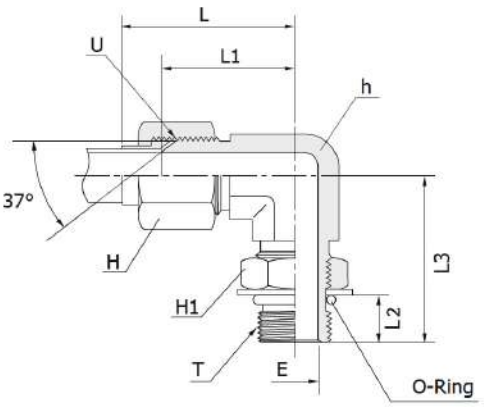
Part No.	Tube O.D.		T (UNF)	U (UNF)	E	L	L1	L2	h (HEX)	H (HEX)
	Inch	Metric								
KMCS2T-2U	1/8"	3	5/16"-24	5/16"-24	1.6	34.7	26.9	7.5	11.1	9.5
KMCS3T-3U	3/16"	4	3/8"-24	3/8"-24	3.2	37.3	27.9	7.5	12.7	11.1
KMCS4T-4U	1/4"	6	7/16"-20	7/16"-20	4.4	40.3	31.2	9.1	14.2	14.2
KMCS5T-5U	5/16"	8	1/2"-20	1/2"-20	6.0	41.6	31.2	9.1	15.8	15.8
KMCS6T-6U	3/8"	10	9/16"-18	9/16"-18	7.5	44.9	33.0	9.9	17.4	17.4
KMCS8T-8U	1/2"	12	3/4"-16	3/4"-16	9.9	50.3	37.6	11.1	22.2	22.2
KMCS10T-10U	5/8"	16	7/8"-14	7/8"-14	12.3	59.8	43.2	12.7	25.4	25.4
KMCS12T-12U	3/4"	18, 20	1 1/16"-12	1 1/16"-12	15.5	65.5	50.0	15.1	31.7	31.7
KMCS14T-14U	7/8"	22	1 3/16"-12	1 3/16"-12	18.0	68.1	50.5	15.1	34.9	34.9
KMCS16T-16U	1"	25	1 5/16"-12	1 5/16"-12	21.5	70.8	51.8	15.1	38.1	38.1
KMCS20T-20U	1-1/4"	32	1 5/8"-12	1 5/8"-12	27.5	73.6	55.1	15.1	47.6	50
KMCS24T-24U	1-1/2"	38	1 7/8"-12	1 7/8"-12	33.3	86.9	60.2	15.1	53.9	57.2
KMCS32T-32U	2"	50	2 1/2"-12	2 1/2"-12	45.0	98.1	70.6	15.1	69.8	75

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

O-Seal UNF Male Elbow

KLS-UP





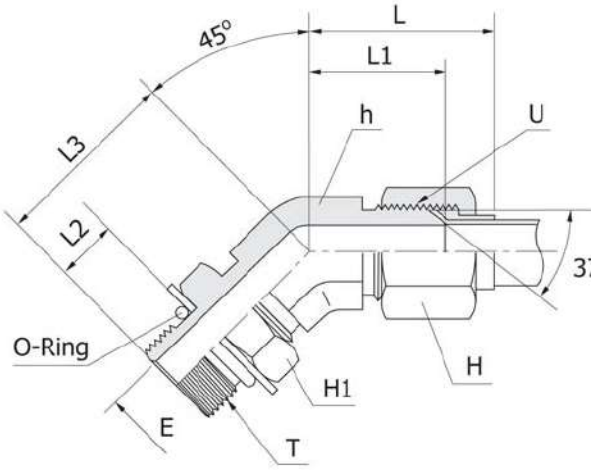
Tube to Straight Thread

Part No.	Tube O.D.		T (UNF)	U (UNF)	E	L	L1	L2	L3	h (HEX)	H (HEX)	H1 (HEX)
	Inch	Metric										
KLS2T-2UP	1/8"	3	5/16"-24	5/16"-24	1.6	27.4	19.6	8.4	23.9	11.1	9.5	11.1
KLS3T-3UP	3/16"	4	3/8"-24	3/8"-24	3.2	30.5	21.1	8.4	23.9	11.1	11.1	12.7
KLS4T-4UP	1/4"	6	7/16"-20	7/16"-20	4.4	31.7	22.6	9.8	26.2	11.1	14.2	14.2
KLS5T-5UP	5/16"	8	1/2"-20	1/2"-20	6.0	34.5	24.1	9.8	28.7	14.2	15.8	15.8
KLS6T-6UP	3/8"	10	9/16"-18	9/16"-18	7.5	38.8	26.9	11	31.8	14.2	17.4	17.4
KLS8T-8UP	1/2"	12	3/4"-16	3/4"-16	9.9	44.5	31.8	12.5	36.8	19.1	22.2	22.2
KLS10T-10UP	5/8"	16	7/8"-14	7/8"-14	12.3	53.4	36.8	14.3	43.2	22.2	25.4	25.4
KLS12T-12UP	3/4"	18, 20	1 1/16"-12	1 1/16"-12	15.5	57.7	42.2	16.5	49.3	27.0	31.7	31.7
KLS14T-14UP	7/8"	22	1 3/16"-12	1 3/16"-12	18.0	63.3	45.7	16.5	50.8	33.3	34.9	34.9
KLS16T-16UP	1"	25	1 5/16"-12	1 5/16"-12	21.5	65.0	46.0	16.5	52.1	33.3	38.1	38.1
KLS20T-20UP	1-1/4"	32	1 5/8"-12	1 5/8"-12	27.5	70.8	52.3	16.5	57.2	41.2	50	47.6
KLS24T-24UP	1-1/2"	38	1 7/8"-12	1 7/8"-12	33.3	85.9	59.2	16.5	60.7	47.6	57.2	53.9
KLS32T-32UP	2"	50	2 1/2"-12	2 1/2"-12	45.0	105.2	77.7	16.5	73.4	63.5	75	69.8

O-Seal 45° UNF Male Elbow

KLBS-UP





Tube to Straight Thread

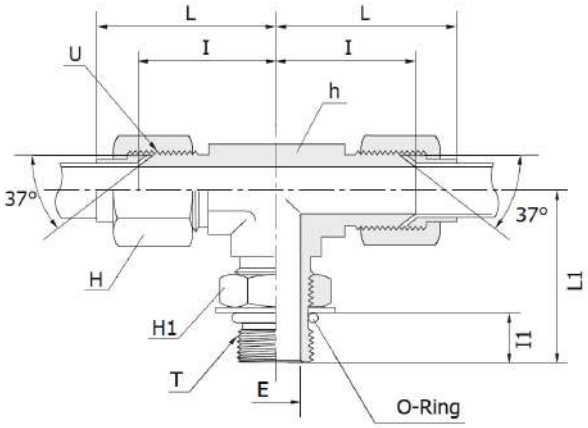
Part No.	Tube O.D.		T (UNF)	U (UNF)	E	L	L1	L2	L3	h (HEX)	H (HEX)	H1 (HEX)
	Inch	Metric										
KLBS2T-2UP	1/8"	3	5/16"-24	5/16"-24	1.6	25.3	17.5	8.4	22.4	11.1	9.5	11.1
KLBS3T-3UP	3/16"	4	3/8"-24	3/8"-24	3.2	26.9	17.5	8.4	22.4	11.1	11.1	12.7
KLBS4T-4UP	1/4"	6	7/16"-20	7/16"-20	4.4	27.4	18.3	9.8	26.7	11.1	14.2	14.2
KLBS5T-5UP	5/16"	8	1/2"-20	1/2"-20	6.0	30.0	19.6	9.8	26.7	14.2	15.8	15.8
KLBS6T-6UP	3/8"	10	9/16"-18	9/16"-18	7.5	33.0	21.1	11	29	14.2	17.4	17.4
KLBS8T-8UP	1/2"	12	3/4"-16	3/4"-16	9.9	37.6	24.9	12.5	33	19.1	22.2	22.2
KLBS10T-10UP	5/8"	16	7/8"-14	7/8"-14	12.3	44.8	28.2	14.3	38.6	22.2	25.4	25.4
KLBS12T-12UP	3/4"	18, 20	1 1/16"-12	1 1/16"-12	15.5	48.0	32.5	16.5	43.9	27.0	31.7	31.7
KLBS14T-14UP	7/8"	22	1 3/16"-12	1 3/16"-12	18.0	54.4	36.8	16.5	47.2	33.3	34.9	34.9
KLBS16T-16UP	1"	25	1 5/16"-12	1 5/16"-12	21.5	56.3	37.3	16.5	47.2	33.3	38.1	38.1
KLBS20T-20UP	1-1/4"	32	1 5/8"-12	1 5/8"-12	27.5	58.9	40.4	16.5	48.5	41.2	50	47.6
KLBS24T-24UP	1-1/2"	38	1 7/8"-12	1 7/8"-12	33.3	71.9	45.2	16.5	48.5	47.6	57.0	53.9
KLBS32T-32UP	2"	50	2 1/2"-12	2 1/2"-12	45.0	83.9	56.4	16.5	47.2	63.5	73.0	69.8

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

O-Seal UNF Branch Tee

KTBS-UP





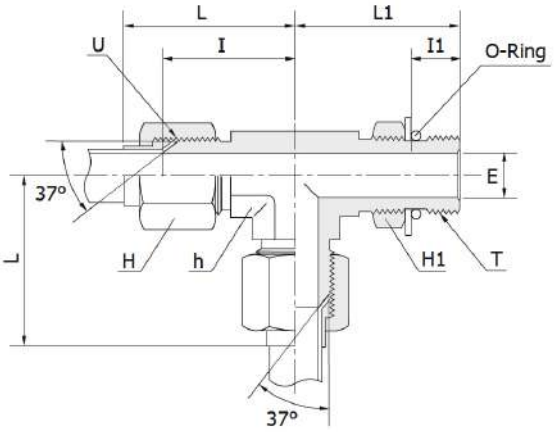
Tube to Straight Thread

Part No.	Tube O.D.		T (UNF)	U (UNF)	E	L	L1	I	I1	h (HEX)	H (HEX)	H1 (HEX)
	Inch	Metric										
KTBS2T-2UP	1/8"	3	5/16"-24	5/16"-24	1.6	27.4	23.9	19.6	8.4	11.1	9.5	11.1
KTBS3T-3UP	3/16"	4	3/8"-24	3/8"-24	3.2	30.5	23.9	21.1	8.4	11.1	11.1	12.7
KTBS4T-4UP	1/4"	6	7/16"-20	7/16"-20	4.4	31.7	26.2	22.6	9.8	11.1	14.2	14.2
KTBS5T-5UP	5/16"	8	1/2"-20	1/2"-20	6.0	34.5	28.7	24.1	9.8	14.2	15.8	15.8
KTBS6T-6UP	3/8"	10	9/16"-18	9/16"-18	7.5	38.8	31.8	26.9	11	14.2	17.4	17.4
KTBS8T-8UP	1/2"	12	3/4"-16	3/4"-16	9.9	44.5	36.8	31.8	12.5	19.1	22.2	22.2
KTBS10T-10UP	5/8"	16	7/8"-14	7/8"-14	12.3	53.4	43.2	36.8	14.3	22.2	25.4	25.4
KTBS12T-12UP	3/4"	18, 20	1 1/16"-12	1 1/16"-12	15.5	57.7	49.3	42.2	16.5	27.0	31.7	31.7
KTBS14T-14UP	7/8"	22	1 3/16"-12	1 3/16"-12	18.0	63.3	50.8	45.7	16.5	33.3	34.9	34.9
KTBS16T-16UP	1"	25	1 5/16"-12	1 5/16"-12	21.5	65.0	52.1	46.0	16.5	33.3	38.1	38.1
KTBS20T-20UP	1-1/4"	32	1 5/8"-12	1 5/8"-12	27.5	70.8	57.2	52.3	16.5	41.2	50	47.6
KTBS24T-24UP	1-1/2"	38	1 7/8"-12	1 7/8"-12	33.3	85.9	60.7	59.2	16.5	47.6	57.2	53.9
KTBS32T-32UP	2"	50	2 1/2"-12	2 1/2"-12	45.0	105.2	73.4	77.7	16.5	63.5	75	69.8

O-Seal UNF Run Tee

KTRS-UP





Tube to Straight Thread

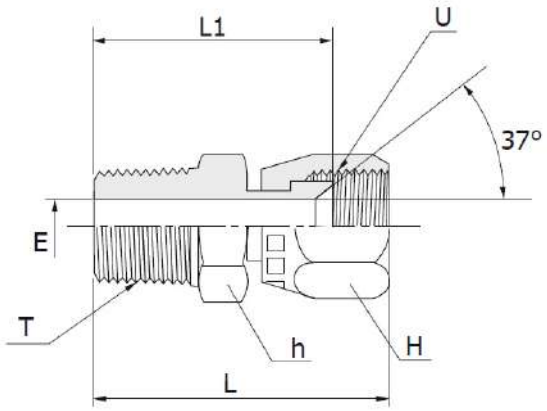
Part No.	Tube O.D.		T (UNF)	U (UNF)	E	L	L1	I	I1	h (HEX)	H (HEX)	H1 (HEX)
	Inch	Metric										
KTRS2T-2UP	1/8"	3	5/16"-24	5/16"-24	1.6	27.4	23.9	19.6	8.4	11.1	9.5	11.1
KTRS3T-3UP	3/16"	4	3/8"-24	3/8"-24	3.2	30.5	23.9	21.1	8.4	11.1	11.1	12.7
KTRS4T-4UP	1/4"	6	7/16"-20	7/16"-20	4.4	31.7	26.2	22.6	9.8	11.1	14.2	14.2
KTRS5T-5UP	5/16"	8	1/2"-20	1/2"-20	6.0	34.5	28.7	24.1	9.8	14.2	15.8	15.8
KTRS6T-6UP	3/8"	10	9/16"-18	9/16"-18	7.5	38.8	31.8	26.9	11	14.2	17.4	17.4
KTRS8T-8UP	1/2"	12	3/4"-16	3/4"-16	9.9	44.5	36.8	31.8	12.5	19.1	22.2	22.2
KTRS10T-10UP	5/8"	16	7/8"-14	7/8"-14	12.3	53.4	43.2	36.8	14.3	22.2	25.4	25.4
KTRS12T-12UP	3/4"	18, 20	1 1/16"-12	1 1/16"-12	15.5	57.7	49.3	42.2	16.5	27.0	31.7	31.7
KTRS14T-14UP	7/8"	22	1 3/16"-12	1 3/16"-12	18.0	63.3	50.8	45.7	16.5	33.3	34.9	34.9
KTRS16T-16UP	1"	25	1 5/16"-12	1 5/16"-12	21.5	65.0	52.1	46.0	16.5	33.3	38.1	38.1
KTRS20T-20UP	1-1/4"	32	1 5/8"-12	1 5/8"-12	27.5	70.8	57.2	52.3	16.5	41.2	50	47.6
KTRS24T-24UP	1-1/2"	38	1 7/8"-12	1 7/8"-12	33.3	85.9	60.7	59.2	16.5	47.6	57.2	53.9
KTRS32T-32UP	2"	50	2 1/2"-12	2 1/2"-12	45.0	105.2	73.4	77.7	16.5	63.5	75	69.8

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Swivel Male Connector

KSMC



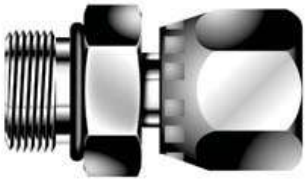


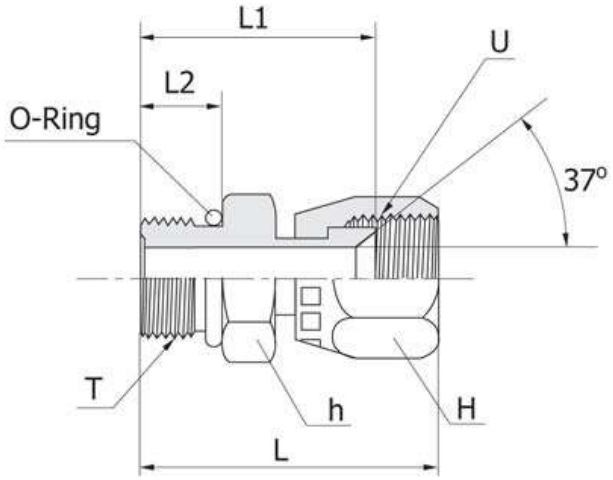
Swivel Fittings

Part No.	Tube O.D.		T (NPT)	U (UNF)	E	L	L1	h (HEX)	H (HEX)
	Inch	Metric							
KSMC2T-2N	1/8"	3	1/8”	5/16”-24	1.6	30.0	22.0	11.1	11.1
KSMC3T-2N	3/16”	4	1/8”	3/8”-24	3.2	32.0	23.5	11.1	12.7
KSMC4T-2N	1/4"	6	1/8”	7/16”-20	4.4	34.2	25.5	12.7	14.2
KSMC5T-2N	5/16”	8	1/8”	1/2”-20	6.0	35.0	25.5	14.2	16.0
KSMC6T-4N	3/8”	10	1/4”	9/16”-18	7.5	40.2	30.7	16	17.4
KSMC8T-6N	1/2”	12	3/8”	3/4”-16	9.9	42.7	32	21	22.2
KSMC10T-8N	5/8”	16	1/2”	7/8”-14	12.3	51.3	38.6	23.8	25.4
KSMC12T-12N	3/4”	18, 20	3/4”	1 1/16”-12	15.5	54.5	40.2	29	32
KSMC14T-12N	7/8”	22	3/4”	1 3/16”-12	18.0	56.0	41.2	32.0	35.0
KSMC16T-16N	1”	25	1”	1 5/16”-12	21.5	63.7	48.6	36	38
KSMC20T-20N	1-1/4”	32	1-1/4”	1 5/8”-12	27.5	68.9	53	46	50.8
KSMC24T-24N	1-1/2”	38	1-1/2”	1 7/8”-12	33.3	77.6	59	50	57
KSMC32T-32N	2”	50	2”	2 1/2”-12	45.0	92.9	69.1	66.7	73

Swivel UNF Male Connector

KSMCS-U





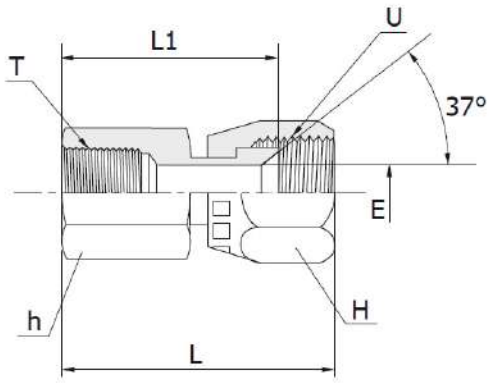
Swivel Fittings

Part No.	Tube O.D.		T (UNF)	U (UNF)	L	L1	L2	h (HEX)	H (HEX)
	Inch	Metric							
KSMCS2T-02U	1/8"	3	5/16"-24	5/16"-24	30.4	22.5	7.5	11.1	11.1
KSMCS3T-02U	3/16"	4	3/8"-24	3/8"-24	31.0	22.7	7.5	12.7	12.7
KSMCS4T-04U	1/4"	6	7/16"-20	7/16"-20	33.9	25.2	9.1	14.2	14.2
KSMCS5T-05U	5/16"	8	1/2"-20	1/2"-20	35.7	26.2	9.1	15.8	15.8
KSMCS6T-06U	3/8"	10	9/16"-18	9/16"-18	37.4	27.9	9.9	17.4	19
KSMCS8T-08U	1/2"	12	3/4"-16	3/4"-16	41.6	30.7	11.1	22.2	22.2
KSMCS10T-10U	5/8"	16	7/8"-14	7/8"-14	47.6	34.9	12.7	25.4	27
KSMCS12T-12U	3/4"	18, 20	1 1/16"-12	1 1/16"-12	54.4	40.1	15.1	31.8	32
KSMCS14T-14U	7/8"	22	1 3/16"-12	1 3/16"-12	55.6	40.9	15.1	34.9	34.9
KSMCS16T-16U	1"	25	1 5/16"-12	1 5/16"-12	56.8	41.7	15.1	38.1	38.1
KSMCS20T-20U	1-1/4"	32	1 5/8"-12	1 5/8"-12	63.2	47.3	15.1	46.7	50.8
KSMCS24T-24U	1-1/2"	38	1 7/8"-12	1 7/8"-12	71.3	52.7	15.1	54.0	60.0
KSMCS32T-32U	2"	50	2 1/2"-12	2 1/2"-12	72.5	58.7	15.1	70.0	73.0

Swivel Female Connector

KSCF





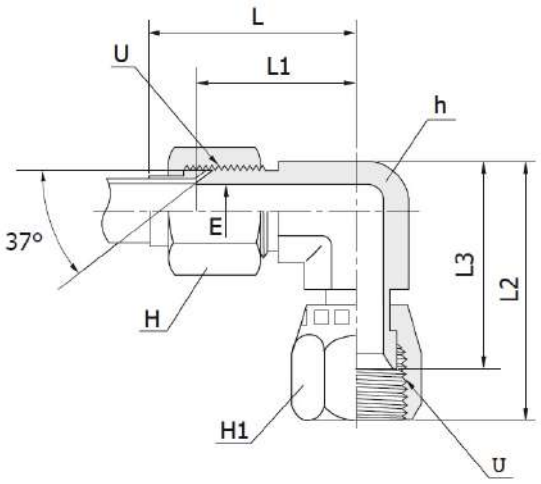
Swivel Fittings

Part No.	Tube O.D.		T (NPT)	U (UNF)	E	L	L1	h (HEX)	H (HEX)
	Inch	Metric							
KSCF2T-2N	1/8"	3	1/8"	5/16"-24	1.6	36.1	28.2	14.2	11.1
KSCF3T-2N	3/16"	4	1/8"	3/8"-24	3.2	37.3	29.0	14.2	12.7
KSCF4T-2N	1/4"	6	1/8"	7/16"-20	4.4	39.7	31	14.2	14.2
KSCF5T-2N	5/16"	8	1/8"	1/2"-20	6.0	40.5	31.0	14.2	16.0
KSCF6T-4N	3/8"	10	1/4"	9/16"-18	7.5	45.8	36.3	19	17.4
KSCF8T-6N	1/2"	12	3/8"	3/4"-16	9.9	47	38.9	22.2	22.2
KSCF10T-8N	5/8"	16	1/2"	7/8"-14	12.3	51.6	48	29	25.4
KSCF12T-12N	3/4"	18, 20	3/4"	1 1/16"-12	15.5	66.6	52.3	35	32
KSCF14T-12N	7/8"	22	3/4"	1 3/16"-12	18.0	67.8	53.1	35.0	35.0
KSCF16T-16N	1"	25	1"	1 5/16"-12	21.5	73.5	58.4	41	38
KSCF20T-20N	1-1/4"	32	1-1/4"	1 5/8"-12	27.5	78.1	62.2	50.8	50.8
KSCF24T-24N	1-1/2"	38	1-1/2"	1 7/8"-12	33.3	86.7	68.1	60.0	57
KSCF32T-32N	2"	50	2"	2 1/2"-12	45.0	89.3	65.2	73	73

Swivel Elbow

KSL





Swivel Fittings

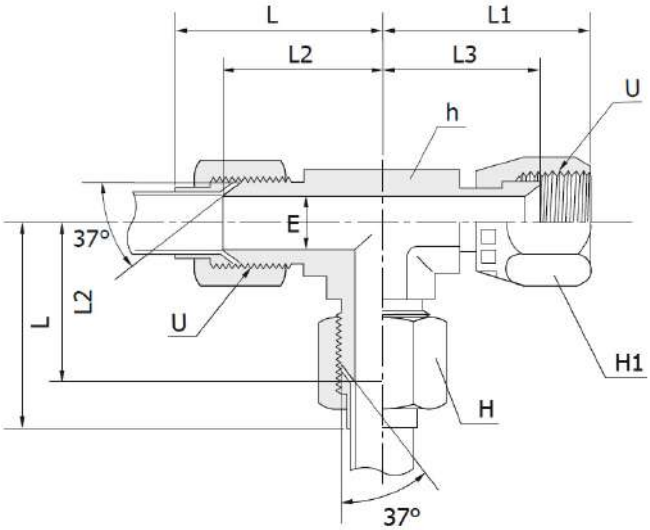
Part No.	Tube O.D.		U (UNF)	E	L	L1	L2	L3	h (HEX)	H (HEX)	H1 (HEX)
	Inch	Metric									
KSL-2T	1/8"	3	5/16”-24	1.6	27.4	19.6	24.6	16.7	11.1	9.5	11.1
KSL-3T	3/16”	4	3/8”-24	3.2	30.5	21.1	25.4	17.1	11.1	11.1	12.7
KSL-4T	1/4"	6	7/16”-20	4.4	31.7	22.6	25.4	16.7	11.1	14.2	14.2
KSL-5T	5/16”	8	1/2”-20	6.0	34.5	24.1	26.9	17.4	14.2	15.8	15.8
KSL-6T	3/8”	10	9/16"-18	7.5	38.8	26.9	31.8	22.3	14.2	17.4	17.4
KSL-8T	1/2”	12	3/4”-16	9.9	44.5	31.8	35.1	24.4	19.1	22.2	22.2
KSL-10T	5/8”	16	7/8”-14	12.3	53.4	36.8	41.1	28.4	22.2	25.4	25.4
KSL-12T	3/4”	18, 20	1 1/16”-12	15.5	57.7	42.2	44.4	30.1	27.0	31.7	31.7
KSL-14T	7/8”	22	1 3/16”-12	18.0	63.3	45.7	45.2	30.5	33.3	34.9	34.9
KSL-16T	1”	25	1 5/16”-12	21.5	65.0	46.0	50.8	35.7	33.3	38.1	38.1
KSL-20T	1-1/4”	32	1 5/8”-12	27.5	70.8	52.3	58.7	42.8	41.2	50	50
KSL-24T	1-1/2”	38	1 7/8”-12	33.3	85.9	59.2	65.8	47.2	47.6	57.2	57.2
KSL-32T	2”	50	2 1/2”-12	45.0	105.2	77.7	85.9	62.1	63.5	75	75

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Swivel Run Tee

KSRT



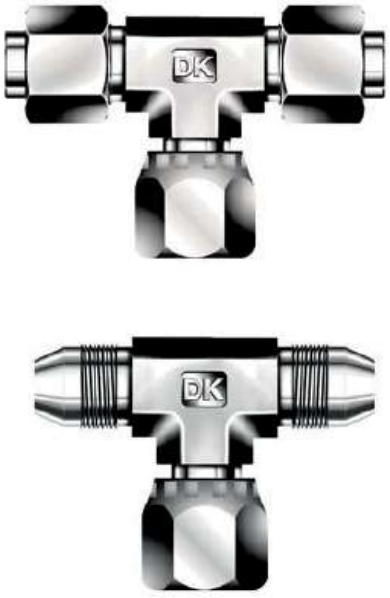


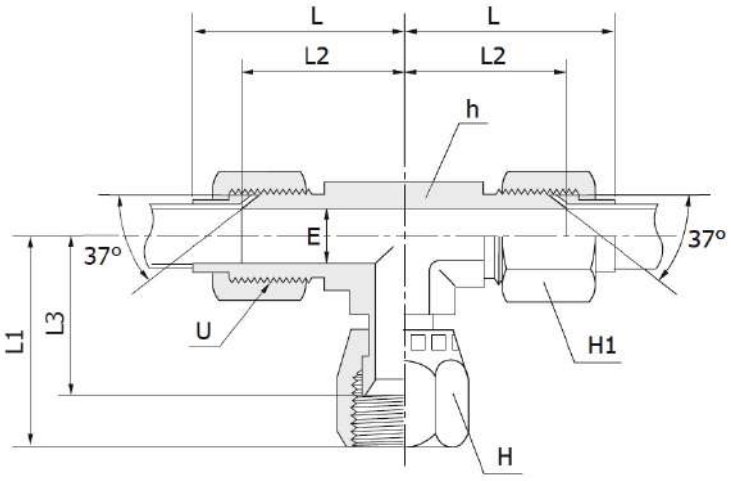
Swivel Fittings

Part No.	Tube O.D.		U (UNF)	E	L	L1	L2	L3	h (HEX)	H (HEX)	H1 (HEX)
	Inch	Metric									
KSRT-2T	1/8"	3	5/16”-24	1.6	27.4	24.6	19.6	16.7	11.1	9.5	11.1
KSRT-3T	3/16”	4	3/8”-24	3.2	30.5	25.4	21.1	17.1	11.1	11.1	12.7
KSRT-4T	1/4"	6	7/16”-20	4.4	31.7	25.4	22.6	16.7	11.1	14.2	14.2
KSRT-5T	5/16”	8	1/2”-20	6.0	34.5	26.9	24.1	17.4	14.2	15.8	15.8
KSRT-6T	3/8”	10	9/16"-18	7.5	38.8	31.8	26.9	22.3	14.2	17.4	17.4
KSRT-8T	1/2”	12	3/4”-16	9.9	44.5	35.1	31.8	24.4	19.1	22.2	22.2
KSRT-10T	5/8”	16	7/8”-14	12.3	53.4	41.1	36.8	28.4	22.2	25.4	25.4
KSRT-12T	3/4”	18, 20	1 1/16”-12	15.5	57.7	44.4	42.2	30.1	27.0	31.7	31.7
KSRT-14T	7/8”	22	1 3/16”-12	18.0	63.3	45.2	45.7	30.5	33.3	34.9	34.9
KSRT-16T	1”	25	1 5/16”-12	21.5	65.0	50.8	46.0	35.7	33.3	38.1	38.1
KSRT-20T	1-1/4”	32	1 5/8”-12	27.5	70.8	58.7	52.3	42.8	41.2	50	50
KSRT-24T	1-1/2”	38	1 7/8”-12	33.3	85.9	65.8	59.2	47.2	47.6	57.2	57.2
KSRT-32T	2”	50	2 1/2”-12	45.0	105.2	85.9	77.7	62.1	63.5	75	75

Swivel Branch Tee

KSBT





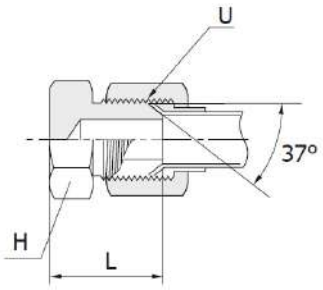
Swivel Fittings

Part No.	Tube O.D.		U (UNF)	E	L	L1	L2	L3	h (HEX)	H (HEX)	H1 (HEX)
	Inch	Metric									
KSBT-2T	1/8"	3	5/16”-24	1.6	27.4	24.6	19.6	16.7	11.1	9.5	11.1
KSBT-3T	3/16”	4	3/8”-24	3.2	30.5	25.4	21.1	17.1	11.1	11.1	12.7
KSBT-4T	1/4"	6	7/16”-20	4.4	31.7	25.4	22.6	16.7	11.1	14.2	14.2
KSBT-5T	5/16”	8	1/2”-20	6.0	34.5	26.9	24.1	17.4	14.2	15.8	15.8
KSBT-6T	3/8”	10	9/16"-18	7.5	38.8	31.8	26.9	22.3	14.2	17.4	17.4
KSBT-8T	1/2”	12	3/4”-16	9.9	44.5	35.1	31.8	24.4	19.1	22.2	22.2
KSBT-10T	5/8”	16	7/8”-14	12.3	53.4	41.1	36.8	28.4	22.2	25.4	25.4
KSBT-12T	3/4”	18, 20	1 1/16”-12	15.5	57.7	44.4	42.2	30.1	27.0	31.7	31.7
KSBT-14T	7/8”	22	1 3/16”-12	18.0	63.3	45.2	45.7	30.5	33.3	34.9	34.9
KSBT-16T	1”	25	1 5/16”-12	21.5	65.0	50.8	46.0	35.7	33.3	38.1	38.1
KSBT-20T	1-1/4”	32	1 5/8”-12	27.5	70.8	58.7	52.3	42.8	41.2	50	50
KSBT-24T	1-1/2”	38	1 7/8”-12	33.3	85.9	65.8	59.2	47.2	47.6	57.2	57.2
KSBT-32T	2”	50	2 1/2”-12	45.0	105.2	85.9	77.7	62.1	63.5	75	75

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Cap for Tube End
KC



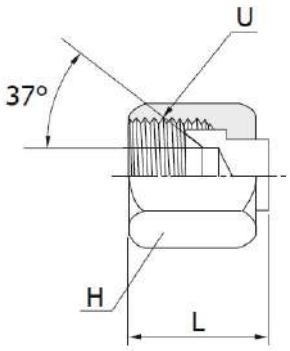


Cap and Plug

Part No.	Tube O.D.		U (UNF)	H (HEX)	L
	Inch	Metric			
KC-2T	1/8"	3	5/16”-24	11.1	17.8
KC-3T	3/16”	4	3/8”-24	11.1	18.5
KC-4T	1/4"	6	7/16”-20	12.7	20.3
KC-5T	5/16”	8	1/2”-20	14.2	20.3
KC-6T	3/8”	10	9/16"-18	15.8	21.3
KC-8T	1/2”	12	3/4”-16	20.6	23.9
KC-10T	5/8”	16	7/8”-14	23.8	27.9
KC-12T	3/4”	18, 20	1 1/16”-12	28.5	32.5
KC-14T	7/8”	22	1 3/16”-12	31.7	33.3
KC-16T	1”	25	1 5/16”-12	34.9	33.8
KC-20T	1-1/4”	32	1 5/8”-12	42.8	36.8
KC-24T	1-1/2”	38	1 7/8”-12	50	41.9
KC-32T	2”	50	2 1/2”-12	70	52.1

Plug for Fitting Port
KP



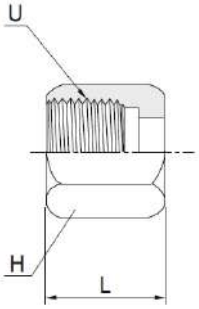


Cap and Plug

Part No.	Tube O.D.		U (UNF)	H (HEX)	L
	Inch	Metric			
KP-2T	1/8"	3	5/16”-24	9.5	13.7
KP-3T	3/16”	4	3/8”-24	11.1	15.2
KP-4T	1/4"	6	7/16”-20	14.2	15.5
KP-5T	5/16”	8	1/2”-20	15.8	17.0
KP-6T	3/8”	10	9/16"-18	17.4	18.3
KP-8T	1/2”	12	3/4”-16	22.2	21.3
KP-10T	5/8”	16	7/8”-14	25.4	24.6
KP-12T	3/4”	18, 20	1 1/16”-12	31.7	25.9
KP-14T	7/8”	22	1 3/16”-12	34.9	27.4
KP-16T	1”	25	1 5/16”-12	38.1	28.4
KP-20T	1-1/4”	32	1 5/8”-12	50.8	31.0
KP-24T	1-1/2”	38	1 7/8”-12	57.1	35.8
KP-32T	2”	50	2 1/2”-12	73.0	44.2

Nut
KN



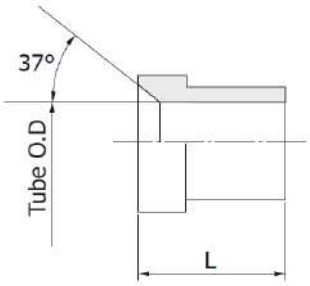


Spare Parts

Part No.	Tube O.D.		U (UNF)	H (HEX)	L
	Inch	Metric			
KN-2T	1/8"	3	5/16”-24	9.5	14.0
KN-3T	3/16”	4	3/8”-24	11.1	15.5
KN-4T	1/4"	6	7/16”-20	14.2	15.8
KN-5T	5/16”	8	1/2”-20	15.8	17.3
KN-6T	3/8”	10	9/16"-18	17.4	18.5
KN-8T	1/2”	12	3/4”-16	22.2	21.6
KN-10T	5/8”	16	7/8”-14	25.4	24.9
KN-12T	3/4”	18, 20	1 1/16”-12	31.7	26.2
KN-14T	7/8”	22	1 3/16”-12	34.9	27.7
KN-16T	1”	25	1 5/16”-12	38.1	28.7
KN-20T	1-1/4”	32	1 5/8”-12	50	31.2
KN-24T	1-1/2”	38	1 7/8”-12	57.2	36.1
KN-32T	2”	50	2 1/2”-12	75	44.5

Sleeve
KS





Spare Parts

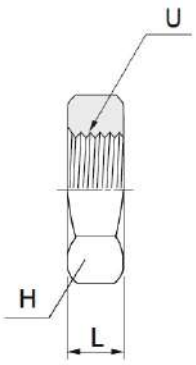
Part No.	Tube O.D.		L
	Inch	Metric	
KS-2T	1/8"	3	8.6
KS-3T	3/16"	4	8.6
KS-4T	1/4"	6	10.4
KS-5T	5/16"	8	11.2
KS-6T	3/8"	10	12.7
KS-8T	1/2"	12	14.2
KS-10T	5/8"	16	16.8
KS-12T	3/4"	18, 20	17.3
KS-14T	7/8"	22	19.3
KS-16T	1"	25	19.8
KS-20T	1-1/4"	32	23.1
KS-24T	1-1/2"	38	28.4
KS-32T	2	50	30 2

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Bulkhead Lok Nut

KBN





Spare Parts

Part No.	Tube O.D.		U (UNF)	L	H (HEX)
	Inch	Metric			
KBN-2T	1/8”	3	5/16"-24	5.6	14.2
KBN-3T	3/16"	4	3/8"-24	5.6	15.8
KBN-4T	1/4”	6	7/16"-20	6.4	17.4
KBN-5T	5/16"	8	1/2"-20	6.4	19.1
KBN-6T	3/8”	10	9/16"-18	6.9	20.6
KBN-8T	1/2"	12	3/4"-16	7.9	25.4
KBN-10T	5/8"	16	7/8"-14	9.1	28.5
KBN-12T	3/4"	18, 20	1 1/16"-12	10.4	34.9
KBN-14T	7/8"	22	1 3/16"-12	10.4	38.1
KBN-16T	1"	25	1 5/16"-12	10.4	41
KBN-20T	1-1/4"	32	1 5/8"-12	10.4	47.6
KBN-24T	1-1/2"	38	1 7/8"-12	10.4	53.9
KBN-32T	2"	50	2 1/2"-12	10.4	70

Quality System Certifications

ISO 9001:2000	AP1149
ISO 14001:2004	CL-K-E-1149
OHSMS 18001	HSBSK-S006
API Spec Q1	6D-0593
KEPIC-MN	MN-466
PED 97/23/EC Module D	HSBI-10-11-046
PED 97/23/EC Module H	HSBI-11-03-010
PED 97/23/EC Annex I	07-202-1326WZ-0941/10

Nuclear System and Product Certifications

ASME N	N-3185
ASME NPT	N-3186
ASME NS	N-3342
ASME NB	N-3185

Pressure Equipment Directive 97/23/EC

Module B&D	HSBI-10-11 -045

DK-Lok Flange Adapter Leakproof Test per TA Luft requirements

TUV Rheinland	973-10014584

CRN

CRN	0A4788.2
CRN	0C07988.2
CRN	0C09275.2
CRN	0E07988.2
CRN	0C5191.2
CRN	0C07988.2

GOST

GOST	POCC KR.AB28.B02325
GOST	POCC KR.AB28.B02327

Type Approval Certifications

ABS	01-BK218882/3-PDA
	09-BK522012-PDA
	BK720958-X
BV	14034/A1 BV
DNV	P-13044
	P-13052
GL	47 924-03HH
	47 925-03HH
	40 504-01HH
	40 505-01HH
KR	CWN80397-PE001
LR	01/10047
	01/10048
NK	06FV101B

CNG Certifications

TUV Rheinland :	AF-2009-0903-01	TUV SUD : 07-000026-PA-GMB-01
ECER110	67-01	ECE Regulation NO. 110
IS0 15500-19	15500-15916	ECE Regulation NO. 67-02
ANSI	AGA NGV 3.1-1995,CGA NGV 12.3-M95	Compressed Gaseous Hydrogen (CGH2)
ANSI	AGA NGV 4.1-1999,CSA 125.M99	Liquid Hydrogen(LH2)
Draft ECE Compressed Gaseous Hydrogen Regulation,		
Revision 12b, 10/12/03.		
State of the art		

The information shown in this catalog are not for design purpose, but for reference only.
The accuracy of information is not the liability of our company.

Safe Component Selection

The Selection of component for any applications or system design must be considered to ensure safe performance Component function, material compatibility, component ratings, proper installation, operation and maintenance remain the sole responsibility of the system designer and the user.
DK Tech accepts no liability for any improper selection, installation, operation or maintenance

DK-LOK

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7, Golden root-ro 129beon-gil, Juchon-myeon, Gimhae-si, Gyeongsangnam-do, South Korea. 50969
Tel. +82-55-338-0114 Fax. +82-55-901-0141 **www.dklok.com**

DK-Lok High Pressure Series Fittings & Valves

Rev. 01-01
Aug. 2023



DK-LOK®
DK-Lok Tube Fittings

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Rev.01-01
Aug.2023

High Pressure Needle Valve

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Angle **DK-NV-A**  04

3 Way One Pressure **DK-NV-O**  05

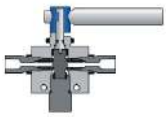
Straight **DK-NV-T**  05

High Pressure Check Valve

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High Pressure Equipment

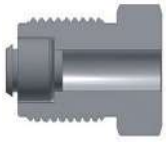
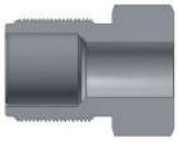
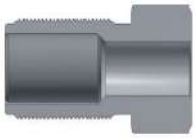
Tooling  26

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

DK-Lok High Pressure Fittings

General

- DK-Lok Corporation is specialized in the manufacturing of Instrument Fitting and Valve. The DK HP Series has been developed to satisfy customer requests for high pressure application.
- DK MP & HP Fittings and Valves are manufactured from 316 cold-worked stainless steel meeting NACE MR 0175.
- DK HP Valves are designed to operate safely and reliably against Medium Pressure for 20,000 psig service and High Pressure for 30,000 through 60,000 psig service and Ultra High Pressure for 100,000 through 150,000 psig service.
- Cone & thread design

				
Low Pressure Sleeve 5,500psig~11,500psig	Medium Pressure Collar 20,000psig	High Pressure Collar 30,000psig	High Pressure Collar 60,000psig	Ultra High Pressure Collar 100,000psig~150,000psig

Working Pressure and size table

Type	Pressure	Tube Size						
		1/8”	1/4”	3/8”	1/2”	9/16”	3/4”	1”
NPT & PT thread	15,000	O	O	O	O			
	10,000						O	O
Low Pressure[1)]	11,000	O						
	11,500		O					
	7,500			O				
	5,500				O			
Medium Pressure	20,000		O	O		O	O	O
High Pressure	30,000	O	O	O		O		
	60,000		O			O		
Ultra-high Pressure	100,000		O					
	150,000			O				

Note: 1) Low pressure is according to tube thickness. See page 12.

Application

- DBB
- High Pressure Test Equipment
- Subsea
- Chemical Injection System





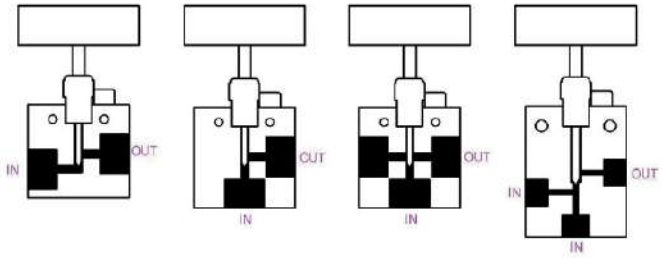

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High Pressure Needle Valve

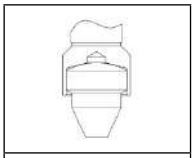


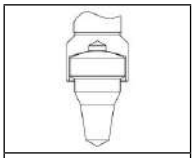
Features

- Flow patterns are straight, angle, 3 way-1 inlet port, and 3 way-2 inlet ports.

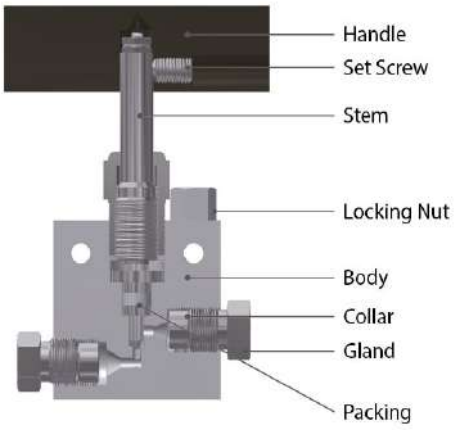


- Non-rotating stem tip is prevent thread galling and assure long life cycle.
- Temperature range is from -100°F to 600°F (-73°C to 315°C) with standard PTFE packing and -100°F to 600°F (-73°C to 315°C) with optional Graphite packing.
- Stem tip are standard “Vee” and optional “Regulating” available.


Vee stem tip


Regulating stem tip

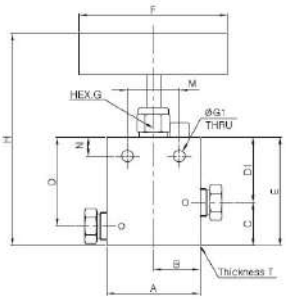
Material of Construction



Parts	Materials
Handle	Aluminum
Set Screw	Stainless Steel
Stem	ASTM A564 TYPE630
Locking Nut	ASTM A276 TYPE304
Body	ASTM A276 TYPE316L
Collar	ASTM A276 TYPE304
Gland	ASTM A276 TYPE304
Packing	PTFE optional Graphite

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

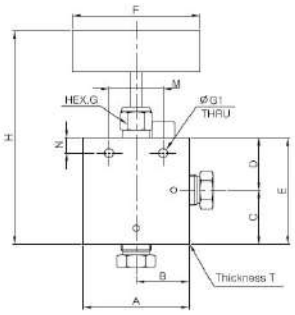
Straight
DK-NV





Part No.	Pressure Rating	Tube Size	Cv	Orifice Size	Dimensions												
					A	B	C	D	D1	E	F	G	G1	H	M	N	T
DK11NV-02	11,000 psig	1/8”	0.12	2.39	38	19	22	30	23	45	50	13	5	82	12.8	8	20
DK11NV-04	11,500 psig	1/4”	0.2	3.18	50	25	20	40.3	30	50	80	17	6	118.2	15.6	9.7	20
DK07NV-06	7,500 psig	3/8”	0.2	3.18	50	25	20.5	40.3	29.5	50	80	17	6	116.9	15.7	9.7	20
DK05NV-08	5,500 psig	1/2”	1.62	7.54	63	31.5	30.5	60.5	44.5	75	100	24	9	151.8	17.5	12.7	25
DK20NV-04	20,000 psig	1/4”	0.31	3.18	50	25	20	40.3	30	50	80	17	6	118.2	15.7	9.7	20
DK20NV-06		3/8”	0.75	5.56	50	25	20	40.3	30	50	80	17	6	116.9	15.7	9.7	20
DK20NV-09		9/16”	1.3	7.94	63	31.5	29	60	44	73	80	22	8	143.1	15.7	12.7	25
DK20NV-12		3/4”	2.29	11.1	76	38	38	76	57	95	260	30	10	177.8	46	15.8	35
DK20NV-16		1”	4.78	14.3	105	52.5	46	96	72	118	260	41	14	214.8	63.5	28.5	45
DK30NV-02	30,000 psig	1/8”	0.03	1.59	38	19	22	30	23	45	50	13	5	82.2	12.8	8	20
DK30NV-04		1/4”	0.12	2.4	50	25	21	43	33	54	80	20	6	114.9	17	9.7	25
DK30NV-06		3/8”	0.2	3.2	50	25	24	43	33	57	80	20	6	115.6	17	9.7	25
DK30NV-09		9/16”	0.33	3.2	67	33.5	29	43	33	62	80	20	6	130.3	17	9.7	38
DK60NV-04	60,000 psig	1/4”	0.08	1.8	50	25	21	43	33	54	80	20	6	121.4	17	9.7	25
DK60NV-06		3/8”	0.09	1.8	50	25	24	43	33	57	80	20	6	124.9	17	9.7	25
DK60NV-09		9/16”	0.14	2	67	33.5	29	43	33	62	80	20	6	127.4	17	9.7	38
DK100NV-04	100,000 psig	1/4”	0.09	1.59	67	33.5	30.5	44	33	63.5	100	24	6	132.4	20	9.7	38
DK150NV-06	150,000 psig	3/8”	0.06	1.59	90	45	30	42	34	64	100	24	7	135	19	12.7	38

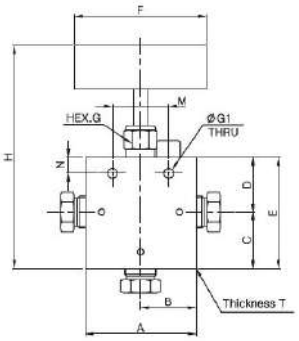
Angle
DK-NV-A





Part No.	Pressure Rating	Tube Size	Cv	Orifice Size	Dimensions											
					A	B	C	D	E	F	G	G1	H	M	N	T
DK11NV-02-A	11,000 psig	1/8"	0.12	2.39	38	19	22	23	45	50	13	5	82	12.8	8	20
DK11NV-04-A	11,500 psig	1/4"	0.2	3.18	50	25	32	30	62	80	17	6	130.2	15.6	9.7	20
DK07NV-06-A	7,500 psig	3/8"	0.2	3.18	50	25	32	30	62	80	17	6	128.9	15.7	9.7	20
DK05NV-08-A	5,500 psig	1/2"	1.62	7.54	63	31.5	41.5	44.5	86	100	24	9	162.8	17.6	12.7	25
DK20NV-04-A	20,000 psig	1/4"	0.31	3.18	50	25	32	30	62	80	17	6	130.2	15.7	9.7	20
DK20NV-06-A		3/8"	0.75	5.56	50	25	32	30	62	80	17	6	128.9	15.7	9.7	20
DK20NV-09-A		9/16"	1.3	7.94	63	31.5	25.5	44.5	70	80	22	8	155.6	15.7	12.7	25
DK20NV-12-A		3/4"	2.29	11.1	76	38	50.8	57.2	108	260	30	10	191	46	15.8	35
DK20NV-16-A		1"	4.78	14.3	105	52.5	65	73	138	260	41	14	238.1	63.5	28.5	45
DK30NV-02-A	30,000 psig	1/8"	0.03	1.59	38	19	22	23	45	50	13	5	82.2	12.8	8	20
DK30NV-04-A		1/4"	0.12	2.4	50	25	33.5	28.5	62	80	20	6	126.4	17.2	9.7	25
DK30NV-06-A		3/8"	0.2	3.2	50	25	33.5	28.5	62	80	20	6	126.5	17.2	9.7	25
DK30NV-09-A		9/16"	0.33	3.2	67	33.5	33.5	28.5	62	80	20	6	130.3	17.2	9.7	38
DK60NV-04-A	60,000 psig	1/4"	0.08	1.8	50	25	27.5	33	60.5	80	20	6	127.9	17	9.7	25
DK60NV-06-A		3/8"	0.09	1.8	50	25	33.5	33	66.5	80	20	6	134.4	17	9.7	25
DK60NV-09-A		9/16"	0.14	2	67	33.5	35.5	31.5	67	80	20	6	134.4	17	9.7	38
DK100NV-04-A	100,000 psig	1/4"	0.09	1.59	67	33.5	32	30	62	100	24	6	130.2	20	9.7	38
DK150NV-06-A	150,000 psig	3/8"	0.06	1.59	90	45	32	30	62	100	24	7	130.2	19	12.7	38

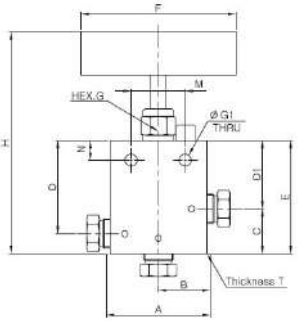
3Way One Pressure
DK-NV-O





Part No.	Pressure Rating	Tube Size	Cv	Orifice Size	Dimensions											
					A	B	C	D	E	F	G	G1	H	M	N	T
DK11NV-02-O	11,000 psig	1/8"	0.12	2.39	38	19	22	23	45	50	13	5	82	12.8	8	20
DK11NV-04-O	11,500 psig	1/4"	0.2	3.18	50	25	32	30	62	80	17	6	130.2	15.6	9.7	20
DK07NV-06-O	7,500 psig	3/8"	0.2	3.18	50	25	32	30	62	80	17	6	128.9	15.7	9.7	20
DK05NV-08-O	5,500 psig	1/2"	1.62	7.54	63	31.5	41.5	44.5	86	100	24	9	162.8	17.5	12.7	25
DK20NV-04-O	20,000 psig	1/4"	0.31	3.18	50	25	32	30	62	80	17	6	130.2	15.7	9.7	20
DK20NV-06-O		3/8"	0.75	5.56	50	25	32	30	62	80	17	6	128.9	15.7	9.7	20
DK20NV-09-O		9/16"	1.3	7.94	63	31.5	41	45	86	80	22	8	155.1	15.7	12.7	25
DK20NV-12-O		3/4"	2.29	11.1	76	38	50.8	57.2	108	260	30	10	191	46	15.8	35
DK20NV-16-O		1"	4.78	14.3	105	52.5	65	73	138	260	41	14	238.1	63.5	28.5	45
DK30NV-02-O	30,000 psig	1/8"	0.03	1.59	38	19	22	23	45	50	13	5	82.2	12.8	8	20
DK30NV-04-O		1/4"	0.12	2.4	50	25	33.5	28.5	62	80	20	6	126.4	17.2	9.7	25
DK30NV-06-O		3/8"	0.2	3.2	50	25	33.5	28.5	62	80	20	6	126.4	17.2	9.7	25
DK30NV-09-O		9/16"	0.33	3.2	67	33.5	33.5	28.5	62	80	20	6	130.3	17.2	9.7	38
DK60NV-04-O	60,000 psig	1/4"	0.08	1.8	50	25	27.5	33	60.5	80	20	6	127.9	17	9.7	25
DK60NV-06-O		3/8"	0.09	1.8	50	25	37	33	70	80	20	6	137.4	17	9.7	25
DK60NV-09-O		9/16"	0.14	2	67	33.5	35.5	32	67	80	20	6	134.4	17	9.7	38
DK100NV-04-O	100,000 psig	1/4"	0.09	1.59	67	33.5	32	30	62	100	24	6	130.2	20	9.7	38
DK150NV-06-O	150,000 psig	3/8"	0.06	1.59	90	45	32	30	62	100	24	7	130.2	19	12.7	38

3Way Two Pressure
DK-NV-T





Part No.	Pressure Rating	Tube Size	Cv	Orifice Size	Dimensions												
					A	B	C	D	D1	E	F	G	G1	H	M	N	T
DK11NV-02-T	11,000 psig	1/8"	0.12	2.39	38	19	22	30	23	45	50	13	5	82	12.8	8	20
DK11NV-04-T	11,500 psig	1/4"	0.2	3.18	50	25	36.5	41	30	66.5	80	17	6	134.8	15.6	9.7	20
DK07NV-06-T	7,500 psig	3/8"	0.2	3.18	50	25	36.5	41	30	66.5	80	17	6	133.3	15.7	9.7	20
DK05NV-08-T	5,500 psig	1/2"	1.62	7.54	63	31.5	47.5	60.5	44.5	92	100	24	9	168.8	17.5	12.7	25
DK20NV-04-T	20,000 psig	1/4"	0.31	3.18	50	25	36.5	41	30	66.5	80	17	6	134.7	15.7	9.7	20
DK20NV-06-T		3/8"	0.75	5.56	50	25	36.5	41	30	66.5	80	17	6	133.3	15.7	9.7	20
DK20NV-09-T		9/16"	1.3	7.94	63	31.5	47.5	60	44.5	92	80	22	8	159.9	15.7	12.7	25
DK20NV-12-T		3/4"	2.29	11.1	76	38	60.3	50.8	57.2	117.5	260	30	10	200	46	15.8	35
DK20NV-16-T		1"	4.78	14.3	105	52.5	77.8	95	71.2	149	260	41	14	247.6	63.5	28.5	45
DK30NV-02-T	30,000 psig	1/8"	0.03	1.59	38	19	22	30	23	45	50	13	5	87.2	12.8	8	20
DK30NV-04-T		1/4"	0.12	2.4	50	25	33.5	38	28.5	62	80	20	6	126.4	17.2	9.7	25
DK30NV-06-T		3/8"	0.2	3.2	50	25	35	38	28.5	63.5	80	20	6	127.9	17.2	9.7	25
DK30NV-09-T		9/16"	0.33	3.2	67	33.5	50.5	39.5	28.5	79	80	20	6	141.3	17.2	9.7	38
DK60NV-04-T	60,000 psig	1/4"	0.08	1.8	50	25	27.2	43	33	60.5	80	20	6	127.9	17	9.7	25
DK60NV-06-T		3/8"	0.09	1.8	50	25	38.5	43	33	71.5	80	20	6	138.9	17	9.7	25
DK60NV-09-T		9/16"	0.14	2	67	33.5	45.5	41	31.5	77	80	20	6	144.4	17	9.7	38
DK100NV-04-T	100,000 psig	1/4"	0.09	1.59	67	33.5	36.5	41	30	66.5	100	24	6	134.7	20	9.7	38
DK150NV-06-T	150,000 psig	3/8"	0.06	1.59	90	45	36.5	41	30	66.5	100	24	7	134.7	19	12.7	38

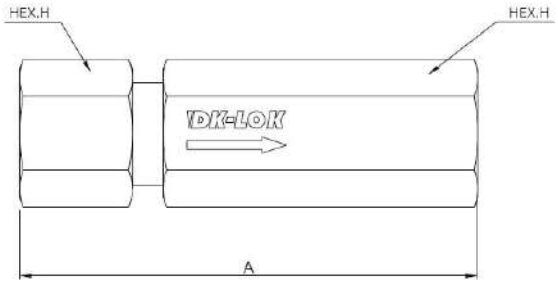
All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

High Pressure Check Valve

Features

- Reverse flow prevention which fully leak-tight performance.
- Two sealing Type : Standard FKM O-ring seat is excellent fast shut-off. Other material is available.
  Optional tungsten carbide Ball seat is metal to metal and continuous cycling.
- Spring material is stainless steel.
- Check valve that facilitates one-directional movement by blocking the reverse flow of gas or liquid

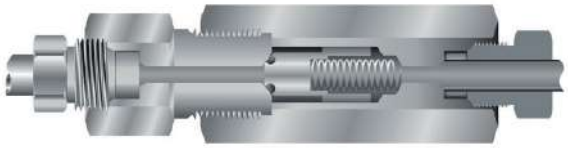
Dimensions



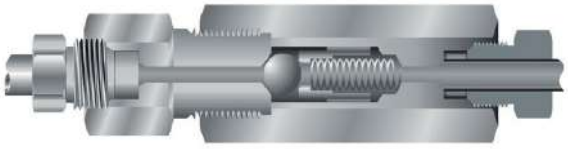


Part No.	Pressure Rating	Tube Size	Orifice Size	Dimensions	
				A	HEX.H
DK11CV-02	11,000 psig	1/8"	1.4	68	22
DK11CV-04	11,500 psig	1/4"	3.2	81	25.4
DK07CV-06	7,500 psig	3/8"	5	93	35
DK05CV-08	5,500 psig	1/2"	8.35	108	41
DK20CV-04	20,000 psig	1/4"	2.8	77	25
DK20CV-06		3/8"	5.2	91	25
DK20CV-09		9/16"	5	107	35
DK20CV-12		3/4"	5	131	41
DK20CV-16		1"	6	165	55
DK30CV-02	30,000 psig	1/8"	1.2	66	20
DK60CV-04	60,000 psig	1/4"	2.4	85	32
DK60CV-06		3/8"	3.2	100	36
DK60CV-09		9/16"	4.8	118	38
DK100CV-04	100,000 psig	1/4"	2.4	129	ø50

Check Valves
DK-CV



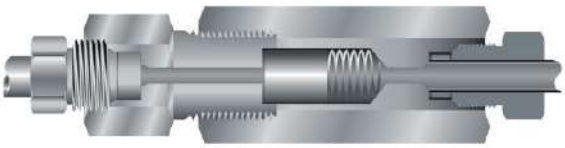
O-Ring Type Check Valve



Ball Type Check Valve

Pressure Rating	Tube Size	Union		Male to Male		Male to Female	
		O-Ring Type	Ball Type	O-Ring Type	Ball Type	O-Ring Type	Ball Type
11,000psig	1/8”	DK11CV-02-OR	DK11CV-02-BS	DK11CV-MM02-OR	DK11CV-MM02-BS	DK11CV-MF02-OR	DK11CV-MF02-BS
11,500psig	1/4”	DK11CV-04-OR	DK11CV-04-BS	DK11CV-MM04-OR	DK11CV-MM04-BS	DK11CV-MF04-OR	DK11CV-MF04-BS
7,500psig	3/8”	DK11CV-06-OR	DK11CV-06-BS	DK11CV-MM06-OR	DK11CV-MM06-BS	DK11CV-MF06-OR	DK11CV-MF06-BS
5,500psig	1/2”	DK11CV-08-OR	DK11CV-08-BS	DK11CV-MM08-OR	DK11CV-MM08-BS	DK11CV-MF08-OR	DK11CV-MF08-BS
20,000psig	1/4”	DK20CV-04-OR	DK20CV-04-BS	DK20CV-MM04-OR	DK20CV-MM04-BS	DK20CV-MF04-OR	DK20CV-MF04-BS
	3/8”	DK20CV-06-OR	DK20CV-06-BS	DK20CV-MM06-OR	DK20CV-MM06-BS	DK20CV-MF06-OR	DK20CV-MF06-BS
	9/16”	DK20CV-09-OR	DK20CV-09-BS	DK20CV-MM09-OR	DK20CV-MM09-BS	DK20CV-MF09-OR	DK20CV-MF09-BS
	3/4”	DK20CV-12-OR	DK20CV-12-BS	DK20CV-MM12-OR	DK20CV-MM12-BS	DK20CV-MF12-OR	DK20CV-MF12-BS
	1”	DK20CV-16-OR	DK20CV-16-BS	DK20CV-MM16-OR	DK20CV-MM16-BS	DK20CV-MF16-OR	DK20CV-MF16-BS
30,000psig	1/8”	DK30CV-02-OR	DK30CV-02-BS	DK30CV-MM02-OR	DK30CV-MM02-BS	DK30CV-MF02-OR	DK30CV-MF02-BS
	1”	DK30CV-16-OR	DK30CV-16-BS	DK30CV-MM16-OR	DK30CV-MM16-BS	DK30CV-MF16-OR	DK30CV-MF16-BS
60,000psig	1/4”	DK60CV-04-OR	DK60CV-04-BS	DK60CV-MM04-OR	DK60CV-MM04-BS	DK60CV-MF04-OR	DK60CV-MF04-BS
	3/8”	DK60CV-06-OR	DK60CV-06-BS	DK60CV-MM06-OR	DK60CV-MM06-BS	DK60CV-MF06-OR	DK60CV-MF06-BS
	9/16”	DK60CV-09-OR	DK60CV-09-BS	DK60CV-MM09-OR	DK60CV-MM09-BS	DK60CV-MF09-OR	DK60CV-MF09-BS

Filter
DK-FL



Cup Type Filter

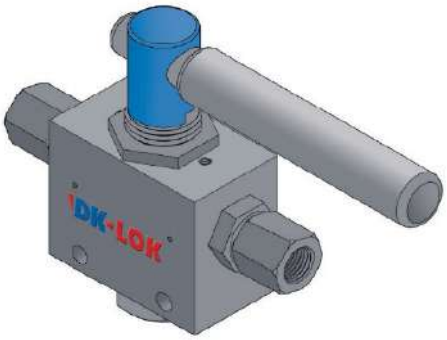
Pressure Rating	Tube Size	Union		Male to Male		Male to Female	
		Cup Type	Plate Type	Cup Type	Plate Type	Cup Type	Plate Type
11,000psig	1/8”	DK11FL-02-CS	DK11FL-02-PL	DK11FL-MM02-CS	DK11FL-MM02-PL	DK11FL-MF02-CS	DK11FL-MF02-PL
11,500psig	1/4”	DK11FL-04-CS	DK11FL-04-PL	DK11FL-MM04-CS	DK11FL-MM04-PL	DK11FL-MF04-CS	DK11FL-MF04-PL
7,500psig	3/8”	DK11FL-06-CS	DK11FL-06-PL	DK11FL-MM06-CS	DK11FL-MM06-PL	DK11FL-MF06-CS	DK11FL-MF06-PL
5,500psig	1/2"	DK11FL-08-CS	DK11FL-08-PL	DK11FL-MM08-CS	DK11FL-MM08-PL	DK11FL-MF08-CS	DK11FL-MF08-PL
20,000psig	1/4”	DK20FL-04-CS	DK20FL-04-PL	DK20FL-MM04-CS	DK20FL-MM04-PL	DK20FL-MF04-CS	DK20FL-MF04-PL
	3/8”	DK20FL-06-CS	DK20FL-06-PL	DK20FL-MM06-CS	DK20FL-MM06-PL	DK20FL-MF06-CS	DK20FL-MF06-PL
	9/16”	DK20FL-09-CS	DK20FL-09-PL	DK20FL-MM09-CS	DK20FL-MM09-PL	DK20FL-MF09-CS	DK20FL-MF09-PL
	3/4"	DK20FL-12-CS	DK20FL-12-PL	DK20FL-MM12-CS	DK20FL-MM12-PL	DK20FL-MF12-CS	DK20FL-MF12-PL
	1”	DK20FL-16-CS	DK20FL-16-PL	DK20FL-MM16-CS	DK20FL-MM16-PL	DK20FL-MF16-CS	DK20FL-MF16-PL
30,000psig	1/8”	DK30FL-02-CS	DK30FL-02-PL	DK30FL-MM02-CS	DK30FL-MM02-PL	DK30FL-MF02-CS	DK30FL-MF02-PL
	1”	DK30FL-16-CS	DK30FL-16-PL	DK30FL-MM16-CS	DK30FL-MM16-PL	DK30FL-MF16-CS	DK30FL-MF16-PL
60,000psig	1/4”	DK60FL-04-CS	DK60FL-04-PL	DK60FL-MM04-CS	DK60FL-MM04-PL	DK60FL-MF04-CS	DK60FL-MF04-PL
	3/8”	DK60FL-06-CS	DK60FL-06-PL	DK60FL-MM06-CS	DK60FL-MM06-PL	DK60FL-MF06-CS	DK60FL-MF06-PL
	9/16”	DK60FL-09-CS	DK60FL-09-PL	DK60FL-MM09-CS	DK60FL-MM09-PL	DK60FL-MF09-CS	DK60FL-MF09-PL

High Pressure Ball Valve

Features

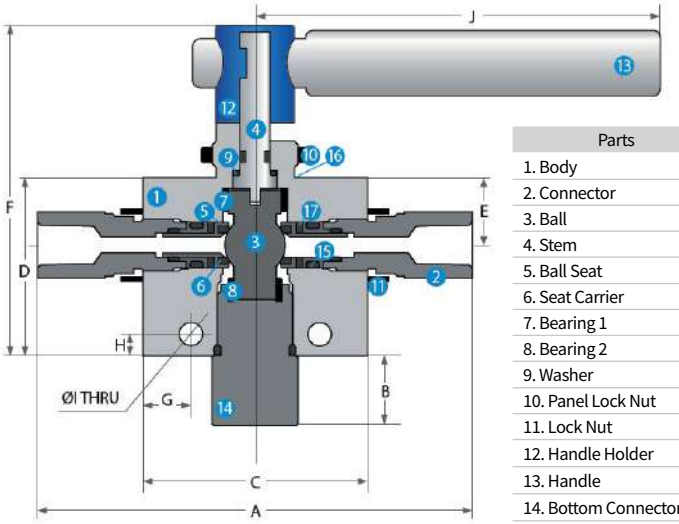
High pressure ball valves are designed with trunnion style ball so that it is possible to open and close the flow path only by 1/4 turn.

- 2-way ball valve; bi-directional, 3-way ball valve; inlet-bottom, outlet-left or right port.
- 2-way ball valve; 1/4 (90°) turn, 3-way ball valve; 1/2 (180°) turn.
- Applicable tubing size; 1/8", 1/4", 3/8", 9/16"
- Maximum working pressure; 20,000 psig
- Seat material uses PEEK, and is excellent in abrasion resistance, friction resistance and chemical resistance.
- O-ring material; standard-Viton



2-Way Ball Valve

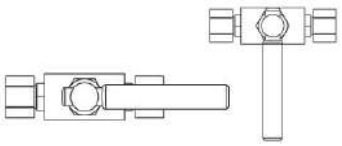
DK-BV



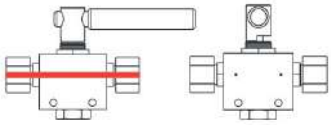
* 1.BODY
이런 표는 중앙정렬 안했습니다.

Parts	Material
1. Body	ASTM A276 TYPE316L
2. Connector	ASTM A276 TYPE316L
3. Ball	ASTM A276 TYPE316L
4. Stem	ASTM A276 TYPE316L
5. Ball Seat	PEEK
6. Seat Carrier	ASTM A276 TYPE316L
7. Bearing 1	PEEK
8. Bearing 2	PEEK
9. Washer	ASTM A276 TYPE316L
10. Panel Lock Nut	ASTM A276 TYPE316L
11. Lock Nut	ASTM A276 TYPE316L
12. Handle Holder	Stainless Steel
13. Handle	Stainless Steel
14. Bottom Connector	ASTM A276 TYPE316L
15. Seat Carrier Guide	ASTM A276 TYPE316L
16. Panel	Stainless Steel
17. Belleville Washers	ASTM A276 TYPE316L

2-Way open & close position



Open Closed

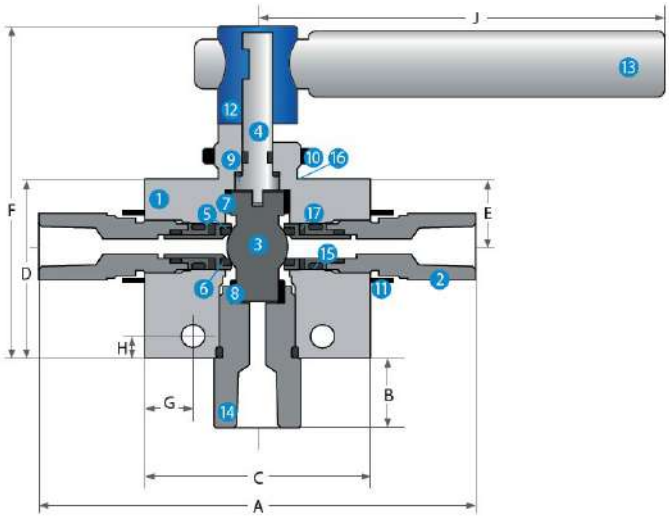


Open Closed

Part No.	Pressure Rating	Tube / Port Type	Orifice Size	Min. Orifice	Cv	Dimensions											Panel	
						A	B	C	D	E	F	G	H	I	J	Block Thickness	Diameter	Max. Thickness
DK11BV-02	11,000 psig	1/8"	4.8	1.4	0.09	118	10	66.5	54	20.5	100	14.2	6.5	7	120	38	25.4	6.4
DK11BV-04	11,500 psig	1/4"		3.2	0.45	128												
DK11BV-06	7,500 psig	3/8"		4.8	1.45	128												
DK20BV-04	20,000 psig	1/4"		2.8	0.31	128												
DK20BV-06	20,000 psig	3/8"		4.8	1.45	128												
DK20BV-09	20,000 psig	9/16"		4.8	1.45	138												
DK60BV-04	20,000 psig	1/4"		2.4	0.2	128												
DK60BV-06	20,000 psig	3/8"		3.2	0.45	128												
DK60BV-09	20,000 psig	9/16"		4.8	1.45	138												
DK15BV-2N	15,000 psig	NPT 1/8"		4.8	1.45	128												
DK15BV-4N	15,000 psig	NPT 1/4"		4.8	1.45	128												
DK15BV-6N	15,000 psig	NPT 3/8"		4.8	1.45	128												
DK15BV-2R	15,000 psig	PT 1/8"		4.8	1.45	128												
DK15BV-4R	15,000 psig	PT 1/4"		4.8	1.45	128												
DK15BV-6R	15,000 psig	PT 3/8"		4.8	1.45	128												

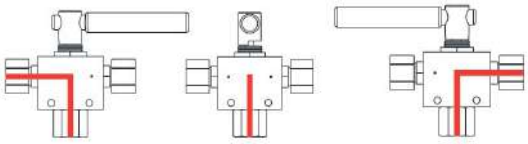
3-Way Ball Valve

DK-BV



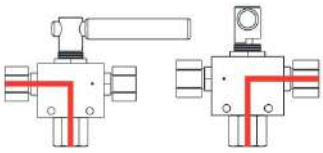
Parts	Material
1. Body	ASTM A276 TYPE316L
2. Connector	ASTM A276 TYPE316L
3. Ball	ASTM A276 TYPE316L
4. Stem	ASTM A276 TYPE316L
5. Ball Seat	PEEK
6. Seat Carrier	ASTM A276 TYPE316L
7. Bearing 1	PEEK
8. Bearing 2	PEEK
9. Washer	ASTM A276 TYPE316L
10. Panel Lock Nut	ASTM A276 TYPE316L
11. Lock Nut	ASTM A276 TYPE316L
12. Handle Holder	Stainless Steel
13. Handle	Stainless Steel
14. Bottom Connector	ASTM A276 TYPE316L
15. Seat Carrier Guide	ASTM A276 TYPE316L
16. Panel	Stainless Steel
17. Belleville Washers	ASTM A276 TYPE316L

3-Way open & close position – 180° Switching



Open Closed Open

3-Way open & close position – 90° Diverter



Open Open

Part No.		Pressure Rating	Tube / Port Type	Orifice Size	Min. Orifice	Cv	Dimensions											Panel	
Switching Type	Diverting Type						A	B	C	D	E	F	G	H	I	J	Block Thickness	Diameter	Max. Thickness
DK11BV-02-SW	DK11BV-02-DV	11,000 psig	1/8”	4.8	1.4	0.04	118	13	66.5	54	20.5	100	14.2	6.5	7	120	38	25.4	6.4
DK11BV-04-SW	DK11BV-04-DV	11,500 psig	1/4"		3.2	0.22	128	17											
DK11BV-06-SW	DK11BV-06-DV	7,500 psig	3/8"		4.8	0.71	128	21											
DK20BV-04-SW	DK20BV-04-DV	20,000 psig	1/4"		2.8	0.15	128	17											
DK20BV-06-SW	DK20BV-06-DV	20,000 psig	3/8”		4.8	0.71	128	21											
DK20BV-09-SW	DK20BV-09-DV	20,000 psig	9/16”		4.8	0.71	138	25											
DK60BV-04-SW	DK60BV-04-DV	20,000 psig	1/4"		2.4	0.1	128	17											
DK60BV-06-SW	DK60BV-06-DV	20,000 psig	3/8”		3.2	0.22	128	21											
DK60BV-09-SW	DK60BV-09-DV	20,000 psig	9/16”		4.8	0.71	138	25											
DK15BV-2N-SW	DK15BV-2N-DV	15,000 psig	NPT 1/8"		4.8	0.71	128	13											
DK15BV-4N-SW	DK15BV-4N-DV	15,000 psig	NPT 1/4"		4.8	0.71	128	21											
DK15BV-6N-SW	DK15BV-6N-DV	15,000 psig	NPT 3/8"		4.8	0.71	128	21											
DK15BV-2R-SW	DK15BV-2R-DV	15,000 psig	PT 1/8"		4.8	0.71	128	13											
DK15BV-4R-SW	DK15BV-4R-DV	15,000 psig	PT 1/4"		4.8	0.71	128	21											
DK15BV-6R-SW	DK15BV-6R-DV	15,000 psig	PT 3/8"		4.8	0.71	128	21											

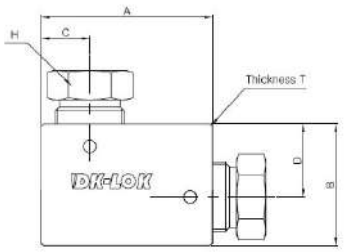
All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

High Pressure Fittings

Features

- Flow patterns are elbow, tee, and cross.
- Temperature range is from -423°F to 1,200°F (-252°C to 649°C).
- Unless otherwise noted, it is supplied with standard gland and collar is assembled.

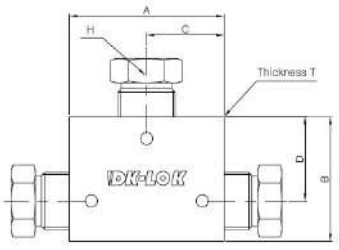
Elbow
DK-L





Part No.	Pressure Rating	Tube Size	Orifice Size	Dimensions					
				A	B	C	D	H	T
DK11L-02	11,000 psig	1/8"	1.4	25	25	7	19	12	15.5
DK11L-04	11,500 psig	1/4"	4	35	35	10	25	16	20
DK07L-06	7,500 psig	3/8"	5.5	35	35	10	25	17	20
DK05L-08	5,500 psig	1/2"	8.5	45	45	13.5	31.5	25.4	25
DK20L-04	20,000 psig	1/4"	2.8	30	25	8	17.5	12	16
DK20L-06		3/8"	5.2	35	35	10	25	16	20
DK20L-09		9/16"	9.1	45	45	13.5	31.5	22	25
DK20L-12		3/4"	1.3	57	57	19	38	27	35
DK20L-16		1"	17.5	76	76	23.5	52.5	36	45
DK30L-02	30,000 psig	1/8"	1.16	28	28	9	19	13	20
DK30L-16		1"	11.1	76	76	23.5	52.5	36	45
DK60L-04	60,000 psig	1/4"	2.4	35	35	12.5	22.5	16	25
DK60L-06		3/8"	3.2	45	38	13.5	25	20	25
DK60L-09		9/16"	4.8	67	47.5	19	28.5	30	38
DK100L-04	100,000 psig	1/4"	2.4	44.5	44.5	13	31.5	16	25
DK150L-06	150,000 psig	3/8"	2.4	67	67	22	45	20	38

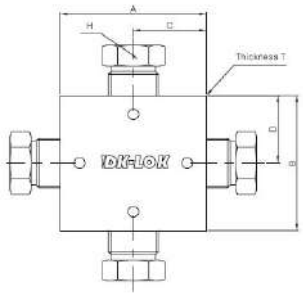
Tee
DK-T





Part No.	Pressure Rating	Tube Size	Orifice Size	Dimensions					
				A	B	C	D	H	T
DK11T-02	11,000 psig	1/8"	1.4	38	25	19	19	12	15.5
DK11T-04	11,500 psig	1/4"	4	50	35	25	25	16	20
DK07T-06	7,500 psig	3/8"	5.5	50	35	25	25	17	20
DK05T-08	5,500 psig	1/2"	8.5	63	45	31.5	31.5	25.4	25
DK20T-04	20,000 psig	1/4"	2.8	44	25	22	17.5	12	16
DK20T-06		3/8"	5.2	50	35	25	25	16	20
DK20T-09		9/16"	9.1	63	45	31.5	31.5	22	25
DK20T-12		3/4"	1.3	76	57	38	38	27	35
DK20T-16		1"	17.5	105	76	52.5	52.5	36	45
DK30T-02	30,000 psig	1/8"	1.16	28	38	19	19	13	20
DK30T-16		1"	11.1	105	76	52.5	52.5	36	45
DK60T-04	60,000 psig	1/4"	2.4	50	35	25	22.5	16	25
DK60T-06		3/8"	3.2	50	40	25	27	20	25
DK60T-09		9/16"	4.8	67	54	33.25	35	30	38
DK100T-04	100,000 psig	1/4"	2.4	44.5	63	31.5	31.5	16	25
DK150T-06	150,000 psig	3/8"	2.4	67	90	45	45	20	38

Cross
DK-X

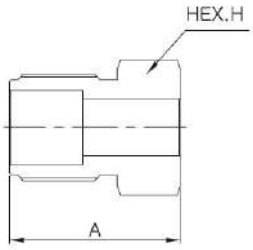




Part No.	Pressure Rating	Tube Size	Orifice Size	Dimensions					
				A	B	C	D	H	T
DK11X-02	11,000 psig	1/8"	1.4	38	38	19	19	12	15.5
DK11X-04	11,500 psig	1/4"	4	50	50	25	25	16	20
DK07X-06	7,500 psig	3/8"	5.5	50	50	25	25	17	20
DK05X-08	5,500 psig	1/2"	8.5	63	63	31.5	31.5	25.4	25
DK20X-04	20,000 psig	1/4"	2.8	44	35	22	17.5	12	16
DK20X-06		3/8"	5.2	50	50	25	25	16	20
DK20X-09		9/16"	9.1	63	63	31.5	31.5	22	25
DK20X-12		3/4"	1.3	76	76	38	38	27	35
DK20X-16		1"	17.5	105	105	52.5	52.5	36	45
DK30X-02	30,000 psig	1/8"	1.16	38	38	19	19	13	20
DK30X-16		1"	11.1	105	105	52.5	52.5	36	45
DK60X-04	60,000 psig	1/4"	2.4	50	38	25	19	16	25
DK60X-06		3/8"	3.2	54	50	27	25	20	25
DK60X-09		9/16"	4.8	70	67	35	33.25	30	38
DK100X-04	100,000 psig	1/4"	2.4	63	63	31.5	31.5	16	25
DK150X-06	150,000 psig	3/8"	2.4	90	90	45	45	20	38

High Pressure Fitting Accessory

Gland
DK-G





Part No.				Pressure Rating	Tube Size	Dimensions	
Sleeve	Collar	Plug	Gland			HEX.H	T
DK11S-02	–	–	DK11G-02	11,000 psig	1/8"	12	14.5
DK11S-04	–	–	DK11G-04	11,500 psig	1/4"	16	16
DK07S-06	–	–	DK07S-06	7,500 psig	3/8"	17	19
DK05S-02	–	–	DK05G-02	5,500 psig	1/2"	25.4	24
–	DK20C-04	DK20P-04	DK20G-04	20,000 psig	1/4"	12	16
–	DK20C-06	DK20P-06	DK20G-06		3/8"	16	16
–	DK20C-09	DK20P-09	DK20G-09		9/16"	22	20
–	DK30C-02	DK30P-02	DK30G-02	30,000 psig	1/8"	27	28
–	DK30C-04	DK30P-04	DK30G-04		1/4"	36	38
–	DK30C-06	DK30P-06	DK30G-06		3/8"	13	18
–	DK30C-09	DK30P-09	DK30G-09		9/16"	36	38
–	DK60C-04	DK60P-04	DK60G-04	60,000 psig	1/4"	16	20
–	DK60C-06	DK60P-06	DK60G-06		3/8"	20	30
–	DK60C-09	DK60P-09	DK60G-09		9/16"	30	38
–	DK100C-04	DK100P-04	DK100G-04	100,000 psig	1/4"	16	30
–	DK150C-06	DK150P-06	DK150G-06	150,000 psig	3/8"	20	30

Collar
DK-C



Sleeve
DK-S



All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Tube
DK-TL



Part No.	Pressure Rating	Tube Size	Cv		Thickness	Flow Area(㎟)	Working Pressure (bar)				
			Outside Diameter	Inside Diameter			-17.8~37.8°C 0~100°F	93°C 200°F	204°C 400°F	316°C 600°F	343°C 650°F
DK11TL-02	11,000 psig	1/8"	3.18	1.57	0.81	1.94	803.23	803.23	775.65	730.83	679.12
DK11TL-04	11,500 psig	1/4"	6.35	3.18	1.57	7.74	803.23	761.86	775.65	730.83	679.12
DK07TL-06	7,500 psig	3/8"	9.53	6.35	1.57	31.61	517.1	517.1	496.41	468.84	434.36
DK05TL-08	5,500 psig	1/2"	12.7	9.53	1.57	70.97	379.21	379.21	361.97	341.29	317.15
							-198~37.8°C -325~100°F	93°C 200°F	204°C 400°F	316°C 600°F	427°C 800°F
DK20TL-04	20,000 psig	1/4"	6.35	2.77	1.78	5.81	1378.93	1378.93	1378.93	1244.48	1158.3
DK20TL-06		3/8"	9.53	5.16	2.18	20.65	1378.93	1378.93	1378.93	1244.48	1158.3
DK20TL-09		9/16"	14.29	7.92	3.18	49.03	1378.93	1378.93	1378.93	1244.48	1158.3
DK20TL-12		3/4"	19.05	11.13	3.96	97.42	1378.93	1378.93	1378.93	1244.48	1158.3
DK20TL-16		1"	25.4	14.27	5.56	160	1378.93	1378.93	1378.93	1244.48	1158.3
DK30TL-02	30,000 psig	1/8"	3.18	1.02	1.08						
DK30TL-16		1"	25.4	11.1	7.15						
DK60TL-04	60,000 psig	1/4"	6.35	2.11	2.11	3.23	4136.79	4136.79	3981.66	3740.35	3495.59
DK60TL-06		3/8"	9.53	3.18	3.18	7.74	4136.79	4136.79	3981.66	3740.35	3495.59
DK60TL-09		9/16"	14.29	4.78	4.75	18.06	4136.79	4136.79	3981.66	3740.35	3495.59
DK100TL-04	100,000 psig	1/4"	6.35	1.59	2.38	3.23	6894.64	6894.64	6633.24	6230.55	5820.46
DK150TL-06	150,000 psig	3/8"	9.53	1.59	3.97	7.74	10341.97	10341.97	9955.87	9400.85	8738.97

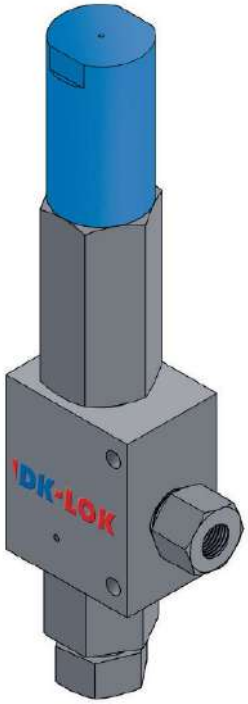
Nipple
DK-N



Part No.	Pressure Rating	Tube Size	Cv		Thickness	Flow Area(㎟)	Working Pressure (bar)				
			Outside Diameter	Inside Diameter			-198~37.8°C -325~100°F	93°C 200°F	204°C 400°F	316°C 600°F	427°C 800°F
DK20N-04	20,000 psig	1/4"	6.35	2.77	1.78	5.81	1378.93	1378.93	1378.93	1244.48	1158.3
DK20N-06		3/8"	9.53	5.16	2.18	20.65	1378.93	1378.93	1378.93	1244.48	1158.3
DK20N-09		9/16"	14.29	7.92	3.18	49.03	1378.93	1378.93	1378.93	1244.48	1158.3
DK20N-12		3/4"	19.05	11.13	3.96	97.42	1378.93	1378.93	1378.93	1244.48	1158.3
DK20N-16		1"	25.4	14.27	5.56	160	1378.93	1378.93	1378.93	1244.48	1158.3
DK30N-02	30,000 psig	1/8"	3.18	1.02	1.08						
DK30N-16		1"	25.4	11.1	7.15						
DK60N-04	60,000 psig	1/4"	6.35	2.11	2.11	3.23	4136.79	4136.79	3981.66	3740.35	3495.59
DK60N-06		3/8"	9.53	3.18	3.18	7.74	4136.79	4136.79	3981.66	3740.35	3495.59
DK60N-09		9/16"	14.29	4.78	4.75	18.06	4136.79	4136.79	3981.66	3740.35	3495.59
DK100N-04	100,000 psig	1/4"	6.35	1.59	2.38	3.23	6894.64	6894.64	6633.24	6230.55	5820.46
DK150N-06	150,000 psig	3/8"	9.53	1.59	3.97	7.74	10341.97	10341.97	9955.87	9400.85	8738.97

High Pressure Relief Valve – Factory Set

Features

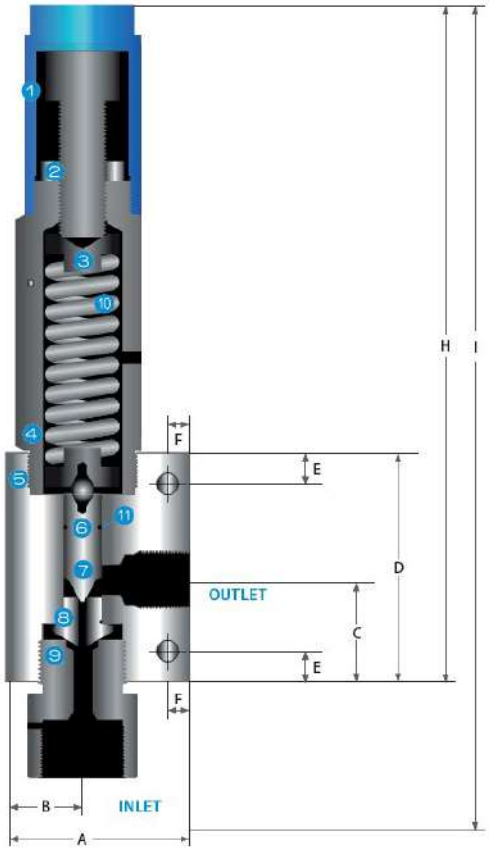


If system internal pressure rises above a set pressure due to system malfunction, etc., it will discharge pressure to protect system and other devices.

- Pressure range; 3,000 ~ 60,000 psig
- Setting pressure accuracy; ±8%
- Inlet port; 9/16”, Outlet port; NPT 1/2"
- Operating temperature; up to 170°C
- Adapters allow connection of various pressure specifications and sizes.
- Apply a metal to metal contact method to extend the life of the seat.
- The set pressure is set before shipment and sealed with the pressure tag.

Relief Valve – Factory Set
DK-RV

Parts	Material
1. Cap	Aluminum 6061
2. Lock Nut	Stainless Steel 304
3. Spring Cap	Stainless Steel 304
4. Housing	Aluminum 6061 Stainless Steel 304
5. Body	Stainless Steel 304
6. Spindle	Stainless Steel 630
7. Plug	Stainless Steel 630
8. Seat	Stainless Steel 304
9. Adapter	Stainless Steel 304
10. Molding Spring	Stainless Steel 304
11. O-Ring	Viton



Part No.	Port Type		Orifice Size	Pressure Range		Dimensions									Block Thickness
	Inlet	Outlet		Min.	Max.	A	B	C	D	E	F	G	H	I	
DK10RVS-09-8N	9/16”	NPT 1/2"	6.4	3,000 psig	10,000 psig	60	25	33.5	75	10	7	7	222.5	253.8	44
DK15RVS-09-8N	9/16”	NPT 1/2"	4.8	10,000 psig	15,000 psig	60	25	33.5	75	10	7	7	222.5	253.8	44
DK30RVS-09-8N	9/16”	NPT 1/2"	3.2	15,000 psig	30,000 psig	60	25	33.5	75	10	7	7	222.5	253.8	44
DK60RVS-09-8N	9/16”	NPT 1/2"	2.4	30,000 psig	60,000 psig	60	25	33.5	75	10	7	7	222.5	253.8	44

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

High Pressure Relief Valve – Field Adjustable

Features

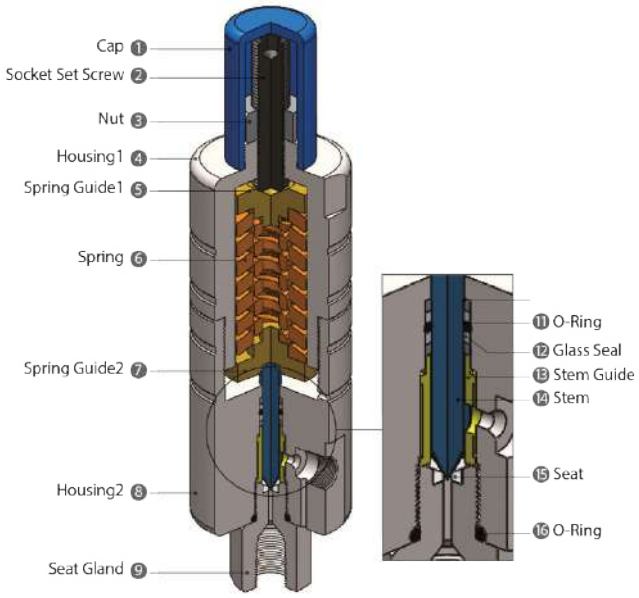
When the pressure inside the system rises above the set pressure, the pressure is released to protect the system from overpressure.

- Pressure range; 1,000 ~ 10,000 psig, 10,000 ~ 20,000 psig
- Setting pressure accuracy; ±8%
- Inlet port; NPT 1/4“ or 1/4", Outlet port; NPT 1/4"
- Operating temperature; -20 ~ 65°C (Nylon), -20 ~ 204°C (PTFE)
- Adapters allow connection of various pressure specifications and sizes.
- Long Life due to mold springs and soft seat.
- The pressure setting is easily adjustable by the customer by directly adjusting the mood wrench bolt at the top of the valve.

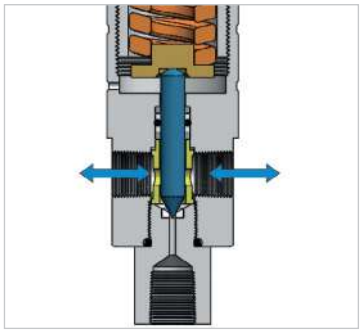
Relief Valve – Field Adjustable

DK-RVS

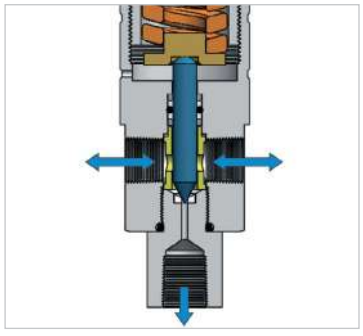
Parts	Material
1. Cap	Aluminum 6061
2. Socket Set Screw	SCM435
3. Nut	Stainless Steel 304
4. Housing1	Aluminum 6061 Stainless Steel 304
5. Spring Guide1	Stainless Steel 304
6. Spring	Carbon Steel
7. Spring Guide2	Stainless Steel 304
8. Housing2	Stainless Steel 316
9. Seat Gland	Stainless Steel 316
10. Seal	Stainless Steel 316
11. O-Ring	Viton
12. Glass Seal	Glass Teflon
13. Stem Guide	Stainless Steel 316
14. Stem	Stainless Steel 630
15. Seat	Nylon/PTFE
16. O-Ring	Viton



Application



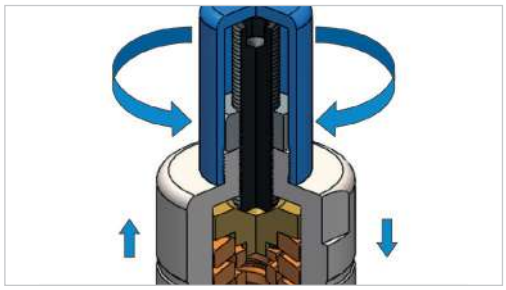
Close
Spring-proof pressure, Force >> Pressure applied to the stem, force



Open
Spring-proof pressure, Force << Pressure applied to the stem, force

The relief valve opens when the pressure applied to the stem exceeds the set pressure, and closes when the pressure falls bello the set pressure.

How to Use

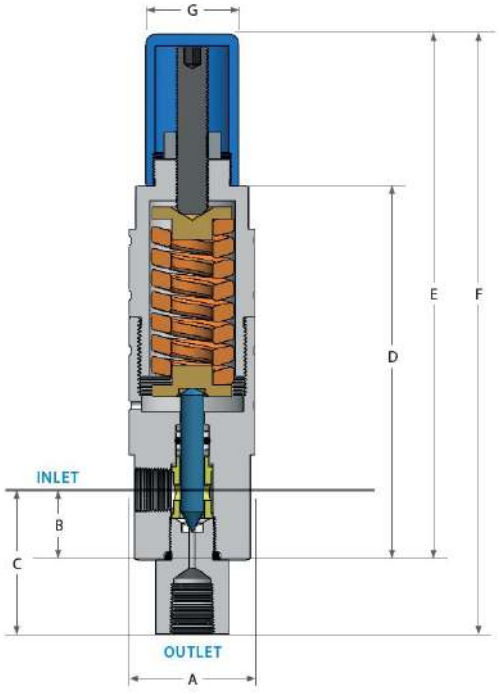


- The inlet pressure determines the set pressure.
- Turning to the right increases the set pressure.
- Turning to the left decreases the set pressure.
- Accuracy range is ±8%.

Set Pressure

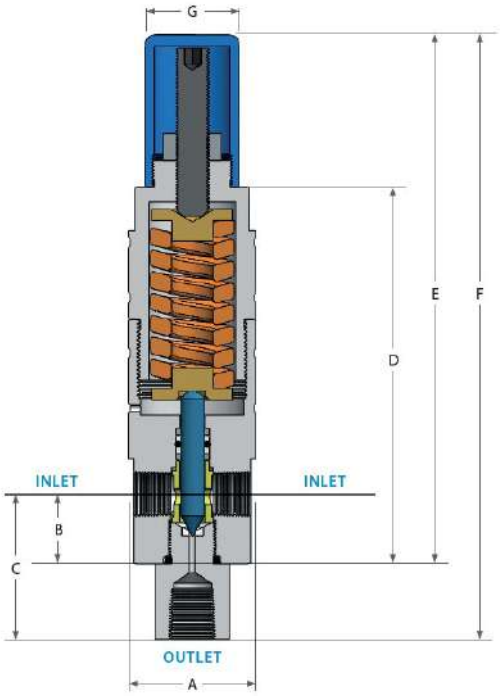
Part No.	Set Pressure [psig]	Spring Compression Length [mm]
DK10RV-F-4N 1,000 ~ 10,000 psig	2,500	2.58
	5,500	5.15
	7,500	7.73
	10,000	10.31
DK20RV-2H04-4N 10,000 ~ 20,000 psig	12,500	6.96
	15,000	8.35
	17,500	9.74
	20,000	11.13

Application



[1 Inlet Type]

Pressure : 1,000 psig ~ 10,000 psig



[2 Inlet Type]

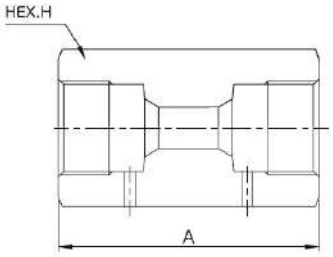
Pressure : 1,000 psig ~ 10,000 psig

Part No.	Port Type			Orifice Size	Pressure Range		Dimensions						
	Inletl	Inlet2	Outlet		Min.	Max.	A	B	C	D	E	F	G
DK10RV-F-4N-1	NPT 1/4"		1/4" NPT	1.8	1,000 psig	10,000 psig	38	21	43.1	112.5	158	180.1	28
DK10RV-F-4N-2		NPT 1/4"											
DK20RV-04-4N-1	1/4"		1/4" NPT	1.8	10,000 psig	20,000 psig	49.5	21	43.1	120	165.5	187.6	28
DK20RV-04-4N-2		1/4"											

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

High Pressure Union & Adapter

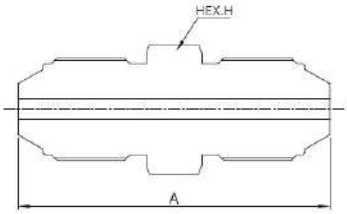
Female Union
DK-FAU





Part No.	Pressure Rating	Tube Size	Dimensions	
			HEX.H	A
DK11FAU-02	11,000 psig	1/8"	12.7	31
DK11FAU-04	11,500 psig	1/4"	16	41.5
DK07FAU-06	7,500 psig	3/8"	19	44.5
DK05FAU-08	5,500 psig	1/2"	25.4	50.5
DK20FAU-04	20,000 psig	1/4"	16	41.5
DK20FAU-06		3/8"	19	44.5
DK20FAU-09		9/16"	25.4	54
DK20FAU-12		3/4"	36	63.5
DK20FAU-16		1"	46	89
DK30FAU-02	30,000 psig	1/8"	20	31
DK30FAU-16		1"	46	91
DK60FAU-04	60,000 psig	1/4"	20	35
DK60FAU-06		3/8"	25.4	44.5
DK60FAU-09		9/16"	36	57

Male Union
DK-MAU

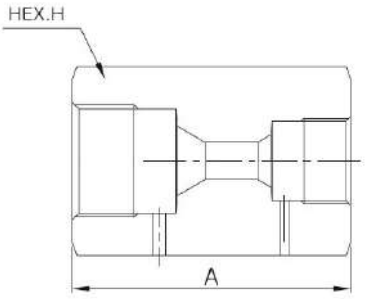




Part No.	Pressure Rating	Tube Size	Dimensions	
			HEX.H	A
DK11MAU-02	11,000 psig	1/8"	12.7	35
DK11MAU-04	11,500 psig	1/4"	16	47
DK07MAU-06	7,500 psig	3/8"	19	54
DK05MAU-08	5,500 psig	1/2"	25.4	57.5
DK20MAU-04	20,000 psig	1/4"	12.7	44
DK20MAU-06		3/8"	16	54
DK20MAU-09		9/16"	25.4	64
DK20MAU-12		3/4"	30	82
DK20MAU-16		1"	36	107
DK30MAU-02	30,000 psig	1/8"	14	38
DK30MAU-16		1"	36	109
DK60MAU-04	60,000 psig	1/4"	16	43
DK60MAU-06		3/8"	20	58
DK60MAU-09		9/16"	30	68

Female Union Reducer

DK-FARU



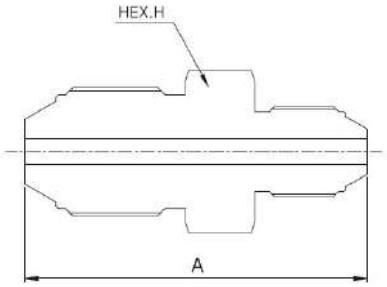


Part No.			Female End														
			11,500 psig	7,500 psig	5,500 psig	20,000 psig					30,000 psig		60,000 psig		
			1/4"	3/8"	1/2"	1/4"	3/8"	9/16"	3/4"	1"	1/8"	1"	1/4"	3/8"	9/16"
Female End	11,500 psig	1/8"	DK11FARU 02-L04	DK11FARU 02-L06	DK11FARU 02-L08	DK11FARU 02-M04	DK11FARU 02-M06	DK11FARU 02-M09			DK11FARU 02-3H02		DK11FARU 02-6H04	DK11FARU 02-6H06	DK11FARU 02-6H09
	11500 psig	1/4"		DK11FARU 04-L06	DK11FARU 04-L08	DK11FARU 04-M04	DK11FARU 04-M06	DK11FARU 04-M09	DK11FARU 04-M12		DK11FARU 04-3H02		DK11FARU 04-6H04	DK11FARU 04-6H06	DK11FARU 04-6H09
	7,500 psig	3/8"			DK07FARU 06-L08	DK07FARU 06-M04	DK07FARU 06-M06	DK07FARU 06-M09	DK07FARU 06-M12	DK07FARU 06-M16	DK07FARU 06-3H02	DK07FARU 06-3H16	DK07FARU 06-6H04	DK07FARU 06-6H06	DK07FARU 06-6H09
	5,500 psig	1/2"				DK07FARU 08-M04	DK07FARU 08-M06	DK07FARU 08-M09	DK07FARU 08-M12	DK07FARU 08-M16	DK07FARU 08-3H02	DK07FARU 08-3H16	DK07FARU 08-6H04	DK07FARU 08-6H06	DK07FARU 08-6H09
	20,000 psig	1/4"					DK20FARU 04-M06	DK20FARU 04-M09	DK20FARU 04-M12	DK20FARU 04-M16	DK20FARU 04-3H02		DK20FARU 04-6H04	DK20FARU 04-6H06	DK20FARU 04-6H09
		3/8"						DK20FARU 06-M09	DK20FARU 06-M12	DK20FARU 06-M16	DK20FARU 06-3H02	DK20FARU 06-3H16	DK20FARU 06-6H04	DK20FARU 06-6H06	DK20FARU 06-6H09
		9/16"							DK20FARU 09-M12	DK20FARU 09-M16	DK20FARU 09-3H02	DK20FARU 09-3H16	DK20FARU 09-6H04	DK20FARU 09-6H06	DK20FARU 09-6H09
		3/4"								DK20FARU 12-M16	DK20FARU 12-3H02	DK20FARU 12-3H16	DK20FARU 12-6H04	DK20FARU 12-6H06	DK20FARU 12-6H09
		1"										DK20FARU 16-3H16	DK20FARU 16-6H04	DK20FARU 16-6H06	DK20FARU 16-6H09
	30,000 psig	1/8"											DK60FARU 02-6H04	DK60FARU 02-6H06	DK60FARU 02-6H09
		1"											DK60FARU 16-6H04	DK60FARU 16-6H06	DK60FARU 16-6H09
	60,000 psig	1/4"												DK60FARU 04-6H06	DK60FARU 04-6H09
		3/8"													DK60FARU 06-6H09

Dimensions			Female End																							
			11,500 psig		7,500 psig		5,500 psig		20,000 psig										30,000 psig				60,000 psig			
			1/4"		3/8"		1/2"		1/4"		3/8"		9/16"		3/4"		1"		1/8"		1"		1/4"		3/8"		9/16"	
			HEX.H	A	HEX.H	A	HEX.H	A	HEX.H	A	HEX.H	A	HEX.H	A	HEX.H	A	HEX.H	A	HEX.H	A	HEX.H	A	HEX.H	A	HEX.H	A	HEX.H	A
Female End	11,500 psig	1/8”	16	36.5	19	38	25.4	41.5	16	35	19	38	25.4	44.5					20	31			19	31.5	25.4	38	36	44.5
	11,500 psig	1/4"			19	43	25.4	47.5	16	41.5	19	44.5	25.4	50.5	36	57			20	38			19	38	25.4	43	36	52
	7,500 psig	3/8”					25.4	47.5	19	41.5	19	44.5	25.4	50.5	36	57	46	76	20	38	46	76	19	41.5	25.4	46	36	51
	5,500 psig	1/2"'							25.4	41.5	25.4	47.5	25.4	50.5	36	57	46	76	25.4	43	46	76	25.4	43	25.4	47.5	36	52
	20,000 psig	1/4"'									19	44.5	25.4	50.5	36	57	46	70	20	38			19	35	25.4	41.5	36	47.5
		3/8"											25.4	50.5	36	57	46	73	20	40	46	76	19	41.5	25.4	50.5	36	50.5
		9/16"													36	63.5	46	76	25.4	48	46	76	25.4	50.5	25.4	50.5	36	57
		3/4"															46	76	36	53.5	46	76	36	53.5	36	60	36	70
		1"																			46	91	46	70	46	73	46	82.5
	30,000 psig	1/8"																					20	31	25.4	38	36	44.5
		1”																					46	68	46	73	46	78
	60,000 psig	1/4"'																							25.4	44.5	36	57
		3/8"																									36	57

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Male Union Reducer
DK-MAUR



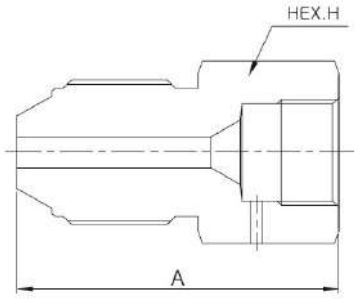


Part No.			Male End															
			11,500 psig	7,500 psig	5,500 psig	20,000 psig					30,000 psig		60,000 psig		
			1/4"	3/8"	1/2"	1/4"	3/8"	9/16"	3/4"	1"	1/8"	1"	1/4"	3/8"	9/16"
Male End	11,500 psig	1/8"	DK11MAUR 02-L04	DK11MAUR 02-L06	DK11MAUR 02-L08	DK11MAUR 02-M04	DK11MAUR 02-M06	DK11MAUR 02-M09			DK11MAUR 02-3H02		DK11MAUR 02-6H04	DK11MAUR 02-6H06	DK11MAUR 02-6H09
	11,500 psig	1/4"		DK11MAUR 04-L06	DK11MAUR 04-L08	DK11MAUR 04-M04	DK11MAUR 04-M06	DK11MAUR 04-M09	DK11MAUR 04-M12		DK11MAUR 04-3H02		DK11MAUR 04-6H04	DK11MAUR 04-6H06	DK11MAUR 04-6H09
	7,500 psig	3/8"			DK07MAUR 06-L08	DK07MAUR 06-M04	DK07MAUR 06-M06	DK07MAUR 06-M09	DK07MAUR 06-M12	DK07MAUR 06-M16	DK07MAUR 06-3H02	DK07MAUR 06-3H16	DK07MAUR 06-6H04	DK07MAUR 06-6H06	DK07MAUR 06-6H09
	5,500 psig	1/2"				DK05MAUR 08-M04	DK07MAUR 08-M06	DK07MAUR 08-M09	DK07MAUR 08-M12	DK07MAUR 08-M16	DK07MAUR 08-3H02	DK07MAUR 08-3H16	DK07MAUR 08-6H04	DK07MAUR 08-6H06	DK07MAUR 08-6H09
	20,000 psig	1/4"					DK20MAUR 04-M06	DK20MAUR 04-M09	DK20MAUR 04-M12	DK20MAUR 04-M16	DK20MAUR 04-3H02		DK20MAUR 04-6H04	DK20MAUR 04-6H06	DK20MAUR 04-6H09
		3/8"						DK20MAUR 06-M09	DK20MAUR 06-M12	DK20MAUR 06-M16	DK20MAUR 06-3H02	DK20MAUR 06-3H16	DK20MAUR 06-6H04	DK20MAUR 06-6H06	DK20MAUR 06-6H09
		9/16"							DK20MAUR 09-M12	DK20MAUR 09-M16	DK20MAUR 09-3H02	DK20MAUR 09-3H16	DK20MAUR 09-6H04	DK20MAUR 09-6H06	DK20MAUR 09-6H09
		3/4"								DK20MAUR 12-M16	DK20MAUR 12-3H02	DK20MAUR 12-3H16	DK20MAUR 12-6H04	DK20MAUR 12-6H06	DK20MAUR 12-6H09
		1"										DK20MAUR 16-3H16	DK20MAUR 16-6H04	DK20MAUR 16-6H06	DK20MAUR 16-6H09
	30,000 psig	1/8"											DK60MAUR 02-6H04	DK60MAUR 02-6H06	DK30MAUR 02-6H09
		1"											DK60MAUR 16-6H04	DK60MAUR 16-6H06	DK30MAUR 16-6H09
	60,000 psig	1/4"												DK60MAUR 04-6H06	DK60MAUR 04-6H09
		3/8"													DK60MAUR 06-6H09

Dimensions			Male End																							
			11,500 psig		7,500 psig		5,500 psig		20,000 psig										30,000 psig				60,000 psig					
			1/4"		3/8"		1/2"		1/4"		3/8"		9/16"		3/4"		1"		1/8"		1"		1/4"		3/8"		9/16"	
			HEX.H	A	HEX.H	A	HEX.H	A	HEX.H	A	HEX.H	A	HEX.H	A	HEX.H	A	HEX.H	A	HEX.H	A	HEX.H	A	HEX.H	A	HEX.H	A	HEX.H	A
Male End	11,500 psig	1/8"	16	41	19	46.5	25.4	49.5	14	39.5	16	43.5	25.4	49.5					14	36.5			16	41	25.4	50	30	54.5
	11,500 psig	1/4"			19	51.5	25.4	54.5	16	44.5	16	48.5	25.4	56.5	30	65			14	41.5			16	46	25.4	55	30	59.5
	7,500 psig	3/8"					25.4	57	19	47	19	51	25.4	59	30	67.5	36	77.5	19	44	36	78.5	19	48.5	25.4	57.5	30	62
	5,500 psig	1/2"							25.4	54	25.4	58	25.4	62	30	70	36	80	25.4	51	36	81	25.4	51.5	25.4	60	30	64.5
	20,000 psig	1/4"									16	48	25.4	56	30	64.5	36	78.5	14	41			16	45.5	20	54.5	30	61
		3/8"											25.4	60	30	70	36	84.5	16	45	36	85.5	16	49.5	20	58.5	30	65
		9/16"													30	70	36	91	25.4	53	36	92	22	56	22	62.5	30	69
		3/4"															36	97	30	65	36	98	30	62	30	70.5	30	75
		1"																			36	108	36	76.5	36	82.5	36	88
	30,000 psig	1/8"																					16	42.5	20	51.5	30	58
		1"																					36	81.5	36	87.5	36	91
	60,000 psig	1/4"																							20	52	30	58.5
		3/8"																									30	64.5

Male Adapter * Female Adapter

DK-MAFA





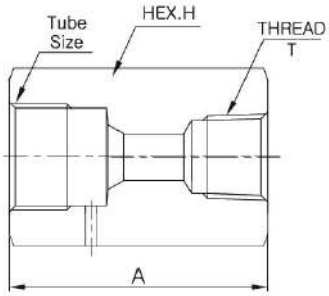
Part No.			Female End														
			11,000 psig	11,500 psig	7,500 psig	5,500 psig	20,000 psig					30,000 psig		60,000 psig		
			1/8"	1/4"	3/8"	1/2"	1/4"	3/8"	9/16"	3/4"	1"	1/8"	1"	1/4"	3/8"	9/16"
Male End	11,000 psig	1/8"		DK11MAFA 02-L04	DK11MAFA 02-L06	DK11MAFA 02-L08	DK11MAFA 02-M04	DK11MAFA 02-M06	DK11MAFA 02-M09			DK11MAFA 02-3H02		DK11MAFA 02-6H04	DK11MAFA 02-6H06	DK11MAFA 02-6H09
	11,500 psig	1/4"	DK11MAFA 04-L02		DK11MAFA 04-L06	DK11MAFA 04-L08	DK11MAFA 04-M04	DK11MAFA 04-M06	DK11MAFA 04-M09	DK11MAFA 04-M12		DK11MAFA 04-3H02		DK11MAFA 04-6H04	DK11MAFA 04-6H06	DK11MAFA 04-6H09
	7,500 psig	3/8"	DK07MAFA 06-L02	DK07MAFA 06-L04		DK07MAFA 06-L08	DK07MAFA 06-M04	DK07MAFA 06-M06	DK07MAFA 06-M09	DK07MAFA 06-M12	DK07MAFA 06-M16	DK07MAFA 06-3H02	DK07MAFA 06-3H16	DK07MAFA 06-6H04	DK07MAFA 06-6H06	DK07MAFA 06-6H09
	5,500 psig	1/2"	DK07MAFA 08-L02	DK07MAFA 08-L04	DK07MAFA 08-L06		DK07MAFA 08-M04	DK07MAFA 08-M06	DK07MAFA 08-M09	DK07MAFA 08-M12	DK07MAFA 08-M16	DK07MAFA 08-H02	DK07MAFA 08-3H16	DK07MAFA 08-6H04	DK07MAFA 08-6H06	DK07MAFA 08-6H09
	20,000 psig	1/4"	DK20MAFA 04-L02	DK20MAFA 04-L04	DK20MAFA 04-L06	DK20MAFA 04-L08		DK20MAFA 04-M06	DK20MAFA 04-M09	DK20MAFA 04-M12	DK20MAFA 04-M16	DK20MAFA 04-3H02	DK20MAFA 04-3H16	DK20MAFA 04-6H04	DK20MAFA 04-6H06	DK20MAFA 04-6H09
		3/8"	DK20MAFA 06-L02	DK20MAFA 06-L04	DK20MAFA 06-L06	DK20MAFA 06-L08	DK20MAFA 06-M04		DK20MAFA 06-M09	DK20MAFA 06-M12	DK20MAFA 06-M16	DK20MAFA 06-3H02	DK20MAFA 06-3H16	DK20MAFA 06-6H04	DK20MAFA 06-6H06	DK20MAFA 06-6H09
		9/16"	DK20MAFA 09-L02	DK20MAFA 09-L04	DK20MAFA 09-L06	DK20MAFA 09-L08	DK20MAFA 09-M04	DK20MAFA 09-M06		DK20MAFA 09-M12	DK20MAFA 09-M16	DK20MAFA 09-3H02	DK20MAFA 09-3H16	DK20MAFA 09-6H04	DK20MAFA 09-6H06	DK20MAFA 09-6H09
		3/4"		DK20MAFA 12-L04	DK20MAFA 12-L06	DK20MAFA 12-L08	DK20MAFA 12-M04	DK20MAFA 12-M06	DK20MAFA 12-M09		DK20MAFA 12-M16		DK20MAFA 12-3H16	DK20MAFA 12-6H04	DK20MAFA 12-6H06	DK20MAFA 12-6H09
		1"		DK20MAFA 16-L04	DK20MAFA 16-L06	DK20MAFA 16-L08	DK20MAFA 16-M04	DK20MAFA 16-M06	DK20MAFA 16-M09	DK20MAFA 16-M12			DK20MAFA 16-3H16	DK20MAFA 16-6H04	DK20MAFA 16-6H06	DK20MAFA 16-6H09
	30,000 psig	1/8"	DK60MAFA 02-L02	DK60MAFA 02-L04	DK60MAFA 02-L06	DK60MAFA 02-L08	DK60MAFA 02-M04	DK60MAFA 02-M06	DK60MAFA 02-M09					DK60MAFA 02-6H04	DK60MAFA 02-6H06	DK60MAFA 02-6H09
		1"		DK60MAFA 16-L04	DK60MAFA 16-L06	DK60MAFA 16-L08	DK60MAFA 16-M04	DK60MAFA 16-M06	DK60MAFA 16-M09	DK60MAFA 16-M12	DK60MAFA 16-M16	DK60MAFA 16-3H02		DK60MAFA 16-6H04	DK60MAFA 16-6H06	DK60MAFA 16-6H09
	60,000 psig	1/4"	DK60MAFA 04-L02	DK60MAFA 04-L04	DK60MAFA 04-L06	DK60MAFA 04-L08	DK60MAFA 04-M04	DK60MAFA 04-M06	DK60MAFA 04-M09	DK60MAFA 04-M12		DK60MAFA 04-3H02	DK60MAFA 04-3H16		DK60MAFA 04-6H06	DK60MAFA 04-6H09
		3/8"	DK60MAFA 06-L06	DK60MAFA 06-L04	DK60MAFA 06-L06	DK60MAFA 06-L08	DK60MAFA 06-M04	DK60MAFA 06-M06	DK60MAFA 06-M09	DK60MAFA 06-M12	DK60MAFA 06-M16	DK60MAFA 06-3H02	DK60MAFA 06-3H16	DK60MAFA 06-6H04		DK60MAFA 06-6H09
		9/16"	DK60MAFA 09-L09	DK60MAFA 09-L04	DK60MAFA 09-L06	DK60MAFA 09-L08	DK60MAFA 09-M04	DK60MAFA 09-M06	DK60MAFA 09-M09	DK60MAFA 09-M12	DK60MAFA 09-M16	DK60MAFA 09-3H02	DK60MAFA 09-3H16	DK60MAFA 09-6H04	DK60MAFA 09-6H06	

Dimensions			Female End																									
			11,500 psig		11,500 psig		7,500 psig		5,500 psig		20,000 psig										30,000 psig				60,000 psig					
			1/8"		1/4"		3/8"		1/2"		1/4"		3/8"		9/16"		3/4"		1"		1/8"		1"		1/4"		3/8"		9/16"	
			HEX.H	A	HEX.H	A	HEX.H	A	HEX.H	A	HEX.H	A	HEX.H	A	HEX.H	A	HEX.H	A	HEX.H	A	HEX.H	A	HEX.H	A	HEX.H	A	HEX.H	A	HEX.H	A
Male End	11,500 psig	1/8"			16	32	19	35	25.4	38	16	32	19	35	25.4	42					20	27			19	29	25.4	34	36	40
	11500 psig	1/4"	16	27.5			19	41.5	25.4	44.5	16	35	19	42.5	25.4	48	36	57.5			20	35			19	32.5	25.4	39.5	36	45.5
	7,500 psig	3/8"	19	30	19	35			25.4	45	19	35	19	40	25.4	48	36	57.5	46	70	20	35	46	70	19	35	25.4	42	36	45.5
	5,500 psig	1/2"	25.4	33	25.4	33	25.4	37			25.4	37	25.4	40	25.4	48	36	57.5	46	70	25.4	37	46	70	25.4	35	25.4	42	36	45.5
	20,000 psig	1/4"	16	34	16	40	19	40	25.4	43			19	40	25.4	50	36	57.5	46	70	20	37	46	70	19	32	25.4	42	36	45.5
		3/8"	16	34	16	40	19	44	25.4	48	16	36			25.4	52	36	57.5	46	72	20	37	46	72	19	36.5	25.4	42	36	47
		9/16"	22	40	22	44	22	45	25.4	49	24	40	24	46			36	62.5	46	75	22	40	46	75	22	40	25.4	47	36	52
		3/4"			30	46	30	50	30	56	30	48	30	52	30	57			46	80			46	80	30	48	30	52	36	58
		1"			36	54	36	54	36	54	36	56	36	59	36	63	36	70					46	81	36	54	36	60	36	64
	30,000 psig	1/8"	16	29	16	34	19	37	25.4	40	16	31	19	37	25.4	44									19	30	25.4	36	36	46
		1"			36	55	36	55	36	55	36	57	36	60	36	64	36	70	46	82					36	55	36	61	36	65
	60,000 psig	1/4"	16	30	16	35	19	38	25.4	42	16	32	19	40	25.4	46	36	55			20	32					25.4	44.5	36	49.5
		3/8"	20	35.5	20	41.5	20	42.5	25.4	44.5	20	42.5	20	43.5	25.4	50.5	36	57.5	46	74.5	20	35.5	46	74.5	20	38.5			36	44.5
		9/16"	30	38	30	42.5	30	42.5	30	44.5	30	42.5	30	46	30	51	36	61	46	78	30	38	46	78	30	36.5	30	39		

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Female Adapter * Female Thread

DK-FAF

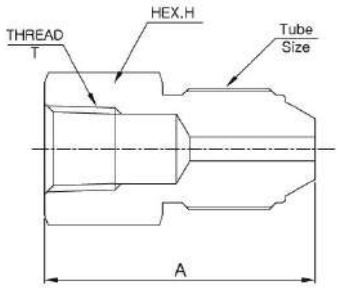




Connection Type		Part No.	Pressure Rating	Tube Size	Thread T F.NPT	Dimensions	
						HEX.H	A
Low Pressure 11,500 psig		DK11FAF02-2N	11,000 psig	1/8"	1/8"	16	35
		DK11FAF02-4N			1/4"	19	38
		DK11FAF02-6N			3/8"	25.4	41
		DK11FAF02-8N			1/2"	30	50.5
		DK11FAF04-2N	11,500 psig	1/4"	1/8"	16	38
		DK11FAF04-4N			1/4"	19	41.5
		DK11FAF04-6N			3/8"	25.4	44.5
		DK11FAF04-8N			1/2"	30	54
		DK11FAF04-12N			3/4"	36	55.5
		DK07FAF06-2N	7,500 psig	3/8"	1/8"	19	41.5
		DK07FAF06-4N			1/4"	19	44.5
		DK07FAF06-6N			3/8"	25.4	48
		DK07FAF06-7N			1/2"	30	54
		DK07FAF06-12N			3/4"	36	58.5
		DK07FAF06-16N			1"	46	68
		DK05FAF08-2N	5,500 psig	1/2"	1/8"	25.4	38
		DK05FAF08-4N			1/4"	25.4	50.5
		DK05FAF08-6N			3/8"	25.4	50.5
		DK05FAF08-8N			1/2"	30	57
		DK05FAF08-12N			3/4"	36	63.5
		DK05FAF08-16N			1"	46	72
Medium Pressure 20,000 psig		DK20FAF04-2N	15,000 psig	1/4"	1/8"	16	35
		DK20FAF04-4N			1/4"	19	41.5
		DK20FAF04-6N			3/8"	25.4	41.5
		DK20FAF04-8N			1/2"	30	50.5
		DK20FAF04-12N	10,000 psig		3/4"	36	57
		DK20FAF06-2N	15,000 psig	3/8"	1/8"	19	38
		DK20FAF06-4N			1/4"	19	44.5
		DK20FAF06-6N			3/8"	25.4	46
		DK20FAF06-8N			1/2"	30	54
		DK20FAF06-12N	10,000 psig		3/4"	36	57
		DK20FAF06-16N			1"	46	66.5
		DK20FAF09-2N	15,000 psig	9/16"	1/8"	25.4	41.5
		DK20FAF09-4N			1/4"	25.4	50.5
		DK20FAF09-6N			3/8"	25.4	50.5
		DK20FAF09-8N			1/2"	30	57
		DK20FAF09-12N	10,000 psig		3/4"	36	57
		DK20FAF09-16N			1"	46	66.5
		DK20FAF12-4N	15,000 psig	3/4"	1/4"	36	54.5
		DK20FAF12-6N			3/8"	36	60
		DK20FAF12-8N			1/2"	36	66.5
		DK20FAF12-12N	10,000 psig		3/4"	36	66.5
		DK20FAF12-16N			1"	46	73
		DK20FAF16-4N	15,000 psig	1"	1/4"	46	67
		DK20FAF16-6N			3/8"	46	67
		DK20FAF16-8N			1/2"	46	73
		DK20FAF16-12N	10,000 psig		3/4"	46	76
		DK20FAF16-16N			1"	46	83
High Pressure	30,000 psig	DK30FAF02-2N	15,000 psig	1/8"	1/8"	20	31
		DK30FAF02-4N			1/4"	20	36
		DK30FAF02-6N			3/8"	25.4	41
		DK30FAF02-8N			1/2"	30	45.5
		DK30FAF16-4N	15,000 psig	1"	1/4"	46	71
		DK30FAF16-6N			3/8"	46	71
		DK30FAF16-8N			1/2"	46	76
		DK30FAF16-12N	10,000 psig		3/4"	46	80
		DK30FAF16-16N			1"	46	87
	60,000 psig	DK60FAF04-2N	15,000 psig	1/4"	1/8"	19	35
		DK60FAF04-4N			1/4"	19	41.5
		DK60FAF04-6N			3/8"	25.4	41.5
		DK60FAF04-8N			1/2"	30	50.5
		DK60FAF04-12N	10,000 psig		3/4"	36	55.5
		DK60FAF06-2N	15,000 psig	3/8"	1/8"	25.4	41.5
		DK60FAF06-4N			1/4"	25.4	47.5
		DK60FAF06-6N			3/8"	25.4	47.5
		DK60FAF06-8N			1/2"	30	54
		DK60FAF06-12N	10,000 psig		3/4"	36	58.5
		DK60FAF06-16N			1"	46	65.5
		DK60FAF09-2N	15,000 psig	9/16"	1/8"	36	46
		DK60FAF09-4N			1/4"	36	50.5
		DK60FAF09-6N			3/8"	36	50.5
		DK60FAF09-8N			1/2"	36	56.5
		DK60FAF09-12N	10,000 psig		3/4"	36	60
		DK60FAF09-16N			1"	46	68

Male Adapter * Female Thread

DK-MAF



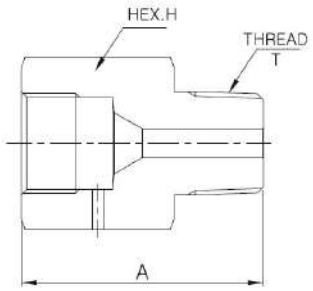


Connection Type		Part No.	Pressure Rating	Tube Size	Thread T F.NPT	Dimensions	
						HEX.H	A
Low Pressure 11,500 psig		DK11MAF02-2N	11,000 psig	1/8"	1/8"	16	28
		DK11MAF02-4N			1/4"	19	34
		DK11MAF02-6N			3/8"	25.4	38
		DK11MAF02-8N			1/2"	30	43
		DK11MAF04-2N	11,500 psig	1/4"	1/8"	16	33
		DK11MAF04-4N			1/4"	19	37
		DK11MAF04-6N			3/8"	25.4	43
		DK11MAF04-8N			1/2"	30	47.5
		DK11MAF04-12N			3/4"	36	55.5
		DK07MAF06-2N	7,500 psig	3/8"	1/8"	19	35
		DK07MAF06-4N			1/4"	19	37
		DK07MAF06-6N			3/8"	25.4	43
		DK07MAF06-7N			1/2"	30	50
		DK07MAF06-12N			3/4"	36	57.5
		DK07MAF06-16N			1"	46	70
Medium Pressure 20,000 psig		DK05MAF08-2N	5,500 psig	1/2"	1/8"	19	35
		DK05MAF08-4N			1/4"	19	37
		DK05MAF08-6N			3/8"	25.4	43
		DK05MAF08-8N			1/2"	30	50
		DK05MAF08-12N			3/4"	36	57.5
		DK05MAF08-16N			1"	46	70
		DK20MAF04-2N	15,000 psig	1/4"	1/8"	16	33
		DK20MAF04-4N			1/4"	19	37
		DK20MAF04-6N			3/8"	25.4	43
		DK20MAF04-8N			1/2"	30	50
		DK20MAF04-12N	10,000 psig		3/4"	36	57.5
		DK20MAF06-2N	15,000 psig	3/8"	1/8"	16	34
		DK20MAF06-4N			1/4"	19	39.5
		DK20MAF06-6N			3/8"	25.4	45
		DK20MAF06-8N			1/2"	30	50
		DK20MAF06-12N	10,000 psig		3/4"	36	57.5
		DK20MAF06-16N			1"	46	70
		DK20MAF09-2N	15,000 psig	9/16"	1/8"	22	40
		DK20MAF09-4N			1/4"	22	43
		DK20MAF09-6N			3/8"	25.4	47
		DK20MAF09-8N			1/2"	30	54
		DK20MAF09-12N	10,000 psig		3/4"	36	62
		DK20MAF09-16N			1"	46	73
		DK20MAF12-4N	15,000 psig	3/4"	1/4"	30	48
		DK20MAF12-6N			3/8"	30	52
		DK20MAF12-8N			1/2"	30	56
		DK20MAF12-12N	10,000 psig		3/4"	36	68
		DK20MAF12-16N			1"	46	78
		DK20MAF16-4N	15,000 psig	1"	1/4"	36	60
		DK20MAF16-6N			3/8"	36	60
		DK20MAF16-8N			1/2"	36	60
		DK20MAF16-12N	10,000 psig		3/4"	36	68
		DK20MAF16-16N			1"	46	78
High Pressure	30,000 psig	DK30MAF02-2N	15,000 psig	1/8"	1/8"	16	29
		DK30MAF02-4N			1/4"	19	36
		DK30MAF02-6N			3/8"	25.4	39
		DK30MAF02-8N			1/2"	30	43
		DK30MAF16-4N	15,000 psig	1"	1/4"	36	61
		DK30MAF16-6N			3/8"	36	61
		DK30MAF16-8N			1/2"	36	61
		DK30MAF16-12N	10,000 psig		3/4"	36	69
		DK30MAF16-16N			1"	46	79
	60,000 psig	DK60MAF04-2N	15,000 psig	1/4"	1/8"	16	30
		DK60MAF04-4N			1/4"	19	36
		DK60MAF04-6N			3/8"	25.4	42
		DK60MAF04-8N			1/2"	30	46
		DK60MAF04-12N	10,000 psig		3/4"	36	53
		DK60MAF06-2N	15,000 psig	3/8"	1/8"	20	35.5
		DK60MAF06-4N			1/4"	20	40.5
		DK60MAF06-6N			3/8"	25.4	45.5
		DK60MAF06-8N			1/2"	30	52.5
		DK60MAF06-12N	10,000 psig		3/4"	36	58.5
		DK60MAF06-16N			1"	46	65.5
		DK60MAF09-2N	15,000 psig	9/16"	1/8"	30	38
		DK60MAF09-4N			1/4"	30	41
		DK60MAF09-6N			3/8"	30	49
		DK60MAF09-8N			1/2"	30	54
		DK60MAF09-12N	10,000 psig		3/4"	36	59
		DK60MAF09-16N			1"	46	70

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Female Adapter * Male Thread

DK-FAM

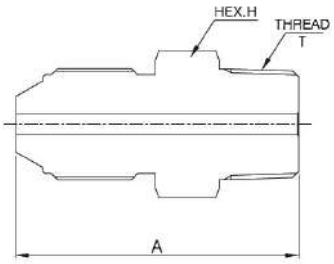




Connection Type		Part No.	Pressure Rating	Tube Size	Thread T F.NPT	Dimensions	
						HEX.H	A
Low Pressure 11,500 psig		DK11FAM02-2N	11,000 psig	1/8"	1/8"	12.7	25
		DK11FAM02-4N			1/4"	16	28
		DK11FAM02-6N			3/8"	19	30
		DK11FAM02-8N			1/2"	25.4	37
		DK11FAM04-2N	11,500 psig	1/4"	1/8"	16	31
		DK11FAM04-4N			1/4"	16	35
		DK11FAM04-6N			3/8"	19	35
		DK11FAM04-8N			1/2"	25.4	41
		DK11FAM04-12N			3/4"	30	44.5
		DK07FAM06-2N	7,500 psig	3/8"	1/8"	19	36
		DK07FAM06-4N			1/4"	19	38
		DK07FAM06-6N			3/8"	19	38
		DK07FAM06-7N			1/2"	25.4	43
		DK07FAM06-12N			3/4"	30	44.5
		DK07FAM06-16N			1"	36	45
		DK05FAM08-2N	5,500 psig	1/2"	1/8"	25.4	38
		DK05FAM08-4N			1/4"	25.4	41
		DK05FAM08-6N			3/8"	25.4	42
		DK05FAM08-8N			1/2"	25.4	47
		DK05FAM08-12N			3/4"	30	46.5
		DK05FAM08-16N			1"	36	45
Medium Pressure 20,000 psig		DK20FAM04-2N	15,000 psig	1/4"	1/8"	16	28
		DK20FAM04-4N			1/4"	16	33
		DK20FAM04-6N			3/8"	19	35
		DK20FAM04-8N			1/2"	25.4	37
		DK20FAM04-12N	10,000 psig		3/4"	30	44.5
		DK20FAM06-2N	15,000 psig	3/8"	1/8"	19	36
		DK20FAM06-4N			1/4"	19	36
		DK20FAM06-6N			3/8"	19	38
		DK20FAM06-8N			1/2"	25.4	43
		DK20FAM06-12N	10,000 psig		3/4"	30	44.5
		DK20FAM06-16N			1"	36	50
		DK20FAM09-2N	15,000 psig	9/16"	1/8"	25.4	42
		DK20FAM09-4N			1/4"	25.4	44
		DK20FAM09-6N			3/8"	25.4	42
		DK20FAM09-8N			1/2"	25.4	47
		DK20FAM09-12N	10,000 psig		3/4"	30	50.5
		DK20FAM09-16N			1"	36	55
		DK20FAM12-4N	15,000 psig	3/4"	1/4"	36	52
		DK20FAM12-6N			3/8"	36	52
		DK20FAM12-8N			1/2"	36	52
		DK20FAM12-12N	10,000 psig		3/4"	36	57
		DK20FAM12-16N			1"	36	57
		DK20FAM16-4N	15,000 psig	1"	1/4"	46	68
		DK20FAM16-6N			3/8"	46	68
		DK20FAM16-8N			1/2"	46	68
		DK20FAM16-12N	10,000 psig		3/4"	46	68
		DK20FAM16-16N			1"	46	70
High Pressure	30,000 psig	DK30FAM02-2N	15,000 psig	1/8"	1/8"	20	25
		DK30FAM02-4N			1/4"	20	30
		DK30FAM02-6N			3/8"	20	30
		DK30FAM02-8N			1/2"	25.4	37
		DK30FAM02-12N			3/4"	30	44.5
		DK30FAM16-4N	15,000 psig	1"	1/4"	46	68
		DK30FAM16-6N			3/8"	46	68
		DK30FAM16-8N			1/2"	46	68
		DK30FAM16-12N	10,000 psig		3/4"	46	68
		DK30FAM16-16N			1"	46	70
	60,000 psig	DK60FAM04-2N	15,000 psig	1/4"	1/8"	19	28
		DK60FAM04-4N			1/4"	19	33
		DK60FAM04-6N			3/8"	19	33
		DK60FAM04-8N			1/2"	25.4	37
		DK60FAM04-12N	10,000 psig		3/4"	30	44.5
		DK60FAM06-2N	15,000 psig	3/8"	1/8"	25.4	36
		DK60FAM06-4N			1/4"	25.4	38
		DK60FAM06-6N			3/8"	25.4	38
		DK60FAM06-8N			1/2"	25.4	43
		DK60FAM06-12N	10,000 psig		3/4"	30	50.5
		DK60FAM06-16N			1"	36	50
		DK60FAM09-2N	15,000 psig	9/16"	1/8"	36	41
		DK60FAM09-4N			1/4"	36	43
		DK60FAM09-6N			3/8"	36	44
		DK60FAM09-8N			1/2"	36	47
		DK60FAM09-12N	10,000 psig		3/4"	36	54
		DK60FAM09-16N			1"	36	57

Male Adapter * Male Thread

DK-MAM





Connection Type		Part No.	Pressure Rating	Tube Size	Thread T F.NPT	Dimensions	
						HEX.H	A
Low Pressure 11,500 psig		DK11MAM02-2N	11,000 psig	1/8"	1/8"	12.7	34.5
		DK11MAM02-4N			1/4"	16	41.5
		DK11MAM02-6N			3/8"	19	44.5
		DK11MAM02-8N			1/2"	25.4	49.5
		DK11MAM04-2N	11,500 psig	1/4"	1/8"	16	39.5
		DK11MAM04-4N			1/4"	16	44.5
		DK11MAM04-6N			3/8"	19	47.5
		DK11MAM04-8N			1/2"	25.4	54.5
		DK11MAM04-12N			3/4"	30	57.5
		DK07MAM06-2N	7,500 psig	3/8"	1/8"	19	42
		DK07MAM06-4N			1/4"	19	47
		DK07MAM06-6N			3/8"	19	50
		DK07MAM06-7N			1/2"	25.4	57
		DK07MAM06-12N			3/4"	30	60
		DK07MAM06-16N			1"	36	60
		DK05MAM08-2N	5,500 psig	1/2"	1/8"	25.4	44.5
		DK05MAM08-4N			1/4"	25.4	47.5
		DK05MAM08-6N			3/8"	25.4	50.5
		DK05MAM08-8N			1/2"	25.4	57.5
		DK05MAM08-12N			3/4"	30	60.5
		DK05MAM08-16N			1"	36	66.5
Medium Pressure 20,000 psig		DK20MAM04-2N	15,000 psig	1/4"	1/8"	12.7	41
		DK20MAM04-4N			1/4"	16	44
		DK20MAM04-6N			3/8"	19	46
		DK20MAM04-8N			1/2"	25.4	54
		DK20MAM04-12N	10,000 psig		3/4"	30	59
		DK20MAM06-2N	15,000 psig	3/8"	1/8"	16	45
		DK20MAM06-4N			1/4"	16	49
		DK20MAM06-6N			3/8"	19	50
		DK20MAM06-8N			1/2"	25.4	58
		DK20MAM06-12N	10,000 psig		3/4"	30	63
		DK20MAM06-16N			1"	36	69
		DK20MAM09-2N	15,000 psig	9/16"	1/8"	22	50.5
		DK20MAM09-4N			1/4"	22	55
		DK20MAM09-6N			3/8"	22	54
		DK20MAM09-8N			1/2"	25.4	62
		DK20MAM09-12N	10,000 psig		3/4"	30	67
		DK20MAM09-16N			1"	36	73
		DK20MAM12-4N	15,000 psig	3/4"	1/4"	30	63
		DK20MAM12-6N			3/8"	30	64
		DK20MAM12-8N			1/2"	30	68
		DK20MAM12-12N	10,000 psig		3/4"	30	73
		DK20MAM12-16N			1"	36	79
		DK20MAM16-4N	15,000 psig	1"	1/4"	36	80
		DK20MAM16-6N			3/8"	36	81
		DK20MAM16-8N			1/2"	36	84
		DK20MAM16-12N	10,000 psig		3/4"	36	85
		DK20MAM16-16N			1"	36	89
High Pressure	30,000 psig	DK30MAM02-2N	15,000 psig	1/8"	1/8"	14	36
		DK30MAM02-4N			1/4"	14	41
		DK30MAM02-6N			3/8"	19	46
		DK30MAM02-8N			1/2"	25.4	51
		DK30MAM16-4N	15,000 psig	1"	1/4"	36	79
		DK30MAM16-6N			3/8"	36	80
		DK30MAM16-8N			1/2"	36	83
		DK30MAM16-12N	10,000 psig		3/4"	36	84
		DK30MAM16-16N			1"	36	88
	60,000 psig	DK60MAM04-2N	15,000 psig	1/4"	1/8"	16	41.5
		DK60MAM04-4N			1/4"	16	44.5
		DK60MAM04-6N			3/8"	19	46.5
		DK60MAM04-8N			1/2"	25.4	51.5
		DK60MAM04-12N	10,000 psig		3/4"	30	56.5
		DK60MAM06-2N	15,000 psig	3/8"	1/8"	20	47.5
		DK60MAM06-4N			1/4"	20	50.5
		DK60MAM06-6N			3/8"	20	52.5
		DK60MAM06-8N			1/2"	25.4	57.5
		DK60MAM06-12N	10,000 psig		3/4"	30	62.5
		DK60MAM06-16N			1"	36	68.5
		DK60MAM09-2N	15,000 psig	9/16"	1/8"	30	53
		DK60MAM09-4N			1/4"	30	56
		DK60MAM09-6N			3/8"	30	57
		DK60MAM09-8N			1/2"	30	61
		DK60MAM09-12N	10,000 psig		3/4"	30	66
		DK60MAM09-16N			1"	36	72

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

High Pressure Air Operated Valves

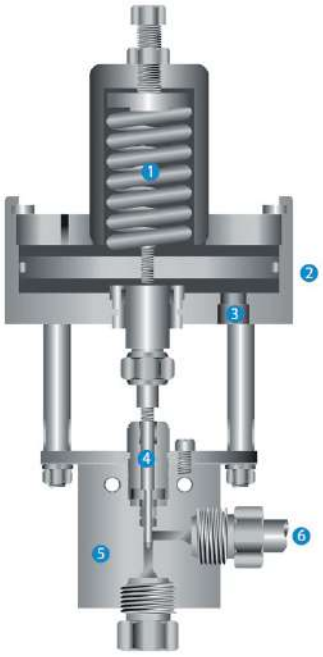
Features

It is an air pressure valve that automatically opens and closes the valve at the bottom by using air pressure.

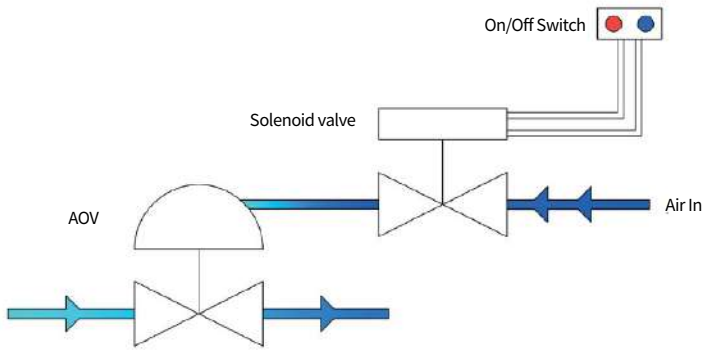
- Normal open or normal close type are available.
- Normal open type; Normally, when the valve is open, air is supplied and the valve is closed.
- Normal close type; Normally, when the valve is close, air is supplied and the valve is open.
- Minimum air pressure for operation; 5 kgf/cm^2
- The lower body through which the fluid or gas flows is of the same type as the high pressure needle valve.
- It is possible to adjust the tension of the spring by adjusting the upper bolt.
- When control of the system is required, the valve can be operated remotely via AOV.
- Because it uses air as the driving pressure, it is safer than electrical control which is dangerous for explosion.

Air Operated Valves
DK-NV

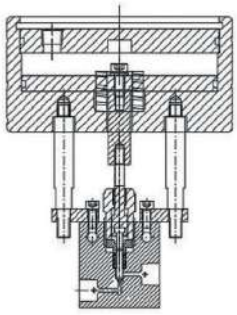
Parts	Material
1. Spring	Carbon Steel
2. Housing	Aluminum 6061
3. Air Inlet Port	-
4. Stem	Stainless Steel 316
5. Body	Stainless Steel 316
6. Connection	Stainless Steel 316



Performance Property

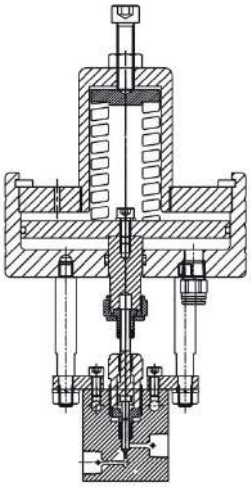


Description of Operation



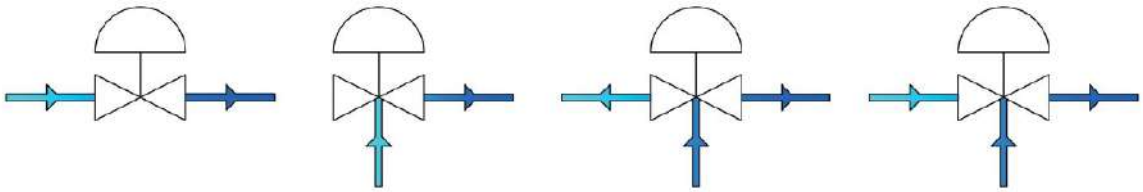
Normal-Open Type

1. In normal operation, the stem connected to the circular plate is lifted up and the valve remains open.
2. At this time, when the air pressure is applied from above, the circular plate moves downward due to the air pressure.
3. The stem connected to the circular plate is also moved downwards to block the open orifice, thus blocking the fluid flow.
4. To reopen the valve, shut off the incoming air pressure and exhaust the air already in the product.
5. The restoring force of the spring at the bottom causes the circular plate and the stem to move up again, and the valve opens and the fluid flows again.



Normal-Close Type

1. In normal operation, the stem connected to the circular plate is lifted down and the valve remains close.
2. At this time, if the air pressure is applied from the lower side, the circular plate moves upward due to the inflating air pressure.
3. The closed orifice is opened and fluid flows.
4. To close the valve again, shut off the incoming air pressure and exhaust the air already in the product.
5. The restoring force of the spring at the upper part causes the circular plate and the stem to come down again, closing the valve to block the flow of the fluid.

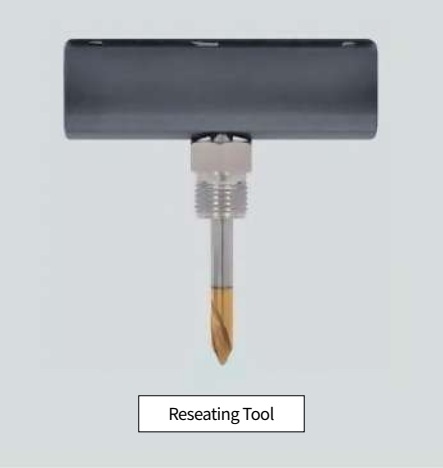


Pressure Rating	Tube Size	Normal-Close				Normal-Open			
		Straight	Angle	3Way/1 Pressure	3Way/2 Pressure	Straight	Angle	3Way/1on	3Way/2on
11,000 psig	1/8"	DK11NV-02-AC	DK11NV-02-A-AC	DK11NV-02-O-AC	DK11NV-02-T-AC	DK11NV-02-AO	DK11NV-02-A-AO	DK11NV-02-O-AO	DK11NV-02-T-AO
11,500 psig	1/4"	DK11NV-04-AC	DK11NV-04-A-AC	DK11NV-04-O-AC	DK11NV-04-T-AC	DK11NV-04-AO	DK11NV-04-A-AO	DK11NV-04-O-AO	DK11NV-04-T-AO
7,500 psig	3/8"	DK11NV-06-AC	DK11NV-06-A-AC	DK11NV-06-O-AC	DK11NV-06-T-AC	DK11NV-06-AO	DK11NV-06-A-AO	DK11NV-06-O-AO	DK11NV-06-T-AO
5,500 psig	1/2"	DK11NB-08-AC	DK11NB-08-A-AC	DK11NB-08-O-AC	DK11NB-08-T-AC	DK11NB-08-AO	DK11NB-08-A-AO	DK11NB-08-O-AO	DK11NB-08-T-AO
20,000 psig	1/4"	DK20NV-04-AC	DK20NV-04-A-AC	DK20NV-04-O-AC	DK20NV-04-T-AC	DK20NV-04-AO	DK20NV-04-A-AO	DK20NV-04-O-AO	DK20NV-04-T-AO
	3/8"	DK20NV-06-AC	DK20NV-06-A-AC	DK20NV-06-O-AC	DK20NV-06-T-AC	DK20NV-06-AO	DK20NV-06-A-AO	DK20NV-06-O-AO	DK20NV-06-T-AO
	9/16"	DK20NV-09-AC	DK20NV-09-A-AC	DK20NV-09-O-AC	DK20NV-09-T-AC	DK20NV-09-AO	DK20NV-09-A-AO	DK20NV-09-O-AO	DK20NV-09-T-AO
	3/4"	DK20NV-12-AC	DK20NV-12-A-AC	DK20NV-12-O-AC	DK20NV-12-T-AC	DK20NV-12-AO	DK20NV-12-A-AO	DK20NV-12-O-AO	DK20NV-12-T-AO
	1"	DK20NV-16-AC	DK20NV-16-A-AC	DK20NV-16-O-AC	DK20NV-16-T-AC	DK20NV-16-AO	DK20NV-16-A-AO	DK20NV-16-O-AO	DK20NV-16-T-AO
60,000 psig	1/4"	DK60NV-04-AC	DK60NV-04-A-AC	DK60NV-04-O-AC	DK60NV-04-T-AC	DK60NV-04-AO	DK60NV-04-A-AO	DK60NV-04-O-AO	DK60NV-04-T-AO
	3/8"	DK60NV-06-AC	DK60NV-06-A-AC	DK60NV-06-O-AC	DK60NV-06-T-AC	DK60NV-06-AO	DK60NV-06-A-AO	DK60NV-06-O-AO	DK60NV-06-T-AO
	9/16"	DK60NV-09-AC	DK60NV-09-A-AC	DK60NV-09-O-AC	DK60NV-09-T-AC	DK60NV-09-AO	DK60NV-09-A-AO	DK60NV-09-O-AO	DK60NV-09-T-AO

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

High Pressure Tooling





The Coning and Threading tools are designed for simple accurate preparation of tubing ends for the 20,000psig, 60,000psig and ultra high pressure connection. The spare parts are interchangeable and easy to install and work for the coned tubing ends.
(They are not required to reseating job)

Coning Tool

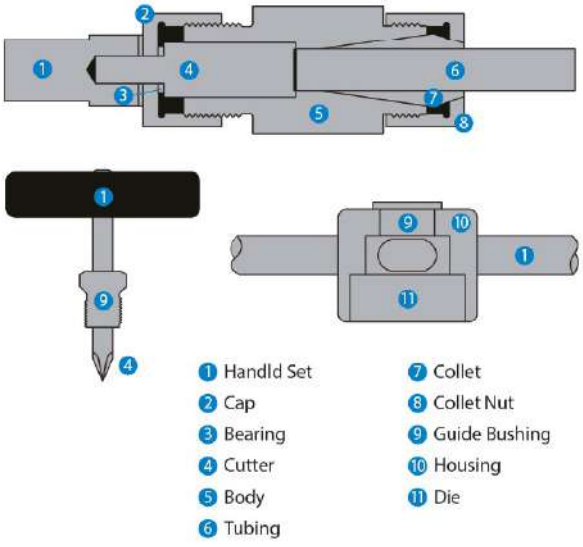
The Coning tool is designed for preparing to cone on the tubing ends for the 20,000psig, 60,000psig and ultra high pressure connections. The cone degrees are approximately 57 to 59°. The cutter and collets are interchangeable each other. (except 9/16" sizes)

Threading Tool

The Threading tool is designed for preparing a thread which is left hand type for the 20,000psig, 60,000psig and ultra high pressure connections. The threaded die and guide busings are interchangeable for all. (except 1/8" sizes)

Reseating Tool

The reseating tool is designed for repairing old or damaged tubing connection seats for valves and fittings. This does not require to have coning and threading tools.



Pressure Rating	Tube Size	Part No.						
		Coning Tool			Threading Tool			Reseating Tool
		Set	Spare Cutter	Spare Collet	Set	Die	Guide Bushing	
20,000 psig	1/4"	DK20-CT-4	DK20-CT-4U	DK60-CT-4O	DK20-TT-4	DK20-TT-4D	DK20-TT-4B	DK20-RT-4
	3/8"	DK20-CT-6	DK20-CT-6U	DK60-CT-6O	DK20-TT-6	DK20-TT-6D	DK20-TT-6B	DK20-RT-6
	9/16"	DK20-CT-9	DK20-CT-9U	DK60-CT-9O	DK20-TT-9	DK20-TT-9D	DK20-TT-9B	DK20-RT-9
60,000 psig	1/4"	DK60-CT-4	DK60-CT-4U	DK60-CT-4O	DK60-TT-4	DK60-TT-4D	DK60-TT-4B	DK60-RT-4
	3/8"	DK60-CT-6	DK60-CT-6U	DK60-CT-6O	DK60-TT-6	DK60-TT-6D	DK60-TT-6B	DK60-RT-6
	9/16"	DK60-CT-9	DK60-CT-9U	DK60-CT-9O	DK60-TT-9	DK60-TT-9D	DK60-TT-9B	DK60-RT-9







DK-LOK
Fittings & Valves

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IDK-LOK

HD Series
O-Ring Face Seal Fittings

Rev. 01-01
Aug. 2023



DK-LOK®
HD Series O-Ring Fittings

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Aug.2023

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Straight Thread Branch Tee **HDTBM-UP**  18

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All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

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What is HD Series O-Ring Face Seal Fittings?

HD Series O-Ring Face Seal Fittings is manufactured in strict accordance with the requirements of SAE J1453. HD Series O-Ring Face Seal Fittings are composed of Body, Nut, O-ring and Sleeve, and can be completely sealed by O-ring. A 90-degree expanded tubing or brazed sleeve compresses and seals the O-ring in the precision machined groove of the fitting body. This approach is suitable for higher pressure hydraulic systems and provides superior sealing performance. It is also suitable for piping systems with high vibration and continuous impact pressure. HD Series O-Ring Face Seal Fittings are available in a variety of sizes for tube diameters and wall thicknesses and are easily adaptable to tubes of inches and meters.

The outer diameter and the wall thickness of the tube is applicable please refer to Table 1.

Table 1. **Applicable Tube O.D and Wall Thickness**

O.D in.	Tube Wall Thickness (in.)														
	0.02	0.028	0.035	0.049	0.058	0.083	0.095	0.109	0.120	0.134	0.156	0.148	0.188	0.22	0.25
1/4”	■	■	■	■	■	■									
3/8”	■	■	■	■	■	■	■								
1/2”		■	■	■	■	■	■	■	■	■	■	■			
5/8”			■	■	■	■	■	■	■	■	■				
3/4”			■	■	■	■	■	■	■	■	■	■			
7/8”			■	■	■	■	■	■	■	■	■	■	■		
1”			■	■	■	■	■	■	■	■	■	■	■	■	
1 1/4”				■	■	■	■	■	■	■	■	■	■	■	
1 1/2”				■	■	■	■	■	■	■	■	■	■	■	■
2”					■	■	■	■	■	■	■	■	■	■	■

O.D mm	Tube Wall Thickness (mm)														
	0.5	1.0	1.2	1.5	1.8	2.0	2.2	2.5	2.8	3.0	3.5	4.0	5.0	6.0	7.0
6	■	■	■	■	■	■	■								
8		■	■	■	■	■	■	■	■						
10		■	■	■	■	■	■	■	■	■					
12			■	■	■	■	■	■	■	■	■				
14			■	■	■	■	■	■	■	■	■	■			
15, 16, 18			■	■	■	■	■	■	■	■	■				
20				■	■	■	■	■	■	■	■	■			
22		■	■	■	■	■	■	■	■	■	■				
25						■	■	■	■	■	■	■	■	■	
28			■	■	■	■	■	■	■	■	■	■	■	■	
30						■	■	■	■	■	■	■	■	■	
32						■	■	■	■						
35						■	■	■	■	■	■	■	■	■	
38							■	■	■	■	■	■	■	■	■

Table 2. **Standard Material**

Part		Material
		Stainless Steel
Body	Bar Stock	ASTM A479 TYPE316
	Forging	ASTM A182 F316
Sleeve		ASTM A479 TYPE316
Brazed Sleeve		ASTM A262 TYPE316L
Nut		ASTM A479 TYPE316

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Design and Construction

HD Series O-Ring Face Seal Fittings consist of four main parts: Body, Sleeve, O-ring and nut.

Body

- The fitting body can be suitably applied to the piping system by providing various shapes and flow paths.
- O-ring grooves on the body surface are machined precisely to ensure perfect sealing.
- In addition, O-ring grooves of all fitting bodies include an O-ring of an appropriate size basically for convenient use.
- Straight-line products are basically made of cold drawn bar stock, Elbow, Tee and Cross are forged to improve strength and extend life.
- O-ring grooves meet the improved dimensional requirements to prevent O-ring deviation of Style "B" of SAE J1453.

Sleeve for 90° expanded tubing

- This is a method of compressing the O-ring of the fitting body by expanding the tube end to 90°.
- With the sleeve in place, leaving the correct length for a 90° expansion at the end of the tube, use a 90° expander to expand the tube.
- When the tube is extended to 90°, the tube and the sleeve are fixed to each other, and the 90° expansion surface should have a good roughness.
- Tubes with poor surface roughness are damaged when they come into contact with the O-ring of the body, resulting in reduced sealing capacity and reduced service life.

Brazed sleeve

- It brazes and secures the tube and sleeve, and the sleeve compresses the O-ring of the fitting body.
- Since the sleeve surface contacts the O-ring of the fitting body, the sleeve itself should have good roughness.

Nut

- The screws of the body and the nut are manufactured according to ASME / ANSI B1.1.
- Stainless steel is silver plated on the threads of the nut to prevent galling of the screws during assembly.
- Carbon steel is basically galvanized.

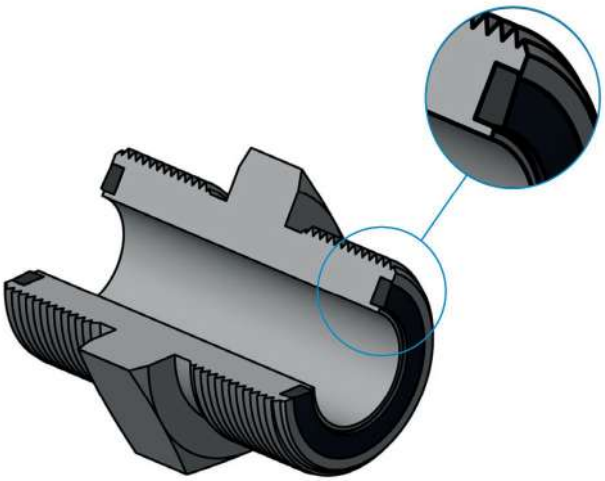


Fig. A1 - Captive O-ring Groove (CORG) Cutaway with DK-Lok's trap seal

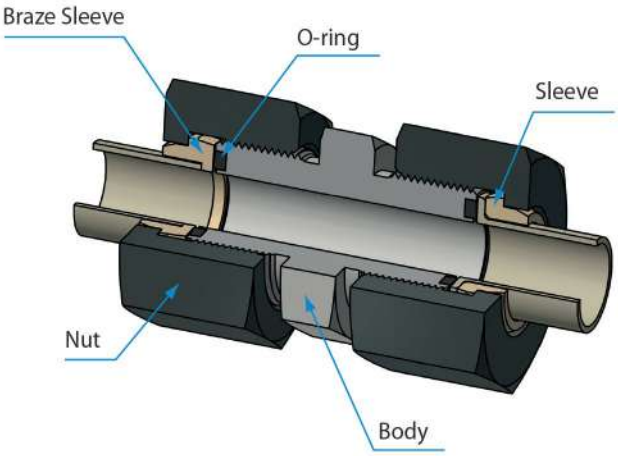
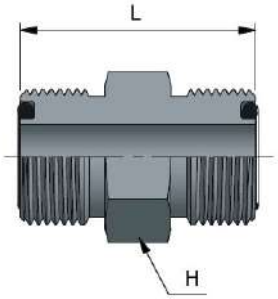


Fig. A1 - DK-Lok's Union cutaway with flanged and brazed assemblies

Union
HDU





Fractional

Part No.	End Size Tube O.D (in.)		H HEX (in.)	L (mm)	Dynamic Pressure (psig)
HDU-4T	1/4	1/4	5/8	27.4	9,200
HDU-6T	3/8	3/8	3/4	31.0	9,200
HDU6T-4T	3/8	1/4	3/4	30.0	9,200
HDU-8T	1/2	1/2	7/8	35.6	9,200
HDU8T-6T	1/2	3/8	7/8	33.5	9,200
HDU-10T	5/8	5/8	1 1/16	42.4	6,000
HDU10T-8T	5/8	1/2	1 1/16	39.9	6,000
HDU-12T	3/4	3/4	1 1/4	47.0	6,000
HDU12T-8T	3/4	1/2	1 1/4	42.9	6,000
HDU12T-10T	3/4	5/8	1 1/4	45.5	6,000
HDU-16T	1	1	1 1/2	49.5	6,000
HDU16T-12T	1	3/4	1 1/2	49.0	6,000
HDU-20T	1 1/4	1 1/4	1 3/4	51.6	6,000
HDU20T-16T	1 1/4	1	1 3/4	51.6	6,000
HDU-24T	1 1/2	1 1/2	2 1/8	53.1	5,000
HDU-32T	2	2	2 3/4	63.0	3,000

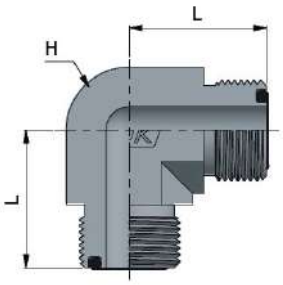
* Size 32 is not included in SAE J1453.

Metric

Part No.	End Size Tube O.D (mm)	H HEX (mm)	L (mm)	Dynamic Pressure (psig)
HDU-6M	6	17	27.5	9,200
HDU-8M	8,10	19	31.0	9,200
HDU-12M	12	22	35.5	9,200
HDU-14M	14,15,16	27	42.5	6,000
HDU-18M	18,20	32	47.0	6,000
HDU-22M	22,25	41	49.5	6,000
HDU-28M	28,30,32	46	51.5	6,000
HDU-35M	35,38	55	53.0	5,000

Union Elbow
HDL





Fractional

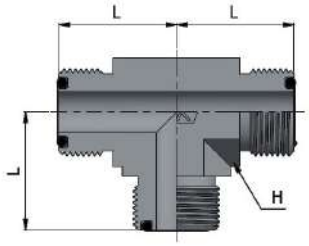
Part No.	End Size Tube O.D (in.)	H HEX (in.)	L (mm)	Dynamic Pressure (psig)
HDL-4T	1/4	9/16	21.6	9,200
HDL-6T	3/8	3/4	24.9	9,200
HDL-8T	1/2	3/4	27.9	9,200
HDL-10T	5/8	1 1/16	33.5	6,000
HDL-12T	3/4	1 3/16	37.6	6,000
HDL-16T	1	1 7/16	41.4	6,000
HDL-20T	1 1/4	1 5/8	44.4	5,000
HDL-24T	1 1/2	1 7/8	49.0	4,000
HDL-32T	2	2 1/2	70.1	3,000

Metric

Part No.	End Size Tube O.D (mm)	H HEX (mm)	L (mm)	Dynamic Pressure (psig)
HDL-6M	6	14	21.5	9,200
HDL-8M	8,10	19	25.0	9,200
HDL-12M	12	19	28.0	9,200
HDL-14M	14,15,16	27	33.5	6,000
HDL-18M	18,20	30	37.5	6,000
HDL-22M	22,25	36	41.5	6,000
HDL-28M	28,30,32	41	44.5	5,000
HDL-35M	35,38	50	49.0	4,000

Union Tee
HDT





Fractional

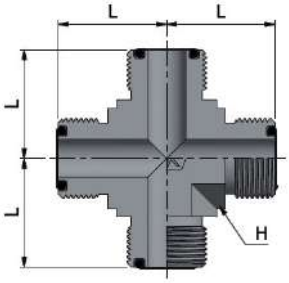
Part No.	End Size Tube O.D (in.)	H HEX (in.)	L (mm)	Dynamic Pressure (psig)
HDT-4T	1/4	9/16	21.6	9,200
HDT-6T	3/8	3/4	24.9	9,200
HDT-8T	1/2	3/4	27.9	9,200
HDT-10T	5/8	1 1/16	33.5	6,000
HDT-12T	3/4	1 3/16	37.6	6,000
HDT-16T	1	1 7/16	41.4	6,000
HDT-20T	1 1/4	1 5/8	44.4	5,000
HDT-24T	1 1/2	1 7/8	49.0	4,000
HDT-32T	2	2 1/2	70.1	3,000

Metric

Part No.	End Size Tube O.D (mm)	H HEX (mm)	L (mm)	Dynamic Pressure (psig)
HDT-6M	6	14	21.5	9,200
HDT-8M	8,10	19	25.0	9,200
HDT-12M	12	19	28.0	9,200
HDT-14M	14,15,16	27	33.5	6,000
HDT-18M	18,20	30	37.5	6,000
HDT-22M	22,25	36	41.5	6,000
HDT-28M	28,30,32	41	44.5	5,000
HDT-35M	35,38	50	49.0	4,000

Union Cross
HDX

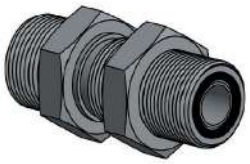


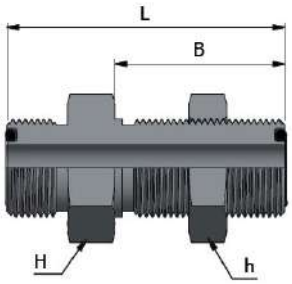


Fractional

Part No.	End Size Tube O.D (in.)	H HEX (in.)	L (mm)	Dynamic Pressure (psig)
HDX-4T	1/4	9/16	21.6	9,200
HDX-6T	3/8	3/4	24.9	9,200
HDX-8T	1/2	3/4	27.9	9,200
HDX-10T	5/8	1 1/16	33.5	6,000
HDX-12T	3/4	1 3/16	37.6	6,000
HDX-16T	1	1 7/16	41.4	6,000
HDX-20T	1 1/4	1 5/8	44.4	5,000

Bulkhead Union
HDUB





Fractional

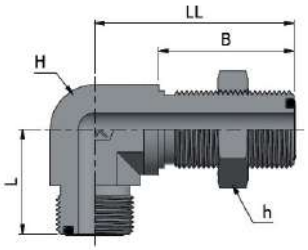
Part No.	End Size Tube O.D (in.)	H,h HEX (in.)	B (mm)	L (mm)	Dynamic Pressure (psig)
HDUB-4T	1/4	13/16	31.5	48.3	9,200
HDUB-6T	3/8	1	34.0	53.1	9,200
HDUB-8T	1/2	1 1/8	36.6	58.4	9,200
HDUB-10T	5/8	1 5/16	40.4	66.5	6,000
HDUB-12T	3/4	1 1/2	41.4	69.1	6,000
HDUB-16T	1	1 3/4	41.9	70.1	6,000
HDUB-20T	1 1/4	2	41.9	70.1	6,000
HDUB-24T	1 1/2	2 3/8	41.9	70.1	5,000

Metric

Part No.	End Size Tube O.D (mm)	H,h HEX (in.)	B (mm)	L (mm)	Dynamic Pressure (psig)
HDUB-6M	6	22	31.5	48.0	9,200
HDUB-8M	8,10	27	34.0	53.0	9,200
HDUB-12M	12	30	36.5	58.5	9,200
HDUB-14M	14,15,16	36	40.5	66.5	6,000
HDUB-18M	18,20	41	41.5	69.0	6,000
HDUB-22M	22,25	46	42.0	70.0	6,000
HDUB-28M	28,30,32	50	42.0	70.0	6,000
HDUB-35M	35,38	60	42.0	70.0	5,000

Bulkhead Elbow
HDBL





Fractional

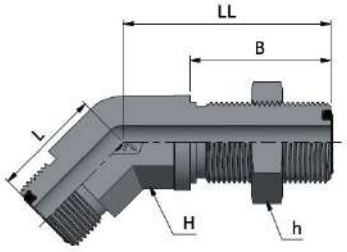
Part No.	End Size Tube O.D (in.)	h HEX (in.)	H HEX (in.)	B (mm)	L (mm)	LL (mm)	Dynamic Pressure (psig)
HDBL-4T	1/4	13/16	9/16	31.5	22.6	47.0	9,200
HDBL-6T	3/8	1	3/4	34.0	25.9	52.1	9,200
HDBL-8T	1/2	1 1/8	3/4	36.6	29.0	55.6	9,200
HDBL-10T	5/8	1 5/16	1 1/16	40.4	34.5	63.0	6,000
HDBL-12T	3/4	1 1/2	1 3/16	41.4	38.6	67.1	6,000
HDBL-16T	1	1 3/4	1 7/16	41.9	42.4	71.1	6,000
HDBL-20T	1 1/4	2	1 5/8	41.9	45.5	75.4	5,000
HDBL-24T	1 1/2	2 3/8	1 7/8	41.9	49.5	79.5	4,000

Metric

Part No.	End Size Tube O.D (mm)	H HEX (mm)	B (mm)	L (mm)	LL (mm)	Dynamic Pressure (psig)
HDBL-6M	6	14	31.5	22.5	47.0	9,200
HDBL-8M	8,10	19	34.0	26.0	52.0	9,200
HDBL-12M	12	19	36.5	29.0	55.5	9,200
HDBL-14M	14,15,16	27	40.5	34.5	63.0	6,000
HDBL-18M	18,20	30	41.5	38.5	67.0	6,000
HDBL-22M	22,25	36	42.0	42.5	71.0	6,000
HDBL-28M	28,30,32	41	42.0	45.5	75.5	5,000
HDBL-35M	35,38	50	42.0	49.5	79.5	4,000

45°Bulkhead Elbow
HDBLB





Fractional

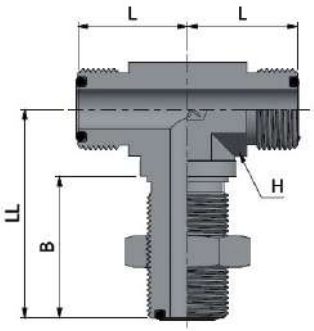
Part No.	End Size Tube O.D (in.)	h HEX (in.)	H HEX (in.)	B (mm)	L (mm)	LL (mm)	Dynamic Pressure (psig)
HDBLB-4T	1/4	13/16	9/16	31.5	16.0	43.9	9,200
HDBLB-6T	3/8	1	3/4	34.0	19.0	48.5	9,200
HDBLB-8T	1/2	1 1/8	3/4	36.6	20.6	51.0	9,200
HDBLB-10T	5/8	1 5/16	1 1/16	40.4	23.6	56.4	6,000
HDBLB-12T	3/4	1 1/2	1 3/16	41.4	25.9	60.4	6,000
HDBLB-16T	1	1 3/4	1 7/16	41.9	30.0	65.0	6,000
HDBLB-20T	1 1/4	2	1 5/8	41.9	32.0	67.1	5,000
HDBLB-24T	1 1/2	2 3/8	1 7/8	41.9	37.1	67.1	4,000

Metric

Part No.	End Size Tube O.D (mm)	H HEX (mm)	B (mm)	L (mm)	LL (mm)	Dynamic Pressure (psig)
HDBLB-6M	6	14	31.5	16.0	44.0	9,200
HDBLB-8M	8,10	19	34.0	19.0	48.5	9,200
HDBLB-12M	12	19	36.5	20.5	51.0	9,200
HDBLB-14M	14,15,16	27	40.5	23.5	56.5	6,000
HDBLB-18M	18,20	30	41.5	26.0	60.5	6,000
HDBLB-22M	22,25	36	42.0	30.0	65.0	6,000
HDBLB-28M	28,30,32	41	42.0	32.0	67.0	5,000
HDBLB-35M	35,38	50	42.0	37.0	67.0	4,000

Bulkhead Branch Tee
HDBBT





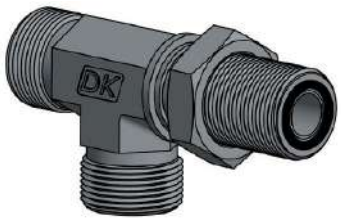
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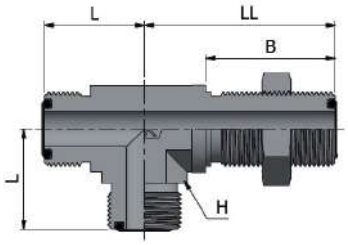
Part No.	End Size Tube O.D (in.)	H HEX (in.)	B (mm)	L (mm)	LL (mm)	Dynamic Pressure (psig)
HDBBT-4T	1/4	9/16	31.5	22.6	47.0	9,200
HDBBT-6T	3/8	3/4	34.0	25.9	52.1	9,200
HDBBT-8T	1/2	3/4	36.6	29.0	55.6	9,200
HDBBT-10T	5/8	1 1/16	40.4	34.5	63.0	6,000
HDBBT-12T	3/4	1 3/16	41.4	38.6	67.1	6,000
HDBBT-16T	1	1 7/16	41.9	42.4	71.1	6,000
HDBLB-20T	1 1/4	1 5/8	41.9	32.0	67.1	5,000
HDBLB-24T	1 1/2	1 7/8	41.9	37.1	67.1	4,000

Metric

Part No.	End Size Tube O.D (mm)	H HEX (mm)	B (mm)	L (mm)	LL (mm)	Dynamic Pressure (psig)
HDBBT-6M	6	14	31.5	22.5	47.0	9,200
HDBBT-8M	8,10	19	34.0	26.0	52.0	9,200
HDBBT-12M	12	19	36.5	29.0	55.5	9,200
HDBBT-14M	14,15,16	27	40.5	34.5	63.0	6,000
HDBBT-18M	18,20	30	41.5	38.5	67.0	6,000
HDBBT-22M	22,25	36	42.0	42.5	71.0	6,000
HDBBT-28M	28,30,32	41	42.0	45.5	75.5	5,000
HDBBT-35M	35,38	50	42.0	49.5	79.5	4,000

Bulkhead Run Tee
HDRBT





Fractional

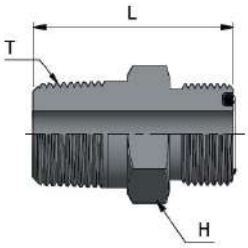
Part No.	End Size Tube O.D (in.)	H HEX (in.)	B (mm)	L (mm)	LL (mm)	Dynamic Pressure (psig)
HDRBT-4T	1/4	9/16	31.5	22.6	47.0	9,200
HDRBT-6T	3/8	3/4	34.0	25.9	52.1	9,200
HDRBT-8T	1/2	3/4	36.6	29.0	55.6	9,200
HDRBT-10T	5/8	1 1/16	40.4	34.5	63.0	6,000
HDRBT-12T	3/4	1 3/16	41.4	38.6	67.1	6,000
HDRBT-16T	1	1 7/16	41.9	42.4	71.1	6,000
HDRBT-20T	1 1/4	1 5/8	41.9	45.5	70.9	5,000
HDRBT-24T	1 1/2	1 7/8	41.9	49.5	79.5	4,000

Metric

Part No.	End Size Tube O.D (in.)	H HEX (mm)	B (mm)	L (mm)	LL (mm)	Dynamic Pressure (psig)
HDRBT-6M	6	14	31.5	22.5	47.0	9,200
HDRBT-8M	8,10	19	34.0	26.0	52.0	9,200
HDRBT-12M	12	19	36.5	29.0	55.5	9,200
HDRBT-14M	14,15,16	27	40.5	34.5	63.0	6,000
HDRBT-18M	18,20	30	41.5	38.5	67.0	6,000
HDRBT-22M	22,25	36	42.0	42.5	71.0	6,000
HDRBT-28M	28,30,32	41	42.0	45.5	71.0	5,000
HDRBT-35M	35,38	50	42.0	49.5	79.5	4,000

Male Connector
HDMC-N

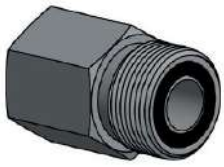


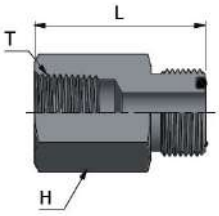


Fractional

Part No.	End Size		H HEX (in.)	L (mm)	Dynamic Pressure (psig)
	Tube O.D (in.)	T NPT			
HDMC4T-2N	1/4	1/8 - 27	5/8	27.2	6,000
HDMC4T-4N	1/4	1/4 - 18	5/8	32.0	6,000
HDMC4T-6N	1/4	3/8 - 18	3/4	33.5	6,000
HDMC4T-8N	1/4	1/2 - 14	7/8	38.6	6,000
HDMC6T-2N	3/8	1/8 - 27	3/4	29.5	6,000
HDMC6T-4N	3/8	1/4 - 18	3/4	31.7	6,000
HDMC6T-6N	3/8	3/8 - 18	3/4	34.0	6,000
HDMC6T-8N	3/8	1/2 - 14	7/8	39.4	6,000
HDMC8T-4N	1/2	1/4 - 18	7/8	37.6	6,000
HDMC8T-6N	1/2	3/8 - 18	7/8	37.6	6,000
HDMC8T-8N	1/2	1/2 - 14	7/8	41.7	6,000
HDMC8T-12N	1/2	3/4 - 14	1 1/8	42.9	6,000
HDMC10T-8N	5/8	1/2 - 14	1 1/16	46.2	6,000
HDMC10T-12N	5/8	3/4 - 14	1 1/8	46.2	5,500
HDMC12T-8N	3/4	1/2 - 14	1 1/4	49.0	6,000
HDMC12T-12N	3/4	3/4 - 14	1 1/4	49.0	6,000
HDMC12T-16N	3/4	1 - 11 1/2	1 3/8	54.1	4,500
HDMC16T-12N	1	3/4 - 14	1 1/2	50.8	5,500
HDMC16T-16N	1	1 - 11 1/2	1 1/2	55.6	4,500
HDMC16T-20N	1	1 1/4 - 11 1/2	1 3/4	58.4	3,000
HDMC20T-12N	1 1/4	3/4 - 14	7/8	51.3	4,500
HDMC20T-16N	1 1/4	1 - 11 1/2	1 7/8	57.7	4,500
HDMC20T-20N	1 1/4	1 1/4 - 11 1/2	1 7/8	58.4	4,000
HDMC24T-24N	1 1/2	1 1/2 - 11 1/2	2 1/8	61.0	3,000

Female Connector
HDCF-N





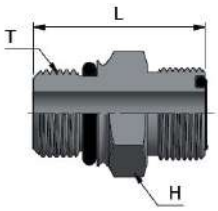
Fractional

Part No.	End Size		H HEX (in.)	L (mm)	Dynamic Pressure (psig)
	Tube O.D (in.)	T NPT			
HDCF4T-2N	1/4	1/8 - 27	5/8	26.2	6,000
HDCF4T-4N	1/4	1/4 - 18	3/4	31.7	6,000
HDCF6T-4N	3/8	1/4 - 18	3/4	33.0	6,000
HDCF6T-6N	3/8	3/8 - 18	7/8	34.0	6,000
HDCF8T-6N	1/2	3/8 - 18	7/8	34.0	6,000

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Metric Straight Thread Connector
HDMC-MO



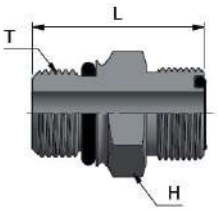


Fractional / Metric

Part No.	End Size			H HEX (mm)	L (mm)	Dynamic Pressure (psig)
	Tube O.D		T Metric			
	(in.)	(mm)				
HDMC4T-12M15O	1/4	6	M12X1.5	17	28.5	9,200
HDMC4T-14M15O	1/4	6	M14X1.5	19	29.5	9,200
HDMC6T-12M15O	3/8	8,10	M12X1.5	22	32.0	9,200
HDMC6T-14M15O	3/8	8,10	M14X1.5	22	32.0	9,200
HDMC6T-16M15O	3/8	8,10	M16X1.5	22	33.5	9,200
HDMC6T-18M15O	3/8	8,10	M18X1.5	24	36.1	9,200
HDMC8T-14M15O	1/2	12	M14X1.5	24	35.1	9,200
HDMC8T-16M15O	1/2	12	M16X1.5	24	36.6	9,200
HDMC8T-18M15O	1/2	12	M18X1.5	24	38.1	9,200
HDMC8T-22M15O	1/2	12	M22X1.5	27	39.6	6,000
HDMC8T-27M20O	1/2	12	M27X2.0	32	44.2	6,000
HDMC10T-18M15O	5/8	14,15,16	M18X1.5	27	41.0	6,000
HDMC10T-22M15O	5/8	14,15,16	M22X1.5	27	42.0	6,000
HDMC10T-27M20O	5/8	14,15,16	M27X2.0	32	47.0	6,000
HDMC12T-22M15O	3/4	18,20	M22X1.5	32	45.0	6,000
HDMC12T-27M20O	3/4	18,20	M27X2.0	32	48.5	6,000
HDMC12T-33M20O	3/4	18,20	M33X2.0	41	51.5	6,000
HDMC16T-27M20O	1	22.26	M27X2.0	41	33.6	6,000
HDMC16T-33M20O	1	22,25	M33X2.0	41	52.0	6,000
HDMC20T-33M20O	1 1/4	28,30,32	M33X2.0	46	35.1	5,000
HDMC20T-42M20O	1 1/4	28,30,32	M42X2.0	50	54.5	5,000
HDMC24T-48M20O	1 1/2	35,38	M48X2.0	55	57.0	5,000

Male Connector
HDMC-GE



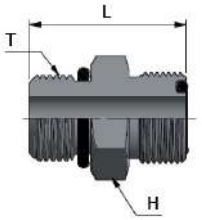


Fractional / Metric

Part No.	End Size			H HEX (mm)	L (mm)	Dynamic Pressure (psig)
	Tube O.D		T PF			
	(in.)	(mm)				
HDMC4T-2GE	1/4	6	1/8 - 28	17	25.7	9,200
HDMC4T-4GE	1/4	6	1/4 - 19	19	30.5	9,200
HDMC4T-6GE	1/4	6	3/8 - 19	22	31.6	9,200
HDMC4T-8GE	1/4	6	1/2 - 14	27	35.4	6,000
HDMC6T-2GE	3/8	8,10	1/8 - 28	19	31.1	9,200
HDMC6T-4GE	3/8	8,10	1/4 - 19	19	31.9	9,200
HDMC6T-6GE	3/8	8,10	3/8 - 19	22	33.0	9,200
HDMC6T-8GE	3/8	8,10	1/2 - 14	27	36.5	6,000
HDMC6T-12GE	3/8	8,10	3/4 - 14	32	40.3	6,000
HDMC8T-4GE	1/2	12	1/4 - 19	22	37.5	9,200
HDMC8T-6GE	1/2	12	3/8 - 19	22	34.6	9,200
HDMC8T-8GE	1/2	12	1/2 - 14	27	38.4	6,000
HDMC8T-12GE	1/2	12	3/4 - 14	32	41.9	6,000
HDMC10T-6GE	5/8	14,15,16	3/8 - 19	27	42.4	9,200
HDMC10T-8GE	5/8	14,15,16	1/2 - 14	27	41.1	6,000
HDMC10T-12GE	5/8	14,15,16	3/4 - 14	32	44.3	6,000
HDMC12T-8GE	3/4	18,20	1/2 - 14	32	48.5	6,000
HDMC12T-12GE	3/4	18,20	3/4 - 14	32	46.1	6,000
HDMC12T-16GE	3/4	18,20	1 - 11	41	47.5	6,000
HDMC12T-20GE	3/4	18,19,20	1 1/4 - 11	50	53.0	6,000
HDMC16T-12GE	1	22,25	3/4 - 14	38	50.3	6,000
HDMC16T-16GE	1	22,25	1 - 11	41	49.8	6,000
HDMC16T-20GE	1	22,25	1 1/4 - 11	50	53.8	6,000
HDMC16T-24GE	1	22,25	1 1/2 - 11	55	57.5	5,000
HDMC20T-16GE	1 1/4	28,30,32	1 - 11	48	55.9	6,000
HDMC20T-20GE	1 1/4	28,30,32	1 1/4 - 11	50	53.8	6,000
HDMC20T-24GE	1 1/4	28,30,32	1 1/2 - 11	55	57.6	5,000
HDMC24T-24GE	1 1/2	38	1 1/2 - 11	55	57.6	5,000

Straight Thread Connector
HDMC-U



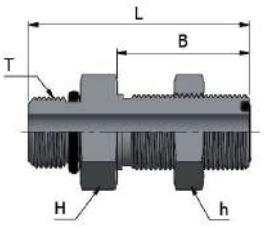


Fractional

Part No.	End Size		H HEX (mm)	L (mm)	Dynamic Pressure (psig)
	Tube O.D (in.)	T UN/UNF			
HDMC4T-4U	1/4	7/16 - 20	5/8	28.7	9,200
HDMC4T-5U	1/4	1/2 - 20	5/8	29.5	9,200
HDMC4T-6U	1/4	9/16 - 18	3/4	30.5	9,200
HDMC4T-8U	1/4	3/4 - 16	7/8	33.5	9,200
HDMC6T-4U	3/8	7/16 - 20	3/4	34.0	9,200
HDMC6T-5U	3/8	1/2 - 20	3/4	31.0	9,200
HDMC6T-6U	3/8	9/16 - 18	3/4	32.0	9,200
HDMC6T-8U	3/8	3/4 - 16	7/8	35.0	9,200
HDMC6T-10U	3/8	7/8 - 14	1	38.6	9,200
HDMC6T-12U	3/8	1 1/16 - 12	1 1/4	42.4	9,200
HDMC8T-4U	1/2	7/16 - 20	7/8	36.6	9,200
HDMC8T-6U	1/2	9/16 - 18	7/8	37.6	6,000
HDMC8T-8U	1/2	3/4 - 16	7/8	36.6	9,200
HDMC8T-10U	1/2	7/8 - 14	1	40.4	6,000
HDMC8T-12U	1/2	1 1/16 - 12	1 1/4	44.4	6,000
HDMC8T-16U	1/2	1 5/16 - 12	1 1/2	45.5	6,000
HDMC10T-6U	5/8	9/16 - 18	1 1/16	41.4	6,000
HDMC10T-8U	5/8	3/4 - 16	1 1/16	45.0	6,000
HDMC10T-10U	5/8	7/8 - 14	1 1/16	42.9	6,000
HDMC10T-12U	5/8	1 1/16 - 12	1 1/4	47.0	6,000
HDMC10T-16U	5/8	1 5/16 - 12	1 1/2	48.0	6,000
HDMC12T-6U	3/4	9/16 - 16	1 1/4	45.0	6,000
HDMC12T-8U	3/4	3/4 - 16	1 1/4	48.5	6,000
HDMC12T-10U	3/4	7/8 - 14	1 1/4	50.5	6,000
HDMC12T-12U	3/4	1 1/16 - 12	1 1/4	48.5	6,000
HDMC12T-16U	3/4	1 5/16 - 12	1 1/2	49.5	6,000
HDMC14T-14U	7/8	1 3/16 - 12	1 3/8	48.5	6,000
HDMC16T-8U	1	3/4 - 16	1 1/2	49.8	6,000
HDMC16T-10U	1	7/8 - 14	1 1/2	52.1	6,000
HDMC16T-12U	1	1 1/16 - 12	1 1/2	54.6	6,000
HDMC16T-16U	1	1 5/16 - 12	1 1/2	50.0	6,000
HDMC16T-20U	1	1 5/8 - 12	1 7/8	52.6	6,000
HDMC16T-24U	1	1 7/8 - 12	2 1/8	54.1	6,000
HDMC20T-16U	1 1/4	1 5/16 - 12	1 7/8	57.9	6,000
HDMC20T-20U	1 1/4	1 5/8 - 12	1 7/8	52.6	6,000
HDMC20T-24U	1 1/4	1 7/8 - 12	2 1/8	54.1	5,000
HDMC24T-20U	1 1/2	1 5/8 - 12	2 1/8	59.4	5,000
HDMC24T-24U	1 1/2	1 7/8 - 12	2 1/8	54.1	5,000
HDMC32T-32U	2	2 1/2 - 12	2 3/4	58.9	3,000

Straight Thread Bulkhead Connector
HDMCB-U



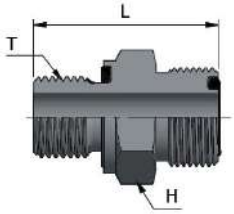


Fractional

Part No.	End Size		h HEX (in.)	H HEX (in.)	B (mm)	L (mm)	Dynamic Pressure (psig)
	Tube O.D (in.)	T UN/UNF					
HDMCB4T-4U	1/4	7/16 - 20	13/16	13/16	31.5	54.4	9,200
HDMCB6T-6U	3/8	9/16 - 18	1	1	34.0	58.7	9,200
HDMCB8T-8U	1/2	3/4 - 16	1 1/8	1 1/8	36.6	66.0	9,200
HDMCB10T-10U	5/8	7/8 - 14	1 5/16	1 5/16	40.6	68.3	6,000
HDMCB12T-12U	3/4	1 1/16 - 12	1 1/2	1 1/2	41.7	73.4	6,000
HDMCB16T-16U	1	1 5/16 - 12	1 3/4	1 3/4	42.2	74.9	6,000

Male Connector
HDMC-ME





Fractional / Metric

Part No.	End Size			H HEX (mm)	L (mm)	Dynamic Pressure (psig)
	Tube O.D		T Metric			
	(in.)	(mm)				
HDMC4T-12M15E	1/4	6	M12X1.5	17	29.7	9,200
HDMC4T-14M15E	1/4	6	M14X1.5	19	30.5	9,200
HDMC6T-14M15E	3/8	8,10	M14X1.5	22	31.9	9,200
HDMC6T-16M15E	3/8	8,10	M16X1.5	22	31.9	9,200
HDMC8T-16M15E	1/2	12	M16X1.5	22	32.0	9,200
HDMC8T-18M15E	1/2	12	M18X1.5	24	34.6	9,200
HDMC10T-22M15E	5/8	14,15,16	M22X1.5	27	41.1	6,000
HDMC12T-22M15E	3/4	18,20	M22X1.5	32	42.7	6,000
HDMC12T-27M20E	3/4	18,20	M27X2.0	32	46.1	6,000
HDMC16T-33M20E	1	22,25	M33X2.0	41	49.8	6,000
HDMC20T-42M20E	1 1/4	28,30,32	M42X2.0	50	54.0	5,000

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

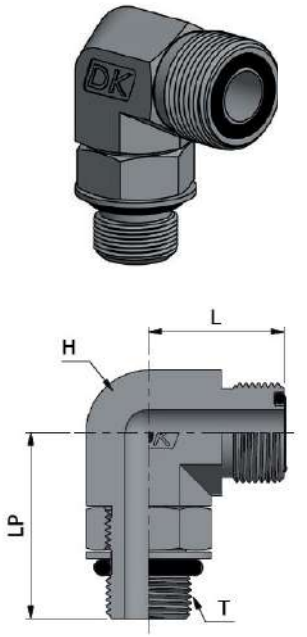
Long Straight Thread Connector
HDMCL-U



Fractional

Part No.	End Size		H HEX (in.)	L (mm)	Dynamic Pressure (psig)
	Tube O.D (in.)	T UN/UNF			
HDMCL4T-4U	1/4	7/16 - 20	5/8	52.6	9,200
HDMCL6T-4U	3/8	7/16 - 20	3/4	60.7	9,200
HDMCL6T-6U	3/8	9/16 - 18	3/4	57.7	9,200
HDMCL8T-8U	1/2	3/4 - 16	7/8	67.8	9,200
HDMCL10T-10U	5/8	7/8 - 14	1 1/16	79.8	6,000
HDMCL12T-12U	3/4	1 1/16 - 12	1 1/4	95.5	6,000
HDMCL16T-16U	1	1 5/16 - 12	1 1/2	105.2	6,000
HDMC20T-20U	1 1/4	1 5/8 - 12	1 7/8	120.9	6,000
HDMCL24T-24U	1 1/2	1 7/8 - 12	2 1/8	133.6	5,000

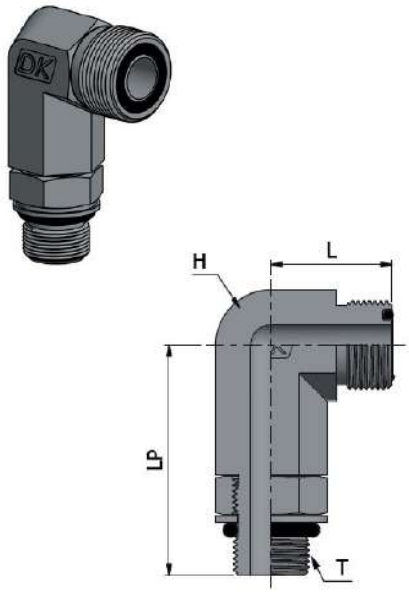
Straight Thread Elbow
HDLM-UP



Fractional

Part No.	End Size		H HEX (in.)	L (mm)	LP (mm)	Dynamic Pressure (psig)
	Tube O.D (in.)	T UN/UNF				
HDLM4T-4UP	1/4	7/16 - 20	9/16	21.6	33.02	6,000
HDLM4T-6UP	1/4	9/16 - 18	9/16	23.6	37.08	6,000
HDLM4T-8UP	1/4	3/4 - 16	3/4	24.9	40.39	6,000
HDLM6T-4UP	3/8	7/16 - 20	3/4	24.9	35.05	6,000
HDLM6T-5UP	3/8	1/2 - 20	3/4	24.9	35.05	6,000
HDLM6T-6UP	3/8	9/16 - 18	3/4	24.9	37.08	6,000
HDLM6T-8UP	3/8	3/4 - 16	3/4	26.4	40.39	6,000
HDLM6T-10UP	3/8	7/8 - 14	7/8	29.2	50.04	6,000
HDLM6T-12UP	3/8	1 1/16 - 12	1 1/16	32.5	55.12	6,000
HDLM8T-6UP	1/2	9/16 - 18	3/4	27.9	36.58	6,000
HDLM8T-8UP	1/2	3/4 - 16	3/4	27.9	40.39	6,000
HDLM8T-10UP	1/2	7/8 - 14	7/8	30.7	50.04	6,000
HDLM8T-12UP	1/2	1 1/16 - 12	1 3/16	33.5	55.12	6,000
HDLM10T-8UP	5/8	3/4 - 16	1 1/16	33.53	45.97	6,000
HDLM10T-10UP	5/8	7/8 - 14	1 1/16	33.5	50.04	6,000
HDLM10T-12UP	5/8	1 1/16 - 12	1 3/16	36.1	55.12	6,000
HDLM12T-12UP	3/4	1 1/16 - 12	1 3/16	37.6	55.12	6,000
HDLM12T-8UP	3/4	3/4 - 16	1 3/16	37.6	46.48	6,000
HDLM12T-10UP	3/4	7/8 - 14	1 3/16	37.6	51.05	6,000
HDLM12T-16UP	3/4	1 5/16 - 12	1 7/16	40.9	59.44	5,500
HDLM16T-12UP	1	1 1/16 - 12	1 7/16	41.4	58.42	6,000
HDLM16T-16UP	1	1 5/16 - 12	1 7/16	41.4	59.44	5,500
HDLM16T-20UP	1	1 5/8 - 12	1 5/8	44.4	61.98	4,000
HDLM20T-20UP	1 1/4	1 5/8 - 12	1 5/8	44.4	61.98	4,000
HDLM20T-16UP	1 1/4	1 5/16 - 12	1 5/8	44.4	61.98	4,000
HDLM20T-24UP	1 1/4	1 7/8 - 12	1 7/8	49.0	66.04	4,000
HDLM24T-20UP	1 1/2	1 5/8 - 12	1 7/8	49.0	66.04	4,000
HDLM24T-24UP	1 1/2	1 7/8 - 12	1 7/8	49.0	66.04	4,000
HDLM32T-32UP	2	2 1/2 - 12	2 1/2	70.1	77.98	2,500

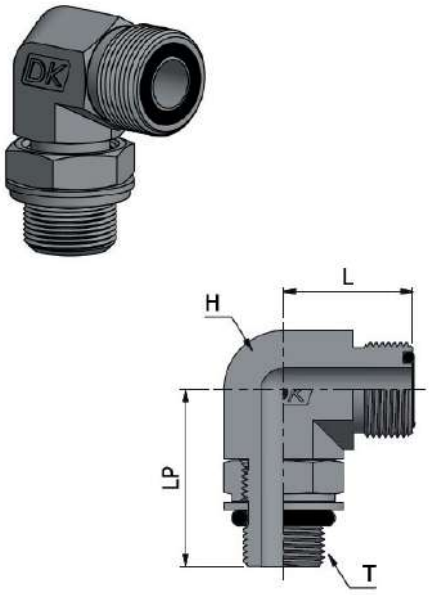
Long Straight Thread Elbow
HDLLM-UP



Fractional

Part No.	End Size		H HEX (in.)	L (mm)	LP (mm)	Dynamic Pressure (psig)
	Tube O.D (in.)	T UN/UNF				
HDLLM4T-4UP	1/4	7/16 - 20	9/16	21.6	56.4	6,000
HDLLM6T-6UP	3/8	9/16 - 18	3/4	24.9	66.5	6,000
HDLLM8T-8UP	1/2	3/4 - 16	3/4	27.9	74.9	6,000
HDLLM10T-10UP	5/8	7/8 - 14	1 1/16	33.5	88.9	6,000
HDLLM12T-12UP	3/4	1 1/16 - 12	1 3/16	37.6	101.1	6,000
HDLLM16T-16UP	1	1 5/16 - 12	1 5/8	41.4	114.0	5,500

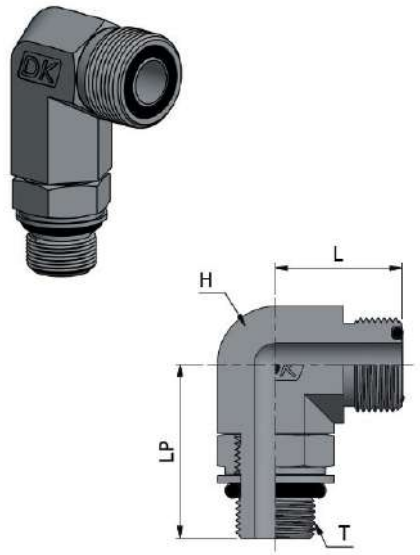
Male Elbow
HDLM-GP



Fractional / Metric

Part No.	End Size			H HEX (mm)	L (mm)	LP (mm)	Dynamic Pressure (psig)
	Tube O.D		T PF				
	(in.)	(mm)					
HDLM4T-2GP	1/4	6	1/8 - 28	14	21.5	30.0	4,000
HDLM4T-4GP	1/4	6	1/4 - 19	19	23.5	36.0	4,000
HDLM4T-6GP	1/4	6	3/8 - 19	19	24.5	38.0	4,000
HDLM6T-4GP	3/8	8,10	1/4 - 19	19	25.0	36.0	4,000
HDLM6T-6GP	3/8	8,10	3/8 - 19	19	26.5	38.0	4,000
HDLM8T-4GP	1/2	12	1/4 - 19	19	28.0	35.5	4,000
HDLM8T-6GP	1/2	12	3/8 - 19	19	28.0	38.0	4,000
HDLM8T-8GP	1/2	12	1/2 - 14	27	31.0	48.5	4,000
HDLM8T-12GP	1/2	12	3/4 - 14	30	33.5	51.5	4,000
HDLM10T-6GP	5/8	14,15,16	3/8 - 19	27	33.5	40.5	4,000
HDLM10T-8GP	5/8	14,15,16	1/2 - 14	27	33.5	48.5	4,000
HDLM10T-12GP	5/8	14,15,16	3/4 - 14	30	36.0	51.5	4,000
HDLM10T-16GP	5/8	14,15,16	1 - 11	36	39.5	58.5	4,000
HDLM12T-8GP	3/4	18,20	1/2 - 14	30	37.5	49.5	4,000
HDLM12T-12GP	3/4	18,20	3/4 - 14	30	37.5	51.5	4,000
HDLM12T-16GP	3/4	18,20	1 - 11	36	41.0	58.5	4,000
HDLM16T-12GP	1	22,25	3/4 - 14	36	41.5	56.0	4,000
HDLM16T-16GP	1	22,25	1 - 11	36	41.5	58.5	4,000
HDLM16T-20GP	1	22,25	1 1/4 - 11	41	44.5	61.0	3,000
HDLM20T-16GP	1 1/4	28,30,32	1 - 11	41	44.5	61.0	4,000
HDLM20T-20GP	1 1/4	28,30,32	1 1/4 - 11	41	44.5	61.0	2,000
HDLM20T-24GP	1 1/4	28,30,32	1 1/2 - 11	50	49.0	64.5	2,000
HDLM24T-24GP	1 1/2	35,38	1 1/2 - 11	50	49.0	64.5	2,000

Metric Straight Thread Elbow
HDLM-MPH

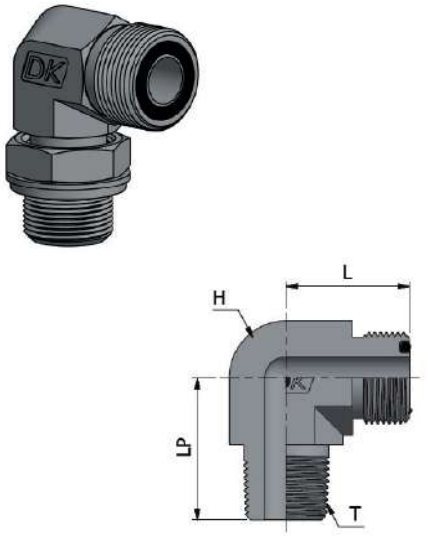


Fractional / Metric

Part No.	End Size			H HEX (mm)	L (mm)	LP (mm)	Dynamic Pressure (psig)
	Tube O.D		T				
	(in.)	(mm)	Metric				
HDLM4T-12M15PH	1/4	6	M12X1.5	14	21.5	33.0	6,000
HDLM4T-14M15PH	1/4	6	M14X1.5	17	23.5	35.5	6,000
HDLM6T-12M15PH	3/8	8,10	M12X1.5	17	25.0	35.5	6,000
HDLM6T-14M15PH	3/8	8,10	M14X1.5	17	25.0	35.5	6,000
HDLM6T-16M15PH	3/8	8,10	M16X1.5	17	25.0	37.5	6,000
HDLM8T-14M15PH	1/2	12	M14X1.5	19	28.0	36.0	6,000
HDLM8T-18M15PH	1/2	12	M18X1.5	19	28.0	41.0	6,000
HDLM8T-22M15PH	1/2	12	M22X1.5	27	31.0	49.0	6,000
HDLM10T-18M15PH	5/8	14,15,16	M18X1.5	27	33.5	47.5	6,000
HDLM10T-22M15PH	5/8	14,15,16	M22X1.5	27	33.5	49.0	6,000
HDLM12T-22M15PH	3/4	18,20	M22X1.5	27	37.5	49.0	6,000
HDLM12T-27M20PH	3/4	18,20	M27X2.0	27	37.5	55.5	6,000
HDLM16T-33M20PH	1	22,25	M33X2.0	36	41.5	59.5	5,000
HDLM20T-38M20PH	1 1/4	28,30,32	M38X2.0	41	44.5	62.0	4,000
HDLM20T-42M20PH	1 1/4	28,30,32	M42X2.0	41	44.5	63.0	4,000
HDLM24T-48M20PH	1 1/2	35,38	M48X2.0	50	49.0	71.5	4,000

* For special M38x2 (ISO 6149-1 style) port. The current ISO 6149 does not include the M38 size.

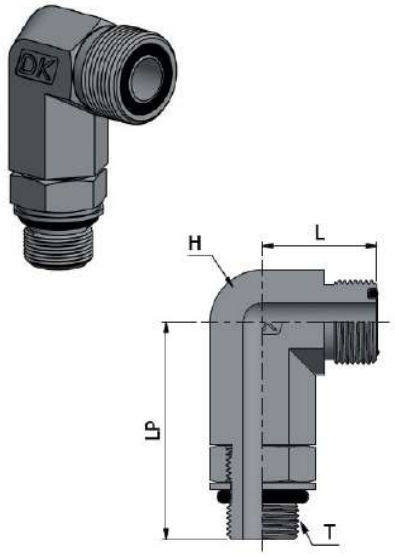
Male Elbow
HDLM-N



Fractional

Part No.	End Size		H HEX (in.)	L (mm)	LP (mm)	Dynamic Pressure (psig)
	Tube O.D (in.)	T NPT				
HDLM4T-2N	1/4	1/8 - 27	9/16	20.3	21.6	6,000
HDLM4T-4N	1/4	1/4 - 18	9/16	28.4	21.6	6,000
HDLM4T-6N	1/4	3/8 - 18	3/4	31.0	24.6	6,000
HDLM4T-8N	1/4	1/2 - 14	7/8	37.3	27.2	6,000
HDLM6T-4N	3/8	1/4 - 18	3/4	27.7	24.9	6,000
HDLM6T-6N	3/8	3/8 - 18	3/4	31.0	24.9	6,000
HDLM6T-8N	3/8	1/2 - 14	7/8	37.3	29.2	6,000
HDLM8T-4N	1/2	1/4 - 18	3/4	31.0	27.9	6,000
HDLM8T-6N	1/2	3/8 - 18	3/4	31.0	27.9	6,000
HDLM8T-8N	1/2	1/2 - 14	7/8	37.3	27.9	6,000
HDLM8T-12N	1/2	3/4 - 14	1 1/16	40.4	33.5	4,000
HDLM10T-6N	5/8	3/8 - 18	1 1/16	32.5	33.3	6,000
HDLM10T-8N	5/8	1/2 - 14	1 1/16	37.3	33.3	6,000
HDLM10T-12N	5/8	3/4 - 14	1 3/16	40.4	35.8	4,000
HDLM12T-8N	3/4	1/2 - 14	1 3/16	40.4	37.3	6,000
HDLM12T-12N	3/4	3/4 - 14	1 3/16	40.4	37.3	4,000
HDLM12T-16N	3/4	1 - 11 1/2	1 5/16	50.0	41.1	3,000
HDLM16T-12N	1	3/4 - 14	1 7/16	45.2	41.7	4,000
HDLM16T-16N	1	1 - 11 1/2	1 7/16	50.0	41.7	3,000
HDLM20T-20N	1 1/4	1 1/4 - 11 1/2	1 5/8	60.4	44.7	2,500
HDLM24T-20N	1 1/2	1 1/4 - 11 1/2	1 7/8	66.3	48.8	2,500
HDLM24T-24N	1 1/2	1 1/2 - 11 1/2	1 7/8	67.1	48.8	2,500

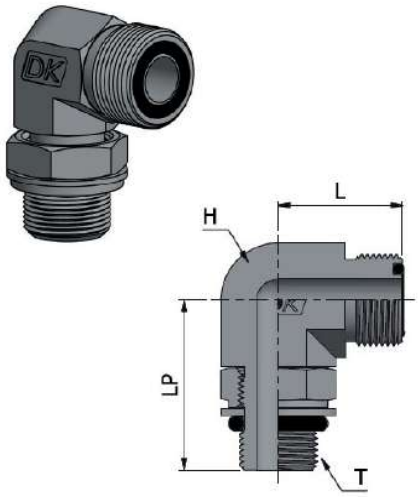
Long Metric Straight Thread Elbow
HDLLM-MPH



Fractional / Metric

Part No.	End Size			H HEX (mm)	L (mm)	LP (mm)	Dynamic Pressure (psig)
	Tube O.D		T Metric				
	(in.)	(mm)					
HDLLM4T-12M15PH	1/4	6	M12X1.5	14	21.5	56.5	6,000
HDLLM6T-14M15PH	3/8	8,10	M14X1.5	17	25.0	56.5	6,000
HDLLM6T-16M15PH	3/8	8,10	M16X1.5	17	25.0	66.5	6,000
HDLLM8T-18M15PH	1/2	12	M18X1.5	19	28.0	75.0	6,000
HDLLM8T-22M15PH	1/2	12	M22X1.5	27	31.5	88.0	6,000
HDLLM10T-22M15PH	5/8	14,15,16	M22X1.5	27	33.5	88.0	6,000
HDLLM12T-27M20PH	3/4	18,20	M27X2.0	27	37.5	100.5	6,000
HDLLM16T-33M20PH	1	22,25	M33X2.0	36	41.5	114.5	5,000
HDLLM20T-42M20PH	1 1/4	28,30,32	M42X2.0	41	44.5	126.5	4,000

Metric Straight Thread Elbow
HDLM-MP

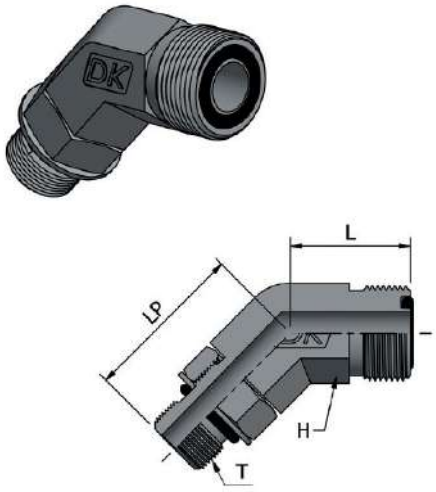


Fractional / Metric

Part No.	End Size			H HEX (mm)	L (mm)	LP (mm)	Dynamic Pressure (psig)
	Tube O.D		T Metric				
	(in.)	(mm)					
HDLM4T-12M15P	1/4	6	M12X1.5	14	21.5	33.0	3,600
HDLM6T-12M15P	3/8	8,10	M12X1.5	17	25.0	35.5	3,600
HDLM6T-14M15P	3/8	8,10	M14X1.5	17	25.0	35.5	3,600
HDLM6T-16M15P	3/8	8,10	M16X1.5	17	25.0	37.5	3,600
HDLM8T-14M15P	1/2	12	M14X1.5	19	28.0	36.0	3,600
HDLM8T-18M15P	1/2	12	M18X1.5	19	28.0	41.0	3,600
HDLM8T-22M15P	1/2	12	M22X1.5	27	31.5	49.0	3,600
HDLM10T-22M15P	5/8	14,15,16	M22X1.5	27	33.5	49.0	3,600
HDLM12T-27M20P	3/4	18,20	M27X2	30	37.5	55.5	3,600
HDLM16T-33M20P	1	22,25	M33X2	36	41.5	59.5	2,500
HDLM20T-38M20P	1 1/4	28,30,32	M38X2	41	44.5	62.0	2,500
HDLM20T-42M20P	1 1/4	28,30,32	M42X2	41	44.5	63.0	2,500

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

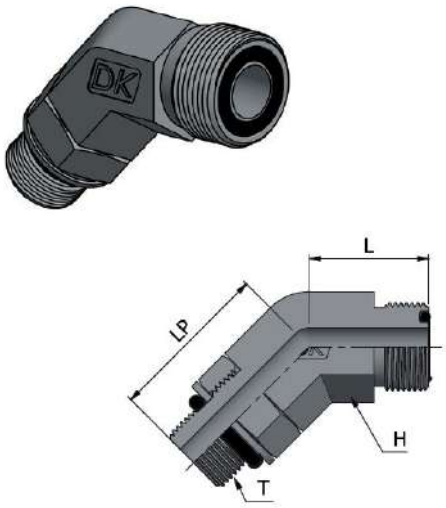
45°Straight Thread Elbow
HDLBM-UP



Fractional

Part No.	End Size		H HEX (in.)	L (mm)	LP (mm)	Dynamic Pressure (psig)
	Tube O.D (in.)	T UN/UNF				
HDLBM4T-4UP	1/4	7/16 - 20	9/16	16.0	30.0	6,000
HDLBM4T-6UP	1/4	9/16 - 18	3/4	17.5	33.1	6,000
HDLBM6T-4UP	3/8	7/16 - 20	3/4	19.0	31.0	6,000
HDLBM6T-6UP	3/8	9/16 - 18	3/4	19.0	33.1	6,000
HDLBM6T-8UP	3/8	3/4 - 16	3/4	19.0	36.6	6,000
HDLBM8T-6UP	1/2	9/16 - 18	3/4	20.6	32.5	6,000
HDLBM8T-8UP	1/2	3/4 - 16	3/4	20.6	36.6	6,000
HDLBM8T-10UP	1/2	7/8 - 14	3/4	21.6	44.4	6,000
HDLBM10T-8UP	5/8	3/4 - 16	1 1/16	23.6	39.9	6,000
HDLBM10T-10UP	5/8	7/8 - 14	1 1/16	23.6	44.4	6,000
HDLBM10T-12UP	5/8	1 1/16 - 12	1 3/16	24.4	50.0	6,000
HDLBM12T-10UP	3/4	7/8 - 14	1 3/16	25.9	46.0	6,000
HDLBM12T-12UP	3/4	1 1/16 - 12	1 3/16	25.9	50.0	6,000
HDLBM12T-16UP	3/4	1 5/16 - 12	1 7/16	29.5	52.6	5,500
HDLBM16T-10UP	1	7/8 - 14	1 7/16	30.0	51.6	6,000
HDLBM16T-12UP	1	1 1/16 - 12	1 7/16	30.0	51.6	6,000
HDLBM16T-16UP	1	1 5/16 - 12	1 7/16	30.0	52.6	5,500
HDLBM16T-20UP	1	1 5/8 - 12	1 5/8	32.0	53.6	4,000
HDLBM20T-20UP	1 1/4	1 5/8 - 12	1 5/8	32.0	53.6	4,000
HDLBM24T-24UP	1 1/2	1 7/8 - 12	1 7/8	37.1	53.6	4,000

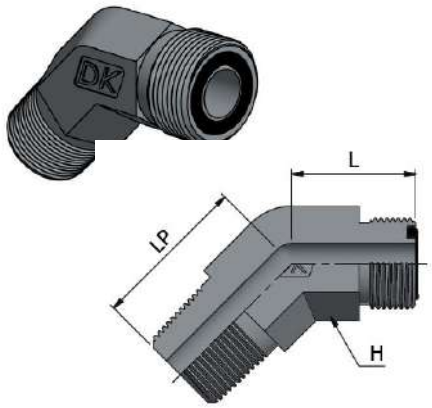
45°Metric Straight Thread Elbow
HDLBM-MPH



Fractional / Metric

Part No.	End Size			H HEX (mm)	L (mm)	LP (mm)	Dynamic Pressure (psig)
	Tube O.D		T Metric				
	(in.)	(mm)					
HDLBM4T-12M15PH	1/4	6	M12X1.5	14	16.0	30.0	6,000
HDLBM4T-14M15PH	1/4	6	M14X1.5	17	17.5	31.5	6,000
HDLBM6T-16M15PH	3/8	8,10	M16X1.5	17	19.0	33.5	6,000
HDLBM8T-18M15PH	1/2	12	M18X1.5	19	20.5	37.0	6,000
HDLBM10T-22M15PH	5/8	14,15,16	M22X1.5	27	23.5	44.0	6,000
HDLBM12T-27M2PH	3/4	18,20	M27X2	27	26.0	50.5	6,000
HDLBM16T-33M2PH	1	22,25	M33X2	36	30.0	52.5	5,000
HDLBM20T-42M20PH	1 1/4	28,30,32	M42X2	41	32.0	54.0	4,000
HDLBM24T-48M20PH	1 1/2	35,38	M48X2	50	37.0	56.5	4,000

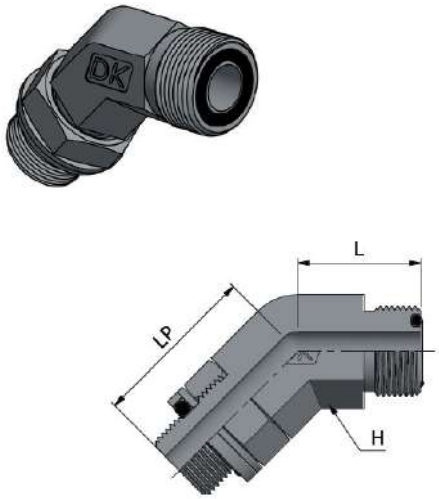
45° Male Elbow
HDLBM-N



Fractional

Part No.	End Size		H HEX (in.)	L (mm)	LP (mm)	Dynamic Pressure (psig)
	Tube O.D (in.)	T NPT				
HDLBM4T-2N	1/4	1/8 - 27	9/16	16.3	16.0	6,000
HDLBM4T-4N	1/4	1/4 - 18	9/16	21.8	17.3	6,000
HDLBM6T-4N	3/8	1/4 - 18	3/4	22.1	18.8	6,000
HDLBM6T-6N	3/8	3/8 - 18	3/4	22.1	18.8	6,000
HDLBM8T-6N	1/2	3/8 - 18	3/4	24.1	20.3	6,000
HDLBM8T-8N	1/2	1/2 - 14	7/8	29.7	21.8	6,000
HDLBM10T-8N	5/8	1/2 - 14	1 1/16	29.7	23.4	6,000
HDLBM12T-12N	3/4	3/4 - 14	1 5/16	33.0	25.9	4,000
HDLBM16T-16N	1	1 – 11.5	1 7/16	37.6	30.0	3,000
HDLBM20T-20N	1 1/4	1 1/4 – 11.5	1 5/8	42.4	32.0	2,500

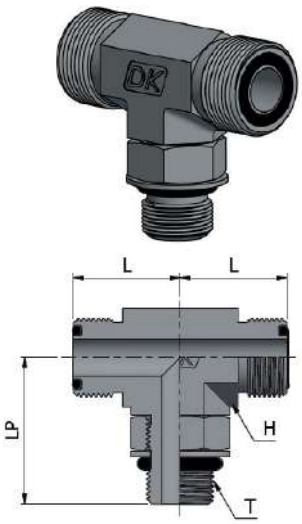
45° Male Elbow
HDLBM-GP



Fractional / Metric

Part No.	End Size			H HEX (mm)	L (mm)	LP (mm)	Dynamic Pressure (psig)
	Tube O.D		T PF				
	(in.)	(mm)					
HDLBM4T-2GP	1/4	6	1/8 - 28	14	16.0	27.5	4,000
HDLBM4T-4GP	1/4	6	1/4 - 19	19	17.5	32.0	4,000
HDLBM6T-4GP	3/8	8,10	1/4 - 19	19	19.0	32.0	4,000
HDLBM6T-6GP	3/8	8,10	3/8 - 19	19	19.0	33.5	4,000
HDLBM6T-8GP	3/8	8,10	1/2 - 14	27	19.5	43.5	4,000
HDLBM8T-6GP	1/2	12	3/8 - 19	19	20.5	33.5	4,000
HDLBM8T-8GP	1/2	12	1/2 - 14	27	21.0	43.5	4,000
HDLBM10T-8GP	5/8	14,15,16	1/2 - 14	27	23.5	43.5	4,000
HDLBM10T-12GP	5/8	14,15,16	3/4 - 14	30	24.5	46.5	4,000
HDLBM12T-12GP	3/4	18,20	3/4 - 14	30	26.0	46.5	4,000
HDLBM12T-16GP	3/4	18,20	1 - 11	37	26.0	51.0	4,000
HDLBM16T-16GP	1	22,25	1 - 11	37	30.0	51.0	4,000

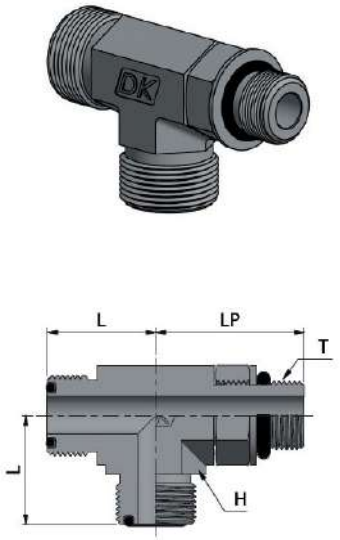
Straight Thread Branch Tee
HDTBM-UP



Fractional

Part No.	End Size		H HEX (in.)	L (mm)	LP (mm)	Dynamic Pressure (psig)
	Tube O.D (in.)	T UN/UNF				
HDTBM4T-4UP	1/4	7/16 - 20	9/16	21.6	33.0	6,000
HDTBM4T-6UP	1/4	9/16 - 18	9/16	23.6	37.1	6,000
HDTBM6T-6UP	3/8	9/16 - 18	3/4	24.9	37.1	6,000
HDTBM6T-4UP	3/8	7/16 - 20	3/4	24.9	35.0	6,000
HDTBM6T-8UP	3/8	3/4 - 16	3/4	26.4	40.4	6,000
HDTBM8T-8UP	1/2	3/4 - 16	3/4	27.9	40.4	6,000
HDTBM8T-10UP	1/2	7/8 - 14	1 1/16	31.5	50.0	6,000
HDTBM8T-12UP	1/2	1 1/16 - 12	1 3/16	34.0	55.1	6,000
HDTBM10T-10UP	5/8	7/8 - 14	1 1/16	33.5	50.0	6,000
HDTBM10T-12UP	5/8	1 1/16 - 12	1 3/16	36.1	55.1	6,000
HDTBM12T-12UP	3/4	1 1/16 - 12	1 3/16	37.6	55.1	6,000
HDTBM12T-16UP	3/4	1 5/16 - 12	1 7/16	40.9	59.4	5,500
HDTBM16T-16UP	1	1 5/16 - 12	1 7/16	41.4	59.4	5,500
HDTBM16T-20UP	1	1 5/8 - 12	1 5/8	44.4	62.0	4,000
HDTBM20T-20UP	1 1/4	1 5/8 - 12	1 5/8	44.4	62.0	4,000
HDTBM24T-24UP	1 1/2	1 7/8 - 12	1 7/8	49.0	66.0	4,000

Straight Thread Run Tee
HDTRM-UP

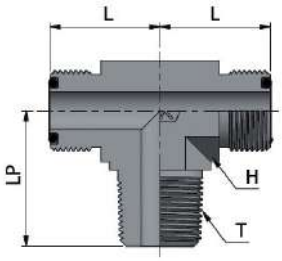


Fractional

Part No.	End Size		H HEX (in.)	L (mm)	LP (mm)	Dynamic Pressure (psig)
	Tube O.D (in.)	T UN/UNF				
HDTRM4T-4UP	1/4	7/16 - 20	9/16	21.6	33.0	6,000
HDTRM4T-6UP	1/4	9/16 - 18	3/4	23.4	37.1	6,000
HDTRM6T-6UP	3/8	9/16 - 18	3/4	24.9	37.1	6,000
HDTRM6T-8UP	3/8	3/4 - 16	3/4	26.4	40.4	6,000
HDTRM8T-8UP	1/2	3/4 - 16	3/4	27.9	40.4	6,000
HDTRM8T-10UP	1/2	7/8 - 14	1 1/16	31.5	50.0	6,000
HDTRM10T-10UP	5/8	7/8 - 14	1 1/16	33.5	50.0	6,000
HDTRM10T-12UP	5/8	1 1/16 - 12	1 3/16	36.1	55.1	6,000
HDTRM12T-12UP	3/4	1 1/16 - 12	1 3/16	37.6	55.1	6,000
HDTRM12T-16UP	3/4	1 5/16 - 12	1 7/16	40.9	59.4	5,500
HDTRM16T-16UP	1	1 5/16 - 12	1 7/16	41.4	59.4	5,500
HDTRM16T-20UP	1	1 5/8 - 12	1 5/8	44.4	62.0	4,000
HDTRM20T-20UP	1 1/4	1 5/8 - 12	1 5/8	44.4	62.0	4,000
HDTRM24T-24UP	1 1/2	1 7/8 - 12	1 7/8	49.0	66.0	4,000

Male Branch Tee
HDTBM-N



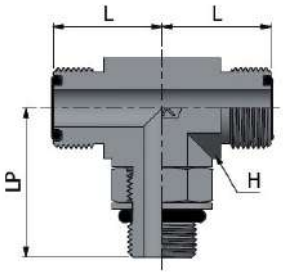


Fractional / Metric

Part No.	End Size		H HEX (in.)	L (mm)	LP (mm)	Dynamic Pressure (psig)
	Tube O.D (in.)	T NPT				
HDTBM4T-4N	1/4	1/4 - 18	9/16	21.6	28.4	6,000
HDTBM6T-4N	3/8	1/4 - 18	3/4	24.9	27.7	6,000
HDTBM6T-6N	3/8	3/8 - 18	3/4	24.9	31.0	6,000
HDTBM8T-6N	1/2	3/8 - 18	3/4	27.9	31.0	6,000
HDTBM8T-8N	1/2	1/2 - 14	7/8	27.9	37.3	6,000
HDTBM10T-8N	5/8	1/2 - 14	1 1/16	33.3	37.3	6,000
HDTBM12T-12N	3/4	3/4 - 14	1 3/16	37.3	40.4	4,000
HDTBM16T-16N	1	1 – 11.5	1 7/16	41.7	50.0	3,000
HDTBM20T-20N	1 1/4	1 1/4 – 11.5	1 5/8	44.7	60.4	2,500

Metric Straight Thread Branch Tee
HDTBM-MPH

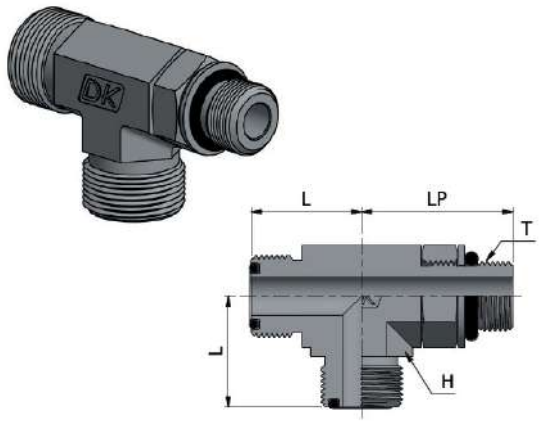




Fractional / Metric

Part No.	End Size			H HEX (mm)	L (mm)	LP (mm)	Dynamic Pressure (psig)
	Tube O.D		T Metric				
	(in.)	(mm)					
HDTBM4T-12M15PH	1/4	6	M12X1.5	14	21.5	33.0	6,000
HDTBM4T-14M15PH	1/4	6	M14X1.5	19	23.5	35.5	6,000
HDTBM6T-14M15PH	3/8	8,10	M14X1.5	19	25.0	35.5	6,000
HDTBM6T-16M15PH	3/8	8,10	M16X1.5	19	25.0	37.5	6,000
HDTBM8T-14M15PH	1/2	12	M14X1.5	19	28.0	36.0	6,000
HDTBM8T-18M15PH	1/2	12	M18X1.5	19	28.0	41.0	6,000
HDTBM8T-22M15PH	1/2	12	M22X1.5	27	31.0	49.0	6,000
HDTBM10T-22M15PH	5/8	14,15,16	M22X1.5	27	33.5	49.0	6,000
HDTBM12T-27M20PH	3/4	18,20	M27X2.0	30	37.5	55.5	6,000
HDTBM16T-33M20PH	1	22,25	M33X2.0	36	41.5	59.5	5,100
HDTBM20T-42M20PH	1 1/4	28,30,32	M42X2.0	41	44.5	63.0	4,000
HDTBM24T-48M20PH	1 1/2	35,38	M48X2.0	50	49.0	71.5	4,000

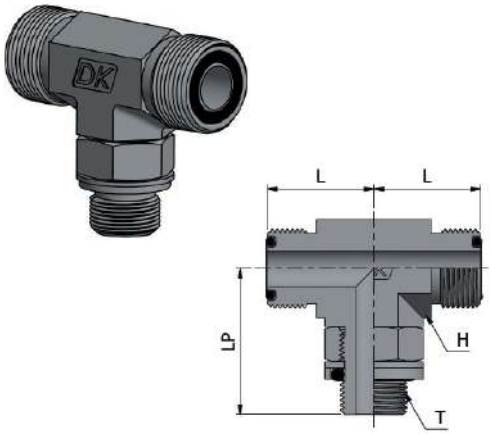
Metric Straight Thread Run Tee
HDTRM-MPH



Fractional / Metric

Part No.	End Size			H HEX (mm)	L (mm)	LP (mm)	Dynamic Pressure (psig)
	Tube O.D		T				
	(in.)	(mm)	Metric				
HDTRM4T-12M15PH	1/4	6	M12X1.5	14	21.5	33.0	6,000
HDTRM4T-14M15PH	1/4	6	M14X1.5	19	23.5	35.5	6,000
HDTRM6T-14M15PH	3/8	8,10	M14X1.5	19	25.0	35.5	6,000
HDTRM6T-16M15PH	3/8	8,10	M16X1.5	19	25.0	37.5	6,000
HDTRM8T-14M15PH	1/2	12	M14X1.5	19	28.0	36.0	6,000
HDTRM8T-18M15PH	1/2	12	M18X1.5	19	28.0	41.0	6,000
HDTRM8T-22M15PH	1/2	12	M22X1.5	27	31.0	49.0	6,000
HDTRM10T-22M15PH	5/8	14,15,16	M22X1.5	27	33.5	49.0	6,000
HDTRM12T-27M20PH	3/4	18,20	M27X2.0	30	37.5	55.5	6,000
HDTRM16T-32M20PH	1	22,25	M32X2.0	36	41.5	59.5	4,000
HDTRM20T-42M20PH	1 1/4	28,30,32	M42X2.0	41	44.5	63.0	4,000
HDTRM24T-48M20PH	1 1/2	35,38	M48X2.0	50	49.0	71.5	4,000

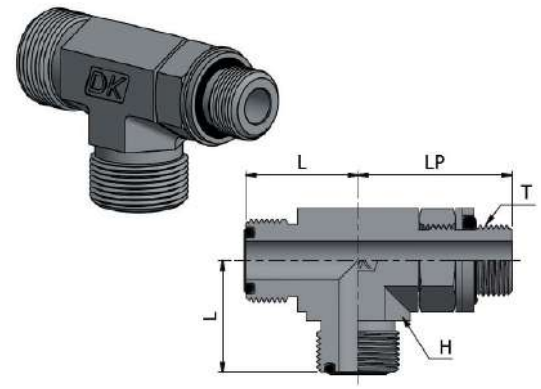
Male Branch Tee
HDTBM-GP



Fractional / Metric

Part No.	End Size			H HEX (mm)	L (mm)	LP (mm)	Dynamic Pressure (psig)
	Tube O.D		T				
	(in.)	(mm)	PF				
HDTBM4T-2GP	1/4	6	1/8 - 28	14	21.5	30.0	4,000
HDTBM4T-4GP	1/4	6	1/4 - 19	19	23.5	36.0	4,000
HDTBM6T-4GP	3/8	8,10	1/4 - 19	19	25.0	36.0	4,000
HDTBM6T-6GP	3/8	8,10	3/8 - 19	19	26.5	38.0	4,000
HDTBM8T-6GP	1/2	12	3/8 - 19	19	28.0	38.0	4,000
HDTBM8T-8GP	1/2	12	1/2 - 14	27	31.0	48.5	4,000
HDTBM10T-8GP	5/8	14,15,16	1/2 - 14	27	33.5	48.5	4,000
HDTBM12T-12GP	3/4	18,20	3/4 - 14	30	37.5	51.5	4,000
HDTBM16T-16GP	1	22,25	1 - 11	36	41.5	58.5	4,000

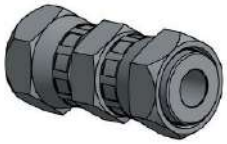
Male Run Tee
HDTRM-GP

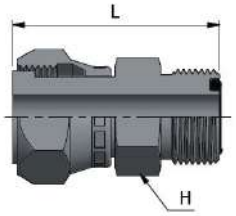


Fractional / Metric

Part No.	End Size			H HEX (mm)	L (mm)	LP (mm)	Dynamic Pressure (psig)
	Tube O.D		T				
	(in.)	(mm)	PF				
HDTRM4T-2GP	1/4	6	1/8 - 28	14	21.5	30.0	4,000
HDTRM4T-4GP	1/4	6	1/4 - 19	19	23.5	36.0	4,000
HDTRM6T-4GP	3/8	8,10	1/4 - 19	19	25.0	36.0	4,000
HDTRM6T-6GP	3/8	8,10	3/8 - 19	19	26.5	38.0	4,000
HDTRM8T-6GP	1/2	12	3/8 - 19	19	28.0	38.0	4,000
HDTRM8T-8GP	1/2	12	1/2 - 14	27	31.0	48.5	4,000
HDTRM10T-8GP	5/8	14,15,16	1/2 - 14	27	33.5	45.2	4,000
HDTRM12T-12GP	3/4	18,20	3/4 - 14	30	37.5	51.5	4,000
HDTRM16T-16GP	1	22,25	1 - 11	37	41.5	58.5	4,000

Swivel Union
HDUS



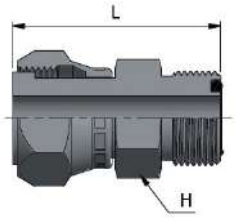


Fractional

Part No.	End Size Tube O.D (in.)	H HEX (in.)	L (mm)	Dynamic Pressure (psig)
HDUS-4T	1/4	5/8	40.4	9,200
HDUS-6T	3/8	3/4	45.0	9,200
HDUS-8T	1/2	7/8	53.8	9,200
HDUS-10T	5/8	1 1/16	61.5	6,000
HDUS-12T	3/4	1 1/4	69.6	6,000
HDUS-16T	1	1 7/16	74.9	6,000

Tube End Extender / Expander
HDSU



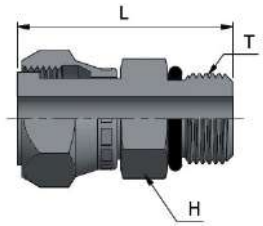


Fractional

Part No.	End Size Tube O.D (in.)	H HEX (in.)	L (mm)	Dynamic Pressure (psig)
HDSU-4T	1/4	5/8	33.8	9,200
HDSU-6T	3/8	3/4	36.6	9,200
HDSU6T-4T	3/8	3/4	34.8	9,200
HDSU8T-6T	1/2	7/8	41.1	9,200
HDSU8T-8T	1/2	7/8	42.4	9,200
HDSU10T-8T	5/8	1 1/16	46.0	6,000
HDSU12T-10T	3/4	1 1/4	50.5	6,000
HDSU16T-12T	1	1 1/2	54.9	6,000
HDSU20T-16T	1 1/4	1 3/4	57.9	5,000
HDSU24T-20T	1 1/2	2 1/8	59.7	4,000

Straight Thread Swivel Connector
HDSMC-U

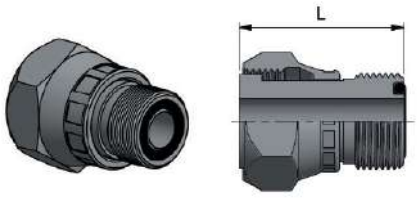


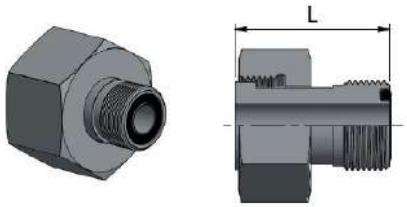


Fractional

Part No.	End Size		H HEX (in.)	L (mm)	Dynamic Pressure (psig)
	Tube O.D (in.)	T UN/UNF			
HDSMC4T-4U	1/4	7/16 - 20	5/8	37.1	9,200
HDSMC6T-6U	3/8	9/16 - 18	3/4	39.9	9,200
HDSMC8T-8U	1/2	3/4 - 16	7/8	49.5	9,200
HDSMC10T-10U	5/8	7/8 -14	1 1/16	54.1	6,000
HDSMC12T-12U	3/4	1 1/16 - 12	1 1/4	59.4	6,000
HDSMC16T-16U	1	1 5/16 - 12	1 1/2	67.6	6,000
HDSMC20T-20U	1 1/4	1 5/8 -12	1 7/8	67.6	5,000

Tube End Reducer
HDSR



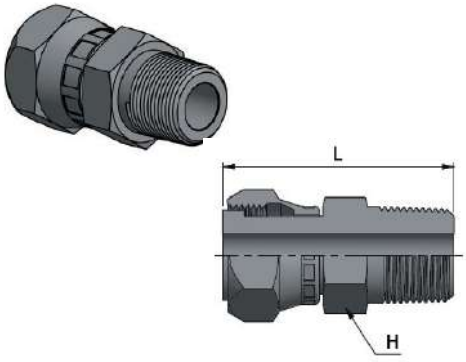


Fractional

Part No.		End Size		L (mm)	Dynamic Pressure (psig)
HDSR					
*One Piece Design (With Crimp Nut)	**Two Piece Design (With Large Nut)	Tube O.D Swivel (in.)	Tube O.D (in.)		
HDSR6T-4T	-	3/8	1/4	19.6	9,200
-	HDSR8T-4T	1/2	1/4	22.1	9,200
HDSR8T-6T	-	1/2	3/8	22.6	9,200
-	HDSR10T-4T	5/8	1/4	23.1	6,000
-	HDSR10T-6T	5/8	3/8	23.9	6,000
-	HDSR10T-8T	5/8	1/2	25.4	6,000
-	HDSR12T-4T	3/4	1/4	24.9	6,000
-	HDSR12T-6T	3/4	3/8	25.9	6,000
-	HDSR12T-8T	3/4	1/2	27.4	6,000
HDSR12T-10T	-	3/4	5/8	29.5	6,000
-	HDSR16T-8T	1	1/2	29.0	6,000
-	HDSR16T-10T	1	5/8	32.0	6,000
HDSR16T-12T	-	1	3/4	33.0	6,000
-	HDSR20T-12T	1 1/4	3/4	33.5	5,000
HDSR20T-16T	-	1 1/4	1	34.0	5,000
-	HDSR24T-12T	1 1/2	3/4	33.5	4,000
-	HDSR24T-16T	1 1/2	1	34.0	4,000
-	HDSR24T-20T	1 1/2	1 1/4	34.0	4,000
-	HDSR32T-20T	2	1 1/4	36.1	3,000
-	HDSR32T-24T	2	1 1/2	36.1	3,000

* Assembled with swivel nut.
** Assembled with page HDN nut.

Swivel Male Connector
HDSMC-N

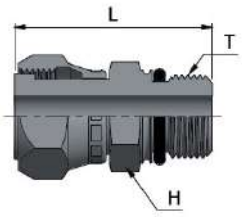


Fractional

Part No.	End Size		H HEX (in.)	L (mm)	Dynamic Pressure (psig)
	Tube O.D Swivel (in.)	T NPT			
HDSMC4T-2N	1/4	1/8 - 27	5/8	33.8	6,000
HDSMC4T-4N	1/4	1/4 - 18	5/8	38.6	6,000
HDSMC6T-4N	3/8	1/4 - 18	3/4	42.9	6,000
HDSMC6T-6N	3/8	3/8 - 18	3/4	42.4	6,000
HDSMC8T-6N	1/2	3/8 - 18	3/4	49.5	6,000
HDSMC8T-8N	1/2	1/2 - 14	7/8	54.4	6,000
HDSMC10T-8N	5/8	1/2 - 14	1 1/16	58.2	6,000
HDSMC12T-12N	3/4	3/4 - 14	1 1/4	60.2	5,500
HDSMC16T-16N	1	1 – 11.5	1 1/2	72.9	4,500

Swivel ISO 6149 Connector
HDSMC-MO



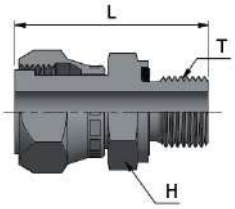


Fractional / Metric

Part No.	End Size			H HEX (mm)	L (mm)	Dynamic Pressure (psig)
	Tube O.D		T			
	(in.)	(mm)	Metric			
HDSMC4T-12M15O	1/4	6	M12X1.5	17	37.0	9,200
HDSMC6T-12M15O	3/8	8,10	M12X1.5	17	39.0	9,200
HDSMC6T-14M15O	3/8	8,10	M14X1.5	19	38.0	9,200
HDSMC6T-16M15O	3/8	8,10	M16X1.5	22	43.5	9,200
HDSMC8T-16M15O	1/2	12	M16X1.5	22	48.0	9,200
HDSMC10T-22M15O	5/8	14,15,16	M22X1.5	27	53.0	6,000
HDSMC10T-27M20O	5/8	14,15,16	M27X2.0	32	57.0	6,000
HDSMC12T-27M20O	3/4	18,20	M27X2.0	32	59.5	6,000
HDSMC16T-33M20O	1	22,25	M33X2.0	41	67.5	6,000

Swivel Metric Connector
HDSMC-ME



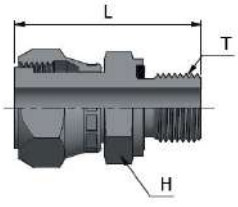


Fractional / Metric

Part No.	End Size			H HEX (mm)	L (mm)	Dynamic Pressure (psig)
	Tube O.D		T			
	(in.)	(mm)	Metric			
HDSMC4T-12M15E	1/4	6	M12X1.5	17	38.2	9,200
HDSMC6T-14M15E	3/8	8,10	M14X1.5	19	40.2	9,200
HDSMC8T-16M15E	1/2	12	M16X1.5	22	47.3	9,200
HDSMC10T-22M15E	5/8	14,15,16	M22X1.5	27	51.8	6,000
HDSMC12T-27M20E	3/4	18,20	M27X2.0	32	57.2	6,000
HDSMC16T-33M20E	1	22,25	M33X2.0	41	67.0	6,000

Swivel BSPP Connector
HDSMC-GE





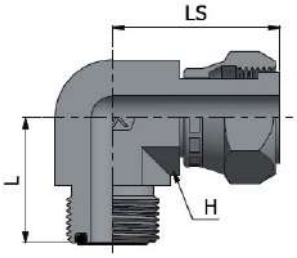
Fractional / Metric

Part No.	End Size			H HEX (mm)	L (mm)	Dynamic Pressure (psig)
	Tube O.D		T			
	(in.)	(mm)	PF			
HDSMC4T-2GE	1/4	6	1/8	14	34.0	7,200
HDSMC6T-4GE	3/8	8,10	1/4	19	40.2	9,200
HDSMC8T-6GE	1/2	12	3/8	22	47.3	9,200
HDSMC10T-8GE	5/8	14,15,16	1/2	27	51.8	6,000
HDSMC12T-12GE	3/4	18,20	3/4	32	57.2	6,000
HDSMC16T-16GE	1	22,25	1	46	67.0	6,000

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Swivel Elbow
HDSL





Fractional

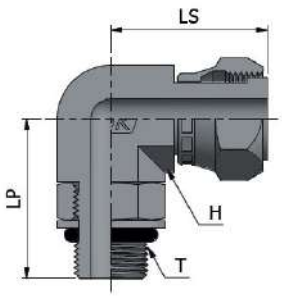
Part No.	End Size Tube O.D (in.)	H HEX (in.)	L (mm)	LS (mm)	Dynamic Pressure (psig)
HDSL-4T	1/4	9/16	21.6	27.2	9,200
HDSL-6T	3/8	3/4	24.9	29.7	9,200
HDSL-8T	1/2	3/4	27.9	38.1	9,200
HDSL-10T	5/8	1 1/16	33.5	40.9	6,000
HDSL-12T	3/4	1 3/16	37.6	46.5	6,000
HDSL-16T	1	1 7/16	41.7	53.6	6,000
HDSL-20T	1 1/4	1 5/8	44.4	57.9	5,000
HDSL-24T	1 1/2	1 7/8	48.8	61.2	4,000

Metric

Part No.	End Size Tube O.D (mm)	H HEX (mm)	L (mm)	LS (mm)	Dynamic Pressure (psig)
HDSL6M-4T	6	14	21.5	27.2	9,200
HDSL8M-6T	8,10	19	25.0	29.7	9,200
HDSL12M-8T	12	19	28.0	38.0	9,200
HDSL14M-10T	14,15,16	27	33.5	41.0	6,000
HDSL18M-12T	18,20	30	37.5	46.5	6,000
HDSL22M-16T	22,25	36	41.6	53.5	6,000
HDSL28M-20T	28,30,32	41	44.5	58.0	4,000
HDSL35M-24T	35,38	50	48.8	61.0	4,000

Straight Thread Swivel Male Elbow
HDSLM-UP





Fractional

Part No.	End Size		H HEX (in.)	LS (mm)	LP (mm)	Dynamic Pressure (psig)
	Tube O.D (in.)	T UN/UNF				
HDSLM4T-4UP	1/4	7/16 - 20	9/16	26.4	33.0	6,000
HDSLM6T-6UP	3/8	9/16 - 18	3/4	29.7	37.1	6,000
HDSLM8T-8UP	1/2	3/4 - 16	3/4	38.1	40.4	6,000
HDSLM10T-10UP	5/8	7/8 - 14	1 1/16	41.9	50.0	6,000
HDSLM12T-12UP	3/4	1 1/16 - 12	1 1/16	45.5	55.1	6,000
HDSLM16T-16UP	1	1 5/16 - 12	1 5/16	52.6	59.4	5,500
HDSLM20T-20UP	1 1/4	1 5/8 - 12	1 5/8	57.9	62.0	4,000
HDSLM24T-24UP	1 1/2	1 7/8 - 12	1 7/8	61.0	66.0	4,000

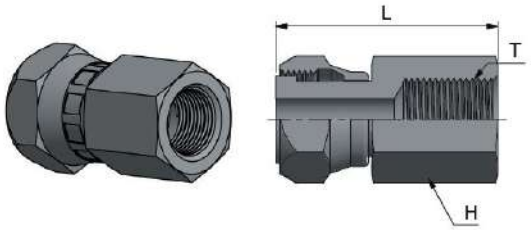
45°Swivel Elbow
HDSLB



Fractional

Part No.	End Size Tube O.D (in.)	H HEX (in.)	L (mm)	LS (mm)	Dynamic Pressure (psig)
HDSLB-4T	1/4	9/16	16.0	25.1	9,200
HDSLB-6T	3/8	3/4	18.8	28.4	9,200
HDSLB-8T	1/2	3/4	20.3	37.8	9,200
HDSLB-10T	5/8	1 1/16	23.4	38.9	6,000
HDSLB-12T	3/4	1 3/16	25.9	43.9	6,000
HDSLB-16T	1	1 7/16	30.0	47.5	6,000
HDSLB-20T	1 1/4	1 5/8	32.0	50.3	5,000
HDSLB-24T	1 1/2	1 7/8	36.8	52.3	4,000

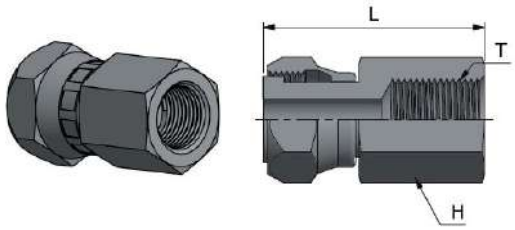
Swivel Female Connector
HDSCF-N



Fractional

Part No.	End Size		H HEX (in.)	L (mm)	Dynamic Pressure (psig)
	Tube O.D (in.)	T UN/UNF			
HDSCF4T-4N	1/4	1/4 - 18	3/4	37.6	6,000
HDSCF6T-4N	3/8	1/4 - 18	7/8	40.6	6,000
HDSCF8T-4N	1/2	1/4 - 18	7/8	44.4	6,000

Straight Thread Swivel Female Connector
HDSCF-U

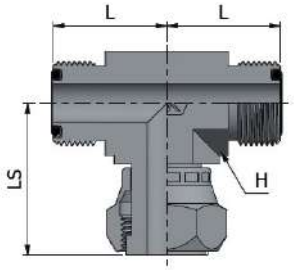


Fractional

Part No.	End Size		H HEX (in.)	L (mm)	Dynamic Pressure (psig)
	Tube O.D (in.)	T UN/UNF			
HDSCF4T-4U	1/4	7/16 - 20	3/4	35.05	6,000
HDSCF4T-6U	1/4	9/16 - 18	13/16	36.83	6,000
HDSCF6T-4U	3/8	7/16 - 20	3/4	38.35	6,000
HDSCF8T-4U	1/2	7/16 – 20	7/8	39.88	6,000

Swivel Branch Tee
HDSBT





Fractional

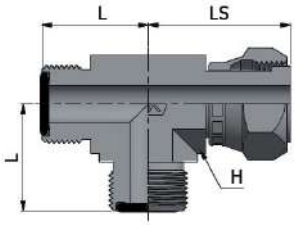
Part No.	End Size Tube O.D (in.)	H HEX (in.)	L (mm)	LS (mm)	Dynamic Pressure (psig)
HDSBT-4T	1/4	9/16	21.6	27.18	9,200
HDSBT-6T	3/8	3/4	24.9	29.72	9,200
HDSBT-8T	1/2	3/4	27.9	38,10	9,200
HDSBT-10T	5/8	1 1/16	33.5	40.89	6,000
HDSBT-12T	3/4	1 3/16	37.6	46.48	6,000
HDSBT-16T	1	1 7/16	41.4	53.59	6,000
HDSBT-20T	1 1/4	1 5/8	44.4	57.91	5,000
HDSBT-24T	1 1/2	1 7/8	49.0	60.96	4,000

Metric

Part No.	End Size Tube O.D (mm)	H HEX (mm)	L (mm)	LS (mm)	Dynamic Pressure (psig)
HDSBT-6M	6	14	21.5	27.2	-
HDSBT-8M	8,10	19	25.0	29.7	9,200
HDSBT-12M	12	19	28.0	38.0	9,200
HDSBT-14M	14,15,16	27	33.5	41.0	6,000
HDSBT-18M	18,20	30	37.5	46.5	6,000
HDSBT-22M	22,25	36	41.5	53.5	6,000
HDSBT-28M	28,30,32	41	44.5	58.0	4,000
HDSBT-35M	35,38	50	49.0	61.0	4,000

Swivel Run Tee
HDSRT





Fractional

Part No.	End Size Tube O.D (in.)	H HEX (in.)	L (mm)	LS (mm)	Dynamic Pressure (psig)
HDSRT-4T	1/4	9/16	21.6	27.2	9,200
HDSRT-6T	3/8	3/4	24.9	29.7	9,200
HDSRT-8T	1/2	3/4	27.9	38.1	9,200
HDSRT-10T	5/8	1 1/16	33.5	40.9	6,000
HDSRT-12T	3/4	1 3/16	37.6	46.5	6,000
HDSRT-16T	1	1 7/16	41.4	53.6	6,000
HDSRT-20T	1 1/4	1 5/8	44.4	57.9	5,000
HDSRT-24T	1 1/2	1 7/8	49.0	61.0	4,000

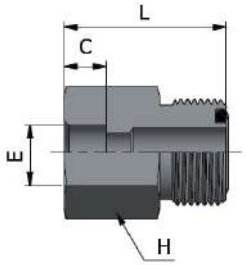
Metric

Part No.	End Size Tube O.D (mm)	H HEX (mm)	L (mm)	LS (mm)	Dynamic Pressure (psig)
HDSRT-6M	6	14	21.5	27.2	9,200
HDSRT-8M	8,10	19	25.0	29.7	9,200
HDSRT-12M	12	19	28.0	38.0	9,200
HDSRT-14M	14,15,16	27	33.5	41.0	6,000
HDSRT-18M	18,20	30	37.5	46.5	6,000
HDSRT-22M	22,25	36	41.6	53.5	6,000
HDSRT-28M	28,30,32	41	44.5	58.0	4,000
HDSRT-35M	35,38	50	48.8	61.0	4,000

Braze Connector

HDCF-TSW





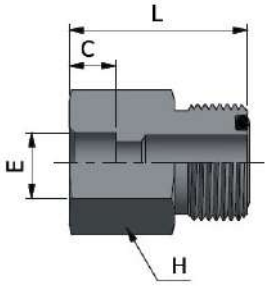
Fractional

Part No.	End Size		H HEX (in.)	C (mm)	E Tube Socket (mm)	L (mm)	Dynamic Pressure (psig)
	Tube O.D (in.)	SW (in.)					
HDCF4T-4TSW	1/4	1/4	5/8	13.5	6.6	21.8	9,200
HDCF4T-6TSW	1/4	3/8	5/8	13.5	9.6	21.8	9,200
HDCF6T-4TSW	3/8	1/4	3/4	14.5	6.6	22.9	9,200
HDCF6T-6TSW	3/8	3/8	3/4	14.5	9.6	22.9	9,200
HDCF6T-8TSW	3/8	1/2	3/4	14.5	12.9	22.9	9,200
HDCF8T-4TSW	1/2	1/4	7/8	16.3	6.6	24.6	9,200
HDCF8T-6TSW	1/2	3/8	7/8	16.0	9.6	24.6	9,200
HDCF8T-8TSW	1/2	1/2	7/8	16.0	12.9	24.6	9,200
HDCF8T-10TSW	1/2	5/8	7/8	16.0	16.0	24.6	6,000
HDCF8T-12TSW	1/2	3/4	1 1/16	17.0	19.3	29.5	6,000
HDCF10T-6TSW	5/8	3/8	1 1/16	18.8	9.6	27.2	6,000
HDCF10T-8TSW	5/8	1/2	1 1/16	18.8	12.9	27.2	6,000
HDCF10T-10TSW	5/8	5/8	1 1/16	18.8	16.0	27.2	6,000
HDCF10T-12TSW	5/8	3/4	1 1/16	18.8	19.3	31.2	6,000
HDCF12T-8TSW	3/4	1/2	1 1/4	21.1	12.9	29.5	6,000
HDCF12T-10TSW	3/4	5/8	1 1/4	21.1	16.0	29.5	6,000
HDCF12T-12TSW	3/4	3/4	1 1/4	21.1	19.3	33.5	6,000
HDCF12T-16TSW	3/4	1	1 1/2	21.1	25.6	35.0	6,000
HDCF16T-8TSW	1	1/2	1 1/2	24.6	12.9	33.0	6,000
HDCF16T-12TSW	1	3/4	1 1/2	24.6	19.3	37.1	6,000
HDCF16T-16TSW	1	1	1 1/2	24.6	25.6	38.6	6,000
HDCF16T-20TSW	1	1 1/4	1 3/4	24.4	32.0	38.6	6,000
HDCF20T-16TSW	1 1/4	1	1 3/4	24.6	25.6	38.6	6,000
HDCF20T-20TSW	1 1/4	1 1/4	1 3/4	24.6	32.0	38.6	6,000
HDCF20T-24TSW	1 1/4	1 1/2	2 1/8	24.6	38.3	38.6	5,000
HDCF24T-20TSW	1 1/2	1 1/4	2 1/8	24.6	32.0	38.6	5,000
HDCF24T-24TSW	1 1/2	1 1/2	2 1/8	24.6	38.3	38.6	5,000

Braze Connector

HDCF-MSW



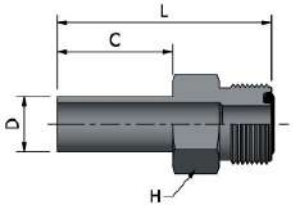


Metric

Part No.	End Size		H HEX (mm)	C (mm)	E Tube Socket (mm)	L (mm)	Dynamic Pressure (psig)
	Tube O.D (mm)	SW (mm)					
HDCF6M-6MSW	6	6	17	13.5	6.1	22.0	9,200
HDCF6M-8MSW	6	8	17	13.5	8.1	22.0	9,200
HDCF8M-10MSW	8,10	10	19	14.5	10.1	23.0	9,200
HDCF12M-12MSW	12	12	22	16.0	12.1	24.5	9,200
HDCF14M-16MSW	14,15,16	16	27	19.0	16.1	27.5	6,000
HDCF18M-20MSW	18,20	20	32	21.0	20.2	33.5	6,000
HDCF22M-25MSW	22,25	25	41	24.5	25.2	38.5	6,000
HDCF28M-30MSW	28,30,32	30	46	24.5	30.2	38.5	6,000
HDCF35M-38MSW	35,38	38	55	24.5	38.2	38.5	5,000

Tube Stub Connector
HDCW



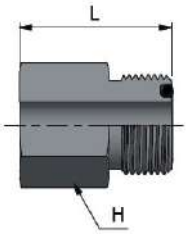


Fractional

Part No.	End Size Tube O.D (in.)	H HEX (in.)	C (mm)	D DIA (mm)	L (mm)	Dynamic Pressure (psig)
HDCW-4T	1/4	5/8	22.35	6.3	40.1	5,900
HDCW-6T	3/8	3/4	22.35	9.6	42.4	3,800
HDCW-8T	1/2	7/8	25.40	12.7	48.0	5,500
HDCW-12T	3/4	1 1/4	29.46	19.0	59.7	3,500
HDCW-16T	1	1 1/4	28.70	25.4	58.9	2,600
HDCW-16T61L	1	1 1/2	28.70	25.4	61.0	2,600

Plug
HDP





Fractional

Part No.	End Size Tube O.D (in.)	H HEX (mm)	L (mm)	Dynamic Pressure (psig)
HDP-4T	1/4	5/8	16.5	9,200
HDP-6T	3/8	3/4	19.0	9,200
HDP-8T	1/2	7/8	22.1	9,200
HDP-10T	5/8	1 1/16	25.9	6,000
HDP-12T	3/4	1 1/4	27.4	6,000
HDP-14T	7/8	1 3/8	27.9	6,000
HDP-16T	1	1 1/2	27.9	6,000
HDP-20T	1 1/4	1 3/4	27.9	6,000
HDP-24T	1 1/2	2 1/8	27.9	5,000
HDP-32T	2	2 3/4	35.6	3,000

Metric

Part No.	End Size Tube O.D (in.)	H HEX (mm)	L (mm)	Dynamic Pressure (psig)
HDP-6M	6	17	16.5	9,200
HDP-8M	8,10	19	19.0	9,200
HDP-12M	12	22	22.0	9,200
HDP-14M	14,15,16	27	26.0	6,000
HDP-18M	18,20	32	27.5	6,000
HDP-22M	22,25	41	28.0	6,000
HDP-28M	28,30,32	46	28.0	6,000
HDP-38M	38	55	28.0	5,000

Cap
HDC





Fractional

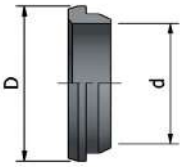
Part No.	End Size Tube O.D (in.)	Thread Size Swivel UN/UNF	H HEX (mm)	N (mm)	L (mm)	Dynamic Pressure (psig)
HDC-4T	1/4	9/16-18	11/16	8.9	16.8	9,200
HDC-6T	3/8	11/16-16	13/16	10.4	18.8	9,200
HDC-8T	1/2	13/16-16	15/16	11.9	22.1	9,200
HDC-10T	5/8	1-14	1 1/8	13.5	25.9	6,000
HDC-12T	3/4	1 3/16-12	1 3/8	15.0	28.4	6,000
HDC-14T	7/8	1 5/16-12	1 1/2	15.0	28.4	6,000
HDC-16T	1	1 7/16-12	1 5/8	16.0	29.5	6,000
HDC-20T	1 1/4	1 11/16-12	1 7/8	16.0	29.5	6,000
HDC-24T	1 1/2	2-12	2 1/4	16.0	29.5	5,000
HDC-32T	2	2 1/2-12	2 7/8	20.1	37.1	3,000

Metric

Part No.	End Size Tube O.D (mm)	Thread Size Swivel UN/UNF	H HEX (mm)	N (mm)	L (mm)	Dynamic Pressure (psig)
HDC-6M	6	9/16-18	17	9.0	16.8	9,200
HDC-8M	8,10	11/16-16	22	10.5	18.8	9,200
HDC-12M	12	13/16-16	24	12.0	22.0	9,200
HDC-14M	14,15,16	1-14	30	13.5	26.0	6,000
HDC-18M	18,20	1 3/16-12	36	15.0	28.6	6,000
HDC-22M	22,25	1 7/16-12	41	16.0	29.5	6,000
HDC-28M	28,30,32	1 11/16-12	50	16.0	29.5	6,000
HDC-35M	35,38	2-12	60	16.0	29.5	5,000

Sleeve
HDPS





Fractional

Part No.	End Size d (in.)	D (mm)	Dynamic Pressure (psig)
HDPS-4T	1/4	12.7	7.6
HDPS-6T	3/8	15.7	8.6
HDPS-8T	1/2	18.8	10.7
HDPS-10T	5/8	23.4	10.7
HDPS-12T	3/4	27.7	11.9
HDPS-16T	1	34.0	13.5
HDPS-20T	1 1/4	40.4	12.9
HDPS-24T	1 1/2	48.5	12.4
HDPS-32T	2	60.7	13.7

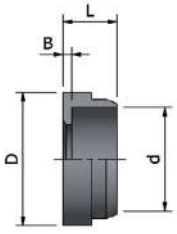
*Must be mechanically attached using Sleeve system.
*Additional-S not required, HDPS-6M is complete part number.

Metric

Part No.	End Size d (mm)	D (mm)	Dynamic Pressure (psig)
HDPS-6M	6	12.7	7.5
HDPS-8M	8	15.7	8.5
HDPS-10M	10	15.7	8.5
HDPS-12M	12	18.9	10.5
HDPS-14M	14	23.5	10.5
HDPS-15M	15	23.5	10.5
HDPS-16M	16	23.5	10.5
HDPS-18M	18	27.8	12.0
HDPS-20M	20	27.8	12.0
HDPS-25M	25	34.0	13.5
HDPS-30M	30	40.5	13.0
HDPS-32M	32	40.5	13.0
HDPS-35M	35	48.5	12.5
HDPS-38M	38	48.5	12.5

Braze Reducer Sleeve
HDS





Fractional

Part No.	End Size Tube O.D (in.)		D (mm)	d (mm)	B (mm)	L (mm)
HDS-4T	1/4	-	12.7	6.6	1.0	9.4
HDS-6T	3/8	-	15.7	9.6	1.0	9.4
HDS6T-4T	3/8	1/4	15.7	6.6	2.0	10.4
HDS-8T	1/2	-	19.0	12.9	1.0	9.4
HDS8T-4T	1/2	1/4	19.0	6.6	3.6	11.9
HDS8T-6T	1/2	3/8	19.0	9.6	3.6	11.9
HDS-10T	5/8	-	23.4	16.0	1.5	10.4
HDS10T-4T	5/8	1/4	23.4	6.6	5.1	13.5
HDS10T-6T	5/8	3/8	23.4	9.6	5.1	13.5
HDS10T-8T	5/8	1/2	23.4	12.9	5.1	13.5
HDS-12T	3/4	-	27.9	19.3	1.5	14.0
HDS12T-4T	3/4	1/4	27.9	6.6	6.1	14.5
HDS12T-6T	3/4	3/8	27.9	9.6	6.1	14.5
HDS12T-8T	3/4	1/2	27.9	12.9	6.1	14.5
HDS12T-10T	3/4	5/8	27.9	16.0	5.6	14.5
HDS12T-14T	3/4	7/8	27.9	22.3	1.5	16.5
HDS-14T	7/8	-	31.0	22.3	1.5	14.0
HDS-16T	1	-	34.3	25.6	1.5	15.5
HDS16T-8T	1	1/2	34.3	12.9	7.1	15.5
HDS16T-10T	1	5/8	34.3	16.0	6.6	15.5
HDS16T-12T	1	3/4	34.3	19.3	4.6	17.0
HDS16T-14T	1	7/8	34.3	22.3	4.6	17.0
HDS-20T	1 1/4	-	40.6	32.0	1.5	15.5
HDS20T-12T	1 1/4	3/4	40.6	19.3	7.1	19.6
HDS20T-16T	1 1/4	1	40.6	25.6	7.1	21.1
HDS-24T	1 1/2	-	48.5	38.3	1.5	15.5
HDS24T-16T	1 1/2	1	48.5	25.6	7.1	21.1
HDS24T-20T	1 1/2	1 1/4	48.5	32.0	7.1	21.1
HDS-32T	2	-	61.2	51.0	1.5	16.5

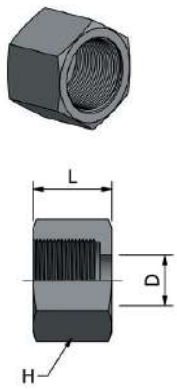
Unplated part, oil dipped for corrosion protection.
*D is for silver brazing.
**12-14 HDS must be assembled with 12-14 HDN.
***Size 14 and 32 are not included in SAE J1453.
• Uses HDBR silver braze rings.

Metric

Part No.	End Size Tube O.D (mm)	D (mm)	d (mm)	B (mm)	L (mm)
HDS-6M	6	12.8	6	1.0	9.5
HDS-8M	8	15.8	8	1.0	9.5
HDS-10M	10	15.8	10	1.0	9.5
HDS-12M	12	18.9	12	1.0	9.5
HDS-16M	16	23.5	16	1.5	10.5
HDS-20M	20	27.9	20	1.5	14.0
HDS-25M	25	34.2	25	1.5	15.5
HDS-30M	30	40.6	30	1.5	15.5
HDS-38M	38	48.5	38	1.5	15.5

Unplated part, oil dipped for corrosion protection.
*D is for silver brazing.
• Uses HDBR (metric) silver braze rings.
• Stainless steel part number example: HDS-10M.

Nut
HDN



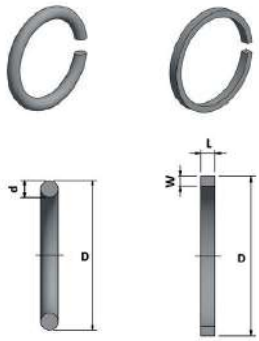
Fractional

Part No.	End Size Tube O.D (in.)	Thread Size UNF/UNF	H HEX (in.)	D (mm)	L (mm)
HDN-4T	1/4	9/16-18	11/16	10.4	15.0
HDN-5T	5/16	5/8-18	3/4	11.9	16.0
HDN-6T	3/8	11/16-16	13/16	13.5	17.0
HDN-8T	1/2	13/16-16	15/16	16.5	20.1
HDN-10T	5/8	1-14	1 1/8	21.1	23.9
HDN-12T	3/4	1 3/16-12	1 3/8	24.1	26.4
HDN12T-14T	7/8	1 3/16-12	1 3/8	25.1	30.5
HDN-14T	7/8	1 5/16-12	1 1/2	27.3	26.4
HDN-16T	1	1 7/16-12	1 5/8	29.2	27.4
HDN-20T	1 1/4	1 11/16-12	1 7/8	36.1	27.4
HDN-24T	1 1/2	2-12	2 1/4	43.9	27.4
HDN-32T	2	2 1/2-12	2 7/8	56.4	33.0

Metric

Part No.	End Size Tube O.D (mm)	Thread Size UNF/UNF	H HEX (mm)	D (mm)	L (mm)
HDN-6M	6	9/16-18	17	10.5	15.0
HDN-8M	8,10	11/16-16	22	13.5	17.5
HDN-12M	12	13/16-16	24	16.6	20.0
HDN-14M	14,15,16	1-14	30	21.1	24.0
HDN-18M	18,20	1 3/16-12	36	24.1	26.5
HDN-22M	22,25	17/16-12	41	29.1	27.5
HDN-28M	28,30,32	1 11/16-12	50	36.0	27.5
HDN-35M	35,38	2-12	60	44.0	27.5

Braze Ring
HDBR



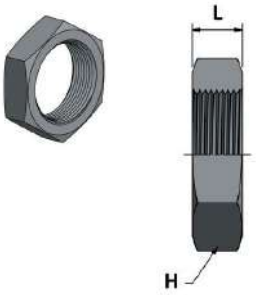
Fractional

Part No.	End Size Tube O.D (in.)	d (mm)	D (mm)	w (mm)	L (mm)
HDBR-4T	1/4	1.3	6.6	-	-
HDBR-6T	3/8	-	9.9	1.8	0.8
HDBR-8T	1/2	-	13.1	1.8	0.8
HDBR-10T	5/8	-	16.3	1.8	0.8
HDBR-12T	3/4	-	19.4	2.0	1.0
HDBR-14T	7/8	1.5	22.6	-	-
HDBR-16T	1	-	25.8	2.0	1.0
HDBR-20T	1 1/4	-	32.1	2.0	1.0
HDBR-24T	1 1/2	-	38.5	2.0	1.0
HDBR-32T	2	2.3	51.2	-	-

Metric

Part No.	End Size Tube O.D (mm)	D (mm)	L (mm)
HDBR-6M	6	6.4	1.2
HDBR-8M	8	8.4	1.2
HDBR-10M	10	10.4	1.2
HDBR-12M	12	12.4	1.2
HDBR-16M	16	16.4	1.2
HDBR-20M	20	20.4	1.6
HDBR-25M	25	25.4	1.6
HDBR-30M	30	30.4	1.6
HDBR-38M	38	38.4	1.6

Bulkhead Locknut
HDBN



Fractional

Part No.	End Size Tube O.D (in.)	Thread Size UNF/UNF	H HEX (in.)	L (mm)
HDBN-4T	1/4	9/16-18	13/16	6.9
HDBN-6T	3/8	11/16-16	1	7.9
HDBN-8T	1/2	13/16-16	1 1/8	8.9
HDBN-10T	5/8	1-14	1 5/16	10.4
HDBN-12T	3/4	1 3/16-12	1 1/2	10.4
HDBN-14T	7/8	1 5/16-12	1 5/8	10.4
HDBN-16T	1	1 7/16-12	1 3/4	10.4
HDBN-20T	1 1/4	1 11/16-12	2	10.4
HDBN-24T	1 1/2	2-12	2 3/8	10.4

Metric

Part No.	End Size Tube O.D (mm)	Thread Size UNF/UNF	H HEX (mm)	L (mm)
HDBN-6M	6	9/16-18	22	7.0
HDBN-8M	8,10	11/16-16	27	8.0
HDBN-12M	12	13/16-16	30	9.0
HDBN-14M	14,15,16	1-14	36	10.5
HDBN-18M	18,20	1 3/16-12	41	10.5
HDBN-22M	22,25	1 7/16-12	46	10.5
HDBN-28M	28,30,32	1 11/16-12	50	10.5
HDBN-35M	35,38	2-12	60	10.5

DK-LOK

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IDK-LOK

Z Series

Rev. 01-01
Aug. 2023

Z series Dk-Lok

Rev.01-01
Aug.2023





Dk-Lok Z Series single ferrule tube fitting is designed and manufactured to the highest quality standards. This fitting includes single ferrule with standard Dk-Lok fitting body and nut. To help identify Dk-Lok Z series from Dk-Lok Tube fitting, nut is black Molybdenum Disulfide (MoS2) coated.

Material

Dk-Lok Z Series single ferrule tube fitting is manufactured in stainless steel 316.

Pressure and Temperature Ratings

Dk-Lok Z Series fittings are identical to Dk-Lok Tube Fittings in pressure and temperature ratings.

Dimensions

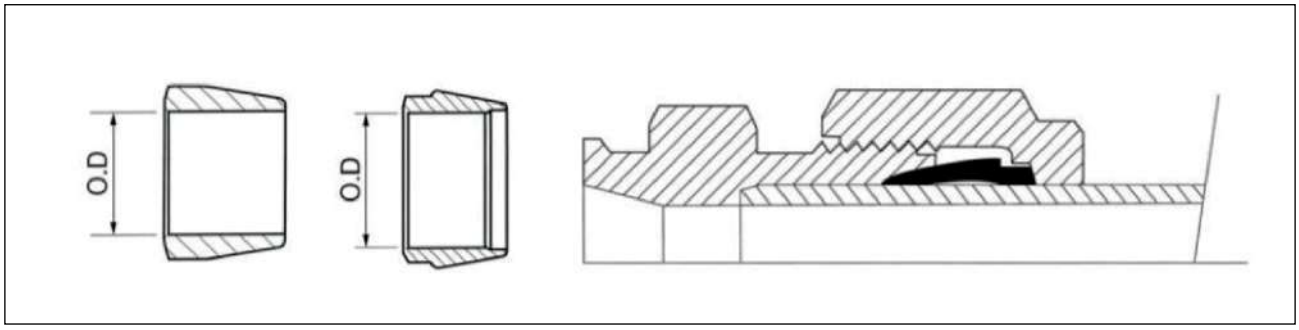
Dk-Lok Z Series fittings are dimensionally identical to Dk-Lok Tube Fittings.

Ordering Information

To order Z series, insert Z in the standard Dk-Lok tube fitting part number.
Examples: DU**Z**-8-S, DMC**Z**8-8N-S, DN**Z**-4-S

Z Series Ferrule

Z series Ferrule	
Part No.	Tube O.D.
DFZ-4	1/4
DFZ-6	3/8
DFZ-8	1/2
DFZ-12	3/4
DFZ-16	1



All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

DK-LOK

경상남도 김해시 주촌면 골든루트로 129번길 7 50969
7, Golden root-ro 129beon-gil, Juchon-myeon, Gimhae-si, Gyeongsangnam-do, South Korea. 50969
Tel. +82-55-338-0114 Fax. +82-55-901-0141 **www.dklok.com**

IDK-LOK

DO Series
O-Ring Face Seal Fittings

Rev. 01-01
Aug. 2023

Do Series
Female Nut Blind Nut



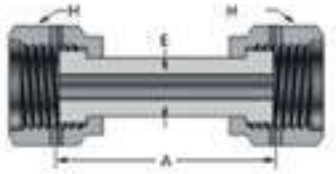
Part No.	DO Size	Dimensions, in. (mm)	
		A	H
DON-4	1/4	0.66 (16.8)	11/16
DON-8	1/2	0.69 (17.5)	1
DON-12	3/4	0.81 (20.6)	1 1/2
DON-16	1	0.81 (20.6)	1 3/4

Do Series
Blind Nut



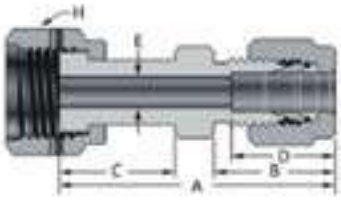
Part No.	DO Size	Dimensions, in. (mm)	
		A	H
DONB-4	1/4	0.44 (11.2)	11/16
DONB-8	1/2	0.56 (14.2)	1
DONB-12	3/4	0.75 (19.1)	1 1/2
DONB-16	1	0.81 (20.6)	1 3/4

Do Series
Glands Swivel Union



Part No.	DO Size	Dimensions, in. (mm)			Pressure Rating Psig (bar)
		A	E	H	
DOGU-4	1/4	1.42 (36.1)	0.18 (4.6)	11/16	10 200 (702)
DOGU-8	1/2	1.61 (40.9)	0.40 (10.2)	1	5 800 (399)

Do Series
Dk-Lok Tube Fitting Connector

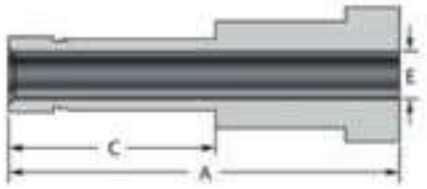


Part No.	DO Size	Tube OD	Dimensions, in. (mm)						Pressure Rating Psig (bar)
			A	B	C	D	E	H	
DOGDC 4-4T	1/4	1/4	1.74 (44.2)	0.70 (17.8)	0.77 (19.6)	0.60 (15.2	0.18 (4.6)	11/16	10 200 (702)
DOGDC 8-6T	1/2	3/8	1.87 (47.5)	0.76 (19.3)	0.81 (20.6)	0.66 (16.8)	0.28 (7.1)	1	5 800 (399)
DOGDC 8-8T	1/2	1/2	2.01 (51.1)	0.87 (22.1)		0.40 (22.9)	0.40 (10.2)		
DOGDC 12-12T	3/4	3/4	2.14 (54.4)	0.87 (22.1)	0.94 (23.9)	0.96 (24.4)	0.62 (15.7)	1 1/2	4 000 (275)
DOGDC 16-16T	1	1	2.45 (62.2)	1.04 (26.4)	0.98 (24.9)	1.23 (31.2)	0.87 (22.1)	1 3/4	3 000 (206)

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Do Series

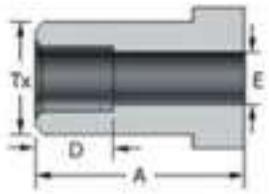
Tube Adapter Gland



Part No	DO Size	Tube OD	Dimensions, in. (mm)			Pressure Rating Psig (bar)
			A	C	E	
DOGTA 4-4T	1/4	1/4	1.31 (33.3)	0.64 (16.3)	0.18 (4.6)	10 200 (702)
DOGTA 8-6T	1/2	3/8	1.38 (35.1)	0.70 (17.8)	0.27 (6.8)	6 500 (447)
DOGTA 8-8T	1/2	1/2	1.62 (41.1)	0.96 (24.4)	0.37 (9.3)	6 700 (461)
DOGTA 12-12T	3/4	3/4	1.80 (45.7)	1.02 (25.9)	0.58 (14.7)	5 800 (399)
DOGTA 16-16T	1	1	2.05 (52.1)	1.30 (33.0)	0.80 (20.3)	4 700 (323)

Do Series

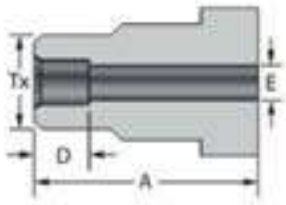
Weld Tube Socket Weld Gland



Part No	DO Size	Tube OD	Dimensions, in. (mm)				Pressure Rating Psig (bar)
			A	D	E	Tx	
DOGTSW 2-2T	1/8	1/8	0.77 (19.6)	0.10 (2.5)	0.09 (2.3)	0.38 (9.7)	15 400 (1061)
DOGTSW 4-4T	1/4	1/4	0.77 (19.6)	0.28 (7.1)	0.18 (4.6)	0.38 (9.7)	6 800 (468)
DOGTSW 6-6T	3/8	3/8	0.81 (20.6)	0.31 (7.9)	0.28 (7.1)	0.60 (15.2)	8 100 (558)
DOGTSW 8-8T	1/2	1/2	0.81 (20.6)	0.38 (9.7)	0.40 (10.2)	0.60 (15.2)	3 000 (206)
DOGTSW 12-12T	3/4	3/4	0.94 (23.9)	0.44 (11.2)	0.62 (15.7)	0.92 (23.4)	3 700 (255)
DOGTSW 16-16T	1	1	0.98 (24.9)	0.62 (15.7)	0.87 (22.1)	1.19 (30.2)	3 000 (206)

Do Series

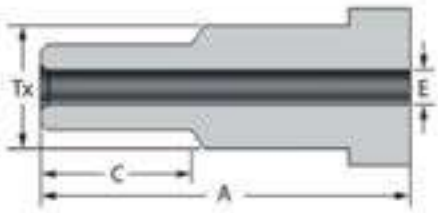
Tube Socket Weld Reducing Gland



Part No	DO Size	Tube OD	Dimensions, in. (mm)				Pressure Rating Psig (bar)
			A	D	E	Tx	
DOGRTSW 4-2T	1/4	1/8	0.77 (19.6)	0.10 (2.5)	0.09 (2.3)	0.29 (7.4)	12 600 (868)
DOGRTSW 8-4T	1/2	1/4	0.81 (20.6)	0.28 (7.1)	0.18 (4.6)	0.48 (12.2)	10 700 (737)

Do Series

MaleTube Weld Gland



Part No	DO Size	Tube OD	Dimensions, in. (mm)				Pressure Rating Psig (bar)
			A	D	E	Tx	
DOGMTW 4-2T	1/4	1/8	0.77 (19.6)	0.10 (2.5)	0.09 (2.3)	0.38 (9.7)	15 400 (1061)
DOGMTW4-4T		1/4	0.77 (19.6)	0.28 (7.1)	0.18 (4.6)	0.38 (9.7)	6 800 (468)
DOGMTW 8-4T	1/2	1/4	0.81 (20.6)	0.31 (7.9)	0.28 (7.1)	0.60 (15.2)	8 100 (558)
DOGMTW 8-6T		3/8	0.81 (20.6)	0.38 (9.7)	0.40 (10.2)	0.60 (15.2)	3 000 (206)
DOGMTW 8-8T		1/2	0.98 (24.9)	0.62 (15.7)	0.87 (22.1)	1.19 (30.2)	3 000 (206)

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Do Series

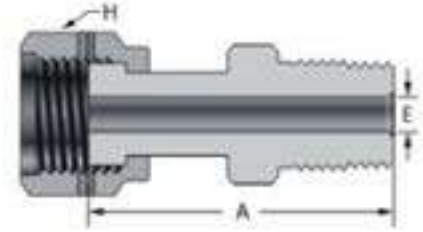
Automatic Tube Weld Gland



Part No	DO Size	Tube OD	Dimensions, in. (mm)						Pressure Rating Psig (bar)
			A	C	D	E	Tx	Wall Thickness	
DOGATW 4-4T	1/4	1/4	1.12 (28.4)	0.78 (19.8)	0.02 (0.51)	0.18 (4.6)	0.29 (7.4)	0.035	5 100 (351)
DOGATW 8-6T	1/2	3/8	1.13 (28.7)	0.79 (20.0)	0.03 (0.76)	0.31 (7.9)	0.41 (10.4)	0.035	3 300 (227)
DOGATW 8-8T	1/2	1/2	1.14 (29.0)	0.80 (20.3)	0.04 (1.0)	0.40 (10.2)	0.55 (14.0)	0.049	3 500 (241)
DOGATW 12-12T	3/4	3/4	1.20 (30.5)	0.80 (20.3)	0.04 (1.0)	0.65 (16.5)	0.80 (20.3)	0.049	2 200 (151)
DOGATW 16-16T	1	1	1.41 (35.8)	1.00 (25.4)	0.04 (1.0)	0.87 (22.1)	1.06 (26.9)	0.065	2 200 (151)

Do Series

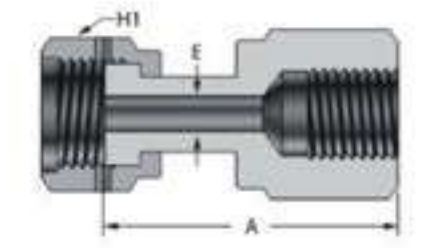
Glands Male Connector



Part No	DO Size	Tube OD	Dimensions, in. (mm)			Pressure Rating Psig (bar)
			A	E	H	
DOGWMC 4-4N	1/4	1/4	1.59 (40.4)	0.18 (4.6)	11/16	9 800 (675)
DOGWMC 8-6N	1/2	3/8	1.67 (42.4)	0.40 (10.2)	1	5 600 (385)
DOGWMC 8-8N	1/2	1/2	1.87 (47.5)	0.40 (10.2)	1	5 600 (385)
DOGWMC 12-12N	3/4	3/4	2.03 (51.6)	0.62 (15.7)	1 1/2	3 900 (268)
DOGWMC 16-16N	1	1	2.36 (59.9)	0.87 (22.1)	1 3/4	2 900(199)

Do Series

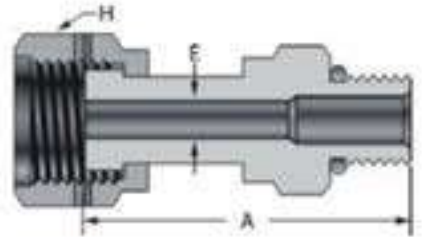
Female Connector



Part No	DO Size	NPT Size	Dimensions, in. (mm)				Pressure Rating Psig (bar)
			A	E	H	H1	
DOGFC 4-4N	1/4	1/4	1.57 (39.9)	0.18 (4.6)	3/4	11/16	6 600 (454)
DOGFC 8-6N	1/2	3/8	1.73 (43.9)	0.40 (10.2)	7/8	1	5 300 (365)
DOGFC 8-8N	1/2	1/2	1.96 (49.8)	0.40 (10.2)	1 1/16	1	4 900 (337)
DOGFC 12-12N	3/4	3/4	2.12 (53.8)	0.62 (15.7)	1 5/16	1 1/2	4 000 (275)
DOGFC 16-16N	1	1	2.29 (58.2)	0.87 (22.1)	1 5/8	1 3/4	3 000 (206)

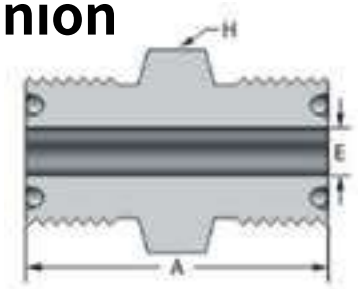
All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Do Series
MaleSAE/MS Connector



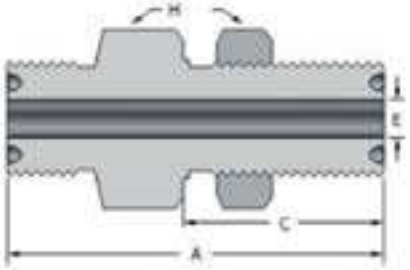
Part No	DO Size	Thread Size	Dimensions, in. (mm)			Pressure Rating Psig (bar)
			A	E	H	
DOGMCS 4-4U	1/4	7/16-20	1.54 (39.1)	0.18 (4.6)	11/16	4 500 (310)
DOGMCS 8-6U	1/2	9/16-18	1.64 (41.7)	0.40 (10.2)	1	4 500 (310)
DOGMCS 8-8U	1/2	3/4-16	1.71 (43.4)	0.40 (10.2)	1	4 500 (310)
DOGMCS 12-12U	3/4	1 1/16-12	2.07 (52.6)	0.62 (15.7)	1 1/2	3 600 (248)
DOGMCS 16-16U	1	1 5/16-12	2.17 (55.1)	0.87 (22.1)	1 3/4	2 900(199)

Do Series
Bodies Union



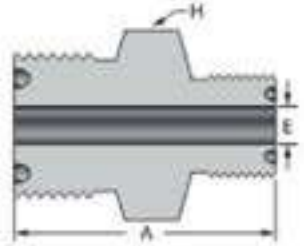
Part No	DO Size	Dimensions, in. (mm)			Pressure Rating Psig (bar)
		A	E	H	
DOBU-4	1/4	1.25 (31.8)	0.18 (4.6)	5/8	14 300 (985)
DOBU-8	1/2	1.50 (38.1)	0.40(10.2)	15/16	11 100(764)

Do Series
Bulkhead Union



Part No	DO Size	Dimensions, in. (mm)						Pressure Rating Psig (bar)
		A	C	E	H	Panel Hole Drill Size	Wall Thickness	
DOBUB-4	1/4	1.88 (47.8)	1.06 (26.9)	0.18 (4.6)	3/4	37/64	0.36 (9.1)	14 300 (985)
DOBUB-8	1/2	2.09 (53.1)	1.19 (30.2)	0.40 (10.2)	1 1/16	57/64	0.40 (10.2)	11 100 (764)

Do Series
Reducing Union



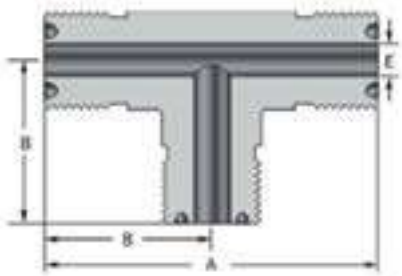
Part No	DO Size	DO Size	Dimensions, in. (mm)			Pressure Rating Psig (bar)
			A	E	H	
DOBUR 8-4	1/2	1/4	1.43 (36.3)	0.18 (4.6)	15/16	11 100 (764)

Do Series
Elbow



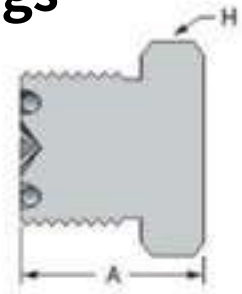
Part No	DO Size	Dimensions, in. (mm)		Pressure Rating Psig (bar)
		A	E	
DOBL-4	1/4	0.96 (24.4)	0.18 (4.6)	14 300 (985)
DOBL-8	1/2	1.26 (32.0)	0.40 (10.2)	11 100
DOBL-12	3/4	1.48 (37.6)	0.62 (15.7)	10 900 (751)
DOBL-16	1	1.56 (39.6)	0.87 (22.1)	8 800 (606)

Do Series
Tee



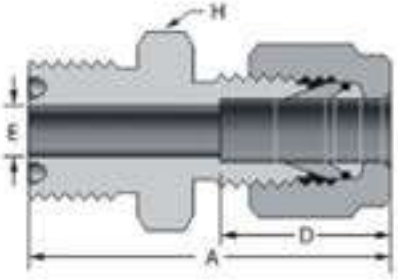
Part No	DO Size	Dimensions, in. (mm)			Pressure Rating Psig (bar)
		A	B	E	
DOBT-4	1/4	1.92 (48.8)	0.96 (24.4)	0.18 (4.6)	14 300 (985)
DOBT-8	1/2	2.52 (64.0)	1.26 (32.0)	0.40 (10.2)	11 100 (764)
DOBT-12	3/4	2.96 (75.2)	1.48 (37.6)	0.62 (15.7)	10 900 (751)
DOBT-16	1	3.12 (79.2)	1.56 (39.6)	0.87 (22.1)	8 800 (606)

Do Series
Bodies Plugs



Part No	DO Size	Dimensions, in. (mm)	
		A	H
DOBB-4	1/4	0.77 (19.6)	5/8
DOBB-8	1/2	0.89 (22.6)	15/16
DOBB-12	3/4	0.99 (25.1)	1 5/16
DOBB-16	1	1.02 (25.9)	1 5/8

Do Series
Dk-Lok Tube Fitting Connector

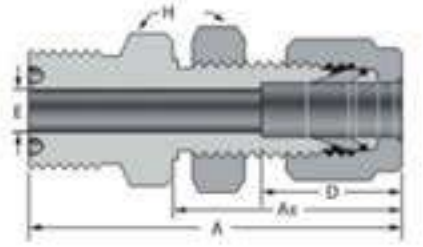


Part No	DO Size	Tube OD	Dimensions, in. (mm)				Pressure Rating Psig (bar)
			A	D	E	H	
DOBDMC 4-2T	1/4	1/8	1.38 (35.1)	0.51 (13.0)	0.09 (2.3)	5/8	10 900 (751)
DOBDMC 4-4T	1/4	1/4	1.47 (37.3)	0.60 (15.2)	0.18 (4.6)	5/8	10 200 (702)
DOBDMC 8-6T	1/2	3/8	1.65 (41.9)	0.66 (16.8)	0.28 (7.1)	15/16	6 500 (447)
DOBDMC 8-8T	1/2	1/2	1.78 (45.2)	0.90 (22.9)	0.40 (10.2)	15/16	6 700 (461)
DOBDMC 12-12T	3/4	3/4	1.86 (47.2)	0.96 (24.4)	0.62 (15.7)	1 5/16	5 800 (399)
DOBDMC 16-16T	1	1	2.06 (52.3)	1.23 (31.2)	0.87 (22.1)	1 5/8	4 700 (323)

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Do Series

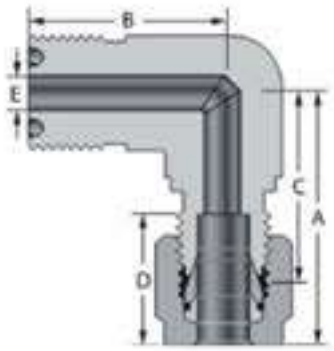
Dk-Lok Tube Fitting Bulkhead Connector



Part No	DO Size	Tube OD	Dimensions, in. (mm)							Pressure Rating Psig (bar)
			A	Ax	D	E	H	Pane Hole Drill Size	Max Panel Thick-ness	
DOBDBMC 4-4T	1/4	1/4	2.10 (53.3)	1.32 (33.5)	0.60 (15.2)	0.18 (4.6)	5/8	29/64	0.40 (10.2)	10 200 (702)
DOBDBMC 8-6T	1/2	3/8	2.34 (59.4)	1.45 (36.8)	0.66 (16.8)	0.28 (7.1)	15/16	37/64	0.44 (11.2)	6 500 (447)
DOBDBMC 8-8T	1/2	1/2	2.55 (64.8)	1.65 (41.9)	0.90 (22.9)	0.40 (10.2)	15/16	49/64	0.50 (12.7)	6 700 (461)
DOBDBMC 12-12T	3/4	3/4	2.86 (72.6)	1.87 (47.5)	0.96 (24.4)	0.62 (15.7)	1 5/16	1 1/64	0.66 (16.8)	5 800 (399)
DOBDBMC 16-16T	1	1	3.29 (83.6)	2.26 (57.4)	1.23 (31.2)	0.87 (22.1)	1 5/8	1 21/64	0.75 (19.1)	4 700 (323)

Do Series

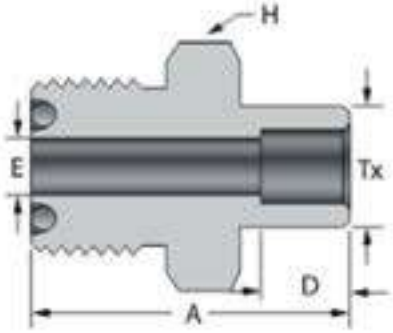
Dk-Lok Tube Fitting Elbow



Part No	DO Size	Tube OD	Dimensions, in. (mm)					Pressure Rating Psig (bar)
			A	B	C	D	E	
DOBLD 4-4T	1/4	1/4	1.19 (30.2)	0.96 (24.4)	0.90 (22.9)	0.60 (15.2)	0.18 (4.6)	10 200 (702)
DOBLD 8-6T	1/2	3/8	1.39 (35.3)	1.26 (32.0)	1.10 (27.9)	0.66 (16.8)	0.28 (7.1)	6 500 (447)
DOBLD 8-8T	1/2	1/2	1.50 (38.1)	1.26 (32.0)	1.10 (27.9)	0.90 (22.9)	0.40 (10.2)	6 700 (461)
DOBLD 12-12T	3/4	3/4	1.80 (45.7)	1.48 (37.6)	1.40 (35.6)	0.96 (24.4)	0.62 (15.7)	5 800 (399)
DOBLD 16-16T	1	1	2.04 (51.8)	1.56 (39.6)	1.56 (31.2)	1.23 (31.2)	0.87 (22.1)	4 700 (323)

Do Series

Bodies Tube Socket Weld Connector

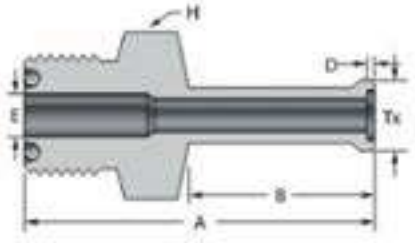


Part No	DO Size	Tube OD	Dimensions, in. (mm)					Pressure Rating Psig (bar)
			A	D	E	H	Tx	
DOBCSW 2-2T	1/8	1/8	0.88 (22.4)	0.10 (2.5)	0.09 (2.3)	5/8	0.29 (7.4)	12 600 (868)
DOBCSW 4-4T	1/4	1/4	1.09 (27.7)	0.28 (7.1)	0.18 (4.6)	5/8	0.38 (9.7)	6 800 (468)
DOBCSW 6-6T	3/8	3/8	12.8 (32.5)	0.31 (7.9)	0.28 (7.1)	15/16	0.60 (15.2)	8 100 (558)
DOBCSW 8-8T	1/2	1/2	1.34 (34.0)	0.38 (9.7)	0.40 (10.2)	15/16	0.60 (15.2)	3 000 (206)
DOBCSW 12-12T	3/4	3/4	1.50 (38.1)	0.44 (11.2)	0.62 (15.7)	1 5/16	0.92 (23.4)	3 700 (255)
DOBCSW 16-16T	1	1	1.72 (43.7)	0.62 (15.7)	0.87 (22.1)	1 5/8	1.19 (30.2)	3 000 (206)

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Do Series

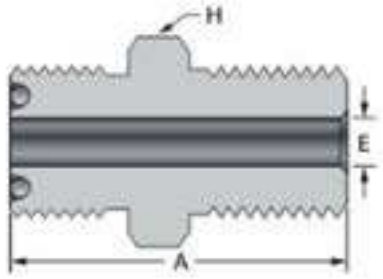
Automatic Tube Weld Connector



Part No	DO Size	Tube OD	Dimensions, in. (mm)							Pressure Rating Psig (bar)
			A	B	D	E	H	Tx	Wall	
DOBCAW 4-4T	1/4	1/4	1.59 (40.4)	0.78 (19.8)	0.02 (0.5)	0.18 (4.6)	5/8	0.29 (7.4)	0.035	5 100 (351)
DOBCAW 6-6T	3/8	3/8	1.74 (44.2)	0.79 (20.0)	0.03 (0.8)	0.31 (7.9)	15/16	0.41 (10.4)	0.035	3 300 (227)
DOBCAW 8-8T	1/2	1/2	1.75 (44.4)	0.80 (20.3)	0.04 (1.0)	0.40 (10.2)	15/16	0.55 (14.0)	0.049	3 500 (241)
DOBCAW 12-12T	3/4	3/4	1.78 (45.2)	0.80 (20.3)	0.04 (1.0)	0.65 (16.5)	1 5/16	0.80 (20.3)	0.049	2 200 (151)
DOBCAW 16-16T	1	1	2.03 (51.6)	1.00 (25.4)	0.04 (1.0)	0.87 (22.1)	1 5/8	1.06 (26.9)	0.065	2 200 (151)

Do Series

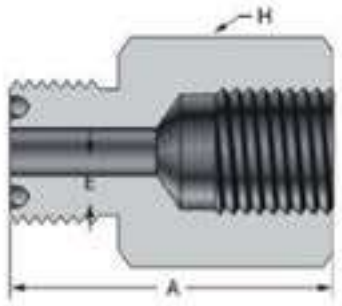
Male Connector



Part No	DO Size	Male NPT	Dimensions, in. (mm)			Pressure Rating Psig (bar)
			A	E	H	
DOBMC 4-2N	1/4	1/8	1.16 (29.5)	0.18 (4.6)	5/8	10 000 (689)
DOBMC 4-4N	1/4	1/4	1.34 (34.0)	0.18 (4.6)	5/8	13 400 (923)
DOBMC 8-6N	1/2	3/8	1.46 (37.1)	0.38 (9.7)	15/16	7 800 (537)
DOBMC 8-8N	1/2	1/2	1.65 (41.9)	0.40 (10.2)	15/16	10 000 (689)
DOBMC 12-12N	3/4	3/4	1.75 (44.4)	0.62 (15.7)	1 5/16	7 300 (502)
DOBMC 16-16N	1	1	1.97 (50.0)	0.87 (22.1)	1 5/8	5 300 (365)

Do Series

Bodies Female Connector

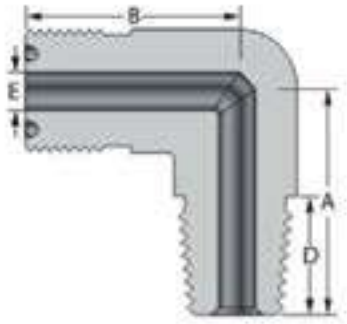


Part No	DO Size	Male NPT	Dimensions, in. (mm)			Pressure Rating Psig (bar)
			A	E	H	
DOBFC 4-2N	1/4	1/8	1.25 (31.8)	0.18 (4.6)	5/8	8 400 (578)
DOBFC 4-4N	1/4	1/4	1.39 (35.3)	0.18 (4.6)	3/4	6 600 (454)
DOBFC 8-6N	1/2	3/8	1.57 (39.9)	0.40 (10.2)	15/16	6 600 (454)
DOBFC 8-8N	1/2	1/2	1.77 (45.0)	0.40 (10.2)	1 1/16	4 900 (337)
DOBFC 12-12N	3/4	3/4	1.93 (49.0)	0.62 (15.7)	1 5/16	4 600 (316)
DOBFC 16-16N	1	1	2.02 (51.3)	0.87 (22.1)	1 5/8	4 400 (303)

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Do Series

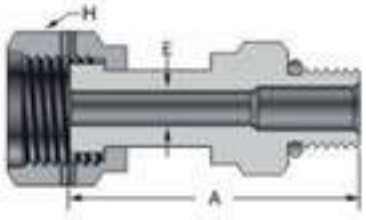
Male Elbow



Part No	DO Size	Male NPT	Dimensions, in. (mm)				Pressure Rating Psig (bar)
			A	B	D	E	
DOBLM 4-2N	1/4	1/8	0.87 (22.1)	0.96 (24.4)	0.38 (9.7)	0.18 (4.6)	10 000 (689)
DOBLM 4-4N	1/4	1/4	1.05 (26.7)	0.96 (24.4)	0.56 (14.2)	0.18 (4.6)	8 000 (551)
DOBLM 8-6N	1/2	3/8	1.26 (32.0)	1.26 (32.0)	0.56 (14.2)	0.38 (9.7)	7 800 (537)
DOBLM 8-8N	1/2	1/2	1.45 (36.8)	1.26 (32.0)	0.75 (19.1)	0.40 (10.2)	7 700 (530)
DOBLM 12-12N	3/4	3/4	1.67 (42.4)	1.48 (37.6)	0.75 (19.1)	0.62 (15.7)	7 300 (502)
DOBLM 16-16N	1	1	1.94 (49.3)	1.56 (39.6)	0.94 (23.9)	0.87 (22.1)	5 300 (365)

Do Series

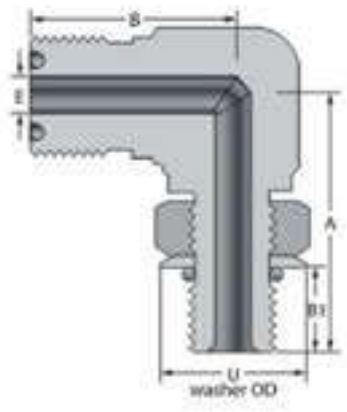
MaleSAE/MS Connector



Part No	DO Size	Straight Thread	Dimensions, in. (mm)				Pressure Rating Psig (bar)
			A	C	E	H	
DOBMCS 4-4U	1/4	7/16-20	1.24 (31.5)	0.36 (9.1)	0.18 (4.6)	11/16	4 500 (310)
DOBMCS 4-6U	1/4	9/16-18	1.17 (29.7)	0.39 (9.9)	0.18 (4.6)	11/16	
DOBMCS 8-4U	1/2	7/16-20	1.36 (34.5)	0.36 (9.1)	0.18 (4.6)	1 1/2	4 500 (310)
DOBMCS 8-6U	1/2	9/16-18	1.39 (35.3)	0.39 (9.9)	0.30 (7.7)	1 1/2	
DOBMCS 8-8U	1/2	3/4-16	1.47 (37.3)	0.40 (11.2)	0.40 (10.2)	1	
DOBMCS 12-12U	3/4	1 1/16-12	1.73 (43.9)	0.59 (15.0)	0.62 (15.7)	1 3/8	3 600 (248)
DOBMCS 16-16U	1	1 5/16-12	1.79 (45.5)	0.59 (15.0)	0.85 (21.6)	1 5/8	2 900 (199)

Do Series

MaleSAE/MS Positionable Elbow



Part No	DO Size	Straight Thread	Dimensions, in. (mm)					Pressure Rating Psig (bar)
			A	B	B1	E	U	
DOBLS 4-4UP	1/4	7/16-20	1.19 (30.2)	0.96 (24.4)	0.39 (9.9)	0.19 (4.6)	0.65 (16.5)	4 500 (310)
DOBLS 8-6UP	1/2	9/16-18	1.54 (39.1)	1.33 (33.8)	0.44 (11.2)	0.30 (7.6)	0.79 (20.1)	3 600 (248)
DOBLS 8-8UP	1/2	3/4-16	1.65 (41.9)	1.33 (33.8)	0.50 (12.7)	0.40 (10.2)	1.01 (25.7)	
DOBLS 12-12UP	3/4	1 1/16-12	2.13 (54.1)	1.53 (38.9)	0.66 (16.8)	0.62 (15.7)	1.44 (36.6)	2 900 (199)
DOBLS 16-16UP	1	1 5/16-12	2.31 (58.7)	1.72 (43.7)	0.66 (16.8)	0.87 (22.1)	1.73 (43.9)	2 300 (158)

DK-LOK

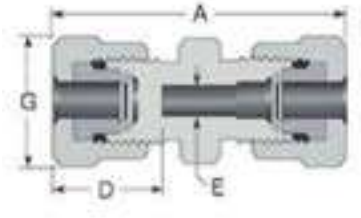
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7, Golden root-ro 129beon-gil, Juchon-myeon, Gimhae-si, Gyeongsangnam-do, South Korea. 50969
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Ultra-Torr Vacuum Fittings

Rev. 01-01
Aug. 2023

Ultra-Torr Vacuum Fittings

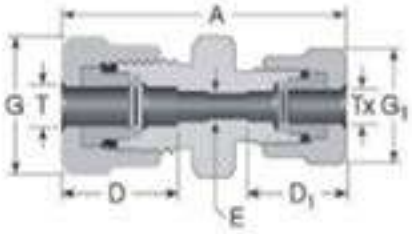
Union



Part No.	O.D (in.)	Dimensions, in. (mm)			
		A	D	E	G
DKUTU-1-S	1/16	1.23(21.2)	0.43(10.9)	0.05(1.3)	3/8
DKUTU-2-S	1/8	1.40(35.6)	0.43(10.9)	0.09(2.3)	9/16
DKUTU-4-S	1/4	1.63(41.4)	0.62(15.7)	0.18(4.6)	11/16
DKUTU-6-S	3/8	1.81(46.0)	0.66(16.8)	0.28(7.1)	13/16
DKUTU-8-S	1/2	1.84(46.7)	0.80(20.3)	0.40(10.2)	15/16
DKUTU-10-S	5/8	1.84(46.7)	0.84(21.3)	0.50(12.7)	1 1/8
DKUTU-12-S	3/4	2.05(52.1)	0.94(23.9)	0.62(15.7)	1 1/4
DKUTU-16-S	1	2.15(54.6)	0.94(23.9)	0.87(22.1)	1 9/16
DKUTU-24-S	1 1/2	2.27(57.6)	0.94(23.9)	1.38(35.1)	2 1/16

Ultra-Torr Vacuum Fittings

Reducing Union



Part No.	O.D (in.)		Dimensions, in. (mm)					
	T	Tx	A	D	D1	E	G	G1
DKUTRU6-4-S	3/8	1/4	1.72(43.7)	0.66(16.8)	0.62(15.7)	0.18(4.6)	13/16	11/16
DKUTRU8-4-S	1/2		1.40(35.6)	0.43(10.9)			15/16	

Ultra-Torr Vacuum Fittings

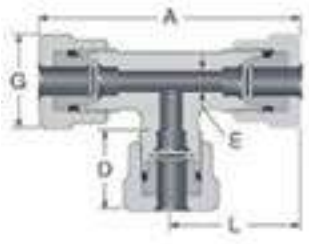
Union Elbow



Part No.	O.D (in.)	Dimensions, in. (mm)			
		D	E	G	L
DKUTL-4-S	1/4	0.62(15.7)	0.18(4.6)	11/16	1.14(29.0)
DKUTL-6-S	3/8	0.66(16.8)	0.28(7.1)	13/16	1.36(34.5)
DKUTL-8-S	1/2	0.80(20.3)	0.40(10.2)	15/16	1.36(34.5)

Ultra-Torr Vacuum Fittings

Union Tee

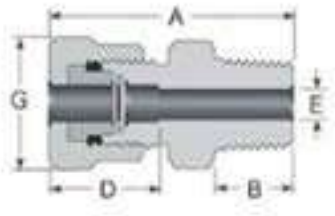


Part No.	O.D (in.)	Dimensions, in. (mm)				
		A	D	E	G	L
DKUTT-2-S	1/8	2.12(53.8)	0.43(10.9)	0.09(2.3)	9/16	1.06(26.9)
DKUTT-4-S	1/4	2.30(58.4)	0.62(15.7)	0.18(4.6)	11/16	1.15(29.2)
DKUTT-6-S	3/8	2.72(69.1)	0.66(16.8)	0.28(7.1)	13/16	1.36(34.5)
DKUTT-8-S	1/2	2.72(69.1)	0.80(20.3)	0.40(10.2)	15/16	1.36(34.5)
DKUTT-12-S	3/4	3.30(83.8)	0.94(23.9)	0.62(15.7)	1 1/4	1.65(41.9)
DKUTT-16-S	1	3.64(92.4)	0.94(23.9)	0.87(22.1)	1 9/16	1.82(46.2)

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Ultra-Torr Vacuum Fittings

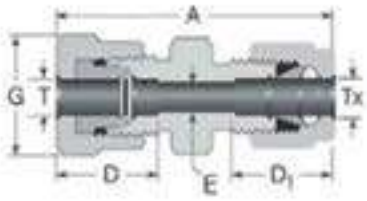
Male Connector



Part No.	O.D (in.)	NPT (in.)	Dimensions, in. (mm)				
			A	B	D	E	G
DKUTMC1-2N-S	1/16	1/8	1.12(28.4)	0.38(9.6)	0.43(10.9)	0.05(1.3)	3/8
DKUTMC2-2N-S	1/8	1/8	1.22(31.0)	0.38(9.6)	0.43(10.9)	0.09(2.3)	9/16
DKUTMC4-2N-S	1/4	1/8	1.35(34.3)	0.38(9.6)	0.62(15.7)	0.18(4.6)	11/16
DKUTMC4-4N-S	1/4	1/4	1.53(38.9)	0.56(14.2)	0.62(15.7)	0.18(4.6)	11/16
DKUTMC6-2N-S	3/8	1/8	1.44(36.6)	0.38(9.6)	0.66(16.8)	0.18(4.6)	13/16
DKUTMC6-4N-S	3/8	1/4	1.62(41.1)	0.56(14.2)	0.66(16.8)	0.28(7.1)	13/16
DKUTMC8-6N-S	1/2	3/8	1.65(41.9)	0.56(14.2)	0.80(20.3)	0.40(10.2)	15/16
DKUTMC8-8N-S	1/2	1/2	1.84(46.7)	0.75(19.1)	0.80(20.3)	0.40(10.2)	15/16
DKUTMC12-12N-S	3/4	3/4	1.96(49.8)	0.75(19.1)	0.94(23.9)	0.62(15.7)	1 1/4
DKUTMC16-16N-S	1	1	2.25(57.2)	0.94(23.9)	0.94(23.9)	0.87(22.1)	1 9/16

Ultra-Torr Vacuum Fittings

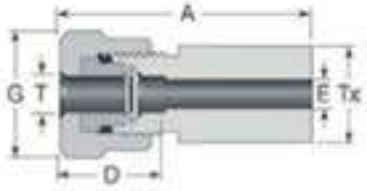
DK-LOK Tube Fitting Union



Part No.	O.D (in.)		Dimensions, in. (mm)				
	T	Tx	A	D	D1	E	G
DKUTU4-D4T-S	1/4	1/4	1.66(42.2)	0.62(15.7)	0.60(15.2)	0.18(4.6)	11/16
DKUTU6-D6T-S	3/8	3/8	1.81(46.0)	0.66(16.8)	0.66(16.8)	0.28(7.1)	13/16
DKUTU8-D8T-S	1/2	1/2	1.95(49.5)	0.80(20.3)	0.90(22.9)	0.40(10.2)	15/16

Ultra-Torr Vacuum Fittings

Adapter



Part No.	O.D (in.)		Dimensions, in. (mm)			
	T	Tx	A	D	E	G
DKUTA1-4-S	1/16	1/4	1.12(28.4)	0.43(10.9)	0.05(1.3)	3/8
DKUTA2-4-S	1/8	1/4	1.20(30.5)	0.43(10.9)	0.09(2.3)	9/16
DKUTA2-6-S	1/8	3/8	1.21(30.7)	0.43(10.9)	0.09(2.3)	9/16
DKUTA4-4-S	1/4	1/4	1.34(34.0)	0.62(15.7)	0.18(4.6)	11/16
DKUTA4-6-S	1/4	3/8	1.33(33.8)	0.62(15.7)	0.18(4.6)	11/16
DKUTA4-8-S	1/4	1/2	1.47(37.3)	0.62(15.7)	0.18(4.6)	11/16
DKUTA6-6-S	3/8	3/8	1.47(37.3)	0.66(16.8)	0.28(7.1)	13/16
DKUTA6-8-S	3/8	1/2	1.58(40.1)	0.66(16.8)	0.28(7.1)	13/16
DKUTA8-10-S	1/2	5/8	1.64(41.7)	0.80(20.3)	0.40(10.2)	15/16
DKUTA8-12-S	1/2	3/4	1.69(42.9)	0.80(20.3)	0.40(10.2)	15/16
DKUTA12-16-S	3/4	1	1.78(45.2)	0.94(23.9)	0.62(15.7)	1 1/4
DKUTA16-20-S	1	1 1/4	1.80(45.7)	0.94(23.9)	0.87(22.1)	1 9/16
DKUTA24-24-S	1 1/2	1 1/2	1.98(50.3)	0.94(23.9)	1.25(31.8)	2 1/16

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Ultra-Torr Vacuum Fittings

Nuts



Part No.	O.D (in.)	Thread Size	Dimensions, in. (mm)		
			E	L	G
DKUTN-1-S	1/16	1/4-20 UNC	0.07(1.8)	0.38(9.6)	3/8
DKUTN-2-S	1/8	3/8-20 UN	0.13(3.3)	0.41(10.4)	9/16
DKUTN-4-S	1/4	1/2-20 UNF	0.26(6.6)	0.53(13.5)	11/16
DKUTN-6-S	3/8	5/8-20 UN	0.38(9.6)	0.62(15.7)	13/16
DKUTN-8-S	1/2	3/4-20 UNEF	0.51(13.0)	0.62(15.7)	15/16
DKUTN-10-S	5/8	15/16-20 UNEF	0.63(16.0)	0.62(15.7)	1 1/8
DKUTN-12-S	3/4	1 1/16-20 UN	0.76(19.3)	0.72(18.3)	1 1/4
DKUTN-16-S	1	1 3/8-20 UN	1.01(25.6)	0.72(18.3)	1 9/16
DKUTN-24-S	1 1/2	1 7/8-20 UN	1.51(38.4)	0.72(18.3)	2 1/16

Ultra-Torr Vacuum Fittings

O-Rings



Part No.	O.D (in.)	Uniform Size Number
DKUTOR-1-S	1/16	001-1/2°
DKUTOR-2-S	1/8	006
DKUTOR-4-S	1/4	010
DKUT0R-6-S	3/8	012
DKUTOR-8-S	1/2	014
DKUTOR-10-S	5/8	114
DKUTOR-12-S	3/4	116
DKUTOR-16-S	1	120
DKUTOR-24-S	1 1/2	128

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

DK-LOK

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Tel. +82-55-338-0114 Fax. +82-55-901-0141 **www.dklok.com**

IDK-LOK

V23 Series Plug Valves

Rev. 01-01
Aug. 2023



DK-LOK®
Ball & Plug Valves

V23 Series Plug Valves

Pressure Rating up to 3,000 psig (206 bar)

Rev.01-01
Aug.2023

Features

- Quarter-turn operation
- Unique forward flow throttlving
- Low torque operation
- Unidirectional flow



Materials of Construction

Component	Valve Body Materials	
	Stainless Steel	Brass
	Grade/ASTM Specification	
1. Body	SS316/ A479 or A276	Brass / B16
2. Plug	PTFE-coated SS316/ A479 or A276	PTFE-coated Brass / B16
3. O-ring	PTFE-coated FKM	
4. Handle	Nylon	
5. Pin	SS316/A276	
6. Snap ring	Stainless Steel	

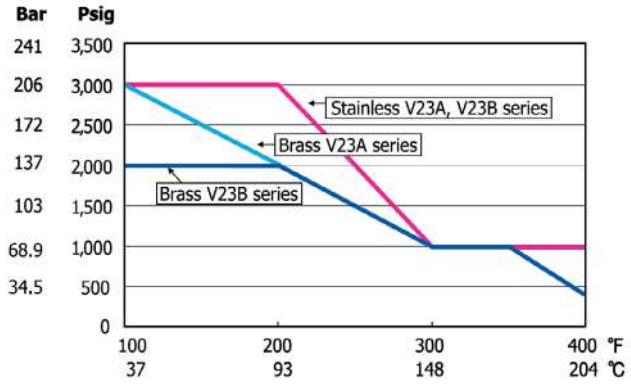
- Wetted parts and lubricants listed in blue
- Lubricant is silicone-based

Technical Data

Series	Valve Material	Pressure Rating		Temperature Rating	Plug Orifice mm (in.)
		psig	bar		
V23A	SS316	3,000	206	-10 to 400 °F (-23 to 204 °C)	4.4 (.17)
	Brass				
V23B	SS316	2,000	137		7.2 (.28)
	Brass				

- Differential pressure is limited to maximum 150 psig (10.3bar) when reverse flow occurs.
- Throttling reverse flow may damage O-ring.

Pressure - Temperature Curves
with standard FKM O-ring



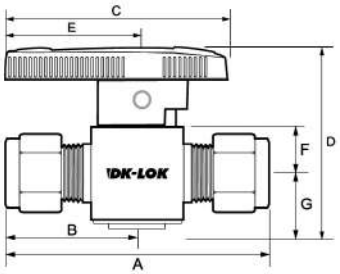
Operation

- DK-Lok plug valves provide positive shut-off, high flow capacity, and quick quarter-turn operation.
- DK-Lok plug valve provides flow throttling capability.



Ordering Information and Dimensions





Basic Ordering Number		End Connections		Dimensions mm (inches)							
		Inlet	Outlet H	A	B	C	D	E	F	G	H
V23A	D-2T-	1/8 in. DK-Lok		50.5 (1.99)	19.8 (0.78)	47.8 (1.88)	38.6 (1.52)	29.0 (1.14)	9.4 (0.37)	11.7 (0.46)	19.1 (0.75)
	D-4T-	1/4 in. DK-Lok		55.1 (2.17)							
	D-6T-	3/8 in. DK-Lok		58.2 (2.29)							
	D-6M-	6mm DK-Lok		55.1 (2.17)							
	M-2N-	1/8 in. Male NPT		38.9 (1.53)							
	M-4N-	1/4 in. Male NPT		48.3 (1.90)							
	MD-4N4T-	1/4 in. Male NPT	1/4 in. DK-Lok	51.7 (2.03)							
	MF-4N-	1/4 in. Male NPT	1/4 in. female NPT	50.8 (2.00)							
	F-2N-	1/8 in. Female NPT		45.2 (1.78)							
	F-4N-	1/4 in. Female NPT		53.1 (2.09)							
	F-4R-	1/4 in. Female ISO Tapered		56.1 (2.21)							
V23B-	D-6T-	3/8 in. DK-Lok		67.6 (2.66)	29.0 (1.14)	63.2 (2.49)	54.1 (2.13)	38.1 (1.50)	14.2 (0.56)	16.8 (0.66)	28.4 (1.12)
	D-8T-	1/2 in. DK-Lok		73.2 (2.88)							
	D-8M-	8mm DK-Lok		67.6 (2.66)							
	D-10M-	10mm DK-Lok		68.1 (2.68)							
	D-12M-	12mm DK-Lok		75.2 (2.96)							
	M-8N-	1/2 in. Male NPT		67.1 (2.64)							
	F-6N-	3/8 in. Female NPT		60.5 (2.38)							
	F-8N-	1/2 in. Female NPT		73.2 (2.88)							
	F-8R-	1/2 in. Female ISO Tapered		79.8 (3.14)							

All dimensions shown are for reference only and are subject to change. Dimensions with DK-Lok nuts are in finger-tight position.

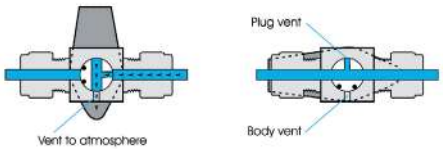
All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Factory Test

• Every V23 series plug valve is factory tested for shutoff at 600psig (41.3 bar).

Optional Downstream Vent

Vent to atmosphere when valve is closed valve open



Optional vented plug and valve body provides system pressure release to atmosphere when valve is closed.

• This option reduces the maximum operation pressure to 150 psig (10.3 bar).
• To order, use designator - VH. See how to order.

Optional O-ring material

PTFE-coated FKM is standard. Choose optional O-ring material for fluid compatibility and system temperatures.

O-ring material	O-ring Designator	Temperature Range
Standard PTFE-coated FKM	EV	-20 to 400 °F (-28 to 204 °C)
PTFE-coated Buna-N	EB	-68 to 221 °F (-20 to 105 °C)
PTFE-coated EPDM	EE	-49 to 275 °F (-45 to 135 °C)

Flow Data

Basic Ordering Number		End Connections		Cv	Pressure Drop to Atmosphere, psi (bar)					
		Inlet	Outlet		Air Flow, std ft3/min (L/min) @ 70 °F (21 °C)			Water Flow, US gal/min(L/min) @ 70 °F (21 °C)		
					1 (0.068)	5 (0.34)	10 (0.68)	1 (0.068)	5 (0.34)	10 (0.68)
V23A-	D-2T-	1/8 in. DK-Lok		0.1	0.3 (8.4)	0.8 (22)	1.1 (31)	0.1 (0.37)	0.2 (0.75)	0.3 (1.1)
	D-4T-	1/4 in. DK-Lok		1.6	6.0 (169)	13 (368)	18 (509)	1.6 (6.0)	3.6 (13.6)	5.1 (19.3)
	D-6T-	3/8 in. DK-Lok		1.1	4.1 (116)	8.9 (252)	12.4 (351)	1.1 (4.1)	2.5 (9.4)	3.5 (13.2)
	D-6M-	6mm DK-Lok		1.6	6.0 (169)	13 (368)	18 (509)	1.6 (6.0)	3.6 (13.6)	5.1 (19.3)
	M-2N-	1/8 in. Male NPT		1.0	3.7 (104)	8.1 (229)	11.3 (320)	1.0 (3.7)	2.2 (8.3)	3.2 (12.1)
	M-4N-	1/4 in. Male NPT								
	MD-4N4T-	1/4 in. Male NPT	1/4 in. DK-Lok	0.9	3.3 (93)	7.3 (206)	10.1 (286)	0 .9 (3.4)	2.0 (7.5)	2.8 (10.8)
	MF-4N-	1/4 in. Male NPT	1/4 in. female NPT	1.0	3.7 (104)	8.1 (229)	11.3 (320)	1.0 (3.7)	2.2 (8.3)	3.2 (12.1)
	F-2N-	1/8 in. Female NPT		1.2	4.4 (124)	9.7 (274)	13.5 (382)	1.2 (4.5)	2.7 (10.2)	3.8 (14.3)
	F-4N-	1/4 in. Female NPT		0.9	3.3 (93)	7.3 (206)	10.1 (286)	0.9 (3.4)	2.0 (7.5)	2.8 (10.8)
	F-4R-	1/4 in. Female ISO Tapered								
V23B	D-6T-	3/8 in. DK-Lok		6.4	23.9 (676)	52.0 (1470)	72.3 (2040)	6.4 (24.2)	14.3 (54.1)	20.2 (76.4)
	D-8T-	1/2 in. DK-Lok		4.4	16.4 (464)	35.7 (1010)	49.7 (1400)	4.4 (16.6)	9.8 (37.0)	13.9 (52.6)
	D-8M-	8mm DK-Lok		6.4	23.9 (676)	52.0 (1470)	72.3 (2040)	6.4 (24.2)	14.3 (54.1)	20.2 (76.4)
	D-10M-	10mm DK-Lok								
	D-12M-	12mm DK-Lok		4.8	17.9 (506)	39.0 (1100)	54.2 (1530)	4.8 (18.1)	10.7 (40.4)	15.2 (57.5)
	M-8N-	1/2 in. Male NPT		2.4	9.0 (254)	19.5 (552)	27.1 (767)	2.4 (9.0)	5.4 (20.4)	7.6 (28.7)
	F-6N-	3/8 in. Female NPT		4.3	16.0 (453)	34.9 (988)	48.6 (1370)	4.3 (16.2)	9.6 (36.3)	13.6 (51.4)
	F-8N-	1/2 in. Female NPT		2.7	10.1 (286)	21.9 (620)	30.5 (863)	2.7 (10.2)	6.0 (22.7)	8.5 (32.1)
	F-8R-	1/2 in. Female ISO Tapered								

How to Order

Select the desired valve basic ordering number, options and body material.

V23A-D-4T-
V23B-F-8N-

EB - **VH** - **-B** **S**

O-ring Material Designator	Downstream Vent Option	Body Material Designator
Nil : PTFE-coated Viton **EB** : PTFE-coated Buna-N **EE** : PTFE-coated EPDM	**Nil** : no vent **VH** : Vent	**S** : SS316 **B** : Brass

We reserve the right t ations stated in this catalog for our continuing program of improvement.

Safe Valve Selection

The selection of a valve for any application or system design must be considered to ensure safe performance. Valve function, valve rating, material compatibility, proper installation, operation and maintenance remain the sole responsibillty of the system designer and the user. DK-Lok accepts no liability for any improper selection, installation, operation or maintenance.

DK-LOK

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Tel. +82-55-338-0114 Fax. +82-55-901-0141 **www.dklok.com**

IDK-LOK

V81 Series Ball Valves

Rev. 01-01
Aug. 2023



DK-LOK
Ball & Plug Valves

V81 Series Ball Valve

Rev.01-01
Aug.2023

Pressures rating of 68.9 bar (1000 psig) and 137 bar (2000 psig)



Valve with lever handle
Working pressure
- PTFE seats : 68.9 bar (1000 psig)
- TFM seats : 137 bar (2000 psig)



Valve with butterfly handle
Working pressure
- PTFE seats : 68.9 bar (1000 psig)
- TFM seats not applicable



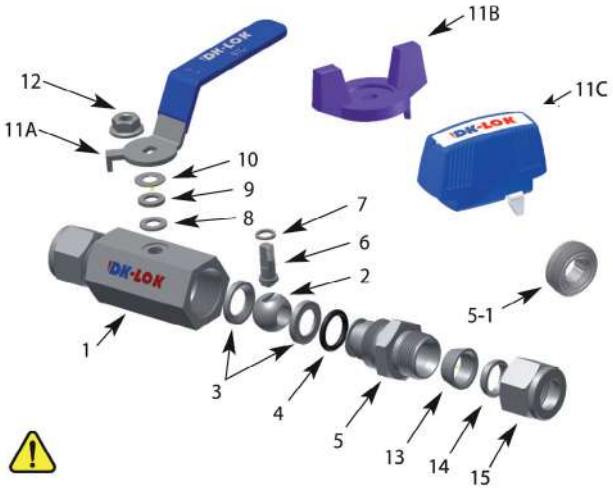
Valve with dielectric handle
Working pressure
- PTFE seats : 68.9 bar (1000 psig)
- TFM seats : 137 bar (2000 psig)

Design Features

- Compact barstock construction for high integrity
- Blow-out proof design with internally loaded stem
- Floating Ball design providing seat wear compensation
- Micro-finished ball ensures a leak-tight shut-off on pressure
- Standard lever handle, optional butterfly and dielectric handle.

Applications

V81 series ball valve offers a safe and reliable performance for a wide range of onshore and offshore applications: water, oil, gas, petrochemical and general duty applications.



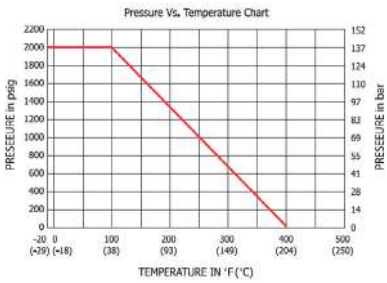


Materials of Construction

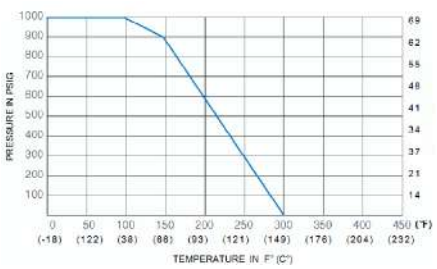
Component	Valve Body Materials	
	Stainless steel	Brass
1. Body	ASTM A276 / A479 TYPE316	ASTM B16 or JIS H3250
2. Ball	ASTM A276 TYPE316	
3. Seat (2)	PTFE / D1710 for pressure 68.9 bar (1000 psig) TFM 1600 for pressure 137 bar (2000 psig)	
4. O-Ring	FKM	NBR
5. End Connector	ASTM A276/A479 TYPE316	ASTM B16 or JIS H3250
5-1. Insert		
6. Stem	ASTM A276/A479 TYPE316	
7. Lower Packing	PTFE / D1710	
8. Upper Packing	PTFE / D1710	
9. Gland	ASTM A276/A479 TYPE316	
10. Washer	Stainless Steel	
11A. Handle	Stainless Steel Lever handle with vinyle sleeve	
11B. Handle	ZINC / ASTM B240 Butterfly handle, Nickel-plated	
11C. Handle	Dielectric Handle with Nylon(Black, Red, Blue)	
12. Lock Nut	Stainless Steel	Stainless Steel
13. Front Ferrule	ASTM A276/A479 TYPE316	ASTM B16 or JIS H3250
14. Backing Ferrule	ASTM A276/A479 TYPE316	ASTM B16 or JIS H3250
15. Nut	ASTM A276/A479 TYPE316	ASTM B16 or JIS H3250

1. V81D, V81E Locking device lever handle Type : Body Material is ASTM A351 CF8M
4. O-Ring is applicable to end connector type.
5. End Connector is for DK-Lok end connection standard, male pipe thread available.
5-1. Insert is for female pipe thread end connection.
* TFM 1600 seat is usable only with body in stainless steel.
* Wetted parts are listed in Blue.

Pressure -Temperature Curves



TFM 1600 Seat Body Material: Stainless



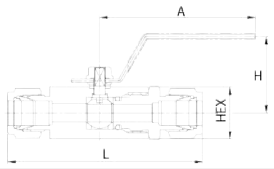
PTFE Seat Body Material: Stainless and Brass

Factory Test

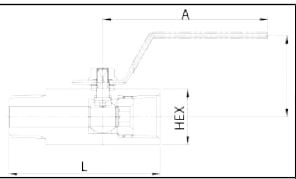
Every valve is factory tested with nitrogen gas @41 bar (600 psig) for leakage at the seat to a maximum allowable leak rate of 0.1 SCCM.
The packing is tested with nitrogen for no detectable leakage.

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

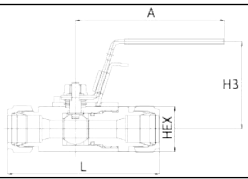
DK-Lok to DK-Lok
Lever Handle



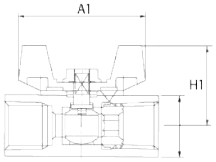
Male Pipe Thread to
Female Pipe Thread
Lever Handle



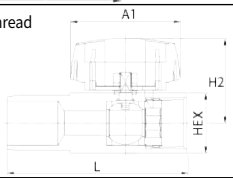
Female Pipe Thread to
Female Pipe Thread
Lever Handle



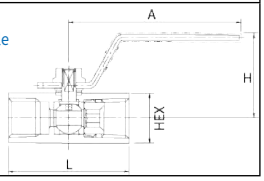
Female Pipe Thread to
Female Pipe Thread
Butterfly Handle



Weld End to Female Pipe Thread
Dielectric Handle



DK-Lok to DK-Lok
Locking device Lever Handle



Ordering Information and Table of Dimensions

Basic Ordering Number		End Connections Inlet / Outlet	Orifice mm (in.)	Cv	Dimensions mm(in.)								
					L	H	HEX	A	A1	A2	H1	H2	H3
V81A-	D-6M-	6mm DK-Lok	5 (0.2)	1.25	79 (3.11)	27.6 (1.09)	17 (11/16)	59.5 (2.34)	30.5 (1.20)	41.8 (1.65)	23.5 (0.93)	33.8 (1.33)	35.6 (1.4)
	D-4T-	1/4 in.DK-Lok		1.25	79 (3.11)								
	F-4N-	1/4 in. Female NPT		1.35	41.9 (1.65)								
	MF-4N-	1/4 in. M/F NPT		1.35	52.4 (2.06)								
V81B-	D-10M-	10mmDK-Lok	7.5 (0.3)	2.6	91.7 (3.61)	36.5 (1.44)	20.64 (13/16)	81 (3.19)	42 (1.65)	44.5 (1.75)	30 (1.18)	38.3 (1.5)	39.5 (1.56)
	D-6T-	3/8 in.DK-Lok		2.5	91.3 (3.59)								
	F-6N-	3/8 in. Female NPT		2.6	47 (1.85)								
	MF-6N-	3/8 in. M/F NPT		2.6	53.5 (2.1)								
V81C-	D-12M-	12mmDK-Lok	9 (0.35)	9.25	99.2 (3.9)	39.7 (1.56)	27 (1-1/16)	81 (3.19)	46 (1.81)	46.5 (1.83)	35.7 (1.41)	43.5 (1.71)	44.7 (1.76)
	D-8T-	1/2 in.DK-Lok		9.25	101 (3.98)								
	F-8N-	1/2 in. Female NPT		9.25	56.15 (2.21)								
	MF-8N-	1/2 in.M/F-NPT		9.25	66.6 (2.62)								
	WF-15A8N-	1/2 in.Welding/F-NPT		9.25	95.0 (3.74)								
V81D-	D-16M-	16mmDK-Lok	12.5 (0.49)	10.6	107 (4.24)	44.85 (1.76)	32 (1-1/4)	102.5 (4.04)	49.5 (1.95)	56 (2.2)	38.1 (1.50)	47.2 (1.86)	-
	D-10T-	5/8 in.DK-Lok		10.6	108 (4.25)								
	F-12N-	3/4 in.Female NPT		12.65	63 (2.48)								
	D-12T-	3/4 in.DK-Lok		12.65	107 (4.22)								
	MF-12N-	3/4 in.M/F-NPT		12.65	75.9 (2.99)								
	WF-20A12N-	3/4 in.Welding/F-NPT		12.65	100 (3.93)								
V81E-	D-16T-	1 in.DK-Lok	16 (0.63)	17.35	133 (5.23)	49.75 (1.95)	38 (1-1/2)	102.5 (4.04)	68 (2.68)	70.1 (2.76)	45 (1.77)	53.7 (2.11)	-
	F-16N-	1 in. Female NPT		17.35	78.1 (3.07)								
	WF-25A16N-	1 in. Welding/F-NPT		17.35	115 (4.53)								
V81F-	F-20N-	1 1/4 in. Female NPT	21 (0.83)	-	89 (3.50)	65 (2.56)	50 (2)	141 (5.55)					
V81G-	F-24N-	1 1/2 in.Female NPT	24 (0.94)	-	95 (3.74)	68 (2.68)	55 (2-3/16)	148 (5.83)					
V81H-	F-32N-	2 in. Female NPT	32 (1.26)	-	110 (4.33)	80 (3.15)	69.8 (2-3/4)	154 (6.06)	-	-	-	-	-

Dimensions shown are for reference only, subject to change. Dimensions with DK-Lok nuts are in finger-tight position

How to Order

Select valve ordering number, applicable option(s) from designator tables listed below.

Examples

V81A-D-6M- **VT-** **TF-** **BF-** **BK** **S**

O-ring	Seat Material	Handle	Handle Color	Body material
Nil : FKM O-ring is standard for SS316 body. **Nil** : NBR O-ring is standard for Brass body. **VT** : FKM O-ring for Brass body **BN** : NBR O-ring for Stainless Steel **NOTE** : O-ring is required for DK-Lok end connection.	**Nil** : Standard PTFE seats for 68.9 bar (1000 psig) working pressure. **TF** : Optional TFM1600 for 137 bar (2000 psig) working pressure. **NOTE** : TFM1600 seat is not applicable to Brass valve.	**Nil** : Standard lever handle **BF** : Optional butterfly handle **DH** : Dielectric handle **LD** : Locking device lever handle **NOTE** : BF option is not applicable to the valve with TF seat	**BK** : Black **BL** : Blue **RD** : Red	**S** : SS316 **B** : Brass **M** : Monel **L20** : Alloy 20 **HC** : Hastelloy C276

Safe Valve Selection

The selection of a valve for any application or system design must be considered to ensure safe performance. Valve function, valve rating, material compatibility, proper installation, operation and maintenance remain the sole responsibility of the system designer and the user. DK-Lok accepts no liability for any improper selection, installation, operation or maintenance.

DK-LOK

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IDK-LOK

V82 Series Ball Valves

Rev. 01-01
Aug. 2023



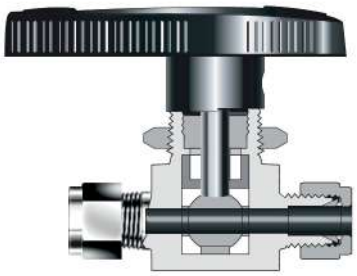
DK-LOK®
Ball & Plug Valves

V82 Series Ball Valves

Pressure Rating up to 3,000psig

Features of V82 Series

V82 series Ball valves are classified into 3 types according to the temperature range in use. V82 series is for general use and VL82 is adequate to the low temperature range. VG82 can be used in the widen temperature range from low to high temperature. The exact temperature range of each type is referred to the technical data of the type.



- Sealing is achieved without system pressure
- Bi-directional flow
- Pressure up to 3000 psig (206 bar)
- Lowest dead space design
- Nylon Directional handle - indicates the flow through the valve.
- Panel mounting nut - is standard and permits valve to panel or actuator.
- Top-loaded packing - allows packing adjustment with the valve in-line.
- Capsule packing - fills voids in the valve body and prevents fluid entrapment.
  - allows lowest dead space.
- Support rings and discs - retains the capsule packing and prevent cold flow.
- Integral ball stem - machined from single piece bar stock.
  - eliminates the backlash during handle actuation.
- One-piece body - reduces the number of potential leak points.



Materials of Construction

Component	Valve Body Materials	
	Stainless steel	Brass
	Grade/ASTM Specification	
1. Handle	Nylon with brass insert	
2. Set Screw	stainless steel 304	
3. Packing bolt *	SS316/A276 or A479	Brass C3604
4. Upper Gland	SS316/A276 or A479	
4a. Packing Spring (VL82 series)	17-4PH/A693	
4b. Gland (VG82 series)	SS316/A276 or A479	
5. Bushing	PTFE/D1710 type 1, Grade 1, Class B	
5b. Packing (VG82 series)	PTFE/D1710 type 1, Grade 1, Class B	
6. Lower gland	SS316/A276	Brass C3604
6a. Packing Gland (VL82 series)	SS316/A276	
6b. Lower Gland (VG82 series)	SS316/A276	Brass C3604
7 & 11. Upper & Lower Packing	PTFE/D1710 type 1	
7b. Integrated Seat (VG82 series)	PFA	
8. Ball stem	SS316/A276	
9. Support rings	SS316 powered metal/B783 (fluorocarbon coating)	
10. Side discs		
12. Panel nut	SS316/A276	Brass C3604
13. Body	SS316/A276 or A479	

* Molybdenum disulfide with hydrocarbon coating.
• Note : 1. Wetted parts and lubricants are listed in blue.
2. Lubricant is Fluorinated-based. Lubricants are available for a specific application.

Operation & Packing Adjustment

- V82 valves are designed to control fluid in full open and closed position; using V82 valves to throttle the flow may reduce the valve life.
- Valves that have not been actuated for a period of time may have a higher initial actuation torque.
- Every valve working pressure is adjusted for factory test at 1,000 psig (68.9 bar) @ 21°C (70°F). For use in higher pressure or lower temperature range, the valve packing may be required for re-adjustment.
- Packing adjustment may be required during the valve in service.

Application

- Analytical market requiring a valve with lowest dead volume to prevent fluid entrapment which can cause contamination.
- Control Sampling Systems, and Process Instrumentation market requiring a valve with compact size, high flow capacity and directional indication of flow.

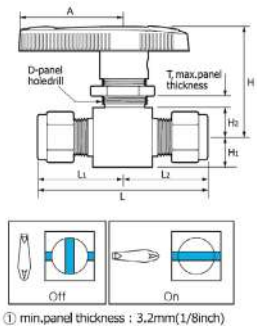
Factory Test and Packaging

- Every valve is factory tested with nitrogen gas at 1,000 psig (68.9 bar) for leakage at seat to a maximum allowable leak rate of 0.1 SCCM.The packing is tested with nitrogen gas for no detectable leakage.
- Every valve is cleaned and packaged in accordance with DK cleaning standard DC-01

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

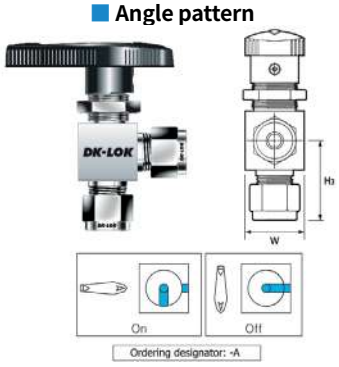
2-way On-off Valves

In-line pattern



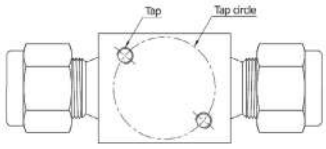
① min.panel thickness : 3.2mm(1/8inch)

Angle pattern



Ordering designator: -A

Botton mounting option (In-line Only)



Size	Tap	Tap Depth	Tap circle
V82C	M5x0.8P	5.0 mm (0.2 in.)	Ø28.7 mm (1.13 in.)
V82D			Ø38.1 mm (1.5 in.)

Ordering designator: -TM

Technical Data for V82 Series with Standard PTFE Seat

Valve series		Working Pressure		Temp. Range
In-line	Angle	psig	bar	
V82A, V82C, V82D	V82A-A, V82B-A	2500	172	10°C to 65°C 50°F to 150°F
V82B	-	3000	206	
-	V82C-A, V82D-A	1500	103	

Technical Data for VL82 Series with Standard PFA Seat

Valve Series		Working Pressure		Temp. Range
In-line	Angle	psig	bar	
VL82A, VL82C, VL82D	VL82A-A, VL82B-A	2500	172	-54°C to 65°C -65°F to 150°F
VL82B	-	3000	206	
-	VL82C-A, VL82D-A	1500	103	

Technical Data for VG82 Series with Integrated PFA Seat

Valve Series		Working Pressure		Temp. Range
In-line	Angle	psig	bar	
VG82A, VG82C, VG82D	VG82A-A, VG82B-A	2500	172	-54°C to 150°C -65°F to 302°F
VG82B	-	3000	206	
-	VG82C-A, VG82D-A	1500	103	

Ordering Information and Table of Dimensions

Basic Ordering Number		End Connections		Orifice		Cv		Dimensions mm(in.)										
		Inlet	Outlet	mm	in.	Inline	Angle	L	L1	L2	H3	H2	H1	A	T①	D	H	W
V82A- (VG82A)	D1T-	1/16" DK-Lok		1.3	0.052	0.1	-	42.7(1.68)	21.3(0.84)	21.3(0.84)	-	8.6(0.34)	7.1(0.28)	28.4(1.12)	6.4(1/4)	15.1(19/32)	34.5(1.36)	14.7(0.58)
	D2T-	1/8" DK-Lok		2.4	0.093	0.2	0.15	51.1(2.01)	25.7(1.01)	25.7(1.01)	24.6(0.97)	8.6(0.34)	7.1(0.28)	28.4(1.12)	6.4(1/4)	15.1(19/32)	34.5(1.36)	14.7(0.58)
	D3M-	3mm DK-Lok		2.4	0.093	0.2	0.15	51.1(2.01)	25.7(1.01)	25.7(1.01)	24.6(0.97)	8.6(0.34)	7.1(0.28)	28.4(1.12)	6.4(1/4)	15.1(19/32)	34.5(1.36)	14.7(0.58)
	D4T-	1/4" DK-Lok		3.2	0.125	0.6	0.35	56.1(2.21)	27.9(1.10)	27.9(1.10)	27.2(1.07)	8.6(0.34)	7.1(0.28)	28.4(1.12)	6.4(1/4)	15.1(19/32)	34.5(1.36)	14.7(0.58)
	D6M-	6mm DK-Lok		3.2	0.125	0.6	0.35	56.1(2.21)	27.9(1.10)	27.9(1.10)	27.2(1.07)	8.6(0.34)	7.1(0.28)	28.4(1.12)	6.4(1/4)	15.1(19/32)	34.5(1.36)	14.7(0.58)
	F2N-	1/8" Female NPT		3.2	0.125	0.5	0.3	41.1(1.62)	20.6(0.81)	20.6(0.81)	20.6(0.81)	8.6(0.34)	7.1(0.28)	28.4(1.12)	6.4(1/4)	15.1(19/32)	34.5(1.36)	14.7(0.58)
V82B (VG82B)	D4T-	1/4" DK-Lok		4.8	0.187	1.4	0.9	59.9(2.36)	30.0(1.18)	30.0(1.18)	29.7(1.17)	11.2(0.44)	9.7(0.38)	38.9(1.53)	4.8(3/16)	19.8(25/32)	39.6(1.56)	19.8(0.78)
	D6T-	3/8" DK-Lok		4.8	0.187	1.5	0.9	65.5(2.58)	32.8(1.29)	32.8(1.29)	32.8(1.29)	11.2(0.44)	9.7(0.38)	38.9(1.53)	4.8(3/16)	19.8(25/32)	39.6(1.56)	19.8(0.78)
	D6M-	6mm DK-Lok		4.8	0.187	1.4	0.9	60.7(2.39)	30.5(1.20)	30.5(1.20)	29.7(1.17)	11.2(0.44)	9.7(0.38)	38.9(1.53)	4.8(3/16)	19.8(25/32)	39.6(1.56)	19.8(0.78)
	D8M-	8mm DK-Lok		4.8	0.187	1.5	0.9	62.5(2.46)	31.2(1.23)	31.2(1.23)	30.5(1.20)	11.2(0.44)	9.7(0.38)	38.9(1.53)	4.8(3/16)	19.8(25/32)	39.6(1.56)	19.8(0.78)
	F2N-	1/8"Female NPT		4.8	0.187	1.2	0.7	50.8(2.00)	25.4(1.00)	25.4(1.00)	25.4(1.00)	11.2(0.44)	9.7(0.38)	38.9(1.53)	4.8(3/16)	19.8(25/32)	39.6(1.56)	19.8(0.78)
	F4N-	1/4"Female NPT		4.8	0.187	0.9	0.75	52.3(2.06)	26.2(1.03)	26.2(1.03)	26.2(1.03)	11.2(0.44)	9.7(0.38)	38.9(1.53)	4.8(3/16)	19.8(25/32)	39.6(1.56)	19.8(0.78)
	M4N-	1/4"Male NPT		4.8	0.187	1.2	0.75	50.8(2.00)	25.4(1.00)	25.4(1.00)	26.2(1.03)	11.2(0.44)	9.7(0.38)	38.9(1.53)	4.8(3/16)	19.8(25/32)	39.6(1.56)	19.8(0.78)
	F4R-	1/4" ISO Female Tapered		4.8	0.187	0.9	-	52.3(2.06)	26.2(1.03)	26.2(1.03)	-	11.2(0.44)	9.7(0.38)	38.9(1.53)	4.8(3/16)	19.8(25/32)	39.6(1.56)	19.8(0.78)
V82C	D6T-	3/8" DK-Lok		7.1	0.281	6.0	2.0	77.5(3.05)	38.6(1.52)	38.6(1.52)	38.2(1.5)	14.2(0.56)	14.2(0.56)	50.8(2.00)	9.5(3/8)	28.6(1-1/8)	52.6(2.07)	28.4(1.12)
	D10M-	10mm DK-Lok		7.1	0.281	6.0	2.0	78.0(3.07)	38.9(1.53)	38.9(1.53)	39(1.53)	14.2(0.56)	14.2(0.56)	50.8(2.00)	9.5(3/8)	28.6(1-1/8)	52.6(2.07)	28.4(1.12)
	F4N-	1/4"Female NPT		7.1	0.281	3.0	1.7	63.5(2.50)	31.8(1.25)	31.8(1.25)	31.8(1.25)	14.2(0.56)	14.2(0.56)	50.8(2.00)	9.5(3/8)	28.6(1-1/8)	52.6(2.07)	28.4(1.12)
	F6N-	3/8"Female NPT		7.1	0.281	2.6	1.5	63.5(2.50)	31.8(1.25)	31.8(1.25)	31.8(1.25)	14.2(0.56)	14.2(0.56)	50.8(2.00)	9.5(3/8)	28.6(1-1/8)	52.6(2.07)	28.4(1.12)
	F6R-	3/8" ISO Female Tapered		7.1	0.281	2.6	-	63.5(2.50)	31.8(1.25)	31.8(1.25)	-	14.2(0.56)	14.2(0.56)	50.8(2.00)	9.5(3/8)	28.6(1-1/8)	52.6(2.07)	28.4(1.12)
V82D-	D8T-	1/2" DK-Lok		10.3	0.406	12.0	4.6	99.6(3.92)	49.8(1.96)	49.8(1.96)	49.8(1.96)	17.5(0.69)	17.5(0.69)	76.2(3.00)	9.5(3/8)	38.1(1-1/2)	66.3(2.61)	38.1(1.50)
	D12T-	3/4" DK-Lok		10.3	0.406	6.4	3.8	99.6(3.92)	49.8(1.96)	49.8(1.96)	49.5(1.94)	17.5(0.69)	17.5(0.69)	76.2(3.00)	9.5(3/8)	38.1(1-1/2)	66.3(2.61)	38.1(1.50)
	D12M-	12mm DK-Lok		9.5	0.375	12.0	4.6	99.6(3.92)	49.8(1.96)	49.8(1.96)	48.7(1.91)	17.5(0.69)	17.5(0.69)	76.2(3.00)	9.5(3/8)	38.1(1-1/2)	66.3(2.61)	38.1(1.50)
	F8N-	1/2"Female NPT		10.3	0.406	6.3	3.5	79.2(3.12)	39.6(1.56)	39.6(1.56)	39.6(1.56)	17.5(0.69)	17.5(0.69)	76.2(3.00)	9.5(3/8)	38.1(1-1/2)	66.3(2.61)	38.1(1.50)
	F8R-	1/2" ISO Female Tapered		10.3	0.406	6.3	-	79.2(3.12)	39.6(1.56)	39.6(1.56)	-	17.5(0.69)	17.5(0.69)	76.2(3.00)	9.5(3/8)	38.1(1-1/2)	66.3(2.61)	38.1(1.50)

All dimensions shown are for reference only and are subject to change. Dimensions with DK-Lok nuts are in finger-tight position.

Patterns: To order angle pattern, use -A as a suffix to the basic ordering number. Example: V82B-D-4T-A-S

Top mounting: To order Top mounting option, use -TM as a suffix to the basic ordering number. Example: V82C-D-6T-TM-S

3-way Switching Valves

Technical Data for V82 Series with Standard PTFE Seat

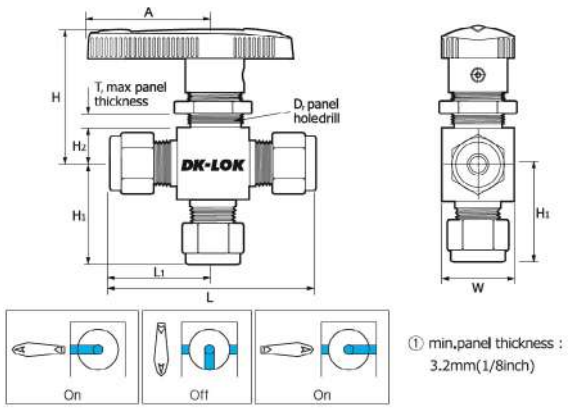
Valve series 3-way	Working Pressure		Temp. Range
	psig	bar	
V823A, V823B	2500	172	10°C to 65°C 50°F to 150°F
V823C, V823D	1500	103	

Technical Data for VL82 Series with Standard PFA Seat

Valve series 3-way	Working Pressure		Temp. Range
	psig	bar	
VL823A, VL823B	2500	172	-54°C to 65°C -65°F to 150°F
VL823C, VL823D	1500	103	

Technical Data for VG82 Series with Integrated PFA Seat

Valve series 3-way	Working Pressure		Temp. Range
	psig	bar	
VG823A, VG823B	2500	172	-54°C to 150°C -65°F to 302°F
VG823C, VG823D	1500	103	



① min.panel thickness : 3.2mm(1/8inch)

Ordering Information and Table of Dimensions

Basic Ordering Number		End Connections		Orifice		Cv	Dimensions mm(in.)								
		Inlet	Outlet	mm	in.		L	L1	H1	H2	A	T①	D	H	W
V823A-(VG823A)	D1T-	1/16" DK-Lok		1.3	0.052	0.1	42.7(1.68)	21.3(0.84)	20.6(0.81)	8.6(0.34)	28.7(1.13)	6.4(1/4)	15.0(19/32)	34.5(1.36)	14.7(0.58)
	D2T-	1/8" DK-Lok		2.4	0.093	0.2	51.1(2.01)	25.7(1.01)	24.6(0.97)	8.6(0.34)	28.7(1.13)	6.4(1/4)	15.0(19/32)	34.5(1.36)	14.7(0.58)
	D3M-	3mm DK-Lok		2.4	0.093	0.2	56.1(2.21)	27.9(1.10)	27.2(1.07)	8.6(0.34)	28.7(1.13)	6.4(1/4)	15.0(19/32)	34.5(1.36)	14.7(0.58)
	D4T-	1/4" DK-Lok		3.2	0.125	0.6	51.1(2.01)	25.7(1.01)	24.6(0.97)	8.6(0.34)	28.7(1.13)	6.4(1/4)	15.0(19/32)	34.5(1.36)	14.7(0.58)
	D6M-	6mm DK-Lok		3.2	0.125	0.6	56.1(2.21)	27.9(1.10)	27.2(1.07)	8.6(0.34)	28.7(1.13)	6.4(1/4)	15.0(19/32)	34.5(1.36)	14.7(0.58)
	F2N-	1/8" Female NPT		3.2	0.125	0.5	41.4(1.63)	20.6(0.81)	20.6(0.81)	8.6(0.34)	28.7(1.13)	6.4(1/4)	15.0(19/32)	34.5(1.36)	14.7(0.58)
V823B-(VG823B)	D4T-	1/4" DK-Lok		4.8	0.187	1.4	60.7(2.39)	30.5(1.20)	29.7(1.17)	11.2(0.44)	38.9(1.53)	4.8(3/16)	19.8(25/32)	39.6(1.56)	19.8(0.78)
	D6M-	6mm DK-Lok		4.8	0.187	1.4	60.7(2.39)	30.5(1.20)	29.7(1.17)	11.2(0.44)	38.9(1.53)	4.8(3/16)	19.8(25/32)	39.6(1.56)	19.8(0.78)
	D8M-	8mm DK-Lok		4.8	0.187	1.5	62.5(2.46)	31.2(1.23)	30.5(1.20)	11.2(0.44)	38.9(1.53)	4.8(3/16)	19.8(25/32)	39.6(1.56)	19.8(0.78)
	F4N-	1/4" Female NPT		4.8	0.187	0.9	52.3(2.06)	26.2(1.03)	26.2(1.03)	11.2(0.44)	38.9(1.53)	4.8(3/16)	19.8(25/32)	39.6(1.56)	19.8(0.78)
	F4R-	1/4" ISO Female Tapered		4.8	0.187	0.9	52.3(2.06)	26.2(1.03)	26.2(1.03)	11.2(0.44)	38.9(1.53)	4.8(3/16)	19.8(25/32)	39.6(1.56)	19.8(0.78)
V823C	D6T-	3/8" DK-Lok		7.1	0.281	6.0	73.4(2.89)	36.8(1.45)	36.3(1.43)	14.2(0.56)	50.8(2.00)	9.7(3/8)	28.7(1-1/8)	52.6(2.07)	28.4(1.12)
	D10M-	10mm DK-Lok		7.1	0.281	6.0	78(3.07)	39(1.53)	39(1.53)	14.2(0.56)	50.8(2.00)	9.7(3/8)	28.7(1-1/8)	52.6(2.07)	28.4(1.12)
	F4N-	1/4" Female NPT		7.1	0.281	3.0	63.5(2.50)	31.8(1.25)	31.8(1.25)	14.2(0.56)	50.8(2.00)	9.7(3/8)	28.7(1-1/8)	52.6(2.07)	28.4(1.12)
	F6N-	3/8" Female NPT		7.1	0.281	2.6	63.5(2.50)	31.8(1.25)	31.8(1.25)	14.2(0.56)	50.8(2.00)	9.7(3/8)	28.7(1-1/8)	52.6(2.07)	28.4(1.12)
	F6R-	3/8" ISO Female Tapered		7.1	0.281	2.6	63.5(2.50)	31.8(1.25)	31.8(1.25)	14.2(0.56)	50.8(2.00)	9.7(3/8)	28.7(1-1/8)	52.6(2.07)	28.4(1.12)
V823D	D8T-	1/2" DK-Lok		10.3	0.406	12.0	88.4(3.48)	44.2(1.74)	44.2(1.74)	17.5(0.69)	76.2(3.00)	9.7(3/8)	38.1(1-1/2)	66.3(2.61)	38.1(1.50)
	D12T-	3/4" DK-Lok		10.3	0.406	6.4	88.4(3.48)	44.2(1.74)	44.2(1.74)	17.5(0.69)	76.2(3.00)	9.7(3/8)	38.1(1-1/2)	66.3(2.61)	38.1(1.50)
	D12M-	12mm DK-Lok		9.5	0.375	12.0	86.5(3.40)	43.2(1.70)	43.2(1.70)	17.5(0.69)	76.2(3.00)	9.7(3/8)	38.1(1-1/2)	66.3(2.61)	38.1(1.50)
	F8N-	1/2" Female NPT		10.3	0.406	6.3	79.5(3.13)	39.6(1.56)	39.6(1.56)	17.5(0.69)	76.2(3.00)	9.7(3/8)	38.1(1-1/2)	66.3(2.61)	38.1(1.50)
	F8R-	1/2" ISO Female Tapered		10.3	0.406	6.3	79.5(3.13)	39.6(1.56)	39.6(1.56)	17.5(0.69)	76.2(3.00)	9.7(3/8)	38.1(1-1/2)	66.3(2.61)	38.1(1.50)

All dimensions shown are for reference only and are subject to change. Dimensions with Dk-Lok nuts are in finger-tight position.

Flow Data

2-way

Cv	Water US GPM (L/min.) @21°C (70°F) Pressure Drop to Atmosphere (Δp) psi (bar)			Air SCFM (NL/min.) @21°C (70°F) Pressure Drop to Atmosphere (Δp) psi (bar)		
	10(0.7)	50 (3.5)	100 (7.0)	10 (0.7)	50 (3.5)	100 (7.0)
0.1	0.3(1.1)	0.7 (2.6)	1.0 (3.8)	1.1 (31)	3.0 (85)	5.3 (150)
0.2	0.6(2.3)	1.4 (5.3)	2.0 (7.6)	2.3 (76)	6.0 (215)	11.0 (396)
0.5	1.6 (5.7)	3.5 (13.2)	5.0 (18.9)	5.6 (195)	15.0 (538)	27.0 (963)
0.6	1.9 (7.2)	4.2 (15.9)	6.0 (22.7)	6.8 (235)	18.0 (651)	32.0 (1161)
0.9	2.8 (10.6)	6.4 (23.8)	9.0 (34.0)	10.0 (340)	27.0 (963)	48.0 (1720)
1.2	3.8 (14.0)	8.5 (31.8)	12.0 (45.4)	14.0 (481)	36.0 (1303)	64.0 (2294)
1.5	4.7 (17.8)	11.0 (41.6)	15.0 (56.8)	17.0 (595)	45.0 (1614)	80.0 (2832)
2.4	7.6 (28.4)	17.0 (64.3)	24.0 (90.8)	27.0 (935)	72.0 (2606)	120.0 (4531)
2.6	8.2 (31.0)	18.0 (68.1)	26.0 (98.4)	29.0 (1020)	78.0 (2804)	140.0 (5098)
3.0	9.5 (35.6)	21.2 (79.5)	30.0 (113.6)	34.0 (1189)	90.0 (3115)	160.0 (5664)
6.0	19.0 (71.9)	42.0 (159.0)	60.0 (227.1)	68.0 (2351)	180.0 (6514)	320.0 (11611)
6.3	19.9 (75.5)	44.5 (170.3)	63.0 (237.0)	71.0 (2464)	190.0 (6797)	340.0 (12178)
6.4	20.2 (75.7)	45.3 (170.3)	64.0 (242.2)	72.0 (2520)	190.0 (6797)	340.0 (12178)
12.0	37.9 (143.8)	84.9 (321.7)	120.0 (454.2)	130.0 (4814)	360.0 (13027)	640.0 (22939)

2-way angle pattern and 3-way

Cv	Water US GPM (L/min.) @21°C (70°F) Pressure Drop to Atmosphere (Δp) psi (bar)			Air SCFM (NL/min.) @21°C (70°F) Pressure Drop to Atmosphere (Δp) psi (bar)		
	10(0.7)	50 (3.5)	100 (7.0)	10 (0.7)	50 (3.5)	100 (7.0)
0.08	0.3 (1.1)	0.6 (2.3)	0.8 (3.0)	0.9 (26)	2.4 (68)	4.3 (122)
0.15	0.4 (1.5)	1.0 (3.8)	1.5 (5.7)	1.7 (57)	4.5 (161)	8.0 (286)
0.30	0.9 (3.4)	2.1 (7.9)	3.0 (11.4)	3.4 (116)	9.0 (312)	16.0 (566)
0.35	1.1 (4.2)	2.4 (9.1)	3.5 (13.2)	4.0 (136)	10.0 (368)	19.0 (680)
0.75	2.3 (8.7)	5.3 (20.1)	7.5 (28.4)	8.5 (283)	22.0 (821)	40.0 (1444)
0.80	2.5 (9.5)	5.6 (21.2)	8.0 (30.3)	9.0 (312)	24.0 (878)	42.0 (1529)
0.90	2.8 (10.6)	6.3 (23.8)	9.0 (34.1)	10.0 (340)	27.0 (963)	48.0 (1728)
1.5	4.7 (17.8)	11.0 (41.6)	15.0 (56.8)	17.0 (595)	45.0 (1614)	80.0 (2832)
1.7	5.3 (20.1)	12.0 (45.4)	17.0 (64.3)	19.0 (680)	51.0 (1841)	90.0 (3115)
2.0	6.3 (23.8)	14.0 (53.0)	20.0 (75.7)	22.0 (793)	60.0 (2181)	100.0 (3965)
3.5	11.0 (41.6)	25.0 (94.6)	35.0 (132.5)	39.0 (1359)	100.0 (3682)	180.0 (6797)
3.8	12.0 (45.4)	27.0 (102.2)	38.0 (143.8)	43.0 (1501)	110.0 (3965)	200.0 (7363)
4.6	15.0 (56.8)	33.0 (124.9)	46.0 (174.1)	52.0 (1812)	140.0 (5098)	240.0 (8779)

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

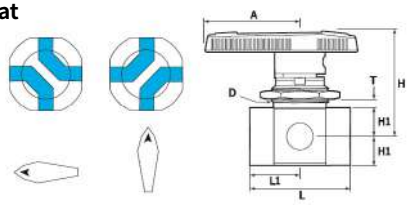
V824 Crossover 4-way Ball Valves

Features

- Crossover of two streams
- Mechanical stop ensures positive port positioning

Technical Data with standard PTFE, PFA and integrated PFA seat

Valve series	Pressure Rating		SEAT material	Temperature Range
	psig	bar		
V824A	2500	172	PTFE	10°C to 65°C 50°F to 150°F
V824B	1500	103		
VL824A	2500	172	PFA	-54°C to 65°C -65°F to 150 °F
VL824B	1500	103		
VG824A	2500	172	Integrated PFA	-54°C to 150°C -65°F to 302°F
VG824B	1500	103		





Ordering Information and Table of Dimensions

Ordering Number		End Connection	Cv	Orifice		Dimensions, mm(in.)						
				mm	in.	L	L1	H1	A	T*	D	H
V(L, G)824A-	F2N-S	1/8 in. Female NPT	0.08	1.6	0.062	39.4 (1.55)	19.8 (0.78)	11.2 (0.44)	38.9 (1.53)	4.8 (3/16)	23.1 (29/32)	42.7 (1.68)
V(L, G)824B-	F8N-S	1/2 in. Female NPT	1.6	7.1	0.281	79.5 (3.13)	39.6 (1.56)	17.5 (0.69)	76.2 (3.00)	9.7 (3/8)	38.1 (1 1/2)	61.7 (2.43)

T* indicates maximum panel thickness D : Panel Hole

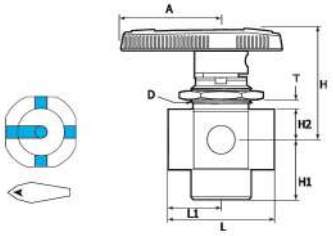
V825 Switching 5-way Ball Valves

Features

- Flow switches from a single port to multiple ports or from multiple ports to a single port.
- Spring-loaded detent ensures exact port positioning.

Technical Data with standard PTFE, PFA and integrated PFA seat

Valve series	Pressure Rating		SEAT material	Temperature Range
	psig	bar		
V825A	2500	172	PTFE	10°C to 65°C 50°F to 150°F
V825B	1500	103		
VL825A	2500	172	PFA	-54°C to 65°C -65°F to 150 °F
VL825B	1500	103		
VG825A	2500	172	Integrated PFA	-54°C to 150°C -65°F to 302°F
VG825B	1500	103		





Ordering Information and Table of Dimensions

Ordering Number		End Connection	Cv	Orifice		Dimensions, mm(in.)							
				mm	in.	L	L1	H1	H2	A	T*	D	H
V(L, G)825A-	F2N-S	1/8 in. Female NPT	0.07	1.6	0.062	39.4 (1.94)	19.8 (0.78)	22.4 (0.88)	38.9 (1.53)	38.9 (1.53)	4.1 (5/32)	23.1 (29/32)	42.9 (1.69)
	F2G-S	1/8 in. ISO Parallel Threads											
V(L, G)825B-	F8N-S	1/2 in. Female NPT	3.5	10.3	0.406	79.5 (3.13)	39.6 (1.56)	17.5 (0.69)	76.2 (3.00)	76.2 (3.00)	9.7 (3/8)	38.1 (1 1/2)	61.7 (2.43)

T* indicates the maximum panel thickness. 3.2 mm (1/8 in.) minimum panel thickness. D : Panel Hole

Handle Options

Aluminum Bar
Add-AH to the valve ordering number.
Example:V824A-F-2N-AH-S



Stainless Bar
Add-BH to the valve ordering number.
Example:V824A-F-2N-BH-S

How to Order

Select applicable valve pattern, options and body material from designators listed below.

V824A-F2N -AH -B
V82B-D4T -A -NL -S
VG82A-D2T

2-way	Botton mounting	Valve with no lubricant	Bar handle	Body material
A : 2-way angle pattern	**TM** : Botton mounting **Note** : Botton mounting option is applicable only to the in-line pattern 2-way valves.	**NL** : No lubricant Valve **Note** : Valve with no lubricant is factory tested at 200 psig (13 bar). This valve pressure rating is 200 psig (13 bar).	**Nil** : Standard Nylon handle **AH** : Aluminum bar handle **BH** : Stainless bar handle	**S** : SS316 **B** : Brass

Safe Valve Selection

The selection of a valve for any application or system design must be considered to ensure safe performance. Valve function, valve rating, material compatibility, proper installation, operation and maintenance remain the sole responsibility of the system designer and the user. DK-Lok accepts no liability for any improper selection, installation, operation or maintenance.

DK-LOK

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V83 Series
Swing-Out Ball Valves

Rev. 01-01
Aug. 2023



DK-LOK®
Ball & Plug Valves

V83 Series Swing-Out Ball Valves

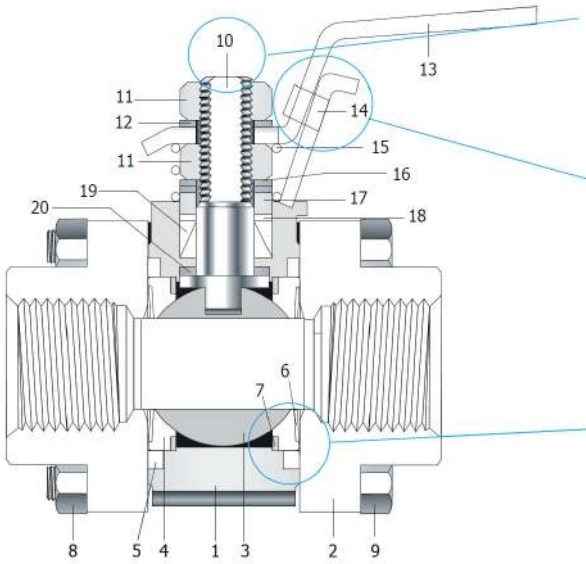
Pressure Rating up to 3,000 psig (206 bar)

Rev.01-01
Aug.2023



Features

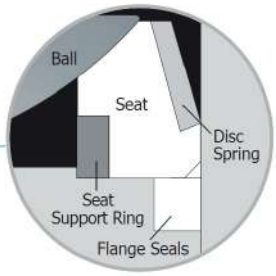
- Pressure and temperature compensation seat design.
- Swing-out design for fast and easy maintenance with the valve in-line.
- Chevron packing design.
- 2-way (on-off) valves with quarter-turn actuation.



Two flats on stem (10) and lever handle (13) indicate open or closed position of the valve.



Built-in manual locking device (14) allows locking the valve with a detent either in open or closed position. You may also apply a pad-lock to this device. Pad-lock hole: 8 mm (0.314 in.)



Compensation seat design requires no pressure to create a seal.
Under high pressure, seats react on the ball movement for sealing at upstream and downstream.

Table 1. **Material of Construction**

Component	Valve Body Materials	
	Stainless steel	Carbon Steel
	Grade/ASTM Specification	
1. Body	CF3M / A351	WCB / A216
2. Flanges (2)	CF3M / A351	WCB / A216
3. Ball	Type 316 / A276	
4. Seats (2)	See Table 2.	
5. Flange Seals (2)	PTFE	
6. Disc Spring (2)	Strain Hardened SS316	
7. Seat support rings (2)	Type 316 / A276	
8. Body fasteners (4)	SS316 Gr.B8M/ A193	
9. Body hex nuts (4)	SS316 Gr.8M/ A194	
10. Stem	Type 316 / A276, A479	
11. Stem Nuts (2)	SS316	
12. Tooth Washer	Stainless steel	
13. Handle	SS304 with Vinyl sleeve	
14. Locking Device	SS304	
15. Grounding spring	SS312 / A313	
16. Stem Springs (2)	Strain Hardened SS316 / A240	
17. Gland	Type 316 / A276	
18. Packing Support	PEEK (Polyetheretherketone)	
19. Upper & Lower Packing	Reinforced PTFE	
20. Stem Bearing	PEEK, Optional X750	

• Wetted parts and lubricants are listed in blue.

Table 2. **Seat Materials**
Pressure - Temperature Ratings

Seats	Valve Series	Pressure Rating @ -28 to 38 °C (-20 to 100 °F)	Pressure @ Max. Temperature	Lubricants
Standard Reinforced PTFE	V83A	151 bar (2200 psig)	7 bar @ 232°C 100 psig @450°F	Silicon based and PTFE based
	V83B			
	V83C			
Virgin PTFE	V83A	103 bar (1500 psig)	7 bar @ 232°C 100 psig @450°F	
	V83B			
	V83C			
Carbon PTFE	V83A	172 bar (2500 psig)	7 bar @ 232°C 100 psig @450°F	
	V83B			
	V83C			
PEEK	V83A	206 bar (3000 psig)	55 bar @ 232°C 800 psig @ 450°F	PTFE based
	V83B	172 bar (2500 psig)		
	V83C			
UHMWPE	V83A	206 bar (3000 psig)	17 bar @ 121°C 250 psig @ 250°F	Hydrocarbon based and PTFE based
	V83B	172 bar (2500 psig)		
	V83C			

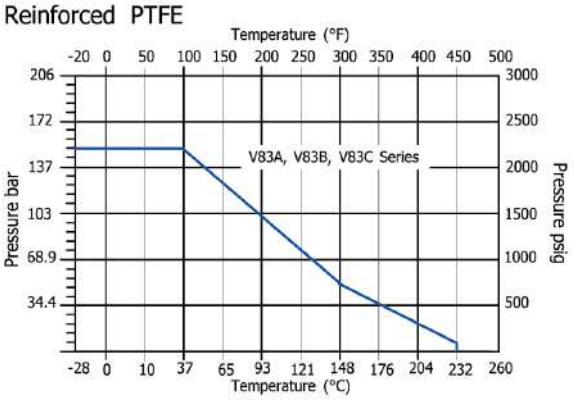
Factory Test

Every valve is tested with nitrogen @ 68.9 bar (1,000 psig) for leakage at the seat to a maximum allowable leak rate of 0.1 SCCM. Shell test with nitrogen @ 68.9 bar (1,000 psig) is performed to a requirement of no detectable leakage with a liquid leak detector. Shell test with water at 1.5 times the working pressure is performed on request with extra cost.

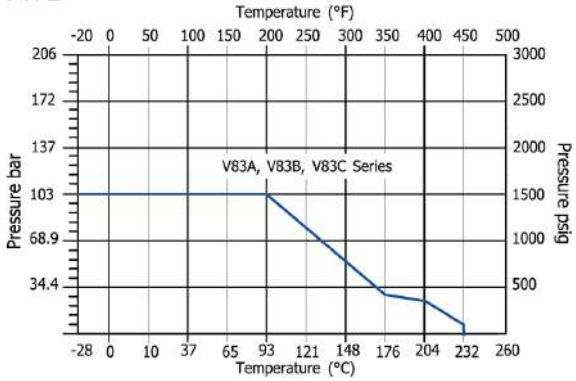
All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

PRESSURE-TEMPEATURE GRAPH

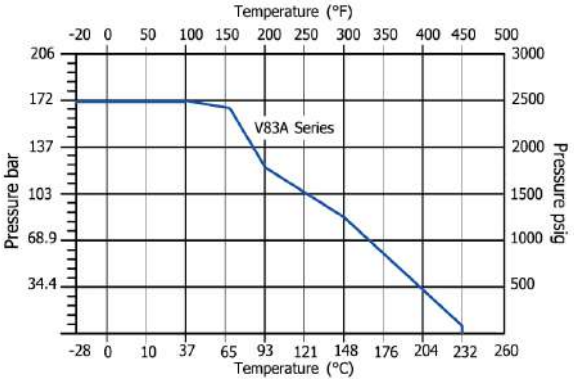
Reinforced PTFE



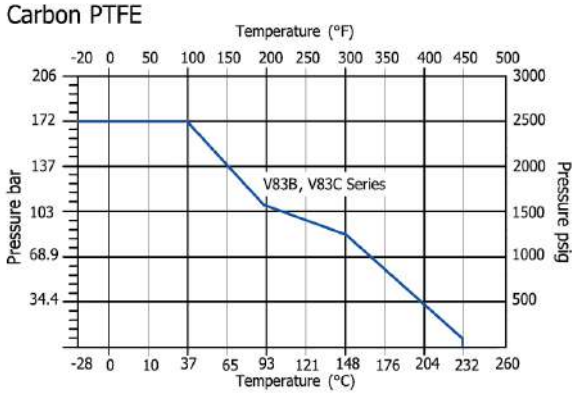
PTFE



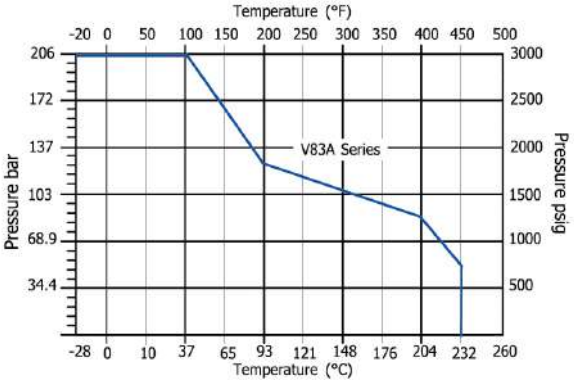
Carbon PTFE



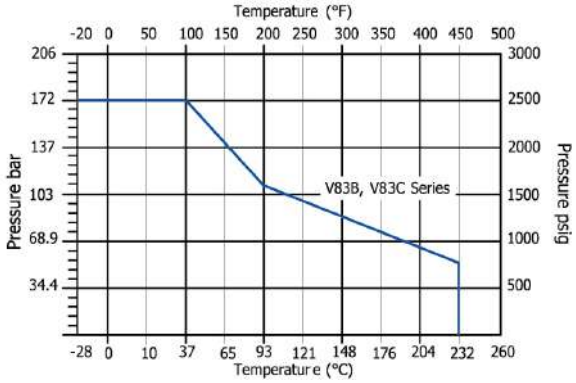
Carbon PTFE



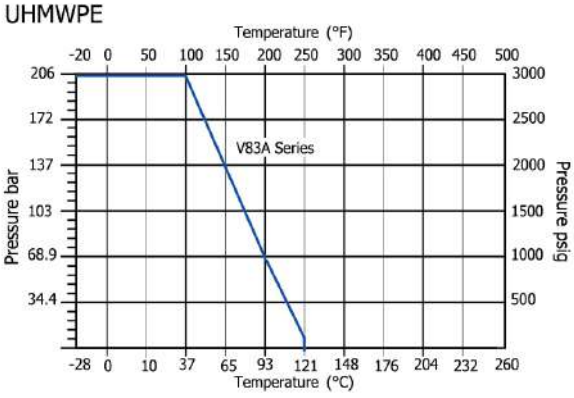
PEEK



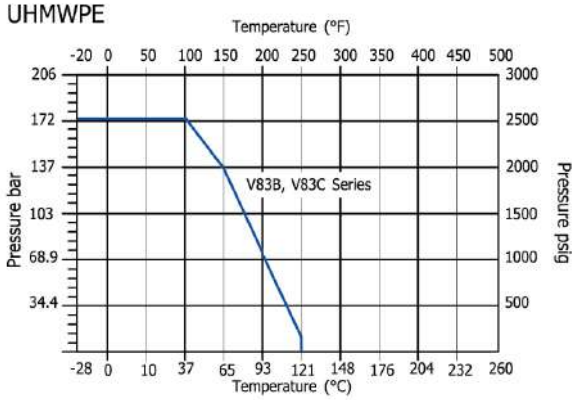
PEEK



UHMWPE

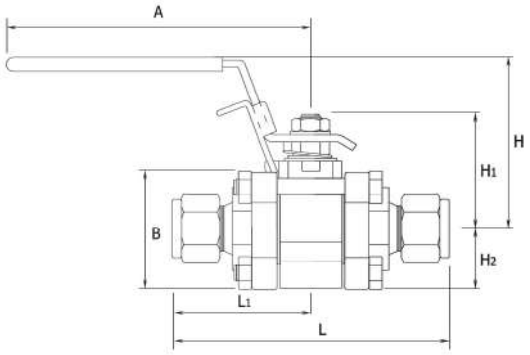


UHMWPE



DK-Lok Tube Fitting End Connections

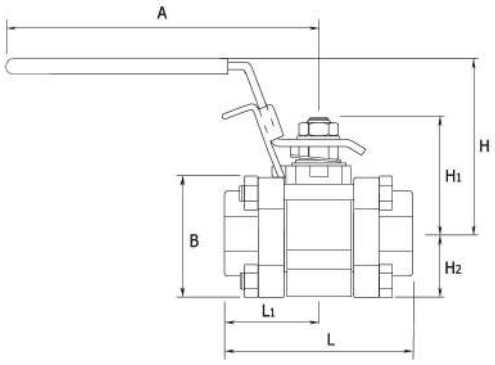




Basic Ordering number	End Connection	Orifice		Cv	Dimension mm(in.)						
		mm	in.		L	L1	H	H1	H2	A	B
Fractional DK-Lok											
V83A-D4T-	1/4 in.	4.8	0.188	1.2	80.8 (3.18)	40.40 (1.59)	47.7 (1.88)	31.8 (1.25)	16.75 (0.66)	57.2 (2.25)	33.0 (1.30)
V83A-D6T-	3/8 in.	7.1	0.281	3.8							
V83B-D8T-	1/2 in.	10.4	0.411	7.5	103.8 (4.09)	51.90 (2.04)	64.8 (2.55)	44.2 (1.74)	22.25 (0.88)	111.0 (4.37)	44.5 (1.75)
V83B-D12T-	3/4 in.	13.1	0.516	13.6							
V83C-D16T-	1 in.	22.2	0.875	40.0	136.7 (5.38)	68.35 (2.69)	79.0 (3.11)	61.9 (2.44)	31.00 (1.22)	149.4 (5.88)	62.0 (2.44)
Metric DK-Lok											
V83A-D6M-	6 mm	4.8	0.188	1.2	80.8 (3.18)	40.40 (1.59)	47.7 (1.88)	31.8 (1.25)	16.75 (0.66)	57.2 (2.25)	33.0 (1.30)
V83A-D8M-	8 mm	6.4	0.250	2.5							
V83A-D10M-	10 mm	7.1	0.281	3.8							
V83B-D12M-	12 mm	10.4	0.411	7.5	103.8 (4.09)	51.90 (2.04)	64.8 (2.55)	44.2 (1.74)	22.25 (0.88)	111.0 (4.37)	44.5 (1.75)
V83C-D25M-	25 mm	22.2	0.875	40.0	136.7 (5.38)	68.35 (2.69)	79.0 (3.11)	61.9 (2.44)	31.00 (1.22)	149.4 (5.88)	62.0 (2.44)

Female Pipe Thread End Connections



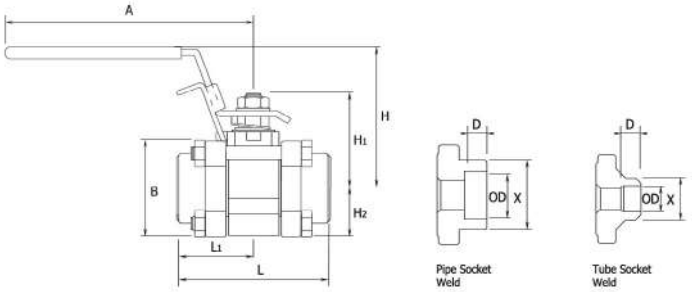


Basic Ordering number	End Connection	Orifice		Cv	Dimension mm(in.)						
		mm	in.		L	L1	H	H1	H2	A	B
Female NPT Ends											
V83A-F2N-	1/8 in.	7.1	0.281	3.8	55.4 (2.18)	27.70 (1.09)	47.7 (1.88)	31.8 (1.25)	16.75 (0.66)	57.2 (2.25)	33.0 (1.30)
V83A-F4N-	1/4 in.										
V83B-F6N-	3/8 in.	13.1	0.516	12.0	68.9 (2.71)	34.45 (1.36)	64.8 (2.55)	44.2 (1.74)	22.25 (0.88)	111.0 (4.37)	44.5 (1.75)
V83B-F8N-	1/2 in.										
V83C-F12N-	3/4 in.	22.2	0.875	31.0	92.0 (3.62)	46.00 (1.81)	79.0 (3.11)	61.9 (2.44)	31.00 (1.22)	149.4 (5.88)	62.0 (2.44)
V83C-F16N-	1 in.			38.0							
Female ISO Tapered Ends											
V83A-F4R-	1/4 in.	7.1	0.281	3.8	55.4 (2.18)	27.70 (1.09)	47.7 (1.88)	31.8 (1.25)	16.75 (0.66)	57.2 (2.25)	33.0 (1.30)
V83B-F8R-	1/2 in.	13.1	0.516	12.0	68.9 (2.71)	34.45 (1.36)	64.8 (2.55)	44.2 (1.74)	22.25 (0.88)	111.0 (4.37)	44.5 (1.75)
V83C-F12R-	3/4 in.	22.2	0.875	31.0	92.0 (3.62)	46.00 (1.81)	79.0 (3.11)	61.9 (2.44)	31.00 (1.22)	149.4 (5.88)	62.0 (2.44)
V83C-F16R-	1 in.			38.0	114.3 (4.50)	57.15 (2.25)					

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Tube and Pipe Socket Weld End Connections

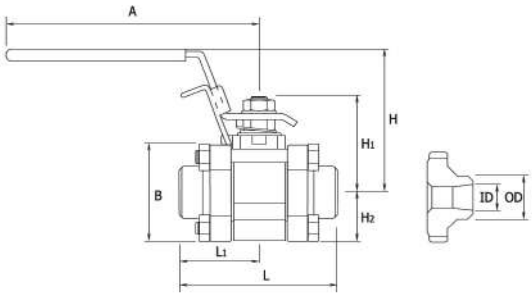




Basic Ordering number	End Connection	Orifice		Cv	Dimension mm(in.)									
		mm	in.		OD	X	D	L	L1	H	H1	H2	A	B
Tube Socket Weld														
V83A-SW4T-	1/4 in.	4.8	0.188	1.2	6.50 (0.26)	13.70 (0.54)	7.1 (0.28)	55.4 (2.18)	27.70 (1.09)	47.7 (1.88)	31.8 (1.25)	16.75 (0.66)	57.2 (2.25)	33.0 (1.30)
V83A-SW6T-	3/8 in.	7.1	0.281	3.8	9.70 (0.38)	17.10 (0.67)	7.9 (0.31)							
V83B-SW8T-	1/2 in.	10.4	0.411	7.5	12.90 (0.51)	21.30 (0.84)	9.7 (0.38)	68.9 (2.71)	34.45 (1.36)	64.8 (2.55)	44.2 (1.74)	22.25 (0.88)	111.0 (4.37)	44.5 (1.75)
V83B-SW12T-	3/4 in.	13.1	0.516	13.6	19.20 (0.76)	26.70 (1.05)	11.2 (0.44)							
V83C-SW16T-	1 in.	22.2	0.875	40.0	25.65 (1.01)	33.40 (1.31)	16.0 (0.63)	92.0 (3.62)	46.00 (1.81)	79.0 (3.11)	61.9 (2.44)	31.00 (1.22)	149.4 (5.88)	62.0 (2.44)
Pipe Socket Weld														
V83B-SW8P-	1/2 in.	13.1	0.516	15.0	21.80 (0.86)	31.20 (1.23)	9.7 (0.38)	68.9 (2.71)	34.45 (1.36)	64.8 (2.55)	44.2 (1.74)	22.25 (0.88)	111.0 (4.37)	44.5 (1.75)
V83C-SW12P-	3/4 in.	22.2	0.875	36.0	27.20 (1.07)	42.16 (1.66)	12.7 (0.50)	92.0 (3.62)	46.00 (1.81)	79.0 (3.11)	61.9 (2.44)	31.00 (1.22)	149.4 (5.88)	62.0 (2.44)
V83C-SW16P-	1 in.			42.0	33.90 (1.33)	45.30 (1.78)								

Pipe Butt Weld End Connections

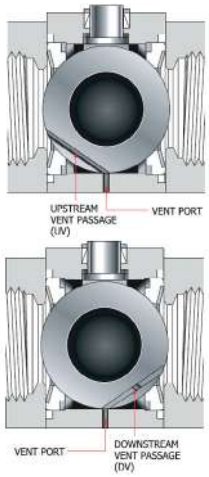




Basic Ordering number	End Connection	Orifice		Cv	Dimension mm(in.)								
		mm	in.		OD	ID	L	L1	H	H1	H2	A	B
Schedule 10													
V83A-W4P10-	1/4 in.	7.1	0.271	1.2	13.70 (0.54)	10.40 (0.41)	52.4 (2.06)	26.20 (1.03)	47.7 (1.88)	31.8 (1.25)	16.75 (0.66)	57.2 (2.25)	33.0 (1.30)
V83B-W8P10-	1/2 in.	13.1	0.516	15.0	21.30 (0.84)	17.10 (0.67)	68.9 (2.71)	34.45 (1.36)	64.8 (2.55)	44.2 (1.74)	22.25 (0.88)	111.0 (4.37)	44.5 (1.75)
V83C-W12P10-	3/4 in.	22.2	0.875	36.0	26.67 (1.05)	22.45 (0.88)	92.0 (3.62)	46.00 (1.81)	79.0 (3.11)	61.9 (2.44)	31.00 (1.22)	149.4 (5.88)	62.0 (2.44)
V83C-W16P10-	1 in.			40.0	33.40 (1.31)	27.90 (1.10)	88.9 (3.50)	44.45 (1.75)					
Schedule 40													
V83A-W4P40-	1/4 in.	7.1	0.271	1.2	13.70 (0.54)	9.20 (0.36)	52.4 (2.06)	26.20 (1.03)	47.7 (1.88)	31.8 (1.25)	16.75 (0.66)	57.2 (2.25)	33.0 (1.30)
V83B-W8P40-	1/2 in.	13.1	0.516	15.0	21.30 (0.84)	15.80 (0.62)	68.9 (2.71)	34.45 (1.36)	64.8 (2.55)	44.2 (1.74)	22.25 (0.88)	111.0 (4.37)	44.5 (1.75)
V83C-W12P40-	3/4 in.	22.2	0.875	36.0	26.67 (1.05)	20.93 (0.82)	92.0 (3.62)	46.00 (1.81)	79.0 (3.11)	61.9 (2.44)	31.00 (1.22)	149.4 (5.88)	62.0 (2.44)
V83C-W16P40-	1 in.			40.0	33.40 (1.31)	26.60 (1.05)	88.9 (3.50)	44.45 (1.75)					
Schedule 80													
V83A-W4P80-	1/4 in.	7.1	0.271	1.2	13.70 (0.54)	7.70 (0.30)	52.4 (2.06)	26.20 (1.03)	47.7 (1.88)	31.8 (1.25)	16.75 (0.66)	57.2 (2.25)	33.0 (1.30)
V83A-W6P80-	3/8 in.	7.1	0.281	3.8	17.10 (0.67)	10.70 (0.42)							
V83B-W8P80-	1/2 in.	10.4	0.411	7.5	21.30 (0.84)	13.90 (0.55)	68.9 (2.71)	34.45 (1.36)	64.8 (2.55)	44.2 (1.74)	22.25 (0.88)	111.0 (4.37)	44.5 (1.75)
V83B-W12P80-	3/4 in.	13.1	0.516	13.6	26.70 (1.05)	18.80 (0.74)							
V83C-W16P80-	1 in.	22.2	0.875	40.0	33.40 (1.31)	23.90 (0.94)	88.9 (3.50)	44.45 (1.75)	79.0 (3.11)	61.9 (2.44)	31.00 (1.22)	149.4 (5.88)	62.0 (2.44)

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

External Vent Options



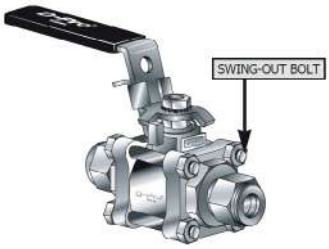
The vent passage is isolated from the ball bore. The valve in closed position, system fluids vent through vent passage to the vent port.
The valve in open position, no venting occurs, system fluids flow through the valve.
Choose either the Downstream Vent (DV) or Upstream Vent (UP) option.

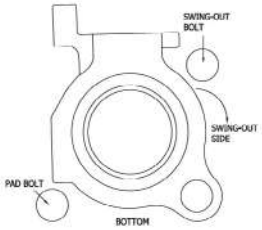
External Vented Valve Rating

Upstream and downstream

Seat Material	Valve Series	Pressure, bar (psi)	Pressure @ Max. Temp.
Reinforced PTFE Virgin PTFE Carbon PTFE	V83A	68.9 (1000) @ -28 to 37°C (-20 to 100°F)	7 bar @ 232°C (100 psig @ 450°F)
	V83B		
	V83C		
PEEK	V83A		7 bar @ 232°C (100 psig @ 450°F)
	V83B		55 bar @ 232°C (800 psig @ 450°F)
	V83C		
UHMWPE	V83A		17 bar @ 121°C (250 psig @ 250°F)
	V83B		
	V83C		

Maintenance Kits





Unscrew the swing-out bolt and loosen other three bolts. This allows users to swing-out the body, keeping the valve in-line.

Seat Seal Kits

Kit contains each two pieces of seats, seat support rings, disc springs and flange seals.

Valve Series	Seat Material Designator	Flange Seal Designator
V83A- V83B- V83C-	**Nil** :Reinforced PTFE **VP** : Virgin PTFE **CP** : Carbon PTFE **PK** : PEEK **UH** : UHMWPE	**Nil** : Reinforced PTFE

To order, add - SEAT as a suffix to the ordering number. i.e., V83B-PK-SEAT

Packing Seal Kits

Kit contains each one piece of upper & lower packing, packing gland, packing support and stem bearing.

Valve Series	Packing Material Designator	Stem Bearing Designator
V83A- V83B- V83C-	**Nil** :Reinforced PTFE	**PK** : PEEK 7 : X750

To order, add - PKG as a suffix to the ordering number. i.e., V83B-PK-PKG

Flange Seal Kits

Kit contains two flange seals.

Valve Series	Flange Seal Designator
V83A- V83B- V83C-	**Nil** :Reinforced PTFE

To order, add - FL as a suffix to the ordering number.
i.e., V83A-FL

Fastener Kits

Kit contains each four pieces of body fasteners, body hex nuts and one stem nut.

Valve Series	Flange Seal Designator
V83A- V83B- V83C-	Gr. B8M

To order, add - BOLT as a suffix to the ordering number.
i.e., V83A-BOLT

- **All dimensions shown in this catalog are for reference only and are subject to change.**
- **Dimensions with DK-Lok nuts are in finger-tight position.**
- **We reserve the right to change specifications stated in this catalog for our continuing program of improvement.**

Safe Valve Selection

The selection of a valve for any application or system design must be considered to ensure safe performance. Valve function, valve rating, material compatibility, proper installation, operation and maintenance remain the sole responsibillty of the system designer and the user. DK-Lok accepts no liability for any improper selection, installation, operation or maintenance.

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

P series Rack and Pinion Pneumatic Actuator



Model shown:

V83A single
V83A double
V83B double

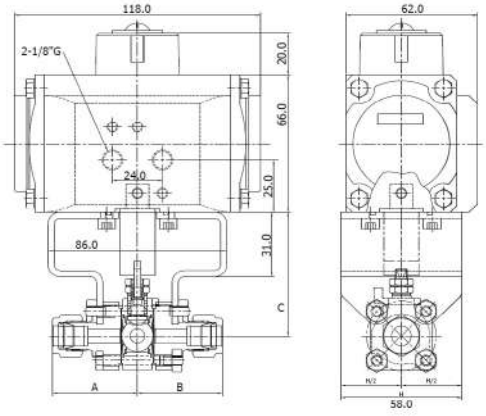
A,B dimension

V83A: 40.71
V83B: 52.24

C dimension

V83A: 61.45
V83B: 65.62

Unit: mm



Actuator Material of Construction

Parts	Standard Matetial
Body	Extruded Aluminum Alloy with external & internal corrosion protection.
Piston (Rack)	Die Cast Aluminum Alloy Anodized.
Drive Shaft (Pinion)	Steel Alloy Nickel Plated.
Spring	Spring Alloy Steel Nickel Plated. (min. 5, max. 12 spring)
End Cap	Die Cast Aluminum Alloy Polyester Coated.
O-Ring	NBR is standard. Optional FKM and Silicon.

Table 1. **Technical Information**

Actuator operating temperature (°C)

- Standard : NBR O-Ring -40 to 80.
- Low Temperature : Silicon O-Ring -55 to 80 (Designator : **LT**).
- High Temperature : FKM O-Ring -15 to 150 (Designator : **HT**).
- Air-pressure : Min. 2.5 bar, Max. 8 bar.
- Air supply end connection: Female G 1/8 inch (ISO 228-1).
- Position indicator is standard.

Table 2. **Single Return 90 Deg. Actuator**

Valve series	Ordering Number		Dimensions	Weight	Moment Values P=6 bar	Air Consumption	Mounting Bracket Ordering Number	Actuator Operating Temperature Options
	Normal Close	Normal Open	L x H x W unit: mm	Kg	Nm	Liter		
V83A	PCS1	POS1	118x86x62	0.9	3.5	0.10	V83A-SMB	Nil : Standard Temp. LT : Low Temp. HT : High Temp.
V83B	PCS3	POS3	140.5x89x70.5	1.13	7.4	0.15	V83B-SMB	
V83C	PCS4	POS4	210.5x122x94.5	3.09	17.7	0.49	V83C-SMB	

Table 3. **Double Return 90 Deg. Actuator**

Valve series	Ordering Number	Weight Unit: Kg	L x H x W unit: mm	Moment Values P=6 bar	Air Consumption	Mounting Bracket Ordering Number	Mounting Bracket Ordering Number
				Nm	Liter		
V83A	PD1	0.75	118x86x62	14.4	0.10	V83A-DMB	Nil : Standard Temp. LT : Low Temp. HT : High Temp.
V83B	PD1	0.75	118x86x62	14.4	0.10	V83B-DMB	
V83C	PD2	1.03	140.5x89x70.5	19.9	0.15	V83C-DMB	

Mount bracket : Field assembly kit includes mount bracket, valve to actuator connector, special size of valve body fasteners, fastener washers, bracket bolts and assembly manual.

How to Order

Select applicable valve pattern, seat options, pneumatic actuator, and the actuator temperature option from designator listed below.

V83A-D4T	**-PK**					**-PCS1**	**-HT**	**-S**
V83C-D25M		**- 7**				**-PD2**		**-S**
Seat Material	Stem Bearing	Flange Seals	External Vent	Handle	Factory Assembled Actuator	Actuator Temperature Options	Body & Flange Material	
Nil : Reinforced PTFE **VP** : Virgin PTFE **CP** : Carbon PTFE **PK** : PEEK **UH** : UHMWPE	**Nil** : PEEK **7** : X750	**Nil** : Standard PTFE	**UV** : External Upstream **DV** : External Downstream	**Nil** : Lever Handle **OH** : Oval Handle	• Single return, see Table 2. • Double return, see Table 3.	**Nil** : Standard Temp. **LT** : Low Temp. **HT** : High Temp.	**S** : A351 CF8M **L** : A351 CF3M **C** : A216 Gr. WCB	

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

DK-LOK

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IDK-LOK

V86-VC86 Series Valves

Rev. 01-01
Aug. 2023



DK-LOK®
Ball & Plug Valves

V86 Series Ball Valves
VC86 Series CNG/NGV Valves

Pressure Rating up to 689 bar (10,000psig)



Features

- High pressure up to 10,000 psi (689 bar).
- Blowout proof design with internally loaded stem.
- Handle indicates the flow direction.
- Positive stop with a robust stop pin.
- High flow rate with maximum orifice.
- Various end ports including DK-Lok tube port.
- Various flow control with side and bottom inlet port on 3-way diverter valves.



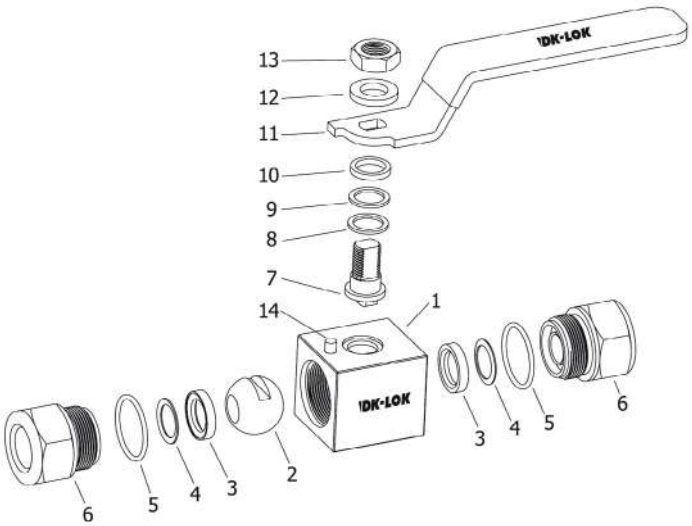


Table 1. **Materials of Construction**

	Component	Materials Grade/ASTM Specification
1	Body	SS316/A276 or A479
2	Ball	
3	Seat (2)	PVDF, standard for V86 Series Optional PCTFE PEEK, standard for VC86 Series
4	Disc Spring (2)	Type 630/A564, applicable to VC86 Series
5	End Seal (2)	FKM Oring for V86 Series HNBR O-ring for VC86 Series
6	End Connector (2)	SS316/A276 or A479
7	Stem	
8	Bearing	PTFE
9	Packing	
10	Gland	SS316/ ASTM A276 or ASTM A479
11	Lever Handle	SS304 handle with vinyl sleeve
	Optional Oval Handle	
12	Washer	SS304
13	Stem Nut	SS304
14	Stop Pin	SS304

- Wetted parts and lubricants listed in blue.
- Fluorinated-based lubricant

CNC/NGV Certifications

VC86 Series with PEEK seat and HNBR O-rings are available with CNG/NGV certifications.
The sealing material of seat and O-rings are selected for compatible with CNG.
VC86 Series with the live loaded compensation disc spring reacts on ball movement in both low and high pressure systems in CNG and NGV applications.

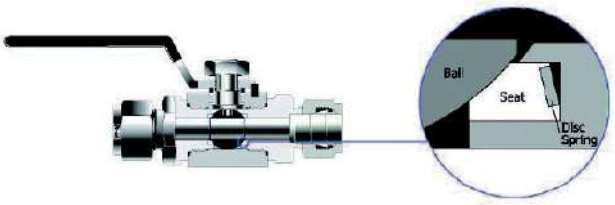


Table 2. Pressure - Temperature Rating for CNG Service

Valve Series	Certificates	ECE R110	ANSI / AGA NGV 3.1-1995 CGV NGV 12.3-M95	ANSI / IAS NGV 4.6-1999 CSA 12.56-M99	ISO 15500
VC86 Series 2-way ball valves	Certificate No.	110R-000181	2010-REPORT-002 (00)	2010-REPORT-003 (00)	2010-REPORT-001- (00)
	Classification	Class 0	manual valve	manual valve (Class B)	manual valve
	Temperature	-40 to 120 °C (-40 to 250 °F)	-40 to 121 °C (-40 to 250 °F)	-40 to 65 °C (-40 to 150 °F)	-40 to 121 °C (-40 to 250 °F)
	Working Pressure	274 bar @ 120 °C	273 bar @ 121 °C	293 bar @ 65 °C	273 bar @ 121 °C

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Operation

- 2-way positive shut off and 3-way directional control of fluids in process, power and instrument application.
- Valves are designed to control fluids in full open or full closed position.
- Valves that have not been actuated for a period of time may have a higher initial actuation torque.
- Valves must be in open position during system test not to damage the valve seat.
- Sour Gas Service NACE MR0175 available.

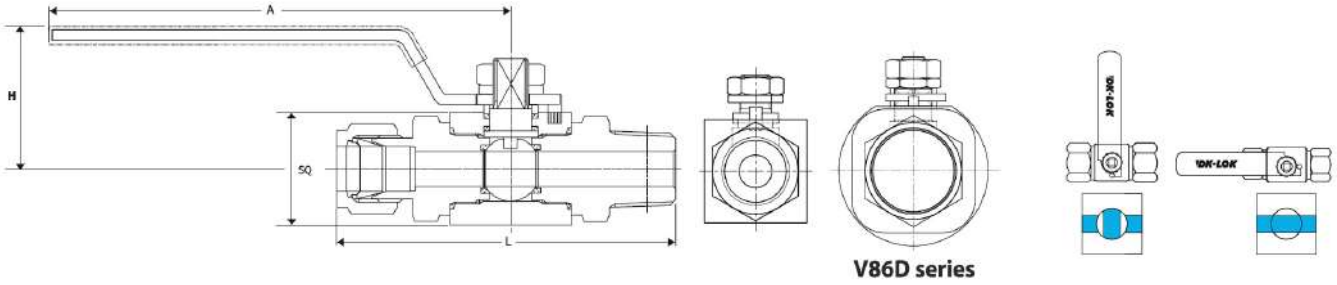
Factory Test

Every valve is tested with nitrogen gas @1,000 psig (68 bar) for leakage at the seat to a maximum allowable leak rate of 0.1 SCCM. The stem packing is tested with nitrogen gas @1,000 psig for no detectable leakage.

Cleaning and Packaging

Every valve is cleaned and packaged in accordance with DK-Lok cleaning standard DC-01. Special cleaning and packaging in accordance with DK-Lok DC-11 ensures compliance with product cleaning of ASTM G93 Level C is available for valves with PCTFE seat.

2-Way On-off Valves



Ordering Information and Dimensions

Basic Ordering Number		End Connections Inlet & Outlet	Orifice mm (in.)	Cv	Dimensions mm(in.) A	H	L	SQ
V86A- VC86A-	D-4T	1/4 in.DK-Lok	4.8 (0.19)	1.2	108.3 (4.26)	38.4 (1.52)	97.12 (3.82)	32.0 (1.26)
	D-6T	3/8 in.DK-Lok	7.1 (0.28)	3.7			104.5 (4.11)	
	D-8T	1/2 in.DK-Lok	10.0 (0.39)	7.5			109.6 (4.31)	
	F-4N	1/4 in.Female NPT					74.0 (2.91)	
	F-6N	3/8 in.Female NPT					77.0 (3.03)	
	F-8N	1/2 in.Female NPT					85.0 (3.35)	
	M-4N	1/4 in.Male NPT	7.1 (0.28)	3.7			95.4 (3.76)	
	M-6N	3/8 in. Male NPT	10.0 (0.39)	7.2			95.4 (3.76)	
	M-8N	1/2 in.Male NPT		7.5			100.2 (3.94)	
V86B- VC86B-	F-8N	1/2 in.Female NPT	12.7 (0.50)	10.1	149.0 (5.86)	50.8 (2.00)	89.0 (3.50)	40.0 (1.57)
	F-12N	3/4 in.Female NPT					90.0 (3.54)	
	D-12M	12mmDK-Lok	10.0 (0.39)				112.6 (4.43)	
	D-16M	16mmDK-Lok	12.7 (0.50)				115.0 (4.53)	
	D-8T	1/2 in.DK-Lok	10.4 (0.41)				114.6 (4.51)	
	D-10T	5/8 in.DK-Lok	12.7 (0.50)				114.4 (4.50)	
	D-12T	3/4 in.DK-Lok					114.8 (4.52)	
V86C- VC86C-	F-12N	3/4 in.Female NPT	19.0 (0.75)	30.0	149.0 (5.86)	56.0 (2.20)	96.0 (3.78)	50.0 (1.97)
	F-16N	1 in.Female NPT					111.0 (4.37)	
	D-12T	3/4 in.DK-Lok	15.7 (0.62)	19.0			125.0 (4.92)	
	D-16T	1 in.DK-Lok	19.0 (0.75)	30.0			134.0 (5.27)	
	M-12N	3/4 in.Male NPT	15.7 (0.62)	19.0			119.0 (4.68)	
	M-16N	1 in.Male NPT	19.0 (0.75)	30.0			129.0 (5.07)	
VC86D-	F -16N	1 in.Female NPT	25.0 (0.98)	Full Bore	193.7 (7.62)	84.1 (3.31)	112.90 (4.44)	70 (2.76)

CNG valve ordering number :
The basic ordering number listed in black are not for CNG/NGV applicable valves.

Table 3. **2-Way Valve Actuation Torque**

Standard Valves

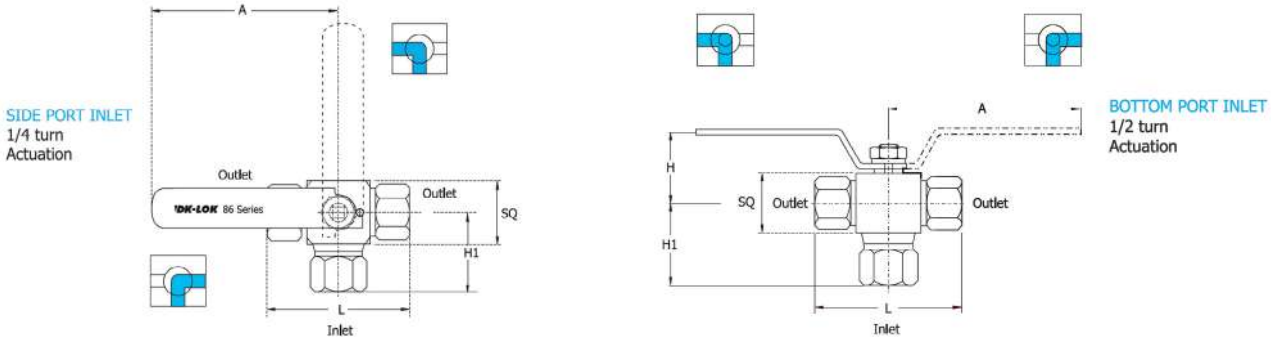
Valve Series	System Pressures, bar (psig) 0 (0)	334 (5000)	413 (6000)
	Torque	Unit: Nm	
V86A	3.92 (2.89)	-	6.37 (4.69)
V86B	7.35 (5.42)	10.30 (7.59)	-
V86C	12.26 (9.04)	19.61 (14.46)	-

CNG/NGV Valves

Valve Series	System Pressures, bar (psig) 0 (0)	344 (5000)
	Torque	Unit: Nm
VC86B	5.19	10.59
VC86C	2.15	5.88
VC86D	7.35	9.80

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

3-Way Diverter Valves



V86 3-way ball valve is designed to switch media through the inlet port and direct it to out of two outlet ports.

Ordering Information and Dimensions

Basic Ordering Number		End Connections	Orifice	Dimensions mm(in.)				SQ
			mm (in.)	A	H	H1	L	
V86A-	3*- D-4T-	1/4 in. DK-Lok	4.8 (0.19)	108.3 (4.26)	38.4 (1.52)	50.9 (2.0)	97.12 (3.82)	32.0 (1.26)
	3*- D-6T-	3/8 in. DK-Lok	7.1 (0.28)			53.0 (2.09)	104.5 (4.11)	
	3*- D-8T-	1/2 in. DK-Lok	10.0 (0.39)			55.8 (2.20)	109.6 (4.31)	
	3*- F-4N -	1/4 in. Female NPT				40.0 (1.57)	74.0 (2.91)	
	3*- F-6N-	3/8 in. Female NPT				41.5 (1.64)	77.0 (3.03)	
	3*- F-8N-	1/2 in. Female NPT				45.5 (1.79)	85.0 (3.35)	
V86B-	3*- F-8N-	1/2 in. Female NPT	12.7 (0.50)	149.0 (5.86)	50.8 (2.00)	55.0 (2.17)	89.0 (3.50)	40.0 (1.57)
	3*- F-12N-	3/4 in. Female NPT				55.0 (2.17)	90.0 (3.54)	
	3*- D-10T-	5/8 in. DK-Lok				67.2 (2.66)	114.4 (4.50)	
	3*- D-12T-	3/4 in. DK-Lok				67.7 (2.66)	115.0 (4.53)	
V86C-	3*- D-12T-	3/4 in. DK-Lok	15.7 (0.62)	149.0 (5.86)	56.0 (2.20)	75.3 (2.96)	125.0 (4.92)	50.0 (1.97)
	3*- D-16T-	1 in.DK-Lok	19.0 (0.75)			80.0 (3.15)	134.0 (5.27)	
	3*- F-12N-	3/4 in. Female NPT				59.5 (2.34)	96.0 (3.78)	
	3*- F-16N-	1 in. Female NPT				67.0 (2.64)	111.0 (4.37)	

All dimensions shown are for reference only and are subject to change.

Side and Bottom Port Valve Ordering Information
To order side port entry valve, replace * with S, to order bottom port entry valve, replace * with B.
Examples : V86A-3**S**-D-4T-S, V86A-3**B**-D-4T-S.

Table 4. **3-way Valve Actuation Torque**

Valve Series	System Pressures, bar (psig)		
	0 (0)	206 (3000)	275 (4000)
	Torque		Unit: Nm
V86A	3.92	-	4.90
V86B	7.35	7.85	-

Table 5. 2-way Valve Pressure and Temperature Rating

Valve Series	Seat Material	Maximum Working Pressure at -54~21°C (-65~70°F) psig (bar)	Temperature Rating °C(°F)
V86A	PVDF	6,000 (413)	-30 to 130 (-22 to 266)
	PCTFE		-30 to 180 (-22 to 356)
	PEEK	10,000 (689)	-54 to 260 (-65 to 500)
V86B V86C	PVDF	5,000 (344)	-30 to 110 (-22 to 230)
	PCTFE		-30 to 160 (-22 to 320)
	PEEK	6,000 (413)	-40 to 210 (-40 to 410)
V86D	PCTFE	6,000 (413)	-40 to 160 (-40 to 320)

Note : Refer to table 2 for VC86 series's Pressure and Temperature Rating

Table 6. **3-way Valve Pressure and Temperature Rating**

Valve Series	Seat	Maximum Working Pressure at -54~21°C (-65~70°F) psig (bar)	Temperature Rating °C(°F)
V86A-3*	PVDF	4,000 (275)	-30 to 130 (-22 to 266)
	PCTFE		-30 to 180 (-22 to 356)
	PEEK	6,000 (413)	-40 to 230 (-40 to 446)
V86B-3* V86C-3*	PVDF	3,000 (206)	-30 to 110 (-22 to 230)
	PCTFE		-30 to 160 (-22 to 320)
	PEEK	4,000 (275)	-40 to 210 (-40 to 410)

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

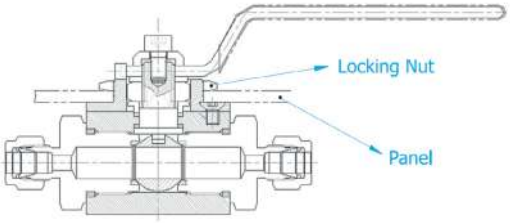
Options

Locking Nut & Panel Mounting

Ordering designator : **P1**
Addition locking nut below handle makes the valve panel mountable.
Disassemble the handle prior to panel mounting.

mm (in.)

Valve Series	Panel Hole Drill	Panel Thickness
V86A	30.0 (1.18)	Max. 4.0 (0.157)
V86B	38.0 (1.50)	
V86C	38.0 (1.50)	

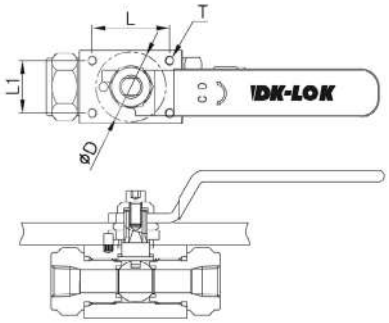


Screw Hole for Panel Mounting

Ordering Designator : **P2**
Additional four (4) screw holes on the top of valve makes the valve panel mountable.
Disassemble the handle prior to panel mounting.

mm (in.)

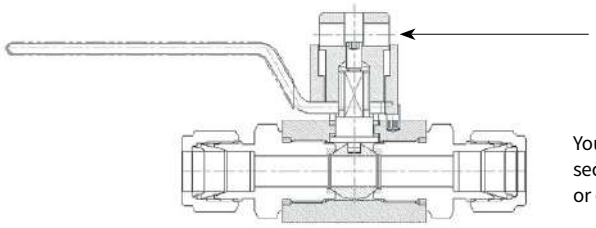
Valve Series	L	L1	T	D
V86A	34.0 (1.33)	23.0 (0.91)	M4×0.7P	30.0 (1.18)
V86B	36.0 (1.42)	29.0 (1.14)	M5×0.8P	38.0 (1.50)
V86C	40.0 (1.57)	35.0 (1.37)	M6×1.0P	38.0 (1.50)



" Lift-Turn" Locking Device

Ordering Designator : **LD**
Dk Tech patented “Lift-Turn” safety locking device allows you to lock the valve manually either in open or close position.
The locking device consists of study upper and lower locking detents made out of stainless steel.

Note : LD option applicable to 2-way valves.



Pad-Lock applicable 7.2mm (0.28in) hole constructed on upper locking detent.

You may apply a pad-lock to secure the valve in the open or close position.

Ordering Information

Select the desired basic ordering number, and options from designators listed below.

V86A-D-4T	**-PC**			**-OH**	**-S**
V86B-F-12N			**-LD**		**-S**
VC86B-D-12M		**-PC**			**-S**
	Seat	Panel Mounting	Locking Device	Handle	Body Material
	Nil : PEEK, standard for VC86 series **Nil** : PVDF, standard for V86 series **PC** : PCTFE **PK** : PEEK **PV** : PVDF	**P1** : Locking nut & panel mounting **P2** : Screw hole for panel mounting	**LD** : Locking Device	**Nil** : Standard Lever Handle **OH** : Oval Handle OH option is applicable to 2-way V86A Series valves.	**S** : SS316

Safe Valve Selection

The selection of a valve for any application or system design must be considered to ensure safe performance. Valve function, valve rating, material compatibility, proper installation, operation and maintenance remain the sole responsibility of the system designer and the user. DK-Lok accepts no liability for any improper selection, installation, operation or maintenance.

DK-LOK

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IDK-LOK

VH86 Series

Rev. 01-01
Aug. 2023



DK-LOK®
Ball & Plug Valves

VH86 Series

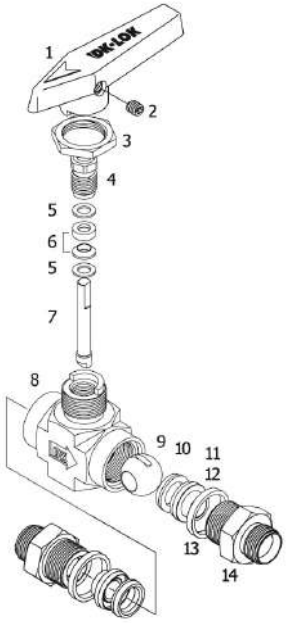
High Pressure Multi Purpose Ball Valves

Rev.01-01
Aug.2023

Features

- High flow in a compact design.
- High pressure capacity designed for blow-out proof with internally loaded ball stem.
- Micro-finished ball provides a positive seal.
- 90 degree actuation for 2-way and 180 degree actuation for 3-way ball valves.
- Panel mounting as standard.
- Chevron stem seal, adjustable with the handle disassembled.
- Handle indicates flow direction.
- Low operating torques and positive handle stops.
- Optional pneumatic actuation.





Material of Construction

Components	Valve Body Material Stainless Steel Grade/ASTM Specification
1. Handle	Nylon with brass insert
2. Set Screw	Stainless steel
3. Panel Nut	SS316/A276
4. Packing bolt*	
5. Upper / Lower Gland	
6. Stem Chevron Packing	PTFE/D1710 type 1, Grade 1, Class B
7. Stem	SS316/A276
8. Body	SS316/A182 Type F316
9. Ball	SS316/A276
10. Seat (2)	Standard PCTFE (Kel-F), optional PTFE, PEEK
11. Retainer (2)	SS316/A276
12. Retainer Seal (2)	PTFE/D1710 type 1, Grade 1, Class B
13. End Connector Seal (2)	
14. End Connector (2)	SS316/A276

* Molybdenum disulfide with hydrocarbon coating
  - Wetted parts and lubricants are listed in blue.
  - Lubricant is Fluorinated-based.

Operation and Packing Adjustment

- VH86 valves are designed to control fluid in full open and closed position, using VH86 valves to throttle the flow may reduce the valve life.
- Stem packing can be adjustable with the handle disassembled. Tighten packing bolt clockwise to tighten the stem packing.
- Valves that have not been actuated for a period of time may have a higher initial actuation torque.
- If the valve system needs to be tested at higher pressure than the valve maximum pressure, the valve must be in open position during the test so as not to damage the valve seat.
- Optional Sour Gas Service applicable.

Application

VH86 series ball valve offers a safe and reliable performance in a wide range of onshore and offshore applications: Water, oil, gas, petrochemical in heavy duty applications.

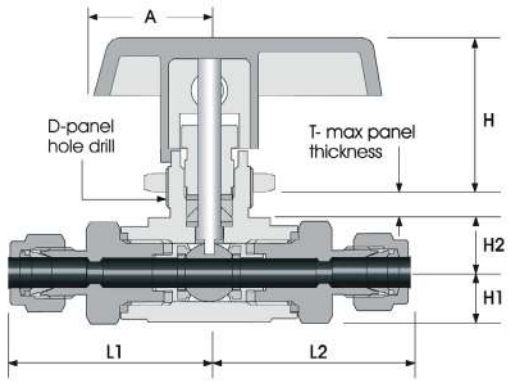
Factory Test, Cleaning and Packaging

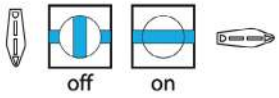
- Every valve is factory tested with nitrogen gas at 1,000 psig (68.9 bar) for leakage at seat to a maximum allowable leak rate of 0.1 SCCM. The packing is tested with nitrogen gas for no detectable leakage.
- Every valve is cleaned and packaged in accordance with DK cleaning standard DC-01.

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Bi-directional 2-way Ball Valves

In-line patten





Technical Data

Valve Series	Sealing Materials			Pressure Rating @-27 to 37 °C (-20 to 100 °F)	Temperature Rating
	Seat	Stem Packing	Retainer / End Seal		
VH86A, VH86B, and VH86C series	PCTFE	PTFE	PTFE	6,000 psig (413 bar)	-30 to 180 °C (-22 to 356 °F)
	PEEK	PTFE	PTFE	6,000 psig (413 bar)	-54 to 230 °C (-65 to 446 °F)
	PTFE	PTFE	PTFE	1,500 psig (103 bar)	-30 to 176 °C (-22 to 349 °F)

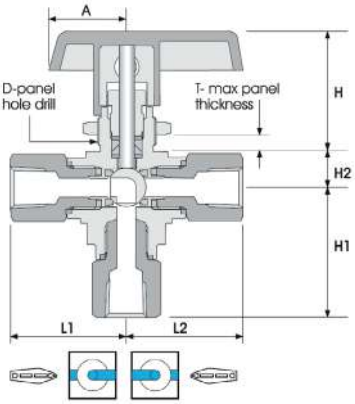
•PCTFE is standard seat material.

Ordering Information and Dimensions

Basic Ordering Number		End Connections		Orifice		Cv	Dimensions mm(in.)							
		Inlet	Outlet	mm	inch		L1	L2	H1	H2	H	A	D	T
VH86A-	D-1T-	1/16" DK-Lok		1.3	0.052	0.06	33.0(1.30)	33.0(1.30)	9.5 (0.37)	8.5 (0.33)	24.8 (0.98)	19.1 (0.75)	14.7 (0.58)	3.3 (0.13)
	D-2T-	1/8" DK-Lok		2.4	0.0945	0.21	34.5(1.36)	34.5(1.36)						
	F-2N-	1/8" Female NPT		4.2	0.165	0.43	27.2(1.07)	27.2(1.07)						
	M-2N-	1/8" Male NPT		4.2	0.165	0.43	30.0(1.18)	30.0(1.18)						
	D-4T-	1/4" DK-Lok		4.2	0.165	0.43	37.6(1.48)	37.6(1.48)						
	M-4N-	1/4" Male NPT		4.2	0.165	0.43	34.3(1.35)	34.3(1.35)						
	D-3M-	3mm DK-Lok		2.2	0.086	0.18	34.8(1.37)	34.8(1.37)						
VH86B-	D-2T-	1/8" DK-Lok		2.4	0.0945	0.26	41.9(1.65)	41.9(1.65)	10.7 (0.42)	11.9 (0.47)	38.9 (1.53)	25.4 (1.00)	19.6 (0.77)	6.4 (0.25)
	D-4T-	1/4" DK-Lok		4.7	0.185	1.04	44.2(1.74)	44.2(1.74)						
	MD-4N4T-	1/4" Male NPT	1/4" DK-Lok					41.1(1.62)						
	FD-4F4T-	1/4" Female NPT	1/4" DK-Lok					38.4(1.51)						
	F-4N-	1/4" Female NPT		6.4	0.252	2.34	38.4(1.51)	38.4(1.51)						
	M-4N-	1/4" Male NPT					41.1(1.62)	41.1(1.62)						
	MF-4N-	1/4" Male NPT	1/4" Female NPT				38.4(1.51)							
	MD-4N6T-	1/4" Male NPT	3/8" DK-Lok				45.7(1.8)							
	FD-4N6T-	1/4" Female NPT	3/8" DK-Lok					38.4(1.51)						
	D-6T-	3/8" DK-Lok						45.7(1.8)						
	M-6N-	3/8" Male NPT					82.2(3.24)							
	D-6M-	6 mm DK-Lok		4.7	0.185	1.04	89.0(3.50)							
	D-8M-	8 mm DK-Lok		6.4	0.252	2.34	90.4(3.56)							
	D-10M-	10 mm DK-Lok					92.0(3.62)							
VH86C-	F-6N-	3/8" Female NPT		10.3	0.406	6.42	99.0(3.90)		17.5 (0.69)	17.8 (0.70)	44.2 (1.74)	38.1 (1.50)	22.9 (0.90)	9.7 (0.38)
	F-8N-	1/2" Female NPT					109.20(4.30)							
	D-8T-	1/2" DK-Lok					118.8(4.68)							
	M-8N-	1/2" Male NPT					112.8(4.44)							
	D-12T-	3/4" DK-Lok					118.4(4.66)							
	D-12M-	12 mm DK-Lok		9.5	0.375	5.57	116.68(4.59)							
	D-16M-	16 mm DK-Lok		10.3	0.406	6.42	118.4(4.66)							

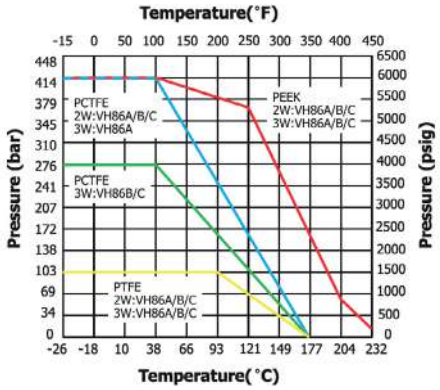
All dimensions shown are for reference only and are subject to change. Dimensions with DK-Lok nuts are in finger-tight position.

3-way Diverter Ball Valves



VH86 3-way Ball Valve is designed to switch media through the bottom port and direct it to out of two outlet ports.

Pressure-Temperature Curve



Legend : 2W:2-Way VH86 ball valves
3W:3-Way VH86 ball valves

Technical Data

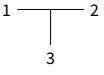
Valve Series	Sealing Materials			Pressure Rating @-27 to 37 °C (-20 to 100 °F)	Temperature Rating °C (°F)
	Seat	Stem Packing	Retainer / End Seal		
VH86A-3B	PCTFE	PTFE	PTFE	6,000 psig (413 bar)	-30 to 180 °C (-22 to 356 °F)
	PEEK	PTFE	PTFE	6,000 psig (413 bar)	-54 to 230 °C (-65 to 446 °F)
	PTFE	PTFE	PTFE	1,500 psig (103 bar)	-30 to 176 °C (-22 to 349 °F)
VH86B-3B VH86C-3B	PCTFE	PTFE	PTFE	4,000 psig (276 bar)	-50 to 180 °C (-58 to 356 °F)
	PEEK	PTFE	PTFE	6,000 psig (413 bar)	-54 to 230 °C (-65 to 446 °F)
	PTFE	PTFE	PTFE	1,500 psig (103 bar)	-30 to 176 °C (-22 to 349 °F)

Ordering Information and Dimensions

Basic Ordering Number		End Connections	Orifice		Cv	Dimensions mm(in.)							
			mm	inch		L1	L2	H1	H2	H	A	D	T
VH86A-3B-	D-1T-	1/16" DK-Lok	1.3	0.052	0.06	33.0 (1.30)	33.0 (1.30)	35.3(1.39)	8.4 (0.33)	24.8 (0.98)	19.1 (0.75)	14.7 (0.58)	3.3 (0.13)
	D-2T-	1/8" DK-Lok	2.4	0.093	0.21	34.5 (1.36)	34.5 (1.36)	36.8(1.45)					
	F-2N-	1/8" Female NPT	4.2	0.165	0.63	27.2 (1.07)	27.2 (1.07)	29.2(1.15)					
	M-2N-	1/8" Male NPT	4.2	0.165	0.59	30.0 (1.18)	30.0 (1.18)	32.0(1.26)					
	D-4T-	1/4" DK-Lok	4.2	0.165	0.63	37.6 (1.48)	37.6 (1.48)	39.6(1.56)					
	M-4N-	1/4" Male NPT	4.2	0.165	0.59	34.3 (1.35)	34.3 (1.35)	36.3(1.43)					
VH86B-3B-	D-2T-	1/8" DK-Lok	2.4	0.093	0.21	41.9 (1.65)	41.9 (1.65)	45.5(1.79)	11.9 (0.47)	38.9 (1.53)	25.4 (1.00)	19.6 (0.77)	6.4 (0.25)
	D-4T-	1/4" DK-Lok	4.7	0.187	0.70	44.2 (1.74)	44.2 (1.74)	47.8 (1.88)					
	F-4N-	1/4" Female NPT	5.0	0.196	0.87	38.4 (1.51)	38.4 (1.51)	41.9 (1.65)					
	DDM-T4N-*	1/4" DK-Lok, 1/4" Male NPT	4.7	0.187	0.70	44.2 (1.74)	44.2 (1.74)	47.8 (1.88)					
	M-4N-	1/4" Male NPT	5.0	0.196	0.87	41.1 (1.62)	41.1 (1.62)	44.7 (1.76)					
	D-6T-	3/8" DK-Lok				45.7 (1.8)	45.7 (1.8)	49.3 (1.94)					
	M-6N-	3/8" Male NPT				41.1 (1.62)	41.1 (1.62)	44.7 (1.76)					
	D-6M-	6 mm DK-Lok	4.7	0.187	0.70	44.5 (1.75)	44.5 (1.75)	47.8 (1.88)					
	D-8M-	8 mm DK-Lok	5.0	0.196	0.87	45.2 (1.78)	45.2 (1.78)	48.5 (1.91)					
	D-10M-	10 mm DK-Lok				46.0 (1.81)	46.0 (1.81)	49.5 (1.95)					
VH86C-3B-	F-6N-	3/8" Female NPT	10.3	0.406	3.62	49.5 (1.95)	49.5 (1.95)	58.2 (2.29)	17.8 (0.70)	44.2 (1.74)	38.1 (1.50)	22.9 (0.90)	9.7 (0.38)
	F-8N-	1/2" Female NPT				54.6 (2.15)	54.6 (2.15)	63.2 (2.49)					
	D-8T-	1/2" DK-Lok				59.4 (2.34)	59.4 (2.34)	68.1 (2.68)					
	DDF-8T8F-*	1/2" DK-Lok, 1/2" Female NPT						63.2 (2.49)					
	M-8N-	1/2" Male NPT				56.4 (2.22)	56.4 (2.22)	65.8 (2.59)					
	D-12T-	3/4" DK-Lok				58.9 (2.32)	58.9 (2.32)	68.1 (2.68)					
	D-12M-	12 mm DK-Lok	9.5	0.375	3.46			67.8 (2.67)					
	D-16M-	16 mm DK-Lok	10.3	0.406	3.62	59.2 (2.34)	59.2 (2.34)	65.5 (2.58)					

- All dimensions shown are for reference only and are subject to change.
- Dimensions with DK-Lok nuts are in finger-tight position.

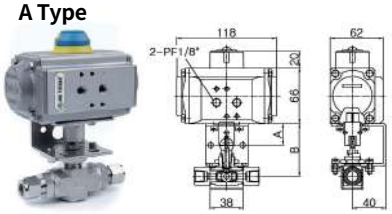
* VH86 3-way ball valves are described by first the outlet ports (1) and (2) and next the bottom inlet port (3).



All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

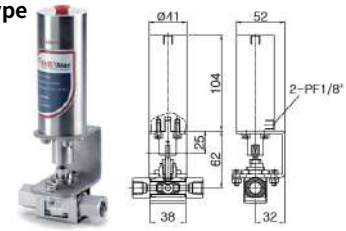
P series Rack and Pinion Pneumatic Actuator

A Type



Model shown: VH86B/C series
A dimension
VH86B: 25.00
VH86C:27.50
B dimension(Unit: mm)
VH86B: 62.00
VH86C:90.90

B Type



Model shown
: VH86B series

Table 1. **Actuator Material of Construction**

Parts	Standard Material
Body	Extruded Aluminum Alloy with external & internal corrosion protection.
Piston (Rack)	Die Cast Aluminum Alloy Anodized.
Drive Shaft (Pinion)	Steel Alloy Nickel Plated.
Spring	Spring Alloy Steel Nickel Plated. (min. 5, max. 12 spring)
End Cap	Die Cast Aluminum Alloy Polyester Coated.
O-Ring	NBR is standard. Optional FKM and Silicon.

• Body : Stainless Steel structure
Standard – Stainless Steel 304L
Option – Stainless Steel 316L

Technical Information

Actuator operating temperature (°C)
- Standard : NBR O-Ring - 20 to 80.
- Low Temperature : Silicon O-Ring -40 to 80 (Designator : **LT**).
- High Temperature : FKM O-Ring -15 to 150 (Designator : **HT**).
- Air-pressure : Min. 2.5 bar, Max. 8 bar.
- Air supply end connection : Female G 1/8 inch (ISO 228-1).
- Position indicator is standard.

Actuator operating temperature (°C)
- 10 to 60
- For TWISTMax actuators wider temperature range please refer to DK-LOK representative
- Air-pressure: Min. 4 bar, Max. 8 bar.
- Air supply end connection: Female G 1/8 inch (ISO 228-1).
- Position indicator is optional.

Table 2. **Single Return 90 Deg. Actuator**

Actuator Type	Valve series	Ordering Number		Dimensions	Weight	Moment Values P=6 bar	Air Consumption	Mounting Bracket Ordering Number	Actuator Operating Temperature Options
		Normal Close	Normal Open	L x H x W unit: mm	Kg	Nm	Liter		
A Type	VH86A	PCS1	POS1	118x86x62	0.9	3.5	0.1	VH86A-SMB	**Nil** : Standard Temp. **LT** : Low Temp. **HT** : High Temp.
	VH86B							VH86B-SMB	
	VH86C	PCS2	POS2			5.0		VH86C-SMB	
B Type	VH86A/B/C	TCS1	TOS1	ø 41x104	0.5	7.5	0.04	VH86A/B/C-TMB	-

Mount bracket : Field assembly kit includes mount bracket, valve to actuator, bracket bolts and assembly manual.

Table 3. **Double Return 90 Deg. Actuator**

Actuator Type	Valve series	Ordering Number	L x H x W unit: mm	Weight Unit: Kg	Moment Values P=6 bar	Air Consumption	Mounting Bracket Ordering Number	Actuator Operating Temperature Options
					Nm	Liter		
A Type	VH86A	PD1	118x86x62	0.75	14.4	0.1	VH86A-DMB	**Nil** : Standard Temp. **LT** : Low Temp. **HT** : High Temp.
	VH86B						VH86B-DMB	
	VH86C						VH86C-DMB	
B Type	VH86A/B/C	TD1	ø 41x104	0.4	20.5	0.1	VH86A/B/C-TMB	-

How to Order

Select applicable valve pattern, seat options, pneumatic actuator, and the actuator temperature option from designator listed below.

VH86B-D-6T- **-PK** **-PCS1** **-HT** **-S**

VH86C-D-12T **-SG** **-S**

Seat Materials	Sour Gas	Factory Assembled Actuator	Actuator Temperature Options	Valve Body Material
Nil : PCTFE **PK** : PEEK **PE** : PTFE	**SG** : Sour Gas	For single return, see Table 2. For double return, see Table 3.	**Nil** : Standard Temp. **LT** : Low Temp. **HT** : High Temp.	**S** : SS316

Safe Valve Selection

The selection of a valve for any application or system design must be considered to ensure safe performance. Valve function, valve rating, material compatibility, proper installation, operation and maintenance remain the sole responsibility of the system designer and the user. DK-Lok accepts no liability for any improper selection, installation, operation or maintenance.

DK-LOK

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IDK-LOK

VT86 Series
Trunnion Ball Vavles

Rev. 01-01
Aug. 2023



DK-LOK®
Ball & Plug Valves

VT86 Series Trunnion Ball Valves

Rev.01-01
Aug.2023

VT86 Series Pressure Rating up to 413bar (6,000 psig)
VTH86 Series pressure Rating up to 689bar (10,000 psig)
VCT86 Series CNG/NGV Valves



Features

- The Trunnion ball valve is featured by blowout-proof design with cylindrical extensions at the top and bottom of the ball.
- The trunnion prevents the ball from shifting and permits the ball to rotate on a vertical axis.
- Integral ball stem machined from single piece of bar stock eliminates the backlash during handle actuation.
- Panel mounting nut is standard permitting valve to panel or actuator

Technical Data

Valve Series	Seat Material	Temperature Rating ° C (°F)	Pressure Rating at 37 °C (100°F)
VT86	PCTFE	-17 to 121 (0 to 250)	413bar (6,000psig)
	PEEK	- 17 to 232 (0 to 450)	413bar (6,000psig)
	PTFE		103bar (1,500psig)
VTH86	PEEK	-17 to 232 (0 to 450)	413 to 689bar (6,000 to 10,000psig)

Operation

- Valves that have not been actuated for a period of time may have a higher initial actuation torque.
- VT86 Series ball valves are designed to control fluid in full open and full closed position.

Factory Test

Every valve is factory tested with nitrogen gas at 68.9bar (1,000psig) for leakage to a maximum allowable leak rate of 0.1 SCCM at seat. Hydraulic shell test is optionally performed at 1.5 times the working pressure to a requirement of no detectable leakage with a liquid leak detector.

Cleaning and Packaging

Every valve is cleaned and packaged in accordance with DK-Lok cleaning standard DC-01. Special cleaning and packaging in accordance with DK-Lok standard DC-11 ensures compliance with product cleaning of ASTM G93 Level C is available on request for valves with PCTFE and PTFE seats.

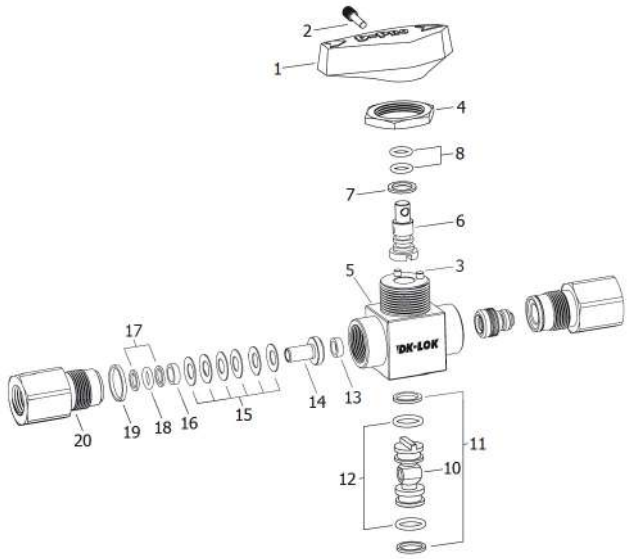
CNG/NGV Certifications

VCT86 and VCT863 Series valve provides leak-tight integrity in both low and high pressure systems in CNG and NGV applications. Valves with PAI seat HNBR O-ring are compatible with CNG fluid.

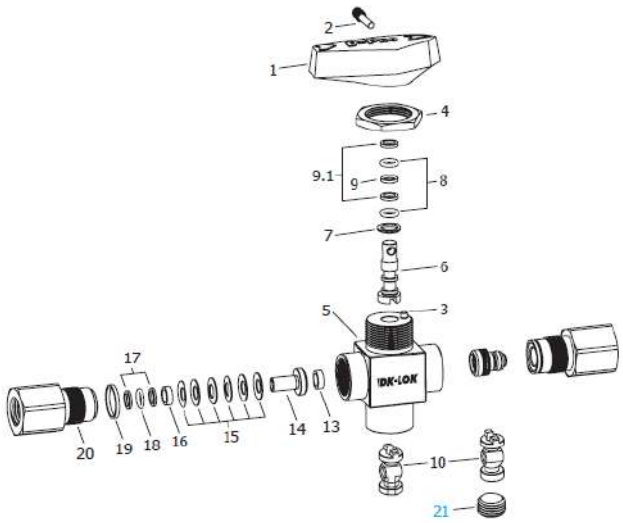
Valve Series	Certificates	ECE R110	ANSI / AGA NGV 3.1-1995 CGV NGV 12.3-M95	ANSI /IAS NGV 4.6-1999 CSA 12.56-M99	ISO 15500
VCT86 Series 2-way ball valves	Certificate No.	110R-000184	2010-REPORT-005 (00)	2010-REPORT-006 (00)	2010-REPORT-004 (00)
	Classification	Class 0	manual valve	manual valve (Class B)	manual valve
	Temperature	-40 to 120 °C (-40 to 250 °F)	- 40 to 121 °C (-40 to 250 °F)	-40 to 65 °C (-40 to 150 °F)	- 40 to 121 °C (-40 to 250 °F)
	Working Pressure	274 bar @ 120 °C	273 bar @ 121 °C	293 bar @ 65 °C	273 bar @ 121 °C
VCT863 Series 3-way ball valves	Certificate No.	110R-000185	2010-REPORT-011 (00)	2010-REPORT-012 (00)	2010-REPORT-010 (00)
	Classification	Class 0	manual valve	manual valve (Class B)	manual valve
	Temperature	40 to 120 °C	- 40 to 121 °C	-40 to 65 °C	- 40 to 121 °C
	Working Pressure	274 bar @ 120 °C	273 bar @ 121 °C	293bar @ 65 °C	273 bar @ 121 °C

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

VT86 / VCT86 Series For 2-Way



VT86 / VCT86 Series For 3-Way & VTH86 Series For 2-Way, 3-Way



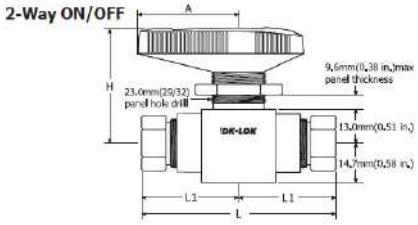
VTH86 Series For 2-Way

3-Way valve with an arrow marking on the top of 6. stem.
The arrow marking helps set a direction of the valve handle after the handle is removed from its mounting panel.

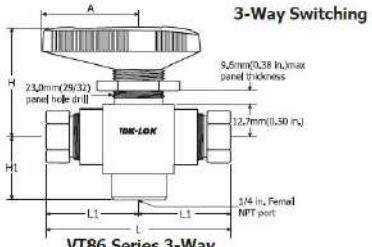
Materials of Construction

Component	VT86/VCT86 Series		VTH86 Series	
	2-Way	3-Way	2-Way	3-Way
	Grade/ASTM Specification			
1. Handle	Nylon with brass insert			
2. Set screw	SS316/A276			
3. Stop pin (2-Way - 2, 3-Way - 1)	SS316			
4. Panel nut	SS316/A479 or A276			
5. Body	SS316/A479 or A276			
6. Stem	SS316/A479 or A276			
7. Stem bearing	PEEK			
8. Stem O-rings (2)	FKM O-ring (HNBR for VCT86/VCT863 Series)		FKM O-ring	
9. Stem support ring	-	PEEK		
9.1. Stem backup rings (2)	-	PTFE/D1710, type 1		
10. Trunnion ball	SS316/A479 or A276			
11. Trunnion ball back-up rings (2)	Reinforced PTFE	-		
12. Trunnion ball O-rings (2)	FKM O-ring (HNBR for VCT86 Series)	-		
13. Seats (2)	PCTFE, optional PTFE, PEEK (PAI for VCT86/VCT863 Series)		PEEK	
14. Seat carriers (2)	SS316/A479 or A276			
15. Seat springs (12)	Alloy X-750/AMS 5542			
16. Seat carrier guides (2)	SS316/A479 or A276			
17. Seat carrier back-up rings (4)	Reinforced PTFE			
18. Seat carrier O-rings (2)	FKM O-ring (HNBR for VCT86/VCT863 Series)		FKM O-ring	
19. End connector seals (2)	PTFE/D1710,type 1			
20. End connectors (2)	SS316/A479 or A276			
21. Plug	-		SS316/A479 or A276	-

• Wetted components and lubricants are listed in BLUE.
• **Lubricants** : Molybdenum disulfide and fluorinated based.



VT86 Series 2-Way



VT86 Series 3-Way
VTH86 Series 2/3-Way

Ordering Information and Dimensions

VT86 Series Basic Ordering Number		Cv	Orifice mm (in.)	VTH86 Series Basic Ordering Number		Cv	Orifice mm (in.)	End Connection	Dimensions, mm (in.)			
									L	L1	H	A
2-Way				2-Way								
VT86- VCT86-	F2N-	1.2	4.75 (0.187)	VTH86-	F2N-	1.2	4.75 (0.187)	1/8 in. Female NPT	76.2(3)	3.81(1.5)	46.7 (1.83)	38.0 (1.50)
	F4N-	1			-	1		1/4 in. Female NPT				
	-	-			F4N-	1		1/4 in. Female NPT	98.5(3.88)	49.3(1.94)		
	F8N-	1.2			-	-		1/2 in. Female NPT	81.2(3.2)	40.6(1.6)		
	D4T-	1.6			D4T-	1.6		1/4 in. DK-Lok	105 (4.14)	52.6 (2.07)		
	D6T-	1.4			D6T-	1.4		3/8 in. DK-Lok	112 (4.39)	55.6 (2.19)		
	D8T-	1			D8T-	1		1/2 in. DK-Lok	117 (4.60)	58.4 (2.30)		
	D6M-	1.6			D6M-	1.6		6mm DK-Lok	105 (4.14)	52.6 (2.07)		
	D8M-	1.5			D8M-	1.5		8mm DK-Lok	105 (4.14)	52.6 (2.07)		
	D10M-	1.3			D10M-	1.3		10mm DK-Lok	112 (4.41)	55.9 (2.20)		
	D12M-	1			D12M-	1		12mm DK-Lok	117(4.6)	58.4(2.3)		
3-Way				3-Way								
VT863- VCT863-	F2N-	0.75	4.75 (0.187)	VTH863-	F2N-	0.75	4.75 (0.187)	1/8 in. Female NPT	76.2(3)	3.81(1.5)	46.7 (1.83)	38.0 (1.50)
	F4N-				-			1/4 in. Female NPT	76.2(3)	38.1(1.5)		
	-				F4N-			1/4 in. Female NPT	81.2(3.2)	40.6(1.6)		
	D4T-				D4T-			1/4 in. DK-Lok	105 (4.14)	52.6 (2.07)		
	D6T-				D6T-			3/8 in. DK-Lok	112 (4.39)	55.6 (2.19)		
	D8T-				D8T-			1/2 in. DK-Lok	117 (4.60)	58.4 (2.30)		
	D6M-				D6M-			6mm DK-Lok	105 (4.14)	52.6 (2.07)		
	D8M-				D8M-			8mm DK-Lok	105 (4.14)	52.6 (2.07)		
	D10M-				D10M-			10mm DK-Lok	112 (4.41)	55.9 (2.20)		
	D12M-				D12M-			12mm DK-Lok	117(4.6)	58.4(2.3)		

All dimensions shown are for reference only and are subject to change. Dimension with DK-Lok nuts are in finger-tight position.

* **CNG/NGV valve ordering number** : Basic ordering numbers listed in blue are for CNG/NGV valves as well.

Flow Rate

VT86 series Flow Data @ 21 °C (70 °F)

Flow Rate	Pressure Drop to Atmosphere (ΔP) in bar (psig)	3-Way	2-Way					
		Cv 0.75	Cv 1	Cv 1.2	Cv 1.3	Cv 1.4	Cv 1.5	Cv 1.6
Water L/min (U.S.GPM)	0.68 (10)	9.0(2.4)	12.1 (3.2)	14.3 (3.8)	15.5 (4.1)	17.8 (4.4)	17.8 (4.7)	19.3 (5.1)
	3.4 (50)	20.0 (5.3)	26.8 (7.1)	32.1 (8.5)	34.8 (9.2)	37.4 (9.9)	40.1 (10.6)	42.7 (11.3)
	6.8 (100)	28.3 (7.5)	37.8 (10.0)	45.4 (12.0)	49.2 (13.0)	53.0 (14.0)	56.7 (15.0)	60.5 (16.0)
Air std L/min (SCFM)	0.68 (10)	226 (8.0)	311 (11.0)	396 (14.0)	424 (15.0)	453 (16.0)	481 (17.0)	509 (18.0)
	3.4 (50)	651 (23.0)	849 (30.0)	1019 (36.0)	1104 (39.0)	1189 (42.0)	1274 (45.0)	1359 (48.0)
	6.8 (100)	1132 (40.0)	1500 (53.0)	1812 (64.0)	1953 (69.0)	2095 (74.0)	2265 (80.0)	2406 (85.0)

VTH86 series Flow Data @21 °C (70°F)

Flow Rate	Pressure Drop to Atmosphere (ΔP) in bar (psig)	3-Way	2-Way					
		Cv 0.75	Cv 1	Cv 1.2	Cv 1.3	Cv 1.4	Cv 1.5	Cv 1.6
Water L/min (U.S.GPM)	10.3 (150)	34.8 (9.2)	45.4 (12)	56.7 (15)	60.5 (16)	64.3 (17)	68.1 (18)	74.1 (19.6)
	41.3 (600)	69.1 (18)	94 (25)	109 (29)	121 (32)	128 (34)	140 (37)	147 (39)
	68.9 (1000)	90.8 (24)	143 (38)	143 (38)	155 (41)	166 (44)	178 (47)	189 (50)
Air std L/min (SCFM)	10.3 (150)	1614 (57)	2152 (76)	2805 (92)	2803 (99)	3029 (107)	3256 (115)	3454 (122)
	41.3 (600)	5946 (210)	8070 (285)	9627 (340)	10 505 (371)	11 298 (399)	12 119 (428)	12 912 (456)
	68.9 (1000)	9912 (350)	13 308(470)	16 140 (570)	17 272 (610)	18 688 (660)	19 821 (700)	21 321 (750)

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

VT86 Series Pressure-Temperature Ratings

Body material		316 Stainless steel					
Seat material		PCTFE		PTFE		PEEK	
Temperature		bar	psig	bar	psig	bar	psig
°C	°F	Working Pressure					
-17 to 37	0 to 100	413	6000	103	1500	413	6000
65	150	206	3000	77.5	1125	399	5800
93	200	137	2000	51.6	750	344	5000
121	250	69	1000	43	625	282	4100
148	300	-	-	34.4	500	220	3200
176	350	-	-	25.8	375	158	2300
204	400	-	-	17.2	250	96.4	1400
232	450	-	-	8.6	125	34.4	500

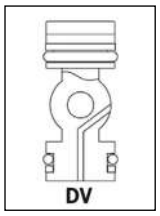
VTH86 Series Pressure-Temperature Ratings

Body material		316 Stainless steel							
End Connection	DK-Lok	6M, 1/4 in.		8M, 3/8 in.		12M, 1/2 in.		10M	
	Female NPT	1/8, 1/4 in.		-		-		-	
Seat material		PEEK							
Temperature		Working Pressure							
°C	°F	bar	psig	bar	psig	bar	psig	bar	psig
-17 to 37	0 to 100	689	10000	516	7500	454	6600	413	6000
65	150	516	7500	516	7500	454	6600	406	5900
93	200	344	5000	344	5000	344	5000	344	5000
121	250	282	4100	282	4100	282	4100	282	4100
148	300	220	3200	220	3200	220	3200	220	3200
176	350	158	2300	158	2300	158	2300	158	2300
204	400	96.4	1400	96.4	1400	96.4	1400	96.4	1400
232	450	34.4	500	34.4	500	34.4	500	34.4	500

Options

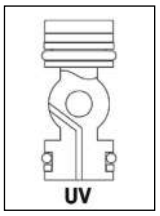
VT86 Series 2-Way Valve External Vent Options

A downstream or upstream vent option on VT86 Series 2-Way ball valve is available. The vent port is constructed on trunnion ball. The vent port activates when the valve is in closed position. This option reduces the valve pressure rating to 34.4bar (500 psig).



Downstream Vent
Ordering designator - DV

When a downstream vent valve in closed position, shutoff at the upstream seat occurs. Downstream system media flows into the vent hole and vents out to atmosphere through the valve bottom.



Upstream Vent
Ordering designator - UV

When a upstream vent valve in closed position, shutoff at the downstream seat occurs. Upstream system media flows into the vent hole and vents out to atmosphere through the valve bottom.

Service Kit

For field assembly, service kit with a maintenance instruction is available. Service kit contains wetted parts including trunnion ball, stem assembly and seat carrier assembly. To order the service kit, prefix SK- to the valve series. i.e., SK-VCT863, SK-VTH863.



How to Order

Select applicable valve basic ordering number, options and body material designator listed below.

VT86-D4T	**-PK**	**-DV**	**-S**
VTH86-D12M			**-S**
VCT86-F4N			**-S**

Seat Materials	O-ring Materials	External Vent Options	Body Material
Nil : Standard PCTFE for VT86 Series **Nil** : Standard PEEK for VTH86 Series **Nil** : Standard PAI for VCT86 Series **PC** : PCTFE **PK** : PEEK **PE** : PTFE **PI** : PAI	**Nil** : Standard FKM for VT86 and VTH86 Series **Nil** : Standard HNBR for VCT86 Series Note : Optional O-rings applicable to; 8. Stem O-rings 12. Trunnion ball O-rings 18. Seat carrier O-rings	**DV** : Downstream Vent **UV** : Upstream Vent Note : Vent option available on VT86 2-Way ball valves.	**S** : Stainless steel 316

Safe Valve Selection

The selection of a valve for any application or system design must be considered to ensure safe performance. Valve function, valve rating, material compatibility, proper installation, operation and maintenance remain the sole responsibility of the system designer and the user. DK-Lok accepts no liability for any improper selection, installation, operation or maintenance.

DK-LOK

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IDK-LOK

V87 Series Ball Valves / DIN Standard

Rev. 01-01
Aug. 2023

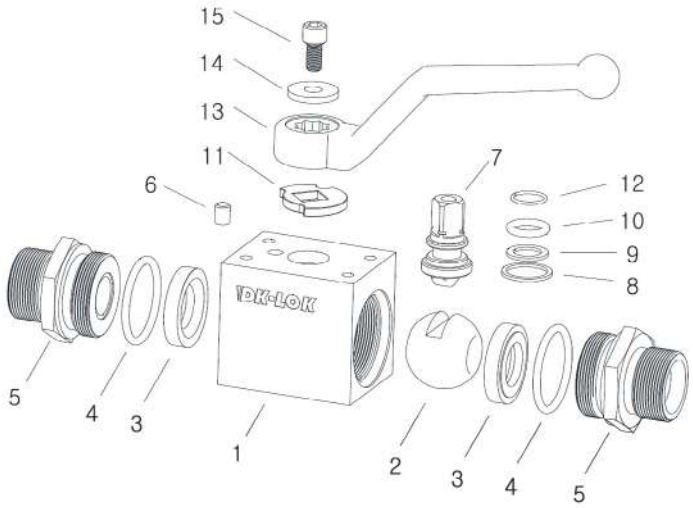
DK-LOK®
Ball & Plug Valves

V87 Series Ball Valves, DIN Standard

Rev.01-01
Aug.2023

Pressure Rating up to 500 bar(7,250 psig)





Features

- Pressure Rating up to 500 bar (7,250 psi)
- Positive stop with robust stop pin
- Various end ports including DIN Standard port

Features

- Hydraulic fluids
- Compressed Air
- Fuel oil system

Material of Construction

Component	Valve Body Material	
	Stainless Steel	Carbon Steel
	Grade/ASTM, JIS Specification	
1. Body	SS316/A276	S45C
2. Ball	SS316/A276	SS316/A276
3. Seat	POM	
4. o-ring	FKM	NBR
5. Connector	SS316/A276	S45C
6. Pin	SS316	
7. Stem	SS316/A276	S45C
8. Bearing	POM	
9. Stem ring	POM	
10. Stem o-ring	FKM	
11. Stopper	SS304	
12. Snap ring	SS304	
13. Handle	SS316	S45C
14. Washer	SS304	
15. Screw	SS304	SS41

· Wetted parts and lubricants listed in blue.
· Fluorinated-based lubricant

Factory Testing

Every valve is tested with nitrogen gas @ 1000 psig(68bar) for leakage at the seat to a maximum allowable leak rate of 0.1 SCCM.
The stem packing is tested with nitrogen gas@1000 psig for no detectable leakages.

Optional Seat Material

Rating based on valve with standard POM seat.

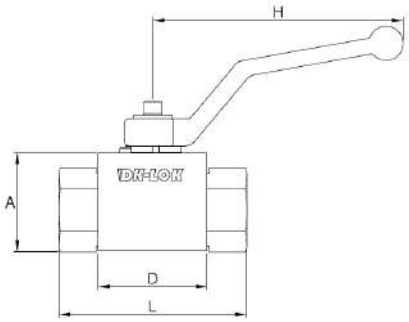
Seat	Temperature Rating ° C (°F)
POM, PEEK	-30 to 100 (-22 to 212)
PTFE	-54 to 65 (-65 to 149)

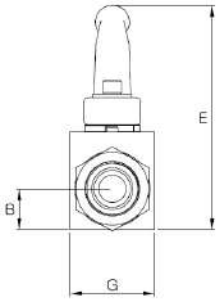
Optional O-ring Materials

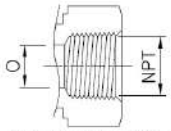
FKM O-Rings are standard. Add the designator to the ordering number for valve with optional O-ring material.

O-ring Materials	Designator	Temperature Rating ° C (°F)
FKM	Nil	-23 ~ 190 (-10 ~375)
NBR	BN	-23 ~ 121 (-10 ~ 250)
EPDM	EP	-45 ~ 148 (-50 ~ 300)
FFKM	KZ	-30 ~ 210 (-22 ~ 410)

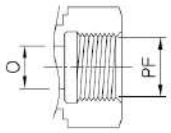
All dimensions are in millimeters unless otherwise specified and only for reference subject to change.



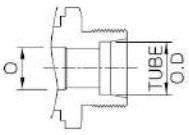




ANSI / ASME B1.20.1



DIN / ISO 228



Din 2353

Ordering Information and Table of Dimensions

Basic Ordering Number		End Connections	DN O	PN bar	Dimensions, mm						
					A	B	E	G	D	L	H
V87A-	F2N	1/8 in. Female NPT	4	500	35	14.5	96.5	30	42.0	71.0	110
	F4N	1/4 in. Female NPT	6								
	F2G	1/8 in. Female PF	4								
	F4G	1/4 in. Female PF	6								
	N6L	6mm	6							76.0	
	N8L	8mm									
	N10L	10mm									
	N8S	8mm	4								
	N10S	10mm	6								
	N12S	12mm	8								
V87B-	F6N	3/8 in. Female NPT	10	500	40	18.5	101.5	35	44.4	73.0	110
	F6G	3/8 in. Female PF									
	N12L	12mm								79.5	
	N14S	14mm								82.5	
V87C-	F8N	1/2 in. Female NPT	13	500	43	19.5	104.5	37	48.4	83.0	110
	F8G	1/2 in. Female PF									
	N15L	15mm								87.0	
	N18L	18mm									
	N16S	16mm								89.0	
	N20S	20mm								93.0	
V87D-	F12N	3/4 in. Female NPT	20	400	55	23.5	130.0	45	62.5	95.0	175
	F12G	3/4 in. Female PF									
	N22L	22mm								110.0	
	N25S	25mm								111.0	
V87E-	F16N	1 in. Female NPT	20	350	65	29.5	140.0	55	66.5	112.0	175
	F16G	1 in. Female PF									
	N28L	28mm	25							117.0	
	N35L	35mm								119.0	
	N42L	42mm									
	N30S	30mm								121.0	
	N38S	38mm								131.0	

Ordering Information

Select valve basic ordering number, applicable options and body material.

V87A - F4N - **BN-** **S**
V87B - N12L - **EP-** **L**
V87D - N30S - **KZ-** **PE**

O-ring Material Designator	Seat Material Designator	Valve Body Material Designator
Nil : FKM **BN** : NBR **EP** : EPDM **KZ** : FFKM	**Nil** : POM **PE** : PTFE **PK** : PEEK	**S** : 316 stainless steel **L** : 316L stainless steel **C** : Carbon steel

Safe Valve Selection

The selection of a valve for any application or system design must be considered to ensure safe performance. Valve function, valve rating, material compatibility, proper installation, operation and maintenance remain the sole responsibility of the system designer and the user. DK-Lok accepts no liability for any improper selection, installation, operation or maintenance.

DK-LOK

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IDK-LOK

VCH86 Series
Alternative Fuel Service Ball Valve

Rev. 01-01
Aug. 2023

DK-LOK®
VCH86 Series

CNG/NGV Valves

Rev.01-01
Aug.2023

VCH86 Series Alternative Fuel Service Ball Valve



Features

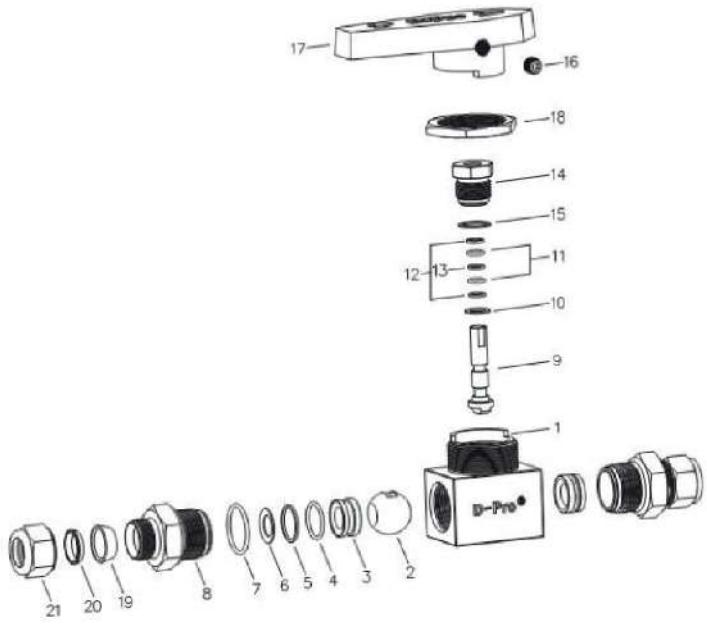
- Wetted components are compatible with compressed natural gas (CNG), liquid petroleum gas, gaseous and liquid hydrogen.
- Sturdy body and end connections made out of stainless 316 barstock.
- Maximum pressure rating: 413 bar (6000 psig).
- Temperature rating: - 40 to 121°C (-40 to 250°F).

Pressure-Temperature Ratings

End Connections	DK-LOK Tube Fitting			Female Pipe	
	3/8 in. 1/2 in. 12 mm	3/4 in. 16 mm	1 in.	3/8 in. 1/2 in.	3/4 in.
Temperature °C (°F)	Working Pressure bar (psig)				
- 40 to 93 (-40 to 200)	413 (6000)	400 (5800)	323 (4680)	413 (6000)	381 (5520)
121 (250)	413 (6000)	395 (5720)	320 (4640)	413 (6000)	381 (5520)

CNG/NGV Certifications

Certificates	ECE R110	ANSI / AGA NGV 3.1-1995 CGV NGV 12.3-M95	ANSI / IAS NGV 4.6-1999 CSA 12.56-M99	ISO 15500
Certificate No.	110R-000181	2010-REPORT-008 (00)	2010-REPORT-009 (00)	2010-CERT-007 (00)
Classification	Class 0	manual valve	manual valve (Class B)	manual valve
Temperature	-40 to 120 °C (-40 to 250 °F)	-40 to 121 °C (-40 to 250 °F)	-40 to 65 °C (-40 to 150 °F)	-40 to 121 °C (-40 to 250 °F)
Working Pressure	274 bar @ 120 °C	273 bar @ 121 °C	293 bar @ 65°C	273 bar @ 121 °C



Materials of Construction

No.	Component	Glade / ASTM specification
1	Body	SS316/A276, A479
2	Ball	SS316/A276, A479
3	Seat(2)	PEEK
4	Seat O-ring (2)	HNBR
5	Seat Backup Ring (2)	PTFE /D1710
6	Disc Spring (2)	SS316/A240
7	Connector Oring (2)	HNBR
8	End Connector (2)	SS316/A276, A479
9	Stem	SS316/A276, A479
10	Stem Seat Bearing	PEEK
11	Stem O-ring (2)	HNBR/D2000
12	Stem Guide Ring	PTFE /D1710
13	Stem Backup Ring (2)	PEEK
14	Packing Bolt	SS316/A276, A479
15	Packing Bolt Gasket	SS316/A240 Silver-plated
16	Set Screw	SS316 Stainless steel
17	Handle	Nylon with brass insert
18	Panel Nut	SS316
19 20,21	Dk-Lok Nut and Ferrule set (2)	SS316 Stainless steel

• Wetted components are listed in BLUE.

Factory Testing

Every valve is factory tested with nitrogen @ 1000 psig (68 bar). Seats have a maximum allowable leak rate of 0.1 std cm^3/min.
The stem packing is tested with nitrogen @ 1000 psig (68 bar) for no detectable leakage.

Cleaning and Packaging

Valves are cleaned and packaged in accordance with DK-LOK cleaning standard DC-01. Special cleaning and packaging in accordance with DK-LOK DC-11 ensures compliance with product cleaning of ASTM G93 Level C is available on request.

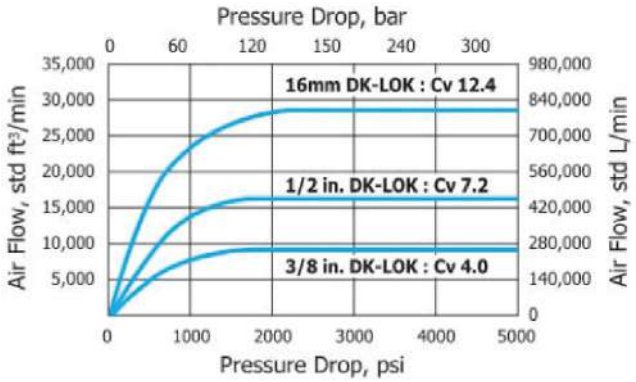
Operation

- VCH86 ball valves are designed for fully open and close operation.
- Valves that have not be actuated for a period of time may have a higher initial actuation torque.

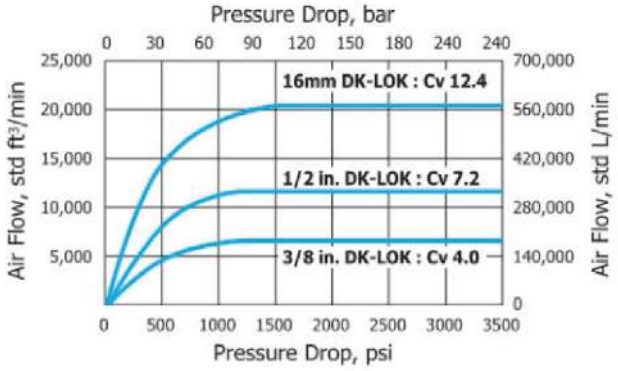
All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

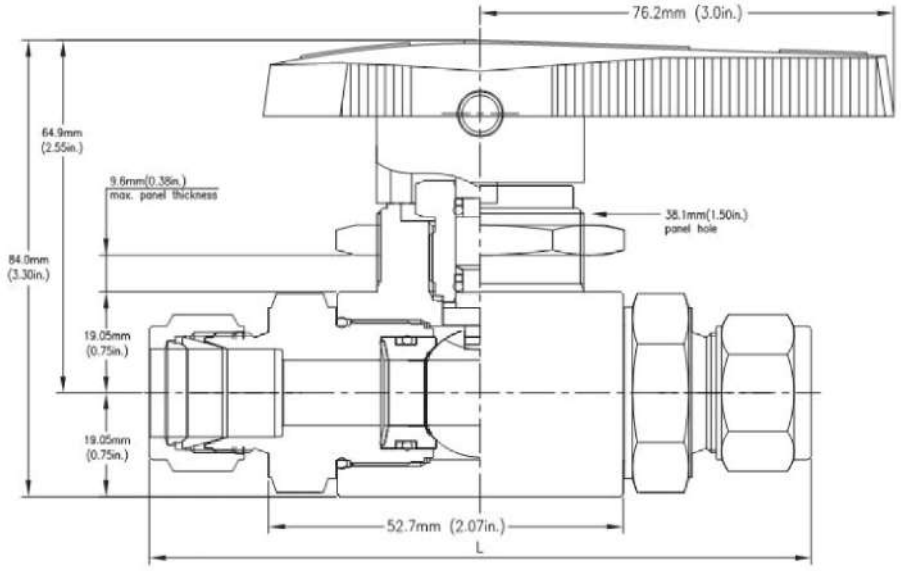
Flow Data @ 21°C (70°F)

Air Pressure 350 bar (5000 psig)



Air Pressure 250 bar (3600 psig)





Ordering information and Table of Dimensions

Ordering Number		End Connections	Orifice		Cv	Dimensions
			mm	in.		L
VCH86-	D-6T-S	3/8 in. DK-LOK	7.1	0.281	4.0	116 mm (4.57 in.)
	D-8T-S	1/2 in. DK-LOK	10.3	0.406	7.2	122 mm (4.8 in.)
	D-12T-S	3/4 in. DK-LOK	12.0	0.472	7.1	
	D-16T-S	1 in. DK-LOK (1)	12.0	0.472	6.5	130 mm (5.10 in.)
	D-10M-S	10 mm DK-LOK	7.1	0.281	4.0	116 mm (4.57 in.)
	D-12M-S	12 mm DK-LOK	10.3	0.406	5.2	112 mm (4.40 in.)
	D-16M-S	16 mm DK-LOK	12.0	0.472	12.4	122 mm (4.80 in.)
	F-6N-S	3/8 in. Female pipe	12.0	0.472	11.0	102 mm (4.00 in.)
	F-8N-S	1/2 in. Female NPT	12.0	0.472	13.8	
	F-8R-S	1/2 in. Female PT	12.0	0.472	13.8	
	F-12N-S	3/4 in. Female NPT (1)	12.0	0.472	7.8	

All dimensions shown are for reference only and are subject to change. Dimensions with DK-LOK nuts are in finger-tight position.

(1) Not recommended for panel mounting.

Safe Valve Selection

The selection of a valve for any application or system design must be considered to ensure safe performance. Valve function, valve rating, material compatibility, proper installation, operation and maintenance remain the sole responsibility of the system designer and the user. DK Tech accepts no liability for any improper selection, installation, operation or maintenance.

DK-LOK

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Check Valves

(V33,VP33,VA33,VDA33,VH36,VL36,VCH36 Series)

Rev. 01-01
Aug. 2023

DK-LOK®
Check Valves

Check Valves

Rev.01-01
Aug.2023

V33, VP33, VA33, VDA33, VH36 and VL36 Series
for VCH36 Series for CNG/NGV applications
Pressures up to 3,000 psig (206 bar) and 6,000 psig (413 bar)

Features

- Fixed cracking pressure valves : V33, VP33, VH36, VCH36 Series
- Adjustable cracking pressure valves : VA33, VDA33 Series
- Lift Check valves : VL36 Series

Technical Information

Valve Series	V33 Series			VP33 Series	VA33 & VDA33 Series	VH36 Series	
	V33A, V33B, V33C, V33D	V33E, V33F		VP33A, VP33B	VA33A, VA33B, VDA33	VH36A, VH36B	VH36C
Materials	SS316 & Brass	SS316	Brass	SS316 & Brass	SS316 & Brass	SS316	SS316
Maximum Working Pressure @70°F (21°C) Unit : psig (bar)	3000 (206)	2000 (137)	1500 (103)	3000 (206)	3000 (206)	6000 (413)*	5000 (344)*
Temperature Ratings °F (°C)	Seal Material	Designator		Rating	Seal Material	Designator	Rating
	FKM O-ring	VT		-10 to 375 (-23 to 190)[a]	EPDM O-ring	EP	-50 to 300 (-45 to 148)
	NBR O-ring	BN		-10 to 250 (-23 to 121)	FFKM O-ring	KZ	-10 to 600 (-23 to 315)
	(a)VH36 Series with FKM O-ring : -10 to 400 °F (-23 to 204 °C) • FKM is standard for SS316 valves. • NBR is standard for Brass valves.						
Cracking Pressure	Refer to spring table of each valve series						

- Poppet Check Valves, V33 Series : 2, 3 page
- One-Piece Check Valves, VP33 Series : 3 page
- One-Piece Adjustable Check Valves, VA33 Series : 4, 5 page
- In-Line Adjustable Check Valves, VDA33 Series : 4, 5 page
- CNG/NGV Check Valves, VCH36 Series : 6, 7 page
- High Pressure Check Valves, VH36 Series* : 6, 7 page
- Lift Check Valves, VL36 Series : 8 page

Cracking, Reseal and Back Pressure @ 70°F(21°C)

- Cracking Pressure : Valve poppet is actuated when the pressure difference between the inlet (upstream) and the outlet (downstream) reaches the range of cracking pressure.
- Reseal Pressure : Valves that have higher cracking pressure can be resealed to bubble-tight by the spring force. The reseal pressure is the pressure at the same flow direction, but lower than the cracking pressure.
- Back Pressure : Valves that have cracking pressure of 5 psig (0.34 bar) and lower may not be able to return to the bubble-tight seal. This may require back pressure to press the seal to form a bubble-tight contact in addition to the spring force.

Class Ratings

Valve Series	V33 Series				VP33, VA33, VDA33 Series		VH36 Series	
	V33A, V33B, V33C, V33D		V33E, V33F		VP33A, VP33B, VA33A, VA33B, VDA33		VH36A, VH36B	VH36C
Temperature, °F (°C)	Working Pressure, psig (bar)							
	SS316	Brass	SS316	Brass	SS316	Brass	SS316	SS316
-18 to 100 (-28 to 38)	3000 (206)	3000 (206)	2000 (137)	1500 (103)	3000 (206)	3000 (206)	6000 (413)	5000 (344)
200 (93)	2575 (177)	2600 (179)	1715 (118)	1300 (89)	2575 (177)	2600 (179)	5160 (355)	4290 (295)
225 (175)	2510 (172)	2500 (172)	1670 (115)	1250 (86)	2510 (172)	2500 (172)	5030 (346)	4180 (288)
250 (121)	2450 (168)	2405 (165)	1630 (112)	1200 (82)	2450 (168)	2405 (165)	4910 (338)	4080 (281)
300 (148)	2325 (160)	-	1545 (106)	-	2325 (160)	-	4660 (321)	3875 (267)
350 (176)	2255 (155)	-	1490 (102)	-	2255 (155)	-	4470 (308)	3720 (256)
375 (190)	2185 (150)	-	1450 (99)	-	2185 (150)	-	4375 (301)	3640 (250)
400 (204)	-	-	-	-	-	-	4280 (294)	3560 (245)

* VH36 & VCH36 Series is Pressure ratings may be limited by the end connection. See Page 7, Dimensions Table.

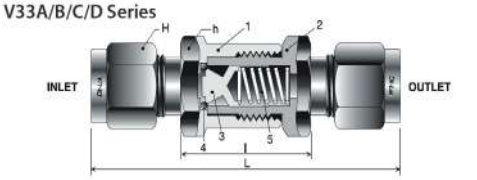
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V33 series

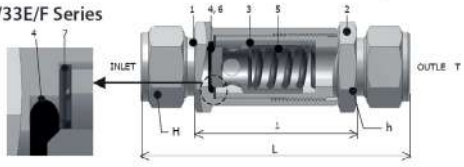
Features

- Working pressure up to 3,000 psig (206 bar)

V33A/B/C/D Series



V33E/F Series



Material of Construction

Component	Valve Body Materials	
	Stainless Steel	Brass
	Material Grade/ASTM	
1. Body	SS316 /A276, A479	Brass 360 /B16
2. Connector		
3. Poppet		
4. O-ring*	FKM	NBR
5. Spring	SS302/A313	
6. O-ring seal	FKM	NBR
7. Washer	SS316 With PTFE Coting	

Wetted parts are listed in blue.
4. O-ring* on V33E & V33F Series is secured in poppet groove.

Lubrication :

- Silicon-based Lubricant for Poppet.
- Molybdenum Dry Film Lubricant for SS316 Body Threads.

Operation

- Valves that have not been actuated for a period of time may require a higher cracking pressure than the set cracking pressure.
- DK-Lok check valves prevent reverse flow in circuits. Do not use them as relief valves.
- DK-Lok check valves are designed to prevent loss of media caused by failed connections and for uni-directional flow control of fluids in chemical processing, power generation, oil and gas industries.

Factory Test, Cleaning and Packaging

- Every valve is factory tested for cracking and reseals performance.
- Every valve is cleaned, and packaged in accordance with DK-Lok cleaning standard of DC-01.
- Special cleaning and packaging in accordance with DK-Lok DC-11 in compliance with ASTM G93 Level C is available on request.

Ordering Information and Dimensions

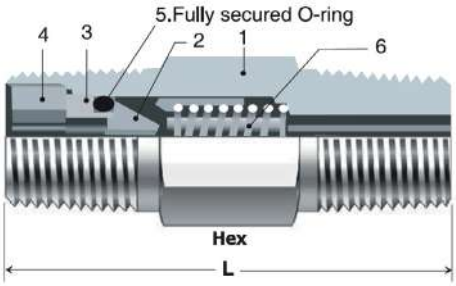
Basic Ordering Number		End Connections Inlet	End Connections Outlet	Orifice mm (in.)	Cv	Dimensions mm (in.) h-Hex	H-Hex	L	l
V33A-	D-2T-	1/8 in. DK-Lok		4.8 (0.19)	0.16	15.88 (5/8)	11.11 (7/16)	55.60 (2.19)	25.00 (0.98)
	M-2N-	1/8 in. Male NPT			0.47		-	44.40 (1.75)	-
	F-2N-	1/8 in. Female NPT					-	46.50 (1.83)	25.00 (0.98)
	D-4T-	1/4 in. DK-Lok					14.29 (9/16)	60.00 (2.36)	
	D-6M-	6 mm DK-Lok					14.00		
	MD-4N4T-	1/4 in. Male NPT	1/4 in. DK-Lok				14.29 (9/16)	56.40 (2.22)	
	M-4N-	1/4 in. Male NPT					-	53.40 (2.10)	
V33B-	F-4N-	1/4 in. Female NPT		7.1 (0.28)	1.48	19.05 (3/4)	-	56.80 (2.24)	-
	D-6T-	3/8 in. DK-Lok					17.46 (11/16)	65.50 (2.58)	27.10 (1.07)
	D-10M-	10 mm DK-Lok					19.00		
	M-6N-	3/8 in. Male NPT					-	55.50 (2.19)	
V33C-	F-6N-	3/8 in. Female NPT		10.0 (0.39)	1.7	22.22 (7/8)	-	63.80 (2.51)	-
	D-8T-	1/2 in. DK-Lok					22.22 (7/8)	80.20 (3.16)	36.20 (1.43)
	D-12M-	12 mm DK-Lok					22.00		
	M-8N-	1/2 in. Male NPT					-	74.40 (2.93)	
V33D-	F-8N-	1/2 in. Female NPT		13.5 (0.53)	2.6	28.58 (1-1/8)	-	84.70 (3.33)	-
	D-10T-	5/8 in. DK-Lok					25.40 (1)	91.80 (3.61)	48.10 (1.89)
V33E-	D-12T-	3/4 in. DK-Lok		16.0 (0.63)	5.2	31.75 (1-1/4)	28.58(1-1/8)	110.70 (4.35)	66.1 (2.6)
	M-12N-	3/4 in. Male NPT					-	105.30 (4.15)	
	F-12N-	3/4 in. Female NPT					-	103.00 (4.06)	-
V33F-	D-16T-	1 in. DK-Lok		18.0 (0.71)	8.0	34.93 (1-3/8)	38.1 (1-1/2)	120.8 (4.75)	68 (2.68)
	M-16N-	1 in. Male NPT					-	115.8 (4.56)	
	F-16N-	1 in. Female NPT				41.28 (1-5/8)	-	111 (4.37)	

Table 1. **Spring Cracking, Reseal and Back Pressure @ 70 °F (21 °C) (for V33)**

Spring Nominal Cracking Pressure Designator		Cracking Pressure Ranges				Reseal Pressures psig (bar)
		Min. Pressure		Max. Pressure		
psig	bar	psig	bar	psig	bar	
1/3	0.02	0	0	3	0.21	Up to 6 (0.41) Back pressure
1	0.07	0	0	4	0.28	Up to 6 (0.41) Back pressure
3	0.21	2	0.14	7	0.48	Up to 4 (0.28) Back pressure
10	0.69	7	0.48	15	1.03	Minimum 3 (0.21) Reseal pressure
25	1.72	20	1.38	30	2.07	Minimum 17 (1.17) Reseal pressure
50	3.45	40	2.76	60	4.14	Minimum 35 (2.41) Reseal pressure
75	5.17	60	4.14	90	6.20	Minimum 53 (3.65) Reseal pressure
100	6.89	80	5.51	120	8.27	Minimum 70 (4.82) Reseal pressure

VP33 Series One-Piece Check Valves





Features

- O-ring seal blow-out proof design
- One piece body construction.
- Working pressure up to 3,000 psig (206 bar)

Materials of Construction

Component	Valve Body Materials	
	Stainless Steel	Brass
	Material Grade/ASTM	
1. Body	SS316 /A276, A479	Brass 360 /B16
2. Poppet		
3. O-ring Holder		
4. Locking Screw		
5. O-ring	FKM	NBR
6. Spring	SS302/A313	

Wetted parts are listed in blue.

Lubrication :

- Silicon-based Lubricant on Poppet
- Molybdenum Dry Film Lubricant on SS316 Locking Screw.

Ordering Information and Dimensions

Basic Ordering Number		End Connections		Cv	Dimensions mm (in.)	
		Inlet	Outlet		L	Hex.
VP33A-	M-4N-	1/4 in. Male NPT		0.35	41 (1.62)	14.28 (9/16)
	M-4R-	1/4 in. ISO Male Tapered				
	F-4N-	1/4 in. Female NPT			61 (2.41)	19.05 (3/4)
	F-4R-	1/4 in. ISO Female Tapered			64 (2.54)	
	MF-4N-	1/4 in. Male NPT	1/4 in. Female NPT		44 (1.75)	
	FM-4N-	1/4 in. Female NPT	1/4 in. Male NPT		58 (2.28)	
VP33B-	M-8N-	1/2 in. Male NPT		1.20	58 (2.28)	22.22 (7/8)
	F-8N-	1/2 in. Female NPT			94 (3.71)	26.98 (1-1/16)
	MF-8N-	1/2 in. Male NPT	1/2 in. Female NPT		72 (2.83)	

Table 2. **Spring Cracking, Reseal and Back Pressure @ 70°F (21°C)**

Spring Nominal Cracking Pressure Designator		Cracking Pressure Ranges				Reseal Pressures psig (bar)
		Min. Pressure		Max. Pressure		
psig	bar	psig	bar	psig	bar	
1/3	0.02	0	0	3	0.21	6 to 20 (0.41 to 1.38) back pressure
1	0.07	0	0	4	0.28	5 to 20 (0.34 to 1.38) back pressure
10	0.69	7	0.48	13	0.90	3 to 10 (0.21 to 0.69) back pressure
25	1.72	21	1.45	29	2.00	Minimum 5 (0.34) Reseal pressure

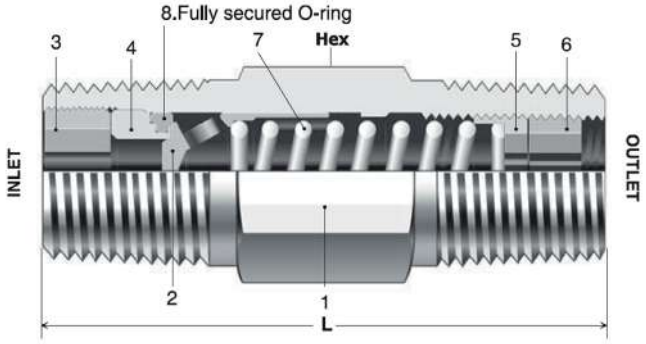
All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

VA33 Series One-Piece Adjustable Check Valves / VDA33 Series In-Line Adjustable Check Valves

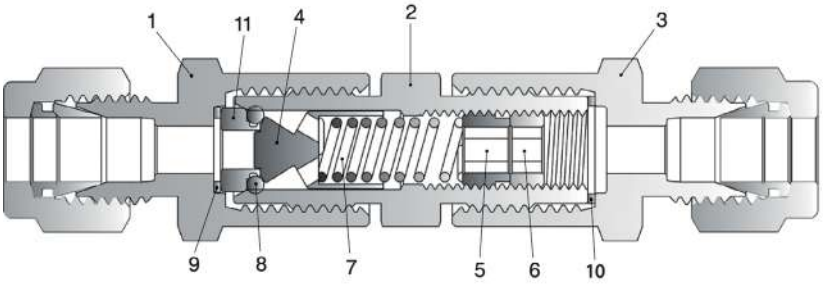
Features

- Cracking pressure adjustable from 3 to 600 psig (0.2 to 41.3 bar)
- Working pressure up to 3,000 psig (206 bar)
- Temperature up to 190°C (375°F)with FKM O-ring
- Standard materials : 316 stainless steel and brass.

VA33 Series



VDA33 Series



Materials of Construction

Component		Valve Body Materials	
		Stainless Steel	Brass
		Material Grade/ASTM	
VA33 Series	VDA33 Series		
1. Body	1. Inlet body 2. Center body 3. Outlet body	SS316 /A276, A479	Brass 360 / B16
2. Poppet 360 / B16	4. Poppet		
3. Insert locking screw	-		
4. Insert	11. Insert		
5. Adjustable screw	5. Adjustable screw		
6. Locking screw	6. Locking screw		
7. Spring	7. Spring	SS302/A313	
8. O-ring	8. O-ring	FKM, Optional FFKM	NBR
	9. Inlet gasket 10. Outlet gasket	TFE coated SS316	

Wetted parts are listed in blue.

Lubrication :

- Silicon-based Lubricant on Poppet
- Molybdenum Dry Film Lubricant on SS316 Locking Screw and Insert Locking Screw.

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

VA33 Series Ordering Information and Dimensions

Basic Ordering Number		End Connections	Cv	L		Hex
				mm	in.	
VA33A-	F-4N	1/4 in. Female NPT	0.35	75.7	2.98	3/4
	M-4N-	1/4 in. Male NPT		41.1	1.62	9/16
	M-4R-	1/4 in. ISO Male Tappered		41.1	1.62	9/16
VA33B-	M-8N-	1/2 in. Male NPT	1.2	65.0	2.56	7/8
	M-8R-	1/2 in. ISO Male Tappered		65.0	2.56	7/8



VDA33 Series Ordering Information and Dimensions

Basic Ordering Number		End Connections		Cv	Dimensions mm(in.)		
		Inlet	Outlet		L	H	h
VDA33	D-4T-S	1/4 in. DK-Lok		0.37	82.0(3.23)	9/16 in.	5/8 in.
	D-6M-S	6mm DK-Lok			82.0(3.23)	14mm	
	D-8M-S	8mm DK-Lok			84.3(3.32)	16mm	
	MD-4N4T-S	1/4 in. Male NPT	1/4 in. DK-Lok		79.2(3.12)	9/16 in.	

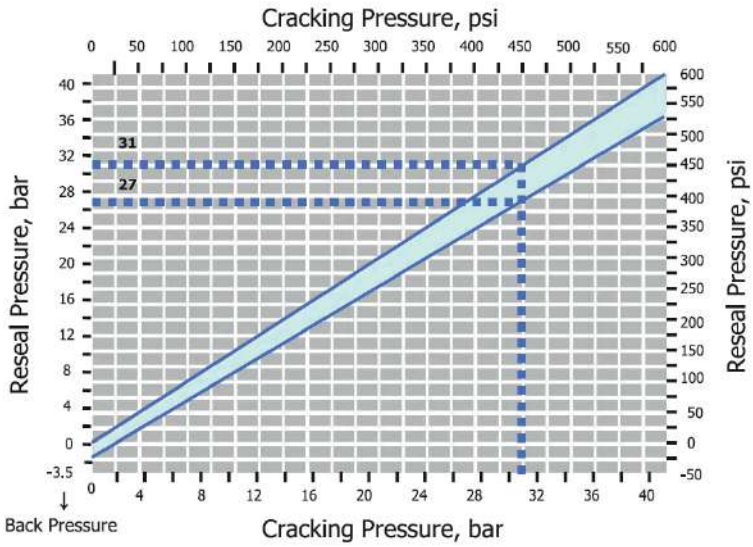


Table 3. **Spring Cracking Pressure Range Designator**

Cracking Pressure Range @21 °C (70 °F)		Designator
psig	bar	
3 to 50	0.2 to 3.4	3
50 to 150	3.4 to 10.3	50
150 to 350	10.3 to 24.1	150
350 to 600	24.1 to 41.3	350

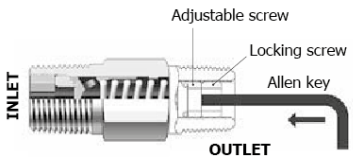
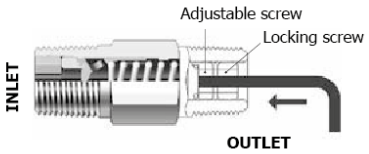
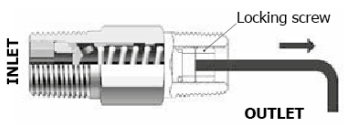
Cracking Pressure vs Reseal pressure

VA33 and VDA33 Series valves set to crack at 20 psig(1.3 bar) or lower may require back pressure(downstream pressure) to reseal the valve bubble tight.



Example shown : For a valve set to crack at 31 bar (450 psig), the minimum reseal pressure would be 27 bar (390psig).

How to adjust cracking pressure

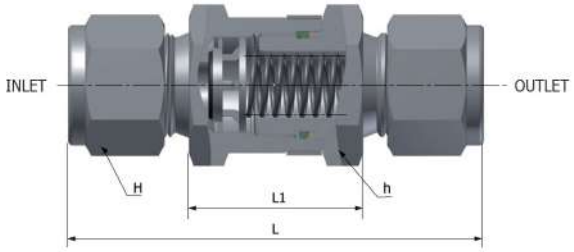
Step 1	Step 2	Step 3
		
Sllghtly unscrew the locking screw counter-clockwise.	1. Gently slide the allen key up to adjustable screw position. 2. Adjust cracking pressure. • To increase cracking pressure, turn adjustable screw clockwise. • To decrease cracking pressure, turn adjustable screw counter-clockwise.	1. Move out the allen key up to the locking screw position. 2. To lock out the locking screw, turn the allen key clockwise.

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

VH36 Series High Pressure Check Valves / VCH36 Series CNG/NGV Check Valves

Features

- High pressure 6,000 psig (413 bar)
- Seal blow-out proof design with the bonded seal on poppet.





Materials of Construction

Component	Valve Body Material Stainless Steel Material Grade/ASTM
1. Body	SS316 /A479, A276
2. Connector	
3. Poppet stop	
4. Poppet with bonded seal	Poppet: SS316 /A479, A276 Bonded Seal : FKM, optional EPDM & Kalrez HNBR standard for VCH36 Series
5. Spring	SS302 /A313
6. Indicator ring*	SS316 /A276
7. O-ring	FKM / HNBR standard for VCH36 Series
8. Backup ring	PTFE /D1710
9. 10. 11. DK-Lok Front & Back Ferrule and Nut	SS316 /A479, A276

Wetted parts are listed in blue.

* Indicator ring bears the information of spring designator.

Lubrication :

- Silicon-based Lubricant on Poppet
- Molybdenum Dry Film Lubricant on SS316 Connector threads

CNG Certifications

VCH36 Series check with CNG compativle HNBR O-ring are available with CNG certifications.

Certificates	ECE R110	ANSI / AGA NGV 3.1-1995 CGV NGV 12.3-M95	ISO 15500
Certificate No.	110R-000186	2010-REPORT-014 (00)	2010-REPORT-013 (00)
Classification	Class 0	Check valve	Check valve
Temperature	-40 to 120 °C (-40 to 250 °F)	-40 to 121 °C (-40 to 250 °F)	-40 to 121 °C (-40 to 250 °F)
Working Pressure	274 bar @ 120 °C	273 bar @ 121 °C	273 bar @ 121 °C

Table 4. **Spring Cracking, Reseal and Back Pressure @ 70°F (21°C)**

Spring Nominal Cracking Pressure Designator		Cracking Pressure Ranges				Reseal Pressures psig (bar)
		Min. Pressure		Max. Pressure		
psig	bar	psig	bar	psig	bar	
1/3	0.02	0	0	3	0.21	Up to 6 (0.41) back pressure
1	0.07	0	0	4	0.28	Up to 5 (0.35) back pressure
5	0.34	3	0.21	9	0.62	Up to 2 (0.14) back pressure
10	0.69	7	0.48	15	1.03	Minimum 3 (0.21) Reseal pressure
25	1.72	20	1.38	30	2.07	Mini mum 17 (1.2) Reseal pressure

Sour Gas Service

Materials of VH36 series valves for sour gas service are selected in accordance with the requirements of NACE MR0175

- Spring : alloy X-750/AMS5699
- Nominal Cracking Pressure : 1/3, 1, and 5 psig (0.03, 0.07 and 0.035 bar)
- Seal : ethylene propylene.

To order, insert-SG in the ordering number.
i.e., VH36B-D-8T-SG-S

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Ordering Information and Dimensions

Basic Ordering Number		End Connections	Cv	Dimensions mm (in.)				Pressure Rating psig (bar)
				L	L1	H	h	
VH36A- VCH36A-	D-2T-	1/8 in. DK-Lok	0.67	57.7 (2.27)	26.4 (1.04)	11.11 (7/16)	11/16	6000 (413)
	D-4T-	1/4 in. DK-Lok		61.7 (2.43)	26.4 (1.04)	14.29 (9/16)		
	D-6M-	6 mm DK-Lok		61.7 (2.43)	26.4 (1.04)	14		
	F-4N-	1/4 in. Female NPT		54.1 (2.13)	-	-		
	M-2N-	1/8 in. Male NPT		45.5 (1.79)	26.4 (1.04)	-		
	M-4N-	1/4 in. Male NPT		55.1 (2.17)	26.4 (1.04)	-		
VH36B- VCH36B-	D-6T-	3/8 in. DK-Lok	1.8	69.9 (2.75)	31.2 (1.23)	17.46 (11/16)	1	6000 (413)
	D-8T-	1/2 in. DK-Lok		75.2 (2.96)	31.2 (1.23)	22.22 (7/8)	1	
	D-8M-	8 mm DK-Lok		68.6 (2.70)	31.2 (1.23)	16	1	
	D-10M-	10 mm DK-Lok		71.1 (2.80)	31.2 (1.23)	19	1	
	D-12M-	12 mm DK-Lok		75.2 (2.96)	31.2 (1.23)	22	1	
	F-6N-	3/8 in. Female NPT		64.8 (2.55)	-	-	1	5300 (365)
	F-8N-	1/2 in. Female NPT		77.0 (3.03)	-	-	1-1/16	4900 (337)
	M-6N-	3/8 in. Male NPT		59.9 (2.36)	31.2 (1.23)	-	1	6000 (413)
	M-8N-	1/2 in. Male NPT		69.3 (2.73)	31.2 (1.23)	-	1	
VH36C- VCH36C-	D-12T-	3/4 in. DK-Lok	4.7	89.4 (3.52)	45.2 (1.78)	28.58 (1-1/8)	1-5/8	5000 (344)
	D-16T-	1 in. DK-Lok		98.6 (3.88)	45.5 (1.79)	38.1 (1-1/2)		4700 (323)
	D-22M-	22 mm DK-Lok		88.4 (3.48)	45.5 (1.79)	32		4900 (337)
	D-25M-	25 mm Dk-Lok		98.6 (3.88)	45.5 (1.79)	40		4600 (316)
	F-12N-	3/4 in. Female NPT		82.0 (3.23)	82.0 (3.23)	-		4600 (316)
	F-16N-	1 in. Female NPT		97.3 (3.83)	97.3 (3.83)	-		4400 (303)
	M-12N-	3/4 in. Male NPT		83.6 (3.29)	45.5 (1.79)	-		5000 (344)
	M-16N-	1 in. Male NPT		93.2 (3.67)	45.7 (1.80)	-		

How to Order

Select valve basic ordering number, applicable seal, spring nominal cracking pressure, and body material.

V33A-D-4T- **BN-** **1/3-** **S**
VP33B-F-8N- **VT-** **1-** **B**
VH36C-D-16T- **EP-** **3-** **S**

Seal Material Designator	Spring Nominal Cracking Pressure Designator	Valve Body Material Designator
FKM : Nil for SS316 Valve **NBR** : Nil for Brass Valve **HNBR** : Nil for VCH36 CNG valves **FKM** : VT **NBR** : BN **EPDM** : EP **FFKM** : KZ	**1/3** : 1/3 psig **1** : 1 psig **3** : 3 psig **10** : 10 psig **25** : 25 psig **Note** : Select the spring designator from Table 1, 2, 3 and 4 of each valve Series.	**S** : 316 stainless steel **B** : Brass (exceptional VH36 Series)

Spare Kits for Field Assembly

Spring

Prefix "9SPR" and select an applicable valve series and the designator of the spring nominal cracking pressure.
9SPR-(Valve series)-(spring designator)-2
Example : 9SPR-V33A-1/3-2

O-ring

Prefix "9ORG", select an applicable valve series and seal material designator.
Example : 9ORG-V33A-BN

How to order VH36 Series spring kit.

VH36 spring kit contains a spring and an indicator ring.
Select an applicable valve series and the designator of the spring nominal cracking pressure.
(Valve series)-RINGSPR-(spring designator)-SA
Example : VH36A-RINGSPR-5-SA

How to order VH36 Series seal kit.

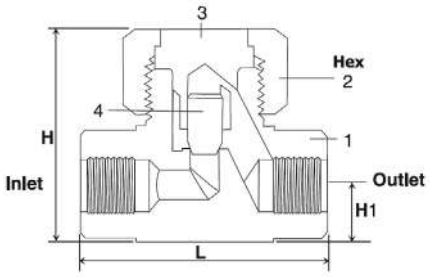
VH36 seal kit contains (Refer to VH36 Materials of Construction) #4. Poppet with bonded seal, #7. O-ring and #8. Backup ring.
Select an applicable valve series and seal material designator
SK-(valve series)-(seal material designator)
Examples : SK-VH36A-VT, SK-VH36B-BN.

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

VL36 Series Lift Check Valves

Features

- Working pressure up to 6,000 psig (413 bar)
- Temperature up to 900 °F (482 °C)
- Metal to metal seat



Operation

- Operation of this valve heavily depends on gravity assistance. Thus mounting horizontally with bonnet nut upward to allow poppet to operate vertically.
- Reverse flow closes the valve, keeping poppet in the or ce.
- Forward flow opens the valve, lifting the poppet
- Lift check valve is primarily for use in liquid systems. If a slight amount of leakage can be tolerated it can be used with heavy gases.
- Reverse flow Cv is limited to less than 0.1% of forward Cv.

Materials of Construction

Component	Valve Body Material
	Stainless Steel
	Material Grade/ASTM
1. Body	SS316/A276 or A479
2. Bonnet Nut	SS316/A276 or A479
3. Bonnet	TYPE630/A564
4. Poppet	SS316/A276 or A479



Complete Ordering Number and Dimensions

Complete Ordering Number		End Connection	Orifice		Cv	Dimensions mm (in.)			
			mm	inch		L	H	H1	Hex
VL36A-	D4T-S	1/4 in. DK-Lok	4.0	0.156	0.30	61.0 (2.40)	37.3 (1.47)	9.9 (.39)	7/8
	D6M-S	6 mm DK-Lok							
	F2N-S	1/8 in. Female NPT				50.8 (2.00)			
	F4N-S	1/4 in. Female NPT				46.0 (1.81)			
	SW4T-S	1/4 in. Tube Socket Weld							
VL36B-	D6T-S	3/8 in. DK-Lok	6.4	0.250	0.64	71.9(2.83)	47.0 (1.85)	12.7 (.50)	1 1/4
	F4N-S	1/4 in. Female NPT				57.2 (2.25)			
	SW6T-S	3/8 in. Tube Socket Weld							
	SW8T-S	1/2 in. Tube Socket Weld							
VL36C-	D8T-S	1/2 in. DK-Lok	11.1	0.437	2.20	99.6 (3.92)	62.0 (2.44)	15.7 (.62)	1 1/2
	D12T-S	3/4 in. DK-Lok							
	F6N-S	3/8 in. Female NPT				79.2(3.12)			
	F8N-S	1/2 in. Female NPT							
	SW8T-S	1/2 in. Tube Socket Weld				79.5 (3.13)			

Pressure-Temperature Ratings

ASME Class	2500
Material Group	2.2
Material Name	SS316
Temp. °F(°C)	Working Pressure psig (bar)
-65 to 100 (-53 to 37)	6000 (413)
200 (93)	5160 (355)
300 (148)	4660 (321)
400 (204)	4280 (294)
500 (260)	3980 (274)
600 (315)	3760 (259)
700 (371)	3600 (248)
800 (426)	3460 (238)
900 (482)	3280 (225)

How to order : Select a complete ordering number. i.e., VL36A-D-4T-S.

All dimensions shown are for reference only and subject to change. Dimensions with DK-LOK are in finger-tight position.
We reserve the right to change specification stated in this catalog for our continuing program of product improvement.

Safe Valve Selection

The selection of a valve for any application or system design must be considered to ensure safe performance. Valve function, valve rating, material compatibility, proper installation, operation and maintenance remain the sole responsibility of the system designer and the user. DK-Lok accepts no liability for any improper selection, installation, operation or maintenance.

DK-LOK

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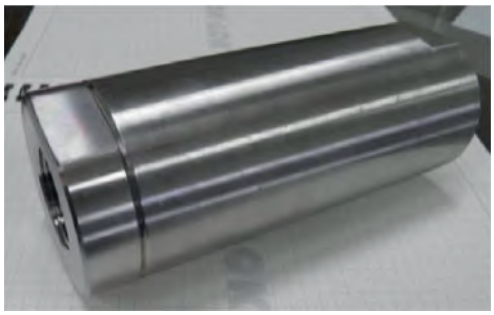
VC34 CNG Check Valves

Rev. 01-01
Aug. 2023

DK-LOK®
Check Valves

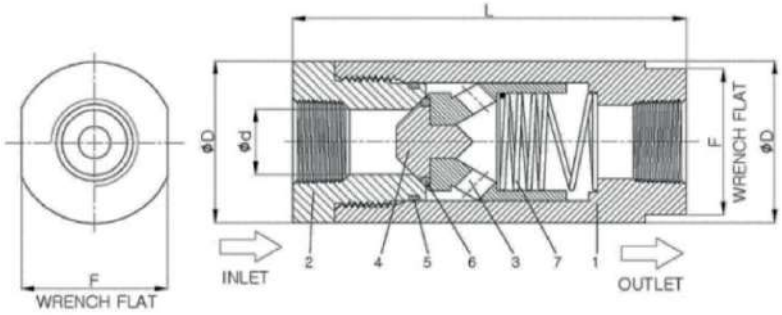
CNG Check Valves

Rev.01-01
Aug.2023



Features

- High Flow check valve.
- Bar stock two piece study design.
- Poppet O-ring secured on groove provides leak-tight seal.
- Unidirectional flow control of fluids
- Prevent loss of media caused by failed connections.



Materials of Construction

No.	Component	Material	Q'ty
1	Body	SS 316	1
2	Connector	SS 316	1
3	Poppet	SS 316	1
4	Poppet Cap	SS 316	1
5	O-ring	HNBR	1
6	O-ring	HNBR	1
7	Spring	SS 304	1

Technical Data

Flow Rate: 2090 SCFM (3551 Nm^3/hr)
Working Pressure: 3600 psi (248 bar)
Burst Pressure: 25,000 psi (1724 bar)
Temperature Range: - 40 to 120 °C (-40 to 250 °F)

Ordering Number and Dimensions

Ordering Number	End Connections		Dimension in.(mm)			
	Inlet	Outlet	D	d	L	F
VC34-F16N-S	1" Female NPT		2.48 (63)	1 (25.4)	6.04 (153.5)	2.24 (57)
VC34-F16R-S	1" Female ISO 7-1					

Factory Test, Cleaning and Packaging

Every valve is factory tested for cracking and reseal performance and cleaned, packaged in accordance with DK-LOK cleaning standard of DC-01.

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

DK-LOK

경상남도 김해시 주촌면 골든루트로 129번길 7 50969
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IDK-LOK

VX36 Series
Excess Flow Valves

Rev. 01-01
Aug. 2023



DK-LOK®
Check Valves

VX36 Series Excess Flow Valves

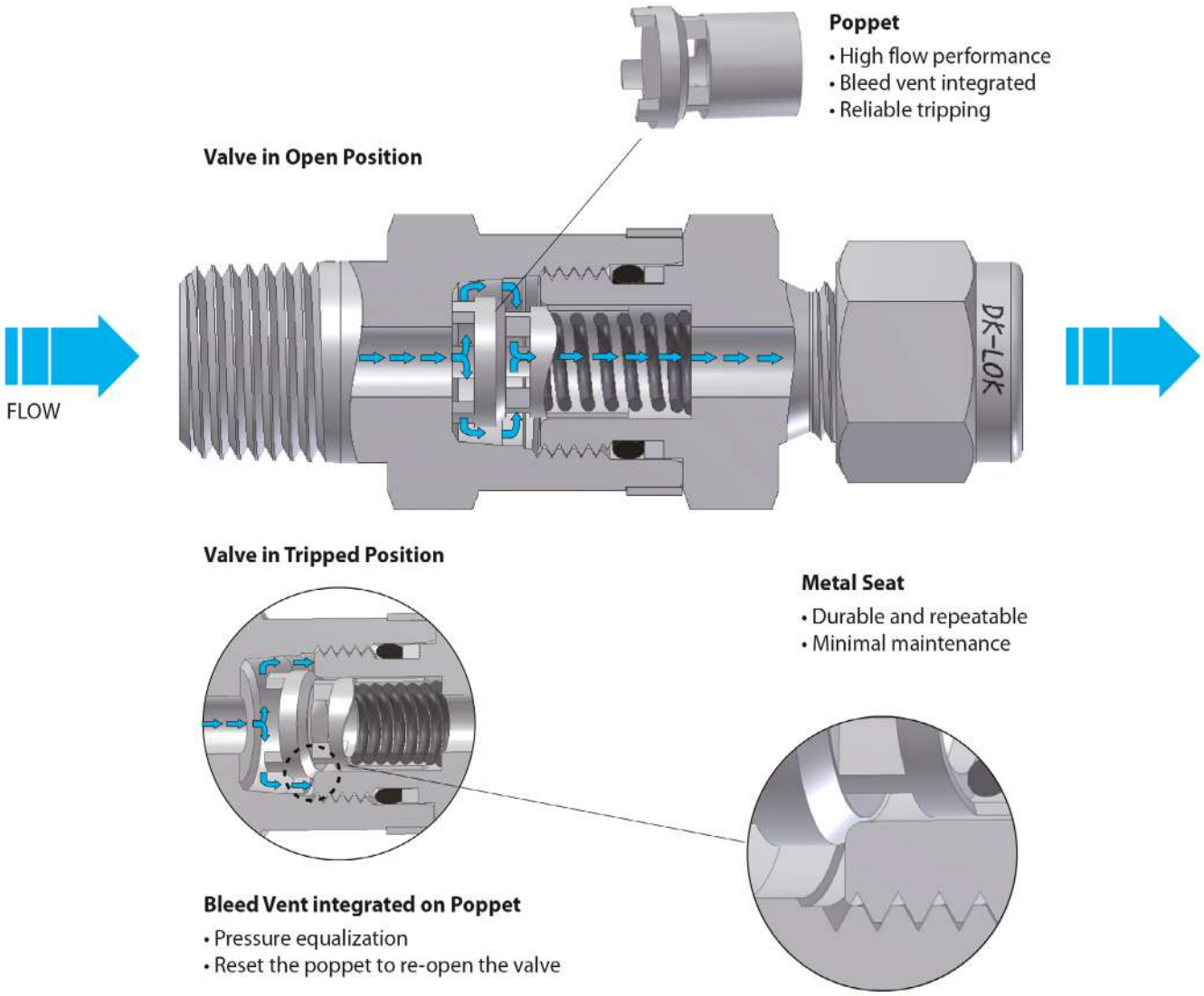
Pressures up to 6,000 psig (413 bar)

Rev.01-01
Aug.2023



Features

- Designed to stop uncontrolled release of system fluid on downstream line rupture.
- Pressure up to 6,000 psig (413 bar)
- Temperature rating up to 400 °F (204 °C)
- Stainless steel construction
- DK-Lok and PIPE END connections up to 1/2 in.



All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Operation

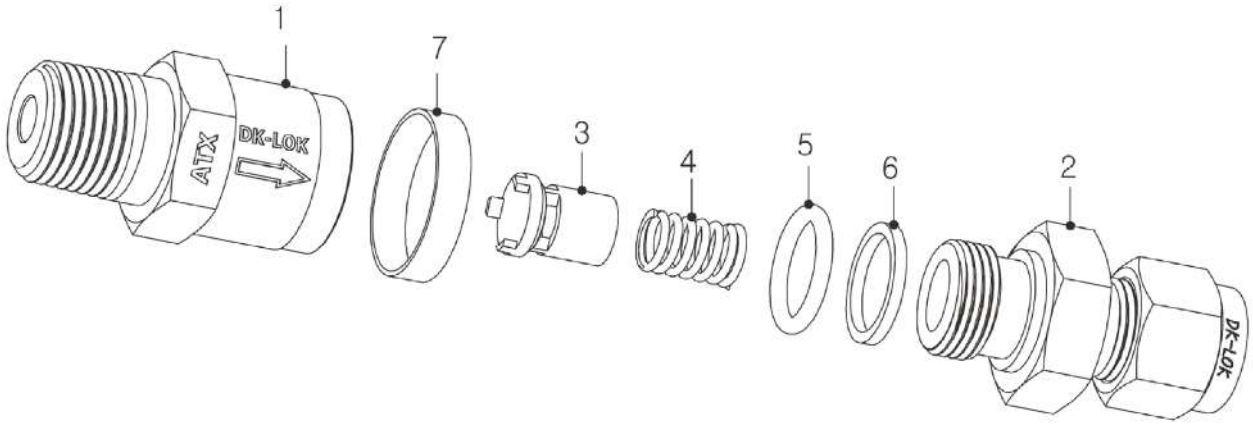
The spring loaded poppet keeps the valve open position in the normal operation.
When an excess flow occurs downstream, the poppet immediately moves to the tripped position to stop rapid release of system fluid.

The valve returns to open position when pressure equalizes through the bleed vent constructed on poppet. The spring in the poppet resets the valve to open position. The least volume of flow goes through the bleed vent that is less than 1% of the valve flow rate while the valve in the tripped position.

Spring-loaded poppet design allows valve for use in vertical, horizontal or in any orientation.

Factory Test, Cleaning and Packaging

- Every valve is factory tested for performance in the tripped and open position.
- Valves are cleaned and packaged as per the requirements of DK Tech's product cleaning standard of DC-01.
- Oil free special cleaning and packaging in compliance with ASTM G93 Level C is available on request.



Materials of Construction

Component	Material
*1. Body	SS316/ASTM A276 or ASTM A479
*2. Connector	
*3. Poppet	
*4. Spring	SS302/ASTM A313
*5. O-ring	Standard FKM O-ring Optional NBR, EPDM, and FFKM
6. Backup ring	Standard PTFE / ASTM D1710 Optional PEEK
7. Indicator ring	Red-color anodized Aluminium

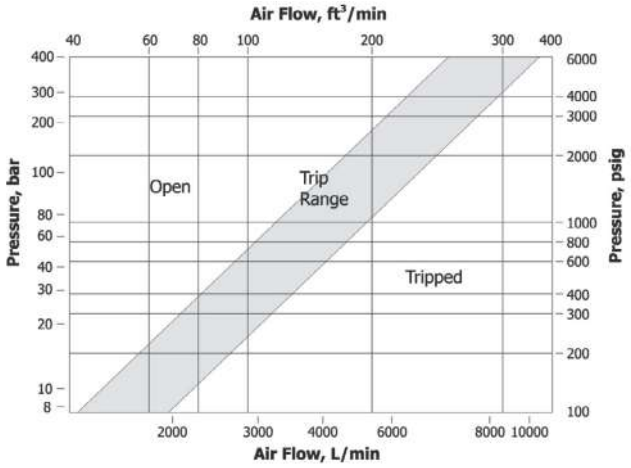
* Wetted parts and lubricants listed in blue.



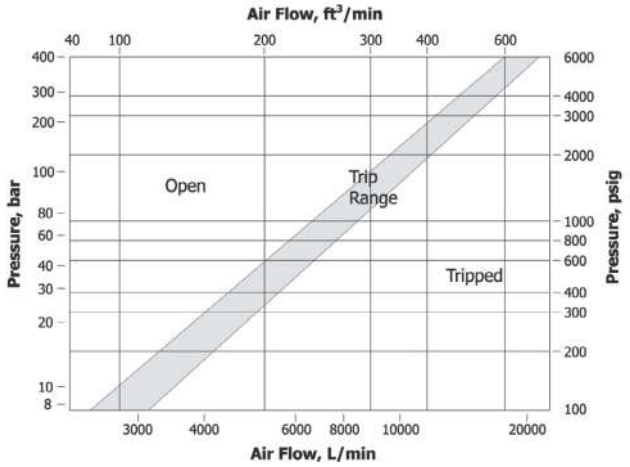
VX36 Series Flow Rate @ 70 °F (20 °C)

The valve stops rapid release of system fluid if a line rupture or similar thing occurs on the downstream by poppet's tripping into the metal seat position when flow volume through the valve increases to a set value.

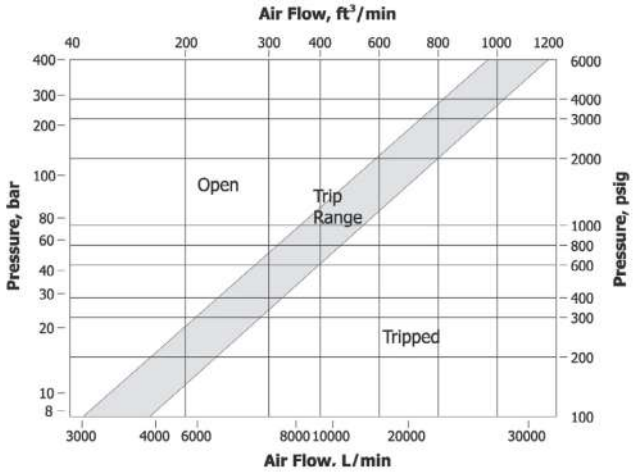
VX36A Series Air



VX36B Series Air



VX36C Series Air



VX36A, B,C Series Water

Series	Cv	Trip Range U.S. gal/min (L/min)
VX36A	0.5	3.9 to 5.8 (14.7 to 21.9)
VX36B	1.1	8.2 to 10.0 (31.0 to 37.8)
VX36C		11.2 to 14.9 (42.3 to 56.3)

Pressure-Temperature Ratings

• Rating based on valve with standard FKM O-Ring.

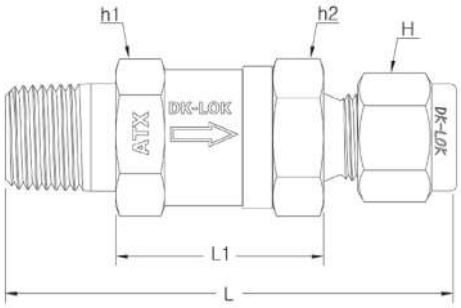
ASME Class / Material Group	2500 / 2.2
Material	Stainless Steel 316
Temp. °F(°C)	Working Pressure psig (bar)
-10 (-23)~100 (37)	6,000 (413)
200 (93)	5,160 (355)
250 (121)	4,910 (338)
300 (148)	4,660 (321)
400 (204)	4,280 (294)

Optional O-ring Materials

• FKM O-Rings are standard. Add the designator to the ordering number for valve with optional O-ring material.

O-ring Materials	Designator	Temperature Rating °F(°C)
FKM	Nil	-10 ~ 400 (-23 ~204)
NBR	BN	-4 ~ 221 (-20 ~ 105)
EPDM	EP	-50 ~ 300 (-45 ~ 148)
FFKM	KZ	-10 ~ 400 (-23 ~ 204)

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.



Ordering Information and Dimensions

Basic Ordering Number		End Connections		Pressure Rating @ 100°F (37°C), psig(Bar)	Cv	Dimensions, mm (in.)				
		Inlet	Outlet			L	L1	H	h1	h2
VX36A-	D-4T-	1/4 in. DK-Lok		6000 (413)	0.5	61.7 (2.43)	26.4 (1.04)	9/16 in.	11/16 in.	
	D-6M	6 mm DK-Lok		6000 (413)		61.7 (2.43)	26.4 (1.04)	14 mm	11/16 in.	
	M-2N-	1/8 in. Male NPT		6000 (413)		45.5 (1.79)	26.4 (1.04)	-	11/16 in.	
	F-2N-	1/8 in. Female NPT		6000 (413)		47.5 (1.87)	-	-	11/16 in.	
	M-4N-	1/4 in. Male NPT		6000 (413)		55.1 (2.17)	26.4 (1.04)	-	11/16 in.	
	M-4R-	1/4 in. Male PT		6000 (413)		55.1 (2.17)	26.4 (1.04)	-	11/16 in.	
	F-4N-	1/4 in. Female NPT		6000 (413)		54.1 (2.13)	-	-	11/16 in.	
	MD-4N4T-	1/4 in. Male NPT	1/4 in. DK-Lok	6000 (413)		58.4 (2.3)	26.4 (1.04)	9/16 in.	11/16 in.	
	MF-4N	1/4 in. Male NPT	1/4 in. Female NPT	6000 (413)		54.6 (2.15)	-	-	11/16 in.	
VX36B-	D-6T-	3/8 in. DK-Lok		6000 (413)	1.1	69.9 (2.75)	31.2 (1.23)	11/16 in.	1 in.	
	D-8M	8 mm DK-Lok		6000 (413)		68.6 (2.70)	31.2 (1.23)	16 mm	1 in.	
	M-6N-	3/8 in. Male NPT		6000 (413)		59.9 (2.36)	31.2 (1.23)	-	1 in.	
	F-6N-	3/8 in. Female NPT		5300 (365)		64.8 (2.55)	-	-	1 in.	
	MD-6N6T-	3/8 in. Male NPT	3/8 in. DK-Lok	6000 (413)		64.9 (2.56)	31.2 (1.23	11/16 in.	1 in.	
	MF-6N-	3/8 in. Male NPT	3/8 in. Female NPT	5300 (365)		62.4 (2.45)	-	-	1 in.	
VX36C-	D-8T-	1/2 in. DK-Lok		6000 (413)	1.1	75.2 (2.96)	31.2 (1.23)	7/8 in.	1 in.	
	D-12M-	12 mm DK-Lok		6000 (413)		75.2 (2.96)	31.2 (1.23)	22 mm	1 in.	
	M-8N-	1/2 in. Male NPT		6000 (413)		69.3 (2.73)	31.2 (1.23)	-	1 in.	
	M-8R-	1/2 in. Male PT		6000 (413)		69.6 (2.74)	31.2 (1.23)	-	1 in.	
	F-8N-	1/2 in. Female NPT		4900 (337)		77.0 (3.03)	-	-	1-1/16 in.	
	F-8R-	1/2 in. Female PT		4900 (337)		83.6 (3.29)	-	-	1-1/16 in.	
	MD-8N8T-	1/2 in. Male NPT	1/2 in. DK-Lok	6000 (413)		72.6 (2.86)	31.2 (1.23)	7/8 in.	1 in.	
	MF-8N-	1/2 in. Male NPT	1/2 in. Female NPT	4900 (337)		69.7 (2.53)	-	-	1 in.	1-1/16 in.

All dimensions shown are for reference only and subject to change. Dimensions with DK-Lok are in finger-tight position.

How to Order

Select valve basic ordering number, applicable options, and body material.

VX36A-D-4T- **BN-** **S**

VX36A-D-4T- **EP-**

VX36C-D-8T- **KZ-** **PK-**

O-ring Material Designator	Backup Ring	Valve Body Material Designator
Nil : FKM **BN** : NBR **EP** : EPDM **KZ** : FFKM (Kalrez)	**Nil** : PTFE **PK** : PEEK	**S** : 316 stainless steel

Safe Valve Selection

The selection of a valve for any application or system design must be considered to ensure safe performance. Valve function, valve rating, material compatibility, proper installation, operation and maintenance remain the sole responsibility of the system designer and the user. DK-Lok accepts no liability for any improper selection, installation, operation or maintenance.

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IDK-LOK

V61 Series

Rev. 01-01
Aug. 2023



DK-LOK®
Relief Valves

V61 Series Vent Relief valves

Rev.01-01
Aug.2023

Working Pressure up to 400 psig (28 bar)



Features

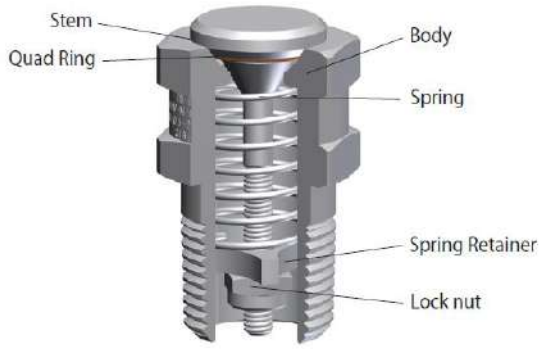
- Precise cracking pressure with high reliability.
- Keeping the sealing to 95~98% of Set Pressure at least.
- Reliable Reseal performance.
- Tamper proof design.

Design and applocation

V61 Series Vent relief valves is designed to vent out the excess pressure from the line automatically to keep the required line pressure safely when the line pressure is exceeded over the limitation unusually. This valves can be used in the case that the working fluid is not harmful when vented out. The level of cracking pressure should be set by adjusting the force of the spring in the valve before this valve is installed in the system.

Installation and Operation

This valve should be positioned perpendicularly to the direction of fluid flow in the line and that position should be considered and the vented fluid should be not directed to the personnel operating and the parts that has any influences on that. The line system should be run to check the performance of the valve after the personnel operating move to the safty zone. Because this valve is opened automatically when the excess of the required line pressure.



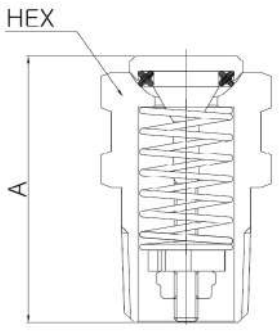
Materials of construction

Component	Valve Body Material	
	SS316	Brass
Body	ASTM A276 / A479 TYPE 316	ASTM B16 / Brass 360 (Nickel plated)
Stem	ASTM A276 / A479 TYPE 316	ASTM B16 / Brass 360
Quad-Ring	FKM	NBR
Spring	STAINLESS STEEL 302	STAINLESS STEEL 302
Spring retainer	ASTM A276 / A479 TYPE 316	ASTM B16 / Brass 360
Lock nut	STAINLESS STEEL	STAINLESS STEEL

· Lubricants listed in blue.

Ordering Number and Table of Dimensions

Basic Ordering No.	Pipe Size NPT	Orifice mm(inch)	Dimension mm(inch)	
			A	Hex.
V61-M-2N	1/8" Male NPT	4.74 (0.187)	24.6 (0.97)	12.7(1/2)
V61-M--4N	1/4" Male NPT	6.98 (0.275)	30.48 (1.2)	15.87 (5/8)
V61-M-6N	3/8" Male NPT	8.76 (0.345)	31.5 (1.24)	19.05 (3/4)
V61-M-8N	1/2" Male NPT	10.41 (0.41)	44.5 (1.75)	25.4 (1.0)
V61-M-12N	3/4" Male NPT	14.47 (0.57)	57.15 (2.25)	28.57 (1-1/8)
V61-M-16N	" Male NPT	19.94 (0.785)	79.25 (3.12)	38.1 (1-1/2)



Technical Data

1. Set Pressure Range : 0.5 to 150 psig
   (0.03 to 10.4 bar)
2. Temperature Range : -65° to 400°F
   (-54°C to 204°C)

(differ from material selection)

Material	Designator	Temperature Rating
FKM	V	-20 to 400°F (-28°C to 204°C)
NBR	N	-40 to 250°F (-40°C to 121°C)
EPDM	EP	-65 to 300°F (-54°C to 148°C)

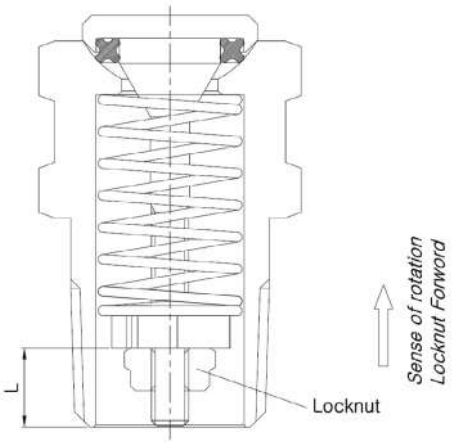
All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Technical Data

Cracking & Reseal Tolerance

	Cracking Pressure	Tolerance
Cracking	below 2 psig (0.14 bar)	± 10%
	2 to 150 psig (0.14 to 10.3 bar)	± 5%

	Cracking Pressure	Tolerance
Reseal	2 ~ 10 psig (0.14 to 1.7 bar)	80% of Cracking
	10 ~ 150 psig (0.7 to 10.3 bar)	92% of Cracking



According to system line's requested pressure,
Turn the locknut(with JIG as picture.1)as picture and set the cracking pressure.

* Ordering Jig Part No. : V61 - JIG

JIG Reference <picture.1>



Spring Cracking Pressure Range Designator and Flow Data

Designator	Cracking Pressure Range @ 20°C (70°F), psig (bar)	Standard Cracking Pressure (The Middle Point Cracking) psig (bar)	Flow Data for Size, SCFM					
			1/8"	1/4"	3/8"	1/2"	3/4"	1"
1	0.5 to 2.5 (0.03 to 0.17)	1.6 (0.11)	0.13	0.13	0.20	0.83	1.23	-
5	2.6 to 7.5 (0.18 to 0.51)	5(0.34)	0.57	0.62	0.97	1.83	1.37	2.92
10	7.6 to 15 (0.52 to 1.03)	11.5 (0.79)	0.92	1.15	1.80	2.50	1.58	1.90
20	16 to 35 (1.1 to 2.41)	26 (1.79)	1.50	2.05	2.50	3.67	3.75	5.17
50	36 to 75 (2.48 to 5.17)	56 (3.86)	4.33	8.58	9.17	24.30	17.50	9.17
100	76 to 125 (5.24 to 8.61)	100 (6.89)	8.33	33.52	21.67	62.08	34.67	76.67
150	126 to 150 (8.68 to 10.4)	138 (9.5)	10.17	38.17	19.00	66.67	57.50	91.67

Factory Test

Every valve is factory tested for standard set cracking and performance.

How to Order

Select valve basic ordering number, applicable seal, spring nominal cracking pressure, and body material.

V61 - **NIL-** **KZ-** **EP-** **1-** **S** **B**

Seal Material Designator	Spring Nominal Cracking Pressure Designator	Valve Body Material Designator
FKM : Nil for SS316 Valve **NBR** : Nil for Brass Valve **FKM** : V **NBR** : N **EPDM** : EP	"Note : Select the spring desigtnor 1 ,5, 10, 20, 50, 100, 150"	**S** : SS316 **B** : Brass

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IDK-LOK

V63-V66 Series Relief Valves

Rev. 01-01
Aug. 2023



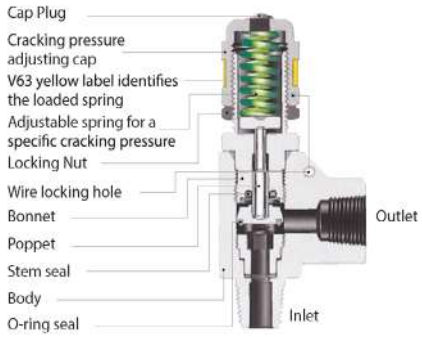


DK-LOK®
Relief Valves

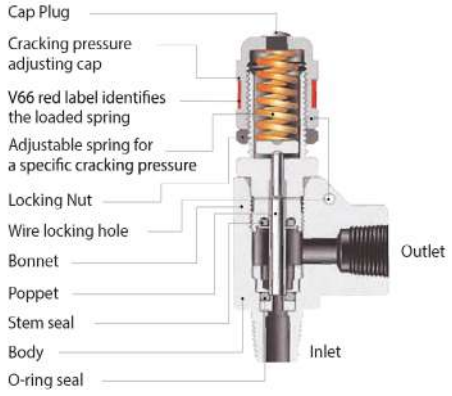
V63 & V66 Series Relief Valves

Rev.01-01
Aug.2023

V63 Series for working pressure 300 psig (20.6 bar)



V66 Series for working pressure 6,000 psig (413 bar)



Technical Data

V63 Series Technical Data

- Maximum working pressure : 300 psig @ 68°F (20.6 bar @ 20°C)
- Cracking pressure range : 10 to 225 psig (0.68 to 15.5 bar)

Table 1. V63 Series Spring Designator

Spring Designator	Cracking Pressure		Color Code
	psig	bar	
RVS-L	10 to 225	0.68 to 15.5	RED

- Orifice : 4.8 mm (0.19 in.)

V63/66 Series Temperature Rating

Seal Material	Temperature Rating, °C (°F)	
	V63 Series	V66 Series
FKM (Viton)	-12 ~ -135 (10.4 ~ 275)	-4 ~ 121 (24.8 ~ 250)
Buna N	-23 ~ 148 (-9.4 ~ 298)	-17 ~ 121 (1.4 ~ 250)
Ethylene Propylene (EPDM)	-40 ~ 148 (-40 ~ 298)	-1 ~ 121 (30.2 ~ 250)

V66 Series Technical Data

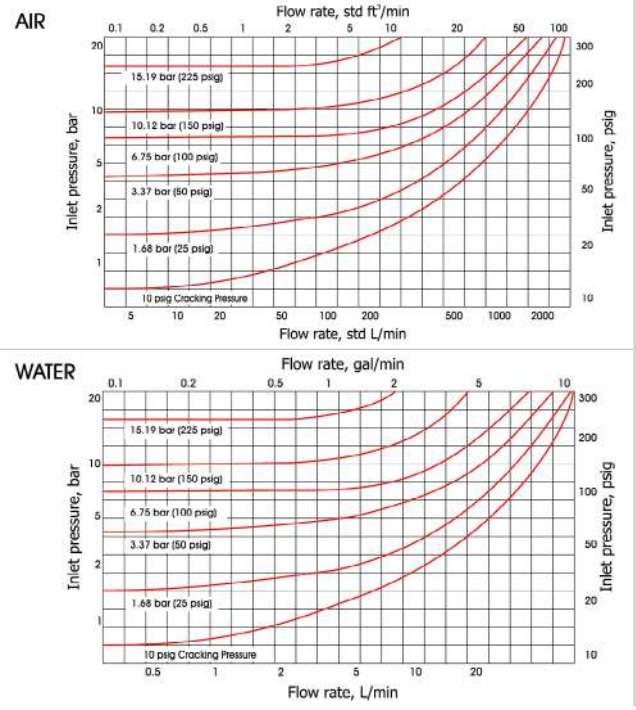
- Maximum working pressure : 6,000 psig @ 68°F (413 bar @ 20°C)
- Orifice size : 3.4 mm (0.13 in.)
- Cracking pressure range : 50 to 6,000 psig (3.4 to 413 bar)

Table 2. **V66 Series Spring Designators**

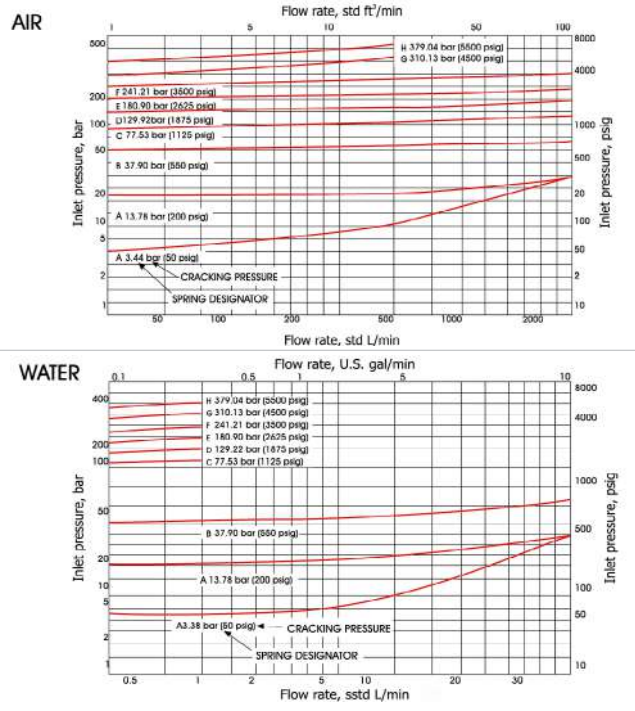
Spring Designator	Cracking Pressure		Color Code
	psig	bar	
RVS-A	50 to 350	3.4 to 24	WHITE
RVS-B	350 to 750	24 to 51.6	BLUE
RVS-C	750 to 1500	51.6 to 103	CLEAR
RVS-D	1500 to 2250	103 to 155	BLACK

Spring Designator	Cracking Pressure		Color Code
	psig	bar	
RVS-E	2250 to 3000	155 to 206	GREEN
RVS-F	3000 to 4000	206 to 275	YELLOW
RVS-G	4000 to 5000	275 to 344	BROWN
RVS-H	5000 to 6000	344 to 413	ORANGE

V63 Series Flow Rate



V66 Series Flow Rate



Factory Test

Every valve is factory tested for cracking and reseal performance.

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

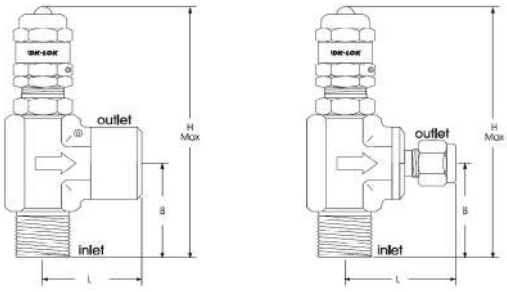
How To Adjust Valve Cracking Pressure

The valve user shall set a specific cracking pressure of the valve supplied.

1. To increase the cracking pressure of the valve, turn the adjusting cap clockwise to compress the spring.
2. To reduce the cracking pressure, turn counterclockwise.
3. Start the pump with the spring relaxed (eight threads showing with the Locking Nut at bottom), with the discharging port open, check the gauge pressure as you turn the adjusting cap clockwise to increase the pressure to the desired operating range.
4. If the system has more than one outlet, set the valve pressure with one outlet open, and then check again with all outlets open to make sure that the set pressure is within the desired operating range.
5. Set the Locking Nut and the wire to maintain the set cracking pressure.

Operation

- Install the valve between the pump outlet as close as possible, and any shutoff device in the discharge line. The preferable mounting position is vertical with the adjusting cap at the top.
- D-Pro relief valve bypasses the system fluid to prevent instrument or sensitive gauge in the system from excess pressure.
- When the inlet pressure overcomes the set spring pressure on the poppet, the poppet lifts off the valve seat, allowing flow to bypass and thereby balance the system pressure.
- If the valve has not been actuated for a period of time, it may initially crack above the set cracking pressure.
- Cracking pressure is only sensitive to inlet pressure, and is not affected by outlet pressure.
- Cv reduction : Valve flow may be reduced by the restriction of pipe and tubing connected.



Material of Construction	
Cap Plug	Polypropylene
Adjusting Cap	ASTM A276 / A479 Type 316
Spring	Stainless Steel 302
Locking Nut	ASTM A276 / A479 Type 316
Bonnet	
Poppet	
Stem & O-ring seal	Standard Viton, optional EPDM and Buna N
Body	ASTM A182 F316

Ordering information and Dimensions

Basic Ordering Number		End Connections		Orifice mm(in.)	Dimensions mm (in.)		
		Inlet	Outlet		H	B	L
V63- and V66-	D-4T-	1/4 DK-Lok		V63 : 4.8 (0.19) V66 : 3.4 (0.13)	100 (3.93)	37 (1.45)	39 (1.53)
	D-6M-	6 mm DK-Lok					
	D-8M-	8 mm DK-Lok				38 (1.49)	40 (1.57)
	D-8T-	1/2 DK-Lok			105 (4.13)	44 (1.73)	42 (1.65)
	D-12M-	12 mm DK-Lok					
	MD-8N8T-	1/2 Male NPT	1/2 DK-Lok		98 (3.85)	36 (1.41)	42 (1.65)
	MD-8N12M-	1/2 Male NPT	12 mm DK-Lok				
	MF-4N-	1/4 Male NPT	1/4 Female NPT		94 (3.70)	32 (1.25)	30 (1.18)
	MF-4R-	1/4 Male ISO 7/1	1/4 Female ISO 7/1				
	MF-6N-	3/8 Male NPT	3/8 Female NPT				35 (1.37)
	MF-6R-	3/8 Male ISO 7/1	3/8 Female ISO 7/1				
	MF-8N-	1/2 Male NPT	1/2 Female NPT		98 (3.85)	36 (1.41)	38 (1.49)
	MF-8R-	1/2 Male ISO 7/1	1/2 Female ISO				



Model Shown :
V66-MF-4N-A

All dimensions shown are for reference only and are subject to change. Dimensions with DK-Lok nuts are in finger-tight position.

How to order

Please select the desired valve basic ordering number, the applicable seal, spring designator and CE certified option from the table below.

Example : V66-D-4T

-BN	-B	-CE
Seat Designator	Spring Designator	CE certified
Nil : Standard Viton **BN** : Buna N **EP** : EPDM	Refer to Table 1, Table 2 for spring designator	**CE** : Valve to 2014/68/EU

Factory pressure set valve

To order, specify the set pressure on the valve ordering number.
Example : V66-D-4T-60BAR or V66-D-4T-870PSI

Valve without spring installed

To order, do not specify spring designator on the ordering number.
Example : V66-D-4T
Note : The valve with no spring installed is supplied with the label stated “NO SPRING INSTALLED” on the adjusting cap.

Spring for field assembly

To order, select an applicable spring from the spring designator table 1 & 2. Spring kit includes spring, sticker and wire. Example : RVS-A

Safe Valve Selection

The selection of a valve for any application or system design must be considered to ensure safe performance. Valve function, valve rating, material compatibility, proper installation, operation and maintenance remain the sole responsibility of the system designer and the user. DK-Lok accepts no liability for any improper selection, installation, operation or maintenance.

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V64 Series

Rev. 01-01
Aug. 2023

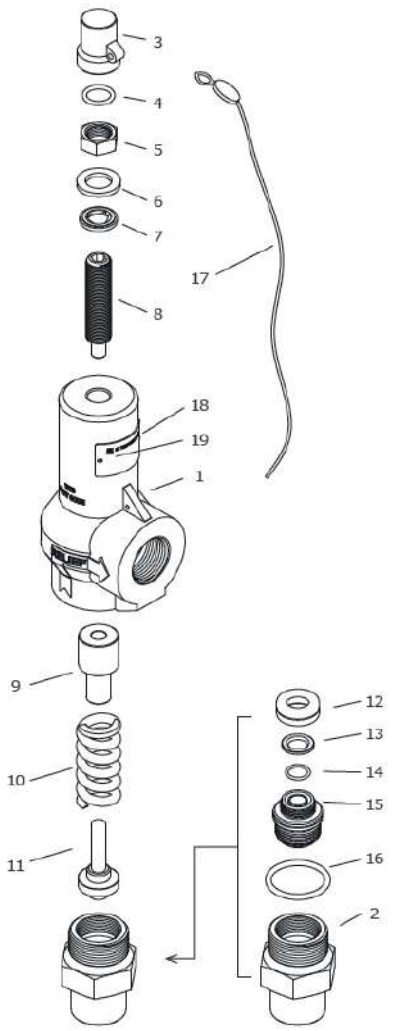


DK-LOK®
Relief Valves

V64 Series

PED Certified Relief Valves

Rev.01-01
Aug.2023





Features

- **Wide Media Applications :**
  Air, Gases, CNG, and Liquid relief applications.
- **High Performance Soft Seat :**
  provides repetitive & reliable bubble-tight seal.
- **Orifice:** 0.404 in. (10.26 mm)
- **Working Pressure:** 6,000 psi (413 bar)
- **Cracking Pressure Range:**
  15 to 5,500 psig (1.03 to 379 bar)

Valves are supplied with protective painted surface.

Table 1. **Materials of Construction**

No.	Component	Valve Body Materials	
		Carbon Steel	Stainless Steel
1	Body	ASTM A216 Gr. WCB	ASTM A351 CF3M
2	Seat Frame	ASTM A105 or Equivalent	ASTM A479/A276 Type316
3	Cap	Carbon Steel	Stainless Steel
4	Cap O-Ring	Rubber	
5	Jam Nut	Carbon Steel	Stainless Steel
6	Flat Washer	Carbon Steel	Stainless Steel
7	Bonded Seal	NBR inner ring bonded to carbon steel outer ring	
8	Adjustable Screw	Carbon Steel with Cr Plated	Stainless Steel
9	Spring Keeper	Stainless Steel	
10	Spring	AISI 1086 or Equivalent	
11	Disc	ASTM A479/A276 Type316	
12	Seat Cap	ASTM A479/A276 Type316	
13	Seat Support	ASTM A479/A276 Type316	
14	Seat O-Ring	FKM (see Table 2 for optional O-rings)	
15	Insert Holder	ASTM A479/A276 Type316	
16	Body O-Ring	FKM (see Table 2 for optional O-rings)	
17	Lead Seal Wire	Stainless Steel	
18	Name Plate	Stainless Steel	
19	Rivet Bolt	Stainless Steel	

· Wetted parts are listed in blue.

V64 Series Technical Data

Working Pressure	Cracking Pressure Range	Orifice	Orifice Area
6,000 psig (413 bar)	15 to 5,500 psig (1.03 to 379 bar)	0.404 in. (10.26 mm)	0.128 in.^{2} (82.58 mm^2)

Table 2. **Elastomer O-ring Technical Information**

Component	Temp. Rating °F (°C)		Recommended Media
	Min.	Max.	
FKM (Viton)*	-15 (-26)	400 (204)	Hydrocarbons, H_2S, Mineral Oil/Grease, Silicone Oil/Grease, Fuels, Chlorinated Hydrocarbons.
HNBR	-25 (-31)	325 (162)	Hydrocarbons, CO_2, Dilute Acids, Water and Steam Less than 300 °F.
EPDM	-70 (-56)	250 (121)	Glycols, Organic Acids, Inorganic Acids, Hydraulic Fluids, Solvents.

* In case of CNG service, FKM of special compound is applied and temperature service is applicable to -40°F (-40°C).

Operation

When the inlet pressure overcomes the spring set pressure, it causes the valve to open, releasing flow to bypass and thereby balance the system pressure.

Factory Test

Every valve is factory tested for cracking and reseal performance.

Pressure Equipment Directive 2014/68/EU Certifications

Module	B	D
Certificate No	HSBI-10-11-045	HSBI-10-11-046

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Ordering Number and Dimensions

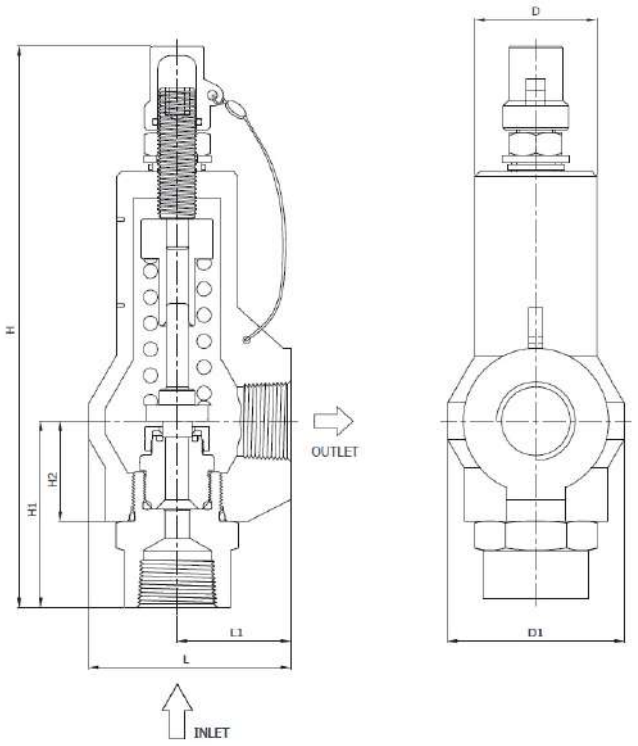


Table 3. **Flow Rate**

Flow rate measured by overpressure of 110% or 3 psig.

Media	Air	Gas	Water
Density	0.0764	0.0458	62.306
SG	1	0.6	1
Temp.	60 °F	60 °F	70 °F
Factor	Kd Factor 0.838	Kd Factor 0.838	K Factor 0.62
Set Pressure psig (bar)	SCFM	SCFM	GPM
15 (1.03)	64	80	13
20 (1.3)	74	93	14
25 (1.7)	84	105	16
30 (2.0)	94	117	17
50 (3.4)	137	171	22
100 (6.8)	245	306	32
150 (10.3)	353	441	39
200 (13.7)	462	576	45
250 (17.2)	570	711	50
300 (20.6)	678	846	55
400 (27.5)	894	1117	63
500 (34.4)	1111	1387	71
600 (41.3)	1327	1657	77
700 (48.2)	1543	1927	84
900 (62.0)	1976	2467	95
1000 (68.9)	2192	2737	100
1500 (103)	3274	4088	122
1750 (120)	3815	4763	132
2000 (137)	4355	5438	141
2500 (172)	5437	6789	158
3000 (206)	6519	8139	173
4000 (275)	8682	10840	200
4500 (310)	9763	12191	212
5000 (344)	10845	13541	224
5500 (379)	11927	14892	235

Table 4. **Basic Ordering Number and Dimensions**

Basic Ordering Number		End Connections		Dimensions in. (mm)						
		Inlet	Outlet	H	H1	H2	L	L1	D	D1
V64-	F8N16N-	1/2 in. Female NPT	1 in. Female NPT	9.25 (235)	3.07 (78.0)	1.64 (41.8)	3.32 (84.50)	1.87 (47.5)	2.00 (51.0)	2.36 (60.0)
	F12N16N-	3/4 in. Female NPT								
	MF8N16N-	1/2 in. Male NPT								
	MF12N16N-	3/4 in. Male NPT								
	MF16N-	1 in. Male NPT								

Ordering Information

Select the desired valve basic ordering number in the table 4, applicable O-Ring designator, Spring designator, and Valve body material in the table below.

O-Ring Material Designators	Spring Set Pressure Designators Unit: psig	Valve Body Material Designators	Example of a complete ordering Number.
Applicable to components number of 14, and 16 in the table 1. • Nil: Standard FKM O-Ring • HBN: HNBR • EP: EPDM	• 1 : 15-40(Brown) • 2 : 41-100(Light Blue) • 3 : 101-215(Yellow) • 4 : 216- 350(Light Green) • 5 : 351-750(Red) • 6 : 751 - 1000(Orange) • 7 : 1001 - 1800(Silver) • 8 : 1801 - 2800(Black) • 9 : 2801 - 3700(Dark Brown) • 10 : 3701 - 5500(Gray)	• C: Carbon Steel • S: Stainless Steel	V64-F12N16N-**EP-8-C** **Factory Set Valve** To order, specify the set pressure on the valve ordering number. i.e., V64-F-8N16N-**1200**-C

Safe Valve Selection

The selection of a valve for any application or system design must be considered to ensure safe performance.
Valves function, valve rating, material compatibility, proper installation, operation and maintenance remain the sole responsibility of the system designer and the user. DK-Lok accepts no liability for any improper selection, installation, operation or maintenance.

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DK-LOK

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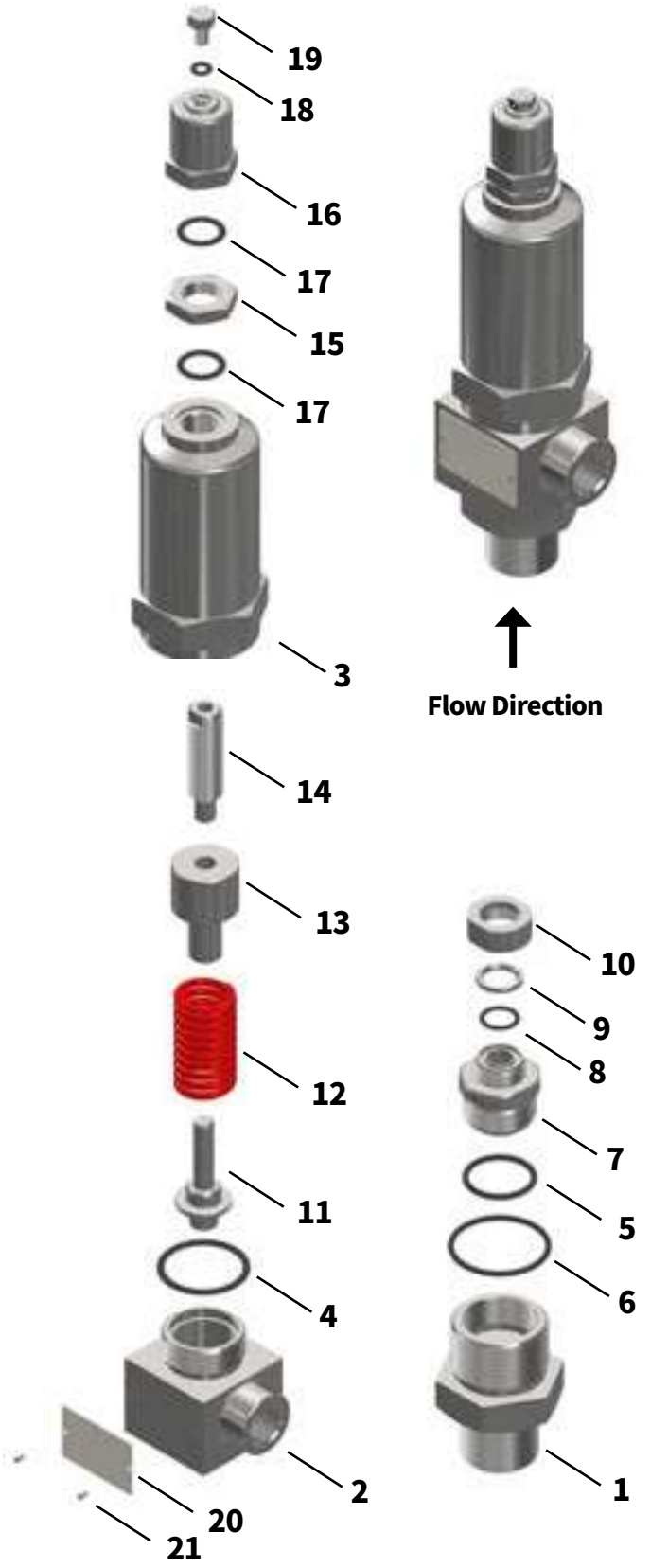
V64H Series

Rev. 01-01
Aug. 2023

V64H Series
Safety Valve

Rev.01-01
Aug.2023

Low Pressure Type



Features

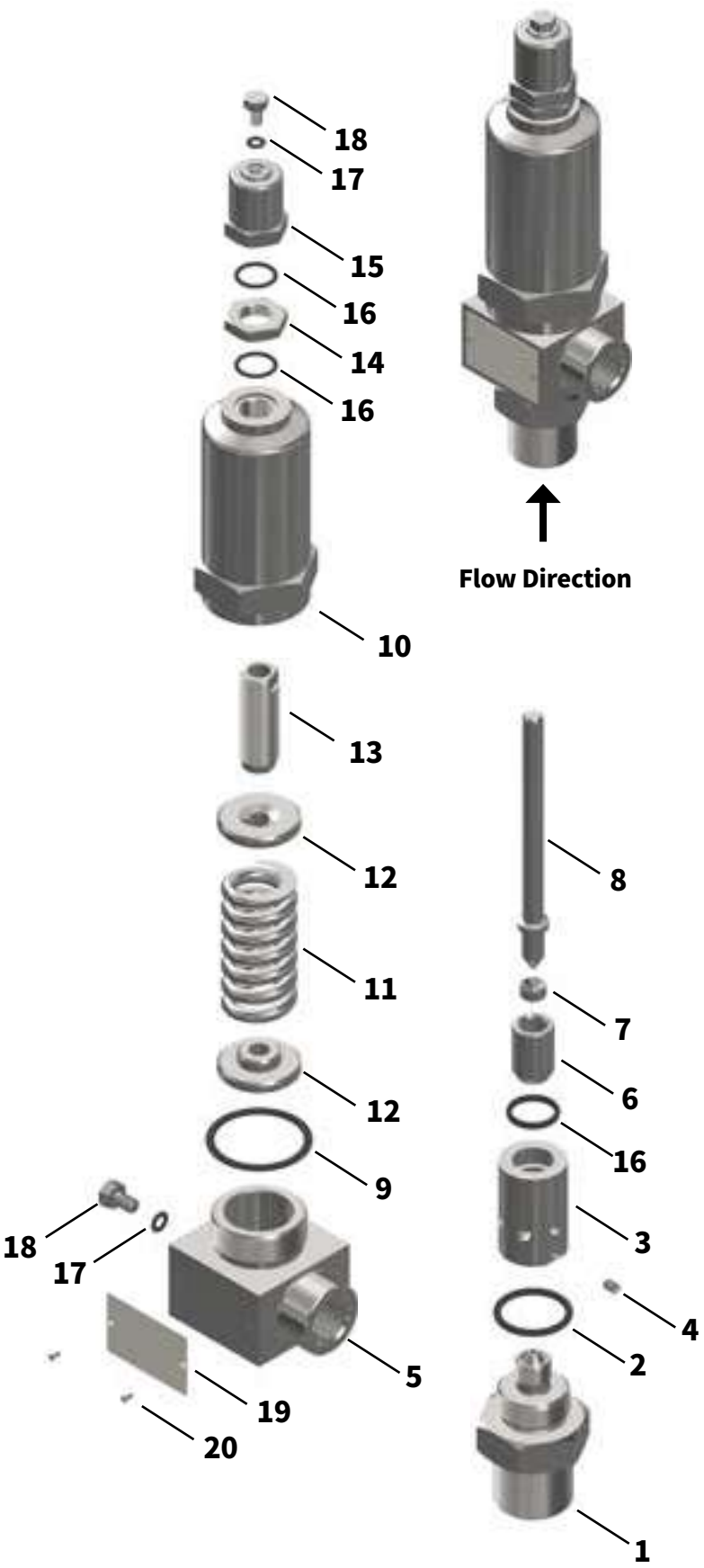
- **Wide Media Applications :**
  Air, Gases and Liquid relief applications.
- **High Performance Soft Seat :**
  Provides Repetitive & Reliable Bubble-tight seal.
- **Orifice :** 0.404 in. (10.26 mm)
- **Working Pressure :** 6,000 psig (413 bar)
- **Cracking Pressure Range :** 10 to 5,500 psig (0.7 to 379.2 bar)
- **Temp. Range :** -15 ~ 400°F (-26 ~ 204°C)
- **Inlet Thread/Screw :** NPT, PT

Table 1. Materials of Construction

No.	Component	Materials
1	Seat Frame	ASTM A 276 TYPE 316
2	Body Lower	ASTM A 276 TYPE 316
3	Body Upper	ASTM A 276 TYPE 316
4	O-Ring	FKM
5	O-Ring	FKM
6	O-Ring	FKM
7	Insert Holder	ASTM A 276 TYPE 316
8	O-Ring	FKM
9	Disc Guide	ASTM A 276 TYPE 316
10	Disc Cap	ASTM A 276 TYPE 316
11	Disc	ASTM A 276 TYPE 316
12	Spring	17-7 PH (SS313)
13	Spring Keeper	Stainless Steel 304
14	Adjustable Screw	Stainless Steel 304
15	Jam Nut	Stainless Steel 304
16	Cap	Stainless Steel 316
17	O-Ring	FKM
18	O-Ring	FKM
19	Vent Bolt	Stainless Steel 304
20	Name Plate	Stainless Steel 304
21	Rivet Bolt	Stainless Steel 304

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

High Pressure Type



Features

- **Wide Media Applications :**
  Air, Gases and Liquid relief applications.
- **High Performance Soft Seat :**
  Provides Repetitive & Reliable Bubble-tight seal
- **Orifice :** 0.098 in. (2.5 mm)
- **Working Pressure :** 14,500 psig (1,000 bar)
- **Cracking Pressure Range :**
  5,501 to 14,000 psig (379.3 to 965.2 bar)
- **Temp. Range :** -15 ~ 400°F (-26 ~ 204°C)
- **Inlet Thread/Screw :** Unified Screw

Table 2. Materials of Construction

No.	Component	Material
1	Seat Frame	ASTM A 276 TYPE 316
2	O-Ring	FKM
3	Insert Holder	ASTM A 276 TYPE 316
4	Set Screw	Stainless Steel 304
5	Body Lower	ASTM A 276 TYPE 316
6	Disc Cap (PAI)	ASTM A 276 TYPE 316 + PAI Seat
7	Disc Guide	ASTM A 276 TYPE 316
8	Disc	ASTM A479 TYPE 316 + Stellite
9	O-Ring	FKM
10	Body Upper	ASTM A 276 TYPE 316
11	Spring	SWOSC-V or EQUIVALENT
12	Spring Keeper	Stainless Steel 304
13	Adjustable Screw	Stainless Steel 304
14	Jam Nut	Stainless Steel 304
15	Cap	Stainless Steel 316
16	O-Ring	FKM
17	O-Ring	FKM
18	Vent Bolt	Stainless Steel 304
19	Name Plate	Stainless Steel 304
20	Rivet Bolt	Stainless Steel 304

Ordering Number and Dimensions

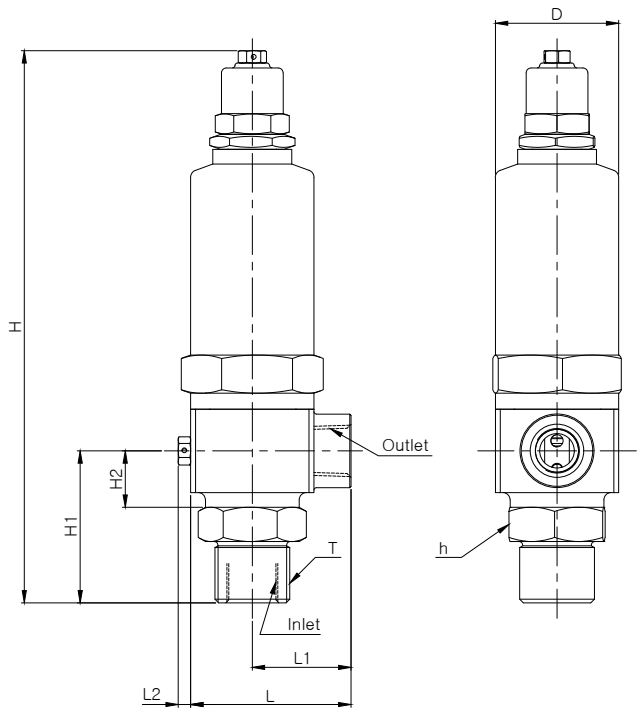


Table 3. Spring Range

Spring No.	Set Pressure Range, psig (bar)		Spring Color
	Min.	Max.	
1	10 (0.7)	20 (1.4)	Brown
2	21 (1.5)	70 (4.8)	Light Blue
3	71 (4.9)	175 (12.0)	Yellow
4	176 (12.1)	350 (24.1)	Light Green
5	351 (24.2)	750 (51.7)	Red
6	751 (51.8)	1,300 (89.6)	Orange
7	1,301 (89.7)	1,800 (124.1)	Silver
8	1,801 (124.2)	2,800 (193.0)	Black
9	2,801 (193.1)	3,700 (255.1)	Dark Brown
10	3,701 (255.2)	5,500 (379.2)	Gray
11	5,501 (379.3)	10,000 (689.4)	Colorless
12	10,001 (689.5)	11,000 (758.4)	Red
13	11,001 (758.5)	14,000 (965.2)	Green

Table 4. Basic Ordering Number and Dimensions

Basic Ordering Number		End Connections		Dimensions in. (mm)									
		Inlet	Outlet	Orifice	T	H	H1	H2	L	L1	L2	D	h
V64H-	F-8N	1/2 in. Female NPT	1/2 in. Female NPT	0.404 (10.26)	M30x1.5P	8.858 (225)	2.441 (62)	0.906 (23)	2.587 (65.7)	1.575 (40)	-	2 (50.8)	Hex. 1-3/4"
	F-9U8N	13/16-16UN Female Unified Thread		0.098 (2.5)	M30x1.5P	8.858 (225)	2.441 (62)	0.906 (23)	2.559 (65)	1.575 (40)	0.197 (5)	2 (50.8)	Hex. 1-1/2"
	F-8U8N	3/4-16UNF Female Unified Thread		0.098 (2.5)	M30x1.5P	8.858 (225)	2.441 (62)	0.906 (23)	2.559 (65)	1.575 (40)	0.197 (5)	2 (50.8)	Hex. 1-1/2"

Ordering Information

Select the desired valve basic ordering number in the table 4, applicable Spring designator, and Valve body material in the table below.

Spring Set Pressure Designators	Body Material Designators	Example of a Complete Ordering Number
See table 3. Spring Range above	S: Stainless Steel	V64H-**F-8N-5-S** V64H-**F-9U8N-11-S**

Operation

When the inlet pressure overcomes the set spring pressure, it causes the valve to open, releasing flow to bypass and thereby balance the system pressure

Factory Test

Every valve is factory tested for cracking and reseal performance.

Safety Valve Selection

The selection of a valve for any application or system design must be considered to ensure safe performance.
Valve function, valve rating, material compatibility, proper installation, operation and maintenance remain the sole responsibility of the system designer and the user. DK-Lok accepts no liability for any improper selection, installation, operation or maintenance.

DK-LOK

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IDK-LOK

V15 Series

Rev. 01-01
Aug. 2023

DK-LOK®
Needle Valves

V15 Series Needle Valves

Rev.01-01
Aug.2023

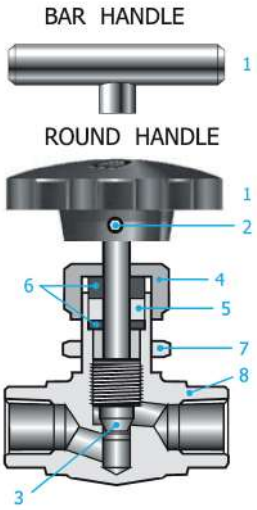
Forged body, Pressure Rating up to 5000psig (345bar)

Integral Bonnet Needle Valves For regulating and shut-off

Stem
Hard chrome plated stem threads assures extended service life

Choice of Fluid Control
- Metal to metal Vee & Regulating stems for elevated temperatures
- Repetitive soft seat for gas leak-tight

Variety of end connections
- Reliable DK-Lok Tube Fitting Ends
- NPT & ISO Male & Female



Positive Driven Handle
Choice of Round handle and Bar handle

Packing Nut
Allows external adjustments of packing

Panel Nut
Allows panel installation

Integral Bonnet Design
To eliminate inadvertent stem back-out

Packing
- Low operating torque.
- Standard PTFE
- Optional Chevron PEEK for high temperature

Materials of Construction

Components		VALVE BODY MATERIALS Material Grade/ASTM Specification		
		SS316	BRASS	ALLOY 400
1	Round handle	Nylon with brass insert		
	Bar handle	SS316/A276		
2	Set Screw	SS304/A276		
3	Standard Vee Stem	SS316/A276 Hard Chrome-plated on stem tip and threads		Alloy R-405
	Optional Regulating stem	SS316/A276 Hard Chrome-plated on threads		
	Optional Soft Seat Stem	PCTFE		
4	Packing Nut	SS316/A276	Brass/B16	Alloy R-405/B164
5	Packing	Standard PTFE, Optional PEEK		
6	Packing Gland	SS316/A276	Brass/B16	Alloy R-405/B164
7	Panel Nut	SS316/A276	Brass/B16	SS316/A276
8	Body	SS316/A182	Brass/B283	Alloy 400/B564

Wetted parts and lubricant are listed in blue.

Lubrication : Molybdenum disulfide with hydrocarbon coating

Design

- Designed for a wide range of general purpose in gas and liquid applications
- Forged Body with Inline and Angle pattern
- Integral Bonnet design to eliminate inadvertent stem back-out
- Standard metal seal for pressure tightness at elevated temperatures
- Standard PTFE packing, and optional PEEK packing for higher temperature service
- Packing nut allows external packing adjustment to ensure leak-free packing on stem
- Broad choices of end connections include reliable DK-Lok, NPT & ISO Male & Female pipe threads

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Operation

- Pressure rating up to 5,000psig (345bar) @100°F (38°C)
- Temperature rating up to 450°F (232°C) with standard PTFE packing; up to 600°F (315°C) with optional PEEK packing
- Panel mounting without packing disruption
- Standard SS316 and Brass material valve construction
- DK-Lok Gap gauge allows easy inspection for sufficient tube pull-up before a system is pressurized
- Valves for Sour Gas Service meeting the requirements of NACE MR0175 are available

Factory Test

Every valve is tested with the nitrogen @1,000psig (68bar) for leakage at the seat to a maximum allowable leak rate of 0.1 SCCM.
The packing is tested for no detectable leakage.

Panel mounting

How to mount the valve on panel.



Panel hole drill and thickness mm(in)			
Valve Series	Panel Hole Drill	Panel Thickness	
		Min.	Max.
V15A	13.5 (0.53)	3.17 (0.125)	6.35 (0.25)
V15B	13.5 (0.53)		
V15C	20.0 (0.79)		
V15D	26.2 (1.03)		

Disassembly

1. Un-tighten the handle set screw using an allen key and remove the handle.
   - Handle Set Screw Allen Key

Valve Series	Allen Key	
	Round Handle	Bar Handle
V15A & V15B	Hex.2.5mm	Hex. 4.0mm
V15C	Hex.3.0mm	
V15D		Hex. 5.0mm

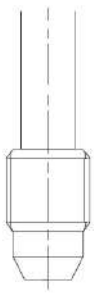
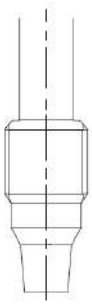
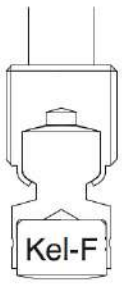
2.Remove the packing nut & panel nut and set aside for later use.
3.Place the valve bonnet in the panel hole.

Reassembly

4. Tighten the panel nut onto the valve bonnet.
   Keep the panel nut always on the external portion of the panel.
5. Finger tighten the packing nut onto the valve body.
6. Place the round handle on the stem. Align the set screw with the groove on the side of the stem. Tighten the set screw.
7. Fully close the valve and retract the stem two or three turns before torque the packing nut to the torque below.
   - Packing Nut Torque Table

Valve Series	Torque	
	lbf·ft	kgf·cm
V15A & V15B	5.2	71.9
V15C	10.6	146.6
V15D	25.1	347

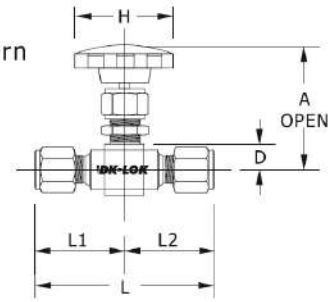
Choice of Stem Tip

Vee Stem	Regulating Stem	Non-Rotating Soft Seat
		
Metal to metal Vee stem for pressure tightness at elevated temperature.	Regulating stem for flow rate control	Non-rotating PCTFE soft seat for repetitive shut-off on gas. • Round Handle is recommended for soft seat valve.

Note : Soft seat packing adjustment may be required during service to compensate the physical compression of soft seat after repeated shut-off.

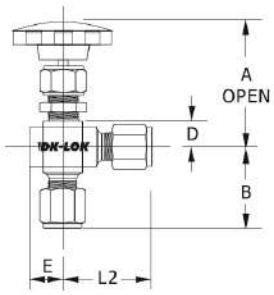
Ordering Information and Table of Dimensions

Inline Pattern





Angle Pattern



Unit : mm (in.)

Valve Basic Ordering Number		End Connections		Orifice	Cv	Dimensions								
		Inlet	Outlet			A	B	L	L1	L2	E	D	H	H1
V15A	F-2N-	1/8" Female NPT		2.0 (0.08)	0.09	60 (2.36)	21(0.83)	42(1.65)	21(0.83)		9.5 (0.37)	11 (0.43)	36 (1.42)	32 (1.26)
	M-2N-	1/8" Male NPT								20(0.79)				
	MD-2N2T	1/8" Male NPT	1/8" DK-Lok					47(1.85)		26(1.02)				
	D-2T-	1/8" DK-Lok					26(1.02)	52(2.05)	26(1.02)					
	D-3M-	3mm DK-Lok												
V15B	F-2N-	1/8" Female NPT		4.3 (0.17)	0.37	60 (2.36)	21(0.83)	42(1.65)	21(0.83)		9.5 (0.37)	11 (0.43)	36 (1.42)	45 (1.77)
	M-2N-	1/8" Male NPT												
	M-4N-	1/4" Male NPT					25(0.98)	50(1.97)	25(0.98)	25(0.98)				
	MD-4N4T-	1/4" Male NPT	1/4" DK-Lok					54(2.13)		28.8(1.13)				
	D-6M-	6mm DK-Lok					29(1.14)	57.6(2.27)	28.8(1.13)					
	D-4T-	1/4" DK-Lok												
	D-8M-	8mm DK-Lok					30(1.18)	59.2(2.33)	29.6(1.16)					
V15C	F-4N-	1/4" Female NPT		6.4 (0.252)	0.73	71 (2.80)	28(1.10)	56(2.20)	28(1.10)	28(1.10)	13 (0.51)	13.5 (0.53)	50 (1.97)	64 (2.52)
	F-4R-	1/4" Female ISO Tapered												
	MF-4N-	1/4" Male NPT	1/4" Female NPT					61.2(2.41)		33.2(1.31)				
	MD-4N6T-	1/4" Male NPT	3/8" DK-Lok				29(1.14)	58(2.28)	29(1.14)	29(1.14)				
	M-6N-	3/8" Male NPT						62.2(2.45)		33.2(1.31)				
	MD-6N6T-	3/8" Male NPT	3/8" DK-Lok					65(2.56)		36(1.42)				
	MD-6N8T-	3/8" Male NPT	1/2" DK-Lok											
	D-10M-	10mm DK-Lok					33(1.30)	66(2.60)	33.2(1.31)	33.2(1.31)				
	D-6T-	3/8" DK-Lok												
	D-12M-	12mm DK-Lok					36(1.42)	72(2.83)	36(1.42)	36(1.42)				
	D-8T-	1/2" DK-Lok												
V15D	F-6N-	3/8" Female NPT		9.5 (0.374)	1.80	99 (3.90)	38(1.50)	76(2.99)	38(1.50)	38(1.50)	19 (0.75)	19 (0.75)	66 (2.60)	76 (3.00)
	F-6R-	3/8" Female ISO Tapered												
	F-8N-	1/2" Female NPT												
	F-8R-	1/2" Female ISO Tapered												
	M-8N-	1/2" Male NPT												
	MF-8N-	1/2" Male NPT	1/2" Female NPT											
	D-8T-	1/2" DK-Lok					49(1.93)	97(3.82)	48.5(1.91)					
	D-12T-	3/4" DK-Lok												

All dimensions shown are for reference only and are subject to change. Dimensions with DK-Lok nuts are in finger-tight position.

Patterns : To order angle pattern, use -A as a suffix to the valve ordering number. Example: V15A-F-2N-A

Table 1. Pressure-Temperature Ratings for valves with standard PTFE packing

Pressure rating of valves with PCTFE soft seat is limited to 200°F (93°C).

ASME Material Group		TABLE 2-2.2		N/A		TABLE 2-3.4	
Material Name		SS316		Brass		Alloy 400	
ASME Class Rating		2,080		N/A		1,500	
Temperature @ pressure		psig	bar	psig	bar	psig	bar
-65°F (-54°C) to	100°F (38°C)	5,000	345	3,000	207	3,000	207
	200°F (93°C)	4,293	296	2,353	162	2,640	182
	300°F (148°C)	3,877	267	2,059	142	2,470	170
	350°F (176°C)	3,719	256	1,471	101	2,430	167
	400°F (204°C)	3,562	246	392	27	2,390	165
	450°F (232°C)	3,437	237	-		2,380	164

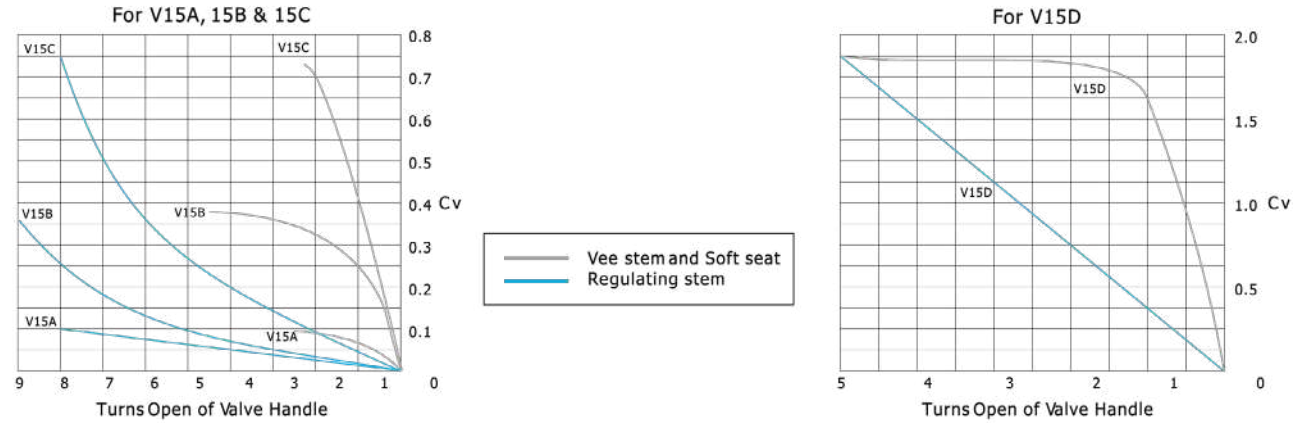
Note : Pressure rating of valve may be limited to the working pressure of pipe ends and the tubing connected.
Refer to DK-Lok Tube Fitting catalog for the details of working pressures in various tubing sizes, materials and wall thickness.

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Table 2. Pressure-Temperature Ratings for valves with optional PEEK packing

Valve Material	Packing	Stem	Pressure –Temperature Rating °F (°C)
SS316	PEEK	Metal to metal (Vee & Regulating)	-65 to 600 (-54 to 315) @ 3,130 psig (215 bar)
Brass			-65 to 400 (-54 to 204) @ 3,000 psig (207 bar)
Alloy 400			-65 to 500 (-54 to 260) @ 2,370 psig (163 bar)

Flow Curves



How to order

Select applicable Valve Pattern, Stem type, Handle and Body material from designators listed below.

V15B-F-2N **-PK** **-BH** **-S**

V15B-F-2N **-A** **-R** **-S**

Valve Pattern	Stem Packing Designator	Stem Designator	Handle Designator	Body Material Designator
Nil : Inline pattern **A** : Angle pattern	**Nil** : Standard PTFE **PK** : PEEK	**Nil** : Standard Vee stem tip **R** : Regulating tip **K** : PCTFE (Kel-F) soft seat	**Nil** : Nylon Round Handle **BH**: Bar Handle	**S** : SS316 **B** : Brass **M** : Alloy 400
	Handle for Soft Seat Nylon Round Handle is recommended for soft seat valve. This helps prevent the soft seat from damage.			

We reserve the right to change specifications stated in this catalog for our coutinuing program of improvement.

Safe Valve Selection

The selection of a valve for any application or system design must be considered to ensure safe performance. Valve function, Valve rating, material compatibility, proper installation, operation and maintenance remain the sole responsibility of the system designer and the user. DK-Lok accepts no liability for any improper selection, installation, operation or maintenance.

DK-LOK

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IDK-LOK

V16, VH16 Series

Rev. 01-01
Aug. 2023

DK-LOK®
Needle Valves

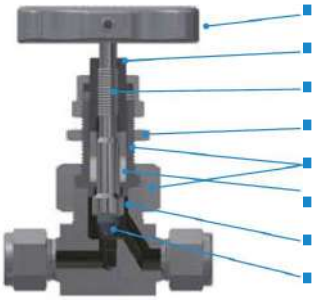
V16/VH16 Series Severe Service Union Bonnet Valves

Rev.01-01
Aug.2023

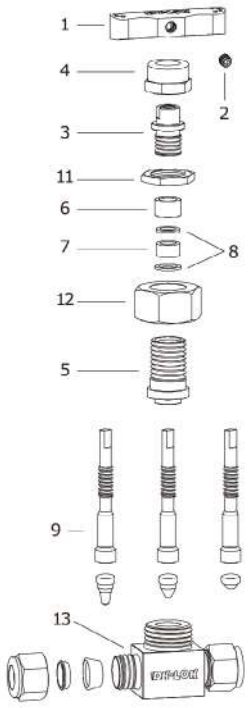
Pressure Rating up to 10,000 psig (689 bar)

Features

- Pressure up to 10,000 psig (689 bar) @ 100°F (38°C).
- Temperature Rating up to 449°F (232°C) with standard PTFE packing; up to 1,200°F (648°C) with Grafoil packing.
- Standard 316 stainless steel, optional Alloy 400, and Alloy C276 construction.
- Valve stem back seating against the bevelled edge of bonnet in fully open position prevents maximum leakage through bonnet when packing fails.
- Standard non-rotating stem disc and stem packing below the threads design.



- **Handle-** Standard Stainless Steel formed handle, optional aluminum bar handle.
- **External Packing Bolt-** allows packing adjustment without the valve disassembly.
- **Roll threaded and hard chrome plated stem-** is for long valve life.
- **Panel Mounting Nut-** is standard and permits valve to panel or actuator.
- **Union Nut-** prevents accidental disassembly of the valve in service.
- **Stem Packing below the threads-** prevents media contamination and thread lubricant washout.
- **Stem Back Seating-** in fully open position.
- **Non-Rotating Stem Disc at Closure-** is for maximum metal seat life and positive seal.



Materials of Construction

Component	Valve Body Materials		
	SS316	Alloy 400	Alloy C276
	Material Grade/ASTM Specification		
1. Bar handle	Stainless Steel for V16, SS316 / A276 for VH16, optional anodized aluminum handle		
2. Set screw	SS304		
3. Packing bolt	SS316 / A276 or A479		
4. Cap nut	SS316 / A276 or A479		
5. Bonnet	SS316 / A276 or A479	Alloy 400/B164	C276/B574
6. Gland	SS316 / A276 or A479	Alloy 400/B164	C276/B574
7. Packing(2)	PTFE/D1710, optional PEEK & Grafoil		
8. Packing supports (2)	SS316 / A276 or A479	Alloy 400/B164	C276/B574
9. Stem	Hard Chrome-plated SS316 / A276 or A479	Alloy 400/B164	C276/B574
10. Standard globe disc, optional globe ball & regulating disc.	TYPE630/A564	Alloy 400/B164	C276/B574
11. Panel nut	SS316		
12. Union nut	SS316 / A276 or A479		
13. Body	SS316 / A276 or A479	Alloy 400/B164	C276/B574

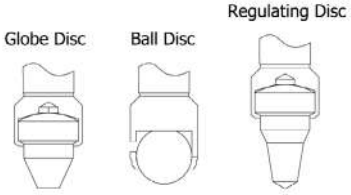
Wetted parts and lubricants are listed in blue.

Lubrication : • Nickel anti-seize lubricant (hydrocarbon carrier).
• Ball disc: hydrocarbon-based.

Technical Data

Ratings below are for valves with standard PTFE packing. Refer to valve ratings with optional packing on Page 4.

Valve Material	Stem Disc Designator	Temperature Range °F (°C)	Pressure Rating @ -65 to 100°F (-53 to 38°C)
SS316 Alloy 400 Alloy C276	Globe: Nil. Regulating: -R Ball: -B	-65 to 450 (-53 to 232)	10,000 psig (689 bar)

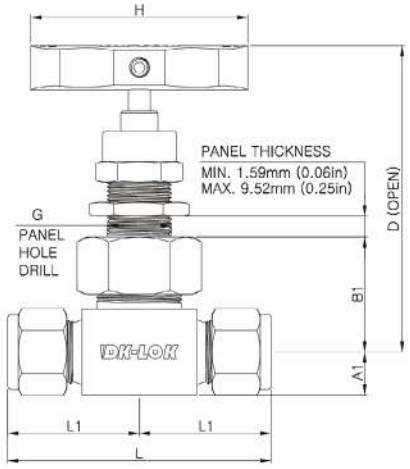


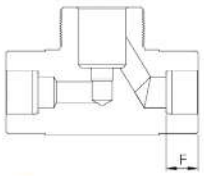
Factory Test and Cleaning

Every valve is tested with the nitrogen gas @ 1,000 psig (68.9 bar) for leakage at the seat to a maximum allowable leak rate of 0.1 SCCM. The packing is tested for no detectable leakage. Optional hydrostatic shell test with additional cost is performed with pure water at 1.5 times the working pressure. Every valve is cleaned and packaged in accordance with DK-Lok cleaning standard DC-01.

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

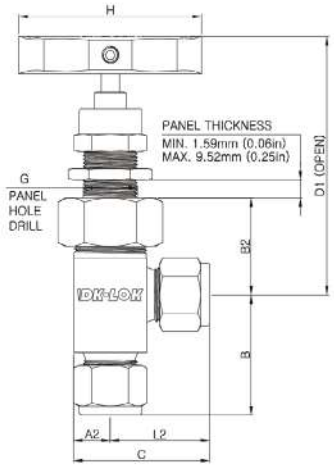
■ In-line pattern





■ Socket weld end

■ Angle pattern



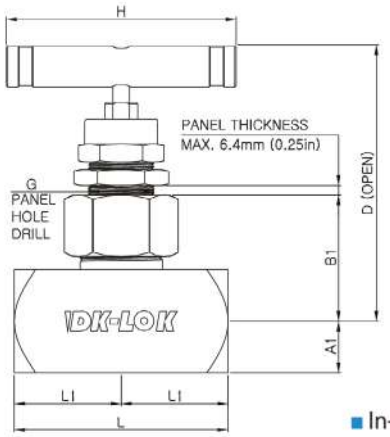
Basic Ordering Number		End Connections Inlet	End Connections Outlet	Orifice mm(in.)	Cv	Dimensions, mm(inch) L	L1	L2	B	C	B1	B2	A1	A2	H	G	D	D1	F
V16A-	F2N-	1/8 Female NPT		4.0 (0.156)	0.35	50.8(2.00)	25.4(1.00)	22.6(0.89)	25.4(1.00)	32.3(1.27)	27.7(1.09)	27.7(1.09)	9.7(0.38)	9.7(0.38)	45.0(1.77)	15.1(19/32)	77.2(3.04)	77.2(3.04)	-
	F4N-	1/4 Female NPT				52.3(2.06)	26.2(1.03)	22.6(0.89)	25.4(1.00)	32.3(1.27)	27.7(1.09)	27.7(1.09)	9.7(0.39)	9.7(0.38)	45.0(1.77)	15.1(19/32)	77.2(3.04)	77.2(3.04)	-
	M4N-	1/4 Male NPT				50.8(2.00)	25.4(1.00)	25.4(1.00)	25.4(1.00)	35.1(1.38)	27.7(1.09)	27.7(1.09)	9.7(0.38)	9.7(0.38)	45.0(1.77)	15.1(19/32)	77.2(3.04)	77.2(3.04)	-
	MF4N-	1/4 Male to Female NPT				51.6(2.03)	26.2(1.03)	22.6(0.89)	25.4(1,00)	32.3(1.27)	27.7(1.09)	27.7(1.09)	9.7(0.39)	9.7(0.38)	45.0(1.77)	15.1(19/32)	77.2(3.04)	77.2(3.04)	-
	D6M-	6mm DK-Lok				61.0(2.40)	30.5(1.20)	29.5(1.16)	37.6(1.48)	39.1(1.54)	27.7(1.09)	27.7(1.09)	9.7(0.38)	9.7(0.38)	45.0(1.77)	15.1(19/32)	77.2(3.04)	77.2(3.04)	-
	D4T-	1/4 DK-Lok				61.0(2.40)	30.5(1.20)	29.5(1.16)	37.6(1.48)	39.1(1.54)	27.7(1.09)	27.7(1.09)	9.7(0.38)	9.7(0.38)	45.0(1.77)	15.1(19/32)	77.2(3.04)	77.2(3.04)	-
	SW4T-	1/4 TSW				46.2(1.82)	23.1(0.91)	22.4(0.88)	30.2(1.19)	31.8(1.25)	27.7(1.09)	27.7(1.09)	9.7(0.38)	9.7(0.38)	45.0(1.77)	15.1(19/32)	77.2(3.04)	77.2(3.04)	7.1(0.28)
	D8M-	8mm DK-Lok				61.0(2.40)	30.5(1.20)	-	-	-	27.7(1.09)	-	9.7(0.38)	-	45.0(1.77)	15.1(19/32)	77.2(3.04)	-	-
V16B-	F4N-	1/4 Female NPT		6.4 (0.25)	0.86	57.2(2.25)	28.4(1.12)	25.4(1.00)	28.4(1.12)	38.1(1.50)	34.0(1.34)	37.3(1.47)	12.7(0.50)	12.7(0.50)	64.0(2.52)	19.8(25/32)	92(3.62)	92(3.62)	-
	F6N-	3/8 Female NPT				57.2(2.25)	28.4(1.12)	25.4(1.00)	28.4(1.12)	38.1(1.50)	34.0(1.34)	37.3(1.47)	12.7(0.50)	12.7(0.50)	64.0(2.52)	19.8(25/32)	92(3.62)	92(3.62)	-
	D10M-	10mm DK-Lok				72.4(2.85)	36.1(1.42)	33.0(1.30)	39.4(1.55)	45.7(1.80)	34.0(1.34)	34.3(1.35)	12.7(0.50)	12.7(0.50)	64.0(2.52)	19.8(25/32)	92(3.62)	92(3.62)	-
	D6T-	3/8 DK-Lok				71.9(2.83)	35.8(1.41)	32.8(1.29)	42.2(1.66)	45.5(1.79)	34.0(1.34)	31.0(1.22)	12.7(0.50)	12.7(0.50)	64.0(2.52)	19.8(25/32)	92(3.62)	92(3.62)	-
	D12M-	12mm DK-Lok				77.2(3.04)	38.6(1.52)	35.6(1.40)	41.9(1.65)	48.3(1.90)	34.0(1.34)	34.0(1.34)	12.7(0.50)	12.7(0.50)	64.0(2.52)	19.8(25/32)	92(3.62)	92(3.62)	-
	D8T-	1/2 DK-Lok				77.2(3.04)	38.6(1.52)	35.6(1.40)	41.9(1.65)	48.3(1.90)	34.0(1.34)	34.0(1.34)	12.7(0.50)	12.7(0.50)	64.0(2.52)	19.8(25/32)	92(3.62)	92(3.62)	-
	SW4P-	1/4 PSW				57.2(2.25)	28.4(1.12)	25.4(1.00)	28.4(1.12)	38.1(1.50)	34.0(1.34)	37.3(1.47)	12.7(0.50)	12.7(0.50)	64.0(2.52)	19.8(25/32)	92(3.62)	92(3.62)	9.5(0.37)
	SW6T-	3/8 TSW				57.2(2.25)	28.4(1.12)	25.4(1.00)	31.8(1.25)	38.1(1.50)	34.0(1.34)	34.0(1.34)	12.7(0.50)	12.7(0.50)	64.0(2.52)	19.8(25/32)	92(3.62)	92(3.62)	7.9(0.31)
	SW8T-	1/2 TSW				57.2(2.25)	28.4(1.12)	25.4(1.00)	25.4(1.00)	38.1(1.50)	34.0(1.34)	35.6(1.40)	12.7(0.50)	12.7(0.50)	64.0(2.52)	19.8(25/32)	92(3.62)	92(3.62)	9.5(0.37)
V16C-	F8N-	1/2 Female NPT		11.1 (0.437)	2.20	79.2(3.12)	39.6(1.56)	33.3(1.31)	39.6(1.56)	50.8(2.00)	46.2(1.82)	50.8(2.00)	15.7(0.62)	17.5(0.69)	90.0(3.54)	26.2(1-1/32)	121(4.78)	126(4.97)	-
	F12N-	3/4 Female NPT				82.6(3.25)	41.1(1.62)	-	-	-	48.5(1.91)	-	19.8(0.78)	-	90.0(3.54)	26.2(1-1/32)	124(4.88)	-	-
	F16N-	1" Female NPT				91.9(3.62)	46.0(1.81)	-	-	-	54.1(2.13)	-	25.4(1.00)	--	90.0(3.54)	26.2(1-1/32)	129(5.10)	-	-
	MF8N-	1/2 Male to Female NPT				79.2(3.12)	39.6(1.56)	33.3(1.31)	39.6(1.56)	50.8(2.00)	46.2(1.82)	50.8(2.00)	15.7(0.62)	17.5(0.69)	90.0(3.54)	26.2(1-1/32)	121(4.78)	126(4.97)	-
	MF12N-	3/4 Male to Female NPT				82.6(3.25)	41.1(1.62)	36.5(1.43)	41.3(1.62)	56.4(2.22)	48.5(1.91)	50.8(2.00)	19.8(0.78)	19.8(0.78)	90.0(3.54)	26.2(1-1/32)	124(4.88)	126(4.97)	-
	MF16N-	1" Male to Female NPT				91.9(3.62)	46.0(1.81)	-	-	-	54.1(2.13)	-	25.4(1.00)	-	90.0(3.54)	26.2(1-1/32)	129(5.10)	-	-
	D12M-	DK-Lok 12mm				99.6(3.92)	49.8(1.96)	42.7(1.68)	52.8(2.08)	60.2(2.37)	46.2(1.82)	47.3(1.88)	15.7(0.62)	17.5(0.69)	90.0(3.54)	26.2(1-1/32)	121(4.78)	123(4.85)	-
	D8T-	1/2 DK-Lok				99.6(3.92)	49.8(1.96)	42.7(1.68)	52.8(2.08)	60.2(2.37)	46.2(1.82)	47.3(1.88)	15.7(0.62)	17.5(0.69)	90.0(3.54)	26.2(1-1/32)	121(4.78)	123(4.85)	-
	D12T-	3/4 DK-Lok				99.0(3.89)	49.5(1.94)	42.7(1.68)	52.8(2.08)	60.2(2.37)	46.2(1.82)	47.3(1.88)	15.7(0.62)	17.5(0.69)	90.0(3.54)	26.2(1-1/32)	121(4.78)	123(4.85)	-
	D16T-	1 DK-Lok				104(4.09)	51.8(2.04)	-	-	-	47.3(1.88)	-	17.5(0.69)	-	90.0(3.54)	26.2(1-1/32)	123(4.85)	-	-
	SW8P-	1/2 PSW				79.2(3.12)	39.6(1.56)	33.3(1.31)	39.6(1.56)	50.8(2.00)	47.3(1.88)	50.8(2.00)	17.5(0.69)	17.5(0.69)	90.0(3.54)	26.2(1-1/32)	123(4.85)	126(4.97)	9.5(0.37)
	SW8T-	1/2 TSW				79.2(3.12)	39.6(1.56)	33.3(1.31)	42.9(1.69)	50.8(2.00)	46.2(1.82)	47.3(1.88)	15.7(0.62)	17.5(0.69)	90.0(3.54)	26.2(1-1/32)	121(4.78)	123(4.85)	9.5(0.37)
	SW12T-	3/4 TSW				79.2(3.12)	39.6(1.56)	-	-	-	46.2(1.82)	-	15.7(0.62)	-	90.0(3.54)	26.2(1-1/32)	121(4.78)	-	11.2(0.44)

All dimensions shown are for reference only and are subject to change. Dimensions with DK-Lok nuts are in finger-tight position.

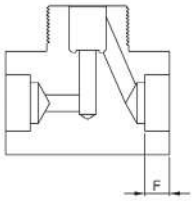
- Non-rotating globe disc providing repetitive leak tight shut-off is standard.
- To order Angle Pattern, insert -A in the basic ordering number. Refer to the ordering information on page 4.

Ordering Information

VH16 Series (High Pressure)



■ In-line pattern



■ Socket weld end

Basic Ordering Number		End Connections		Orifice mm(in.)	Cv	Dimensions, mm(inch)							
		Inlet	Outlet			L	L1	B1	A1	H	G	D	F
VH16A-	F2N-	1/8 Female NPT		4.0 (0.156)	0.35	57.2(2.25)	28.7(1.13)	34.0(1.34)	12.7(0.50)	63.5(2.50)	20.6(0.81)	77.2(3.04)	-
	F4N-	1/4 Female NPT				57.2(2.25)	28.7(1.13)	34.0(1.34)	12.7(0.50)	63.5(2.50)	20.6(0.81)	77.2(3.04)	-
	M4N-	1/4 Male NPT				57.2(2.25)	28.7(1.13)	34.0(1.34)	12.7(0.50)	63.5(2.50)	20.6(0.81)	77.2(3.04)	-
	MF4N-	1/4 Male to Female NPT				57.2(2.25)	28.7(1.13)	34.0(1.34)	12.7(0.50)	63.5(2.50)	20.6(0.81)	77.2(3.04)	-
	D4T-	1/4 DK-Lok				71.6(2.82)	35.8(1.41)	34.0(1.34)	127(0.50)	63.5(2.50)	20.6(0.81)	77.2(3.04)	-
	SW4T-	1/4 TSW				57.2(2.25)	28.7(1.13)	34.0(1.34)	12.7(0.50)	63.5(2.50)	20.6(0.81)	77.2(3.04)	7.1(0.28)
VH16B-	F4N-	1/4 Female NPT		6.4 (0.25)	0.86	79.5(3.13)	39.6(1.56)	46.0(1.81)	16.0(0.63)	88.9(3.50)	26.9(1.06)	108(4.27)	-
	F8N-	1/2 Female NPT				82.6(3.25)	41.4(1.63)	48.2(1.90)	19.8(0.78)	88.9(3.50)	26.9(1.06)	111(4.36)	-
	M8N-	1/2 Male NPT				79.5(3.13)	39.6(1.56)	46.0(1.81)	16.0(0.63)	88.9(3.50)	26.9(1.06)	108(4.27)	-
	MF8N-	1/2 Male to Female NPT				82.6(3.25)	41.4(1.63)	48.2(1.90)	19.8(0.78)	88.9(3.50)	26.9(1.06)	111(4.36)	-

All dimensions shown are for reference only and are subject to change. Dimensions with DK-Lok nuts are in finger-tight position.

- Non-rotating globe disc providing repetitive leak tight shut-off is standard.
- To order Angle Pattern, insert -A in the basic ordering number. Refer to the ordering information on page 4.

Pressure-Temperature Ratings

Ratings are based on valves with optional Grafoil packing.

V16 Series

ASME Class	2500		N/A
Material Group	2.2	3.4	N/A
Material Name	SS316	Alloy 400	Alloy C-276
Temperature, °F (°C)	Working Pressure, psig (bar)		
-65 (-53) to 100 (38)	6000 (413)	5000 (344)	6000 (413)
200 (93)	5160 (355)	4400 (303)	6000 (413)
300 (148)	4660 (321)	4120 (283)	6000 (413)
400 (204)	4280 (294)	3980 (274)	5880 (405)
500 (260)	3980 (274)	3960 (272)	5540 (381)
600 (315)	3760 (259)	-	5040 (347)
700 (371)	3600 (248)	-	4730 (325)
800 (426)	3460 (238)	-	4230 (291)
900 (482)	3280 (225)	-	3745 (258)
1000 (537)	3030 (208)	-	3030 (208)
1100 (593)	2685 (184)	-	2685 (184)
1200 (648)	1715 (118)	-	1545 (106)

VH16 Series (High Pressure)

ASME Class	N/A
Material Group	N/A
Material Name	SS316
Temperature, °F (°C)	Working Pressure, psig (bar)
-65 (-53) to 100 (38)	10000(689)
200 (93)	9290 (640)
300 (148)	8390 (578)
400 (204)	7705 (530)
500 (260)	7165 (493)
600 (315)	6770 (466)
700 (371)	6480 (446)
800 (426)	6230 (429)
900 (482)	5905 (406)
1000 (537)	5450 (375)
1100 (593)	4835 (333)
1200 (648)	3085 (212)

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

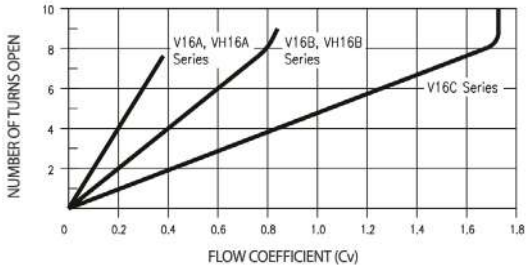
Grafoil packing information
Grafoil is a high temperature packing material that requires a load on the material to generate a seal. In air, Grafoil maximum temperature is 973°F (523°C), in steam, Grafoil goes up to the maximum temperature of 1,200°F (648°C). Grafoil packing is not for use with pneumatic actuating valves.

Valve ratings with DK-Lok end connections
Valve ratings may be limited to the maximum working pressure of connective pipe and tubing. For valve rating with DK-Lok tube fitting end connections, refer to DK-Lok catalog providing suggested working pressures in various tubing OD, wall thicknesses, and materials.

Packing adjustment and actuation torque
Extreme temperature fluctuations while valve in service may require packing adjustment. Valves that have not been actuated for a period of time may have a higher initial actuation torque.

Valve ratings with optional PEEK packing
SS316 and C276 valve with PEEK packing is limited to maximum 600 °F (315 °C) rating; Alloy 400 valve with PEEK packing is limited to maximum 500 °F (260 °C) rating.

Flow Data @ 100°F (38°C) for valves with regulating disc



Globe and Ball Disc
Valve with standard globe and ball disc is designed for use in a fully open or fully closed position.
Refer to Cv in the ordering information and dimensions table on Page 2.

Cv reduction
Valve flow may be reduced by the restriction of pipe and tubing connected.



Sour Gas Valves

Valves for use in sour gas are available. Valve wetted components are selected to the requirements of NACE MR0175 for sulfide stress cracking resistant materials. To order, insert -SG in the basic ordering number.

Optional Handles

SS316 bar handle is standard. Optional anodized black aluminum bar handle is available.
To order valve with factory-assembled optional aluminum handle, insert designator -AH in the ordering number.
To order handle for field assembly, select desired handle ordering number from the table.

Valve Series	Field Assembly Bar Handle	
	SS316	Aluminum
V16A	V16A-BH	V16A-AH
V16B	V16B-BH	V16B-AH
V16C	V16C-BH	V16C-AH

Ordering Information

Select the desired valve basic ordering number, options and body material.
Regulating stem disc is standard for VH16 series.
Optional ball stem disc stem is available.
To order, insert designator -R or -B in the ordering number.

V16B-D-6T-	**A**	**-PK**	**-B**			**-BD**	
V16C-MF-12N-		**GF**		**-AH**	**-SG**		**-S**
VH16B-F-8N-	Valve Pattern Designator	Packing Material Designator	Stem Disc Designator	Handle Designator	Sour Gas Designator	Pneumatic Actuator Designator	Valve Material Designator
	Nil : In-line **A** : Angle	**Nil** : PTFE **PK** : PEEK **GF** : Grafoil*	**Nil** : Globe **R** : Regulating **B** : Ball	**Nil** : Stainless Steel Formed handle for V16, SS316 bar handle for VH16 **AH**: Aluminum bar handle for V16	**Nil** : no Sour Gas **SG** : Sour Gas	Refer to the actuator ordering information on page 6	**S** : SS316 **M** : Alloy 400 **HC** : Alloy C276

*Grafoil TM UCAR

We reserve the right to change the specifications stated in this catalog for our coutinuing program of valve improvement.

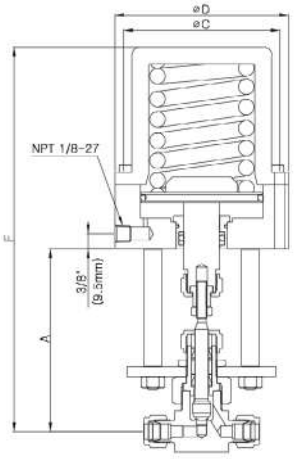
All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

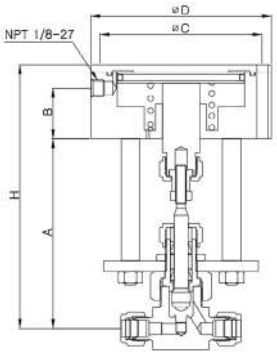
Pneumatic Actuators

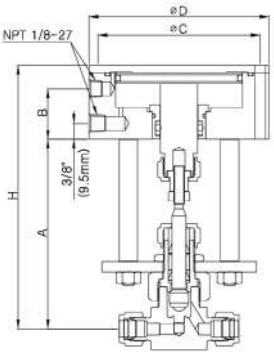
V16 series Pneumatic actuators are designed to actuate valves remotely.
V16A and V16B series are available to be equipped with pneumatic actuators in normally closed, normally open, and double-acting models.

Normally Closed Actuators	Normally Open Actuators	Double-Acting Actuators
		

Dimensions







Valve Series	Dimensions in.(mm)					
	A	H	ØD	ØC	B	F
V16A	107 (4.22)	150 (5.91)	95.3 (3.75)	82.6 (3.25)	28.4 (1.12)	215 (8.47)
V16B	114 (4.47)	158 (6.22)	108 (4.25)	96.8 (3.81)	30.2 (1.19)	239 (9.41)

All dimensions are reference only and subject to change.

Actuator Technical Data Pressure-Temperature Ratings

Normally closed	Normally open and double acting
150 psig (10.3 bar) -20 to 300°F (-28 to 148°C)	150 psig (10.3 bar) -20 to 400°F (-28 to 204°C)

Pneumatic Actuator Applicability

V16A and V16B series valves with PTFE or PEEK packing are applicable to pneumatic actuator. Those valves with Grafoil packing are not applicable to pneumatic actuator.

Operation Information

Curve 1 - 6 indicate the minimum actuator pressure to open or close pneumatic actuators against system pressure.
To prolong valve life, actuators should be operated at minimum air actuator pressures.
Curves shown are based on packing bolt factory adjustment.
Packing bolt adjustment may be required to maintain the valve leak-tight.
If the packing bolt is over-tightened, the actuating pressure can not overcome the friction force between the over-tightened packing and the stem
If the packing bolt is under-tightened for low system pressures, it may leak at high system pressures.
However, packing bolt torque must be sufficiently maintained to prevent packing from leakage.

Normally Closed Actuators

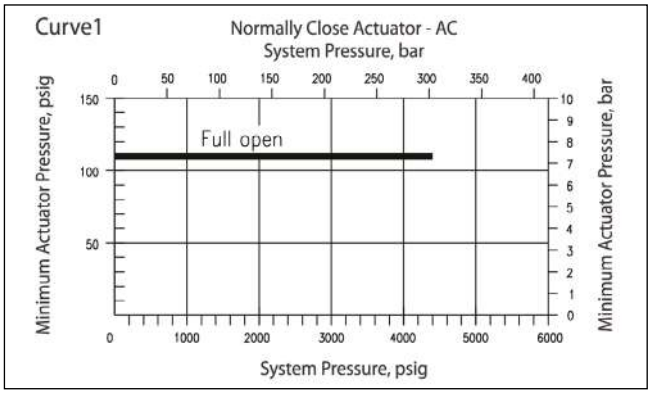
Adjusting the actuator stem drive nut affects the actuator inside the spring force.
This will also have implications for other actuator components sequentially.

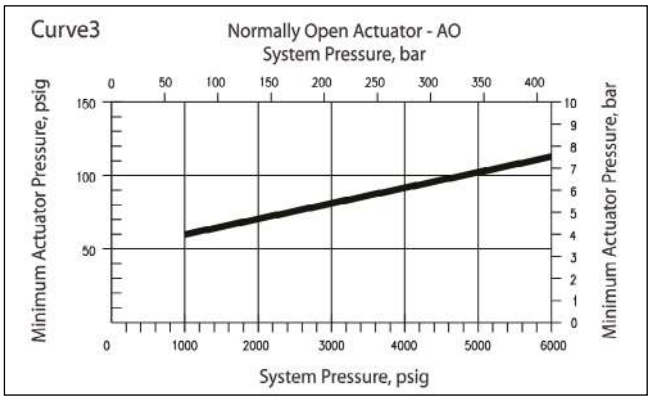
All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

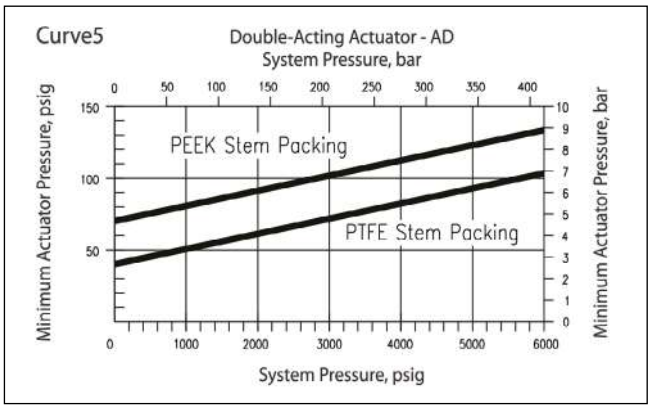
Normally Open Actuators

The stem orifice opens beyond the first open position depends on system pressure, flow characteristics of the fluid and valve packing nut adjustment.

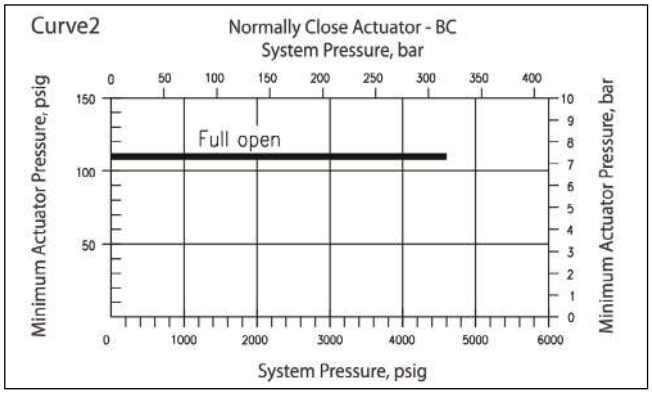
V16A Series

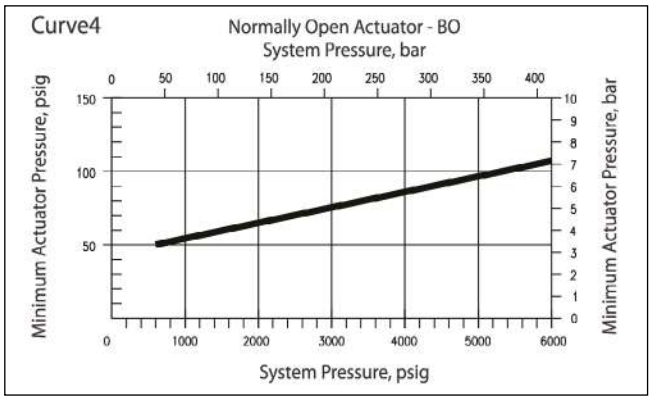


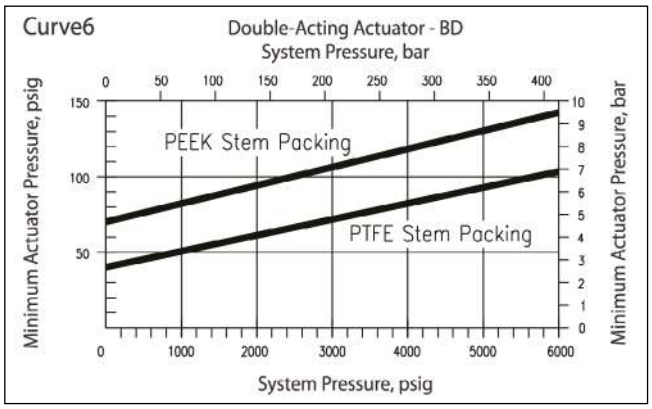




V16B Series







Actuator Ordering Information

To order valves with a pneumatic double acting actuator, insert the desired actuator designator from the chart in the valve ordering number.
Example: V16B-D6T-PK-B-**BD**-S

Valve Series	Pneumatic Actuator Designator		
	Normally Closed	Normally Open	Double Acting
V16A	AC	AO	AD
V16B	BC	BO	BD

Safe Valve Selection

The selection of a valve for any application or system design must be considered to ensure safe performance. Valve function, valve rating, material compatibility, proper installation, operation and maintenance remain the sole responsibility of the system designer and the user. DK-Lok accepts no liability for any improper selection, installation, operation or maintenance.

DK-LOK

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Tel. +82-55-338-0114 Fax. +82-55-901-0141 **www.dklok.com**

VB16-V46A Needle Valves

Rev. 01-01
Aug. 2023

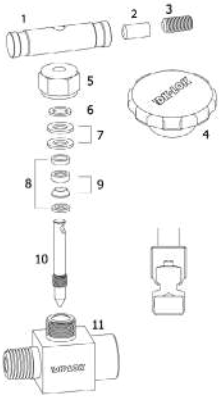
DK-LOK®
Needle Valves

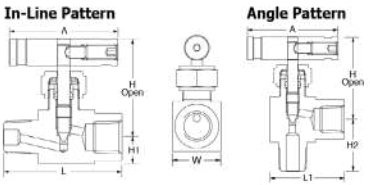
VB16 Series Integral Bonnet Needle Valves

Rev.01-01
Aug.2023

Pressure Rating up to 6,000 psig





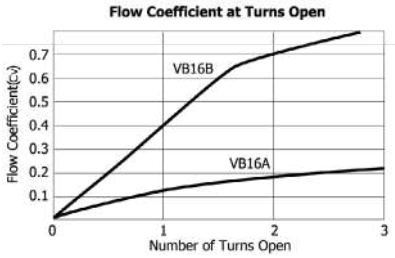


Features

Two-piece chevron PFA stem packing design with compensating spring packing.
- improves sealing integrity.
- high pressure valve but with compact design.

Flow Data

Cv are measured at the valve. Therefore restrictions at end connections may reduce flow.



Materials of Construction

	Components	Material Grade
1	Bar Handle	SS316/ASTM A276
2	Position Pin	
3	Set Screw	Grade B8 TYPE 304/A193
4	Optional Round Handle	Nylon with brass insert
5	Cap Nut	SS316/ASTM A276
6	Gland	
7	Spring Packing (2)	S17700/A693
8	Upper / Lower Gland (2)	SS316/ASTM A276
9	Chevron Packing (2)	PFA/D3307
10	Standard Vee Stem	SS316/ASTM A276
10.1	Optional Soft Stem	Kel-F (PCTFE)
11	Body	SS316/ASTM A276

Pressure-Temperature Ratings

Temperature rating of VB16A & B series with nonrotating Kel-F soft seat -65 to 200 °F (-53 to 93 °C), Vee stem metal seat -65 to 450 °F (-53 to 232 °C).
Non-rotating soft sear for repetitive shut-off on gas

ASME Class	2500
Material Group	2.2
Material	SS316
Temperature °F (°C)	Working Pressure, psig (bar)
-65 to 100 (-53 to 37)	6000 (413)
200 (93)	5160 (355)
250 (121)	4910 (338)
300 (148)	4660 (321)

Ordering Information and Dimensions

Ordering Number		End Connection		Dimensions, mm(in.) Orifice/Cv	H	H1	H2	L	L1	A	W
VB16A-	D4T-S	1/4 in. DK-Lok		3.2 (0.125) Cv 0.21	43.1 (1.69)	10.7 (0.42)	29.5 (1.16)	62.5 (2.46)	39.9 (1.57)	44.5 (1.75)	21.6 (0.85)
	F4N-S	1/4 in. Female NPT				10.7 (0.42)	25.4 (1.00)	47.8 (1.88)	36.6 (1.44)		
	M4N-S	1/4 in. Male NPT					-	49.3 (1.94)	-	*36.0 (1.42)	
	MF4N-S	1/4 in. Male	1/4 in. Female				26.2 (1.03)	48.5 (1.91)	36.6 (1.44)		
VB16B-	D6T-S	3/8 in. DK-Lok		6.4 (0.25) Cv 0.73	58.0 (2.28)	16.8 (0.66)	-	78.2 (3.08)	-	64.0 (2.52)	32.0 (1.26)
	D8T-S	1/2 in. DK-Lok					-	83.8 (3.30)	-		
	F6N-S	3/8 in. Female NPT					-	63.5 (2.50)	-		
	F8N-S	1/2 in. Female NPT					35.8 (1.41)		52.3 (2.06)	*50.0 (1.97)	
	MF6N-S	3/8 in. Male NPT	3/8 in. Female NPT				31.0 (1.22)				
	MF8N-S	1/2 in. Male NPT	1/2 in. Female NPT				35.8 (1.41)				
	MF12N8N-S	3/4 in. Male NPT	1/2 in. Female NPT				-		-		

Angle Pattern : Valves with L1 dimension available for Angle Pattern. * Round handle diameter.
To order a valve with soft stem, insert -K in the ordering number. i.e., VB16A-D4T-K-S

Factory Test

Every valve is tested with the nitrogen @ 68 bar (1,000 psig) for leakage at the seat to a maximum allowance leak rate of 0.1 scc /min.
The stem packing is tested for no detectable leakage.

Safe Valve Selection

The selection of a valve for any application or system design must be considered to ensure safe performance. Valve function, valve rating, material compatibility, proper installation, operation and maintenance remain the sole responsibility of the system designer and the user. DK-Lok accepts no liability for any improper selection, installation, operation or maintenance.

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

DK-LOK®
DK-Lok Tube Fittings

V46A series Hex. Body Needle Valves

Pressure rating up to 10,000 psig

Rev.01-01
Aug.2023

Features

- **Packing bolt** permits packing adjustment externally.
- **Chevron PTFE packing** design provides far improved sealing integrity.
- **Packing** below stem threads is to isolate **threads** from system fluid and lubricant washout.
- **Non-rotating** stem tip at closure for long-life and leak-tight shutoff.
- **Lock plate** ensures the valve fastened to the body.
- **NACE** MR0175/ISO 15156-3 applicable

Pressure-Temperature Ratings

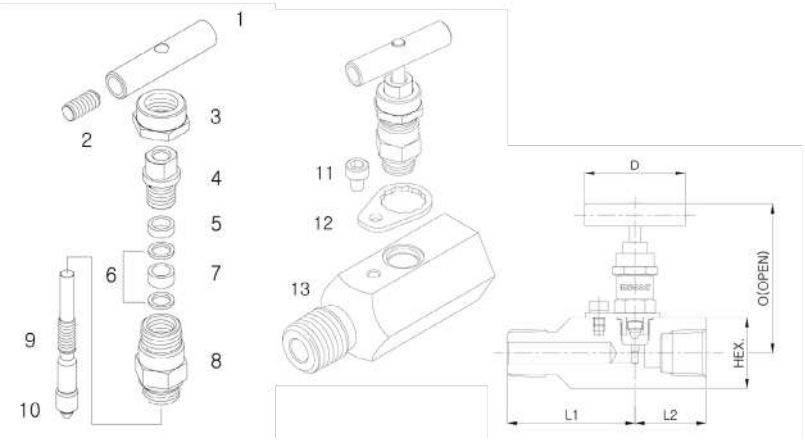
Body Material	Packing material	Temperature Rating	Pressure Rating @ 38 °C (100 °F)	Pressure Rating @ Max. Temp.
Stainless steel	PTFE	- 54 to 232 °C (-65 to 450 °F)	689 bar (10,000 psig)	285 bar @ 232 °C 4,130 psig @ 450 °F
	Grafoil	-54 to 648 °C (-65 to 1,200 °F)		118 bar @ 648 °C 1,715 psig @ 1,200 °F
Carbon steel	PTFE	- 29 to 176 °C (-20 to 350 °F)	689 bar (10,000 psig)	360 bar @ 176 °C (5,230 psig @ 350 °F)
	Grafoil	- 29 to 176 °C (-20 to 350 °F)		

Materials of Construction

Component	Valve Body Materials	
	Stainless steel	Carbon steel
	Grade/ASTM specification	
1. Handle	Stainless steel	Carbon steel
2. Set screw	SS316/A276 or A479	Carbon steel
3. Cap nut		C.Steel/JIS G4051
4. Packing bolt		
5. Gland		SS316/A276 or A479
6. Packing supports	Standard chevron PTFE packing. Optional Grafoil.	
7. Packing	SS316/A276 or A479	SS316/A276 or A479
8. Bonnet		C.Steel/JIS G4051
9. Stem		SS316/A276 or A479
10. stem disc	SS630/A564	
11. Lock bolt	Stainless steel	
12. Lock plate		
13. Body	SS316/A276 or A479	C.Steel/ JIS G4051, White zinc galvanized.

Wetted components listed in blue.

Grafoil : TM UCAR



Ordering Information and Dimensions

Basic Ordering No.		End Connection		Orifice in. (mm)	Cv	Dimensions, in.(mm)					
		Inlet	Outlet			L	L1	L2	Hex	D	O
V46A-	D-4T-	1/4 DK-Lok		0.126 (3.2)	0.37	3.21 (81.5)	1.59 (40.4)	1.62 (41.1)	1.25 (31.75)	1.77 (45)	2.64 (67.2)
	D-6T-	3/8 DK-Lok			0.64	3.33 (84.5)	1.65 (41.9)	1.68 (42.6)			
	D-8T-	1/2 DK-Lok			0.83	3.54 (90.0)	1.76 (44.7)	1.78 (45.3)			
	F-4N-	1/4 Female NPT			0.83	3.0 (76.2)	1.75 (44.4)	1.25 (31.8)			
	F-6N-	3/8 Female NPT									
	F-8N-	1/2 Female NPT									
	MF-8N-	1/2 Male NPT	1/2 Female NPT			3.5 (88.9)	2.25 (57.1)				
	MF-12N8N-	1/2 Male NPT	1/2 Female NPT				2.25 (57.1)				

Dimensions shown are for reference only and subject to change.

How to order

- To complete ordering number, add material designator **S** for stainless steel or **C** for carbon steel. Example V46A-F8N-**S**
- To order optional Grafoil packing, insert **GF** to the ordering number. Example V46A-F8N-**GF**-S
- To order NACE applicable valve, insert **SG** to the ordering number. Example V46A-F8N-GF-**SG**-S



Factory test, cleaning and packaging

- Every valve is factory tested with nitrogen @ 69 bar (1,000 psig) for leakage at the seat to a maximum allowable leak rate of 0.1 SCCM.
- Stem packing is tested for no detectable leakage.
- Every valve is cleaned and packaged in accordance with DK-Lok Corporation cleaning standard DC-01. Optional DC-11 cleaning for oxygen application is available on request.

Packing adjustment and Actuation Torque

- Extreme or rapid temperature cycle while valve in service may require packing adjustment.
- Valves that have not been actuated for a period of time may have a higher initial actuation torque.

Safe Valve Selection

The selection of a valve for any application or system design must be considered to ensure safe performance. Valve function, valve rating, material compatibility, proper installation, operation and maintenance remain the sole responsibility of the system designer and the user. DK-Lok accepts no liability for any improper selection, installation, operation or maintenance.

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

DK-LOK

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Tel. +82-55-338-0114 Fax. +82-55-901-0141 **www.dklok.com**

VEX110 Needle Valves

Rev. 01-01
Aug. 2023

DK-LOK®
Needle Valves

VEX110 Needle Valves

Rev.01-01
Aug.2023

Bar Stock Union Bonnet High Pressure Needle Valve
Maximum Working Pressure 10,000 psig (689 bar)

Features

- Premium multiple four (4) sealing mechanism.
- Unique pressure reacting sealing system eliminates the need of packing adjustment.
- Sealing cup swells up in system pressure for leak-tight operation.
- Backseat stem design prevents stem blowout.
- High precision machining provides low valve operating torque.
- Stem packing below the threads prevents thread lubricant washout and media contamination.

Temperature and Pressure Ratings

Valve Material	Optional Valve O-ring Designator	Standard Sealing Cup Material	Temp. Rating °C (°F)	Pressure Rating @ 38°C (100°F)
SS316	KZ*	PEEK	-30 ~ 250 (-22 ~ 482)	689 bar (10,000 psi)
	VT*		-30 ~ 204 (-22 ~ 399)	

*KZ: Kalrez (Perfluoroelastomer), TM Dupont
*VT: Viton (Vinylidene fluoride-based fluoroelastomer), TM Dupont

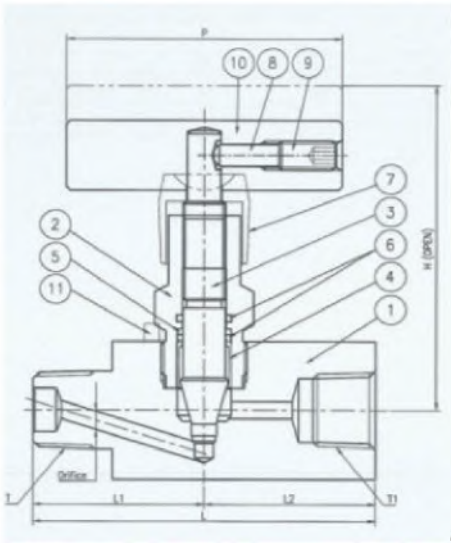
Material of Construction

#	Component	Material / ASTM
1	Body	S316/A479, A276
2	Bonnet	S316/A479, A276
3	Stem	S316/A479, A276
4	Sealing Cup	Standard Polyetheretherketon- PEEK
5	Packing	
6	Upper & Lower O-ring seal	Kalrez or Viton
7	Handle guide	Poly Oxy Methylene- Copolymer- POM C
8	Handle pin	S316/A479, A276
9	Set screw	
10	Bar Handle	
11	Bonnet Locking Pin	

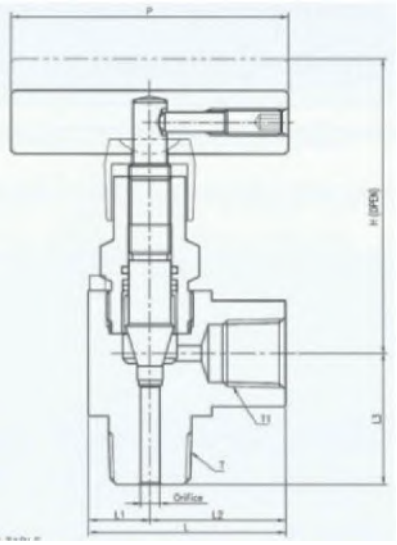
Lubrication : Molybdenum disulfide lubricant

Note: 1. Wetted components are marked in blue.
2. Sealing system is marked in Red.

In-line pattern



Angle pattern

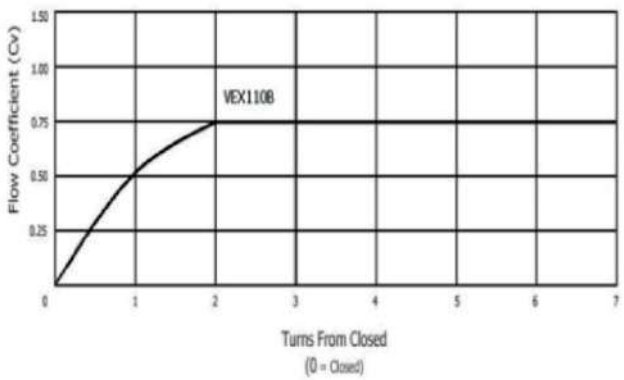


Ordering Information and Table of Dimensions

Basic Ordering Number		End Connections		Orifice mm (in.)	Cv	Dimensions, mm (inch)					
		Inlet	Outlet			L	L1	L2	L3	H	P
In-line pattern **VEX110B-**	MF-4N-*-S	1/4" Male NPT	1/4" Female NPT	4.76 (0.19)	0.75	88.9 (3.5)	44.45 (1.75)	44.45 (1.75)	-	90.0 (3.54)	71.5 (2.81)
	MF-6N-*-S	3/8" Male NPT	3/8" Female NPT								
	MF-8N-*-S	1/2" Male NPT	1/2" Female NPT								
Angle pattern **VEX110B-**	MF-4N-A-*-S	1/4" Male NPT	1/4" Female NPT			50.8 (2.0)	15.87 (0.62)	34.93 (1.38)	36.6 (1.44)	90.0 (3.54)	71.5 (2.81)
	MF-6N-A-*-S	3/8" Male NPT	3/8" Female NPT								
	MF-8N-A-*-S	1/2" Male NPT	1/2" Female NPT								

***Ordering information**
To order valve with Viton o-ring, insert the designator "**VT**"to the valve ordering number. Example: VEX110B-MF-4N-**VT**-S.
To order valve with Kalrez o-ring, insert the designator "**KZ**"to the valve ordering number. Example: VEX110B-MF-8N-A-**KZ**-S.

Flow Coefficient at Turns Open



Flow Data

Cv is measured at the valve.
Restrictions in end connections may reduce the flow.

Factory Test

Every valve is tested with the nitrogen @ 68 bar (1,000 psig) at the seat to a maximum allowable leak rate of 0.1 scc/min. The packing is tested for no detectable leakage.



Model Shown: Angle Pattern
VEX110B-MF-8N-A-VT-S

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

DK-LOK

경상남도 김해시 주촌면 골든루트로 129번길 7 50969
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IDK-LOK

VG16 Series

Rev. 01-01
Aug. 2023

DK-LOK®
Needle Valves

VG16 Series General Utility Service Needle Valves

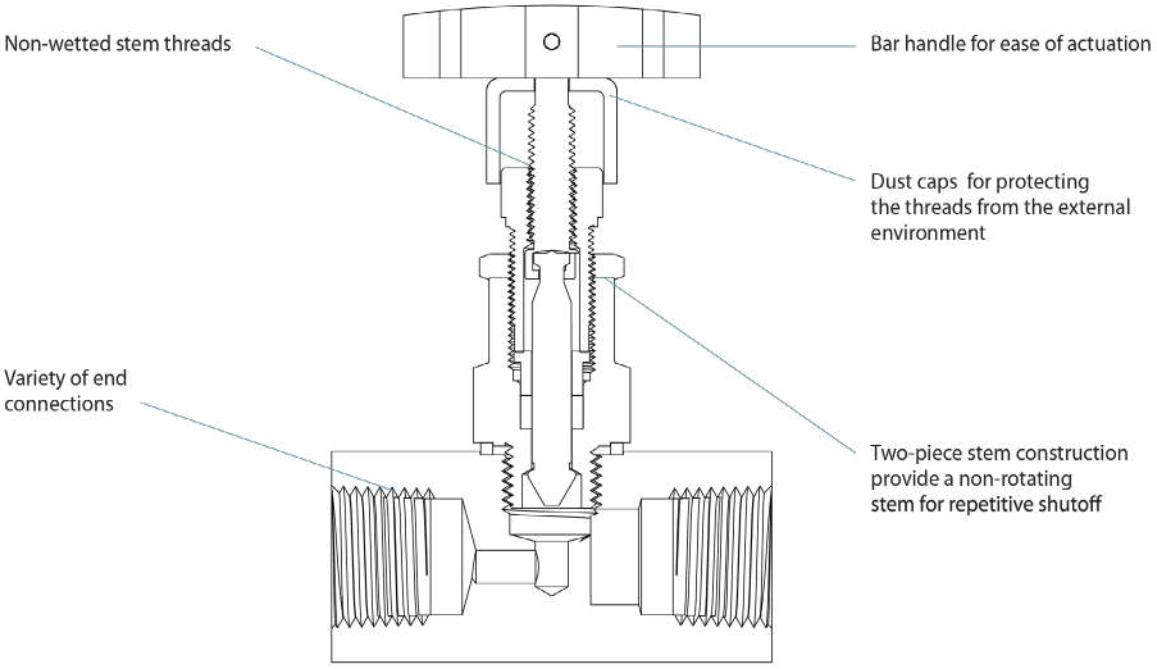
Rev.01-01
Aug.2023

Pressure up to 6,000 psig (413 bar)

Features



- Compact and sturdy design.
- Sintered molded handle for the user of the handle operational convenience.
- Stainless steel spring pin in order to prevent the loosening of bonnet.
- The fluid is not in contact with the threaded stem.
- VG16 series Isolates and vents the system media in instrument air, nitrogen header, lube oil, and general utility service applications in the oil and gas, chemical, petrochemical, and other general industrial markets.

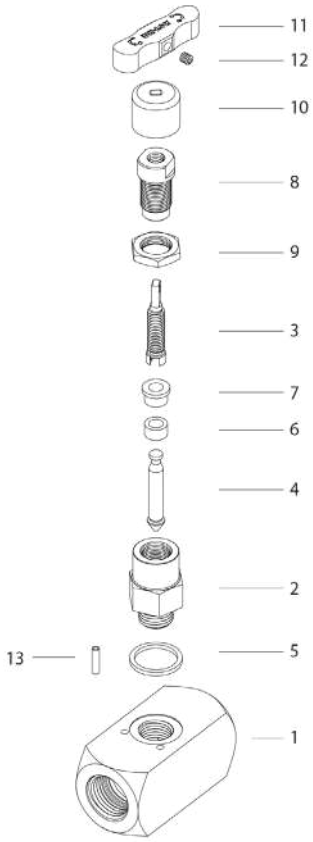


Design

- Straight and angle patterns.
- Standard PTFE packing, and optional Graphite packing for higher temperature service.
- Broad choices of end connections include reliable NPT & ISO Male & Female pipe threads.

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Material of Construction



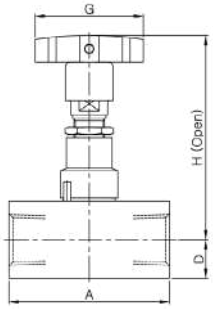
Component	Valve Body Materials	
	Stainless Steel	Carbon Steel
	Material Grade/ASTM Specification	
1. Body	SS316 / A276	Zinc plated carbon steel/AISI 1018
2. Bonnet	SS316 / A276	
3. Stem	SS316 / A276	
4. Stem disc	S17400 SS / A564 Condition H1150D	
5. Bonnet seal ring	SS316 / A276	
6. Packing	Carbon/glass-filled PTFE or graphite	
7. Gland	SS316 / A276	
8. Packing Bolt	SS316 / A276	
9. Lock nut	Stainless steel	
10. Cap	Stainless steel	
11. Handle	Stainless steel	
12. Set screw	Stainless steel	
13. Spring pin	Stainless steel	

* Wetted parts are listed in blue.

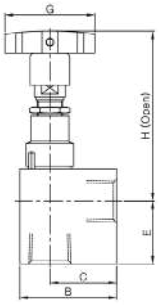
Pressure-Temperature Ratings

Temperature, °F(°C)	Packing Material	
	PTFE	Graphite
	Working Pressure, psig(bar)	
-20 (-28) to 0 (-17)	-	6000 (413)
0 (-17) to 100 (37)	6000 (413)	6000 (413)
200 (93)	5160 (355)	5160 (355)
300 (148)	4680 (322)	4680 (322)
400 (204)	4260 (293)	4260 (293)
450 (232)	4110 (283)	4110 (283)
500 (260)	-	3960 (272)
600 (315)	-	3780 (260)
650 (343)	-	3660 (252)

Ordering Information and Table of Dimensions



In-line pattern



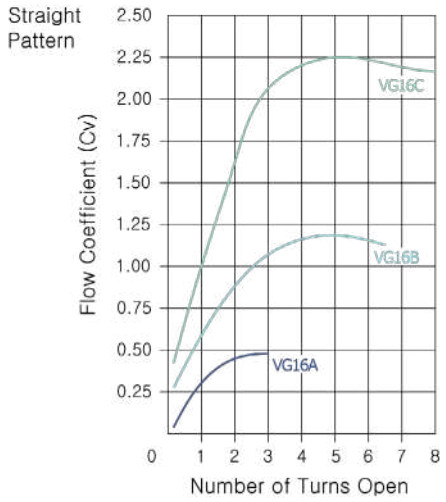
Angle pattern

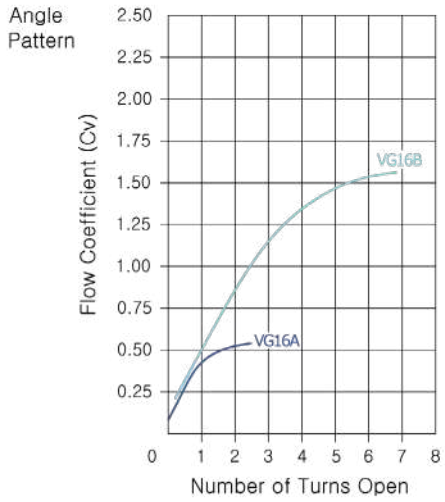
Valve Basic Ordering Number		End Connections		Orifice mm(in.)	Cv	DIMENSION, mm(in.)						
		Inlet	Outlet			G	D	H	A	E	B	C
VG16A	F-4N	1/4" Female NPT		5.0(0.20)	0.45	45(1.77)	12.7(0.50)	81.2(3.20)	54.1(2.13)	-	-	-
	F-4N-A				0.55		-		-	21.6(0.85)	38.1(1.50)	25.4(1.00)
	F-6N	3/8" Female NPT			0.45		12.7(0.50)		57.2(2.25)	-	-	-
	F-6N-A				0.55		-		-	27.9(1.10)	44.5(1.75)	31.8(1.25)
	F-8N	1/2" Female NPT			0.45		16.0(0.63)	84.6(3.33)	66.8(2.63)	-	-	-
	F-8N-A				0.55		-		-	31.2(1.23)	51.0(2.00)	33.3(1.31)
	MF-4N	1/4" Male NPT	1/4" Female NPT		0.45		12.7(0.50)	81.2(3.20)	60.5(2.38)	-		
	MF-6N	3/8" Male NPT	3/8" Female NPT									
	MF-8N	1/2" Male NPT	1/2" Female NPT				16.0(0.63)	84.6(3.33)	70.0(2.76)			
	SW-4P	1/4" Pipe Socket weld					12.7(0.50)	81.2(3.20)	57.2(2.25)			
	SW-6P	3/8" Pipe Socket weld					16.0(0.63)	84.6(3.33)				
	SW-8P	1/2" Pipe Socket weld					19.1(0.75)	87.6(3.45)	63.5(2.50)			
	SW-4T	1/4" Tube Socket weld					12.7(0.50)	81.2(3.20)	50.8(2.00)			
	SW-6T	3/8" Tube Socket weld										
	SW-8T	1/2" Tube Socket weld							57.2(2.25)			
	SW-6M	6mm Tube Socket weld							60.5(2.38)			
	SW-8M	8mm Tube Socket weld							51.0(2.00)			
	SW-10M	10mm Tube Socket weld										
	SW-12M	12mm Tube Socket weld							57.2(2.25)			
VG16B	F-8N	1/2" Female NPT		8.0(0.31)	1.20	64(2.52)	16.0(0.63)	98.3(3.87)	70.0(2.76)	-	-	-
	F-8N-A	1/2" Female NPT			1.60		-		-	31.2(1.23)	51.0(2.00)	35.1(1.38)
	F-12N	3/4" Female NPT			1.20		19.1(0.75)	101(3.98)	76.2(3.00)	-	-	-
	F-12N-A	3/4" Female NPT			1.60		-		-	40.6(1.60)	63.5(2.50)	38.1(1.50)
	F-16N	1" Female NPT			1.20		25.4(1.00)	108(4.25)	88.9(3.50)	-	-	-
	F-16N-A	1" Female NPT			1.60		-		-	40.6(1.60)	70.0(2.76)	44.5(1.75)
	MF-8N	1/2" Male NPT	1/2" Female NPT		1.20		16.0(0.63)	98.3(3.87)	76.2(3.00)	-		
	MF-12N	3/4" Male NPT	3/4" Female NPT				19.1(0.75)	101(3.98)	79.6(3.13)			
	MF-16N	1" Male NPT	1" Female NPT				25.4(1.00)	108(4.25)	88.9(3.50)			
	SW-8P	1/2" Pipe Socket weld					19.1(0.75)	101(3.98)	66.8(2.63)			
	SW-12P	3/4" Pipe Socket weld					22.4(0.88)	105(4.13)	82.6(3.25)			
	SW-16P	1" Pipe Socket weld					25.4(1.00)	108(4.25)	88.9(3.50)			
	SW-8T	1/2" Tube Socket weld					16.0(0.63)	98.3(3.87)				
	SW-12T	3/4" Tube Socket weld										
	SW-16T	1" Tube Socket weld					19.1(0.75)	101(3.98)	66.8(2.63)			
	SW-12M	12mm Tube Socket weld										
	SW-14M	14mm Tube Socket weld					16.0(0.63)	98.3(3.87)				
	SW-16M	16mm Tube Socket weld										
VG16C	F-12N	3/4" Female NPT		11.0(0.43)	2.25	64(2.52)	22.4(0.88)	133(5.24)	82.6(3.25)	-		
	F-16N	1" Female NPT					25.4(1.00)	136(5.35)	102(4.02)			
	MF-12N	3/4" Male NPT	3/4" Female NPT				22.4(0.88)	133(5.24)	88.9(3.50)			
	MF-16N	1" Male NPT	1" Female NPT				25.4(1.00)	136(5.35)	102(4.02)			
	SW-12P	3/4" Pipe Socket weld					22.4(0.88)	133(5.24)	88.9(3.50)			
	SW-16P	1" Pipe Socket weld					25.4(1.00)	136(5.35)				
	SW-12T	3/4" Tube Socket weld					22.4(0.88)	133(5.24)	82.6(3.25)			
	SW-16T	1" Tube Socket weld										
	SW-14M	14mm Tube Socket weld							95.3(3.75)			
	SW-16M	16mm Tube Socket weld							88.9(3.50)			
	SW-18M	18mm Tube Socket weld							82.6(3.25)			
	SW-25M	25mm Tube Socket weld										

All dimensions shown are for reference only and are subject to change. Dimensions with DK-Lok nuts are in finger-tight position.

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Flow Data @ 100°F(38°C)





Option & Accessories

- **Antitamper Handle**
  Stainless steel bar handle is standard.
  Optional antitamper handle is available.
  To order valve with factory-assembled optional antitamper handle, insert designator -AT in the ordering number.
  To order handle for field assembly, select desired handle ordering number from the table ("How to order").

- **Antitamper Key**
  The key can be operated with the antitamper handle.
  Order separately.
  Ordering NO. G16-KEY-AT-SA.



Factory Test and Cleaning

Every valve is tested with the nitrogen gas @ 1,000 psig (68.9 bar) for leakage at the seat to a maximum allowable leak rate of 0.1 SCCM.
The packing is tested for no detectable leakage. Optional hydrostatic shell test with additional cost is performed with pure water at 1.5 times the working pressure.
Every valve is cleaned and packaged in accordance with DK-Lok cleaning standard DC-01.

Sour Gas Service

Valves for use in sour gas are available. Valve wetted components are selected to the requirements of NACE MR0175 for sulfide stress cracking resistant materials.
To order, insert -SG in the basic ordering number.

How to order

VG16A-MF4N-

-A	-GF	-AT	-S
Valve Pattern Designator	Packing Material Designator	Option Designator	Valve Material Designator
Nil : In-line **A :** Angle	**Nil** : PTFE **GF** : Graphite	**Nil :** Stainless Steel formed handle **AT :** Antitamper handle	**S** : SS316 **C** : Carbon Steel

Safe Valve Selection

The selection of a valve for any application or system design must be considered to ensure safe performance.
Valve function, valve rating, material compatibility, proper installation, operation and maintenance remain the sole responsibility of the system designer and the user. DK-Lok accepts no liability for any improper selection, installation, operation or maintenance.

DK-LOK

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IDK-LOK

VS13 Series

Rev. 01-01
Aug. 2023

DK-LOK®
Needle Valves

VS13 Series Non-Rotating Stem Needle Valves

Rev.01-01
Aug.2023

Pressure up to 3,000 psig (207bar)

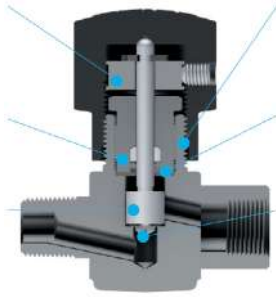
Features

- Compact and sturdy design
- Preventing influx of contaminants when operating the valve is protected by applying the handle
- The size of the orifice provided 0.145 in. (3.7 mm) and 0.216 in. (5.5 mm).
- DK-Lok Tube Fitting, male NPT, female NPT, and others are available.

Improving the flow control function in a suitably adjustment the vertical movement of the stem

No adjustment is needed in this O-ring stem seals

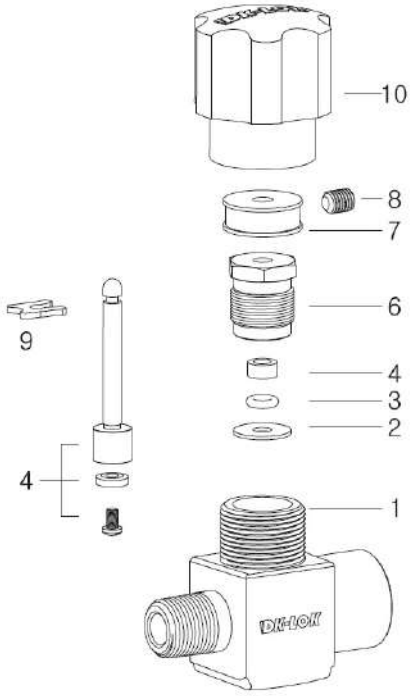
Provide a non-rotating stem repeatedly blocking



Extends the life of the screw to not expose the system fluid to open and close the thread

Securely seal the stem head backs contacts in the fully open state

Easy maintenance and possible replacement of the stem tip



Material of Construction

Component	Wetted parts are listed in blue.		
	SS316	Alloy400	Brass
	Material Grade/ASTM Standard		
1. Body	SS316/A182	Alloy400/B564	Brass C377/B283
2. Washer	PTFE coated SS316/A276	PTFE coated Alloy400/B164	Mo coated Brass C360/B16
3. O-ring	FKM		
4. Back-up ring	PTFE/D1710		
5. Stem	SS316/A276	Alloy400/B164	SS316/A276
Stem tip	PCTFE/D1430		
Screw	SS316/A276	Alloy400/B164	SS316/A276
6. Packing bolt	Mo coated SS316/A276	Mo coated Alloy400/B164	Mo coated Brass C360/B16
7. Handle spool	Aluminum 6061/B211		
8. Set screw	Stainless Steel 304		
9. Retainer	Zinc plated steel		
10. Handle	Aluminum 6061/B211 with block anodizing		

Wetted parts are listed in blue.

Apply only the proper torque to require a shutoff in order to prevent leakage, maintaining the proper performance, and increase the lifetime of the valve.

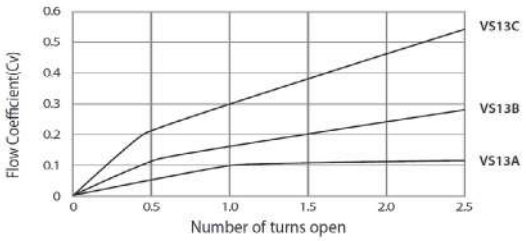
Pressure-Temperature Ratings

ASME Class	1250		1500		N/A	
Material Group	2.2		3.4		N/A	
Material Name	SS316		Alloy 400		Brass	
Stem tip Material	PCTFE	PEEK	PCTFE	PEEK	PCTFE	PEEK
Temperature, °F(°C)	Working Pressure, psig(bar)					
-20(-28) to 100(38)	3000(207)	3000(207)	3000(207)	3000(207)	3000(207)	3000(207)
150(65)	2790(192)	2790(192)	2815(194)	2815(194)	2675(184)	2675(184)
200(93)	2580(178)	2580(178)	2630(181)	2630(181)	2350(162)	2350(162)
250(121)	-	2455(169)	-	2540(175)	-	2200(152)
300(149)	-	2330(160)	-	2450(169)	-	2050(141)
350(177)	-	2236(154)	-	2408(166)	-	1220(84.1)
400(204)	-	2141(148)	-	2365(163)	-	390(26.9)
450(232)	-	2067(143)	-	2365(163)	-	-

- Buna N, EPDM, and silicon O-ring is max. 250°F(121°C).
- Buna C O-ring is -65°F(-53°C) to 250°F(121°C)

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Flow Data @ 100°F(38°C)

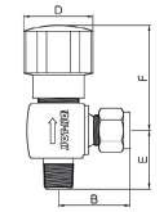


Factory Test and Cleaning

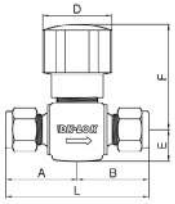
Every valve is tested with the nitrogen gas @ 1,000 psig (68.9 bar) for leakage at the seat to a maximum allowable leak rate of 0.1SCCM.
The packing is tested for no detectable leakage. Optional hydrostatic shell test with additional cost is performed with pure water at 1.5 times the working pressure.
Every valve is cleaned and packaged in accordance with DK-Lok cleaning standard DC-01.

Ordering Information and Table of Dimensions

In-line pattern



Angle pattern



Valve Basic Ordering Number		End Connections		Orifice, mm(in.)	Cv	Dimensions, mm(in.)					
		Inlet	Outlet			A	B	D	E	F	L
VS13A-	D2T	1/8" DK-Lok	1/8" DK-Lok	2.4(0.093)	0.12	27.9(1.10)		28.5(1.12)	8.50(0.33)	48.5(1.91)	55.8(2.20)
VS13B-	D4T	1/4" DK-Lok	1/4" DK-Lok	3.7(0.145)	0.27	28.7(1.13)		28.5(1.12)	10.6(0.42)	48.5(1.91)	57.4(2.26)
	D6M	6mm DK-Lok	6mm DK-Lok			28.7(1.13)					57.4(2.26)
	M4N	1/4" Male NPT	1/4" Male NPT			25.0(0.98)					50.0(1.97)
	MD4N4T	1/4" Male NPT	1/4" DK-Lok			25.0(0.98)	28.7(1.13)				53.7(2.11)
	MD4N6M	1/4" Male NPT	6mm DK-Lok			25.0(0.98)	28.7(1.13)				53.7(2.11)
VS13C-	D6T	3/8" DK-Lok	3/8" DK-Lok	5.5(0.217)	0.53	32.8(1.29)		31.8(1.25)	14.5(0.57)	51.9(2.04)	65.6(2.58)
	F4N	1/4" Female NPT	1/4" Female NPT			27.8(1.09)					55.6(2.18)
	M6N	3/8" Male NPT	3/8" Male NPT			28.4(1.12)					56.8(2.24)
	MD4N6T	1/4" Male NPT	3/8" DK-Lok			28.4(1.12)	32.8(1.29)				61.2(2.41)
	MF8N4N	1/2" Male NPT	1/4" Female NPT			28.4(1.12)	27.8(1.09)				56.2(2.21)

All dimensions shown are for reference only and are subject to change. Dimensions with DK-Lok nuts are in finger-tight position.

Option



Rupture disc prevent overpressure of sample cylinder or other pot by ejecting the cylinder fluid to atmosphere.

Ordering Number	Nominal Burst Pressure at 70°F(20°C)
RD1	2850 psig ± 150 psig 196 bar ± 10.3 bar
RD2	1900 psig ± 100 psig 130 bar ± 6.8 bar

Sour Gas Valves

Valves for use in sour gas are available. Valve wetted components are selected to the requirements of NACE MR0175 for sulfide stress cracking resistant materials.
To order, insert -SG in the basic ordering number.

How to order

VS13B-MF4N-

-A	-PK	-BC	-RD1	-S
Valve Pattern Designator	Stem tip Material Designator	O-ring Material Designator	Rupture Disc Designator	Valve Material Designator
Nil : Inline **A** : Angle	**Nil** : PCTFE **PA** : PEEK	**Nil** : FKM **BC** : Buna C **N** : NBR **EP** : EPDM **SI** : Silicon	**RD1** : 2850 psig **RD2** : 1900 psig	**S** : SS316 **M** : Alloy 400 **B** : Brass

Safe Valve Selection

The selection of a valve for any application or system design must be considered to ensure safe performance.
Valve function, valve rating, material compatibility, proper installation, operation and maintenance remain the sole responsibility of the system designer and the user. DK-Lok accepts no liability for any improper selection, installation, operation or maintenance.

DK-LOK

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Tel. +82-55-338-0114 Fax. +82-55-901-0141 **www.dklok.com**

IDK-LOK

VR6 Series

Rev. 01-01
Aug. 2023

DK-LOK®
Regulators

VR6 Series High Pressure Regulator Valves

Rev.01-01
Aug.2023

VR6 Series Pressure Rating up to 413bar (6,000 psig)

Features

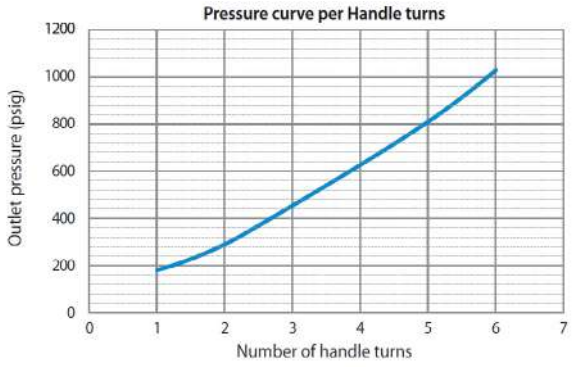


- The High Pressure Regulator valve is featured by controlling the pressure toward downstream from zero to 1,000 psig (68.9 barg) precisely and keeping the downstream pressure constantly after adjusting, though the upstream pressure may be fluctuated unexpectedly.
- The diaphragm made of thin plate of stainless steel is positioned between the body and housing to make sure of stable sealing characteristics and keep the control volume.

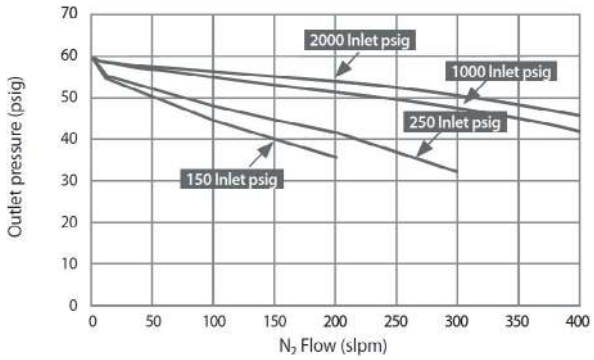
Technical Data

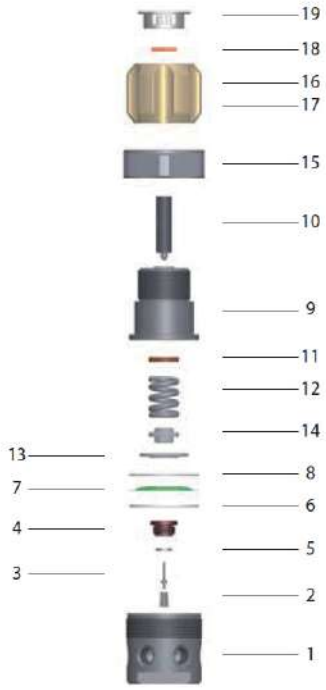
Body Material	Seat Material	Temperature Rating °F (°C)	Pressure Rating @ -40 ~ 160 °F (-40 ~ 70°C)	Control Volume
SS316L/A276	PCTFE	-40 ~ 160 (-40 ~ 70)	0 ~ 6,000 psig (420 barg)	4 cc

Graph 1. **Control Pressure per Handle turns**



Graph 2. **Flow Curves**





Material of Construction

Components	VR6 Series (Standard)
1. BODY	SS316L/A276
2. SPRING-RETURN	SS316L
3. VALVE	SS316L
4. SEAT HOUSIG	SS316L
5. SEAT	PCTFE
6. SEAL BODY	EPDM
7. DIAPHRAGM	SS316L
8. WASHER	SS316L
9. HOUSING	SS316L/A276
10. ADJUST SCREW	SS316L
11. CAP SCREW	BRASS
12. SPRING CONTROL	SS316L
13. STOPPER	SS316L
14. PLUNGER	BRASS
15. NUT HOUSING	SS316L
16. HANDLE	ABS
17. HANDLE NUT	SS316L
18. LOCK NUT	SS316L
19. HANDLE CAP	ABS

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

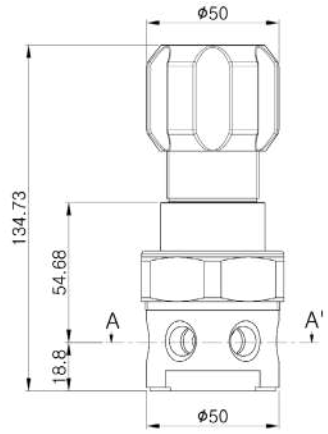
Factory Test

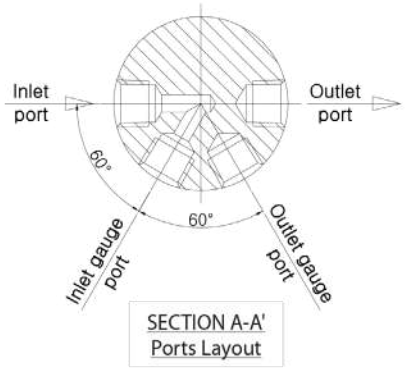
Every valve is factory tested with nitrogen gas @1,000 psig (68.9 barg) for leakage to a maximum allowable leak rate of 0.1 SCCM at seat. Hydraulic shell test is optionally performed at 1.5 times the working pressure to a requirement of no detectable leakage with a liquid leak detector.

Cleaning and Packaging

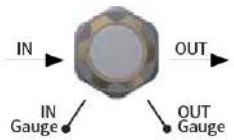
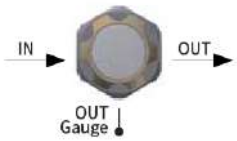
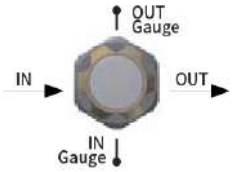
Every valve is cleaned and packaged in accordance with DK-Lok cleaning standard DC-01. Special cleaning and packaging in accordance with DK-Lok DC-11 ensures compliance with product cleaning of ASTM G93 Level C is available on request for valves with PCTFE and PTFE seats.

Dimensions and Port Layout





Designation for Port Layout

Port Layout				
Designation	Nil	0	3	X4

How to order

Select applicable valve basic ordering number, options and body material designator listed below.

VR6-F-4N **-S**

Port Layout	Seat Materials	Self-Vent Options	Body Material
Nil : 4 ports (60° per port) **0 :** None of gauge port **3 :** 3 port (1 for Gauge) **X4 :** 4 ports (90° per port)	**Nil** : Standard PCTFE **PK** : PEEK	**Nil** : None	**S** : 316L Stainless steel

Safe Valve Selection

The selection of a valve for any application or system design must be considered to ensure safe performance. Valve function, valve rating, material compatibility, proper installation, operation and maintenance retain the sole responsibility of the system designer and the user. DK-Lok accepts no liability for any improper selection, installation, operation or maintenance.

DK-LOK

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Tel. +82-55-338-0114 Fax. +82-55-901-0141 **www.dklok.com**

Metering Valves

Rev. 01-01
Aug. 2023

DK-LOK®
Metering Valves

Metering Valves

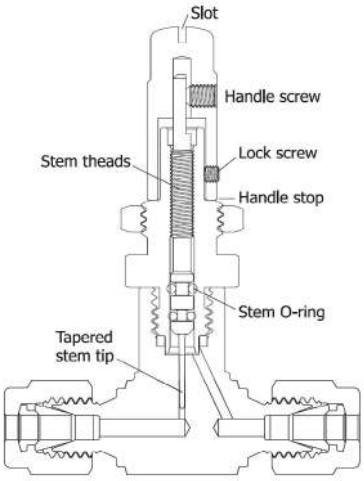
VM 1D, 3D, 6D and VMH Series

Rev.01-01
Aug.2023

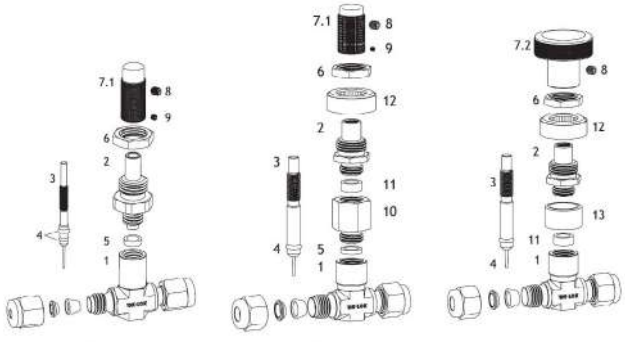
VM 1D, 3D, and 6D Series

Features





- **Slotted handle**
  allows flow setting adjustment with a screwdriver.
- **Lock screw**
  locks out flow setting.
- **Stem threads**
  are isolated from system fluid.
- **Handle stop**
  mechanically helps prevent damage to stem and orifice.
- **Stem O-ring**
  seals system fluids
- **Tapered stem tip**
  controls gas or liquid flow rates accurately.
- **Body materials**
  are forged stainless steel 316 or brass.
  Straight and angle **patterns**.
  Standard **Panel mounting**.



Panel mount : VM1D & 3D series with standard L and optional SL handle allow valve panel mount with no handle removal.

Table 1. **Material of Construction**

Component	Valve Body Materials Grade/ASTM Specification	
	Stainless Steel	Brass
1. Body	F316/A182	C37700/B283
2. Bonnet	SS316/A276	C34500/B453
3. Stem	S17400/A564 for VM1D, A276 for VM3D & VM6D	
4. Stem o-ring	FKM	Buna N
5. Body seal	PTFE	
6. Panel nut	SS316/A276	C36000/B16
7-1. Handle	SS300/A276	C36000/B16
7-2. Round handle	Aluminum 6061	
8. Handle set screw	Alloy steel	
9. Lock screw	Alloy steel	
10. Body extension	SS316/A276	C34500/B453
11. Stem guide ring	Glass-filled PTFE	
12. Bonnet sleeve	Sintered SS316	
13. Body support ring	SS316	

· Wetted components listed in blue.
· **Lubricant** : Molybdenum disulfide-based; silicon-based.

Factory Test

Every valve is factory tested with nitrogen gas at 68.9bar (1,000 psig) and required to no detectable leakage. Hydraulic shell test is optionally performed at 1.5 times the working pressure.

Cleaning and Packaging

Every valve is cleaned and packaged in accordance with DK-Lok Corporation cleaning standard of DC-01. Optional DC-11 cleaning for oxygen application is available on request.

Table 2. **Temperature Rating**

Standard O-ring material	Designator	Temperature Rating °F (°C)
FKM standard for SS316 body	VT	-10 to 400 (-23 to 204)
NBR standard for brass body	BN	-10 to 300 (-23 to 148)
Optional Kalrez®	KZ	0 to 300 (-17 to 148)

Table 3. **Technical Data**

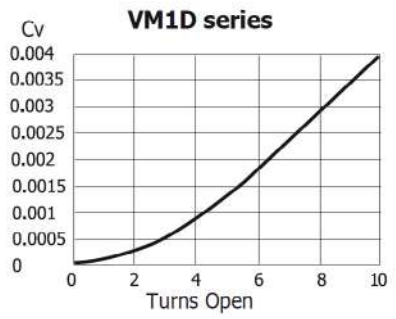
Series	VM1D	VM3D	VM6D
Working pressure psig (bar)	2,000 (137)	1,000 (68.9)*	
Orifice in. (mm)	0.032 (0.81)	0.056 (1.42)	0.128 (3.25)
Stem taper	1°	3°	6°
Cv	0.004	0.03	0.16
Turns to Open	8 to 12	8 to 10	10 to 11
Internal volume cu.in (cu.mm)	0.006 (98)	0.028 (460)	0.035 (570)
Flow shut off	No	No	Yes**

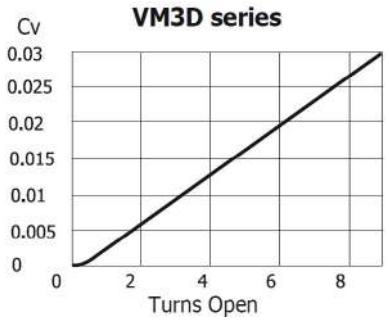
* While valve is adjusted at pressure, 500 psig (34.4 bar) is max downstream pressure due to mechanical strength limit of the finepitch threads and high operation torque.
** VM6D series in use for shutoff in vacuum or gas, or for repetitive shutoff in liquid are not recommendable.

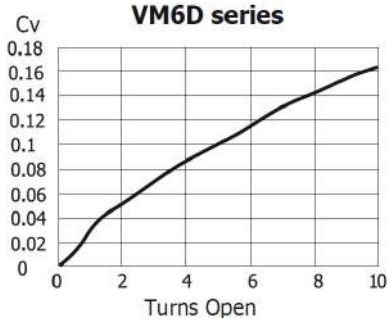
All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Table 4. **Turns Open and Flow Data**

Cv vs. Turns Open







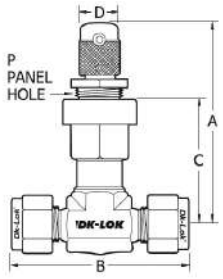
Flow Data

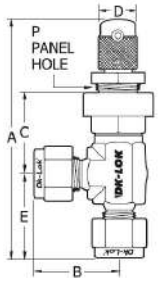
Pressure Drop @ Atmosphere psi(bar)	Air Flow Std. ft³ /min. (std.L/min.)	Water Flow gal/min. (L/min.)
10 (0.68)	0.04 (1.1)	0.01 (0.03)
50 (3.4)	0.10 (2.8)	0.02 (0.07)
100 (6.8)	0.20 (5.6)	0.04 (0.15)

Pressure Drop @ Atmosphere psi(bar)	Air Flow Std. ft³ /min. (std.L/min.)	Water Flow gal/min. (L/min.)
10 (0.68)	0.33 (9.3)	0.09 (0.34)
50 (3.4)	0.90 (25.4)	0.21 (0.79)
100 (6.8)	1.50 (42.4)	0.30 (1.1)

Pressure Drop @ Atmosphere psi(bar)	Air Flow Std. ft³ /min. (std.L/min.)	Water Flow gal/min. (L/min.)
10 (0.68)	2.0 (56.6)	0.51 (1.9)
50 (3.4)	6.4 (181)	1.2 (4.5)
100 (6.8)	11.4 (323)	1.7 (6.4)

Ordering Information and Dimensions





VM series	P	Max Panel Thickness
1D	0.45 (11.4)	0.16 (4.1)
3D	0.58 (14.7)	0.13 (3.3)
6D		

Basic Ordering Number		Angle pattern	End Connections Inlet & Outlet	Dimensions in. (mm) A	B	C	D	E
VM1D-	D1T-		1/16 in.DK-Lok	2.34 (59.4)	1.56 (39.6)	0.92 (23.4)	0.38 (9.6)	-
	D2T-		1/8 in.DK-Lok		1.90 (48.3)			
	D4T-		1/4 in.DK-Lok		2.04 (51.8)			
	D3M-		3mmDK-Lok		1.90 (48.3)			
	D6M-		6mmDK-Lok		2.04 (51.8)			
	D1T-	A-	1/16 in.DK-Lok	3.22 (81.8)	0.81 (20.6)			0.88 (22.4)
	D2T-	A-	1/8 in.DK-Lok	3.32 (84.3)	0.98 (24.9)			0.98 (24.9)
VM3D-	D2T-		1/8 in.DK-Lok	2.78 (70.6)	2.02 (51.3)	1.56 (39.6)	0.50 -12.7	-
	D4T-		1/4 in.DK-Lok		2.20 (55.9)			
	D3M-		3mmDK-Lok		2.02 (51.3)			
	D6M-		6mmDK-Lok		2.20 (55.9)			
	D2T-	A-	1/8 in.DK-Lok	3.30 (83.8)	1.01 (25.7)	1.07 (27.2)		1.01 (25.7)
	D4T-	A-	1/4 in.DK-Lok	3.39 (86.1)	1.10 (27.9)			1.10 (27.9)
	M2N-		1/8 in.Male NPT	2.78 (70.6)	1.50 (38.1)	1.56 (39.6)		-
	M4N-		1/4 in.Male NPT		1.96 (49.8)			
	F2N-		1/8 in. Female NPT	2.78 (70.6)	1.94 (49.3)			
	F2N-	A-	1/8 in.Female NPT	3.26 (82.8)	0.98 (24.9)	1.07 (27.2)		0.97 (24.6)
VM6D-	D4T-		1/4 in.DK-Lok	2.82 (71.6)	2.34 (59.4)	1.26 (32.0)	1.13 (28.7)	-
	D6T-		3/8 in.DK-Lok		2.46 (62.5)			
	D6M-		6mmDK-Lok		2.34 (59.4)			
	D4T-	A-	1/4 in.DK-Lok	3.77 (95.8)	1.17 (29.7)	1.04 (26.4)		1.17 (29.7)
	M4N-		1/4 in.Male NPT	2.82 (71.6)	2.00 (50.8)	1.26 (32.0)		-

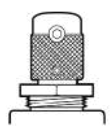
Dimensions shown are for reference only and are subject to change. Dimensions with DK-Lok nuts are in finger-tight position.

Standard and Optional Handles	
Lock screw handle allows locking the set flow, standard for 1D and 3D series.	**Slotted handle** helps flow setting adjustment with a screwdriver.
Vernier handle made out of aluminum helps ensure repeatable flow setting in readings accurate to 1/25th turn.	**Adjustable-torque handle** enhances control for setting flows with two top-mounted adjustment screws.

How to Order Select desired valve basic ordering number, optional handle, O-ring and body material designators.

VM1D-D2T **-V** **-KZ** **-S**

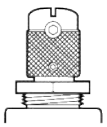
Handle Designators



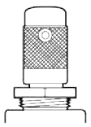
L
Lock screw handle



V
Vernier handle



SL
Slotted handle



ATH
Adjustable-Torque handle

Nil : L is standard for 1D and 3D series
V : Optional to 1D,3D, and 6D series
SL : Optional to 1D and 3D series
ATH : Optional to 1D series
Nil : Round handle (designator -R) standard for 6D series

Note : Chrome plated brass handle supplied on brass valve.

O-ring Designators

Nil : VT standard for stainless body.
Nil : BN standard for brass body.
• VT : Vition
• BN : NBR
• KZ : Kalrez

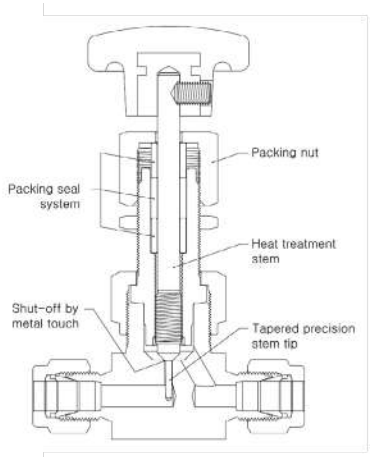
Body material Designators

S : SS316
B : Brass

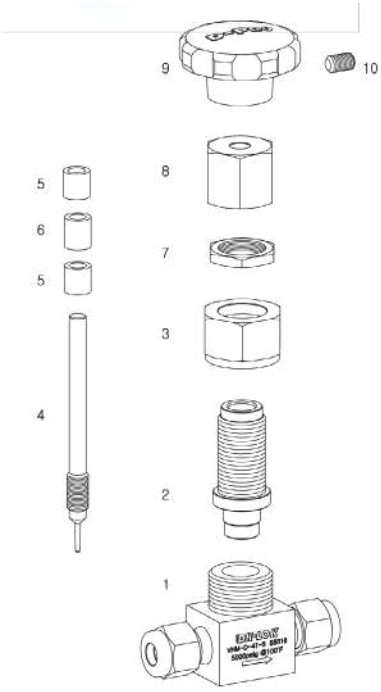
VMH Series

Features





- **Packing Seal System**
  prevents protrusion of packing caused by internal pressure
- **Metal To Metal Shut Off**
  leak free performance between the stem and body seat
- **Packing Nut**
  externally adjustable
- **Heat Treated Stem**
  improves endurance life
- **Tapered Precision Stem Tip**
  eusures accurate flow control



Factory Test

Every valve is factory tested with nitrogen gas at 68.9 bar (1,000 psig) for leakage to a maximum allowable leak rate of 0.1 SCCM at seat.

Cleaning and Packaging

Every valve is cleaned and packaged in accordance with DK-Lok Corporation cleaning standard of DC-01. Optional DC-11 cleaning for oxygen application is available on request.

Table 4. **Material of Construction**

Component	Grade/ASTM Specification
1. Body	SS316/A276
2. Bonnet	SS316/A276
3. Union nut	SS316/A276
4. Stem	SS440/A276
5. Gland	SS316/A276
6. Packing	PTFE/D1710
7. Panel nut	SS316/A276
8. Packing nut	SS316/A276
9. Handle	Nylon with brass insert
10. Handle set screw	Alloy steel

Table 5. **Pressure vs. Temperature Ratings**

ASME Class	2080
Material Group	2.2
Material Name	SS316

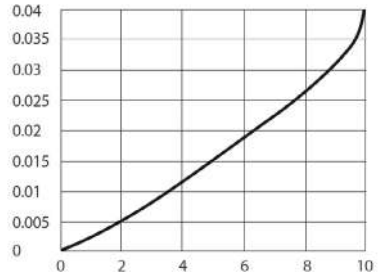
Temperature, °F (°C)	Working pressure, psig (bar)
-65~100 (-53~38)	5,000 (344)
200 (93)	4,295 (295)
300 (148)	3,875 (266)
400 (204)	3,560 (245)
450 (232)	3,435 (236)
500 (260)	3,310 (228)
600 (315)	3,130 (215)
650 (343)	3,080 (212)
700 (371)	3,000 (206)
750 (398)	2,930 (201)
800 (426)	2,880 (198)
850 (454)	2,815 (193)

Standard PTFE packing is up to 450°F (232°C), optional Grafoil packing is up to 850°F (454°C)

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Table 6. **Turns Open and Flow Data**

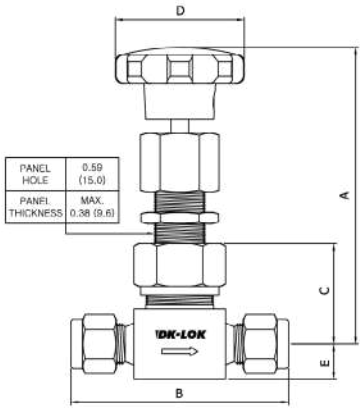
Cv vs. Turns Open

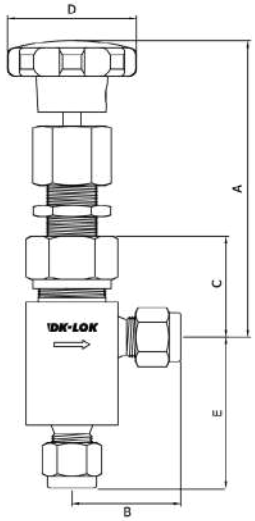


Flow Data

Pressure Drop @ Atmosphere psi(bar)	Air Flow Std. ft^3 /min. (std.L/min.)	Water Flow Gal/min. (L/min.)
10 (0.68)	0.45 (12.7)	0.12 (0.45)
50 (3.4)	1.2 (33.9)	0.28 (1.0)
100 (6.8)	2.1 (59.4)	0.4 (1.5)

Ordering Information and Dimensions





Basic Ordering Number		Angle pattern	End Connections Inlet & Outlet	Dimensions in. (mm)				
				A	B	C	D	E
VMH-	D4T-		1/4 in. DK-Lok	3.6 (91.4)	2.4 (61.0)	1.09 (27.7)	1.42 (36.0)	0.38 (9.6)
	D6M-		6 mm DK-Lok					
	D4T-	A-	1/4 in. DK-Lok		1.16 (29.5)			1.48 (37.6)
	D6M-	A-	6 mm DK-Lok					
	F2N-		1/8 in. Female NPT	3.6 (91.4)	2.0 (50.8)	1.09 (27.7)	1.42 (36.0)	0.38 (9.6)
	F4N-		1/4 in. Female NPT		2.06 (52.3)			
	F2N-	A-	1/8 in. Female NPT	3.8 (96.5)	2.0 (50.8)			1.0 (25.4)
	F4N-	A-	1/4 in. Female NPT		2.06 (52.3)			

Dimensions shown are for reference only and are subject to change.
Dimensions are with DK-Lok nuts in the finger-tight position.

How to Order

VMH-D4T-GF **BL** **-S**

Packing designators	Handle colors		Body material designator
	Handle color	Designator	
Nil : PTFE **GF** : Grafoil	Black	Nil	**S** : SS316
	Red	RD	
	Blue	BL	

DK-LOK

경상남도 김해시 주촌면 골든루트로 129번길 7 50969
7, Golden root-ro 129beon-gil, Juchon-myeon, Gimhae-si, Gyeongsangnam-do, South Korea. 50969
Tel. +82-55-338-0114 Fax. +82-55-901-0141 **www.dklok.com**

IDK-LOK

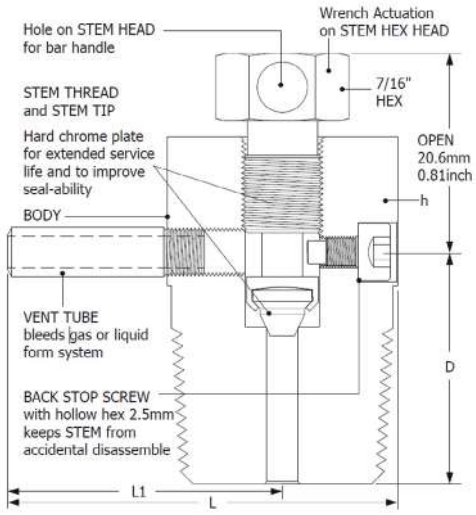
VBV Series Bleed Valves

Rev. 01-01
Aug. 2023

DK-LOK®
Bleed & Purge Valves

VBV Series Bleed Valves

Rev.01-01
Aug.2023



Design and Applications



DK-Lok VBV Series Bleed Valves are designed to vent the signal line pressure to atmosphere before an instrument is removed and to assist in calibration of control devices.
These are for use on instrumentation devices such as gauge root valves and multi-valve manifolds. Optional barbed vent tube enables containment of fluid vented. The VBV Series are also ideal in bleeding hydraulic systems.

Installation and Operation

Position the vent tube so that system fluid is not directed to personnel operating.
Slowly open the valve. This valve has no stem seal packing;
small amounts of fluid will go through the stem thread when they are opened.
Therefore suitable measures should be taken to protect personnel operating.

Materials of Construction

Components	VALVE BODY MATERIALS	
	SS316 Stainless	Carbon Steel
	GRADE / ASTM and JIS SPECIFICATION	
Stem	SS316 / A 276	
Stem Tip	S630 / A564	
Body*	SS316 / A 276	S20C-S45C / G4051
Back Stop Screw	SS316 / A 276	
Vent Tube	SS316 / A 269	

* Carbon Steel bodies are white galvanized for corrosion resistance.

Technical Data

Material	Temperature Rating	Pressure Rating
SS316	-65°F to 850°F (-54°C to 454°C)	10,000 psi (689 bar) @ 100°F (38°C)
Carbon Steel	-20°F to 450°F (-29°C to 232°C)	

Ordering Number and Table of Dimensions

Basic Ordering No.	End Connection		Orifice	Cv	Dimensions in. (mm)			
	Inlet	Outlet	in.(mm)		L	L1	D	h Hex
VBV-M-2N-	1/8" Male NPT	O.D. 3/16" Tube Stub	0.125 (3.2)	0.25	1.34 (34.03)	0.94 (23.87)	0.75 (19.05)	5/8 (15.87)
VBV-M-4N-	1/4" Male NPT						0.69 (17.52)	
VBV-M-6N-	3/8" Male NPT				1.47 (37.33)	1.03 (26.16)	0.75 (19.05)	7/8 (22.22)
VBV-M-8N-	1/2" Male NPT						0.69 (17.52)	

All dimensions shown are for reference only and are subject to change.

CNG Certifications

Certificates	ECE R110	ANSI / AGA NGV 3.1-1995 CGA NGV 12.3-M95	ISO 15500
Certificate No	110R-000197	2010-REPORT-030 (01)	2010-REPORT-030 (01)
Classification	Class 0	CNG-VBV	CNG-VBV
Temperature	-40°C to 120°C (-40°F to 250°F)	-40°C to 121°C (-40°F to 250°F)	-40°C to 121°C (-40°F to 250°F)
Working Pressure	200 bar @ 120°C	273 bar @ 121°C	273 bar @ 120°C

How to Order

To order, add the valve body material as a suffix to the basic ordering number. S: Stainless, C: Steel. Example: VBV-M-2N-S



Options

Bar handle : Optional bar handle allows wrench-less actuation
- Bar handle ordering number : BH

Barbed Vent Tube : Optional barbed vent tube enables containment of fluid vented.
- 3/16" OD barbed vent tube ordering number : HT

To order, use the option ordering number as a suffix to the valve basic ordering number.
Examples: VBV-M-2N-BH-S, VBV-M-2N-HT-S.

Factory Test

Every valve is tested with the nitrogen @ 68 bar (1,000 psi) for leakage at the seat to a maximum allowable leak rate of 0.1 scc/min.

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All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

DK-LOK®
Bleed & Purge Valves

VPV Series Purge Valves

Rev.01-01
Aug.2023



Design

DK-Lok VPV Series Purge Valves are designed for manually bleeding, venting, or draining system fluids.
The cap is clamped to the valve body for safety in use.
The 0.063 inch (1.6 mm) diameter vent hole is constructed on the cap.

Operation and Installation Instruction

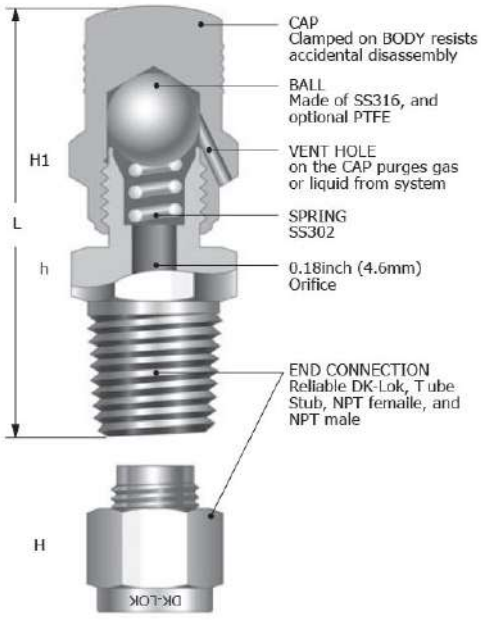
DK-Lok VPV series purge valve requires a quarter turn of cap with a wrench from finger-tight for a leak-tight seal on the first make-up.
To ensure seal to the rated pressure, snug with a wrench.
Always open the valve slowly.
These valves have no seal on cap. Therefore media may flow through the cap thread when the valves are opened.
Operating personnel should take suitable measures to be protected from system fluids.

MATERIALS OF CONSTRUCTION

Valve Material	Pressure Rating @ 100°F (38°C)		Temperature Range	
	psig	bar	°F	°C
SS316	4000	275	-65 ~ 600	-54 ~ 315
Brass	3000	206	-65 ~ 400	-54 ~ 204

Materials of Construction

Components	VALVE BODY MATERIALS	
	SS316	Brass
	Grade / ASTM Specification	
Cap	SS316/A479 or A276	Brass/B16
Body		
Ball	SS316/A276	
Spring	SS302/A313	



Ordering Information and Table of Dimensions

Basic Ordering Number		End Connection	L - closed		h	H	H1
			inch	mm	Hex	Hex	h Hex
VPV-	F-2N-	1/8" Female NPT	1.50	38.1	9/16	-	5/8
	F-4N-	1/4" Female NPT	1.69	42.9	3/4	-	
	F-6N-	3/8" Female NPT	1.75	44.5	7/8	-	
	F-8N-	1/2" Female NPT	1.92	48.8	1-1/16	-	
	M-2N	1/8" Male NPT	1.56	39.6	1/2	-	
	M-4N	1/4" Male NPT	1.75	44.5	9/16	-	
	M-6N	3/8" Male NPT	1.78	45.2	11/16	-	
	M-8N	1/2" Male NPT	2.03	51.6	7/8	-	
	D-2T-	1/8" DK-Lok	1.78	45.2	1/2	7/16	
	D-4T-	1/4" DK-Lok	1.88	47.8	1/2	9/16	
	D-6T-	3/8" DK-Lok	1.97	50.0	5/8	11/16	
	D-8T-	1/2" DK-Lok	2.13	54.1	13/16	7/8	
	D-6M-	6mm DK-Lok	1.88	47.8	14mm	9/16	
	D-8M-	8mm DK-Lok	1.94	49.3	15mm	5/8	
	T-4T-	6mm Tube Stub	1.81	46.0	1/2	-	
	T-6T-	3/8" Tube Stub	1.88	47.8	1/2	-	
	T-8T-	1/2" Tube Stub	2.09	53.1	9/16		

* Several types of pipe thread can be applicable such as Male/Female NPT (N) thread, PT(R) and PF(G), etc.

Options and How to order

Optional PTFE ball is available. Valve with Teflon ball does not require wrench but only finger-tight for leak-tight shut-off.

- Removable cap for PTEE ball replacement
- Pressure rating : 200 psig @ 100 °F (13.7 bar @ 37 °C)
- Maximum Temperature : 350 °F (176 °C)

To order, add the valve body material as a suffix to the basic ordering number. S: Stainless, B: Brass. Example: VPV-M-2N-S
To order PTFE ball valve, add PE to the basic ordering number. Example: VPV-M-4N-PE-B

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Factory Test

Every valve is tested with the nitrogen @ 68 bar (1,000 psi) for leakage at the seat to a maximum allowable leak rate of 0.1 scc/min.
The valve with PTFE ball is tested at 0.69 bar (10 psi) for leakage at the seat to a maximum allowance leak rate of 0.1 scc/min.

DK-LOK

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IDK-LOK

V46, V56 Series

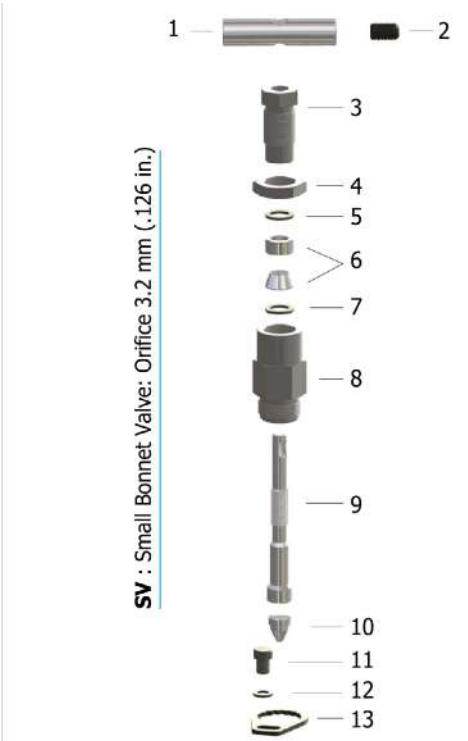
Rev. 01-01
Aug. 2023

DK-LOK®
Manifolds & Gauge Root

V46 series Gauge Root Valves
V56 series Instrument Manifolds

Rev.01-01
Aug.2023

Pressure Rating up to 6000 psig (413 bar)



Materials of Construction

Component	Valve Body Materials	
	Stainless steel	Carbon steel
	Bonnet Valve	
	Grade/ASTM specification	
1. Handle	Stainless steel	Aluminiun black anodized
2. Set screw	SS316/A276 or A479	SS316/A276 or A479
3. Packing bolt		C.Steel/A108
4. Lock nut		
5. Upper gland		SS316/A276 or A479
6. Packing	Standard chevron PTFE packing, optional Grafoil	
7. Lower gland	SS316/A276 or A479	SS316/A276 or A479
8. Bonnet		C.Steel/A108
9. Stem		SS316/A276 or A479
10. Non-rotating stem tip	SS630/A564	
11. Lock plate bolt	Stainless steel	
12. Spring washer	Stainless steel	
13. Lock plate	Stainless steel	Carbon steel
14. Body	SS316/A276 or A479	C.Steel/A108 or A105, Yellow zinc galvanized
Flange seals (not shown)	PTFE/D1710, optional Grafoil and florocarbon FKM O-ring	
Flange bolts (not shown)	Stainless steel/A193	Carbon steel/A193
Lubricant	Fluorinated base with PTFE and tungsten disulfide	
	Hydrocarbon based	

Wetted components are listed in blue.

Grafoil: TM UCAR



Model shown: VBR56-5V8N-S



MV : Medium Bonnet Valve Orifice 5.0 mm (.196 in.)

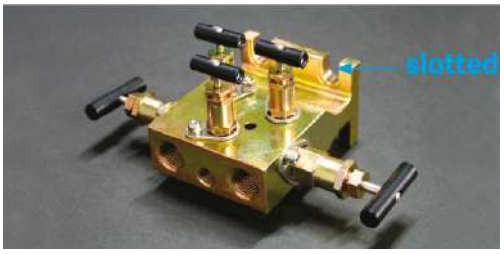
Features

- **Non-rotating** stem tip at closure for long-life and leak-tight shutoff.
- **Chevron PTFE packing** design provides far improved sealing integrity.
- **Packing** below stem threads is to isolate **threads** from system fluid and lubricant washout.
- Packing bolt permits stem **packing adjustment.**
- Standard **Lock plate** ensures the valve fastened to the body even excessive operating torque is applied.
- **One piece body construction** provides strength.
- Burr-free internal surface.



Image shown:
Bonnet Valve.

Feature of packing below stem thread maintains in small, medium and large bonnet valve on manifolds as well as on gauge root valves.



VES56 series **slotted flange** feature facilitates manifolds mounting with long stud hex nut.

Model shown: VES565-5V1F8N-C

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Pressure-Temperature Ratings

Manifolds and Gauge Root Valves

Body Material	Packing material	Temperature Rating	Pressure Rating @ 37 °C (100 °F)	Pressure Rating @ Max. Temp.
Stainless steel	PTFE	-54 to 232 °C (-65 to 450 °F)	413 bar (6000 psig)	285bar @ 232 °C 4130 psig @ 450 °F
	Grafoil	-54 to 648 °C (1) (-65 to 1200 °F)		118bar @ 648 °C 1715 psig @ 1200 °F
Carbon steel	PTFE	-29 to 176 °C (-20 to 350 °F)	413 bar (6000 psig)	360 bar @ 176 °C (5230 psig @ 350 °F)
	Grafoil	-29 to 176 °C (-20 to 350 °F)		

(1) Grafoil packing rating is limited to 537 °C (1000 °F) with flange end connection. In air, Grafoil rating is limited to 523 °C (975 °F), in steam it can go up to the maximum temperature of 648 °C (1200 °F).

• -28 to 204 °C (-18 to 399 °F) with optional fluorocarbon FKM flange seals.



Design

- D-Pro Manifolds and Gauge root valves are designed to ASME B16.34 Class 2500 for pressure-temperature ratings.
- Pressure boundary wetted parts are selected to Chapter III, 123 Materials of ASME B31.1.
- Valve ratings are based on ASME process piping code B31.3.
- To determine pressure rating at 37 °C (100 °F) in accordance with Power piping code B31.1, multiply by 0.94 for stainless steel.

Factory test

- Every manifolds and gauge root valve is factory tested with nitrogen @ 69 bar (1000 psig) for leakage at the seat to a maximum allowable leak rate of 0.1 SCCM.
- Stem packing is tested for no detectable leakage.
- Optional hydrostatic shell test is performed with pure water at 1.5 times the working pressure.

Packing adjustment and Actuation Torque

- Extreme or rapid temperature cycle while valve in service may require packing adjustment. Tighten the packing bolt 1/16 turn clockwise.
- Valves that have not been actuated for a period of time may have a higher initial actuation torque.

Sour Gas Service

- For use valve in sour gas, materials for wetted components are selected in accordance with NACE MR0175 latest revision.

Ordering and Technical Information

Manifolds		Basic Ordering Number	End Connections		Orifice mm(in.)	Weight Kg (lb.)
			Process	Instrument		
Remote Mount		VBR56-2V8N-	1/2 in. Female NPT		3.2 (.126)	0.8 (1.8)
		VBR56-3V8N-			6.4 (.251)	2.0 (4.4)
		VBR56-5V8N-				2.2 (4.9)
Direct Mount	Single Flange	VE56-2V1F8N-	1/2 in. Female NPT to Flange. Flange design meets MSS SP-99.		3.2 (.126)	1.0 (2.2)
		VE56-3V1F8N-			6.4 (.251)	2.2 (4.9)
		VE56-5V1F8N-				2.7 (6.0)
	Double Flange	VE56-3V2F-	Flange to Flange. Flange design meets MSS SP-99		6.4 (.251)	2.5 (5.5)
		VE56-5V2F-				2.7 (6.0)
	Single Flange with slotted feature	VES56-2V1F8N-	1/2 in. Female NPT to Flange. Flange design meets MSS SP-99.		3.2 (.126)	1.0 (2.2)
		VES56-3V1F8N-			6.4 (.251)	2.2 (4.9)
		VES56-5V1F8N-				2.7 (6.0)
	Double Flange with slotted feature	VES56-3V2F-	Flange to Flange. Flange design meets MSS SP-99		6.4 (.251)	2.5 (5.5)
		VES56-5V2F-				2.7 (6.0)
	Vertical	VBD56-2V8N-	1/2 in. Female NPT to Flange. Flange design meets MSS SP-99.		3.2 (.126)	1.6 (3.5)
		VBD56-3V8N-			5.0 (.196)	1.7 (3.8)
		VBD56-5V8N-			6.4 (.251)	3.3 (7.3)
		VBD56S-5V8N-			5.0 (.196)	2.7 (6.0)

How to order manifolds with options

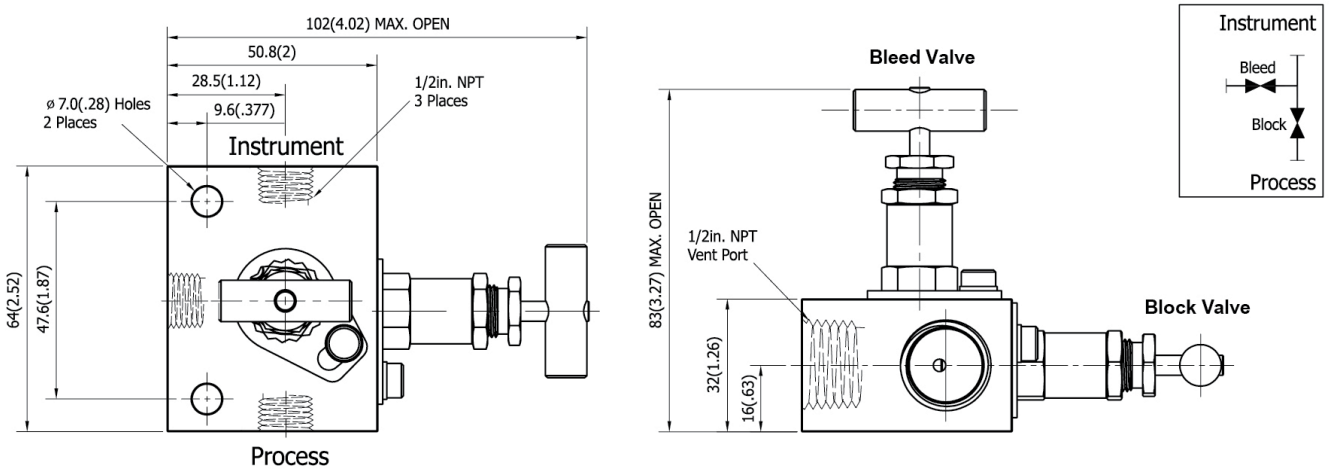
- To order the optional Grafoil packing, add -GF to the ordering number, i.e., VES56-3V1F8N-GF-
- To order sour gas service valve, add-SG to the ordering number. i.e., VES56-3V1F8N-GF-SG-
- To order optional GRAFOIL or FKM O-ring flange seal, add -GF or -VT to the ordering number/ i.e., VES56-3V1F8N-GF-SG-GF(or- VT)-
  Flange seal designators: -GF for Grafoil, - VT for FKM O-ring.
- To complete the ordering number, select valve body material designator:
  - S for SS316, - C for Carbon steel. i.e., VES56-3V1F8N-GF-SG-VT-S.

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

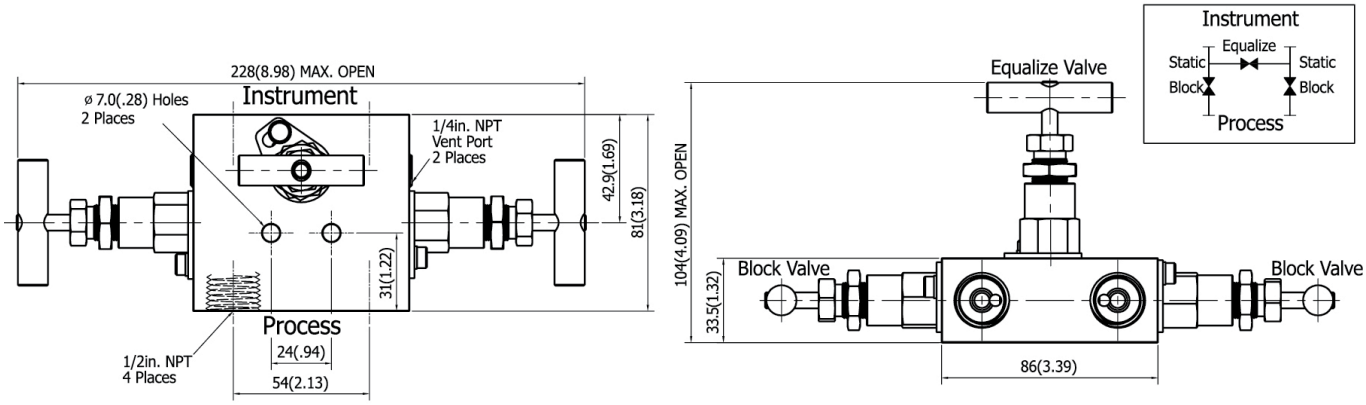
Remote mount

Unit: mm (in.)

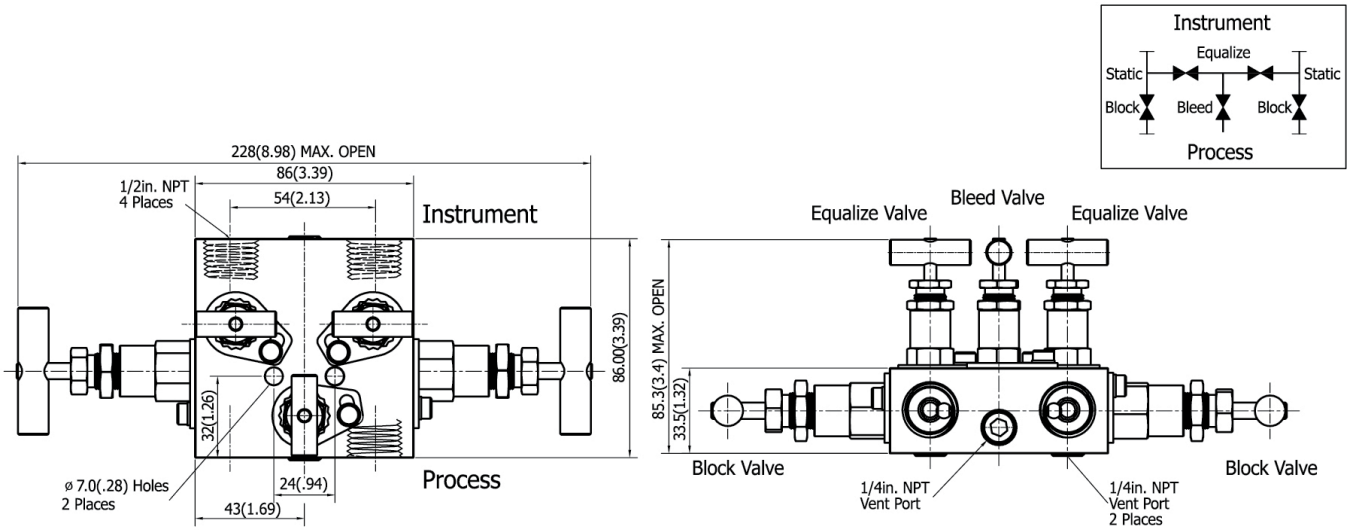
VBR56-2V8N-



VBR56-3V8N-



VBR56-5V8N-

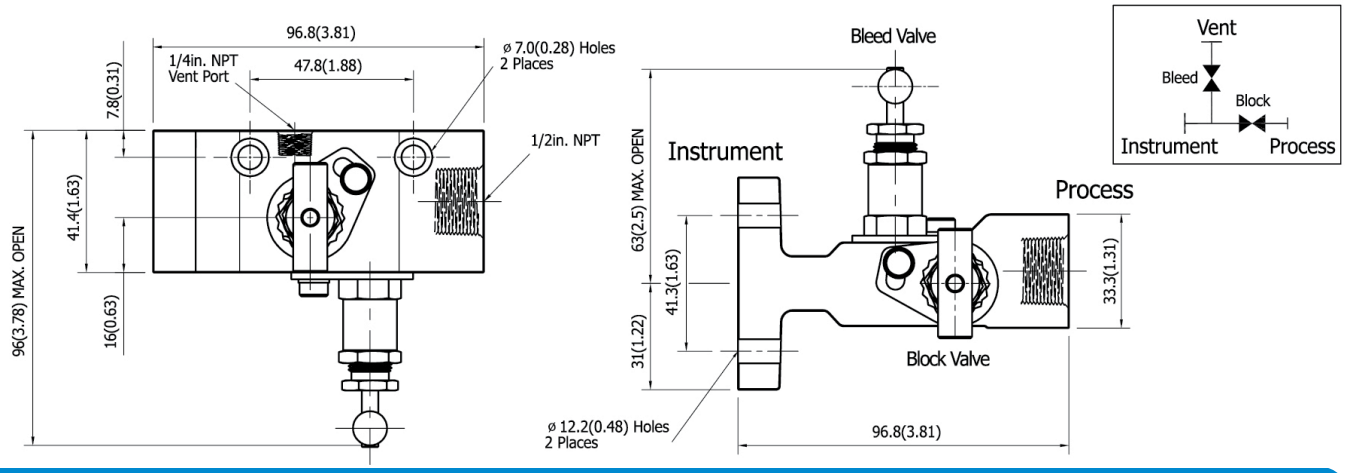


All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

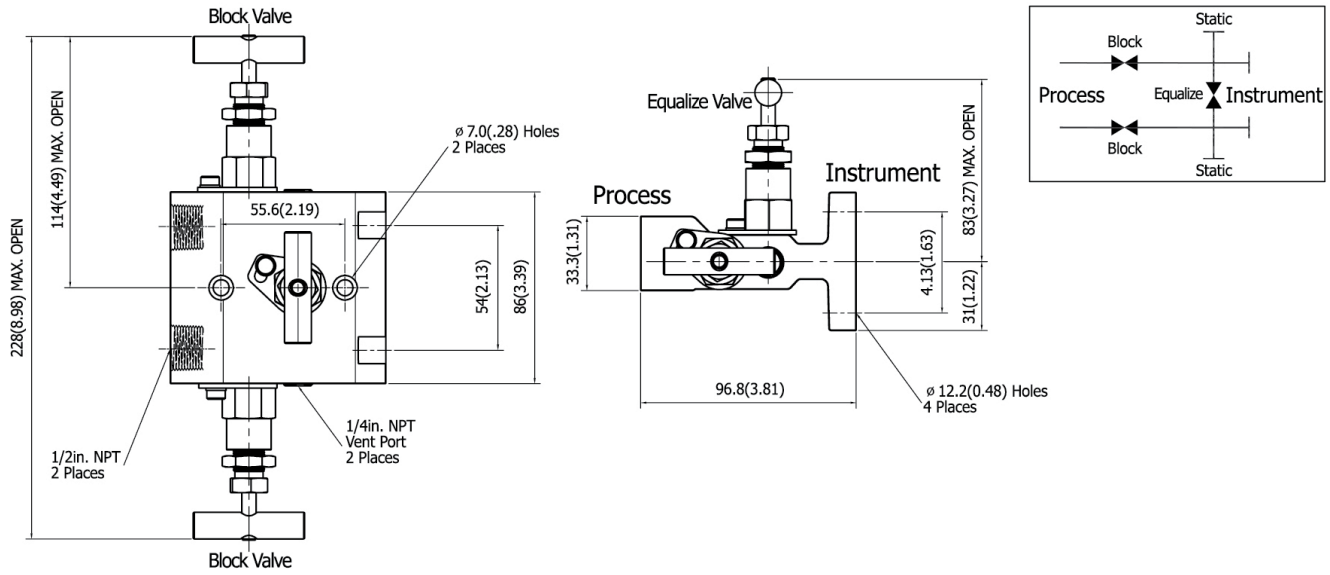
Single Flange Direct Mount

Unit: mm (in.)

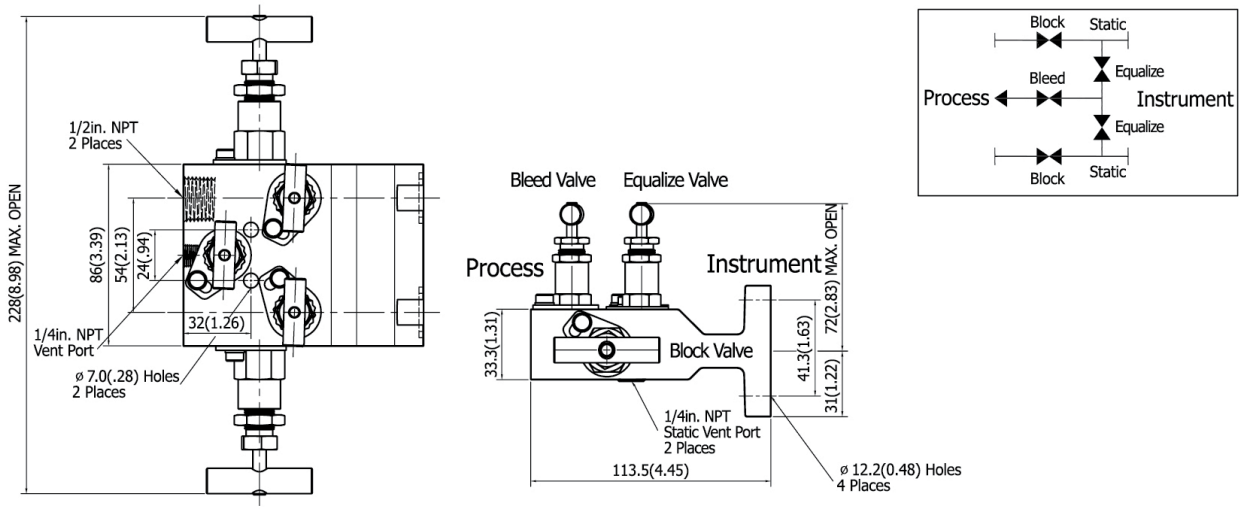
VE56-2V1F8N- / VES56-2V1F8N



VE56-3V1F8N- / VES56-3V1F8N-



VE56-5V1F8N- / VES56-5V1F8N-

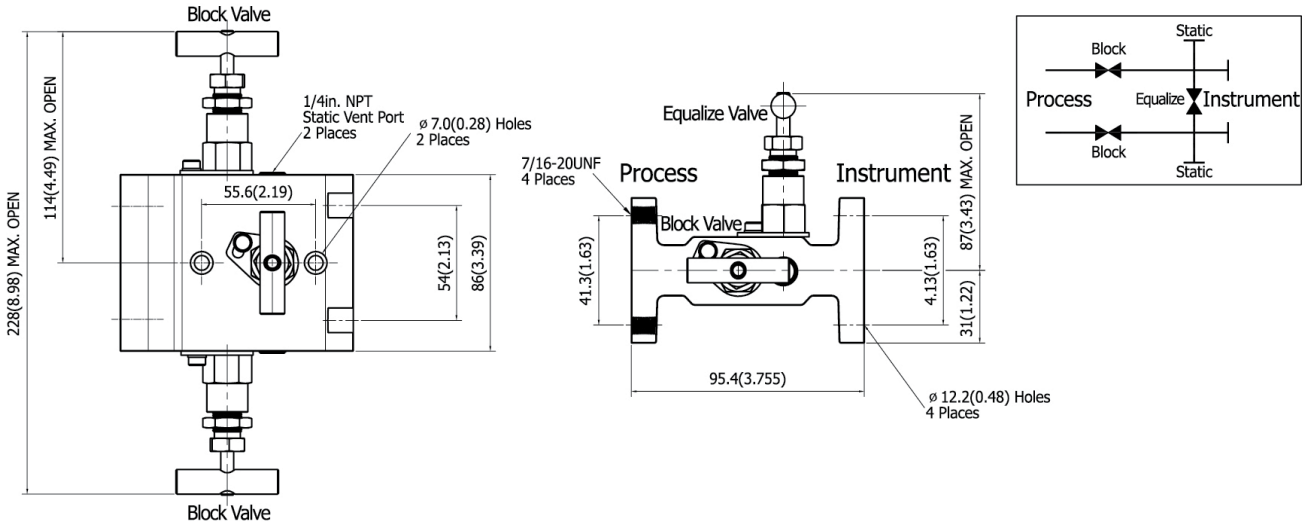


All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

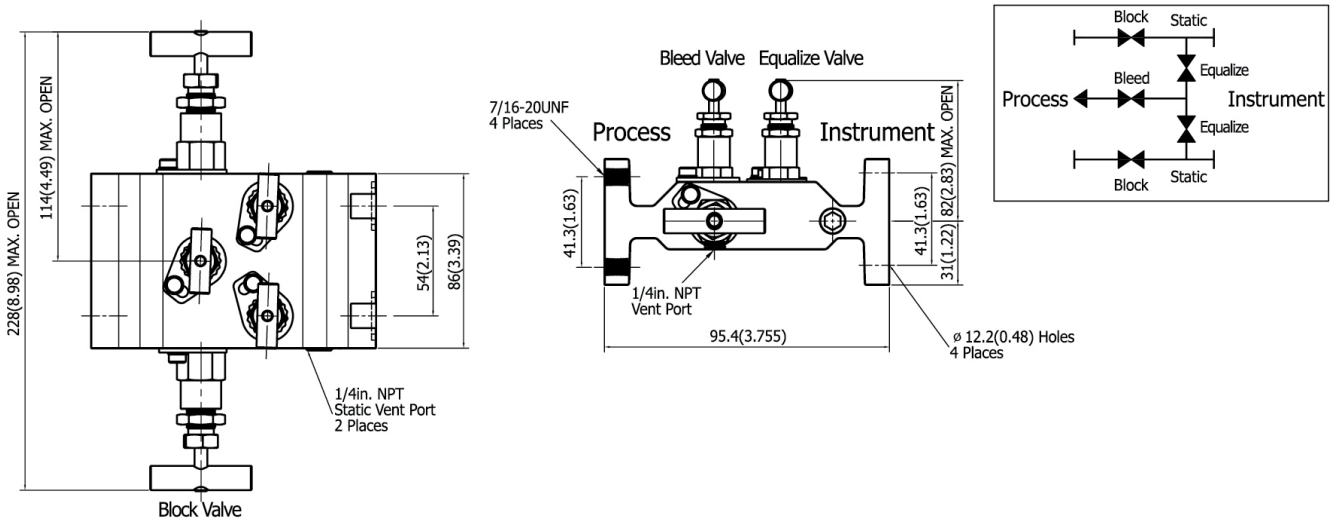
Double Flange Direct Mount

Unit: mm (in.)

VE56-3V2F- / VES56-3V2F-



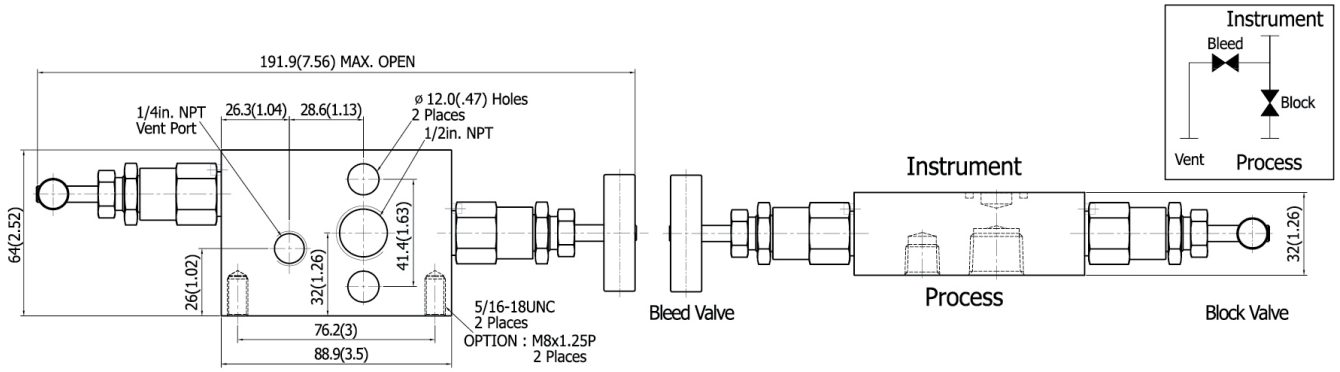
VE56-5V2F- / VES56-5V2F-



Vertical Direct Mount

Unit: mm (in.)

VBD56-2V8N-

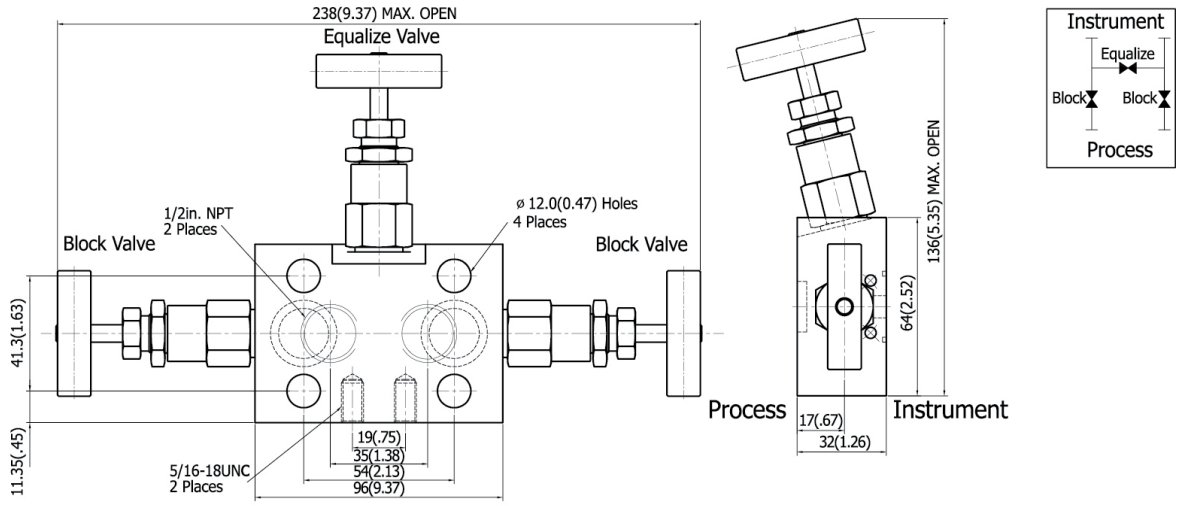


All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

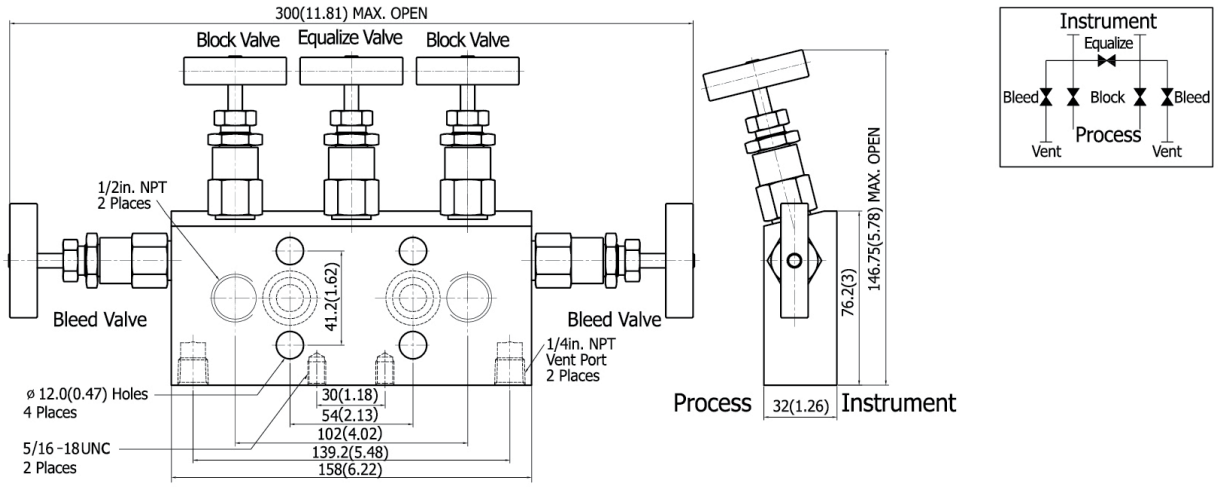
Vertical Direct Mount

Unit: mm (in.)

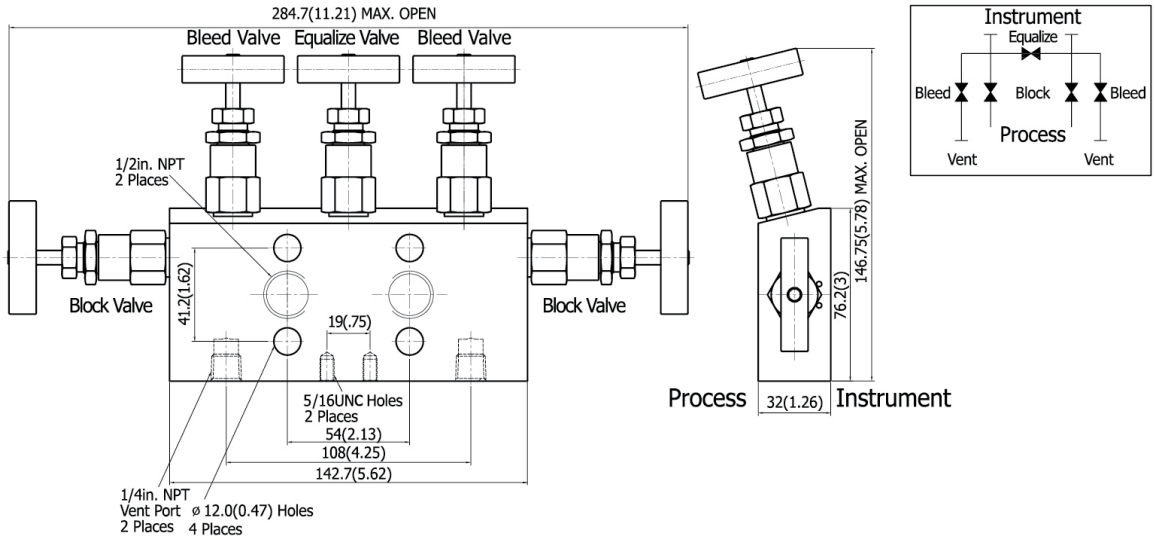
VBD56-3V8N-



VBD56-5V8N-



VBD56S-5V8N-



All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Manifolds Accessories

Flange Bolts

For special mounting applications optional long and short bolts are available. See flange bolt specification below.

Flange Bolt	Threads	Length mm (in.)	Hex Size mm (in.)	Basic Ordering Number	Bolt Material Designator
Standard hex bolt	7/16-20	45.0 (1.77)	15.87 (5/8)	Z56BM-	Stainless steel: S Carbon steel: C
Long stud hex nut	7/16-20	58.0 (2.28)		Z56BL-	
Short hex head bolt	7/16-20	25.0 (.98)		Z56BS-	

To order, add the material designator to the bolt ordering number. i.e., Z56BM-S

• Slotted flange manifolds is supplied with long stud hex nut: Z56BL-



Flange Seals

Flange seals are available in standard PTFE, Grafoil and fluorocarbon FKM O-ring for system compatibility.

Seal Material	Temperature Rating °C (°F)	Ordering Number
PTFE	-53 to 121 (-65 to 250)	Z56PE
Grafoil	-53 to 537 (-65 to 1000)	Z56GF
Fluorocarbon FKM (Viton)	-28 to 204 (-18 to 399)	Z56VT

To order, use the ordering number. i.e., Z56PE.

Oval Flange & Pipe Nipple

Eccentric Flanges and Pipe Nipple allow connections of flange-to-flange manifolds to process flange taps or process root valves.

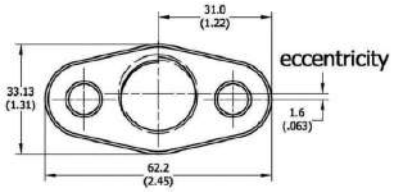


Oval Flange

Pipe Nipple

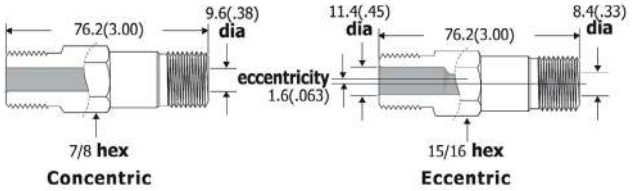
Oval Flange Ordering Number and Technical Information

Material	End Connection	End Connection Size	Ordering Number
Stainless steel	Female NPT	1/2 in. NPT	V56OF-8N-S
Carbon steel			V56OF-8N-C



Pipe Nipple Ordering Number and Technical Information

Material	Ordering Number	Type	Pressure Rating @20°C(70°F)bar(psig)	Temperature Rating°C(°F)	Pressure Rating @ Max. Temp.
Stainless steel /A276	G56NE-8N-S	Eccentric	516 (7 500)	-53 to 648 (-65 to 1200)	147 bar @648 °C (2140 psig @1200°F)
	G56NC-8N-S	Concentric	689 (10 000)		196 bar @648 °C (2850 psig @)1200 °F)



Calibration Fittings

Select DK-LOK differential pressure calibration fitting depending on the bleed port of the transmitter plug.

Ordering Number

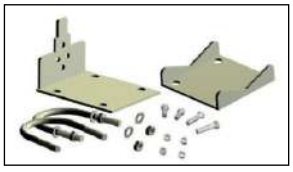
Material	Ordering Number	DK-LOK OD	Straight Male Thread
Stainless steel /A276	DPCM4-1U-S	1/4 in.	1/4-28UNF
	DPCM4-2U-S		5/16-24UNF



Mounting Bracket Kit

Bracket kit containing bracket, U-bolt, bolt, nut and washer allows horizontal and vertical manifold mounting.

Material	Ordering number
Stainless steel	Z56MBK-S
Carbon steel	Z56MBK-C



Manifold Mounting



Bonnet Valve Kit

Bonnet valves are available for field assembly.

Bonnet Valve	Basic Ordering Number	Packing Material Designator	Bonnet Valve Material Designator
Small Bonnet Valve	V56SV-	PTFE: Nil Grafoil: GF	Stainless steel: S Carbon steel: C
Medium Bonnet Valve	V56MV-		
Large Bonnet Valve	V56LV-		

• Kit contains bonnet valve, lock plate and set screw.

How to order

Select designator for the desired packing and valve material.
i.e., V56SV-GF-S

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

D-Pro V46 series Gauge Root Valves

D-Pro Gauge Root Valves offer a safe way of positioning gauges and installing pressure switches.

Features

- 1-2 in. and 3/4 in. male to 1/2 in. female end connections.
- 1/2 in. female gauge ports standard.
- Minimum schedule 160 pipe wall on valve inlet.

Ordering Information and Technical Data

Valve Ordering Number	End Connection NPT	Orifice mm(in.)	Body Length mm (in.) L	MAX. OPEN mm (in.) H	SQ mm (in.)	G mm (in.)	A mm (in.)
V46G-8N-S	1/2 Male to 1/2 in. Female	5.0 (0.20)	90.0 (3.54)	85.9(3.38)	32(1.26)	-	50.00(1.97)
V46GR-8N-S	1/2 Male to 1/2 in. Female		136.0 (5.35)			38.10(1.50)	
V46GR-12N8N-S	3/4 Male to 1/2 in. Female		136.0 (5.35)				
V46GRL-8N-S	1/2 Male to 1/2 in. Female		184.0 (7.24)				
V46GRL-12N8N-S	3/4 Male to 1/2 in. Female		184.0 (7.24)				
V46V2-8N-S	1/2 Male to 1/2 in. Female		119.0 (4.68)				
V46V2-F-8N-S	1/2 Female to 1/2 in. Female		109.0 (4.29)				

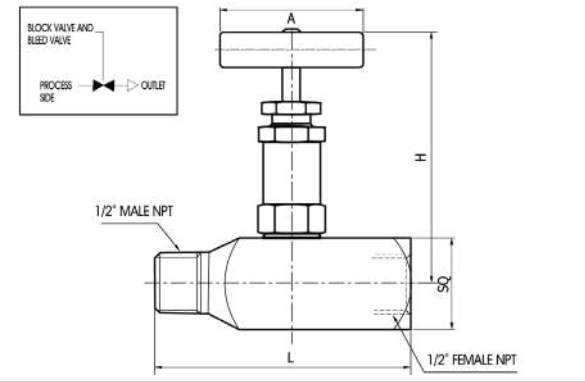
- V46GRL has an extended 4.8 inch of pipe insulation.
- V46 series uses Medium Bonnet Valve: Orifice 5.0 mm (.196in.)

How to order

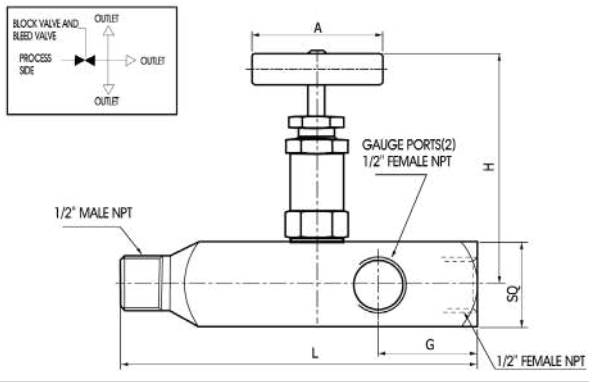
- To order Grafoil option, insert-GF in the ordering number. i.e., V46G-8N-**GF**-S
- To order sour gas service valve, insert -SG in the ordering number. i.e., V46G-8N-GF-**SG**-S

Unit: mm (in.)

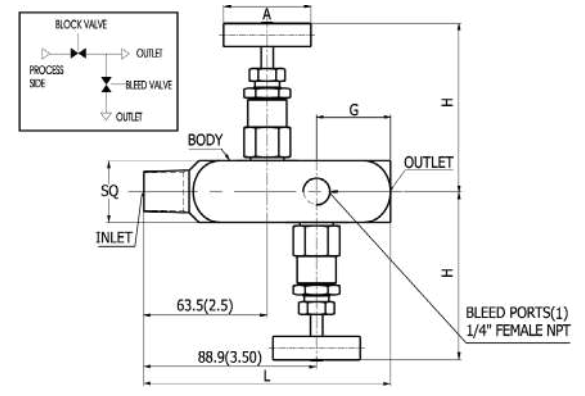
V46G Gauge Valve



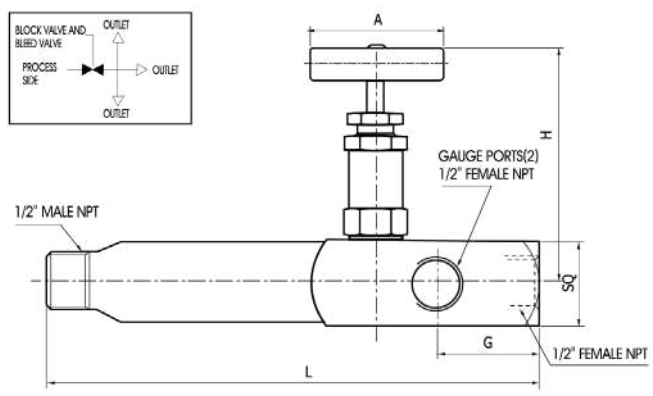
V46GR Gauge Root Valve



V46V2 Valve



V46GRL Extended Gauge Root Valve



Safe Valve Selection

The selection of a valve for any application or system design must be considered to ensure safe performance. Valve function, valve rating, material compatibility, proper installation, operation and maintenance remain the sole responsibility of the system designer and the user. Dk Tech accepts no liability for any improper selection, installation, operation or maintenance.

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

DK-LOK

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IDK-LOK

J Series
Air Distribution Manifolds

Rev. 01-01
Aug. 2023

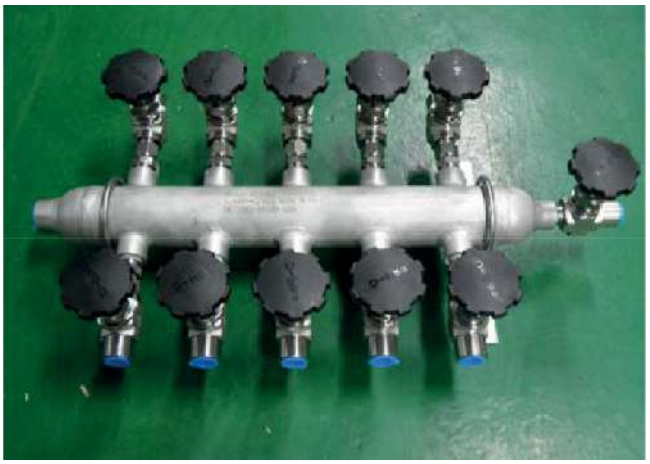
DK-LOK®
Manifolds & Gauge Root

J Series Air Distribution Manifolds

(Air Header)

Rev.01-01
Aug.2023

J Series Air Distribution Manifolds are designed and configured in any layout to fit the application as per client's requirements.



Factory Test

- 100% pressure tested
- PT test standard
- RT test an option

Cleaning

- Stainless steel passivated.
- Carbon steel cleaned & galvanized.

Features and Ordering Information

To order J Series, prefix "J"and build up an ordering number by combining the designators in the sequence below.

1. Manifold Pipe Size

Pipe Size	Designator
1"	1
2"	2
3"	3
4"	4

2. Pipe Schedule

Pipe SCH	Designator
SCH40	4
SCH80, XS	8
SCH160	16
XXS	X

3. Pipe Material

Pipe	Standard	Identifier
Black & Hot Dipped Galvanized Steel Pipe	ASTM A53 Type F Grade A -Welded	CFA
	ASTM A53 Type E Grade A - Welded	CEA
	ASTM A53 Type E Grade B - Welded	CEB
	ASTM A53 Type S Grade A - Seamless	CSA
	ASTM A53 Type S Grade B - Seamless	CSB
Seamless Carbon Steel Pipe	ASTM A106 Grade A	CA
	ASTM A106 Grade B	CB
	ASTM A106 Grade C	CC
Seamless Stainless Steel Pipe	ASTM A312 TP316	S
	ASTM A312 TP316L	L
	ASTM A312 TP304	4
	ASTM A312 TP304L	4L
	ASTM A312 UNS 31254	M6
Seamless Ferritic Alloy Steel Pipe	ASTM A335 P11	C11
	ASTM A335 P22	C22
Seamless Nickel-Copper alloy Pipe	ASTM B165 UNS N04400	M
Seamless Nickel Alloy Pipe	ASTM B729 UNS N08020	L20
Seamelss Carbon Steel Pipe	API 5L GR. B	A5LB

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

4. Inlet Port

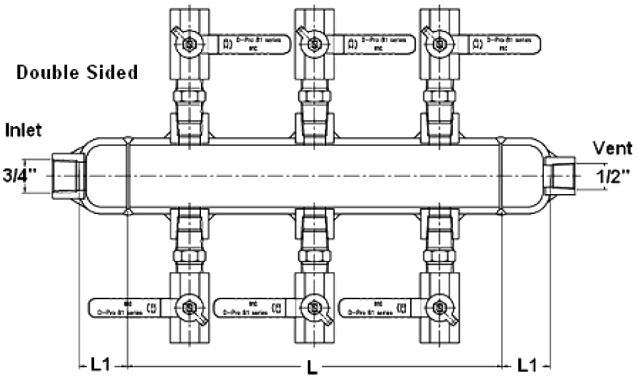
Table A: Type and Size of Inlet Port

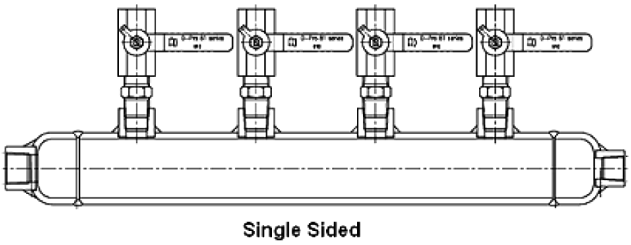
S.No.	Size		1/4”	3/8”	1/2”	3/4”	1”
	Size Designator		4	6	8	12	16
1	DK-LOK Tube Fitting OD Designator		D4T	D6T	D8T	D12T	D16T
2	Male Tapered Pipe Thread Designator	NPT	M4N	M6N	M8N	M12N	M16N
		ISO 7-1	M4R	M6R	M8R	M12R	M16R
3	Female Tapered Pipe Thread Designator	NPT	F4N	F6N	F8N	F12N(1)	F16N
		BSPT	F4R	F6R	F8R	F12R	F16R
4	Needle valve Designator	N	Select out of above 1 thru. 3. i.e., N**D4T-**				
5	Ball valve Designator	B	Select out of above 1 thru. 3. i.e., B**M8N**				

(1) No designator is required in case F12N is inlet port.

5. Outlet Port Configuration

Outlet Port Configuration	Designator
Double sided	D
Single sided	S





6. Number of Outlet Ports

Select 2 to 20.

7. Outlet port type and size

Select from Table A.

8. Vent Port

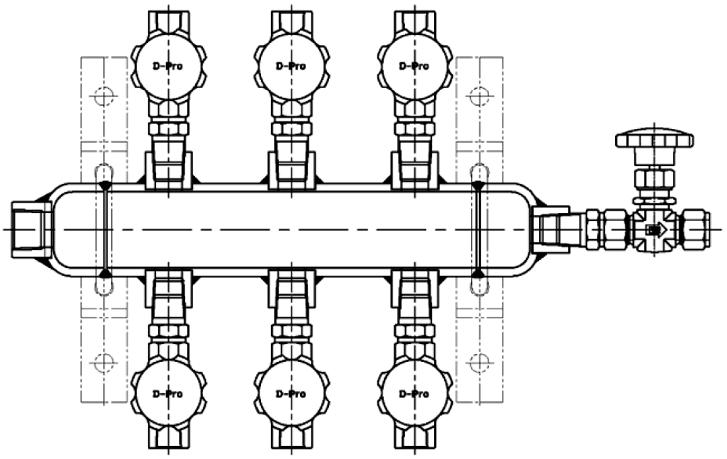
No designator is required in case F8N is vent port. For others, select from Table A.

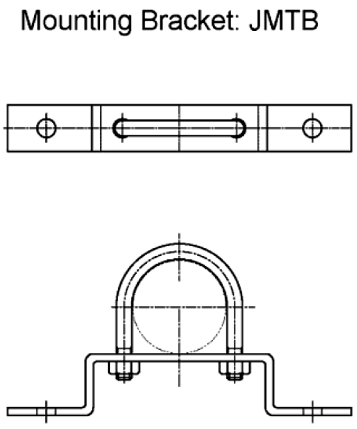
Ordering information

Example: J28S-D8NF8N-BD8TB

To order J series, prefix "J"	J
1. Manifold Pipe Size: 2"	2
2. Pipe Schedule: SCH80	8
3. Pipe Material: ASTM A312 TP316	S
-	
4. Inlet Port: 3/4" FNPT	Nil
5. Outlet Port Configuration : Double Sided	D
6. Number of Outlet Ports: 8 numbers	8
7. Type and Size of Outlet Ports: Needle Valve 1/2" Female NPT	NF8N
-	
8. Vent Port: Ball Valve 1/2" DK-LOK Tube Fitting	BD8T
9. Material: Select an applicable material designator of fittings and/or valves on 4. Inlet Port, 5. Outlet Ports and 8. Vent Port. Designator — Material S — SS316 L — SS316L C — Carbon Steel B — Brass	B

J Series Mounting Bracket





Ordering Number of JMTB Series Mounting Bracket

Pipe Size	Basic Ordering #	Bracket Material
1	JMTB-1-	
2	JMTB-2-	S: Stainless Steel
3	JMTB-3-	C: Carbon Steel
4	JMTB-4-	

- 2 sets of mounting brackets are supplied for one unit of J Series manifold.

Two (2) sets of Mounting Bracket consists of ;
- U-Bolt x 2
- Nut x 4
- Washer x 4
- Bracket x 2



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IDK-LOK

V86M Series
Manifold Ball Valve

Rev. 01-01
Aug. 2023

DK-LOK®
Manifolds & Gauge Root

V86M Series Manifold Ball Valve

Rev.01-01
Aug.2023

Pressures up to 6000 psig (413 bar)



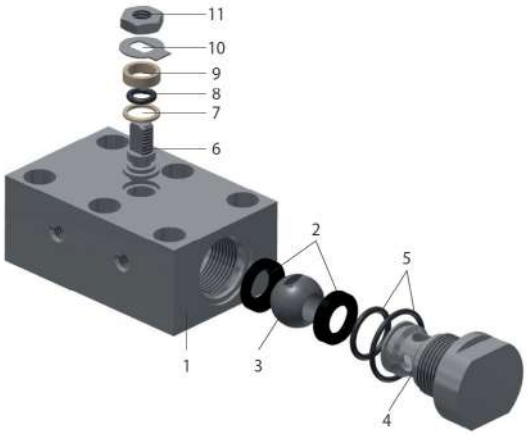
Features

- Quarter turn ball valve that provides fast on-off operation suitable for emergency on-off applications.
- Bolt-on design to insure mounting alignment and stability.
- Mounting brackets and drive dogs designed in compliance with standard ISO pattern.

Features

- Working Pressure 6000 psig (413 bar)
- Temperature Range -40 to 248°F (-40 to 120°C)
- Orifice : ø10.0mm

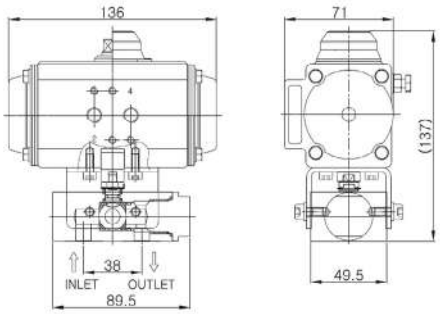
Material of Construction



V86M-FLG-6-S	
Component	Material
1. Body	ASTM A276/479 TYPE316
2. Ball Seat	POM
3. Ball	ASTM A276/479 TYPE316
4. Connector	ASTM A276/479 TYPE316
5. Connector O-ring	FKM
6. Stem	ASTM A276/479 TYPE316
7. Stem Bearing	PEEK
8. Stem O-ring	FKM
9. Grand	PEEK
10. Locking Tap	STAINLESS STEEL
11. Hex. Nut	STAINLESS STEEL

・Wetted parts and lubricants listed in blue.

Pneumatic Actuator



V86M series Pneumatic actuators are designed to accommodate remote valve actuation.

Actuator Type	Ordering Number		Moment Values (P=6 bar)
	Normal Close	Normal Open	Nm
Single Return	PCS2	POS2	5.3
Double Acting	PD1	-	14.4

Factory Test

Every valve is tested with nitrogen gas @ 1000 psig (68 bar) for leakage at the seat to maximum allowable leak rate of 0.1 SCCM. The stem packing is tested with nitrogen gas @ 1000 psig for no detectable leakage.

Safe Valve Selection

The selection of a valve for any application or system design must be considered to ensure safe performance. Valve function, valve rating, material compatibility, proper installation, operation and maintenance remain the sole responsibility of the system designer and the user. DK-Lok Corporation accepts no liability for any improper selection, installation, operation or maintenance.

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DK-LOK

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IDK-LOK

VE56 Series

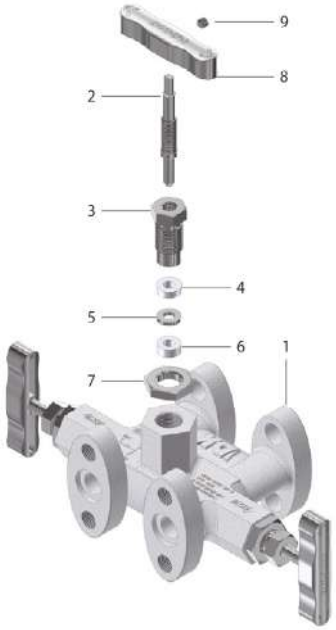
Rev. 01-01
Aug. 2023

DK-LOK®
Manifolds & Gauge Root

VE56 Series

Rev.01-01
Aug.2023

Pressure Rating up to 5,000 psig (345 barg)



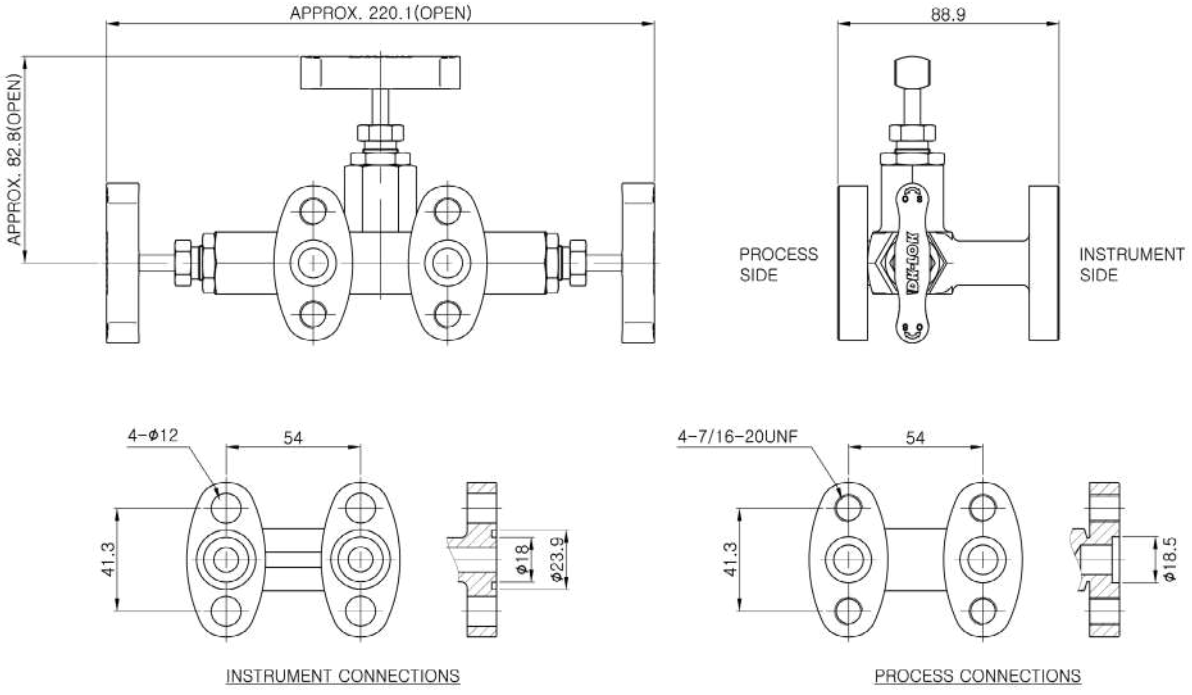
Features

- Packing below stem threads is to isolate threads from system fluid and lubricant washout.
- Bonnet permits stem packing adjustment.
- One piece body construction provides strength.
- Burr-free internal surface.

Material of Construction

Component	Material
1. Body	ASTM A351 CF8
2. Stem	ASTM A276 TYPE 316
3. Bonnet	ASTM A276 TYPE 316
4. Upper Packing	PTFE
5. Packing Gland	ASTM A276 TYPE 316
6. Lower Packing	PTFE
7. Lock Nut	ASTM A276 TYPE 316
8. Handle	Stainless Steel
9. Set Screw	Stainless Steel

Ordering Information and Dimensions



Basic Ordering Number	End Connections	
	Process	Instrument
VE56-3V2F-	Flange design meets MSS SP-99	Flange design meets IEC 61518

- Every valve is factory tested with nitrogen gas at 1,000 psig (68.9 bar) for leakage at seat to a maximum allowable leak rate of 0.1 SCCM. The packing is tested with nitrogen gas for no detectable leakage.
- Every valve is cleaned and packaged in accordance with DK cleaning standard DC-01.

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IDK-LOK

V46, V56 Series

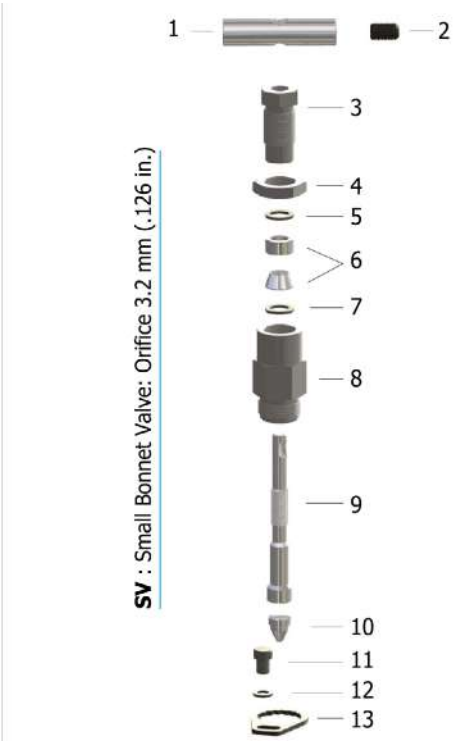
Rev. 01-01
Aug. 2023

DK-LOK®
Manifolds & Gauge Root

V46 series Gauge Root Valves
V56 series Instrument Manifolds

Rev.01-01
Aug.2023

Pressure Rating up to 6000 psig (413 bar)



Materials of Construction

Component	Valve Body Materials	
	Stainless steel	Carbon steel
	Bonnet Valve	
	Grade/ASTM specification	
1. Handle	Stainless steel	Aluminiun black anodized
2. Set screw	SS316/A276 or A479	SS316/A276 or A479
3. Packing bolt		C.Steel/A108
4. Lock nut		
5. Upper gland		SS316/A276 or A479
6. Packing	Standard chevron PTFE packing, optional Grafoil	
7. Lower gland	SS316/A276 or A479	SS316/A276 or A479
8. Bonnet		C.Steel/A108
9. Stem		SS316/A276 or A479
10. Non-rotating stem tip	SS630/A564	
11. Lock plate bolt	Stainless steel	
12. Spring washer	Stainless steel	
13. Lock plate	Stainless steel	Carbon steel
14. Body	SS316/A276 or A479	C.Steel/A108 or A105, Yellow zinc galvanized
Flange seals (not shown)	PTFE/D1710, optional Grafoil and florocarbon FKM O-ring	
Flange bolts (not shown)	Stainless steel/A193	Carbon steel/A193
Lubricant	Fluorinated base with PTFE and tungsten disulfide	
	Hydrocarbon based	

Wetted components are listed in blue.

Grafoil: TM UCAR



Model shown: VBR56-5V8N-S



MV : Medium Bonnet Valve Orifice 5.0 mm (.196 in.)

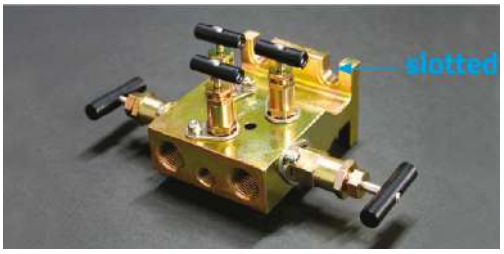
Features

- **Non-rotating** stem tip at closure for long-life and leak-tight shutoff.
- **Chevron PTFE packing** design provides far improved sealing integrity.
- **Packing** below stem threads is to isolate **threads** from system fluid and lubricant washout.
- Packing bolt permits stem **packing adjustment.**
- Standard **Lock plate** ensures the valve fastened to the body even excessive operating torque is applied.
- **One piece body construction** provides strength.
- Burr-free internal surface.



Image shown:
Bonnet Valve.

Feature of packing below stem thread maintains in small, medium and large bonnet valve on manifolds as well as on gauge root valves.



VES56 series **slotted flange** feature facilitates manifolds mounting with long stud hex nut.

Model shown: VES565-5V1F8N-C

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Pressure-Temperature Ratings

Manifolds and Gauge Root Valves

Body Material	Packing material	Temperature Rating	Pressure Rating @ 37 °C (100 °F)	Pressure Rating @ Max. Temp.
Stainless steel	PTFE	-54 to 232 °C (-65 to 450 °F)	413 bar (6000 psig)	285bar @ 232 °C 4130 psig @ 450 °F
	Grafoil	-54 to 648 °C (1) (-65 to 1200 °F)		118bar @ 648 °C 1715 psig @ 1200 °F
Carbon steel	PTFE	-29 to 176 °C (-20 to 350 °F)	413 bar (6000 psig)	360 bar @ 176 °C (5230 psig @ 350 °F)
	Grafoil	-29 to 176 °C (-20 to 350 °F)		

(1) Grafoil packing rating is limited to 537 °C (1000 °F) with flange end connection. In air, Grafoil rating is limited to 523 °C (975 °F), in steam it can go up to the maximum temperature of 648 °C (1200 °F).

• -28 to 204 °C (-18 to 399 °F) with optional fluorocarbon FKM flange seals.



Design

- D-Pro Manifolds and Gauge root valves are designed to ASME B16.34 Class 2500 for pressure-temperature ratings.
- Pressure boundary wetted parts are selected to Chapter III, 123 Materials of ASME B31.1.
- Valve ratings are based on ASME process piping code B31.3.
- To determine pressure rating at 37 °C (100 °F) in accordance with Power piping code B31.1, multiply by 0.94 for stainless steel.

Factory test

- Every manifolds and gauge root valve is factory tested with nitrogen @ 69 bar (1000 psig) for leakage at the seat to a maximum allowable leak rate of 0.1 SCCM.
- Stem packing is tested for no detectable leakage.
- Optional hydrostatic shell test is performed with pure water at 1.5 times the working pressure.

Packing adjustment and Actuation Torque

- Extreme or rapid temperature cycle while valve in service may require packing adjustment. Tighten the packing bolt 1/16 turn clockwise.
- Valves that have not been actuated for a period of time may have a higher initial actuation torque.

Sour Gas Service

- For use valve in sour gas, materials for wetted components are selected in accordance with NACE MR0175 latest revision.

Ordering and Technical Information

Manifolds		Basic Ordering Number	End Connections		Orifice mm(in.)	Weight Kg (lb.)
			Process	Instrument		
Remote Mount		VBR56-2V8N-	1/2 in. Female NPT		3.2 (.126)	0.8 (1.8)
		VBR56-3V8N-			6.4 (.251)	2.0 (4.4)
		VBR56-5V8N-				2.2 (4.9)
Direct Mount	Single Flange	VE56-2V1F8N-	1/2 in. Female NPT to Flange. Flange design meets MSS SP-99.		3.2 (.126)	1.0 (2.2)
		VE56-3V1F8N-			6.4 (.251)	2.2 (4.9)
		VE56-5V1F8N-				2.7 (6.0)
	Double Flange	VE56-3V2F-	Flange to Flange. Flange design meets MSS SP-99		6.4 (.251)	2.5 (5.5)
		VE56-5V2F-				2.7 (6.0)
	Single Flange with slotted feature	VES56-2V1F8N-	1/2 in. Female NPT to Flange. Flange design meets MSS SP-99.		3.2 (.126)	1.0 (2.2)
		VES56-3V1F8N-			6.4 (.251)	2.2 (4.9)
		VES56-5V1F8N-				2.7 (6.0)
	Double Flange with slotted feature	VES56-3V2F-	Flange to Flange. Flange design meets MSS SP-99		6.4 (.251)	2.5 (5.5)
		VES56-5V2F-				2.7 (6.0)
	Vertical	VBD56-2V8N-	1/2 in. Female NPT to Flange. Flange design meets MSS SP-99.		3.2 (.126)	1.6 (3.5)
		VBD56-3V8N-			5.0 (.196)	1.7 (3.8)
		VBD56-5V8N-			6.4 (.251)	3.3 (7.3)
		VBD56S-5V8N-			5.0 (.196)	2.7 (6.0)

How to order manifolds with options

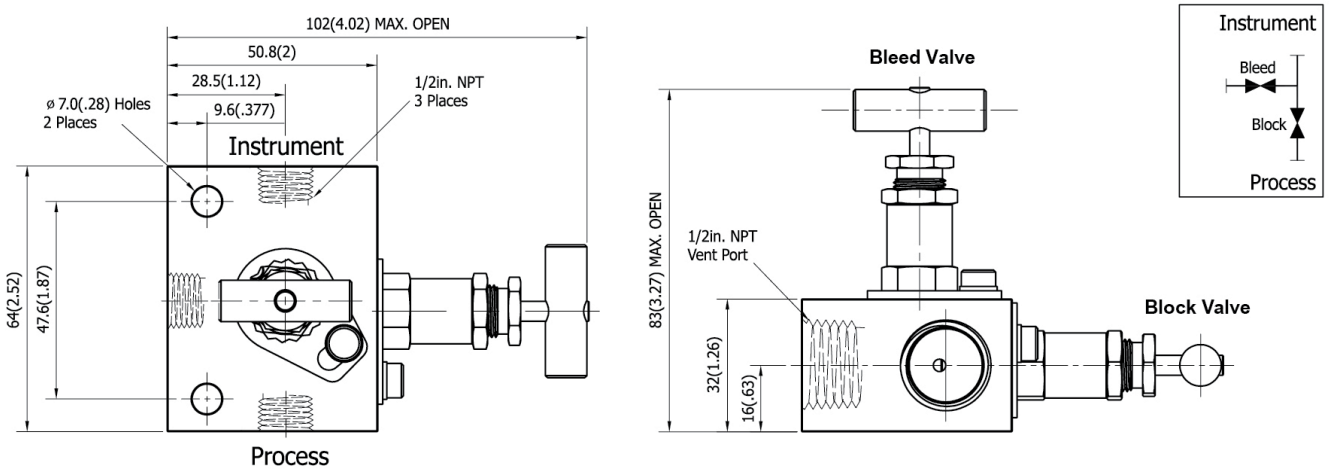
- To order the optional Grafoil packing, add -GF to the ordering number, i.e., VES56-3V1F8N-GF-
- To order sour gas service valve, add-SG to the ordering number. i.e., VES56-3V1F8N-GF-SG-
- To order optional GRAFOIL or FKM O-ring flange seal, add -GF or -VT to the ordering number/ i.e., VES56-3V1F8N-GF-SG-GF(or- VT)-
  Flange seal designators: -GF for Grafoil, - VT for FKM O-ring.
- To complete the ordering number, select valve body material designator:
  - S for SS316, - C for Carbon steel. i.e., VES56-3V1F8N-GF-SG-VT-S.

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

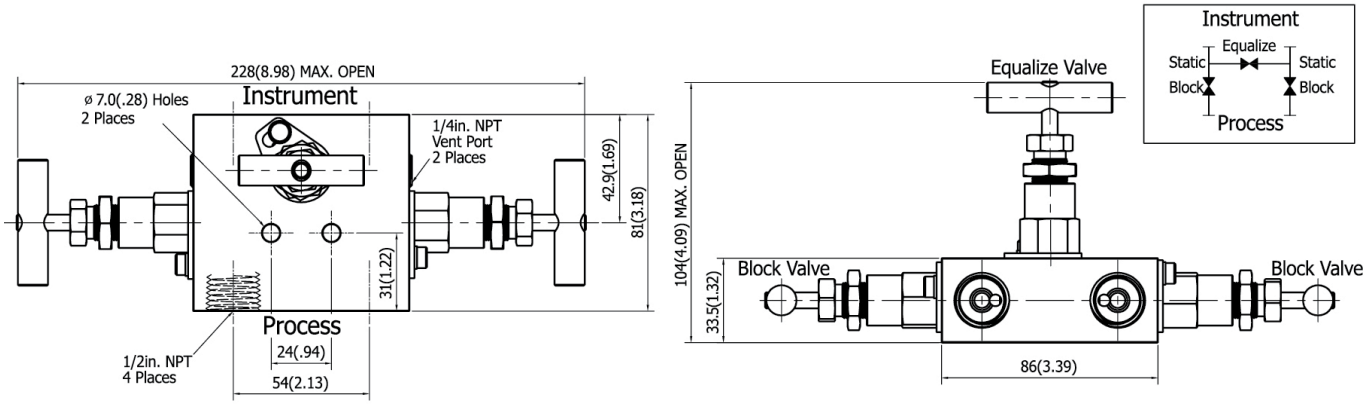
Remote mount

Unit: mm (in.)

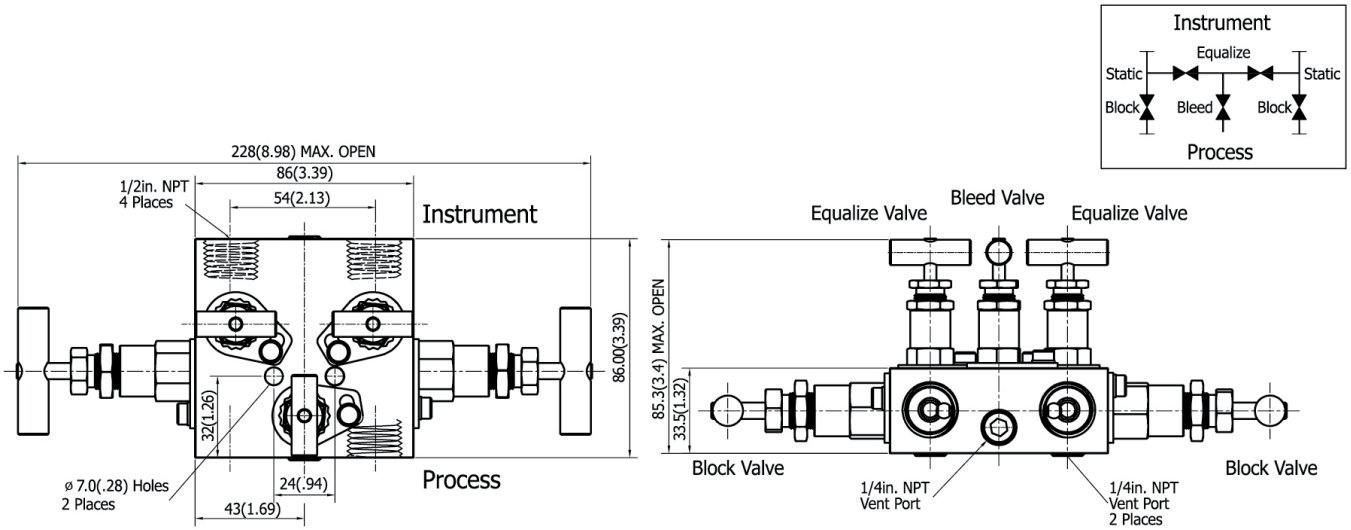
VBR56-2V8N-



VBR56-3V8N-



VBR56-5V8N-

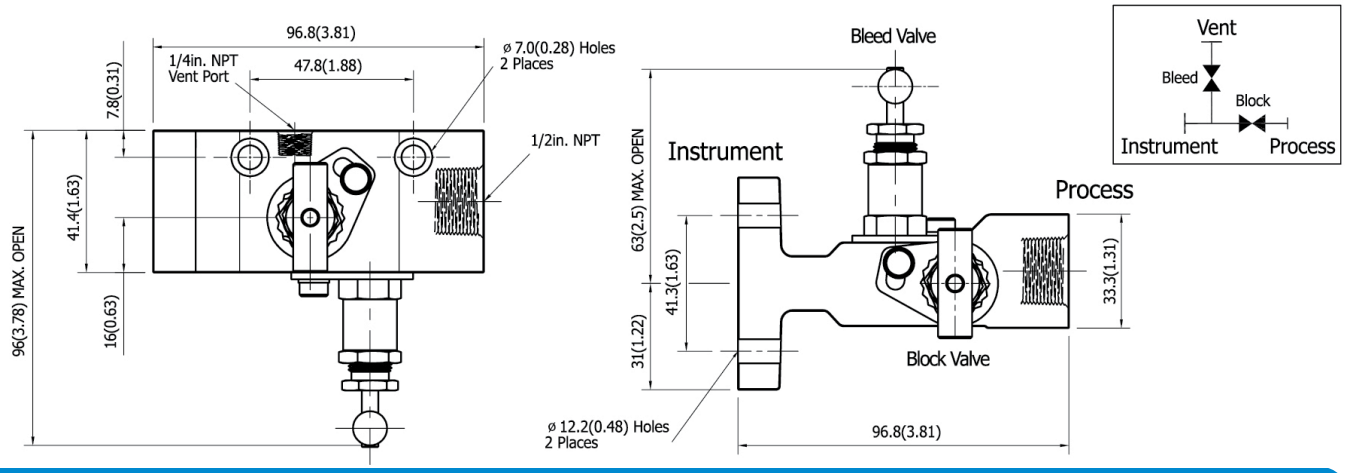


All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

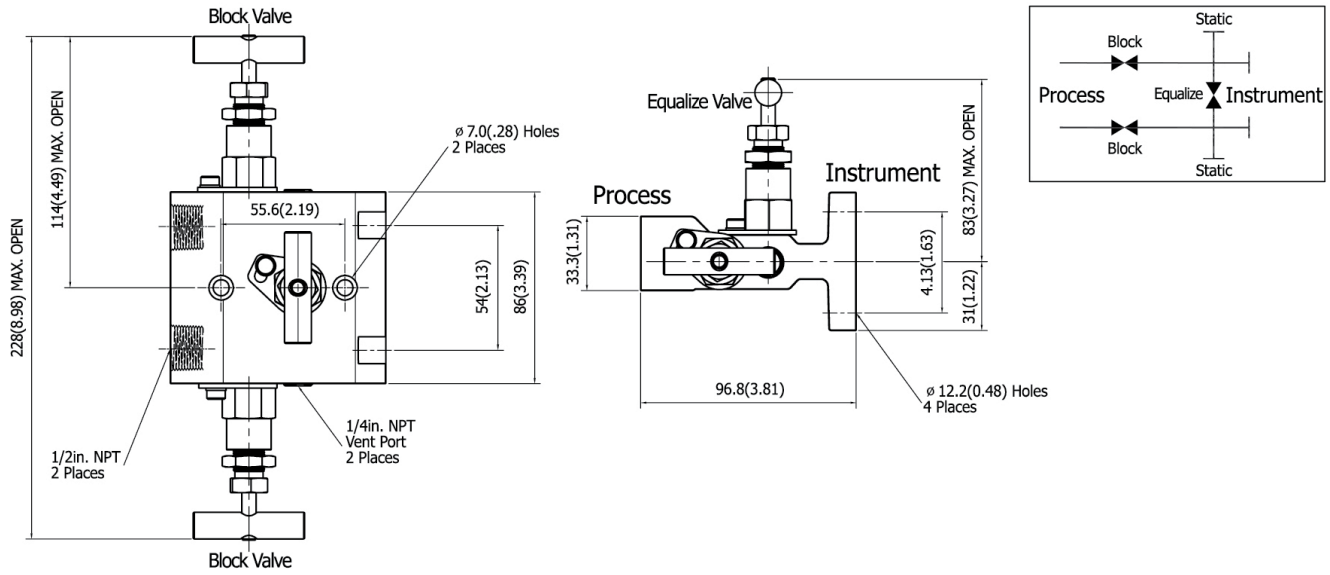
Single Flange Direct Mount

Unit: mm (in.)

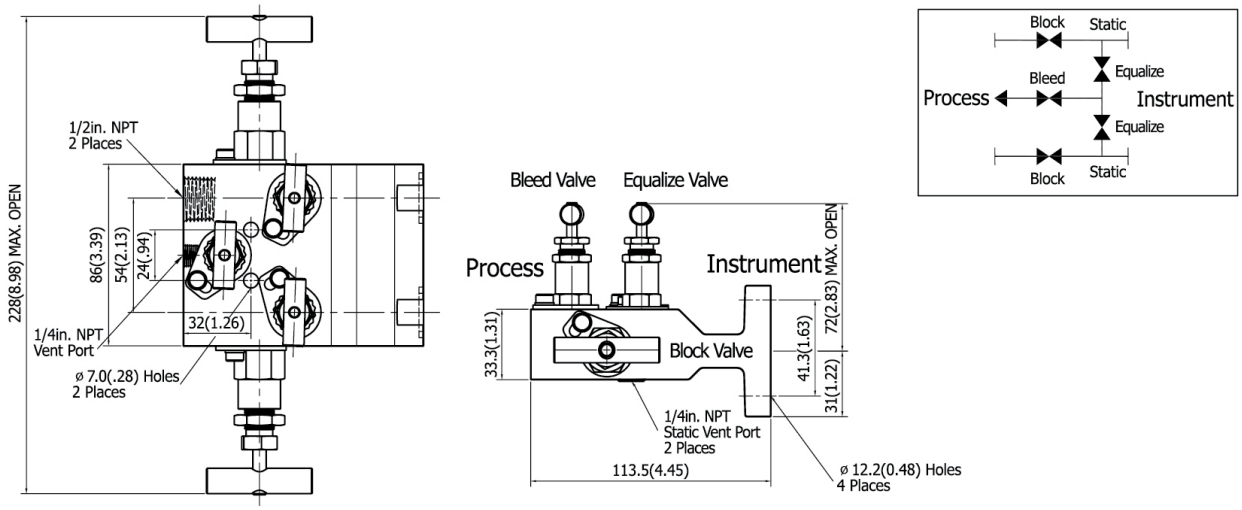
VE56-2V1F8N- / VES56-2V1F8N



VE56-3V1F8N- / VES56-3V1F8N-



VE56-5V1F8N- / VES56-5V1F8N-

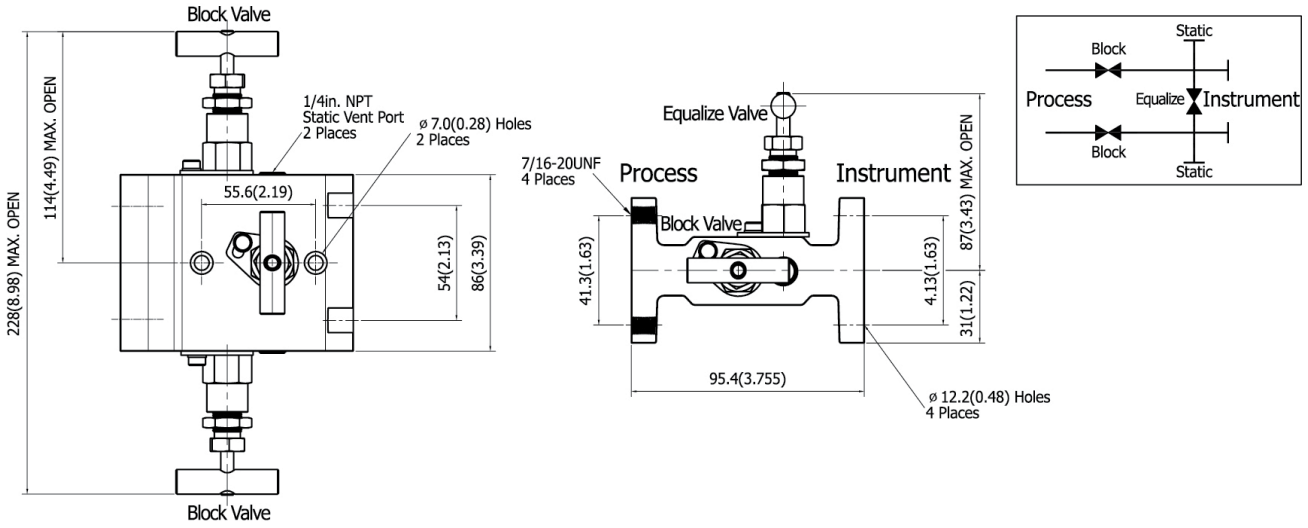


All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

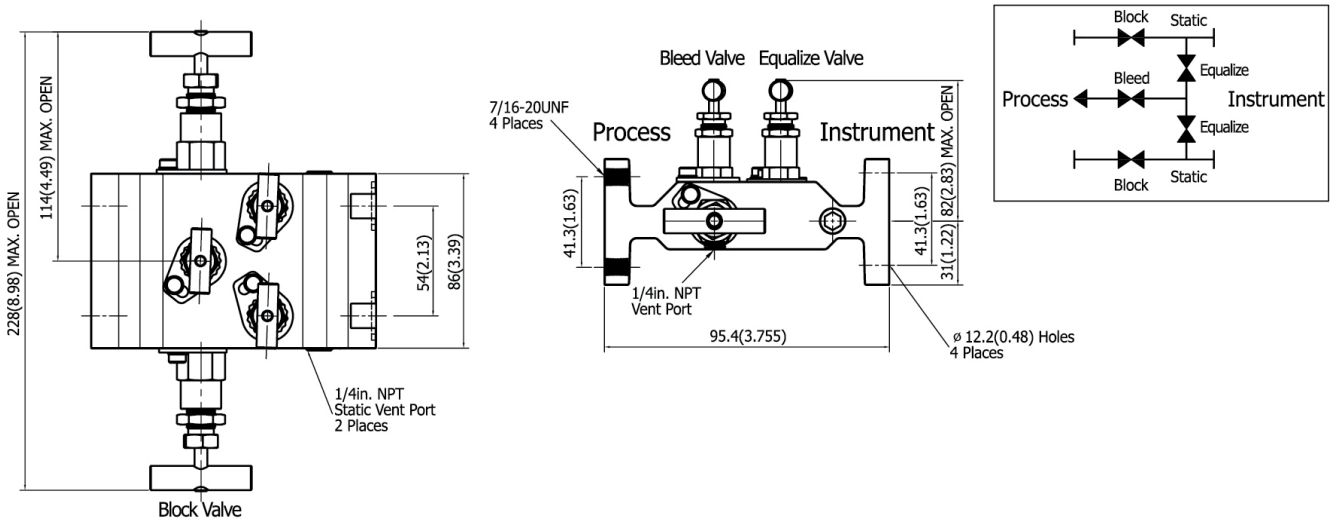
Double Flange Direct Mount

Unit: mm (in.)

VE56-3V2F- / VES56-3V2F-



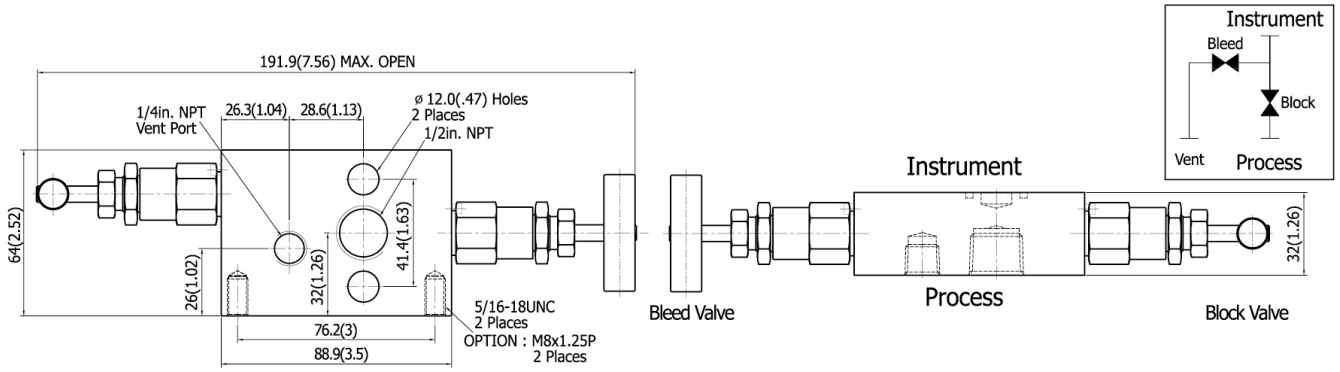
VE56-5V2F- / VES56-5V2F-



Vertical Direct Mount

Unit: mm (in.)

VBD56-2V8N-

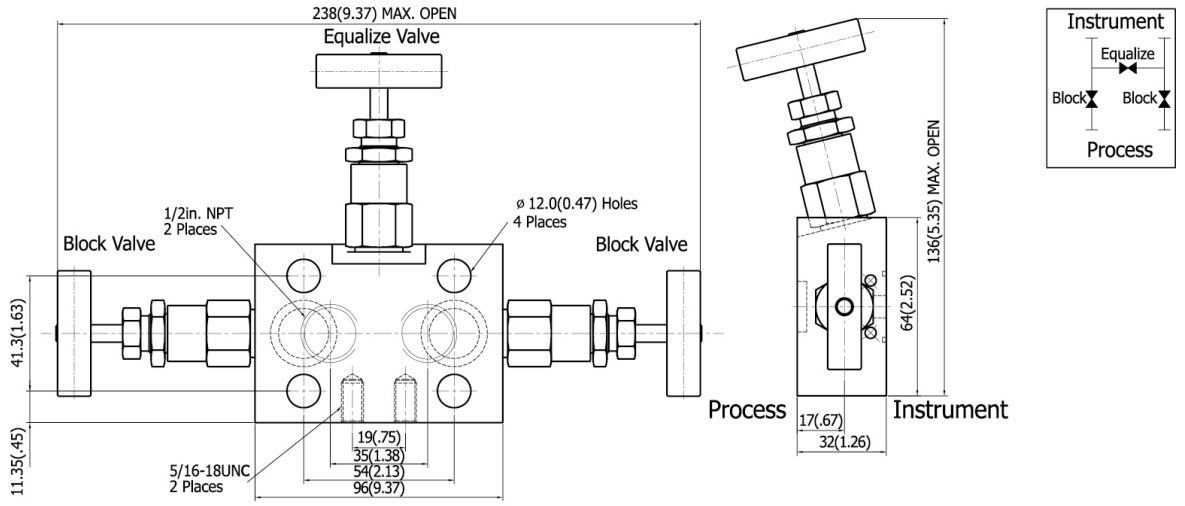


All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

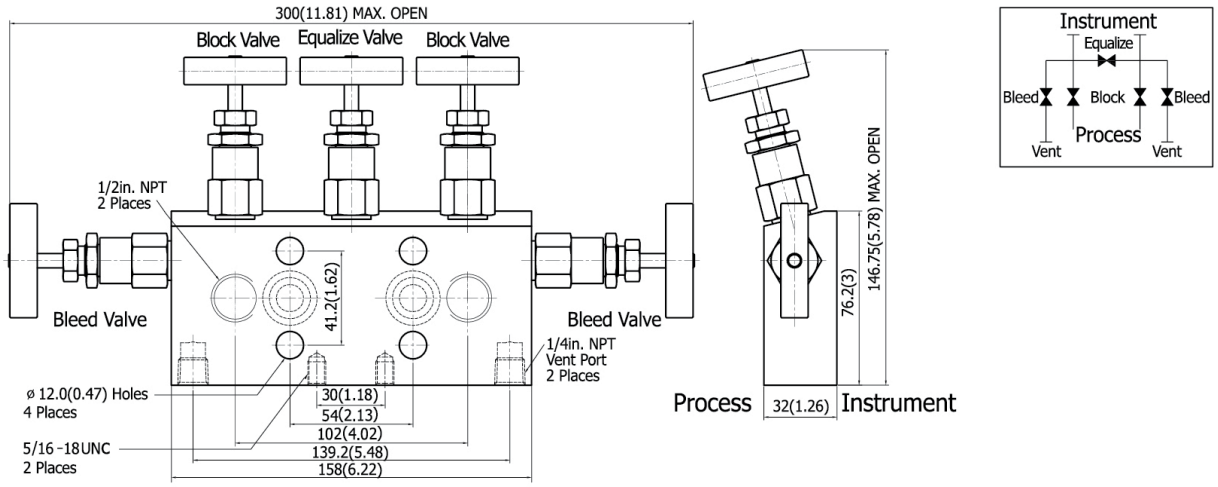
Vertical Direct Mount

Unit: mm (in.)

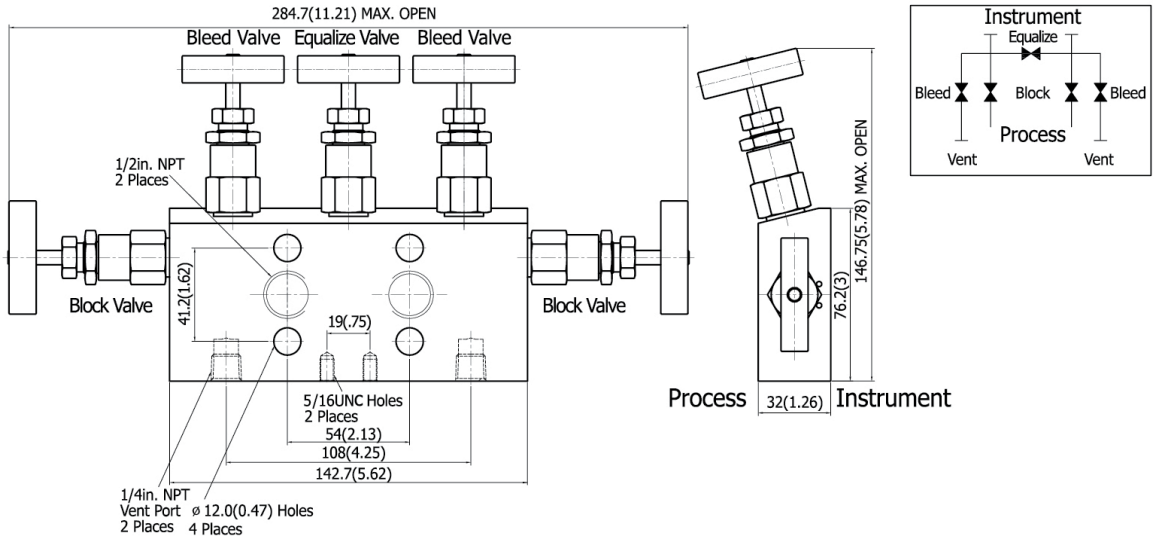
VBD56-3V8N-



VBD56-5V8N-



VBD56S-5V8N-



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Manifolds Accessories

Flange Bolts

For special mounting applications optional long and short bolts are available. See flange bolt specification below.

Flange Bolt	Threads	Length mm (in.)	Hex Size mm (in.)	Basic Ordering Number	Bolt Material Designator
Standard hex bolt	7/16-20	45.0 (1.77)	15.87 (5/8)	Z56BM-	Stainless steel: S Carbon steel: C
Long stud hex nut	7/16-20	58.0 (2.28)		Z56BL-	
Short hex head bolt	7/16-20	25.0 (.98)		Z56BS-	

To order, add the material designator to the bolt ordering number. i.e., Z56BM-S

• Slotted flange manifolds is supplied with long stud hex nut: Z56BL-



Flange Seals

Flange seals are available in standard PTFE, Grafoil and fluorocarbon FKM O-ring for system compatibility.

Seal Material	Temperature Rating °C (°F)	Ordering Number
PTFE	-53 to 121 (-65 to 250)	Z56PE
Grafoil	-53 to 537 (-65 to 1000)	Z56GF
Fluorocarbon FKM (Viton)	-28 to 204 (-18 to 399)	Z56VT

To order, use the ordering number. i.e., Z56PE.

Oval Flange & Pipe Nipple

Eccentric Flanges and Pipe Nipple allow connections of flange-to-flange manifolds to process flange taps or process root valves.

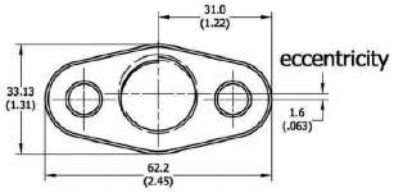


Oval Flange

Pipe Nipple

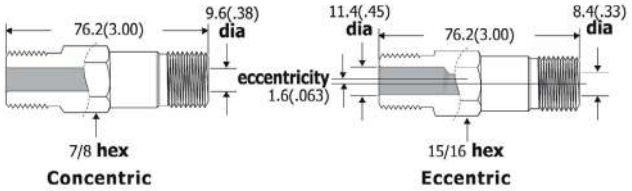
Oval Flange Ordering Number and Technical Information

Material	End Connection	End Connection Size	Ordering Number
Stainless steel	Female NPT	1/2 in. NPT	V56OF-8N-S
Carbon steel			V56OF-8N-C



Pipe Nipple Ordering Number and Technical Information

Material	Ordering Number	Type	Pressure Rating @20°C(70°F)bar(psig)	Temperature Rating°C(°F)	Pressure Rating @ Max. Temp.
Stainless steel /A276	G56NE-8N-S	Eccentric	516 (7 500)	-53 to 648 (-65 to 1200)	147 bar @648 °C (2140 psig @1200°F)
	G56NC-8N-S	Concentric	689 (10 000)		196 bar @648 °C (2850 psig @)1200 °F)



Calibration Fittings

Select DK-LOK differential pressure calibration fitting depending on the bleed port of the transmitter plug.

Ordering Number

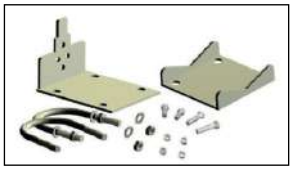
Material	Ordering Number	DK-LOK OD	Straight Male Thread
Stainless steel /A276	DPCM4-1U-S	1/4 in.	1/4-28UNF
	DPCM4-2U-S		5/16-24UNF



Mounting Bracket Kit

Bracket kit containing bracket, U-bolt, bolt, nut and washer allows horizontal and vertical manifold mounting.

Material	Ordering number
Stainless steel	Z56MBK-S
Carbon steel	Z56MBK-C



Manifold Mounting



Bonnet Valve Kit

Bonnet valves are available for field assembly.

Bonnet Valve	Basic Ordering Number	Packing Material Designator	Bonnet Valve Material Designator
Small Bonnet Valve	V56SV-	PTFE: Nil Grafoil: GF	Stainless steel: S Carbon steel: C
Medium Bonnet Valve	V56MV-		
Large Bonnet Valve	V56LV-		

• Kit contains bonnet valve, lock plate and set screw.

How to order

Select designator for the desired packing and valve material.
i.e., V56SV-GF-S

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

D-Pro V46 series Gauge Root Valves

D-Pro Gauge Root Valves offer a safe way of positioning gauges and installing pressure switches.

Features

- 1-2 in. and 3/4 in. male to 1/2 in. female end connections.
- 1/2 in. female gauge ports standard.
- Minimum schedule 160 pipe wall on valve inlet.

Ordering Information and Technical Data

Valve Ordering Number	End Connection NPT	Orifice mm(in.)	Body Length mm (in.) L	MAX. OPEN mm (in.) H	SQ mm (in.)	G mm (in.)	A mm (in.)
V46G-8N-S	1/2 Male to 1/2 in. Female	5.0 (0.20)	90.0 (3.54)	85.9(3.38)	32(1.26)	-	50.00(1.97)
V46GR-8N-S	1/2 Male to 1/2 in. Female		136.0 (5.35)			38.10(1.50)	
V46GR-12N8N-S	3/4 Male to 1/2 in. Female		136.0 (5.35)				
V46GRL-8N-S	1/2 Male to 1/2 in. Female		184.0 (7.24)				
V46GRL-12N8N-S	3/4 Male to 1/2 in. Female		184.0 (7.24)				
V46V2-8N-S	1/2 Male to 1/2 in. Female		119.0 (4.68)				
V46V2-F-8N-S	1/2 Female to 1/2 in. Female		109.0 (4.29)				

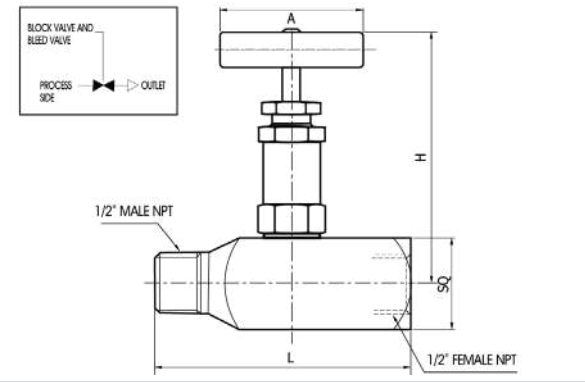
- V46GRL has an extended 4.8 inch of pipe insulation.
- V46 series uses Medium Bonnet Valve: Orifice 5.0 mm (.196in.)

How to order

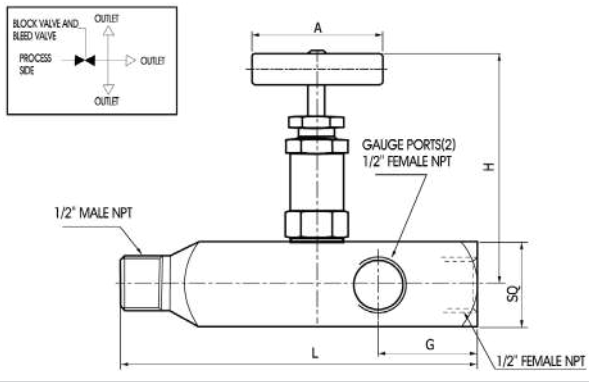
- To order Grafoil option, insert-GF in the ordering number. i.e., V46G-8N-**GF**-S
- To order sour gas service valve, insert -SG in the ordering number. i.e., V46G-8N-GF-**SG**-S

Unit: mm (in.)

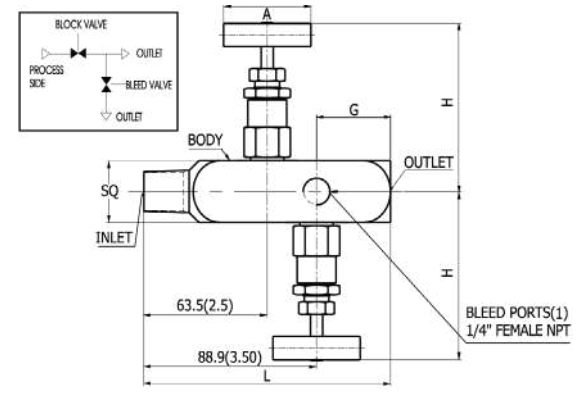
V46G Gauge Valve



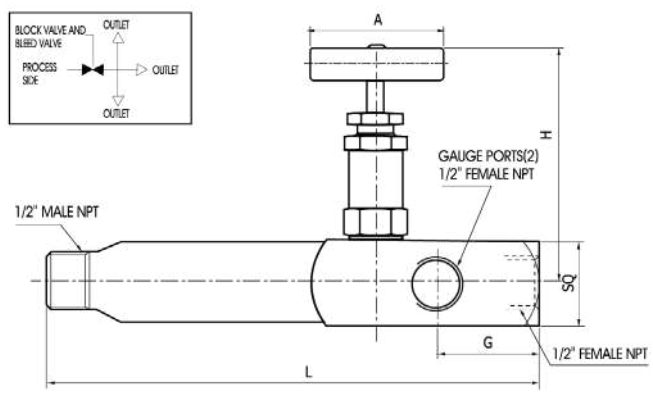
V46GR Gauge Root Valve



V46V2 Valve



V46GRL Extended Gauge Root Valve



Safe Valve Selection

The selection of a valve for any application or system design must be considered to ensure safe performance. Valve function, valve rating, material compatibility, proper installation, operation and maintenance remain the sole responsibility of the system designer and the user. Dk Tech accepts no liability for any improper selection, installation, operation or maintenance.

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

DK-LOK

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Tel. +82-55-338-0114 Fax. +82-55-901-0141 **www.dklok.com**

VDK-LOK

VD3 Series
Diaphragm Valves

Rev. 01-01
Aug. 2023



DK-LOK®
Diaphragm Valves

VD3 Series Diaphragm Valves

Rev.01-01
Aug.2023

VD3 Series Pressure Rating up to 241bar (3,500 psig)



Features

- It is featured that the diaphragm valve serves economical, high performance and high cycle life time.
- The diaphragm valve is used for shut-off, isolation in gas control systems, and analyzer sampling systems.
- The valve ensures positive and consistent shut-off with manual and offers a metal to metal seal to atmosphere for leak integrity with thin plate diaphragm.

Technical Data

Body Material	Seat Material	Temperature Rating °F (°C)	Pressure Rating @ -40 ~ 160 °F (-40 ~ 70°C)	Control Volume
SS316L/A276	PCTFE	-40 ~ 150 (-40 ~ 66)	0 ~ 3,500 psig (241 barg)	1 cc
BRASS/B16	PCTFE	-40 ~ 150 (-40 ~ 66)	0 ~ 3,500 psig (241 barg)	1 cc

Metarial of Construction



Components	Valve Body Materials	
	Stainless Steel	Brass
	Material Grade/ASTM Specification	
1. BODY	SS316L / A276	Brass B16
2. SEAT	PCTFE	
3. DIAPHRAGM	UNS R30003 (Elgiloy)	
4. STEM	SS316L / A276	
5. BONNET	SS316L / A276	
6. KNOB NUT	Stainless Steel	
7. KNOB	ABS	
8. WASHERS	Stainless Steel	
9. LOCK NUT	Stainless Steel	
10. KNOB CAP	ABS	

Factory test

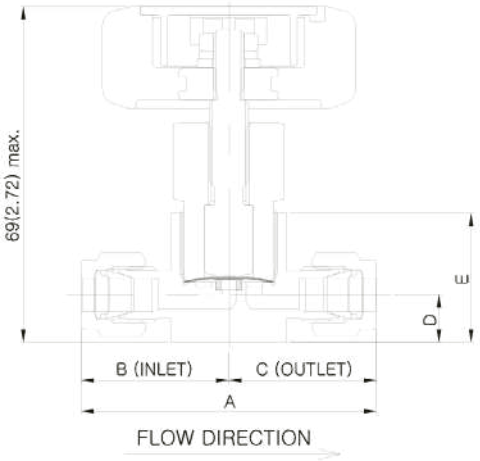
Every valve is factory tested with nitrogen gas @1,000 psig (68.9 barg) for leakage to a maximum allowable leak rate of 0.1 SCCM at seat. Hydraulic shell test is optionally performed at 1.5 times the working pressure to a requirement of no detectable leakage with a liquid leak detector.

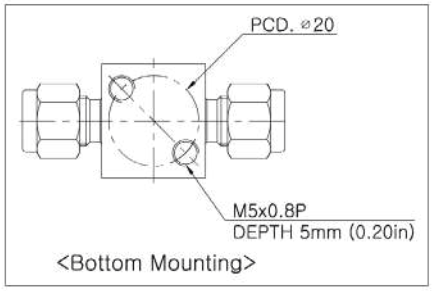
Cleaning and Packaging

Every valve is cleaned and packaged in accordance with DK-Lok cleaning standard DC-01. Special cleaning and packaging in accordance with DK-Lok DC-11 ensures compliance with product cleaning of ASTM G93 Level C is available on request for valves with PCTFE and PTFE seats.

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Dimensions and Port Layout





Basic Ordering Number		End Connections		Orifice mm (in.)	Cv	Dimensions, mm (in.)				
		Inlet (B)	Outlet (C)			A	B	C	D	E
VD3-	D-4T-	1/4 in. DK-Lok		2.8 (0.11)	0.17	58.6 (2.31)	29.3 (1.15)	29.3 (1.15)	9.4 (0.37)	25.4 (1.00)
	M-4N-	1/4 in. Male NPT				48.4 (1.91)	24.2 (0.95)	24.2 (0.95)		
	F-4N-	1/4 in. Female NPT				50.8 (2.00)	25.4 (1.00)	25.4 (1.00)		
	DF-4T4N-	1/4 in. DK-Lok	1/4 in. Female NPT			54.7 (2.15)	29.3 (1.15)	25.4 (1.00)		
	FD-4N4T-	1/4 in. Female NPT	1/4 in. DK-Lok				25.4 (1.00)	29.3 (1.15)		
	DM-4T4N-	1/4 in. DK-Lok	1/4 in. Male NPT			53.5 (2.11)	29.3 (1.15)	24.2 (0.95)		
	MD-4N4T-	1/4 in. Male NPT	1/4 in. DK-Lok				24.2 (0.95)	29.3 (1.15)		
	MF-4N4N-	1/4 in. Male NPT	1/4 in. Female NPT			49.6 (1.95)	24.2 (0.95)	25.4 (1.00)		
	FM-4N4N-	1/4 in. Female NPT	1/4 in. Male NPT				25.4 (1.00)	24.2 (0.95)		

How to Order

Select applicable valve basic ordering number, options and body material designator listed below.

	-A	-PK	-NI	-S -B
VD3-F-4N	↓	↓	↓	↓
	Handle Type	Seat Materials	Plating of Body	Body Material
	Nil : Handwheel **A** : Indicating Arrow **L** : Lever	**Nil** : Standard PCTFE **PK** : PEEK	**Nil** : Not Applicable **NI** : Nickel-plated	**S** : 316L stainless steel **B** : Brass

Safe Valve Selection

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DK-LOK

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IDK-LOK

V13W Series

Rev. 01-01
Aug. 2023

DK-LOK®
Bellows Valves

V13W Series Bellows Valves

Rev.01-01
Aug.2023

Severe Service Bellows Valves, Double Sealed
Working Pressure up to 2,500 psig (172 bar)

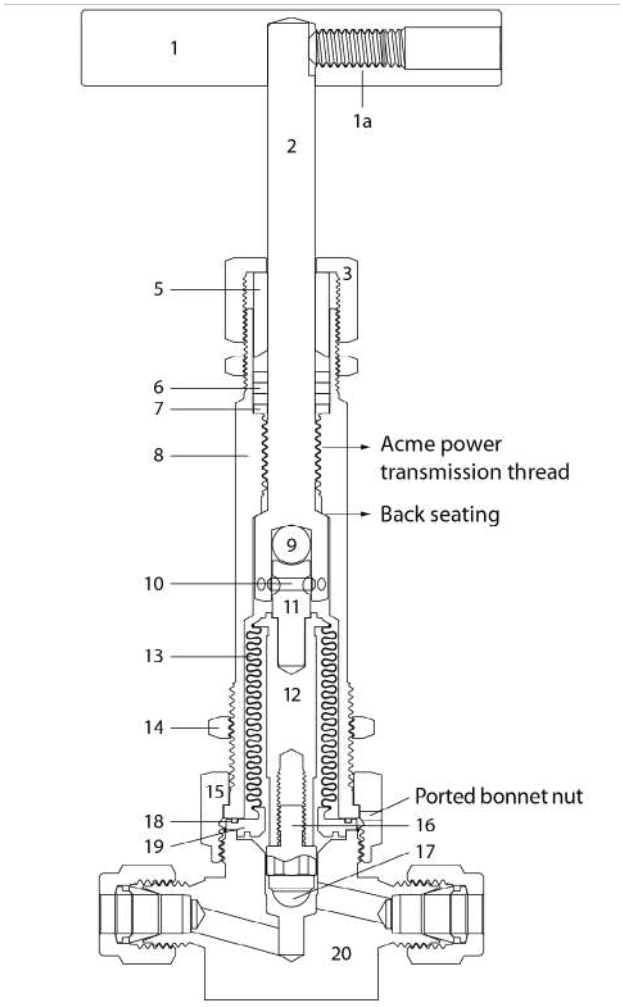
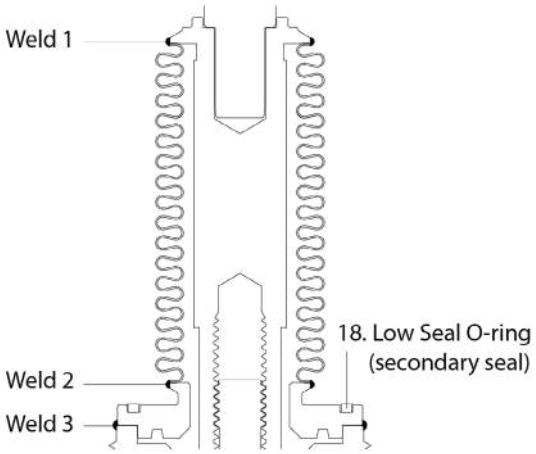


Figure 1.
Bellows Subassembly (Primary Seal)



Features

V13W series bellows valve offers the most difficult fluid handling application. This design with the secondary sealing system fits to the need for a safe and reliable system.

Applications include cryogenic to high temperatures, high pressure to vacuum in power plants, instrumentation, panels, and critical sampling system for toxic, radioactive, and hazardous fluids.

Bellows subassembly (Figure 1)

Welding upper end of the bellows to 12. stem (weld 1) and the other end to 19. stem weld ring (weld 2), this bellows is then welded to the valve body (weld 3).

Bellows subassembly with the three places of welding provides all metal, hermetical sealed valve. This primary seal offers a complete sealing between the system and atmosphere where leakage is not accepted.

Secondary seal (6), (18).

All welded stainless steel valves with secondary seal makes this valve for the most difficult fluid containment applications.

Secondary sealing prevents leakage to atmosphere in the event of a bellows rupture due to excessive pressurization. Leakage past the primary seal is contained by secondary seal.

Actuator threads (2)

Hardened 440C stainless steel actuator is for maximum strength, wear resistance, and positive stem retraction.

Acme power transmission threads constructed on actuator (2) and the bonnet (8) for low operation torque and to handle the extreme force transmitted to the threads in high pressure bellows valve. The threads are not in contact with the process fluid and are protected from atomospheric containments by the packing (6).

Valve actuation

Valves in high pressure tend to stick in the closed position. The ball bearing (9), and double pin (10) on a shoulder of stem extension (11) provide positive lifting of stem (12) and stem retraction.

Compressing or stretching the bellows allows linear motion of the stem with the convolutions.

Ported bonnet nut (15)

This allows monitoring sealing condition of weld 3 (Figure 1) and low seal O-ring (18).

Turns to Open

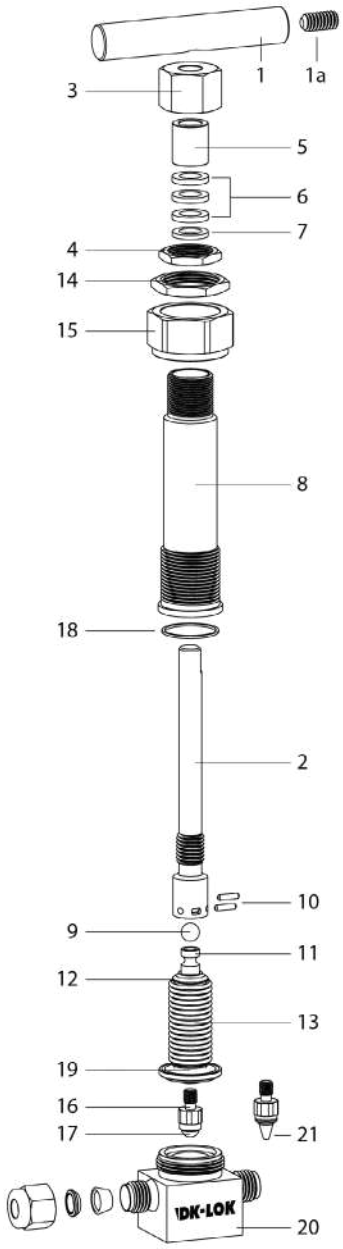
Bellows valves operated by manual actuating bar handle requires around 1 3/4 turns on the V13WA series and 2 1/2 turns on the V13WB & V13WC series to open the vales to full flow.

A jam nut (4) is provided for locking the gland nut (3).

Additional Features

- Non-rotating stem disc (17).
- Standard panel (14) and bottom mounting.
- Union bonnet construction allows packing (6) replacement for maintenance.
- Safety back-seat sealing in the valve closed position.
- DK-Lok tube fitting and socket or butt weld end connections.
- Regulating stem disc for V13WA series.

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.



Materials of Construction

Component	Material Grade/ASTM specification
1. Handle	Aluminum Blue-anodized /B211
1a. Set Screw	Alloy Steel/ANSI 18.3
2. Actuator	440C SS/A276
3. Gland Nut	316SS/A479 or A276
4. Jam Nut	316SS/A479 or A276
5. Gland	316SS/A479 or A276
6. Packing	GRAFOIL, optional PTFE/D1710
7. Spacer	316SS/A479 or A276
8. Bonnet	316SS/A479 or A276
9. Ball Bearing	316SS/A479 or A276
10. Pin (2)	416SS
11. Stem Extension	440CSS/A276 or A276
12. Stem	316SS/A479 or A276
13. Bellows	Type 321 /A240 or 1.4541-DIN EN10028-7
14. Panel Mount Nut	316SS/A479 or A276
15. Bonnet Nut	316SS/A479 or A276
16. Stem Adapter	316SS/A479 or A276
17. Spherical stem disc	Cobalt alloy/AMS 5373
21. Optional regulating stem disc	316SS/A479 or A276
18. Low Seal O-Ring	316SS/A479
19. Stem Weld Ring	316SS/A479
20. Body	316SS/A479

Wetted parts and lubricants are listed in blue.

Lubricants
Spherical stem disc : Fluorinated-based.
Non-wetted lubricant : Silicon based

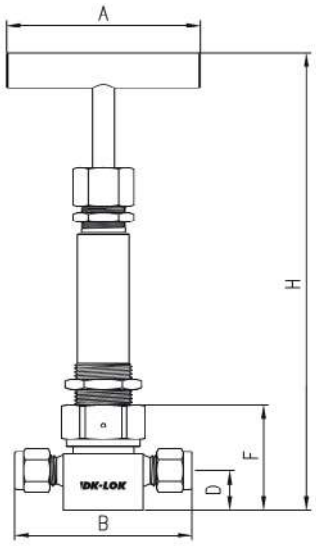
Factory Test

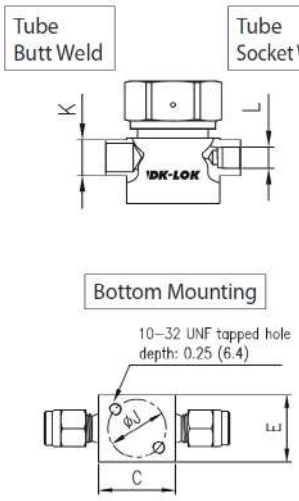
Every bellows valve is vacuum-tested with helium at room temperature for 5s to a maximum leak rate of 4×10^{-9} std cm^3/s at the seat, envelope, and all seals.

Cleaning and Packaging

Every bellows valve is cleaned and packaged in accordance with DK-Lok Corporation cleaning standard DC-01.
Optional DC-11 cleaning for oxygen application is available on request.

Ordering Information and Dimensions







Basic Ordering Number		End Connections Inlet	End Connections Outlet	Orifice	Dimensions, in (mm) B	C	D	E	F	H	J	K	L	A
V13WA-	D4T-	1/4 in.	DK-Lok	0.172 (4.37)	2.46 (62.5)	1.13 (28.7)	0.56 (14.2)	1.00 (25.4)	1.49 (37.8)	6.45 (164)	1.00 (25.4)	-	-	2.75 (69.9)
	D6M-	6mm	DK-Lok	0.172 (4.37)	2.46 (62.5)							-	-	
	SW4T-	1/4 in.	Tube Socket Weld	0.156 (3.96)	1.68 (42.7)							0.38 (9.7)	0.25 (6.4)	
	W6T-	3/8 in.	Tube Butt Weld	0.156 (3.96)	1.68 (42.7)									
V13WB-	D6T-	3/8 in.	DK-Lok	0.265 (6.73)	3.09 (78.5)	1.57 (39.9)	0.50 (12.7)	1.13 (28.7)	1.61 (40.9)	6.59 (167)	1.13 (28.7)	-	-	
	D10M-	10mm	DK-Lok	0.281 (7.14)	3.11 (79.0)							-	-	
	SW6T-	3/8 in.	Tube Socket Weld	0.281 (7.14)	2.27 (57.7)							0.50 (12.7)	0.38 (9.7)	
	W8T-	1/2 in.	Tube Butt Weld	0.281 (7.14)	2.27 (57.7)									
V13WC-	D8T-	1/2 in.	DK-Lok	0.312 (7.92)	3.30 (83.8)	1.57 (39.9)	0.50 (12.7)	1.13 (28.7)	1.61 (40.9)	6.59 (167)	1.13 (28.7)	-	-	
	D12M-	12mm	DK-Lok	0.281 (7.14)	3.30 (83.8)							-	-	
	SW8T-	1/2 in.	Tube Socket Weld	0.312 (7.92)	2.27 (57.7)							0.75 (19.1)	0.50 (12.7)	
	W12T-	3/4 in.	Tube Butt Weld	0.312 (7.92)	2.27 (57.7)									

Ordering information.
Select the desired valve basic ordering number, and optional disc.

Note :
Optional regulating disc is applicable only to V13WA series

V13WA-D4T- **-R** **-S**

Stem Disc Designator	Valve Material Designator
Nil : Spherical stem disc **R** : Regulating stem disc	**S** : stainless steel 316

Pressure-Temperature Ratings

Ratings are for SS316 valves with spherical and regulating stem disc.

Temperature, °F(°C)	Working Pressure, psig (bar)
-20 to 650 (-28 to 343)	2500 (172)
700 (371)	2120 (146)
750 (398)	1740 (119)
800 (426)	1360 (93.7)
850 (454)	980 (67.5)
900 (482)	600 (41.3)
950 (510)	540 (37.2)
1000 (537)	480 (33.0)
1050 (565)	425 (29.2)
1100 (593)	360 (24.8)
1150 (621)	300 (20.6)
1200 (648)	250(17.2)

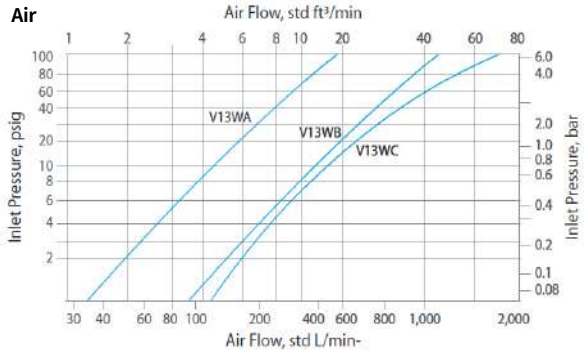
Technical Data

Valve series	Stem disc	Cv	Internal Volume $in.^3(cm^3)$
V13WA	Standard spherical	0.36	0.11 (1.8)
V13WB		1.0	0.25 (4.1)
V13WC		1.2	0.27 (4.4)
V13WA	Optional regulating	0.36	0.11 (1.8)

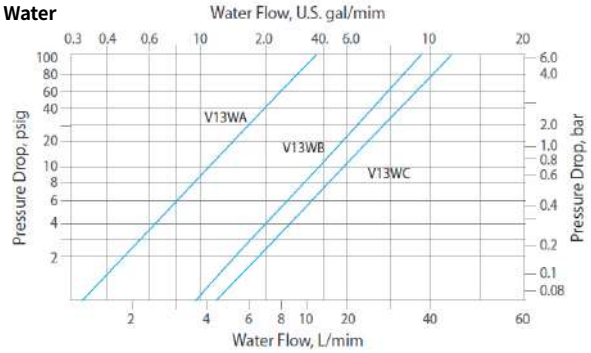
All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Flow Data @ 70 °F (20 °C)

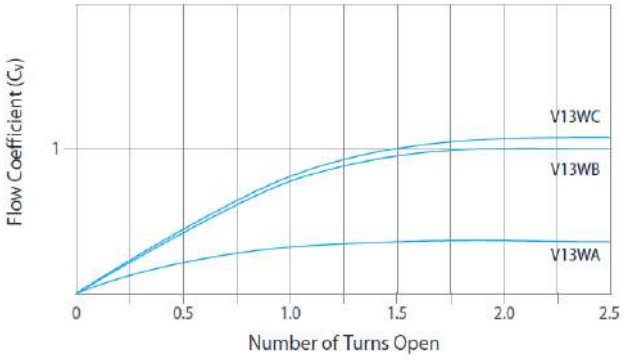
Air



Water



Flow Coefficient at Turns Open



We reserve the right to change specifications stated in this catalog for our coutinuing program of improvement.

Safe Valve Selection

The selection of a valve for any application or system design must be considered to ensure safe performance. Valves function, valve rating, material compatibility, proper installation, operation and maintenance remain the sole responsibility of the system designer and the user. DK-Lok accepts no liability for any improper selection, installation, operation or maintenance.

DK-LOK

경상남도 김해시 주촌면 골든루트로 129번길 7 50969
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Tel. +82-55-338-0114 Fax. +82-55-901-0141 **www.dklok.com**

IDK-LOK

V43 Series

Rev. 01-01
Aug. 2023

DK-LOK®
Bellows Valves

V43 Series Gate Valves

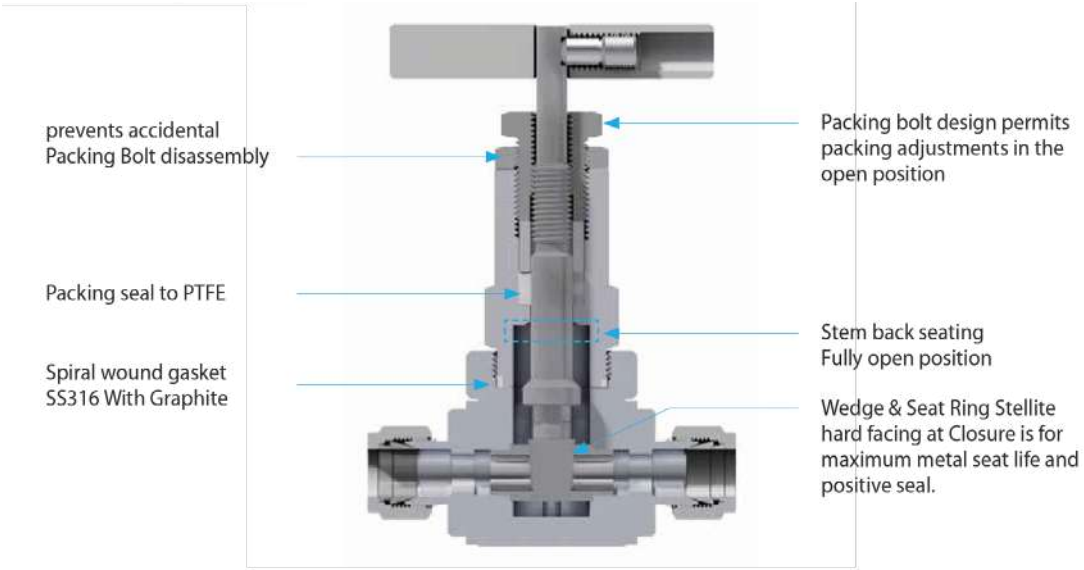
Pressures up to 3600 psig (248 bar)

Rev.01-01
Aug.2023



Features

- Pressure up to 3600 psig (248 bar)
- Temperature up to -65°F (-53°C) ~ 449°F (232°C) with Standard PTFE Packing
- End connection : Screwed End 1/4 ~ 1" , DK-Lok Tube Fitting 1/8 ~ 1"
- Straight through flow path for providing a minimum pressure drop and maximum flow
- Valve stem back seating against the bevelled edge of bonnet in fully open position prevents maximum leakage through bonnet when packing fails



Design

- DK-LOK Gate valve are design to ASME B16.34 Class 1500 pressure rating
- NPT thread connections in accordance with ASME B1.20.1

Factory Test

- Every valve is factory tested with nitrogen @ 69 bar (1000 psig) for leakage at the seat to a maximum allowable leak rate of 0.1 SCCM.
- Stem packing is tested for no detectable leakage.

Cleaning and Packaging

- Every valve is cleaned and packaged in accordance with DK-LOK cleaning standard DC-01.

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

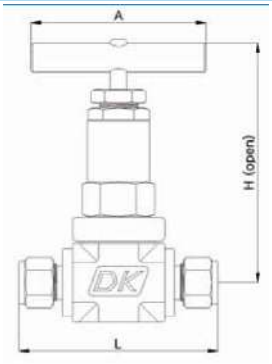
Materials of Construction



Component	Valve Material
1. Body	ASTM A182 F316
2. Seat ring	ASTM A279 TYPE 316 (Hard facing)
3. Bonnet	ASTM A279 TYPE 316
4. Wedge	ASTM A351 CF8M (Hard facing)
5. Stem	ASTM A279 TYPE 316
6. Packing bolt	ASTM A279 TYPE 316
7. Bonnet Packing	PTFE
8. Packing	PTFE
9. Gland	ASTM A279 TYPE 316
10. Lock Nut	ASTM A279 TYPE 316
11. Handle	ASTM A279 TYPE 316
12. Handle pin	Stainless steel
13. Bolt	Stainless steel
14. Pin	Stainless steel

Wetted components are listed in blue.

Dimensions



Basic Ordering Number		End Connection	Orifice	Dimensions, mm(inch)		
				L	H	A
V43	F6N	3/8" Female NPT	10 (0.394)	86 (3.39)	140 (5.51)	89 (3.5)
	F8N	1/2" Female NPT				
	D8T	1/2" DK-LOK		100 (3.94)		
	D12T	3/4" DK-LOK				
	SW6P	3/8" Socket Weld		86 (3.39)		
	SW8P	1/2" Socket Weld				

All dimensions shown are for reference only and are subject to change.

Ordering Information

Select valve basic ordering number, applicable Packing, body material, Connection size, Valve Class Rating

V43 **-F8N** **-E** **-G** **-S**

Connection	Class Rating	Packing Material	Valve Body Material Designator
Female NPT 3/8" : F6N F8N D8T D12T SW6P SW8P	**Nil** : Class 1500	**Nil** : PTFE **G** : Graphite	**S** : ASTM A182 F316

Safe Valve Selection

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IDK-LOK

VYON Series Cryogenic Needle Valves

Rev. 01-01
Aug. 2023



DK-LOK®
Cryogenic Valves

VYON Series Cryogenic Needle Valves

Rev.01-01
Aug.2023

Pressures up to 275 psig (19 bar)

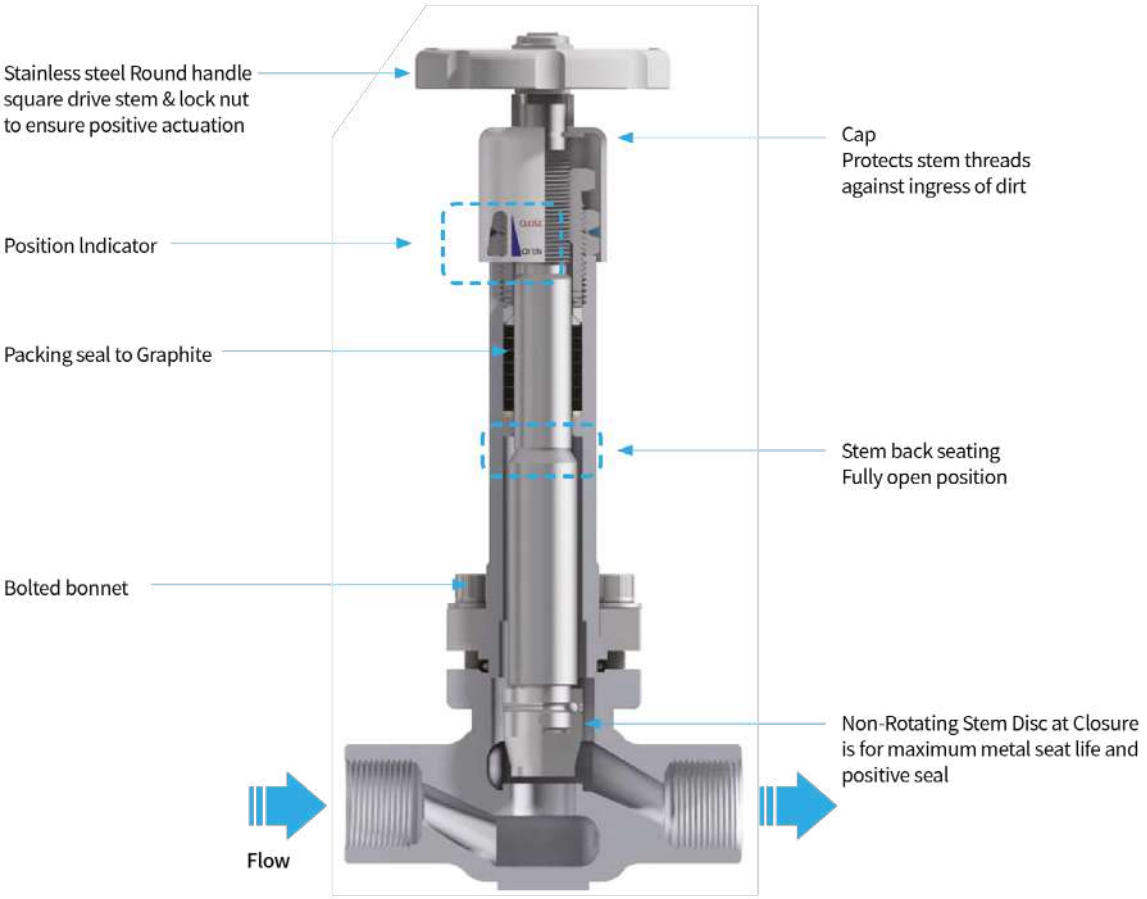


Features

- Dust cap to prevent debris from entering
- Bolted bonnet & outside screw
- Non-rotating stem disc & positive shut off
- Straight through flow path for providing a minimum pressure drop and maximum flow
- Application of the chevron stem packing to prevent leakage to the stem

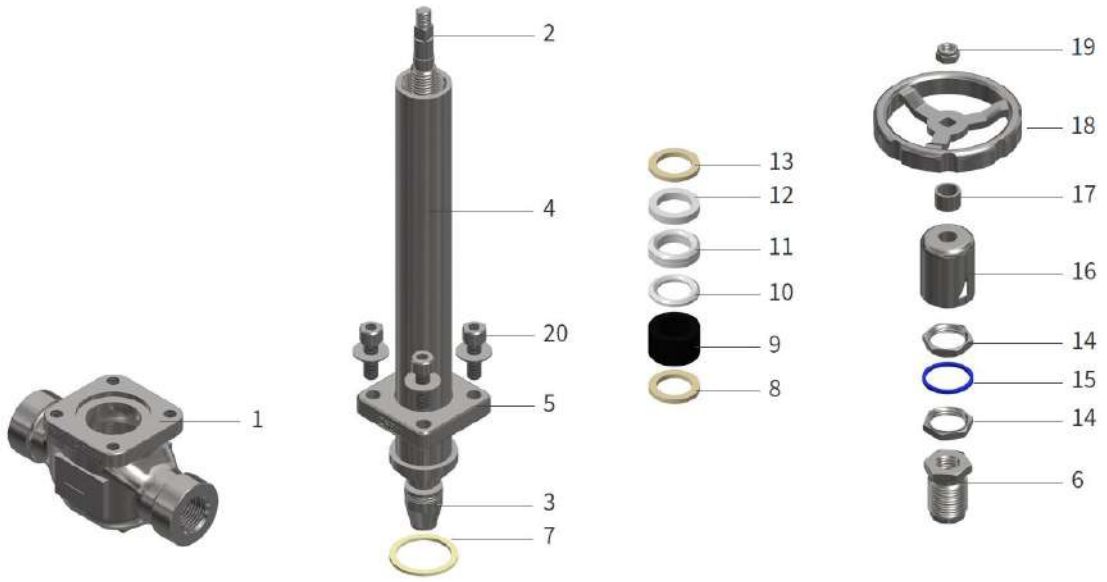
Specifications

- Pressure up to 275 psig (19 bar)
- Temperature up to -320°F (-196°C) ~ 176°F (80°C) with graphite Packing
- Screwed End : 1/2" ~ 1"
- Flanged End : 1/2" ~ 1"
- Butt weld End : 1/2" ~ 1"



All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Materials of Construction



Component	Valve Material
1. Body	ASTM A351 CF3M/CF8M
2. Stem	ASTM A479 TYPE 316
3. Stem disc	ASTM A479 TYPE 316
4. Extended Bonnet	ASTM A479 TYPE 316
5. Bolted bonnet	ASTM A351 CF8M
6. Bushing	ASTM A276 TYPE 316
7. Gasket	V7020
8. Low Gland	PEEK
9. Packing	GRAFOIL
10. Lower Seat guide	PCTFE

Component	Valve Material
11. Guide Packing	PCTFE
12. Upper Seat Guide	PCTFE
13. Upper Gland	ASTM A276 TYPE 316
14. Indicator Nut	ASTM A276 TYPE 316
15. Indicator Ring	Plastic
16. Cap	ASTM A276 TYPE 316
17. Handle support	ASTM A276 TYPE 316
18. Handle	ASTM A351 CF8
19. Handle nut	ASTM A276 TYPE 316
20. Bolt & Spring Washer	STAINLESS STEEL

• Wetted parts listed in blue.

Design

- DK-Lok Cryogenic Needle valves are designed to ASME B16.34 pressure rating
- NPT thread connections in accordance with ASME B1.20.1
- Flange Connections in accordance with ASME B16.5
- Butt weld Connections in accordance with ASME B16.9
- Cryogenic test in accordance with BS 6364

Cleaning and Packaging

- Every valve is cleaned and packaged in accordance with DK-Lok cleaning standard DC-01

Application

- LNG and LPG trailers
- High purity cryogenic or gas system

Classification

- DK-Lok VYON Series has received ABS, BV, KR, LR, DNV GL, RS classification.
- Refer to the table below for each classification.


ABS


BV


KR

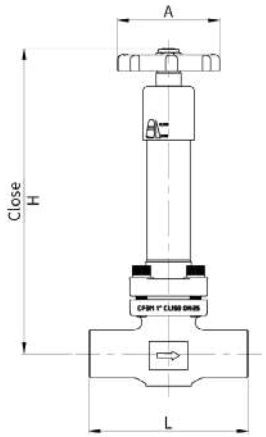

LR


DNV GL


RS

Classification	ABS	BV	KR	LR	DNV GL	RS
Certificate No.	21-2105601-PDA	64258 A0/BV	CWN19339-VV012	LR21262101TA	TAP000015V	29 0000 28.14.13.110
Size	1/2", 1"	1/2", 1"	1/2", 1"	1/2", 1"	1/2", 3/4", 1"	1/2", 1"
Temperature	-196 ~ 80°C"	-196 ~ 80°C"	-196 ~ 80°C	-196 ~ 80°C"	-196 ~ 371°C"	-196 ~ 80°C
Working Pressure	19 bar @ -196°C	19 bar @ -196°C	19 bar @ -196°C	19 bar @ -196°C	20 bar @ -196°C	20 bar @ -196°C
Class	Class 150					

Dimensions

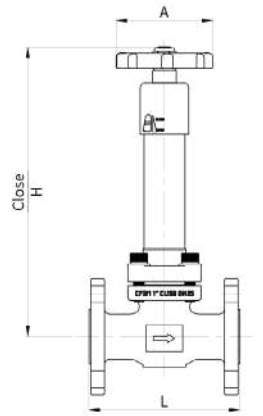


Dimensions – Screwed Ends

Basic Ordering Number		End Connection	Dimensions, mm(in.)		
			L	H	A
VYON	F8N	1/2" Female NPT	114 (4.49)	348 (13.7)	90 (3.54)
	F12N	3/4" Female NPT	140 (5.51)	378 (14.9)	110 (4.33)
	F16N	1" Female NPT	140 (5.51)	378 (14.9)	110 (4.33)
	F8R	1/2" Female PT	114 (4.49)	348 (13.7)	90 (3.54)
	F12R	3/4" Female PT	140 (5.51)	378 (14.9)	110 (4.33)
	F16R	1" Female PT	140 (5.51)	378 (14.9)	110 (4.33)

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All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

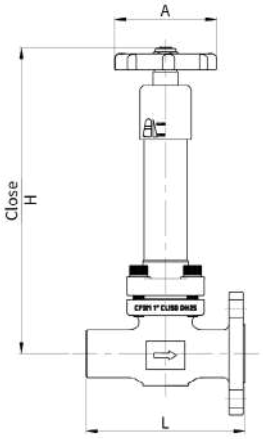


Dimensions– Flanged Ends

Basic Ordering Number		End Connection	Dimensions, mm(in.)		
		Flange	L	H	A
VYON	8RF	1/2" x RF	120 (4.72)	348 (13.7)	90 (3.54)
	12RF	3/4" x RF	140 (5.51)	378 (14.9)	110 (4.33)
	16RF	1" x RF	140 (5.51)	378 (14.9)	110 (4.33)

* Flange design in accordance with ANSI B16.5 Class 150

All dimensions shown are for reference only and are subject to change.

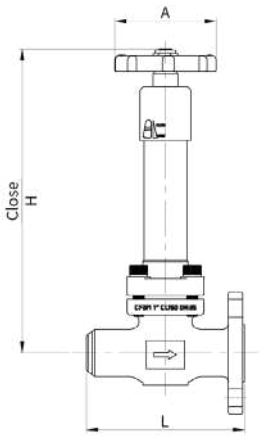


Dimensions– Screwed End / Flanged End

Basic Ordering Number		End Connection		Dimensions, mm(in.)		
		Thread (IN)	Flange (OUT)	L	H	A
VYON	F8NRF	1/2" NPT	1/2"	117 (4.6)	348 (13.7)	90 (3.54)
	F12NRF	3/4" NPT	3/4"	140 (5.51)	378 (14.9)	110 (4.33)
	F16NRF	1" NPT	1"	140 (5.51)	378 (14.9)	110 (4.33)

* Flange design in accordance with ANSI B16.5 Class 150

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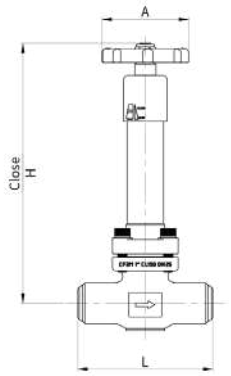


Dimensions– Butt weld End / Flanged End

Basic Ordering Number		End Connection		Dimensions, mm(in.)		
		Butt weld (IN)	Flange (OUT)	L	H	A
VYON	BW8RF	1/2"	1/2"	117 (4.6)	348 (13.7)	90 (3.54)
	BW12RF	3/4"	3/4"	140 (5.51)	378 (14.9)	110 (4.33)
	BW12RF	1"	1"	140 (5.51)	378 (14.9)	110 (4.33)

* Flange design in accordance with ANSI B16.5 Class 150

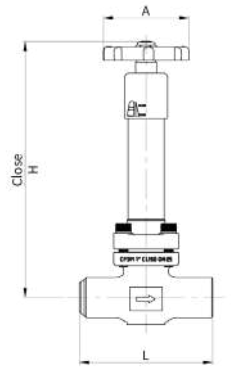
All dimensions shown are for reference only and are subject to change.



Dimensions– Butt weld Ends

Basic Ordering Number		End Connection	Dimensions, mm(in.)		
			L	H	A
VYON	BW8	1/2”	114 (4.49)	348 (13.7)	90 (3.54)
	BW12	3/4”	140 (5.51)	378 (14.9)	110 (4.33)
	BW16	1”	140 (5.51)	378 (14.9)	110 (4.33)

All dimensions shown are for reference only and are subject to change.



Dimensions– Butt weld End / Screwed End

Basic Ordering Number		End Connection		Dimensions, mm(in.)		
		Butt weld (IN)	Thread (OUT)	L	H	A
VYON	BW8RF	1/2”	1/2” NPT	117 (4.6)	348 (13.7)	90 (3.54)
	BW12RF	3/4”	3/4” NPT	140 (5.51)	378 (14.9)	110 (4.33)
	BW12RF	1”	1” NPT	140 (5.51)	378 (14.9)	110 (4.33)

All dimensions shown are for reference only and are subject to change.

Ordering Information

Select valve basic ordering number, applicable Packing, body material, Connection size, Valve Class Rating

VYON **-F8N** **-C2**

Connection	Class Rating	Packing Material	Valve Body Material Designator
Female NPT 1/2” : F8N F8N F12N FLANGE RF 1/2” : 8RF 12RF 16RF	Nil : Class 150	Nil : Graphite	ASTM A351 CF3M : C2 ASTM A351 CF8M : C3

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DK-LOK

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IDK-LOK

V96 Series
Rising Stem Plug Valves

Rev. 01-01
Aug. 2023



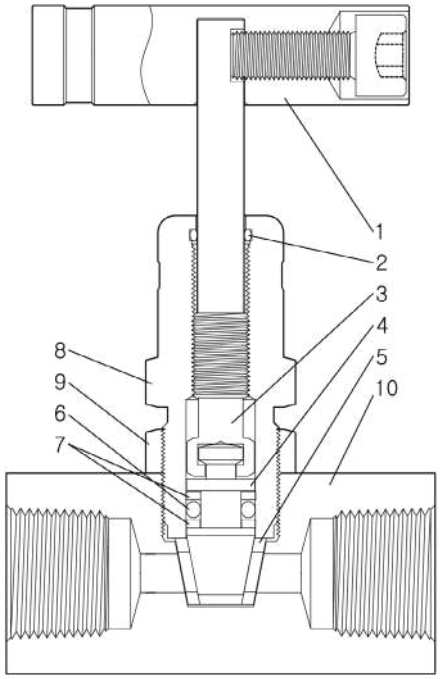
DK-LOK®
Rising Plug & Toggle Valves

V96 Series Rising Stem Plug Valves

Pressure Ratings up to 6,000 psig (413 bar)

Rev.01-01
Aug.2023

Features



- Bi-directional flow control.
- Straight-through orifice hence roddable for easy cleaning.
- Acetal seat standard, optional PEEK and PFA.
- Non-rotating Stem Tip for positive sealing and maximum soft seat life.
- Internal bonnet O-ring protects threads from external contamination.
- Isolated threads located above bonnet O-ring prevents media contamination and thread lubricant washout.

Materials of Construction

Component	Grade/ASTM Specification
1. Handle, Set screw	SS316 / A276
2. Bonnet O-ring	FKM O-ring
3. Stem Shank	SS316 / A276 or A479
4. Stem Tip	
5. Seat	Acetal/D4181, optional PEEK, PFA
6. Stem tip O-ring	FKM O-ring
7. Backup rings (2)	PTFE/D1710
8. Bonnet	SS316/A276
9. Locking nut	
10. Body	SS316/A276 or A479

Wetted components are listed in blue.

Lubrication : Fluorocarbon base on threads, silicone base on soft parts

Technical Information

Pressure-Temperature

Ratings are based on standard stem tip of FKM O-ring and PTFE backup rings.

Body Material	SS316		
Seat	Acetal	PEEK	PFA
Temperature °F (°C)	Working Pressure, psig (bar)		
-20 to 100 (-28 to 37)	6,000 (413)	6,000 (413)	750 (51.6)
200 (93)	2,650 (182)	3,000 (206)	625 (43.0)
250 (121)	1,000 (68.9)	1,600 (110)	450 (31.0)
300 (148)	-	1,300 (89.5)	300 (20.6)
350 (176)	-	1,200 (82.6)	200 (13.7)
400 (204)	-	1,000 (68.9)	100 (6.8)

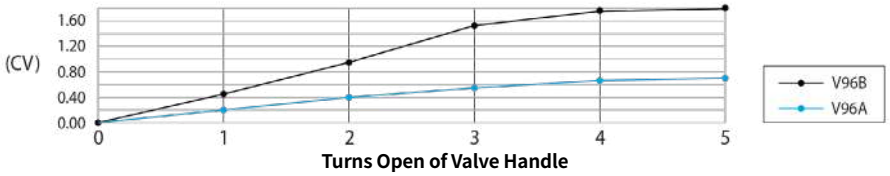
Valve with Acetal seat : For water and steam application, standard valve with Acetal seat is not recommended for application of greater than 200 °F (93 °C) temperature.

Temperature Range Optional O-ring materials

O-ring Material	Designator	Temperature Range °F (°C)
Buna C	BC	-65 to 250 (-53 to 121)
Buna N	BN	-20 to 250 (-28 to 121)
EPDM	EP	-20 to 250 (-28 to 121)
Kalrez	KZ	-20 to 400 (-28 to 204)

Flow Coefficiency at 100°F (37°C)

Flow Curves

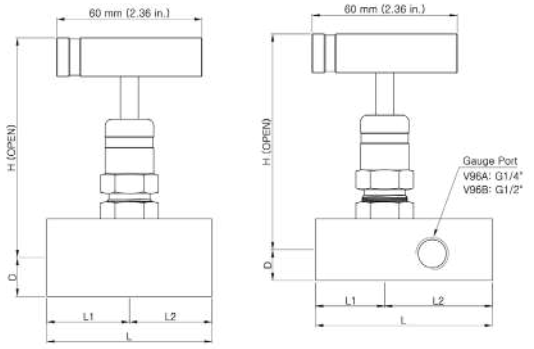


Turns Open of Valve Handle

Testing

Every valve is factory tested with the nitrogen gas @ 1,000 psig (68 bar) for leakage at the seat to a maximum allowable leak rate of 0.1 SCCM. Stem seals are tested to a requirement of no detectable leakage using a liquid leak detector.

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.





Ordering information and Dimensions

Basic Ordering Number		End Connections		Orifice mm(in.)	Cv	Dimensions, mm(in.)				
		Inlet	Outlet			L	L1	L2	D	H
V96A-	F-4N	1/4 in. Female NPT		4.8 (0.187)	0.63	56.9 (2.24)	28.4 (1.12)	28.4 (1.12)	12.7 (0.5)	95.8 (3.77)
	MF-4N	1/4 in. Male NPT	1/4 in. Female NPT			73.4 (2.90)	45.2 (1.78)			
	MF-8N4N	1/2 in. Male NPT	1/4 in. Female NPT			76.5 (3.01)	48.0 (1.89)			
V96A-G4*-	F-4N	1/4 in. Female NPT				72.9 (2.87)	28.4 (1.12)	44.4 (1.75)		
	MF-8N4N	1/2 in. Male NPT	1/4 in. Female NPT			124 (4.87)	79.2 (3.12)			
V96B	F-8N	1/2 in. Female NPT		6.4 (0.25)	1.8	67.6 (2.66)	33.8 (1.33)	33.8 (1.33)	16.0 (0.63)	97.3 (3.83)
	MF-8N	1/2 in. Male NPT	1/2 in. Female NPT			88.6 (3.49)	54.9 (2.16)			
	MF-12N8N	3/4 in. Male NPT	1/2 in. Female NPT							
V96B-G8*-	F-8N	1/2 in. Female NPT				90.9 (3.58)	33.8 (1.33)	57.2 (2.25)		
	MF-8N	1/2 in. Male NPT	1/2 in. Female NPT			142 (5.58)	84.6 (3.33)			
	MF-12N8N	3/4 in. Male NPT	1/2 in. Female NPT							

All dimensions shown are for reference only and are subject to change.

- V96A-G4* gauge port: 1/4 in. Female NPT, V96B-G8*: 1/2 in. Female NPT.
- Gauge port valves with pipe insulation extended body of 2.0 in. (50 mm) are listed in blue.



Panel Mounting option

Panel hole drill size 25/32 in. (19.8 mm), max. panel thickness 1/2 in. (12.7 mm).
To order, add - **PM** as a suffix to the valve ordering number. Example: V96A-F-4N-**PM**

Sour Gas Service option

Materials are selected in accordance with NACE standards.
To order, add - **SG** as a suffix to the ordering number. Example: V96A-F-4N-**SG**

How to order

Select desired valve basic ordering number, and applicable options from designators listed below.

Example:V96A-F-4N

-PK	-EP	-PM	-SG	-S
Seat Designator	Stem tip O-ring Designator	Panel mounting Designator	Sour Gas Designator	Body Material Designator
Nil : Acetal **PA** : PEEK **PA** : Teflon PFA	**Nil** : FKM O-ring **EP** :EPDM **KZ** : Kalrez **BC** :Buna C **BN** : Buna N	**PM** : Panel Mounting	**SG** : Sour Gas	**S** : SS316

We reserve the right to change specifications stated in this catalog for our coutinuing program of improvement.

Safe Valve Selection

The selection of a valve for any application or system design must be considered to ensure safe performance. Valve function, valve rating, material compatibility, proper installation, operation and maintenance remain the sole responsibility of the system designer and the user. DK-Lok accepts no liability for any improper selection, installation, operation or maintenance.

DK-LOK

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IDK-LOK

V103 Series
Toggle Valves

Rev. 01-01
Aug. 2023



DK-LOK®
Rising Plug & Toggle Valves

V103 Series Toggle Valves

Pressure Rating up to 300 psig (20.6 bar)

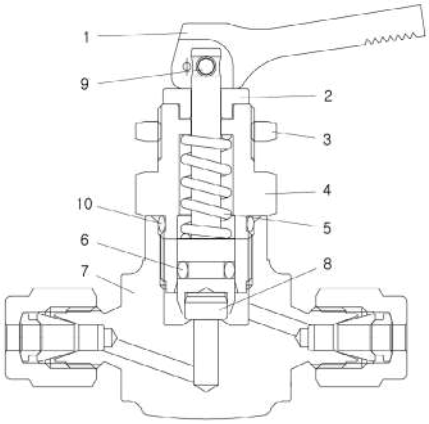
Rev.01-01
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Design & Features



- Valves are designed for use in gas sampling, analysis systems and test equipment.
- In-line and angle flow pattern.
- O-ring seal below stem spring protects the spring from contamination.
- Quick open and close.
- Soft seat for repetitive shut-off
- Standard panel mounting.

Materials of Construction



Component	Valve Body Material	
	SS316	Brass
	Grade/ASTM Specification	
1. Handle	Nylon	
2. Washer	Nylon	
3. Panel Nut	SS316 / A276	Brass B16
4. Packing nut		
5. Spring	Stainless Steel 302	
6. Stem O-ring	FKM	NBR
7. Body	SS316 / A182	Brass B283
8. Stem tip	PTFE/D1710	
9. Handle Pin	Stainless Steel	
10. Body O-ring	FKM	NBR

Wetted component listed in blue and silicon based lubricdant.

Operation

- To open the valve, lift the handle.
- Spring forces the valve to close.
- Soft seat provides leak-tight sealing under positive pressure and vacuum conditions.
- Stem O-ring seal eliminates packing adjustment.

Technical Data

Pressure and Temperature Ratings

Valve Series	Orifice		Pressure Rating @ 100 °F (38 °C) for SS316, Brass body	Temperature Rating
	inch	mm		
V103A	0.080	2.00	300 psig	FKM O-ring -20 to 200 °F (-28 to 93 °C)
V103B	0.125	3.20		
V103C	0.250	6.40	200 psig	

Optional O-Ring Material

FKM O-rings are standard
and other materials are Buna C, EPDM and Kalrez.

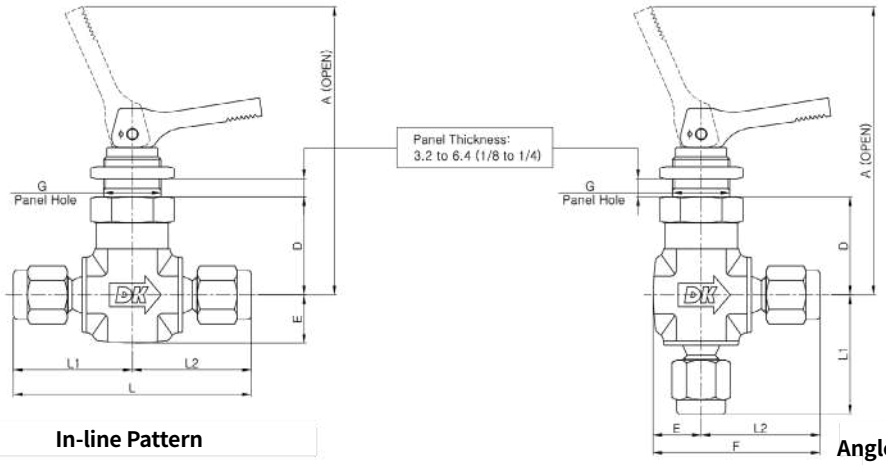
Low Temperature Service

O-ring	Temperature Range, °F (°C)
Buna C	-65 to 200 (-53 to 93)

Factory test

Every valve is factory tested at 200psig (13 bar) with nitrogen gas at the seat and seal.

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.



In-line Pattern **Angle Pattern**

Ordering Information and Dimensions

Basic Ordering Number		End Connection Inlet	End Connection Outlet	Orifice in.	Orifice mm	Cv	Dimensions mm (in.) L	L1	L2	D	E	F	G	A
V103A-	M-2N-	1/8 in. Male NPT		0.08	2	0.11	38.1 (1.5)	19.05 (0.75)	19.05 (0.75)	23.4 (0.92)	10.6 (0.42)	27.0 (1.06)	13.5 (0.53)	72.9 (2.87)
	D-2T-	1/8 in. DK-Lok					49.8 (1.96)	24.9 (0.98)	24.9 (0.98)			32.8 (1.29)		
	D-3M-	3 mm DK-Lok												
	MD-2N2T-	1/8 in. Male NPT	1/8 in. DK-Lok				43.9 (1.73)	19.05 (0.75)	24.9 (0.98)					
V103B	F-2N-	1/8 in. Female NPT		0.125	3.2	0.2	41.4 (1.63)	20.6 (0.81)	20.6 (0.81)	21.8 (0.86)	9.5 (0.38)	30.2 (1.19)	13.5 (0.53)	71.4 (2.81)
	M-2N-	1/8 in. Male NPT					43.7 (1.72)	21.8 (0.86)	21.8 (0.86)			31.2 (1.23)		
	M-4N-	1/4 in. Male NPT					49.8 (1.96)	24.9 (0.98)	24.9 (0.98)			34.5 (1.36)		
	D-4T-	1/4 in. DK-Lok					57.4 (2.26)	28.7 (1.13)	28.7 (1.13)			38.1 (1.5)		
	D-6M-	6 mm DK-Lok					57.4 (2.26)	28.7 (1.13)	28.7 (1.13)			38.1 (1.5)		
	D-8M-	8 mm DK-Lok					56.4 (2.22)	28.2 (1.11)	28.2 (1.11)			37.6 (1.48)		
	MF-2N-	1/8 in. Male NPT	1/8 in. Female NPT				41.4 (1.63)	20.6 (0.81)	20.6 (0.81)			30.2 (1.19)		
	MD-4N4T-	1/4 in. Male NPT	1/4 in. DK-Lok				53.6 (2.11)	24.9 (0.98)	28.7 (1.13)			38.1 (1.5)		
V103C-	F-4N-	1/4 in. Female NPT		0.25	6.4	0.7	53.8 (2.12)	26.9 (1.06)	26.9 (1.06)	26.9 (1.06)	12.7 (0.5)	39.6 (1.56)	16.8 (0.66)	90.4 (3.56)
	M-6N-	3/8 in. Male NPT					57.2 (2.25)	28.4 (1.12)	28.4 (1.12)			41.1 (1.62)		
	D-6T-	3/8 in. DK-Lok					65.5 (2.58)	32.8 (1.29)	32.8 (1.29)			45.5 (1.79)		
	D-8T-	1/2 in. DK-Lok					71.1 (2.8)	35.6 (1.4)	35.6 (1.4)			48.3 (1.9)		
	D-10M-	10 mm DK-Lok					69.1 (2.72)	34.5 (1.36)	34.5 (1.36)			47.2 (1.86)		
	D-12M-	12 mm DK-Lok					74.2 (2.92)	37.1 (1.46)	37.1 (1.46)			49.8 (1.96)		

All dimensions shown are for reference only and subject to change. Dimensions with DK-Lok nuts are in finger-tight position.

How to order

Select basic ordering number, applicable valve pattern, O-ring and body material designators listed below.

V103B-D-4T **-A** **-BC** **-S**

Valve Pattern	O-ring Designator	Body Material
• Nil : Inline pattern • A : Angle pattern	• Nil : FKM • KZ : Kalrez • BC : Buna-C • EP : EPDM	• S : SS316 • B : Brass

Safe Valve Selection

The selection of a valve for any application or system design must be considered to ensure safe performance.
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DK-LOK

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IDK-LOK

Block & Bleed Valves
Monoflange

No. 01-01
Jun. 2023



DK-LOK®
DK-Lok Tube Fittings

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Rev.01-01
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Primary Isolation Valve Application

Market

- Offshore oil and gas production
- Offshore terminals
- Chemical, petro-chemical, refining
- Control panel manufactures
- Process/power industry contractors
- Compressor manufactures
- LNG carrier

Application

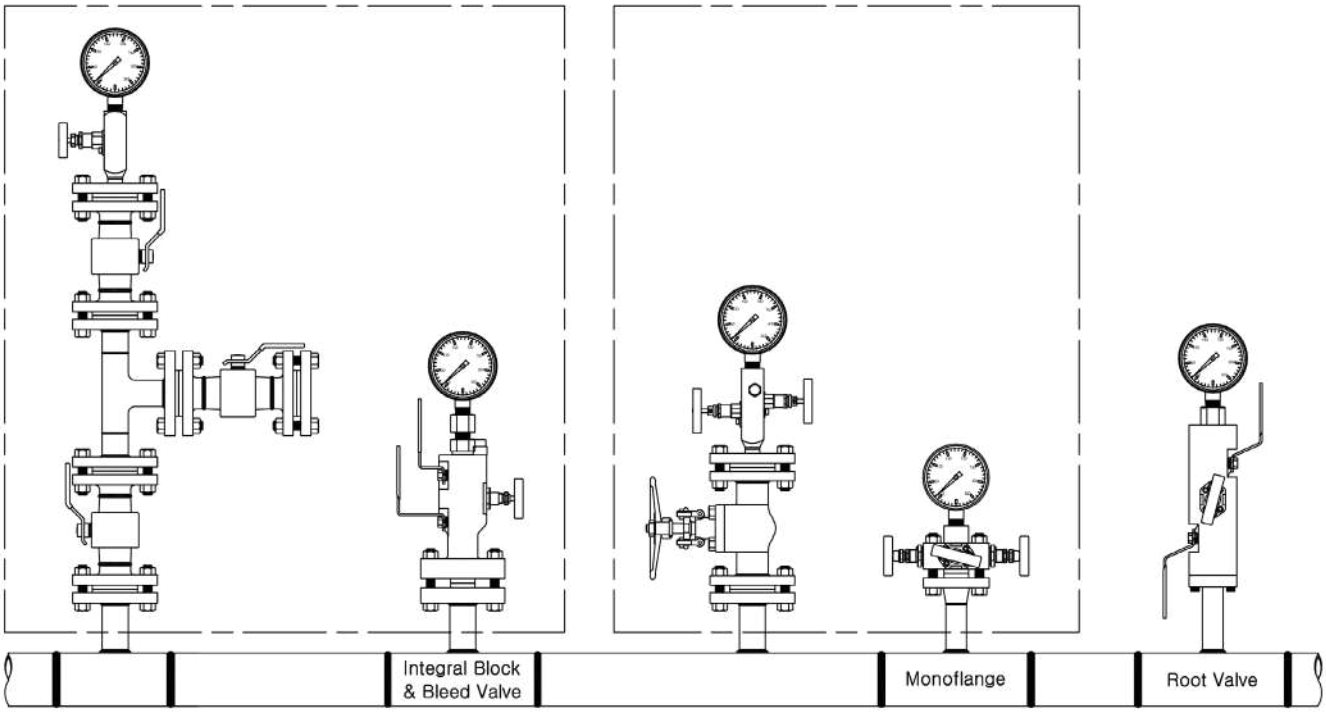
- Double block and bleed instrument isolation
- Gauge isolation
- Instrument drain
- Chemical injection connection
- Sample connection
- Chemical instrument isolation
- Piping/instrument interface
- Direct mounting of instruments
- Remote mounting of instruments

Installation Advantages

- More compact design
- Reduced weight
- Reduced height
- Reduced leakage point
- Reduced effect of system vibration
- Supporting bracket are not required
- Reduced bending moment acting on the vessel branch fitting weld
- Reduced installation cost
- Reduced gasket and bolting





Integral Block & Blees Valve
- Ball and Globe Type Needle Valves
- Flanged and Threaded Connections
- Integrally Forged Body

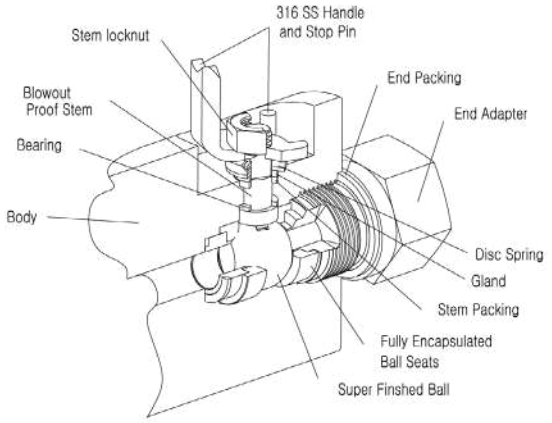
Monoflange
- Globe Type Needle Valves
- Flanged and Threaded Connections
- Slimline Integrally Forged Body

Root Valve
- Ball and Globe Type Needle Valves
- Weld or Threaded Connections
- Direct Connection to the Vessel

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Technical Specification

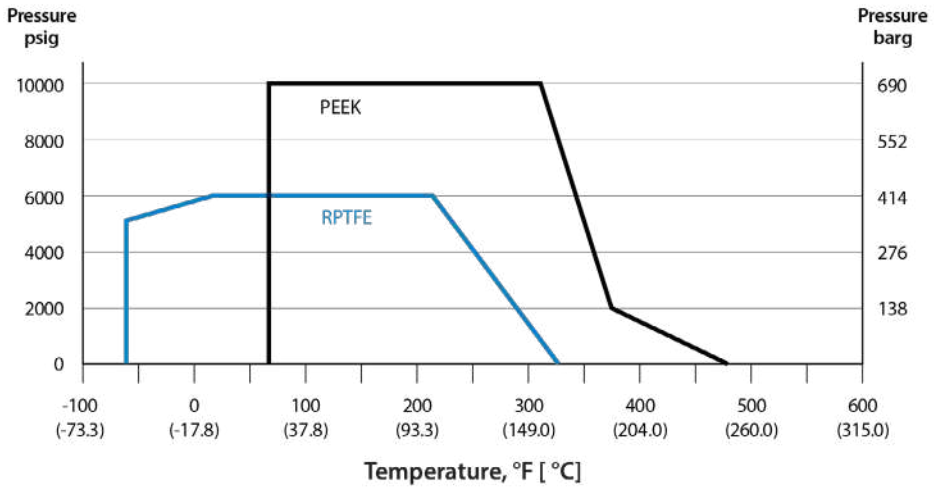
Ball Valve



Features

- Quarter turn actuation.
- Blowout proof stem design.
- Micro-finished ball for long service life.
- Anti static design as standard.
- Live-loaded stem packing ensures positive sealing across the pressure and temperature range.
- Live-loaded seats maintain system seal through changes in pressure and temperature.
- Bore size available : 3/8" (9.5mm), 1/2" (14mm), 3/4" (19mm), 1" (25mm), 1 1/2" (38mm), 2" (50mm).
- Lockable with nylon sleeve lever handle is standard.
- Pressure rating up to 10000 psig (690 barg).
- Temperature rating - 71 to 482 °F (-57 to 250 °C).

Pressure - Temperature Ratings

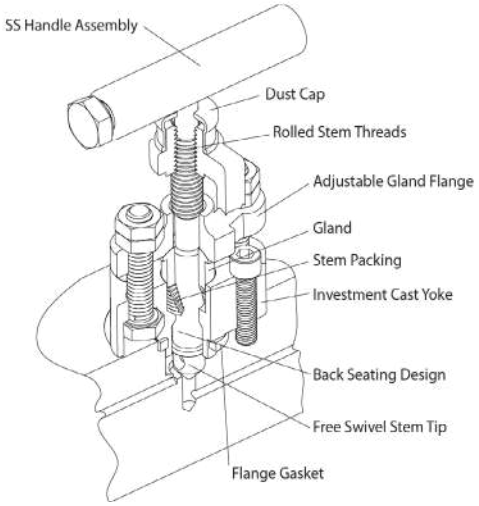


Material of Construction

Ball Valve Components					
No	Description	Material Grade / ASTM Specification			
1	Body	A182 F316	A105	A182 F51	Inconel 625
2	End Adapter	A479-316	A105	UNS S31803	Inconel 625
3	Stem	A479 TYPE316		UNS S31803	UNS N06625
4	Ball	A479 TYPE316		UNS S31803	UNS N06625
5	Handle & Stop Pin	SS316			
6	Stem Locknut	SS316			
7	Bearing	PEEK			
8	Seat	RPTFE or PEEK			
9	End Packing	GRAPHITE			
10	Gland	SS316			
11	Stem Packing	GRAPHITE			
12	Dis Spring	INCONEL X750			

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

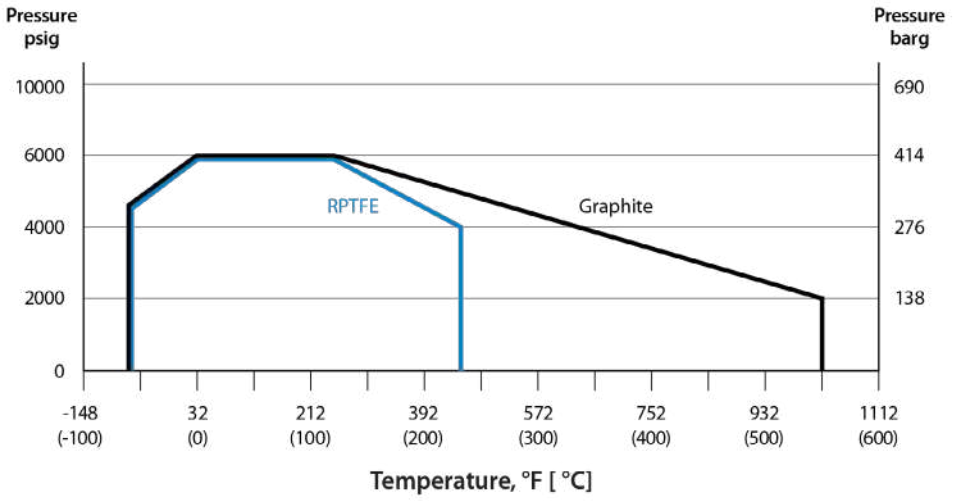
Outside Screw and Yoke(OS&Y) Needle Valve



Features

- Investment cast yoke is precision cased for perfect stem alignment.
- Standard non-rotating free swivel stem tip.
- Roll threaded and hard chrome plated stem for long valve life.
- Stem packing below thread design prevents media contamination and thread lubricant washout.
- Back seating design provides secondary stem sealing and prevents stem blowout.
- Adjustable gland flange allows packing adjustment.
- 0.2 in. (5mm) bore.
- Pressure rating up to 6000 psig (414 barg).
- Temperature rating - 71 to 1022 °F (-57 to 550 °C).

Pressure - Temperature Ratings

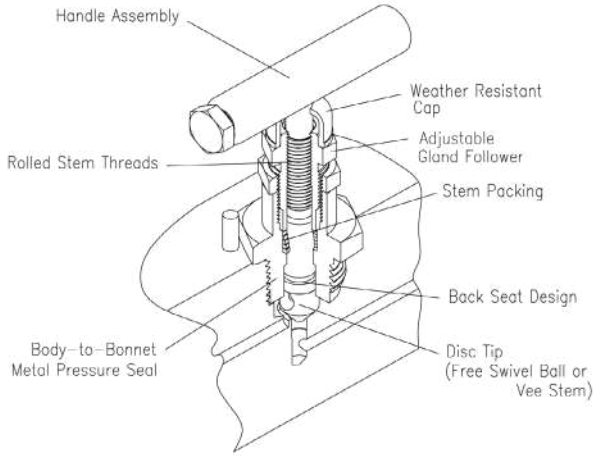


Material of Construction

Yoke Needle Valve Component					
No	Description	Material Grade / ASTM Specification			
1	Body	A182 F316	A105	A182 F51	Inconel 625
2	Stem	A479 TYPE316		UNS S31803	UNS N06625
3	Gland Flange	A479 TYPE316		UNS S31803	UNS N06625
4	Yoke	A351 CF8M		UNS S31803	UNS N06625
5	Stem Tip	SS630		UNS S31803	UNS N06625
6	Handle Assembly	SS316			
7	Dust Cap	PLASTIC			
8	Gland	SS316			
9	Stem Packing	GRAPHITE			
10	Flange Gasket	GRAPHITE			

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

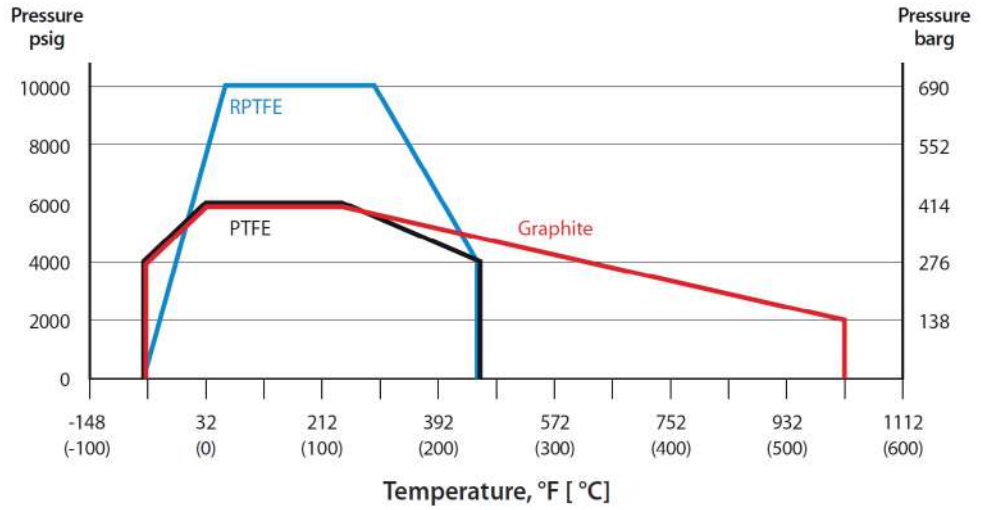
Globe Type Needle Valve



Features

- Bar-handled vent is standard.
- External packing adjustment.
- Back seating design provides secondary stem sealing and prevents stem blowout.
- Standard non-rotating free swivel stem tip.
- Roll threaded and hard chrome plated stem for long valve life.
- Stem packing below thread design prevents media contamination and thread lubricant washout.
- Stellite seat is an option for Globe Needle Valve. To order the option, suffix “HS” to the ordering number. i.e., V1F-SNHS, V1F-SCHS, V1F-SDHS, V1FF-DCHS, V1FF-DDHS and V1FF-DEHS.
- Globe needle valve with anti-tamper bonnet(designator - T) is available with a removable T-bar key to prevent unauthorized operation and release of fluid through the vent port to atmosphere. The T-bar key is supplied separately or alternatively the key can be chained (designator - TC) to the valve.
- 0.2 in. (5mm) bore.
- Pressure rating up to 10,000 psig (690 barg).
- Temperature rating -71 to 1,022 °F (57 to 550 °C).

Pressure - Temperature Ratings



Material of Construction

Material of Construction					
No	Description	Material Grade / ASTM Specification			
1	Body	A182 F316	A105	A182 F51	Inconel 625
2	Stem	A479 TYPE316		UNS S31803	UNS N06625
3	Bonnet	A479 TYPE316		UNS S31803	UNS N06625
4	Handle Assembly	A479 TYPE316			
5	Dust Cap	PLASTIC			
6	Packing Bolt	A479-316			
7	Stem Packing	GRAPHITE			
8	O-ring	NBR or FKM			
9	Stem Tip	GRAPHITE			

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Integral Block & Bleed Valve



Integral Block & Bleed Valve

Are integrally one-piece double block and bleed assemblies, for primary isolation of pressure take-offs, where the valve is directly mounted to the vessel or process pipe. Instruments may be directly mounted to the valve outlet or alternatively remotely with gauge lines/impulse pipe work.

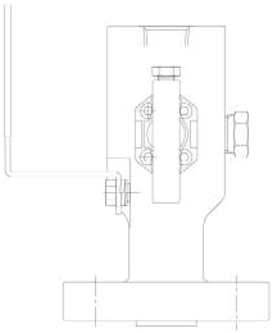
Features

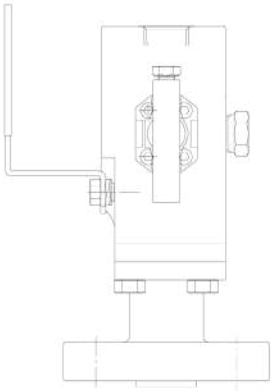
- Reduced potential leak paths with primary & secondary isolation in one valve.
- Compact ball/OS&Y/needle valve assembly in one DBB.
- Flange construction as per the requirements of ASME B16.5.
- NPT threaded connection to ANSI/ASME B1.20.1.
- Pressure ratings as per ASME B16.34 Class 150 thru 2500.
- Wetted components of Sour gas service valve are selected as per the requirements of NACE MR0175 /ISO 15156.
- Fire tested as per BS 6755 part 2/API 607.
- Anti-Static Device is set between the stem and ball.
- All DK-Lok Double Block & Bleed valves are equipped with two body gasket. The first body gasket is in soft material and second in graphite(if not otherwise required), this combination assures the best seal characteristic in whatever corrosive service as well as giving a fire safe design.
- The Solid ball used by DK-Lok provides straight through flow and real full-port performance characteristics. Hollow ball or cored cavity ball are not used for DK-Lok products.
- Locking device is supplied as standard in order to prevent unauthorized opening & closing. Locking device can lock the valve in either the open or closed position and cannot be breached by removing the lever.
- Every valve is subject to a pressure test in accordance with the standard API 598 or BS 6755 part1. The rated pressure for the applicable pressure class is in accordance with ASME B 16.34 & EN 12516-1/2.
- Each valve is identified on proper name plate and on valve body as required by MSS SP 25, ASME B16.34
  Name plate carries all information on rating, size, valve body and trim material.
  On body, marking includes material designations and heat code and of course the trade mark.

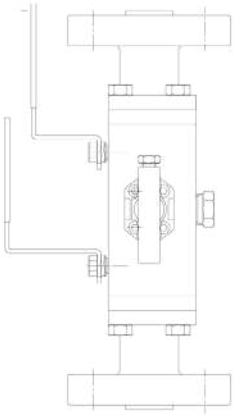
Ordering Information

1. Body Construction

One Piece Forged Design	Two Piece Bolted Design	Three Piece Bolted Design
Designator : V1	Designator : V2	Designator : V3

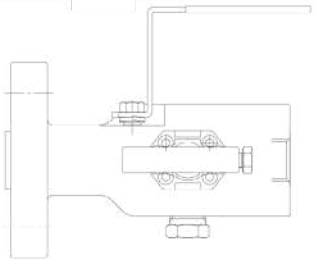


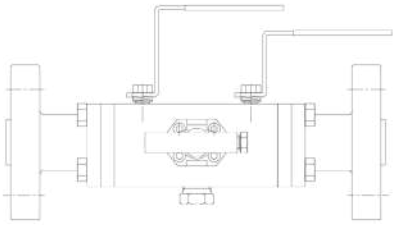




2. Process and Outlet Connection

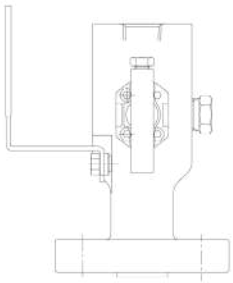
Flange to 1/2" NPTF	Flange to Flange
Designator - F	Designator - FF

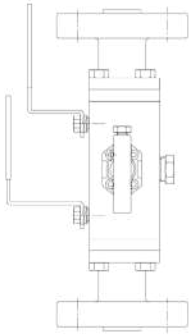




3. Single and Double Block and Bleed Valve

Single Block and Bleed	Double Block and Bleed
Designator - S	Designator - D





All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

4. Configuration

Single Block and Bleed Valve

Designator	Block	Vent
B	Ball	Ball
Y	OS&Y	OS&Y
N	Globe Needle	Globe Needle
A	Ball	OS&Y
C	Ball	Globe Needle
D	OS&Y	Globe Needle

Double Block and Bleed Valve

Designator	Block	Block	Vent
B	Ball	Ball	Ball
Y	OS&Y	OS&Y	OS&Y
A	Ball	Ball	OS&Y
C	Ball	Ball	Globe Needle
D	OS&Y	Globe Needle	Globe Needle
E	OS&Y	OS&Y	Globe Needle

5. Process Connections

Flange Size		Flange Class		Bore Size		Finish Standard	
Designator	Size	Designator	Rating	Designator	Size	Designator	Finish
8	1/2" (DN15)	A	150	Nill	Full	1	Raised Faced Smooth
12	3/4" (DN20)	B	300	1	Reduce	2	Raised Faced Serrated
16	1" (DN25)	C	600	2	9.5mm	3	Raised Faced Stock
24	1 1/2" (DN40)	D	900	3	14mm	4	Ring Type Joint
32	2" (DN50)	E	1500	4	19mm		
		F	2500				

How to order

Designators	Selected Flange Size	Selected Flange Class	Selected Bore Size	Selected Finish Standard	Intermediate Ordering Number
8A11	1/2" (DN15)	150	9.5mm	Raised Faced Smooth Finish	V1F-SN-8A11
16C31	1" (DN25)	600	14mm	Raised Faced Smooth Finish	V1F-SN-16C31
24D2	1 1/2" (DN40)	900	Full Bore	Raised Faced Serrated	V3F-DC-24D2

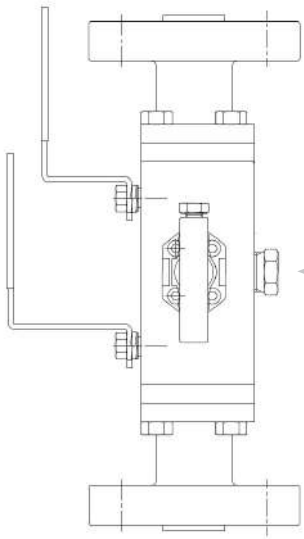
6. Seat and Packing

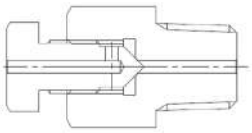
Ball Valve Seat Material		OS&Y Packing		Needle Valve Packing	
Designator	Seat	Designator	Packing	Designator	Packing
Nil	Reinforced PTFE	Nil	Graphite	Nil	Graphite
PK	PEEK	PE	PTFE	RP	Reinforced PTFE

How to order

Designator	Ball Valve Seat Material	OS&Y Packing	Needle Valve Packing	Intermediate Ordering Number
Nil	Reinforced PTFE	Standard Grcking	Standard Graphite	V1F-SNT-84A1-
PKPE	PK : PEEK	PE : PTFE	Standard Graphite	V1F-SCTC-16C1-PKPE
PKPERP	PK : PEEK	PE : PTFE	RP : Reinforced PTFE	V1F-SDT-24D2-PKPERP

7. Vent (Bleed) Port





"VP" option
- Vent port 1/2" NPTF with Hex Plug is standard.
- Vent port with "Vent Plug" is an option with **"VP"** designator.

How to order the "VP" option

Designator	On Vent Port	Intermediate Ordering
Nil	Hex Plug	V1F-SC-16C1
VP	Vent Plug	V1F-SC-16C1-VP

8. Option, Trim and Body Material

Option	Trim Material	Body Material
SG : NACE MR0175 FS : Fire Tested Design to BS6755 Part 2	Nil : Standard SS316 D : Duplex M : Monel UNS N04400	S : ASTM A182 F316 / F316L C : ASTM A105 D : ASTM A182 F51 M : ASTM B564 UNS N04400 LF : ASTM A350 LF2

FS : Optional fire tested design valve is supplied with the following seat & packing materials.
- Ball Seat: Standard Reinforced PTFE
- OS&Y Packing: Standard Graphite Packing
- Needle Valve Packing: Optional Graphite Packing

Completion of DBB ordering numbers

Complete Ordering Number	Option	Trim Material	Body Material
V1F-SN-8A1-S	No option	No option	S316
V3F-DC-16D4-PKPE-SG-MS	Nace	Monel	S316
V1F-SDT-24DS-FS-S	Fire Safely	No option	S316

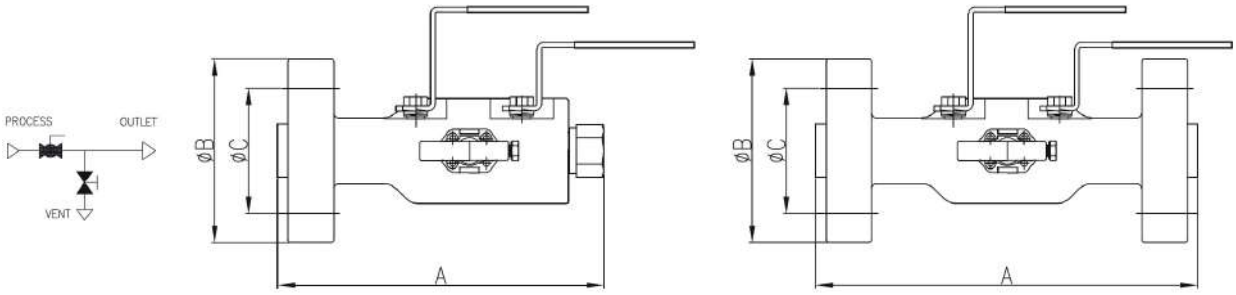
All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Product range / Weights and Dimensions

V1FF Series

9.5mm Bore

One Piece Forged Flange to 1/2" NPTF Single Block Bleed Valve with Ball and OS&Y(or Needle) on Block and Vent.
3/8"(9.5mm) and 1/2"(14mm), 3/4"(19mm) Bore Size



Size(inch)	Class	Dimension(mm)					Weight(kg)	
		A(RF)	A(RTJ)	A(Flange/NPT)	B	C	Flange	Flange/NPT
1/2"	150	188	-	168	88.9	60.5	4.3	3.6
	300	188	193	168	95.2	66.5	5	3.9
	600	188	196	168	95.2	66.5	5.2	4
	900/1500	206	213	176	120.6	82.5	7.9	5
	2500	206	213	176	133.4	88.5	10.8	6
3/4"	150	188	-	168	98.6	69.9	4.9	3.9
	300	188	196	168	117.3	82.5	6.3	4
	600	188	196	168	117.3	82.5	6.5	4.2
	900/1500	206	213	176	130	88.9	9.5	5.6
	2500	206	213	176	139.7	95.3	11	7.1
1"	150	188	193	173	108	79.2	5	3.9
	300	190	195	173	124	88.9	6.3	4.3
	600	190	198	173	124	88.9	6.5	4.5
	900/1500	240	240	195	149.3	101.6	11.5	6.8
	2500	255	255	203	158.8	108	14.3	8.1
1 1/2"	150	198	203	178	127	98.6	7	4.6
	300	218	218	185	155.4	114.3	10.1	6
	600	235	235	204	155.4	114.3	11	6.5
	900/1500	280	280	215	177.8	123.9	16.5	9.4
	2500	316	316	220	203.2	146.1	25.8	14
2"	150	203	213	183	152.4	120.7	9.4	5.5
	300	223	228	190	165.1	127	12.8	6.8
	600	243	253	202	165.1	127	13.4	8.1
	900/1500	288	288	215	215.9	165.1	25.4	14
	2500	313	313	220	235	171.5	36.6	22

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V1FF Series

14mm Bore

One Piece Forged Flange to 1/2" NPTF Single Block Bleed Valve with Ball and OS&Y(or Needle) on Block and Vent.
3/8"(9.5mm) and 1/2"(14mm), 3/4"(19mm) Bore Size

Size(inch)	Class	Dimension(mm)					Weight(kg)	
		A(RF)	A(RTJ)	A(Flange/NPT)	B	C	Flange	Flange/NPT
1"	150	231	231	197	108	79.2	7.7	3.9
	300	241	241	197	124	88.9	8.8	4.3
	600	241	241	203	124	88.9	8.8	4.5
	900/1500	261	261	203	149.3	101.6	12.7	6.8
	2500	273	273	203	158.8	108	16.5	8.1
1 1/2"	150	241	241	207	127	98.6	9.1	4.9
	300	251	251	207	155.4	114.3	12.3	6.4
	600	251	251	215	155.4	114.3	12.3	6.9
	900/1500	291	291	215	177.8	123.9	17.7	9.8
	2500	316	316	220	203.2	146.1	27	14
2"	150	241	213	210	152.4	120.7	10.9	5.9
	300	261	241	210	165.1	127	14.1	7.5
	600	261	261	220	165.1	127	14.1	8.4
	900/1500	306	306	220	215.9	165.1	26.6	14
	2500	346	346	230	235	171.5	37.8	22.1

V1FF Series

19mm Bore

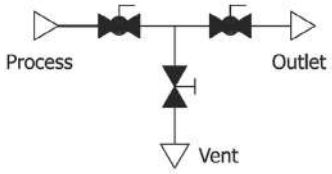
Size(inch)	Class	Dimension(mm)				Weight(kg)
		A(RF)	A(RTJ)	B	C	
1 1/2"	150	253	253	127	98.6	9.8
	300	263	263	155.4	114.3	13.0
	600	263	263	155.4	114.3	13.0
	900/1500	303	303	177.8	123.9	18.4
	2500	328	328	203.2	146.1	27.7
2"	150	253	253	152.4	12.7	11.7
	300	273	273	165.1	127	14.9
	600	273	273	165.1	127	14.9
	900/1500	318	318	215.9	165.1	27.4
	2500	358	358	235	171.5	38.6

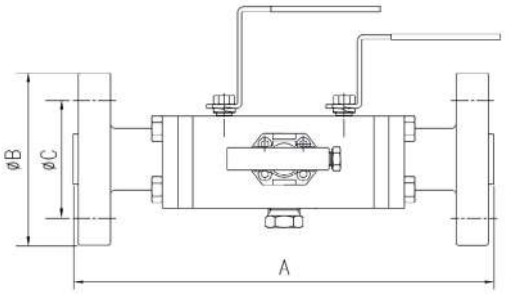
All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

V3FF Series

Full Bore

Three Piece Bolted Design Flange to Flange Double Block and Bleed Valve with Ball and OS&Y (or Needle) on Block and Vent.





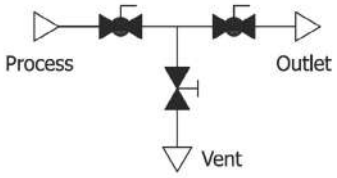
Size(inch)	Bore(mm)	Class	Dimension(mm)				Weight(kg)
			A(RF)	A(RTJ)	B	C	
1/2”	14	150	235	248	88.9	60.5	8.5
		300	241	254	95.2	66.5	9.5
		600	254	254	95.2	66.5	10.0
		900/1500	287	287	120.6	82.5	13.0
		2500	303	303	133.4	88.5	16.0
3/4”	19	150	264	277	98.6	69.9	9.5
		300	277	290	117.3	82.5	10.5
		600	290	290	117.3	82.5	11.0
		900/1500	320	320	130	88.9	16.0
		2500	333	333	139.7	95.3	19.0
1”	25	150	272	285	108	79.2	15.0
		300	279	292	124	88.9	16.7
		600	292	292	124	88.9	17.5
		900/1500	364	364	149.3	101.6	21.2
		2500	377	377	158.8	108	24.2
1 1/2”	38	150	361	374	127	98.6	24.7
		300	367	384	155.4	114.3	27.1
		600	384	384	155.4	114.3	27.9
		900/1500	402	402	177.8	123.9	35.1
		2500	463	466	203.2	146.1	45.5
2”	50	150	390	403	152.4	120.7	48.2
		300	398	411	165.1	127	50.3
		600	416	419	165.1	127	51.1
		900/1500	481	484	215.9	165.1	66.8
	42	2500	652	655	235	171.5	150.0

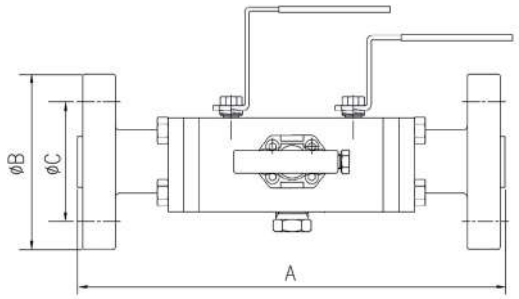
All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

V3FF Series

Reduce Bore

Three Piece Bolted Design Flange to Flange Double Block and Bleed Valve with Ball and OS&Y (or Needle) on Block and Vent.





Size(inch)	Bore(mm)	Class	Dimension(mm)				Weight(kg)
			A(RF)	A(RTJ)	B	C	
3/4”	14	150	249	262	98.6	69.9	10.0
		300	262	275	117.3	82.5	11.5
		600	275	275	117.3	82.5	13.0
		900/1500	305	305	130	88.9	16.0
		2500	318	321	139.7	95.3	19.0
1”	19	150	267	280	108	79.2	11.5
		300	281	294	124	88.9	13.0
		600	294	294	124	88.9	14.5
		900/1500	336	336	149.3	101.6	19.0
		2500	350	353	158.8	108	22.0
1 1/2”	25	150	279	292	127	98.6	16.4
		300	285	298	155.4	114.3	20.2
		600	301	301	155.4	114.3	21.0
		900/1500	370	370	177.8	123.9	26.2
		2500	396	399	203.2	146.1	36.6
2”	38	150	364	377	152.4	120.7	25.7
		300	372	383	165.1	127	29.8
		600	390	393	165.1	127	31.2
		900/1500	415	418	215.9	165.1	43.8
		2500	475	478	235	171.5	57.5
3”	50	150	400	413	190.5	152.4	52.7
		300	410	423	209.5	168.1	56.7
		600	428	431	209.5	168.1	58.7
		900	441	444	241.3	190.5	68.9
		1500	500	503	266.7	203.2	84.7
	42	2500	694	700	304.8	228.6	210.0

Caution

Valves that have not been actuated for a period of time may have a higher initial actuation torque. Packing adjustment may be required during the valve in service.

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Monoflange

- ASME B16.5 flange inlet connections 1/2” to 3” sizes.
- Standard 1/2” NPT female outlet.
- Bleed port 1/2” NPT female with Hex Plug is standard.
- OS&Y with graphite packing is standard, optional PTFE.
- Needle valve with PTFE packing is standard, optional Graphite.
- Optional fire safe design to BS6755 part 2.
- Optional NACE certification.



Ordering Information

VMS Series(Single Block)

Flange to 1/2” NPTF
Isolate : OS&Y or Needle

Designators	Isolate	Intermediate Ordering #
Y	OS&Y	VMS-Y
N	Globe Needle	VMS-N

VMB Series (Single Block & Bleed)

Flange to 1/2” NPTF
Isolate : OS&Y or Needle
Bleed : OS&Y or Needle

Designators	Isolate	Bleed	Intermediate Ordering #
Y	OS&Y	OS&Y	VMB-Y
N	Globe Needle	Globe Needle	VMB-N
D	OS&Y	Globe Needle	VMB-D

VMD Series (Double Block & Bleed)

Flange to 1/2” NPTF
Primary Isolate : OS&Y or Needle
Secondary Isolate : OS&Y or Needle
Bleed : OS&Y or Needle

Designators	Primary Isolate	Secondary Isolate	Bleed	Intermediate Ordering #
Y	OS&Y	OS&Y	OS&Y	VMD-Y
N	Globe Needle	Globe Needle	Gobe Needle	VMD-N
D	OS&Y	OS&Y	Globe Needle	VMD-D

Process Connections

Flange Size	
Designator	Size
8	1/2” (DN15)
12	3/4” (DN20)
16	1” (DN25)
24	1 1/2”(DN40)
32	2” (DN50)
48	3” (DN80)

Flange Class	
Designator	Class Rating
A	150
B	300
C	600
D	900
E	1500
F	2500

Finish Standard	
Designator	Finish
1	Raised Faced Smooth
2	Raised Faced Serrated
3	Raised Faced Stock

Packing Material

OS&Y Packing	Needle Valve Packing
Nil : Standard Graphite **PE** : PTFE	**Nil** : Standard PTFE **GF** : Graphite **RP** : Reinforced PTFE

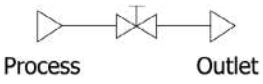
Option, Trim and Body Material

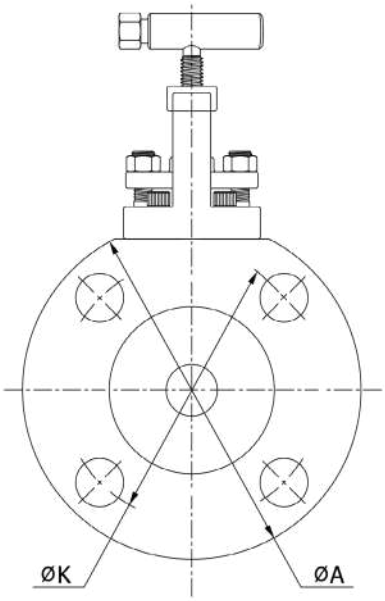
Option	Trim Material	Body Material
SG : NACE MR0175 **FS** : Fire tested design	**S** : SS316 **C** : Carbon Steel **D** : Duplex **M** : Monel	**S** : SS316 **C** : Carbon Steel **D** : Duplex **M** : Monel

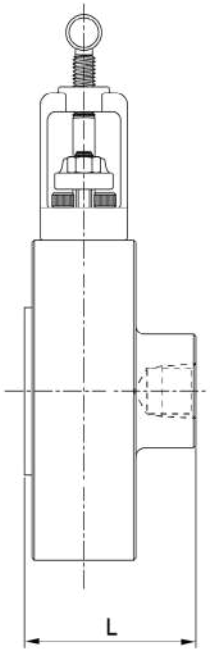
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Product Range / Weights and Dimensions

Single Block
VMS Series





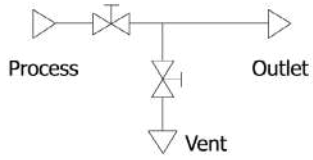


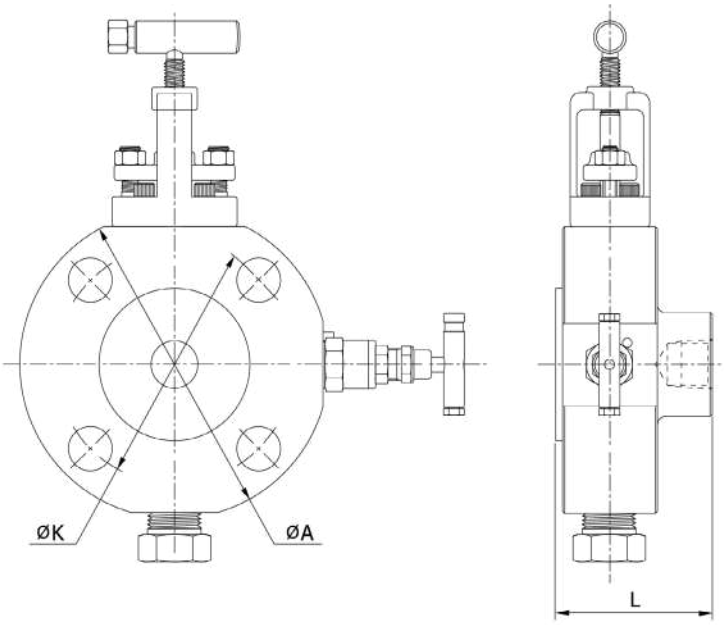
Size (inch)	Class	Dimension(mm)				Weight (kg)
		L(RF)	L(RTJ)	A	K	
1/2	150	64	-	99	60.3	2.0
	300	64	68	99	66.7	2.0
	600	68	68	99	66.7	2.0
	900/1500	68	68	133	82.5	3.4
	2500	68	68	133	88.9	3.4
3/4	150	64	-	99	69.8	2.0
	300	64	68	133	82.5	3.4
	600	68	68	133	82.5	3.4
	900/1500	68	68	133	88.9	3.4
	2500	73	73	159	95.2	5.5
1	150	64	68	133	79.4	2.4
	300	64	68	133	88.9	3.4
	600	68	68	133	88.9	3.4
	900/1500	73	73	159	101.6	5.5
	2500	73	73	159	108.0	5.5
1 1/2	150	64	68	127	98.4	3.2
	300	69	69	159	114.3	5.5
	600	73	73	159	114.3	5.5
	900/1500	73	73	178	128.8	7.8
	2500	82	84	235	146.1	11.4
2	150	69	73	159	120.6	5.5
	300	69	75	178	127.0	7.8
	600	73	75	178	127.0	7.8
	900/1500	82	84	235	165.1	11.4

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Single Block & Bleed

VMB Series



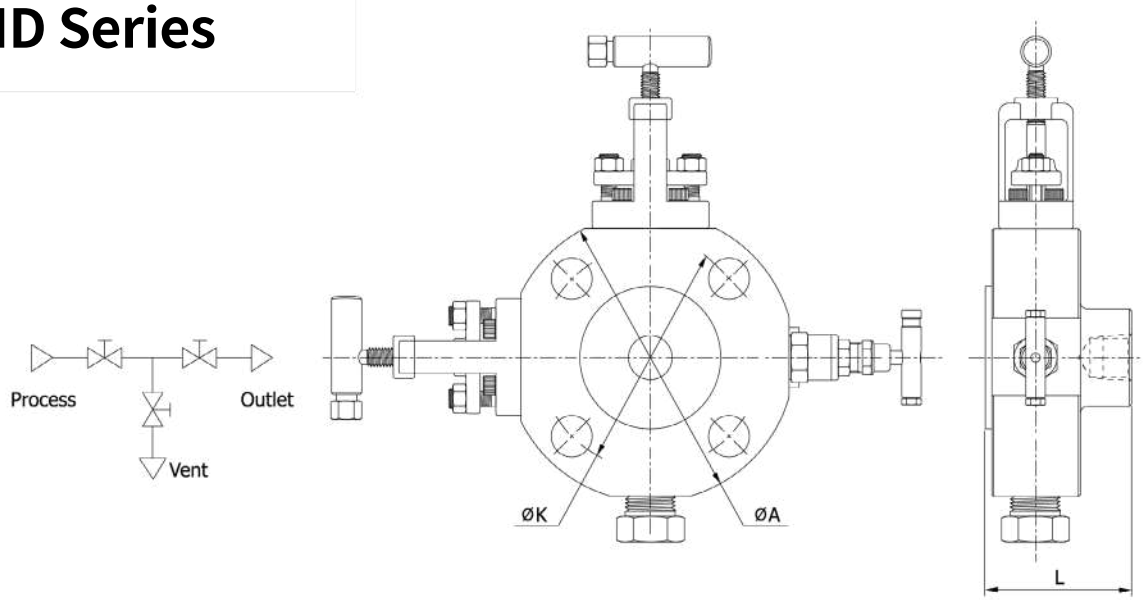


Size (inch)	Class	Dimension(mm)				Weight (kg)
		L(RF)	L(RTJ)	A	K	
1/2	150	64	-	99	60.3	2.0
	300	64	68	99	66.7	2.0
	600	68	68	99	66.7	2.0
	900/1500	68	68	133	82.5	3.4
	2500	68	68	133	88.9	3.4
3/4	150	64	-	99	69.8	2.0
	300	64	68	133	82.5	3.4
	600	68	68	133	82.5	3.4
	900/1500	68	68	133	88.9	3.4
	2500	73	73	159	95.2	5.5
1	150	64	68	133	79.4	2.4
	300	64	68	133	88.9	3.4
	600	68	68	133	88.9	3.4
	900/1500	73	73	159	101.6	5.5
	2500	73	73	159	108.0	5.5
1 1/2	150	64	68	127	98.4	3.2
	300	69	69	159	114.3	5.5
	600	73	73	159	114.3	5.5
	900/1500	73	73	178	128.8	7.8
	2500	82	84	235	146.1	11.4
2	150	69	73	159	120.6	5.5
	300	69	75	178	127.0	7.8
	600	73	75	178	127.0	7.8
	900/1500	82	84	235	165.1	11.4

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Double Block & Bleed

VMD Series



Size (inch)	Class	Dimension(mm)				Weight (kg)
		L(RF)	L(RTJ)	A	K	
1/2	150	64	-	99	60.3	2.0
	300	64	68	99	66.7	2.0
	600	68	68	99	66.7	2.0
	900/1500	68	68	133	82.5	3.4
	2500	68	68	133	88.9	3.4
3/4	150	64	-	99	69.8	2.0
	300	64	68	133	82.5	3.4
	600	68	68	133	82.5	3.4
	900/1500	68	68	133	88.9	3.4
	2500	73	73	159	95.2	5.5
1	150	64	68	133	79.4	2.4
	300	64	68	133	88.9	3.4
	600	68	68	133	88.9	3.4
	900/1500	73	73	159	101.6	5.5
	2500	73	73	159	108.0	5.5
1 1/2	150	64	68	127	98.4	3.2
	300	69	69	159	114.3	5.5
	600	73	73	159	114.3	5.5
	900/1500	73	73	178	128.8	7.8
	2500	82	84	235	146.1	11.4
2	150	69	73	159	120.6	5.5
	300	69	75	178	127.0	7.8
	600	73	75	178	127.0	7.8
	900/1500	82	84	235	165.1	11.4

Caution

Valves that have not been actuated for a period of time may have a higher initial actuation torque. Packing adjustment may be required during the valve in service.

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

DK-LOK



Safe Valve Selection

The selection of a valve for any application or system design must be considered to ensure safe performance. Valve function, valve rating, material compatibility, proper installation, operation and maintenance remain the sole responsibillty of the system designer and the user. DK-Lok accepts no liability for any improper selection, installation, operation or maintenance.

DK-LOK

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IDK-LOK

V73, V76 Series Filters

Rev. 01-01
Aug. 2023

DK-LOK®

V73 Series Filters

V73 Series In-Line Filters
V76 Series Tee Filters

Rev.01-01
Aug.2023

Pressure Rating up to 3000 psig (206 bar), 6000 psig (413 bar)

Features

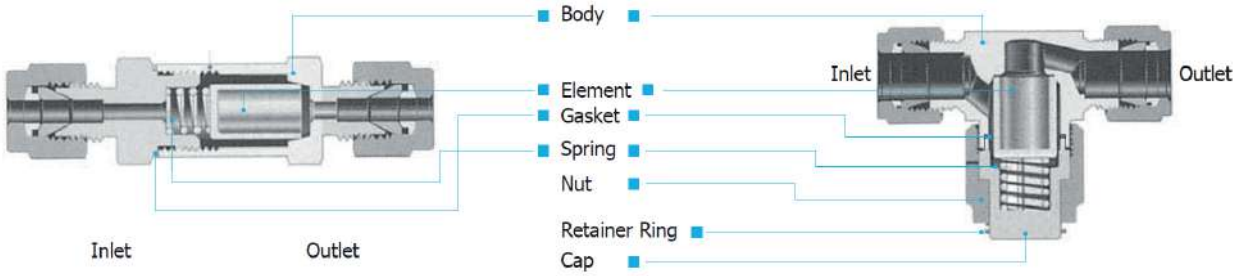
- Traps fine contamination to maintain system purity
- Gas and liquid filtration
- Standard micron filtering ranges
- Sintered Elements : 0.5, 2, 7, 15, 60 and 90 micron
- Strainer Elements : 40,140,230 and 440 micron
- Replaceable SS316 sintered and starainer elements
- SS316 and Brass body construction
- Choice of reliable DK-Lok, NPT & ISO pipe end connections
- Heat Code Traceability

V73 Series In-line Filters

- In-line filters are applicable where space is limited and elements don't have to be replaced often.
- Compact in-line design with large filtration area
- Maximum working pressure 3,000 psig @100°F(206 bar @38°C)

V76 Series Tee Filters

- Filter Element replaceable with the valve in-line.
- Safety union bonnet design for high pressure rating
- Optional Bypass for sampling or purging of process fluid.
- Maximum working pressure 6,000 psig @100 °F(413 bar @38°C)



Materials of Construction

Component	V73 Series		V76 Series	
	Grade/ASTM Specification			
Body	SS316 / A276	Brass / B16	SS316 / A276	Brass / B16
Nut	-	-	SS316 / A276	Brass / B16
Cap	-	-	SS316 / A276	Brass / B16
Retainer Ring	-	-	Stainless Steel	
Element	SS316 (Sintered, Strainer)			
Spring	SS302			
Gasket	SS316 / A240 silver plated			

Wetted components are listed in blue.

Filtration Definitions

- **Filter Element :**
  The component within the filter which traps media contamination.
- **Filtration Area :**
  The actual surface area of the filter element available to trap contamination.
- **Micron :**
  A unit of measure to describe the mean pore diameter of the filter element or the mean particle diameter of media contamination.
  One micron = 0.001mm or 0.00004 inch

V76 Series Tee Filter CNG Certifications

Certificates	ECE R110	ANSI / AGA NGV 3.1-1995 CGA NGV 12.3-M95	ISO 15500
Certificate No	110R-000196	2010-REPORT-032 (01)	2010-REPORT-031(00)
Classification	Class 0	CNG-Filter	CNG-Filter
Temperature	-40°C to 120°C (-40°F to 250°F)	-40°C to 121°C (-40°F to 250°F)	-40°C to 121°C (-40°F to 250°F)
Working Pressure	200 bar @ 120°C	273 bar @ 121°C	273 bar @ 121°C

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Sintered Elements Technical Information

- Stainless steel 316 sintered
- High heat resistance and thermal stability up to 1,500°F(815°C)
- High permeability with low-pressure drop.
- Shape-stability with self-supporting structural elements
- Suitable for compression, vibration, and high impulse pressures.
- Precise filtration because pore size and distribution are exact and uniform.
- Chemical resistance against acids and caustic solutions in various ranges of pH.

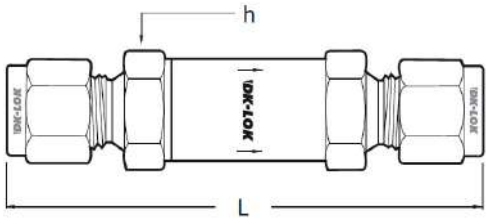
Element Designator	Nominal Pore Size ,µm	Pore Size Range ,µm	Element Porosity	Cv Factor	Max Pressure Differential Across Clean Filters at 70°F (21°C)
05	0.5	0.5 - 2	17%	0.046	1160 psig (80.0 bar)
2	2	1 - 4	22%	0.056	
7	7	5 - 10	27%	0.12	
15	15	11 - 25	36%	0.13	
60	60	50 - 75	44%	0.38	
90	90	75 - 110	45%	0.50	

Element Replacement

- The sintered elements don't permit the contaminants in the gas and liquid to pass through the elements when they are bigger than the pore size of micron.
- Contaminants are trapped by element pores and it results in pressure buildup.
- Contamination comes earlier when ow volume is high and media is not clean.
- The filtering elements need to be replaced for minimum pressure drop as well as system purity.

Note : Clean filter valve components whenever the element is replaced.

V73 Series In-line Filters



Ordering Information and Dimensions

Basic Ordering Number		End Connections Inlet and Outlet	Orifice inch (mm)	Dimensions. mm (in.)	
				L	H
V73A-	D-2T-	1/8 in. DK-Lok	0.09 (2.4)	59.7(2.35)	9/16
	F-2N-	1/8 in. Female NPT		54.9(2.16)	
	D-3M-	3mm DK-Lok		60.5(2.38)	
V73B-	D-4T-	1/4 in. DK-Lok	0.19 (4.7)	74.9(2.95)	3/4
	M-4N-	1/4 in. Male NPT		68.3(2.69)	
	F-4N-	1/4 in. Female NPT		72.9(2.87)	
	D-6M-	6mm DK-Lok		75.2(2.96)	
V73C-	M-8N-	1/2 in. Male NPT	0.28 (7.1)	81.3(3.20)	1
	D-6T-	3/8 in. DK-Lok		81.5(3.21)	
V73D-	D-8T-	1/2 in. DK-Lok	0.41 (10.3)	88.6(3.49)	1

Flow Capacities

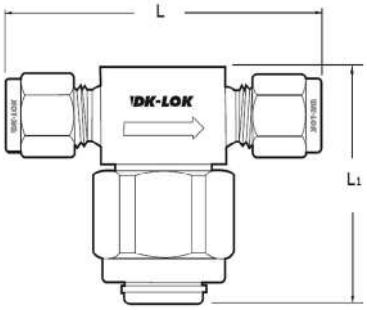
Filter Series	Nominal Pore Micron	Pressure Drop		
		20 psi	60 psi	120 psi
		Water GPM @70°F (21°C)		
73A Series	05	0.01	0.44	0.13
	2	0.11	0.26	0.44
	7	0.14	0.33	0.53
	15	0.17	0.39	0.64
	60	0.21	0.55	0.77
	90	0.28	0.55	0.66
73B Series	05	0.06	0.19	0.32
	2	0.34	0.94	1.42
	7	0.57	1.42	2.19
	15	0.71	1.42	2.30
	60	1.27	3.61	5.04
	90	1.70	4.60	6.68
	40,140,230,440	2.40	6.14	8.54
73C Series 73D Series	05	0.13	0.44	0.83
	2	0.37	1.20	1.75
	7	0.91	2.41	3.83
	15	1.19	2.85	4.49
	60	2.83	7.34	10.95
	90	3.25	8.32	12.05
	40, 140, 230, 440	5.00	15.40	19.40

Technical Information

Filter Series	Pressure Rating @100 °F (38 °C), psig (bar)		Temperature Rating, °F (°C)		Filtration Area in.² (mm²)	
Body Material	SS316	Brass	SS316	Brass	Sintered	Strainer
V73A	3000 (206)	3000 (206)	-20 to 900 (-28 to 482)	-20 to 300 (-28 to 148)	0.55(350)	-
V73B					1.30(830)	1.0(640)
V73C, V73D	2500 (172)	2000 (137)			2.0(1280)	1.7(1090)

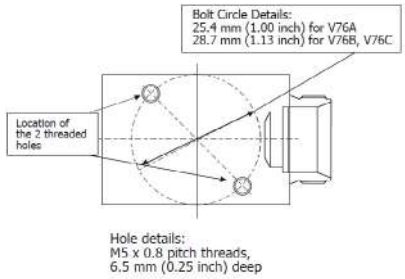
All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

V76 Series Tee Filters



Top mounting

Top View



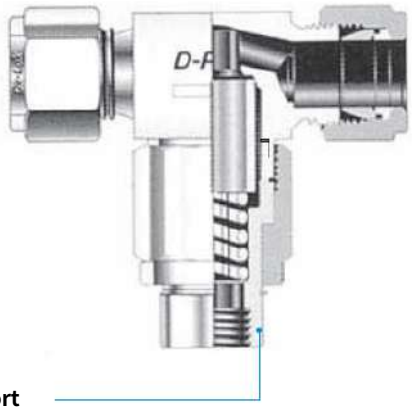
Ordering Information and Dimensions

Basic Ordering Number		End Connections Inlet & Outlet	Orifice mm (in.)	Dimensions, mm (in.)		
				L	L1	H
V76A	F-2N-	1/8 in. Female NPT	4.4 (0.17)	50.8(2.0)	47.5 (1.87)	-
	D-2T-	1/8 in. DK-Lok		57.7(2.27)		7/16
	D-4T-	1/4 in. DK-Lok		62.7(2.47)		9/16
	M-4N-	1/4 in. Male NPT		54.1(2.13)		1
	F-4N-	1/4 in. Female NPT		54.1(2.13)		-
	D-6M-	6mm DK-Lok		62.5(2.46)		14mm
V76B	D-6T-	3/8 in. DK-Lok	5.4 (0.21)	72.1(2.84)	56 (2.2)	11/16
	D-8M-	8mm DK-Lok		72.1(2.84)		1-1/8
V76C	M-6N-	3/8 in. Male NPT	6.4 (0.25)	60.5(2.38)	56 (2.2)	-
	D-10M-	10mm DK-Lok		72.6(2.86)		19mm
	D-12M-	12mm DK-Lok		77.2(3.04)		1-1/8
	D-8T-	1/2 in. DK-Lok		77.2(3.04)		7/8
	M-8N-	1/2 in. Male NPT		69.9(2.75)		-

All dimensions shown are for reference only and are subject to change. Dimensions with DK-Lok nuts are in finger-tight position.

Technical Information

Filter Series	Pressure Rating @100 °F (38 °C), psig (bar)		Temperature Rating, °F (°C)		Filtration Area in.² (mm²)	
	SS316	Brass	SS316	Brass	Sintered	Strainer
V76A, V76B	6000 (413)	2000 (137)	-20 to 900 (-28 to 482)	-20 to 300 (-28 to 148)	1.3(830)	1.0(640)
V76C	6000 (413)	2000 (137)			2.0(1280)	1.7(1090)



By-pass port

By-pass port of female 1/8 in. or 1/4 in. NPT is available for sampling and purging of process fluid.
To use, replace the cap on Tee filter with the by-pass port.

Operation

Keep the cap downwards to prevent contaminants from entering the system during element replacement

Flow Capacities

Filter Series	Nom. Pore Micron	Pressure Drop		
		20 psi	60 psi	120 psi
		Water GPM @70°F (21°C)		
V76A-F-2N V76A-D-2T	05	0.06	0.19	0.32
	2	0.11	0.26	0.44
	7	0.14	0.33	0.53
	15	0.17	0.39	0.64
	60	0.21	0.55	0.77
	90	0.28	0.55	0.66
	40, 140, 230, 440	0.28	0.55	0.66
V76A-D-4T V76A-M-4N V76A-F-4N	05	0.06	0.19	0.32
	2	0.34	0.94	1.42
	7	0.57	1.42	2.19
	15	0.71	1.42	2.30
	60	1.13	2.96	4.27
	90	1.56	3.72	5.37
	40, 140, 230, 440	1.70	4.6	6.13
V76B Series V76C Series"	05	0.13	0.44	0.83
	2	0.37	1.2	1.75
	7	0.91	2.41	3.83
	15	1.19	2.85	4.49
	60	2.12	5.26	7.34
	90	2.40	6.02	8.33
	40, 140, 230, 440	2.60	7.50	10.80

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Ordering information

Select desired basic ordering number, element designator, option and body material listed below.

V76A-D-4T -7 -BF2N -S
V76B-D-6T -NE -B

Element			Filter with no element	By-pass	Body Material
Element Type	Element Designator	Nominal Micron			
Sintered	0.5	0.5	**NE** : Filter with no element Note : NE option is applicable to V76 series Tee filter only.	**Nil** : No By-pass option **BF2N** : 1/8 in. Female NPT **BF4N** : 1/4 in. Female NPT	**S** : SS316 **B** : Brass
	2	2			
	7	7			
	15	15			
	60	60			
	90	90			
Strainer	40	40			
	140	140			
	230	230			
	440	440			



Field Assembly Kit

Element Kits

To order, select desired kit basic ordering number and element designator. Example : FE73A-05

Element Kit Basic Ordering Number		Element Designator	Nominal Pore Size, µm	Pore Size Range, µm	Kit applicable Filter Series	
Sintered	FE73A- FE73B- FE73C-	5	0.5	05 - 2	FE73A-	V73A
		2	2	1 - 4		
		7	7	5 - 10	FE73B-	V73B V76A
		15	15	11 - 25		
		60	60	50 - 75	FE73C-	V73C, V73D V76B, V76C
		90	90	75 - 110		
Strainer	FES76A- FES73C-	40	40	-	FES76A	V73B V76A
		140	140	-		
		230	230	-	FES73C-	V73C, V73D V76B, V76C
		440	440	-		

Gasket and Spring Kits

To order, select desired gasket or spring kit ordering number

Filter Series	Gasket Kit Ordering Number	Spring Kit Ordering Number	Kit applicable Filter Series
V73 Stainless Brass	9WSH-73A-S	9SPR-73A-2	V73A
	9WSH-73B-S	9SPR-73B-2	V73B
	9WSH-73C-S	9SPR-73C-2	V73C
	9WSH-73D-S	9SPR-73C-2	V73D
V76 Stainless Brass	76A-WSH-S	9SPR-76A-2	V76A
	76B-WSH-S	9SPR-76B-2	V76B / V76C

We reserve the right to change specifications stated in this catalog for our coutinuing program of improvement.

Safe Filter Selection

The Selection of a Filter for any application or system design must be considered to ensure safe performance. Filter function, Filter rating, material compatibility, proper installation, operation and maintenance remain the sole responsibility of the system designer and the user. DK-Lok accepts no liability for any improper selection, installation, operation or maintenance.

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IDK-LOK

VDPRV Series

Rev. 01-01
Aug. 2023

DK-LOK®
VDPRV Series

VDPRV Series

Pressure Reducing Valves

Rev.01-01
Aug.2023



Application

- Pressure reducing valve is applied with high pressure reduction in the water and steam sampling system
- The sampling system is required with chemical analysis of water and steam samples

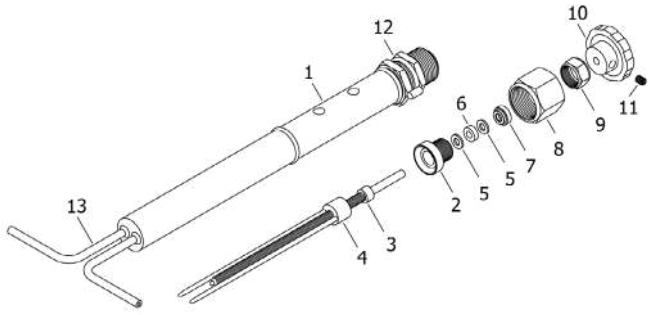
Features

- Precision flow control
- Smooth handle operating
- Accuracy pressure reducing
- Panel mounting possibility
- Pressure reducer is rod-in-tube type
- Stainless steel tapered rod

Technical Data

• Working Pressure	5,000 psig
• Temperature Range	122 to 300°F (50 to 149°C)
• Pressure Reducing Range	5 to 5,000 psig
• Flow Range	150 to 4,000 ml/min.
• End Connection	Tube end O.D 1/4”x Thickness 0.065”
	Socket weld 1/4” tube
	37° flare 1/4”
	Union elbow 1/4”

Materials of Construction



Description	Material
1. Body	ASTM A479/A276 TYPE316
2. Bonnet	ASTM A479/A276 TYPE316
3. Stem Screw	ASTM A479/A276 TYPE316
4. Stem	ASTM A479/A276 TYPE316
5. Stem Bearing	PEEK
6. Stem Seal	Stainless Steel with TFE
7. Gland	Brass
8. Union Nut	ASTM A479/A276 TYPE316
9. Bonnet Nut	ASTM A479/A276 TYPE316
10. Handle	Nylon with Brass insert
11. Set Screw	Stainless Steel
12. Panel Nut	ASTM A479/A276 TYPE316
13. Bending Tube	ASTM A479/A276 TYPE316

* Wetted parts are listed in blue.

Factory Test

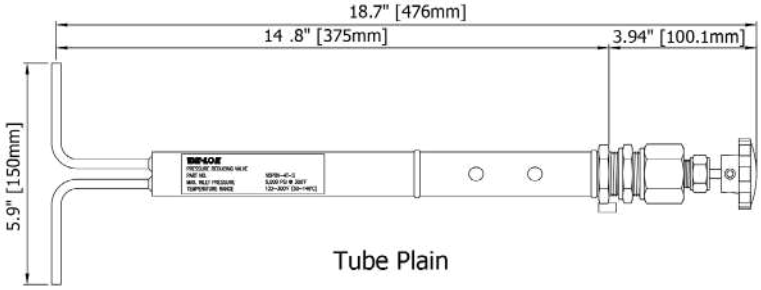
Every pressure reducing valve is factory tested for pressure reducing.
This test is to find out whether the pressure of outlet is adjustable by 28 psig(2kg/cm2), 43 psig(3kg/cm2) and 71 psig(5kg/cm2) when the inlet pressure comes in 1850 psig(130kg/cm2).

Cleaning

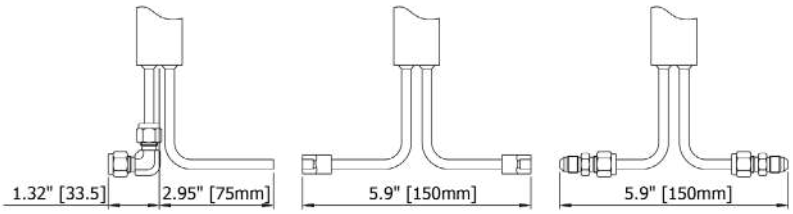
Every pressure reducing valve is cleaned and packaged in accordance with the requirements of our cleaning standard of DC-01.

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Ordering Information



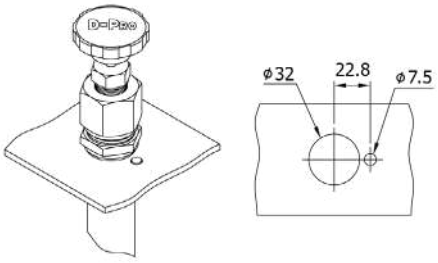
Tube Plain



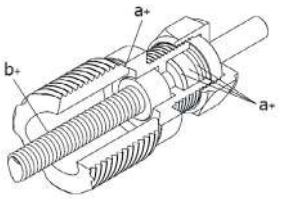
Union Elbow | Socket Weld | 37° Flare

Part No.	End Connection
VDPRV-4T-S	Tube Plain 1/4”
VDPRV-SW4T-S	Socket Weld 1/4”
VDPRV-K4T-S	37° Flare 1/4”
VDPRV-DL-4T-S	Union Elbow 1/4”

Panel Mounting & Lubrication

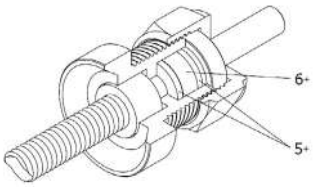


Panel Mounting Dimension

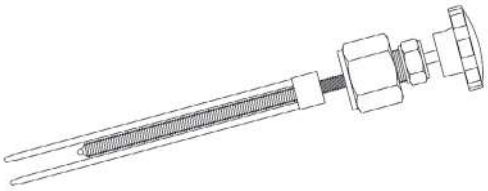


No.	Lubrication
a	Silicon-based
b	Hydrocarbon-based

Replacement Parts



No.	Part (EA)	Description	Ordering No
5	Stem Bearing (2)	Stem Seal	VDPRV-SSR
6	Stem Seal (1)	Replacement Part	



Description	Ordering No
Handle and stem Road Assembly	VDPRV-HSRA

Safe Valve Selection

The selection of a valve for any application or system design must be considered to ensure safe performance. Valve function, valve rating, material compatibility, proper installation, operation and maintenance remain the sole responsibility of the system of the system designer and the user. Dk Tech accepts no liability for any improper selection, installation, operation or maintenance.

DK-LOK

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IDK-LOK

DQVP and GJ Series

Rev. 01-01
Aug. 2023

DK-LOK®
Quick Connect

DQVP and GJ Series

Rev.01-01
Aug.2023

Pressure Rating up to 508 psig (35bar)

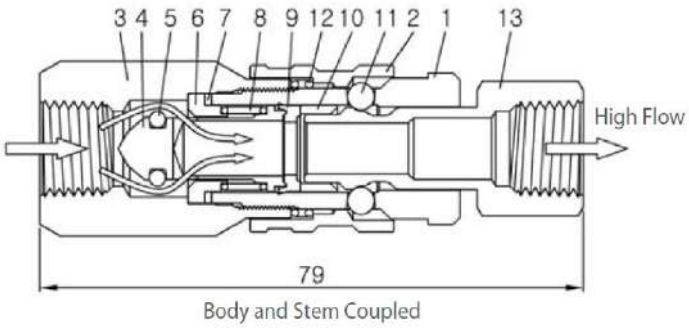
DQVP Series Quick Connects



Feature

- Max. Working Pressure: 508 psig@100°F(35 bar@38°C)
- Min. Burst Pressure: 2,030 psig@100°F(140 bar@38°C)
- Cracking Pressure: 87 psig@100°F(6 bar@38°C)
- Body and connector are made of Stainless Steel 316L
- Prevent disconnection for user's carelessness by constructed auto locking system

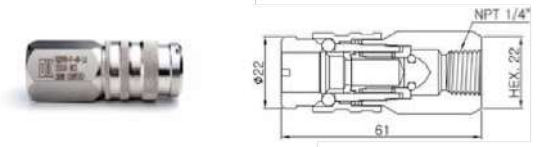
Materials of Construction



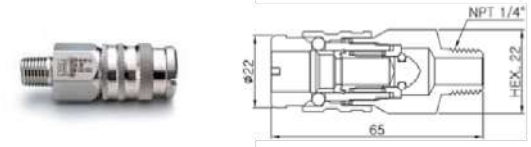
No.	Component	Material
		SS316
1	Body	ASTM A276 TYPE 316L
2	Body Sleeve	ASTM A276 TYPE 316L
3	Connector	ASTM A276 TYPE 316L
4	Valve	ASTM A276 TYPE 316L
5	O-Ring	NBR
6	Guide	ASTM A276 TYPE 316L
7	Packing	PCTFE
8	Spring	Stainless Steel 302
9	Retainer	NBR
10	Insert	ASTM A276 TYPE 316L
11	Ball	Stainless Steel
12	Sleeve Spring	Stainless Steel 302
13	Stem	ASTM A276 TYPE 316L

Ordering Information and Dimensions

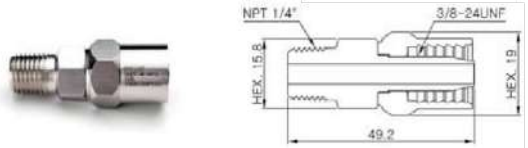
Part No.: DQVPB-F-4N-L (Body with Female NPT 1/4")



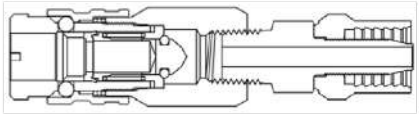
Part No.: DQVPB-M-4N-L (Body with Male NPT 1/4")



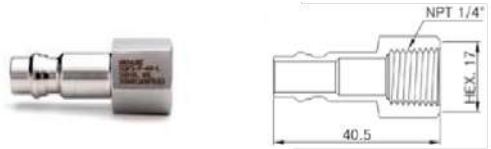
Part No.: DQPC-M-4N-L (Re-usable Connector)



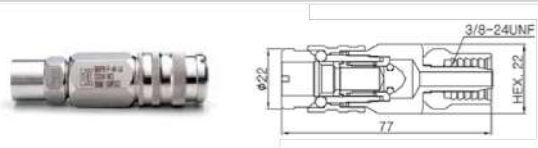
Assembly of DQVPB-F-4N-L and DQPC-M-4N-L



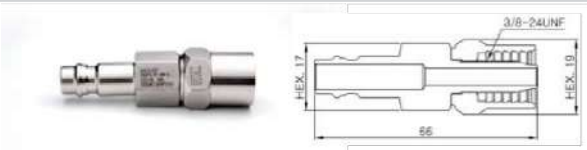
Part No.: DQPS-F-4N-L (Stem with Female NPT 1/4")



Part No.: DQVPB-PC-3U-L (Body with Hose Cap)



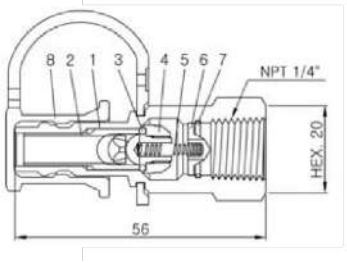
Part No.: DQPS-PC-3U-L (Stem with Hose Cap)



All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

DQVPS Series Quick Connect Stem with Valve (Part No.: DQVPS-F-4N-L)





No.	Component	Material
		SS316
1	Stem	ASTM A479/A276 TYPE 316L
2	Valve	ASTM A479/A276 TYPE 316L
3	O-Ring	NBR
4	Valve Cap Nut	ASTM A479/A276 TYPE 316L
5	Spring	Stainless Steel 302
6	Guide	ASTM A479/A276 TYPE 316L
7	Key Spring	Stainless Steel
8	Protect Cap	Option

GJ Series Connections



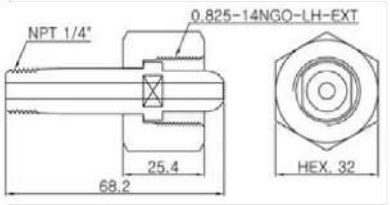
Feature

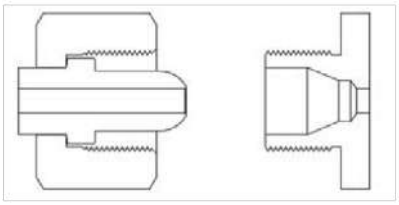
- Max. Working Pressure: 6,000 psig@100°F(414 bar@38°C)
- Material: ASTM A276 TYPE316L
- Applied to CGA standard

Ordering Information and Dimensions

Part No.: GJ-MF-4N-CGA350-L (Round Nipple)

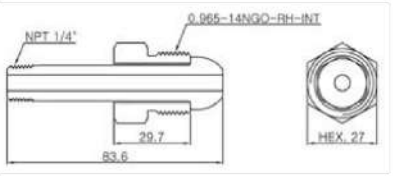


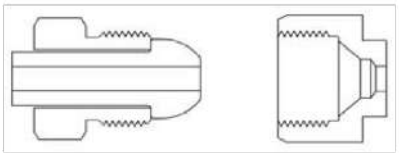




Part No.: GJ-M-4N-CGA580-L

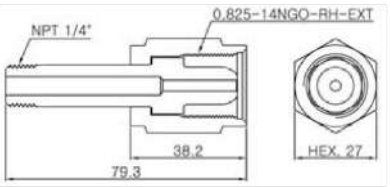


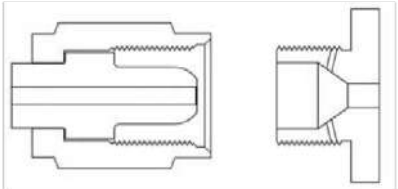




Part No.: GJ-MF-4NCGA347-L (Long Round Nipple)







Safe Valve Selection

The selection of a valve for any application or system design must be considered to ensure safe performance.Valve function, valve rating, material compatibility, proper installation, operation and maintenance remain the sole responsibility of the system designer and the user. Dk Tech accepts no liability for any improper selection, installation, operation or maintenance.

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IDK-LOK

DQ, DQM, DF, DQPM Series

Rev. 01-01
Aug. 2023

DK-LOK®
Quick Connect

Quick Connectors

DQ, DQM, DF, DQPM Series

Rev.01-01
Aug.2023

- No tools required to couple and uncouple.
- Bi-directional flow design.
- Versatile options of both-end shutoff (DV), single-end shutoff (SV), and both end open (DF Series).

- DQ Series Quick Connector : 1 to 5 page
- DQM Series Miniature Quick Connector : 6 page
- DF Series Full Flow Quick Connector : 7 to 8 page
- DQPM PTFE Sealed Quick Connect : 9 to 13 page

DQ Series Quick Connectors



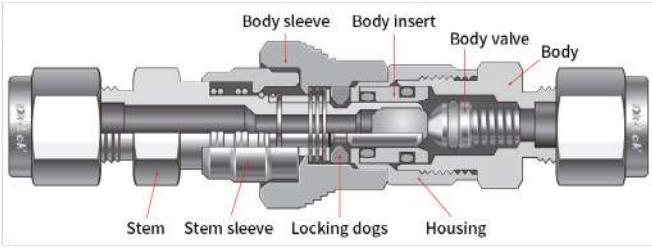
Features

- Bi-directional flow design.
- Simple to operate.
- SS316 construction with standard FKM O-ring.
- Brass construction with standard NBR O-ring.
- No tools required to couple and uncouple.
- Compact and light-weight design.

Operation

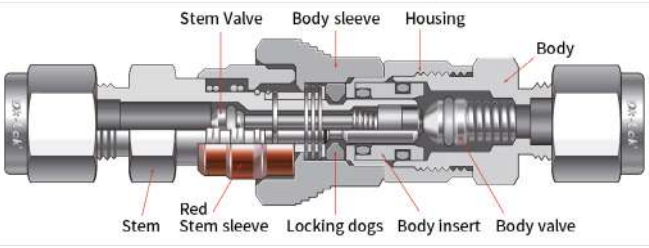
- Coupling
  1. Align the stem with the body in the identical Series.
  2. Push the stem into the body until it clicks.
- Uncoupling
  1. Pull the body sleeve toward stem.
  2. Remove stem from body.
- Do not couple or uncouple at pressures exceeding 250 psig (17.2 bar).

SV: Single valve coupled



Bi-Directional Flow
Stem has no valve

DV: Double valve coupled



Bi-Directional Flow
Stem has valve

Materials of Construction

Component	Material	
	SS316	Brass
Body, Housing Body valve Body insert Body sleeve	SS316/ ASTM A276	JIS H3250 C3604
Locking dogs	Xylan™-coated SS316 powered	
Stem Stem sleeve Stem valve	SS316/ ASTM A276	JIS H3250 C3604
O-rings	FKM	NBR
Springs	SS302/ASTM A313	
Lubricants	Silicon and TFE based	

Wetted parts indicated in blue.

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Pressure-Temperature Ratings

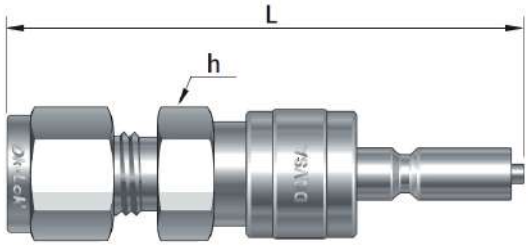
DQ Stem and Body	SS316 FKM O-rings			Brass NBR O-rings		
	DQA	DQB	DQC	DQA	DQB	DQC
	psi (bar) @ °F (°C)					
Coupled	3000(206) @ 70 (21)	1500(103) @ 70 (21)	750(51.6) @ 70 (21)	2000(137) @ 70 (21)	1000(68.9) @ 70 (21)	500(34.4) @ 70 (21)
	250(17.2) @ 400 (204)			250(17.2) @ 250 (121)		
Uncoupled	250(17.2) @ 70 (21)					
When coupling and uncoupling	250(17.2) @ 70 (21)					

Spillage and Air Inclusion

- Spillage is the volume of system fluid that escapes while a quick connector is uncoupled.
- Air inclusion is the volume of air trapped that comes in while a quick connector is coupled.

DQ Series	Spillage	Air Inclusion
DQ A	0.3	0.3
DQ B	1.0	1.0
DQ C	3.0	3.0

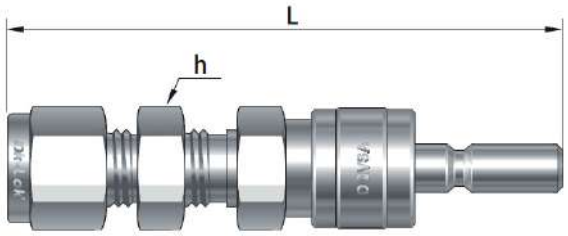
Ordering Information and Dimensions Stems



DV : Stem has a valve
SV : Stem has no valve

Series	End Connection	Basic Ordering Number		Cv			L mm(in.)		h Hex. in.
		SV	DV	SV	DV	Full Flow	SV	DV	
DQA	1/8 in. DK-Lok	DQSA-D-2T-	DQVSA-D-2T-	0.08	0.08	0.08	58.9 (2.32)	70.4 (2.77)	5/8
	1/4 in. DK-Lok	DQSA-D-4T-	DQVSA-D-4T-	0.3	0.2	0.4	59.9 (2.36)	61.5 (2.42)	5/8
	6 mm DK-Lok	DQSA-D-6M-	DQVSA-D-6M-	0.3	0.2	0.4	59.9 (2.36)	61.5 (2.42)	5/8
	1/8 in. Male NPT	DQSA-M-2N-	DQVSA-M-2N-	0.3	0.2	0.4	52.6 (2.07)	54.1 (2.13)	5/8
	1/4 in. Male NPT	DQSA-M-4N-	DQVSA-M-4N-	0.3	0.2	0.4	56.4 (2.22)	57.9 (2.28)	5/8
	1/8 in. Female NPT	DQSA-F-2N-	DQVSA-F-2N-	0.3	0.2	0.4	51.1 (2.01)	52.6 (2.07)	5/8
	1/4 in. Female NPT	DQSA-F-4N-	DQVSA-F-4N-	0.3	0.2	0.4	57.4 (2.26)	58.9 (2.32)	3/4
DQB	3/8 in. DK-Lok	DQSB-D-6T-	DQVSB-D-6T-	1.0	0.5	1.5	64.0 (2.52)	67.1 (2.64)	3/4
	10 mm DK-Lok	DQSB-D-10M-	DQVSB-D-10M-	1.0	0.5	1.5	67.3 (2.65)	70.4 (2.77)	3/4
	1/4 in. Male NPT	DQSB-M-4N-	DQVSB-M-4N-	0.9	0.5	1.5	58.9 (2.32)	61.9 (2.44)	3/4
	3/8 in. Male NPT	DQSB-M-6N-	DQVSB-M-6N-	0.8	0.5	1.6	59.7 (2.35)	62.7 (2.47)	3/4
	1/4 in. Female NPT	DQSB-F-4N-	DQVSB-F-4N-	0.9	0.5	1.5	59.7 (2.35)	62.7 (2.47)	3/4
	3/8 in. Female NPT	DQSB-F-6N-	DQVSB-F-6N-	0.8	0.5	1.6	59.7 (2.35)	62.7 (2.47)	7/8
DQC	1/2 in. DK-Lok	DQSC-D-8T-	DQVSC-D-8T-	2.4	1.5	3.3	75.2 (2.96)	80.3 (3.16)	15/16
	12 mm DK-Lok	DQSC-D-12M-	DQVSC-D-12M-	2.4	1.5	3.3	75.2 (2.96)	60.3 (3.16)	15/16
	1/2 in. Male NPT	DQSC-M-8N-	DQVSC-M-8N-	2.0	1.3	3.1	72.1 (2.84)	77.2 (3.04)	15/16
	1/2 in. Female NPT	DQSC-F-8N-	DQVSC-F-8N-	2.0	1.3	3.1	71.6 (2.82)	76.7 (3.02)	1 1/16

Stems-Bulkhead



DV : Stem has a valve
SV : Stem has no valve

Series	End Connection	Basic Ordering Number		Panel Thickness Max. mm (in.)	Panel Hole Dia. Min. mm (in.)	L mm (in.)		h Hex. in.
		SV	DV			SV	DV	
DQA	1/4 in. DK-Lok	DQSA-BH-D-4T-	DQVSA-BH-D-4T-	6.4 (0.25)	11.9 (15/32)	69.6 (2.74)	71.1 (2.80)	5/8
	6 mm DK-Lok	DQSA-BH-D-6M-	DQVSA-BH-D-6M-	6.4 (0.25)	11.5 (29/64)	69.6 (2.74)	71.1 (2.80)	16 mm
DQB	3/8 in. DK-Lok	DQSB-BH-D-6T-	DQVSB-BH-D-6T-	6.9 (0.27)	15.1 (19/32)	74.2 (2.92)	76.0 (3.07)	3/4
	10 mm DK-Lok	DQSB-BH-D-10M-	DQVSB-BH-D-10M-	6.9 (0.27)	16.7 (21/32)	77.7 (3.06)	78.7 (3.10)	22 mm
DQC	1/2 in. DK-Lok	DQSC-BH-D-8T-	DQVSC-BH-D-8T-	6.6 (0.26)	19.8 (25/32)	87.1 (3.43)	92.2 (3.63)	15/16
	12 mm DK-Lok	DQSC-BH-D-12M-	DQVSC-BH-D-12M-	6.6 (0.26)	19.4 (49/64)	87.1 (3.43)	92.2 (3.63)	24 mm

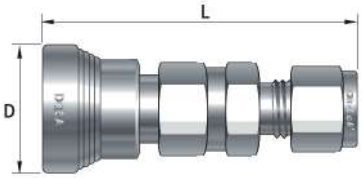
Insertion depth and Overall length

To have an overall length in coupled position, subtract the insertion depth from the combination length of the stem and the body.

Insertion Depth

DQ Series	Depth mm (in.)	
	SV	DV
DQA	27.7 (1.09)	29.2 (1.15)
DQB	30.0 (1.18)	33.0 (1.30)
DQC	37.6 (1.48)	42.7 (1.68)

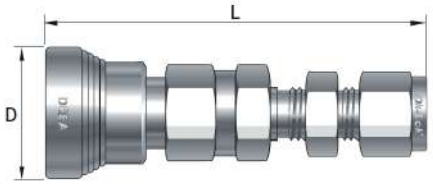
Bodies



Series	End Connection	Basic Ordering Number	L mm (in.)	D mm (in.)
DQA	1/8 in. DK-Lok	DQBA-D-2T-	57.4 (2.26)	23.1 (0.91)
	1/4 in. DK-Lok	DQBA-D-4T-	56.4 (2.30)	23.1 (0.91)
	6 mm DK-Lok	DQBA-D-6M-	58.4 (2.30)	23.1 (0.91)
	1/8 in. Male NPT	DQBA-M-2N-	51.1 (2.01)	23.1 (0.91)
	1/4 in. Male NPT	DQBA-M-4N-	54.9 (2.16)	23.1 (0.91)
	1/4 in. Male ISO	DQBA-M-4R-	54.9 (2.16)	23.1 (0.91)
	1/8 in. Female NPT	DQBA-F-2N-	54.9 (2.16)	23.1 (0.91)
	1/4 in. Female NPT	DQBA-F-4N-	61.5 (2.42)	23.1 (0.91)
	1/4 in. Female ISO	DQBA-F-4R-	61.5 (2.42)	23.1 (0.91)
DQB	3/8 in. DK-Lok	DQBB-D-6T-	65.5 (2.58)	26.2 (1.03)
	10 mm DK-Lok	DQBB-D-10M-	68.1 (2.68)	26.2 (1.03)
	1/4 in. Male NPT	DQBB-M-4N-	60.5 (2.38)	26.2 (1.03)
	3/8 in. Male NPT	DQBB-M-6N-	60.5 (2.38)	26.2 (1.03)
	3/8 in. Male ISO	DQBB-M-6R-	60.5 (2.38)	26.2 (1.03)
	1/4 in. Female NPT	DQBB-F-4N-	64.5 (2.54)	26.2 (1.03)
	3/8 in. Female NPT	DQBB-F-6N-	65.3 (2.57)	26.2 (1.03)
	3/8 in. Female ISO	DQBB-F-6R-	65.3 (2.57)	26.2 (1.03)
DQC	1/2 in. DK-Lok	DQBC-D-8T-	78.5 (3.09)	30.7 (1.21)
	12 mm DK-Lok	DQBC-D-12M-	78.5 (3.09)	30.7 (1.21)
	1/2 in. Male NPT	DQBC-M-8N-	75.4 (2.97)	30.7 (1.21)
	1/2 in. Male ISO	DQBC-M-8R-	75.4 (2.97)	30.7 (1.21)
	1/2 in. Female NPT	DQBC-F-8N-	81.8 (3.22)	30.7 (1.21)
	1/2 in. Female ISO	DQBC-F-8R-	81.8 (3.22)	30.7 (1.21)

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Bodies-Bulkhead



Series	End Connection	Basic Ordering Number	Panel Thickness Max.	Panel Hole Dia. Min.	L	D
			mm (in.)			
DQA	1/4 in. DK-Lok	DQBA-BH-D-4T-	6.4 (0.25)	11.9 (15/32)	67.8 (2.67)	23.1 (0.91)
	6 mm DK-Lok	DQBA-BH-D-6M-	6.4 (0.25)	11.9 (15/32)	67.8 (2.67)	23.1 (0.91)
DQB	3/8 in. DK-Lok	DQBB-BH-D-6T-	6.9 (0.27)	15.1 (19/32)	75.7 (2.98)	26.2 (1.03)
	10 mm DK-Lok	DQBB-BH-D-10M-	6.9 (0.27)	16.7 (21/32)	75.9 (2.99)	26.2 (1.03)
DQC	1/2 in. DK-Lok	DQBC-BH-D-8T-	6.6 (0.26)	19.8 (25/32)	90.4 (3.56)	30.7 (1.21)
	12 mm DK-Lok	DQBC-BH-D-12M-	6.6 (0.26)	19.4 (49/64)	90.4 (3.56)	30.7 (1.21)

How to Order

Add "SA" for SS316 or "BA" for Brass as a suffix to the Basic Ordering Number.
Examples : DQSA-D-4T-SA, DQBA-D-4T-BA.

O-ring Designators

Nil : Standard FKM for SS316 quick connector
Nil : Standard NBR for Brass quick connector
FKM : VT
NBR : BN
FFKM : KZ
EPDM : EP

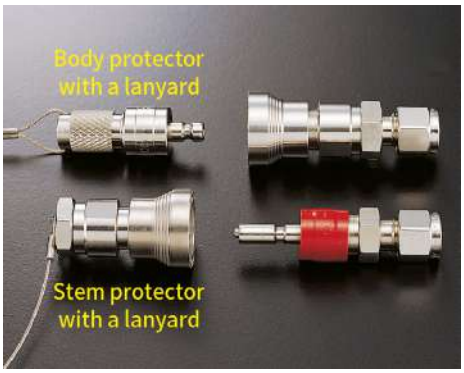
How to Order an Optional O-ring Connector
Insert O-ring designator to the basic ordering number.
Examples: DQVSA-D-2T-KZ-SA, DQVSA-D-2T-EP-BA

How to Order a Full Flow DQ Series Connector

A full flow DQ series consists of a SV stem and a full flow body.

To order a full flow body, select an applicable Basic Ordering Number, add "FF" and a material designator.
Examples : DQBA-D-4T-FF-SA, DQBB-D-6T-FF-SA.

Options



DQ Protectors

Body and Stem Protector are available to protect body and stem from damage and contamination while they are uncoupled.

Field Assembly Protector Ordering Number

Stem Protector	Body Protector
DQSA-CP-	DQBA-PG-
DQSB-CP-	DQBB-PG-
DQSC-CP-	DQBC-PG-

To complete ordering number, add a material designator "SA" for SS316, "BA" for Brass as a suffix to the protector ordering number.
Examples : DQSA-CP-SA, DQBA-PG-BA
Note : Stem Protector is applicable to both SV stem and DV stem.

Pressure Retaining Protectors

DQ Protectors are not pressure retaining devices.
To order the pressure retaining protector, add "P" as a suffix to the protector ordering number.
Examples : DQSA-CPP-, DQBA-PGP-.

Materials of Construction

Protector: Stainless steel or Brass
Lanyard: Stainless steel
Lanyard clamp: Stainless steel

How to order FACTORY ASSEMBLED PROTECTOR on to DQ stem and body.

Select an applicable STEM or BODY ordering number, and insert“CP” or“PG”in the ordering number.
Examples : DQVSC-D-12M-CP-SA, DQBC-D-12M-PG-SA.

DQ color coded “Keyed” quick connectors



Features

- DQ Keyed quick connectors prevent intermixing of different keys mechanically as well as allow visual identification by color coding.
- Eight (8) different keys on each DQ series are available with its own Key number.
- DQ keys are useful to control multi-fluid or multi-pressure systems.

Operation

- Select stem and body keyed in the same DQ series.
- Coupling : Align stem with body. Push stem into body until it clicks.
- Uncoupling : Pull body sleeve toward stem. Remove stem.

DQ Key Ordering Numbers and Sleeve Outside Diameter

Key Number	Key Color	DQA				DQB				DQC			
		Body Sleeve		Stem Sleeve		Body Sleeve		Stem Sleeve		Body Sleeve		Stem Sleeve	
		mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
K1	Black	24.5	0.96	20.9	0.82	28.7	1.13	25.1	0.99	32.0	1.26	27.9	1.10
K2	Orange	25.0	0.99	21.6	0.85	29.5	1.16	25.8	1.02	32.8	1.29	28.9	1.14
K3	Green	26.0	1.02	22.4	0.88	30.2	1.19	26.6	1.05	33.6	1.32	29.7	1.17
K4	Yellow	26.8	1.05	23.2	0.91	31.0	1.22	27.4	1.08	34.3	1.35	30.4	1.20
K5	Blue	27.5	1.08	23.9	0.94	31.5	1.24	28.1	1.11	35.1	1.38	31.2	1.23
K6	White	28.3	1.11	24.7	0.97	32.5	1.28	28.9	1.14	35.8	1.41	32.0	1.26
K7	Purple	29.1	1.14	25.4	1.00	33.3	1.31	29.7	1.17	36.6	1.44	32.7	1.29
K8	Brown	29.8	1.17	26.2	1.03	34.0	1.34	30.4	1.20	37.4	1.47	33.5	1.32
Standard DQ Body Sleeve Dia.		23.1	0.91			26.2	1.03			30.7	1.21		

How to Order

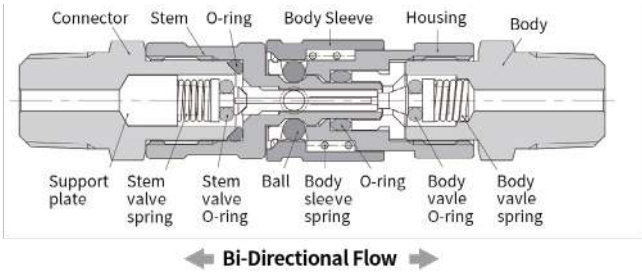
Add the Key number as a suffix to the DQ series Ordering Number.
Examples : DQSB-D-6T-**K1**-SA.

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

DQM Series Miniature Quick Connectors

Features

- Bi-directional flow design.
- Miniature design for max. 4000 psi working pressure.
- Stainless steel and brass construction.
- **Operation** : To couple, to uncouple, pull body sleeve toward body.



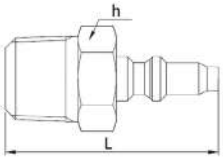
Materials of Construction

Component	Material	
	Stainless	Brass
Body, Housing, Stem, Connector, Body sleeve	SS316/ ASTM A276	JIS H3250 C3604
Support plate, Left & Right fin	Stainless Steel	
Body valve, Stem valve	SS316/ ASTM A276	
Springs	SS302/ASTM A313	
O-rings	FKM	NBR
Locking ball	SS316	
Lubricants	Silicon and TFE based	

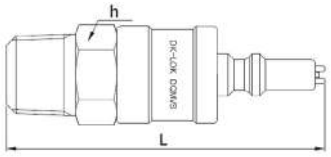
Wetted parts indicated in blue.

Ordering Information and Dimensions

Stems



SV : Stem has no valve

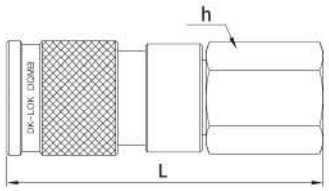


DV : Stem has a valve



End Connection	Basic Ordering Number		Cv			L mm(in.)		h Hex. in.
	SV	DV	SV	DV	Full Flow	SV	DV	
1/16 in. DK-Lok	DQMS-D-1T-	DQMVS-D-1T-	0.06	0.05	0.06	30.0 (1.18)	44.7 (1.76)	7/16
1/16 in. Male NPT	DQMS-M-1N-	DQMVS-M-1N-	0.06	0.05	0.06	26.2 (1.03)	40.9 (1.61)	7/16
1/16 in. Female NPT	DQMS-F-1N-	DQMVS-F-1N-	0.06	0.05	0.06	26.2 (1.03)	40.9 (1.61)	7/16
1/8 in. DK-Lok	DQMS-D-2T-	DQMVS-D-2T-	0.06	0.05	0.06	32.8 (1.29)	47.5 (1.87)	7/16
1/8 in. Male NPT	DQMS-M-2N-	DQMVS-M-2N-	0.06	0.05	0.06	26.2 (1.03)	40.9 (1.61)	7/16
1/8 in. Female NPT	DQMS-F-2N-	DQMVS-F-2N-	0.06	0.05	0.06	26.2 (1.03)	46.0 (1.81)	9/16

Body



Basic Ordering Number	End Connection	L mm(in.)	h Hex. in.
DQMB-D-1T-	1/16 in. DK-Lok	38.1 (1.50)	7/16
DQMB-D-2T-	1/8 in. DK-Lok	43.2 (1.70)	7/16
DQMB-M-1N-	1/16 in. Male NPT	36.1 (1.42)	7/16
DQMB-M-2N-	1/8 in. Male NPT	36.6 (1.44)	7/16
DQMB-F-1N-	1/16 in. Female NPT	36.3 (1.43)	7/16
DQMB-F-2N-	1/8 in. Female NPT	41.1 (1.62)	9/16
DQMB-BH*-D-2T-	1/8 in. DK-Lok	53.1 (2.09)	7/16

* BH : Bulkhead

How to Order a Full Flow DQM Quick Connector

A full flow DQM series consists of a SV stem a full flow body.

To order a full flow body, select an applicable basic ordering number, add "FF" and a material designator.

i.e., DQMB-D-2T-**FF**-SA

Pressure- Temperature Ratings

DQM Stem and Body	SS316 FKM O-rings	Brass NBR O-rings
	Pressure Rating psi (bar) @ °F (°C)	
Coupled	4000(275) @ 70 (21)	2000(137) @ 70 (21)
	100(6.8) @ 400 (204)	100(6.8) @ 250 (121)
Uncoupled	100(6.8) @ 70 (21)	
When coupling & uncoupling	100(6.8) @ 70 (21)	

Spillage and Air Inclusion 0.1㎤

Insertion Depth
SV : 11.9 mm (0.47 in.)
DV : 13.5 mm (0.53 in.)

Operation : To couple, to uncouple, pull body sleeve.

Insertion depth and Overall length

To have an overall length in coupled position, subtract the insertion depth from the combination length of the stem and the body.

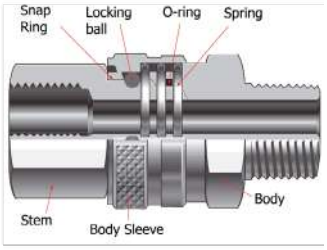
How to Order

Add "**SA**" for SS316 or "**BA**" for brass as a suffix to the basic ordering number. Example : DQMS-D-1T-**SA**.

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

DF Series Full Flow Quick Connectors





Features

- Bi-directional flow design.
- Applicable to maximum flow.
- Lowest pressure drop.
- No tools required to connect & disconnect.

Materials of Construction

Component	Materials	
	SS316	Brass
Body, Stem	SS316 / ASTM A276	JIS H3250 C3604
Sleeve		
Snap Ring	SS316	SS316
Spring, Locking ball	Stainless Steel	
O-ring	FKM	NBR
Lubricant	Silicon-based and PTFE based lubricants	

Wetted parts and lubrication are indicated in blue.

Max. Pressure @ 70°F (21°C)

DF Series	SS316	Brass
	psig (bar)	psig (bar)
DFA	6000 (413)	4000 (275)
DFB		3000 (206)
DFC	4000 (275)	2000 (137)
DFD		

Cleaning and Packaging

Every connector is cleaned, and packed in a plastic sealing bag to keep them from dust, and then boxed for protection from damage during transportation and storage.

Max. Temperature Rating

DF Materials	O-ring Material	Max. Temp. Rating	Pressure Rating @ Max. Temp.
SS316	FKM	400 F (204°C)	100 psig (6.8 bar)
Brass	NBR	250 F (121°C)	100 psig (6.8 bar)

Operation

Coupling

1. Align stem with body.
2. Pull the body sleeve back.
3. Insert stem into body until it bottoms.
4. Return body sleeve to its original position.

Uncoupling

1. Pull the body sleeve back completely.
2. Remove stem from body.

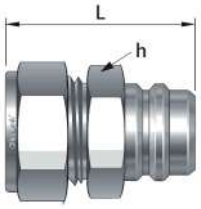
Caution : Do not uncouple under pressure.

Note :
Couple the identical Series of stem and body.

Example : Any DFBA series body will fit any DFSA series stem.

Ordering Information and Dimensions

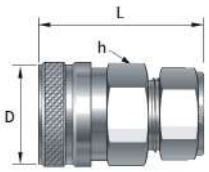
Stems



Basic Ordering Number		End Connection	Cv	Orifice Min.	L	h
				mm (in.)		in.
DFSA-	D-4T-	1/4 in. DK-Lok	2.2	4.8 (0.19)	45.0 (1.77)	9/16
	D-6T-	3/8 in. DK-Lok	2.8	6.1(0.24)	45.0 (1.77)	11/16
	D-6M-	6 mm DK-Lok	2.2	4.8(0.19)	45.0 (1.77)	9/16
	M-4N-	1/4 in. Male NPT	1.7	6.1(0.24)	40.4 (1.59)	9/16
	M-6N-	3/8 in. Male NPT	1.7	6.1(0.24)	40.4 (1.59)	11/16
	F-4N-	1/4 in. Female NPT	1.7	6.1(0.24)	40.6 (1.60)	3/4
	F-6N-	3/8 in. Female NPT	1.7	6.1(0.24)	42.4 (1.67)	7/8
DFSB-	D-6T-	3/8 in. DK-Lok	2.9	7.1 (0.28)	47.8 (1.88)	7/8
	D-8T-	1/2 in. DK-Lok	13.0	10.4 (0.41)	50.5 (1.99)	7/8
	M-6N-	3/8 in. Male NPT	7.1	10.4(0.41)	40.4 (1.59)	7/8
	M-8N-	1/2 in. Male NPT	11.5	12.7(0.50)	46.7 (1.84)	7/8
	F-6N-	3/8 in. Female NPT	7.1	11.9(0.47)	40.4 (1.59)	1 1/16
	F-8N-	1/2 in. Female NPT	11.5	12.7(0.50)	46.2 (1.82)	1 1/16
DFSC-	D-12T-	3/4 in. DK-Lok	26.0	15.7(0.62)	54.6 (2.15)	1 1/16
	M-12N-	3/4 in. Male NPT	23.6	18.3(0.72)	51.6 (2.03)	1 1/16
	F-12N-	3/4 in. Female NPT	23.6	18.3(0.72)	52.8 (2.08)	1 5/16
DFSD-	D-16T-	1 in. DK-Lok	45.0	22.4(0.88)	62.2 (2.45)	1 3/8
	M-16N-	1 in. Male NPT	39.0	22.4(0.88)	59.7 (2.35)	1 3/8
	F-16N-	1 in. Female NPT	39.0	22.4(0.88)	63.2 (2.49)	1 5/8

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Bodies



Basic Ordering Number		End Connection	Orifice Min.	L	D	h
			mm (in.)			in.
DFBA-	D-4T-	1/4 in. DK-Lok	4.8 (0.19)	45.7 (1.80)	22.1 (0.87)	1 1/16
	D-6T-	3/8 in. DK-Lok	7.1 (0.28)	46.0 (1.81)	22.1 (0.87)	1 1/16
	D-6M-	6 mm DK-Lok	4.8 (0.19)	45.7 (1.80)	22.1 (0.87)	11/16
	M-4N-	1/4 in. Male NPT	6.4 (0.25)	39.9 (1.57)	22.1 (0.87)	11/16
	M-6N-	3/8 in. Male NPT	9.4 (0.37)	39.9 (1.57)	22.1 (0.87)	11/16
	F-4N-	1/4 in. Female NPT	9.7 (0.38)	38.1 (1.50)	22.1 (0.87)	3/4
	F-6N-	3/8 in. Female NPT	9.7 (0.38)	41.4 (1.63)	22.1 (0.87)	7/8
DFBB-	D-6T-	3/8 in. DK-Lok	7.1 (0.28)	55.1 (2.17)	33.0 (1.30)	1 1/16
	D-8T-	1/2 in. DK-Lok	11.9 (0.47)	56.6 (2.23)	33.0 (1.30)	1 1/16
	M-6N-	3/8 in. Male NPT	10.4 (0.41)	46.5 (1.83)	33.0 (1.30)	1 1/16
	M-8N-	1/2 in. Male NPT	12.7 (0.50)	52.8 (2.08)	33.0 (1.30)	1 1/16
	F-6N-	3/8 in. Female NPT	15.0 (0.59)	43.9 (1.73)	33.0 (1.30)	1 1/16
	F-8N-	1/2 in. Female NPT	16.0 (0.63)	43.9 (1.73)	33.0 (1.30)	1 1/16
DFBC-	D-12T-	3/4 in. DK-Lok	15.7 (0.62)	62.2 (2.45)	42.2 (1.66)	1 1/2
	M-12N-	3/4 in. Male NPT	18.3 (0.72)	59.2 (2.33)	42.2 (1.66)	1 1/2
	F-12N-	3/4 in. Female NPT	22.4 (0.88)	48.0 (1.89)	42.2 (1.66)	1 1/2
DFBD-	D-16T-	1 in. DK-Lok	22.4 (0.88)	69.9 (2.75)	47.8 (1.88)	1 11/16
	M-16N-	1 in. Male NPT	22.4 (0.88)	67.3 (2.65)	47.8 (1.88)	1 11/16
	F-16N-	1 in. Female NPT	26.9 (1.06)	53.8 (2.12)	47.8 (1.88)	1 11/16

DF Protectors

Body and Stem Protector are available to protect body and stem from damage and contamination while they are uncoupled.

Field Assembly Protector Ordering Number

Stem Protector	Body Protector
DFSA-CP-	DFBA-PG-
DFSB-CP-	DFBB-PG-
DFSC-CP-	DFBC-PG-
DFSD-CP-	DFBD-PG-

To complete ordering number, add a material designator "**SA**" for SS316, "**BA**" for Brass as a suffix to the protector ordering number.
Examples : DFSA-CP-**SA**, DFBA-PG-**BA**.

Insertion Depth

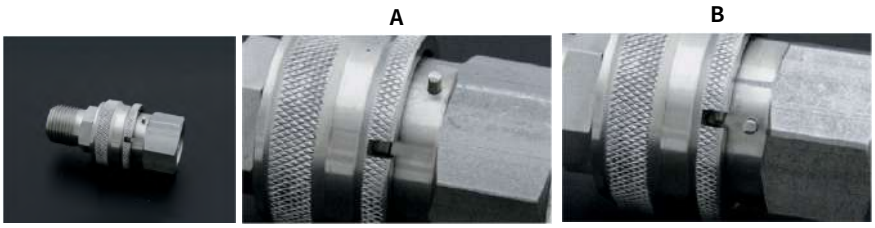
Unit : mm (in.)

DF Series	Depth
DFA	19.8 (0.78)
DFB	20.6 (0.81)
DFC	22.9 (0.90)
DFD	23.9 (0.94)

How to order FACTORY ASSEMBLED PROTECTOR on to DF stem and body.

Select an applicable STEM or BODY ordering number, and insert“CP” or“PG” in the ordering number.
Examples : DFSA-D-4T-**CP**-SA, DFBA-D-4T-**PG**-SA

Safety Pin Option on DF series



A. A safety pin on body with a holding groove on sleeve prevents accidental uncoupling.
B. To Uncouple, rotate body sleeve for the pin to fit into the groove and pull the body sleeve back.

To order Safety Pin DF body, insert "P" in the ordering number. Example: DFBC-D-12T-**P**-SA

All dimensions shown are for reference only and subject to change. Dimensions with DK-Lok Tube Fitting are finger-tight position.
We reserve the right to change specification stated in this catalog for our continuing program of product improvement.

DQPM Series PTFE Sealed Quick Connect



Features

- Bi-directional flow design.
- Simple to operate.
- No tools required to couple and uncouple.
- Keyed option is available.
- Max working pressure : 4,500psi.
- Stainless steel and Monel 400 construction.

Operation

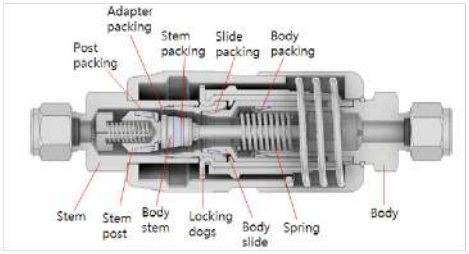
- Coupling
  1. Align the stem with the body in the identical Series.
  2. Push the stem into the body until it clicks.
- Uncoupling
  1. Pull the body sleeve toward stem.
  2. Remove stem from body.
- Do not couple or uncouple at pressures exceeding 250 psig (17.2 bar).

Note

Couple the identical Series of stem and body.
Example : Any DQPM8 body will fit any DQPM8D(DV) or DQPM8S(SV) stem.

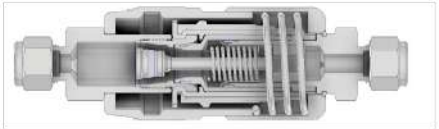
Materials of Construction

DV : Double valve coupled



Bi-Directional Flow
Stem has a valve

SV : Single valve coupled



Directional Flow
Stem has no valve

Component	Material	
	SS316	Alloy 400 / Monel
Valve body	SS316/ Xylan Coated	Alloy 400 / Xylan Coated
Stem body, Adapter Post, Post cap Body cap1, Body cap2 Body Insert Slide, Body stem Body stem cap	SS316 / ASTM A276	Alloy 400 / ASTM B164
Stem Spring guide1 Stem Spring guide2	SS316	Alloy 400
Body Locking dogs Body Locking bracket Slide spring guide1 Slide spring guide2	SS304	Alloy 400
Adapter packing Body packing Body backup packing Slide packing	TFM 1600	
Post packing Stem packing	PTFE	
Slide spring Stem spring Body cap spring	SS316 or Alloy X-750	Alloy X-750
Stem post ring Body cap ring Body Stem ring	SS304	Alloy X-750

Wetted parts indicated in blue.

Pressure-Temperature Ratings

DQPM Stem and Body	SS316			Alloy 400
	DQPM2	DQPM4	DQPM8	DQPM2
	psi (bar) @ °F (°C)			
Coupled	4500 (310) @ 0 ~ 194 (-17 ~ 90)	3200 (220) @ 0 ~ 194 (-17 ~ 90)	3200 (220) @ 0 ~ 194 (-17 ~ 90)	3200 (220) @ 0 ~ 120 (-17 ~ 48)
Uncoupled	1000 (68.9) @ 0 ~ 194 (-17 ~ 90)			1000 (68.9) @ 0 ~ 120 (-17 ~ 48)
When coupling and uncoupling	250(17.2) @ 70 (20)	100(6.8) @ 70 (20)	50(3.4) @ 70 (20)	250(17.2) @ 70 (20)

Spillage and Air Inclusion (DV Only)

unit : cm^3

Series	Spillage	Air Inclusion
DQPM2	0.1	0.1
DQPM4	0.2	0.4
DQPM8	1.0	2.0

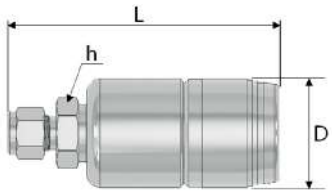
- Spillage is the volume of system fluid that escapes while a quick connect is uncoupled.
- Air inclusion is the volume of air trapped that comes in while a quick connect is coupled.

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Ordering Information and Dimensions Bodies

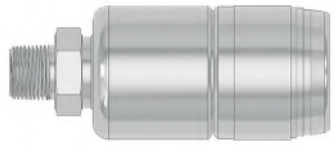
Bodies

DK-Lok Tube Fitting

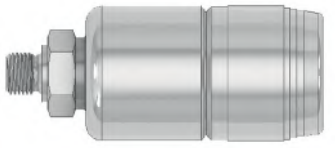


Series	End Connection	Basic Ordering Number	D mm (in.)	L mm (in.)	h Hex. In
DK-Lok Tube Fitting					
DQPM2	1/4 in. DK-Lok	DQPM2-D4T	28.4 (1.12)	80.3 (3.16)	5/8
	3/8 in. DK-Lok	DQPM2-D6T	28.4 (1.12)	82.6 (3.25)	11/16
	6 mm DK-Lok	DQPM2-D6M	28.4 (1.12)	80.3 (3.16)	15mm
	8 mm DK-Lok	DQPM2-D8M	28.4 (1.12)	80.3 (3.16)	15mm
DQPM4	1/4 in. DK-Lok	DQPM4-D4T	44.0 (1.73)	104.0 (4.08)	15/16
	3/8 in. DK-Lok	DQPM4-D6T	44.0 (1.73)	104.0 (4.08)	15/16
	6 mm DK-Lok	DQPM4-D6M	44.0 (1.73)	104.0 (4.08)	24mm
	10 mm DK-Lok	DQPM4-D10M	44.0 (1.73)	104.0 (4.08)	24mm
DQPM8	1/2 in. DK-Lok	DQPM8-D8T	50.8 (4.30)	109.0 (4.30)	1-1/4
	3/4 in. DK-Lok	DQPM8-D12T	50.8 (4.30)	109.0 (4.30)	1-1/4
	1 in. DK-Lok	DQPM8-D16t	50.8 (4.30)	116.0 (4.58)	1-3/8
	12 mm DK-Lok	DQPM8-D12M	50.8 (4.30)	109.0 (4.30)	32mm

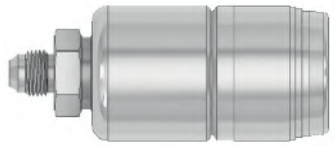
Male NPT / BSPT



Male PSPP



Male JIC 37°



Series	End Connection	Basic Ordering Number	D mm (in.)	L mm (in.)	h Hex. In
Male NPT					
DQPM2	1/4 in. Male NPT	DQPM2-M4N	28.4 (1.12)	76.7 (3.02)	5/8
	3/8 in. Male NPT	DQPM2-M6N	28.4 (1.12)	78.0 (3.07)	3/4
DQPM4	1/4 in. Male NPT	DQPM4-M4N	44.0 (1.73)	98.9 (3.89)	15/16
	3/8 in. Male NPT	DQPM4-M6N	44.0 (1.73)	98.9 (3.89)	15/16
DQPM8	1/2 in. Male NPT	DQPM8-M8N	50.8 (4.30)	109.0 (4.30)	1-1/4
	3/4 in. Male NPT	DQPM8-M12N	50.8 (4.30)	109.0 (4.30)	1-1/4
	1 in. Male NPT	DQPM8-M16N	50.8 (4.30)	116.0 (4.58)	1-3/8
ISO Tapered Male BSPT					
DQPM2	1/4 in. Male PT	DQPM2-M4R	28.4 (1.12)	76.7 (3.02)	5/8
	3/8 in. Male PT	DQPM2-M6R	28.4 (1.12)	78.0 (3.07)	3/4
DQPM4	1/4 in. Male PT	DQPM4-M4R	44.0 (1.73)	98.9 (3.89)	15/16
	3/8 in. Male PT	DQPM4-M6R	44.0 (1.73)	98.9 (3.89)	15/16
DQPM8	1/2 in. Male PT	DQPM8-M8R	50.8 (4.30)	109.0 (4.30)	1-1/4
	3/4 in. Male PT	DQPM8-M12R	50.8 (4.30)	109.0 (4.30)	1-1/4
	1 in. Male PT	DQPM8-M16R	50.8 (4.30)	116.0 (4.58)	1-3/8
ISO Parallel Male BSPP					
DQPM2	1/4 in. Male PF	DQPM2-M4G	28.4 (1.12)	76.7 (3.02)	3/4
DQPM4	1/4 in. Male PF	DQPM4-M4G	44.0 (1.73)	98.9 (3.89)	15/16
DQPM8	1/2 in. Male PF	DQPM8-M8G	50.8 (4.30)	109.0 (4.30)	1-1/4
JIC 37° Flare					
DQPM4	1/4 in. AN Flare	DQPM4-M4A	44.0 (1.73)	98.9 (3.89)	15/16
DQPM8	1/2 in. AN Flare	DQPM8-M8A	50.8 (4.30)	109.0 (4.30)	1-1/4

Insertion depth and Overall length

To have an overall length in coupled position, subtract the insertion depth from the combination length of the stem and the body.

Insertion Depth

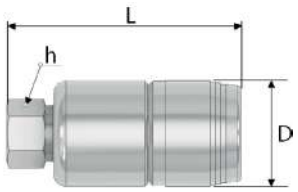
DQPM Series	Depth mm (in.)
DQPM2	0.9(23.5)
DQPM4	1.1(27.2)
DQPM8	1.2(30.6)

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Ordering Information and Dimensions Bodies

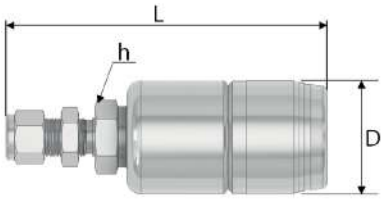
Bodies

Female NPT / BSPT/ BSPP



Series	End Connection	Basic Ordering Number	D mm (in.)	L mm (in.)	h Hex. In
DK-Lok Tube Fitting					
DQPM2	1/8 in. Female NPT	DQPM2-F2N	28.4 (1.12)	66.0 (2.60)	5/8
	1/4 in. Female NPT	DQPM2-F4N	28.4 (1.12)	75.9 (2.99)	3/4
	3/8 in. Female NPT	DQPM2-F6N	28.4 (1.12)	77.2 (3.04)	3/4
DQPM4	1/4 in. Female NPT	DQPM4-F4N	44.0 (1.73)	85.1 (3.35)	15/16
	3/8 in. Female NPT	DQPM4-F6N	44.0 (1.73)	85.1 (3.35)	15/16
DQPM8	1/2 in. Female NPT	DQPM8-F8N	50.8 (4.30)	89.7 (3.53)	1-1/4
	3/4 in. Female NPT	DQPM8-F12N	50.8 (4.30)	102.0 (4.02)	1-5/16
	1 in. Female NPT	DQPM8-F16N	50.8 (4.30)	112.0 (4.40)	1-5/8
ISO Tapered Female BSPT					
DQPM2	1/4 in. Female PT	DQPM2-F4R	28.4 (1.12)	75.9 (2.99)	3/4
DQPM4	1/4 in. Female PT	DQPM4-F4R	44.0 (1.73)	85.1 (3.35)	15/16
DQPM8	1/2 in. Female PT	DQPM8-F8R	50.8 (4.30)	89.7 (3.53)	1-1/4
ISO Parallel Female BSPP					
DQPM2	1/8 in. Female PF	DQPM2-F2G	28.4 (1.12)	66.0 (2.60)	5/8
	1/4 in. Female PF	DQPM2-F4G	28.4 (1.12)	75.9 (2.99)	3/4
DQPM4	1/4 in. Female PF	DQPM4-F4G	44.0 (1.73)	85.1 (3.35)	15/16
DQPM8	1/2 in. Female PF	DQPM8-F8G	50.8 (4.30)	89.7 (3.53)	1-1/4

Bulkhead Bodies
DK-Lok Tube Fitting

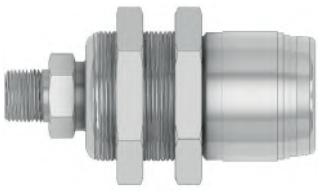


Series	End Connection	Basic Ordering Number	D mm (in.)	L mm (in.)	h Hex. In	Panel Hole Drill size mm (in.)	Panel Max Thickness mm (in.)
DK-Lok Tube Fitting							
DQPM2	1/4 in. DK-Lok	DQPM2-D4T-B	28.4 (1.12)	80.3 (3.16)	5/8	30.6 (1.20)	16.5 (0.65)
	6 mm DK-Lok	DQPM2-D6M-B	28.4 (1.12)	80.3 (3.16)	15mm	30.6 (1.20)	16.5 (0.65)
DQPM4	1/4 in. DK-Lok	DQPM4-D4T-B	44.0 (1.73)	119.0 (4.68)	15/16	11.7 (0.46)	3.8 (0.15)
	3/8 in. DK-Lok	DQPM4-D6T-B	44.0 (1.73)	122.0 (4.80)	15/16	14.7 (0.58)	3.8 (0.15)
	6 mm DK-Lok	DQPM4-D6M-B	44.0 (1.73)	119.0 (4.68)	24mm	11.7 (0.46)	3.8 (0.15)
	10 mm DK-Lok	DQPM4-D10M-B	44.0 (1.73)	122.0 (4.80)	24mm	16.8 (0.66)	3.8 (0.15)
DQPM8	1/2 in. DK-Lok	DQPM8-D8T-B	50.8 (4.30)	130.0 (5.11)	1-1/4	19.6 (0.77)	4.8 (0.19)
	12 mm DK-Lok	DQPM8-D12M-B	50.8 (4.30)	130.0 (5.11)	32mm	19.6 (0.77)	4.8 (0.19)
Male NPT							
DQPM2	1/4 in. Male NPT	DQPM2-F4N-B	28.4 (1.12)	66.0 (2.60)	5/8	1.20 (30.6)	0.65 (16.5)
Female NPT							
DQPM2	1/8 in. Female NPT	DQPM2-F2N-B	28.4 (1.12)	66.0 (2.60)	5/8	30.6 (1.20)	16.5 (0.65)
	1/4 in. Female NPT	DQPM2-F4N-B	28.4 (1.12)	66.0 (2.60)	5/8	30.6 (1.20)	16.5 (0.65)

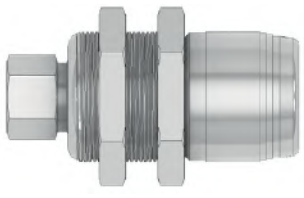
DQPM2 Integral Bulkhead



Male NPT



Female NPT

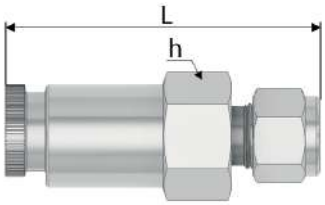


All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Ordering Information and Dimensions Stems

Stems

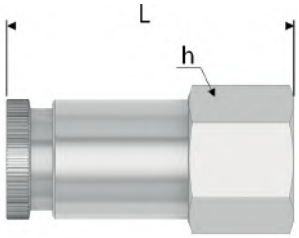
Dk-Lok Tube Fitting



SV : Stem has no valve
DV : Stem has a valve

Series	End Connection	Basic Ordering Number		Cv		L mm (in.)	h Hex. In
		SV	DV	SV	DV		
DK-Lok Tube Fitting							
DQPM2	1/4 in. DK-Lok	DQPM2S-D4T	DQPM2D-D4T	0.7	0.6	51.1 (2.01)	5/8
	3/8 in. DK-Lok	DQPM2S-D6T	DQPM2D-D6T	0.9	0.8	52.6 (2.07)	11/16
	6 mm DK-Lok	DQPM2S-D6M	DQPM2D-D6M	0.7	0.6	51.1 (2.01)	16mm
	8 mm DK-Lok	DQPM2S-D8M	DQPM2D-D8M	0.9	0.8	53.1 (2.09)	16mm
DQPM4	1/4 in. DK-Lok	DQPM4S-D4T	DQPM4D-D4T	0.9	0.8	66.3 (2.61)	15/16
	3/8 in. DK-Lok	DQPM4S-D6T	DQPM4D-D6T	1.7	1.6	67.8 (2.67)	15/16
	6 mm DK-Lok	DQPM4S-D6M	DQPM4D-D6M	0.9	0.8	66.3 (2.61)	5/8
	10 mm DK-Lok	DQPM4S-D10M	DQPM4D-D10M	1.7	1.6	68.1 (2.68)	24mm
DQPM8	1/2 in. DK-Lok	DQPM8S-D8T	DQPM8D-D8T	4.2	3.1	77.7 (3.06)	1-5/16
	3/4 in. DK-Lok	DQPM8S-D12T	DQPM8D-D12T	6.7	6.4	77.7 (3.06)	1-5/16
	1 in. DK-Lok	DQPM8S-D16T	DQPM8D-D16T	9.0	7.8	83.1 (3.27)	1-3/8
	12 mm DK-Lok	DQPM8S-D12M	DQPM8D-D12M	4.2	3.1	77.7 (3.06)	35mm

Female NPT / BSPT / BSPP



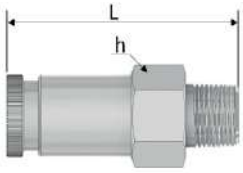
Series	End Connection	Basic Ordering Number		Cv		L mm (in.)	h Hex. In
		SV	DV	SV	DV		
DK-Lok Tube Fitting							
DQPM2	1/4 in. Female NPT	DQPM2S-F4N	DQPM2D-F4N	0.2	0.2	48.5 (1.91)	5/8
	3/8 in. Female NPT	DQPM2S-F6N	DQPM2D-F6N	0.7	0.6	51.8 (2.04)	11/16
DQPM4	1/4 in. Female NPT	DQPM4S-F4N	DQPM4D-F4N	1.4	1.4	62.5 (2.46)	15/16
	3/8 in. Female NPT	DQPM4S-F6N	DQPM4D-F6N	1.8	1.7	62.5 (2.46)	15/16
DQPM8	1/2 in. Female NPT	DQPM8S-F8N	DQPM8D-F8N	5.1	4.4	70.6 (2.78)	1-5/16
	3/4 in. Female NPT	DQPM8S-F12N	DQPM8D-F12N	8.5	7.8	70.6 (2.78)	1-5/16
	1 in. Female NPT	DQPM8S-F16N	DQPM8D-F16N	-	-	77.0 (3.03)	1-5/8
ISO Tapered Female BSPT							
DQPM2	1/4 in. Female PT	DQPM2S-F4R	DQPM2D-F4R	0.2	0.2	48.5 (1.91)	5/8
DQPM4	1/4 in. Female PT	DQPM4S-F4R	DQPM4D-F4R	1.4	1.4	62.5 (2.46)	15/16
DQPM8	1/2 in. Female PT	DQPM8S-F8R	DQPM8D-F8R	5.1	4.4	70.6 (2.78)	1-5/16
ISO Parallel Female BSPP							
DQPM2	1/8 in. Female PF	DQPM2S-F2G	DQPM2D-F2G	0.5	0.4	48.5 (1.91)	5/8
	1/4 in. Female PF	DQPM2S-F4G	DQPM2D-F4G	0.6	0.6	48.5 (1.91)	3/4
DQPM4	1/4 in. Female PF	DQPM4S-F4G	DQPM4D-F4G	1.2	1.2	63.0 (2.48)	15/16
DQPM8	1/2 in. Female PF	DQPM8S-F8G	DQPM8D-F8G	4.8	3.9	70.6 (2.78)	1-5/16

Ordering Information and Dimensions Stems

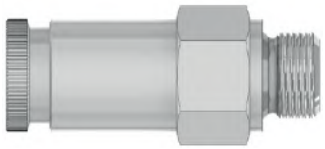
Stems

SV : Stem has no valve
DV : Stem has a valve

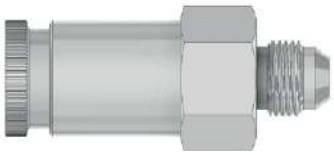
Male NPT / BSPT



Male BSPP



Male JIC 37°



Series	End Connection	Basic Ordering Number		Cv		L mm (in.)	h Hex. In
		SV	DV	SV	DV		
			Male NPT				
DQPM2	1/4 in. Male NPT	DQPM2S-M4N	DQPM2D-M4N	0.2	0.2	48.5 (1.91)	5/8
	3/8 in. Male NPT	DQPM2S-M6N	DQPM2D-M6N	0.7	0.6	51.8 (2.04)	11/16
DQPM4	1/4 in. Male NPT	DQPM4S-M4N	DQPM4D-M4N	1.4	1.4	62.5 (2.46)	15/16
	3/8 in. Male NPT	DQPM4S-M6N	DQPM4D-M6N	1.8	1.7	62.5 (2.46)	15/16
DQPM8	1/2 in. Male NPT	DQPM8S-M8N	DQPM8D-M8N	5.1	4.4	70.6 (2.78)	1-5/16
	3/4 in. Male NPT	DQPM8S-M12N	DQPM8D-M12N	8.5	7.8	70.6 (2.78)	1-5/16
	1 in. Male NPT	DQPM8S-M16N	DQPM8D-M16N	-	-	77.0 (3.03)	1-5/8
			ISO Tapered Male BSPT				
DQPM2	1/4 in. Male PT	DQPM2S-M4R	DQPM2D-M4R	0.2	0.2	48.5 (1.91)	5/8
DQPM4	1/4 in. Male PT	DQPM4S-M4R	DQPM4D-M4R	1.4	1.4	62.5 (2.46)	15/16
DQPM8	1/2 in. Male PT	DQPM8S-M8R	DQPM8D-M8R	5.1	4.4	70.6 (2.78)	1-5/16
			ISO Parallel Male BSPP				
DQPM2	1/8 in. Male PF	DQPM2S-M2G	DQPM2D-M2G	0.5	0.4	48.5 (1.91)	5/8
	1/4 in. Male PF	DQPM2S-M4G	DQPM2D-M4G	0.6	0.6	48.5 (1.91)	3/4
DQPM4	1/4 in. Male PF	DQPM4S-M4G	DQPM4D-M4G	1.2	1.2	63.0 (2.48)	15/16
DQPM8	1/2 in. Male PF	DQPM8S-M8G	DQPM8D-M8G	4.8	3.9	70.6 (2.78)	1-5/16
			Male JIC 37° Flare				
DQPM4	1/4 in. AN Flare	DQPM4S-M4A	DQPM4D-M4A	-	-	63.0 (2.48)	15/16
DQPM8	1/2 in. AN Flare	DQPM8S-M8A	DQPM8D-M8A	4.2	2.7	70.6 (2.78)	1-5/16

All dimensions shown are for reference only and subject to change. Dimensions with DK-Lok Tube Fittings are in finger-tight position.
We reserve the right to change specifications stated in this catalog for our continuing program of product improvement.

How to Order

DQPM series consists of a DV or SV stem and body
Examples : DQPM4D-D6T-S(DV), DQPM4S-D6T-S(SV), DQPM4-D6T-S(Body)

DQPM color coded “Keyed” quick connect



Key Color	Key Number and Designator
Black	K1
Orange	K2
Green	K3
Yellow	K4
Blue	K5
White	K6
Purple	K7
Brown	K8

Features

- DQPM Keyed quick connect prevent intermixing of different keys mechanically as well as allow visual identification by color coding.
- Eight (8) different keys on each DQPM series are available with its own Key number.
- DQPM keys are useful to control multi-fluid or multi-pressure systems.
- If an attempt is made to couple unlike keys, the valve system will not open.

Operation

- Select stem and body keyed in the same DQPM series.
- Coupling: Align stem with body. Push stem into body until it clicks.
- Uncoupling: Pull body sleeve toward stem. Remove stem.

How to Order

Add the key number as a suffix to the DQPM series Ordering Number.
Examples : DQPM4-D6T-K1-S, DQPM4D-D6T-K1-S
DQPM2 and DQPM4 series quick connect are available in keys K1 through K8.
DQPM8 series quick connect are available in keys K1 through K4 only.

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

DK-LOK

경상남도 김해시 주촌면 골든루트로 129번길 7 50969
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IDK-LOK

RCQ Series
NGV Products

Rev. 01-01
Aug. 2023

DK-LOK
Quick Connect

NGV Products

RCQ series Receptacle

Rev.01-01
Aug.2023



DK-LOK RCQ series receptacles fully comply with and are certified to the ANSI/AGA/CGA/ NGV1 and ECE R110 standards for Compressed Natural Gas Vehicles (NGV) fueling connection devices.

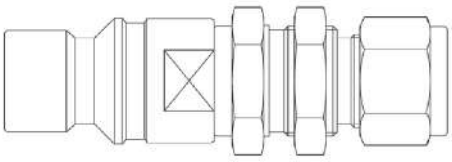
DK-LOK RCQ series receptacle is designed for permanent mounting on a compressed natural gas vehicle (NGV).

DK-LOK RCQA receptacle utilizes the NGV 1 profile which allows complete interchangeability to any fueling nozzles conforming to the NGV 1 standard.

Features

- RCQA series Receptacle design to meet the NGV1 profiles and delivered with integrated non-contact check valve.
- RCQA series Receptacle complies with NGV1 in dimension and performance.
- RCQB series is specifically designed for CNG refueling of bus and truck and delivered with integrated particle filter of 50 micron and non-contact check valve.
- RCQA and RCQB series are for fast-fill and time-fill dispensing.

RCQA Series Profile



RCQA series is designed for CNG refueling of cars.

RCQA Certificates

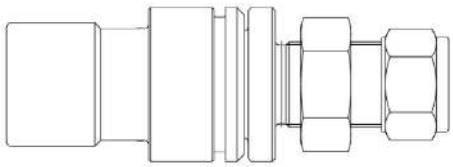
ECE R110
Certificate No.: E13-110R00-0187-00

- **Working Pressure**: 34.1 MPa(341 bar) at 120°C
- **Operating temperature**: -40 to 120°C

ANSI / AGA / CGA NGV1
TUV Certificate No.: 2010-CERT-015 (00)

- **Service Pressure**: 250 bar / 25 MPa at 15°C
- **Operating temperature**: -40 to 121°C

RCQB Series Profile



RCQB series is specifically designed for CNG refueling of buses and trucks.

RCQB Certificate

ECE R110
Certificate No.: E13-110R00-0195-00

- **Working Pressure**: 27.3 MPa(273 bar) at 120°C
- **Operating temperature**: -40 to 120°C

Factory Test

Every receptacle is factory tested with nitrogen @ 1000 psig (68 bar) for no detectable leakage on sealing and shell integrity.

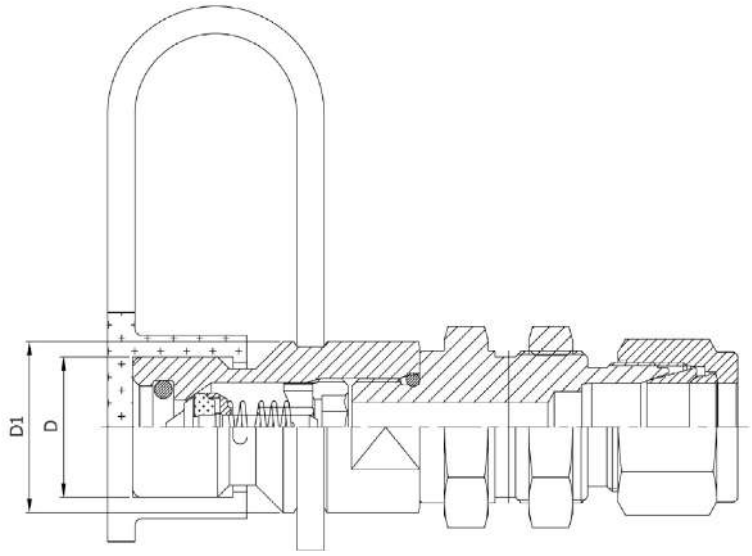
Cleaning

Every receptacle is cleaned and packaged in accordance with the requirements of our cleaning standard of DC-01.

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Technical Data

Subjects	RCQA series	RCQB series
D	20.5 mm	32 mm
D1	P30: 25 mm P36: 24 mm	35 mm
Working Pressure	P30 and P36 NGV1 profiles P30 (3000 psi, 200 bar) P36 (3600 psi, 250 bar) Working pressure is maintained both in connection and disconnection position.	3900 psi (273 bar) Working pressure is maintained both in connection and disconnection position.
Temperature	- 40 to 120 °C (-40 to 250 °F)	
Rated Flow	1500 scfm	3600 scfm
Internal Orifice Area	0.075 in^2 (0.48 cm^2)	0.23 in^2 (1.49 cm^2)
Weight	90 gram (0.20 lbs)	450 gram (0.99 lbs)
Internal Check Valve	Included as standard.	Included as standard.
Particle Filter	Not applicable	Particle Filter of 50 micron included as standard.



Materials of Construction

Body: 316 Stainless steel
Connector: 316 Stainless steel

Internal components: stainless steel
Seals: Natural gas compatible HNBR

Dust protection cap:
Low temperature Nitrile compound.

- Receptacle is constructed out of high strength cold drawn 316 stainless steel bar.
- Internal check valve provides unidirectional flow to vehicle from dispenser.
- Self-centering check valve poppet makes sure of positive sealing.
- Non-barrel type design of check valve poppet reduces sticking caused by icing or contamination in the valve.
- Delivered with standard dust protection cap.

Safety

Key system prevents higher pressure fueling nozzle from connecting onto lower pressure receptacle.

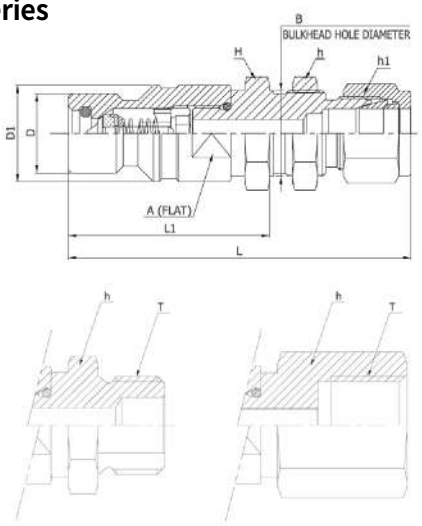
Fueling nozzle for higher pressure P36 (3600 psi) receptacle mechanically not accepts connection with lower pressure P30 (3000 psi) receptacle. However fueling nozzle for lower pressure P30 receptacle accepts mechanically connection with higher pressure P36 receptacle.

Operation

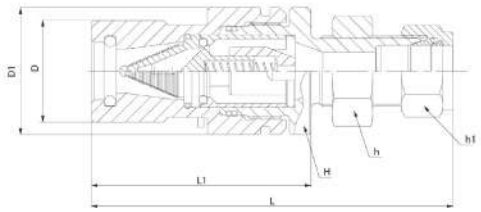
- RCQA series receptacle is compatible with any fueling nozzle conforming to the NGV1 standard.
- RCQA series is available in different service pressures of 3000 psi and 3600 psi.
- Internal check valve prevents flow while fueling nozzle is disconnected.
- Designed for time-fill and fast-fill.
- Cycle tested to withstand more than 20,000 connections.
- RCQB is recommended for refueling of heavy vehicles.

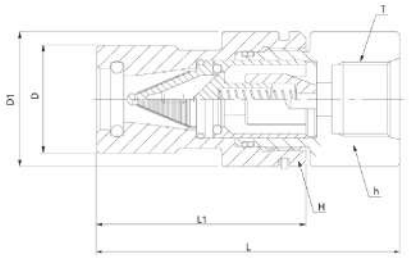
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RCQA Series



RCQB Series





Ordering Numbers and Dimensions

Unit : mm

Ordering Number			End Connection		Dimensions								
RCQ	A-	P30-	**Receptacle Bulkhead DK-LOK**		D	D1	L	L1	A(Flats)	H	h	h1	B
			D4T-S	1/4" DK-LOK	20.5	25	84.4	52	20.6	25.4	25.4	14.28	22.22
			D6T-S	3/8" DK-LOK			85.9					17.46	
			D8T-S	1/2" DK-LOK			88.4					22.22	
			D6M-S	6 mm DK-LOK			84.3					14	
			D8M-S	8 mm DK-LOK			85.2					16	
			D10M-S	10 mm DK-LOK			86.1					19	
			D12M-S	12 mm DK-LOK			88.6					22	
			Receptacle Male Thread										
			M8G-S	1/2" Male ISO 228-1 (BSPP)	20.5	25	66.2	52	20.6	25.4	-	-	-
			M10U-S	7/8-14 SAE J514 Male with O-Ring			64.7				-	-	-
			MAN6-S	9/16-18 SAE J514 Male for 3/8" OD			67.1				-	-	-
			MAN6LH-S	9/16-18 SAE J514 Male left-handed thread for 3/8" OD			67.1				-	-	-
			Receptacle Female Thread										
			F8G-S	1/2" Female ISO 228-1 (BSPP)	20.5	25	71.9	52	20.6	25.4	-	-	-
		P36-	**Receptacle Bulkhead DK-LOK**										
			D4T-S	1/4" DK-LOK	20.5	24	84.4	52	20.6	25.4	25.4	14.28	22.22
			D6T-S	3/8" DK-LOK			85.9					17.46	
			D8T-S	1/2" DK-LOK			88.4					22.22	
			D6M-S	6 mm DK-LOK			84.3					14	
			D8M-S	8 mm DK-LOK			85.2					16	
			D10M-S	10 mm DK-LOK			86.1					19	
			D12M-S	12 mm DK-LOK			88.6					22	
			Receptacle Female Thread										
			F8G-P30-S	1/2" Female ISO 228-1 (BSPP)	20.5	24	71.9	52	20.6	25.4	-	-	-
	B-		**Receptacle Bulkhead DK-LOK**										
			D8T-S	1/2" DK-LOK	32	35	115	70	34	34	30	22.22	22.2
			D10T-S	5/8" DK-LOK			115					25.4	
			D12M-S	12 mm DK-LOK			115					22	
			D16M-S	16 mm DK-LOK			115					25	
			Receptacle Internal Thread										
			F10 U-S	7/8-14 internal thread SAE Boss J1926	32	35	90	62	34	34	30	-	-

How to Order

RCQB series is supplied with particle filter of 50 micron and internal check valve as standard. To order receptacle with no particle filter, insert NF in the ordering number. Example: RCQB-D16M-**NF**-S

Safe Valve Selection

The selection of a valve for any application or system design must be considered to ensure safe performance. Valve function, valve rating, material compatibility, proper installation, operation and maintenance remain the sole responsibility of the system designer and the user. Dk Tech accepts no liability for any improper selection, installation, operation or maintenance.

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DK-LOK

DK-Lok Tubing

Rev. 01-01
Aug. 2023



DK-LOK®
DK-Lok Tubing

DK-Lok Tubing

Rev.01-01
Aug.2023

Stainless Steel Instrumentation Fractional / Metric Tubing

Tubing benefits

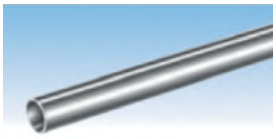
Tubing has many benefits against piping

- Pipe threading or welding is difficult to disassemble and re-assemble.
- Piping requires skilled worker for welding & threading.
- Piping is bulky.
- Tubing is assembled by simple wrench make-up on DK-Lok Tube Fittings reducing assembly time and the overall cost of installation.
- Tubing is bendable, allowing lower pressure drop with fewer connections. This in turn reduces costs with less fabricating manpower.

For safe, reliable and leak-free tubing system for use with DK-Lok Fittings , tubing should be considered as one of fitting components.

The following parameters should be considered when ordering instrumentation bright annealed seamless and welded tubing.

1. Tubing Selection
2. Tubing Handling
3. Tubing Installation
4. System Pressure
5. Welded Tubing Working Pressure



DK-Lok Tubing Features

For the best performance with DK-Lok fittings, DK offers ASTM A269 and A213 bright annealed DK-Lok tubing 1/8 in. to 1 in. OD with the following features:

- Seamless and suitable for bending and flaring.
- Free of scratches, drawing, dirt, and dust and other contamination.
- Chemically cleaned and passivated surface.
- Cold drawn and bright annealed.
- Hardness 80 HRB or less.

DK-Lok Tubing marking and packaging

- Marking on tubing includes OD, wall thickness(WT), material grade, specification, heat code, and country of origin.
- Tubing ends to be capped.
- A certain quantity to be packaged in a protective cover and then packed in a wooden crate.

DK-Lok Tubing standard length

6 meter tubing cut length variations as per the requirement of ASTM A450 standard.

DK-Lok Tubing ovality in OD and variations in WT

ASTM A269 specifies permissible variation in tubing OD and WT, reads:

Tube O.D. In	Permissible variation in OD, In. (mm)	Permissible variation in WT, %
Up to 1/2	+ / - 0.005 (0.13)	+ / - 15%
1/2 to 1 1/2, excl	+ / - 0.005 (0.13)	+ / - 10%

Tubing ovality variation in OD as per the requirements of ASTM A269. For tubing OD 1/8 in. and smaller, DK supplies +/- 0.003 inch variations for the leak-free performance with stainless steel 316 DK-Lok Fittings.

Tubing WT variations as specified in the ASTM A269 standard. See Table 4 and 5.

Heat Treatment

Solution annealed.

Surface Condition

Bright annealed with thermocouple clean level on the inside surface as per ASTM A632 S3.

Tubing Selection

Hardness

1. Tubing must be softer than fitting material. The metal tubing must be fully annealed and suitable for bending and flaring.
2. Tubing hardness must be selected according to the information in the table 4 and 5.

Surface

3. Tubing must have a surface free from scratches, draw mark, dirt, durst and flat spots.

Ovality

4. Tubing in oval or out-of-roundness may not fit into the fitting. Do not force the tubing into the fitting; it may damage the fitting sealing system on the nut, ferrules, and body.

5. Material

Using like tubing and fitting material is essential for the thermal compatibility and corrosion resistance. Different materials have different hardness level that may adversely affect the fitting seal on tubing. The only exception is copper tubing with brass DK-Lok Fittings.

6. Wall thickness

The table 4 and 5 show tubing working pressure ratings in a wide range of wall thickness. A too thin of a wall may collapse and too thick wall may not properly be deformed by the ferrule action.

DK-Lok Fittings are not recommended for tube wall thickness not listed in the table 4 and 5.

7. Wall thickness for gas application

Gases such as nitrogen, air, hydrogen and helium, can escape even the most minute leak path due to their small molecules.

Heavy wall tubing resists ferrule action by coining out minor defects of the tube surface whereas a thin wall may collapse with little resistance to ferrule action. For gas service, use heavy wall in white in table 4 and 5.

8. Weld tubing

The weld bead should not be noticeable visually on the outside of the tube.

Note:

Tubing of ornamental, structural or mechanical grade should not be used for fluid system.

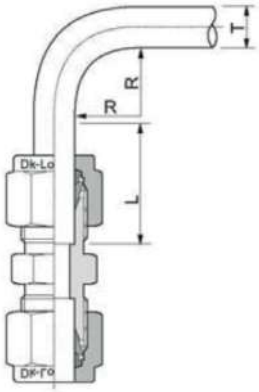
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Tubing Handling

Careful handling and storage practices will protect tubing from unnecessary scratches, nicks and or degrading good tubing surface finish

- Tubing ends should be capped so any foreign materials will not fall inside during transportation and storage.
- Do not drag across tubing rack, cement, gravel or any rough surface.
- Do use correct tube cutter for tube material. The wrong cutter may result in excessive deformation of the tube end.
- Do not cut deep with each turn of cutter.
- Tube cutters and hacksaws should be sharp enough.
- Hacksaw blades should have at least 32 teeth per inch.
- Deburring tube ends before inserting in the tube fittings helps prevent against system containments.

Tubing Installation



T : Tube OD
R : Radius
L : Straight tube length

When tube bend is too close to a fitting, the bend section shall enter the fitting. This may not allow the tube to be bottomed out in the fitting, and may result in leakage.

Keep the proper straight length of tube as shown in table 1 below.

- Do not bend a tube in the fitting. Use tube bender.

Table 1.

Fractional tube, in.	
T	L
1/16	1/2
1/8	23/32
3/16	3/4
1/4	13/16
5/16	7/8
3/8	15/16
1/2	1 3/16
5/8	1 1/4
3/4	1 1/4
7/8	1 5/16
1	1 1/2
1 1/4	2
1 1/2	2 13/32
2	3 1/4

Metric tube, mm	
T	L
3	19
6	21
8	23
10	25
12	31
14	32
15	32
16	32
18	32
20	34
22	34
25	40
28	46
30	50
32	54
38	63
50	80

System pressure

DK-Lok Fitting pressure ratings are governed by the connective tubing pressure rating. To determine allowable working pressure at elevated temperature, multiply the working pressure at ambient temperature shown in table 4 and 5 by the factor shown in table 2.

Example:

SS316 seamless tubing 1/2 in. O.D. x 0.065 in. WT
at 700 F. 4700 psig x 0.82 = 3854 psig.

Therefore 3854 psig is the maximum allowable working pressure at 700 of for SS316 seamless 1/2 in. O.D. x 0.065 in. wall thickness tubing.

Table 2. Temperature De-rating Factors

Temperature		Stainless steel ASTM A269	
°F	°C	SS304	SS316
100	38	1	1
200	93	1	1
300	149	1	1
400	204	0.94	0.97
500	260	0.88	0.9
600	316	0.82	0.85
700	371	0.8	0.82
800	427	0.76	0.8
900	482	0.73	0.78
1000	538	0.69	0.77
1200	649	0.3	0.37

Table 3. Elastomer seal working temperature

Elastomer Seals	Working Temperature
NBR	-40 to 110°C(-40 to 230°F)
FKM	-20 to 200°C(-4 to 392°F)
FFKM (Kalrez®)	-30 to 275°C(-22 to 527°F)

When Elastomer seal is used in the system, care must be taken for allowable working temperature. See Table 3

* Kalrez®: TM Dupont

Welded Tubing Working Pressure

As per ASME B31.3 Code for weld tubing working pressure, de-rating factors below must be applied. For double butt weld tubing multiply by 0.85 and for single butt weld tubing multiply by 0.80.

Example:

SS316 single butt weld tubing 1/2 in. O.D. x 0.065 in.
4700 psig x 0.80 = 3760 psig at -20 to 100°F (-28 to 37°C).

Cryogenic Service

- SS316 DK-Lok Fittings provide highly reliable performance from cryogenic to high temperature.
- SS316 DK-Lok Fitting and tubing temperature Rating: -425 to 1200°F (-253 to 649 °C)
- Cryogenic temperature are considered temperatures below -100°F (-73 °C)

Table 4. Tubing Material Grade and Chemical Requirements

Material Grade	ASTM	A269		A213 (a) / A249	
	UNS	S31600	S31603	S31600	S31603
	Grade	TP316	TP316L	TP316	TP316L
Chemical %	Chromium	16.0 to 18.0			
	Nickel	10.0 to 14.0		11.0 to 14.0	10.0 to 15.0
	Molybdenum	2.00 to 3.00			
	Manganese	2.00 max			
	Silicon	1.00		0.75 max	0.75 max (b)
	Carbon	0.08 max	0.035 max (c)	0.08 max	0.035 max (c)
	Phosphorus	0.045 max		0.040 max	
	Sulfur	0.030 max			

ASTM Standards

(a) Nominal wall thickness, not minimum wall thickness.

(b) For seamless TP316L tube, the silicon maximum shall be 1.00%.

(c) For smaller diameter or thin walls, or both, where many drawing passes are required, a carbon maximum of 0.040% is necessary in grade TP316L. This is applicable tubing size less than 1/2 in. OD and less than 0.049 in. (1.2 mm) in WT.

Stainless Steel Tubing

Fully annealed austenitic Type 304 or 316 seamless tubing ASTM A269 or A213, or equivalent. Tubing to be free from scratches, draw mark, dirt, durst and flat spots. Suitable for bending and flaring.

Table 5. Seamless Stainless Steel Fractional Tubing (Recommended hardness: 80 HRB (180 HV) or less.)

Tube OD In.	Tube Wall Thickness, in.														
	0.012	0.014	0.016	0.02	0.028	0.035	0.049	0.065	0.083	0.095	0.109	0.12	0.134	0.156	0.188
1/16	6800	8100	9400	12000											
1/8					8500	10900									
3/16					5400	7000	10200								
1/4					4000	5100	7500	10200				Working Pressure in PSIG			
5/16						4000	5800	8000							
3/8						3300	4800	6500	8600						
1/2						2400	3500	4700	6200						
5/8							2900	4000	5200	6000					
3/4							2400	3300	4200	4900	5800	6400			
7/8							2000	2800	3600	4200	4800	5400	6100		
1								2400	3100	3600	4200	4700	5300	6200	
1 1/4									2400	2800	3300	3600	4100	4900	
1 1/2										2300	2700	3000	3400	4000	4900
2											2000	2200	2500	2900	3600

Table 6. Seamless Stainless Steel MetricTubing (Recommended hardness: 80 HRB (180 HV) or less.)

Tube OD mm	Tube Wall Thickness, mm												
	0.8	1	1.2	1.5	1.8	2	2.2	2.5	2.8	3	3.5	4	4.5
3	710												
6	330	420	520	670									
8		310	380	490									
10		240	300	380						Working Pressure in Bar			
12		200	240	310	380	430							
14		180	220	280	340	390	430						
15		170	200	260	320	360	400						
16			190	240	300	330	370						
18			170	210	260	290	320	370					
20			150	190	230	260	290	330	380				
22			130	170	210	230	260	300	340				
25					180	200	230	260	300	320			
28						180	200	230	260	280	330		
30						170	190	210	240	260	310		
32						160	170	200	230	240	290	330	
38							140	170	190	200	240	280	310

- ASTM A269 tubing allowable working pressure is calculated at -20 to 100°F (-28 to 37°C) using allowable stress value of 20,000 psi according to ASME B31.3 Code.
- Pressure calculations are based on maximum O.D. and minimum wall thickness and no allowance is made for corrosion and erosion. i.e, ASTM A269 1/2 in. OD x 0.035 in.: OD tolerance ± 0.005 in., WT tolerance ± 15%. Calculations are based on 0.505 in.OD x 0.0298 in. WT.
- Safety Factor is 3.75 to 1, considering ultimate tensile strength of 75,000 psi.
- For working pressure according to ASME B31.1, multiply the ASME 31.3 rating by 0.94.

All dimensions are in millimeters unless otherwise specified and only for reference subject to change.

Ordering information

DK-Lok A269/A213 seamless bright annealed stainless steel grade TP316/316L tubing.

Tube OD in.	Nominal Wall Thickness (in.)	Ordering Number
1/8	0.028	TL2-028-x-S
	0.035	TL2-035-x-S
1/4	0.028	TL4-028-x-S
	0.035	TL4-035-x-S
	0.049	TL4-049-x-S
	0.065	TL4-065-x-S
3/8	0.035	TL6-035-x-S
	0.049	TL6-049-x-S
	0.065	TL6-065-x-S
	0.083	TL6-083-x-S
1/2	0.035	TL8-035-x-S
	0.049	TL8-049-x-S
	0.065	TL8-065-x-S
	0.083	TL8-083-x-S
3/4	0.065	TL12-065-x-S
	0.083	TL12-083-x-S
	0.095	TL12-095-x-S
	0.109	TL12-109-x-S
	0.120	TL12-120-x-S
1	0.083	TL16-083-x-S
	0.095	TL16-095-x-S
	0.109	TL16-109-x-S
	0.120	TL16-120-x-S
	0.134	TL16-134-x-S
	0.156	TL16-156-x-S

Tube OD mm	Nominal Wall Thickness (mm)	Ordering Number
6	1.00	TL6M-1.0-x-S
	1.20	TL6M-1.2-x-S
	1.50	TL6M-1.5-x-S
8	1.00	TL8M-1.0-x-S
	1.20	TL8M-1.2-x-S
	1.50	TL8M-1.5-x-S
10	1.00	TL10M-1.0-x-S
	1.20	TL10M-1.2-x-S
	1.50	TL10M-1.5-x-S
12	1.20	TL12M-1.2-x-S
	1.50	TL12M-1.5-x-S
	1.80	TL12M-1.8-x-S
	2.00	TL12M-2.0-x-S
20	1.80	TL20M-1.8-x-S
	2.00	TL20M-2.0-x-S
	2.20	TL20M-2.2-x-S
	2.50	TL20M-2.5-x-S
	2.80	TL20M-2.8-x-S
25	1.80	TL25M-1.8-x-S
	2.00	TL25M-2.0-x-S
	2.50	TL25M-2.5-x-S
	2.80	TL25M-2.8-x-S
	3.00	TL25M-3.0-x-S

To order tubing in 6 meter length, insert “6M” into the ordering number. Example: TL8-035-6M-S
To order tubing in 20 feet length, insert “20” into the ordering number. Example: TL8-035-20-S

To order weld tubing remove “L" after T in the ordering number. Example: T8-035-6M-S
To order annealed & pickled A269 seamless SS316 tubing, insert “AP” in the ordering number. Example: TL8-083-6M-AP-S

Reference Documents

• ASTM A213	Seamless Ferritic and Austenitic Alloy-Steel Boiler, Super heater, and Heat-Exchanger Tubes
• ASTM A249	Welded Austenitic Steel Boiler, Super heater, Heat Exchanger, and Condenser Tubes
• ASTM A269	Seamless and Welded Austenitic Stainless Tubing for General Service
• ASTM A450	General Requirements for Carbon, Ferritic Alloy, and Austenitic Alloy Steel Tubes
• ASTM A632	Seamless and welded Austenitic Stainless Steel Tubing (Small-Diameter) for General Service
• DIN 2391/EN10305	Precision Seamless Tubes
• DIN 17458/2462	Seamless Circular Tubes of Austenitic Stainless Steels with Special Quality Requirements

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