

Ultrapure Flare Style PFA Tube Fittings



As the manufacturer of the original Flaretek® flare fitting, Entegris has the most complete line of industry leading flare fitting connections available, including standard Flaretek® fittings, “SpaceSaver” connections and FlareLock® II fittings for high temperature, high pressure applications. All PFA wetted surfaces provide high purity and chemical resistance.

Flaretek® PFA Fittings

Leak-free performance is achieved with minimum dead volume for ultrapure fluid applications. The Flaretek® fitting has high integrity in high vibration applications. Reliability in sideloaded applications allows for compact plumbing and small cleanroom footprint. Flaretek® fittings are available in 1/4", 3/8", 1/2", 3/4", 1" and 1 1/4" nominal tube sizes. Fitting bodies are manufactured from PFA or PFA *Plus* material with PFA, PVDF or carbon-filled PFA (CPFA) nut options.

Flaretek® PFA “SpaceSaver” Fittings

Flaretek® “SpaceSaver” fittings are designed to solve your toughest fluid network applications. They are ideal where you need flexible fitting connections to transition between line sizes. The “SpaceSaver” connection saves valuable space in your system while eliminating one and sometimes two connections. With fewer connections come faster installation, reduced labor and lower costs. As with all Flaretek® fittings, “SpaceSaver” fitting bodies are manufactured from PFA or PFA *Plus* material with PFA, PVDF or CPFA nut options.

FlareLock® II PFA Fittings

The FlareLock® II fitting is the premier flare fitting specially designed for high temperature, high pressure applications. Manufactured entirely from PFA, the FlareLock® II fitting is matched by no other. The patented design combines the gripping power of a grooved tube, the security of a locking ferrule mechanism and the compact, leak-free design of the Flaretek® fitting body. This innovative combination gives you a stronger, safer, higher-performing tube connection. Available in 1/4", 3/8", 1/2", 3/4" and 1" nominal tube sizes.

SEMI F57 Compliant

Entegris fittings are compliant to SEMI Standard F57-0301, the specification for polymer components used in ultrapure water and liquid chemical distribution systems.



Flaretek® fittings are specifically designed, tested and characterized to work together with specific Flaretek® fitting components manufactured by Entegris. Customer assumes the risk of connection integrity if Flaretek® fitting bodies and/or nuts are attached to components manufactured by third parties.

Valve Component CAD Library

Entegris has partnered with the Thomas Industrial Network to generate and house our 3D and 2D information. With this partnership, you have the ability to access product data that is compatible with today's CAD modeling packages. To decrease system design time, visit Entegris' web site at www.entegrisfluidhandling.com for component specifications and CAD files, and then simply download parts directly into your design.

Flare Fitting Styles and Technical Information

Flaretek® Ultrapure PFA Tube Fittings

Entegris fittings are compliant to SEMI Standard F57-0301, the specification for polymer components used in ultrapure water and liquid chemical distribution systems.

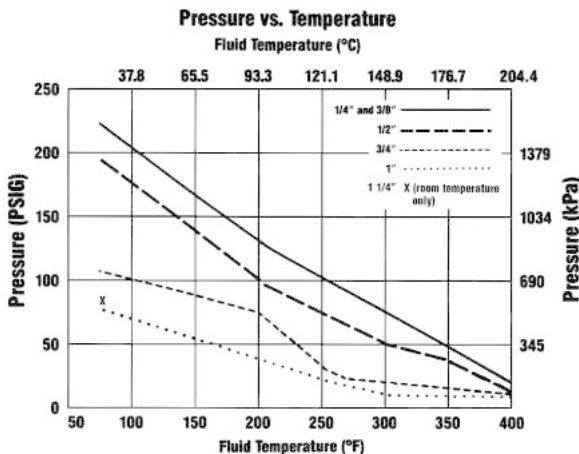
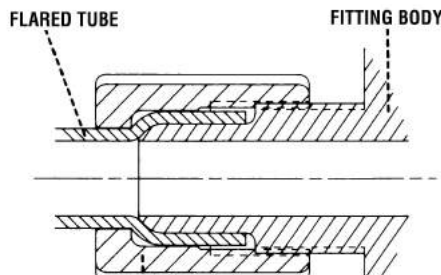
Leak-free performance is achieved with minimum dead volume for ultrapure fluid applications. High integrity in high vibration applications. Reliability in sideloaded applications allows for compact plumbing and small cleanroom footprint. All PFA wetted surfaces provide high purity and chemical resistance.

Available in 1/4", 3/8", 1/2", 3/4", 1" and 1 1/4" nominal tube sizes. Materials include PFA fitting body with PFA, PVDF or carbon-filled PFA nut options. Over 425 configurations are available to meet your needs. Adapters are available for NPT, JIS threads and PureBond® weldable piping systems. "SpaceSaver" flared ends also available.

Manual and automatic flaring tools are available. Automatic flaring allows hands-off operation for consistent, repeatable flares.



Flaretek® fittings are specifically designed, tested and characterized to work together with specific Flaretek® fitting components manufactured by Entegris. Customer assumes the risk of connection integrity if Flaretek® fittings, body and/or nut components are attached to components manufactured by third parties.



Note: All pressure ratings at various temperatures are based on actual test data utilizing the standards noted in the Technical Information Section of this manual.

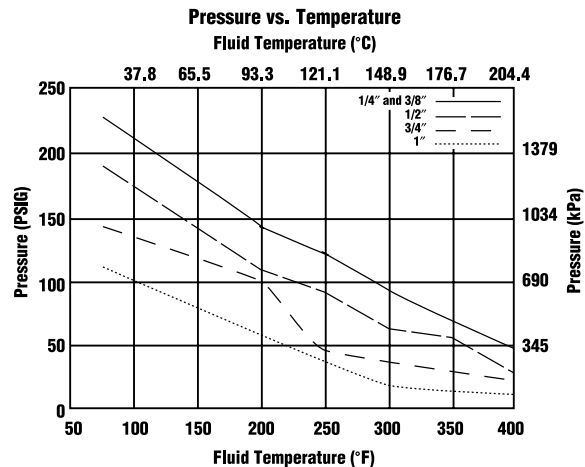
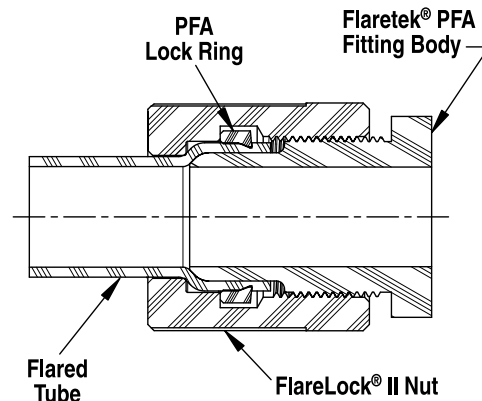
FlareLock® II PFA Tube Fittings

Entegris fittings are compliant to SEMI Standard F57-0301, the specification for polymer components used in ultrapure water and liquid chemical distribution systems.

The patented FlareLock® II fitting design combines the gripping power of a grooved tube, the security of a locking ferrule mechanism and the compact, leak-free design of the Flaretek® fitting body.

Available in 1/4", 3/8", 1/2", 3/4" and 1" nominal tube sizes. The fitting body, split locking ring and nut are all PFA material. A specific FlareLock® II fitting groove tool is also available.

Note: Dimensional information accompanies each fitting configuration on the following pages. For tolerance information, please consult the factory.



Note: All pressure ratings at various temperatures are based on actual test data utilizing the standards noted in the Technical Information Section of this manual.

Maximum Pressure Capabilities

Maximum pressure capabilities of various sizes for various Flaretek® nuts are listed below. (Tubing ratings are included as a reference.) These ratings are provided as a guide in system design. The component with the lowest maximum pressure rating determines your system maximum pressure rating.

Maximum Pressure Rating Chart

Flaretek® Tube Fitting Connections

Size (X)	Temperature °F (°C)	FluoroLine® 4400, 4300 & 4200	PVDF Nut	PFA Nut	CPFA Nut	FlareLock® II PFA Nut
		PFA Tubing PSIG (kPa)	FL(X)-1 PSIG (kPa)	FL(X)-3 PSIG (kPa)	FL(X)-6 PSI (kPa)	FL(X)ii-3 PSI (kPa)
1/4" (4)	75 (24)	273 (1882)	225 (1551)	225 (1551)	225 (1551)	225 (1551)
	200 (93)	136 (938)	133 (917)	133 (917)	133 (917)	144 (993)
	250 (121)	85 (586)	100 (689)	100 (689)	100 (689)	120 (827)
	300 (150)	61 (421)	75 (517)	75 (517)	75 (517)	95 (655)
	350 (175)	36 (248)	N/R	50 (345)	50 (345)	70 (483)
	400 (200)	N/R	N/R	N/R	15 (103)	45 (310)
3/8" (6)	75 (24)	234 (1613)	225 (1551)	225 (1551)	225 (1551)	225 (1551)
	200 (93)	116 (800)	133 (917)	133 (917)	133 (917)	144 (993)
	250 (121)	73 (503)	100 (689)	100 (689)	100 (689)	120 (827)
	300 (150)	52 (359)	75 (517)	75 (517)	75 (517)	95 (655)
	350 (175)	31 (214)	N/R	50 (345)	50 (345)	70 (483)
	400 (200)	N/R	N/R	N/R	15 (103)	45 (310)
1/2" (8)	75 (24)	168 (1158)	190 (1310)	190 (1310)	190 (1310)	190 (1310)
	200 (93)	83 (572)	100 (689)	100 (689)	100 (689)	105 (724)
	250 (121)	52 (359)	75 (517)	75 (517)	75 (517)	82 (565)
	300 (150)	37 (255)	50 (345)	50 (345)	50 (345)	58 (400)
	350 (175)	22 (152)	N/R	40 (276)	40 (276)	55 (379)
	400 (200)	N/R	N/R	N/R	15 (103)	35 (241)
3/4" (12)	75 (24)	107 (738)	110 (758)	110 (758)	110 (758)	140 (965)
	200 (93)	53 (365)	76 (524)	76 (524)	76 (524)	100 (689)
	250 (121)	33 (228)	35 (241)	35 (241)	35 (241)	47 (324)
	300 (150)	24 (165)	27 (186)	27 (186)	27 (186)	40 (276)
	350 (175)	14 (95.5)	N/R	20 (138)	20 (138)	34 (234)
	400 (200)	N/R	N/R	N/R	15 (103)	27 (186)
1" (16)	75 (24)	77 (531)	75 (517)	75 (517)	75 (517)	90 (620)
	200 (93)	38 (262)	40 (276)	40 (276)	40 (276)	50 (345)
	250 (121)	24 (165)	28 (193)	28 (193)	28 (193)	34 (234)
	300 (150)	17 (117)	15 (103)	15 (103)	17 (117)	20 (138)
	350 (175)	10 (68.9)	N/R	15 (103)	15 (103)	17 (117)
	400 (200)	N/R	N/R	N/R	15 (103)	15 (103)
1 1/4" (20)	75 (24)	80 (552)	80 (552)	*	*	N/A

N/R = Not Rated
 N/A = Not Available
 * = Contact Entegris

Flaretek[®] Tube Fitting Flare and Assembly Procedures

for 1/4", 3/8", 1/2", 3/4" and 1" sizes

- The flaring process provides a permanent expansion (flare) of the tubing end, allowing insertion of the Flaretek[®] fitting body. Proper tube flaring and Flaretek[®] fitting assembly results in a secure tubing connection.
- Entegris recommends these procedures for flaring standard wall Entegris PFA tubing only (.062" wall thickness for 3/8", 1/2", 3/4" and 1" O.D., .047" wall thickness for 1/4").

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

Flaretek[®] Autoflare Tool

For a fast, reliable flare every time, reference Entegris' Flaretek[®] Autoflare Tool Operations Manual included in the Autoflare tool kit.

Tubing Preparation

1. Cut the tubing end squarely (.070" maximum squareness tolerance) using a Galtek[®] tubing cutter (p. 236 of this catalog).
2. 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.



Flaretek[®] fittings are specifically designed, tested and characterized to work together with specific Flaretek[®] fitting components manufactured by Entegris. Customer assumes the risk of connection integrity if Flaretek[®] fittings, body and/or nut components are attached to components manufactured by third parties.

Heat Flaring Instructions

1. If using an Entegris hot air gun, set the hot air gun (see Figure 1) 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 Entegris infrared heating tool, turn on heating tool (see Figure 2). 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 Entegris 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 (see Figure 3) into the tubing until the end of the tubing reaches the tube stop. Refer to page 232 for available mandrel configurations.

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 the time specified in Table 1.
5. The flaring process is now complete and the mandrel may be removed from the tube.

Note: The Flaretek[®] autoflare tool is also available by Entegris (see p. 234 of this catalog for information).

Room Temperature Flaring Instructions

Reference Room Temperature Flaring Tool instructions that accompany each Room Temperature Flaring Tool Kit (part number 213-112).

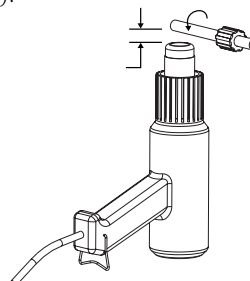


Figure 1

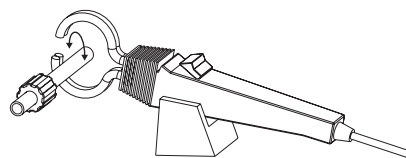


Figure 2

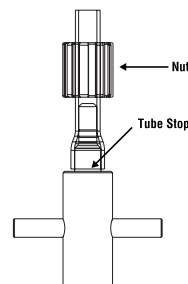


Figure 3

Flaretek® Tube Fitting Flare and Assembly Procedures

Flaretek® Fitting Assembly Instructions

1. Push the flared tubing end onto the Flaretek® fitting body until the end of the fitting body contacts the flare shoulder of the tube (see Figure 4). The maximum gap between the tube end and end of threads should be .08 - .15".
2. Tighten the nut onto the fitting body until handtight (see Table 1 for recommended minimum torque values).

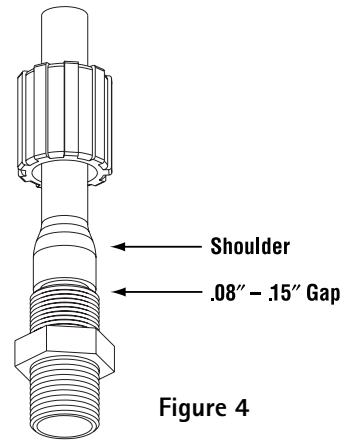


Figure 4

Table 1

Tube and Fitting Size	1/4"	3/8"	1/2"	3/4"	1"
<i>Heating time for PFA (sec.)</i>					
Air gun	15	25	25	25	25
Infrared heater	40	50	50	50	60
<i>Hold tubing on flare mandrel (sec.)</i>					
	20	20	20	20	25
<i>Minimum cooling time on mandrel (min.)</i>					
	2	2	3	3	3
<i>Minimum nut torque (inch•lbs. (N•m))</i>					
PFA fitting/PVDF nut	5 (.57)	8 (.90)	11 (1.24)	14 (1.58)	30 (3.39)
PFA fitting/PFA nut	5 (.57)	8 (.90)	11 (1.24)	14 (1.58)	30 (3.39)
PFA fitting/CPFA nut	5 (.57)	8 (.90)	11 (1.24)	14 (1.58)	30 (3.39)
PVDF fitting/PVDF nut	5 (.57)	8 (.90)	11 (1.24)	19 (2.14)	40 (4.51)

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).

1 1/4" Reduced Footprint Flaretek[®] Tube Flare and Assembly Procedures

Flaretek[®] Fitting Connection

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

Entegris recommends these procedures for flaring standard wall Entegris 1 1/4" PFA tubing only (.075" wall thickness).

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

Tubing Preparation

1. Cut the tubing end squarely (.70" maximum squareness tolerance) using a Galtek[®] tubing cutter (part number 213-30).
2. Insert the cut end of tubing through the nonthreaded 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. Using an Entegris hot air gun, set the hot air gun on "high". Hold the PFA tubing 1/2" to 3/4" above the heater and slowly rotate the tubing 360° for two minutes or until a fine, clear line appears around the tubing. (See Figure 1).

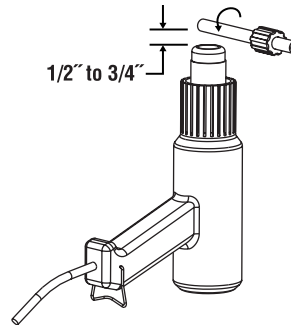


Figure 1

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.

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 (see Figure 2).
3. Firmly hold the tubing onto the mandrel for one minute.
4. Let the flared tubing continue to cool on the mandrel for two minutes.

Note: A water bath can be used to cool the tubing.

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

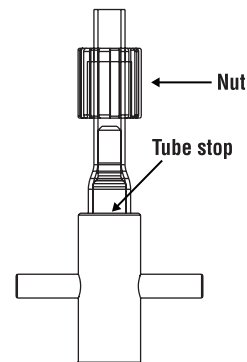


Figure 2

1 1/4" Reduced Footprint Flaretek[®] Tube Flare and Assembly Procedures

Flaretek[®] Fitting Assembly Instructions

1. Push the flared tubing end onto the Flaretek[®] fitting body until the end of the fitting body contacts the flare shoulder of the tube (see Figure 3). The maximum gap between the tube end and fitting shoulder should be approximately .08".
2. Tighten the nut onto the fitting body until handtight.
3. Using the wrench (part number 213-200), tighten nut an additional 1/4-turn or 80 in•lbs (9.04 N•m) torque.

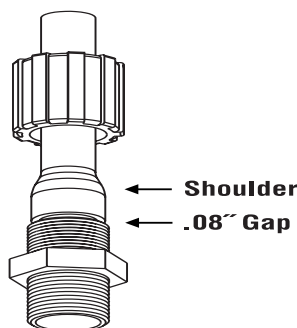


Figure 3

Table 1

Tubing and Fitting Size	3/4"	1"	1 1/4"
<i>Heating time for PFA (sec.)</i>			
<i>Air Gun</i>	25	25	120
<i>Infrared Heater</i>	50	50	N/A
<i>Hold tubing on flare mandrel (sec.)</i>	120	120	60
<i>Minimum cooling time on mandrel (min.)</i>	2	2	2
<i>Minimum nut torque (inch •lbs. (N•m))</i>	2	2	2
<i>PFA fitting/PVDF nut</i>	35	45	80
	(3.95)	(5.08)	(9.04)
<i>PFA fitting/PFA nut</i>	35	45	80
	(3.95)	(5.08)	(9.04)

Table 2

Size	Wrench Part Number	Mandrel Part Number
3/4"	213-198	213-201
1"	213-199	213-202
1 1/4"	213-200	213-163

Troubleshooting — Flaretek[®] Tubing Fitting Assembly

Problem	Possible Cause	Solution
After flaring the tubing, one side of the expanded portion the tubing is wrinkled and shorter than its original length.	The tubing was not heated evenly. The wrinkled areas were overheated.	The wrinkles can be avoided by rotating and moving the tubing through the heat source with more uniformity. Cut off the flared tubing end and reflare.
The tubing kinks when pushing it onto the flaring mandrel.	The tubing was not heated properly before flaring.	1/2" to 3/4" of the tubing needs to be heated. Closely follow the recommended heating times. Cut off the flared tubing end and reflare.
When the flared tubing is pushed onto the fitting body, the tubing is more than 0.08" away from the threaded area of the fitting body.	The tubing was not pushed onto the flaring mandrel all the way or the tubing was removed from the mandrel before it was cool.	Tubing may need longer heating time or longer cooling time on the flaring mandrel. Cut off the flared tubing end and reflare.
	Or	Or
	Mandrel is worn out.	Replace mandrel
The flared tubing will not fit onto the fitting body.	The tubing was removed from the mandrel before it was cool.	Reheat and reflare the undersized flared tubing end. Allow adequate cooling time prior to removing from the flare mandrel.
		Or
		Heated flaring should only be attempted with tubing that has not been exposed to chemical.
Changes need to be made to a line after chemical has been run through the system. There is potential for vapor explosion in the line or hazard to the operator.		Cut off the flared tubing end and reflare. Be sure the tubing is cool before removing it from the mandrel.

1 1/4" Reduced Footprint Flaretek[®] Tube Flare and Assembly Procedures

Torque Wrench Calculation

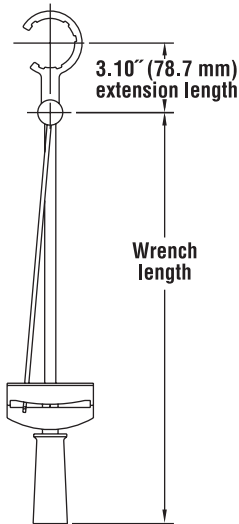
$$G = (L \times T) \div (L + E)$$

- G = Torque wrench reading (in•lbs)
- L = Torque wrench length (inches)
- T = Torque desired (in•lbs)
- E = Extension length (3.10")

Example

- wrench length = 12.0"
- extension length = 3.10"
- torque desired = 80 in•lbs

$$(12 \times 80) \div (12 + 3.1) = 63.58 \text{ in}\bullet\text{lbs}$$



FlareLock® II Tube Fitting Flare and Assembly Procedures

- Assembling the FlareLock® II fitting consists of grooving, flaring and final assembly.
- Grooving the tubing O.D. provides a groove in which the FlareLock® II nut firmly connects.
- The flaring process provides a permanent expansion (flare) of the tubing end, allowing insertion of the Flaretek® fitting body. Proper grooving, flaring and fitting assembly result in a secure tubing connection.
- Entegris recommends the following procedures for use only with Entegris groove tools, heat sources and standard wall PFA tubing (.062" wall thickness for 3/8", 1/2", 3/4" and 1" O.D., .047" wall thickness for 1/4").

Note: The FlareLock® II nut is assembled at the factory with the split locking ring properly in place. If disassembled in the field, proper reassembly is crucial to ensure a good connection that functions properly.

See page 169 for Heat Flaring and FlareLock® II Fitting Assembly Instructions.

Flaretek® Autoflare Tool

For a fast, reliable flare every time, reference Entegris' Flaretek® Autoflare Tool Operations Manual included in the Autoflare tool kit.

Tubing Preparation

1. Cut the tubing end squarely (.070" maximum squareness tolerance) using a Galtek® tubing cutter (p. 236 of this catalog).

Grooving Instructions

1. Obtain the proper FlareLock® II groove tool designed to groove the tubing outside diameter (O.D.).
2. While maintaining slight force between the tube end and groove tool, rotate groove tool in direction of arrow, four complete revolutions.
3. Depress thumb rest. Remove tube and inspect groove to be certain that the depth is uniform and free from burrs.
4. Insert the grooved end of the tubing through the nonthreaded 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.

FlareLock[®] II Tube Fitting Flare and Assembly Procedures

Heat Flaring Instructions

Warning: For your safety, do not attempt to heat flare tubing that has been exposed to chemical. Tubing cools rapidly so please read and understand all instructions before flaring your tubing.

- 1a. **When using an Entegris hot air gun**, set the hot air gun (see Figure 1) on “high”. Hold 1/2" to 3/4" of the PFA tubing 1/2" to 3/4" above the heater and continually rotate the tubing 360° for the approximate time specified in Table 1 or until a fine, clear line appears around the tubing.

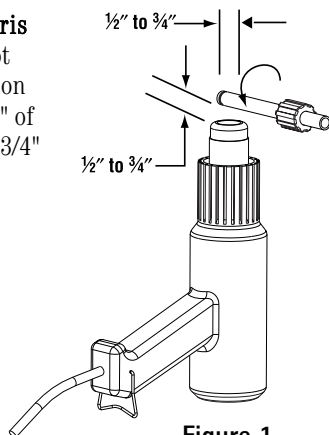


Figure 1
213-79

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.

- 1b. **When using an Entegris infrared heating tool**, turn on heating tool (see Figure 2). 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.

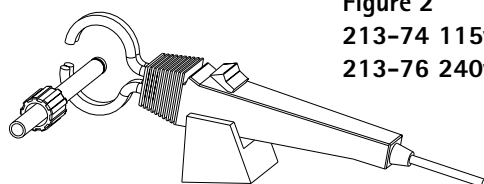


Figure 2
213-74 115v
213-76 240v

Note: To flare 1" tubing with an Entegris infrared heating tool, a 1" heat ring is needed. See part number on page 231.

Note: It is very important to rotate the tubing within 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 (see Figure 3) into the tubing until the end of the tubing reaches the tube stop.

Note: Flaring 1/4" tubing is 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.

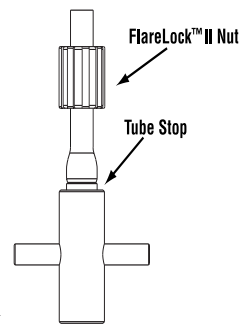


Figure 3

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

Note: To ensure that the FlareLock[®] II fitting functions properly, it is crucial that the tubing is held firmly against the tube stop for the time specified in Table 1.

4. Let the flared tubing continue to cool on the mandrel the time specified in Table 1.
5. The flaring process is now complete and the tubing may be removed from the mandrel.

Note: The Flaretek[®] autoflare tool is also available by Entegris (see p. 234 of this catalog for information).

FlareLock[®] II Fitting Assembly Instructions

1. Push the flared tubing end onto the Flaretek[®] fitting body until the end of the fitting body contacts the flare transition of the tube (see Figure 4). The maximum gap between the tube end and fitting shoulder should be .08" to .15".
2. Tighten the nut onto the fitting body until hand tight (see Table 1 for recommended minimum torque values).

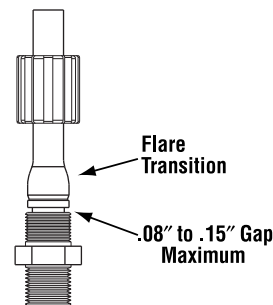


Figure 4

FlareLock[®] II Tube Fitting Flare and Assembly Procedures

Table 1

Tubing and Fitting Size	1/4"	3/8"	1/2"	3/4"	1"
Heating time for PFA (sec.)					
Air gun	15	25	25	25	25
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)]	5 (.57)	8 (.90)	11 (1.24)	14 (1.58)	30 (3.39)

Retightening

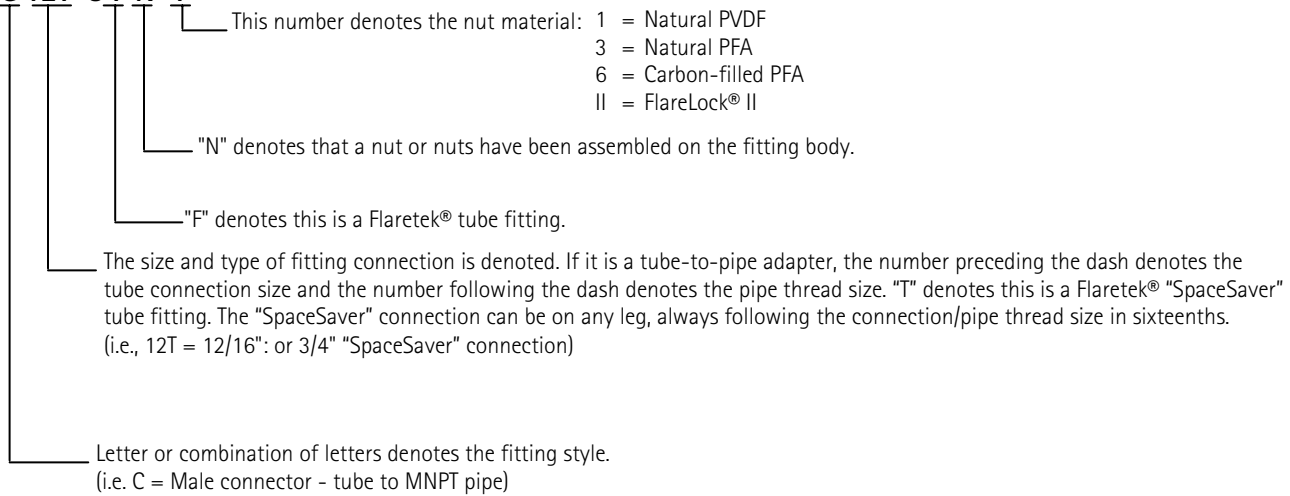
All fitting connections assembled using the Room Temperature flaring technique should be retightened to the minimum nut torque values identified in Table 1.

Additionally, after initial exposure to elevated temperatures, all fitting connections including Flaretek[®], Flaretek[®] "SpaceSaver" and FlareLock[®] II exposed to temperatures $\geq 165^{\circ}\text{F}$ must be retightened to the minimum torque values identified in Table 1 (fitting must be returned to room temperature before retightening).

Flaretek[®], Flaretek[®] “SpaceSaver” and FlareLock[®] II PFA Fittings

Part Number System

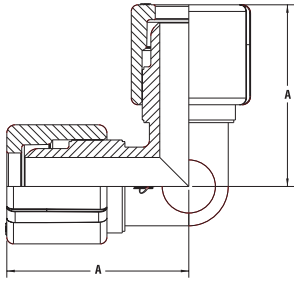
C 12T-8 F N-1



- BT = Male branch tee - tube to MNPT pipe
- C = Male connector - tube to MNPT pipe
- CP = Cap plug
- E = Male elbow - tube to pipe or Flaretek[®] "SpaceSaver"
- FC = Female adapter - tube to FNPT pipe
- FE = Female elbow - tube to FNPT pipe
- FN = Ferrule nut
- FP = Ferrule plug
- HN = Half nut
- PM = Panel mount - straight union
- PMC = Panel mount adapter - tube to MNPT pipe
- PMX = Panel mount - straight union extended
- PMXC = Panel mount - straight adapter extended - tube to MNPT pipe
- PMXX = Panel mount - straight union elongated extension
- RT = Male run tee - tube to MNPT pipe
- USE = Sweep elbow union
- SFTU = Tube - straight union
- SU = Straight union
- UE = Union elbow
- UT = Union tee
- WBT = PureBond[®] welded tee adapter - branch
- WETA = PureBond[®] welded elbow tube adapter
- WT = PureBond[®] welded tee union
- WTA = PureBond[®] welded tube adapter

Flaretek[®], PFA

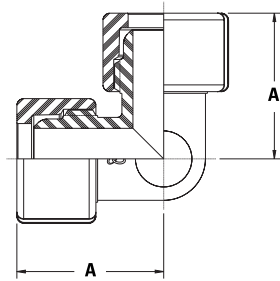
Elbow Union



Part* Number	O.D. Tube Size	Orifice	Dimension A
UE4FN-1	1/4"	0.13" (3.3 mm)	1.61" (40.9 mm)
UE6FN-1	3/8"	0.25" (6.4 mm)	1.73" (43.9 mm)
UE8FN-1	1/2"	0.38" (9.7 mm)	1.83" (46.5 mm)
UE12FN-1	3/4"	0.63" (16.0 mm)	2.18" (55.4 mm)
UE16FN-1	1"	0.88" (22.4 mm)	2.70" (68.6 mm)

*Also available in PFA(-3) and CPFA(-6) nuts.

Elbow Union, Reduced Footprint

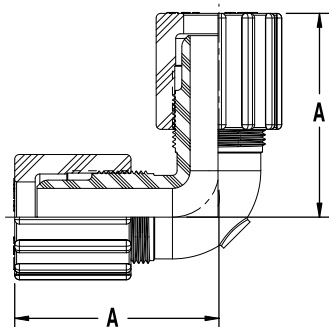


Part* Number	O.D. Tube Size	Orifice	Dimension A	Wrench Part Number	Recommended Torque
UE20FN-3S	1 1/4"	1.09" (27.7 mm)	2.84" (72.1 mm)	213-200	80 in•lbs (9.0 N•m)

*Also available in PVDF(-1S) nuts. PVDF nut dimensions are slightly smaller.

Flaretek[®], PFA

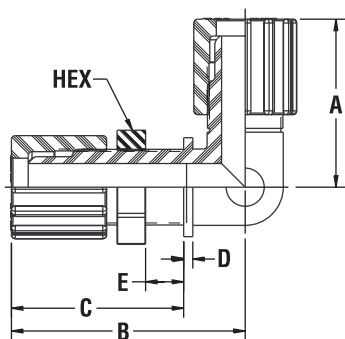
90° Sweep Elbow Union



Part* Number	O.D. Tube Size	Orifice	Dimension A	Wrench Part Number
USE8FN-3	1/2"	0.38" (9.7 mm)	1.85" (47.0 mm)	213-147
USE12FN-3	3/4"	0.63" (16.0 mm)	2.20" (55.9 mm)	213-148
USE16FN-3	1"	0.88" (22.4 mm)	2.85" (72.4 mm)	213-149

*Also available in PVDF (-1) and CPFA (-6) nuts.

Elbow Union, Panel Mount



Part* Number	O.D. Tube Size	Orifice	A	B	C
PMXUE4FN-1	1/4"	0.13" (3.3 mm)	1.61" (40.9 mm)	2.44" (62.0 mm)	1.83" (46.5 mm)
PMXUE6FN-1	3/8"	0.25" (6.4 mm)	1.71" (43.4 mm)	2.46" (62.5 mm)	1.95" (49.5 mm)
PMXUE8FN-1	1/2"	0.38" (9.7 mm)	1.84" (46.7 mm)	2.64" (67.1 mm)	2.06" (52.3 mm)
PMXUE12FN-1	3/4"	0.63" (16.0 mm)	2.20" (55.9 mm)	3.07" (78.0 mm)	2.26" (57.4 mm)

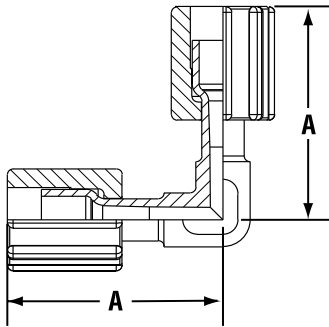
Part Number	Dimensions D	E	Hex 1	Half-Nut Part Number
PMXUE4FN-1	0.10" (2.5 mm)	0.50" (12.7 mm)	11/16"	HN5
PMXUE6FN-1	0.12" (3.0 mm)	0.50" (12.7 mm)	15/16"	HN6
PMXUE8FN-1	0.12" (3.0 mm)	0.50" (12.7 mm)	1 1/16"	HN8†
PMXUE12FN-1	0.12" (3.0 mm)	0.50" (12.7 mm)	1 5/16"	HN12†

*Also available in PFA(-3) and CPFA(-6) nuts.

†Panel mount nut material is Natural PVDF.

Flaretek[®], PFA

Elbow Union, "SpaceSaver", PFA Plus

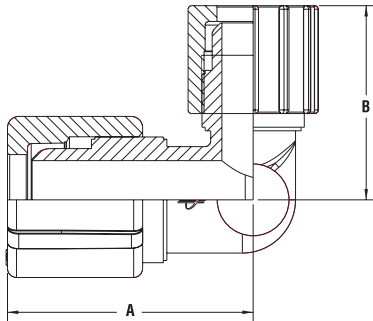


Part* Number	O.D. Tube Size	Orifice	Dimension A
UE4TFN-3X	1/4"	0.16" (4.1 mm)	1.66" (42.2 mm)
UE6TFN-3X	3/8"	0.25" (6.4 mm)	1.75" (44.4 mm)
UE8TFN-3X	1/2"	0.38" (9.7 mm)	1.82" (46.2 mm)
UE12TFN-3X	3/4"	0.63" (16.0 mm)	2.23" (56.6 mm)
UE16TFN-3X	1"	0.88" (22.4 mm)	2.99" (75.9 mm)

*Also available in PVDF (-1X) nuts.

#Fitting also available in PFA material. To order, replace "-3X" with "-1" for PVDF nuts, "-3" for PFA nuts or "-6" for CPFA nuts.

Elbow Union, Reducer



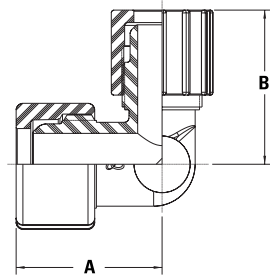
Part* Number	O.D. Tube Size	Orifice	Dimensions	
			A	B
UE6-4FN-1	3/8" × 1/4"	0.13" (3.3 mm)	1.73" (43.9 mm)	1.59" (40.4 mm)
UE8-4FN-1	1/2" × 1/4"	0.13" (3.3 mm)	1.82" (46.2 mm)	1.59" (40.4 mm)
UE8-6FN-1	1/2" × 3/8"	0.25" (6.4 mm)	1.82" (46.2 mm)	1.73" (43.9 mm)
UE12-4FN-1	3/4" × 1/4"	0.13" (3.3 mm)	2.22" (56.4 mm)	1.78" (45.2 mm)
UE12-6FN-1	3/4" × 3/8"	0.25" (6.4 mm)	2.22" (56.4 mm)	1.90" (48.3 mm)
UE12-8FN-1	3/4" × 1/2"	0.38" (9.7 mm)	2.17" (55.1 mm)	2.00" (50.8 mm)
UE16-8FN-1	1" × 1/2"	0.38" (9.7 mm)	2.70" (68.6 mm)	2.40" (61.0 mm)
UE16-12FN-1	1" × 3/4"	0.63" (16.0 mm)	2.70" (68.6 mm)	2.45" (62.2 mm)

*Also available in PFA(-3) and CPFA(-6) nuts.

Flaretek[®], PFA

Elbow Union, Reducer, Reduced Footprint

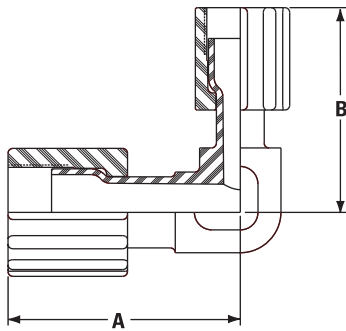
Elbow Union Reducer*



Part* Number	O.D. Tube Size	Orifice	Dimensions	
			A	B
UE20-16FN-3SF	1 1/4" × 1"	0.88" (22.4 mm)	2.84" (72.1 mm)	3.06" (77.7 mm)

*Also available in PVDF (-1SF) nuts. PVDF nut dimensions are slightly smaller.

Elbow Union, Reducer, "SpaceSaver", PFA Plus



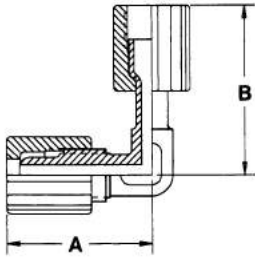
Part*†	"SpaceSaver" Tube Size	Orifice	Dimensions	
			A	B
UE6T-4TFN-3X	3/8" X 1/4"	0.16" (4.1 mm)	1.73" (43.9 mm)	1.64" (41.7 mm)
UE8T-6TFN-3X	1/2" X 3/8"	0.25" (6.4 mm)	1.93" (49.0 mm)	1.75" (44.4 mm)
UE12T-8TFN-3X	3/4" X 1/2"	0.38" (9.7 mm)	2.21" (56.1 mm)	1.98" (50.3 mm)
UE16T-12TFN-3X	1" X 3/4"	0.63" (16.0 mm)	2.99" (75.9 mm)	2.49" (63.2 mm)

*Also available in PVDF (-1X) nuts.

†Fitting also available in PFA material. To order, replace "-3X" with "-1" for PVDF nuts, "-3" for PFA nuts or "-6" for CPFA nuts.

Flaretek[®], PFA

Elbow Adapter, "SpaceSaver", PFA Plus

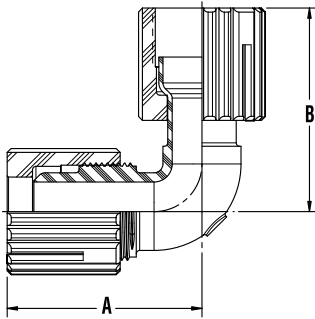


Part*† Number	O.D. Tube Size	"SpaceSaver" Size	Orifice	Dimensions	
				A	B
E4-4TFN-3X	1/4"	1/4"	0.13" (3.3 mm)	1.61" (40.9 mm)	1.67" (42.4 mm)
E6-6TFN-3X	3/8"	3/8"	0.25" (6.4 mm)	1.76" (44.7 mm)	1.75" (44.4 mm)
E8-8TFN-3X	1/2"	1/2"	0.38" (9.7 mm)	1.85" (47.0 mm)	1.82" (46.2 mm)
E12-12TFN-3X	3/4"	3/4"	0.63" (16.0 mm)	2.20" (55.9 mm)	2.21" (56.1 mm)
E16-16TFN-3X	1"	1"	0.88" (22.4 mm)	2.85" (72.4 mm)	3.00" (76.2 mm)

*Also available in PVDF (-1X) nuts.

†Fitting also available in PFA material. To order, replace "-3X" with "-1" for PVDF nuts, "-3" for PFA nuts or "-6" for CPFA nuts.

90° Sweep Elbow Adapter, "SpaceSaver", PFA Plus



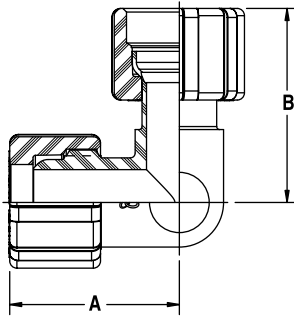
Part*† Number	O.D. Tube Size	Orifice	Dimensions		Wrench Part Number	Torque Verification Device (TVD) Part Number
			A	B		
SE8-8TFN-3X	1/2"	0.38" (9.7 mm)	1.85" (47.0 mm)	1.82" (46.2 mm)	213-142	TVD-0500-3
SE12-12TFN-3X	3/4"	0.63" (16.0 mm)	2.20" (55.9 mm)	2.23" (56.6 mm)	213-143	TVD-0750-3
SE16-16TFN-3X	1"	0.88" (22.4 mm)	2.85" (72.4 mm)	2.99" (75.9 mm)	213-144	TVD-1000-3

*Also available in PVDF (-1X) nuts.

†Fitting also available in PFA material. To order, replace "-3X" with "-1" for PVDF nuts, "-3" for PFA nuts or "-6" for CPFA nuts.

Flaretek[®], PFA

Elbow Adapter, "SpaceSaver", Reduced Footprint, PFA Plus

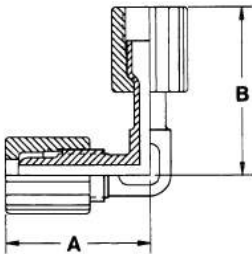


Part*† Number	O.D. Tube Size	"SpaceSaver" Size	Orifice	Dimensions	
				A	B
E20-20TFN-3SX	1 1/4"	1 1/4"	1.10" (27.9 mm)	2.84" (72.1 mm)	3.12" (79.2 mm)

*Also available in PVDF (-1SX) nuts.

†Fitting also available in PFA material. To order, replace "-3SX" with "-1S" for PVDF nuts or "-3S" for PFA nuts.

Elbow Adapter, Reducer, "SpaceSaver", PFA Plus



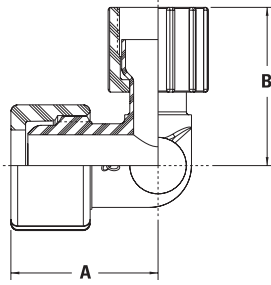
Part*† Number	O.D. Tube Size	"SpaceSaver" Size	Orifice	Dimensions	
				A	B
E4-6TFN-3X	1/4"	3/8"	0.13" (3.3 mm)	1.65" (41.9 mm)	1.75" (44.4 mm)
E4-8TFN-3X	1/4"	1/2"	0.13" (3.3 mm)	1.63" (41.4 mm)	1.82" (46.2 mm)
E6-4TFN-3X	3/8"	1/4"	0.16" (4.1 mm)	1.73" (43.9 mm)	1.60" (40.6 mm)
E6-8TFN-3X	3/8"	1/2"	0.25" (6.4 mm)	1.76" (44.7 mm)	1.82" (46.2 mm)
E6-12TFN-3X	3/8"	3/4"	0.25" (6.4 mm)	1.94" (49.3 mm)	2.21" (56.1 mm)
E8-6TFN-3X	1/2"	3/8"	0.25" (6.4 mm)	1.84" (46.7 mm)	1.75" (44.4 mm)
E8-12TFN-3X	1/2"	3/4"	0.25" (6.4 mm)	2.02" (51.3 mm)	2.21" (56.1 mm)
E8-16TFN-3X	1/2"	1"	0.38" (9.7 mm)	2.28" (57.9 mm)	3.00" (76.2 mm)
E12-16TFN-3X	3/4"	1"	0.63" (16.0 mm)	2.46" (62.5 mm)	3.00" (76.2 mm)
E16-12TFN-3X	1"	3/4"	0.63" (16.0 mm)	2.69" (68.3 mm)	2.32" (58.9 mm)

*Also available in PVDF (-1X) nuts.

†Fitting also available in PFA material. To order, replace "-3X" with "-1" for PVDF nuts, "-3" for PFA nuts or "-6" for CPFA nuts.

Flaretek[®], PFA

Elbow Adapter, Reducer, "SpaceSaver", Reduced Footprint, PFA Plus

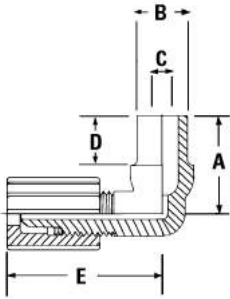


Part*†	O.D.	"SpaceSaver"	Orifice	Dimensions	
Number	Tube Size	Size		A	B
E20-16TFN-3SFX	1 1/4"	1"	0.88" (22.4 mm)	2.70" (68.6 mm)	2.93" (74.4 mm)

*Also available in PVDF (-1SFX) nuts.

†Fitting also available in PFA material. To order, replace "-3SFX" with "-1SF" for PVDF nuts or "-3SF" for PFA nuts.

Elbow Adapter, PureBond[®], 90°

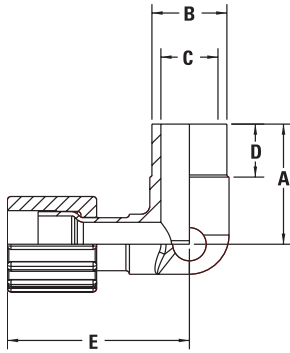


Part*	O.D.	Pipe	Orifice	Dimensions				
Number	Tube Size	Size		A	B	C	D	E
WETA4-4PFN-1	1/4"	1/4"	0.13" (3.3 mm)	1.08" (27.4 mm)	0.54" (13.7 mm)	0.35" (9.0 mm)	0.55" (14.0 mm)	1.61" (40.9 mm)
WETA4-8PFN-1	1/4"	1/2"	0.13" (3.3 mm)	1.44" (36.6 mm)	0.84" (21.3 mm)	0.61" (15.5 mm)	0.75" (19.0 mm)	1.76" (44.7 mm)
WETA4-12PFN-1	1/4"	3/4"	0.13" (3.3 mm)	1.44" (36.6 mm)	1.05" (26.7 mm)	0.82" (20.8 mm)	0.75" (19.0 mm)	1.90" (48.3 mm)
WETA6-8PFN-1	3/8"	1/2"	0.25" (6.4 mm)	1.44" (36.6 mm)	0.84" (21.3 mm)	0.61" (15.5 mm)	0.75" (19.0 mm)	1.90" (48.3 mm)
WETA6-12PFN-1	3/8"	3/4"	0.25" (6.4 mm)	1.70" (43.2 mm)	1.05" (26.7 mm)	0.82" (20.8 mm)	0.75" (19.0 mm)	2.18" (55.4 mm)
WETA8-8PFN-1	1/2"	1/2"	0.38" (9.7 mm)	1.44" (36.6 mm)	0.84" (21.3 mm)	0.61" (15.4 mm)	0.75" (19.0 mm)	1.99" (50.5 mm)
WETA8-12PFN-1	1/2"	3/4"	0.38" (9.7 mm)	1.44" (36.6 mm)	1.05" (26.7 mm)	0.82" (20.8 mm)	0.75" (19.0 mm)	2.10" (53.3 mm)
WETA8-16PFN-1	1/2"	1"	0.38" (9.7 mm)	1.71" (43.4 mm)	1.32" (33.5 mm)	1.03" (26.2 mm)	0.75" (19.0 mm)	2.28" (57.9 mm)
WETA12-8PFN-1	3/4"	1/2"	0.62" (15.7 mm)	1.71" (43.4 mm)	0.84" (21.3 mm)	0.61" (15.5 mm)	0.75" (19.0 mm)	2.17" (55.1 mm)
WETA12-12PFN-1	3/4"	3/4"	0.63" (16.0 mm)	1.69" (42.9 mm)	1.05" (26.7 mm)	0.81" (20.6 mm)	0.75" (19.0 mm)	2.46" (62.5 mm)
WETA12-16PFN-1	3/4"	1"	0.63" (16.0 mm)	1.71" (43.4 mm)	1.32" (33.5 mm)	1.03" (26.2 mm)	0.75" (19.0 mm)	2.44" (62.0 mm)
WETA16-12PFN-1	1"	3/4"	0.82" (20.8 mm)	1.71" (43.4 mm)	1.05" (26.7 mm)	0.81" (20.6 mm)	0.75" (19.0 mm)	2.68" (68.1 mm)
WETA16-16PFN-1	1"	1"	0.88" (22.4 mm)	1.70" (43.2 mm)	1.32" (33.5 mm)	1.04" (26.4 mm)	0.75" (19.0 mm)	2.65" (67.3 mm)

*Also available in PFA(-3) and CPFA(-6) nuts.

Flaretek[®], PFA

Elbow Adapter, PureBond[®], "SpaceSaver", PFA Plus



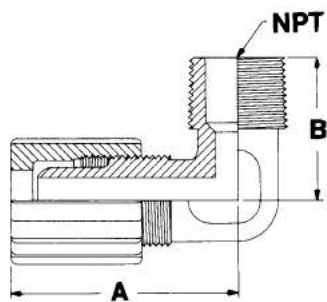
Part*† Number	"SpaceSaver" Pipe		Dimensions						
	Size	Size	Orifice	A	B	C	D	E	
WETA4-4TFN-3X	1/4"	1/4"	0.16" (4.1 mm)	1.26" (32.0 mm)	0.54" (13.7 mm)	0.35" (8.9 mm)	0.75" (19.0 mm)	1.60" (40.6 mm)	
WETA4-8TFN-3X	1/4"	1/2"	0.16" (4.1 mm)	1.27" (32.3 mm)	0.84" (21.3 mm)	0.61" (15.5 mm)	0.75" (19.0 mm)	1.67" (42.4 mm)	
WETA6-8TFN-3X	3/8"	1/2"	0.25" (6.4 mm)	1.26" (32.0 mm)	0.84" (21.3 mm)	0.61" (15.5 mm)	0.75" (19.0 mm)	1.75" (44.4 mm)	
WETA8-8TFN-3X	1/2"	1/2"	0.38" (9.7 mm)	1.44" (36.6 mm)	0.84" (21.3 mm)	0.61" (15.5 mm)	0.75" (19.0 mm)	2.01" (51.1 mm)	
WETA8-12TFN-3X	1/2"	3/4"	0.38" (9.7 mm)	1.44" (36.6 mm)	1.05" (26.7 mm)	0.81" (20.6 mm)	0.75" (19.0 mm)	2.01" (51.1 mm)	
WETA12-8TFN-3X	3/4"	1/2"	0.62" (15.7 mm)	1.70" (43.2 mm)	0.84" (21.3 mm)	0.61" (15.5 mm)	0.75" (19.0 mm)	2.40" (61.0 mm)	
WETA12-12TFN-3X	3/4"	3/4"	0.63" (16.0 mm)	1.70" (43.2 mm)	1.05" (26.7 mm)	0.81" (20.6 mm)	0.75" (19.0 mm)	2.33" (59.2 mm)	
WETA12-16TFN-3X	3/4"	1"	0.63" (16.0 mm)	1.70" (43.2 mm)	1.32" (33.5 mm)	1.03" (26.2 mm)	0.75" (19.0 mm)	2.35" (59.7 mm)	
WETA16-12TFN-3X	1"	3/4"	0.82" (20.8 mm)	2.00" (50.8 mm)	1.05" (26.7 mm)	0.81" (20.6 mm)	0.75" (19.0 mm)	2.97" (75.4 mm)	
WETA16-16TFN-3X	1"	1"	0.88" (22.4 mm)	1.73" (43.9 mm)	1.32" (33.5 mm)	1.03" (26.2 mm)	0.75" (19.0 mm)	2.99" (75.9 mm)	

*Also available in PVDF (-1X) nuts.

†Fitting also available in PFA material. To order, replace "-3X" with "-1" for PVDF nuts, "-3" for PFA nuts or "-6" for CPFA nuts.

Flaretek[®], PFA

Elbow Adapter, MNPT

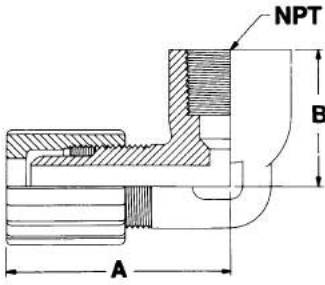


Part* Number	O.D. Tube Size	MNPT Size	Orifice	Dimensions	
				A	B
E4-2FN-1	1/4"	1/8"	0.13" (3.3 mm)	1.61" (40.9 mm)	1.07" (27.2 mm)
E4-4FN-1	1/4"	1/4"	0.13" (3.3 mm)	1.61" (40.9 mm)	1.07" (27.2 mm)
E4-6FN-1	1/4"	3/8"	0.13" (3.3 mm)	1.61" (40.9 mm)	1.07" (27.2 mm)
E4-8FN-1	1/4"	1/2"	0.13" (3.3 mm)	1.61" (40.9 mm)	1.18" (30.0 mm)
E6-2FN-1	3/8"	1/8"	0.20" (5.1 mm)	1.73" (43.9 mm)	1.07" (27.2 mm)
E6-4FN-1	3/8"	1/4"	0.25" (6.4 mm)	1.73" (43.9 mm)	1.07" (27.2 mm)
E6-6FN-1	3/8"	3/8"	0.25" (6.4 mm)	1.73" (43.9 mm)	1.07" (27.2 mm)
E6-8FN-1	3/8"	1/2"	0.25" (6.4 mm)	1.74" (44.2 mm)	1.18" (30.0 mm)
E6-12FN-1	3/8"	3/4"	0.25" (6.4 mm)	1.95" (49.5 mm)	1.36" (34.5 mm)
E8-4FN-1	1/2"	1/4"	0.28" (7.1 mm)	1.83" (46.5 mm)	1.07" (27.2 mm)
E8-6FN-1	1/2"	3/8"	0.38" (9.7 mm)	1.83" (46.5 mm)	1.07" (27.2 mm)
E8-8FN-1	1/2"	1/2"	0.38" (9.7 mm)	1.83" (46.5 mm)	1.18" (30.0 mm)
E8-12FN-1	1/2"	3/4"	0.38" (9.7 mm)	2.00" (50.8 mm)	1.36" (34.5 mm)
E12-8FN-1	3/4"	1/2"	0.52" (13.2 mm)	2.17" (55.1 mm)	1.37" (34.8 mm)
E12-12FN-1	3/4"	3/4"	0.63" (16.0 mm)	2.18" (55.4 mm)	1.37" (34.8 mm)
E12-16FN-1	3/4"	1"	0.63" (16.0 mm)	2.27" (57.7 mm)	1.80" (45.7 mm)
E16-12FN-1	1"	3/4"	0.66" (16.8 mm)	2.70" (68.6 mm)	1.64" (41.7 mm)
E16-16FN-1	1"	1"	0.88" (22.4 mm)	2.70" (68.6 mm)	1.80" (45.7 mm)

*Also available in PFA(-3) and CPFA(-6)

Flaretek[®], PFA

Elbow Adapter, FNPT

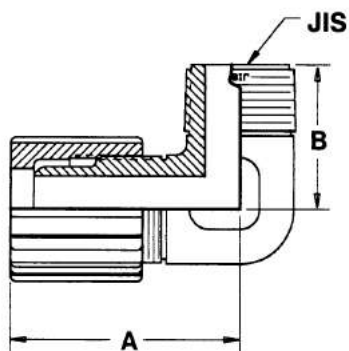


Part* Number	O.D. Tube Size	FNPT Size	Orifice	Dimensions	
				A	B
FE4-2FN-1	1/4"	1/8"	0.13" (3.3 mm)	1.77" (45.0 mm)	0.81" (20.6 mm)
FE4-4FN-1	1/4"	1/4"	0.13" (3.3 mm)	1.77" (45.0 mm)	0.94" (23.9 mm)
FE6-4FN-1	3/8"	1/4"	0.25" (6.4 mm)	1.89" (48.0 mm)	0.94" (23.9 mm)
FE6-6FN-1	3/8"	3/8"	0.25" (6.4 mm)	1.89" (48.0 mm)	1.00" (25.4 mm)
FE6-8FN-1	3/8"	1/2"	0.25" (6.4 mm)	1.89" (48.0 mm)	1.23" (31.2 mm)
FE8-4FN-1	1/2"	1/4"	0.34" (8.6 mm)	1.99" (50.5 mm)	0.94" (23.9 mm)
FE8-6FN-1	1/2"	3/8"	0.38" (9.7 mm)	1.99" (50.5 mm)	1.00" (25.4 mm)
FE8-8FN-1	1/2"	1/2"	0.38" (9.7 mm)	1.99" (50.5 mm)	1.23" (31.2 mm)

*Also available in PFA(-3) and CPFA(-6) nuts.

Flaretek[®], PFA

Elbow, Adapter, Male JIS Thread

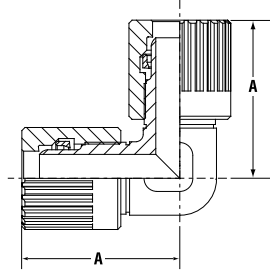


Part* Number	O.D. Tube Size	Male JIS Size	Orifice	Dimensions	
				A	B
E4-R1/4FN-1	1/4"	1/4"	0.13" (3.3 mm)	1.61" (40.9 mm)	0.88" (22.4 mm)
E4-R3/8FN-1	1/4"	3/8"	0.13" (3.3 mm)	1.61" (40.9 mm)	1.08" (27.4 mm)
E4-R3/4FN-1	1/4"	3/4"	0.13" (3.3 mm)	1.78" (45.2 mm)	1.41" (35.8 mm)
E6-R1/4FN-1	3/8"	1/4"	0.13" (3.3 mm)	1.73" (43.9 mm)	1.07" (27.2 mm)
E6-R3/8FN-1	3/8"	3/8"	0.25" (6.4 mm)	1.73" (43.9 mm)	1.07" (27.2 mm)
E6-R1/2FN-1	3/8"	1/2"	0.25" (6.4 mm)	1.72" (43.7 mm)	1.17" (29.7 mm)
E6-R3/4FN-1	3/8"	3/4"	0.25" (6.4 mm)	1.09" (27.7 mm)	1.41" (35.8 mm)
E8-R1/4FN-1	1/2"	1/4"	0.13" (3.3 mm)	1.83" (46.5 mm)	1.07" (27.2 mm)
E8-R3/8FN-1	1/2"	3/8"	0.25" (6.4 mm)	1.83" (46.5 mm)	1.07" (27.2 mm)
E8-R1/2FN-1	1/2"	1/2"	0.38" (9.7 mm)	1.83" (46.5 mm)	1.18" (30.0 mm)
E8-R3/4FN-1	1/2"	3/4"	0.38" (9.7 mm)	2.00" (50.8 mm)	1.36" (34.5 mm)
E12-R1/2FN-1	3/4"	1/2"	0.38" (9.7 mm)	2.17" (55.1 mm)	1.37" (34.8 mm)
E12-R3/4FN-1	3/4"	3/4"	0.63" (16.0 mm)	2.18" (55.4 mm)	1.36" (34.5 mm)
E16-R3/4FN-1	1"	3/4"	0.63" (16.0 mm)	2.70" (68.6 mm)	1.64" (41.7 mm)
E16-R1FN-1	1"	1"	0.88" (22.4 mm)	2.70" (68.6 mm)	1.80" (45.7 mm)

*Also available in PFA(-3) and CPFA(-6) nuts.

FlareLock® II, PFA

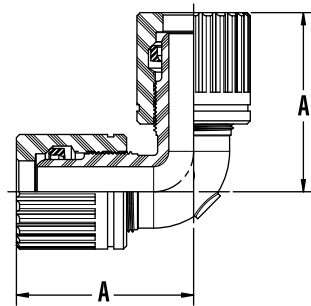
Elbow Union



Part Number	O.D. Tube Size	Orifice	Dimension A
UE4FN-II	1/4"	0.13" (3.3 mm)	1.63" (41.4 mm)
UE6FN-II	3/8"	0.25" (6.4 mm)	1.80" (45.7 mm)
UE8FN-II	1/2"	0.38" (9.7 mm)	1.84" (46.7 mm)
UE12FN-II	3/4"	0.63" (16.0 mm)	2.20" (55.9 mm)
UE16FN-II	1"	0.88" (22.4 mm)	2.36" (59.9 mm)

Nut and split locking ring are PFA material.

90° Sweep Elbow Union

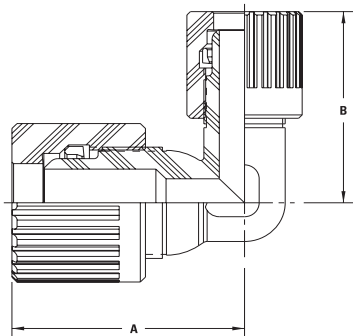


Part Number	O.D. Tube Size	Orifice	Dimension A	Wrench Part Number	Torque Verification Device (TVD) Part Number
USE8FN-II	1/2"	0.38" (9.7 mm)	1.86" (47.2 mm)	213-168	TVD-0500-II
USE12FN-II	3/4"	0.63" (16.0 mm)	2.22" (56.4 mm)	213-169	TVD-0750-II
USE16FN-II	1"	0.88" (22.4 mm)	2.81" (71.4 mm)	213-144	TVD-1000-II

Nut and split locking ring are PFA material.

FlareLock[®] II, PFA

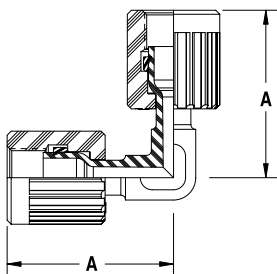
Elbow Union, Reducer



Part Number	O.D. Tube Size	Orifice	Dimensions	
			A	B
UE8-4FN-II	1/2" × 1/4"	0.13" (3.3 mm)	1.85" (47.0 mm)	1.63" (41.4 mm)
UE12-8FN-II	3/4" × 1/2"	0.38" (9.7 mm)	2.21" (56.1 mm)	2.03" (51.6 mm)
UE16-12FN-II	1" × 3/4"	0.63" (16.0 mm)	2.83" (71.9 mm)	2.49" (63.2 mm)

Nut and split locking ring are PFA material.

Elbow Union, "SpaceSaver"

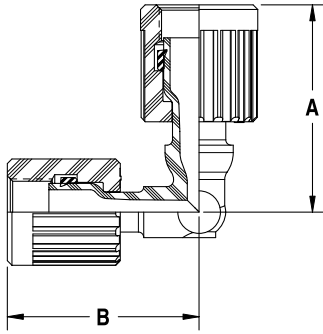


Part Number	O.D. Tube Size	Orifice	Dimension
			A
UE6TFN-II	3/8"	0.25" (6.4 mm)	1.80" (45.7 mm)
UE12TFN-II	3/4"	0.63" (16.0 mm)	2.31" (58.7 mm)
UE16TFN-II	1"	0.88" (22.4 mm)	2.98" (75.7 mm)

Nut and split locking ring are PFA material.

FlareLock® II, PFA

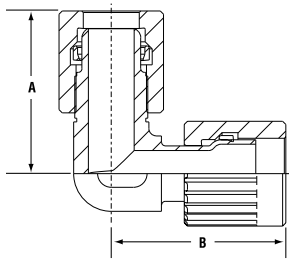
Elbow Union, Reducer, "SpaceSaver"



Part Number	O.D. Tube Size	Orifice	Dimensions	
			A	B
UE8T-6TFN-II	1/2" × 3/8"	0.25" (6.4 mm)	1.95" (49.5 mm)	1.80" (45.7 mm)
UE12T-8TFN-II	3/4" × 1/2"	0.38" (9.7 mm)	2.30" (58.4 mm)	2.00" (50.8 mm)

Nut and split locking ring are PFA material.

Elbow Adapter, "SpaceSaver"

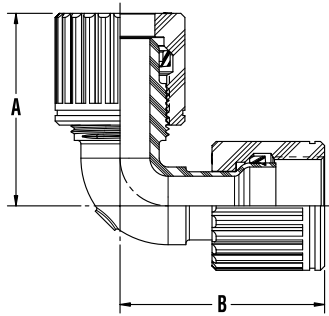


Part Number	O.D. Tube Size	Orifice	Dimensions	
			A	B
E6-6TFN-II	3/8"	0.25" (6.4 mm)	1.76" (44.7 mm)	1.80" (45.7 mm)
E8-8TFN-II	1/2"	0.38" (9.7 mm)	1.86" (47.2 mm)	1.84" (46.7 mm)
E12-12TFN-II	3/4"	0.63" (16.0 mm)	2.22" (56.4 mm)	2.30" (58.4 mm)
E16-16TFN-II	1"	0.88" (22.4 mm)	2.83" (71.9 mm)	2.99" (75.9 mm)

Nut and split locking ring are PFA material.

FlareLock® II, PFA

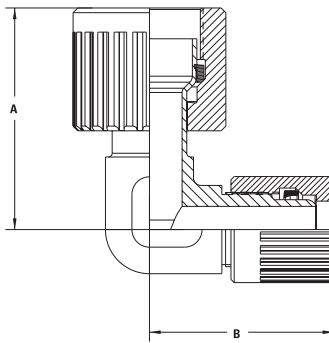
90° Sweep Elbow Adapter, "SpaceSaver"



Part Number	O.D. Tube Size	Orifice	Dimensions		Wrench Part Number	Torque Verification Device (TVD) Part Number
			A	B		
SE8-8TFN-II	1/2"	0.38" (9.7 mm)	1.86" (47.2 mm)	1.84" (46.7 mm)	213-168	TVD-0500-II
SE12-12TFN-II	3/4"	0.63" (16.0 mm)	2.22" (56.4 mm)	2.32" (58.9 mm)	213-169	TVD-0750-II
SE16-16TFN-II	1"	0.88" (22.4 mm)	2.83" (71.9 mm)	2.98" (75.7 mm)	213-144	TVD-1000-II

Nut and split locking ring are PFA material.

Elbow Adapter, Reducer, "SpaceSaver"

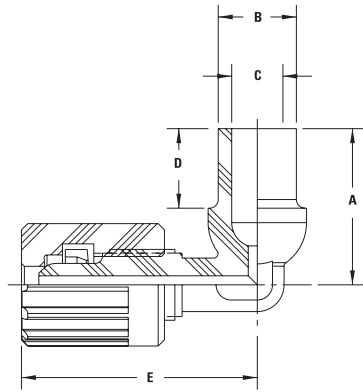


Part* Number	O.D. Tube Size	"SpaceSaver" Size	Orifice	Dimensions	
				A	B
E6-8TFN-II	3/8"	1/2"	0.25" (6.4 mm)	1.84" (46.7 mm)	1.76" (44.7 mm)
E8-6TFN-II	1/2"	3/8"	0.25" (6.4 mm)	1.80" (45.7 mm)	1.86" (47.2 mm)
E8-12TFN-II	1/2"	3/4"	0.38" (9.7 mm)	2.30" (58.4 mm)	2.02" (51.3 mm)
E8-16TFN-II	1/2"	1"	0.38" (9.7 mm)	2.99" (75.9 mm)	2.30" (58.4 mm)
E12-16TFN-II	3/4"	1"	0.63" (16.0 mm)	2.99" (75.9 mm)	2.49" (63.2 mm)
E16-12TFN-II	1"	3/4"	0.63" (16.0 mm)	2.41" (61.2 mm)	2.82" (71.6 mm)

Nut and split locking ring are PFA material.

FlareLock® II, PFA

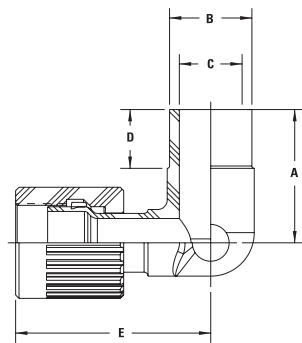
Elbow Adapter, PureBond® Pipe, 90°



Part Number	O.D. Tube Size	Pipe Size	Orifice	Dimensions				
				A	B	C	D	E
WETA4-4PFN-II	1/4"	1/4"	0.13" (3.3 mm)	1.08" (27.4 mm)	0.54" (13.7 mm)	0.35" (8.9 mm)	0.55" (14.0 mm)	1.63" (41.4 mm)
WETA16-12PFN-II	1"	3/4"	0.82" (20.8 mm)	1.71" (43.4 mm)	1.05" (26.7 mm)	0.81" (20.6 mm)	0.75" (19.0 mm)	2.81" (71.4 mm)
WETA16-16PFN-II	1"	1"	0.88" (22.4 mm)	1.70" (43.2 mm)	1.32" (33.5 mm)	1.04" (26.4 mm)	0.75" (19.0 mm)	2.81" (71.4 mm)

Nut and split locking ring are PFA material.

Elbow Adapter, PureBond® Pipe, "SpaceSaver"

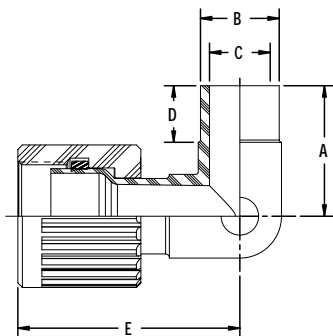


Part Number	"SpaceSaver" Size	Pipe Size	Orifice	Dimensions				
				A	B	C	D	E
WETA8-8TFN-II	1/2"	1/2"	0.38" (9.7 mm)	1.44" (36.6 mm)	0.84" (21.3 mm)	0.61" (15.5 mm)	0.75" (19.0 mm)	2.03" (51.6 mm)
WETA12-12TFN-II	3/4"	3/4"	0.63" (16.0 mm)	1.70" (43.2 mm)	1.05" (26.7 mm)	0.81" (20.6 mm)	0.75" (19.0 mm)	2.42" (61.5 mm)
WETA16-16TFN-II	1"	1"	0.88" (22.4 mm)	1.71" (43.4 mm)	1.32" (33.5 mm)	1.03" (26.2 mm)	0.75" (19.0 mm)	2.98" (75.7 mm)

Nut and split locking ring are PFA material.

FlareLock[®] II, PFA

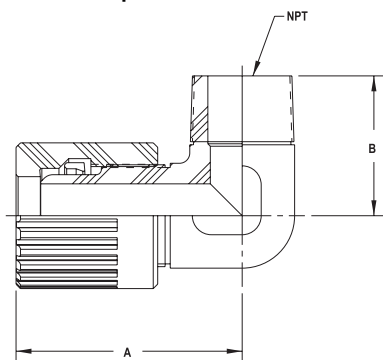
Elbow Adapter, Reducer, PureBond[®] Pipe, "SpaceSaver"



Part Number	"SpaceSaver" Pipe		Dimensions					
	Size	Size	Orifice	A	B	C	D	E
WETA12-16TFN-II	3/4"	1"	0.63" (16.0 mm)	2.60" (66.0 mm)	1.32" (33.5 mm)	1.03" (26.2 mm)	0.75" (19.0 mm)	2.64" (67.1 mm)
WETA16-12TFN-II	1"	3/4"	0.63" (16.0 mm)	1.71" (43.4 mm)	1.05" (26.7 mm)	0.81" (20.6 mm)	0.75" (19.0 mm)	2.98" (75.7 mm)

Nut and split locking ring are PFA material.

Elbow Adapter, MNPT

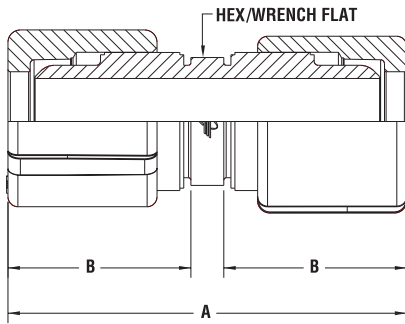


Part Number	O.D. Tube Size	MNPT Size	Orifice	Dimensions	
				A	B
E8-8FN-II	1/2"	1/2"	0.38" (9.7 mm)	1.84" (46.7 mm)	1.18" (30.0 mm)
E12-12FN-II	3/4"	3/4"	0.63" (16.0 mm)	2.20" (55.9 mm)	1.36" (34.5 mm)

Nut and split locking ring are PFA material.

Flaretek[®], PFA

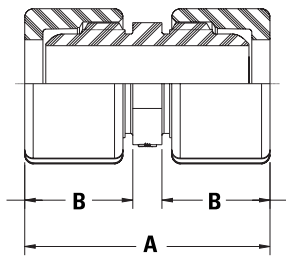
Straight Union



Part* Number	O.D.		Dimensions		Wrench	
	Tube Size	Orifice	A	B	Hex	Flat
SU4FN-1	1/4"	0.13" (3.3 mm)	2.46" (62.5 mm)	1.09" (27.7 mm)	11/16"	N/A
SU6FN-1	3/8"	0.25" (6.4 mm)	2.69" (68.3 mm)	1.21" (30.7 mm)	13/16"	N/A
SU8FN-1	1/2"	0.38" (9.7 mm)	2.90" (73.7 mm)	1.31" (33.3 mm)	15/16"	N/A
SU12FN-1	3/4"	0.63" (16.0 mm)	3.25" (82.6 mm)	1.48" (37.6 mm)	1 3/16"	N/A
SU16FN-1	1"	0.88" (22.4 mm)	3.74" (95.0 mm)	1.72" (43.7 mm)	1 7/16"	N/A

*Also available in PFA(-3) and CPFA(-6) nuts.

Straight Union, Reduced Footprint

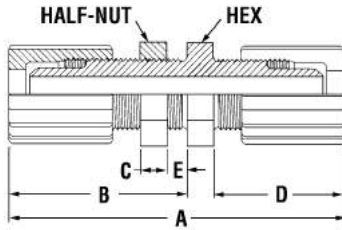


Part* Number	O.D.		Dimensions		Wrench	Wrench	Recommended
	Tube Size	Orifice	A	B	Flat	Part Number	Torque
SU20FN-3S	1 1/4"	1.09" (27.7 mm)	3.93" (99.8 mm)	1.79" (45.5 mm)	1.60"	213-200	80 in•lbs (9.0 N•m)

*Also available in PVDF(-1S) nuts. PVDF nut dimensions are slightly smaller.

Flaretek® , PFA

Straight Union Panel Mount

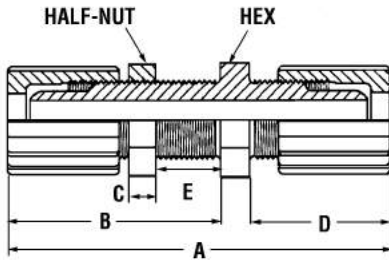


Part* Number	O.D. Tube Size	Orifice	A	Dimensions B C	
PM4FN-1	1/4"	0.13" (3.3 mm)	2.97" (75.4 mm)	1.59" (40.4 mm)	0.28" (7.1 mm)
PM6FN-1	3/8"	0.25" (6.4 mm)	3.21" (81.5 mm)	1.71" (43.4 mm)	0.28" (7.1 mm)
PM8FN-1	1/2"	0.38" (9.7 mm)	3.39" (86.1 mm)	1.81" (46.0 mm)	0.28" (7.1 mm)
PM12FN-1	3/4"	0.63" (16.0 mm)	3.88" (98.6 mm)	2.11" (53.6 mm)	0.28" (7.1 mm)
PM16FN-1	1"	0.88" (22.4 mm)	4.18" (106.2 mm)	2.18" (55.4 mm)	0.28" (7.1 mm)

Part Number	Dimensions D E _(max)		Hex	Half-Nut	Panel Mount Hole Diameter	Half-Nut Part Number
PM4FN-1	1.09" (27.7 mm)	0.25" (6.4 mm)	11/16"	11/16"	0.50" (12.7 mm)	HN5
PM6FN-1	1.21" (30.7 mm)	0.25" (6.4 mm)	13/16"	15/16"	0.63" (16.0 mm)	HN6
PM8FN-1	1.31" (33.3 mm)	0.25" (6.4 mm)	15/16"	1 1/16"	0.75" (19.0 mm)	HN8†
PM12FN-1	1.48" (37.6 mm)	0.25" (6.4 mm)	1 3/16"	1 5/16"	1.00" (25.4 mm)	HN12†
PM16FN-1	1.74" (44.2 mm)	0.25" (6.4 mm)	1 3/4"	1 3/4"	1.50" (38.1 mm)	HN16†

*Also available in PFA(-3) and CPFA(-6) nuts.
†Panel mount nut material is Natural PVDF.

Straight Union, Panel Mount, Extended



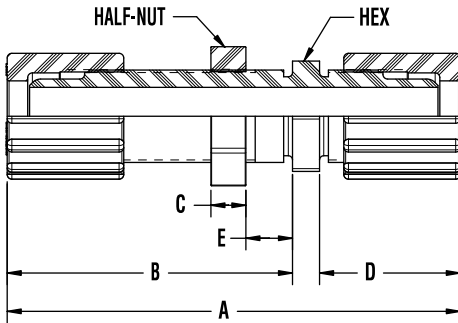
Part* Number	O.D. Tube Size	Orifice	A	Dimensions B C	
PMX4FN-1	1/4"	0.13" (3.3 mm)	3.23" (82.0 mm)	1.84" (46.7 mm)	0.26" (6.6 mm)
PMX6FN-1	3/8"	0.25" (6.4 mm)	3.45" (87.6 mm)	1.96" (49.8 mm)	0.25" (6.4 mm)
PMX8FN-1	1/2"	0.38" (9.7 mm)	3.65" (92.7 mm)	2.06" (52.3 mm)	0.32" (8.1 mm)
PMX12FN-1	3/4"	0.63" (16.0 mm)	4.12" (104.6 mm)	2.36" (59.9 mm)	0.38" (9.7 mm)
PMX16FN-1	1"	0.88" (22.4 mm)	4.42" (112.3 mm)	2.39" (60.7 mm)	0.32" (8.1 mm)

Part Number	Dimensions D E _(max)		Hex	Half-Nut	Panel Mount Hole Diameter	Half-Nut Part Number
PMX4FN-1	1.09" (27.7 mm)	0.50" (12.7 mm)	11/16"	11/16"	0.50" (12.7 mm)	HN5
PMX6FN-1	1.21" (30.7 mm)	0.50" (12.7 mm)	13/16"	15/16"	0.63" (16.0 mm)	HN6
PMX8FN-1	1.31" (33.3 mm)	0.50" (12.7 mm)	15/16"	1 1/16"	0.75" (19.0 mm)	HN8†
PMX12FN-1	1.48" (37.6 mm)	0.50" (12.7 mm)	1 3/16"	1 5/16"	1.00" (25.4 mm)	HN12†
PMX16FN-1	1.74" (44.2 mm)	0.50" (12.7 mm)	1 3/4"	1 3/4"	1.44" (36.6 mm)	HN16†

*Also available in PFA(-3) and CPFA(-6) nuts.
†Panel mount nut material is Natural PVDF.

Flaretek[®], PFA

Straight Union, Panel Mount, Elongated Extension

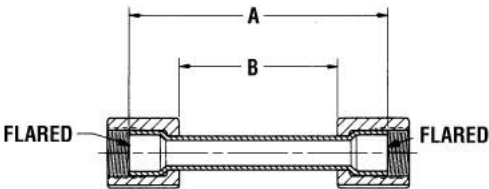


Part* Number	O.D. Tube Size	Orifice	Dimensions		
			A	B	C
PMXX4FN-1	1/4"	0.13" (3.3 mm)	3.90" (99.1 mm)	2.52" (64.0 mm)	0.29" (7.4 mm)
PMXX6FN-1	3/8"	0.25" (6.4 mm)	4.29" (109.0 mm)	2.76" (70.1 mm)	0.25" (6.4 mm)
PMXX8FN-1	1/2"	0.38" (9.7 mm)	4.45" (113.0 mm)	2.73" (69.3 mm)	0.28" (7.1 mm)
PMXX12FN-1	3/4"	0.63" (16.0 mm)	4.82" (122.4 mm)	3.04" (77.2 mm)	0.29" (7.4 mm)
PMXX16FN-1	1"	0.88" (22.4 mm)	5.12" (130.0 mm)	3.09" (78.5 mm)	0.29" (7.4 mm)

Part Number	Dimensions		Hex	Half-Nut	Panel Mount Hole Diameter	Half-Nut Part Number
	D	E _(min)				
PMXX4FN-1	1.09" (27.7 mm)	0.40" (10.2 mm)	1 1/16"	1 1/16"	0.50" (12.7 mm)	HN5
PMXX6FN-1	1.38" (35.1 mm)	0.40" (10.2 mm)	1 3/16"	1 5/16"	0.63" (16.0 mm)	HN6
PMXX8FN-1	1.41" (35.8 mm)	0.40" (10.2 mm)	1 5/16"	1 1/16"	0.75" (19.0 mm)	HN8†
PMXX12FN-1	1.49" (37.8 mm)	0.40" (10.2 mm)	1 3/16"	1 5/16"	1.00" (25.4 mm)	HN12†
PMXX16FN-1	1.74" (44.2 mm)	0.40" (10.2 mm)	1 3/4"	1 3/4"	1.44" (36.6 mm)	HN16†

*Also available in PFA(-3) and CPFA(-6) nuts.
†Panel mount nut material is Natural PVDF.

Straight Union, Tube

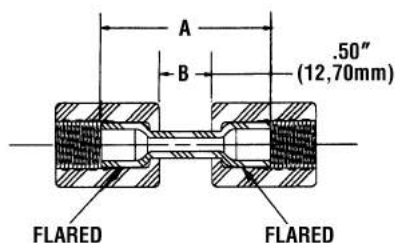


Part* Number	O.D. Tube Size	Orifice	Dimensions	
			A	B
SFTU4FN-1	1/4"	0.13" (3.3 mm)	3.44" (87.4 mm)	2.33" (59.2 mm)
SFTU6FN-1	3/8"	0.25" (6.4 mm)	3.58" (90.9 mm)	2.24" (56.9 mm)
SFTU8FN-1	1/2"	0.38" (9.7 mm)	3.89" (98.8 mm)	2.38" (60.5 mm)
SFTU12FN-1	3/4"	0.63" (16.0 mm)	4.49" (114.0 mm)	2.90" (73.7 mm)
SFTU16FN-1	1"	0.88" (22.4 mm)	3.80" (96.5 mm)	2.07" (52.6 mm)

*Also available in PFA(-3) and CPFA(-6) nuts.

Flaretek[®], PFA

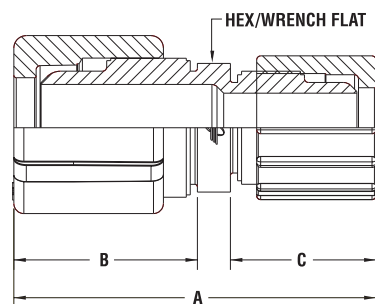
Straight Union, Tube, Minimum Length



Part* Number	O.D.		Dimensions	
	Tube Size	Orifice	A	B
SFTU4FN-1M	1/4"	0.13" (3.3 mm)	1.61" (40.9 mm)	0.50" (12.7 mm)
SFTU6FN-1M	3/8"	0.25" (6.4 mm)	1.88" (47.8 mm)	0.50" (12.7 mm)
SFTU8FN-1M	1/2"	0.38" (9.7 mm)	2.01" (51.1 mm)	0.50" (12.7 mm)
SFTU12FN-1M	3/4"	0.63" (16.0 mm)	2.09" (53.1 mm)	0.50" (12.7 mm)
SFTU16FN-1M	1"	0.88" (22.4 mm)	2.23" (56.6 mm)	0.50" (12.7 mm)

Special length tube unions are available upon request.
 *Also available in PFA(-3M) and CPFA(-6M) nuts.

Straight Union, Reducer

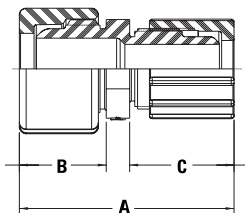


Part* Number	O.D.		Orifice	Dimensions			Wrench	
	Tube Size			A	B	C	Hex	Flat
SU6-4FN-1	3/8" × 1/4"		0.13" (3.3 mm)	2.57" (65.3 mm)	1.21" (30.7 mm)	1.09" (27.7 mm)	13/16"	N/A
SU8-4FN-1	1/2" × 1/4"		0.13" (3.3 mm)	2.67" (67.8 mm)	1.31" (33.3 mm)	1.09" (27.7 mm)	15/16"	N/A
SU8-6FN-1	1/2" × 3/8"		0.25" (6.4 mm)	2.79" (70.9 mm)	1.31" (33.3 mm)	1.21" (30.7 mm)	15/16"	N/A
SU12-4FN-1	3/4" × 1/4"		0.13" (3.3 mm)	2.85" (72.4 mm)	1.48" (37.6 mm)	1.09" (27.7 mm)	1 3/16"	N/A
SU12-6FN-1	3/4" × 3/8"		0.25" (6.4 mm)	2.99" (75.9 mm)	1.48" (37.6 mm)	1.21" (30.7 mm)	1 3/16"	N/A
SU12-8FN-1	3/4" × 1/2"		0.38" (9.7 mm)	3.07" (78.0 mm)	1.48" (37.6 mm)	1.31" (33.3 mm)	1 3/16"	N/A
SU16-8FN-1	1" × 1/2"		0.38" (9.7 mm)	3.33" (84.6 mm)	1.73" (43.9 mm)	1.32" (33.5 mm)	1 7/16"	N/A
SU16-12FN-1	1" × 3/4"		0.63" (16.0 mm)	3.49" (88.6 mm)	1.72" (43.7 mm)	1.48" (37.6 mm)	1 7/16"	N/A

*Also available in PFA(-3) and CPFA(-6) nuts.

Flaretek[®], PFA

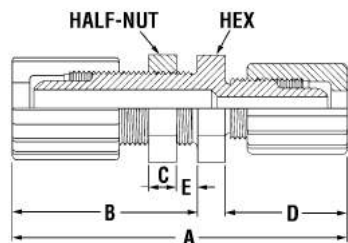
Straight Union, Reducer, Reduced Footprint



Part* Number	O.D. Tube Size	Orifice	Dimensions			Wrench Flat
			A	B	C	
SU20-12FN-3SF	1 1/4" × 3/4"	0.63" (16.0 mm)	3.76" (95.5 mm)	1.65" (41.9 mm)	1.55" (39.4 mm)	1.60"
SU20-16FN-3SF	1 1/4" × 1"	0.88" (22.4 mm)	4.14" (105.2 mm)	1.79" (45.5 mm)	1.94" (49.3 mm)	1.60"

*Also available in PVDF (-1SF) nuts. PVDF nut dimensions are slightly smaller.

Straight Union, Reducer, Panel Mount



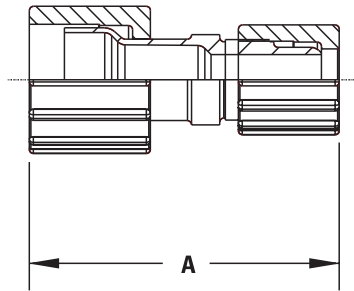
Part* Number	O.D. Tube Size	Orifice	Dimensions		
			A	B	C
PM6-4FN-1	3/8" × 1/4"	0.13" (3.3 mm)	3.09" (78.5 mm)	1.71" (43.4 mm)	0.28" (7.1 mm)
PM8-4FN-1	1/2" × 1/4"	0.13" (3.3 mm)	3.20" (81.3 mm)	1.81" (46.0 mm)	0.28" (7.1 mm)
PM8-6FN-1	1/2" × 3/8"	0.25" (6.4 mm)	3.30" (83.8 mm)	1.81" (46.0 mm)	0.28" (7.1 mm)
PM12-8FN-1	3/4" × 1/2"	0.38" (9.7 mm)	3.70" (94.0 mm)	2.11" (53.6 mm)	0.38" (9.7 mm)
PM16-12FN-1	1" × 3/4"	0.63" (16.0 mm)	3.96" (100.6 mm)	2.18" (55.4 mm)	0.32" (8.1 mm)

Part Number	Dimensions		Hex	Panel Mount		Half-Nut Part Number
	D	E _(max)		Half-Nut	Hole Diameter	
PM6-4FN-1	1.09" (27.7 mm)	0.25" (6.4 mm)	13/16"	15/16"	0.63" (16.0 mm)	HN6
PM8-4FN-1	1.09" (27.7 mm)	0.25" (6.4 mm)	15/16"	1 1/16"	0.75" (19.0 mm)	HN8†
PM8-6FN-1	1.21" (30.7 mm)	0.25" (6.4 mm)	15/16"	1 1/16"	0.75" (19.0 mm)	HN8†
PM12-8FN-1	1.31" (33.3 mm)	0.25" (6.4 mm)	1 3/16"	1 5/16"	1.00" (25.4 mm)	HN12†
PM16-12FN-1	1.52" (38.6 mm)	0.25" (6.4 mm)	1 3/4"	1 3/4"	1.50" (38.1 mm)	HN16†

*Also available in PFA(-3) and CPFA(-6) nuts.
†Panel mount nut material is Natural PVDF.

Flaretek[®], PFA

Straight Adapter, Reducer, "SpaceSaver", PFA Plus



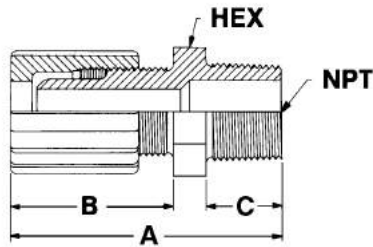
Part*† Number	O.D. Tube Size	"SpaceSaver" Size	Orifice Size	Dimension A
SU6T-4FN-3X	1/4"	3/8"	0.13" (3.3 mm)	2.64" (67.1 mm)
SU8T-4FN-3X	1/4"	1/2"	0.13" (3.3 mm)	2.71" (68.8 mm)
SU8T-6FN-3X	3/8"	1/2"	0.25" (6.4 mm)	2.82" (71.6 mm)
SU12T-6FN-3X	3/8"	3/4"	0.25" (6.4 mm)	3.05" (77.5 mm)
SU12T-8FN-3X	1/2"	3/4"	0.38" (9.7 mm)	3.14" (79.8 mm)
SU12T-16FN-3X	1"	3/4"	0.63" (16.0 mm)	3.99" (101.3 mm)
SU16T-8FN-3X	1/2"	1"	0.38" (9.7 mm)	3.64" (92.5 mm)
SU16T-12FN-3X	3/4"	1"	0.63" (16.0 mm)	3.88" (98.6 mm)

*Also available in PVDF (-1X) nuts.

†Fitting also available in PFA material. To order, replace "-3X" with "-1" for PVDF nuts, "-3" for PFA nuts or "-6" for CPFA nuts.

Flaretek[®], PFA

Straight Adapter, MNPT

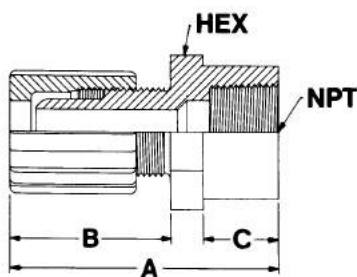


Part* Number	O.D. Tube Size	MNPT Size	Orifice	Dimensions			
				A	B	C	Hex
C4-2FN-1	1/4"	1/8"	0.13" (3.3 mm)	1.93" (49.0 mm)	1.09" (27.7 mm)	0.55" (14.0 mm)	5/8"
C4-4FN-1	1/4"	1/4"	0.13" (3.3 mm)	1.93" (49.0 mm)	1.09" (27.7 mm)	0.55" (14.0 mm)	5/8"
C4-6FN-1	1/4"	3/8"	0.13" (3.3 mm)	1.93" (49.0 mm)	1.09" (27.7 mm)	0.55" (14.0 mm)	11/16"
C4-8FN-1	1/4"	1/2"	0.13" (3.3 mm)	2.03" (51.6 mm)	1.09" (27.7 mm)	0.66" (16.8 mm)	13/16"
C6-2FN-1	3/8"	1/8"	0.20" (5.1 mm)	2.04" (51.8 mm)	1.21" (30.7 mm)	0.55" (14.0 mm)	13/16"
C6-4FN-*1	3/8"	1/4"	0.25" (6.4 mm)	2.04" (51.8 mm)	1.21" (30.7 mm)	0.55" (14.0 mm)	13/16"
C6-6FN-1	3/8"	3/8"	0.25" (6.4 mm)	2.04" (51.8 mm)	1.21" (30.7 mm)	0.55" (14.0 mm)	13/16"
C6-8FN-1	3/8"	1/2"	0.25" (6.4 mm)	2.15" (54.6 mm)	1.21" (30.7 mm)	0.66" (16.8 mm)	15/16"
C6-12FN-1	3/8"	3/4"	0.25" (6.4 mm)	2.16" (54.9 mm)	1.21" (30.7 mm)	0.67" (17.0 mm)	1 3/16"
C8-2FN-1	1/2"	1/8"	0.20" (5.1 mm)	2.14" (54.4 mm)	1.31" (33.3 mm)	0.55" (14.0 mm)	15/16"
C8-4FN-1	1/2"	1/4"	0.28" (7.1 mm)	2.15" (54.6 mm)	1.31" (33.3 mm)	0.55" (14.0 mm)	15/16"
C8-6FN-1	1/2"	3/8"	0.38" (9.7 mm)	2.15" (54.6 mm)	1.31" (33.3 mm)	0.55" (14.0 mm)	15/16"
C8-8FN-1	1/2"	1/2"	0.38" (9.7 mm)	2.25" (57.2 mm)	1.31" (33.3 mm)	0.66" (16.8 mm)	15/16"
C8-12FN-1	1/2"	3/4"	0.38" (9.7 mm)	2.26" (57.4 mm)	1.31" (33.3 mm)	0.67" (17.0 mm)	1 3/16"
C12-8FN-1	3/4"	1/2"	0.52" (13.2 mm)	2.44" (62.0 mm)	1.48" (37.6 mm)	0.66" (16.8 mm)	1 3/16"
C12-12FN-1	3/4"	3/4"	0.63" (16.0 mm)	2.44" (62.0 mm)	1.48" (37.6 mm)	0.67" (17.0 mm)	1 3/16"
C12-16FN-1	3/4"	1"	0.63" (16.0 mm)	2.65" (67.3 mm)	1.52" (38.6 mm)	0.85" (21.6 mm)	1 7/16"
C16-12FN-1	1"	3/4"	0.66" (16.8 mm)	2.68" (68.1 mm)	1.72" (43.7 mm)	0.67" (17.0 mm)	1 7/16"
C16-16FN-1	1"	1"	0.88" (22.4 mm)	2.84" (72.1 mm)	1.72" (43.7 mm)	0.85" (21.6 mm)	1 7/16"

*Also available in PFA(-3) and CPFA(-6) nuts.

Flaretek[®], PFA

Straight Adapter, FNPT

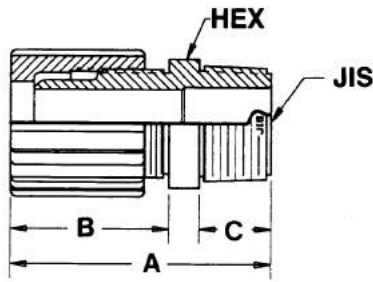


Part* Number	O.D. Tube Size	FNPT Size	Orifice	Dimensions			
				A	B	C	Hex
FC4-2FN-1	1/4"	1/8"	0.13" (3.3 mm)	2.00" (50.8 mm)	1.09" (27.7 mm)	0.63" (16.0 mm)	5/8"
FC4-4FN-1	1/4"	1/4"	0.13" (3.3 mm)	2.00" (50.8 mm)	1.09" (27.7 mm)	0.63" (16.0 mm)	3/4"
FC4-6FN-1	1/4"	3/8"	0.13" (3.3 mm)	2.00" (50.8 mm)	1.09" (27.7 mm)	0.63" (16.0 mm)	15/16"
FC4-8FN-1	1/4"	1/2"	0.13" (3.3 mm)	2.00" (50.8 mm)	1.09" (27.7 mm)	0.63" (16.0 mm)	1 3/16"
FC6-2FN-1	3/8"	1/8"	0.25" (6.4 mm)	2.12" (53.8 mm)	1.21" (30.7 mm)	0.63" (16.0 mm)	5/8"
FC6-4FN-1	3/8"	1/4"	0.25" (6.4 mm)	2.12" (53.8 mm)	1.21" (30.7 mm)	0.63" (16.0 mm)	3/4"
FC6-6FN-1	3/8"	3/8"	0.25" (6.4 mm)	2.10" (53.3 mm)	1.21" (30.7 mm)	0.61" (15.5 mm)	15/16"
FC6-8FN-1	3/8"	1/2"	0.25" (6.4 mm)	2.12" (53.8 mm)	1.21" (30.7 mm)	0.63" (16.0 mm)	1"
FC8-4FN-1	1/2"	1/4"	0.35" (8.9 mm)	2.22" (56.4 mm)	1.31" (33.3 mm)	0.63" (16.0 mm)	3/4"
FC8-6FN-1	1/2"	3/8"	0.38" (9.7 mm)	2.22" (56.4 mm)	1.31" (33.3 mm)	0.63" (16.0 mm)	15/16"
FC8-8FN-1	1/2"	1/2"	0.38" (9.7 mm)	2.22" (56.4 mm)	1.31" (33.3 mm)	0.63" (16.0 mm)	1 1/8"
FC8-12FN-1	1/2"	3/4"	0.38" (9.7 mm)	2.39" (60.7 mm)	1.44" (36.6 mm)	0.68" (17.3 mm)	1 3/16"
FC12-8FN-1	3/4"	1/2"	0.55" (14.0 mm)	2.43" (61.7 mm)	1.48" (37.6 mm)	0.67" (17.0 mm)	1 3/16"
FC12-12FN-1	3/4"	3/4"	0.63" (16.0 mm)	2.43" (61.7 mm)	1.48" (37.6 mm)	0.67" (17.0 mm)	1 3/16"
FC16-16FN-1	1"	1"	0.88" (22.4 mm)	2.83" (71.9 mm)	1.74" (44.2 mm)	0.80" (20.3 mm)	1 5/8"

*Also available in PFA(-3) and CPFA(-6) nuts.

Flaretek[®], PFA

Straight Adapter, Male JIS Thread

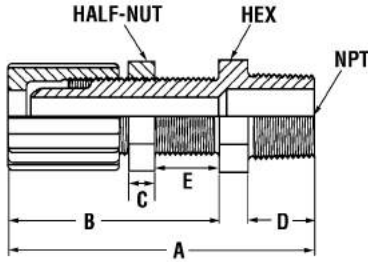


Part* Number	O.D. Tube Size	Male JIS Size	Orifice	Dimensions			
				A	B	C	Hex
C4-R1/4FN-1	1/4"	1/4"	0.13" (3.3 mm)	1.92" (48.8 mm)	1.09" (27.7 mm)	0.55" (14.0 mm)	11/16"
C4-R3/8FN-1	1/4"	3/8"	0.13" (3.3 mm)	1.92" (48.8 mm)	1.09" (27.7 mm)	0.55" (14.0 mm)	11/16"
C4-R1/2FN-1	1/4"	1/2"	0.13" (3.3 mm)	2.04" (51.8 mm)	1.09" (27.7 mm)	0.66" (16.8 mm)	13/16"
C4-R3/4FN-1	1/4"	3/4"	0.13" (3.3 mm)	2.04" (51.8 mm)	1.09" (27.7 mm)	0.67" (17.0 mm)	1 3/16"
C6-R1/4FN-1	3/8"	1/4"	0.25" (6.4 mm)	2.04" (51.8 mm)	1.21" (30.7 mm)	0.55" (14.0 mm)	13/16"
C6-R3/8FN-1	3/8"	3/8"	0.25" (6.4 mm)	2.04" (51.8 mm)	1.21" (30.7 mm)	0.55" (14.0 mm)	13/16"
C6-R1/2FN-1	3/8"	1/2"	0.25" (6.4 mm)	2.16" (54.9 mm)	1.21" (30.7 mm)	0.66" (16.8 mm)	15/16"
C6-R3/4FN-1	3/8"	3/4"	0.25" (6.4 mm)	2.16" (54.9 mm)	1.21" (30.7 mm)	0.67" (17.0 mm)	1 3/16"
C8-R1/4FN-1	1/2"	1/4"	0.13" (3.3 mm)	2.15" (54.6 mm)	1.31" (33.3 mm)	0.55" (14.0 mm)	15/16"
C8-R3/8FN-1	1/2"	3/8"	0.25" (6.4 mm)	2.15" (54.6 mm)	1.31" (33.3 mm)	0.55" (14.0 mm)	15/16"
C8-R1/2FN-1	1/2"	1/2"	0.38" (9.7 mm)	2.26" (57.4 mm)	1.31" (33.3 mm)	0.66" (16.8 mm)	15/16"
C8-R3/4FN-1	1/2"	3/4"	0.38" (9.7 mm)	2.27" (57.7 mm)	1.31" (33.3 mm)	0.67" (17.0 mm)	1 3/16"
C12-R1/4FN-1	3/4"	1/4"	0.13" (3.3 mm)	2.31" (58.7 mm)	1.48" (37.6 mm)	0.55" (14.0 mm)	1 3/16"
C12-R3/8FN-1	3/4"	3/8"	0.25" (6.4 mm)	2.31" (58.7 mm)	1.48" (37.6 mm)	0.55" (14.0 mm)	1 3/16"
C12-R1/2FN-1	3/4"	1/2"	0.38" (9.7 mm)	2.42" (61.5 mm)	1.48" (37.6 mm)	0.66" (16.8 mm)	1 3/16"
C12-R3/4FN-1	3/4"	3/4"	0.63" (16.0 mm)	2.43" (61.7 mm)	1.48" (37.6 mm)	0.67" (17.0 mm)	1 3/16"
C16-R3/4FN-1	1"	3/4"	0.63" (16.0 mm)	2.67" (67.8 mm)	1.72" (43.7 mm)	0.67" (17.0 mm)	1 7/16"
C16-R1FN-1	1"	1"	0.88" (22.4 mm)	2.84" (72.1 mm)	1.72" (43.7 mm)	0.83" (21.1 mm)	1 7/16"

*Also available in PFA(-3) and CPFA(-6) nuts.

Flaretek[®], PFA

Straight Adapter, MNPT, Panel Mount

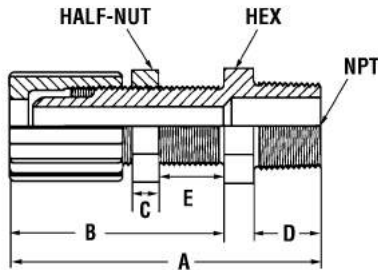


Part* Number	O.D. Tube Size	MNPT Size	Orifice	Dimensions		
				A	B	C
PMC4-2FN-1	1/4"	1/8"	0.13" (3.3 mm)	2.43" (61.7 mm)	1.59" (40.4 mm)	0.26" (6.6 mm)
PMC4-4FN-1	1/4"	1/4"	0.13" (3.3 mm)	2.43" (61.7 mm)	1.59" (40.4 mm)	0.26" (6.6 mm)
PMC8-4FN-1	1/2"	1/4"	0.28" (7.1 mm)	2.64" (67.1 mm)	1.81" (46.0 mm)	0.32" (8.1 mm)
PMC8-6FN-1	1/2"	3/8"	0.38" (9.7 mm)	2.66" (67.6 mm)	1.81" (46.0 mm)	0.32" (8.1 mm)
PMC8-8FN-1	1/2"	1/2"	0.38" (9.7 mm)	2.78" (70.6 mm)	1.81" (46.0 mm)	0.32" (8.1 mm)
PMC12-12FN-1	3/4"	3/4"	0.63" (16.0 mm)	3.07" (78.0 mm)	2.11" (53.6 mm)	0.38" (9.7 mm)

Part Number	Dimensions		Hex	Half-Nut	Panel Mount Hole Diameter	Half-Nut Part Number
	D	E _(max)				
PMC4-2FN-1	0.55" (14.0 mm)	0.25" (6.4 mm)	11/16"	1 1/16"	0.50" (12.7 mm)	HN5
PMC4-4FN-1	0.55" (14.0 mm)	0.25" (6.4 mm)	11/16"	1 1/16"	0.50" (12.7 mm)	HN5
PMC8-4FN-1	0.55" (14.0 mm)	0.38" (9.7 mm)	15/16"	1 1/16"	0.75" (19.0 mm)	HN8†
PMC8-6FN-1	0.55" (14.0 mm)	0.38" (9.7 mm)	15/16"	1 1/16"	0.75" (19.0 mm)	HN8†
PMC8-8FN-1	0.67" (17.0 mm)	0.38" (9.7 mm)	15/16"	1 1/16"	0.75" (19.0 mm)	HN8†
PMC12-12FN-1	0.67" (17.0 mm)	0.44" (11.2 mm)	1 3/16"	1 5/16"	1.00" (25.4 mm)	HN12†

*Also available in PFA(-3) and CPFA(-6) nuts.
†Panel mount nut material is Natural PVDF.

Straight Adapter, MNPT, Panel Mount Extended



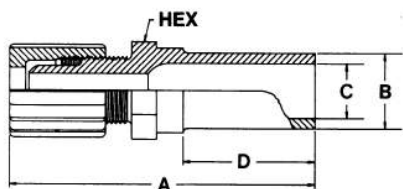
Part* Number	O.D. Tube Size	MNPT Size	Orifice	Dimensions		
				A	B	C
PMXC4-4FN-1	1/4"	1/4"	0.13" (3.3 mm)	2.69" (68.3 mm)	1.84" (46.7 mm)	0.26" (6.6 mm)
PMXC6-6FN-1	3/8"	3/8"	0.25" (6.4 mm)	2.81" (71.4 mm)	1.96" (49.8 mm)	0.25" (6.4 mm)
PMXC8-8FN-1	1/2"	1/2"	0.38" (9.7 mm)	3.01" (76.5 mm)	2.06" (52.3 mm)	0.32" (8.1 mm)
PMXC12-12FN-1	3/4"	3/4"	0.63" (16.0 mm)	3.31" (84.1 mm)	2.36" (59.9 mm)	0.38" (9.7 mm)

Part Number	Dimensions		Hex	Half-Nut	Panel Mount Hole Diameter	Half-Nut Part Number
	D	E _(max)				
PMXC4-4FN-1	0.55" (14.0 mm)	0.50" (12.7 mm)	11/16"	1 1/16"	0.50" (12.7 mm)	HN5
PMXC6-6FN-1	0.55" (14.0 mm)	0.50" (12.7 mm)	13/16"	1 5/16"	0.63" (16.0 mm)	HN6
PMXC8-8FN-1	0.67" (17.0 mm)	0.50" (12.7 mm)	15/16"	1 1/16"	0.75" (19.0 mm)	HN8†
PMXC12-12FN-1	0.67" (17.0 mm)	0.50" (12.7 mm)	1 3/16"	1 5/16"	1.00" (25.4 mm)	HN12†

*Also available in PFA(-3) and CPFA(-6) nuts.
†Panel mount nut material is Natural PVDF.

Flaretek[®], PFA

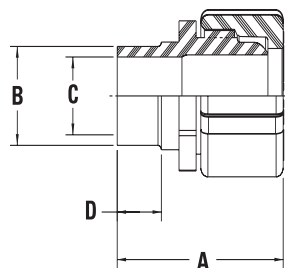
Straight Adapter, PureBond[®] Pipe



Part* Number	O.D. Tube Size	Pipe Size	Orifice	Dimensions					Hex
				A	B	C	D		
WTA4-4PFN-1	1/4"	1/4"	0.13" (3.3 mm)	1.92" (48.77 mm)	0.54" (13.72 mm)	0.35" (8.99 mm)	0.55" (13.97 mm)	11/16"	
WTA4-8PFN-1	1/4"	1/2"	0.13" (3.3 mm)	3.22" (81.79 mm)	0.84" (21.34 mm)	0.61" (15.42 mm)	1.49" (37.85 mm)	15/16"	
WTA4-12PFN-1	1/4"	3/4"	0.13" (3.3 mm)	3.22" (81.79 mm)	1.05" (26.67 mm)	0.81" (20.55 mm)	1.49" (37.85 mm)	1 3/16"	
WTA6-4PFN-1	3/8"	1/4"	0.25" (6.4 mm)	2.04" (51.82 mm)	0.54" (13.72 mm)	0.35" (8.99 mm)	0.55" (13.97 mm)	13/16"	
WTA6-8PFN-1	3/8"	1/2"	0.25" (6.4 mm)	3.30" (83.82 mm)	0.84" (21.34 mm)	0.61" (15.42 mm)	1.49" (37.85 mm)	15/16"	
WTA6-12PFN-1	3/8"	3/4"	0.25" (6.4 mm)	3.29" (83.57 mm)	1.05" (26.67 mm)	0.81" (20.55 mm)	1.50" (38.10 mm)	1 3/16"	
WTA8-8PFN-1	1/2"	1/2"	0.38" (9.7 mm)	3.38" (85.85 mm)	0.84" (21.34 mm)	0.61" (15.42 mm)	1.50" (38.10 mm)	15/16"	
WTA8-12PFN-1	1/2"	3/4"	0.38" (9.7 mm)	3.38" (85.85 mm)	1.05" (26.67 mm)	0.81" (20.55 mm)	1.49" (37.85 mm)	1 3/16"	
WTA8-16PFN-1	1/2"	1"	0.38" (9.7 mm)	2.63" (66.80 mm)	1.32" (33.53 mm)	1.05" (26.67 mm)	0.73" (18.54 mm)	1 7/16"	
WTA8-32PFN-1	1/2"	2"	0.38" (9.7 mm)	3.38" (85.85 mm)	2.38" (60.45 mm)	2.07" (52.58 mm)	1.48" (37.59 mm)	N/A	
WTA12-8PFN-1	3/4"	1/2"	0.62" (15.7 mm)	3.56" (90.42 mm)	0.84" (21.34 mm)	0.61" (15.42 mm)	1.50" (38.10 mm)	1 3/16"	
WTA12-12PFN-1	3/4"	3/4"	0.63" (16.0 mm)	3.56" (90.42 mm)	1.05" (26.67 mm)	0.81" (20.55 mm)	1.50" (38.10 mm)	1 3/16"	
WTA12-16PFN-1	3/4"	1"	0.63" (16.0 mm)	3.56" (90.42 mm)	1.32" (33.40 mm)	1.03" (26.26 mm)	1.50" (38.10 mm)	1 7/16"	
WTA16-12PFN-1	1"	3/4"	0.82" (20.8 mm)	3.80" (96.52 mm)	1.05" (26.67 mm)	0.81" (20.55 mm)	1.50" (38.10 mm)	1 7/16"	
WTA16-16PFN-1	1"	1"	0.88" (22.4 mm)	3.78" (96.01 mm)	1.32" (33.40 mm)	1.03" (26.26 mm)	1.50" (38.10 mm)	1 7/16"	

*Also available in PFA(-3) and CPFA(-6) nuts.

Straight Adapter, PureBond[®] Pipe, Reduced Footprint

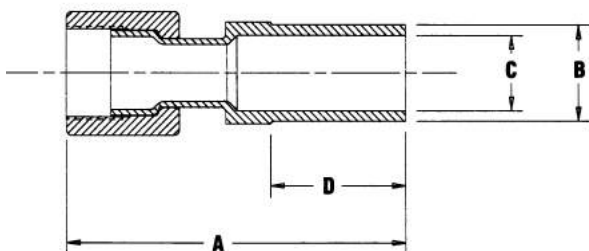


Part* Number	O.D. Tube Size	Pipe Size	Orifice	Dimensions				Wrench Part Number
				A	B	C	D	
WTA20-16PFN-3S	1 1/4"	1"	0.88" (22.4 mm)	3.00" (76.2 mm)	1.32" (33.5 mm)	1.03" (26.2 mm)	0.75" (19.0 mm)	213-200

*Also available in PVDF(-1S) nuts. PVDF nut dimensions are slightly smaller.

Flaretek[®], PFA

Straight Adapter, PureBond[®] Pipe, "SpaceSaver", PFA Plus

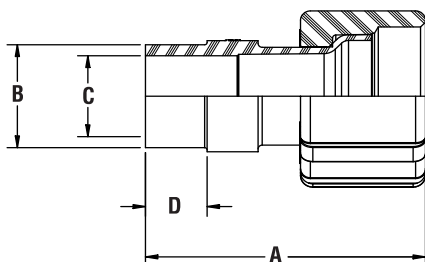


Part* Number	"SpaceSaver" Size	Pipe Size	Orifice	Dimensions			
				A	B	C	D
WTA4-4TFN-3X	1/4"	1/4"	0.16" (4.1 mm)	2.21" (56.13 mm)	0.54" (13.72 mm)	0.35" (8.89 mm)	0.55" (13.97 mm)
WTA6-4TFN-3X	3/8"	1/4"	0.25" (6.4 mm)	2.30" (58.42 mm)	0.54" (13.72 mm)	0.35" (8.99 mm)	0.55" (13.97 mm)
WTA6-8TFN-3X	3/8"	1/2"	0.25" (6.4 mm)	2.50" (63.50 mm)	0.84" (21.34 mm)	0.61" (15.42 mm)	0.75" (19.05 mm)
WTA8-8TFN-3X	1/2"	1/2"	0.38" (9.7 mm)	3.32" (84.33 mm)	0.84" (21.34 mm)	0.61" (15.42 mm)	1.50" (38.10 mm)
WTA8-12TFN-3X	1/2"	3/4"	0.38" (9.7 mm)	3.32" (84.33 mm)	1.05" (26.67 mm)	0.81" (20.55 mm)	1.50" (38.10 mm)
WTA8-16TFN-3X	1/2"	1"	0.38" (9.7 mm)	2.56" (65.02 mm)	1.32" (33.53 mm)	1.03" (26.16 mm)	0.75" (19.05 mm)
WTA12-8TFN-3X	3/4"	1/2"	0.62" (15.7 mm)	3.55" (90.17 mm)	0.84" (21.34 mm)	0.61" (15.42 mm)	1.50" (38.10 mm)
WTA12-12TFN-3X	3/4"	3/4"	0.63" (16.0 mm)	3.55" (90.17 mm)	1.05" (26.67 mm)	0.81" (20.55 mm)	1.50" (38.10 mm)
WTA12-16TFN-3X	3/4"	1"	0.63" (16.0 mm)	2.81" (71.37 mm)	1.32" (33.53 mm)	1.03" (26.16 mm)	0.75" (19.05 mm)
WTA16-12TFN-3X	1"	3/4"	0.82" (20.8 mm)	4.05" (102.87 mm)	1.05" (26.67 mm)	0.81" (20.55 mm)	1.50" (38.10 mm)
WTA16-16TFN-3X	1"	1"	0.88" (22.4 mm)	4.05" (102.87 mm)	1.32" (33.40 mm)	1.03" (26.26 mm)	1.50" (38.10 mm)

*Also available in PVDF (-1X) nuts.

#Fitting also available in PFA material. To order, replace "-3X" with "-1" for PVDF nuts, "-3" for PFA nuts or "-6" for CPFA nuts.

Straight Adapter, PureBond[®] Pipe, "SpaceSaver", Reduced Footprint

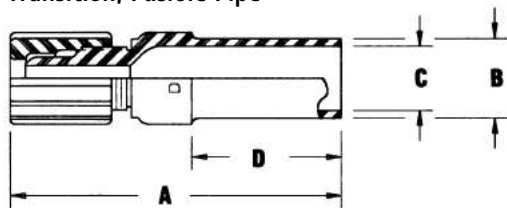


Part* Number	"SpaceSaver" Size	Pipe Size	Orifice	Dimensions			
				A	B	C	D
WTA20-16TFN-3S	1 1/4"	1"	0.88" (22.4 mm)	3.41" (86.6 mm)	1.32" (33.5 mm)	1.03" (26.2 mm)	0.75" (19.0 mm)

*Also available in PVDF (-1S) nuts. PVDF nut dimensions are slightly smaller.

Flaretek® , PVDF

Transition, Fusible Pipe



Part Number	O.D. Tube Size	Pipe Size	Orifice	Dimensions			
				A	B	C	D
WTA4-20mmDFN-1	1/4"	20 mm	0.13" (3.3 mm)	3.19" (81.0 mm)	0.79" (20.0 mm)	0.64" (16.2 mm)	1.50" (38.1 mm)
WTA6-20mmDFN-1	3/8"	20 mm	0.25" (6.4 mm)	3.31" (84.1 mm)	0.79" (20.0 mm)	0.64" (16.2 mm)	1.50" (38.1 mm)
WTA6-25mmDFN-1	3/8"	25 mm	0.25" (6.4 mm)	3.31" (84.1 mm)	0.98" (25.0 mm)	0.82" (21.0 mm)	1.50" (38.1 mm)
WTA8-20mmDFN-1	1/2"	20 mm	0.38" (9.7 mm)	3.40" (86.4 mm)	0.79" (20.0 mm)	0.64" (16.2 mm)	1.50" (38.1 mm)
WTA8-25mmDFN-1	1/2"	25 mm	0.38" (9.7 mm)	3.41" (86.6 mm)	0.98" (25.0 mm)	0.82" (21.0 mm)	1.50" (38.1 mm)
WTA8-32mmDFN-1	1/2"	32 mm	0.38" (9.7 mm)	3.41" (86.6 mm)	1.26" (32.0 mm)	1.07" (27.3 mm)	1.50" (38.1 mm)
WTA8-40mmDFN-1	1/2"	40 mm	0.38" (9.7 mm)	3.40" (86.4 mm)	1.58" (40.0 mm)	1.39" (35.2 mm)	1.50" (38.1 mm)
WTA8-63mmDFN-1	1/2"	63 mm	0.38" (9.7 mm)	3.37" (85.6 mm)	2.48" (63.0 mm)	2.24" (57.0 mm)	1.45" (36.8 mm)
WTA12-20mmDFN-1	3/4"	20 mm	0.63" (16.0 mm)	3.58" (90.9 mm)	0.79" (20.0 mm)	0.64" (16.2 mm)	1.50" (38.1 mm)
WTA12-25mmDFN-1	3/4"	25 mm	0.63" (16.0 mm)	3.58" (90.9 mm)	0.98" (25.0 mm)	0.82" (21.0 mm)	1.50" (38.1 mm)
WTA12-32mmDFN-1	3/4"	32 mm	0.63" (16.0 mm)	3.58" (90.9 mm)	1.26" (32.0 mm)	1.07" (27.3 mm)	1.50" (38.1 mm)
WTA12-40mmDFN-1	3/4"	40 mm	0.63" (16.0 mm)	3.57" (90.7 mm)	1.58" (40.0 mm)	1.39" (35.2 mm)	1.50" (38.1 mm)
WTA12-63mmDFN-1	3/4"	63 mm	0.63" (16.0 mm)	3.57" (90.7 mm)	2.48" (63.0 mm)	2.24" (57.0 mm)	1.45" (36.8 mm)
WTA16-25mmDFN-1	1"	25 mm	0.88" (22.4 mm)	3.54" (89.9 mm)	0.98" (25.0 mm)	0.82" (21.0 mm)	1.50" (38.1 mm)
WTA16-32mmDFN-1	1"	32 mm	0.88" (22.4 mm)	3.54" (89.9 mm)	1.26" (32.0 mm)	1.07" (27.3 mm)	1.50" (38.1 mm)
WTA16-40mmDFN-1	1"	40 mm	0.88" (22.4 mm)	3.54" (89.9 mm)	1.58" (40.0 mm)	1.39" (35.2 mm)	1.50" (38.1 mm)

Other sizes can be provided in a machined version. A minimum order may be required per size. Please allow 6-8 weeks ARO to ship.

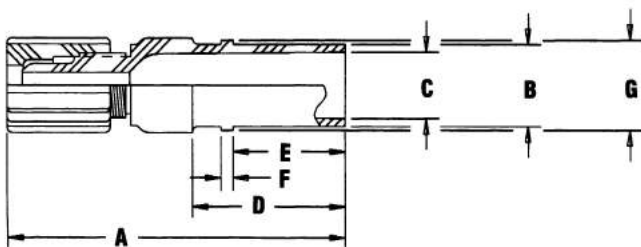
Specifications

Size	Pressure Temperature Rating		Minimum Nut Torque
	77°F (25°C)	203°F (95°C)	
1/4"	225 PSIG (1551 kPa)	80 PSIG (551 kPa)	5 inch/lbs (5.76 kg/cm)
3/8"	225 PSIG (1551 kPa)	80 PSIG (551 kPa)	8 inch/lbs (9.22 kg/cm)
1/2"	160 PSIG (1103 kPa)	80 PSIG (551 kPa)	11 inch/lbs (12.67 kg/cm)
3/4"	110 PSIG (758 kPa)	60 PSIG (413 kPa)	19 inch/lbs (21.89 kg/cm)
1"	75 PSIG (758 kPa)	40 PSIG (275 kPa)	40 inch/lbs (46kg/cm)

Materials:	The entire fitting including the nut is produced from virgin PVDF resin.
Temperature:	203°F (95°C) maximum

Flaretek® , PVDF

Transition, Fusible Pipe with Locating Rib

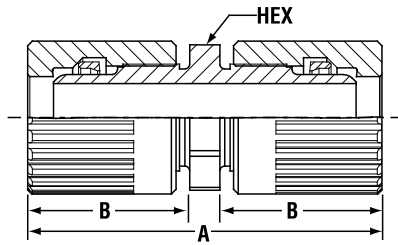


Part Number	O.D. Tube Size	Pipe Size	Orifice	Dimensions		
				A	B	C
WTA4-20mmDFRN-1	1/4"	20 mm	0.13" (3.3 mm)	3.19" (81.0 mm)	0.79" (20.0 mm)	0.64" (16.2 mm)
WTA6-20mmDFRN-1	3/8"	20 mm	0.25" (6.4 mm)	3.31" (84.1 mm)	0.79" (20.0 mm)	0.64" (16.2 mm)
WTA8-20mmDFRN-1	1/2"	20 mm	0.38" (9.7 mm)	3.40" (86.4 mm)	0.79" (20.0 mm)	0.64" (16.2 mm)
WTA8-25mmDFRN-1	1/2"	25 mm	0.38" (9.7 mm)	3.41" (86.6 mm)	0.98" (25.0 mm)	0.82" (21.0 mm)
WTA8-32mmDFRN-1	1/2"	32 mm	0.38" (9.7 mm)	3.41" (86.6 mm)	1.26" (32.0 mm)	1.07" (27.3 mm)
WTA8-40mmDFRN-1	1/2"	40 mm	0.38" (9.7 mm)	3.73" (94.7 mm)	1.58" (40.0 mm)	1.39" (35.2 mm)
WTA8-50mmDFRN-1	1/2"	50 mm	0.38" (9.7 mm)	4.27" (108.5 mm)	1.97" (50.0 mm)	1.73" (44.0 mm)
WTA8-63mmDFRN-1	1/2"	63 mm	0.38" (9.7 mm)	4.27" (108.5 mm)	2.48" (63.0 mm)	2.24" (57.0 mm)
WTA12-20mmDFRN-1	3/4"	20 mm	0.63" (16.0 mm)	3.58" (90.9 mm)	0.79" (20.0 mm)	0.64" (16.2 mm)
WTA12-25mmDFRN-1	3/4"	25 mm	0.63" (16.0 mm)	3.58" (90.9 mm)	0.98" (25.0 mm)	0.82" (21.0 mm)
WTA12-32mmDFRN-1	3/4"	32 mm	0.63" (16.0 mm)	3.58" (90.9 mm)	1.26" (32.0 mm)	1.07" (27.3 mm)
WTA12-40mmDFRN-1	3/4"	40 mm	0.63" (16.0 mm)	3.89" (98.8 mm)	1.58" (40.0 mm)	1.39" (35.2 mm)
WTA12-50mmDFRN-1	3/4"	50 mm	0.63" (16.0 mm)	4.44" (112.8 mm)	1.97" (50.0 mm)	1.73" (44.0 mm)
WTA12-63mmDFRN-1	3/4"	63 mm	0.63" (16.0 mm)	4.44" (112.8 mm)	2.48" (63.0 mm)	2.24" (57.0 mm)
WTA16-25mmDFRN-1	1"	25 mm	0.88" (22.4 mm)	3.54" (89.9 mm)	0.98" (25.0 mm)	0.82" (21.0 mm)
WTA16-32mmDFRN-1	1"	32 mm	0.88" (22.4 mm)	3.53" (89.7 mm)	1.26" (32.0 mm)	1.07" (27.3 mm)
WTA16-40mmDFRN-1	1"	40 mm	0.88" (22.4 mm)	3.78" (96.0 mm)	1.58" (40.0 mm)	1.39" (35.2 mm)
WTA16-50mmDFRN-1	1"	50 mm	0.88" (22.4 mm)	4.68" (118.9 mm)	1.97" (50.0 mm)	1.73" (44.0 mm)
WTA16-63mmDFRN-1	1"	63 mm	0.88" (22.4 mm)	4.68" (118.9 mm)	2.48" (63.0 mm)	2.24" (57.0 mm)

Part Number	Dimensions			
	D	E	F	G
WTA4-20mmDFRN-1	1.50" (38.1 mm)	1.102" (28.0 mm)	.118" (3.0 mm)	.866" (22.0 mm)
WTA6-20mmDFRN-1	1.50" (38.1 mm)	1.102" (28.0 mm)	.118" (3.0 mm)	.866" (22.0 mm)
WTA8-20mmDFRN-1	1.50" (38.1 mm)	1.102" (28.0 mm)	.118" (3.0 mm)	.866" (22.0 mm)
WTA8-25mmDFRN-1	1.50" (38.1 mm)	1.102" (28.0 mm)	.118" (3.0 mm)	1.063" (27.0 mm)
WTA8-32mmDFRN-1	1.50" (38.1 mm)	1.102" (28.0 mm)	.118" (3.0 mm)	1.339" (34.0 mm)
WTA8-40mmDFRN-1	1.80" (45.7 mm)	1.457" (37.0 mm)	.118" (3.0 mm)	1.653" (42.0 mm)
WTA8-50mmDFRN-1	N/A	1.457" (37.0 mm)	.118" (3.0 mm)	2.047" (52.0 mm)
WTA8-63mmDFRN-1	N/A	1.460" (37.1 mm)	.124" (3.1 mm)	2.559" (65.0 mm)
WTA12-20mmDFRN-1	1.50" (38.1 mm)	1.102" (28.0 mm)	.118" (3.0 mm)	.866" (22.0 mm)
WTA12-25mmDFRN-1	1.50" (38.1 mm)	1.102" (28.0 mm)	.118" (3.0 mm)	1.063" (27.0 mm)
WTA12-32mmDFRN-1	1.50" (38.1 mm)	1.102" (28.0 mm)	.118" (3.0 mm)	1.339" (34.0 mm)
WTA12-40mmDFRN-1	1.82" (46.2 mm)	1.457" (37.0 mm)	.118" (3.0 mm)	1.653" (42.0 mm)
WTA12-50mmDFRN-1	N/A	1.457" (37.0 mm)	.118" (3.0 mm)	2.047" (52.0 mm)
WTA12-63mmDFRN-1	N/A	1.460" (37.1 mm)	.124" (3.1 mm)	2.559" (65.0 mm)
WTA16-25mmDFRN-1	1.50" (38.1 mm)	1.102" (28.0 mm)	.118" (3.0 mm)	1.063" (27.0 mm)
WTA16-32mmDFRN-1	1.50" (38.1 mm)	1.102" (28.0 mm)	.118" (3.0 mm)	1.339" (34.0 mm)
WTA16-40mmDFRN-1	1.83" (46.5 mm)	1.457" (37.0 mm)	.118" (3.0 mm)	1.653" (42.0 mm)
WTA16-50mmDFRN-1	N/A	1.457" (37.0 mm)	.118" (3.0 mm)	2.047" (52.0 mm)
WTA16-63mmDFRN-1	N/A	1.460" (37.1 mm)	.124" (3.1 mm)	2.559" (65.0 mm)

FlareLock® II, PFA

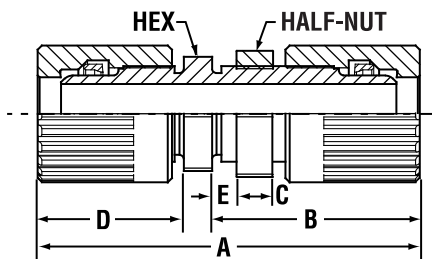
Straight Union



Part Number	O.D.		Dimensions			Hex
	Tube Size	Orifice	A	B		
SU4FN-II	1/4"	0.13" (3.3 mm)	2.50" (63.5 mm)	1.11" (28.2 mm)		11/16"
SU6FN-II	3/8"	0.25" (6.4 mm)	2.83" (71.9 mm)	1.28" (32.5 mm)		13/16"
SU8FN-II	1/2"	0.38" (9.7 mm)	2.92" (74.2 mm)	1.32" (33.5 mm)		15/16"
SU12FN-II	3/4"	0.63" (16.0 mm)	3.29" (83.6 mm)	1.50" (38.1 mm)		1 3/16"
SU16FN-II	1"	0.88" (22.4 mm)	4.06" (103.1 mm)	1.89" (48.0 mm)		1 7/16"

Nut and split locking ring are PFA material.

Straight Union Panel Mount



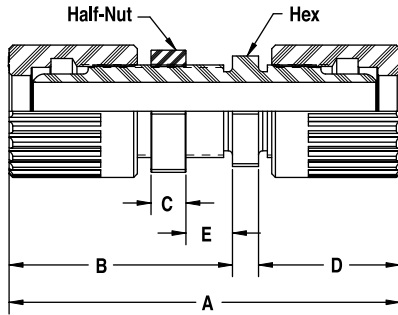
Part Number	O.D.		Dimensions		
	Tube Size	Orifice	A	B	C
PM4FN-II	1/4"	0.13" (3.3 mm)	3.01" (76.5 mm)	1.61" (40.9 mm)	0.28" (7.1 mm)
PM6FN-II	3/8"	0.25" (6.4 mm)	3.35" (85.1 mm)	1.78" (45.2 mm)	0.28" (7.1 mm)
PM8FN-II	1/2"	0.38" (9.7 mm)	3.41" (86.6 mm)	1.82" (46.2 mm)	0.28" (7.1 mm)
PM12FN-II	3/4"	0.63" (16.0 mm)	3.92" (99.6 mm)	2.13" (54.1 mm)	0.28" (7.1 mm)
PM16FN-II	1"	0.88" (22.4 mm)	4.50" (114.3 mm)	2.35" (59.7 mm)	0.28" (7.1 mm)

Part Number	Dimensions		Hex	Half-Nut	Half-Nut Part Number
	D	E _(max)			
PM4FN-II	1.11" (28.2 mm)	0.25" (6.4 mm)	11/16"	11/16"	HN5
PM6FN-II	1.28" (32.5 mm)	0.25" (6.4 mm)	13/16"	15/16"	HN6
PM8FN-II	1.32" (33.5 mm)	0.25" (6.4 mm)	15/16"	1 1/16"	HN8†
PM12FN-II	1.50" (38.1 mm)	0.25" (6.4 mm)	1 3/16"	1 5/16"	HN12†
PM16FN-II	1.90" (48.3 mm)	0.25" (6.4 mm)	1 3/4"	1 3/4"	HN16†

*Nut and split locking ring are PFA material.
†Panel mount nut material is Natural PVDF.*

FlareLock® II, PFA

Straight Union, Panel Mount, Extended

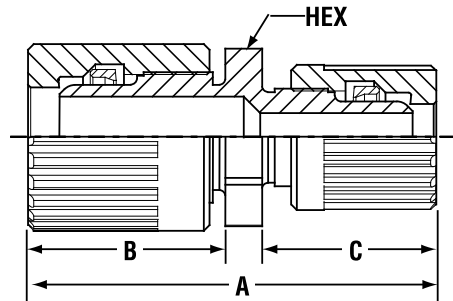


Part Number	O.D. Tube Size	Orifice	Dimensions		
			A	B	C
PMX12FN-II	3/4"	0.63" (16.0 mm)	4.20" (106.7 mm)	2.40" (61.0 mm)	0.38" (9.7 mm)

Part Number	Dimensions		Hex	Half-Nut	Panel Mount Hole Diameter	Half-Nut Part Number
	D	E (max)				
PMX12FN-II	1.52" (38.6 mm)	0.50" (12.7 mm)	1 3/16"	1 5/16"	1.00" (25.4 mm)	HN12†

†Panel mount nut material is natural PVDF.

Straight Union Reducer

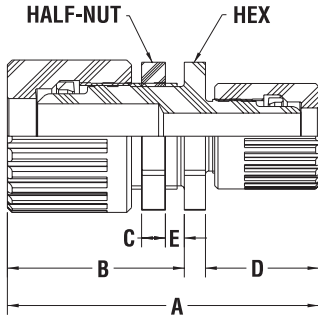


Part Number	O.D. Tube Size	Orifice	Dimensions			
			A	B	C	Hex
SU6-4FN-II	3/8" × 1/4"	0.13" (3.3 mm)	2.66" (67.6 mm)	1.24" (31.5 mm)	1.14" (29.0 mm)	13/16"
SU8-4FN-II	1/2" × 1/4"	0.13" (3.3 mm)	2.70" (68.6 mm)	1.24" (31.5 mm)	1.18" (30.0 mm)	15/16"
SU8-6FN-II	1/2" × 3/8"	0.25" (6.4 mm)	2.87" (72.9 mm)	1.28" (32.5 mm)	1.31" (33.3 mm)	15/16"
SU12-4FN-II	3/4" × 1/4"	0.13" (3.3 mm)	2.89" (73.4 mm)	1.43" (36.3 mm)	1.18" (30.0 mm)	1 3/16"
SU12-6FN-II	3/4" × 3/8"	0.25" (6.4 mm)	3.07" (78.0 mm)	1.46" (37.1 mm)	1.32" (33.5 mm)	1 3/16"
SU12-8FN-II	3/4" × 1/2"	0.38" (9.7 mm)	3.10" (78.7 mm)	1.50" (38.1 mm)	1.32" (33.5 mm)	1 3/16"
SU16-12FN-II	1" × 3/4"	0.63" (16.0 mm)	3.67" (93.2 mm)	1.88" (47.8 mm)	1.50" (38.1 mm)	1 7/16"

Nut and split locking ring are PFA material.

FlareLock® II, PFA

Straight Union, Reducer, Panel Mount

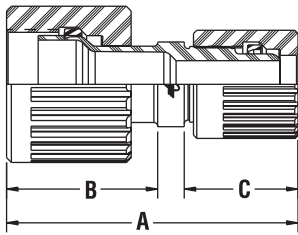


Part Number	O.D. Tube Size	Orifice	A	B	C	D
PM16-12FN-II	1" x 3/4"	0.63" (16.0 mm)	4.12" (104.6 mm)	2.34" (59.4 mm)	0.32" (8.1 mm)	1.50" (38.1 mm)

Part Number	E	Hex	Half-Nut	Panel Mount Hole Diameter	Half Nut Part Number
PM16-12FN-II	0.25" (6.4 mm)	1 3/4"	1 3/4"	1.50" (38.1 mm)	HN16+

*Nut and split locking ring are PFA material.
†Panel mount nut material is Natural PVDF.*

Straight Adapter, Reducer, Flaretek® "SpaceSaver"

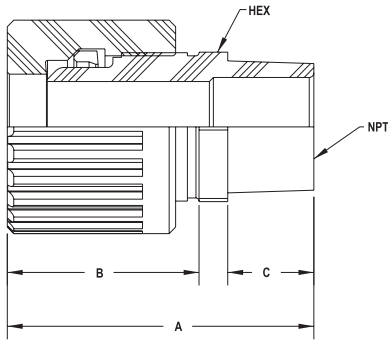


Part Number	O.D. Tube Size	Orifice	A	B	C
SU12T-6FN-II	3/4" x 3/8"	0.25" (6.4 mm)	3.14" (79.8 mm)	1.62" (41.1 mm)	1.24" (31.5 mm)
SU16T-12FN-II	1" x 3/4"	0.63" (16.0 mm)	3.89" (98.8 mm)	2.04" (51.8 mm)	1.50" (38.1 mm)

Nut and split locking ring are PFA material.

FlareLock® II, PFA

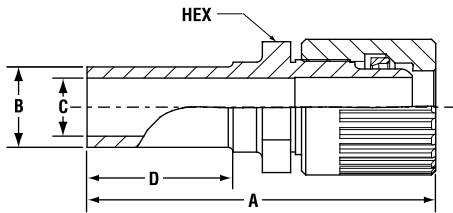
Straight Adapter, MNPT



Part Number	O.D. Tube Size	MNPT Size	Orifice	Dimensions			
				A	B	C	Hex
C8-8FN-II	1/2"	1/2"	0.38" (9.7 mm)	2.28" (57.9 mm)	1.33" (33.8 mm)	0.67" (17.0 mm)	15/16"
C12-16FN-II	3/4"	1"	0.63" (16.0 mm)	2.63" (66.8 mm)	1.51" (38.4 mm)	0.84" (21.3 mm)	1 7/16"
C16-12FN-II	1"	3/4"	0.66" (16.8 mm)	2.83" (71.9 mm)	1.88" (47.8 mm)	0.67" (17.0 mm)	1 7/16"
C16-16FN-II	1"	1"	0.88" (22.4 mm)	2.99" (75.9 mm)	1.87" (47.5 mm)	0.84" (21.3 mm)	1 7/16"

Nut and split locking ring are PFA material.

Straight Adapter, PureBond® Pipe

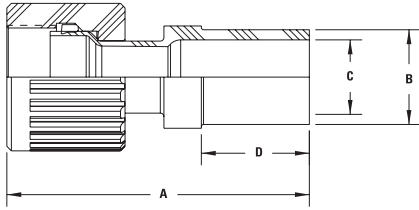


Part Number	O.D. Tube Size	Pipe Size	Orifice	Dimensions				
				A	B	C	D	Hex
WTA4-4PFN-II	1/4"	1/4"	0.13" (3.30 mm)	1.94" (49.3 mm)	0.54" (13.7 mm)	0.35" (8.9 mm)	0.55" (14.0 mm)	11/16"
WTA8-8PFN-II	1/2"	1/2"	0.38" (9.65 mm)	3.39" (86.1 mm)	0.84" (21.3 mm)	0.61" (15.5 mm)	1.50" (38.1 mm)	15/16"
WTA12-8PFN-II	3/4"	1/2"	0.62" (15.75 mm)	3.58" (90.9 mm)	0.84" (21.3 mm)	0.61" (15.4 mm)	1.50" (38.1 mm)	1 3/16"
WTA12-12PFN-II	3/4"	3/4"	0.63" (16.00 mm)	3.58" (90.9 mm)	1.05" (26.7 mm)	0.81" (20.6 mm)	1.50" (38.1 mm)	1 3/16"
WTA12-16PFN-II	3/4"	1"	0.63" (16.00 mm)	3.58" (90.9 mm)	1.32" (33.4 mm)	1.03" (26.2 mm)	1.50" (38.1 mm)	1 7/16"
WTA16-12PFN-II	1"	3/4"	0.82" (20.83 mm)	3.96" (100.6 mm)	1.05" (26.7 mm)	0.81" (20.5 mm)	1.50" (38.1 mm)	1 7/16"
WTA16-16PFN-II	1"	1"	0.88" (22.35 mm)	3.94" (100.1 mm)	1.32" (33.4 mm)	1.03" (26.3 mm)	1.50" (38.1 mm)	1 7/16"

Nut and split locking ring are PFA material.

FlareLock® II, PFA

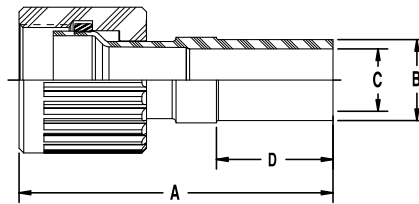
Straight Adapter, PureBond® Pipe, "SpaceSaver"



Part Number	"SpaceSaver" Size	Pipe Size	Orifice	Dimensions			
				A	B	C	D
WTA8-8TFN-II	1/2"	1/2"	0.38" (9.65 mm)	3.34" (84.8 mm)	0.84" (21.3 mm)	0.61" (15.5 mm)	1.50" (38.1 mm)
WTA12-12TFN-II	3/4"	3/4"	0.63" (16.00 mm)	3.64" (92.5 mm)	1.05" (26.7 mm)	0.81" (20.6 mm)	1.50" (38.1 mm)
WTA16-16TFN-II	1"	1"	0.88" (22.35 mm)	4.04" (102.6 mm)	1.32" (33.5 mm)	1.03" (26.2 mm)	1.50" (38.1 mm)

Nut and split locking ring are PFA material.

Straight Adapter, Reducer, PureBond® Pipe, "SpaceSaver"

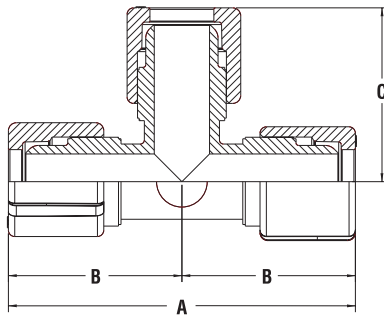


Part Number	"SpaceSaver" Size	Pipe Size	Orifice	Dimensions			
				A	B	C	D
WTA12-16TFN-II	3/4"	1"	0.63" (16.0 mm)	2.90" (73.7 mm)	1.32" (33.5 mm)	1.03" (26.2 mm)	0.75" (19.0 mm)
WTA16-12TFN-II	1"	3/4"	0.82" (20.8 mm)	4.04" (102.6 mm)	1.05" (26.7 mm)	0.81" (20.6 mm)	1.50" (38.1 mm)

Nut and split locking ring are PFA material.

Flaretek[®], PFA

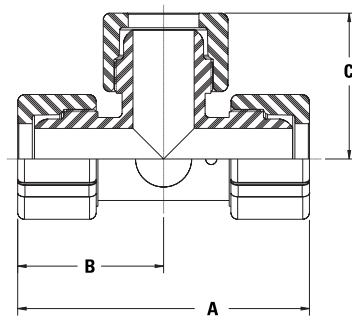
Tee Union



Part* Number	O.D. Tube Size	Orifice	Dimensions		
			A	B	C
UT4FN-1	1/4"	0.13" (3.3 mm)	3.22" (81.8 mm)	1.61" (40.9 mm)	1.61" (40.9 mm)
UT6FN-1	3/8"	0.25" (6.4 mm)	3.46" (87.9 mm)	1.73" (43.9 mm)	1.73" (43.9 mm)
UT8FN-1	1/2"	0.38" (9.7 mm)	3.65" (92.7 mm)	1.83" (46.5 mm)	1.83" (46.5 mm)
UT12FN-1	3/4"	0.63" (16.0 mm)	4.36" (110.7 mm)	2.18" (55.4 mm)	2.18" (55.4 mm)
UT16FN-1	1"	0.88" (22.4 mm)	5.40" (137.2 mm)	2.70" (68.6 mm)	2.70" (68.6 mm)

*Also available in PFA(-3) and CPFA(-6) nuts. Please allow 4 to 6 weeks for delivery.

Tee Union, Reduced Footprint

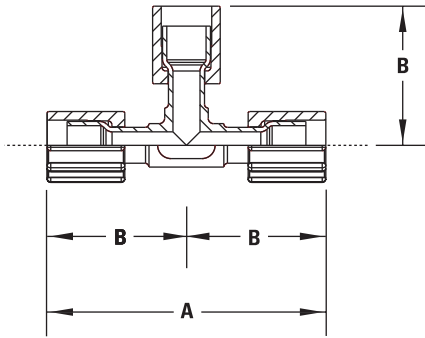


Part* Number	O.D. Tube Size	Orifice	A	Dimensions		Wrench Part Number	Recommended Torque
				B	C		
UT20FN-3S	1 1/4"	1.09" (27.7 mm)	5.70" (144.8 mm)	2.85" (72.4 mm)	2.84" (72.1 mm)	213-200	80 in•lbs (9.0 N•m)

*Also available in PVDF(-1S) nuts. PVDF nut dimensions are slightly smaller.

Flaretek[®], PFA

Tee Union, "SpaceSaver", PFA Plus



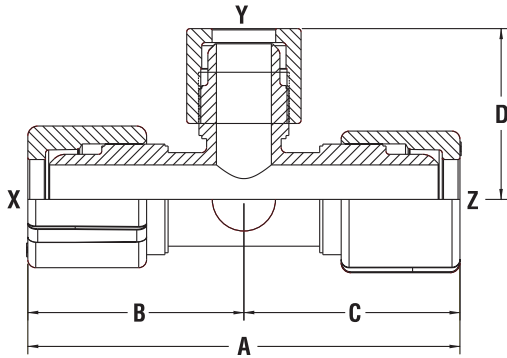
Part*† Number	"SpaceSaver"		Dimensions	
	Size	Orifice	A	B
UT4TFN-3X	1/4"	0.16" (4.1 mm)	3.34" (84.8 mm)	1.67" (42.4 mm)
UT6TFN-3X	3/8"	0.25" (6.4 mm)	3.46" (87.9 mm)	1.73" (43.9 mm)
UT8TFN-3X	1/2"	0.38" (9.7 mm)	3.68" (93.5 mm)	1.84" (46.7 mm)
UT12TFN-3X	3/4"	0.63" (16.0 mm)	4.42" (112.3 mm)	2.21" (56.1 mm)
UT16TFN-3X	1"	0.88" (22.4 mm)	5.96" (151.4 mm)	2.98" (75.7 mm)

*Also available in PVDF (-1X) nuts.

†Fitting also available in PFA material. To order, replace "-3X" with "-1" for PVDF nuts, "-3" for PFA nuts or "-6" for CPFA nuts.

Flaretek[®], PFA

Tee Union, Reducer

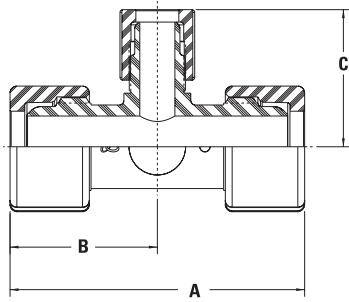


Part* Number	O.D. Tube Size	Orifice	Dimensions			
			A	B	C	D
UT4-4-6FN-1	1/4" × 1/4" × 3/8"	0.13" (3.3 mm)	3.34" (84.8 mm)	1.61" (40.9 mm)	1.73" (43.9 mm)	1.61" (40.9 mm)
UT4-6-4FN-1	1/4" × 3/8" × 1/4"	0.13" (3.3 mm)	3.26" (82.8 mm)	1.63" (41.4 mm)	1.63" (41.4 mm)	1.72" (43.7 mm)
UT4-6-6FN-1	1/4" × 3/8" × 3/8"	0.13" (3.3 mm)	3.34" (84.8 mm)	1.61" (40.9 mm)	1.73" (43.9 mm)	1.73" (43.9 mm)
UT6-4-6FN-1	3/8" × 1/4" × 3/8"	0.13" (3.3 mm)	3.46" (87.9 mm)	1.73" (43.9 mm)	1.73" (43.9 mm)	1.61" (40.9 mm)
UT6-8-6FN-1	3/8" × 1/2" × 3/8"	0.25" (6.4 mm)	3.46" (87.9 mm)	1.73" (43.9 mm)	1.73" (43.9 mm)	1.81" (46.0 mm)
UT6-12-6FN-1	3/8" × 3/4" × 3/8"	0.25" (6.4 mm)	3.80" (96.5 mm)	1.90" (48.3 mm)	1.90" (48.3 mm)	2.22" (56.4 mm)
UT8-4-4FN-1	1/2" × 1/4" × 1/4"	0.13" (3.3 mm)	3.44" (87.4 mm)	1.83" (46.5 mm)	1.61" (40.9 mm)	1.61" (40.9 mm)
UT8-4-8FN-1	1/2" × 1/4" × 1/2"	0.13" (3.3 mm)	3.66" (93.0 mm)	1.83" (46.5 mm)	1.83" (46.5 mm)	1.61" (40.9 mm)
UT8-8-4FN-1	1/2" × 1/2" × 1/4"	0.13" (3.3 mm)	3.45" (87.6 mm)	1.84" (46.7 mm)	1.61" (40.9 mm)	1.84" (46.7 mm)
UT8-6-6FN-1	1/2" × 3/8" × 3/8"	0.25" (6.4 mm)	3.56" (90.4 mm)	1.83" (46.5 mm)	1.73" (43.9 mm)	1.73" (43.9 mm)
UT8-6-8FN-1	1/2" × 3/8" × 1/2"	0.25" (6.4 mm)	3.66" (93.0 mm)	1.83" (46.5 mm)	1.83" (46.5 mm)	1.74" (44.2 mm)
UT8-8-6FN-1	1/2" × 1/2" × 3/8"	0.25" (6.4 mm)	3.61" (91.7 mm)	1.83" (46.5 mm)	1.78" (45.2 mm)	1.76" (44.7 mm)
UT8-12-8FN-1	1/2" × 3/4" × 1/2"	0.38" (9.7 mm)	3.66" (93.0 mm)	1.83" (46.5 mm)	1.83" (46.5 mm)	1.96" (49.8 mm)
UT8-16-8FN-1	1/2" × 1" × 1/2"	0.38" (9.7 mm)	4.52" (114.8 mm)	2.26" (57.4 mm)	2.26" (57.4 mm)	2.70" (68.6 mm)
UT8-16-16FN-1	1/2" × 1" × 1"	0.38" (9.7 mm)	4.95" (125.7 mm)	2.28" (57.9 mm)	2.67" (67.8 mm)	2.70" (68.6 mm)
UT12-4-12FN-1	3/4" × 1/4" × 3/4"	0.13" (3.3 mm)	4.36" (110.7 mm)	2.18" (55.4 mm)	2.18" (55.4 mm)	1.79" (45.5 mm)
UT12-6-12FN-1	3/4" × 3/8" × 3/4"	0.25" (6.4 mm)	4.36" (110.7 mm)	2.18" (55.4 mm)	2.18" (55.4 mm)	1.98" (50.3 mm)
UT12-8-4FN-1	3/4" × 1/2" × 1/4"	0.13" (3.3 mm)	3.94" (100.1 mm)	2.18" (55.4 mm)	1.76" (44.7 mm)	2.01" (51.1 mm)
UT12-8-8FN-1	3/4" × 1/2" × 1/2"	0.38" (9.7 mm)	4.18" (106.2 mm)	2.18" (55.4 mm)	2.00" (50.8 mm)	2.00" (50.8 mm)
UT12-8-12FN-1	3/4" × 1/2" × 3/4"	0.38" (9.7 mm)	4.36" (110.7 mm)	2.18" (55.4 mm)	2.18" (55.4 mm)	2.00" (50.8 mm)
UT12-12-6FN-1	3/4" × 3/4" × 3/8"	0.25" (6.4 mm)	4.11" (104.4 mm)	2.21" (56.1 mm)	1.90" (48.3 mm)	2.18" (55.4 mm)
UT12-12-8FN-1	3/4" × 3/4" × 1/2"	0.38" (9.7 mm)	4.18" (106.2 mm)	2.18" (55.4 mm)	2.00" (50.8 mm)	2.18" (55.4 mm)
UT12-16-12FN-1	3/4" × 1" × 3/4"	0.63" (16.0 mm)	4.88" (124.0 mm)	2.44" (62.0 mm)	2.44" (62.0 mm)	2.70" (68.6 mm)
UT12-16-16FN-1	3/4" × 1" × 1"	0.63" (16.0 mm)	5.12" (130.0 mm)	2.45" (62.2 mm)	2.67" (67.8 mm)	2.70" (68.6 mm)
UT16-6-16FN-1	1" × 3/8" × 1"	0.25" (6.4 mm)	5.38" (136.7 mm)	2.69" (68.3 mm)	2.69" (68.3 mm)	2.39" (60.7 mm)
UT16-8-16FN-1	1" × 1/2" × 1"	0.38" (9.7 mm)	5.38" (136.7 mm)	2.69" (68.3 mm)	2.69" (68.3 mm)	2.27" (57.7 mm)
UT16-12-16FN-1	1" × 3/4" × 1"	0.63" (16.0 mm)	5.36" (136.1 mm)	2.68" (68.1 mm)	2.68" (68.1 mm)	2.43" (61.7 mm)

*Also available in PFA(-3) and CPFA(-6) nuts.

Flaretek[®], PFA

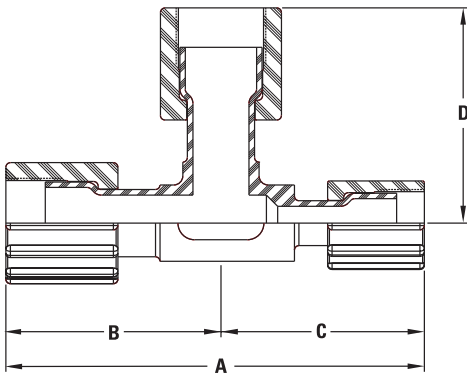
Tee Union, Reducer, Reduced Footprint



Part*	O.D.			Dimensions		
Number	Tube Size	Orifice	A	B	C	
UT20-8-20FN-3SF	1 1/4" × 1/2" × 1 1/4"	0.38" (9.7 mm)	5.70" (144.8 mm)	2.85" (72.4 mm)	2.49" (63.2 mm)	
UT20-12-20FN-3SF	1 1/4" × 3/4" × 1 1/4"	0.63" (16.0 mm)	5.70" (144.8 mm)	2.85" (72.4 mm)	2.46" (62.5 mm)	
UT20-16-20FN-3SF	1 1/4" × 1" × 1 1/4"	0.88" (22.4 mm)	5.70" (144.8 mm)	2.85" (72.4 mm)	3.07" (78.0 mm)	

*Also available in PVDF (-15F) nuts. PVDF nut dimensions are slightly smaller.

Tee Union, Reducer, "SpaceSaver", PFA Plus



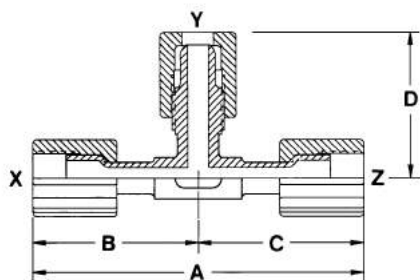
Part†	"SpaceSaver"			Dimensions			
Number	Size	Orifice	A	B	C	D	
UT12T-12T-8TFN-3X	3/4" × 3/4" × 1/2"	0.38" (9.7 mm)	4.20" (106.7 mm)	2.14" (54.4 mm)	2.06" (52.3 mm)	2.21" (56.1 mm)	

*Also available in PVDF (-1X) nuts.

†Fitting also available in PFA material. To order, replace "-3X" with "-1" for PVDF nuts, "-3" for PFA nuts or "-6" for CPFA nuts.

Flaretek[®], PFA

Tee Adapter, "SpaceSaver", PFA Plus

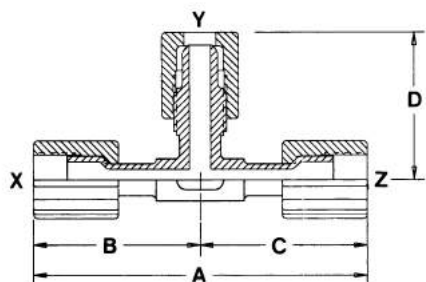


Part*† Number	"SpaceSaver"		O.D.	"SpaceSaver"	Orifice	Dimensions			
	Size	Tube Size	Size	A		B	C	D	
UT4T-4-4TFN-3X	1/4"	1/4"	1/4"	1/4"	0.13" (3.3 mm)	3.32" (84.3 mm)	1.66" (42.2 mm)	1.66" (42.2 mm)	1.65" (41.9 mm)
UT6T-6-6TFN-3X	3/8"	3/8"	3/8"	3/8"	0.25" (6.4 mm)	3.50" (88.9 mm)	1.75" (44.4 mm)	1.75" (44.4 mm)	1.76" (44.7 mm)
UT8T-8-8TFN-3X	1/2"	1/2"	1/2"	1/2"	0.38" (9.7 mm)	3.64" (92.5 mm)	1.82" (46.2 mm)	1.82" (46.2 mm)	1.84" (46.7 mm)
UT12T-12-12TFN-3X	3/4"	3/4"	3/4"	3/4"	0.63" (16.0 mm)	4.42" (112.3 mm)	2.21" (56.1 mm)	2.21" (56.1 mm)	2.20" (55.9 mm)
UT16T-16-16TFN-3X	1"	1"	1"	1"	0.88" (22.4 mm)	5.96" (151.4 mm)	2.98" (75.7 mm)	2.98" (75.7 mm)	2.85" (72.4 mm)

*Also available in PVDF (-1X) nuts.

†Fitting also available in PFA material. To order, replace "-3X" with "-1" for PVDF nuts, "-3" for PFA nuts or "-6" for CPFA nuts.

Tee Adapter, Reducer, "SpaceSaver", PFA Plus



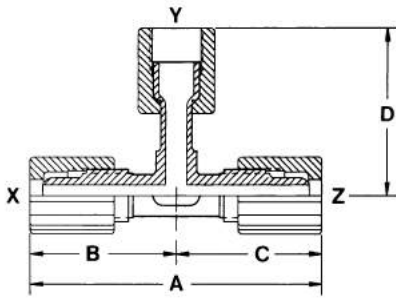
Part*† Number	"SpaceSaver"		O.D.	"SpaceSaver"	Orifice	Dimensions			
	Size	Tube Size	Size	A		B	C	D	
UT8T-12-8TFN-3X	1/2"	3/4"	1/2"	1/2"	0.38" (9.7 mm)	4.00" (101.6 mm)	2.00" (50.8 mm)	2.00" (50.8 mm)	2.20" (55.9 mm)
UT12T-6-12TFN-3X	3/4"	3/8"	3/4"	3/4"	0.25" (6.4 mm)	4.42" (112.3 mm)	2.21" (56.1 mm)	2.21" (56.1 mm)	1.94" (49.3 mm)
UT12T-8-12TFN-3X	3/4"	1/2"	3/4"	3/4"	0.38" (9.7 mm)	4.42" (112.3 mm)	2.21" (56.1 mm)	2.21" (56.1 mm)	2.02" (51.3 mm)
UT16T-8-16TFN-3X	1"	1/2"	1"	1"	0.38" (9.7 mm)	5.96" (151.4 mm)	2.98" (75.7 mm)	2.98" (75.7 mm)	2.28" (57.9 mm)
UT16T-12-16TFN-3X	1"	3/4"	1"	1"	0.63" (16.0 mm)	5.96" (151.4 mm)	2.98" (75.7 mm)	2.98" (75.7 mm)	2.46" (62.5 mm)

*Also available in PVDF (-1X) nuts.

†Fitting also available in PFA material. To order, replace "-3X" with "-1" for PVDF nuts, "-3" for PFA nuts or "-6" for CPFA nuts.

Flaretek® , PFA

Tee Adapter, "SpaceSaver", PFA Plus

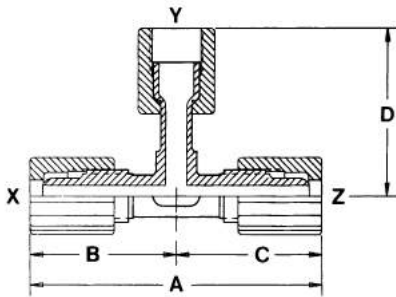


Part*† Number	O.D. "SpaceSaver"		O.D. Tube Size	Orifice	Dimensions			
	Tube Size	Size			A	B	C	D
UT4-4T-4FN-3X	1/4"	1/4"	1/4"	0.13" (3.3 mm)	3.28" (83.3 mm)	1.64" (41.7 mm)	1.64" (41.7 mm)	1.66" (42.2 mm)
UT6-6T-6FN-3X	3/8"	3/8"	3/8"	0.25" (6.4 mm)	3.51" (89.2 mm)	1.76" (44.7 mm)	1.75" (44.4 mm)	1.75" (44.4 mm)
UT8-8T-8FN-3X	1/2"	1/2"	1/2"	0.38" (9.7 mm)	3.67" (93.2 mm)	1.84" (46.7 mm)	1.83" (46.5 mm)	1.82" (46.2 mm)
UT12-12T-12FN-3X	3/4"	3/4"	3/4"	0.63" (16.0 mm)	4.40" (111.8 mm)	2.20" (55.9 mm)	2.20" (55.9 mm)	2.21" (56.1 mm)
UT16-16T-16FN-3X	1"	1"	1"	0.88" (22.4 mm)	5.70" (144.8 mm)	2.85" (72.4 mm)	2.85" (72.4 mm)	2.98" (75.7 mm)

*Also available in PVDF (-1X) nuts.

†Fitting also available in PFA material. To order, replace "-3X" with "-1" for PVDF nuts, "-3" for PFA nuts or "-6" for CPFA nuts.

Tee Adapter, Reducer, "SpaceSaver", PFA Plus



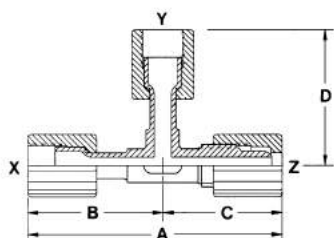
Part*† Number	O.D. "SpaceSaver"		O.D. Tube Size	Orifice	Dimensions			
	Tube Size	Size			A	B	C	D
UT6-4T-6FN-3X	3/8"	1/4"	3/8"	0.16" (4.1 mm)	3.52" (89.4 mm)	1.76" (44.7 mm)	1.76" (44.7 mm)	1.66" (42.2 mm)
UT8-6T-8FN-3X	1/2"	3/8"	1/2"	0.25" (6.4 mm)	3.69" (93.7 mm)	1.85" (47.0 mm)	1.84" (46.7 mm)	1.75" (44.4 mm)
UT8-12T-8FN-3X	1/2"	3/4"	1/2"	0.38" (9.7 mm)	4.00" (101.6 mm)	2.00" (50.8 mm)	2.00" (50.8 mm)	2.22" (56.4 mm)
UT8-16T-8FN-3X	1/2"	1"	1/2"	0.38" (9.7 mm)	4.56" (115.8 mm)	2.28" (57.9 mm)	2.28" (57.9 mm)	2.99" (75.9 mm)
UT12-8T-12FN-3X	3/4"	1/2"	3/4"	0.38" (9.7 mm)	4.36" (110.7 mm)	2.18" (55.4 mm)	2.18" (55.4 mm)	2.00" (50.8 mm)
UT16-8T-16FN-3X	1"	1/2"	1"	0.38" (9.7 mm)	5.66" (143.8 mm)	2.83" (71.9 mm)	2.83" (71.9 mm)	2.30" (58.4 mm)
UT16-12T-16FN-3X	1"	3/4"	1"	0.63" (16.0 mm)	5.66" (143.8 mm)	2.83" (71.9 mm)	2.83" (71.9 mm)	2.32" (58.9 mm)

*Also available in PVDF (-1X) nuts.

†Fitting also available in PFA material. To order, replace "-3X" with "-1" for PVDF nuts, "-3" for PFA nuts or "-6" for CPFA nuts.

Flaretek[®], PFA

Tee Adapter, "SpaceSaver", PFA Plus

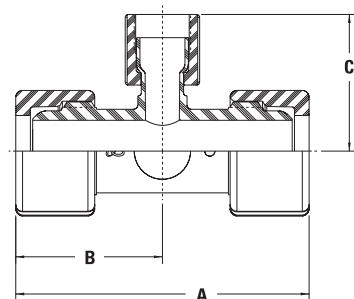


Part*† Number	"SpaceSaver" Size	O.D. Tube Size	Orifice	Dimensions			
				A	B	C	D
UT4T-4T-4FN-3X	1/4" × 1/4"	1/4"	0.13" (3.30 mm)	3.14" (79.76 mm)	1.66" (42.16 mm)	1.48" (37.59 mm)	1.66" (42.16 mm)
UT6T-6T-6FN-3X	3/8" × 3/8"	3/8"	0.25" (6.35 mm)	3.51" (89.15 mm)	1.75" (44.45 mm)	1.76" (44.70 mm)	1.75" (44.45 mm)
UT8T-8T-8FN-3X	1/2" × 1/2"	1/2"	0.38" (9.65 mm)	3.67" (93.22 mm)	1.82" (46.23 mm)	1.85" (46.99 mm)	1.82" (46.23 mm)
UT12T-12T-12FN-3X	3/4" × 3/4"	3/4"	0.63" (16.00 mm)	4.39" (111.51 mm)	2.21" (56.13 mm)	2.18" (55.37 mm)	2.21" (56.13 mm)
UT16T-16T-16FN-3X	1" × 1"	1"	0.88" (22.35 mm)	5.52" (140.21 mm)	2.83" (71.88 mm)	2.69" (68.33 mm)	2.83" (71.88 mm)

*Also available in PVDF (-1X) nuts.

†Fitting also available in PFA material. To order, replace "-3X" with "-1" for PVDF nuts, "-3" for PFA nuts or "-6" for CPFA nuts.

Tee Adapter, Reducer, "SpaceSaver", Reduced Footprint

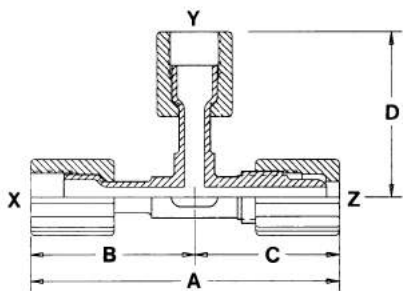


Part* Number	O.D. Tube Size	"SpaceSaver" Size	O.D. Tube Size	Orifice	Dimensions		
					A	B	C
UT20-12T-20FN-3SF	1 1/4"	3/4"	1 1/4"	0.63" (16.0 mm)	5.70" (144.8 mm)	2.85" (72.4 mm)	2.71" (68.8 mm)
UT20-16T-20FN-3SF	1 1/4"	1"	1 1/4"	0.88" (22.4 mm)	5.70" (144.8 mm)	2.85" (72.4 mm)	3.18" (80.8 mm)

*Also available in PVDF (-1SF) nuts. PVDF nut dimensions are slightly smaller.

Flaretek[®], PFA

Tee Adapter, Reducer, "SpaceSaver", PFA Plus

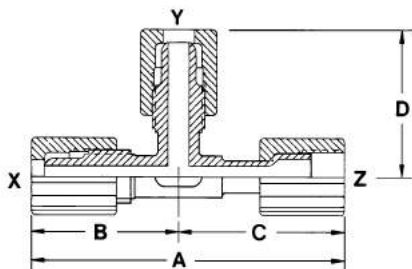


Part*† Number	"SpaceSaver" Size	O.D. Tube Size	Orifice	Dimensions			
				A	B	C	D
UT12T-8T-12FN-3X	3/4" × 1/2"	3/4"	0.38" (9.7 mm)	4.39" (111.5 mm)	2.21" (56.1 mm)	2.18" (55.4 mm)	2.00" (50.8 mm)
UT12T-12T-8FN-3X	3/4" × 3/4"	1/2"	0.38" (9.7 mm)	4.22" (107.2 mm)	2.21" (56.1 mm)	2.01" (51.1 mm)	2.21" (56.1 mm)

*Also available in PVDF (-1X) nuts.

†Fitting also available in PFA material. To order, replace "-3X" with "-1" for PVDF nuts, "-3" for PFA nuts or "-6" for CPFA nuts.

Tee Adapter, "SpaceSaver", PFA Plus



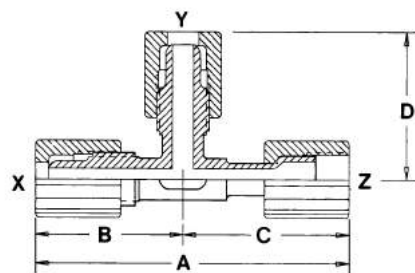
Part*† Number	O.D. Tube Size	"SpaceSaver" Size	Orifice	Dimensions			
				A	B	C	D
UT4-4-4TFN-3X	1/4" × 1/4"	1/4"	0.13" (3.3 mm)	3.32" (84.3 mm)	1.65" (41.9 mm)	1.67" (42.4 mm)	1.65" (41.9 mm)
UT6-6-6TFN-3X	3/8" × 3/8"	3/8"	0.25" (6.4 mm)	3.51" (89.2 mm)	1.76" (44.7 mm)	1.75" (44.4 mm)	1.76" (44.7 mm)
UT8-8-8TFN-3X	1/2" × 1/2"	1/2"	0.38" (9.7 mm)	3.67" (93.2 mm)	1.85" (47.0 mm)	1.82" (46.2 mm)	1.85" (47.0 mm)
UT12-12-12TFN-3X	3/4" × 3/4"	3/4"	0.63" (16.0 mm)	4.41" (112.0 mm)	2.20" (55.9 mm)	2.21" (56.1 mm)	2.20" (55.9 mm)
UT16-16-16TFN-3X	1" × 1"	1"	0.88" (22.4 mm)	5.80" (147.3 mm)	2.83" (71.9 mm)	2.97" (75.4 mm)	2.85" (72.4 mm)

*Also available in PVDF (-1X) nuts.

†Fitting also available in PFA material. To order, replace "-3X" with "-1" for PVDF nuts, "-3" for PFA nuts or "-6" for CPFA nuts.

Flaretek[®], PFA

Tee Adapter, Reducer, "SpaceSaver", PFA Plus

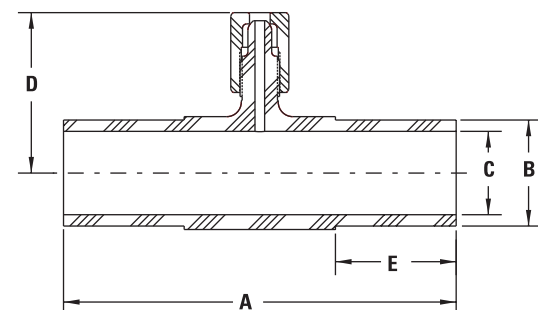


Part* Number	O.D. Tube Size	"SpaceSaver" Size	Orifice	Dimensions			
				A	B	C	D
UT4-6-4TFN-3X	1/4" × 3/8"	1/4"	0.13" (3.3 mm)	3.31" (84.1 mm)	1.65" (41.9 mm)	1.66" (42.2 mm)	1.76" (44.7 mm)
UT6-4-6TFN-3X	3/8" × 1/4"	3/8"	0.13" (3.3 mm)	3.51" (89.2 mm)	1.76" (44.7 mm)	1.75" (44.4 mm)	1.66" (42.2 mm)
UT8-4-8TFN-3X	1/2" × 1/4"	1/2"	0.13" (3.3 mm)	3.67" (93.2 mm)	1.85" (47.0 mm)	1.82" (46.2 mm)	1.65" (41.9 mm)
UT12-6-12TFN-3X	3/4" × 3/8"	3/4"	0.25" (6.4 mm)	4.40" (111.8 mm)	2.18" (55.4 mm)	2.22" (56.4 mm)	1.92" (48.8 mm)
UT12-8-12TFN-3X	3/4" × 1/2"	3/4"	0.38" (9.7 mm)	4.40" (111.8 mm)	2.18" (55.4 mm)	2.22" (56.4 mm)	2.03" (51.6 mm)
UT12-12-8TFN-3X	3/4" × 3/4"	1/2"	0.38" (9.7 mm)	4.20" (106.7 mm)	2.18" (55.4 mm)	2.02" (51.3 mm)	2.19" (55.6 mm)
UT16-8-16TFN-3X	1" × 1/2"	1"	0.38" (9.7 mm)	5.80" (147.3 mm)	2.83" (71.9 mm)	2.97" (75.4 mm)	2.30" (58.4 mm)
UT16-12-16TFN-3X	1" × 3/4"	1"	0.63" (16.0 mm)	5.80" (147.3 mm)	2.83" (71.9 mm)	2.97" (75.4 mm)	2.47" (62.7 mm)

*Also available in PVDF (-1X) nuts.

†Fitting also available in PFA material. To order, replace "-3X" with "-1" for PVDF nuts, "-3" for PFA nuts or "-6" for CPFA nuts.

Tee Adapter, PureBond[®] Pipe Branch

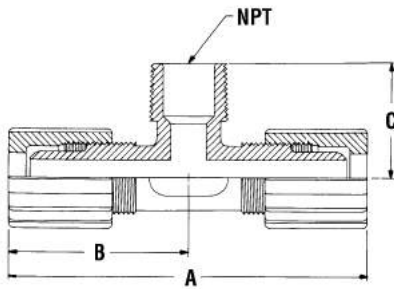


Part* Number	Pipe Size	O.D. Tube Size	Orifice	Dimensions				
				A	B	C	D	E
WBT8-4PFN-1	1/2"	1/4"	0.13" (3.3 mm)	4.44" (112.8 mm)	0.84" (21.3 mm)	0.61" (15.4 mm)	1.81" (46.0 mm)	1.50" (38.1 mm)
WBT12-12PFN-1	3/4"	3/4"	0.63" (16.0 mm)	4.63" (117.6 mm)	1.05" (26.7 mm)	0.81" (20.5 mm)	2.52" (64.0 mm)	1.50" (38.1 mm)
WBT12-16PFN-1	3/4"	1"	0.82" (20.8 mm)	4.62" (117.3 mm)	1.05" (26.7 mm)	0.81" (20.5 mm)	2.70" (68.6 mm)	1.50" (38.1 mm)
WBT12-4PFN-1	3/4"	1/4"	0.13" (3.3 mm)	4.61" (117.1 mm)	1.05" (26.7 mm)	0.81" (20.5 mm)	2.25" (57.2 mm)	1.50" (38.1 mm)
WBT16-4PFN-1	1"	1/4"	0.13" (3.3 mm)	4.88" (124.0 mm)	1.32" (33.4 mm)	1.03" (26.3 mm)	1.99" (50.5 mm)	1.43" (36.3 mm)

*Also available in PFA(-3) and CPFA(-6) nuts.

Flaretek[®], PFA

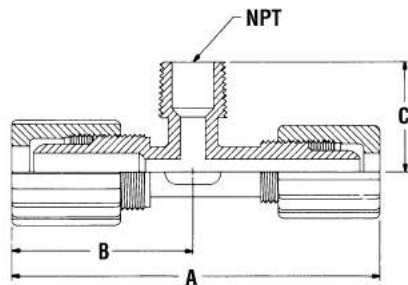
Tee Adapter, MNPT Branch



Part* Number	O.D. Tube Size	MNPT Size	O.D. Tube Size	Orifice	Dimensions		
					A	B	C
BT4-2FN-1	1/4"	1/8"	1/4"	0.13" (3.3 mm)	3.22" (81.8 mm)	1.61" (40.9 mm)	1.07" (27.2 mm)
BT4-4FN-1	1/4"	1/4"	1/4"	0.13" (3.3 mm)	3.20" (81.3 mm)	1.60" (40.6 mm)	1.07" (27.2 mm)
BT6-2FN-1	3/8"	1/8"	3/8"	0.20" (5.1 mm)	3.46" (87.9 mm)	1.73" (43.9 mm)	1.08" (27.4 mm)
BT6-4FN-1	3/8"	1/4"	3/8"	0.25" (6.4 mm)	3.46" (87.9 mm)	1.73" (43.9 mm)	1.08" (27.4 mm)
BT6-6FN-1	3/8"	3/8"	3/8"	0.25" (6.4 mm)	3.46" (87.9 mm)	1.73" (43.9 mm)	1.08" (27.4 mm)
BT6-8FN-1	3/8"	1/2"	3/8"	0.25" (6.4 mm)	3.48" (88.4 mm)	1.74" (44.2 mm)	1.18" (30.0 mm)
BT8-4FN-1	1/2"	1/4"	1/2"	0.28" (7.1 mm)	3.65" (92.7 mm)	1.83" (46.5 mm)	1.08" (27.4 mm)
BT8-8FN-1	1/2"	1/2"	1/2"	0.38" (9.7 mm)	3.65" (92.7 mm)	1.83" (46.5 mm)	1.18" (30.0 mm)
BT12-4FN-1	3/4"	1/4"	3/4"	0.28" (7.1 mm)	4.36" (110.7 mm)	2.18" (55.4 mm)	1.24" (31.5 mm)
BT12-8FN-1	3/4"	1/2"	3/4"	0.38" (9.7 mm)	4.36" (110.7 mm)	2.18" (55.4 mm)	1.35" (34.3 mm)
BT12-12FN-1	3/4"	3/4"	3/4"	0.63" (16.0 mm)	4.40" (111.8 mm)	2.20" (55.9 mm)	1.36" (34.5 mm)

*Also available in PFA(-3) and CPFA(-6) nuts.

Tee Adapter, Reducer, MNPT Branch

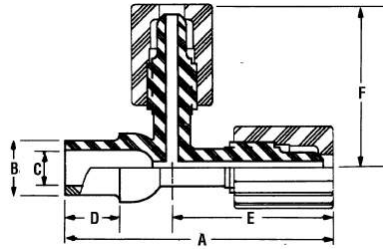


Part* Number	O.D. Tube Size	MNPT Size	O.D. Tube Size	Orifice	Dimensions		
					A	B	C
BT6-4-4FN-1	3/8"	1/4"	1/4"	0.13" (3.3 mm)	3.34" (84.8 mm)	1.73" (43.9 mm)	1.08" (27.4 mm)
BT6-6-4FN-1	3/8"	3/8"	1/4"	0.13" (3.3 mm)	3.34" (84.8 mm)	1.73" (43.9 mm)	1.08" (27.4 mm)
BT8-6-6FN-1	1/2"	3/8"	3/8"	0.25" (6.4 mm)	3.56" (90.4 mm)	1.83" (46.5 mm)	1.08" (27.4 mm)
BT8-8-4FN-1	1/2"	1/2"	1/4"	0.13" (3.3 mm)	3.44" (87.4 mm)	1.83" (46.5 mm)	1.18" (30.0 mm)

*Also available in PFA(-3) and CPFA(-6) nuts.

Flaretek[®], PFA

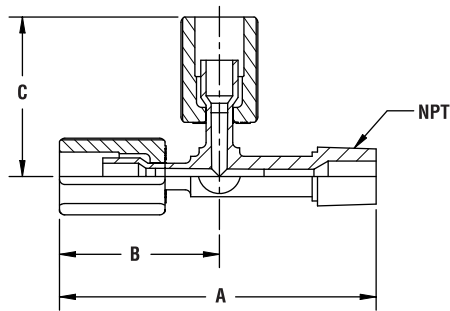
Tee Adapter, PureBond[®] Pipe Run



Part* Number	O.D. Tube Size	Pipe Size	Orifice	A	B	Dimensions			
						C	D	E	F
WT4-4PF-4PFN-1	1/4"	1/4"	0.13" (3.3 mm)	2.70" (68.6 mm)	0.54" (13.7 mm)	0.35" (9.0 mm)	0.55" (14.0 mm)	1.62" (41.1 mm)	1.62" (41.1 mm)

*Also available in PFA(-3) and CPFA(-6) nuts.

Tee Adapter, "SpaceSaver", MNPT Run, PFA Plus



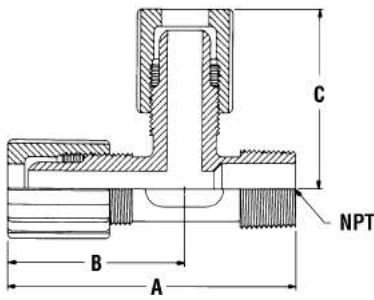
Part*† Number	O.D. Tube Size	MNPT Size	Orifice	A	Dimensions		
					B	C	
RT4-4TFN-3X	1/4" X 1/4"	1/4"	0.13" (3.3 mm)	2.48" (63.0 mm)	1.41" (35.8 mm)	1.41" (35.8 mm)	

*Also available in PVDF(-1X) nuts.

†Fitting also available in PFA material. To order, replace "-3X" with "-1" for PVDF nuts, "-3" for PFA nuts or "-6" for CPFA nuts.

Flaretek[®], PFA

Tee Adapter, MNPT Run

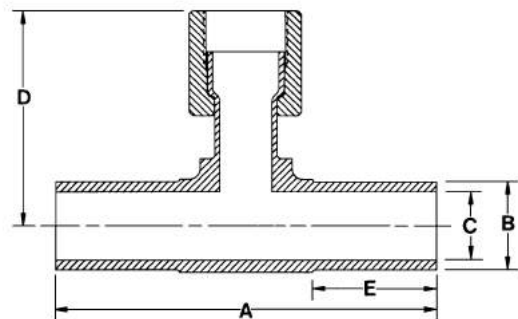


Part* Number	O.D. Tube Size	MNPT Size	Orifice	Dimensions		
				A	B	C
RT4-2FN-1	1/4" × 1/4"	1/8"	0.13" (3.3 mm)	2.68" (68.1 mm)	1.61" (40.9 mm)	1.61" (40.9 mm)
RT4-4FN-1	1/4" × 1/4"	1/4"	0.13" (3.3 mm)	2.68" (68.1 mm)	1.61" (40.9 mm)	1.61" (40.9 mm)
RT4-6FN-1	1/4" × 1/4"	3/8"	0.13" (3.3 mm)	2.68" (68.1 mm)	1.61" (40.9 mm)	1.61" (40.9 mm)
RT6-2FN-1	3/8" × 3/8"	1/8"	0.20" (5.1 mm)	2.80" (71.1 mm)	1.73" (43.9 mm)	1.73" (43.9 mm)
RT6-4FN-1	3/8" × 3/8"	1/4"	0.25" (6.4 mm)	2.80" (71.1 mm)	1.73" (43.9 mm)	1.73" (43.9 mm)
RT6-6FN-1	3/8" × 3/8"	3/8"	0.25" (6.4 mm)	2.80" (71.1 mm)	1.73" (43.9 mm)	1.73" (43.9 mm)
RT6-8FN-1	3/8" × 3/8"	1/2"	0.25" (6.4 mm)	2.91" (73.9 mm)	1.73" (43.9 mm)	1.73" (43.9 mm)
RT8-4FN-1	1/2" × 1/2"	1/4"	0.28" (7.1 mm)	2.89" (73.4 mm)	1.83" (46.5 mm)	1.83" (46.5 mm)
RT8-6FN-1	1/2" × 1/2"	3/8"	0.38" (9.7 mm)	2.89" (73.4 mm)	1.83" (46.5 mm)	1.83" (46.5 mm)
RT8-8FN-1	1/2" × 1/2"	1/2"	0.38" (9.7 mm)	3.01" (76.5 mm)	1.83" (46.5 mm)	1.83" (46.5 mm)
RT12-8FN-1	3/4" × 3/4"	1/2"	0.52" (13.2 mm)	3.55" (90.2 mm)	2.19" (55.6 mm)	2.19" (55.6 mm)
RT12-12FN-1	3/4" × 3/4"	3/4"	0.63" (16.0 mm)	3.54" (89.9 mm)	2.18" (55.4 mm)	2.18" (55.4 mm)

*Also available in PFA(-3) and CPFA(-6) nuts.

Flaretek[®], PFA

Tee Adapter, "SpaceSaver", PureBond[®] Pipe, PFA Plus



Part*† Number	"SpaceSaver" Size	Pipe Size	Orifice	Dimensions	
				A	B
WBT8-8PTN-3X	1/2"	1/2"	0.38" (9.7 mm)	2.94" (74.7 mm)	0.84" (21.3 mm)
WBT12-6PTN-3X	3/8"	3/4"	0.25" (6.4 mm)	3.10" (78.7 mm)	1.05" (26.7 mm)
WBT12-12PTN-3X	3/4"	3/4"	0.63" (16.0 mm)	4.60" (116.8 mm)	1.05" (26.7 mm)
WBT12-16PTN-3X	1"	3/4"	0.82" (20.8 mm)	4.60" (116.8 mm)	1.05" (26.7 mm)
WBT16-6PTN-3X	3/8"	1"	0.25" (6.4 mm)	3.40" (86.4 mm)	1.32" (33.4 mm)
WBT16-8PTN-3X	1/2"	1"	0.38" (9.7 mm)	3.40" (86.4 mm)	1.32" (33.4 mm)

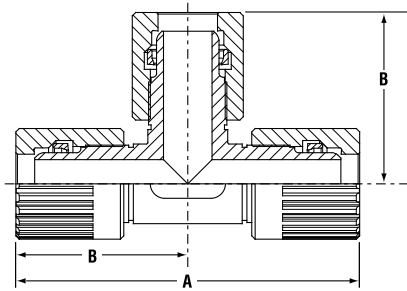
Part Number	C	D	E
WBT8-8PTN-3X	0.62" (15.7 mm)	2.01" (51.1 mm)	0.75" (19.0 mm)
WBT12-6PTN-3X	0.82" (20.9 mm)	2.03" (51.6 mm)	0.75" (19.0 mm)
WBT12-12PTN-3X	0.82" (20.8 mm)	2.33" (59.2 mm)	1.50" (38.1 mm)
WBT12-16PTN-3X	0.82" (20.8 mm)	2.83" (71.9 mm)	1.50" (38.1 mm)
WBT16-6PTN-3X	1.03" (26.3 mm)	2.18" (55.4 mm)	0.75" (19.0 mm)
WBT16-8PTN-3X	1.03" (26.3 mm)	2.25" (57.2 mm)	0.75" (19.0 mm)

*Also available in PVDF (-1X) nuts.

†Fitting also available in PFA material. To order, replace "-3X" with "-1" for PVDF nuts, "-3" for PFA nuts or "-6" for CPFA nuts.

FlareLock® II, PFA

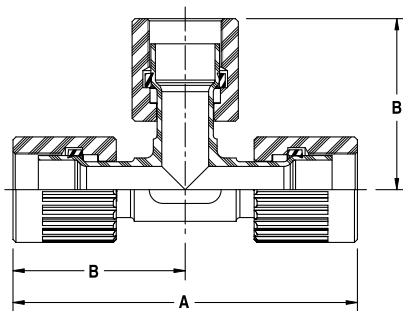
Tee Union



Part Number	O.D.		Dimensions	
	Tube Size	Orifice	A	B
UT4FN-II	1/4"	0.13" (3.3 mm)	3.26" (82.8 mm)	1.63" (41.4 mm)
UT6FN-II	3/8"	0.25" (6.4 mm)	3.60" (91.4 mm)	1.80" (45.7 mm)
UT8FN-II	1/2"	0.38" (9.7 mm)	3.67" (93.2 mm)	1.84" (46.7 mm)
UT12FN-II	3/4"	0.63" (16.0 mm)	4.39" (111.5 mm)	2.20" (55.9 mm)
UT16FN-II	1"	0.88" (22.4 mm)	5.72" (145.3 mm)	2.86" (72.6 mm)

Nut and split locking ring are PFA material.

Tee Union, "SpaceSaver"

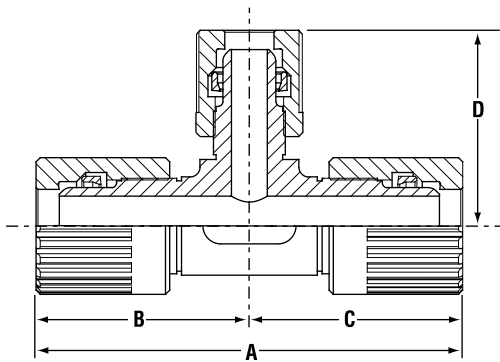


Part Number	O.D.		Dimensions	
	Tube Size	Orifice	A	B
UT12TFN-II	3/4"	0.63" (16.0 mm)	4.60" (116.8 mm)	2.30" (58.4 mm)

Nut and split locking ring are PFA material.

FlareLock® II, PFA

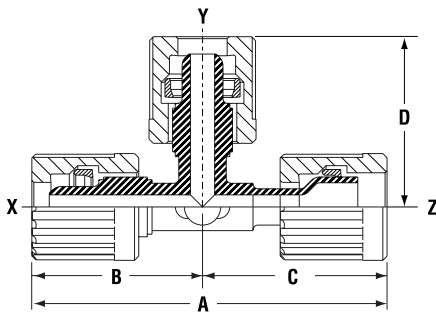
Tee Union, Reducer



Part Number	O.D. Tube Size			Orifice	Dimensions			
	X	Y	Z		A	B	C	D
UT8-4-8FN-II	1/2" × 1/4" × 1/2"	0.13" (3.3 mm)	3.68" (93.5 mm)	1.84" (46.7 mm)	1.84" (46.7 mm)	1.63" (41.4 mm)		
UT8-12-8FN-II	1/2" × 3/4" × 1/2"	0.38" (9.7 mm)	4.02" (102.1 mm)	2.01" (51.1 mm)	2.01" (51.1 mm)	2.20" (55.9 mm)		
UT12-4-12FN-II	3/4" × 1/4" × 3/4"	0.13" (3.3 mm)	4.40" (111.8 mm)	2.20" (55.9 mm)	2.20" (55.9 mm)	1.81" (46.0 mm)		
UT12-6-12FN-II	3/4" × 3/8" × 3/4"	0.25" (6.4 mm)	4.40" (111.8 mm)	2.20" (55.9 mm)	2.20" (55.9 mm)	1.97" (50.0 mm)		
UT12-8-12FN-II	3/4" × 1/2" × 3/4"	0.38" (9.7 mm)	4.20" (106.7 mm)	2.20" (55.9 mm)	2.20" (55.9 mm)	2.01" (51.1 mm)		
UT16-6-16FN-II	1" × 3/8" × 1"	0.25" (6.4 mm)	5.70" (144.8 mm)	2.85" (72.4 mm)	2.85" (72.4 mm)	2.43" (61.7 mm)		
UT16-8-16FN-II	1" × 1/2" × 1"	0.38" (9.7 mm)	5.70" (144.8 mm)	2.85" (72.4 mm)	2.85" (72.4 mm)	2.34" (59.4 mm)		
UT16-12-16FN-II	1" × 3/4" × 1"	0.63" (16.0 mm)	5.70" (144.8 mm)	2.85" (72.4 mm)	2.85" (72.4 mm)	2.45" (62.2 mm)		

Nut and split locking ring are PFA material.

Tee Adapter, "SpaceSaver"

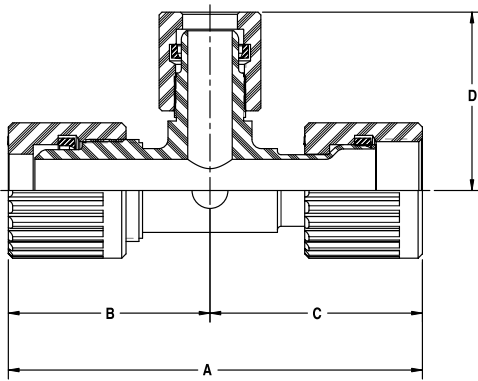


Part Number	O.D. "SpaceSaver" Tube Size			Orifice	Dimensions			
	X	Y	Z		A	B	C	D
UT8-8-8TFN-II	1/2" × 1/2"	1/2"	0.38" (9.7 mm)	3.70" (94.0 mm)	1.86" (47.2 mm)	1.74" (44.2 mm)	1.86" (47.2 mm)	
UT12-12-12TFN-II	3/4" × 3/4"	3/4"	0.63" (16.0 mm)	4.52" (114.8 mm)	2.22" (56.4 mm)	2.30" (58.4 mm)	2.22" (56.4 mm)	
UT16-16-16TFN-II	1" × 1"	1"	0.88" (22.4 mm)	5.77" (146.6 mm)	2.81" (71.4 mm)	2.96" (75.2 mm)	2.83" (71.9 mm)	

Nut and split locking ring are PFA material.

FlareLock® II, PFA

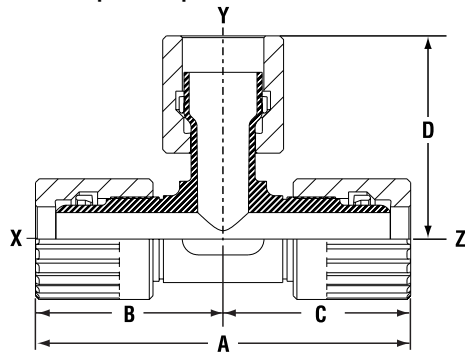
Tee Adapter, Reducer, "SpaceSaver"



Part Number	O.D. Tube Size			Orifice	Dimensions				
	X	Y	Z		A	B	C	D	
UT16-12-16TFN-II	1"	3/4"	1"	0.63" (16.0 mm)	5.77" (146.6 mm)	2.81" (71.4 mm)	2.96" (75.2 mm)	2.49" (63.2 mm)	

Nut and split locking ring are PFA material.

Tee Adapter, "SpaceSaver"

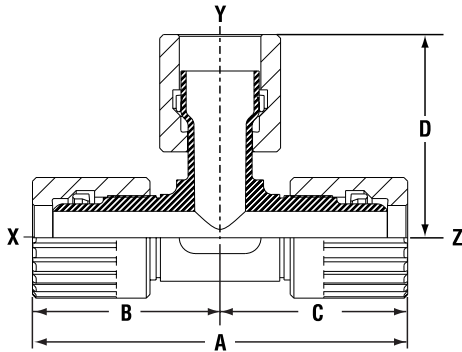


Part Number	O.D. "SpaceSaver"		O.D. Tube Size	Orifice	Dimensions				
	X	Y			Z	A	B	C	D
UT8-8T-8FN-II	1/2"	1/2"	1/2"	0.38" (9.7 mm)	3.72" (94.5 mm)	1.86" (47.2 mm)	1.86" (47.2 mm)	1.84" (46.7 mm)	
UT12-12T-12FN-II	3/4"	3/4"	3/4"	0.63" (16.0 mm)	4.44" (112.8 mm)	2.22" (56.4 mm)	2.22" (56.4 mm)	2.30" (58.4 mm)	
UT16-16T-16FN-II	1"	1"	1"	0.88" (22.4 mm)	5.62" (142.7 mm)	2.81" (71.4 mm)	2.81" (71.4 mm)	2.82" (71.6 mm)	

Nut and split locking ring are PFA material.

FlareLock® II, PFA

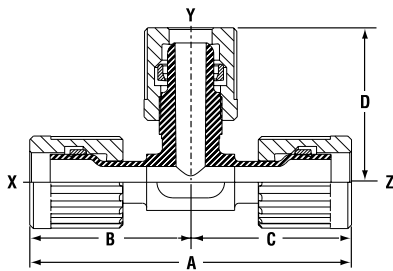
Tee Adapter, Reducer, "SpaceSaver"



Part Number	O.D. "SpaceSaver" Size		O.D. Tube Size	Orifice	Dimensions			
	X	Y	Z		A	B	C	D
UT12-8T-12FN-II	3/4"	1/2"	3/4"	0.38" (9.7 mm)	4.40" (111.8 mm)	2.20" (55.9 mm)	2.20" (55.9 mm)	2.02" (51.3 mm)

Nut and split locking ring are PFA material.

Tee Adapter, "SpaceSaver"

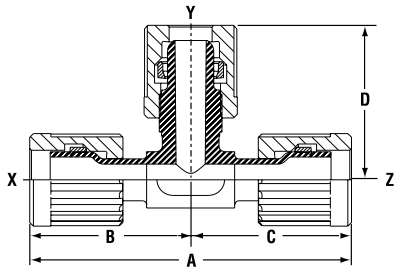


Part Number	O.D. Tube Size	"SpaceSaver" Size		Orifice	Dimensions			
	X	Y	Z		A	B	C	D
UT8T-8-8TFN-II	1/2"	1/2" × 1/2"	1/2"	0.38" (9.7 mm)	3.68" (93.5 mm)	1.84" (46.7 mm)	1.84" (46.7 mm)	1.86" (47.2 mm)
UT12T-12-12TFN-II	3/4"	3/4" × 3/4"	3/4"	0.63" (16.0 mm)	4.60" (116.8 mm)	2.30" (58.4 mm)	2.30" (58.4 mm)	2.22" (56.4 mm)
UT16T-16-16TFN-II	1"	1" × 1"	1"	0.88" (22.4 mm)	5.94" (150.9 mm)	2.97" (75.4 mm)	2.97" (75.4 mm)	2.83" (71.9 mm)

Nut and split locking ring are PFA material.

FlareLock® II, PFA

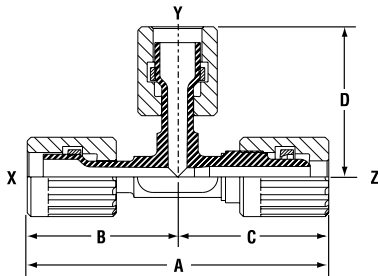
Tee Adapter, Reducer, "SpaceSaver"



Part Number	"SpaceSaver" Size		O.D. Tube Size	Orifice	A	Dimensions		
	X	Y	Z			B	C	D
UT8T-12-8TFN-II	1/2"	3/4"	1/2"	0.38" (9.7 mm)	4.04" (102.6 mm)	2.02" (51.3 mm)	2.02" (51.3 mm)	2.22" (56.4 mm)
UT12T-8-12TFN-II	3/4"	1/2"	3/4"	0.38" (9.7 mm)	4.60" (116.8 mm)	2.30" (58.4 mm)	2.30" (58.4 mm)	2.04" (51.8 mm)

Nut and split locking ring are PFA material.

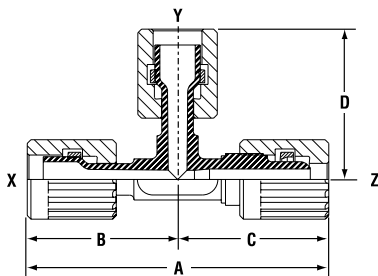
Tee Adapter, "SpaceSaver"



Part Number	"SpaceSaver" Size		O.D. Tube Size	Orifice	A	Dimensions		
	X	Y	Z			B	C	D
UT8T-8T-8FN-II	1/2" × 1/2"	1/2"	1/2"	0.38" (9.7 mm)	3.70" (94.0 mm)	1.84" (46.7 mm)	1.86" (47.2 mm)	1.84" (46.7 mm)
UT12T-12T-12FN-II	3/4" × 3/4"	3/4"	3/4"	0.63" (16.0 mm)	4.50" (114.3 mm)	2.30" (58.4 mm)	2.20" (55.9 mm)	2.30" (58.4 mm)
UT16T-16T-16FN-II	1" × 1"	1"	1"	0.88" (22.4 mm)	5.49" (139.4 mm)	2.82" (71.6 mm)	2.67" (67.8 mm)	2.82" (71.6 mm)

Nut and split locking ring are PFA material.

Tee Adapter, Reducer, "SpaceSaver"

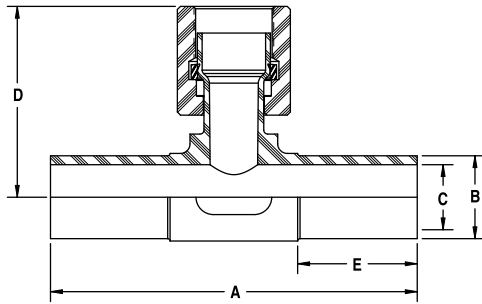


Part Number	"SpaceSaver" Size		O.D. Tube Size	Orifice	A	Dimensions		
	X	Y	Z			B	C	D
UT12T-8T-12FN-II	3/4" × 1/2"	3/4"	3/4"	0.38" (9.7 mm)	4.50" (114.3 mm)	2.30" (58.4 mm)	2.20" (55.9 mm)	2.02" (51.3 mm)
UT12T-12T-8FN-II	3/4" × 3/4"	1/2"	1/2"	0.38" (9.7 mm)	4.32" (109.7 mm)	2.30" (58.4 mm)	2.02" (51.3 mm)	2.30" (58.4 mm)

Nut and split locking ring are PFA material.

FlareLock[®] II, PFA

Tee Adapter, PureBond[®] Pipe, "SpaceSaver"



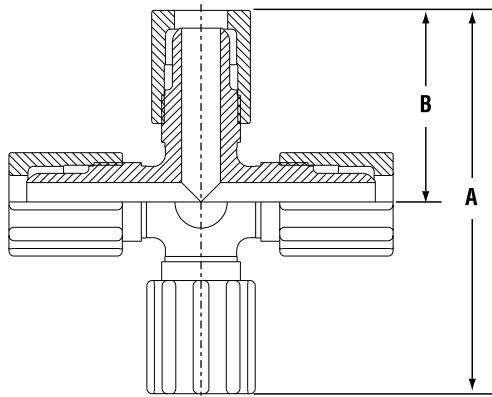
Part Number	"SpaceSaver" Size	Pipe Size	Orifice	Dimensions	
				A	B
WBT8-8PTN-II	1/2"	1/2"	0.38" (9.7 mm)	2.94" (74.7 mm)	0.84" (21.3 mm)
WBT12-12PTN-II	3/4"	3/4"	0.63" (16.0 mm)	4.60" (116.8 mm)	1.05" (26.7 mm)

Part Number	Dimensions		
	C	D	E
WBT8-8PTN-II	0.62" (15.7 mm)	2.03" (51.6 mm)	0.75" (19.0 mm)
WBT12-12PTN-II	0.81" (20.6 mm)	2.42" (61.5 mm)	1.50" (38.1 mm)

Nut and split locking ring are PFA material.

Flaretek[®], PFA

Straight Cross

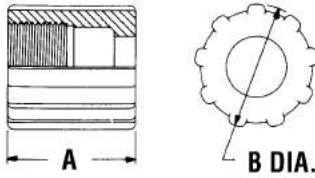


Part* Number	O.D. Tube Size	Orifice	Dimensions	
			A	B
SX8FN-1	1/2"	0.38" (9.7 mm)	3.66" (93.0 mm)	1.83" (46.5 mm)
SX12FN-1	3/4"	0.63" (16.0 mm)	4.26" (108.2 mm)	2.13" (54.1 mm)

*Also available in PFA(-3) and CPFA(-6) nuts.

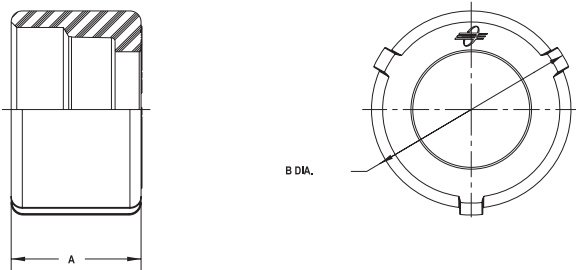
Flaretek[®] PVDF Nut

Standard



Part Number	O.D. Tube Size	Dimensions	
		A	B
FL4-1	1/4"	0.99" (25.1 mm)	0.79" (20.1 mm)
FL6-1	3/8"	1.01" (25.7 mm)	0.91" (23.1 mm)
FL8-1	1/2"	1.08" (27.4 mm)	1.04" (26.4 mm)
FL12-1	3/4"	1.25" (31.8 mm)	1.35" (34.3 mm)
FL16-1	1"	1.50" (38.1 mm)	1.81" (46.0 mm)

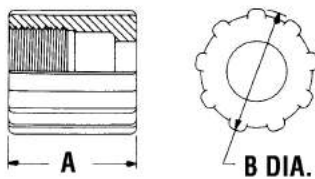
Reduced Footprint



Part Number	O.D. Tube Size	Dimensions	
		A	B
FL12-1S	3/4"	0.89" (22.6 mm)	1.47" (37.3 mm)
FL16-1S	1"	1.11" (28.2 mm)	1.85" (47.0 mm)
FL20-1S	1 1/4"	1.40" (35.6 mm)	2.30" (58.4 mm)

Flaretek[®] PFA Nut

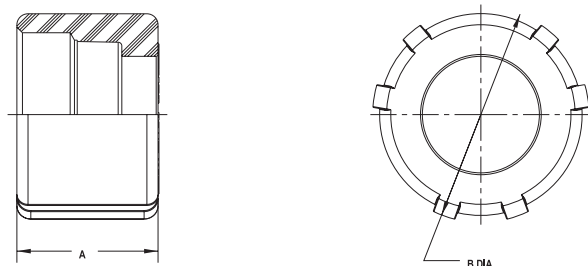
Standard



Part Number	O.D. Tube Size	Dimensions	
		A	B
FL4-3	1/4"	0.99" (25.1 mm)	0.84" (21.3 mm)
FL6-3	3/8"	1.01" (25.7 mm)	0.96" (24.4 mm)
FL8-3	1/2"	1.09" (27.7 mm)	1.08" (27.4 mm)
FL12-3	3/4"	1.25" (31.8 mm)	1.41" (35.8 mm)
FL16-3	1"	1.65" (41.9 mm)	1.89" (48.0 mm)

Flaretek® PFA Nut

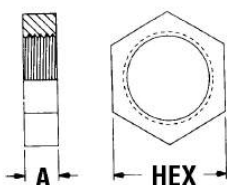
Reduced Footprint



Part Number	O.D. Tube Size	Dimensions	
		A	B
FL12-3S	3/4"	0.99" (25.1 mm)	1.48" (37.6 mm)
FL16-3S	1"	1.21" (30.7 mm)	1.86" (47.2 mm)
FL20-3S	1 1/4"	1.52" (38.6 mm)	2.33" (59.2 mm)

Flaretek® Half-Nut

(for Panel Mount Connectors)

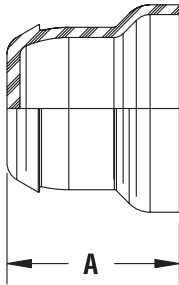


Part Number	O.D. Tube Size	Dimension	
		A	Hex
HN5	1/4"	0.26" (6.6 mm)	11/16"
HN6	3/8"	0.25" (6.4 mm)	15/16"
HN8†	1/2"	0.32" (8.1 mm)	1 1/16"
HN12†	3/4"	0.38" (9.7 mm)	1 5/16"
HN16†	1"	0.32" (8.1 mm)	1 3/4"

†Material is Natural PVDF.

Flaretek[®] Cap

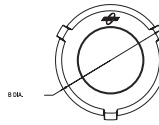
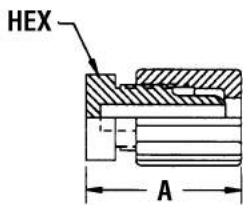
(Closes Unused Tube Connector)



Part Number	O.D. Tube Size	Dimension A
FLC4	1/4"	0.60" (15.2 mm)
FLC6	3/8"	0.69" (17.5 mm)
FLC8	1/2"	0.72" (18.3 mm)
FLC12	3/4"	0.82" (20.8 mm)
FLC16	1"	1.06" (26.9 mm)
FLC20	1 1/4"	1.24" (31.5 mm)

Flaretek[®] Tube Caps with Nuts

(Closes Unused Tubing)

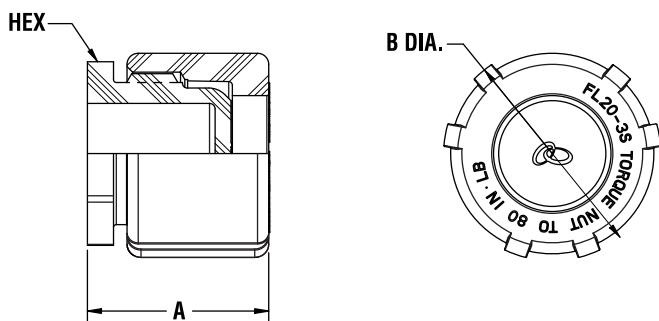


CP20FN-1S only

Part Number	O.D. Tube Size	Dimensions		Hex
		A	B	
CP4FN-1	1/4"	1.37" (34.8 mm)	0.79" (20.1 mm)	11/16"
CP6FN-1	3/8"	1.49" (37.8 mm)	0.91" (23.1 mm)	13/16"
CP8FN-1	1/2"	1.59" (40.4 mm)	1.04" (26.4 mm)	15/16"
CP12FN-1	3/4"	1.76" (44.7 mm)	1.35" (34.3 mm)	1 3/16"
CP16FN-1	1"	2.02" (51.3 mm)	1.81" (46.0 mm)	1 7/16"
CP20FN-1S	1 1/4"	1.82" (46.2 mm)	2.30" (58.4 mm)	1 3/4"

Flaretek[®] Reduced Footprint Tube Caps with Nuts

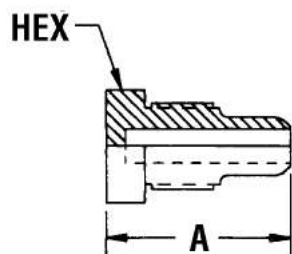
(Closes Unused Tubing)



Part Number	O.D. Tube Size	Dimensions		Hex
		A	B	
CP12FN-3S	3/4"	1.45" (36.8 mm)	1.47" (37.3 mm)	1 1/8"
CP16FN-3S	1"	1.67" (42.4 mm)	1.85" (47.0 mm)	1 1/2"
CP20FN-3S	1 1/4"	1.96" (49.8 mm)	2.33" (59.2 mm)	1 3/4"

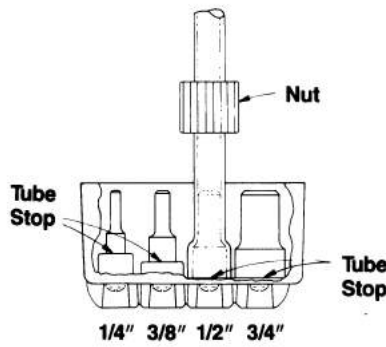
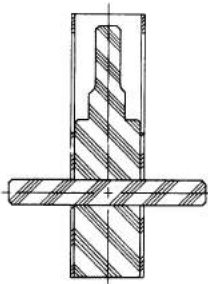
Flaretek[®] "SpaceSaver" Tube Caps without Nuts

(Closes Unused Tubing with Nut on or "SpaceSaver" End)



Part Number	O.D. Tube Size	Dimension	Hex
		A	
CP4F	1/4"	1.27" (32.3 mm)	11/16"
CP6F	3/8"	1.34" (34.0 mm)	13/16"
CP8F	1/2"	1.42" (36.1 mm)	15/16"
CP12F	3/4"	1.54" (39.1 mm)	1 3/16"
CP12F-S	3/4"	1.11" (28.2 mm)	1 1/8"
CP16F	1"	1.78" (45.2 mm)	1 7/16"
CP16F-S	1"	1.33" (33.8 mm)	1 1/2"
CP20F-S	1 1/4"	1.50" (38.1 mm)	1 3/4"

Flaretek[®] Fitting Flaring Tools

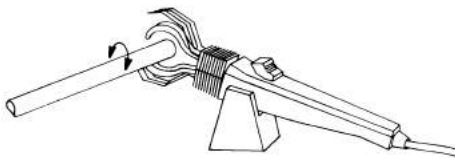


213-58, 213-59, 213-60, 213-61, 213-82

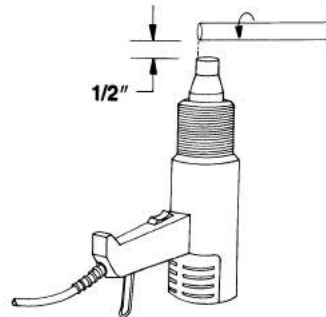
213-81

Part Number	Description
213-58	1/4" tube
213-59	3/8" tube
213-60	1/2" tube
213-61	3/4" tube
213-82	1" tube
213-73	Tube grip (rubber pad to help grip the tube for manual flaring)
213-81	Universal Tool (includes 1/4", 3/8", 1/2" and 3/4" sizes)
213-163	1 1/4" tube, reduced footprint

Flaretek[®] Heating Tools



213-74, 213-76



213-79

CE Flaretek[®] heating tools meet all applicable standards for CE mark.

Part Number	Description
213-74	Infrared Tube Heater Kit 115V-60Hz
213-76	Infrared Tube Heater Kit 240V-50Hz
213-79	Hot Air Gun Tube Heater 115V-60Hz

Flaretek[®] Replacement Kits for Infrared Tube Heater

Part Number	Description
213-75	Regular Replacement Element Kit for 213-74 (flares 1/4" to 3/4" tube) 115 volt
213-77	Regular Replacement Element Kit for 213-76 (flares 1/4" to 3/4" tube) 240 volt
213-91	Large Replacement Element Kit for 213-74 (flares 1" tube) 115 volt
213-92	Large Replacement Element Kit for 213-76 (flares 1" tube) 240 volt

Flaretek[®] Autoflare Tool

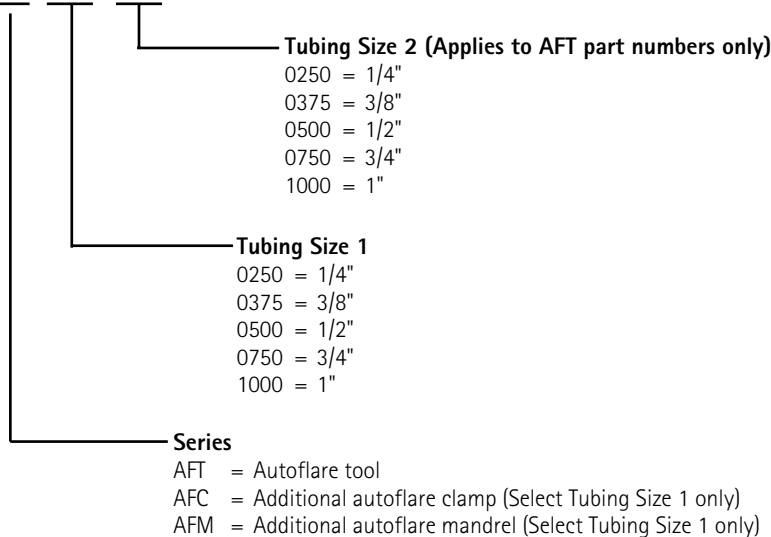


- This easy-to-operate tool reduces installation time, eliminates connection variations and ensures fast, reliable flares every time.
- One operator using multiple tools can make several flares in parallel, significantly reducing critical manufacturing and installation time.
- Specifically designed to flare Entegris' FluoroLine[®] PFA tubing.
- The handheld flaring unit connects to the PLC via a 3 meter bundled process control cable.
- The closed-loop PLC is preprogrammed with the heat specifications required to flare 1/4", 3/8", 1/2", 3/4" or 1" FluoroLine[®] PFA tubing.
- The fully automated PLC eliminates human variability from operator to operator, reducing your costs.
- The Flaretek[®] autoflare tool comes equipped with clamps, mandrels, tube cutters and torque verification devices in two sizes of your choice. Components for additional sizes may be ordered separately.

Ordering Information

Part Number

AFT - XXXX - XXXX



Specifications

Flare sizes:	1/4", 3/8", 1/2", 3/4", 1"
Power requirements:	110 VAC
Control method:	PLC (included)
Heat source:	infrared
Dimensions:	9.12" L x 4.0" W x 8.02" H (232 mm x 120 mm x 204 mm)
Weight:	5.5 lbs. (2.5 kg)
Materials:	PES housing, PTFE mandrels

Room Temperature Flaring Tool

For Flaring 1/4" to 1" PFA Tubing



- Handheld tool for manual flaring without the use of heat or electricity.
- The Room Temperature Flaring Tool is recommended for use with PFA tubing only.
- Easy-to-use tool is convenient for field service applications.
- Single part number for the complete kit. Includes mandrels and inserts for 1/4", 3/8", 1/2", 3/4" and 1" tubing, bench-mount bracket and crank device.

Tubing is inserted and held in place by one clamp. A PTFE mandrel, mounted on a screw assembly, is driven into the tubing in a controlled, consistent method ensuring even flaring. The screw device is operated by either a round knob or a crank attached to the knob. Operator fatigue from continuous use of the same turning method is reduced.

Part

Part Number	Description
213-112	Weight: 3 lbs (1.36 kg) Dimensions: 2.5" x 6" (63.5 mm x 152.4 mm)

Replacement Parts

213-113	1/4" insert
213-114	3/8" insert
213-115	1/2" insert
213-116	3/4" insert
213-117	1" insert
213-119	1/4" mandrel
213-120	3/8" mandrel
213-121	1/2" mandrel
213-122	3/4" mandrel
213-123	1" mandrel

Tube Cutters



TC-0500

Ordering Information

Part Number	O.D. Tube Size
TC-2050	1/4"
TC-0375	3/8"
TC-0500	1/2"
TC-0750	3/4"
TC-1000	1"



213-14

Part Number	O.D. Tube Size	Replacement Blade Part Number
213-14	1/16" to 1/2"	N/A
213-16	1/16" to 3/4"	1311-001
213-30	1/8" to 1 1/2"	1223-021



213-16



213-30



213-203-N

Dual Containment Tube Cutters

Part Number	Description
213-203-N	Tube cutter for 1/2" secondary containment tubing
213-204-N	Tube cutter for 3/4" secondary containment tubing
213-205-N	Tube cutter for 1" secondary containment tubing

FlareLock[®] II Groove Tools

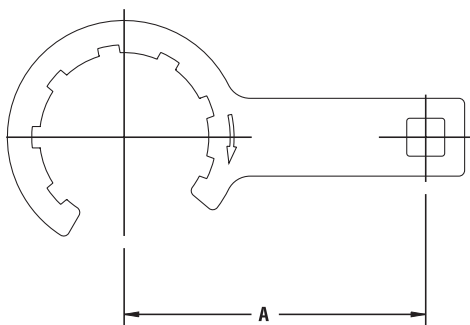


Ordering Information

Part Number	O.D. Tube Size
GTII-4F	1/4"
GTII-6F	3/8"
GTII-8F	1/2"
GTII-12F	3/4"
GTII-16F	1"

Flare Fitting Assembly Aids

Wrenches

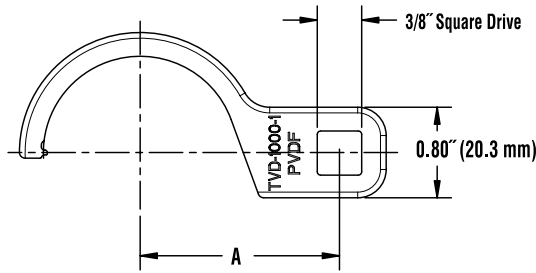


Part Number	Description	Dimension A	Standard Nut Size	Nut Material	Fitting Style
213-145	Wrench (optional)	1.00" (25.4 mm)	1/4"	PVDF (-1)	Flaretek® & Flaretek® "SpaceSaver"
213-146	Wrench (optional)	1.12" (28.4 mm)	3/8"	PVDF (-1)	Flaretek® & Flaretek® "SpaceSaver"
213-147	Wrench (optional)	1.25" (31.8 mm)	1/2"	PVDF (-1)	Flaretek® & Flaretek® "SpaceSaver"
213-148	Wrench (optional)	1.50" (38.1 mm)	3/4"	PVDF (-1)	Flaretek® & Flaretek® "SpaceSaver"
213-149	Wrench (optional)	1.75" (44.4 mm)	1"	PVDF (-1)	Flaretek® & Flaretek® "SpaceSaver"
213-140	Wrench (optional)	1.00" (25.4 mm)	1/4"	PFA (-3)	Flaretek® & Flaretek® "SpaceSaver"
213-141	Wrench (optional)	1.12" (28.4 mm)	3/8"	PFA (-3)	Flaretek® & Flaretek® "SpaceSaver"
213-142	Wrench (optional)	1.25" (31.8 mm)	1/2"	PFA (-3)	Flaretek® & Flaretek® "SpaceSaver"
213-143	Wrench (optional)	1.50" (38.1 mm)	3/4"	PFA (-3)	Flaretek® & Flaretek® "SpaceSaver"
213-144	Wrench (optional)	1.69" (42.9 mm)	1"	PFA (-3)	Flaretek® & Flaretek® "SpaceSaver"
213-150	Wrench (optional)	1.00" (25.4 mm)	1/4"	CPFA (-6)	Flaretek® & Flaretek® "SpaceSaver"
213-151	Wrench (optional)	1.12" (28.4 mm)	3/8"	CPFA (-6)	Flaretek® & Flaretek® "SpaceSaver"
213-152	Wrench (optional)	1.25" (31.8 mm)	1/2"	CPFA (-6)	Flaretek® & Flaretek® "SpaceSaver"
213-153	Wrench (optional)	1.50" (38.1 mm)	3/4"	CPFA (-6)	Flaretek® & Flaretek® "SpaceSaver"
213-154	Wrench (optional)	1.66" (42.2 mm)	1"	CPFA (-6)	Flaretek® & Flaretek® "SpaceSaver"
213-166	Wrench (optional)	1.00" (25.4 mm)	1/4"	PFA (-II)	FlareLock® II
213-167	Wrench (optional)	1.12" (28.4 mm)	3/8"	PFA (-II)	FlareLock® II
213-168	Wrench (optional)	1.25" (31.8 mm)	1/2"	PFA (-II)	FlareLock® II
213-169	Wrench (optional)	1.50" (38.1 mm)	3/4"	PFA (-II)	FlareLock® II
213-144	Wrench (optional)	1.69" (42.9 mm)	1"	PFA (-II)	FlareLock® II
213-196	Wrench (required)	3.10" (78.7 mm)	1/2"	PVDF (-1) & PFA (-3)	PureBond® FlareMount™ Union
213-197	Wrench (required)	3.10" (78.7 mm)	1"	PVDF (-1) & PFA (-3)	PureBond® FlareMount™ Union
213-199	Wrench (required)	3.10" (78.7 mm)	3/4"	PVDF (-1) & PFA (-3)	PureBond® FlareMount™ Union
213-200	Wrench (required)	3.10" (78.7 mm)	1 1/4"	PVDF (-1) & PFA (-3)	Flaretek® Reduced Footprint

Note: All flare fitting wrenches are acetal material.

Torque Verification Devices

For Flaretek®, Flaretek® "SpaceSaver" and FlareLock® II nuts

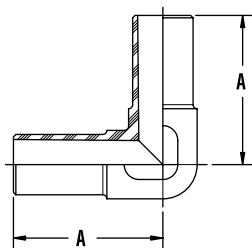


Part Number	Description	Dimension A	Standard Nut Size	Nut Material	Fitting Style
TVD-0250-1	Torque Verification Device	1.25" (31.8 mm)	1/4"	PVDF (-1)	Flaretek® and Flaretek® "SpaceSaver"
TVD-0250-3	Torque Verification Device	1.25" (31.8 mm)	1/4"	PFA (-3)	Flaretek® and Flaretek® "SpaceSaver"
TVD-0250-6	Torque Verification Device	1.25" (31.8 mm)	1/4"	CPFA (-6)	Flaretek® and Flaretek® "SpaceSaver"
TVD-0250-II	Torque Verification Device	1.25" (31.8 mm)	1/4"	PFA (-II)	FlareLock® II
TVD-0375-1	Torque Verification Device	1.25" (31.8 mm)	3/8"	PVDF (-1)	Flaretek® and Flaretek® "SpaceSaver"
TVD-0375-3	Torque Verification Device	1.25" (31.8 mm)	3/8"	PFA (-3)	Flaretek® and Flaretek® "SpaceSaver"
TVD-0375-6	Torque Verification Device	1.25" (31.8 mm)	3/8"	CPFA (-6)	Flaretek® and Flaretek® "SpaceSaver"
TVD-0375-II	Torque Verification Device	1.25" (31.8 mm)	3/8"	PFA (-II)	FlareLock® II
TVD-0500-1	Torque Verification Device	1.25" (31.8 mm)	1/2"	PVDF (-1)	Flaretek® and Flaretek® "SpaceSaver"
TVD-0500-3	Torque Verification Device	1.25" (31.8 mm)	1/2"	PFA (-3)	Flaretek® and Flaretek® "SpaceSaver"
TVD-0500-6	Torque Verification Device	1.25" (31.8 mm)	1/2"	CPFA (-6)	Flaretek® and Flaretek® "SpaceSaver"
TVD-0500-II	Torque Verification Device	1.25" (31.8 mm)	1/2"	PFA (-II)	FlareLock® II
TVD-0750-1	Torque Verification Device	1.44" (36.6 mm)	3/4"	PVDF (-1)	Flaretek® and Flaretek® "SpaceSaver"
TVD-0750-3	Torque Verification Device	1.44" (36.6 mm)	3/4"	PFA (-3)	Flaretek® and Flaretek® "SpaceSaver"
TVD-0750-6	Torque Verification Device	1.44" (36.6 mm)	3/4"	CPFA (-6)	Flaretek® and Flaretek® "SpaceSaver"
TVD-0750-II	Torque Verification Device	1.44" (36.6 mm)	3/4"	PFA (-II)	FlareLock® II
TVD-1000-1	Torque Verification Device	1.75" (44.4 mm)	1"	PVDF (-1)	Flaretek® and Flaretek® "SpaceSaver"
TVD-1000-3	Torque Verification Device	1.75" (44.4 mm)	1"	PFA (-3)	Flaretek® and Flaretek® "SpaceSaver"
TVD-1000-6	Torque Verification Device	1.75" (44.4 mm)	1"	CPFA (-6)	Flaretek® and Flaretek® "SpaceSaver"
TVD-1000-II	Torque Verification Device	1.75" (44.4 mm)	1"	PFA (-II)	FlareLock® II

Note: All flare fitting wrenches are PVDF material.

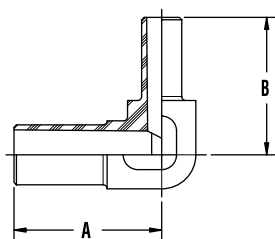
PureBond[®], PFA

Welded Tube Elbow Union, PFA Plus



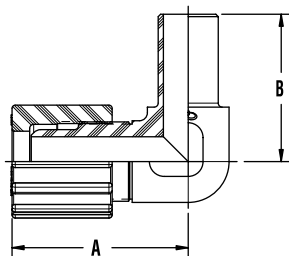
Part Number	O.D. Welded Tube Size	Orifice	Dimension A
UE6W-X	3/8"	0.25" (6.4 mm)	1.47" (37.3 mm)
UE8W-X	1/2"	0.38" (9.7 mm)	1.56" (39.6 mm)
UE12W-X	3/4"	0.63" (16.0 mm)	1.86" (47.2 mm)
UE16W-X	1"	0.88" (22.4 mm)	2.50" (63.5 mm)

Welded Tube Elbow Union, Reducer, PFA Plus



Part Number	O.D. Welded Tube Size	Orifice	Dimensions	
			A	B
UE6W-4W-X	3/8" × 1/4"	0.16" (4.1 mm)	1.45" (36.8 mm)	1.30" (33.0 mm)
UE8W-6W-X	1/2" × 3/8"	0.25" (6.4 mm)	1.67" (42.4 mm)	1.47" (37.3 mm)
UE12W-8W-X	3/4" × 1/2"	0.38" (9.7 mm)	1.84" (46.7 mm)	1.72" (43.7 mm)
UE16W-12W-X	1" × 3/4"	0.63" (16.0 mm)	2.50" (63.5 mm)	1.96" (49.8 mm)

Welded Tube Elbow Adapter, Flaretek[®] Tube, PFA Plus

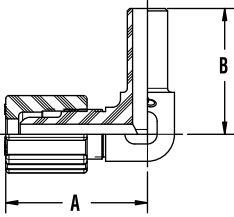


Part* Number	O.D. Welded Tube Size	O.D. Tube Size	Orifice	Dimensions	
				A	B
E6-6WFN-3X	3/8"	3/8"	0.25" (6.4 mm)	1.76" (44.7 mm)	1.47" (37.3 mm)
E8-8WFN-3X	1/2"	1/2"	0.38" (9.7 mm)	1.85" (47.0 mm)	1.56" (39.6 mm)
E12-12WFN-3X	3/4"	3/4"	0.63" (16.0 mm)	2.20" (55.9 mm)	1.84" (46.7 mm)
E16-16WFN-3X	1"	1"	0.88" (22.4 mm)	2.84" (72.1 mm)	2.51" (63.8 mm)

*Also available in PVDF (-1X) and CPFA (-6X) nuts.

PureBond[®], PFA

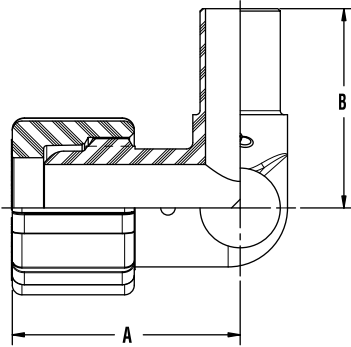
Welded Tube Elbow Adapter, Reducer, Flaretek[®] Tube, PFA Plus



Part* Number	O.D. Welded Tube Size	O.D. Tube Size	Orifice	Dimensions	
				A	B
E4-6WFN-3X	3/8"	1/4"	0.13" (3.3 mm)	1.65" (41.9 mm)	1.47" (37.3 mm)
E4-8WFN-3X	1/2"	1/4"	0.13" (3.3 mm)	1.63" (41.4 mm)	1.56" (39.6 mm)
E6-8WFN-3X	1/2"	3/8"	0.25" (6.4 mm)	1.76" (44.7 mm)	1.56" (39.6 mm)
E6-12WFN-3X	3/4"	3/8"	0.25" (6.4 mm)	1.94" (49.3 mm)	1.84" (46.7 mm)
E8-6WFN-3X	3/8"	1/2"	0.25" (6.4 mm)	1.85" (47.0 mm)	1.47" (37.3 mm)
E8-12WFN-3X	3/4"	1/2"	0.38" (9.7 mm)	2.03" (51.6 mm)	1.84" (46.7 mm)
E8-16WFN-3X	1"	1/2"	0.38" (9.7 mm)	2.29" (58.2 mm)	2.51" (63.8 mm)
E12-16WFN-3X	1"	3/4"	0.63" (16.0 mm)	2.46" (62.5 mm)	2.33" (59.2 mm)
E16-12WFN-3X	3/4"	1"	0.63" (16.0 mm)	2.84" (72.1 mm)	1.95" (49.5 mm)

*Also available in PVDF (-1X) and CPFA (-6X) nuts.

Welded Tube Elbow Adapter, Reducer, Flaretek[®] Tube, Reduced Footprint, PFA Plus

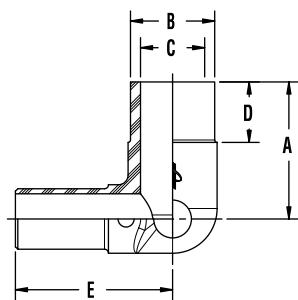


Part* Number	O.D. Welded Tube Size	O.D. Tube Size	Orifice	Dimensions	
				A	B
E20-16WFN-3SX	1"	1 1/4"	0.88" (22.4 mm)	2.84" (72.1 mm)	2.50" (63.5 mm)

*Also available in PVDF (-1SX) and CPFA (-6SX) nuts.

PureBond[®], PFA

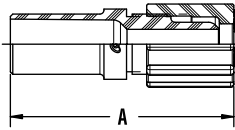
Welded Tube Elbow Adapter, PureBond[®] Pipe, PFA Plus



Part Number	O.D.		Orifice	Dimensions				
	Welded Tube Size	O.D. Tube Size		A	B	C	D	E
WETA4-8W-X	1/4"	1/2"	0.16" (4.1 mm)	1.27" (32.3 mm)	0.84" (21.3 mm)	0.61" (15.5 mm)	0.75" (19.0 mm)	1.33" (33.8 mm)
WETA6-8W-X	3/8"	1/2"	0.25" (6.4 mm)	1.26" (32.0 mm)	0.84" (21.3 mm)	0.61" (15.5 mm)	0.75" (19.0 mm)	1.47" (37.3 mm)
WETA8-8W-X	1/2"	1/2"	0.38" (9.7 mm)	1.44" (36.6 mm)	0.84" (21.3 mm)	0.61" (15.5 mm)	0.75" (19.0 mm)	1.75" (44.4 mm)
WETA8-12W-X	1/2"	3/4"	0.38" (9.7 mm)	1.44" (36.6 mm)	1.05" (26.7 mm)	0.81" (20.6 mm)	0.75" (19.0 mm)	1.75" (44.4 mm)
WETA12-8W-X	3/4"	1/2"	0.61" (15.5 mm)	1.71" (43.4 mm)	0.84" (21.3 mm)	0.61" (15.5 mm)	0.75" (19.0 mm)	2.13" (54.1 mm)
WETA12-12W-X	3/4"	3/4"	0.63" (16.0 mm)	1.70" (43.2 mm)	1.05" (26.7 mm)	0.81" (20.6 mm)	0.75" (19.0 mm)	1.96" (49.8 mm)
WETA12-16W-X	3/4"	1"	0.63" (16.0 mm)	1.70" (43.2 mm)	1.32" (33.5 mm)	1.03" (26.2 mm)	0.75" (19.0 mm)	2.08" (52.8 mm)
WETA16-12W-X	1"	3/4"	0.81" (20.6 mm)	1.73" (43.9 mm)	1.05" (26.7 mm)	0.81" (20.6 mm)	0.75" (19.0 mm)	2.48" (63.0 mm)
WETA16-16W-X	1"	1"	0.88" (22.4 mm)	1.73" (43.9 mm)	1.32" (33.5 mm)	1.03" (26.2 mm)	0.75" (19.0 mm)	2.52" (64.0 mm)

PureBond[®], PFA

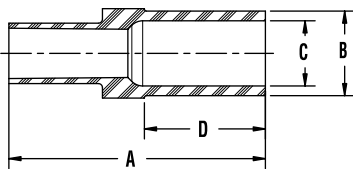
Welded Tube Straight Adapter, Reducer, Flaretek[®] Tube, PFA Plus



Part* Number	O.D. Welded Tube Size	O.D. Tube Size	Orifice	Dimension A
SU6W-4FN-3X	3/8"	1/4"	0.13" (3.3 mm)	2.36" (59.9 mm)
SU8W-4FN-3X	1/2"	1/4"	0.13" (3.3 mm)	2.45" (62.2 mm)
SU8W-6FN-3X	1/2"	3/8"	0.25" (6.4 mm)	2.56" (65.0 mm)
SU12W-6FN-3X	3/4"	3/8"	0.25" (6.4 mm)	2.68" (68.1 mm)
SU12W-8FN-3X	3/4"	1/2"	0.38" (9.7 mm)	2.77" (70.4 mm)
SU12W-16FN-3X	3/4"	1"	0.63" (16.0 mm)	3.62" (91.9 mm)
SU16W-8FN-3X	1"	1/2"	0.38" (9.7 mm)	3.15" (80.0 mm)
SU16W-12FN-3X	1"	3/4"	0.63" (16.0 mm)	3.39" (86.1 mm)

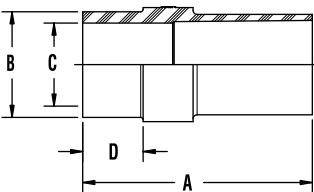
*Also available in PVDF (-1X) and CPFA (-6X) nuts.

Welded Tube Straight Adapter, PureBond[®] Pipe, PFA Plus



Part Number	O.D. Welded Tube Size	Pipe Size	Orifice	Dimensions			
				A	B	C	D
WTA6-8W-X	3/8"	1/2"	0.25" (6.4 mm)	2.22" (56.4 mm)	0.84" (21.3 mm)	0.61" (15.5 mm)	0.75" (19.0 mm)
WTA8-8W-X	1/2"	1/2"	0.38" (9.7 mm)	3.06" (77.7 mm)	0.84" (21.3 mm)	0.61" (15.5 mm)	1.50" (38.1 mm)
WTA8-12W-X	1/2"	3/4"	0.38" (9.7 mm)	3.06" (77.7 mm)	1.05" (26.7 mm)	0.81" (20.6 mm)	1.50" (38.1 mm)
WTA8-16W-X	1/2"	1"	0.38" (9.7 mm)	2.30" (58.4 mm)	1.32" (33.5 mm)	1.03" (26.2 mm)	0.75" (19.0 mm)
WTA12-8W-X	3/4"	1/2"	0.61" (15.5 mm)	3.18" (80.8 mm)	0.84" (21.3 mm)	0.61" (15.5 mm)	1.50" (38.1 mm)
WTA12-12W-X	3/4"	3/4"	0.63" (16.0 mm)	3.18" (80.8 mm)	1.05" (26.7 mm)	0.81" (20.6 mm)	1.50" (38.1 mm)
WTA12-16W-X	3/4"	1"	0.63" (16.0 mm)	2.44" (62.0 mm)	1.32" (33.5 mm)	1.03" (26.2 mm)	0.75" (19.0 mm)
WTA16-12W-X	1"	3/4"	0.81" (20.6 mm)	3.56" (90.4 mm)	1.05" (26.7 mm)	0.81" (20.6 mm)	1.50" (38.1 mm)
WTA16-16W-X	1"	1"	0.88" (22.4 mm)	3.56" (90.4 mm)	1.32" (33.5 mm)	1.03" (26.2 mm)	1.50" (38.1 mm)

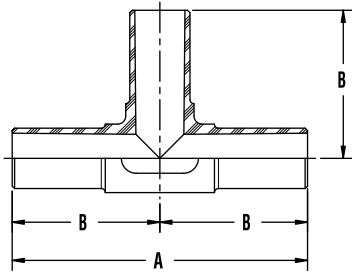
Welded Tube Straight Adapter, PureBond[®] Pipe, Reduced Footprint, PFA Plus



Part Number	O.D. Welded Tube Size	Pipe Size	Orifice	Dimensions			
				A	B	C	D
WTA20-16W-SX	1 1/4"	1"	0.88" (22.4 mm)	2.85" (72.4 mm)	1.32" (33.5 mm)	1.03" (26.2 mm)	0.75" (19.0 mm)

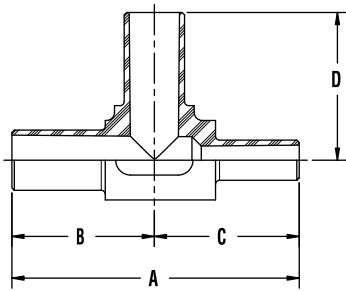
PureBond[®], PFA

Welded Tube Tee Union, PFA Plus



Part Number	O.D. Welded Tube Size		Orifice	Dimensions	
				A	B
UT6W-X	3/8"	0.25" (6.4 mm)	2.89" (73.4 mm)	1.45" (36.8 mm)	
UT8W-X	1/2"	0.38" (9.7 mm)	3.16" (80.3 mm)	1.58" (40.1 mm)	
UT12W-X	3/4"	0.63" (16.0 mm)	3.68" (93.5 mm)	1.84" (46.7 mm)	
UT16W-X	1"	0.88" (22.4 mm)	4.97" (126.2 mm)	2.49" (63.2 mm)	

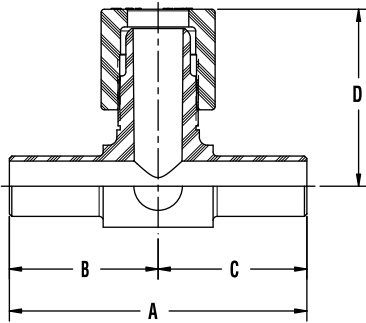
Welded Tube Tee Union, Reducer, PFA Plus



Part Number	O.D. Welded Tube Size	Orifice	Dimensions			
			A	B	C	D
UT12W-12W-8W-X	3/4" × 3/4" × 1/2"	0.38" (9.7 mm)	3.57" (90.7 mm)	1.77" (45.0 mm)	1.80" (45.7 mm)	1.84" (46.7 mm)

PureBond[®], PFA

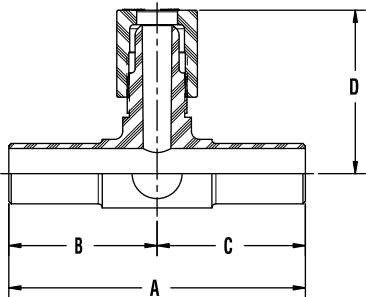
Welded Tube Tee Adapter, Flaretek[®] Tube, PFA Plus



Part* Number	O.D. Welded Tube Size	O.D. Tube Size	O.D. Welded Tube Size	Orifice	A	Dimensions		
	B	C	D					
UT6W-6-6WFN-3X	3/8"	3/8"	3/8"	0.25" (6.4 mm)	2.93" (74.4 mm)	1.47" (37.3 mm)	1.47" (37.3 mm)	1.76" (44.7 mm)
UT8W-8-8WFN-3X	1/2"	1/2"	1/2"	0.38" (9.7 mm)	3.12" (79.2 mm)	1.56" (39.6 mm)	1.56" (39.6 mm)	1.85" (47.0 mm)
UT12W-12-12WFN-3X	3/4"	3/4"	3/4"	0.63" (16.0 mm)	3.68" (93.5 mm)	1.84" (46.7 mm)	1.84" (46.7 mm)	2.20" (55.9 mm)
UT16W-16-16WFN-3X	1"	1"	1"	0.88" (22.4 mm)	4.97" (126.2 mm)	2.49" (63.2 mm)	2.49" (63.2 mm)	2.85" (72.4 mm)

*Also available in PVDF (-1X) and CPFA (-6X) nuts.

Welded Tube Tee Adapter, Reducer, Flaretek[®] Tube, PFA Plus

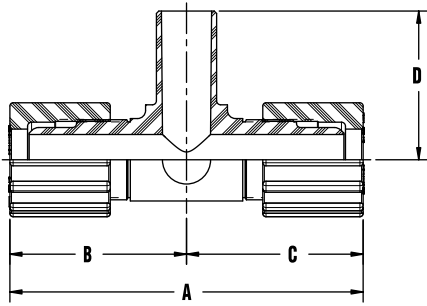


Part* Number	O.D. Welded Tube Size	O.D. Tube Size	O.D. Welded Tube Size	Orifice	A	Dimensions		
	B	C	D					
UT8W-12-8WFN-3X	1/2"	3/4"	1/2"	0.38" (9.7 mm)	3.48" (88.4 mm)	1.74" (44.2 mm)	1.74" (44.2 mm)	2.20" (55.9 mm)
UT12W-6-12WFN-3X	3/4"	3/8"	3/4"	0.25" (6.4 mm)	3.68" (93.5 mm)	1.84" (46.7 mm)	1.84" (46.7 mm)	1.94" (49.3 mm)
UT12W-8-12WFN-3X	3/4"	1/2"	3/4"	0.38" (9.7 mm)	3.68" (93.5 mm)	1.84" (46.7 mm)	1.84" (46.7 mm)	2.03" (51.6 mm)
UT16W-8-16WFN-3X	1"	1/2"	1"	0.38" (9.7 mm)	4.97" (126.2 mm)	2.49" (63.2 mm)	2.49" (63.2 mm)	2.29" (58.2 mm)
UT16W-12-16WFN-3X	1"	3/4"	1"	0.63" (16.0 mm)	4.97" (126.2 mm)	2.49" (63.2 mm)	2.49" (63.2 mm)	2.46" (62.5 mm)

*Also available in PVDF (-1X) and CPFA (-6X) nuts.

PureBond[®], PFA

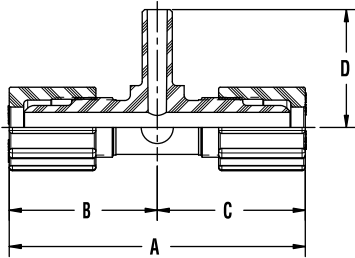
Welded Tube Tee Adapter, Flaretek[®] Tube, PFA Plus



Part* Number	O.D. Tube Size	O.D. Welded Tube Size	O.D. Tube Size	Orifice	Dimensions				
					A	B	C	D	
UT6-6W-6FN-3X	3/8"	3/8"	3/8"	0.25" (6.4 mm)	3.51" (89.2 mm)	1.76" (44.7 mm)	1.76" (44.7 mm)	1.47" (37.3 mm)	
UT8-8W-8FN-3X	1/2"	1/2"	1/2"	0.38" (9.7 mm)	3.69" (93.7 mm)	1.85" (47.0 mm)	1.85" (47.0 mm)	1.56" (39.6 mm)	
UT12-12W-12FN-3X	3/4"	3/4"	3/4"	0.63" (16.0 mm)	4.40" (111.8 mm)	2.20" (55.9 mm)	2.20" (55.9 mm)	1.84" (46.7 mm)	
UT16-16W-16FN-3X	1"	1"	1"	0.88" (22.4 mm)	5.69" (144.5 mm)	2.85" (72.4 mm)	2.85" (72.4 mm)	2.49" (63.2 mm)	

*Also available in PVDF (-1X) and CPFA (-6X) nuts.

Welded Tube Tee Adapter, Reducer, Flaretek[®] Tube, PFA Plus

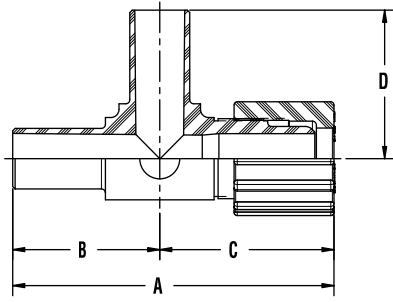


Part* Number	O.D. Tube Size	O.D. Welded Tube Size	O.D. Tube Size	Orifice	Dimensions				
					A	B	C	D	
UT8-6W-8FN-3X	1/2"	3/8"	1/2"	0.25" (6.4 mm)	3.69" (93.7 mm)	1.85" (47.0 mm)	1.85" (47.0 mm)	1.47" (37.3 mm)	
UT8-12W-8FN-3X	1/2"	3/4"	1/2"	0.38" (9.7 mm)	4.02" (102.1 mm)	2.01" (51.1 mm)	2.01" (51.1 mm)	1.85" (47.0 mm)	
UT8-16W-8FN-3X	1/2"	1"	1/2"	0.38" (9.7 mm)	4.56" (115.8 mm)	2.28" (57.9 mm)	2.28" (57.9 mm)	2.50" (63.5 mm)	
UT12-8W-12FN-3X	3/4"	1/2"	3/4"	0.38" (9.7 mm)	4.36" (110.7 mm)	2.18" (55.4 mm)	2.18" (55.4 mm)	1.74" (44.2 mm)	
UT16-8W-16FN-3X	1"	1/2"	1"	0.38" (9.7 mm)	5.68" (144.3 mm)	2.84" (72.1 mm)	2.84" (72.1 mm)	2.02" (51.3 mm)	
UT16-12W-16FN-3X	1"	3/4"	1"	0.63" (16.0 mm)	5.66" (143.8 mm)	2.83" (71.9 mm)	2.83" (71.9 mm)	1.95" (49.5 mm)	

*Also available in PVDF (-1X) and CPFA (-6X) nuts.

PureBond[®], PFA

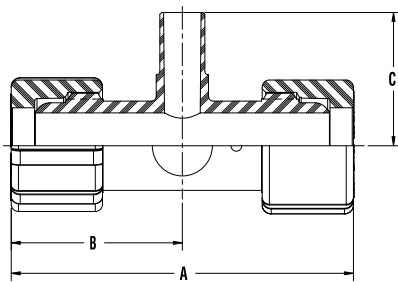
Welded Tube Tee Adapter, Flaretek[®] Tube, PFA Plus



Part* Number	O.D. Welded Tube Size	O.D. Tube Size	Orifice	Dimensions			
				A	B	C	D
UT6W-6W-6FN-3X	3/8" × 3/8"	3/8"	0.25" (6.4 mm)	3.23" (82.0 mm)	1.47" (37.3 mm)	1.76" (44.7 mm)	1.47" (37.3 mm)
UT8W-8W-8FN-3X	1/2" × 1/2"	1/2"	0.38" (9.7 mm)	3.41" (86.6 mm)	1.56" (39.6 mm)	1.85" (47.0 mm)	1.56" (39.6 mm)
UT12W-12W-12FN-3X	3/4" × 3/4"	3/4"	0.63" (16.0 mm)	4.02" (102.1 mm)	1.84" (46.7 mm)	2.18" (55.4 mm)	1.84" (46.7 mm)
UT16W-16W-16FN-3X	1" × 1"	1"	0.88" (22.4 mm)	5.32" (135.1 mm)	2.50" (63.5 mm)	2.82" (71.6 mm)	2.50" (63.5 mm)

*Also available in PVDF (-1X) and CPFA (-6X) nuts.

Welded Tube Tee Adapter, Reducer, Flaretek[®] Tube, Reduced Footprint, PFA Plus

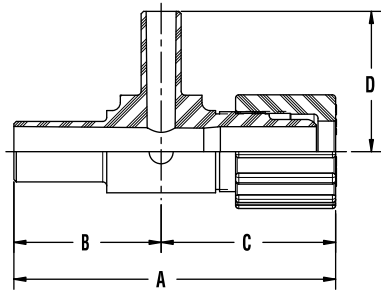


Part* Number	O.D. Tube Size	O.D. Welded Tube Size	O.D. Tube Size	Orifice	Dimensions		
					A	B	C
UT20-16W-20FN-3SX	1 1/4"	1"	1 1/4"	0.88" (22.4 mm)	5.70" (144.8 mm)	2.85" (72.4 mm)	2.48" (63.0 mm)

*Also available in PVDF (-1SX) and CPFA (-6SX) nuts.

PureBond[®], PFA

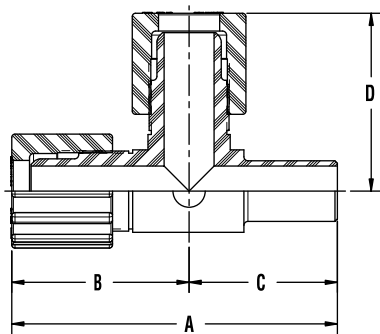
Welded Tube Tee Adapter, Reducer, Flaretek[®] Tube, PFA Plus



Part* Number	O.D. Welded Tube Size	O.D. Tube Size	Orifice	Dimensions			
				A	B	C	D
UT12W-8W-12FN-3X	3/4" × 1/2"	3/4"	0.38" (9.7 mm)	4.02" (102.1 mm)	1.84" (46.7 mm)	2.18" (55.4 mm)	1.74" (44.2 mm)
UT12W-12W-8FN-3X	3/4" × 3/4"	1/2"	0.38" (9.7 mm)	3.85" (97.8 mm)	1.84" (46.7 mm)	2.01" (51.1 mm)	1.84" (46.7 mm)

*Also available in PVDF (-1X) and CPFA (-6X) nuts.

Welded Tube Tee Adapter, Flaretek[®] Tube, PFA Plus

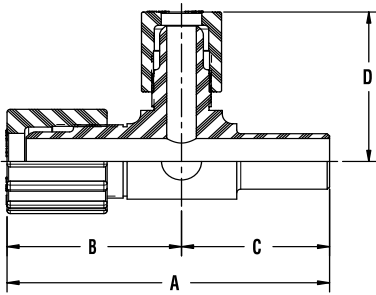


Part* Number	O.D. Welded Tube Size	O.D. Tube Size	Orifice	Dimensions			
				A	B	C	D
UT6-6-6WFN-3X	3/8"	3/8" × 3/8"	0.25" (6.4 mm)	3.23" (82.0 mm)	1.76" (44.7 mm)	1.47" (37.3 mm)	1.76" (44.7 mm)
UT8-8-8WFN-3X	1/2"	1/2" × 1/2"	0.38" (9.7 mm)	3.41" (86.6 mm)	1.85" (47.0 mm)	1.56" (39.6 mm)	1.85" (47.0 mm)
UT12-12-12WFN-3X	3/4"	3/4" × 3/4"	0.63" (16.0 mm)	4.04" (102.6 mm)	2.20" (55.9 mm)	1.84" (46.7 mm)	2.20" (55.9 mm)
UT16-16-16WFN-3X	1"	1" × 1"	0.88" (22.4 mm)	5.32" (135.1 mm)	2.84" (72.1 mm)	2.48" (63.0 mm)	2.86" (72.6 mm)

*Also available in PVDF (-1X) and CPFA (-6X) nuts.

PureBond[®], PFA

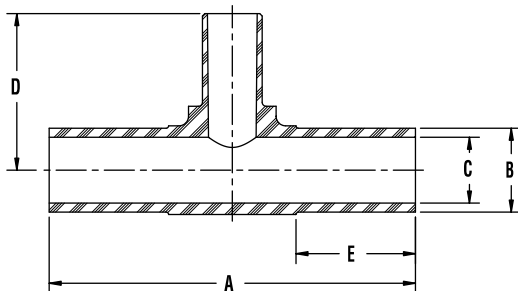
Welded Tube Tee Adapter, Reducer, Flaretek[®] Tube, PFA Plus



Part* Number	O.D. Welded		O.D. Tube Size	Orifice	Dimensions			
	Tube Size	Tube Size			A	B	C	D
UT6-4-6WFN-3X	3/8"	3/8" × 1/4"	3/8" × 1/4"	0.16" (4.1 mm)	3.23" (82.0 mm)	1.76" (44.7 mm)	1.47" (37.3 mm)	1.65" (41.9 mm)
UT8-4-8WFN-3X	1/2"	1/2" × 1/4"	1/2" × 1/4"	0.16" (4.1 mm)	3.41" (86.6 mm)	1.85" (47.0 mm)	1.56" (39.6 mm)	1.65" (41.9 mm)
UT12-6-12WFN-3X	3/4"	3/4" × 3/8"	3/4" × 3/8"	0.25" (6.4 mm)	4.04" (102.6 mm)	2.19" (55.6 mm)	1.85" (47.0 mm)	1.92" (48.8 mm)
UT12-8-12WFN-3X	3/4"	3/4" × 1/2"	3/4" × 1/2"	0.38" (9.7 mm)	4.03" (102.4 mm)	2.18" (55.4 mm)	1.85" (47.0 mm)	2.02" (51.3 mm)
UT12-12-8WFN-3X	1/2"	3/4" × 3/4"	3/4" × 3/4"	0.38" (9.7 mm)	3.95" (100.3 mm)	2.19" (55.6 mm)	1.76" (44.7 mm)	2.19" (55.6 mm)
UT16-8-16WFN-3X	1"	1" × 1/2"	1" × 1/2"	0.38" (9.7 mm)	5.32" (135.1 mm)	2.84" (72.1 mm)	2.48" (63.0 mm)	2.30" (58.4 mm)
UT16-12-16WFN-3X	1"	1" × 3/4"	1" × 3/4"	0.63" (16.0 mm)	5.32" (135.1 mm)	2.84" (72.1 mm)	2.48" (63.0 mm)	2.47" (62.7 mm)

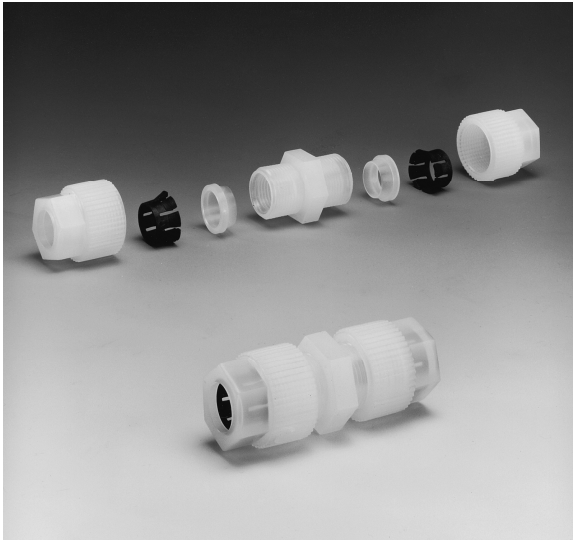
*Also available in PVDF (-1X) and CPFA (-6X) nuts.

Welded Tube Tee Adapter, PureBond[®] Pipe, PFA Plus



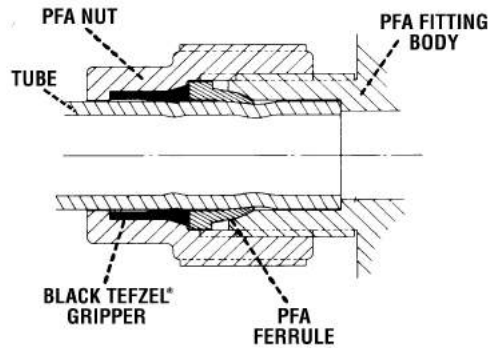
Part Number	O.D. Welded		Orifice	Dimensions				
	Tube Size	Pipe Size		A	B	C	D	E
WBT8-8W-X	1/2"	1/2"	0.38" (9.7 mm)	2.94" (74.7 mm)	0.84" (21.3 mm)	0.61" (15.5 mm)	1.75" (44.4 mm)	0.75" (19.0 mm)
WBT12-6W-X	3/8"	3/4"	0.25" (6.4 mm)	3.08" (78.2 mm)	1.05" (26.7 mm)	0.81" (20.6 mm)	1.75" (44.4 mm)	0.75" (19.0 mm)
WBT12-12W-X	3/4"	3/4"	0.63" (16.0 mm)	4.60" (116.8 mm)	1.05" (26.7 mm)	0.81" (20.6 mm)	1.96" (49.8 mm)	1.50" (38.1 mm)
WBT12-16W-X	1"	3/4"	0.81" (20.6 mm)	4.60" (116.8 mm)	1.05" (26.7 mm)	0.81" (20.6 mm)	2.34" (59.4 mm)	1.50" (38.1 mm)
WBT16-6W-X	3/8"	1"	0.25" (6.4 mm)	3.40" (86.4 mm)	1.32" (33.5 mm)	1.03" (26.2 mm)	1.90" (48.3 mm)	0.75" (19.0 mm)
WBT16-8W-X	1/2"	1"	0.38" (9.7 mm)	3.40" (86.4 mm)	1.32" (33.5 mm)	1.03" (26.2 mm)	1.99" (50.5 mm)	0.75" (19.0 mm)

Quikgrip® Tube Fittings and Technical Information



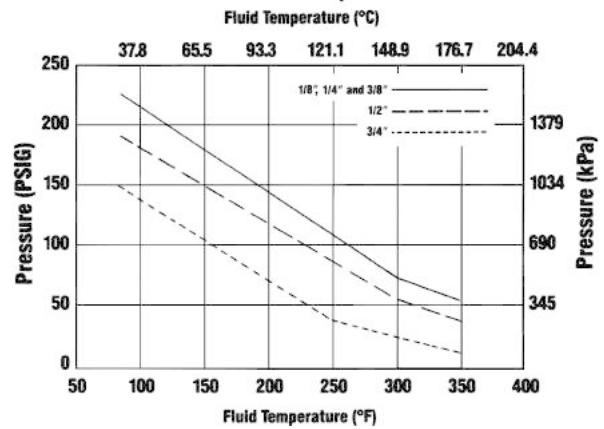
Easy fitting assembly with no tube preparation or special tools required. Fitting integrity easily verified with a visual check.

Available in 1/8", 1/4", 3/8", 1/2" and 3/4" nominal tube sizes. Materials include all PFA fitting body, ferrule and nut with carbon-filled Tefzel® material gripper. Over 100 configurations available to meet your needs.



Quikgrip® Tube Fittings

Pressure vs. Temperature



Note: All pressure ratings at various temperatures are based on actual test data utilizing the standards noted in the Technical Information Section of this manual.

Quikgrip® Tube Fittings Assembly Procedure

1. Cut tube end squarely using Galtek® tube cutter (part number 213-14 for 1/8" through 1/2" tubing or part number 213-16 for 3/4" tubing). No further preparation is required.
2. Insert the square cut end of the tube through the hex side of the nut (See Figure 1).
3. Slide the black gripper onto the tube, solid ring first.
4. Slide the ferrule onto the tube with the wide shoulder of the ferrule going on first. The shoulder of the ferrule should rest evenly against the black gripper.
5. Insert tube into fitting body until internal tube stop is reached.
6. Start threading the nut to the fitting by hand. Ensure that the tube is inserted completely so it can travel no further into the fitting.
7. **Recommended Torque Values** – Using a torque wrench, tighten nut to torque values in the table below. Assembly complete.

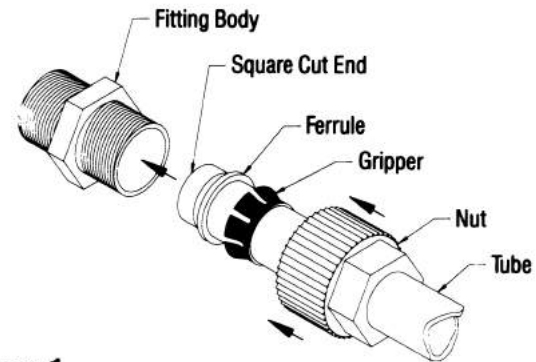


Figure 1

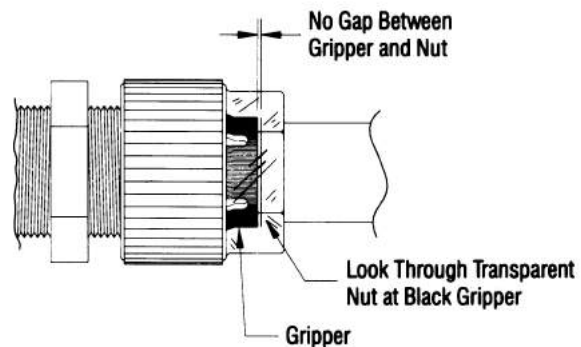


Figure 2

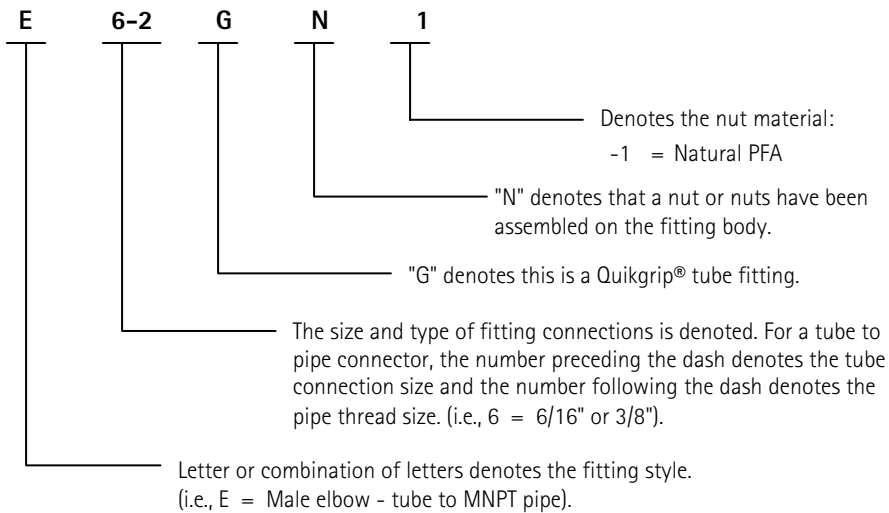
Fitting Size	Torque Inch•lbs (N•m)
1/8	3 (.3)
1/4	8 (.9)
3/8	17 (1.9)
1/2	19 (2.2)
3/4	30 (3.4)

Alternate Method

Wrench tighten nut until black gripper and nut are “seated” with no gap between the black gripper and the nut (see Figure 2). Wrench tighten nut another 1/2-turn (1/3-turn for 1/8" fittings, 1/4-turn for 3/4" fittings) beyond the “seated” condition of the gripper and nut. Assembly complete.

Quikgrip[®] Tube Fittings

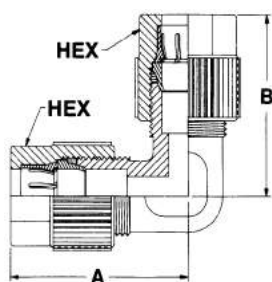
Part Number System



- BT = Male branch tee - tube to MNPT pipe
- C = Male connector - tube to MNPT pipe
- CP = Cap plug
- E = Male elbow - tube to MNPT pipe
- FC = Female adapter - tube to FNPT pipe
- FE = Female elbow - tube to FNPT pipe
- GN = Gripper nut
- HN = Half nut
- PM = Panel mount - straight union
- PMC = Panel mount connector - tube to MNPT pipe
- RT = Male run tee - tube to MNPT pipe
- SU = Straight union
- UE = Union elbow
- UT = Union tee
- WTA = PureBond[®] welded tube adapter

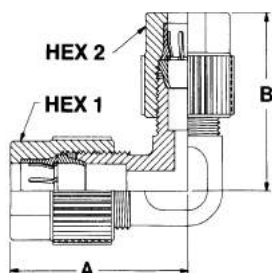
Quikgrip® , PFA

Elbow Union



Part Number	O.D. Tube Size	Orifice	Dimensions		Hex
			A	B	
UE2GN-1	1/8"	0.07" (1.8 mm)	1.29" (32.8 mm)	1.29" (32.8 mm)	3/8"
UE4GN-1	1/4"	0.19" (4.8 mm)	1.36" (34.5 mm)	1.36" (34.5 mm)	1/2"
UE6GN-1	3/8"	0.30" (7.6 mm)	1.66" (42.2 mm)	1.66" (42.2 mm)	11/16"
UE8GN-1	1/2"	0.43" (10.9 mm)	1.74" (44.2 mm)	1.74" (44.2 mm)	13/16"
UE12GN-1	3/4"	0.69" (17.5 mm)	2.11" (53.6 mm)	2.11" (53.6 mm)	1 1/16"

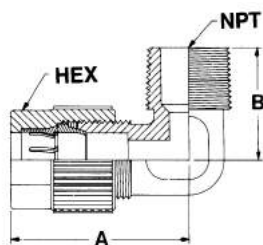
Elbow Union, Reducer



Part Number	O.D. Tube Size	Orifice	Dimensions		Hex 1	Hex 2
			A	B		
UE6-4GN-1	3/8" × 1/4"	0.19" (4.8 mm)	1.65" (41.9 mm)	1.55" (39.4 mm)	11/16"	1/2"
UE8-4GN-1	1/2" × 1/4"	0.19" (4.8 mm)	1.73" (43.9 mm)	1.55" (39.4 mm)	13/16"	1/2"
UE8-6GN-1	1/2" × 3/8"	0.30" (7.6 mm)	1.73" (43.9 mm)	1.65" (41.9 mm)	13/16"	11/16"

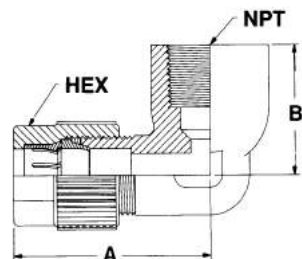
Quikgrip® , PFA

Elbow Adapter, MNPT



Part Number	O.D. Tube Size	MNPT Size	Orifice	Dimensions		Hex
				A	B	
E2-2GN-1	1/8"	1/8"	0.07" (1.8 mm)	1.29" (32.8 mm)	0.88" (22.4 mm)	3/8"
E2-4GN-1	1/8"	1/4"	0.07" (1.8 mm)	1.29" (32.8 mm)	0.88" (22.4 mm)	3/8"
E4-2GN-1	1/4"	1/8"	0.19" (4.8 mm)	1.36" (34.5 mm)	0.88" (22.4 mm)	1/2"
E4-4GN-1	1/4"	1/4"	0.19" (4.8 mm)	1.36" (34.5 mm)	0.88" (22.4 mm)	1/2"
E4-6GN-1	1/4"	3/8"	0.19" (4.8 mm)	1.36" (34.5 mm)	1.07" (27.2 mm)	1/2"
E4-8GN-1	1/4"	1/2"	0.19" (4.8 mm)	1.36" (34.5 mm)	1.07" (27.2 mm)	1/2"
E6-2GN-1	3/8"	1/8"	0.19" (4.8 mm)	1.65" (41.9 mm)	1.07" (27.2 mm)	11/16"
E6-4GN-1	3/8"	1/4"	0.29" (7.4 mm)	1.65" (41.9 mm)	1.07" (27.2 mm)	11/16"
E6-6GN-1	3/8"	3/8"	0.30" (7.6 mm)	1.65" (41.9 mm)	1.07" (27.2 mm)	11/16"
E6-8GN-1	3/8"	1/2"	0.30" (7.6 mm)	1.65" (41.9 mm)	1.07" (27.2 mm)	11/16"
E8-4GN-1	1/2"	1/4"	0.29" (7.4 mm)	1.73" (43.9 mm)	1.07" (27.2 mm)	13/16"
E8-6GN-1	1/2"	3/8"	0.43" (10.9 mm)	1.73" (43.9 mm)	1.07" (27.2 mm)	13/16"
E8-8GN-1	1/2"	1/2"	0.43" (10.9 mm)	1.73" (43.9 mm)	1.07" (27.2 mm)	13/16"
E8-12GN-1	1/2"	3/4"	0.43" (10.9 mm)	2.02" (51.3 mm)	1.40" (35.6 mm)	13/16"
E12-8GN-1	3/4"	1/2"	0.54" (13.7 mm)	2.11" (53.6 mm)	1.40" (35.6 mm)	1 1/16"
E12-12GN-1	3/4"	3/4"	0.67" (17.0 mm)	2.11" (53.6 mm)	1.40" (35.6 mm)	1 1/16"

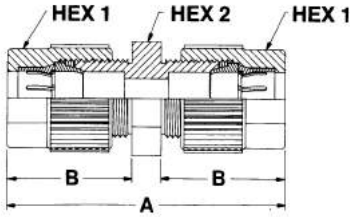
Elbow Adapter, FNPT



Part Number	O.D. Tube Size	FNPT Size	Orifice	Dimensions		Hex
				A	B	
FE2-2GN-1	1/8"	1/8"	0.07" (1.8 mm)	1.64" (41.7 mm)	0.81" (20.6 mm)	3/8"
FE2-4GN-1	1/8"	1/4"	0.07" (1.8 mm)	1.64" (41.7 mm)	0.94" (23.9 mm)	3/8"
FE4-2GN-1	1/4"	1/8"	0.19" (4.8 mm)	1.71" (43.4 mm)	0.81" (20.6 mm)	1/2"
FE4-4GN-1	1/4"	1/4"	0.19" (4.8 mm)	1.71" (43.4 mm)	0.94" (23.9 mm)	1/2"
FE6-4GN-1	3/8"	1/4"	0.30" (7.6 mm)	1.81" (46.0 mm)	0.94" (23.9 mm)	11/16"
FE6-6GN-1	3/8"	3/8"	0.30" (7.6 mm)	1.81" (46.0 mm)	1.00" (25.4 mm)	11/16"
FE6-8GN-1	3/8"	1/2"	0.30" (7.6 mm)	1.81" (46.0 mm)	1.23" (31.2 mm)	11/16"
FE8-4GN-1	1/2"	1/4"	0.35" (8.9 mm)	1.89" (48.0 mm)	0.94" (23.9 mm)	13/16"
FE8-8GN-1	1/2"	1/2"	0.43" (10.9 mm)	1.89" (48.0 mm)	1.23" (31.2 mm)	13/16"

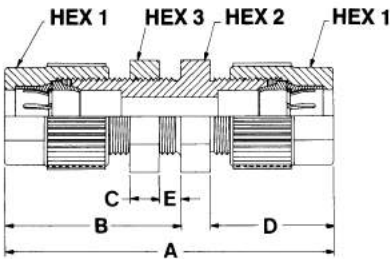
Quikgrip® , PFA

Straight Union



Part Number	O.D. Tube Size	Orifice	Dimensions		Hex 1	Hex 2
			A	B		
SU2GN-1	1/8"	0.07" (1.8 mm)	2.20" (55.9 mm)	0.96" (24.4 mm)	3/8"	1/2"
SU4GN-1	1/4"	0.19" (4.8 mm)	2.34" (59.4 mm)	1.03" (26.2 mm)	1/2"	5/8"
SU6GN-1	3/8"	0.30" (7.6 mm)	2.54" (64.5 mm)	1.13" (28.7 mm)	11/16"	13/16"
SU8GN-1	1/2"	0.43" (10.9 mm)	2.70" (68.6 mm)	1.21" (30.7 mm)	13/16"	15/16"
SU12GN-1	3/4"	0.69" (17.5 mm)	3.12" (79.2 mm)	1.42" (36.1 mm)	1 1/16"	1 3/16"

Straight Union, Panel Mount



Part Number	O.D. Tube Size	Orifice	Dimensions			
			A	B	C	D
PM2GN-1	1/8"	0.07" (1.8 mm)	2.54" (64.5 mm)	1.29" (32.8 mm)	0.28" (7.1 mm)	0.96" (24.4 mm)
PM4GN-1	1/4"	0.19" (4.8 mm)	2.68" (68.1 mm)	1.37" (34.8 mm)	0.28" (7.1 mm)	1.03" (26.2 mm)
PM6GN-1	3/8"	0.30" (7.6 mm)	3.05" (77.5 mm)	1.64" (41.7 mm)	0.28" (7.1 mm)	1.13" (28.7 mm)
PM8GN-1†	1/2"	0.43" (10.9 mm)	3.21" (81.5 mm)	1.72" (43.7 mm)	0.28" (7.1 mm)	1.21" (30.7 mm)
PM12GN-1†	3/4"	0.69" (17.5 mm)	3.76" (95.5 mm)	2.06" (52.3 mm)	0.28" (7.1 mm)	1.42" (36.1 mm)

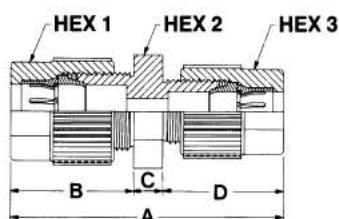
Part Number	E _(max)	Hex 1	Hex 2	Hex 3	Panel Mount	Half-Nut
					Hole Diameter	Part Number*
PM2GN-1	0.25" (6.4 mm)	3/8"	1/2"	1/2"	0.38" (9.5 mm)	HN2
PM4GN-1	0.25" (6.4 mm)	1/2"	5/8"	5/8"	0.50" (12.7 mm)	HN4
PM6GN-1	0.25" (6.4 mm)	11/16"	13/16"	15/16"	0.62" (15.9 mm)	HN6
PM8GN-1†	0.25" (6.4 mm)	13/16"	15/16"	1 1/16"	0.75" (19.0 mm)	HN8†
PM12GN-1†	0.25" (6.4 mm)	1 1/16"	1 3/16"	1 5/16"	1.00" (25.4 mm)	HN12†

†Panel mount nut material is Natural PVDF.

*See page 261 for half-nut ordering information.

Quikgrip[®], PFA

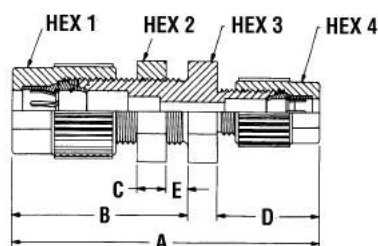
Straight Union, Reducer



Part Number	O.D.		Orifice	A	Dimensions	
	Tube Size				B	C
SU6-4GN-1	3/8" × 1/4"		0.19" (4.8 mm)	2.45" (62.2 mm)	1.13" (28.7 mm)	0.28" (7.1 mm)
SU8-4GN-1	1/2" × 1/4"		0.19" (4.8 mm)	2.53" (64.3 mm)	1.21" (30.7 mm)	0.28" (7.1 mm)
SU8-6GN-1	1/2" × 3/8"		0.30" (7.6 mm)	2.63" (66.8 mm)	1.21" (30.7 mm)	0.28" (7.1 mm)
SU12-8GN-1	3/4" × 1/2"		0.43" (10.9 mm)	3.04" (77.2 mm)	1.42" (36.1 mm)	0.28" (7.1 mm)

Part Number	Dimension	Hex 1	Hex 2	Hex 3
	D			
SU6-4GN-1	1.03" (26.2 mm)	11/16"	13/16"	1/2"
SU8-4GN-1	1.03" (26.2 mm)	13/16"	15/16"	1/2"
SU8-6GN-1	1.13" (28.7 mm)	13/16"	15/16"	11/16"
SU12-8GN-1	1.33" (33.8 mm)	1 1/16"	1 3/16"	13/16"

Straight Union, Reducer, Panel Mount



Part Number	O.D.		Orifice	A	Dimensions		
	Tube Size				B	C	D
PM4-2GN-1	1/4" × 1/8"		0.07" (1.8 mm)	2.77" (70.4 mm)	1.45" (36.8 mm)	0.28" (7.1 mm)	1.04" (26.4 mm)
PM6-4GN-1	3/8" × 1/4"		0.19" (4.8 mm)	2.96" (75.2 mm)	1.63" (41.4 mm)	0.28" (7.1 mm)	1.05" (26.7 mm)
PM8-4GN-1†	1/2" × 1/4"		0.19" (4.8 mm)	3.00" (76.2 mm)	1.70" (43.2 mm)	0.32" (8.1 mm)	1.00" (25.4 mm)

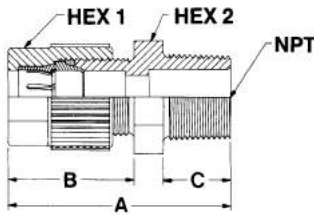
Part Number	E _(max)	Half-Nut				Panel Mount Hole Diameter	Half-Nut (Hex 2) Part Number*
		Hex 1	Hex 2	Hex 3	Hex 4		
PM4-2GN-1	0.25" (6.4 mm)	1/2"	5/8"	5/8"	3/8"	0.47" (11.9 mm)	HN4
PM6-4GN-1	0.25" (6.4 mm)	11/16"	15/16"	13/16"	1/2"	0.66" (16.7 mm)	HN6
PM8-4GN-1†	0.40" (10.2 mm)	13/16"	1 1/16"	15/16"	1/2"	0.75" (19.0 mm)	HN8+

†Panel mount nut material is Natural PVDF.

*See page 261 for half-nut ordering information.

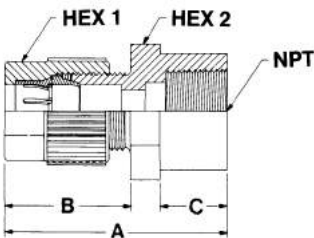
Quikgrip[®], PFA

Straight Adapter, MNPT



Part Number	O.D. Tube Size	MNPT Size	Orifice	Dimensions				
				A	B	C	Hex 1	Hex 2
C2-2GN-1	1/8"	1/8"	0.07" (1.8 mm)	1.79" (45.5 mm)	0.96" (24.4 mm)	0.55" (14.0 mm)	3/8"	1/2"
C2-4GN-1	1/8"	1/4"	0.07" (1.8 mm)	1.79" (45.5 mm)	0.96" (24.4 mm)	0.55" (14.0 mm)	3/8"	5/8"
C4-2GN-1	1/4"	1/8"	0.19" (4.8 mm)	1.86" (47.2 mm)	1.03" (26.2 mm)	0.55" (14.0 mm)	1/2"	5/8"
C4-4GN-1	1/4"	1/4"	0.19" (4.8 mm)	1.86" (47.2 mm)	1.03" (26.2 mm)	0.55" (14.0 mm)	1/2"	5/8"
C4-6GN-1	1/4"	3/8"	0.19" (4.8 mm)	1.86" (47.2 mm)	1.03" (26.2 mm)	0.55" (14.0 mm)	1/2"	13/16"
C4-8GN-1	1/4"	1/2"	0.19" (4.8 mm)	1.86" (47.2 mm)	1.03" (26.2 mm)	0.66" (16.8 mm)	1/2"	13/16"
C6-2GN-1	3/8"	1/8"	0.20" (5.1 mm)	1.96" (49.8 mm)	1.13" (28.7 mm)	0.55" (14.0 mm)	11/16"	13/16"
C6-4GN-1	3/8"	1/4"	0.29" (7.4 mm)	1.96" (49.8 mm)	1.13" (28.7 mm)	0.55" (14.0 mm)	11/16"	13/16"
C6-6GN-1	3/8"	3/8"	0.30" (7.6 mm)	1.96" (49.8 mm)	1.13" (28.7 mm)	0.55" (14.0 mm)	11/16"	13/16"
C6-8GN-1	3/8"	1/2"	0.30" (7.6 mm)	1.96" (49.8 mm)	1.13" (28.7 mm)	0.66" (16.8 mm)	11/16"	15/16"
C8-4GN-1	1/2"	1/4"	0.29" (7.4 mm)	2.04" (51.8 mm)	1.21" (30.7 mm)	0.55" (14.0 mm)	13/16"	15/16"
C8-6GN-1	1/2"	3/8"	0.43" (10.9 mm)	2.04" (51.8 mm)	1.21" (30.7 mm)	0.55" (14.0 mm)	13/16"	15/16"
C8-8GN-1	1/2"	1/2"	0.43" (10.9 mm)	2.04" (51.8 mm)	1.21" (30.7 mm)	0.66" (16.8 mm)	13/16"	15/16"
C8-12GN-1	1/2"	3/4"	0.43" (10.9 mm)	2.04" (51.8 mm)	1.21" (30.7 mm)	0.67" (17.0 mm)	13/16"	1 3/16"
C12-8GN-1	3/4"	1/2"	0.54" (13.7 mm)	2.37" (60.2 mm)	1.42" (36.1 mm)	0.66" (16.8 mm)	1 1/16"	1 3/16"
C12-12GN-1	3/4"	3/4"	0.69" (17.5 mm)	2.37" (60.2 mm)	1.42" (36.1 mm)	0.67" (17.0 mm)	1 1/16"	1 3/16"

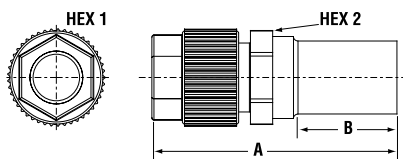
Straight Adapter, FNPT



Part Number	O.D. Tube Size	FNPT Size	Orifice	Dimensions				
				A	B	C	Hex 1	Hex 2
FC2-2GN-1	1/8"	1/8"	0.07" (1.8 mm)	1.87" (47.5 mm)	0.96" (24.4 mm)	0.62" (15.7 mm)	3/8"	5/8"
FC2-4GN-1	1/8"	1/4"	0.07" (1.8 mm)	1.87" (47.5 mm)	0.96" (24.4 mm)	0.62" (15.7 mm)	3/8"	3/4"
FC4-2GN-1	1/4"	1/8"	0.19" (4.8 mm)	1.94" (49.3 mm)	1.03" (26.2 mm)	0.62" (15.7 mm)	1/2"	5/8"
FC4-4GN-1	1/4"	1/4"	0.19" (4.8 mm)	1.94" (49.3 mm)	1.03" (26.2 mm)	0.62" (15.7 mm)	1/2"	3/4"
FC4-6GN-1	1/4"	3/8"	0.19" (4.8 mm)	1.94" (49.3 mm)	1.03" (26.2 mm)	0.62" (15.7 mm)	1/2"	15/16"
FC4-8GN-1	1/4"	1/2"	0.19" (4.8 mm)	1.94" (49.3 mm)	1.03" (26.2 mm)	0.62" (15.7 mm)	1/2"	1 1/8"
FC6-4GN-1	3/8"	1/4"	0.30" (7.6 mm)	2.04" (51.8 mm)	1.13" (28.7 mm)	0.62" (15.7 mm)	11/16"	3/4"
FC6-6GN-1	3/8"	3/8"	0.30" (7.6 mm)	2.04" (51.8 mm)	1.13" (28.7 mm)	0.62" (15.7 mm)	11/16"	15/16"
FC6-8GN-1	3/8"	1/2"	0.30" (7.6 mm)	2.04" (51.8 mm)	1.13" (28.7 mm)	0.62" (15.7 mm)	11/16"	1 1/8"
FC8-4GN-1	1/2"	1/4"	0.35" (8.9 mm)	2.12" (53.8 mm)	1.21" (30.7 mm)	0.62" (15.7 mm)	13/16"	3/4"
FC8-6GN-1	1/2"	3/8"	0.43" (10.9 mm)	2.12" (53.8 mm)	1.21" (30.7 mm)	0.62" (15.7 mm)	13/16"	15/16"
FC8-8GN-1	1/2"	1/2"	0.43" (10.9 mm)	2.12" (53.8 mm)	1.21" (30.7 mm)	0.62" (15.7 mm)	13/16"	1 1/8"
FC8-12GN-1	1/2"	3/4"	0.43" (10.9 mm)	2.12" (53.8 mm)	1.21" (30.7 mm)	0.67" (17.0 mm)	13/16"	1 3/16"
FC12-8GN-1	3/4"	1/2"	0.56" (14.2 mm)	2.37" (60.2 mm)	1.42" (36.1 mm)	0.67" (17.0 mm)	1 3/16"	1 1/16"
FC12-12GN-1	3/4"	3/4"	0.69" (17.5 mm)	2.37" (60.2 mm)	1.42" (36.1 mm)	0.67" (17.0 mm)	1 3/16"	1 1/16"

Quikgrip[®], PFA

Straight Adapter, PureBond[®] Fusible Pipe

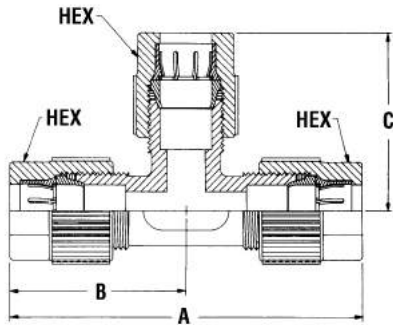


Part Number	O.D. Tube Size	Pipe Size	Orifice	Pipe O.D.	Pipe I.D.	Dimensions		Hex 1	Hex 2
						A	B		
WTA12-12PGN-1	0.75	3/4"	0.63" (16.0 mm)	1.05" (26.7 mm)	0.81" (20.6 mm)	3.56" (90.4 mm)	1.50" (38.1 mm)	1 1/16"	1 3/16"
WTA12-16PGN-1HX	3/4"	1"	0.63" (16.0 mm)	1.32" (33.5 mm)	1.03" (26.2 mm)	3.53" (89.7 mm)	1.48" (37.6 mm)	1 1/16"	1 7/16"

Note: The tube end does not have a shoulder, allowing 3/4" O.D. tubing to pass through into pipe.

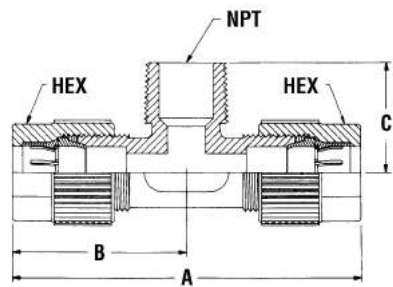
Quikgrip[®], PFA

Tee Union



Part Number	O.D. Tube Size	Orifice	Dimensions			
			A	B	C	Hex
UT4GN-1	1/4"	0.19" (4.8 mm)	2.71" (68.8 mm)	1.36" (34.5 mm)	1.36" (34.5 mm)	1/2"
UT6GN-1	3/8"	0.30" (7.6 mm)	3.31" (84.1 mm)	1.66" (42.2 mm)	1.66" (42.2 mm)	11/16"
UT8GN-1	1/2"	0.43" (10.9 mm)	3.47" (88.1 mm)	1.74" (44.2 mm)	1.74" (44.2 mm)	13/16"
UT12GN-1	3/4"	0.69" (17.5 mm)	4.22" (107.2 mm)	2.11" (53.6 mm)	2.11" (53.6 mm)	1 1/16"

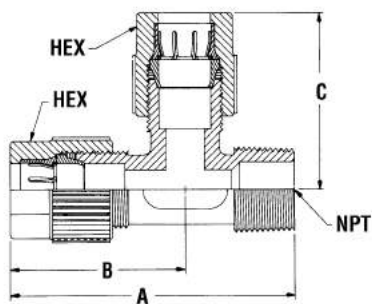
Tee Adapter, MNPT Branch



Part Number	O.D. Tube Size	MNPT Size	Orifice	Dimensions			
				A	B	C	Hex
BT2-4GN-1	1/8" × 1/8"	1/4"	0.07" (1.8 mm)	2.58" (65.5 mm)	1.29" (32.8 mm)	0.88" (22.4 mm)	3/8"
BT4-2GN-1	1/4" × 1/4"	1/8"	0.19" (4.8 mm)	2.72" (69.1 mm)	1.36" (34.5 mm)	0.88" (22.4 mm)	1/2"
BT4-4GN-1	1/4" × 1/4"	1/4"	0.19" (4.8 mm)	2.72" (69.1 mm)	1.36" (34.5 mm)	0.88" (22.4 mm)	1/2"
BT6-2GN-1	3/8" × 3/8"	1/8"	0.20" (5.1 mm)	3.31" (84.1 mm)	1.66" (42.2 mm)	1.08" (27.4 mm)	11/16"
BT6-4GN-1	3/8" × 3/8"	1/4"	0.30" (7.6 mm)	3.31" (84.1 mm)	1.66" (42.2 mm)	1.08" (27.4 mm)	11/16"
BT6-6GN-1	3/8" × 3/8"	3/8"	0.30" (7.6 mm)	3.31" (84.1 mm)	1.66" (42.2 mm)	1.08" (27.4 mm)	11/16"
BT6-8GN-1	3/8" × 3/8"	1/2"	0.30" (7.6 mm)	3.31" (84.1 mm)	1.66" (42.2 mm)	1.08" (27.4 mm)	11/16"
BT8-4GN-1	1/2" × 1/2"	1/4"	0.29" (7.4 mm)	3.47" (88.1 mm)	1.74" (44.2 mm)	0.88" (22.4 mm)	13/16"
BT8-6GN-1	1/2" × 1/2"	3/8"	0.43" (10.9 mm)	3.47" (88.1 mm)	1.74" (44.2 mm)	1.08" (27.4 mm)	13/16"
BT8-8GN-1	1/2" × 1/2"	1/2"	0.43" (10.9 mm)	3.47" (88.1 mm)	1.74" (44.2 mm)	1.08" (27.4 mm)	13/16"
BT12-12GN-1	3/4" × 3/4"	3/4"	0.67" (17.0 mm)	4.22" (107.2 mm)	2.11" (53.6 mm)	1.36" (34.5 mm)	1 1/16"

Quikgrip[®], PFA

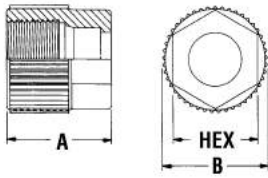
Tee Adapter, MNPT Run



Part Number	O.D. Tube Size	MNPT Size	Orifice	Dimensions			
				A	B	C	Hex
RT4-2GN-1	1/4" × 1/4"	1/8"	0.19" (4.8 mm)	2.23" (56.6 mm)	1.36" (34.5 mm)	1.36" (34.5 mm)	1/2"
RT4-4GN-1	1/4" × 1/4"	1/4"	0.19" (4.8 mm)	2.23" (56.6 mm)	1.36" (34.5 mm)	1.36" (34.5 mm)	1/2"
RT6-4GN-1	3/8" × 3/8"	1/4"	0.30" (7.6 mm)	2.73" (69.3 mm)	1.66" (42.2 mm)	1.66" (42.2 mm)	11/16"
RT8-4GN-1	1/2" × 1/2"	1/4"	0.29" (7.4 mm)	2.81" (71.4 mm)	1.74" (44.2 mm)	1.74" (44.2 mm)	13/16"
RT8-8GN-1	1/2" × 1/2"	1/2"	0.43" (10.9 mm)	2.81" (71.4 mm)	1.74" (44.2 mm)	1.74" (44.2 mm)	13/16"
RT12-12GN-1	3/4" × 3/4"	3/4"	0.67" (17.0 mm)	3.50" (88.9 mm)	2.13" (54.1 mm)	2.13" (54.1 mm)	1 1/16"

Quikgrip[®] PFA Nut Assembly

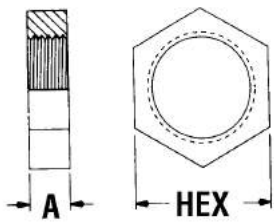
(Includes Nut, Ferrule and Gripper)



Part Number	O.D. Tube Size	Dimensions		Hex	Kit Contains 10 Each Gripper and Ferrule
		A	B		
GN2-1	1/8"	0.76" (19.3 mm)	0.56" (14.2 mm)	3/8"	215-140
GN4-1	1/4"	0.81" (20.6 mm)	0.65" (16.5 mm)	1/2"	215-115
GN6-1	3/8"	0.94" (23.9 mm)	0.87" (22.1 mm)	11/16"	215-116
GN8-1	1/2"	1.00" (25.4 mm)	1.02" (25.9 mm)	13/16"	215-117
GN12-1	3/4"	1.25" (31.8 mm)	1.40" (35.6 mm)	1 1/16"	215-118

Quikgrip[®] Half-Nut

(For Panel Mount Connectors)



Part Number	O.D. Tube Size	Dimension		Material
		A	Hex	
HN2	1/8"	0.25" (6.4 mm)	1/2"	PFA
HN4	1/4"	0.26" (6.6 mm)	5/8"	PFA
HN6	3/8"	0.25" (6.4 mm)	15/16"	PFA
HN8+	1/2"	0.32" (8.1 mm)	1 1/16"	PVDF
HN12+	3/4"	0.38" (9.7 mm)	1 5/16"	PVDF

†Quikgrip[®] half-nuts are used with Quikgrip[®] panel mount connectors on pages 255 and 256.

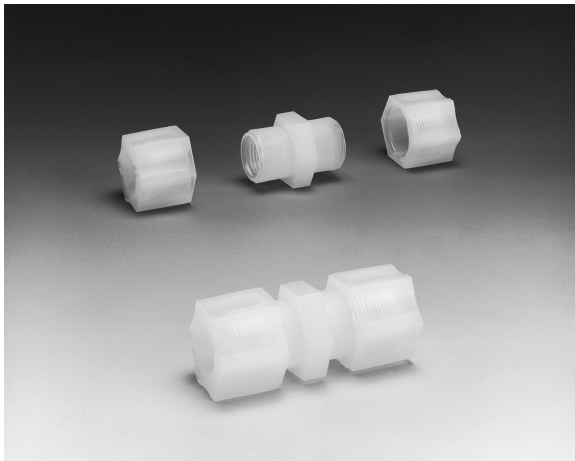
Quikgrip® Wrenches



- Reversible
- Ratchet action
- Metallic construction, nickel plated handles, black oxide coated jaws
- Vinyl pouch

Part Number	Description	Wrench Size	Fits Quikgrip® Standard Nut Size	Fitting Body Hex Size
213-21	5-piece wrench set	-	1/8"	-
		1/2"	1/4"	1/8"
		5/8"	-	1/4"
		11/16"	3/8"	-
		13/16"	1/2"	3/8"
		15/16"	-	1/2"
		-	3/4"	-

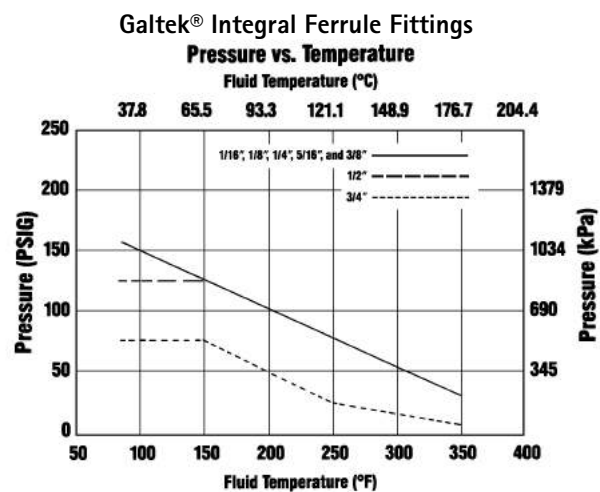
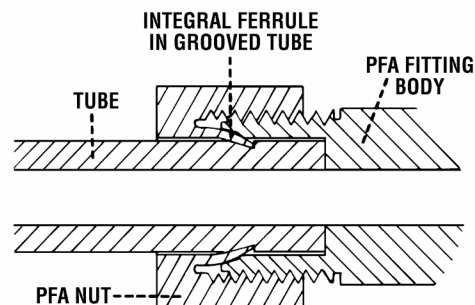
Galtek® Integral Ferrule Fittings and Technical Information



The ORIGINAL all PFA fitting provides chemical resistance both inside and out. The integral ferrule locks into the grooved tube providing increased performance and safety.

Available in 1/16", 1/8", 1/4", 5/16", 3/8", 1/2" and 3/4"; 6 mm, 8 mm, 10 mm and 12 mm nominal tube sizes. Materials are ALL PFA. Over 400 configurations are available to meet your needs.

Grooving tools required for sizes 1/4" to 3/4" and 6 mm to 12 mm.



Note: All pressure ratings at various temperatures are based on actual test data utilizing the standards noted in the Technical Information Section of this manual.

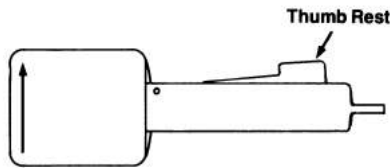
Galtek[®] Integral Ferrule Fitting Assembly Procedure

Tube Preparation

1. Obtain Entegris groove tool designed to groove outside diameter (O.D.) of tubing. All tube sizes 1/4" and larger must be grooved with an Entegris groove tool.
2. Cut tube end squarely using Entegris tube cutter.

Grooving

1. Depress thumb rest until it bottoms out.
2. Insert tube into groove tool until it bottoms out.
3. Release thumb rest.
4. Rotate groove tool in direction of arrow four complete revolutions. Be careful not to move the tube at the same time.
5. Depress thumb rest, remove tube and inspect to be certain that depth is uniform and free from any burrs.



Groove Depth	Tubing Size
.009"	1/8", 3 mm
.012"	1/4", 5/16", 3/8", 6 mm, 8 mm, 10 mm
.020"	1/2", 12 mm
.15"	3/4"

Tolerance is $\pm .005"$

Integral Ferrule Fitting Assembly

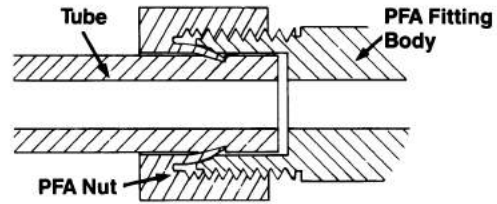
1. Slide ferrule nut onto tube past groove.
2. Insert grooved tube end into integral ferrule until it bottoms out.
3. Slide ferrule nut to fitting and hand tighten.
4. Pull on tubing SLOWLY until ferrule catches on grooved edge.
5. Ensure fitting is hand tight.
6. Tighten ferrule nut with a wrench to the recommended torque specifications in Table 1. DO NOT OVERTIGHTEN.

Table 1
Recommended Assembly Torque

Groove Tool Part Number	Fitting Size	Torque in Inch/lbs.	Approximate Wrench Turns Beyond Hand Tight
N/A	1/16"	3.5	1
GT2	1/8"	5.0	3/4"
GT4	1/4"	8.0	3/4"
GT5	5/16"	8.0	1
GT6	3/8"	18.0	1 1/4"
GT8	1/2"	30.0	1 1/4"
GT12	3/4"	35.0	3/4"
N/A	3 mm	5.0	3/4"
GT6M	6 mm	6.0	3/4"
GT8M	8 mm	7.0	1
GT10M	10 mm	18.0	1 1/4"
GT12M	12 mm	26.0	3/4"

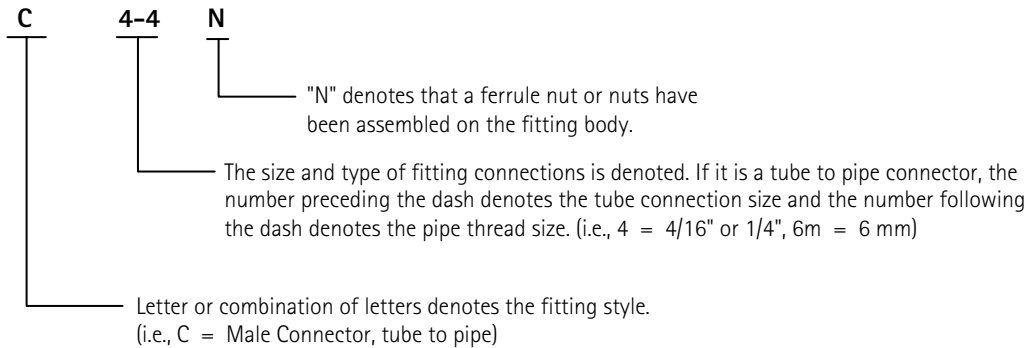
Integral Ferrule Nut/Tube Construction

Laboratory testing of PFA fittings and FEP/PFA tubing (grooved with an Entegris grooving tool) showed successful results under extreme conditions of heat and pressure. Performance reliability is dependent on the care and caution used in grooving the tube and tightening the fitting properly.



Note: The tubing used must be heavy walled (.047" to .062" wall thickness) and must meet Galtek® tubing specifications. 1/8" uses .030" wall thickness.

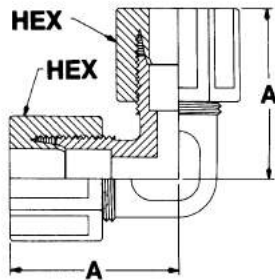
Part Number System



- | | |
|--------------------------------------|--|
| FN = Ferrule Nut | UT = Union Tee |
| FC = Female Connector - Tube to Pipe | CP = Cap Plug |
| PM = Panel Mount - Straight Union | PMC = Panel Mount Connector - Tube to Pipe |
| FP = Ferrule Plug | BT = Male Branch Tee - Tube to Pipe |
| E = Male Elbow - Tube to Pipe | C = Male Connector - Tube to Pipe |
| UE = Union Elbow | SU = Straight Union |
| HN = Half Nut | RT = Male Run Tee - Tube to Pipe |
| FE = Female Elbow - Tube to Pipe | |

Integral Ferrule, PFA

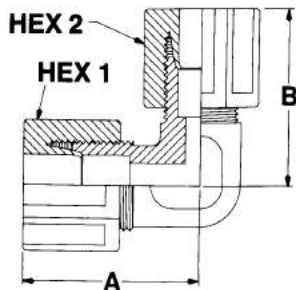
Elbow Union



Part Number	O.D. Tube Size	Orifice	Dimension	
			A	Hex
UE1N*	1/16"	0.07" (1.8 mm)	1.15" (29.2 mm)	1/2"
UE2N	1/8"	0.07" (1.8 mm)	1.15" (29.2 mm)	1/2"
UE4N	1/4"	0.19" (4.8 mm)	1.20" (30.5 mm)	5/8"
UE5N	5/16"	0.25" (6.4 mm)	1.44" (36.6 mm)	11/16"
UE6N	3/8"	0.30" (7.6 mm)	1.49" (37.8 mm)	13/16"
UE8N	1/2"	0.43" (10.9 mm)	1.46" (37.1 mm)	15/16"
UE12N	3/4"	0.69" (17.5 mm)	1.80" (45.7 mm)	1 3/16"
UE6mN	6 mm	0.19" (4.8 mm)	1.20" (30.5 mm)	5/8"
UE8mN	8 mm	0.25" (6.4 mm)	1.44" (36.6 mm)	11/16"
UE10mN	10 mm	0.30" (7.6 mm)	1.49" (37.8 mm)	13/16"
UE12mN	12 mm	0.43" (10.9 mm)	1.52" (38.6 mm)	15/16"

*Special Order. See page 5.

Elbow Union, Reducer

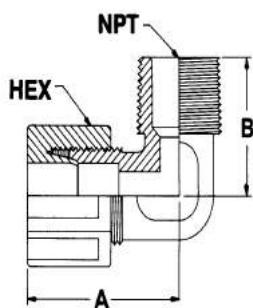


Part Number	O.D. Tube Size	Orifice	Dimensions			
			A	B	Hex 1	Hex 2
UE2-1N*	1/8" × 1/16"	0.07" (1.8 mm)	1.15" (29.2 mm)	1.15" (29.2 mm)	1/2"	1/2"
UE4-2N	1/4" × 1/8"	0.07" (1.8 mm)	1.20" (30.5 mm)	1.15" (29.2 mm)	5/8"	1/2"
UE5-4N	5/16" × 1/4"	0.19" (4.8 mm)	1.43" (36.3 mm)	1.39" (35.3 mm)	11/16"	5/8"
UE6-4N	3/8" × 1/4"	0.19" (4.8 mm)	1.48" (37.6 mm)	1.39" (35.3 mm)	13/16"	5/8"
UE6-5N	3/8" × 5/16"	0.25" (6.4 mm)	1.48" (37.6 mm)	1.43" (36.3 mm)	13/16"	11/16"
UE8-4N	1/2" × 1/4"	0.19" (4.8 mm)	1.45" (36.8 mm)	1.39" (35.3 mm)	15/16"	5/8"
UE8-6N	1/2" × 3/8"	0.30" (7.6 mm)	1.45" (36.8 mm)	1.48" (37.6 mm)	15/16"	13/16"
UE12-8N	3/4" × 1/2"	0.43" (10.9 mm)	1.80" (45.7 mm)	1.63" (41.4 mm)	1 3/16"	15/16"
UE8m-6mN*	8 mm × 6 mm	0.19" (4.8 mm)	1.43" (36.3 mm)	1.39" (35.3 mm)	11/16"	5/8"
UE10m-8mN*	10 mm × 8 mm	0.25" (6.4 mm)	1.48" (37.6 mm)	1.43" (36.3 mm)	13/16"	11/16"
UE12m-6mN	12 mm × 6 mm	0.19" (4.8 mm)	1.45" (36.8 mm)	1.39" (35.3 mm)	15/16"	5/8"

*Special Order. See page 5.

Integral Ferrule, PFA

Elbow Adapter, MNPT

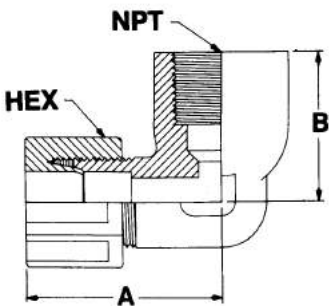


Part Number	O.D. Tube Size	MNPT Size	Orifice	Dimensions		Hex
				A	B	
E1-1N*	1/16"	1/16"	0.07" (1.8 mm)	1.15" (29.2 mm)	0.88" (22.4 mm)	1/2"
E1-2N	1/16"	1/8"	0.07" (1.8 mm)	1.15" (29.2 mm)	0.88" (22.4 mm)	1/2"
E2-1N	1/8"	1/16"	0.07" (1.8 mm)	1.15" (29.2 mm)	0.88" (22.4 mm)	1/2"
E2-2N	1/8"	1/8"	0.07" (1.8 mm)	1.15" (29.2 mm)	0.88" (22.4 mm)	1/2"
E2-4N	1/8"	1/4"	0.07" (1.8 mm)	1.15" (29.2 mm)	0.88" (22.4 mm)	1/2"
E4-2N	1/4"	1/8"	0.19" (4.8 mm)	1.20" (30.5 mm)	0.88" (22.4 mm)	5/8"
E4-4N	1/4"	1/4"	0.19" (4.8 mm)	1.20" (30.5 mm)	0.88" (22.4 mm)	5/8"
E4-6N	1/4"	3/8"	0.19" (4.8 mm)	1.39" (35.3 mm)	1.07" (27.2 mm)	5/8"
E4-8N*	1/4"	1/2"	0.19" (4.8 mm)	1.39" (35.3 mm)	1.07" (27.2 mm)	5/8"
E5-4N*	5/16"	1/4"	0.25" (6.4 mm)	1.43" (36.3 mm)	1.07" (27.2 mm)	11/16"
E5-6N*	5/16"	3/8"	0.25" (6.4 mm)	1.43" (36.3 mm)	1.07" (27.2 mm)	11/16"
E6-2N	3/8"	1/8"	0.20" (5.1 mm)	1.48" (37.6 mm)	1.07" (27.2 mm)	13/16"
E6-4N	3/8"	1/4"	0.29" (7.4 mm)	1.48" (37.6 mm)	1.07" (27.2 mm)	13/16"
E6-6N	3/8"	3/8"	0.30" (7.6 mm)	1.48" (37.6 mm)	1.07" (27.2 mm)	13/16"
E6-8N	3/8"	1/2"	0.30" (7.6 mm)	1.48" (37.6 mm)	1.07" (27.2 mm)	13/16"
E8-4N	1/2"	1/4"	0.29" (7.4 mm)	1.45" (36.8 mm)	1.07" (27.2 mm)	15/16"
E8-6N	1/2"	3/8"	0.42" (10.7 mm)	1.45" (36.8 mm)	1.07" (27.2 mm)	15/16"
E8-8N	1/2"	1/2"	0.43" (10.9 mm)	1.45" (36.8 mm)	1.07" (27.2 mm)	15/16"
E8-12N	1/2"	3/4"	0.43" (10.9 mm)	1.74" (44.2 mm)	1.36" (34.5 mm)	15/16"
E12-8N*	3/4"	1/2"	0.54" (13.7 mm)	1.80" (45.7 mm)	1.36" (34.5 mm)	1 3/16"
E12-12N	3/4"	3/4"	0.67" (17.0 mm)	1.80" (45.7 mm)	1.36" (34.5 mm)	1 3/16"
E12-16N	3/4"	1"	0.69" (17.5 mm)	2.05" (52.1 mm)	1.61" (40.9 mm)	1 3/16"
E6m-2N	6 mm	1/8"	0.19" (4.8 mm)	1.20" (30.5 mm)	0.88" (22.4 mm)	5/8"
E6m-4N	6 mm	1/4"	0.19" (4.8 mm)	1.20" (30.5 mm)	0.88" (22.4 mm)	5/8"
E8m-4N	8 mm	1/4"	0.25" (6.4 mm)	1.43" (36.3 mm)	1.07" (27.2 mm)	11/16"
E8m-6N*	8 mm	3/8"	0.25" (6.4 mm)	1.43" (36.3 mm)	1.07" (27.2 mm)	11/16"
E10m-4N*	10 mm	1/4"	0.29" (7.4 mm)	1.48" (37.6 mm)	1.07" (27.2 mm)	13/16"
E12m-4N*	12 mm	1/4"	0.29" (7.4 mm)	1.45" (36.8 mm)	1.07" (27.2 mm)	1 3/16"
E12m-8N*	12 mm	1/2"	0.43" (10.9 mm)	1.45" (36.8 mm)	1.07" (27.2 mm)	1 3/16"

*Special Order. See page 5.

Integral Ferrule, PFA

Elbow Adapter, FNPT

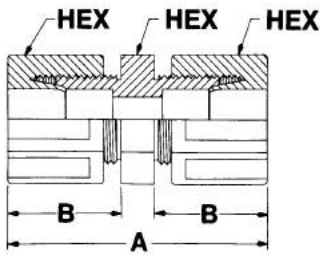


Part Number	O.D. Tube Size	FNPT Size	Orifice	Dimensions		Hex
				A	B	
FE2-2N	1/8"	1/8"	0.07" (1.8 mm)	1.50" (38.1 mm)	0.81" (20.6 mm)	1/2"
FE4-2N	1/4"	1/8"	0.19" (4.8 mm)	1.55" (39.4 mm)	0.81" (20.6 mm)	5/8"
FE4-4N	1/4"	1/4"	0.19" (4.8 mm)	1.55" (39.4 mm)	0.94" (23.9 mm)	5/8"
FE4-8N*	1/4"	1/2"	0.19" (4.8 mm)	1.55" (39.4 mm)	1.23" (31.2 mm)	5/8"
FE6-2N*	3/8"	1/8"	0.25" (6.4 mm)	1.64" (41.7 mm)	0.81" (20.6 mm)	13/16"
FE6-4N*	3/8"	1/4"	0.30" (7.6 mm)	1.64" (41.7 mm)	0.94" (23.9 mm)	13/16"
FE6-6N	3/8"	3/8"	0.30" (7.6 mm)	1.64" (41.7 mm)	1.00" (25.4 mm)	13/16"
FE6-8N	3/8"	1/2"	0.30" (7.6 mm)	1.64" (41.7 mm)	1.23" (31.2 mm)	13/16"
FE8-4N*	1/2"	1/4"	0.35" (8.9 mm)	1.61" (40.9 mm)	0.94" (23.9 mm)	15/16"
FE8-6N	1/2"	3/8"	0.43" (10.9 mm)	1.61" (40.9 mm)	1.00" (25.4 mm)	15/16"
FE8-8N	1/2"	1/2"	0.43" (10.9 mm)	1.61" (40.9 mm)	1.23" (31.2 mm)	15/16"

*Special Order. See page 5.

Integral Ferrule, PFA

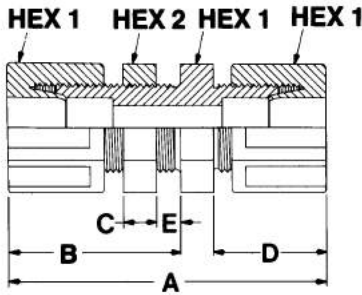
Straight Union



Part Number	O.D. Tube Size	Orifice	Dimensions		Hex
			A	B	
SU1N	1/16"	0.07" (1.8 mm)	1.92" (48.8 mm)	0.82" (20.8 mm)	1/2"
SU2N	1/8"	0.07" (1.8 mm)	1.92" (48.8 mm)	0.82" (20.8 mm)	1/2"
SU4N	1/4"	0.19" (4.8 mm)	2.02" (51.3 mm)	0.87" (22.1 mm)	5/8"
SU5N	5/16"	0.25" (6.4 mm)	2.10" (53.3 mm)	0.91" (23.1 mm)	11/16"
SU6N	3/8"	0.30" (7.6 mm)	2.20" (55.9 mm)	0.96" (24.4 mm)	13/16"
SU8N	1/2"	0.43" (10.9 mm)	2.14" (54.4 mm)	0.93" (23.6 mm)	15/16"
SU12N	3/4"	0.69" (17.5 mm)	2.50" (63.5 mm)	1.11" (28.2 mm)	1 3/16"
SU6mN	6 mm	0.19" (4.8 mm)	2.02" (51.3 mm)	0.87" (22.1 mm)	5/8"
SU8mN	8 mm	0.25" (6.4 mm)	2.10" (53.3 mm)	0.91" (23.1 mm)	11/16"
SU10mN	10 mm	0.30" (7.6 mm)	2.20" (55.9 mm)	0.96" (24.4 mm)	13/16"
SU12mN	12 mm	0.43" (10.9 mm)	2.14" (54.4 mm)	0.93" (23.6 mm)	15/16"

Integral Ferrule, PFA

Straight Union, Panel Mount



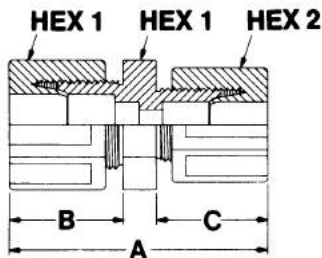
Part Number	O.D.		Dimensions		
	Tube Size	Orifice	A	B	C
PM1N	1/16"	0.07" (1.8 mm)	2.26" (57.4 mm)	1.15" (29.2 mm)	0.28" (7.1 mm)
PM2N	1/8"	0.07" (1.8 mm)	2.26" (57.4 mm)	1.15" (29.2 mm)	0.28" (7.1 mm)
PM4N	1/4"	0.19" (4.8 mm)	2.36" (59.9 mm)	1.20" (30.5 mm)	0.28" (7.1 mm)
PM5N*	5/16"	0.25" (6.4 mm)	2.61" (66.3 mm)	1.42" (36.1 mm)	0.28" (7.1 mm)
PM6N	3/8"	0.30" (7.6 mm)	2.71" (68.8 mm)	1.47" (37.3 mm)	0.28" (7.1 mm)
PM8N	1/2"	0.43" (10.9 mm)	2.65" (67.3 mm)	1.44" (36.6 mm)	0.28" (7.1 mm)
PM12N	3/4"	0.69" (17.5 mm)	3.14" (79.8 mm)	1.32" (33.5 mm)	0.28" (7.1 mm)
PM6mN	6 mm	0.19" (4.8 mm)	2.36" (59.9 mm)	1.20" (30.5 mm)	0.28" (7.1 mm)
PM8mN	8 mm	0.25" (6.4 mm)	2.61" (66.3 mm)	1.42" (36.1 mm)	0.28" (7.1 mm)
PM10mN	10 mm	0.30" (7.6 mm)	2.71" (68.8 mm)	1.47" (37.3 mm)	0.28" (7.1 mm)
PM12mN*	12 mm	0.43" (10.9 mm)	2.65" (67.3 mm)	1.44" (36.6 mm)	0.28" (7.1 mm)

Part Number	Dimensions		Hex 1	Hex 2	Panel Mount Hole Diameter	Half-Nut Part Number
	D	E _(max)				
PM1N	0.82" (20.8 mm)	0.25" (6.4 mm)	1/2"	1/2"	0.33" (8.4 mm)	HN2
PM2N	0.82" (20.8 mm)	0.25" (6.4 mm)	1/2"	1/2"	0.33" (8.4 mm)	HN2
PM4N	0.87" (22.1 mm)	0.25" (6.4 mm)	5/8"	5/8"	0.47" (11.9 mm)	HN4
PM5N*	0.91" (23.1 mm)	0.25" (6.4 mm)	11/16"	11/16"	0.53" (13.5 mm)	HN5
PM6N	0.96" (24.4 mm)	0.25" (6.4 mm)	13/16"	15/16"	0.66" (16.7 mm)	HN6
PM8N	0.93" (23.6 mm)	0.25" (6.4 mm)	15/16"	1 1/16"	0.77" (19.5 mm)	HN8+
PM12N	1.11" (28.2 mm)	0.25" (6.4 mm)	1 3/16"	1 5/16"	0.80" (20.2 mm)	HN12+
PM6mN	0.87" (22.1 mm)	0.25" (6.4 mm)	5/8"	5/8"	0.47" (11.9 mm)	HN4
PM8mN	0.91" (23.1 mm)	0.25" (6.4 mm)	11/16"	11/16"	0.53" (13.5 mm)	HN5
PM10mN	0.96" (24.4 mm)	0.25" (6.4 mm)	13/16"	15/16"	0.66" (16.7 mm)	HN6
PM12mN*	0.93" (23.6 mm)	0.25" (6.4 mm)	15/16"	1 1/16"	1.00" (25.4 mm)	HN8+

*Special Order. See page 5.
 †Panel mount nut material is PVDF.

Integral Ferrule, PFA

Straight Union, Reducer

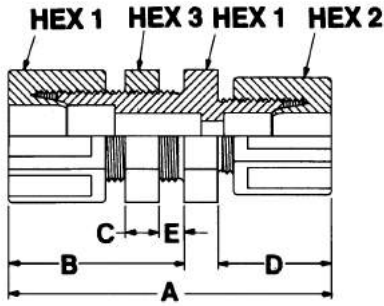


Part Number	O.D. Tube Size	Orifice	Dimensions				
			A	B	C	Hex 1	Hex 2
SU2-1N	1/8" × 1/16"	0.07" (1.8 mm)	1.93" (49.0 mm)	0.82" (20.8 mm)	0.83" (21.1 mm)	1/2"	1/2"
SU4-2N	1/4" × 1/8"	0.07" (1.8 mm)	1.98" (50.3 mm)	0.87" (22.1 mm)	0.83" (21.1 mm)	5/8"	1/2"
SU5-4N	5/16" × 1/4"	0.19" (4.8 mm)	2.07" (52.6 mm)	0.91" (23.1 mm)	0.88" (22.4 mm)	11/16"	5/8"
SU6-4N	3/8" × 1/4"	0.19" (4.8 mm)	2.12" (53.8 mm)	0.93" (23.6 mm)	0.88" (22.4 mm)	13/16"	5/8"
SU6-5N	3/8" × 5/16"	0.25" (6.4 mm)	2.16" (54.9 mm)	0.93" (23.6 mm)	0.92" (23.4 mm)	13/16"	13/16"
SU8-2N	1/2" × 1/8"	0.07" (1.8 mm)	2.04" (51.8 mm)	0.93" (23.6 mm)	0.83" (21.1 mm)	15/16"	15/16"
SU8-4N	1/2" × 1/4"	0.19" (4.8 mm)	2.09" (53.1 mm)	0.93" (23.6 mm)	0.88" (22.4 mm)	15/16"	5/8"
SU8-6N	1/2" × 3/8"	0.30" (7.6 mm)	2.18" (55.4 mm)	0.93" (23.6 mm)	0.97" (24.6 mm)	15/16"	13/16"
SU12-8N	3/4" × 1/2"	0.43" (10.9 mm)	2.45" (62.2 mm)	1.11" (28.2 mm)	1.06" (26.9 mm)	1 3/16"	1/2"
SU4-6mN*	1/4" × 6 mm	0.19" (4.8 mm)	2.03" (51.6 mm)	0.87" (22.1 mm)	0.88" (22.4 mm)	5/8"	5/8"
SU6-10mN*	3/8" × 10 mm	0.30" (7.6 mm)	2.12" (53.8 mm)	0.96" (24.4 mm)	0.97" (24.6 mm)	13/16"	13/16"
SU8m-6mN	8 mm × 6 mm	0.19" (4.8 mm)	2.07" (52.6 mm)	0.91" (23.1 mm)	0.88" (22.4 mm)	11/16"	5/8"
SU10m-6mN	10 mm × 6 mm	0.19" (4.8 mm)	2.12" (53.8 mm)	0.93" (23.6 mm)	0.88" (22.4 mm)	13/16"	5/8"
SU10m-8mN	10 mm × 8 mm	0.25" (6.4 mm)	2.16" (54.9 mm)	0.93" (23.6 mm)	0.92" (23.4 mm)	13/16"	11/16"
SU12m-6N	12 mm × 3/8"	0.28" (7.1 mm)	2.31" (58.7 mm)	1.00" (25.4 mm)	0.98" (24.9 mm)	15/16"	3/8"
SU12m-4N*	12 mm × 1/4"	0.19" (4.8 mm)	2.09" (53.1 mm)	0.93" (23.6 mm)	0.88" (22.4 mm)	15/16"	5/8"
SU12m-6mN*	12 mm × 6 mm	0.19" (4.8 mm)	2.09" (53.1 mm)	0.93" (23.6 mm)	0.88" (22.4 mm)	15/16"	5/8"
SU12m-8mN*	12 mm × 8 mm	0.25" (6.4 mm)	2.13" (54.1 mm)	0.93" (23.6 mm)	0.92" (23.4 mm)	15/16"	11/16"
SU12m-10mN*	12 mm × 10 mm	0.30" (7.6 mm)	2.18" (55.4 mm)	0.93" (23.6 mm)	0.97" (24.6 mm)	15/16"	13/16"

*Special Order. See page 5.

Integral Ferrule, PFA

Straight Union, Reducer Panel Mount



Part Number	O.D. Tube Size		Orifice	Dimensions			
				A	B	C	D
PM2-1N*	1/8"	× 1/16"	0.07" (1.8 mm)	2.26" (57.4 mm)	1.15" (29.2 mm)	0.28" (7.1 mm)	0.83" (21.1 mm)
PM4-2N	1/4"	× 1/8"	0.07" (1.8 mm)	2.31" (58.7 mm)	1.20" (30.5 mm)	0.28" (7.1 mm)	0.83" (21.1 mm)
PM6-4N	3/8"	× 1/4"	0.19" (4.8 mm)	2.63" (66.8 mm)	1.46" (37.1 mm)	0.28" (7.1 mm)	0.89" (22.6 mm)
PM8-4N*	1/2"	× 1/4"	0.19" (4.8 mm)	2.60" (66.0 mm)	1.43" (36.3 mm)	0.28" (7.1 mm)	0.89" (22.6 mm)
PM8-6N	1/2"	× 3/8"	0.30" (7.6 mm)	2.69" (68.3 mm)	1.43" (36.3 mm)	0.28" (7.1 mm)	0.98" (24.9 mm)
PM10m-6mN*	10 mm	× 6 mm	0.19" (4.8 mm)	2.63" (66.8 mm)	1.46" (37.1 mm)	0.28" (7.1 mm)	0.89" (22.6 mm)
PM12m-6mN*	12 mm	× 6 mm	0.19" (4.8 mm)	2.60" (66.0 mm)	1.43" (36.3 mm)	0.28" (7.1 mm)	0.86" (21.8 mm)

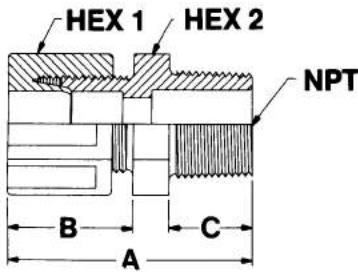
Part Number	Dimension E _(max)	Hex			Panel Mount	Half-Nut
		Hex 1	Hex 2	Hex 3	Hole Diameter	Part Number
PM2-1N*	0.25" (6.4 mm)	1/2"	1/2"	1/2"	0.33" (8.4 mm)	HN2
PM4-2N	0.25" (6.4 mm)	5/8"	1/2"	5/8"	0.47" (11.9 mm)	HN4
PM6-4N	0.25" (6.4 mm)	13/16"	5/8"	15/16"	0.66" (16.7 mm)	HN6
PM8-4N*	0.25" (6.4 mm)	15/16"	5/8"	1 1/16"	0.80" (20.2 mm)	HN8†
PM8-6N	0.25" (6.4 mm)	15/16"	13/16"	1 1/16"	0.80" (20.2 mm)	HN8†
PM10m-6mN*	0.25" (6.4 mm)	13/16"	5/8"	15/16"	0.66" (16.7 mm)	HN6
PM12m-6mN*	0.25" (6.4 mm)	15/16"	5/8"	1 1/16"	0.80" (20.2 mm)	HN8†

*Special Order. See page 5.

†Panel mount nut material is Natural PVDF.

Integral Ferrule, PFA

Straight Adapter, MNPT



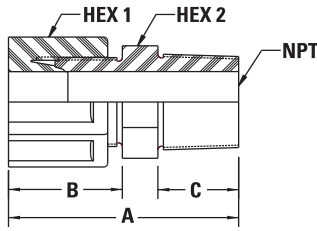
Part Number	O.D. Tube Size	MNPT Size	Orifice	Dimensions				
				A	B	C	Hex 1	Hex 2
C1-1N	1/16"	1/16"	0.07" (1.8 mm)	1.65" (41.9 mm)	0.82" (20.8 mm)	0.55" (14.0 mm)	1/2"	1/2"
C1-2N	1/16"	1/8"	0.07" (1.8 mm)	1.65" (41.9 mm)	0.82" (20.8 mm)	0.55" (14.0 mm)	1/2"	1/2"
C2-1N	1/8"	1/16"	0.07" (1.8 mm)	1.65" (41.9 mm)	0.82" (20.8 mm)	0.55" (14.0 mm)	1/2"	1/2"
C2-2N	1/8"	1/8"	0.07" (1.8 mm)	1.65" (41.9 mm)	0.82" (20.8 mm)	0.55" (14.0 mm)	1/2"	1/2"
C2-4N	1/8"	1/4"	0.07" (1.8 mm)	1.65" (41.9 mm)	0.82" (20.8 mm)	0.55" (14.0 mm)	1/2"	5/8"
C4-2N	1/4"	1/8"	0.19" (4.8 mm)	1.70" (43.2 mm)	0.87" (22.1 mm)	0.55" (14.0 mm)	5/8"	5/8"
C4-4N	1/4"	1/4"	0.19" (4.8 mm)	1.70" (43.2 mm)	0.87" (22.1 mm)	0.55" (14.0 mm)	5/8"	5/8"
C4-6N	1/4"	3/8"	0.19" (4.8 mm)	1.70" (43.2 mm)	0.87" (22.1 mm)	0.55" (14.0 mm)	5/8"	13/16"
C4-8N	1/4"	1/2"	0.19" (4.8 mm)	1.81" (46.0 mm)	0.87" (22.1 mm)	0.66" (16.8 mm)	5/8"	13/16"
C5-4N	5/16"	1/4"	0.25" (6.4 mm)	1.74" (44.2 mm)	0.91" (23.1 mm)	0.55" (14.0 mm)	11/16"	11/16"
C5-6N	5/16"	3/8"	0.25" (6.4 mm)	1.74" (44.2 mm)	0.91" (23.1 mm)	0.55" (14.0 mm)	11/16"	11/16"
C6-2N	3/8"	1/8"	0.20" (5.1 mm)	1.79" (45.5 mm)	0.96" (24.4 mm)	0.55" (14.0 mm)	13/16"	13/16"
C6-4N	3/8"	1/4"	0.29" (7.4 mm)	1.79" (45.5 mm)	0.96" (24.4 mm)	0.55" (14.0 mm)	13/16"	13/16"
C6-6N	3/8"	3/8"	0.30" (7.6 mm)	1.79" (45.5 mm)	0.96" (24.4 mm)	0.55" (14.0 mm)	13/16"	13/16"
C6-8N	3/8"	1/2"	0.30" (7.6 mm)	1.91" (48.5 mm)	0.96" (24.4 mm)	0.66" (16.8 mm)	13/16"	15/16"
C8-4N	1/2"	1/4"	0.29" (7.4 mm)	1.76" (44.7 mm)	0.93" (23.6 mm)	0.55" (14.0 mm)	15/16"	15/16"
C8-6N	1/2"	3/8"	0.42" (10.7 mm)	1.76" (44.7 mm)	0.93" (23.6 mm)	0.55" (14.0 mm)	15/16"	15/16"
C8-8N	1/2"	1/2"	0.43" (10.9 mm)	1.87" (47.5 mm)	0.93" (23.6 mm)	0.66" (16.8 mm)	15/16"	15/16"
C8-12N	1/2"	3/4"	0.43" (10.9 mm)	1.88" (47.8 mm)	0.93" (23.6 mm)	0.67" (17.0 mm)	15/16"	1 3/16"
C12-8N	3/4"	1/2"	0.54" (13.7 mm)	2.06" (52.3 mm)	1.11" (28.2 mm)	0.67" (17.0 mm)	1 3/16"	1 3/16"
C12-12N	3/4"	3/4"	0.67" (17.0 mm)	2.06" (52.3 mm)	1.11" (28.2 mm)	0.67" (17.0 mm)	1 3/16"	1 3/16"
C12-16N*	3/4"	1"	0.69" (17.5 mm)	2.22" (56.4 mm)	1.11" (28.2 mm)	0.83" (21.1 mm)	1 3/16"	1 7/16"
C6m-2N	6 mm	1/8"	0.19" (4.8 mm)	1.70" (43.2 mm)	0.87" (22.1 mm)	0.55" (14.0 mm)	5/8"	5/8"
C6m-4N	6 mm	1/4"	0.19" (4.8 mm)	1.70" (43.2 mm)	0.87" (22.1 mm)	0.55" (14.0 mm)	5/8"	5/8"
C8m-2N*	8 mm	1/8"	0.20" (5.1 mm)	1.74" (44.2 mm)	0.91" (23.1 mm)	0.55" (14.0 mm)	11/16"	11/16"
C8m-4N	8 mm	1/4"	0.25" (6.4 mm)	1.74" (44.2 mm)	0.91" (23.1 mm)	0.55" (14.0 mm)	11/16"	11/16"
C8m-6N*	8 mm	3/8"	0.25" (6.4 mm)	1.74" (44.2 mm)	0.91" (23.1 mm)	0.55" (14.0 mm)	11/16"	11/16"
C8m-8N*	8 mm	1/2"	0.25" (6.4 mm)	1.74" (44.2 mm)	0.91" (23.1 mm)	0.55" (14.0 mm)	11/16"	15/16"
C10m-4N	10 mm	1/4"	0.29" (7.4 mm)	1.74" (44.2 mm)	0.91" (23.1 mm)	0.55" (14.0 mm)	13/16"	13/16"
C10m-6N	10 mm	3/8"	0.30" (7.6 mm)	1.74" (44.2 mm)	0.91" (23.1 mm)	0.55" (14.0 mm)	13/16"	13/16"
C10m-8N	10 mm	1/2"	0.30" (7.6 mm)	1.90" (48.3 mm)	0.91" (23.1 mm)	0.66" (16.8 mm)	13/16"	15/16"
C12m-4N*	12 mm	1/4"	0.29" (7.4 mm)	1.76" (44.7 mm)	0.93" (23.6 mm)	0.55" (14.0 mm)	15/16"	15/16"
C12m-6N*	12 mm	3/8"	0.42" (10.7 mm)	1.76" (44.7 mm)	0.93" (23.6 mm)	0.55" (14.0 mm)	15/16"	15/16"
C12m-8N*	12 mm	1/2"	0.43" (10.9 mm)	1.87" (47.5 mm)	0.93" (23.6 mm)	0.66" (16.8 mm)	15/16"	15/16"

*Special Order. See page 5.

Integral Ferrule, PFA

Straight Adapter, MNPT, Heat Exchanger

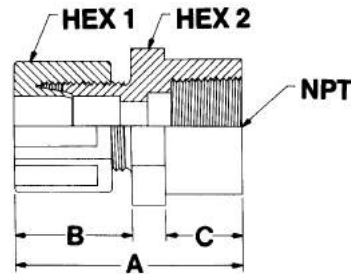
(For use with tubing passing through fitting body)



Part Number	O.D. Tube Size	MNPT Size	Orifice	Dimensions				
				A	B	C	Hex 1	Hex 2
C2-6NHX	1/8"	3/8"	0.14" (3.6 mm)	1.65" (41.9 mm)	0.82" (20.8 mm)	0.55" (14.0 mm)	1/2"	13/16"
C4-4NHX	1/4"	1/4"	0.27" (6.9 mm)	1.70" (43.2 mm)	0.87" (22.1 mm)	0.55" (14.0 mm)	5/8"	5/8"
C4-6NHX*	1/4"	3/8"	0.27" (6.9 mm)	1.70" (43.2 mm)	0.87" (22.1 mm)	0.55" (14.0 mm)	5/8"	13/16"
C4-8NHX*	1/4"	1/2"	0.27" (6.9 mm)	1.81" (46.0 mm)	0.87" (22.1 mm)	0.66" (16.8 mm)	5/8"	13/16"
C6-6NHX	3/8"	3/8"	0.40" (10.2 mm)	1.79" (45.5 mm)	1.11" (28.2 mm)	0.55" (14.0 mm)	13/16"	13/16"
C8-8NHX	1/2"	1/2"	0.52" (13.2 mm)	1.87" (47.5 mm)	0.93" (23.6 mm)	0.66" (16.8 mm)	15/16"	15/16"
C12-12NHX	3/4"	3/4"	0.75" (19.0 mm)	2.06" (52.3 mm)	1.08" (27.4 mm)	0.67" (17.0 mm)	1 3/16"	1 3/16"

*Special Order. See page 5.

Straight Adapter, FNPT



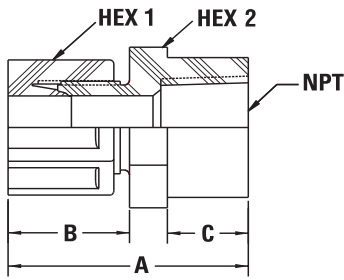
Part Number	O.D. Tube Size	FNPT Size	Orifice	Dimensions				
				A	B	C	Hex 1	Hex 2
FC2-2N	1/8"	1/8"	0.07" (1.8 mm)	1.73" (43.9 mm)	0.82" (20.8 mm)	0.63" (16.0 mm)	1/2"	5/8"
FC2-4N	1/8"	1/4"	0.07" (1.8 mm)	1.73" (43.9 mm)	0.82" (20.8 mm)	0.63" (16.0 mm)	1/2"	3/4"
FC4-2N	1/4"	1/8"	0.19" (4.8 mm)	1.78" (45.2 mm)	0.87" (22.1 mm)	0.63" (16.0 mm)	5/8"	5/8"
FC4-4N	1/4"	1/4"	0.19" (4.8 mm)	1.78" (45.2 mm)	0.87" (22.1 mm)	0.63" (16.0 mm)	5/8"	3/4"
FC4-6N	1/4"	3/8"	0.19" (4.8 mm)	1.78" (45.2 mm)	0.87" (22.1 mm)	0.63" (16.0 mm)	5/8"	15/16"
FC4-8N	1/4"	1/2"	0.19" (4.8 mm)	1.78" (45.2 mm)	0.87" (22.1 mm)	0.63" (16.0 mm)	5/8"	1 1/8"
FC6-2N	3/8"	1/8"	0.25" (6.4 mm)	1.87" (47.5 mm)	0.96" (24.4 mm)	0.63" (16.0 mm)	13/16"	5/8"
FC6-4N	3/8"	1/4"	0.30" (7.6 mm)	1.87" (47.5 mm)	0.96" (24.4 mm)	0.63" (16.0 mm)	13/16"	3/4"
FC6-6N	3/8"	3/8"	0.30" (7.6 mm)	1.87" (47.5 mm)	0.96" (24.4 mm)	0.63" (16.0 mm)	13/16"	15/16"
FC6-8N	3/8"	1/2"	0.30" (7.6 mm)	1.87" (47.5 mm)	0.96" (24.4 mm)	0.63" (16.0 mm)	13/16"	1 1/8"
FC8-4N	1/2"	1/4"	0.35" (8.9 mm)	1.84" (46.7 mm)	0.93" (23.6 mm)	0.63" (16.0 mm)	15/16"	3/4"
FC8-6N	1/2"	3/8"	0.43" (10.9 mm)	1.84" (46.7 mm)	0.93" (23.6 mm)	0.63" (16.0 mm)	15/16"	15/16"
FC8-8N	1/2"	1/2"	0.43" (10.9 mm)	1.84" (46.7 mm)	0.93" (23.6 mm)	0.63" (16.0 mm)	15/16"	1 1/8"
FC8-12N*	1/2"	3/4"	0.43" (10.9 mm)	2.00" (50.8 mm)	1.05" (26.7 mm)	0.67" (17.0 mm)	15/16"	1 3/16"
FC12-8N	3/4"	1/2"	0.56" (14.2 mm)	2.06" (52.3 mm)	1.11" (28.2 mm)	0.67" (17.0 mm)	1 3/16"	1 3/16"
FC12-12N	3/4"	3/4"	0.69" (17.5 mm)	2.06" (52.3 mm)	1.11" (28.2 mm)	0.67" (17.0 mm)	1 3/16"	1 3/16"

*Special Order. See page 5.

Integral Ferrule, PFA

Straight Adapter, FNPT, Heat Exchanger

(For use with tubing passing through fitting body)

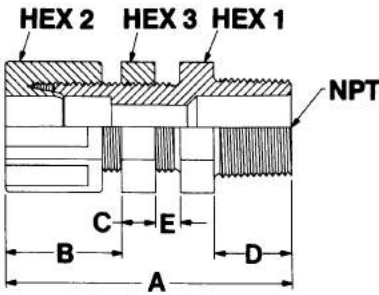


Part Number	O.D. Tube Size	FNPT Size	Orifice	Dimensions				
				A	B	C	Hex 1	Hex 2
FC8-8NHX*	1/2"	1/2"	0.52" (13.2 mm)	1.84" (46.7 mm)	0.93" (23.6 mm)	0.63" (16.0 mm)	15/16"	1 1/8"
FC12-12NHX*	3/4"	3/4"	0.75" (19.0 mm)	2.06" (52.3 mm)	1.11" (28.2 mm)	0.67" (17.0 mm)	1 3/16"	1 11/16"

*Special Order. See page 5.

Integral Ferrule, PFA

Straight Adapter, MNPT, Panel Mount



Part Number	O.D. Tube Size	MNPT Size	Orifice	Dimensions		
				A	B	C
PMC4-2N	1/4"	1/8"	0.19" (4.8 mm)	2.04" (51.8 mm)	0.68" (17.3 mm)	0.28" (7.1 mm)
PMC4-4N*	1/4"	1/4"	0.19" (4.8 mm)	2.04" (51.8 mm)	0.68" (17.3 mm)	0.28" (7.1 mm)
PMC4-6N*	1/4"	3/8"	0.19" (4.8 mm)	2.04" (51.8 mm)	0.68" (17.3 mm)	0.28" (7.1 mm)
PMC4-8N*	1/4"	1/2"	0.19" (4.8 mm)	2.04" (51.8 mm)	0.57" (14.5 mm)	0.28" (7.1 mm)
PMC6-4N*	3/8"	1/4"	0.29" (7.4 mm)	2.31" (58.7 mm)	0.95" (24.1 mm)	0.28" (7.1 mm)
PMC6-6N*	3/8"	3/8"	0.30" (7.6 mm)	2.31" (58.7 mm)	0.95" (24.1 mm)	0.28" (7.1 mm)
PMC6-8N*	3/8"	1/2"	0.30" (7.6 mm)	2.31" (58.7 mm)	0.84" (21.3 mm)	0.28" (7.1 mm)
PMC8-4N	1/2"	1/4"	0.29" (7.4 mm)	2.28" (57.9 mm)	0.92" (23.4 mm)	0.28" (7.1 mm)
PMC8-6N*	1/2"	3/8"	0.42" (10.7 mm)	2.28" (57.9 mm)	0.92" (23.4 mm)	0.28" (7.1 mm)
PMC8-8N	1/2"	1/2"	0.43" (10.9 mm)	2.28" (57.9 mm)	0.81" (20.6 mm)	0.28" (7.1 mm)
PMC8m-2N	8 mm	1/8"	0.20" (5.1 mm)	2.26" (57.4 mm)	0.90" (22.9 mm)	0.28" (7.1 mm)

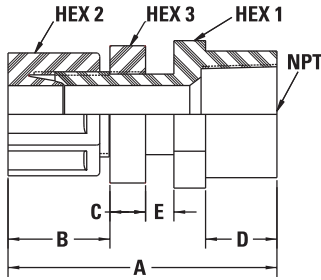
Part Number	Dimensions			Panel Mount			Half-Nut
	D	E _(max)		Hole Diameter	Part Number		
PMC4-2N	0.55" (14.0 mm)	0.25" (6.4 mm)	5/8"	5/8"	5/8"	0.47" (11.9 mm)	HN4
PMC4-4N	0.55" (14.0 mm)	0.25" (6.4 mm)	5/8"	5/8"	5/8"	0.47" (11.9 mm)	HN4
PMC4-6N	0.55" (14.0 mm)	0.25" (6.4 mm)	13/16"	5/8"	5/8"	0.47" (11.9 mm)	HN4
PMC4-8N	0.66" (16.8 mm)	0.25" (6.4 mm)	15/16"	5/8"	5/8"	0.47" (11.9 mm)	HN4
PMC6-4N	0.55" (14.0 mm)	0.25" (6.4 mm)	13/16"	13/16"	15/16"	0.66" (16.7 mm)	HN6
PMC6-6N	0.55" (14.0 mm)	0.25" (6.4 mm)	13/16"	13/16"	15/16"	0.66" (16.7 mm)	HN6
PMC6-8N	0.66" (16.8 mm)	0.25" (6.4 mm)	15/16"	13/16"	15/16"	0.66" (16.7 mm)	HN6
PMC8-4N	0.55" (14.0 mm)	0.25" (6.4 mm)	15/16"	15/16"	1 1/16"	0.80" (20.2 mm)	HN8+
PMC8-6N	0.55" (14.0 mm)	0.25" (6.4 mm)	15/16"	15/16"	1 1/16"	0.80" (20.2 mm)	HN8+
PMC8-8N	0.66" (16.8 mm)	0.25" (6.4 mm)	15/16"	15/16"	1 1/16"	0.80" (20.2 mm)	HN8+
PMC8m-2N	0.55" (14.0 mm)	0.25" (6.4 mm)	5/8"	11/16"	11/16"	0.53" (13.5 mm)	HN5

*Special Order. See page 5.

+Panel mount nut material is Natural PVDF.

Integral Ferrule, PFA

Straight Adapter, FNPT, Panel Mount

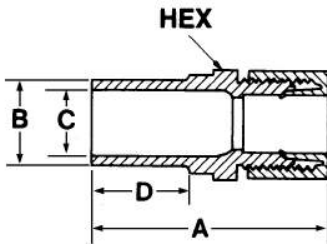


Part Number	O.D. Tube Size	FNPT Size	Orifice	Dimensions		
				A	B	C
FPMC4-4N	1/4"	1/4"	0.18" (4.6 mm)	2.10" (53.3 mm)	0.68" (17.3 mm)	0.26" (6.6 mm)
FPMC6-4N	3/8"	1/4"	0.29" (7.4 mm)	2.37" (60.2 mm)	0.96" (24.4 mm)	0.25" (6.4 mm)
FPMC6-8N*	3/8"	1/2"	0.29" (7.4 mm)	2.37" (60.2 mm)	0.96" (24.4 mm)	0.25" (6.4 mm)
FPMC8-4N	1/2"	1/4"	0.35" (8.9 mm)	2.34" (59.4 mm)	0.87" (22.1 mm)	0.32" (8.1 mm)
FPMC8-8N	1/2"	1/2"	0.41" (10.4 mm)	2.34" (59.4 mm)	0.87" (22.1 mm)	0.32" (8.1 mm)

Part Number	Dimensions			Hex 1	Hex 2	Hex 3	Panel Mount Hole Diameter	Half-Nut Part Number
	D	E _(max)						
FPMC4-4N	0.63" (16.0 mm)	0.25" (6.4 mm)		3/4"	5/8"	5/8"	0.47" (11.9 mm)	HN4
FPMC6-4N	0.63" (16.0 mm)	0.25" (6.4 mm)		3/4"	13/16"	15/16"	0.66" (16.8 mm)	HN6
FPMC6-8N	0.63" (16.0 mm)	0.25" (6.4 mm)		1 1/8"	13/16"	15/16"	0.66" (16.8 mm)	HN6
FPMC8-4N	0.63" (16.0 mm)	0.25" (6.4 mm)		1 1/8"	15/16"	1 1/16"	0.80" (20.3 mm)	HN8+
FPMC8-8N	0.63" (16.0 mm)	0.25" (6.4 mm)		1 1/8"	15/16"	1 1/16"	0.80" (20.3 mm)	HN8+

*Special Order. See page 5.
†Panel mount nut material is Natural PVDF.

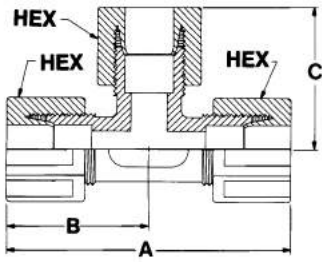
Straight Adapter, PureBond®, Fusible Pipe



Part Number	O.D. Tube Size	Pipe Size	Orifice	Dimensions				
				A	B	C	D	Hex
WTA4-4PN	1/4"	1/4"	0.13" (3.3 mm)	1.74" (44.2 mm)	0.54" (13.7 mm)	0.35" (9.0 mm)	0.55" (14.0 mm)	11/16"
WTA6-4PN	3/8"	1/4"	0.25" (6.4 mm)	1.74" (44.2 mm)	0.54" (13.7 mm)	0.35" (9.0 mm)	0.55" (14.0 mm)	13/16"
WTA6-8PN	3/8"	1/2"	0.25" (6.4 mm)	2.66" (67.6 mm)	0.84" (21.3 mm)	0.61" (15.4 mm)	1.49" (37.8 mm)	15/16"
WTA8-8PN	1/2"	1/2"	0.38" (9.7 mm)	3.25" (82.6 mm)	0.84" (21.3 mm)	0.61" (15.4 mm)	1.49" (37.8 mm)	15/16"
WTA8-12PN	1/2"	3/4"	0.38" (9.7 mm)	3.25" (82.6 mm)	1.05" (26.7 mm)	0.81" (20.5 mm)	1.49" (37.8 mm)	1 3/16"
WTA12-12PN	3/4"	3/4"	0.63" (16.0 mm)	3.25" (82.6 mm)	1.05" (26.7 mm)	0.81" (20.5 mm)	1.49" (37.8 mm)	1 3/16"
WTA12-16PN	3/4"	1"	0.63" (16.0 mm)	3.25" (82.6 mm)	1.32" (33.4 mm)	1.03" (26.3 mm)	1.48" (37.6 mm)	1 7/16"

Integral Ferrule, PFA

Tee Union

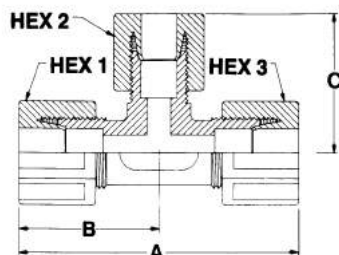


Part Number	O.D. Tube Size	Orifice	Dimensions				Hex 1
			A	B	C		
UT1N	1/16"	0.07" (1.8 mm)	2.29" (58.2 mm)	1.15" (29.2 mm)	1.15" (29.2 mm)	1/2"	
UT2N	1/8"	0.07" (1.8 mm)	2.29" (58.2 mm)	1.15" (29.2 mm)	1.15" (29.2 mm)	1/2"	
UT4N	1/4"	0.19" (4.8 mm)	2.39" (60.7 mm)	1.20" (30.5 mm)	1.20" (30.5 mm)	5/8"	
UT5N*	5/16"	0.25" (6.4 mm)	2.87" (72.9 mm)	1.44" (36.6 mm)	1.44" (36.6 mm)	11/16"	
UT6N	3/8"	0.30" (7.6 mm)	2.97" (75.4 mm)	1.49" (37.8 mm)	1.49" (37.8 mm)	13/16"	
UT8N	1/2"	0.43" (10.9 mm)	2.91" (73.9 mm)	1.46" (37.1 mm)	1.46" (37.1 mm)	15/16"	
UT12N	3/4"	0.69" (17.5 mm)	3.60" (91.4 mm)	1.80" (45.7 mm)	1.80" (45.7 mm)	1 3/16"	
UT6mN*	6 mm	0.19" (4.8 mm)	2.39" (60.7 mm)	1.20" (30.5 mm)	1.20" (30.5 mm)	5/8"	
UT8mN	8 mm	0.25" (6.4 mm)	2.87" (72.9 mm)	1.44" (36.6 mm)	1.44" (36.6 mm)	11/16"	
UT10mN	10 mm	0.30" (7.6 mm)	2.97" (75.4 mm)	1.49" (37.8 mm)	1.49" (37.8 mm)	13/16"	
UT12mN*	12 mm	0.43" (10.9 mm)	3.03" (77.0 mm)	1.52" (38.6 mm)	1.52" (38.6 mm)	15/16"	

*Special Order. See page 5.

Integral Ferrule, PFA

Tee Union, Reducer



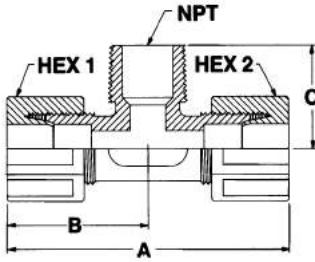
Part Number	O.D. Tube Size			Orifice	Dimensions		
					A	B	C
UT2-2-4N*	1/8"	× 1/8"	× 1/4"	0.07" (1.8 mm)	2.34" (59.4 mm)	1.15" (29.2 mm)	1.15" (29.2 mm)
UT2-4-2N*	1/8"	× 1/4"	× 1/8"	0.07" (1.8 mm)	2.29" (58.2 mm)	1.15" (29.2 mm)	1.20" (30.5 mm)
UT4-2-4N*	1/4"	× 1/8"	× 1/4"	0.07" (1.8 mm)	2.39" (60.7 mm)	1.20" (30.5 mm)	1.15" (29.2 mm)
UT4-4-2N*	1/4"	× 1/4"	× 1/8"	0.07" (1.8 mm)	2.34" (59.4 mm)	1.20" (30.5 mm)	1.20" (30.5 mm)
UT4-6-4N*	1/4"	× 3/8"	× 1/4"	0.19" (4.8 mm)	2.79" (70.9 mm)	1.40" (35.6 mm)	1.49" (37.8 mm)
UT4-6-6N*	1/4"	× 3/8"	× 3/8"	0.19" (4.8 mm)	2.88" (73.2 mm)	1.40" (35.6 mm)	1.49" (37.8 mm)
UT8-2-6N	1/2"	× 1/8"	× 3/8"	0.07" (1.8 mm)	2.94" (74.7 mm)	1.46" (37.1 mm)	1.35" (34.3 mm)
UT8-2-8N*	1/2"	× 1/8"	× 1/2"	0.07" (1.8 mm)	2.91" (73.9 mm)	1.46" (37.1 mm)	1.35" (34.3 mm)
UT8-4-4N	1/2"	× 1/4"	× 1/4"	0.19" (4.8 mm)	2.85" (72.4 mm)	1.46" (37.1 mm)	1.40" (35.6 mm)
UT8-4-8N	1/2"	× 1/4"	× 1/2"	0.19" (4.8 mm)	2.91" (73.9 mm)	1.46" (37.1 mm)	1.40" (35.6 mm)
UT8-6-6N*	1/2"	× 3/8"	× 3/8"	0.30" (7.6 mm)	2.94" (74.7 mm)	1.46" (37.1 mm)	1.49" (37.8 mm)
UT8-6-8N	1/2"	× 3/8"	× 1/2"	0.30" (7.6 mm)	2.91" (73.9 mm)	1.46" (37.1 mm)	1.49" (37.8 mm)
UT8-8-4N	1/2"	× 1/2"	× 1/4"	0.19" (4.8 mm)	2.85" (72.4 mm)	1.46" (37.1 mm)	1.46" (37.1 mm)
UT12-6-12N*	3/4"	× 3/8"	× 3/4"	0.30" (7.6 mm)	3.60" (91.4 mm)	1.80" (45.7 mm)	1.65" (41.9 mm)

Part Number	Hex 1	Hex 2	Hex 3
UT2-2-4N*	1/2"	1/2"	5/8"
UT2-4-2N*	1/2"	5/8"	1/2"
UT4-2-4N*	5/8"	1/2"	5/8"
UT4-4-2N*	5/8"	5/8"	1/2"
UT4-6-4N*	5/8"	13/16"	5/8"
UT4-6-6N*	5/8"	13/16"	13/16"
UT8-2-6N	15/16"	1/2"	13/16"
UT8-2-8N*	15/16"	1/2"	15/16"
UT8-4-4N	15/16"	5/8"	5/8"
UT8-4-8N	15/16"	5/8"	15/16"
UT8-6-6N*	15/16"	13/16"	13/16"
UT8-6-8N	15/16"	13/16"	15/16"
UT8-8-4N	15/16"	15/16"	5/8"
UT12-6-12N*	1 3/16"	13/16"	1 3/16"

*Special Order. See page 5.

Integral Ferrule, PFA

Tee Adapter, MNPT Branch

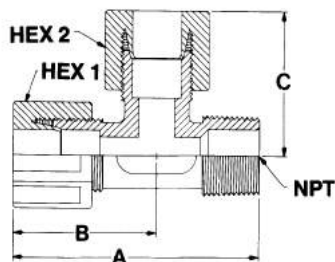


Part Number	O.D. Tube Size		MNPT Size	Orifice	Dimensions			Hex 1 Hex 2	
		×				A	B		C
BT1-2N*	1/16"	×	1/16"	1/8"	0.07" (1.8 mm)	2.30" (58.4 mm)	1.15" (29.2 mm)	0.88" (22.4 mm)	1/2"
BT2-1N*	1/8"	×	1/8"	1/16"	0.07" (1.8 mm)	2.30" (58.4 mm)	1.15" (29.2 mm)	0.88" (22.4 mm)	1/2"
BT2-2N	1/8"	×	1/8"	1/8"	0.07" (1.8 mm)	2.30" (58.4 mm)	1.15" (29.2 mm)	0.88" (22.4 mm)	1/2"
BT2-4N	1/8"	×	1/8"	1/4"	0.07" (1.8 mm)	2.30" (58.4 mm)	1.15" (29.2 mm)	0.88" (22.4 mm)	1/2"
BT4-2N	1/4"	×	1/4"	1/8"	0.19" (4.8 mm)	2.40" (61.0 mm)	1.20" (30.5 mm)	0.88" (22.4 mm)	5/8"
BT4-4N	1/4"	×	1/4"	1/4"	0.19" (4.8 mm)	2.40" (61.0 mm)	1.20" (30.5 mm)	0.88" (22.4 mm)	5/8"
BT5-4N*	5/16"	×	5/16"	1/4"	0.25" (6.4 mm)	2.87" (72.9 mm)	1.44" (36.6 mm)	1.08" (27.4 mm)	11/16"
BT6-2N*	3/8"	×	3/8"	1/8"	0.20" (5.1 mm)	2.97" (75.4 mm)	1.49" (37.8 mm)	1.08" (27.4 mm)	13/16"
BT6-4N	3/8"	×	3/8"	1/4"	0.29" (7.4 mm)	2.97" (75.4 mm)	1.49" (37.8 mm)	1.08" (27.4 mm)	13/16"
BT6-6N	3/8"	×	3/8"	3/8"	0.30" (7.6 mm)	2.97" (75.4 mm)	1.49" (37.8 mm)	1.08" (27.4 mm)	13/16"
BT6-8N	3/8"	×	3/8"	1/2"	0.30" (7.6 mm)	2.97" (75.4 mm)	1.49" (37.8 mm)	1.08" (27.4 mm)	13/16"
BT8-4N*	1/2"	×	1/2"	1/4"	0.29" (7.4 mm)	2.91" (73.9 mm)	1.46" (37.1 mm)	1.08" (27.4 mm)	15/16"
BT8-6N	1/2"	×	1/2"	3/8"	0.42" (10.7 mm)	2.91" (73.9 mm)	1.46" (37.1 mm)	1.08" (27.4 mm)	15/16"
BT8-8N	1/2"	×	1/2"	1/2"	0.43" (10.9 mm)	2.91" (73.9 mm)	1.46" (37.1 mm)	1.08" (27.4 mm)	15/16"
BT6m-2N*	6 mm	×	6 mm	1/8"	0.19" (4.8 mm)	2.40" (61.0 mm)	1.20" (30.5 mm)	0.88" (22.4 mm)	5/8"
BT6m-4N	6 mm	×	6 mm	1/4"	0.19" (4.8 mm)	2.40" (61.0 mm)	1.20" (30.5 mm)	0.88" (22.4 mm)	5/8"
BT8m-4N	8 mm	×	8 mm	1/4"	0.25" (6.4 mm)	2.87" (72.9 mm)	1.44" (36.6 mm)	1.08" (27.4 mm)	11/16"
BT8m-6N	8 mm	×	8 mm	3/8"	0.25" (6.4 mm)	2.87" (72.9 mm)	1.44" (36.6 mm)	1.08" (27.4 mm)	11/16"
BT10m-4N	10 mm	×	10 mm	1/4"	0.29" (7.4 mm)	2.97" (75.4 mm)	1.49" (37.8 mm)	1.08" (27.4 mm)	13/16"
BT12m-8N*	12 mm	×	12 mm	1/2"	0.43" (10.9 mm)	2.91" (73.9 mm)	1.46" (37.1 mm)	1.08" (27.4 mm)	15/16"

*Special Order. See page 5.

Integral Ferrule, PFA

Tee Adapter, MNPT Run

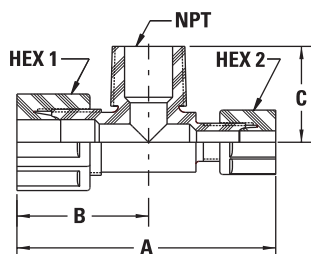


Part Number	O.D. Tube Size	MNPT Size	Orifice	Dimensions				
				A	B	C	Hex 1	Hex 2
RT1-1N*	1/16"	1/16"	0.07" (1.8 mm)	2.02" (51.3 mm)	1.15" (29.2 mm)	1.15" (29.2 mm)	1/2"	1/2"
RT1-2N	1/16"	1/8"	0.07" (1.8 mm)	2.02" (51.3 mm)	1.15" (29.2 mm)	1.15" (29.2 mm)	1/2"	1/2"
RT2-1N*	1/8"	1/16"	0.07" (1.8 mm)	2.02" (51.3 mm)	1.15" (29.2 mm)	1.15" (29.2 mm)	1/2"	1/2"
RT2-2N	1/8"	1/8"	0.07" (1.8 mm)	2.02" (51.3 mm)	1.15" (29.2 mm)	1.15" (29.2 mm)	1/2"	1/2"
RT2-4N	1/8"	1/4"	0.07" (1.8 mm)	2.02" (51.3 mm)	1.15" (29.2 mm)	1.15" (29.2 mm)	1/2"	1/2"
RT4-2N	1/4"	1/8"	0.19" (4.8 mm)	2.07" (52.6 mm)	1.20" (30.5 mm)	1.20" (30.5 mm)	5/8"	5/8"
RT4-4N	1/4"	1/4"	0.19" (4.8 mm)	2.07" (52.6 mm)	1.20" (30.5 mm)	1.20" (30.5 mm)	5/8"	5/8"
RT4-6N	1/4"	3/8"	0.19" (4.8 mm)	2.47" (62.7 mm)	1.40" (35.6 mm)	1.40" (35.6 mm)	5/8"	5/8"
RT4-8N*	1/4"	1/2"	0.19" (4.8 mm)	2.47" (62.7 mm)	1.40" (35.6 mm)	1.40" (35.6 mm)	5/8"	5/8"
RT6-2N*	3/8"	1/8"	0.20" (5.1 mm)	2.56" (65.0 mm)	1.49" (37.8 mm)	1.49" (37.8 mm)	13/16"	13/16"
RT6-4N	3/8"	1/4"	0.30" (7.6 mm)	2.56" (65.0 mm)	1.49" (37.8 mm)	1.49" (37.8 mm)	13/16"	13/16"
RT6-6N	3/8"	3/8"	0.30" (7.6 mm)	2.56" (65.0 mm)	1.49" (37.8 mm)	1.49" (37.8 mm)	13/16"	13/16"
RT6-8N	3/8"	1/2"	0.30" (7.6 mm)	2.56" (65.0 mm)	1.49" (37.8 mm)	1.49" (37.8 mm)	13/16"	13/16"
RT8-4N	1/2"	1/4"	0.29" (7.4 mm)	2.53" (64.3 mm)	1.46" (37.1 mm)	1.46" (37.1 mm)	15/16"	15/16"
RT8-6N	1/2"	3/8"	0.42" (10.7 mm)	2.53" (64.3 mm)	1.46" (37.1 mm)	1.46" (37.1 mm)	15/16"	15/16"
RT8-8N	1/2"	1/2"	0.43" (10.9 mm)	2.53" (64.3 mm)	1.46" (37.1 mm)	1.46" (37.1 mm)	15/16"	15/16"
RT8-2-8N	1/2", 1/8"	1/2"	0.07" (1.8 mm)	2.52" (64.0 mm)	1.45" (36.8 mm)	1.34" (34.0 mm)	15/16"	1/2"
RT12-12N	3/4"	3/4"	0.67" (17.0 mm)	3.19" (81.0 mm)	1.82" (46.2 mm)	1.82" (46.2 mm)	1 3/16"	1 3/16"
RT6m-2N	6 mm	1/8"	0.19" (4.8 mm)	2.07" (52.6 mm)	1.20" (30.5 mm)	1.20" (30.5 mm)	5/8"	5/8"
RT6m-4N	6 mm	1/4"	0.19" (4.8 mm)	2.07" (52.6 mm)	1.20" (30.5 mm)	1.20" (30.5 mm)	5/8"	5/8"
RT8m-4N*	8 mm	1/4"	0.25" (6.4 mm)	2.51" (63.8 mm)	1.44" (36.6 mm)	1.44" (36.6 mm)	11/16"	11/16"
RT10m-4N*	10 mm	1/4"	0.29" (7.4 mm)	2.56" (65.0 mm)	1.49" (37.8 mm)	1.49" (37.8 mm)	13/16"	13/16"
RT10m-6N*	10 mm	3/8"	0.30" (7.6 mm)	2.56" (65.0 mm)	1.49" (37.8 mm)	1.49" (37.8 mm)	13/16"	13/16"
RT12m-4N*	12 mm	1/4"	0.29" (7.4 mm)	2.59" (65.8 mm)	1.46" (37.1 mm)	1.46" (37.1 mm)	15/16"	15/16"
RT12m-6N*	12 mm	3/8"	0.42" (10.7 mm)	2.59" (65.8 mm)	1.46" (37.1 mm)	1.46" (37.1 mm)	15/16"	15/16"
RT12m-8N*	12 mm	1/2"	0.43" (10.9 mm)	2.59" (65.8 mm)	1.46" (37.1 mm)	1.46" (37.1 mm)	15/16"	15/16"

*Special Order. See page 5.

Integral Ferrule, PFA

Tee Adapter, Reducer, MNPT Branch

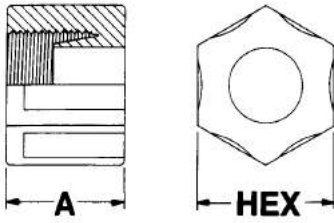


Part Number	O.D. Tube Size	MNPT Size	Orifice	Dimensions				Hex 1	Hex 2
				A	B	C			
BT6-6-4N*	3/8" × 1/4"	3/8"	0.19" (4.8 mm)	2.87" (72.9 mm)	1.49" (37.8 mm)	1.08" (27.4 mm)	13/16"	5/8"	
BT8-8-4N*	1/2" × 1/4"	1/2"	0.19" (4.8 mm)	2.87" (72.9 mm)	1.46" (37.1 mm)	1.08" (27.4 mm)	15/16"	5/8"	

*Special Order. See page 5.

Integral Ferrule, PFA

Nut-ferrule

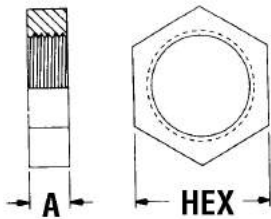


Part Number	O.D. Tube Size	Dimension	
		A	Hex
FN1	1/16"	0.50" (12.7 mm)	1/2"
FN2	1/8"	0.50" (12.7 mm)	1/2"
FN4	1/4"	0.62" (15.7 mm)	5/8"
FN5	5/16"	0.70" (17.8 mm)	11/16"
FN6	3/8"	0.75" (19.0 mm)	13/16"
FN8	1/2"	0.81" (20.6 mm)	15/16"
FN12	3/4"	0.80" (20.3 mm)	13/16"
FN6m	6 mm	0.62" (15.7 mm)	5/8"
FN8m	8 mm	0.70" (17.8 mm)	11/16"
FN10m	10 mm	0.75" (19.0 mm)	1 3/16"
FN12m	12 mm	0.81" (20.6 mm)	15/16"

Integral Ferrule, PFA

Half-Nut

(For Panel Mount Connectors)



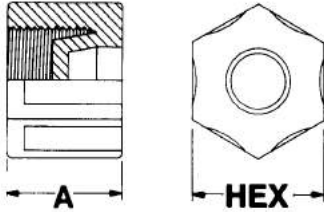
Part Number	O.D. Tube Size	Dimension	
		A	Hex
HN2	1/16", 1/8"	0.25" (6.4 mm)	1/2"
HN4	1/4", 6 mm	0.26" (6.6 mm)	5/8"
HN5	5/16", 8mm	0.26" (6.6 mm)	11/16"
HN6	3/8", 10 mm	0.25" (6.4 mm)	15/16"
HN8†	1/2", 12 mm	0.32" (8.1 mm)	1 1/16"
HN12†	3/4"	0.38" (9.7 mm)	1 5/16"

†Material is Natural PVDF.

Integral Ferrule, PFA

Plug-ferrule

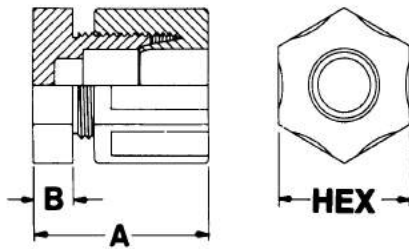
(Closes Unused Tube Connector)



Part Number	O.D. Tube Size	Dimension	
		A	Hex
FP1	1/16"	0.50" (12.7 mm)	1/2"
FP2	1/8"	0.50" (12.7 mm)	1/2"
FP4	1/4"	0.62" (15.7 mm)	5/8"
FP5	5/16"	0.70" (17.8 mm)	11/16"
FP6	3/8"	0.75" (19.0 mm)	13/16"
FP8	1/2"	0.81" (20.6 mm)	15/16"
FP12	3/4"	0.80" (20.3 mm)	1 3/16"
FP6m	6 mm	0.62" (15.7 mm)	5/8"
FP8m	8 mm	0.70" (17.8 mm)	11/16"
FP10m	10 mm	0.75" (19.0 mm)	13/16"
FP12m	12 mm	0.81" (20.6 mm)	15/16"

Integral Ferrule PFA Cap

(Closes Unused Tube End)



Part Number	O.D. Tube Size	Dimensions		
		A	B	Hex
CP1N	1/16"	0.84" (21.3 mm)	0.28" (7.1 mm)	1/2"
CP2N	1/8"	0.84" (21.3 mm)	0.28" (7.1 mm)	1/2"
CP4N	1/4"	0.84" (21.3 mm)	0.28" (7.1 mm)	5/8"
CP5N	5/16"	0.84" (21.3 mm)	0.28" (7.1 mm)	11/16"
CP6N	3/8"	0.84" (21.3 mm)	0.28" (7.1 mm)	13/16"
CP8N	1/2"	0.84" (21.3 mm)	0.28" (7.1 mm)	15/16"
CP12N	3/4"	0.96" (24.4 mm)	0.28" (7.1 mm)	1 1/16"
CP6mN	6 mm	0.84" (21.3 mm)	0.28" (7.1 mm)	5/8"
CP8mN	8 mm	0.84" (21.3 mm)	0.28" (7.1 mm)	11/16"
CP10mN	10 mm	0.84" (21.3 mm)	0.28" (7.1 mm)	13/16"
CP12mN	12 mm	0.84" (21.3 mm)	0.28" (7.1 mm)	15/16"

Integral Ferrule Groove Tools



Ordering Information

Part Number	O.D. Tube Size
GT2	1/8"
GT4	1/4"
GT5	5/16"
GT6	3/8"
GT8	1/2"
GT12	3/4"
GT6m	6 mm
GT8m	8 mm
GT10m	10 mm
GT12m	12 mm

Integral Ferrule Wrenches



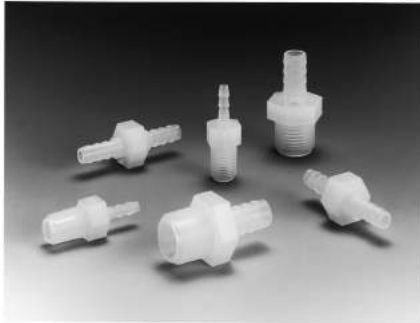
- Reversible
- Ratchet action
- Metallic construction, nickel plated handles, black oxide coated jaws
- Storage pouch

Ordering Information

Part Number	Description	Wrench Size	Fits Standard Tube Size	Fits Metric Tube Size	Fitting Body Hex Size
213-21	5-piece wrench set	1/2"	1/16" and 1/8"	3 mm	1/16" and 1/8"
		5/8"	1/4"	6 mm	1/4"
		11/16"	-	-	-
		13/16"	3/8"	10 mm	3/8"
		15/16"	1/2"	12 mm	1/2"
		-	3/4"	-	-

Barb Fittings

Straight Union



- Ideal for use with flexible hose.
- Made from PFA for long lasting corrosion resistance.
- Suitable for total chemical immersion.

Ordering Information

Part Number	Tube I.D.	Center Hole Diameter	Dimensions			
			A	B	C	Hex
BUC4	0.16" (4.0 mm)	0.06" (1.5 mm)	1.42" (36.1 mm)	0.58" (14.7 mm)	0.28" (7.1 mm)	1/2"
BUC6	0.25" (6.4 mm)	0.14" (3.6 mm)	1.75" (44.4 mm)	0.74" (18.8 mm)	0.28" (7.1 mm)	5/8"
BUC8	0.38" (9.5 mm)	0.25" (6.4 mm)	1.75" (44.4 mm)	0.74" (18.8 mm)	0.28" (7.1 mm)	5/8"

Specifications

Pressure Limit: 20 PSIG (138 kPa) maximum. For temperatures above 150°F (65°C), pressure must be reduced.

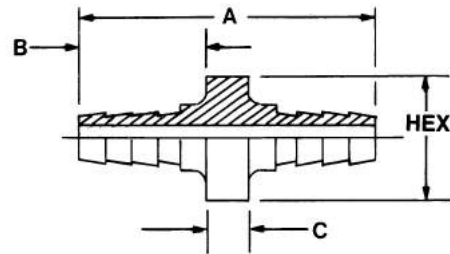
Temperature Range: 0° to 400°F (-18° to 204°C)

A clamp should be used when exposing the fitting to vibration or a pulsating pressure.

Eliminate close bends on the tubing as they cause side loading on the barb fitting.

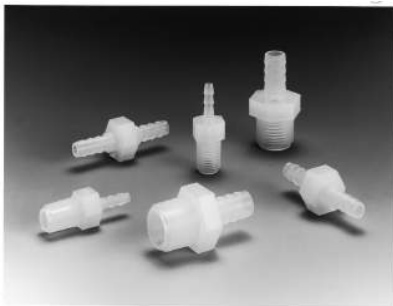
Dimensions

Union Barb



Barb Fittings

Straight Adapter



- Ideal for use with flexible hose.
- Made from PFA for long lasting corrosion resistance.
- Suitable for total chemical immersion.

Ordering Information

Part Number	Tube I.D.	Center Hole Diameter	NPT Size	Dimensions			Hex
				A	B	C	
BC4-2	0.16" (4.0 mm)	0.06" (1.5 mm)	1/8"	1.42" (36.1 mm)	0.58" (14.7 mm)	0.28" (7.1 mm)	1/2"
BC6-2	0.25" (6.4 mm)	0.14" (3.6 mm)	1/8"	1.56" (39.6 mm)	0.74" (18.8 mm)	0.28" (7.1 mm)	5/8"
BC6-4	0.25" (6.4 mm)	0.14" (3.6 mm)	1/4"	1.56" (39.6 mm)	0.74" (18.8 mm)	0.28" (7.1 mm)	5/8"
BC8-4	0.38" (9.5 mm)	0.25" (6.4 mm)	1/4"	1.56" (39.6 mm)	0.74" (18.8 mm)	0.28" (7.1 mm)	5/8"
BC8-6	0.38" (9.5 mm)	0.25" (6.4 mm)	3/8"	1.56" (39.6 mm)	0.74" (18.8 mm)	0.28" (7.1 mm)	1 3/16"

Specifications

Pressure Limit: 20 PSIG (138 kPa) maximum. For temperatures above 150°F (65°C), pressure must be reduced.

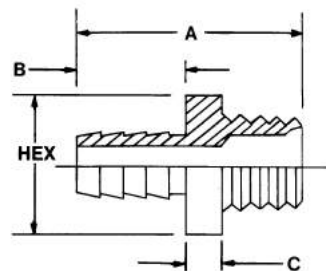
Temperature Range: 0° to 400°F (-18° to 204°C)

A clamp should be used when exposing the fitting to vibration or a pulsating pressure.

Eliminate close bends on the tubing as they cause side loading on the barb fitting.

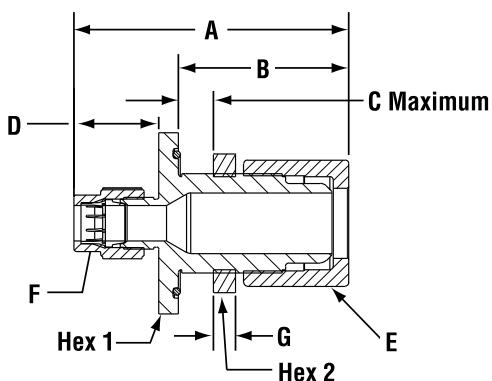
Dimensions

Connector Barb



Flaretek[®], PFA

Pass-through Dual Containment, Flaretek[®] × Quikgrip[®]



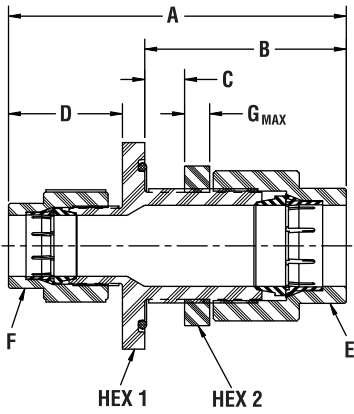
Part* Number	Process Line	Secondary Containment Line	Dimensions			
			A	B	C	D
DCC8F-4GN-1	1/4"	1/2"	3.37" (85.6 mm)	2.06" (52.3 mm)	0.50" (12.7 mm)	1.03" (26.2 mm)
DCC12F-6GN-1	3/8"	3/4"	3.77" (95.8 mm)	2.36" (59.9 mm)	0.50" (12.7 mm)	1.13" (28.7 mm)
DCC12F-8GN-1	1/2"	3/4"	3.85" (97.8 mm)	2.36" (59.9 mm)	0.50" (12.7 mm)	1.21" (30.7 mm)
DCC16F-8GN-1	1/2"	1"	3.92" (99.6 mm)	2.43" (61.7 mm)	0.50" (12.7 mm)	1.21" (30.7 mm)
DCC16F-12GN-1	3/4"	1"	4.13" (104.9 mm)	2.43" (61.7 mm)	0.50" (12.7 mm)	1.42" (36.1 mm)

Part Number	End Connection E	End Connection F	Dimension G	Panel Mount		
				Hex 1	Hex 2	Hole Diameter
DCC8F-4GN-1	1/2" Flaretek [®]	1/4" Quikgrip [®]	0.32" (8.1 mm)	1 3/8"	1 1/16"	0.75" (19.0 mm)
DCC12F-6GN-1	3/4" Flaretek [®]	3/8" Quikgrip [®]	0.38" (9.7 mm)	1 5/8"	1 5/16"	1.00" (25.4 mm)
DCC12F-8GN-1	3/4" Flaretek [®]	1/2" Quikgrip [®]	0.38" (9.7 mm)	1 5/8"	1 5/16"	1.00" (25.4 mm)
DCC16F-8GN-1	1" Flaretek [®]	1/2" Quikgrip [®]	0.32" (8.1 mm)	2 1/4"	1 3/4"	1.50" (38.1 mm)
DCC16F-12GN-1	1" Flaretek [®]	3/4" Quikgrip [®]	0.32" (8.1 mm)	2 1/4"	1 3/4"	1.50" (38.1 mm)

*Also available in PFA(-3) and CPFA(-6) nuts.

Quikgrip[®], PFA

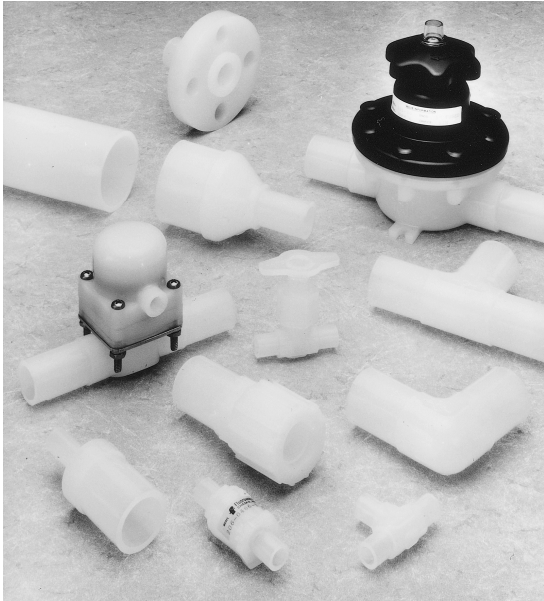
Pass-through Dual Containment, Quikgrip[®] × Quikgrip[®]



Part Number	Process Line	Secondary Containment Line	Dimensions A	B	C	D
DCC8G-4GN-1M	1/4"	1/2"	3.25" (82.6 mm)	1.95" (49.5 mm)	0.50" (12.7 mm)	1.03" (26.2 mm)
DCC12G-8GN-1M	1/2"	3/4"	3.73" (94.7 mm)	2.27" (57.7 mm)	0.50" (12.7 mm)	1.21" (30.7 mm)
DCC16G-12GN-1M	3/4"	1"	4.26" (108.2 mm)	2.53" (64.3 mm)	0.50" (12.7 mm)	1.42" (36.1 mm)

Part Number	End Connection E	End Connection F	Dimensions G	Hex 1	Hex 2	Hole Diameter
DCC8G-4GN-1M	1/2" Quikgrip [®]	1/4" Quikgrip [®]	0.32" (8.1 mm)	1 3/8"	1 1/16"	0.75" (19.0 mm)
DCC12G-8GN-1M	3/4" Quikgrip [®]	1/2" Quikgrip [®]	0.38" (9.7 mm)	1 5/8"	1 5/16"	1.00" (25.4 mm)
DCC16G-12GN-1M	1" Quikgrip [®]	3/4" Quikgrip [®]	0.32" (8.1 mm)	2 1/4"	1 3/4"	1.75" (44.4 mm)

PureBond® Weldable Pipe Products



PureBond® weldable pipe products are suitable for high purity, high corrosive chemical handling applications in the semiconductor, chemical and other industries where purity and corrosion resistance are necessary.

A wide range of pipe, fittings and valves is available. PureBond® pipe and fittings are available in 1/4", 1/2", 3/4", 1" and 2" sizes. Valves with PureBond® port connections are available in 1/4", 1/2", 3/4", and 1" sizes.

Custom assemblies can be designed and constructed to meet your specific needs.

PureBond® weldable products provide a rigid, leak-free piping system that is adaptable to other style systems including NPT, flanged and Flaretek® flared fittings.

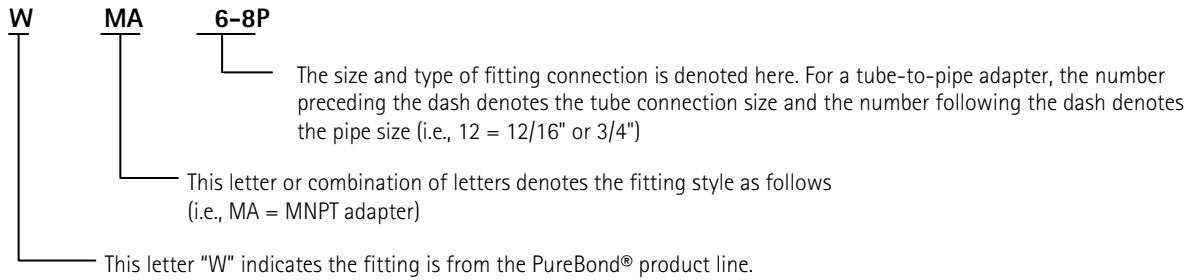
See "Safety in Handling" comments on Page 320.



PureBond® weldable pipe products are specifically designed, tested, and characterized from a material standpoint to work with PureBond® fitting and pipe components manufactured by Entegris. Customer assumes the risk of proper fit and weld connection integrity if PureBond® weldable pipe products are connected to components manufactured by third parties. Further, customer will assume the risk of proper fit and weld connection integrity if PureBond®

PureBond[®] Fittings

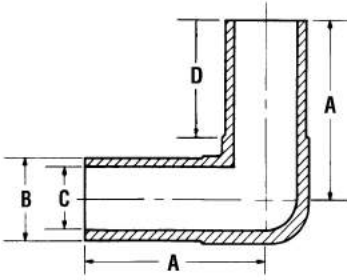
Part Number System



- 45E = Elbow, 45°
- BT = Tee adapter - branch
- C = Cap
- E = Elbow, 90°
- ET = Elbow tee
- ETA = Elbow-tube adapter
- F = Flange adapter, flat face
- FA = FNPT adapter
- FO = Flange adapter, grooved face
- FR = Flange ring
- MA = MNPT adapter
- R = Reducer
- RT = Tee adapter - run
- T = Tee
- TA = Tube adapter
- U = Union
- X = Cross

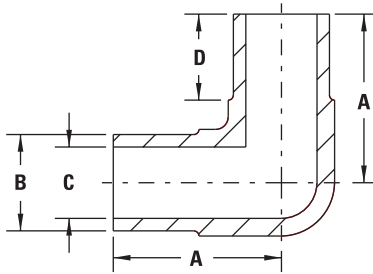
PureBond[®], PFA

Elbow Union, 90°



Part Number	Pipe Size	Orifice	Dimensions			
			A	B	C	D
WE4P	1/4"	0.36" (9.1 mm)	1.08" (27.4 mm)	0.54" (13.7 mm)	0.35" (9.0 mm)	0.55" (14.0 mm)
WE8P	1/2"	0.62" (15.7 mm)	2.22" (56.4 mm)	0.84" (21.3 mm)	0.61" (15.4 mm)	1.50" (38.1 mm)
WE8SP	1/2"	0.62" (15.7 mm)	1.47" (37.3 mm)	0.84" (21.3 mm)	0.61" (15.4 mm)	0.75" (19.0 mm)
WE12P	3/4"	0.82" (20.8 mm)	2.35" (59.7 mm)	1.05" (26.7 mm)	0.81" (20.5 mm)	1.50" (38.1 mm)
WE12SP	3/4"	0.82" (20.8 mm)	1.55" (39.4 mm)	1.05" (26.7 mm)	0.81" (20.5 mm)	0.75" (19.0 mm)
WE16P	1"	1.05" (26.7 mm)	2.46" (62.5 mm)	1.32" (33.4 mm)	1.03" (26.3 mm)	1.50" (38.1 mm)
WE16SP	1"	1.05" (26.7 mm)	1.70" (43.2 mm)	1.32" (33.4 mm)	1.03" (26.3 mm)	0.75" (19.0 mm)
WE32P	2"	2.07" (52.6 mm)	3.30" (83.8 mm)	2.38" (60.3 mm)	2.05" (52.1 mm)	1.50" (38.1 mm)

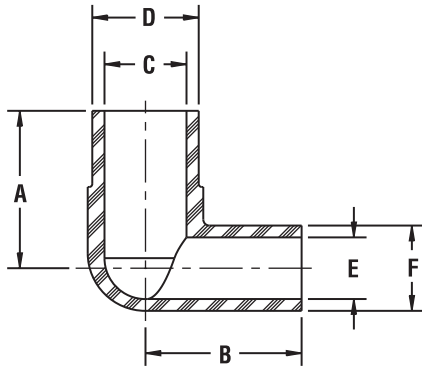
Elbow Union, 90°, Minimum Weld, PFA Plus



Part Number	Pipe Size	Orifice	Dimensions			
			A	B	C	D
WE8SP-X	1/2"	0.62" (15.7 mm)	1.47" (37.3 mm)	0.84" (21.3 mm)	0.61" (15.4 mm)	0.75" (19.0 mm)
WE12SP-X	3/4"	0.82" (20.8 mm)	1.55" (39.4 mm)	1.05" (26.7 mm)	0.81" (20.5 mm)	0.75" (19.0 mm)
WE16SP-X	1"	1.05" (26.7 mm)	1.70" (43.2 mm)	1.32" (33.4 mm)	1.03" (26.3 mm)	0.75" (19.0 mm)

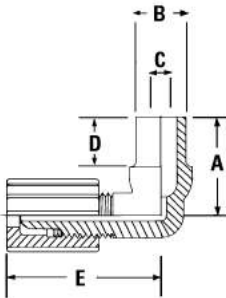
PureBond[®], PFA

Elbow Union, Reducer 90°



Part Number	Pipe Size	Orifice	Dimensions					
			A	B	C	D	E	F
WE8-4P	1/2" x 1/4"	0.36" (9.1 mm)	1.47" (37.3 mm)	1.47" (37.3 mm)	0.61" (15.4 mm)	0.80" (20.4 mm)	0.35" (8.9 mm)	0.54" (13.7 mm)
WE12-8P	3/4" x 1/2"	0.62" (15.7 mm)	1.55" (39.4 mm)	1.55" (39.4 mm)	0.81" (20.5 mm)	1.05" (26.7 mm)	0.61" (15.4 mm)	0.84" (21.3 mm)
WE16-8P	1" x 1/2"	0.62" (15.7 mm)	1.70" (43.2 mm)	1.70" (43.2 mm)	1.03" (26.2 mm)	1.32" (33.4 mm)	0.61" (15.4 mm)	0.84" (21.3 mm)
WE16-12P	1" x 3/4"	0.82" (20.8 mm)	1.70" (43.2 mm)	1.70" (43.2 mm)	1.03" (26.2 mm)	1.32" (33.4 mm)	0.81" (20.5 mm)	1.05" (26.7 mm)

Elbow Adapter, Flaretek[®], 90°

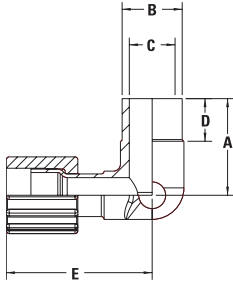


Part* Number	Pipe Size	O.D. Tube Size	Orifice	Dimensions				
				A	B	C	D	E
WETA4-4PFN-1	1/4"	1/4"	0.13" (3.3 mm)	1.08" (27.4 mm)	0.54" (13.7 mm)	0.35" (9.0 mm)	0.55" (14.0 mm)	1.61" (40.9 mm)
WETA4-8PFN-1	1/2"	1/4"	0.13" (3.3 mm)	1.44" (36.6 mm)	0.84" (21.3 mm)	0.61" (15.5 mm)	0.75" (19.0 mm)	1.76" (44.7 mm)
WETA4-12PFN-1	3/4"	1/4"	0.13" (3.3 mm)	1.44" (36.6 mm)	1.05" (26.7 mm)	0.82" (20.8 mm)	0.75" (19.0 mm)	1.90" (48.3 mm)
WETA6-8PFN-1	1/2"	3/8"	0.25" (6.4 mm)	1.44" (36.6 mm)	0.84" (21.3 mm)	0.61" (15.5 mm)	0.75" (19.0 mm)	1.90" (48.3 mm)
WETA6-12PFN-1	3/4"	3/8"	0.25" (6.4 mm)	1.70" (43.2 mm)	1.05" (26.7 mm)	0.82" (20.8 mm)	0.75" (19.0 mm)	2.18" (55.4 mm)
WETA8-8PFN-1	1/2"	1/2"	0.38" (9.7 mm)	1.44" (36.6 mm)	0.84" (21.3 mm)	0.61" (15.4 mm)	0.75" (19.0 mm)	1.99" (50.5 mm)
WETA8-12PFN-1	3/4"	1/2"	0.38" (9.7 mm)	1.44" (36.6 mm)	1.05" (26.7 mm)	0.82" (20.8 mm)	0.75" (19.0 mm)	2.10" (53.3 mm)
WETA8-16PFN-1	1"	1/2"	0.38" (9.7 mm)	1.71" (43.4 mm)	1.32" (33.5 mm)	1.03" (26.2 mm)	0.75" (19.0 mm)	2.28" (57.9 mm)
WETA12-8PFN-1	1/2"	3/4"	0.62" (15.7 mm)	1.71" (43.4 mm)	0.84" (21.3 mm)	0.61" (15.5 mm)	0.75" (19.0 mm)	2.17" (55.1 mm)
WETA12-12PFN-1	3/4"	3/4"	0.63" (16.0 mm)	1.69" (42.9 mm)	1.05" (26.7 mm)	0.81" (20.6 mm)	0.75" (19.0 mm)	2.46" (62.5 mm)
WETA12-16PFN-1	1"	3/4"	0.63" (16.0 mm)	1.71" (43.4 mm)	1.32" (33.5 mm)	1.03" (26.2 mm)	0.75" (19.0 mm)	2.44" (62.0 mm)
WETA16-12PFN-1	3/4"	1"	0.82" (20.8 mm)	1.71" (43.4 mm)	1.05" (26.7 mm)	0.81" (20.6 mm)	0.75" (19.0 mm)	2.68" (68.1 mm)
WETA16-16PFN-1	1"	1"	0.88" (22.4 mm)	1.70" (43.2 mm)	1.32" (33.5 mm)	1.04" (26.4 mm)	0.75" (19.0 mm)	2.65" (67.3 mm)

*Also available in PFA(-3) and CPFA(-6) nuts.

PureBond[®], PFA

Elbow Adapter, Flaretek[®] "SpaceSaver", PFA Plus

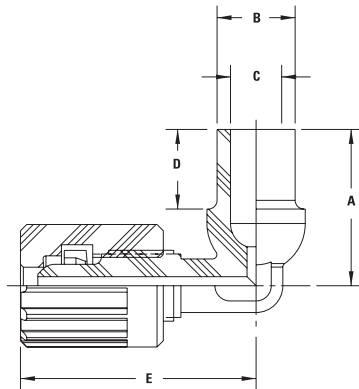


Part*† Number	Pipe "SpaceSaver"		Orifice	Dimensions				
	Size	Size		A	B	C	D	E
WETA4-4TFN-3X	1/4"	1/4"	0.16" (4.1 mm)	1.26" (32.0 mm)	0.54" (13.7 mm)	0.35" (8.9 mm)	0.75" (19.0 mm)	1.60" (40.6 mm)
WETA4-8TFN-3X	1/2"	1/4"	0.16" (4.1 mm)	1.27" (32.3 mm)	0.84" (21.3 mm)	0.61" (15.5 mm)	0.75" (19.0 mm)	1.67" (42.4 mm)
WETA6-8TFN-3X	1/2"	3/8"	0.25" (6.4 mm)	1.26" (32.0 mm)	0.84" (21.3 mm)	0.61" (15.5 mm)	0.75" (19.0 mm)	1.75" (44.4 mm)
WETA8-8TFN-3X	1/2"	1/2"	0.38" (9.7 mm)	1.44" (36.6 mm)	0.84" (21.3 mm)	0.61" (15.5 mm)	0.75" (19.0 mm)	2.01" (51.1 mm)
WETA8-12TFN-3X	3/4"	1/2"	0.38" (9.7 mm)	1.44" (36.6 mm)	1.05" (26.7 mm)	0.81" (20.6 mm)	0.75" (19.0 mm)	2.01" (51.1 mm)
WETA12-8TFN-3X	1/2"	3/4"	0.62" (15.7 mm)	1.70" (43.2 mm)	0.84" (21.3 mm)	0.61" (15.5 mm)	0.75" (19.0 mm)	2.40" (61.0 mm)
WETA12-12TFN-3X	3/4"	3/4"	0.63" (16.0 mm)	1.70" (43.2 mm)	1.05" (26.7 mm)	0.81" (20.6 mm)	0.75" (19.0 mm)	2.33" (59.2 mm)
WETA12-16TFN-3X	1"	3/4"	0.63" (16.0 mm)	1.70" (43.2 mm)	1.32" (33.5 mm)	1.03" (26.2 mm)	0.75" (19.0 mm)	2.35" (59.7 mm)
WETA16-12TFN-3X	3/4"	1"	0.82" (20.8 mm)	2.00" (50.8 mm)	1.05" (26.7 mm)	0.81" (20.6 mm)	0.75" (19.0 mm)	2.97" (75.4 mm)
WETA16-16TFN-3X	1"	1"	0.88" (22.4 mm)	1.73" (43.9 mm)	1.32" (33.5 mm)	1.03" (26.2 mm)	0.75" (19.0 mm)	2.99" (75.9 mm)

*Also available in PVDF (-1X) nuts

†Fitting also available in PFA material. To order, replace "-3X" with "-1" for PVDF nuts, "-3" for PFA nuts or "-6" for CPFA nuts.

Elbow Adapter, FlareLock[®] II

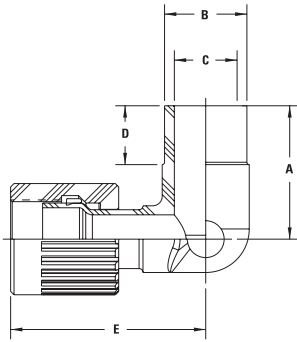


Part Number	O.D. Tube Size	Pipe Size	Orifice	Dimensions				
				A	B	C	D	E
WETA4-4PFN-II	1/4"	1/4"	0.13" (3.3 mm)	1.08" (27.4 mm)	0.54" (13.7 mm)	0.35" (8.9 mm)	0.55" (14.0 mm)	1.63" (41.4 mm)
WETA16-12PFN-II	1"	3/4"	0.82" (20.8 mm)	1.71" (43.4 mm)	1.05" (26.7 mm)	0.81" (20.6 mm)	0.75" (19.0 mm)	2.81" (71.4 mm)
WETA16-16PFN-II	1"	1"	0.88" (22.4 mm)	1.70" (43.2 mm)	1.32" (33.5 mm)	1.04" (26.4 mm)	0.75" (19.0 mm)	2.81" (71.4 mm)

Nut and split locking ring are PFA material.

PureBond[®], PFA

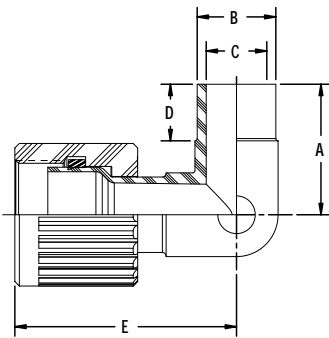
Elbow Adapter, FlareLock[®] II "SpaceSaver"



Part Number	Pipe "SpaceSaver"		Orifice	Dimensions				
	Size	Size		A	B	C	D	E
WETA8-8TFN-II	1/2"	1/2"	0.38" (9.7 mm)	1.44" (36.6 mm)	0.84" (21.3 mm)	0.61" (15.5 mm)	0.75" (19.0 mm)	2.03" (51.6 mm)
WETA12-12TFN-II	3/4"	3/4"	0.63" (16.0 mm)	1.70" (43.2 mm)	1.05" (26.7 mm)	0.81" (20.6 mm)	0.75" (19.0 mm)	2.42" (61.5 mm)
WETA16-16TFN-II	1"	1"	0.88" (22.4 mm)	1.71" (43.4 mm)	1.32" (33.5 mm)	1.03" (26.2 mm)	0.75" (19.0 mm)	2.98" (75.7 mm)

Nut and split locking ring are PFA material.

Elbow Adapter, Reducer, FlareLock[®] II, "SpaceSaver"

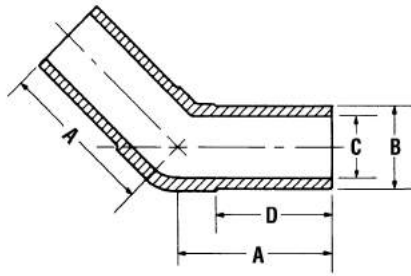


Part Number	Pipe "SpaceSaver"		Orifice	Dimensions				
	Size	Size		A	B	C	D	E
WETA12-16TFN-II	1"	3/4"	0.63" (16.0 mm)	2.60" (66.0 mm)	1.32" (33.5 mm)	1.03" (26.2 mm)	0.75" (19.0 mm)	2.64" (67.1 mm)
WETA16-12TFN-II	3/4"	1"	0.63" (16.0 mm)	1.71" (43.4 mm)	1.05" (26.7 mm)	0.81" (20.6 mm)	0.75" (19.0 mm)	2.98" (75.7 mm)

Nut and split locking ring are PFA material.

PureBond[®], PFA

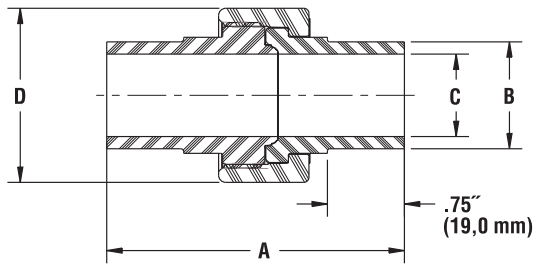
Elbow Union, 45°



Part Number	Pipe Size	Orifice	Dimensions			
			A	B	C	D
W45E4P	1/4"	0.36" (9.1 mm)	0.94" (23.9 mm)	0.54" (13.7 mm)	0.35" (9.0 mm)	0.55" (14.0 mm)
W45E8P	1/2"	0.62" (15.7 mm)	2.00" (50.8 mm)	0.84" (21.3 mm)	0.61" (15.4 mm)	1.50" (38.1 mm)
W45E12P	3/4"	0.82" (20.8 mm)	2.00" (50.8 mm)	1.05" (26.7 mm)	0.81" (20.5 mm)	1.50" (38.1 mm)
W45E16P	1"	1.05" (26.7 mm)	2.00" (50.8 mm)	1.32" (33.4 mm)	1.03" (26.3 mm)	1.50" (38.1 mm)
W45E32P	2"	2.07" (52.6 mm)	2.50" (63.5 mm)	2.38" (60.3 mm)	2.05" (52.1 mm)	1.50" (38.1 mm)

PureBond[®], PFA

FlareMount™ O-ring Free Union, PFA Plus

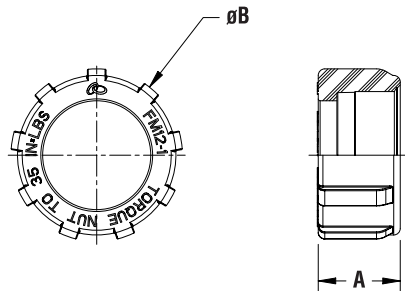


Part*	Pipe	Orifice	Dimensions			
Number	Size		A	B	C	D
WU8SP-FM-1X	1/2"	0.62" (15.7 mm)	2.90" (73.7 mm)	0.84" (21.3 mm)	0.61" (15.5 mm)	1.50" (38.1 mm)
WU12SP-FM-1X	3/4"	0.82" (20.8 mm)	2.90" (73.7 mm)	1.05" (26.7 mm)	0.81" (20.6 mm)	1.71" (43.4 mm)
WU16SP-FM-1X	1"	1.05" (26.7 mm)	2.90" (73.7 mm)	1.32" (33.5 mm)	1.03" (26.2 mm)	1.96" (49.8 mm)

Part*	PVDF Nut	Wrench	Minimum Nut Torque
Number	Part Number		
WU8SP-FM-1X	FM8-1	213-196	30 in•lbs (3.4 N•m)
WU12SP-FM-1X	FM12-1	213-199	35 in•lbs (4.0 N•m)
WU16SP-FM-1X	FM16-1	213-197	45 in•lbs (5.1 N•m)

*Also available in PFA (-3X) nuts.

FlareMount™ Union Replacement Nuts

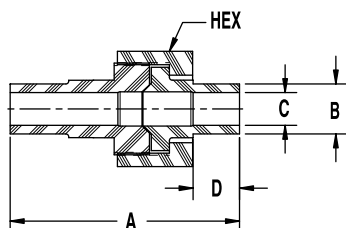


Part*	O.D.	Dimensions	
Number	Tube Size	A	B
FM8-1	1/2"	0.88" (22.4 mm)	1.63" (41.4 mm)
FM12-1	3/4"	0.88" (22.4 mm)	1.84" (46.7 mm)
FM16-1	1"	0.88" (22.4 mm)	2.09" (53.1 mm)

*Also available in PFA(-3) material.

PureBond[®], PFA

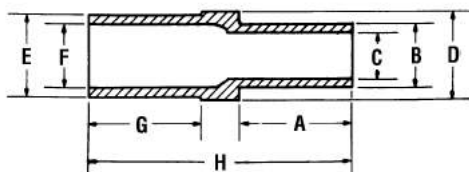
Straight Union



Part Number	Pipe Size	Orifice	Dimensions				Hex	Replacement PVDF Nut
			A	B	C	D		
WU4P	1/4"	0.36" (9.1 mm)	1.84" (46.7 mm)	0.54" (13.7 mm)	0.35" (9.0 mm)	0.55" (14.0 mm)	1 7/16"	400081

Note: The following torque is recommended: 14 in•lbs (5 N•m)

Straight Union, Reducer

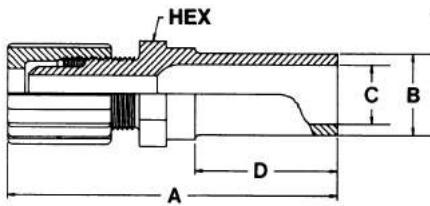


Part Number	Pipe Size	Orifice	Dimensions			
			A	B	C	D
WR8-4P	1/2" × 1/4"	0.36" (9.1 mm)	0.55" (14.0 mm)	0.54" (13.7 mm)	0.35" (9.0 mm)	0.93" (23.6 mm)
WR12-4P	3/4" × 1/4"	0.36" (9.1 mm)	0.55" (14.0 mm)	0.54" (13.7 mm)	0.35" (9.0 mm)	1.11" (28.2 mm)
WR12-8P	3/4" × 1/2"	0.62" (15.7 mm)	1.52" (38.6 mm)	0.84" (21.3 mm)	0.61" (15.4 mm)	1.11" (28.2 mm)
WR16-4P	1" × 1/4"	0.36" (9.1 mm)	1.30" (33.0 mm)	0.54" (13.7 mm)	0.35" (9.0 mm)	1.41" (35.8 mm)
WR16-8P	1" × 1/2"	0.62" (15.7 mm)	1.53" (38.9 mm)	0.84" (21.3 mm)	0.61" (15.4 mm)	1.41" (35.8 mm)
WR16-12P	1" × 3/4"	0.82" (20.8 mm)	1.54" (39.1 mm)	1.05" (26.7 mm)	0.81" (20.5 mm)	1.41" (35.8 mm)
WR32-8P	2" × 1/2"	0.62" (15.7 mm)	1.50" (38.1 mm)	0.84" (21.3 mm)	0.61" (15.4 mm)	2.56" (65.0 mm)
WR32-12P	2" × 3/4"	0.82" (20.8 mm)	1.50" (38.1 mm)	1.05" (26.7 mm)	0.81" (20.5 mm)	2.56" (65.0 mm)
WR32-16P	2" × 1"	1.05" (26.7 mm)	1.50" (38.1 mm)	1.32" (33.4 mm)	1.03" (26.3 mm)	2.56" (65.0 mm)

Part Number	Dimensions			
	E	F	G	H
WR8-4P	0.84" (21.3 mm)	0.61" (15.4 mm)	1.50" (38.1 mm)	2.55" (64.8 mm)
WR12-4P	1.05" (26.7 mm)	0.81" (20.5 mm)	1.50" (38.1 mm)	2.55" (64.8 mm)
WR12-8P	1.05" (26.7 mm)	0.81" (20.5 mm)	1.50" (38.1 mm)	3.52" (89.4 mm)
WR16-4P	1.32" (33.4 mm)	1.03" (26.3 mm)	1.50" (38.1 mm)	3.30" (83.8 mm)
WR16-8P	1.32" (33.4 mm)	1.03" (26.3 mm)	1.50" (38.1 mm)	3.54" (89.9 mm)
WR16-12P	1.32" (33.4 mm)	1.03" (26.3 mm)	1.50" (38.1 mm)	3.54" (89.9 mm)
WR32-8P	2.38" (60.3 mm)	2.05" (52.1 mm)	1.50" (38.1 mm)	4.38" (111.3 mm)
WR32-12P	2.38" (60.3 mm)	2.05" (52.1 mm)	1.50" (38.1 mm)	4.38" (111.3 mm)
WR32-16P	2.38" (60.3 mm)	2.05" (52.1 mm)	1.50" (38.1 mm)	4.38" (111.3 mm)

PureBond[®], PFA

Straight Adapter, Flaretek[®]

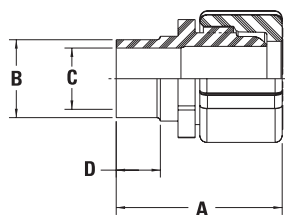


Part* Number	Pipe Size	O.D. Tube Size	Orifice	Dimensions					Hex
				A	B	C	D	Hex	
WTA4-4PFN-1	1/4"	1/4"	0.13" (3.3 mm)	1.92" (48.8 mm)	0.54" (13.7 mm)	0.35" (9.0 mm)	0.55" (14.0 mm)	11/16"	
WTA4-8PFN-1	1/2"	1/4"	0.13" (3.3 mm)	3.22" (81.8 mm)	0.84" (21.3 mm)	0.61" (15.4 mm)	1.49" (37.8 mm)	15/16"	
WTA4-12PFN-1	3/4"	1/4"	0.13" (3.3 mm)	3.22" (81.8 mm)	1.05" (26.7 mm)	0.81" (20.5 mm)	1.49" (37.8 mm)	1 3/16"	
WTA6-4PFN-1	1/4"	3/8"	0.25" (6.4 mm)	2.04" (51.8 mm)	0.54" (13.7 mm)	0.35" (9.0 mm)	0.55" (14.0 mm)	13/16"	
WTA6-8PFN-1	1/2"	3/8"	0.25" (6.4 mm)	3.30" (83.8 mm)	0.84" (21.3 mm)	0.61" (15.4 mm)	1.49" (37.8 mm)	15/16"	
WTA6-12PFN-1	3/4"	3/8"	0.25" (6.4 mm)	3.29" (83.6 mm)	1.05" (26.7 mm)	0.81" (20.5 mm)	1.50" (38.1 mm)	1 3/16"	
WTA8-8PFN-1	1/2"	1/2"	0.38" (9.7 mm)	3.38" (85.9 mm)	0.84" (21.3 mm)	0.61" (15.4 mm)	1.50" (38.1 mm)	15/16"	
WTA8-12PFN-1	3/4"	1/2"	0.38" (9.7 mm)	3.38" (85.9 mm)	1.05" (26.7 mm)	0.81" (20.5 mm)	1.49" (37.8 mm)	1 3/16"	
WTA8-16PFN-1	1"	1/2"	0.38" (9.7 mm)	2.63" (66.8 mm)	1.32" (33.5 mm)	1.05" (26.7 mm)	0.73" (18.5 mm)	1 7/16"	
WTA8-32PFN-1	2"	1/2"	0.38" (9.7 mm)	3.38" (85.9 mm)	2.38" (60.5 mm)	2.07" (52.6 mm)	1.48" (37.6 mm)	N/A	
WTA12-8PFN-1	1/2"	3/4"	0.62" (15.7 mm)	3.56" (90.4 mm)	0.84" (21.3 mm)	0.61" (15.4 mm)	1.50" (38.1 mm)	1 3/16"	
WTA12-12PFN-1	3/4"	3/4"	0.63" (16.0 mm)	3.56" (90.4 mm)	1.05" (26.7 mm)	0.81" (20.5 mm)	1.50" (38.1 mm)	1 3/16"	
WTA12-16PFN-1	1"	3/4"	0.63" (16.0 mm)	3.56" (90.4 mm)	1.32" (33.4 mm)	1.03" (26.3 mm)	1.50" (38.1 mm)	1 7/16"	
WTA16-12PFN-1	3/4"	1"	0.82" (20.8 mm)	3.80" (96.5 mm)	1.05" (26.7 mm)	0.81" (20.5 mm)	1.50" (38.1 mm)	1 7/16"	
WTA16-16PFN-1	1"	1"	0.88" (22.4 mm)	3.78" (96.0 mm)	1.32" (33.4 mm)	1.03" (26.3 mm)	1.50" (38.1 mm)	1 7/16"	

*Also available in PFA(-3) and CPFA(-6) nuts.

PureBond[®], PFA

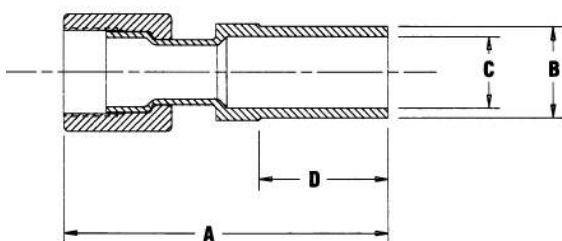
Straight Adapter, Flaretek[®], Reduced Footprint



Part* Number	O.D. Tube Size	Pipe Size	Orifice	Dimensions				Wrench Part Number
				A	B	C	D	
WTA20-16PFN-3S	1 1/4"	1"	0.88" (22.4 mm)	3.00" (76.2 mm)	1.32" (33.5 mm)	1.03" (26.2 mm)	0.75" (19.0 mm)	213-200

*Also available in PVDF (-1S) nuts. PVDF nut dimensions are slightly smaller.

Straight Adapter, Flaretek[®] "SpaceSaver", PFA Plus



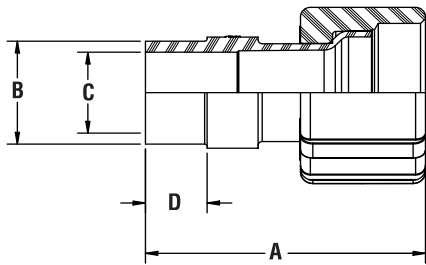
Part*† Number	Pipe Size	"SpaceSaver" Size	Orifice	Dimensions			
				A	B	C	D
WTA4-4TFN-3X	1/4"	1/4"	0.16" (4.1 mm)	2.21" (56.1 mm)	0.54" (13.7 mm)	0.35" (8.9 mm)	0.55" (14.0 mm)
WTA6-4TFN-3X	1/4"	3/8"	0.25" (6.4 mm)	2.30" (58.4 mm)	0.54" (13.7 mm)	0.35" (9.0 mm)	0.55" (14.0 mm)
WTA6-8TFN-3X	1/2"	3/8"	0.25" (6.4 mm)	2.50" (63.5 mm)	0.84" (21.3 mm)	0.61" (15.4 mm)	0.75" (19.0 mm)
WTA8-8TFN-3X	1/2"	1/2"	0.38" (9.7 mm)	3.32" (84.3 mm)	0.84" (21.3 mm)	0.61" (15.4 mm)	1.50" (38.1 mm)
WTA8-12TFN-3X	3/4"	1/2"	0.38" (9.7 mm)	3.32" (84.3 mm)	1.05" (26.7 mm)	0.81" (20.5 mm)	1.50" (38.1 mm)
WTA8-16TFN-3X	1"	1/2"	0.38" (9.7 mm)	2.56" (65.0 mm)	1.32" (33.5 mm)	1.03" (26.2 mm)	0.75" (19.0 mm)
WTA12-8TFN-3X	1/2"	3/4"	0.62" (15.7 mm)	3.55" (90.2 mm)	0.84" (21.3 mm)	0.61" (15.4 mm)	1.50" (38.1 mm)
WTA12-12TFN-3X	3/4"	3/4"	0.63" (16.0 mm)	3.55" (90.2 mm)	1.05" (26.7 mm)	0.81" (20.5 mm)	1.50" (38.1 mm)
WTA12-16TFN-3X	1"	3/4"	0.63" (16.0 mm)	2.81" (71.4 mm)	1.32" (33.5 mm)	1.03" (26.2 mm)	0.75" (19.0 mm)
WTA16-12TFN-3X	3/4"	1"	0.82" (20.8 mm)	4.05" (102.9 mm)	1.05" (26.7 mm)	0.81" (20.5 mm)	1.50" (38.1 mm)
WTA16-16TFN-3X	1"	1"	0.88" (22.4 mm)	4.05" (102.9 mm)	1.32" (33.4 mm)	1.03" (26.3 mm)	1.50" (38.1 mm)

*Also available in PVDF (-1X) nuts.

†Fitting also available in PFA material. To order, replace "-3X" with "-1" for PVDF nuts, "-3" for PFA nuts or "-6" for CPFA nuts.

PureBond[®], PFA

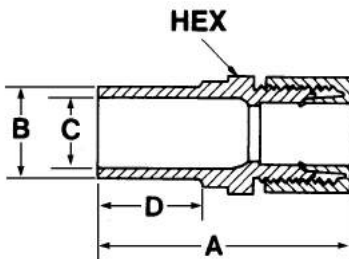
Straight Adapter, Flaretek[®] "SpaceSaver", Reduced Footprint



Part* Number	Pipe Size	"SpaceSaver" Size	Orifice	Dimensions				
				A	B	C	D	
WTA20-16TFN-3S	1"	1 1/4"	0.88" (22.4 mm)	3.41" (86.6 mm)	1.32" (33.5 mm)	1.03" (26.2 mm)	0.75" (19.0 mm)	

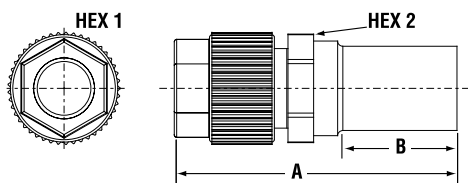
*Also available in PVDF (-1S) nuts. PVDF nut dimensions are slightly smaller.

Straight Adapter, Integral Ferrule



Part Number	Pipe Size	O.D. Tube Size	Orifice	Dimensions					
				A	B	C	D	Hex	
WTA4-4PN	1/4"	1/4"	0.13" (3.3 mm)	1.74" (44.2 mm)	0.54" (13.7 mm)	0.35" (9.0 mm)	0.55" (14.0 mm)	11/16"	
WTA6-4PN	1/4"	3/8"	0.25" (6.4 mm)	1.74" (44.2 mm)	0.54" (13.7 mm)	0.35" (9.0 mm)	0.55" (14.0 mm)	13/16"	
WTA6-8PN	1/2"	3/8"	0.25" (6.4 mm)	2.66" (67.6 mm)	0.84" (21.3 mm)	0.61" (15.4 mm)	1.49" (37.8 mm)	15/16"	
WTA8-8PN	1/2"	1/2"	0.38" (9.7 mm)	3.25" (82.6 mm)	0.84" (21.3 mm)	0.61" (15.4 mm)	1.49" (37.8 mm)	15/16"	
WTA8-12PN	3/4"	1/2"	0.38" (9.7 mm)	3.25" (82.6 mm)	1.05" (26.7 mm)	0.81" (20.5 mm)	1.49" (37.8 mm)	1 3/16"	
WTA12-12PN	3/4"	3/4"	0.63" (16.0 mm)	3.25" (82.6 mm)	1.05" (26.7 mm)	0.81" (20.5 mm)	1.49" (37.8 mm)	1 3/16"	
WTA12-16PN	1"	3/4"	0.63" (16.0 mm)	3.25" (82.6 mm)	1.32" (33.4 mm)	1.03" (26.3 mm)	1.48" (37.6 mm)	1 7/16"	

Straight Adapter, Quikgrip[®]

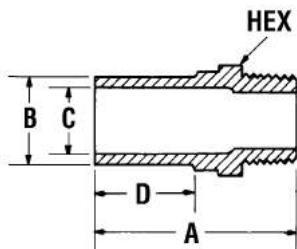


Part Number	Pipe Size	O.D. Tube Size	Orifice	Pipe O.D.	Pipe I.D.	Dimensions			
						A	B	Hex 1	Hex 2
WTA12-12PGN-1	3/4"	3/4"	0.63" (16.0 mm)	1.05" (26.7 mm)	0.81" (20.6 mm)	3.56" (90.4 mm)	1.50" (38.1 mm)	1 1/16"	1 3/16"
WTA12-16PGN-1HX	1"	3/4"	0.63" (16.0 mm)	1.32" (33.5 mm)	1.03" (26.2 mm)	3.53" (89.7 mm)	1.48" (37.6 mm)	1 1/16"	1 7/16"

Note: The tube end does not have a shoulder, allowing 3/4" O.D. tubing to pass through into pipe.

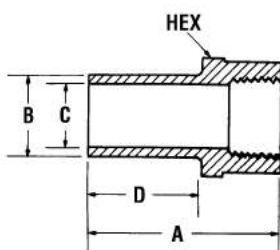
PureBond[®], PFA

Straight Adapter, MNPT



Part Number	Pipe Size	MNPT Size	Orifice	Dimensions				
				A	B	C	D	Hex
WMA4P	1/4"	1/4"	0.28" (7.1 mm)	1.38" (35.1 mm)	0.54" (13.7 mm)	0.35" (9.0 mm)	0.55" (14.0 mm)	5/8"
WMA4-6P	1/4"	3/8"	0.36" (9.1 mm)	1.38" (35.1 mm)	0.54" (13.7 mm)	0.35" (9.0 mm)	0.55" (14.0 mm)	13/16"
WMA8P	1/2"	1/2"	0.52" (13.2 mm)	2.77" (70.4 mm)	0.84" (21.3 mm)	0.61" (15.4 mm)	1.48" (37.6 mm)	15/16"
WMA8-12P	1/2"	3/4"	0.62" (15.7 mm)	2.77" (70.4 mm)	0.84" (21.3 mm)	0.61" (15.4 mm)	1.50" (38.1 mm)	1 3/16"
WMA12P	3/4"	3/4"	0.66" (16.8 mm)	2.77" (70.4 mm)	1.05" (26.7 mm)	0.81" (20.5 mm)	1.50" (38.1 mm)	1 3/16"
WMA16P	1"	1"	0.94" (23.9 mm)	2.94" (74.7 mm)	1.32" (33.4 mm)	1.03" (26.3 mm)	1.51" (38.4 mm)	1 7/16"

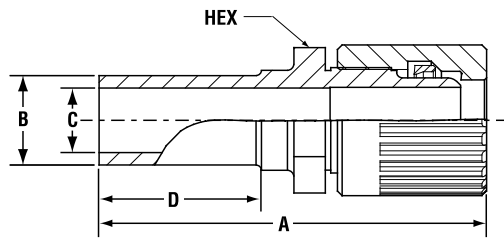
Straight Adapter, FNPT



Part Number	Pipe Size	FNPT Size	Orifice	Dimensions				
				A	B	C	D	Hex
WFA4P	1/4"	1/4"	0.34" (8.6 mm)	1.46" (37.1 mm)	0.54" (13.7 mm)	0.35" (9.0 mm)	0.55" (14.0 mm)	3/4"
WFA4-6P	1/4"	3/8"	0.36" (9.1 mm)	1.46" (37.1 mm)	0.54" (13.7 mm)	0.35" (9.0 mm)	0.55" (14.0 mm)	15/16"
WFA8P	1/2"	1/2"	0.55" (14.0 mm)	2.60" (66.0 mm)	0.84" (21.3 mm)	0.61" (15.4 mm)	1.51" (38.4 mm)	1 1/8"
WFA12P	3/4"	3/4"	0.79" (20.1 mm)	2.60" (66.0 mm)	1.05" (26.7 mm)	0.81" (20.5 mm)	1.51" (38.4 mm)	1 7/16"
WFA16P	1"	1"	0.99" (25.1 mm)	2.57" (65.3 mm)	1.32" (33.4 mm)	1.03" (26.3 mm)	1.47" (37.3 mm)	1 7/8"

PureBond[®], PFA

Straight Adapter, FlareLock[®] II

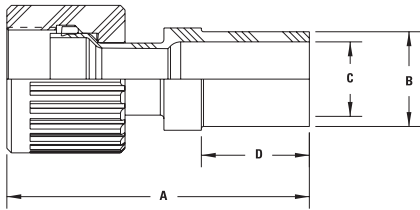


Part Number	Pipe Size	O.D. Tube Size	Orifice	Dimensions				
				A	B	C	D	Hex
WTA4-4PFN-II	1/4"	1/4"	0.13" (3.3 mm)	1.94" (49.3 mm)	0.54" (13.7 mm)	0.35" (8.9 mm)	0.55" (14.0 mm)	11/16"
WTA8-8PFN-II	1/2"	1/2"	0.38" (9.7 mm)	3.39" (86.1 mm)	0.84" (21.3 mm)	0.61" (15.5 mm)	1.50" (38.1 mm)	15/16"
WTA12-8PFN-II	1/2"	3/4"	0.62" (15.7 mm)	3.58" (90.9 mm)	0.84" (21.3 mm)	0.61" (15.4 mm)	1.50" (38.1 mm)	1 3/16"
WTA12-12PFN-II	3/4"	3/4"	0.63" (16.0 mm)	3.58" (90.9 mm)	1.05" (26.7 mm)	0.81" (20.6 mm)	1.50" (38.1 mm)	1 3/16"
WTA12-16PFN-II	1"	3/4"	0.63" (16.0 mm)	3.58" (90.9 mm)	1.32" (33.5 mm)	1.03" (26.2 mm)	1.50" (38.1 mm)	1 7/16"
WTA16-12PFN-II	3/4"	1"	0.82" (20.8 mm)	3.96" (100.6 mm)	1.05" (26.7 mm)	0.81" (20.5 mm)	1.50" (38.1 mm)	1 7/16"
WTA16-16PFN-II	1"	1"	0.88" (22.4 mm)	3.94" (100.1 mm)	1.32" (33.4 mm)	1.03" (26.3 mm)	1.50" (38.1 mm)	1 7/16"

Nut and split locking ring are PFA material.

PureBond[®], PFA

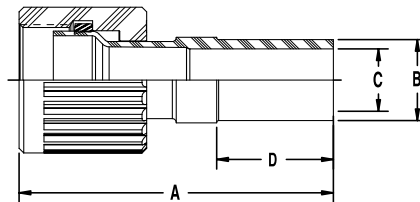
Straight Adapter, FlareLock[®] II, "SpaceSaver"



Part Number	Pipe "SpaceSaver"		Orifice	Dimensions			
	Size	Size		A	B	C	D
WTA8-8TFN-II	1/2"	1/2"	0.38" (9.65 mm)	3.34" (84.8 mm)	0.84" (21.3 mm)	0.61" (15.5 mm)	1.50" (38.1 mm)
WTA12-12TFN-II	3/4"	3/4"	0.63" (16.00 mm)	3.64" (92.5 mm)	1.05" (26.7 mm)	0.81" (20.6 mm)	1.50" (38.1 mm)
WTA16-16TFN-II	1"	1"	0.88" (22.35 mm)	4.04" (102.6 mm)	1.32" (33.5 mm)	1.03" (26.2 mm)	1.50" (38.1 mm)

Nut and split locking ring are PFA material.

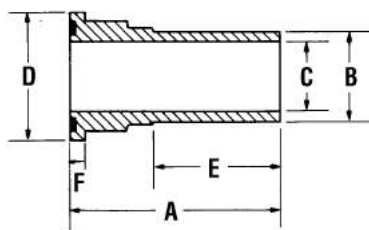
Straight Adapter, Reducer, FlareLock[®] II, "SpaceSaver"



Part Number	Pipe "SpaceSaver"		Orifice	Dimensions			
	Size	Size		A	B	C	D
WTA12-16TFN-II	1"	3/4"	0.63" (16.0 mm)	2.90" (73.7 mm)	1.32" (33.5 mm)	1.03" (26.2 mm)	0.75" (19.0 mm)
WTA16-12TFN-II	3/4"	1"	0.82" (20.8 mm)	4.04" (102.6 mm)	1.05" (26.7 mm)	0.81" (20.6 mm)	1.50" (38.1 mm)

Nut and split locking ring are PFA material.

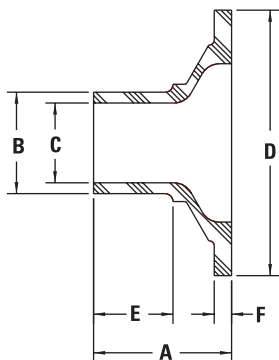
Straight Adapter, Flange, Groove Face



Part Number	Pipe Size	Orifice	Dimensions					
			A	B	C	D	E	F
WFO8P	1/2"	0.62" (15.7 mm)	2.48" (63.0 mm)	0.84" (21.3 mm)	0.61" (15.4 mm)	1.28" (32.5 mm)	1.50" (38.1 mm)	0.18" (4.6 mm)
WFO12P	3/4"	0.82" (20.8 mm)	2.46" (62.5 mm)	1.05" (26.7 mm)	0.81" (20.5 mm)	1.46" (37.2 mm)	1.50" (38.1 mm)	0.18" (4.6 mm)
WFO16P	1"	1.05" (26.7 mm)	2.83" (71.9 mm)	1.32" (33.4 mm)	1.03" (26.3 mm)	1.87" (47.5 mm)	1.50" (38.1 mm)	0.18" (4.6 mm)
WFO32P	2"	2.07" (52.6 mm)	3.00" (76.2 mm)	2.38" (60.3 mm)	2.05" (52.1 mm)	3.48" (88.4 mm)	1.50" (38.1 mm)	0.25" (6.4 mm)

PureBond[®], PFA

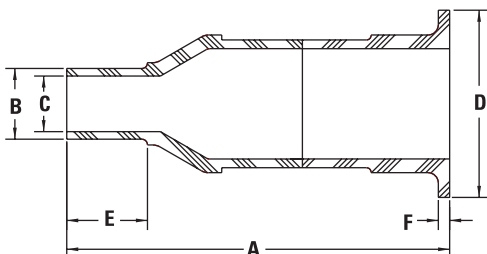
Straight Adapter, Flange, Flat Face



Part Number	Pipe Size	Orifice	Dimensions						
			A	B	C	D	E	F	
WF8P	1/2"	0.62" (15.7 mm)	2.48" (63.0 mm)	0.84" (21.3 mm)	0.61" (15.4 mm)	1.28" (32.5 mm)	1.50" (38.1 mm)	1.50" (38.1 mm)	0.18" (4.6 mm)
WF12P	3/4"	0.82" (20.8 mm)	2.46" (62.5 mm)	1.05" (26.7 mm)	0.81" (20.5 mm)	1.46" (37.2 mm)	1.50" (38.1 mm)	1.50" (38.1 mm)	0.18" (4.6 mm)
WF16P	1"	1.05" (26.7 mm)	2.83" (71.9 mm)	1.32" (33.4 mm)	1.03" (26.3 mm)	1.87" (47.5 mm)	1.50" (38.1 mm)	1.50" (38.1 mm)	0.18" (4.6 mm)
WF32P	2"	2.07" (52.6 mm)	3.00" (76.2 mm)	2.38" (60.3 mm)	2.05" (52.1 mm)	3.48" (88.4 mm)	1.50" (38.1 mm)	1.50" (38.1 mm)	0.25" (6.4 mm)

Note: Flange ring ordering information is on page 306.

Straight Adapter, Flange Reducer, Flat Face



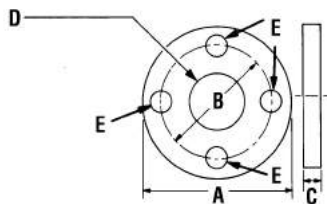
Part Number	Pipe Size	Orifice	Dimensions						
			A	B	C	D	E	F	
WF16-8P*	1/2"	0.62" (15.7 mm)	4.12" (104.6 mm)	0.84" (21.3 mm)	0.61" (15.4 mm)	1.87" (47.5 mm)	1.50" (38.1 mm)	1.50" (38.1 mm)	0.18" (4.6 mm)
WF16-12P*	3/4"	0.82" (20.8 mm)	4.12" (104.6 mm)	1.05" (26.7 mm)	0.81" (20.5 mm)	1.87" (47.5 mm)	1.50" (38.1 mm)	1.50" (38.1 mm)	0.18" (4.6 mm)
WF32-8P*	1/2"	0.62" (15.7 mm)	6.67" (169.4 mm)	0.84" (21.3 mm)	0.61" (15.4 mm)	3.48" (88.4 mm)	1.50" (38.1 mm)	1.50" (38.1 mm)	0.25" (6.4 mm)
WF32-12P*	3/4"	0.82" (20.8 mm)	6.67" (169.4 mm)	1.05" (26.7 mm)	0.82" (20.9 mm)	3.48" (88.4 mm)	1.50" (38.1 mm)	1.50" (38.1 mm)	0.25" (6.4 mm)
WF32-12P-S	3/4"	0.82" (20.8 mm)	1.73" (43.9 mm)	1.05" (26.7 mm)	0.82" (20.9 mm)	3.44" (87.4 mm)	1.03" (26.2 mm)	1.03" (26.2 mm)	0.28" (7.1 mm)
WF32-16P*	1"	1.05" (26.7 mm)	6.67" (169.4 mm)	1.32" (33.4 mm)	1.05" (26.6 mm)	3.48" (88.4 mm)	1.50" (38.1 mm)	1.50" (38.1 mm)	0.25" (6.4 mm)
WF32-16P-S	1"	1.05" (26.7 mm)	1.73" (43.9 mm)	1.32" (33.4 mm)	1.05" (26.6 mm)	3.44" (87.4 mm)	1.03" (26.2 mm)	1.03" (26.2 mm)	0.28" (7.1 mm)

*Denotes welded assembly.

Note: Flange ring ordering information is on page 306.

PureBond[®], PFA

Flange Ring



Part Number	Material	Pipe Size	Dimensions				
			A	B	C	D	E
FR8V	PVC	1/2"	3.50" (88.9 mm)	2.38" (60.5 mm)	0.50" (12.7 mm)	1.12" (28.4 mm)	0.62" (15.7 mm)
FR8D	PVDF	1/2"	3.50" (88.9 mm)	2.38" (60.5 mm)	0.62" (15.7 mm)	1.12" (28.4 mm)	0.62" (15.7 mm)
FR12V	PVC	3/4"	3.88" (98.6 mm)	2.75" (69.8 mm)	0.50" (12.7 mm)	1.34" (34.0 mm)	0.62" (15.7 mm)
FR12D	PVDF	3/4"	3.88" (98.6 mm)	2.75" (69.8 mm)	0.62" (15.7 mm)	1.34" (34.0 mm)	0.62" (15.7 mm)
FR16V	PVC	1"	4.25" (108.0 mm)	3.12" (79.2 mm)	0.62" (15.7 mm)	1.70" (43.2 mm)	0.62" (15.7 mm)
FR16D	PVDF	1"	4.25" (108.0 mm)	3.12" (79.2 mm)	0.75" (19.0 mm)	1.70" (43.2 mm)	0.62" (15.7 mm)
FR32SS	302/304SS	2"	6.00" (152.4 mm)	4.75" (120.6 mm)	0.50" (12.7 mm)	2.61" (66.3 mm)	0.75" (19.0 mm)

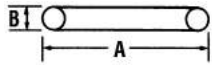
Note: Flange adapter ordering information is on pages 304 and 305.

The following bolt torque is recommended:

PVC	1/2"	15 in•lbs (2 N•m)
PVDF	1/2"	5 in•lbs (0.5 N•m)
PVC	3/4"	20 in•lbs (2 N•m)
PVDF	3/4"	15 in•lbs (2 N•m)
PVC	1"	35 in•lbs (4 N•m)
PVDF	1"	20 in•lbs (2 N•m)
302/304SS	2"	70 in•lbs (8 N•m)

O-ring

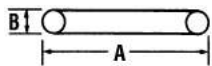
Kalrez®



Part		Dimensions		For Use With
Number	Size	A	B	
215-221	1/2"	1.07" (27.2 mm)	0.12" (3.0 mm)	WU8P-HMW
215-220	3/4"	1.26" (32.0 mm)	0.12" (3.0 mm)	WU12P-HMW
215-218	1"	1.50" (38.1 mm)	0.12" (3.0 mm)	WU16P-HMW

O-ring

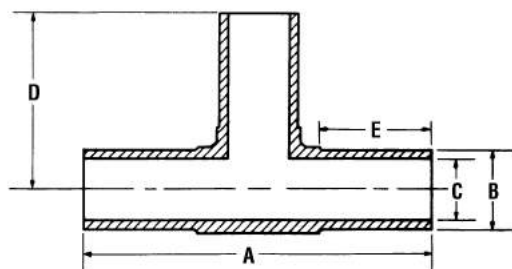
PFA Encapsulated Viton®



Part		Dimensions		For Use With
Number	Size	A	B	
1331-111	1/2"	1.06" (26.9 mm)	0.12" (3.0 mm)	WU8P
1331-112	3/4"	1.25" (31.8 mm)	0.12" (3.0 mm)	WU12P
1331-108	1"	1.50" (38.1 mm)	0.12" (3.0 mm)	WU15P
1618-141	2"	2.50" (63.5 mm)	0.10" (2.5 mm)	WFO32P

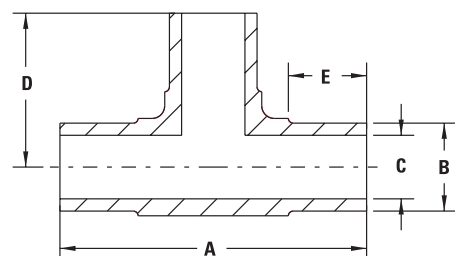
PureBond® , PFA

Tee Union



Part Number	Pipe Size	Orifice	Dimensions				
			A	B	C	D	E
WT4P	1/4"	0.36" (9.1 mm)	2.16" (54.9 mm)	0.54" (13.7 mm)	0.35" (9.0 mm)	1.08" (27.4 mm)	0.55" (14.0 mm)
WT8P	1/2"	0.62" (15.7 mm)	4.43" (112.5 mm)	0.84" (21.3 mm)	0.61" (15.4 mm)	2.22" (56.4 mm)	1.50" (38.1 mm)
WT8SP	1/2"	0.62" (15.7 mm)	2.94" (74.7 mm)	0.84" (21.3 mm)	0.61" (15.4 mm)	1.47" (37.3 mm)	0.75" (19.0 mm)
WT12P	3/4"	0.82" (20.8 mm)	4.60" (116.8 mm)	1.05" (26.7 mm)	0.81" (20.5 mm)	2.31" (58.7 mm)	1.50" (38.1 mm)
WT12SP	3/4"	0.82" (20.8 mm)	3.10" (78.7 mm)	1.05" (26.7 mm)	0.81" (20.5 mm)	1.55" (39.4 mm)	0.75" (19.0 mm)
WT16P	1"	1.05" (26.7 mm)	4.88" (124.0 mm)	1.32" (33.4 mm)	1.03" (26.3 mm)	2.46" (62.5 mm)	1.50" (38.1 mm)
WT16SP	1"	1.05" (26.7 mm)	3.40" (86.4 mm)	1.32" (33.4 mm)	1.03" (26.3 mm)	1.70" (43.2 mm)	0.75" (19.0 mm)
WT32P	2"	2.07" (52.6 mm)	6.60" (167.6 mm)	2.38" (60.3 mm)	2.05" (52.1 mm)	3.30" (83.8 mm)	1.50" (38.1 mm)

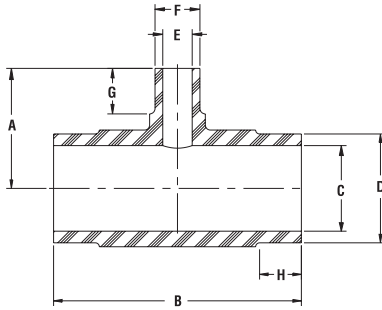
Tee Union, Minimum Weld, PFA Plus



Part Number	Pipe Size	Orifice	Dimensions				
			A	B	C	D	E
WT8SP-X	1/2"	0.62" (15.7 mm)	2.94" (74.7 mm)	0.84" (21.3 mm)	0.61" (15.4 mm)	1.47" (37.3 mm)	0.75" (19.0 mm)
WT12SP-X	3/4"	0.82" (20.8 mm)	3.10" (78.7 mm)	1.05" (26.7 mm)	0.81" (20.5 mm)	1.55" (39.4 mm)	0.75" (19.0 mm)
WT16SP-X	1"	1.05" (26.7 mm)	3.40" (86.4 mm)	1.32" (33.4 mm)	1.03" (26.3 mm)	1.70" (43.2 mm)	0.75" (19.0 mm)

PureBond[®], PFA

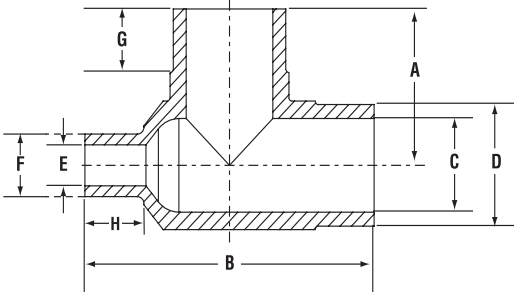
Tee Reducer Branch



Part Number	Pipe Size	Orifice	Dimensions			
			A	B	C	D
WBT8-4P	1/2" × 1/4" × 1/2"	0.36" (9.1 mm)	1.47" (37.3 mm)	2.94" (74.7 mm)	0.61" (15.4 mm)	0.84" (21.3 mm)
WBT12-4P	3/4" × 1/4" × 3/4"	0.36" (9.1 mm)	1.35" (34.3 mm)	2.70" (68.6 mm)	0.81" (20.5 mm)	1.05" (26.7 mm)
WBT12-8P	3/4" × 1/2" × 3/4"	0.62" (15.7 mm)	1.35" (34.3 mm)	2.66" (67.6 mm)	0.81" (20.5 mm)	1.05" (26.7 mm)
WBT16-4P	1" × 1/4" × 1"	0.36" (9.1 mm)	1.50" (38.1 mm)	3.00" (76.2 mm)	1.03" (26.3 mm)	1.32" (33.4 mm)
WBT16-8P	1" × 1/2" × 1"	0.62" (15.7 mm)	1.70" (43.2 mm)	3.37" (85.6 mm)	1.03" (26.3 mm)	1.32" (33.4 mm)
WBT16-12P	1" × 3/4" × 1"	0.82" (20.8 mm)	1.70" (43.2 mm)	3.37" (85.6 mm)	1.03" (26.3 mm)	1.32" (33.4 mm)

Part Number	E	F	Dimensions	
			G	H
WBT8-4P	0.35" (9.0 mm)	0.54" (13.7 mm)	0.75" (19.0 mm)	0.75" (19.0 mm)
WBT12-4P	0.35" (9.0 mm)	0.54" (13.7 mm)	0.55" (14.0 mm)	0.75" (19.0 mm)
WBT12-8P	0.61" (15.4 mm)	0.84" (21.3 mm)	0.61" (15.5 mm)	0.75" (19.0 mm)
WBT16-4P	0.35" (9.0 mm)	0.54" (13.7 mm)	0.55" (14.0 mm)	0.75" (19.0 mm)
WBT16-8P	0.61" (15.4 mm)	0.84" (21.3 mm)	0.75" (19.0 mm)	0.75" (19.0 mm)
WBT16-12P	0.81" (20.5 mm)	1.05" (26.7 mm)	0.75" (19.0 mm)	0.75" (19.0 mm)

Tee Reducer Run

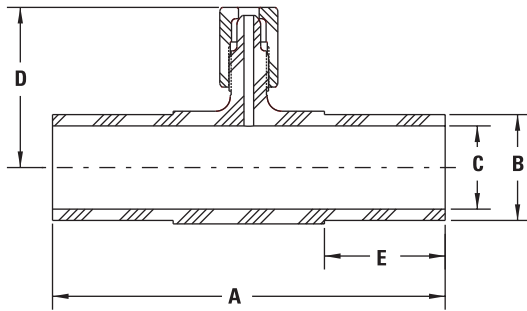


Part Number	Pipe Size	Orifice	Dimensions			
			A	B	C	D
WRT8-4P	1/4" × 1/2" × 1/2"	0.36" (9.1 mm)	1.25" (31.8 mm)	2.40" (61.0 mm)	0.62" (15.7 mm)	0.84" (21.3 mm)
WRT12-4P	1/4" × 3/4" × 3/4"	0.36" (9.1 mm)	1.35" (34.3 mm)	2.70" (68.6 mm)	0.81" (20.5 mm)	1.05" (26.7 mm)
WRT12-8P	1/2" × 3/4" × 3/4"	0.62" (15.7 mm)	1.35" (34.3 mm)	2.70" (68.6 mm)	0.81" (20.6 mm)	1.05" (26.7 mm)
WRT16-4P	1/4" × 1" × 1"	0.36" (9.1 mm)	1.50" (38.1 mm)	3.00" (76.2 mm)	1.03" (26.2 mm)	1.32" (33.4 mm)
WRT16-8P	1/2" × 1" × 1"	0.62" (15.7 mm)	1.45" (36.8 mm)	2.90" (73.7 mm)	1.02" (25.9 mm)	1.32" (33.5 mm)
WRT16-12P	3/4" × 1" × 1"	0.82" (20.8 mm)	1.45" (36.8 mm)	3.00" (76.2 mm)	1.02" (25.9 mm)	1.32" (33.5 mm)

Part Number	E	F	Dimensions	
			G	H
WRT8-4P	0.35" (8.9 mm)	0.54" (13.7 mm)	0.56" (14.2 mm)	0.55" (14.0 mm)
WRT12-4P	0.35" (8.9 mm)	0.54" (13.7 mm)	0.55" (14.0 mm)	0.55" (14.0 mm)
WRT12-8P	0.62" (15.7 mm)	0.84" (21.3 mm)	0.55" (14.0 mm)	0.55" (14.0 mm)
WRT16-4P	0.35" (8.9 mm)	0.54" (13.7 mm)	0.55" (14.0 mm)	0.55" (14.0 mm)
WRT16-8P	0.62" (15.7 mm)	0.84" (21.3 mm)	0.55" (14.0 mm)	0.55" (14.0 mm)
WRT16-12P	0.81" (20.6 mm)	1.05" (26.7 mm)	0.55" (14.0 mm)	0.55" (14.0 mm)

PureBond® , PFA

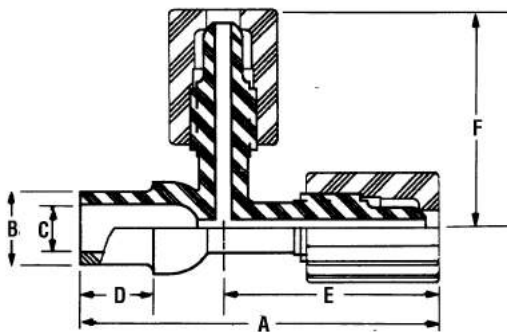
Tee Adapter, Flaretek® Branch



Part* Number	Pipe Size	O.D. Tube Size	Orifice	Dimensions				
				A	B	C	D	E
WBT8-4PFN-1	1/2"	1/4"	0.13" (3.3 mm)	4.44" (112.8 mm)	0.84" (21.3 mm)	0.61" (15.4 mm)	1.81" (46.0 mm)	1.50" (38.1 mm)
WBT12-12PFN-1	3/4"	3/4"	0.63" (16.0 mm)	4.63" (117.6 mm)	1.05" (26.7 mm)	0.81" (20.5 mm)	2.52" (64.0 mm)	1.50" (38.1 mm)
WBT12-16PFN-1	3/4"	1"	0.82" (20.8 mm)	4.62" (117.3 mm)	1.05" (26.7 mm)	0.81" (20.5 mm)	2.70" (68.6 mm)	1.50" (38.1 mm)
WBT12-4PFN-1	3/4"	1/4"	0.13" (3.3 mm)	4.61" (117.1 mm)	1.05" (26.7 mm)	0.81" (20.5 mm)	2.25" (57.2 mm)	1.50" (38.1 mm)
WBT16-4PFN-1	1"	1/4"	0.13" (3.3 mm)	4.88" (124.0 mm)	1.32" (33.4 mm)	1.03" (26.3 mm)	1.99" (50.5 mm)	1.43" (36.3 mm)

*Also available in PFA(-3) and CPFA(-6) nuts.

Tee Adapter, Flaretek® Run

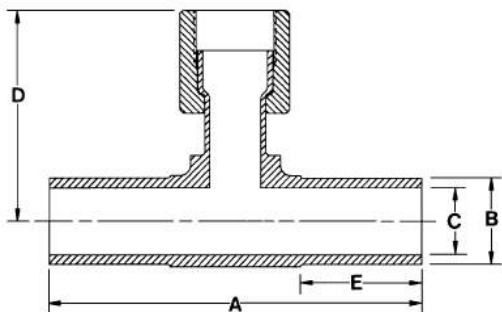


Part* Number	Pipe Size	O.D. Tube Size	Orifice	Dimensions					
				A	B	C	D	E	F
WT4-4PF-4PFN-1	1/4"	1/4"	0.13" (3.3 mm)	2.70" (68.6 mm)	0.54" (13.7 mm)	0.35" (9.0 mm)	0.55" (14.0 mm)	1.62" (41.1 mm)	1.62" (41.1 mm)

*Also available in PFA(-3) and CPFA(-6) nuts.

PureBond® , PFA

Tee Adapter, Flaretek® "SpaceSaver" Branch, PFA Plus



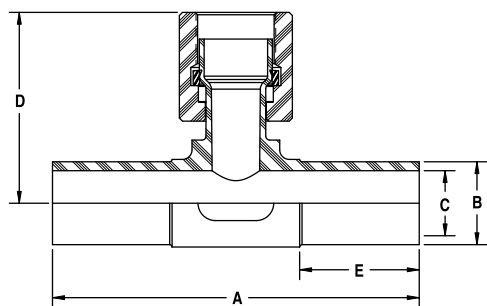
Part*† Number	Pipe Size	O.D. Tube Size	Pipe Size	Orifice	Dimensions	
					A	B
WBT8-8PTN-3X	1/2"	1/2"	1/2"	0.38" (9.7 mm)	2.94" (74.7 mm)	0.84" (21.3 mm)
WBT12-6PTN-3X	3/4"	3/8"	3/4"	0.25" (6.4 mm)	3.10" (78.7 mm)	1.05" (26.7 mm)
WBT12-12PTN-3X	3/4"	3/4"	3/4"	0.63" (16.0 mm)	4.60" (116.8 mm)	1.05" (26.7 mm)
WBT12-16PTN-3X	3/4"	1"	3/4"	0.82" (20.8 mm)	4.60" (116.8 mm)	1.05" (26.7 mm)
WBT16-6PTN-3X	1"	3/8"	1"	0.25" (6.4 mm)	3.40" (86.4 mm)	1.32" (33.4 mm)
WBT16-8PTN-3X	1"	1/2"	1"	0.38" (9.7 mm)	3.40" (86.4 mm)	1.32" (33.4 mm)

Part Number	Dimensions		
	C	D	E
WBT8-8PTN-3X	0.62" (15.7 mm)	2.01" (51.1 mm)	0.75" (19.0 mm)
WBT12-6PTN-3X	0.82" (20.9 mm)	2.03" (51.6 mm)	0.75" (19.0 mm)
WBT12-12PTN-3X	0.82" (20.8 mm)	2.33" (59.2 mm)	1.50" (38.1 mm)
WBT12-16PTN-3X	0.82" (20.8 mm)	2.83" (71.9 mm)	1.50" (38.1 mm)
WBT16-6PTN-3X	1.03" (26.3 mm)	2.18" (55.4 mm)	0.75" (19.0 mm)
WBT16-8PTN-3X	1.03" (26.3 mm)	2.25" (57.2 mm)	0.75" (19.0 mm)

*Also available in PVDF (-1X) nuts.

†Fitting also available in PFA material. To order, replace "-3X" with "-1" for PVDF nuts, "-3" for PFA nuts or "-6" for CPFA nuts.

Tee Adapter, FlareLock® II, "SpaceSaver"



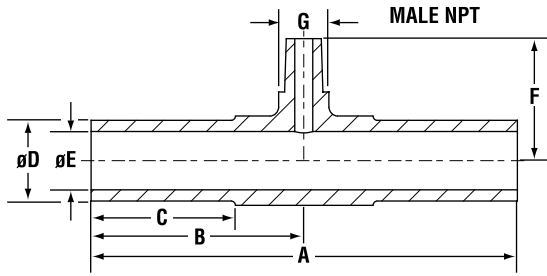
Part Number	"SpaceSaver" Size	Pipe Size	Orifice	Dimensions	
				A	B
WBT8-8PTN-II	1/2"	1/2"	0.38" (9.7 mm)	2.94" (74.7 mm)	0.84" (21.3 mm)
WBT12-12PTN-II	3/4"	3/4"	0.63" (16.0 mm)	4.60" (116.8 mm)	1.05" (26.7 mm)

Part Number	Dimensions		
	C	D	E
WBT8-8PTN-II	0.62" (15.7 mm)	2.03" (51.6 mm)	0.75" (19.0 mm)
WBT12-12PTN-II	0.81" (20.6 mm)	2.42" (61.5 mm)	1.50" (38.1 mm)

Nut and split locking ring are PFA material.

PureBond® , PFA

Tee Adapter, MNPT Branch

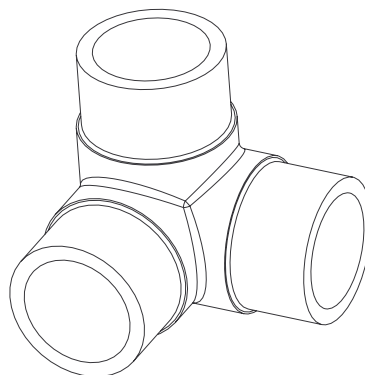
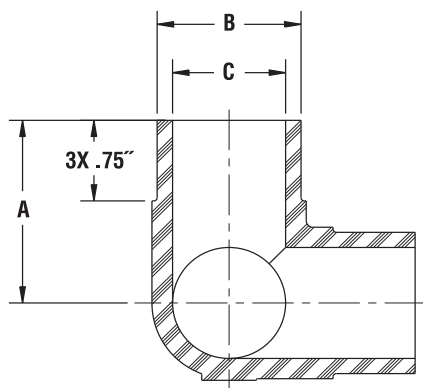


Part Number	Pipe Size	MNPT	Orifice	A	Dimensions B	C	D
WT8-2MA	1/2"	1/8"	0.20" (5.1 mm)	4.43" (112.5 mm)	2.22" (56.4 mm)	1.50" (38.1 mm)	0.84" (21.3 mm)
WT8-4MA	1/2"	1/4"	0.28" (7.1 mm)	4.43" (112.5 mm)	2.22" (56.4 mm)	1.50" (38.1 mm)	0.84" (21.3 mm)

Part Number	E	F	G
WT8-2MA	0.61" (15.49 mm)	1.27" (32.26 mm)	0.44" (11.18 mm)
WT8-4MA	0.61" (15.49 mm)	1.27" (32.26 mm)	0.52" (13.21 mm)

PureBond[®], PFA

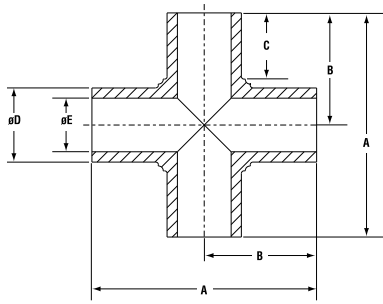
Elbow Tee, PFA Plus



Part Number	Pipe Size	Orifice	Dimensions		
			A	B	C
WET4SP-X	1/4"	0.36" (9.1 mm)	1.25" (31.8 mm)	0.54" (13.7 mm)	0.35" (8.9 mm)
WET8SP-X	1/2"	0.62" (15.7 mm)	1.45" (36.8 mm)	0.84" (21.3 mm)	0.61" (15.5 mm)
WET12SP-X	3/4"	0.82" (20.8 mm)	1.55" (39.4 mm)	1.05" (26.7 mm)	0.81" (20.6 mm)

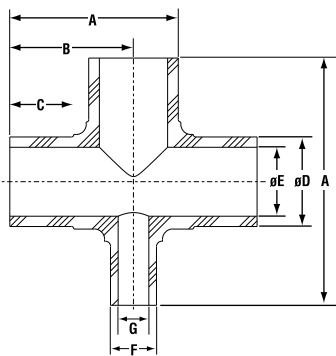
PureBond[®], PFA

Straight Cross



Part Number	Pipe Size	Orifice	Dimensions				
			A	B	C	D	E
WX8P	1/2"	0.62" (15.7 mm)	2.54" (64.5 mm)	1.27" (32.3 mm)	0.75" (19.0 mm)	0.80" (20.4 mm)	0.61" (15.4 mm)
WX12P	3/4"	0.82" (20.8 mm)	2.90" (73.7 mm)	1.45" (36.8 mm)	0.75" (19.0 mm)	1.05" (26.7 mm)	0.81" (20.5 mm)
WX16P	1"	1.05" (26.7 mm)	3.40" (86.4 mm)	1.70" (43.2 mm)	0.75" (19.0 mm)	1.32" (33.4 mm)	1.03" (26.3 mm)

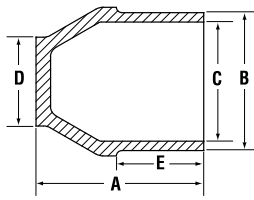
Straight Cross, Reducer



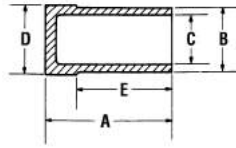
Part Number	Pipe Size	Orifice	Dimensions			
			A	B	C	D
WX12-12-12-4P	3/4" × 3/4" × 3/4" × 1/4"	0.36" (9.1 mm)	2.90" (73.7 mm)	1.45" (36.8 mm)	0.75" (19.0 mm)	1.05" (26.7 mm)
WX16-16-16-4P	1" × 1" × 1" × 1/4"	0.36" (9.1 mm)	3.40" (86.4 mm)	1.70" (43.2 mm)	0.75" (19.0 mm)	1.32" (33.4 mm)

Part Number	Dimensions		
	E	F	G
WX12-12-12-4P	0.81" (20.5 mm)	0.54" (13.7 mm)	0.36" (9.2 mm)
WX16-16-16-4P	1.03" (26.3 mm)	0.54" (13.7 mm)	0.36" (9.2 mm)

PureBond[®] PFA Caps



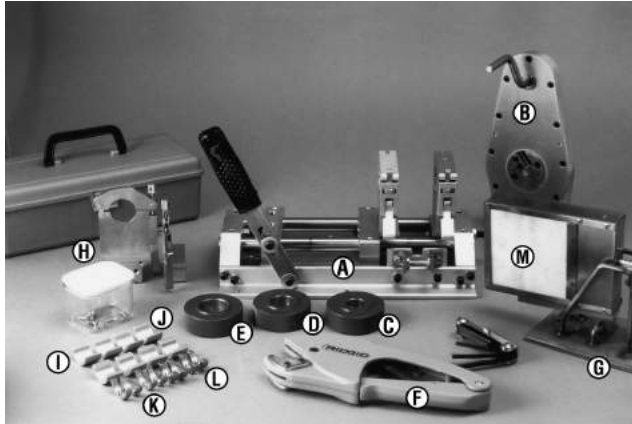
For 2" cap only



Part Number	Pipe Size	Orifice	Dimensions				
			A	B	C	D	E
WC4P	1/4"	0.36" (9.1 mm)	0.75" (19.0 mm)	0.54" (13.7 mm)	0.35" (9.0 mm)	0.62" (15.7 mm)	0.55" (14.0 mm)
WC8P	1/2"	0.62" (15.7 mm)	2.04" (51.8 mm)	0.84" (21.3 mm)	0.61" (15.4 mm)	0.90" (22.9 mm)	1.53" (38.9 mm)
WC12P	3/4"	0.82" (20.8 mm)	2.02" (51.3 mm)	1.05" (26.7 mm)	0.81" (20.5 mm)	1.11" (28.2 mm)	1.50" (38.1 mm)
WC16P	1"	1.05" (26.7 mm)	2.02" (51.3 mm)	1.32" (33.4 mm)	1.03" (26.3 mm)	1.43" (36.3 mm)	1.50" (38.1 mm)
WC32P	2"	2.07" (52.6 mm)	2.88" (73.2 mm)	2.38" (60.3 mm)	2.05" (52.1 mm)	1.53" (38.9 mm)	1.50" (38.1 mm)

Welding Tools

1" Benchmount Kit

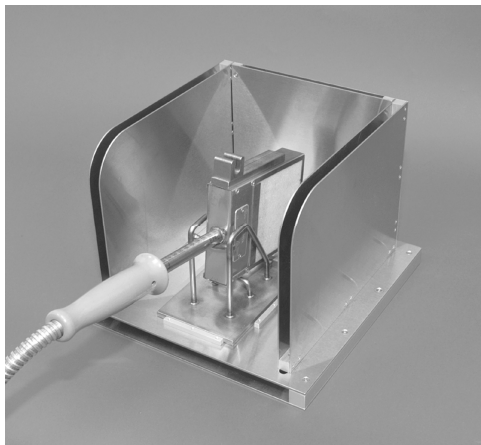


- Complete welding accessories including large bench top base, clamps and inserts, facing tools, shears, heater and gauging tools.
- 1" benchmount kit is for welding 1/4" to 1" PureBond® piping products.
- Capable of minimum fusible joints.
- **CE** Heater is CE marked per Low Voltage Directive 73/23/EEC (EN60335-1 and EN60335-2-45).

Ordering Information

Part* Number	Description
213-67	1" benchmount tool, 120 VAC
213-68	1" benchmount tool, 100 VAC
213-69	1" benchmount tool, 230 VAC with heat shield
213-44	120 VAC heater only
213-45	100 VAC heater only
213-46	230 VAC heater only
213-212	Heat shield only

*To lease a PureBond® welding tool, add an "R" to the end of the part number.
Replacement parts available from the factory upon request.



230 volt heater (213-46) shown with heat shield (213-212).

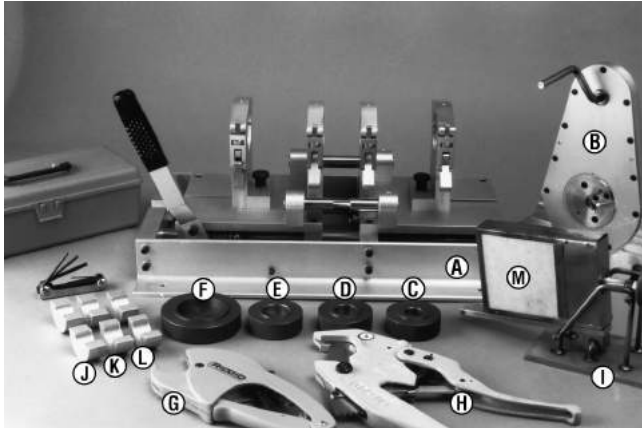
Replacement Parts

Part Number	Reference	Description
	A	Body
213-47	B	1" facing tool
1223-014		Right replacement blade
1223-015		Left replacement blade
213-33	C	1/2" gauging tool
213-34	D	3/4" gauging tool
213-35	E	1" gauging tool
213-42	F	Pipe shear with spacer plate
213-31	G	Heater holder
213-48	H	Thin clamp assembly
1220-003	I	1/2" inserts-standard
1220-004	J	3/4" inserts standard
213-28	K	1-kit with all parts
1220-079	L	1/2" inserts-thin
1220-078		3/4" inserts-thin
	M	Heater
213-44	M	120 VAC 50/60 Hz heater
213-45	M	100 VAC 50/60 Hz heater
213-46	M	230 VAC 50/60 Hz heater
213-212		Replacement heat shield for 230 VAC heater
VHS-01-89		Video instructions
1220-179		1/4" inserts-thin
213-84		1/4" kit with all parts
1223-027		Replacement chain for 1" facing tool

Note: The PureBond® welding process was developed by Entegris and is protected by patent number 4929293.

Welding Tools

2" Benchmount Kit



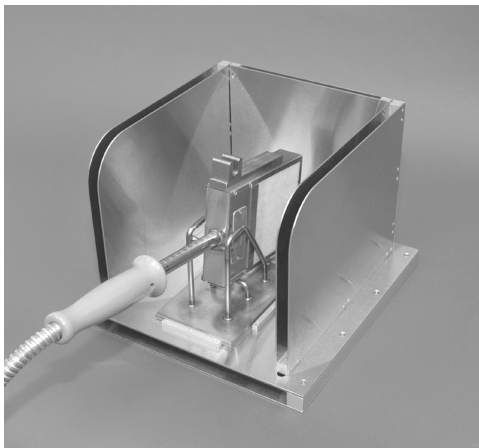
- Complete welding accessories including large bench top base, clamps and inserts, facing tools, shears, heater and gauging tools.
- 1" benchmount kit is for welding 1/2" to 2" PureBond® piping products.
- Capable of minimum fusible joints.
- **CE** Heater is CE marked per Low Voltage Directive 73/23/EEC (EN60335-1 and EN60335-2-45).

Ordering Information

Part*

Number	Description
213-70	2" benchmount tool, 120 VAC
213-71	2" benchmount tool, 100 VAC
213-72	2" benchmount tool, 230 VAC with heat shield
213-55	120 VAC heater only
213-56	100 VAC heater only
213-57	230 VAC heater only
213-212	Heat shield only

*To lease a PureBond® welding tool, add an "R" to the end of the part number.
Replacement parts available from the factory upon request.



230 volt heater (213-57) shown with heat shield (213-212).

Replacement Parts

Part

Number	Reference	Description
	A	Body
213-51	B	Facing tool
1223-018		Replacement blades-2 needed
213-33	C	1/2" gauging tool
213-34	D	3/4" gauging tool
213-35	E	1" gauging tool
213-52	F	2" gauging tool
213-30	G	Pipe shear-standard
1223-021		Replacement blades (Set)
213-53	H	Pipe shear-2" pipe
213-31	I	Heater holder
1220-205	J	1/2" inserts
1220-206	K	3/4" inserts
1220-207	L	1" inserts
	M	Heater
213-55	M	120 VAC heater only
213-56	M	100 VAC heater only
213-57	M	230 VAC heater only
213-212		Replacement heat shield for 230 VAC heater
VHS-01-89		Video instructions
1223-028		Replacement chain for 2" facing tool
215-164		Replacement spring for standard pipe

Note: The PureBond® welding process was developed by Entegris and is protected by patent number 4929293.

Custom PureBond® Assemblies



Experienced System Design and Engineering

Your needs for piping systems of durable PFA will be solved working with Entegris. Our experience in fluid handling, in providing design support and in CAD applications will ensure that our design addresses your needs.

Entegris Will Work With You

Be assured you have selected the right vendor. Entegris' experience in designing and manufacturing fluid handling products is focused on your design while we work together to create the solution to your need. You can use the experience Entegris has gained in more than 25 years as a worldwide leader in high technology fluid delivery systems within the semiconductor and specialty chemical industries.

PFA Fluid Handling Solutions

A PFA fluid handling system is a strong, durable chemical resistant delivery system. A wide range of pressure and temperature capabilities suits PFA to a wide range of applications. Added benefits of this material are high purity and corrosion resistance.

Your Need

Working with you, we will translate your need into a solution, whether it be a subassembly or an entire system. Our experience in fluid handling and with PFA will ensure your need receives dedicated attention to reach a viable solution.

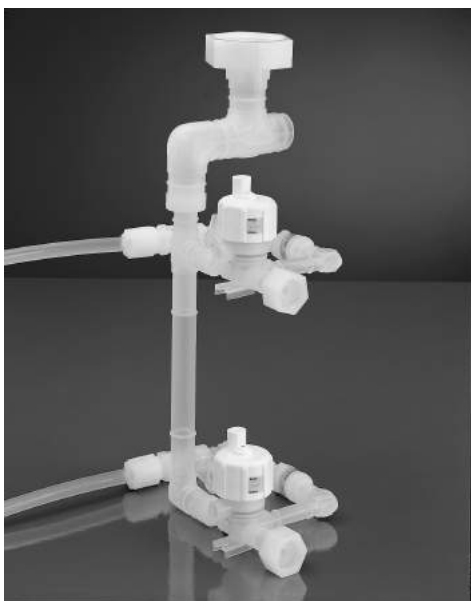
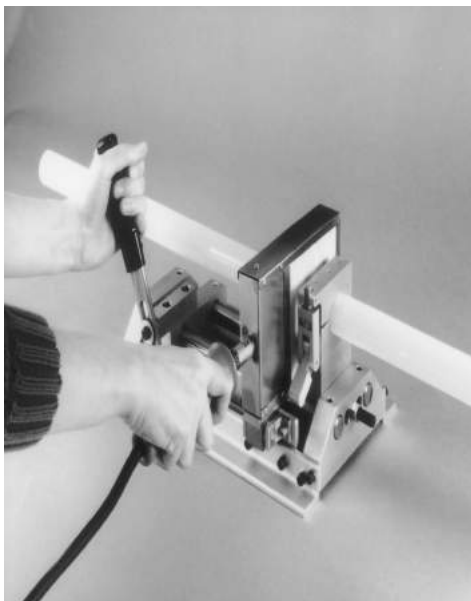
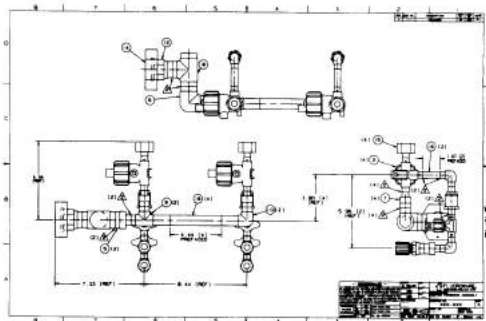
- Visible liquid in sight gauge or level indicator
- Connection between two different connector styles such as flange to NPT
- Reduction in line size with several regulated drops, some manually controlled, some pneumatically controlled
- Instrument drops to flexible tube transport system
- Manifold assemblies used in bulk chemical delivery systems

Quotation

Your need will be thoroughly evaluated and a quotation will be developed. Some of the items included in the evaluation are:

- Product definition
- Pressure/temperature profile
- Product detail such as size, volume, type of material that will be handled
- Special tooling or fixtures

Custom PureBond® Assemblies



Your Design

After the quotation has been accepted, your design will be created. Experienced engineers and designers will execute this design using our modern CAD system to design quickly and accurately to your specifications. Designs will encompass:

- Drafting
- Layout
- New component molding
- Special dimensions
- 3-dimensional configurations such as special angles

The design process can include your formal approval of a design drawing.

Many components can be used in your design including:

- Manual and pneumatic valves
- Unions, flange adapters, grooved flange adapters, NPT adapters, flared and integral ferrule tube adapters
- Needle and check valves
- Elbows, tees and caps
- Reducers and reducer adapters
- Filter housings
- Different materials based on your chemistries

Fabrication

Using more than 25 years of fluid handling experience, well-trained employees and a controlled manufacturing facility, your design will be transformed into the actual assembly. Our patented PureBond® welding process secures your components into a leak-free network. Whatever the design requires – standard, minimum or special – our experienced technicians will perform them with precision. Special fixtures can be created to hold your complex structures. After fabrication, your assembly is functionally tested to ensure weld integrity. After testing, your assembly is packaged to maintain its cleanliness.

Solution

The product you needed to solve your needs is now ready. And, you can expect the same quality from this custom assembly or system as you do of any Entegris component. We use high-quality resins, workmanship and expertise for designing and manufacturing your special product.

Materials Information

Safety in Handling

In the last forty-five years, experience has shown that no reported cases of serious injury, prolonged illness, or death have resulted from the handling of fluoropolymer resins. Tests further indicate that the resins may be taken in food without ill effect and that the resins are nonirritating and nonsensitizing to the skin. There have been no known instances of derma-titis, allergy, or other ill effects in man caused by handling unheated fabricated forms of resins.

In the case of human exposure to heated fluoropolymer resins, no lethal effect has been observed. Instead, such exposure has merely caused a temporary flu-like condition called polymer fume fever. The symptoms do not ordinarily occur until about two or more hours after exposure and pass off within 36 to 48 hours, even in the absence of treatment. Observations indicate that these attacks have no lasting effect and that the effects are not cumulative.

When such an attack occurs, it usually follows exposure to vapors evolved from the polymer at high temperatures used in resin processing operations.

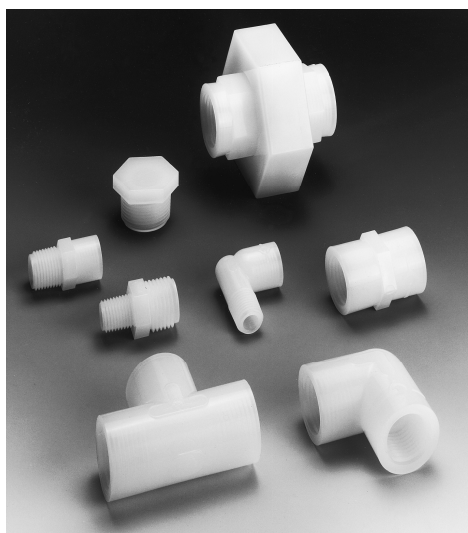
Ventilation is typically provided to eliminate this potential problem and the resultant operator discomfort.

To verify this, an investigation was made by an independent laboratory into the potential for generation of fluoride decomposition products during the fusing operation. Air samples were collected for one hour directly above the point of fusing to determine if any particulate or gaseous decomposition products were being generated.

The testing was done in stagnant air to simulate worst case conditions. No decomposition products, measured as hydrolyzable fluoride, were detected during this time. The lower detection limit of this test was 0.3 parts per million. These test results show that there is little potential for generation of hazardous decomposition products during the normal fusing process.

To further safeguard against the potential discomforts of polymer fume fever, do not smoke tobacco while flaring PFA tubing. This will reduce the possibility of inhaling any decomposition products, although small in quantity, that may be overheated by drawing them through a lit cigarette.

Galtek® Threadable Pipe Fittings



All PFA construction* provides chemical resistance both inside and out. Suitable for high-purity, chemical handling applications in the semiconductor, chemical and other industries worldwide.

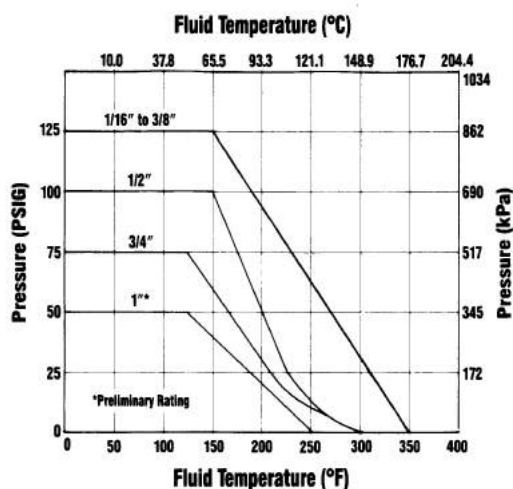
Wide range of styles and sizes to adapt to other PFA fittings and PFA threaded pipe systems. 1/8", 1/4", 3/8", 1/2" and 3/4" sizes available in most configurations, 1" sizes available in limited configurations.

NPT Fitting:

- PFA fittings designed to connect to standard NPT threaded components.
- Wide range of product type is available.

*Pipe unions use a natural PVDF lock nut.

Schedule 80 Threadable Pipe Fitting Connections



Operating Parameters of 1/8" to 3/4" PU Series (Pipe Unions)

Pressure Temperature Ratings - For 1/8" to 1/2" pipe unions, use the 1/2" curve on the pipe fitting connections to the left.

For 3/4" pipe unions, use the 3/4" curve on chart to the left.

Maximum Ambient Temperature - 200°F (93°C) for 1/8" and 1/4", 175°F (79°C) for 3/8" and 150°F (65°C) for 1/2" and 3/4".

Pipe Unions

Lock Nut Torque - 1/8" and 1/4" - Hand tighten plus 3/4-turn by wrench or 40±5 inch/lbs.

3/8" - Hand tighten plus 1/8-turn by wrench or 50±5 inch/lbs.

1/2" and 3/4" - Hand tighten plus 1/8-turn by wrench or 60±5 inch/lbs.

Galtek® Threadable Pipe Fittings

Part Number System

FMC

2-4

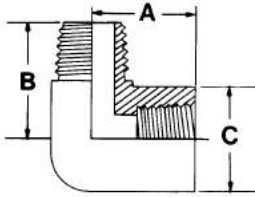
The size of the fitting is denoted here. If all connections on the fitting are the same there will only be one number in this section. If the connections on the fitting are not the same the number will have a dash as shown in the example. The number or numbers represent the number of 1/16's in the dimensions.
(i.e., 2=2/16" or 1/8", 4=4/16" or 1/4")

This letter or combination of letters denotes the fitting style.
(i.e., FMC = Pipe Thread Reducer)

FMC	=	Pipe Thread Reducer
FME	=	Street Elbow
FSU	=	Female Pipe Connector
FUT	=	Female Pipe Tee
FUE	=	Female Pipe Elbow
PU	=	Pipe Union
P	=	Pipe Plug
N	=	Pipe Nipple

NPT Pipe Fitting

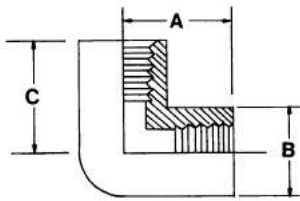
Elbow, FNPT, MNPT (Street Elbow)



Part Number	FNPT Size	MNPT Size	Orifice	Dimensions		
				A	B	C
FME2-2	1/8"	1/8"	0.20" (5.1 mm)	0.81" (20.6 mm)	1.25" (31.8 mm)	0.62" (15.9 mm)
FME4-4	1/4"	1/4"	0.29" (7.4 mm)	0.94" (23.8 mm)	1.25" (31.8 mm)	0.75" (19.0 mm)
FME4-6*	1/4"	3/8"	0.35" (8.9 mm)	0.94" (23.9 mm)	1.25" (31.8 mm)	0.75" (19.0 mm)
FME6-6	3/8"	3/8"	0.42" (10.7 mm)	1.00" (25.4 mm)	1.25" (31.8 mm)	0.94" (23.9 mm)
FME8-8	1/2"	1/2"	0.53" (13.5 mm)	1.23" (31.2 mm)	1.25" (31.8 mm)	1.12" (28.6 mm)
FME12-12	3/4"	3/4"	0.67" (17.0 mm)	1.78" (45.2 mm)	1.78" (45.2 mm)	1.42" (36.1 mm)

*Special Order - See page 5.

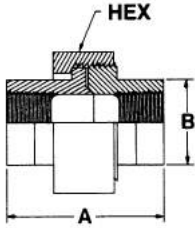
Elbow Union, FNPT



Part Number	FNPT Size	Orifice	Dimensions		
			A	B	C
FUE2	1/8"	0.25" (6.4 mm)	0.81" (20.6 mm)	0.63" (16.0 mm)	0.81" (20.6 mm)
FUE4	1/4"	0.35" (8.9 mm)	0.94" (23.9 mm)	0.75" (19.0 mm)	0.94" (23.9 mm)
FUE6	3/8"	0.44" (11.2 mm)	1.00" (25.4 mm)	0.94" (23.9 mm)	1.00" (25.4 mm)
FUE8	1/2"	0.56" (14.2 mm)	1.13" (28.7 mm)	1.12" (28.4 mm)	1.13" (28.7 mm)
FUE12	3/4"	0.75" (19.0 mm)	1.38" (35.1 mm)	1.38" (35.1 mm)	1.38" (35.1 mm)

NPT Pipe Fitting

Straight Union, FNPT

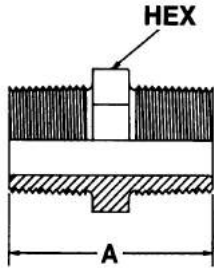


Part Number	FNPT Size	Orifice	Dimensions		Hex
			A	B	
PU2	1/8"	0.25" (6.4 mm)	1.84" (46.7 mm)	0.63" (16.0 mm)	1 1/4"
PU4	1/4"	0.35" (8.9 mm)	1.84" (46.7 mm)	0.75" (19.0 mm)	1 7/16"
PU6	3/8"	0.44" (11.2 mm)	1.84" (46.7 mm)	0.94" (23.9 mm)	1 5/8"
PU8	1/2"	0.56" (14.2 mm)	2.09" (53.1 mm)	1.12" (28.4 mm)	1 7/8"
PU12	3/4"	0.75" (19.0 mm)	2.68" (68.1 mm)	1.42" (36.1 mm)	2 7/8"

Note: The PU12 has a PFA encapsulated Viton® o-ring as an internal face-to-face seal. All unions use a natural PVDF lock nut.
See page 327 for nut ordering information.

Straight Union, MNPT

(Nipple)

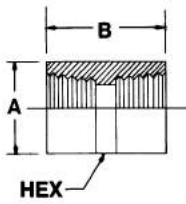


Part Number	MNPT Size	Orifice	Dimension		Hex
			A		
N1-1*	1/16" × 1/16"	0.12" (3.0 mm)	1.40" (35.6 mm)		1/2"
N2-1*	1/8" × 1/16"	0.12" (3.0 mm)	1.40" (35.6 mm)		1/2"
N2-2	1/8" × 1/8"	0.20" (5.1 mm)	1.40" (35.6 mm)		1/2"
N4-2	1/4" × 1/8"	0.20" (5.1 mm)	1.40" (35.6 mm)		5/8"
N4-4	1/4" × 1/4"	0.29" (7.4 mm)	1.40" (35.6 mm)		5/8"
N6-4	3/8" × 1/4"	0.29" (7.4 mm)	1.40" (35.6 mm)		13/16"
N6-6	3/8" × 3/8"	0.42" (10.7 mm)	1.40" (35.6 mm)		13/16"
N8-4	1/2" × 1/4"	0.29" (7.4 mm)	1.40" (35.6 mm)		13/16"
N8-6	1/2" × 3/8"	0.42" (10.7 mm)	1.40" (35.6 mm)		15/16"
N8-8	1/2" × 1/2"	0.53" (13.5 mm)	1.40" (35.6 mm)		15/16"
N12-8	3/4" × 1/2"	0.53" (13.5 mm)	1.63" (41.4 mm)		1 3/16"
N12-12	3/4" × 3/4"	0.67" (17.0 mm)	1.65" (41.9 mm)		1 3/16"
N16-12*	1" × 3/4"	0.67" (17.0 mm)	1.80" (45.7 mm)		1 7/16"
N16-16	1" × 1"	0.95" (24.1 mm)	1.93" (49.0 mm)		1 7/16"

*Special Order - See page 5.

NPT Pipe Fitting

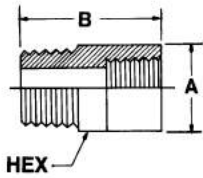
Straight, FNPT



Part Number	FNPT Size	Orifice	Dimensions		Hex
			A	B	
FSU2	1/8"	0.25" (6.4 mm)	0.62" (15.9 mm)	1.62" (41.1 mm)	5/8"
FSU4	1/4"	0.35" (8.9 mm)	0.75" (19.0 mm)	1.62" (41.1 mm)	3/4"
FSU6	3/8"	0.44" (11.2 mm)	0.94" (23.9 mm)	1.62" (41.1 mm)	15/16"
FSU8	1/2"	0.56" (14.2 mm)	1.12" (28.6 mm)	1.62" (41.1 mm)	1 1/8"
FSU8-2*	1/2" x 1/8"	0.25" (6.4 mm)	1.12" (28.4 mm)	1.64" (41.7 mm)	1 1/8"
FSU12	3/4"	0.75" (19.0 mm)	1.41" (35.9 mm)	1.62" (41.1 mm)	1 7/16"

*Special Order - See page 5.

Straight Reducer, FNPT, MNPT

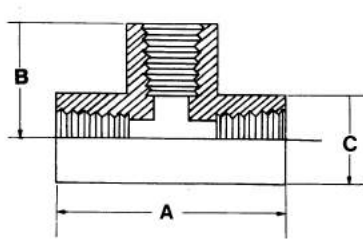


Part Number	FNPT Size	MNPT Size	Orifice	Dimensions		Hex
				A	B	
FMC2-4	1/8"	1/4"	0.29" (7.4 mm)	0.63" (16.0 mm)	1.30" (33.0 mm)	5/8"
FMC2-6*	1/8"	3/8"	0.25" (6.4 mm)	0.63" (16.0 mm)	1.30" (33.0 mm)	3/4"
FMC4-4	1/4"	1/4"	0.29" (7.4 mm)	0.75" (19.0 mm)	1.47" (37.3 mm)	3/4"
FMC4-6	1/4"	3/8"	0.35" (8.9 mm)	0.75" (19.0 mm)	1.30" (33.0 mm)	3/4"
FMC4-8	1/4"	1/2"	0.35" (8.9 mm)	0.75" (19.0 mm)	1.28" (32.5 mm)	15/16"
FMC4-12*	1/4"	3/4"	0.35" (8.9 mm)	1.19" (30.2 mm)	0.96" (24.4 mm)	1 3/16"
FMC6-8	3/8"	1/2"	0.44" (11.2 mm)	0.94" (23.9 mm)	1.28" (32.5 mm)	15/16"
FMC6-12*	3/8"	3/4"	0.44" (11.2 mm)	1.19" (30.2 mm)	1.63" (41.4 mm)	1 3/16"
FMC8-12	1/2"	3/4"	0.56" (14.2 mm)	1.12" (28.4 mm)	1.63" (41.4 mm)	1 3/16"
FMC8-16	1/2"	1"	0.56" (14.2 mm)	1.12" (28.4 mm)	1.94" (49.3 mm)	1 3/8"
FMC12-8	3/4"	1/2"	0.56" (14.2 mm)	1.42" (36.1 mm)	1.51" (38.4 mm)	1 3/16"
FMC12-12*	3/4"	3/4"	0.66" (16.8 mm)	1.42" (36.1 mm)	1.63" (41.4 mm)	1 3/16"
FMC12-16*	3/4"	1"	0.75" (19.0 mm)	1.42" (36.1 mm)	1.92" (48.8 mm)	1 7/16"

*Special Order - See page 5.

NPT Pipe Fitting

Tee Union, FNPT



Part Number	FNPT Size	Orifice	Dimensions		
			A	B	C
FUT2	1/8"	0.25" (6.4 mm)	1.66" (42.2 mm)	0.83" (21.0 mm)	0.62" (15.9 mm)
FUT4	1/4"	0.35" (8.9 mm)	1.87" (47.5 mm)	0.94" (23.7 mm)	0.75" (19.0 mm)
FUT6	3/8"	0.44" (11.2 mm)	2.00" (50.8 mm)	1.00" (25.4 mm)	0.94" (23.8 mm)
FUT8	1/2"	0.56" (14.2 mm)	2.48" (63.0 mm)	1.24" (31.5 mm)	1.25" (31.8 mm)
FUT12	3/4"	0.75" (19.0 mm)	2.75" (69.8 mm)	1.38" (34.9 mm)	1.42" (36.1 mm)

PTFE Seal Tape

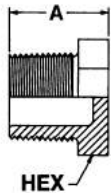
Ordering Information

Part Number	Size x Length
218-1	1/4" x 520"
218-2	1/2" x 520"

Virgin white PTFE seal tape recommended for use on NPT threads. Manufactured per military specification T-27730A. Tape is wound on plastic spool with shell covering.

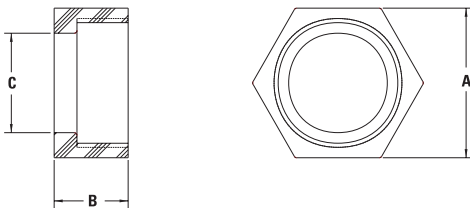
NPT Pipe Fitting

Plug



Part Number	MNPT Size	Dimension	
		A	Hex
P1	1/16"	0.84" (21.3 mm)	1/2"
P2	1/8"	0.84" (21.3 mm)	1/2"
P4	1/4"	0.84" (21.3 mm)	5/8"
P6	3/8"	0.84" (21.3 mm)	13/16"
P8	1/2"	0.84" (21.3 mm)	15/16"
P12	3/4"	0.97" (24.6 mm)	1 3/16"
P16	1"	1.12" (28.4 mm)	1 7/16"

Straight Union, FNPT Replacement Nut



Part Number	Union Nut For	FNPT Size	Dimensions		
			A	B	C
400091	PU2	1/8"	1.25" (31.8 mm)	0.81" (20.6 mm)	0.73" (18.5 mm)
400087	PU4	1/4"	1.44" (36.6 mm)	0.81" (20.6 mm)	0.86" (21.8 mm)
400083	PU6	3/8"	1.62" (41.1 mm)	0.81" (20.6 mm)	1.08" (27.4 mm)
400079	PU8	1/2"	1.87" (47.5 mm)	0.81" (20.6 mm)	1.30" (33.0 mm)
600125	PU12	3/4"	2.85" (72.4 mm)	1.00" (25.4 mm)	1.66" (42.2 mm)