

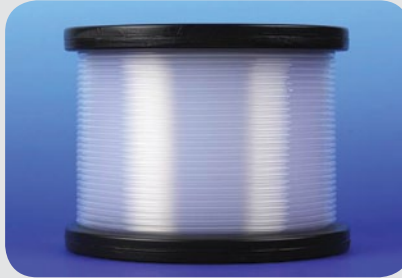
# Technical CF23

Published January 16, 2024

## ChemFlare™

Flexible Leak-Free Solutions

PFA Tubing, Fittings, Valve Ends and Tools  
Single Wall and Dual Containment



**CHEMLINE**  **PLASTICS**  
SUPERIOR FLOW SOLUTIONS

ISO 9001:2015 Certified

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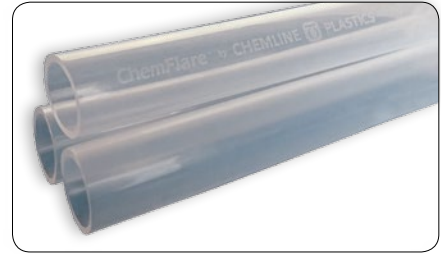
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# PFA Tubing



Technical



Chemline PFA (perfluoroalkoxy) is the Teflon tubing of choice for applications involving extreme chemical resistance combined with high temperature exposure. PFA tubing is made exclusively from the highest molecular weight resin available giving it superior physical properties. PFA tubing is suitable for even the most demanding applications.

## Industrial Grade PFA Tube – Imperial (suitable for flaring)

Item No.	Tube O.D.	Wall Thickness	Bend Radius	Working Pressure psi @ 22°C(72°F)
TT250-047	1/4"	0.047"	3/4"	352
TT375-062	3/8"	0.062"	1"	310
TT500-062	1/2"	0.062"	2"	232
TT750-062	3/4"	0.062"	6"	155
TT1000-062	1"	0.062"	15"	116

For high purity tubing, add -HP after the above item number

## Vacuum Service

Chemline recommends using 0.062" wall tubing at ambient temperature, with minimum bends for service down to -7.5 psi of vacuum.

# Technical Specifications

## PFA features

- 100% virgin grade high performance resins used to resist stress cracking
- Chemically inert to nearly all industrial chemicals and solvents
- Higher thermal stability than with FEP
- Lower permeability than with FEP
- Translucent
- Moisture absorption nearly zero
- FDA compliant for food contact
- Non-flammable
- Tubing is suitable for use with flare or conventional fittings
- Tubing is available in coiled hose and convoluted constructions
- Low permeation PFA tubing and pipe are also available
- Semiconductor grade PFA is also available

## PFA specifications

- General: Chemline PFA meets or exceeds the requirements listed in ASTM D 6867-03 and ASTM D 3307
- Temperature: -300° F to 500° F
- Flammability: UL 94 VO rated. Chemline PFA tubing resists combustion and does not promote flame spread
- FDA: Chemline PFA is approved for the use in food contact applications in compliance with FDA regulation: 21 CFR 177.1550
- USP Class VI: Chemline PFA tubing meets the requirements of UPS Class VI
- NSF 51, 61 and 372 Certified

## PFA applications

- Chemical process
- Heat exchangers
- Laboratory applications
- Semiconductor
- Flow monitoring
- Emissions monitoring
- Double containment systems
- Food processing
- Electrical insulation
- Automotive hose
- Automotive paint spray
- Sodium Bisulfite and Sodium Hypochlorite chemical feed systems

## PFA physical properties

Upper Service Temperature  
 Specific Gravity  
 Tensile Strength  
 Elongation  
 Flex Modulus  
 MIT Flex Life  
 Hardness

## ASTM test

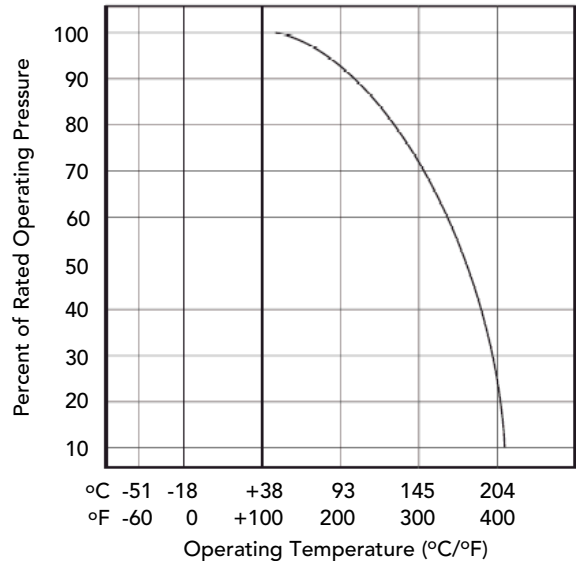
D 792  
 D 1708  
 D 638  
 D 790  
 D 2176  
 D 2240

## values

260°C (500°F)  
 2.15  
 4200 PSI  
 400 %  
 90,000 PSI  
 500,000+  
 60 Shore D

## pressure vs. temperature

### PFA Tubing



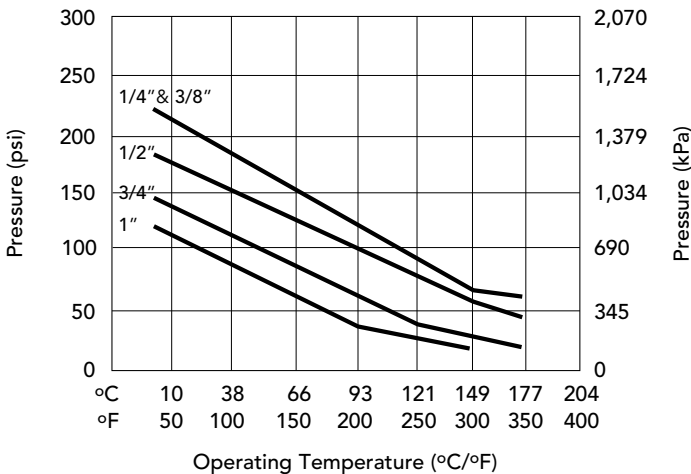
**Warning:** Not for use in applications exceeding 120°C (248°F)



### pressure vs. temperature

Pressure ratings based on 0.047" wall for 1/4" fittings and 0.062" wall for 3/8", 1/2", 3/4" and 1".

#### PFA Fittings



**Warning:** Not for use in applications exceeding 120°C (248°F).

ChemFlare™ PFA tube fittings bring to the Semiconductor, Biotech, Pharmaceutical and Ultra Pure Water industries an innovative and economical way of dispensing high-purity fluids.

**Quality** • Every ChemFlare™ fitting is manufactured from high purity PFA resin, providing chemical resistance and high purity. PFA is well known for use in ultra-pure water and chemical applications and is Semi-F57-0301 compliant.

**Efficiency** • Our Sweep Elbows have a fully swept flow path allowing up to 300% more flow than standard elbows.

**Size Range** • Size range is from 1/4" to 1-1/4" in all the popular fitting configurations. Special fitting configurations are available on a custom basis.

**Precise Assembly** • Our TruFLARE™ Tube Flaring System allows for precise and repeatable tube flares, making flare fitting assemblies easier, more cost effective and more convenient.

**Compatibility** • ChemFlare™ fittings are compatible and interchangeable with all other Fine Thread Flare Fitting systems. The fittings can be used with PFA, FEP and PTFE tubing.

**Patented TightFLARE™ Technology** • Our proprietary technology creates repeatable and precise "Female Flare" assemblies.

**Molding** • Only dedicated molds and process equipment are used for high purity production. This eliminates the possibility of cross-contamination, thus assuring "Quality without compromise."

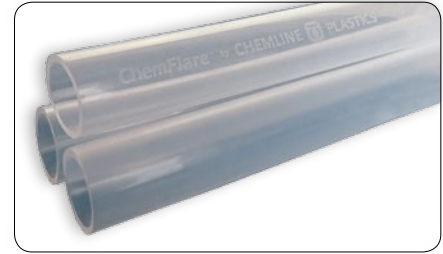
**High Purity** • State-of-the-art tube fittings are ideal for UPW (Ultra Pure Water) and semiconductor grade chemical applications.

**Packaging** • Cleaning and packaging are proprietary processes conducted in a Class 1000 clean room using a five-stage cleaning and rinsing process. Fittings are packaged in a double polyethylene bags, ensuring the highest level of protection and contamination control.

# FEP Tubing



## Technical



FEP is a fluoropolymer resin or fluorocarbon and is a copolymer of hexafluoropropylene and tetrafluoroethylene. Compared to PFA, FEP has similar chemical resistance, similar low porosity and translucency, but mechanical properties and temperature ratings are not as good.

FEP tubing is not as expensive as PFA and is an economical choice for applications requiring chemical resistance in combination with broad temperature exposure. FEP tubing is usually chosen for the containment or outer tubing of dual containment PFA tube systems. The outstanding UV transmission rate of FEP makes it a good choice for UV water purification systems.

FEP tubing has low permeability, moisture absorption nearly zero and superior electrical insulation properties.

### Specifications & Physical Properties

FEP tubing is manufactured from 100% Virgin FEP complying with ASTM D3296-98. FEP tubing is FDA approved for repeated contact with food (21 CFR 177.1550), meets the requirements for USP Class VI materials. It resists stress cracking, combustion, does not promote flame spread and it is UL 94 VO rated. FEP tubing is tested per ASTM D2837.

FEP Physical Properties	ASTM Test	Values
Upper Service Temperature		205°C (400°F)
Specific Gravity	D792	2.15
Tensile Strength	D1708	4000 PSI
Elongation	D638	400%
Flex Modulus	D790	90,000 PSI
MIT Flex Life	D2176	200,000 +
Hardness	D2240	D57-60

### Industrial Grade Dual Containment Tubing – Imperial (suitable for flaring)

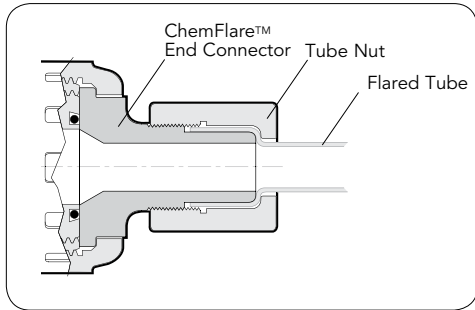
Item No.	PFA Primary		FEP Containment		Bend Radius	Working Pressure psi @ 22°C(72°F)
	O.D.	Wall Thickness	O.D.	Wall Thickness		
TT-DC48-10000FT <sup>1</sup> -YE <sup>2</sup>	1/4"	0.047"	1/2"	0.062"	2"	232
TT-DC612-10000FT-YE	3/8"	0.062"	3/4"	0.062"	6"	155
TT-DC812-10000FT-YE	1/2"	0.062"	3/4"	0.062"	6"	155
TT-DC1216-10000FT-YE	3/4"	0.062"	1"	0.062"	22"	116

<sup>1</sup> Custom length, minimum 1,000 ft per size. Chemline will try to best ability to provide in lengths as requested. Due to custom product, we reserve the right to ship shorter lengths if available.

<sup>2</sup> Custom coloured stripe on interior tubing, ie; YE – Yellow, for chlorine applications as per Recommended Standards for Wastewater Facilities).

# ChemFlare™ PFA Fittings

## ChemFlare™ end connectors



## tube vs. tight flare

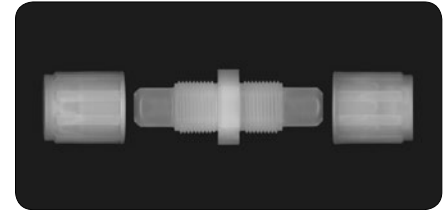
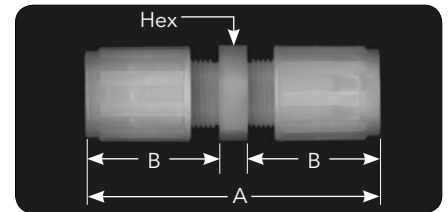
### ChemFlare™ Tube End Connections

ChemFlare™ Tube end connection have the standard male spigot which goes inside the flared tube. They come standard with the nut that goes over the tube before flaring. The dimension is shown in the charts as Tube.

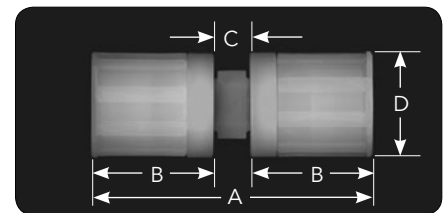
### ChemFlare™ Tight Flare End Connections

ChemFlare™ Tight Flare end connection have the female flare that accepts the male spigot of another fitting. They are used to reduce the distance between fittings (ie tight flare). They come standard with the nut that go onto the male spigot. This nut comes attached to the fitting. They are shown in the charts as Tight Flare.

## Technical



Tube End Connections



Shown without captive Tight Flare Nuts.

Tight Flare End Connections

## recommended nut torque setting

Tube O.D.	Wall Thickness (in.)	Minimum Torque (in.-lb.)	Maximum Torque (in.-lb.)
1/4"	0.047	6	11
3/8"	0.062	9	18
1/2"	0.062	12	23
3/4"	0.062	20	30
1"	0.062	30	48

### TruFlare™ PFA tube flaring system



**MTF416-110** is a portable moulding machine for the production of flares directly onto the tubing from 1/4" to 1" in any location. The semi-automated function ensures proper timing and temperature for each size of tubing while at the melt stage.

**MTF416-110 Flaring Tool**

### fitting flaring tools



**Universal Flare Tool, 213-81F**



**SS Flare Tool, CF-FFM-xx**

### torque wrenches



**Torque Wrench Set, CF-TWS-1**



**Torque Wrenches, CF-TWxx**  
(individual sizes)

### heating tools



**Hot Air Gun**  
(available from Amazon)



### CF-DC-WRENCH

Adjustable grip wrench recommended for double containment tubing installation (8" Bionic Grip Wrench from Amazon)



The flaring process provides a permanent expansion (flare) of the tubing end, allowing insertion of the ChemFlare™ fitting body. Proper tube flaring and ChemFlare™ fitting assembly results in a secure tubing connection.

**Note:** The tubing cools rapidly so please read and understand all instructions before flaring your tubing.

### Tubing Preparation

Cut the tubing end squarely (.070" maximum squareness tolerance) using a tubing cutter. Insert the cut end of the tubing through the non threaded end of the nut. Warning: If you do not put the nut on the tube now you will not be able to put it on after you complete the flare.

### Heat Flaring Instructions

1. If using an hot air gun, set the hot air gun on "high". Hold the PFA tubing end flush with the heater edge and 1/2" to 3/4" above the heater and slowly rotate the tubing 360° for the approximate time specified in Table 1 or until a fine, clear line appears around the tubing.

**Note:** It is very important to fully rotate the tubing over the heat source so all surface areas receive an equal amount of heat. Uniform heating is essential to making a good flare. If using an infrared heating tool, turn on heating tool. Center 1/2" to 3/4" of the PFA tubing between the heat rings. While slowly rotating the PFA tubing back and forth between your forefinger and thumb, heat for the approximate time specified in Table 1 or until a fine, clear line appears around the tubing.

**Note:** To flare 1" tubing with an infrared heating tool, a larger heat ring (part number 213-91 or 213-92) is needed.

**Note:** It is very important to rotate the tubing through the heat source so all surface areas receive an equal amount of heat. Uniform heating is essential to making a good flare.

2. Remove the PFA tubing from the heat source. Immediately push the flaring mandrel into the tubing until the end of the tubing reaches the tube stop.

**Note:** Flaring 1/4" tubing is the most challenging because of its small size. To get a firm grip on the small tube diameter, we recommend using the grip pad that is included in the mandrel kit (for additional grip pad, part number 213-73).

3. Firmly hold the tubing onto the mandrel for the time specified in Table 1.

4. Let the flared tubing continue to cool on the mandrel for the time specified in Table 1.

5. The flaring process is now complete and the mandrel may be removed from the tube.

### Fitting Assembly Instructions

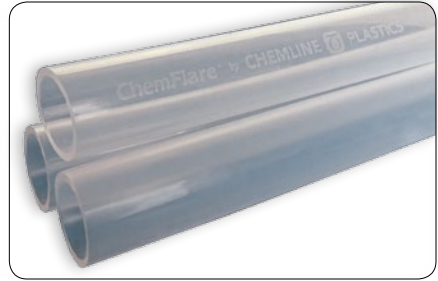
Push the flared tubing end onto the ChemFlare™ fitting body until the end of the fitting body contacts the flare shoulder of the tube. The maximum gap between the tube end and end of threads should be .08" - .15". Tighten the nut onto the fitting body until hand tight (see Table 1 for recommended minimum torque values).

### Retightening

All fitting connections assembled using the Room Temperature flaring technique should be retightened to the minimum nut torque values identified in Table 1. All "SpaceSaver" fitting connections exposed to temperatures >165°F should be retightened to the minimum nut torque values identified in Table 1 (fitting must be returned to room temperature before retightening).

**Table 1**

Tubing & Fitting Size	1/4"	3/8"	1/2"	3/4"	1"
Heating time for PFA (sec.) – Air gun	15	25	25	25	25
Heating time for PFA (sec.) – Infrared heater	40	50	50	50	60
Hold tubing on flare mandrel (sec.)	20	20	20	20	25
Minimum cooling time on mandrel (min.)	2	2	3	3	3
Minimum nut torque (inch.lbs. ((N•m)) – PFA fitting/PVDF nut	5 (0.57)	8 (0.90)	11 (1.24)	14 (1.58)	30 (3.39)
Minimum nut torque (inch.lbs. ((N•m)) – PFA fitting/PFA nut	5 (0.57)	8 (0.90)	11 (1.24)	14 (1.58)	30 (3.39)
Minimum nut torque (inch.lbs. ((N•m)) – PFA fitting/CPFA nut	5 (0.57)	8 (0.90)	11 (1.24)	14 (1.58)	30 (3.39)
Minimum nut torque (inch.lbs. ((N•m)) – PVDF fitting/PVDF nut	5 (0.57)	8 (0.90)	11 (1.24)	19 (2.14)	40 (4.51)



Tubing comes in coils of 25 foot increments. Continuous lengths of up to 1,000 feet or longer are available for all tube sizes.

NSF 51, 61 and 372 Certified

### Industrial Grade PFA Tube – Imperial

Tube O.D.	Wall Thickness	Tube I.D.	Suitable for Flaring	Item No.
1/8"	0.030"	0.065"	–	TT125-030 <sup>2</sup>
5/32"	0.030"	0.096"	–	TT156-030 <sup>2</sup>
3/16"	0.030"	0.128"	–	TT187-030 <sup>2</sup>
	0.062"	0.064"	–	TT187-062 <sup>2</sup>
1/4"	0.030"	0.190"	–	TT250-030 <sup>1</sup>
	0.040"	0.170"	–	TT250-040 <sup>2</sup>
	0.047"	0.156"	Yes	TT250-047 <sup>1</sup>
	0.062"	0.126"	–	TT250-062 <sup>1</sup>
5/16"	0.030"	0.253"	–	TT312-030 <sup>2</sup>
	0.062"	0.189"	–	TT312-062 <sup>1</sup>
3/8"	0.030"	0.315"	–	TT375-030 <sup>2</sup>
	0.062"	0.251"	Yes	TT375-062 <sup>2</sup>
7/16"	0.030"	0.378"	–	TT438-030 <sup>2</sup>
	0.062"	0.314"	–	TT438-062 <sup>1</sup>
1/2"	0.030"	0.440"	–	TT500-030 <sup>2</sup>
	0.062"	0.376"	Yes	TT500-062 <sup>1</sup>
3/4"	0.062"	0.626"	Yes	TT750-062 <sup>1</sup>
1"	0.062"	0.876"	Yes	TT1000-062 <sup>1</sup>

<sup>1</sup>Normally stocked in large quantities.

<sup>2</sup>Not normally stocked, may require a minimum order quantity. Contact Chemline for details.

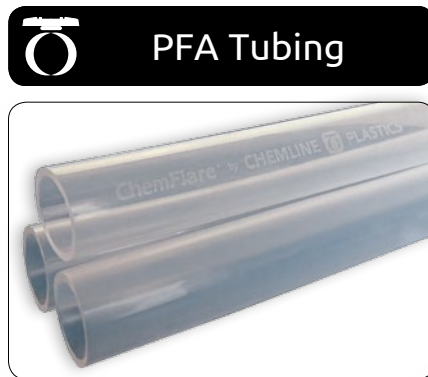
### Industrial Grade PFA Tube – Metric

Tube O.D.	Wall Thickness	Suitable for Flaring	Item No.
4mm	1mm	–	TT4m1.0m
6mm	1mm	–	TT6m1.0m
8mm	1mm	–	TT8m1.0m
10mm	1mm	–	TT10m1.0m
12mm	1mm	–	TT12m1.0m



Tubing comes in coils of 25 foot increments. Continuous lengths of up to 1,000 feet or longer are available for all tube sizes.

NSF 51, 61 and 372 Certified

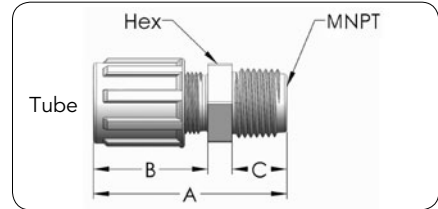


### High Purity PFA Tube – Imperial

Tube O.D.	Wall Thickness	Tube I.D.	Suitable for Flaring	Item No.
1/8"	0.030"	0.065"	–	TT125-030-HP
1/4"	0.047"	0.156"	Yes	TT250-047-HP
1/4"	0.062"	0.126"	–	TT250-062-HP
3/8"	0.062"	0.251"	Yes	TT375-062-HP
1/2"	0.062"	0.376"	Yes	TT500-062-HP
3/4"	0.062"	0.626"	Yes	TT750-062-HP
1"	0.062"	0.876"	Yes	TT1000-062-HP

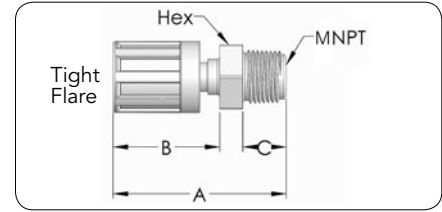
### High Purity PFA Tube – Metric

Tube O.D.	Wall Thickness	Suitable for Flaring	Item No.
4mm	1mm	–	TT4m1.0m-HP
6mm	1mm	–	TT6m1.0m-HP
8mm	1mm	–	TT8m1.0m-HP



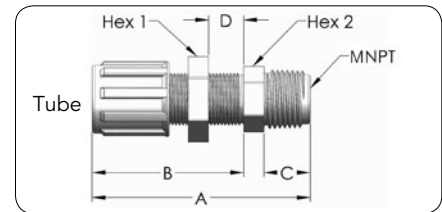
**Male Connector**      Inches

Item No.	Tube	MNPT	Orifice	A	B	C	HEX
CF-MC4-2N-1	1/4"	1/8"	0.15	1.91	1.16	0.45	5/8"
CF-MC4-4N-1	1/4"	1/4"	0.15	2.00	1.16	0.55	5/8"
CF-MC4-6N-1	1/4"	3/8"	0.15	2.00	1.16	0.55	11/16"
CF-MC4-8N-1	1/4"	1/2"	0.15	2.12	1.16	0.66	15/16"
CF-MC4-12N-1	1/4"	3/4"	0.15	2.12	1.16	0.67	1-3/16"
CF-MC4-16N-1	1/4"	1"	0.15	2.32	1.16	0.85	1-7/16"
CF-MC6-2N-1	3/8"	1/8"	0.18	2.09	1.27	0.55	13/16"
CF-MC6-4N-1	3/8"	1/4"	0.25	2.11	1.27	0.55	13/16"
CF-MC6-6N-1	3/8"	3/8"	0.25	2.11	1.27	0.55	13/16"
CF-MC6-8N-1	3/8"	1/2"	0.25	2.21	1.27	0.66	15/16"
CF-MC6-12N-1	3/8"	3/4"	0.25	2.22	1.27	0.66	1-3/16"
CF-MC6-16N-1	3/8"	1"	0.25	2.39	1.27	0.85	1-7/16"
CF-MC8-2N-1	1/2"	1/8"	0.18	2.20	1.36	0.54	15/16"
CF-MC8-4N-1	1/2"	1/4"	0.38	2.20	1.36	0.55	15/16"
CF-MC8-6N-1	1/2"	3/8"	0.38	2.20	1.36	0.55	15/16"
CF-MC8-8N-1	1/2"	1/2"	0.38	2.32	1.36	0.66	15/16"
CF-MC8-12N-1	1/2"	3/4"	0.38	2.32	1.36	0.66	1-3/16"
CF-MC8-16N-1	1/2"	1"	0.38	2.51	1.36	0.86	1-7/16"
CF-MC12-6N-1	3/4"	3/8"	0.38	2.37	1.52	0.56	15/16"
CF-MC12-8N-1	3/4"	1/2"	0.55	2.48	1.52	0.67	1-3/16"
CF-MC12-12N-1	3/4"	3/4"	0.63	2.48	1.52	0.67	1-3/16"
CF-MC12-16N-1	3/4"	1"	0.63	2.66	1.52	0.85	1-7/16"
CF-MC16-8N-1	1"	1/2"	0.55	2.69	1.73	0.67	1-7/16"
CF-MC16-12N-1	1"	3/4"	0.66	2.69	1.73	0.67	1-7/16"
CF-MC16-16N-1	1"	1"	0.88	2.88	1.73	0.86	1-7/16"
CF-MC20-16N-1	1-1/4"	1"	0.97	3.29	2.06	0.86	1-3/4"
CF-MC20-20N-1	1-1/4"	1-1/4"	1.10	3.29	2.06	0.86	1-3/4"



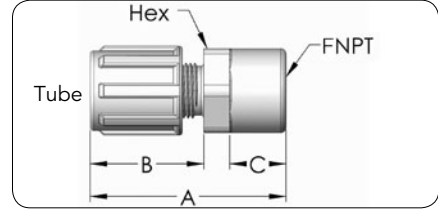
### Tight Flare Male Connector Inches

Item No.	Tight Flare	MNPT	Orifice	A	B	C	HEX
CF-MC4T-2N-1	1/4"	1/8"	0.15	2.16	1.31	0.45	5/8"
CF-MC4T-4N-1	1/4"	1/4"	0.15	2.13	1.29	0.55	5/8"
CF-MC4T-6N-1	1/4"	3/8"	0.15	2.13	1.29	0.55	13/16"
CF-MC4T-8N-1	1/4"	1/2"	0.15	2.27	1.31	0.67	13/16"
CF-MC6T-4N-1	3/8"	1/4"	0.25	2.22	1.37	0.56	13/16"
CF-MC6T-6N-1	3/8"	3/8"	0.25	2.22	1.37	0.55	13/16"
CF-MC6T-8N-1	3/8"	1/2"	0.25	2.33	1.37	0.67	13/16"
CF-MC8T-4N-1	1/2"	1/4"	0.38	2.28	1.43	0.56	15/16"
CF-MC8T-6N-1	1/2"	3/8"	0.38	2.26	1.42	0.55	13/16"
CF-MC8T-8N-1	1/2"	1/2"	0.38	2.47	1.51	0.67	15/16"
CF-MC8T-12N-1	1/2"	3/4"	0.38	2.47	1.51	0.67	15/16"
CF-MC12T-8N-1	3/4"	1/2"	0.55	2.57	1.61	0.67	1-3/16"
CF-MC12T-12N-1	3/4"	3/4"	0.63	2.57	1.61	0.67	1-3/16"
CF-MC12T-16N-1	3/4"	1"	0.63	2.76	1.79	0.86	1-7/16"
CF-MC16T-16N-1	1"	1"	0.88	2.99	1.83	0.86	1-7/16"



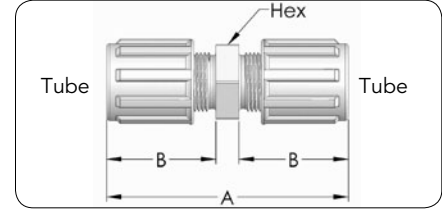
### Male Connector Panel Mount Inches

Item No.	Tube	MNPT	Orifice	A	B	C	D (max)	HEX 1	HEX 2
CF-MCPM4-2N-1	1/4"	1/8"	0.15	2.78	1.94	0.55	0.5	3/4"	11/16"
CF-MCPM4-4N-1	1/4"	1/4"	0.15	2.78	1.94	0.55	0.5	3/4"	11/16"
CF-MCPM4-6N-1	1/4"	3/8"	0.15	2.78	1.94	0.55	0.5	3/4"	11/16"
CF-MCPM6-4N-1	3/8"	1/4"	0.25	2.87	2.03	0.55	0.5	15/16"	13/16"
CF-MCPM6-6N-1	3/8"	3/8"	0.25	2.87	2.03	0.55	0.5	15/16"	13/16"
CF-MCPM8-4N-1	1/2"	1/4"	0.25	2.99	2.14	0.55	0.5	1-1/16"	15/16"
CF-MCPM8-6N-1	1/2"	3/8"	0.38	2.99	2.14	0.55	0.5	1-1/16"	15/16"
CF-MCPM8-8N-1	1/2"	1/2"	0.38	3.10	2.14	0.67	0.5	1-1/16"	15/16"
CF-MCPM12-12N-1	3/4"	3/4"	0.63	3.26	2.29	0.68	0.5	1-15/16"	1-3/16"
CF-MCPM16-16N-1	1"	1"	0.88	3.66	2.51	0.86	0.5	1-3/4"	1-5/16"



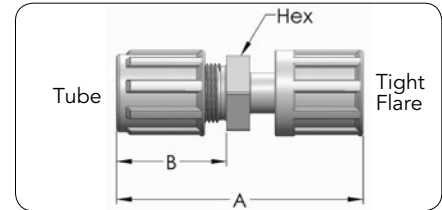
**Female Connector**      Inches

Item No.	Tube	FNPT	Orifice	A	B	C	HEX
CF-FC4-2N-1	1/4"	1/8"	0.15	1.90	1.16	0.49	5/8"
CF-FC4-4N-1	1/4"	1/4"	0.15	1.99	1.16	0.54	3/4"
CF-FC4-6N-1	1/4"	3/8"	0.15	2.00	1.16	0.55	15/16"
CF-FC4-8N-1	1/4"	1/2"	0.15	2.02	1.16	0.57	1-1/8"
CF-FC6-4N-1	3/8"	1/4"	0.25	2.08	1.27	0.54	3/4"
CF-FC6-6N-1	3/8"	3/8"	0.25	2.10	1.27	0.55	15/16"
CF-FC6-8N-1	3/8"	1/2"	0.25	2.13	1.27	0.57	1-1/8"
CF-FC8-4N-1	1/2"	1/4"	0.38	2.18	1.36	0.54	3/4"
CF-FC8-6N-1	1/2"	3/8"	0.38	2.20	1.36	0.55	15/16"
CF-FC8-8N-1	1/2"	1/2"	0.38	2.22	1.36	0.57	1-1/8"
CF-FC8-12N-1	1/2"	3/4"	0.38	2.28	1.36	0.63	1-3/8"
CF-FC8-16N-1	1/2"	1"	0.38	2.50	1.36	0.85	1-5/8"
CF-FC12-8N-1	3/4"	1/2"	0.63	2.38	1.52	0.57	1-1/8"
CF-FC12-12N-1	3/4"	3/4"	0.63	2.44	1.52	0.63	1-3/8"
CF-FC12-16N-1	3/4"	1"	0.63	2.66	1.52	0.85	1-5/8"
CF-FC16-16N-1	1"	1"	0.88	2.88	1.74	0.85	1-5/8"



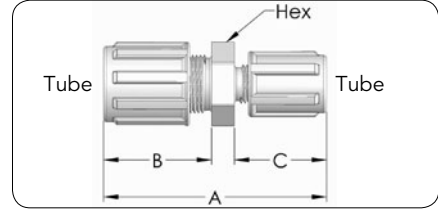
### Straight Union Inches

Item No.	Tube	Tube	Orifice	A	B	HEX
CF-SU44N-1	1/4"	1/4"	0.15	2.62	1.16	11/16"
CF-SU66N-1	3/8"	3/8"	0.25	2.83	1.27	13/16"
CF-SU88N-1	1/2"	1/2"	0.38	3.02	1.36	15/16"
CF-SU1212N-1	3/4"	3/4"	0.63	3.32	1.52	1-3/16"
CF-SU1616N-1	1"	1"	0.88	3.72	1.73	1-7/16"
CF-SU2020N-1	1-1/4"	1-1/4"	1.10	4.50	2.25	1-3/4"



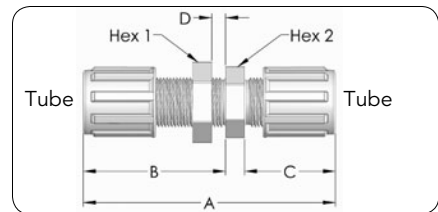
### Straight Union – Tube x Tight Flare Inches

Item No.	Tube	Tight Flare	Orifice	A	B	HEX
CF-SU44TN-1	1/4"	1/4"	0.15	2.76	1.16	11/16"
CF-SU66TN-1	3/8"	3/8"	0.25	2.93	1.27	13/16"
CF-SU88TN-1	1/2"	1/2"	0.38	3.07	1.36	15/16"
CF-SU1212TN-1	3/4"	3/4"	0.63	3.41	1.52	1-3/16"
CF-SU1616TN-1	1"	1"	0.88	4.04	1.73	1-7/16"



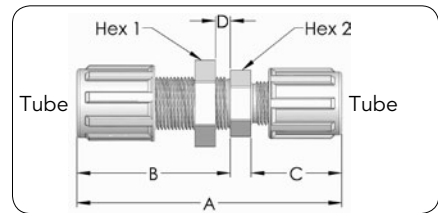
### Straight Union Reducer Inches

Item No.	Tube	Tube	Orifice	A	B	C	HEX
CF-SU64N-1	3/8"	1/4"	0.15	2.72	1.27	1.16	11/16"
CF-SU84N-1	1/2"	1/4"	0.15	2.82	1.36	1.16	15/16"
CF-SU86N-1	1/2"	3/8"	0.25	2.92	1.36	1.27	15/16"
CF-SU124N-1	3/4"	1/4"	0.15	2.96	1.52	1.16	1-3/16"
CF-SU126N-1	3/4"	3/8"	0.25	3.07	1.52	1.27	1-3/16"
CF-SU128N-1	3/4"	1/2"	0.38	3.17	1.52	1.36	1-3/16"
CF-SU168N-1	1"	1/2"	0.38	3.38	1.72	1.36	1-7/16"
CF-SU1612N-1	1"	3/4"	0.66	3.53	1.72	1.52	1-7/16"
CF-SU2016N-1	1-1/4"	1"	0.88	4.36	1.75	1.51	1-3/4"



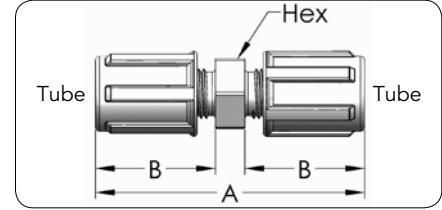
### Straight Union Panel Mount Inches

Item No.	Tube	Tube	Orifice	A	B	C	D (max)	HEX 1	HEX 2
CF-SPM44N-1	1/4"	1/4"	0.15	3.40	1.94	1.16	0.5	3/4"	11/16"
CF-SPM66N-1	3/8"	3/8"	0.25	3.58	2.02	1.27	0.5	15/16"	13/16"
CF-SPM88N-1	1/2"	1/2"	0.38	3.80	2.24	1.36	0.5	1-1/16"	15/16"
CF-SPM1212N-1	3/4"	3/4"	0.63	4.11	2.30	1.52	0.5	1-5/16"	1-3/16"
CF-SPM1616N-1	1"	1"	0.88	4.53	2.52	1.73	0.5	1-3/4"	1-5/8"



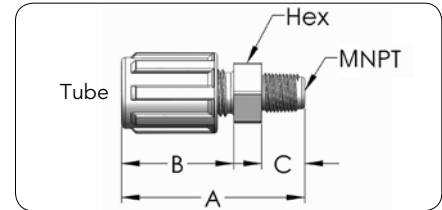
### Straight Union Panel Mount Reducer Inches

Item No.	Tube	Tube	Orifice	A	B	C	D (max)	HEX 1	HEX 2
CF-SPM64N-1	3/8"	1/4"	0.15	3.48	2.03	1.18	0.5	15/16"	13/16"
CF-SPM84N-1	1/2"	1/4"	0.15	3.59	2.14	1.18	0.5	1-1/16"	15/16"
CF-SPM86N-1	1/2"	3/8"	0.25	3.70	2.14	1.28	0.5	1-1/16"	15/16"
CF-SPM126N-1	3/4"	3/8"	0.25	3.86	2.30	1.28	0.5	1-5/16"	1-3/16"
CF-SPM128N-1	3/4"	1/2"	0.38	3.95	2.30	1.38	0.5	1-5/16"	1-3/16"
CF-SPM1612N-1	1"	3/4"	0.63	4.31	2.50	1.50	0.5	1-3/4"	1-5/8"



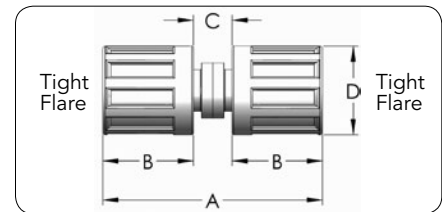
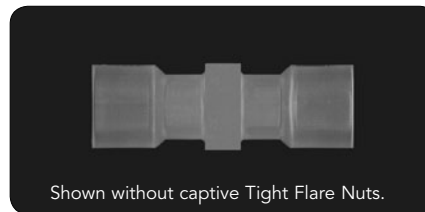
### Reduced Orifice Fittings – Straight Union Inches

Item No.	Tube	Tube	Orifice	A	B	HEX
CF-SU44N-1x.030	1/4"	1/4"	0.030	2.65	1.18	11/16"



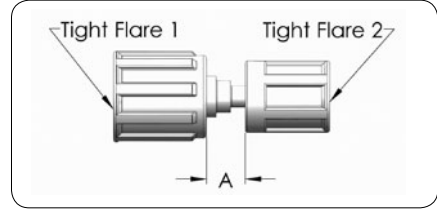
### Reduced Orifice Fittings – Male Connector Inches

Item No.	Tube	MNPT	Orifice	A	B	C	HEX
CF-MC4-2N-1x.015	1/4"	1/8"	0.015	1.92	0.99	0.45	5/8"
CF-MC4-2N-1x.030	1/4"	1/8"	0.030	1.92	1.18	0.45	5/8"

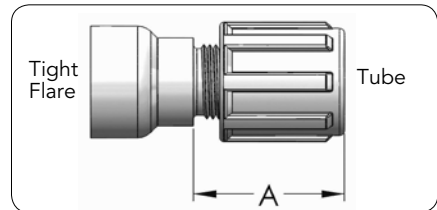


### Tight Flare Union Inches

Item No.	Tight Flare	Orifice	A	B	C	D
CF-TFU4N-1	1/4"	0.15	2.40	1.03	0.36	0.78
CF-TFU6N-1	3/8"	0.25	2.58	1.10	0.38	0.91
CF-TFU8N-1	1/2"	0.38	2.69	1.15	0.38	1.03
CF-TFU12N-1	3/4"	0.63	3.00	1.32	0.38	1.35
CF-TFU16N-1	1"	0.88	3.52	1.50	0.52	1.76

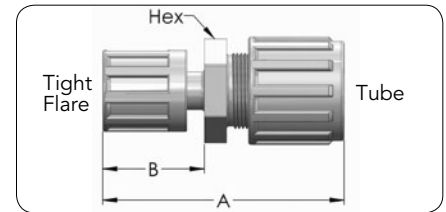

**Tight Flare Reducer**    Inches

Item No.	Tight Flare 1	Tight Flare 2	Orifice	A
CF-TFFR64N-1	3/8"	1/4"	0.15	0.29
CF-TFFR84N-1	1/2"	1/4"	0.15	0.41
CF-TFFR86N-1	1/2"	3/8"	0.25	0.29
CF-TFFR124N-1	3/4"	1/4"	0.15	0.41
CF-TFFR126N-1	3/4"	3/8"	0.25	0.41
CF-TFFR128N-1	3/4"	1/2"	0.38	0.41
CF-TFFR164N-1	1"	1/4"	0.15	0.34
CF-TFFR166N-1	1"	3/8"	0.25	0.34
CF-TFFR168N-1	1"	1/2"	0.38	0.35
CF-TFFR1612N-1	1"	3/4"	0.63	0.35


**Tight Flare Tube Reducer**    Inches

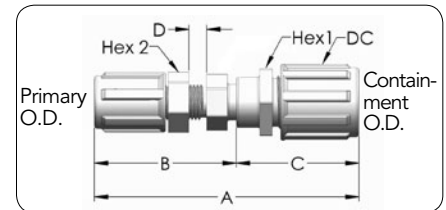
Item No.	Tight Flare	Tube	Orifice	A
CF-TFMR64N-1	3/8"	1/4"	0.15	1.33
CF-TFMR84N-1	1/2"	1/4"	0.15	1.27
CF-TFMR86N-1	1/2"	3/8"	0.25	1.42
CF-TFMR124N-1	3/4"	1/4"	0.15	1.27
CF-TFMR126N-1	3/4"	3/8"	0.25	1.37
CF-TFMR128N-1	3/4"	1/2"	0.38	1.47
CF-TFMR164N-1	1"	1/4"	0.15	1.23
CF-TFMR166N-1	1"	3/8"	0.25	1.32
CF-TFMR168N-1	1"	1/2"	0.38	1.43
CF-TFMR1612N-1	1"	3/4"	0.63	1.56
CF-TFMR204N-1	1-1/4"	1/4"	0.15	1.07
CF-TFMR206N-1	1-1/4"	3/8"	0.25	1.16
CF-TFMR208N-1	1-1/4"	1/2"	0.38	1.24
CF-TFMR2016N-1	1-1/4"	1"	0.88	1.75





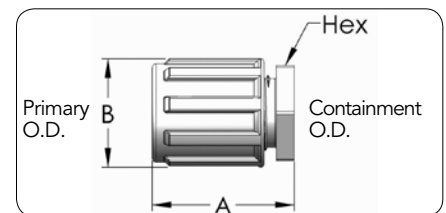
### Tight Flare Tube Increaser Inches

Item No.	Tight Flare	Tube	Orifice	A	B	HEX
CF-TFMI46N-1	1/4"	3/8"	0.15	2.88	1.33	13/16"
CF-TFMI48N-1	1/4"	1/2"	0.15	2.97	1.33	15/16"
CF-TFMI68N-1	3/8"	1/2"	0.25	3.03	1.38	15/16"
CF-TFMI612N-1	3/8"	3/4"	0.25	3.19	1.38	1-3/16"
CF-TFMI812N-1	1/2"	3/4"	0.38	3.23	1.42	1-3/16"
CF-TFMI816N-1	1/2"	1"	0.38	3.44	1.42	1-7/16"
CF-TFMI1216N-1	3/4"	1"	0.63	3.66	1.60	1-7/16"
CF-TFMI1620N-1	1"	1-1/4"	0.88	4.39	t.b.a.	1-3/4"



### Dual Containment Fittings – Panel Mount Dual Containment with O-Ring Containment Seal Inches

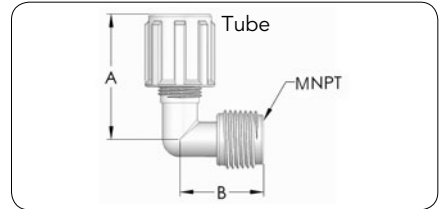
Item No.	Primary O.D.	Containment O.D.	Orifice	A	B	C	D	HEX 1	HEX 2	Panel Hole
CF-PM44DC8N-1	1/4"	1/2"	0.15	3.60	1.53	2.07	0.25	3/4"	11/16"	1/2"
CF-PM66DC12N-1	3/8"	3/4"	0.25	3.95	1.63	2.32	0.25	1-5/16"	13/16"	5/8"
CF-PM88DC12N-1	1/2"	3/4"	0.38	4.15	1.73	2.42	0.25	1-1/16"	15/16"	3/4"
CF-PM1212DC16N-1	3/4"	1"	0.63	4.58	1.88	2.70	0.25	1-5/16"	1-3/16"	1"



### PVDF Dual Containment Adaptor Inches

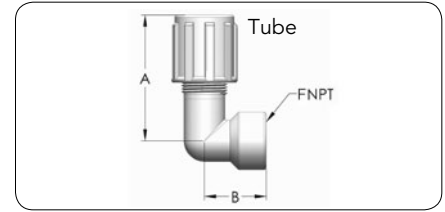
Item No.	Primary O.D.	Containment O.D.	A	B	HEX
CF-DC48	1/4"	1/2"	1.40	1.03	15/16"
CF-DC612	3/8"	3/4"	1.78	1.35	1-3/16"
CF-DC812	1/2"	3/4"	1.78	1.35	1-3/16"
CF-DC1216	3/4"	1"	2.04	1.82	1-9/16"

Note: Minimum of 25 feet run of double containment tubing is recommended for installation with double containment flared fittings.



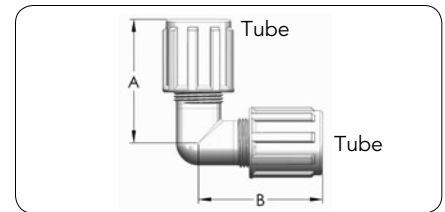
### Male Elbow Inches

Item No.	Tube	MNPT	Orifice	A	B
CF-ME4-2N-1	1/4"	1/8"	0.15	1.66	1.06
CF-ME4-4N-1	1/4"	1/4"	0.15	1.66	1.06
CF-ME4-6N-1	1/4"	3/8"	0.15	1.66	1.06
CF-ME4-8N-1	1/4"	1/2"	0.15	1.66	1.17
CF-ME6-2N-1	3/8"	1/8"	0.18	1.76	1.06
CF-ME6-4N-1	3/8"	1/4"	0.25	1.76	1.06
CF-ME6-6N-1	3/8"	3/8"	0.25	1.76	1.06
CF-ME6-8N-1	3/8"	1/2"	0.25	1.76	1.18
CF-ME6-12N-1	3/8"	3/4"	0.25	1.76	1.36
CF-ME8-2N-1	1/2"	1/8"	0.18	1.86	1.06
CF-ME8-4N-1	1/2"	1/4"	0.25	1.86	1.06
CF-ME8-6N-1	1/2"	3/8"	0.38	1.86	1.06
CF-ME8-8N-1	1/2"	1/2"	0.38	1.86	1.18
CF-ME8-12N-1	1/2"	3/4"	0.38	1.86	1.36
CF-ME8-16N-1	1/2"	1"	0.38	1.86	1.80
CF-ME12-6N-1	3/4"	3/8"	0.36	2.21	1.23
CF-ME12-8N-1	3/4"	1/2"	0.53	2.21	1.36
CF-ME12-12N-1	3/4"	3/4"	0.63	2.21	1.37
CF-ME12-16N-1	3/4"	1"	0.63	2.21	1.80
CF-ME16-8N-1	1"	1/2"	0.49	2.70	1.64
CF-ME16-12N-1	1"	3/4"	0.66	2.70	1.64
CF-ME16-16N-1	1"	1"	0.87	2.70	1.80



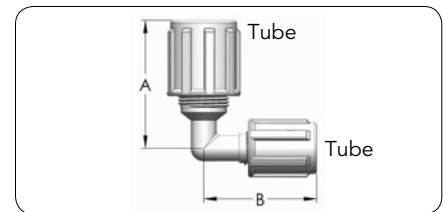
### Female Elbow Inches

Item No.	Tube	FNPT	Orifice	A	B
CF-FE4-2N-1	1/4"	1/8"	0.15	1.80	0.81
CF-FE4-4N-1	1/4"	1/4"	0.15	1.80	0.94
CF-FE4-6N-1	1/4"	3/8"	0.15	1.80	1.00
CF-FE4-8N-1	1/4"	1/2"	0.15	1.80	1.25
CF-FE6-4N-1	3/8"	1/4"	0.25	1.91	0.94
CF-FE6-6N-1	3/8"	3/8"	0.25	1.91	1.00
CF-FE6-8N-1	3/8"	1/2"	0.25	1.91	1.25
CF-FE8-4N-1	1/2"	1/4"	0.36	2.03	0.96
CF-FE8-6N-1	1/2"	3/8"	0.38	2.03	1.00
CF-FE8-8N-1	1/2"	1/2"	0.38	2.03	1.27
CF-FE8-12N-1	1/2"	3/4"	0.38	2.03	1.53
CF-FE12-8N-1	3/4"	1/2"	0.54	2.22	1.44
CF-FE12-12N-1	3/4"	3/4"	0.63	2.22	1.53
CF-FE16-16N-1	1"	1"	0.88	2.67	1.60



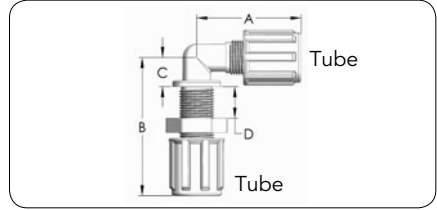
### Union Elbow Inches

Item No.	Tube	Tube	Orifice	A	B
CF-UE44N-1	1/4"	1/4"	0.15	1.66	1.66
CF-UE66N-1	3/8"	3/8"	0.25	1.76	1.76
CF-UE88N-1	1/2"	1/2"	0.38	1.87	1.87
CF-UE1212N-1	3/4"	3/4"	0.63	2.22	2.22
CF-UE1616N-1	1"	1"	0.87	2.70	2.70
CF-UE2020N-1	1-1/4"	1-1/4"	1.10	2.96	2.96



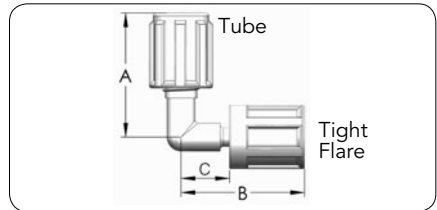
### Union Elbow Reducer Inches

Item No.	Tube	Tube	Orifice	A	B
CF-UE64N-1	3/8"	1/4"	0.15	1.76	1.66
CF-UE84N-1	1/2"	1/4"	0.15	1.87	1.66
CF-UE86N-1	1/2"	3/8"	0.25	1.87	1.76
CF-UE124N-1	3/4"	1/4"	0.15	2.22	1.66
CF-UE126N-1	3/4"	3/8"	0.25	2.22	1.76
CF-UE128N-1	3/4"	1/2"	0.38	2.22	1.87
CF-UE168N-1	1"	1/2"	0.38	2.70	2.03
CF-UE1612N-1	1"	3/4"	0.63	2.70	2.22



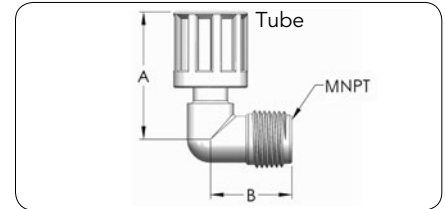
### Union Elbow Panel Mount Inches

Item No.	Tube	Tube	Orifice	A	B	C	D (Max)	HEX	Min Panel Hole Diameter
CF-EPMX44N-1	1/4"	1/4"	0.15	1.66	1.85	0.51	0.50	3/4"	1/2"
CF-EPMX66N-1	3/8"	3/8"	0.25	1.77	1.96	0.51	0.50	15/16"	5/8"
CF-EPMX88N-1	1/2"	1/2"	0.38	1.88	1.94	0.66	0.50	1-1/16"	3/4"
CF-EPMX1212N-1	3/4"	3/4"	0.63	2.21	2.21	0.84	0.50	1-5/16"	1"



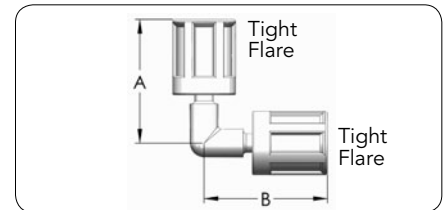
### Union Elbow Tube x Tight Flare Inches

Item No.	Tube	Tight Flare	Orifice	A	B	C
CF-UE44TN-1	1/4"	1/4"	0.15	1.65	1.64	0.66
CF-UE46TN-1	1/4"	3/8"	0.15	1.65	1.73	0.68
CF-UE48TN-1	1/4"	1/2"	0.15	1.65	1.84	0.73
CF-UE64TN-1	3/8"	1/4"	0.15	1.76	1.64	0.66
CF-UE66TN-1	3/8"	3/8"	0.25	1.76	1.73	0.68
CF-UE68TN-1	3/8"	1/2"	0.25	1.76	1.84	0.73
CF-UE612TN-1	3/8"	3/4"	0.25	1.76	2.13	0.87
CF-UE84TN-1	1/2"	1/4"	0.15	1.87	1.64	0.66
CF-UE86TN-1	1/2"	3/8"	0.25	1.87	1.73	0.68
CF-UE88TN-1	1/2"	1/2"	0.38	1.87	1.84	0.73
CF-UE812TN-1	1/2"	3/4"	0.38	1.87	2.13	0.87
CF-UE816TN-1	1/2"	1"	0.38	2.03	2.74	1.27
CF-UE126TN-1	3/4"	3/8"	0.25	2.22	1.73	1.50
CF-UE128TN-1	3/4"	1/2"	0.38	2.22	1.84	0.73
CF-UE1212TN-1	3/4"	3/4"	0.63	2.22	2.13	0.87
CF-UE1216TN-1	3/4"	1"	0.63	2.22	2.74	1.27
CF-UE1612TN-1	1"	3/4"	0.63	2.70	2.13	0.87
CF-UE1616TN-1	1"	1"	0.88	2.70	2.74	1.27
CF-UE2020TN-1	1-1/4"	1-1/4"	1.10	2.96	3.10	2.79



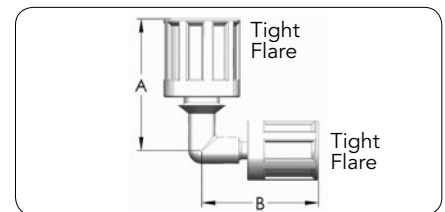
### Tight Flare Male Elbow Inches

Item No.	Tube O.D.	MNPT	Orifice	A	B
CF-ME4T-4N-1	1/4"	1/4"	0.15	1.66	1.06
CF-ME6T-6N-1	3/8"	3/8"	0.25	1.76	1.06
CF-ME8T-8N-1	1/2"	1/2"	0.38	1.85	1.18
CF-ME12T-12N-1	3/4"	3/4"	0.18	1.76	1.36
CF-ME16T-16N-1	1"	1"	0.25	1.76	1.18



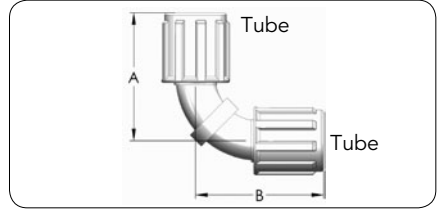
### Tight Flare Union Elbow Inches

Item No.	Tight Flare	Orifice	A	B	C
CF-UE4TN-1	1/4"	0.15	1.64	1.64	0.66
CF-UE6TN-1	3/8"	0.25	1.73	1.73	0.68
CF-UE8TN-1	1/2"	0.38	1.84	1.84	0.73
CF-UE12TN-1	3/4"	0.63	2.13	2.13	0.87
CF-UE16TN-1	1"	0.88	2.74	2.74	1.27



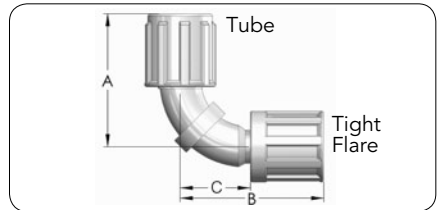
### Tight Flare Union Elbow Reducer Inches

Item No.	Tight Flare	Tight Flare	Orifice	A	B	C <sub>1</sub>	C <sub>2</sub>
CF-UE6T4TN-1	3/8"	1/4"	0.15	1.73	1.64	0.68	0.66
CF-UE8T4TN-1	1/2"	1/4"	0.15	1.84	1.64	0.73	0.66
CF-UE8T6TN-1	1/2"	3/8"	0.25	1.84	1.73	0.73	0.68
CF-UE12T8TN-1	3/4"	1/2"	0.38	2.13	1.84	0.87	0.73
CF-UE16T12TN-1	1"	3/4"	0.63	2.77	2.13	1.27	0.87



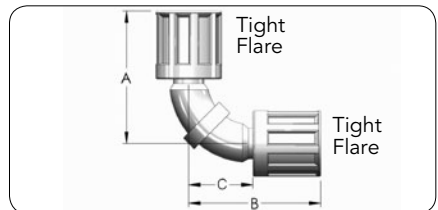
### Union Elbow Sweep Inches

Item No.	Tube	Tube	Orifice	A	B
CF-UES44N-1	1/4"	1/4"	0.15	1.62	1.62
CF-UES66N-1	3/8"	3/8"	0.25	1.83	1.83
CF-UES88N-1	1/2"	1/2"	0.38	2.05	2.05
CF-UES1212N-1	3/4"	3/4"	0.63	2.33	2.33
CF-UES1616N-1	1"	1"	0.88	2.78	2.78



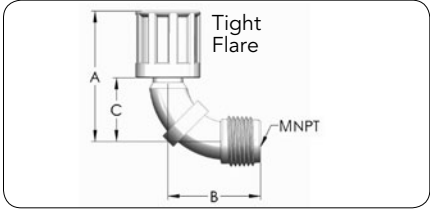
### Union Elbow Sweep Tube x Tight Flare Inches

Item No.	Tube	Tight Flare	Orifice	A	B	C
CF-UES44TN-1	1/4"	1/4"	0.15	1.62	1.78	0.79
CF-UES66TN-1	3/8"	3/8"	0.25	1.83	1.97	0.93
CF-UES88TN-1	1/2"	1/2"	0.38	2.05	2.15	1.05
CF-UES1212TN-1	3/4"	3/4"	0.63	2.33	2.56	1.31
CF-UES1616TN-1	1"	1"	0.88	2.78	3.22	1.72



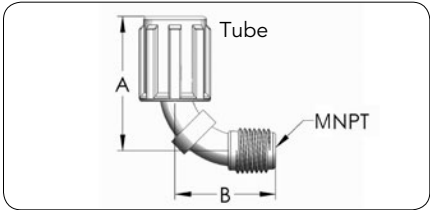
### Tight Flare Union Elbow Sweep Inches

Item No.	Tight Flare	Orifice	A	B	C
CF-UES4TN-1	1/4"	0.15	1.78	1.78	0.79
CF-UES6TN-1	3/8"	0.25	1.97	1.97	0.93
CF-UES8TN-1	1/2"	0.38	2.15	2.15	1.05
CF-UES12TN-1	3/4"	0.63	2.56	2.56	1.31
CF-UES16TN-1	1"	0.88	3.22	3.22	1.72



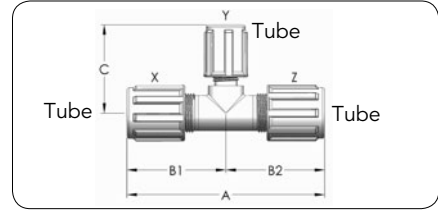
### Tight Flare Male Elbow Sweep *Inches*

Item No.	Tight Flare	MNPT	Orifice	A	B	C
CF-MES4T-4N-1	1/4"	1/4"	0.15	1.78	1.20	0.79
CF-MES6T-6N-1	3/8"	3/8"	0.25	1.97	1.32	0.93
CF-MES8T-8N-1	1/2"	1/2"	0.38	2.15	1.55	1.05
CF-MES12T-12N-1	3/4"	3/4"	0.63	2.56	1.76	1.31
CF-MES16T-16N-1	1"	1"	0.88	3.22	2.26	1.72



### Male Elbow Sweep *Inches*

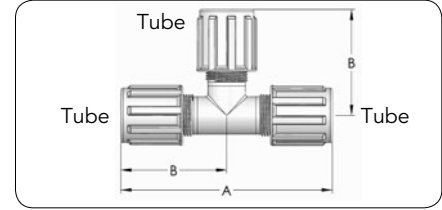
Item No.	Tube	MNPT	Orifice	A	B
CF-MES4-4N-1	1/4"	1/4"	0.15	1.62	1.20
CF-MES6-6N-1	3/8"	3/8"	0.25	1.83	1.32
CF-MES8-8N-1	1/2"	1/2"	0.38	2.05	1.55
CF-MES12-12N-1	3/4"	3/4"	0.63	2.33	1.76
CF-MES16-16N-1	1"	1"	0.88	2.78	2.26



### Union Tee Reducer Inches

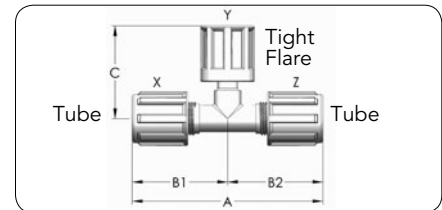
Item No.	Tube X	Tube Y	Tube Z	Orifice	A	B <sub>1</sub>	C	B <sub>2</sub>
CF-UT4-6-4N-1	1/4"	3/8"	1/4"	0.15	3.32	1.66	1.76	1.66
CF-UT4-8-4N-1	1/4"	1/2"	1/4"	0.15	3.32	1.66	1.87	1.66
CF-UT6-4-4N-1	3/8"	1/4"	1/4"	0.15	3.42	1.76	1.66	1.76
CF-UT6-4-6N-1	3/8"	1/4"	3/8"	0.15	3.52	1.76	1.66	1.76
CF-UT6-6-4N-1	3/8"	3/8"	1/4"	0.15	3.42	1.76	1.76	1.76
CF-UT6-8-6N-1	3/8"	1/2"	3/8"	0.25	3.52	1.76	1.87	1.76
CF-UT8-4-4N-1	1/2"	1/4"	1/4"	0.15	3.53	1.87	1.66	1.87
CF-UT8-4-6N-1	1/2"	1/4"	3/8"	0.15	3.63	1.87	1.66	1.87
CF-UT8-4-8N-1	1/2"	1/4"	1/2"	0.15	3.74	1.87	1.66	1.87
CF-UT8-6-6N-1	1/2"	3/8"	3/8"	0.25	3.63	1.87	1.76	1.87
CF-UT8-6-8N-1	1/2"	3/8"	1/2"	0.25	3.74	1.87	1.76	1.87
CF-UT8-8-4N-1	1/2"	1/2"	1/4"	0.15	3.53	1.87	1.87	1.87
CF-UT8-8-6N-1	1/2"	1/2"	3/8"	0.38	3.63	1.87	1.87	1.87
CF-UT8-12-8N-1	1/2"	3/4"	1/2"	0.38	3.72	1.86	2.22	1.86
CF-UT12-4-12N-1	3/4"	1/4"	3/4"	0.15	4.44	2.22	1.66	2.22
CF-UT12-6-12N-1	3/4"	3/8"	3/4"	0.25	4.44	2.22	1.76	2.22
CF-UT12-8-8N-1	3/4"	1/2"	1/2"	0.38	4.09	2.22	1.87	2.22
CF-UT12-8-12N-1	3/4"	1/2"	3/4"	0.38	4.44	2.22	1.87	2.22
CF-UT12-12-6N-1	3/4"	3/4"	3/8"	0.25	3.98	2.22	2.22	2.22
CF-UT12-12-8N-1	3/4"	3/4"	1/2"	0.38	4.09	2.22	2.22	2.22
CF-UT12-16-12N-1	3/4"	1"	3/4"	0.63	4.44	2.22	2.70	2.22
CF-UT16-4-16N-1	1"	1/4"	1"	0.15	5.40	2.70	2.02	2.70
CF-UT16-6-16N-1	1"	3/8"	1"	0.25	5.40	2.70	2.13	2.70
CF-UT16-8-16N-1	1"	1/2"	1"	0.38	5.40	2.70	2.26	2.70
CF-UT16-12-12N-1	1"	3/4"	3/4"	0.63	4.92	2.70	2.22	2.70
CF-UT16-12-16N-1	1"	3/4"	1"	0.63	5.40	2.70	2.22	2.70
CF-UT16-16-8N-1	1"	1"	1/2"	0.38	4.92	2.70	2.70	2.70
CF-UT16-16-12N-1	1"	1"	3/4"	0.63	4.92	2.70	2.70	2.70





### Union Tee Inches

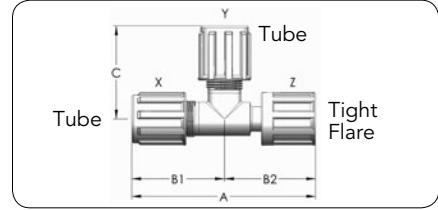
Item No.	Tube	Orifice	A	B
CF-UT4N-1	1/4"	0.15	3.32	1.66
CF-UT6N-1	3/8"	0.25	3.52	1.76
CF-UT8N-1	1/2"	0.38	3.74	1.87
CF-UT12N-1	3/4"	0.63	4.44	2.22
CF-UT16N-1	1"	0.88	5.40	2.70
CF-UT20N-1	1-1/4"	1.10	5.92	2.96



### Union Tee (Tight Flare) Branch Inches

Item No.	Tube X	Tight Flare Y	Tube Z	Orifice	A	B <sub>1</sub>	C	B <sub>2</sub>
CF-UT4-4T-4N-1	1/4"	1/4"	1/4"	0.15	3.32	1.66	1.64	1.66
CF-UT4-6T-4N-1	1/4"	3/8"	1/4"	0.15	3.32	1.66	1.73	1.66
CF-UT6-4T-6N-1	3/8"	1/4"	3/8"	0.15	3.52	1.76	1.64	1.76
CF-UT6-6T-4N-1	3/8"	3/8"	1/4"	0.15	3.42	1.76	1.73	1.66
CF-UT6-6T-6N-1	3/8"	3/8"	3/8"	0.25	3.52	1.76	1.73	1.76
CF-UT6-8T-6N-1	3/8"	1/2"	3/8"	0.25	3.52	1.76	1.84	1.76
CF-UT8-4T-8N-1	1/2"	1/4"	1/2"	0.15	3.74	1.87	1.64	1.87
CF-UT8-6T-8N-1	1/2"	3/8"	1/2"	0.25	3.74	1.87	1.73	1.87
CF-UT8-8T-4N-1	1/2"	1/2"	1/4"	0.15	3.53	1.87	1.84	1.87
CF-UT8-8T-6N-1	1/2"	1/2"	3/8"	0.25	3.63	1.87	1.84	1.76
CF-UT8-8T-8N-1	1/2"	1/2"	1/2"	0.38	3.74	1.87	1.84	1.87
CF-UT8-12T-8N-1	1/2"	3/4"	1/2"	0.38	3.74	1.87	2.13	1.87
CF-UT12-4T-12N-1	3/4"	1/4"	3/4"	0.15	4.44	2.22	1.64	2.22
CF-UT12-6T-12N-1	3/4"	3/8"	3/4"	0.25	4.44	2.22	1.73	2.22
CF-UT12-8T-8N-1	3/4"	1/2"	1/2"	0.38	4.09	2.22	1.84	2.22
CF-UT12-8T-12N-1	3/4"	1/2"	3/4"	0.38	4.44	2.22	1.97	2.22
CF-UT12-12T-6N-1	3/4"	3/4"	3/8"	0.25	3.98	2.22	2.13	1.76
CF-UT12-12T-8N-1	3/4"	3/4"	1/2"	0.38	4.09	2.22	2.13	2.22
CF-UT12-12T-12N-1	3/4"	3/4"	3/4"	0.63	4.44	2.22	2.13	2.22
CF-UT12-16T-12N-1	3/4"	1"	3/4"	0.63	4.44	2.22	2.74	2.22
CF-UT16-8T-16N-1	1"	1/2"	1"	0.38	5.40	2.70	2.09	2.70
CF-UT16-12T-12N-1	1"	3/4"	3/4"	0.63	4.92	2.70	2.23	2.22
CF-UT16-12T-16N-1	1"	3/4"	1"	0.63	5.40	2.70	2.23	2.70
CF-UT16-16T-12N-1	1"	1"	3/4"	0.63	4.95	2.70	2.74	2.22
CF-UT16-16T-16N-1	1"	1"	1"	0.88	5.40	2.70	2.74	2.70

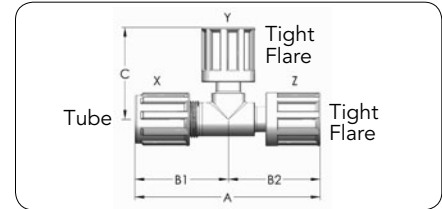
For D Dimension: 4T=0.66, 6T=0.68, 8T=0.73, 12T=0.87, 16T=1.27



### Union Tee (Tight Flare) Run Inches

Item No.	Tube X	Tube Y	Tight Flare Z	Orifice	A	B <sub>1</sub>	C	B <sub>2</sub>
CF-UT4-4-4TN-1	1/4"	1/4"	1/4"	0.15	3.30	1.66	1.66	1.64
CF-UT4-8-8TN-1	1/4"	1/2"	1/2"	0.15	3.50	1.66	1.87	1.84
CF-UT6-4-6TN-1	3/8"	1/4"	3/8"	0.15	3.49	1.76	1.66	1.73
CF-UT6-6-6TN-1	3/8"	3/8"	3/8"	0.25	3.49	1.76	1.76	1.73
CF-UT6-6-8TN-1	3/8"	3/8"	1/2"	0.25	3.60	1.76	1.76	1.84
CF-UT6-8-8TN-1	3/8"	1/2"	1/2"	0.25	3.60	1.76	1.87	1.84
CF-UT6-12-12TN-1	3/8"	3/4"	3/4"	0.25	3.89	1.76	2.22	2.13
CF-UT8-4-8TN-1	1/2"	1/4"	1/2"	0.15	3.71	1.87	1.66	1.84
CF-UT8-6-6TN-1	1/2"	3/8"	3/8"	0.25	3.60	1.87	1.76	1.73
CF-UT8-6-8TN-1	1/2"	3/8"	1/2"	0.25	3.71	1.87	1.76	1.84
CF-UT8-8-6TN-1	1/2"	1/2"	3/8"	0.25	3.60	1.87	1.87	1.73
CF-UT8-8-8TN-1	1/2"	1/2"	1/2"	0.38	3.71	1.87	1.87	1.84
CF-UT8-8-12TN-1	1/2"	1/2"	3/4"	0.38	4.00	1.87	1.87	2.13
CF-UT12-4-12TN-1	3/4"	1/4"	3/4"	0.15	4.35	2.22	1.66	2.13
CF-UT12-6-12TN-1	3/4"	3/8"	3/4"	0.25	4.35	2.22	1.76	2.13
CF-UT12-8-12TN-1	3/4"	1/2"	3/4"	0.38	4.35	2.22	1.87	2.13
CF-UT12-12-8TN-1	3/4"	3/4"	1/2"	0.38	4.06	2.22	2.22	1.84
CF-UT12-12-12TN-1	3/4"	3/4"	3/4"	0.63	4.35	2.22	2.22	2.13
CF-UT16-4-16TN-1	1"	1/4"	1"	0.15	5.44	2.70	1.66	2.74
CF-UT16-6-16TN-1	1"	3/8"	1"	0.25	5.44	2.70	1.76	2.74
CF-UT16-12-16TN-1	1"	3/4"	1"	0.63	5.44	2.70	2.22	2.74
CF-UT16-16-12TN-1	1"	1"	3/4"	0.63	4.94	2.70	2.70	2.24
CF-UT16-16-16TN-1	1"	1"	1"	0.88	5.44	2.70	2.70	2.74
CF-UT20-20-20TN-1	1-1/4"	1-1/4"	1-1/4"	1.10	6.06	2.96	2.96	3.10

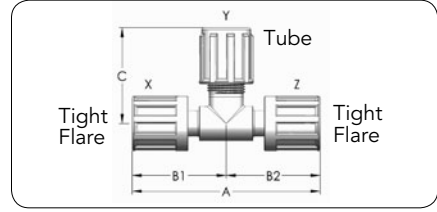
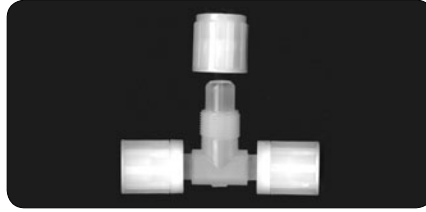
For D Dimension: 4T=0.66, 6T=0.68, 8T=0.73, 12T=0.87, 16T=1.27



### Union Tee (Tight Flare) Branch, Run Inches

Item No.	Tube X	Tight Flare Y	Tight Flare Z	Orifice	A	B <sub>1</sub>	C	B <sub>2</sub>
CF-UT4-4T-4TN-1	1/4"	1/4"	1/4"	0.15	3.30	1.66	1.64	1.64
CF-UT6-4T-6TN-1	3/8"	1/4"	3/8"	0.15	3.49	1.76	1.64	1.73
CF-UT6-6T-6TN-1	3/8"	3/8"	3/8"	0.25	3.49	1.76	1.73	1.73
CF-UT6-8T-8TN-1	3/8"	1/2"	1/2"	0.25	3.60	1.76	1.84	1.84
CF-UT6-12T-12TN-1	3/8"	3/4"	3/4"	0.25	3.89	1.76	2.13	2.13
CF-UT8-4T-8TN-1	1/2"	3/8"	3/8"	0.25	3.60	1.87	1.64	1.84
CF-UT8-6T-6TN-1	1/2"	3/8"	3/8"	0.25	3.60	1.87	1.73	1.73
CF-UT8-6T-8TN-1	1/2"	3/8"	1/2"	0.25	3.71	1.87	1.64	1.84
CF-UT8-8T-12TN-1	1/2"	1/2"	3/4"	0.38	4.00	1.87	1.84	2.13
CF-UT8-8T-8TN-1	1/2"	1/2"	1/2"	0.38	3.71	1.87	1.84	1.84
CF-UT8-12T-12TN-1	1/2"	3/4"	3/4"	0.38	4.00	1.87	2.13	2.13
CF-UT12-8T-8TN-1	1/2"	1/2"	3/4"	0.38	4.00	2.22	1.84	1.84
CF-UT12-8T-12TN-1	3/4"	1/2"	3/4"	0.38	4.31	2.22	1.84	2.13
CF-UT12-12T-8TN-1	3/4"	3/4"	1/2"	0.38	4.06	2.22	2.13	1.84
CF-UT12-12T-12TN-1	3/4"	3/4"	3/4"	0.63	4.35	2.22	2.13	2.13
CF-UT16-12T-12TN-1	1"	3/4"	3/4"	0.63	4.83	2.70	2.13	2.13
CF-UT16-12T-16TN-1	1"	3/4"	1"	0.63	5.44	2.70	2.13	2.74
CF-UT16-16T-12TN-1	1"	1"	3/4"	0.63	4.94	2.70	2.77	2.24
CF-UT16-16T-16TN-1	1"	1"	1"	0.88	5.44	2.70	2.77	2.74
CF-UT20-16T-20TN-1	1-1/4"	1"	1-1/4"	0.88	6.06	2.96	2.77	3.10
CF-UT20-20T-20TN-1	1-1/4"	1-1/4"	1-1/4"	1.10	6.06	2.96	3.10	3.10

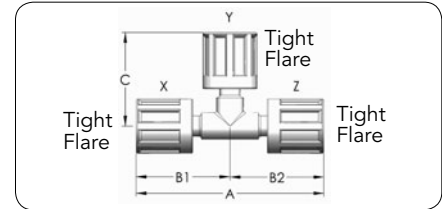
For D Dimension: 4T=0.66, 6T=0.68, 8T=0.73, 12T=0.87, 16T=1.27



### Union Tee (Tight Flare) Run, Run Inches

Item No.	Tight Flare X	Tube Y	Tight Flare Z	Orifice	A	B <sub>1</sub>	C	B <sub>2</sub>
CF-UT4T-4-4TN-1	1/4"	1/4"	1/4"	0.15	3.28	1.64	1.66	1.64
CF-UT6T-4-4TN-1	3/8"	1/4"	1/4"	0.15	3.37	1.73	1.66	1.64
CF-UT6T-4-6TN-1	3/8"	1/4"	3/8"	0.15	3.46	1.73	1.66	1.73
CF-UT4T-6-4TN-1	1/4"	3/8"	1/4"	0.15	3.28	1.64	1.76	1.64
CF-UT6T-6-6TN-1	3/8"	3/8"	3/8"	0.25	3.46	1.73	1.76	1.73
CF-UT6T-8-6TN-1	3/8"	1/2"	3/8"	0.25	3.46	1.73	1.87	1.73
CF-UT8T-4-8TN-1	1/2"	1/4"	1/2"	0.15	3.68	1.84	1.66	1.84
CF-UT8T-6-6TN-1	1/2"	3/8"	3/8"	0.25	3.57	1.84	1.76	1.84
CF-UT8T-8-4TN-1	1/2"	1/2"	1/4"	0.15	3.48	1.84	1.87	1.84
CF-UT8T-8-6TN-1	1/2"	1/2"	3/8"	0.25	3.57	1.84	1.87	1.73
CF-UT8T-8-8TN-1	1/2"	1/2"	1/2"	0.38	3.68	1.84	1.87	1.84
CF-UT8T-12-8TN-1	1/2"	3/4"	1/2"	0.38	3.68	1.84	2.22	1.84
CF-UT12T-4-12TN-1	3/4"	1/4"	3/4"	0.15	4.26	2.13	1.66	2.13
CF-UT12T-6-12TN-1	3/4"	3/8"	3/4"	0.25	4.26	2.13	1.76	2.13
CF-UT12T-8-8TN-1	3/4"	1/2"	1/2"	0.38	4.26	2.13	1.87	2.13
CF-UT12T-8-12TN-1	3/4"	1/2"	3/4"	0.38	4.26	2.13	1.87	2.13
CF-UT12T-12-12TN-1	3/4"	3/4"	3/4"	0.63	4.26	2.13	2.22	2.13
CF-UT12T-16-12TN-1	3/4"	1"	3/4"	0.63	4.26	2.13	2.70	2.13
CF-UT16T-6-16TN-1	1"	3/8"	1"	0.25	5.48	2.74	2.13	2.74
CF-UT16T-8-16TN-1	1"	1/2"	1"	0.38	5.48	2.74	2.26	2.74
CF-UT16T-12-16TN-1	1"	3/4"	1"	0.63	5.48	2.74	2.21	2.74
CF-UT16T-16-16TN-1	1"	1"	1"	0.88	5.48	2.74	2.70	2.74
CF-UT20T-20-20TN-1	1-1/4"	1-1/4"	1-1/4"	1.10	6.20	3.10	2.96	3.10

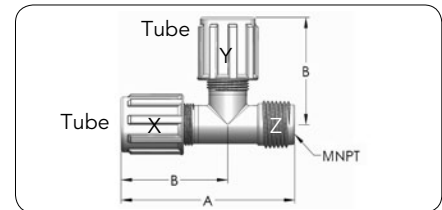
For D Dimension: 4T=0.66, 6T=0.68, 8T=0.73, 12T=0.87, 16T=1.27



### Union Tee (Tight Flare) All Inches

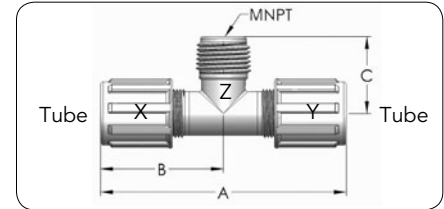
Item No.	Tight Flare X	Tight Flare Y	Tight Flare Z	Orifice	A	B <sub>1</sub>	C	B <sub>2</sub>
CF-UT4TN-1	1/4"	1/4"	1/4"	0.15	3.28	1.64	1.64	1.64
CF-UT4T-6T-4TN-1	1/4"	3/8"	1/4"	0.15	3.28	1.64	1.73	1.64
CF-UT6TN-1	3/8"	3/8"	3/8"	0.25	3.46	1.73	1.73	1.73
CF-UT6T-8T-4TN-1	3/8"	1/2"	1/4"	0.15	3.37	1.73	1.84	1.64
CF-UT8TN-1	1/2"	1/2"	1/2"	0.38	3.68	1.84	1.84	1.84
CF-UT8T-6T-6TN-1	1/2"	3/8"	3/8"	0.25	3.57	1.84	1.73	1.73
CF-UT8T-8T-4TN-1	1/2"	1/2"	1/4"	0.15	3.48	1.84	1.84	1.64
CF-UT8T-12T-8TN-1	1/2"	3/4"	1/2"	0.38	3.68	1.84	2.13	1.84
CF-UT12TN-1	3/4"	3/4"	3/4"	0.63	4.26	2.13	2.13	2.13
CF-UT12T-6T-12TN-1	3/4"	3/8"	3/4"	0.25	4.26	2.13	1.73	2.13
CF-UT12T-8T-12TN-1	3/4"	1/2"	3/4"	0.38	4.23	2.13	1.84	2.13
CF-UT12T-12T-8TN-1	3/4"	3/4"	1/2"	0.38	3.97	2.13	2.13	1.84
CF-UT16TN-1	1"	1"	1"	0.88	5.48	2.74	2.74	2.74
CF-UT16T-12T-16TN-1	1"	3/4"	1"	0.63	5.48	2.74	2.13	2.74
CF-UT20TN-1	1-1/4"	1-1/4"	1-1/4"	1.10	6.20	3.10	3.10	3.10

For D Dimension: 4T=0.66, 6T=0.68, 8T=0.73, 12T=0.87, 16T=1.27



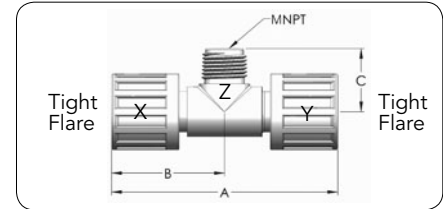
### Male Run Tee Inches

Item No.	Tube X	Tube Y	MNPT Z	Orifice	A	B
CF-MRT44-2N-1	1/4"	1/4"	1/8"	0.15	2.72	1.68
CF-MRT44-4N-1	1/4"	1/4"	1/4"	0.15	2.72	1.68
CF-MRT44-6N-1	1/4"	1/4"	3/8"	0.15	2.72	1.68
CF-MRT66-2N-1	3/8"	3/8"	1/8"	0.17	2.83	1.76
CF-MRT66-4N-1	3/8"	3/8"	1/4"	0.25	2.83	1.76
CF-MRT66-6N-1	3/8"	3/8"	3/8"	0.25	2.83	1.76
CF-MRT66-8N-1	3/8"	3/8"	1/2"	0.25	2.83	1.76
CF-MRT88-4N-1	1/2"	1/2"	1/4"	0.38	2.96	1.87
CF-MRT88-6N-1	1/2"	1/2"	3/8"	0.38	2.96	1.87
CF-MRT88-8N-1	1/2"	1/2"	1/2"	0.38	3.04	1.87
CF-MRT1212-6N-1	3/4"	3/4"	3/8"	0.38	3.45	2.22
CF-MRT1212-8N-1	3/4"	3/4"	1/2"	0.49	3.56	2.22
CF-MRT1212-12N-1	3/4"	3/4"	3/4"	0.63	3.59	2.22
CF-MRT1616-12N-1	1"	1"	3/4"	0.63	4.34	2.70
CF-MRT1616-16N-1	1"	1"	1"	0.88	4.50	2.70
CF-MRT1616T-16N-1	1"	1"	1"	0.88	4.50	2.74



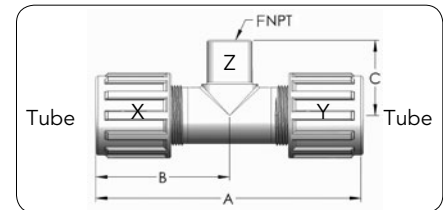
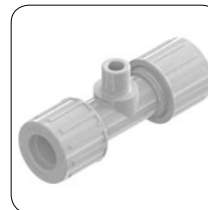
### Male Branch Tee Inches

Item No.	Tube X	Tube Y	MNPT Z	Orifice	A	B	C
CF-MBT44-2N-1	1/4"	1/4"	1/8"	0.15	3.32	1.66	1.07
CF-MBT44-4N-1	1/4"	1/4"	1/4"	0.15	3.32	1.66	1.07
CF-MBT44-8N-1	1/4"	1/4"	1/2"	0.15	3.32	1.66	1.17
CF-MBT64-4N-1	3/8"	1/4"	1/4"	0.15	3.42	1.76	1.07
CF-MBT64-6N-1	3/8"	1/4"	3/8"	0.15	3.52	1.76	1.07
CF-MBT66-2N-1	3/8"	3/8"	1/8"	0.25	3.52	1.76	1.07
CF-MBT66-4N-1	3/8"	1/4"	1/4"	0.25	3.52	1.76	1.07
CF-MBT66-6N-1	3/8"	3/8"	3/8"	0.25	3.52	1.76	1.07
CF-MBT66-8N-1	3/8"	3/8"	1/2"	0.25	3.52	1.76	1.17
CF-MBT84-8N-1	1/2"	1/4"	1/2"	0.15	3.53	1.77	1.17
CF-MBT86-6N-1	1/2"	3/8"	3/8"	0.25	3.64	1.82	1.08
CF-MBT86-8N-1	1/2"	3/8"	1/2"	0.25	3.64	1.82	1.17
CF-MBT88-4N-1	1/2"	1/2"	1/4"	0.25	3.74	1.87	1.07
CF-MBT88-6N-1	1/2"	1/2"	3/8"	0.38	3.74	1.87	1.08
CF-MBT88-8N-1	1/2"	1/2"	1/2"	0.38	3.74	1.87	1.17
CF-MBT88-12N-1	1/2"	1/2"	3/4"	0.38	4.74	1.87	1.35
CF-MBT1212-4N-1	3/4"	3/4"	1/4"	0.25	4.44	2.22	1.27
CF-MBT1212-8N-1	3/4"	3/4"	1/2"	0.49	4.44	2.22	1.35
CF-MBT1212-12N-1	3/4"	3/4"	3/4"	0.63	4.44	2.22	1.35
CF-MBT1616-4N-1	1"	1"	1/4"	0.25	5.40	2.70	1.57
CF-MBT1616-6N-1	1"	1"	3/8"	0.38	5.40	2.70	1.57
CF-MBT1616-8N-1	1"	1"	1/2"	0.49	5.40	2.70	1.63
CF-MBT1616-12N-1	1"	1"	3/4"	0.69	5.40	2.70	1.63
CF-MBT1616-16N-1	1"	1"	1"	0.88	5.40	2.70	1.81
CF-MBT2020-8N-1	1-1/4"	1-1/4"	1/2"	0.51	5.92	2.96	2.00



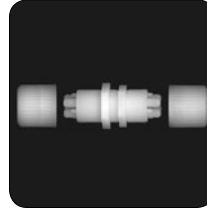
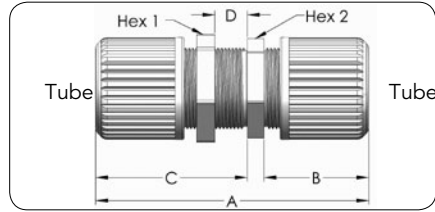
### Tight Flare Male Branch Tee Inches

Item No.	Tight Flare X	Tight Flare Y	MNPT Z	Orifice	A	B	C
CF-MBT12T-12T-8N-1	3/4"	3/4"	1/2"	0.49	4.24	2.12	1.35



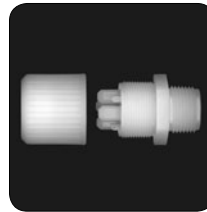
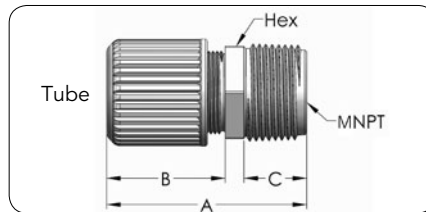
### Female Branch Tee Inches

Item No.	Tube X	Tube Y	FNPT Z	Orifice	A	B	C
CF-FBT88-4N-1	1/2"	1/2"	1/4"	0.38	3.72	1.86	1.11
CF-FBT1212-4N-1	3/4"	3/4"	1/4"	0.25	4.44	2.22	1.43
CF-FBT1212-12N-1	3/4"	3/4"	3/4"	0.63	4.44	2.22	1.63
CF-FBT1616-4N-1	1"	1"	1/4"	0.25	5.40	2.70	1.43
CF-FBT1616-8N-1	1"	1"	1/2"	0.49	5.40	2.70	1.38
CF-FBT1616-16N-1	1"	1"	1"	t.b.a.	5.40	2.70	t.b.a.



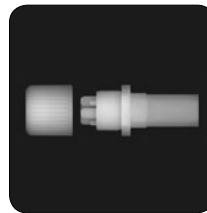
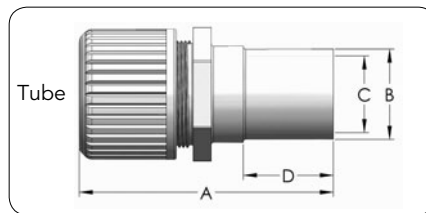
### PVDF Multi-Flare Panel Mount *Inches*

Item No.	Tube	Ports	Orifice	A	B	C	D (Max)	HEX 1	HEX 2	Hole Size Required
CF-MSUPM4-2	1/4"	2	0.15	4.13	1.60	2.30	0.50	1-3/8"	1-1/4"	1-1/8"
CF-MSUPM4-3	1/4"	3	0.15	4.13	1.60	2.30	0.50	1-3/8"	1-1/4"	1-1/8"
CF-MSUPM4-4	1/4"	4	0.15	4.13	1.60	2.30	0.50	1-1/2"	1-3/8"	1-1/4"
CF-MSUPM4-6	1/4"	6	0.15	4.13	1.60	2.30	0.50	1-3/4"	1-5/8"	1-1/2"



### PVDF Multi-Flare Male Connector *Inches*

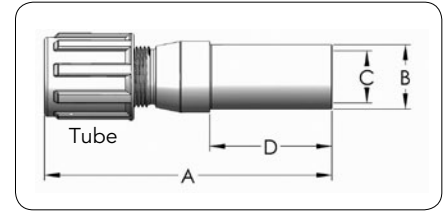
Item No.	Tube	MNPT	Ports	Orifice	A	B	C	HEX
CF-MMC4-8-2	1/4"	1/2"	2	0.15	2.49	1.60	0.66	1-1/4"
CF-MMC4-8-3	1/4"	1/2"	3	0.15	2.49	1.60	0.66	1-1/4"
CF-MMC4-12-2	1/4"	3/4"	2	0.15	2.50	1.60	0.67	1-1/4"
CF-MMC4-12-3	1/4"	3/4"	3	0.15	2.50	1.60	0.67	1-1/4"
CF-MMC4-12-4	1/4"	3/4"	4	0.15	2.50	1.60	0.67	1-3/8"
CF-MMC4-16-3	1/4"	1"	3	0.15	2.68	1.60	0.85	1-1/4"
CF-MMC4-16-4	1/4"	1"	4	0.15	2.68	1.60	0.85	1-3/8"
CF-MMC4-16-6	1/4"	1"	6	0.15	2.68	1.60	0.85	1-5/8"



### PVDF Multi-Flare Transition Fitting *Inches*

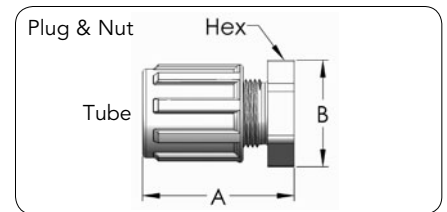
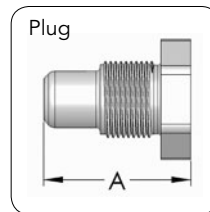
Item No.	Tube	Pipe	Ports	Orifice	A	B	C	D	HEX
CF-MTSF4-25MM-2	1/4"	25mm	2	0.15	3.75	0.98	0.82	1.50	1-1/4"
CF-MTSF4-25MM-3	1/4"	25mm	3	0.15	3.75	0.98	0.82	1.50	1-1/4"
CF-MTSF4-25MM-4	1/4"	25mm	4	0.15	3.75	0.98	0.82	1.50	1-3/8"
CF-MTSF4-32MM-4	1/4"	32mm	4	0.15	3.75	1.26	1.07	1.50	1-3/8"
CF-MTSF4-32MM-6	1/4"	32mm	6	0.15	3.75	1.26	1.07	1.50	1-5/8"





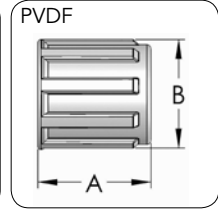
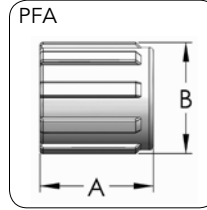
### PVDF Transition Fitting – Tube x Metric Pipe Inches

Item No.	Tube	Pipe	A	B	C	D
CF-TSF4-20MM	1/4"	20mm	3.30	0.79	0.64	1.50
CF-TSF4-25MM	1/4"	25mm	3.30	0.98	0.82	1.50
CF-TSF6-20MM	3/8"	20mm	3.40	0.79	0.64	1.50
CF-TSF6-25MM	3/8"	25mm	3.40	0.98	0.82	1.50
CF-TSF8-20MM	1/2"	20mm	3.50	0.79	0.64	1.50
CF-TSF8-25MM	1/2"	25mm	3.50	0.98	0.82	1.50
CF-TSF8-32MM	1/2"	32mm	3.50	1.26	1.07	1.50
CF-TSF8-40MM	1/2"	40mm	3.50	1.57	1.38	1.50
CF-TSF12-20MM	3/4"	20mm	3.64	0.79	0.64	1.50
CF-TSF12-25MM	3/4"	25mm	3.64	0.98	0.82	1.50
CF-TSF12-32MM	3/4"	32mm	3.64	1.26	1.07	1.50
CF-TSF12-40MM	3/4"	40mm	3.64	1.57	1.38	1.50
CF-TSF16-25MM	1"	25mm	3.80	0.98	0.82	1.50
CF-TSF16-32MM	1"	32mm	3.80	1.26	1.07	1.50
CF-TSF16-40MM	1"	40mm	3.80	1.57	1.38	1.50
CF-TSF16-50MM	1"	50mm	3.90	1.97	1.73	1.48
CF-TSF16-63MM	1"	63mm	3.90	2.48	2.24	1.48



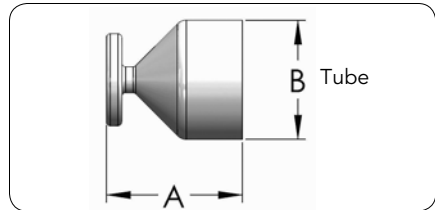
### Flare Plug & PVDF Nut Inches

Flare Plug Only Item No.	Tube	A	HEX	Price	Plug & Nut Item No.	Tube	A	B	HEX
CF-FP4	1/4"	1.25	5/8"	30.20	CF-FP4N-1	1/4"	1.47	0.73	5/8"
CF-FP6	3/8"	1.34	13/16"	33.50	CF-FP6N-1	3/8"	1.57	0.85	13/16"
CF-FP8	1/2"	1.43	15/16"	40.10	CF-FP8N-1	1/2"	1.67	1.00	15/16"
CF-FP12	3/4"	1.58	1-3/16"	46.90	CF-FP12N-1	3/4"	1.79	1.32	1-3/16"
CF-FP16	1"	1.75	1-7/16"	54.30	CF-FP16N-1	1"	2.01	1.76	1-7/16"
CF-FP20	1-1/4"	2.13	1-3/4"	67.10					


**PFA Nut** Inches

**PVDF Nut** Inches

Item No.	Tube	A	B	Item No.	Tube	A	B
CF-N4-3	1/4"	1.02	0.84	CF-N4-1	1/4"	1.00	0.73
CF-N6-3	3/8"	1.03	0.99	CF-N6-1	3/8"	1.01	0.85
CF-N8-3	1/2"	1.12	1.07	CF-N8-1	1/2"	1.09	1.00
CF-N12-3	3/4"	1.27	1.41	CF-N12-1	3/4"	1.25	1.32
CF-N16-3	1"	1.51	1.85	CF-N16-1	1"	1.49	1.76
CF-N20-3	1-1/4"	1.86	2.32				


**Flare Cap** Inches

Item No.	Tube	A	B
CF-FCAP4	1/4"	0.93	0.39
CF-FCAP6	3/8"	1.01	0.53
CF-FCAP8	1/2"	1.03	0.68
CF-FCAP12	3/4"	1.10	0.93
CF-FCAP16	1"	1.28	1.26
CF-FCAP20	1-1/4"	1.77	1.57



### Flange Adaptors – Flange to ChemFlare™

Item No.	PVC Flange	Tube
CF-FA.005-A8N-1	1/2"	1/2"
CF-FA.007-A12N-1	3/4"	3/4"
CF-FA.010-A16N-1	1"	1"

### Pump Adaptors – Pump Outlets to ChemFlare™

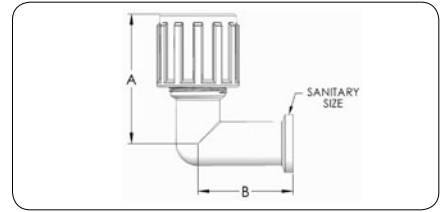
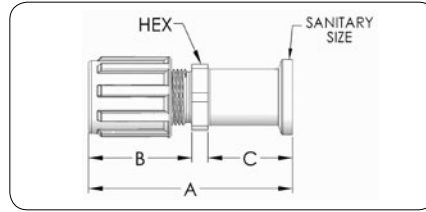
Item No.	PVC Thread	Tube
CF-PA.FM20-A4N-1	Female M20	1/4"
CF-PA.FM20-A6N-1	Female M20	3/8"
CF-PA.FM20-A8N-1	Female M20	1/2"
CF-PA.FM20-A12N-1	Female M20	3/4"
CF-PA.MM20-A4N-1	Male M20	1/4"
CF-PA.MM20-A6N-1	Male M20	3/8"
CF-PA.MM20-A8N-1	Male M20	1/2"
CF-PA.MM20-A12N-1	Male M20	3/4"

### Pipe Adaptors – Pipe End to ChemFlare™

Item No.	PVC Socket	Tube
CF-PIPEADAPT005-A4N-1	1/2" Female	1/4"
CF-PIPEADAPT005-A6N-1	1/2" Female	3/8"
CF-PIPEADAPT005-A8N-1	1/2" Female	1/2"
CF-PIPEADAPT007-A12N-1	3/4" Female	3/4"
CF-PIPEADAPT010-A12N-1	1" Female	3/4"
CF-PIPEADAPT010-A16N-1	1" Female	1"

### Spigot Adaptors – Socket Adaptors to ChemFlare™

Item No.	PVC Spigot	Tube
CF-SPIGOT-005-A6N-1	1/2" Male	3/8"
CF-SPIGOT-005-A8N-1	1/2" Male	1/2"
CF-SPIGOT-007-A8N-1	3/4" Male	1/2"
CF-SPIGOT-007-A12N-1	3/4" Male	3/4"
CF-SPIGOT-010-A8N-1	1" Male	1/2"
CF-SPIGOT-010-A12N-1	1" Male	3/4"
CF-SPIGOT-012-A16N-1	1-1/4" Male	1"
CF-SPIGOT-015-A12N-1	1-1/2" Male	3/4"



### Male Connector x Sanitary End Inches

Item No.	Tube O.D.	Sanitary Size	Orifice	A	B	C	HEX
CF-MC4-MINI	1/4"	MINI	0.15	2.49	1.16	1.12	7/8"
CF-MC6-MINI	3/8"	MINI	0.25	2.58	1.25	1.12	7/8"
CF-MC8-MINI	1/2"	MINI	0.38	2.70	1.37	1.12	7/8"
CF-MC12-MINI	3/4"	MINI	0.56	2.72	1.39	1.12	1-1/8"
CF-MC16-MINI	1"	MINI	0.56	2.92	1.59	1.12	1-7/16"
CF-MC8-MAXI	1/2"	MAXI	0.38	2.83	1.37	1.25	1-3/16"
CF-MC12-MAXI	3/4"	MAXI	0.63	2.99	1.39	1.25	1-3/16"
CF-MC16-MAXI	1"	MAXI	0.86	3.04	1.59	1.25	1-7/16"

- Prices are to be added on to socket valve prices
- Nuts are included
- PVDF end connectors are offered for PP and CPVC valves. PVDF temperature rating exceeds those of PP and CPVC. PVDF ends are recommended for CPVC valves on sodium hypochlorite.

## End Connectors



### for True Union Ball Valves

also for other True Union Valves: Type 33 and 23 Multi-Port ball valves, DV Series and Type 14 diaphragm valves and YS Series Y-Strainers

for Type 24 PVC valves

Item No.	Valve Size	Tube O.D.	Materials	
			End Connector	Nut
24005-4A4N-1	1/2"	1/4"	PVC	PVDF
24005-4A6N-1	1/2"	3/8"	PVC	PVDF
24005-4A8N-1	1/2"	1/2"	PVC	PVC
24007-4A12N-1	3/4"	3/4"	PVC	PVDF
24010-4A16N-1	1"	1"	PVC	PVDF



for Type 25 PVC valves

Item No.	Valve Size	Tube O.D.	Materials	
			End Connector	Nut
25005-4A4N-1	1/2"	1/4"	PVC	PVDF
25005-4A6N-1	1/2"	3/8"	PVC	PVDF
25005-4A8N-1	1/2"	1/2"	PVC	PVC
25007-4A12N-1	3/4"	3/4"	PVC	PVDF
25010-4A16N-1	1"	1"	PVC	PVDF

for Type 25 PP and PVDF valves

Item No.	Valve Size	Tube O.D.	Materials	
			End Connector	Nut
25005-4K4N-1	1/2"	1/4"	PVDF	PVDF
25005-4K6N-1	1/2"	3/8"	PVDF	PVDF
25005-4K8N-1	1/2"	1/2"	PVDF	PVDF
25007-4K12N-1	3/4"	3/4"	PVDF	PVDF
25010-4K16N-1	1"	1"	PVDF	PVDF



for Type 26 CPVC valves

Item No.	Valve Size	Tube O.D.	Materials	
			End Connector	Nut
26005-4K4N-1	1/2"	1/4"	PVDF	PVDF
26005-4K6N-1	1/2"	3/8"	PVDF	PVDF
26005-4K8N-1	1/2"	1/2"	PVDF	PVDF
26007-4K12N-1	3/4"	3/4"	PVDF	PVDF
26010-4K16N-1	1"	1"	PVDF	PVDF

- Prices are to be added on to socket valve price
- PVDF end connectors are offered for PP and CPVC valves. PVDF temperature rating exceeds those of PP and CPVC. PVDF ends are recommended for CPVC valves on sodium hypochlorite.

## End Connectors



### for Type 21 PVC valves

Item No.	Valve Size	Tube O.D.	Materials	
			End Connector	Nut
21005-4A4N-1	1/2"	1/4"	PVC	PVDF
21005-4A6N-1	1/2"	3/8"	PVC	PVDF
21005-4A8N-1	1/2"	1/2"	PVC	PVC
21007-4A12N-1	3/4"	3/4"	PVC	PVDF
21010-4A16N-1	1"	1"	PVC	PVDF

### for Type 21 PP, CPVC and PVDF valves

Item No.	Valve Size	Tube O.D.	Materials	
			End Connector	Nut
21005-4K4N-1	1/2"	1/4"	PVDF	PVDF
21005-4K6N-1	1/2"	3/8"	PVDF	PVDF
21005-4K8N-1	1/2"	1/2"	PVDF	PVDF
21007-4K12N-1	3/4"	3/4"	PVDF	PVDF
21010-4K16N-1	1"	1"	PVDF	PVDF

## for SB Series Back Pressure/Relief Valves

also for other True Union valves: SR50 Series Regulating valves, FC Series Compact Flow Meters, SM Metering Ball valves, SP Proportional ball valves and 700 Series diaphragm valves



### for SB Series PVC valves

Item No.	Valve Size	Tube O.D.	Materials	
			End Connector	Nut
SB005-17A4N-1	1/2"	1/4"	PVC	PVDF
SB005-17A6N-1	1/2"	3/8"	PVC	PVDF
SB005-17A8N-1	1/2"	1/2"	PVC	PVC
SB007-17A12N-1	3/4"	3/4"	PVC	PVDF
SB010-17A16N-1	1"	1"	PVC	PVDF

### for SB Series PP, CPVC and PVDF valves

Item No.	Valve Size	Tube O.D.	Materials	
			End Connector	Nut
SB005-17K4N-1	1/2"	1/4"	PVDF	PVDF
SB005-17K6N-1	1/2"	3/8"	PVDF	PVDF
SB005-17K8N-1	1/2"	1/2"	PVDF	PVDF
SB007-17K12N-1	3/4"	3/4"	PVDF	PVDF
SB010-17K16N-1	1"	1"	PVDF	PVDF