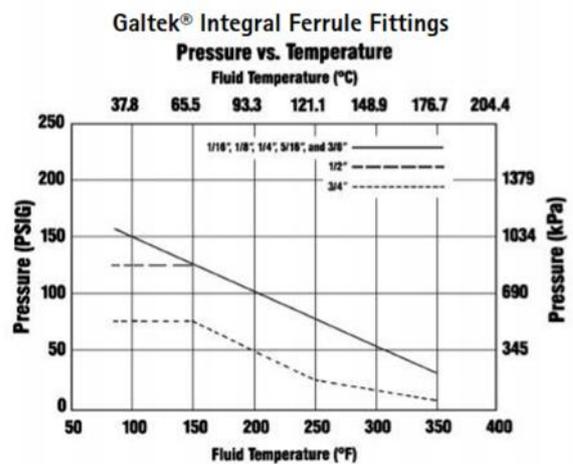
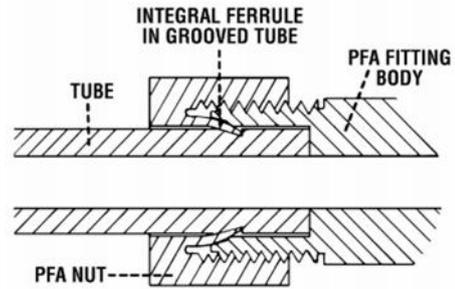


The ORIGINAL all PFA fitting provides chemical resistance both inside and out. The integral ferrule locks into the grooved tube providing increased performance and safety.

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.



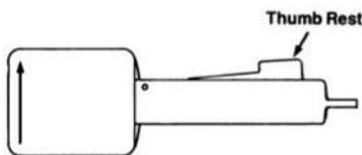
Note: All pressure ratings at various temperatures are based on actual test data utilizing the standards noted in the Technical Information Section of this manual.

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

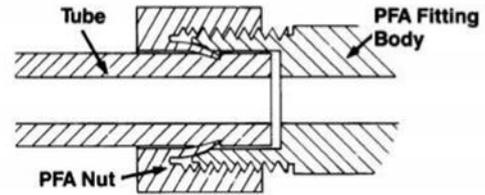
1. Slide ferrule nut onto tube past groove.
2. Insert grooved tube end into integral ferrule until it bottoms out.
3. Slide ferrule nut to fitting and hand tighten.
4. Pull on tubing SLOWLY until ferrule catches on grooved edge.
5. Ensure fitting is hand tight.
6. Tighten ferrule nut with a wrench to 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"

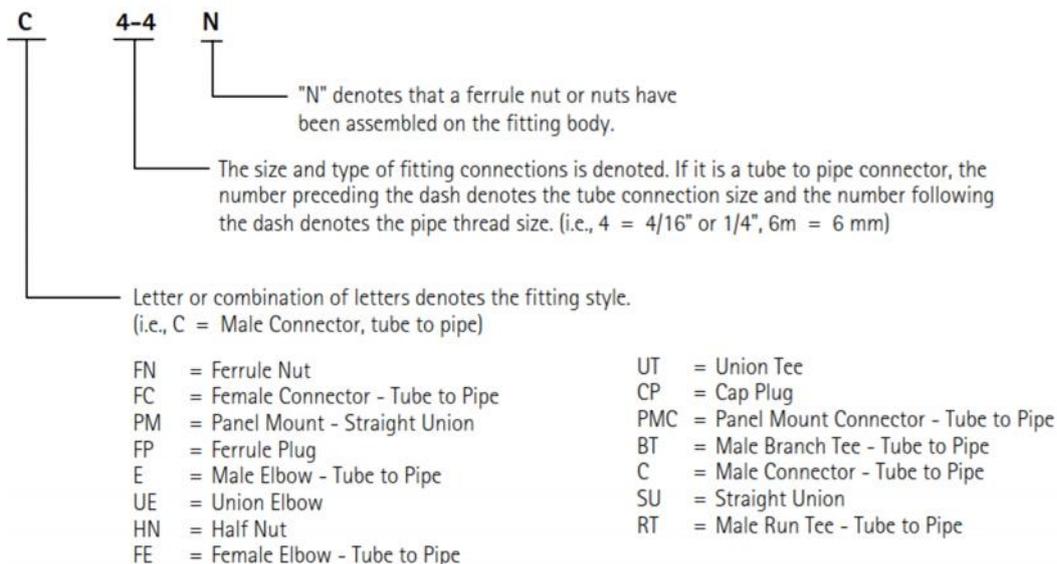
Integral Ferrule Nut/Tube Construction

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.



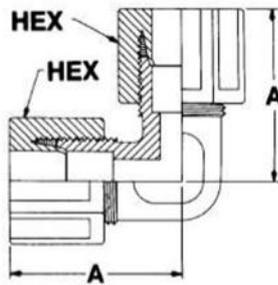
Note: The tubing used must be heavy walled (.047" to .062" wall thickness) and must meet Galtek® tubing specifications. 1/8" uses .030" wall thickness.

Part Number System



Integral Ferrule, PFA

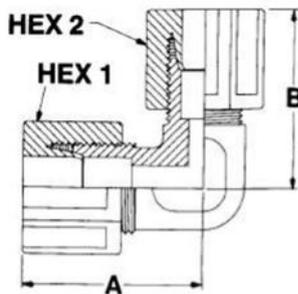
Elbow Union



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

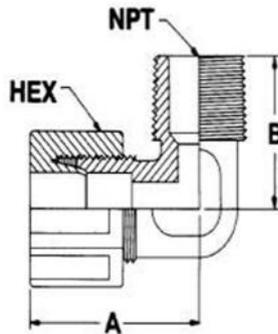


Part Number	O.D. Tube Size	Orifice	Dimensions		Hex 1	Hex 2
			A	B		
UE2-1N*	1/8" × 1/16"	0.07" (1.8 mm)	1.15" (29.2 mm)	1.15" (29.2 mm)	1/2"	1/2"
UE4-2N	1/4" × 1/8"	0.07" (1.8 mm)	1.20" (30.5 mm)	1.15" (29.2 mm)	5/8"	1/2"
UE5-4N	5/16" × 1/4"	0.19" (4.8 mm)	1.43" (36.3 mm)	1.39" (35.3 mm)	11/16"	5/8"
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

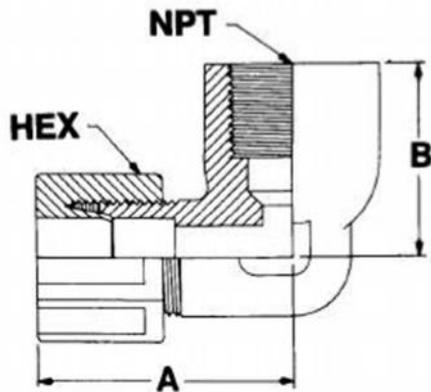


Part Number	O.D. Tube Size	MNPT Size	Orifice	Dimensions		
				A	B	Hex
E1-1N*	1/16"	1/16"	0.07" (1.8 mm)	1.15" (29.2 mm)	0.88" (22.4 mm)	1/2"
E1-2N	1/16"	1/8"	0.07" (1.8 mm)	1.15" (29.2 mm)	0.88" (22.4 mm)	1/2"
E2-1N	1/8"	1/16"	0.07" (1.8 mm)	1.15" (29.2 mm)	0.88" (22.4 mm)	1/2"
E2-2N	1/8"	1/8"	0.07" (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

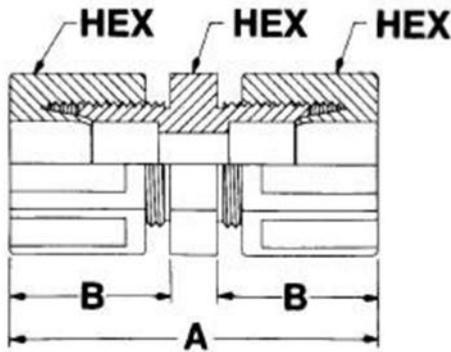


Part Number	O.D. Tube Size	FNPT Size	Orifice	Dimensions		
				A	B	Hex
FE2-2N	1/8"	1/8"	0.07" (1.8 mm)	1.50" (38.1 mm)	0.81" (20.6 mm)	1/2"
FE4-2N	1/4"	1/8"	0.19" (4.8 mm)	1.55" (39.4 mm)	0.81" (20.6 mm)	5/8"
FE4-4N	1/4"	1/4"	0.19" (4.8 mm)	1.55" (39.4 mm)	0.94" (23.9 mm)	5/8"
FE4-8N*	1/4"	1/2"	0.19" (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

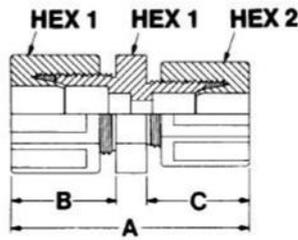
Straight Union



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, Reducer

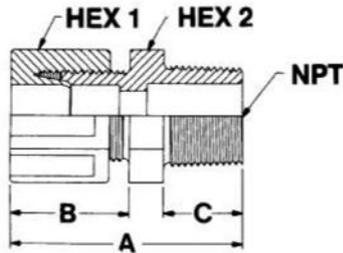


Part Number	O.D. Tube Size	Orifice	Dimensions				
			A	B	C	Hex 1	Hex 2
SU2-1N	1/8" x 1/16"	0.07" (1.8 mm)	1.93" (49.0 mm)	0.82" (20.8 mm)	0.83" (21.1 mm)	1/2"	1/2"
SU4-2N	1/4" x 1/8"	0.07" (1.8 mm)	1.98" (50.3 mm)	0.87" (22.1 mm)	0.83" (21.1 mm)	5/8"	1/2"
SU5-4N	5/16" x 1/4"	0.19" (4.8 mm)	2.07" (52.6 mm)	0.91" (23.1 mm)	0.88" (22.4 mm)	11/16"	5/8"
SU6-4N	3/8" x 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" x 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" x 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" x 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" x 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" x 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" x 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" x 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 x 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 x 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 x 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 x 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 x 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 x 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 x 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 x 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.

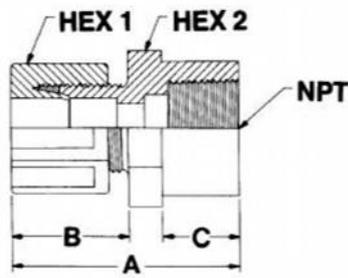
Integral Ferrule, PFA

Straight 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.

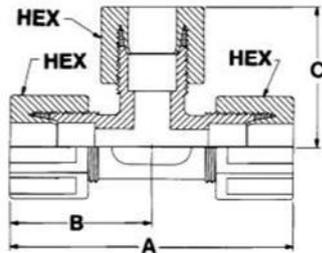
Straight Adapter, FNPT


Part Number	O.D. Tube Size	FNPT Size	Orifice	Dimensions			Hex 1	Hex 2
				A	B	C		
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

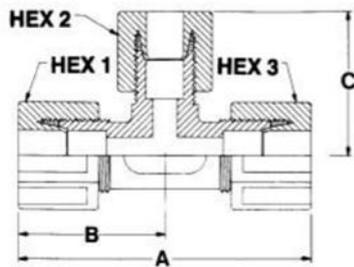
Tee Union



Part Number	O.D. Tube Size	Orifice	A	Dimensions			Hex 1
				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"	

Integral Ferrule, PFA

Tee Union, Reducer



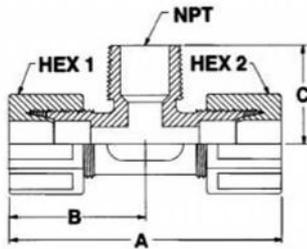
Part Number	O.D.			Orifice	A	Dimensions	
	Tube Size					B	C
UT2-2-4N*	1/8" x 1/8" x 1/4"			0.07" (1.8 mm)	2.34" (59.4 mm)	1.15" (29.2 mm)	1.15" (29.2 mm)
UT2-4-2N*	1/8" x 1/4" x 1/8"			0.07" (1.8 mm)	2.29" (58.2 mm)	1.15" (29.2 mm)	1.20" (30.5 mm)
UT4-2-4N*	1/4" x 1/8" x 1/4"			0.07" (1.8 mm)	2.39" (60.7 mm)	1.20" (30.5 mm)	1.15" (29.2 mm)
UT4-4-2N*	1/4" x 1/4" x 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" x 3/8" x 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" x 3/8" x 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" x 1/8" x 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" x 1/8" x 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" x 1/4" x 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" x 1/4" x 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" x 3/8" x 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" x 3/8" x 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" x 1/2" x 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" x 3/8" x 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

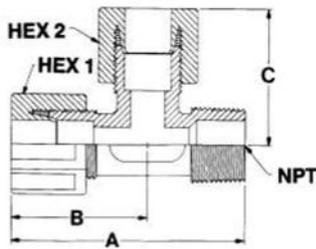


Part Number	O.D. Tube Size	MNPT Size	Orifice	Dimensions			Hex 1 Hex 2
				A	B	C	
BT1-2N*	1/16" × 1/16"	1/8"	0.07" (1.8 mm)	2.30" (58.4 mm)	1.15" (29.2 mm)	0.88" (22.4 mm)	1/2"
BT2-1N*	1/8" × 1/8"	1/16"	0.07" (1.8 mm)	2.30" (58.4 mm)	1.15" (29.2 mm)	0.88" (22.4 mm)	1/2"
BT2-2N	1/8" × 1/8"	1/8"	0.07" (1.8 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

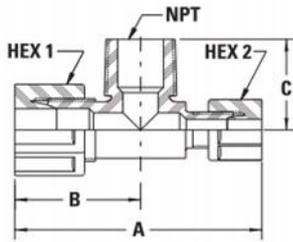


Part Number	O.D. Tube Size	MNPT Size	Orifice	Dimensions			Hex 1	Hex 2
				A	B	C		
RT1-1N*	1/16"	1/16"	0.07" (1.8 mm)	2.02" (51.3 mm)	1.15" (29.2 mm)	1.15" (29.2 mm)	1/2"	1/2"
RT1-2N	1/16"	1/8"	0.07" (1.8 mm)	2.02" (51.3 mm)	1.15" (29.2 mm)	1.15" (29.2 mm)	1/2"	1/2"
RT2-1N*	1/8"	1/16"	0.07" (1.8 mm)	2.02" (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

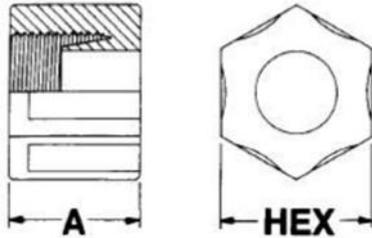


Part Number	O.D. Tube Size	MNPT Size	Orifice	A	Dimensions B	C	Hex 1	Hex 2
BT6-6-4N*	3/8" x 1/4"	3/8"	0.19" (4.8 mm)	2.87" (72.9 mm)	1.49" (37.8 mm)	1.08" (27.4 mm)	13/16"	5/8"
BT8-8-4N*	1/2" x 1/4"	1/2"	0.19" (4.8 mm)	2.87" (72.9 mm)	1.46" (37.1 mm)	1.08" (27.4 mm)	15/16"	5/8"

*Special Order. See page 5.

Integral Ferrule, PFA

Nut-ferrule

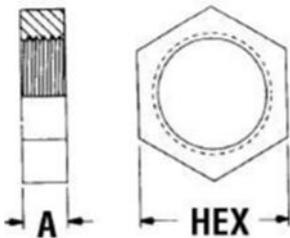


Part Number	O.D. Tube Size	Dimension	
		A	Hex
FN1	1/16"	0.50" (12.7 mm)	1/2"
FN2	1/8"	0.50" (12.7 mm)	1/2"
FN4	1/4"	0.62" (15.7 mm)	5/8"
FN5	5/16"	0.70" (17.8 mm)	11/16"
FN6	3/8"	0.75" (19.0 mm)	13/16"
FN8	1/2"	0.81" (20.6 mm)	15/16"
FN12	3/4"	0.80" (20.3 mm)	13/16"
FN6m	6 mm	0.62" (15.7 mm)	5/8"
FN8m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



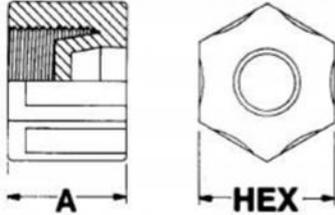
Part Number	O.D. Tube Size	Dimension	
		A	Hex
HN2	1/16", 1/8"	0.25" (6.4 mm)	1/2"
HN4	1/4", 6 mm	0.26" (6.6 mm)	5/8"
HN5	5/16", 8mm	0.26" (6.6 mm)	11/16"
HN6	3/8", 10 mm	0.25" (6.4 mm)	15/16"
HN8†	1/2", 12 mm	0.32" (8.1 mm)	1 1/16"
HN12†	3/4"	0.38" (9.7 mm)	1 5/16"

†Material is Natural PVDF.

Integral Ferrule, PFA

Plug-ferrule

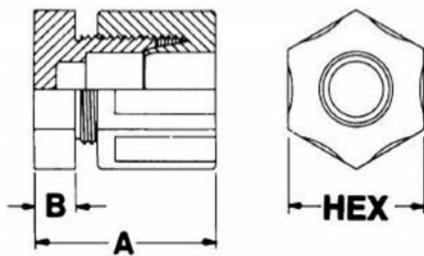
(Closes Unused Tube Connector)



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



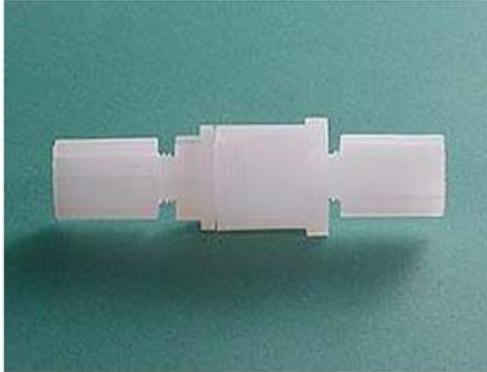
- Reversible
- Ratchet action
- Metallic construction, nickel plated handles, black oxide coated jaws
- Storage pouch

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"	-	-

Check Valves

1/4" Orifice, O-ring Free Design

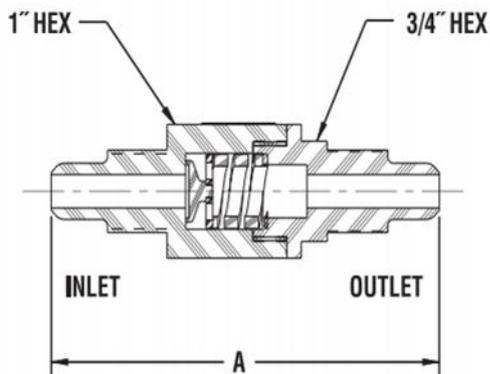


- O-ring free design reduces contamination.
- All wetted parts are molded PFA and PTFE for corrosion resistance.
- No metal parts are used that could corrode or contribute to contamination.
- Poppet design allows for a high flow through rate and maximizes rinsability.

Ordering Information

Part Number	Flow Factor		Inlet	Outlet	Dimension
	C_v	K_v			A
CK4-4N-4N	.75	10.7	1/4" FNPT	1/4" FNPT	2.39" (60.7 mm)
CK4-4MN-4MN	.75	10.7	1/4" MNPT	1/4" MNPT	2.47" (62.7 mm)
CK4-4MN-4N	.75	10.7	1/4" MNPT	1/4" FNPT	2.12" (53.8 mm)
CK4-4N-4MN	.75	10.7	1/4" FNPT	1/4" MNPT	2.47" (62.7 mm)
CK4-4Q-4Q	.75	10.7	1/4" O.D. tube†	1/4" O.D. tube†	2.52" (64.0 mm)
CK4-4Q-4MN	.75	10.7	1/4" O.D. tube†	1/4" MNPT	2.52" (64.0 mm)
CK4-4Q-4N	.75	10.7	1/4" O.D. tube†	1/4" FNPT	2.47" (62.7 mm)
CK4-4N-4Q	.75	10.7	1/4" FNPT	1/4" O.D. tube†	2.47" (62.7 mm)
CK4-4MN-4Q	.75	10.7	1/4" MNPT	1/4" O.D. tube†	2.52" (64.0 mm)
CK4-4MN-6Q	.75	10.7	1/4" MNPT	3/8" O.D. tube†	2.63" (66.8 mm)
CK4-6Q-4N	.75	10.7	3/8" O.D. tube†	1/4" FNPT	2.88" (73.2 mm)
CK4-6Q-4MN	.75	10.7	3/8" O.D. tube†	1/4" MNPT	2.63" (66.8 mm)
CK4-4F-4F	.75	10.7	1/4" Flaretek® fitting	1/4" Flaretek® fitting	3.44" (87.4 mm)
CK4-4P-4P	.75	10.7	1/4" PureBond® fusible pipe	1/4" PureBond® fusible pipe	2.53" (64.3 mm)
CK4-6F-6F	.75	10.7	3/8" Flaretek® fitting	3/8" Flaretek® fitting	3.53" (89.7 mm)

Dimensions

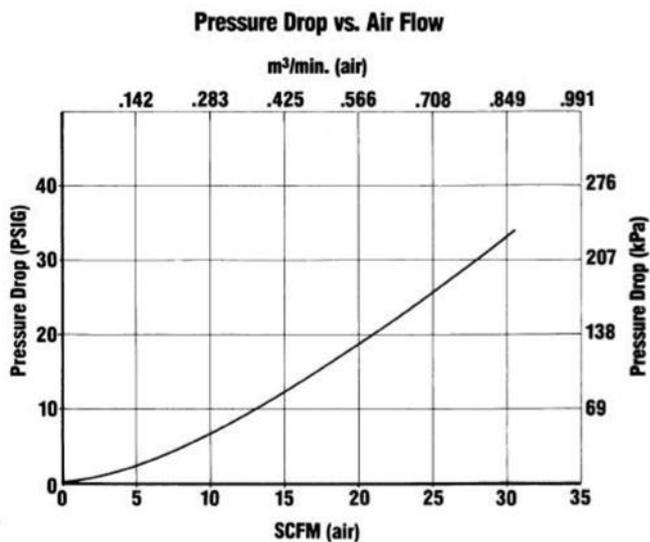
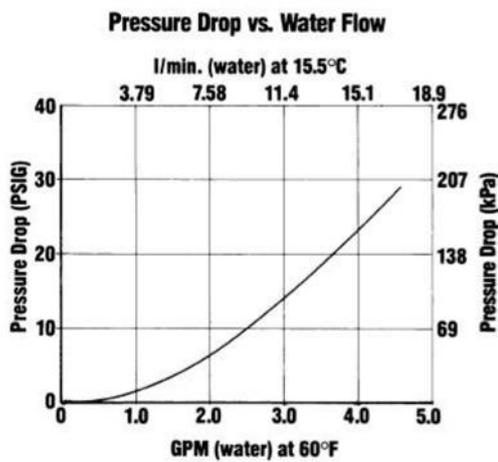


Check Valves

Specifications

Pressure range:	125 PSIG (862 kPa) up to 150°F (65°C). To calculate the maximum pressure rating, subtract 1 PSIG (6.9 kPa) from 125 PSIG (862 kPa) for every 2°F (1°C) temperature rise above 150°F (65°C).
Temperature range:	0° to 212°F (-18° to 100°C)
Cracking pressure (opening):	1 PSIG (6.9 kPa) or less.
Sealing pressure (closing):	Minimum 3 PSIG (20.7 kPa) back pressure.
Materials:	All wetted parts, including the spring, are molded PFA and PTFE.

Performance Data



Check Valves

1/2" Orifice, O-ring Free Design

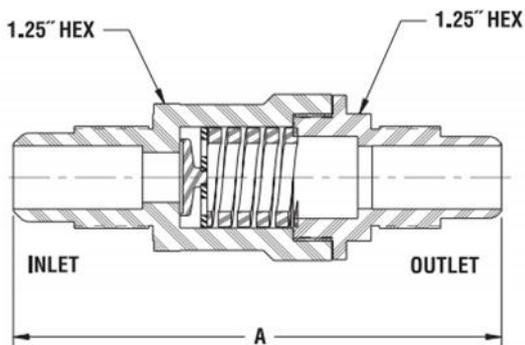


- O-ring free design reduces contamination.
- All wetted parts are molded PFA and PTFE for corrosion resistance.
- No metal parts are used that could corrode or contribute to contamination.
- Poppet design allows for a high flow through rate and maximizes rinsability.

Ordering Information

Part Number	Flow Factor		Port Connection	Dimension
	C_v	K_v		A
CK8-8F-8F	4.0	57.1	1/2" Flaretek® flared tube	4.60" (116.8 mm)
CK8-8N-8N	4.0	57.1	1/2" FNPT	3.32" (84.3 mm)
CK8-12F-12F	4.0	57.1	3/4" Flaretek® flared tube	4.72" (119.9 mm)

Dimensions

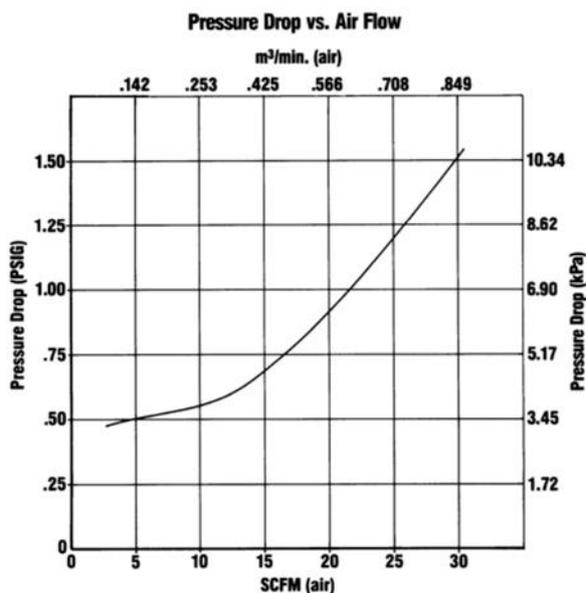
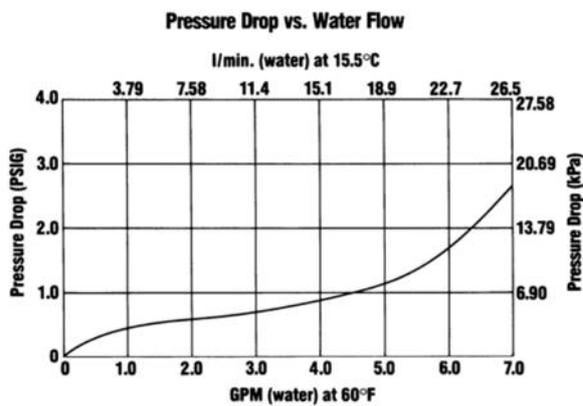


Check Valves

Specifications

Pressure range:	100 PSIG (690 kPa) up to 150°F (65°C). To calculate the maximum pressure rating, subtract 1 PSIG (6.9 kPa) from 100 PSIG (690 kPa) for every 2°F (1°C) temperature rise above 150°F (65°C).
Temperature range:	0° to 212°F (-18° to 100°C)
Cracking pressure (opening):	1 PSIG (6.9 kPa) or less
Sealing pressure (closing):	Minimum 3 PSIG (20.7 kPa) back pressure
Materials:	All wetted parts, including the spring, are molded PFA and PTFE.

Performance Data



Check Valves

3/4" Orifice, O-ring Free Design, Machined

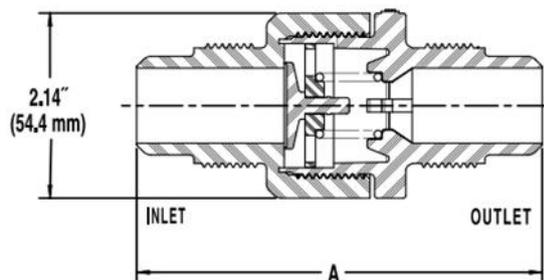


- O-ring free design reduces contamination.
- All wetted parts are molded PFA and PTFE for corrosion resistance.
- No metal parts are used that could corrode or contribute to contamination.
- Poppet design allows for a high flow through rate and maximizes rinsability.

Ordering Information

Part Number	Flow Factor		Port Connection	Dimension
	C _v	K _v		A
CK12-12F-12F-A	6.1	87.1	3/4" Flaretek® flared tube	4.86" (123.4 mm)
CK12-12P-12P-A	9.1	129.9	3/4" PureBond® fusible pipe	3.41" (86.6 mm)
CK12-16F-16F-A	9.1	129.9	1" Flaretek® flared tube	4.67" (118.6 mm)
CK12-16P-16P-A	8.6	122.8	1" PureBond® fusible pipe	3.17" (80.5 mm)

Dimensions



Specifications

Pressure range:	100 PSIG (690 kPa) up to 150°F (65°C). To calculate the maximum pressure rating, subtract 1 PSIG (6.9 kPa) from 100 PSIG (690 kPa) for every 1°F (-17°C) temperature rise above 150°F (65°C).
Temperature range:	0° to 212°F (-18° to 100°C)
Cracking pressure (opening):	1 PSIG (6.9 kPa) or less
Sealing pressure (closing):	Minimum 5 PSIG (34.5 kPa) back pressure
Materials:	All wetted parts, including the spring, are molded PFA and PTFE.

Check Valves

1" Orifice, O-ring Free Design, Machined

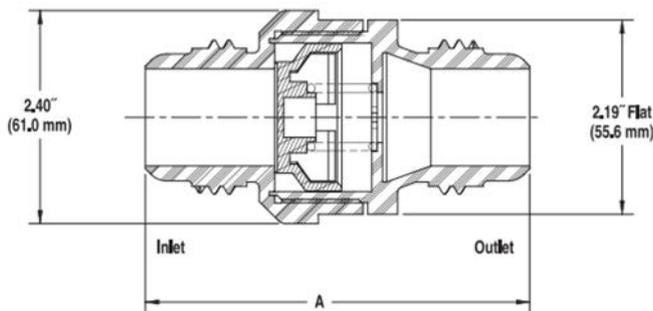


- O-ring free design reduces contamination.
- All wetted parts are PFA and PTFE for corrosion resistance
- No metal parts are used that could corrode or contribute to contamination.
- Poppet design allows for a high flow through rate and maximizes rinsability.

Ordering Information

Part Number	Flow Factor		Port Connection	Dimension
	C_v	K_v		A
CK16-16F-16F-M	12	171.4	1" Flaretek® flared tube	4.80" (121.9 mm)
CK16-16P-16P-M	16	228.5	1" PureBond® fusible pipe	4.15" (105.4 mm)
CK16-20F-20F-M	16	228.5	1 1/4" Flaretek® flared tube	4.30" (109.2 mm)

Dimensions



Specifications

Pressure range:	100 PSIG (690 kPa) up to 150°F (65°C). To calculate the maximum pressure rating, subtract 1 PSIG (6.9 kPa) from 100 PSIG (690 kPa) for every 1°F (0.6°C) temperature rise above 150°F (65°C).
Temperature range:	0° to 212°F (-18° to 100°C)
Cracking pressure (opening):	1 PSIG (6.9 kPa) or less
Sealing pressure (closing):	Minimum 10 PSIG (68.9 kPa) back pressure
Materials:	All wetted parts, including the spring, are molded PFA and PTFE.