



INSTRUMENTATION TUBE FITTINGS

www.unilok.com



We, Uni-Lok corporation, have distinguished ourselves in the design and manufacturing of a high performance “Twin Ferrule Compression Tube Fittings” and “Instrumentation Valves” range since 1984.

In addition, we have been manufacturing “the fittings and valves for UHP (Ultra High Purity) application” with our own design and technology since 2000.

Due to our outstanding capacity for innovation and our policy of investment in research and development as well as quality control, Uni-Lok has been able to capitalize on our expert knowledge, oriented towards the new expectations of customers worldwide in oil, gas, petro-chemical, on-offshore, ship building, power plant, semiconductor, flat panel display and solar industries.

Our well-trained staffs are dedicated to providing our customers with the very best service possible, and this service is backed up by our performance guarantee as well as quality assurance.

Systematic control is fully committed to utilizing the latest technology and information advancements to provide our customers with the maximum supports.

Features

Gaugeability

Uni-Lok tube fittings are produced in accordance with the exact and tight tolerance. Without such close tolerance, the interaction of the nut, the ferrules and the body would not be interacted properly.

Corrosion Resistance

Uni-Lok ferrules have the strongest corrosion resistance by our own special hardening process. It has been proved in various of industrial areas for some decades.

Interchangeability

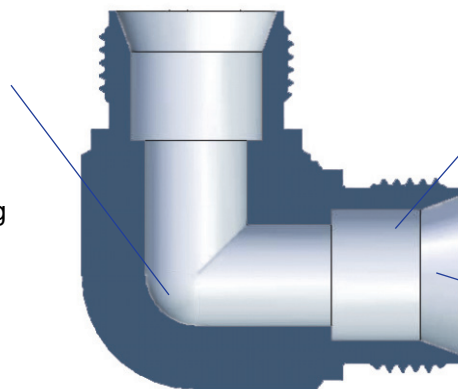
Uni-Lok tube fittings can be interchanged with the tube fittings which are manufactured by the international standard.

Less Torque and Anti Distortion

When the nut is tightened, both ferrules are driven forward between the nut and the body. This axial movement doesn't transfer any torque from the fitting to the tubing when original tubing's mechanical properties are maintained.

Radius Junction In Every Piece of Elbows

To eliminate entrapment areas and to allow smooth flow transition for all elbows including pipe fittings



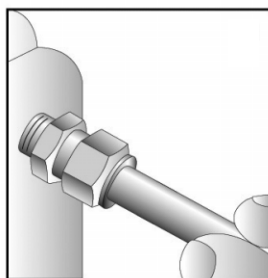
Excellent Finish Level

To allow smooth flow transition

Special Hardening Process

Not only to ensure leak tight assembly but also to ensure remake-up

Uni-Lok Tube Fittings Installation Instruction



1. Firmly insert the tubing until it bottoms in the fitting body.
2. Finger tighten the nut.
3. Mark the nut at the 6 o'clock position, with pencil or scribe.
4. Hold the body with a backup wrench, or vice, then tighten nut.
5. 1-1/4 turns to the 9 o'clock position.

Reassembly - Simply insert tube assembly into fitting body, tighten nut to the original position as indicated by the previous mark, then snug up slightly with a wrench.

Materials

Uni-Lok fittings are available in various kinds of materials as below. Straight fittings are machined from cold finished bar stock and shaped fittings from forgings. For more details or special application, contact your local distributors.

| Materials | Bar Stock | Forgings |
|--|-------------------------|-------------------------|
| 316 SS or 316L SS | ASTM A479 ASME SA479 | ASTM A182 ASME SA182 |
| Brass ^① | ASTM B16 ASTM B453 | ASTM B283 |
| Alloy 400 (Monel [®]) | ASTM B164 | |
| Alloy 600 (Inconel [®]) | ASTM B166 | ASTM B564 |
| Alloy 625 (Inconel [®]) | ASTM B166 | ASME SB564 |
| Alloy 825 (Incoloy [®]) | ASTM B425 | |
| Alloy C-276 (Hastelloy C [®]) | ASTM B574 | ASTM B564 |
| PTFE | ASTM D1710 | ASTM D3294 |
| Alloy 2205 / UNS 32205(Duplex) | ASTM A479 | ASTM A182 |
| Alloy 2207 / UNS 32750(Super Duplex) | ASTM A479 | |
| UNS 31254 (Incoloy 25-6MO [®]) | ASTM B649 | - |

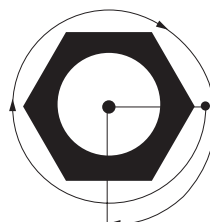
①Nickel plating is available as optional.

*Monel, Inconel, Incoloy, Incoloy 25-6MO are the trade marks of Special Metals.

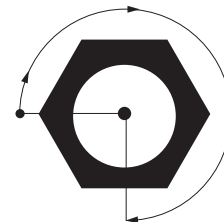
*Hastelloy C is the trade mark of Haynes International.

6. The above applies to all fittings from 1/4" to 1" (6mm to 25mm).

1/4" ~ 1" O.D.
6mm ~ 25mm O.D.



1/16" ~ 3/16" O.D.
2mm ~ 4mm O.D.



7. Fittings from 1/8" to 3/16" (3mm to 4mm), only 3/4 turn is required.

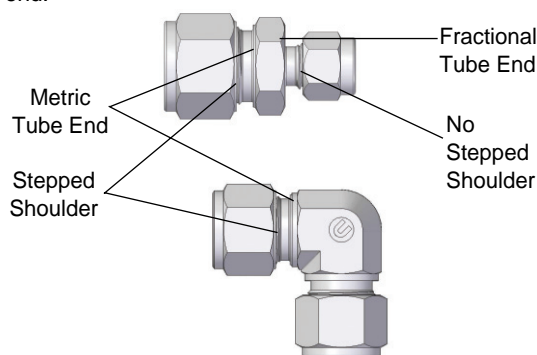
Sour Environment Services

Uni-Lok tube fittings are comply with NACE MR-0175/ISO 115156 for sour oilfield application or NACE MR-0103 for petroleum refining operations.

To order, add - N to the end of part number.

Identification of Metric Uni-Lok Tube Fittings

Every Uni-Lok tube fittings with metric tube end have a stepped shoulder to distinguish the fittings with fractional tube end.



Cleaning

Uni-Lok tube fittings are free from machine oils, loose particles and grease throughout the close cleaning process. Uni-Lok tube fittings for oxygen enriched systems are available by the special cleaning procedure. To order, add - SC to the part number.

Tubing Information

The proper selection of tubing is essential to assure maximum fitting reliability and performance. When choosing tubing material, size and wall thickness, consider system's pressure, flow rate, temperature, environment and compatibility with great care.

Maximum Allowable Working Pressure

Stainless Steel Tubing

Fully annealed and seamless stainless steel tubing to comply with ASTM A269 or equivalent.

Hardness should not exceed Rb 80.

Tubing should be free from scratched and suitable for bending and flaring.

| Fractional(Inch) Tubing | | | | | | | | | | | |
|-------------------------|----------------------------|-------|-------|-------|-------|-------|-------|-------|--------------------------|-------|-------|
| Tube O.D. (inch) | Tube Wall Thickness (inch) | | | | | | | | | | |
| | 0.028 | 0.035 | 0.049 | 0.065 | 0.083 | 0.095 | 0.109 | 0.120 | 0.134 | 0.156 | 0.188 |
| 1/8 | 8550 | 10950 | | | | | | | | | |
| 3/16 | 5500 | 7100 | 10300 | | | | | | | | |
| 1/4 | 4100 | 5200 | 7600 | 10300 | | | | | Working pressure in psig | | |
| 5/16 | | 4100 | 5900 | 8100 | | | | | | | |
| 3/8 | | 3350 | 4850 | 6550 | | | | | | | |
| 1/2 | | 2650 | 3750 | 5150 | 6750 | | | | | | |
| 5/8 | | | 2950 | 4050 | 5250 | 6050 | | | | | |
| 3/4 | | | 2450 | 3350 | 4250 | 4950 | 5850 | | | | |
| 7/8 | | | 2050 | 2850 | 3650 | 4250 | 4850 | | | | |
| 1 | | | | 2400 | 3100 | 3600 | 4200 | 4700 | | | |
| 1-1/4 | | | | | 2400 | 2800 | 3300 | 3600 | 4100 | 4900 | |
| 1-1/2 | | | | | | 2300 | 2700 | 3000 | 3400 | 4000 | 4900 |
| 2 | | | | | | | 2000 | 2200 | 2500 | 2900 | 3600 |

| Metric Tubing | | | | | | | | | | | |
|-------------------|--------------------------|-------|------|-------|------|------|------|------|--------------------------|------|------|
| Tube O.D. (mm) | Tube Wall Thickness (mm) | | | | | | | | | | |
| | 0.8 | 1.0 | 1.2 | 1.5 | 2.0 | 2.2 | 2.5 | 3.0 | 3.5 | 4.0 | 4.5 |
| 3 | 9700 | | | | | | | | | | |
| 4 | 7900 | 11500 | | | | | | | | | |
| 6 | 4500 | 6100 | 7850 | 10300 | | | | | Working pressure in psig | | |
| 8 | | 4500 | 5650 | 7550 | | | | | | | |
| 10 | | 3500 | 4350 | 5800 | 8400 | | | | | | |
| 12 | | 2900 | 3600 | 4800 | 6800 | | | | | | |
| 14 | | 2300 | 2900 | 4000 | 5500 | 6250 | | | | | |
| 15 | | 2200 | 2750 | 3650 | 5200 | 5800 | | | | | |
| 16 | | | 2450 | 3350 | 4800 | 5350 | 5800 | | | | |
| 18 | | | 2150 | 2950 | 4200 | 4650 | 5350 | | | | |
| 20 | | | 2030 | 2600 | 3750 | 4200 | 4800 | | | | |
| 22 | | | 1750 | 2300 | 3350 | 3750 | 4350 | | | | |
| 25 | | | | | 2900 | 3350 | 3750 | 4650 | | | |
| 38 | | | | | | 2030 | 2300 | 2900 | 3500 | 3900 | 4500 |

For gas service application, use only tubing with wall thickness on outside of gray areas.

Allowable stress of 20000 psig between -30°C(-22°F) and 40°C(104°F) based on ultimate tensile strength to be 74000 psig.

Copper Tubing

Fully annealed and seamless stainless steel tubing to comply with ASTM B75 or equivalent.

Hardness should not exceed Rb 60.

| Fractional(Inch) Tubing | | | | | | | | |
|-------------------------|----------------------------|-------|-------|-------|-------|-------|------------------|-------|
| Tube O.D. (inch) | Tube Wall Thickness (inch) | | | | | | | |
| | 0.028 | 0.035 | 0.049 | 0.065 | 0.083 | 0.095 | 0.109 | 0.120 |
| 1/4 | 1300 | 1600 | 2500 | 3500 | | | | |
| 3/8 | | 1000 | 1600 | 2200 | | | Working | |
| 1/2 | | 800 | 1100 | 1600 | 2200 | | pressure in psig | |
| 5/8 | | | 900 | 1200 | 1600 | 1900 | | |
| 3/4 | | | 700 | 1000 | 1300 | 1500 | 1800 | |
| 1 | | | 500 | 700 | 900 | 1100 | 1300 | 1500 |

| Metric Tubing | | | | | |
|-------------------|--------------------------|------|------|------------------|------|
| Tube O.D. (mm) | Tube Wall Thickness (mm) | | | | |
| | 1.0 | 1.5 | 2.0 | 2.5 | 3.0 |
| 6 | 2350 | 3670 | | | |
| 8 | 1710 | 2680 | | Working | |
| 10 | 1350 | 2090 | | pressure in psig | |
| 12 | 1100 | 1710 | 2350 | | |
| 20 | | 990 | 1350 | 1710 | |
| 25 | | 780 | 1060 | 1350 | 1640 |

For gas service application, use only tubing with wall thickness on outside of gray areas.

Allowable stress of 6000 psig between -30°C(-22°F) and 37°C(100°F) based on ultimate tensile strength to be 30000 psig.

Monel Tubing

Fully annealed and seamless stainless steel tubing to comply with ASTM B165 or equivalent.

Hardness should not exceed Rockwell Rb 75.

| Fractional(Inch) Tubing | | | | | | | |
|-------------------------|----------------------------|-------|-------|-------|-------|-------|-------|
| Tube O.D. (inch) | Tube Wall Thickness (inch) | | | | | | |
| | 0.035 | 0.049 | 0.065 | 0.083 | 0.095 | 0.109 | 0.120 |
| 1/4 | 4800 | 7000 | 9500 | | | | |
| 3/8 | 3100 | 4400 | 6100 | | | | |
| 1/2 | 2300 | 3200 | 4400 | | | | |
| 3/4 | | 2200 | 3000 | 4000 | 4600 | | |
| 1 | | | 2200 | 2900 | 3400 | 3900 | 4300 |

For gas service application, use only tubing with wall thickness on outside of gray areas.

Allowable stress of 18700 psig between -30°C(-22°F) and 37°C(100°F) based on ultimate tensile strength to be 70000 psig.

Determination Factors of MAWP at High Temperature Application

To determine allowable working pressure at elevated temperature, multiply allowable working pressure and factors which are shown in the table.

Example :

316SS Tubing, 1/2" ODx0.049" WT at 310°C
AWP : 3750 x 0.85 = 3187 psig.

* MAWP : Maximum Allowable Working Pressure
* AWP : Allowable Working Pressure

| Temperature | | Materials | | |
|-------------|------|-----------|--------|-------|
| °C | °F | 316SS | Copper | Monel |
| 90 | 194 | 1.00 | 0.80 | 0.88 |
| 200 | 392 | 0.96 | 0.50 | 0.79 |
| 310 | 590 | 0.85 | - | 0.79 |
| 480 | 802 | 0.79 | - | 0.75 |
| 536 | 996 | 0.76 | - | - |
| 644 | 1227 | 0.37 | - | - |

Pipe End Thread Information

The end connections with the lower pressure rating is the determining factor of pressure rating for the fittings with both Uni-Lok tube ends and pipe thread ends .

Pressure Rating for Pipe End Thread

Tapered Pipe Threads - NPT or ISO 7/1(BSPT)

Allowable pressure ratings for male and female threads are based on ASME B31.3 at ambient temperature.

| Pipe Size inch | 316SS | | | | Brass | | | Uni-Lok Desig - nator |
|-------------------|-------|-------|--------|------|-------|--------|------|-----------------------------|
| | Male | | Female | | Male | Female | | |
| | bar | psig | bar | psig | psig | bar | psig | |
| 1/16 | 760 | 11000 | 460 | 6700 | 5500 | 230 | 3300 | -01N/R |
| 1/8 | 690 | 10000 | 440 | 6500 | 5000 | 220 | 3200 | -02N/R |
| 1/4 | 550 | 8000 | 450 | 6600 | 4000 | 220 | 3300 | -04N/R |
| 3/8 | 540 | 7800 | 360 | 5300 | 3900 | 180 | 2600 | -06N/R |
| 1/2 | 530 | 7700 | 330 | 4900 | 3800 | 160 | 2400 | -08N/R |
| 3/4 | 500 | 7300 | 320 | 4600 | 3600 | 160 | 2300 | -12N/R |
| 1 | 370 | 5300 | 300 | 4400 | 2600 | 150 | 2200 | -16N/R |
| 1-1/4 | 410 | 6000 | 350 | 5000 | 3000 | 170 | 2500 | -20N/R |
| 1-1/2 | 340 | 5000 | 310 | 4600 | 2500 | 150 | 2300 | -24N/R |
| 2 | 270 | 3900 | 270 | 3900 | 1900 | 130 | 1900 | -32N/R |

Designator for NPT pipe thread is N, ISO/7 is R.

ISO 228/1 Parallel Thread (BSPP)

The pressure ratings are at ambient temperature.

| Male Pipe Size | 316SS | | Uni-Lok Designator |
|-------------------|-------|------|-----------------------|
| | bar | psig | |
| 1/8 | 316 | 4568 | -02G |
| 1/4 | 315 | 4568 | -04G |
| 3/8 | 315 | 4568 | -06G |
| 1/2 | 160 | 2320 | -08G |

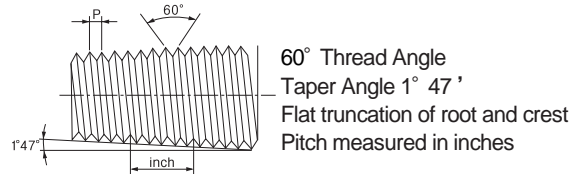
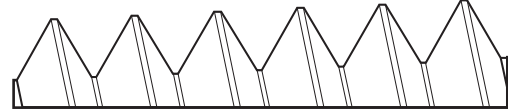
O-Seal Fittings

Rated to 206 bar (3000 psig) for 316SS fittings up to 1 inch and 25mm

Kinds of Pipe End Thread

NPT Pipe Thread

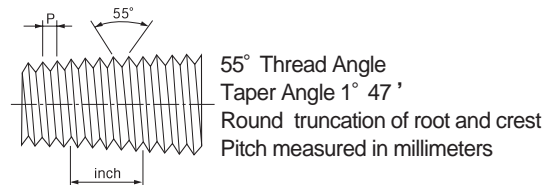
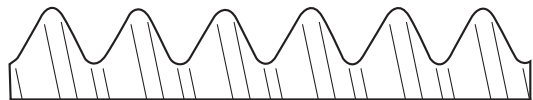
NPT (National Pipe Thread) is based on ANSI B1.2.



ISO 7/1 Tapered Pipe Thread

International Organization for Standard (ISO 7/1) Tapered (PT)

Equivalent to BSPT (British Standard Pipe Taper Thread), DIN 2999, JIS B0203

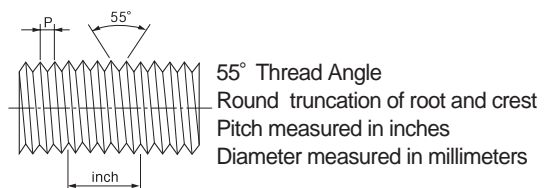
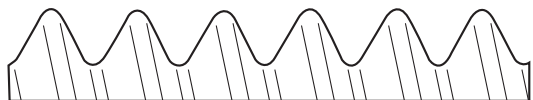


ISO 228/1 Parallel Pipe Thread

International Organization for Standard (ISO 228/1) Parallel(PF)

Equivalent to BSPP (British Standard Pipe Parallel Thread), DIN ISO228/1, JIS B0202

Gasket or O-ring is normally used to seal into the parallel female threaded components.

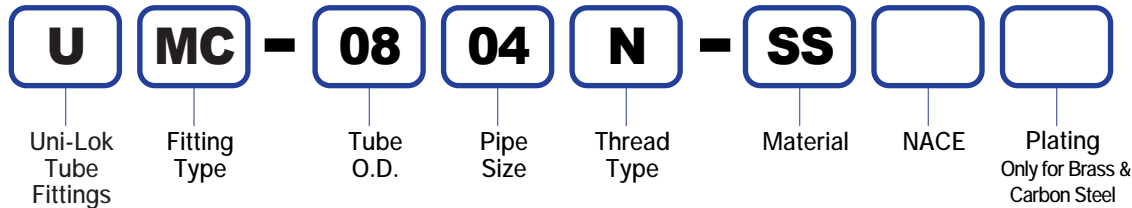


How To Order

Fractional(Inch) Tube fittings

Uni-Lok fractional(inch) size tube fittings are ordered by part number as shown as below.

Example : The following part number, **08UMC-04N-SS**, is designated for Male Connector, 1/2" OD x 1/4" Male NPT, 316SS.



| Fractional(Inch) Tube O.D. Designation | | | | | | | | | | | | | | | | |
|--|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Tube O.D. | inch | 1/16 | 1/8 | 3/16 | 1/4 | 5/16 | 3/8 | 1/2 | 5/8 | 3/4 | 7/8 | 1 | 1-1/8 | 1-1/4 | 1-1/2 | 2 |
| | mm | 1.59 | 3.17 | 4.76 | 6.35 | 7.93 | 9.52 | 12.70 | 15.88 | 19.05 | 22.22 | 25.40 | 28.57 | 31.75 | 38.10 | 50.80 |
| Designator | | 01 | 02 | 03 | 04 | 05 | 06 | 08 | 10 | 12 | 14 | 16 | 18 | 20 | 24 | 32 |

| Pipe Size Designation | | | | | | | | | |
|-----------------------|-----|-----|-----|-----|-----|----|-------|-------|----|
| Pipe Size | 1/8 | 1/4 | 3/8 | 1/2 | 3/4 | 1 | 1-1/4 | 1-1/2 | 2 |
| Designator | 02 | 04 | 06 | 08 | 12 | 16 | 20 | 24 | 32 |

| Thread Type Designation | | |
|-------------------------|-------------------------------|---|
| Thread Type | Designator | |
| NPT | National Standard Pipe Thread | |
| ISO 7/1 | Taper Pipe Thread | |
| ISO 228/1 | Parallel Pipe Thread | |
| SAE J1926 | Straight Thread Boss | |
| SAE J514 | 37° Flared | |
| | Uni-Lok Port or Tube End | |
| | | T |

| Plating Designation | |
|---------------------|--------------------|
| Designator | Plating |
| NP | Nickel |
| BP | Black Phosphorized |

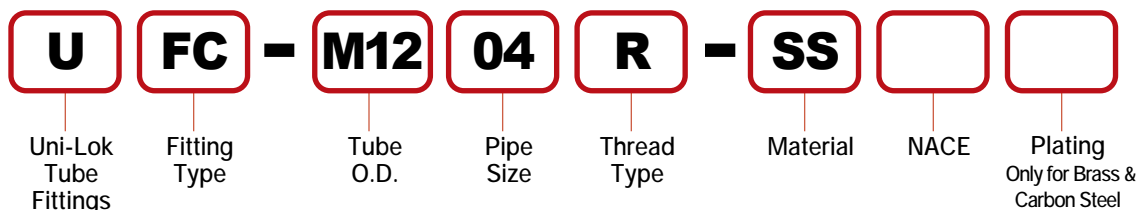
| NACE Application | |
|------------------|------------------|
| None | - |
| N | NACE Application |

| Material Designation | |
|----------------------|--------------|
| Designator | Materials |
| SS | 316SS |
| BS | Brass |
| CS | Carbon Steel |
| MO | Alloy 400 |
| IN60 | Alloy 600 |
| IN65 | Alloy 625 |
| IN85 | Alloy 825 |
| HC | Alloy C-276 |
| TF | PTFE |
| DP | Duplex |
| SD | Super Duplex |
| 6MO | 6MO/SMO254 |

Metric Tube Fittings

Uni-Lok metric size tube fittings are ordered by part number as shown as below.

Example : The following part number, **M12UMC-04R-SS** is designated for Female Connector, 12mmOD x 1/4" Female BSPT, 316SS.



| Fractional(Inch) Tube O.D. Designation | | | | | | | | | | | | | | | | | | |
|--|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Tube OD | mm | 2 | 3 | 4 | 6 | 8 | 10 | 12 | 14 | 15 | 16 | 18 | 20 | 22 | 25 | 28 | 32 | 38 |
| Designator | | M02 | M02 | M04 | M06 | M08 | M10 | M12 | M14 | M15 | M16 | M18 | M20 | M22 | M25 | M28 | M32 | M38 |

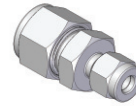
Visual Index

Tube to Tube



Union
UU

10



Reducing Union
URU

11,12



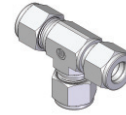
Bulkhead Union
UBU

13



Union Elbow
UEU

14



Union Tee
UUT

15



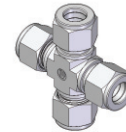
Reducing Union
Branch Tee
URBT

16



Reducing Union
Run Tee
URRT

16



Union Cross
UUC

17

Tube to Male Pipe



Male Connector
UMC

18, 19



Thermocouple
Male Connector
UTMC

20



Male Connector
for Bonded Seal
UMC-G

21, 22



Male Connector
for Metal Gasket
UMC-M

23, 24



Bulkhead
Male Connector
UBMC

25



Male Elbow
UME

26, 27



45° Male Elbow
UMVE

28



Male Branch Tee
UMBT

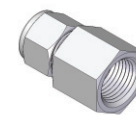
29

Tube to Female Pipe



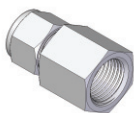
Male Run Tee
UMRT

30



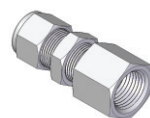
Female Connector
UFC

31, 32



Gauge Connector
UGC

33



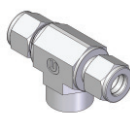
Bulkhead
Female Connector
UBFC

34



Female Elbow
UFE

35



Female
Branch Tee
UFBT

36



Female
Run Tee
UFRT

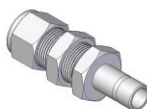
36, 37

Stub Tube Connector



Reducer
UR

38, 39



Bulkhead Reducer
UBR

40



Elbow Reducer
UER

40



Male Adapter
UMA

41



Female Adapter
UFA


42



Port Connector
UPC


43

Tube to Welded System


| | | |
|---|---|----|
|  | Tube Socket Weld Connector UWSC | 45 |
|---|---|----|

| | | |
|---|---|----|
|  | Tube Socket Weld Adapter UWSA | 46 |
|---|---|----|

| | | |
|---|----------------------------------|----|
|  | AN Bulkhead Union UBUA | 47 |
|---|----------------------------------|----|


| | | |
|--|--|----|
|  | SAE/MS Male Connector -Positionable UMCS | 48 |
|--|--|----|

| | | |
|---|--|----|
|  | SAE/MS Male Branch Tee -Positionable UMBTS | 49 |
|---|--|----|

| | | |
|---|---|----|
|  | O-Seal Pipe Thread Connector UMOP | 53 |
|---|---|----|

| | | |
|---|------------------------|----|
|  | Tube Plug UP | 55 |
|---|------------------------|----|

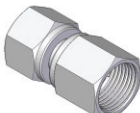
| | | |
|---|--|----|
|  | Lapped Flange Connector ULFC | 57 |
|---|--|----|

| | | |
|---|----------------------------|----|
|  | Back Ferrule UBF | 58 |
|---|----------------------------|----|


| | | |
|---|----------------------------------|----|
|  | Ferrule & Nut Set UFNS | 59 |
|---|----------------------------------|----|

| | | |
|---|---|----|
|  | Pipe Butt Weld Connector UWBC | 44 |
|---|---|----|


| | | |
|---|---------------------------------------|----|
|  | Tube Socket Weld Elbow UWSE | 45 |
|---|---------------------------------------|----|

| | | |
|---|--------------------------|----|
|  | AN Adapter UAA | 47 |
|---|--------------------------|----|


| | | |
|--|--|----|
|  | SAE/MS Male Elbow -Positionable UMES | 48 |
|--|--|----|

| | | |
|---|---|----|
|  | SAE/MS Male Run Tee -Positionable UMRTS | 49 |
|---|---|----|


| | | |
|------------------------|--|--|
| Plug/Cap/Others | | |
|------------------------|--|--|

| | | |
|---|------------------------------|----|
|  | Vent Protector UVP | 55 |
|---|------------------------------|----|

| | | |
|--------------------|--|--|
| Spare Parts | | |
|--------------------|--|--|


| | | |
|---|------------------|----|
|  | Nut UN | 58 |
|---|------------------|----|

| | | |
|---|-------------------------------------|----|
|  | Pipe Butt Weld Elbow UWBE | 45 |
|---|-------------------------------------|----|

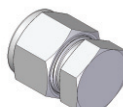
| | | |
|---|---------------------------------------|----|
|  | Pipe Butt Weld Adapter UWBA | 46 |
|---|---------------------------------------|----|


| | | |
|---|------------------------|----|
|  | AN Union UUA | 47 |
|---|------------------------|----|


| | | |
|------------------------------------|--|--|
| Tube to SAE/MS, O-Ring Seal | | |
|------------------------------------|--|--|


| | | |
|--|---|----|
|  | SAE/MS 45° Male Elbow -Positionable UMVES | 49 |
|--|---|----|

| | | |
|---|---|----|
|  | O-Seal Straight Thread Connector UMOS | 52 |
|---|---|----|

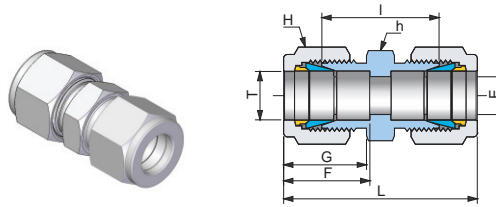
| | | |
|---|-----------------------|----|
|  | Tube Cap UC | 54 |
|---|-----------------------|----|

| | | |
|---|--------------------------|----|
|  | Tube Insert UI | 56 |
|---|--------------------------|----|

| | | |
|---|-----------------------------|----|
|  | Front Ferrule UFF | 58 |
|---|-----------------------------|----|

| | | |
|---|---------------------------|----|
|  | Ferrule Set UFS | 59 |
|---|---------------------------|----|

Union
UU



Connects Fractional(Inch) Tube

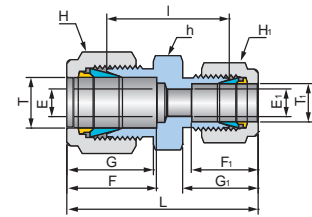
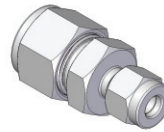
| Part No. | Tube OD T | | Dimensions (mm) | | | | | | | | |
|----------|--------------|-------|-----------------|--------|-------|-------|-------|------|------|------|-------|
| | inch | mm | E Min. | h | | H | | F | G | I | L |
| | | | | inch | mm | inch | mm | | | | |
| UU-01 | 1/16 | 1.58 | 1.3 | 5/16 | 7.93 | 5/16 | 7.93 | 9.0 | 11.1 | 17.5 | 25.5 |
| UU-02 | 1/8 | 3.17 | 2.3 | 7/16 | 11.11 | 7/16 | 11.11 | 12.8 | 15.4 | 22.4 | 36.0 |
| UU-03 | 3/16 | 4.76 | 3.0 | 7/16 | 11.1 | 1/2 | 12.7 | 14.0 | 16.4 | 24.1 | 37.9 |
| UU-04 | 1/4 | 6.35 | 4.8 | 1/2 | 12.70 | 9/16 | 14.28 | 15.1 | 17.4 | 26.2 | 40.5 |
| UU-05 | 5/16 | 7.93 | 6.4 | 9/16 | 14.28 | 5/8 | 15.87 | 16.6 | 18.8 | 28.2 | 43.6 |
| UU-06 | 3/8 | 9.52 | 7.0 | 5/8 | 15.87 | 11/16 | 17.46 | 16.7 | 18.9 | 30.2 | 44.8 |
| UU-08 | 1/2 | 12.7 | 10.0 | 13/16 | 20.63 | 7/8 | 22.22 | 22.7 | 21.6 | 31.0 | 51.0 |
| UU-10 | 5/8 | 15.87 | 12.0 | 15/16 | 23.81 | 1 | 25.40 | 24.5 | 22.0 | 31.8 | 52.2 |
| UU-12 | 3/4 | 19.05 | 16.0 | 1-1/16 | 26.98 | 1-1/8 | 28.57 | 24.4 | 21.9 | 33.3 | 53.5 |
| UU-14 | 7/8 | 22.22 | 18.0 | 1-3/16 | 30.16 | 1-1/4 | 31.75 | 26.0 | 22.0 | 35.1 | 55.4 |
| UU-16 | 1 | 25.4 | 22.0 | 1-3/8 | 34.92 | 1-1/2 | 38.10 | 31.1 | 26.1 | 40.4 | 64.6 |
| UU-20 | 1-1/4 | 31.75 | 27.0 | 1-3/4 | 44.44 | 1-7/8 | 47.63 | 41.0 | 39.0 | 48.0 | 92.0 |
| UU-24 | 1-1/2 | 38.1 | 34.0 | 2-1/8 | 53.97 | 2-1/4 | 57.15 | 50.1 | 45.3 | 58.4 | 113.0 |
| UU-32 | 2 | 50.8 | 46.0 | 2-3/4 | 69.85 | 3 | 76.20 | 69.1 | 63.5 | 74.6 | 150.8 |

Connects Metric Tube

| Part No. | Tube OD T | | Dimensions (mm) | | | | | |
|----------|--------------|-----------|-----------------|-------|------|------|------|-------|
| | mm | E Min. | h | H | F | G | I | L |
| | | | mm | mm | | | | |
| UU-M02 | 2 | 1.7 | 11.11 | 11.11 | 12.8 | 15.1 | 22.4 | 35.4 |
| UU-M03 | 3 | 2.3 | 11.11 | 11.11 | 12.7 | 15.3 | 22.1 | 35.4 |
| UU-M04 | 4 | 2.3 | 11.11 | 12.70 | 13.7 | 16.1 | 24.1 | 37.1 |
| UU-M06 | 6 | 4.8 | 12.70 | 14.28 | 15.3 | 17.6 | 26.2 | 41.0 |
| UU-M08 | 8 | 6.4 | 14.28 | 15.87 | 16.3 | 18.7 | 28.2 | 43.4 |
| UU-M10 | 10 | 8.0 | 17.46 | 19.05 | 17.3 | 19.5 | 31.0 | 46.5 |
| UU-M12 | 12 | 9.5 | 20.63 | 22.22 | 22.8 | 21.7 | 31.0 | 51.3 |
| UU-M14 | 14 | 11.5 | 22.22 | 23.81 | 24.8 | 22.3 | 31.8 | 52.7 |
| UU-M15 | 15 | 12.0 | 23.81 | 25.40 | 24.4 | 22.0 | 31.8 | 52.0 |
| UU-M16 | 16 | 12.0 | 23.81 | 25.40 | 24.5 | 22.0 | 31.8 | 52.2 |
| UU-M18 | 18 | 16.0 | 26.98 | 30.16 | 24.5 | 22.0 | 33.3 | 53.7 |
| UU-M20 | 20 | 18.0 | 30.16 | 31.75 | 26.2 | 22.1 | 34.8 | 55.3 |
| UU-M22 | 22 | 18.0 | 30.16 | 31.75 | 26.2 | 22.1 | 34.8 | 55.3 |
| UU-M25 | 25 | 22.0 | 34.92 | 38.10 | 31.1 | 26.1 | 40.4 | 65.0 |
| UU-M28 | 28 | 22.0 | 44.45 | 47.63 | 41.1 | 38.8 | 43.4 | 87.6 |
| UU-M30 | 30 | 26.0 | 44.45 | 47.50 | 41.1 | 38.8 | 49.5 | 93.7 |
| UU-M32 | 32 | 27.0 | 44.44 | 47.50 | 40.9 | 38.6 | 51.3 | 95.1 |
| UU-M38 | 38 | 33.0 | 55.56 | 57.15 | 49.9 | 45.1 | 58.4 | 112.7 |

Dimensions are for reference only and are subject to change without prior notice.
E is minimum opening. F, G and L are typical finger tight.

Reducing Union URU

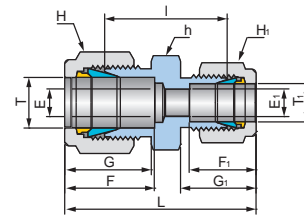
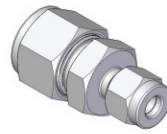


Connects Fractional(Inch) Tube

| Part No. | Tube OD T | | Tube OD T ₁ | | Dimensions (mm) | | | | | | | | | | | | | |
|----------|--------------|-------|---------------------------|-------|-----------------|------------------------|--------|-------|-------|-------|----------------|-------|------|----------------|------|----------------|------|------|
| | inch | mm | inch | mm | E Min. | E ₁ Min. | h | | H | | H ₁ | | F | F ₁ | G | G ₁ | I | L |
| | | | | | | | inch | mm | inch | mm | inch | mm | | | | | | |
| URU-0201 | 1/8 | 3.17 | 1/16 | 1.68 | 2.3 | 1.3 | 7/16 | 11.11 | 7/16 | 11.11 | 5/16 | 7.93 | 12.8 | 9.0 | 15.4 | 11.1 | 20.6 | 31.4 |
| URU-0301 | 3/16 | 4.76 | 1/16 | 1.68 | 3.0 | 1.3 | 7/16 | 11.11 | 1/2 | 12.70 | 5/16 | 7.93 | 14.0 | 9.0 | 16.4 | 11.1 | 21.9 | 32.8 |
| URU-0302 | 3/16 | 4.76 | 1/8 | 3.17 | 3.0 | 2.3 | 7/16 | 11.11 | 1/2 | 12.70 | 7/16 | 11.11 | 14.0 | 12.8 | 16.4 | 15.4 | 23.4 | 37.1 |
| URU-0401 | 1/4 | 6.35 | 1/16 | 1.68 | 4.8 | 1.3 | 1/2 | 12.70 | 9/16 | 14.28 | 5/16 | 7.93 | 15.1 | 9.0 | 17.4 | 11.1 | 23.1 | 34.3 |
| URU-0402 | 1/4 | 6.35 | 1/8 | 3.17 | 4.8 | 2.3 | 1/2 | 12.70 | 9/16 | 14.28 | 7/16 | 11.11 | 15.1 | 12.8 | 17.4 | 15.4 | 24.6 | 38.6 |
| URU-0403 | 1/4 | 6.35 | 3/16 | 4.76 | 4.8 | 3.0 | 1/2 | 12.70 | 9/16 | 14.28 | 1/2 | 12.70 | 15.1 | 14.0 | 17.4 | 16.4 | 25.4 | 39.5 |
| URU-0502 | 5/16 | 7.93 | 1/8 | 3.17 | 6.4 | 2.3 | 9/16 | 14.28 | 5/8 | 15.87 | 7/16 | 11.11 | 16.6 | 12.8 | 18.8 | 15.4 | 25.9 | 40.4 |
| URU-0504 | 5/16 | 7.93 | 1/4 | 6.35 | 6.4 | 4.8 | 9/16 | 14.28 | 5/8 | 15.87 | 9/16 | 14.28 | 17.0 | 15.1 | 19.0 | 17.4 | 27.4 | 42.3 |
| URU-0602 | 3/8 | 9.52 | 1/8 | 3.17 | 7.0 | 2.3 | 5/8 | 15.87 | 11/16 | 17.46 | 7/16 | 11.11 | 16.7 | 12.8 | 18.9 | 15.4 | 26.9 | 41.0 |
| URU-0604 | 3/8 | 9.52 | 1/4 | 6.35 | 7.0 | 4.8 | 5/8 | 15.87 | 11/16 | 17.46 | 9/16 | 14.28 | 16.7 | 15.1 | 18.9 | 17.4 | 28.4 | 42.9 |
| URU-0605 | 3/8 | 9.52 | 5/16 | 7.93 | 6.4 | 6.4 | 5/8 | 15.87 | 11/16 | 17.46 | 5/8 | 15.87 | 16.7 | 16.6 | 18.9 | 18.8 | 29.5 | 44.5 |
| URU-0802 | 1/2 | 12.7 | 1/8 | 3.17 | 10.0 | 2.3 | 13/16 | 20.63 | 7/8 | 22.22 | 7/16 | 11.11 | 22.7 | 12.8 | 21.6 | 15.4 | 27.9 | 44.7 |
| URU-0804 | 1/2 | 12.7 | 1/4 | 6.35 | 10.0 | 4.8 | 13/16 | 20.63 | 7/8 | 22.22 | 9/16 | 14.28 | 22.7 | 15.1 | 21.6 | 17.4 | 29.5 | 46.7 |
| URU-0806 | 1/2 | 12.7 | 3/8 | 9.52 | 10.0 | 7.0 | 13/16 | 20.63 | 7/8 | 22.22 | 11/16 | 17.46 | 22.7 | 16.7 | 21.6 | 18.9 | 31.0 | 48.3 |
| URU-1006 | 5/8 | 15.87 | 3/8 | 9.52 | 12.0 | 7.0 | 15/16 | 23.81 | 1 | 25.40 | 11/16 | 17.46 | 24.5 | 16.7 | 22.0 | 18.9 | 31.8 | 49.3 |
| URU-1008 | 5/8 | 15.87 | 1/2 | 12.7 | 12.0 | 10.0 | 15/16 | 23.81 | 1 | 25.40 | 7/8 | 22.22 | 24.5 | 22.7 | 22.0 | 21.6 | 31.8 | 52.0 |
| URU-1204 | 3/4 | 19.05 | 1/4 | 6.35 | 16.0 | 4.8 | 1-1/16 | 26.98 | 1-1/8 | 28.57 | 9/16 | 14.28 | 24.4 | 15.1 | 21.9 | 17.4 | 31.8 | 49.1 |
| URU-1206 | 3/4 | 19.05 | 3/8 | 9.52 | 16.0 | 7.0 | 1-1/16 | 26.98 | 1-1/8 | 28.57 | 11/16 | 17.46 | 24.4 | 16.7 | 21.9 | 18.9 | 33.3 | 50.7 |
| URU-1208 | 3/4 | 19.05 | 1/2 | 12.7 | 16.0 | 10.0 | 1-1/16 | 26.98 | 1-1/8 | 28.57 | 7/8 | 22.22 | 24.4 | 22.7 | 21.9 | 21.6 | 33.3 | 53.4 |
| URU-1210 | 3/4 | 19.05 | 5/8 | 15.87 | 16.0 | 12.0 | 1-1/16 | 26.98 | 1-1/8 | 28.57 | 1 | 25.40 | 24.4 | 24.5 | 21.9 | 22.0 | 33.3 | 53.6 |
| URU-1608 | 1 | 25.4 | 1/2 | 12.7 | 22.0 | 10.0 | 1-3/8 | 34.92 | 1-1/2 | 38.10 | 7/8 | 22.22 | 31.1 | 22.7 | 26.1 | 21.6 | 40.9 | 63.0 |
| URU-1612 | 1 | 25.4 | 3/4 | 19.05 | 22.0 | 16.0 | 1-3/8 | 34.92 | 1-1/2 | 38.10 | 1-1/8 | 28.57 | 31.1 | 24.4 | 26.1 | 21.9 | 40.9 | 63.1 |
| URU-2016 | 1-1/4 | 31.75 | 1 | 25.4 | 22.0 | 22.0 | 1-3/4 | 44.44 | 1-7/8 | 47.63 | 1-1/2 | 38.10 | 40.8 | 31.1 | 38.5 | 26.1 | 45.0 | 78.9 |

Dimensions are for reference only and are subject to change without prior notice.
E is minimum opening. F, G and L are typical finger tight.

Reducing Union
URU



Connects Metric Tube

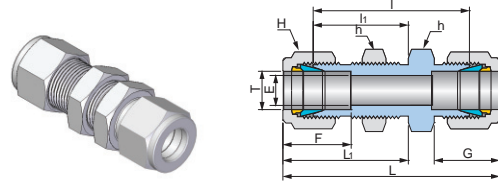
| Part No. | Tube OD | Tube OD | Dimensions (mm) | | | | | | | | | | |
|------------|---------|----------------|-----------------|----------------|-------|-------|----------------|------|----------------|------|----------------|------|------|
| | T | T ₁ | E | E ₁ | h | H | H ₁ | F | F ₁ | G | G ₁ | I | L |
| | mm | mm | Min. | Min. | mm | mm | mm | | | | | | |
| URU-M06M03 | 6 | 3 | 4.8 | 2.3 | 12.70 | 14.28 | 11.11 | 15.3 | 12.7 | 17.6 | 15.3 | 24.6 | 38.7 |
| URU-M06M04 | 6 | 4 | 4.8 | 2.3 | 12.70 | 14.28 | 12.70 | 15.3 | 13.7 | 17.6 | 16.1 | 25.4 | 39.3 |
| URU-M08M06 | 8 | 6 | 6.4 | 4.8 | 14.28 | 15.87 | 14.28 | 16.3 | 15.3 | 18.7 | 17.6 | 27.4 | 42.4 |
| URU-M10M06 | 10 | 6 | 8.0 | 4.8 | 17.46 | 19.05 | 14.28 | 17.3 | 15.3 | 19.5 | 17.6 | 29.5 | 44.6 |
| URU-M12M06 | 12 | 6 | 9.5 | 4.8 | 20.63 | 22.22 | 14.28 | 22.8 | 15.3 | 21.7 | 17.6 | 29.5 | 47.0 |
| URU-M12M08 | 12 | 8 | 9.5 | 6.4 | 20.63 | 22.22 | 15.87 | 22.8 | 16.3 | 21.7 | 18.7 | 30.2 | 47.9 |
| URU-M12M10 | 12 | 10 | 9.5 | 8.0 | 20.63 | 22.22 | 19.05 | 22.8 | 17.3 | 21.7 | 19.5 | 31.0 | 48.8 |
| URU-M16M10 | 16 | 10 | 12.0 | 8.0 | 23.81 | 25.40 | 19.05 | 24.5 | 17.3 | 22.0 | 19.5 | 32.5 | 50.4 |
| URU-M16M12 | 16 | 12 | 12.0 | 9.5 | 23.81 | 25.40 | 22.22 | 24.5 | 22.8 | 22.0 | 21.7 | 31.8 | 52.1 |
| URU-M18M12 | 18 | 12 | 16.0 | 9.5 | 26.98 | 30.16 | 22.22 | 24.5 | 22.8 | 22.0 | 21.7 | 33.3 | 53.6 |
| URU-M25M18 | 25 | 18 | 22.0 | 15.1 | 34.92 | 38.10 | 30.16 | 31.1 | 24.5 | 26.1 | 22.0 | 38.6 | 60.9 |
| URU-M25M20 | 25 | 20 | 22.0 | 16.0 | 34.92 | 38.10 | 31.75 | 31.1 | 26.2 | 26.1 | 22.1 | 39.9 | 62.2 |

Connects Metric Tube to Fractional(Inch) Tube

| Part No. | Tube OD | Tube OD | | Dimensions (mm) | | | | | | | | | | | | |
|-----------|---------|----------------|----------------|-----------------|----------------|-------|------|----------------|-------|-------|----------------|------|----------------|------|------|------|
| | T | T ₁ | T ₁ | E | E ₁ | h | H | H ₁ | | F | F ₁ | G | G ₁ | I | L | |
| | mm | inch | mm | Min. | Min. | mm | inch | mm | inch | mm | | | | | | |
| URU-M0402 | 4 | 1/8 | 3.17 | 3.0 | 2.3 | 11.11 | 1/2 | 12.70 | 7/16 | 11.11 | 13.7 | 12.8 | 16.1 | 15.4 | 23.4 | 36.7 |
| URU-M0404 | 4 | 1/4 | 6.35 | 2.8 | 4.8 | 14.28 | 1/2 | 12.70 | 9/16 | 14.28 | 13.7 | 15.1 | 16.1 | 17.4 | 25.4 | 39.1 |
| URU-M0602 | 6 | 1/8 | 3.17 | 4.8 | 2.3 | 12.70 | 9/16 | 14.28 | 7/16 | 11.11 | 15.3 | 12.8 | 17.6 | 15.4 | 24.6 | 38.8 |
| URU-M0604 | 6 | 1/4 | 6.35 | 4.8 | 4.8 | 12.70 | 9/16 | 14.28 | 9/16 | 14.28 | 15.3 | 15.1 | 17.6 | 17.4 | 26.2 | 40.8 |
| URU-M0605 | 6 | 5/16 | 7.93 | 4.8 | 6.4 | 14.28 | 9/16 | 14.28 | 5/8 | 15.87 | 15.3 | 16.6 | 17.6 | 18.8 | 27.4 | 42.5 |
| URU-M0804 | 8 | 1/4 | 6.35 | 6.4 | 4.8 | 14.28 | 5/8 | 15.87 | 9/16 | 14.28 | 16.3 | 15.1 | 18.7 | 17.4 | 27.4 | 42.2 |
| URU-M1004 | 10 | 1/4 | 6.35 | 8.0 | 4.8 | 17.46 | 3/4 | 19.05 | 9/16 | 14.28 | 17.3 | 15.1 | 19.5 | 17.4 | 29.5 | 44.4 |
| URU-M1006 | 10 | 3/8 | 9.52 | 8.0 | 7.0 | 17.46 | 3/4 | 19.05 | 11/16 | 17.46 | 17.3 | 16.7 | 19.5 | 18.9 | 31.0 | 46.0 |
| URU-M1206 | 12 | 3/8 | 9.52 | 9.5 | 7.0 | 20.63 | 7/8 | 22.22 | 11/16 | 17.46 | 22.8 | 16.7 | 21.7 | 18.9 | 31.0 | 48.4 |
| URU-M1208 | 12 | 1/2 | 12.7 | 9.5 | 9.5 | 20.63 | 7/8 | 22.22 | 7/8 | 22.22 | 22.8 | 22.7 | 21.7 | 21.6 | 31.0 | 51.1 |
| URU-M1508 | 15 | 1/2 | 12.7 | 12.0 | 10.0 | 23.81 | 1 | 25.40 | 7/8 | 22.22 | 24.4 | 22.7 | 21.9 | 21.6 | 31.8 | 52.0 |

Dimensions are for reference only and are subject to change without prior notice.
E is minimum opening. F, G and L are typical finger tight.

Bulkhead Union UBU



Connects Fractional(Inch) Tube

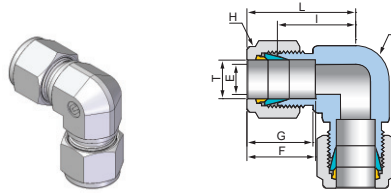
| Part No. | Tube OD T | | Dimensions (mm) | | | | | | | | | | | | |
|----------|--------------|-------|-----------------|--------|-------|-------|-------|------|------|-------|----------------|-------|----------------|-----------------------|---------------------------|
| | inch | mm | E Min. | h | | H | | F | G | I | I ₁ | L | L ₁ | Panel Hole Size | Max Panel Thickness |
| | | | | inch | mm | inch | mm | | | | | | | | |
| UBU-01 | 1/16 | 1.68 | 1.3 | 5/16 | 7.93 | 5/16 | 7.93 | 9.0 | 11.1 | 23.9 | 13.5 | 31.9 | 17.5 | 5.2 | 3.1 |
| UBU-02 | 1/8 | 3.17 | 2.3 | 1/2 | 12.70 | 7/16 | 11.11 | 12.8 | 15.4 | 38.1 | 24.6 | 51.7 | 31.4 | 8.3 | 12.7 |
| UBU-03 | 3/16 | 4.76 | 3.0 | 9/16 | 14.28 | 1/2 | 12.70 | 14.0 | 16.4 | 40.4 | 25.4 | 54.2 | 32.3 | 9.9 | 12.7 |
| UBU-04 | 1/4 | 6.35 | 4.8 | 5/8 | 15.87 | 9/16 | 14.28 | 15.1 | 17.4 | 42.9 | 26.2 | 57.2 | 33.4 | 11.5 | 10.2 |
| UBU-05 | 5/16 | 7.93 | 6.4 | 11/16 | 17.46 | 5/8 | 15.87 | 16.6 | 18.8 | 46.0 | 28.4 | 61.4 | 36.1 | 13.1 | 11.2 |
| UBU-06 | 3/8 | 9.52 | 7.0 | 3/4 | 19.05 | 11/16 | 17.46 | 16.7 | 18.9 | 47.5 | 29.5 | 62.1 | 36.8 | 14.7 | 11.2 |
| UBU-08 | 1/2 | 12.70 | 10.0 | 15/16 | 23.81 | 7/8 | 22.22 | 22.7 | 25.6 | 50.8 | 31.8 | 70.8 | 41.8 | 19.4 | 12.7 |
| UBU-10 | 5/8 | 15.87 | 12.0 | 1-1/16 | 26.98 | 1 | 25.40 | 24.5 | 22.0 | 52.3 | 32.5 | 72.7 | 42.7 | 22.6 | 12.7 |
| UBU-12 | 3/4 | 19.05 | 16.0 | 1-3/16 | 30.16 | 1-1/8 | 28.57 | 24.4 | 21.9 | 58.7 | 37.3 | 78.9 | 47.4 | 25.8 | 16.8 |
| UBU-14 | 7/8 | 22.22 | 18.0 | 1-3/8 | 34.92 | 1-1/4 | 31.75 | 26.0 | 22.0 | 64.3 | 42.9 | 84.6 | 53.1 | 29.0 | 19.1 |
| UBU-16 | 1 | 25.40 | 22.0 | 1-5/8 | 41.27 | 1-1/2 | 38.10 | 31.1 | 26.1 | 71.4 | 45.2 | 95.6 | 57.3 | 33.7 | 19.1 |
| UBU-20 | 1-1/4 | 31.75 | 26.0 | 1-7/8 | 47.63 | 1-7/8 | 47.63 | 40.8 | 38.5 | 78.9 | 47.7 | 122.5 | 69.5 | 42.0 | 20.0 |
| UBU-24 | 1-1/2 | 38.10 | 33.0 | 2-1/4 | 57.15 | 2-1/4 | 57.15 | 50.1 | 45.3 | 84.8 | 49.2 | 139.4 | 76.5 | 50.0 | 20.0 |
| UBU-32 | 2 | 50.80 | 46.0 | 2-3/4 | 69.85 | 3 | 76.20 | 69.1 | 63.5 | 105.7 | 56.4 | 181.9 | 94.5 | 67.1 | 19.1 |

Connects Metric Tube

| Part No. | Tube OD T | | Dimensions (mm) | | | | | | | | | | Panel Hole Size | Max Panel Thickness |
|----------|--------------|-----------|-----------------|---------|------|------|------|----------------|-------|----------------|------|------|-----------------------|---------------------------|
| | mm | E Min. | h mm | H mm | F | G | I | I ₁ | L | L ₁ | | | | |
| | | | | | | | | | | | | | | |
| UBU-M03 | 3 | 2.3 | 14.28 | 11.11 | 12.7 | 15.3 | 38.1 | 24.6 | 51.4 | 31.3 | 8.3 | 12.7 | | |
| UBU-M04 | 4 | 2.3 | 14.28 | 12.70 | 13.7 | 16.1 | 40.4 | 25.4 | 53.4 | 31.9 | 9.9 | 12.7 | | |
| UBU-M06 | 6 | 4.8 | 15.87 | 14.28 | 15.3 | 17.6 | 42.9 | 26.2 | 57.7 | 33.6 | 11.5 | 10.2 | | |
| UBU-M08 | 8 | 6.4 | 17.46 | 15.87 | 16.3 | 18.7 | 46.0 | 28.4 | 61.2 | 35.9 | 13.1 | 11.2 | | |
| UBU-M10 | 10 | 8.0 | 22.22 | 19.05 | 17.3 | 19.5 | 48.5 | 29.5 | 63.9 | 37.2 | 16.2 | 11.2 | | |
| UBU-M12 | 12 | 9.5 | 23.81 | 22.22 | 22.8 | 21.7 | 50.8 | 31.8 | 71.0 | 41.9 | 19.5 | 12.7 | | |
| UBU-M14 | 14 | 12.0 | 26.98 | 23.81 | 24.8 | 22.3 | 52.3 | 32.5 | 73.2 | 42.9 | 22.8 | 12.7 | | |
| UBU-M15 | 15 | 12.0 | 26.98 | 25.40 | 24.4 | 21.9 | 52.3 | 32.5 | 72.5 | 42.6 | 22.8 | 12.7 | | |
| UBU-M16 | 16 | 12.0 | 26.98 | 25.40 | 24.5 | 22.0 | 52.3 | 32.5 | 72.7 | 42.7 | 22.8 | 12.7 | | |
| UBU-M18 | 18 | 15.0 | 30.16 | 30.16 | 24.5 | 22.0 | 58.7 | 37.3 | 79.1 | 47.5 | 26.0 | 16.8 | | |
| UBU-M20 | 20 | 16.0 | 34.92 | 31.75 | 26.2 | 22.1 | 64.3 | 42.9 | 84.8 | 53.2 | 29.0 | 17.0 | | |
| UBU-M22 | 22 | 16.0 | 34.92 | 31.75 | 26.2 | 22.1 | 64.3 | 42.9 | 84.8 | 53.2 | 29.0 | 19.1 | | |
| UBU-M25 | 25 | 22.0 | 41.27 | 38.10 | 31.1 | 26.1 | 71.4 | 45.2 | 95.5 | 57.3 | 33.7 | 19.1 | | |
| UBU-M32 | 32 | 27.0 | 50.80 | 50.80 | 40.9 | 38.6 | 82.3 | 49.5 | 126.1 | 71.4 | 42.5 | 19.0 | | |
| UBU-M38 | 38 | 33.0 | 60.30 | 60.30 | 49.9 | 45.1 | 89.4 | 51.5 | 144.0 | 79.0 | 50.5 | 19.0 | | |

Dimensions are for reference only and are subject to change without prior notice.
E is minimum opening. F, G and L are typical finger tight.

Union Elbow
UEU



Connects Fractional(Inch) Tube

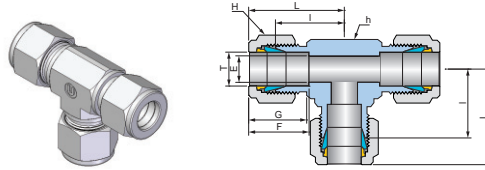
| Part No. | Tube OD T | | Dimensions (mm) | | | | | | | | |
|----------|--------------|-------|-----------------|---------|-------|-------|-------|------|------|------|-------|
| | inch | mm | E Min. | h | | H | | F | G | I | L |
| | | | | inch | mm | inch | mm | | | | |
| UEU-01 | 1/16 | 1.68 | 1.3 | 3/8 | 9.52 | 5/16 | 7.92 | 9.0 | 11.1 | 14.0 | 18.0 |
| UEU-02 | 1/8 | 3.17 | 2.3 | 3/8 | 9.52 | 7/16 | 11.11 | 12.8 | 15.4 | 15.7 | 22.5 |
| UEU-03 | 3/16 | 4.76 | 3.0 | 1/2 | 12.70 | 1/2 | 12.70 | 14.0 | 16.4 | 18.9 | 25.8 |
| UEU-04 | 1/4 | 6.35 | 4.8 | 1/2 | 12.70 | 9/16 | 14.28 | 15.1 | 17.4 | 19.6 | 26.8 |
| UEU-05 | 5/16 | 7.93 | 6.4 | 9/16 | 14.28 | 5/8 | 15.87 | 16.6 | 18.8 | 21.7 | 29.4 |
| UEU-06 | 3/8 | 9.52 | 7.0 | 5/8 | 15.87 | 11/16 | 17.46 | 16.7 | 18.9 | 23.1 | 30.4 |
| UEU-08 | 1/2 | 12.70 | 10.0 | 13/16 | 20.63 | 7/8 | 22.22 | 22.7 | 21.6 | 25.9 | 35.9 |
| UEU-10 | 5/8 | 15.87 | 12.0 | 15/16 | 23.81 | 1 | 25.40 | 24.5 | 22.0 | 26.9 | 37.1 |
| UEU-12 | 3/4 | 19.05 | 16.0 | 1-1/16 | 26.98 | 1-1/8 | 28.57 | 24.4 | 21.9 | 29.7 | 39.8 |
| UEU-14 | 7/8 | 22.22 | 18.0 | 1-3/16 | 30.16 | 1-1/4 | 31.75 | 26.0 | 22.0 | 34.5 | 44.7 |
| UEU-16 | 1 | 25.40 | 22.0 | 1-3/8 | 34.92 | 1-1/2 | 38.10 | 31.1 | 26.1 | 36.5 | 48.6 |
| UEU-20 | 1-1/4 | 31.75 | 27.0 | 1-11/16 | 42.86 | 1-7/8 | 47.63 | 40.8 | 38.5 | 44.4 | 66.2 |
| UEU-24 | 1-1/2 | 38.10 | 33.0 | 2-3/16 | 55.56 | 2-1/4 | 57.15 | 50.1 | 45.3 | 56.4 | 83.7 |
| UEU-32 | 2 | 50.80 | 46.0 | 2-3/4 | 69.85 | 3 | 76.20 | 69.1 | 63.5 | 69.8 | 107.9 |

Connects Metric Tube

| Part No. | Tube OD T | | Dimensions (mm) | | | | | | |
|----------|--------------|-----------|-----------------|---------|------|------|------|------|--|
| | mm | E Min. | h mm | H mm | F | G | I | L | |
| | | | | | | | | | |
| UEU-M03 | 3 | 2.3 | 9.52 | 11.11 | 12.7 | 15.3 | 15.7 | 22.4 | |
| UEU-M04 | 4 | 2.3 | 12.70 | 12.70 | 13.7 | 16.1 | 18.8 | 25.3 | |
| UEU-M06 | 6 | 4.8 | 12.70 | 14.28 | 15.3 | 17.6 | 19.6 | 27.0 | |
| UEU-M08 | 8 | 6.4 | 14.28 | 15.87 | 16.3 | 18.7 | 21.7 | 29.3 | |
| UEU-M10 | 10 | 8.0 | 17.46 | 19.05 | 17.3 | 19.5 | 23.9 | 31.6 | |
| UEU-M12 | 12 | 9.5 | 20.63 | 22.22 | 22.8 | 21.7 | 25.9 | 36.0 | |
| UEU-M14 | 14 | 12.0 | 23.81 | 23.81 | 24.8 | 22.3 | 26.9 | 37.4 | |
| UEU-M15 | 15 | 12.0 | 23.81 | 25.40 | 24.4 | 21.9 | 26.9 | 36.9 | |
| UEU-M16 | 16 | 12.0 | 23.81 | 25.40 | 24.5 | 22.0 | 26.9 | 37.1 | |
| UEU-M18 | 18 | 16.0 | 26.98 | 30.16 | 24.5 | 21.9 | 29.7 | 39.9 | |
| UEU-M20 | 20 | 16.0 | 34.92 | 31.75 | 26.2 | 22.1 | 36.8 | 47.1 | |
| UEU-M22 | 22 | 18.0 | 34.92 | 31.75 | 26.2 | 22.1 | 34.8 | 45.1 | |
| UEU-M25 | 25 | 22.0 | 34.92 | 38.10 | 31.1 | 26.1 | 36.5 | 48.6 | |
| UEU-M28 | 28 | 22.0 | 42.86 | 47.63 | 41.1 | 38.8 | 44.0 | 66.1 | |
| UEU-M30 | 30 | 26.0 | 42.86 | 47.50 | 41.1 | 38.8 | 44.0 | 66.1 | |
| UEU-M32 | 32 | 27.0 | 46.04 | 50.80 | 40.9 | 38.6 | 49.3 | 71.2 | |
| UEU-M38 | 38 | 33.0 | 55.56 | 57.15 | 49.9 | 45.1 | 56.4 | 83.5 | |

Dimensions are for reference only and are subject to change without prior notice.
E is minimum opening. F, G and L are typical finger tight.

Union Tee UUT



Connects Fractional(Inch) Tube

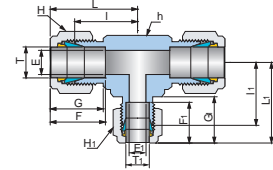
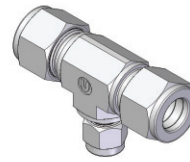
| Part No. | Tube OD T | | Dimensions (mm) | | | | | | | | |
|----------|--------------|-------|-----------------|---------|-------|-------|-------|------|------|------|-------|
| | inch | mm | E Min. | h | | H | | F | G | I | L |
| | | | | inch | mm | inch | mm | | | | |
| UUT-01 | 1/16 | 1.68 | 1.3 | 3/8 | 9.52 | 5/16 | 7.93 | 9.0 | 11.1 | 14.0 | 18.0 |
| UUT-02 | 1/8 | 3.17 | 2.3 | 3/8 | 9.52 | 7/16 | 11.11 | 12.8 | 15.4 | 15.7 | 22.5 |
| UUT-03 | 3/16 | 4.76 | 3.0 | 1/2 | 12.70 | 1/2 | 12.70 | 14.0 | 16.4 | 18.9 | 25.8 |
| UUT-04 | 1/4 | 6.35 | 4.8 | 1/2 | 12.70 | 9/16 | 14.28 | 15.1 | 17.4 | 19.6 | 26.8 |
| UUT-05 | 5/16 | 7.93 | 6.4 | 9/16 | 14.28 | 5/8 | 15.87 | 16.6 | 18.8 | 22.3 | 30.0 |
| UUT-06 | 3/8 | 9.52 | 7.0 | 5/8 | 15.87 | 11/16 | 17.46 | 16.7 | 18.9 | 23.1 | 30.4 |
| UUT-08 | 1/2 | 12.7 | 10.0 | 13/16 | 20.63 | 7/8 | 22.22 | 22.7 | 21.6 | 25.9 | 35.9 |
| UUT-10 | 5/8 | 15.87 | 12.0 | 15/16 | 23.81 | 1 | 25.40 | 24.5 | 22.0 | 26.9 | 37.1 |
| UUT-12 | 3/4 | 19.05 | 16.0 | 1-1/16 | 26.98 | 1-1/8 | 28.57 | 24.4 | 21.9 | 29.7 | 39.8 |
| UUT-14 | 7/8 | 22.22 | 18.0 | 1-3/16 | 30.16 | 1-1/4 | 31.75 | 26.0 | 22.0 | 34.5 | 44.7 |
| UUT-16 | 1 | 25.4 | 22.0 | 1-3/8 | 34.92 | 1-1/2 | 38.10 | 31.1 | 26.1 | 36.8 | 48.9 |
| UUT-20 | 1-1/4 | 31.75 | 27.0 | 1-11/16 | 42.86 | 1-7/8 | 47.63 | 40.8 | 38.5 | 44.0 | 65.8 |
| UUT-24 | 1-1/2 | 38.1 | 33.0 | 2-3/16 | 55.56 | 2-1/4 | 57.15 | 50.1 | 45.3 | 56.4 | 83.7 |
| UUT-32 | 2 | 50.8 | 46.0 | 2-3/4 | 69.85 | 3 | 76.20 | 69.1 | 63.5 | 69.8 | 107.9 |

Connects Metric Tube

| Part No. | Tube OD T | | Dimensions (mm) | | | | | |
|----------|--------------|-----------|-----------------|-------|------|------|------|------|
| | mm | E Min. | h | H | F | G | I | L |
| | | | mm | mm | | | | |
| UUT-M02 | 2 | 1.7 | 9.52 | 12.70 | 12.8 | 15.1 | 15.7 | 22.2 |
| UUT-M03 | 3 | 2.3 | 9.52 | 11.11 | 12.7 | 15.3 | 15.7 | 22.4 |
| UUT-M04 | 4 | 2.3 | 12.70 | 12.70 | 13.7 | 16.1 | 18.8 | 25.3 |
| UUT-M06 | 6 | 4.8 | 12.70 | 14.28 | 15.3 | 17.6 | 19.6 | 27.0 |
| UUT-M08 | 8 | 6.4 | 14.28 | 15.87 | 16.3 | 18.7 | 22.3 | 29.9 |
| UUT-M10 | 10 | 8.0 | 17.46 | 19.05 | 17.3 | 19.5 | 23.9 | 31.6 |
| UUT-M12 | 12 | 9.5 | 20.63 | 22.22 | 22.8 | 21.7 | 25.9 | 36.0 |
| UUT-M14 | 14 | 12.0 | 23.81 | 23.81 | 24.8 | 22.3 | 26.6 | 37.1 |
| UUT-M15 | 15 | 12.0 | 23.81 | 25.40 | 24.4 | 21.9 | 26.9 | 36.9 |
| UUT-M16 | 16 | 12.0 | 23.81 | 25.40 | 24.5 | 22.0 | 26.9 | 37.1 |
| UUT-M18 | 18 | 16.0 | 26.98 | 30.16 | 24.5 | 22.0 | 29.7 | 39.9 |
| UUT-M20 | 20 | 16.0 | 34.92 | 31.75 | 26.2 | 22.1 | 34.8 | 45.1 |
| UUT-M22 | 22 | 18.0 | 34.92 | 31.75 | 26.2 | 22.1 | 34.8 | 45.1 |
| UUT-M25 | 25 | 22.0 | 34.92 | 38.10 | 31.1 | 26.1 | 36.5 | 48.6 |
| UUT-M28 | 28 | 22.0 | 42.86 | 47.63 | 41.1 | 38.8 | 44.0 | 66.1 |
| UUT-M30 | 30 | 26.0 | 42.86 | 47.50 | 41.1 | 38.8 | 44.0 | 66.1 |
| UUT-M32 | 32 | 27.0 | 46.04 | 50.80 | 40.9 | 38.6 | 49.3 | 71.2 |
| UUT-M38 | 38 | 33.0 | 55.56 | 57.15 | 49.9 | 45.1 | 56.4 | 83.5 |

Dimensions are for reference only and are subject to change without prior notice.
E is minimum opening. F, G and L are typical finger tight.

Reducing Union Branch Tee URBT



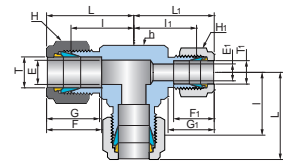
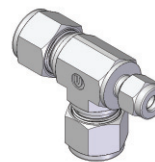
Connects Fractional(Inch) Tube

| Part No. | Tube OD T | | Tube OD T ₁ | | Dimensions (mm) | | | | | | | | | | | | | | | |
|-----------|--------------|-------|---------------------------|-------|-----------------|------------------------|--------|-------|-------|-------|----------------|-------|------|----------------|------|----------------|------|----------------|------|----------------|
| | inch | mm | inch | mm | E Min. | E ₁ Min. | h | | H | | H ₁ | | F | F ₁ | G | G ₁ | I | I ₁ | L | L ₁ |
| | | | | | | | inch | mm | inch | mm | inch | mm | | | | | | | | |
| URBT-0604 | 3/8 | 9.52 | 1/4 | 6.35 | 7.0 | 4.8 | 5/8 | 15.87 | 11/16 | 17.46 | 9/16 | 14.28 | 16.7 | 15.1 | 18.9 | 17.4 | 23.1 | 21.7 | 30.4 | 28.9 |
| URBT-0804 | 1/2 | 12.7 | 1/4 | 6.35 | 10.0 | 4.8 | 13/16 | 20.63 | 7/8 | 22.22 | 9/16 | 14.28 | 22.7 | 15.1 | 21.6 | 17.4 | 25.9 | 24.5 | 35.9 | 31.8 |
| URBT-0806 | 1/2 | 12.7 | 3/8 | 9.52 | 10.0 | 7.0 | 13/16 | 20.63 | 7/8 | 22.22 | 11/16 | 17.46 | 22.7 | 16.7 | 21.6 | 18.9 | 25.9 | 26.1 | 35.9 | 33.4 |
| URBT-1006 | 5/8 | 15.87 | 3/8 | 9.52 | 12.0 | 7.0 | 15/16 | 23.81 | 1 | 25.40 | 11/16 | 17.46 | 24.5 | 16.7 | 22.0 | 18.9 | 26.9 | 26.7 | 37.1 | 34.0 |
| URBT-1204 | 3/4 | 19.05 | 1/4 | 6.35 | 16.0 | 4.8 | 1-1/16 | 26.98 | 1-1/8 | 28.57 | 9/16 | 14.28 | 24.4 | 15.1 | 21.9 | 17.4 | 29.7 | 29.6 | 39.8 | 36.8 |
| URBT-1206 | 3/4 | 19.05 | 3/8 | 9.52 | 16.0 | 7.0 | 1-1/16 | 26.98 | 1-1/8 | 28.57 | 11/16 | 17.46 | 24.4 | 16.7 | 21.9 | 18.9 | 29.7 | 29.7 | 39.8 | 37.0 |
| URBT-1208 | 3/4 | 19.05 | 1/2 | 12.7 | 16.0 | 10.0 | 1-1/16 | 26.98 | 1-1/8 | 28.57 | 7/8 | 22.22 | 24.4 | 22.7 | 21.9 | 21.6 | 29.7 | 29.7 | 39.8 | 39.7 |
| URBT-1604 | 1 | 25.4 | 1/4 | 6.35 | 22.0 | 4.8 | 1-3/8 | 34.92 | 1-1/2 | 38.10 | 9/16 | 14.28 | 31.1 | 15.1 | 26.1 | 17.4 | 36.8 | 33.0 | 48.9 | 40.2 |
| URBT-1606 | 1 | 25.4 | 3/8 | 9.52 | 22.0 | 7.0 | 1-3/8 | 34.92 | 1-1/2 | 38.10 | 11/16 | 17.46 | 31.1 | 16.7 | 26.1 | 18.9 | 36.5 | 34.4 | 48.6 | 41.7 |
| URBT-1608 | 1 | 25.4 | 1/2 | 12.7 | 22.0 | 10.0 | 1-3/8 | 34.92 | 1-1/2 | 38.10 | 7/8 | 22.22 | 31.1 | 22.7 | 26.1 | 21.6 | 36.8 | 34.4 | 48.9 | 44.4 |
| URBT-1612 | 1 | 25.4 | 3/4 | 19.05 | 22.0 | 16.0 | 1-3/8 | 34.92 | 1-1/2 | 38.10 | 1-1/8 | 28.57 | 31.1 | 24.4 | 26.1 | 21.9 | 36.8 | 34.6 | 48.9 | 44.7 |
| URBT-2416 | 1-1/2 | 38.1 | 1 | 25.4 | 33.0 | 22.0 | 2-3/16 | 55.56 | 2-1/4 | 57.15 | 1-3/8 | 34.92 | 50.1 | 31.1 | 45.3 | 26.1 | 56.4 | 52.4 | 83.7 | 64.5 |

Connects Metric Tube

| Part No. | Tube OD | | Dimensions (mm) | | | | | | | | | | | | | | | |
|-------------|---------|----------------------|-----------------|------------------------|-------|-------|-------|------|----------------|------|------|----------------|------|----------------|------|----------------|---|----------------|
| | T mm | T ₁ mm | E Min. | E ₁ Min. | h | | H | | H ₁ | | F | F ₁ | G | G ₁ | I | I ₁ | L | L ₁ |
| | | | | | mm | mm | mm | mm | mm | mm | | | | | | | | |
| URBT-M08M06 | 8 | 6 | 6.4 | 4.8 | 14.28 | 15.87 | 14.28 | 16.3 | 15.3 | 18.7 | 17.6 | 22.3 | 21.4 | 29.9 | 28.8 | | | |
| URBT-M10M06 | 10 | 6 | 8.0 | 4.8 | 17.46 | 19.05 | 14.28 | 17.3 | 15.3 | 19.5 | 17.6 | 23.9 | 22.3 | 31.6 | 29.7 | | | |
| URBT-M12M06 | 12 | 6 | 9.5 | 4.8 | 20.63 | 22.22 | 14.28 | 22.8 | 15.3 | 21.7 | 17.6 | 25.9 | 24.5 | 36.0 | 31.9 | | | |
| URBT-M16M12 | 16 | 12 | 12.0 | 9.5 | 26.98 | 25.40 | 22.22 | 24.5 | 22.8 | 22.0 | 21.7 | 29.7 | 29.7 | 39.9 | 39.8 | | | |
| URBT-M18M12 | 18 | 12 | 16.0 | 9.5 | 26.98 | 30.16 | 22.22 | 24.5 | 22.8 | 22.0 | 21.7 | 29.7 | 29.7 | 39.8 | 39.8 | | | |
| URBT-M22M12 | 22 | 12 | 18.0 | 9.5 | 34.92 | 31.75 | 22.22 | 26.2 | 22.8 | 22.1 | 21.7 | 34.8 | 34.4 | 45.1 | 44.5 | | | |
| URBT-M25M12 | 25 | 12 | 22.0 | 9.5 | 34.92 | 38.10 | 22.22 | 31.1 | 22.8 | 26.1 | 21.7 | 36.8 | 34.4 | 48.9 | 44.5 | | | |

Reducing Union Run Tee URRT

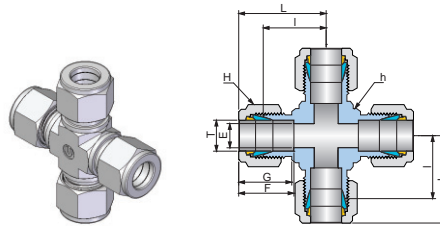


Connects Fractional(Inch) Tube

| Part No. | Tube OD T | | Tube OD T ₁ | | Dimensions (mm) | | | | | | | | | | | | | | | |
|-----------|--------------|-------|---------------------------|-------|-----------------|------------------------|--------|-------|-------|-------|----------------|-------|------|----------------|------|----------------|------|----------------|------|----------------|
| | inch | mm | inch | mm | E Min. | E ₁ Min. | h | | H | | H ₁ | | F | F ₁ | G | G ₁ | I | I ₁ | L | L ₁ |
| | | | | | | | inch | mm | inch | mm | inch | mm | | | | | | | | |
| URRT-0604 | 3/8 | 9.52 | 1/4 | 6.35 | 7.0 | 4.8 | 5/8 | 15.87 | 11/16 | 17.46 | 9/16 | 14.28 | 16.7 | 15.1 | 18.9 | 17.4 | 23.1 | 21.7 | 30.4 | 28.9 |
| URRT-0804 | 1/2 | 12.7 | 1/4 | 6.35 | 10.0 | 4.8 | 13/16 | 20.63 | 7/8 | 22.22 | 9/16 | 14.28 | 22.7 | 15.1 | 21.6 | 17.4 | 25.9 | 24.5 | 35.9 | 31.7 |
| URRT-0806 | 1/2 | 12.7 | 3/8 | 9.52 | 10.0 | 7.0 | 13/16 | 20.63 | 7/8 | 22.22 | 11/16 | 17.46 | 22.7 | 16.7 | 21.6 | 18.9 | 25.9 | 25.9 | 35.9 | 33.2 |
| URRT-1006 | 5/8 | 15.87 | 3/8 | 9.52 | 12.0 | 7.0 | 1 | 25.40 | 1 | 25.40 | 11/16 | 17.46 | 24.5 | 16.7 | 22.0 | 18.9 | 28.7 | 28.7 | 38.9 | 36.0 |
| URRT-1206 | 3/4 | 19.05 | 3/8 | 9.52 | 16.0 | 7.0 | 1-1/16 | 26.98 | 1-1/8 | 28.57 | 11/16 | 17.46 | 24.4 | 16.7 | 21.9 | 18.9 | 29.7 | 29.7 | 39.9 | 37.0 |
| URRT-1208 | 3/4 | 19.05 | 1/2 | 12.7 | 16.0 | 10.0 | 1-1/16 | 26.98 | 1-1/8 | 28.57 | 7/8 | 22.22 | 24.4 | 22.7 | 21.9 | 21.6 | 29.7 | 29.7 | 39.8 | 39.7 |
| URRT-1608 | 1 | 25.4 | 1/2 | 12.7 | 22.0 | 10.0 | 1-3/8 | 34.92 | 1-1/2 | 38.10 | 7/8 | 22.22 | 31.1 | 22.7 | 26.1 | 21.6 | 36.5 | 34.6 | 48.6 | 44.6 |
| URRT-1612 | 1 | 25.4 | 3/4 | 19.05 | 22.0 | 16.0 | 1-3/8 | 34.92 | 1-1/2 | 38.10 | 1-1/8 | 28.57 | 31.1 | 24.4 | 26.1 | 21.9 | 36.8 | 34.6 | 49.0 | 44.7 |

Dimensions are for reference only and are subject to change without prior notice.
E is minimum opening. F, G and L are typical finger tight.

Union Cross UUC



Connects Fractional(Inch) Tube

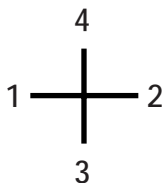
| Part No. | Tube OD T | | Dimensions (mm) | | | | | | | | |
|----------|--------------|-------|-----------------|--------|-------|-------|-------|------|------|------|------|
| | inch | mm | E Min. | h | | H | | F | G | I | L |
| | | | | inch | mm | inch | mm | | | | |
| UUC-02 | 1/8 | 3.17 | 2.3 | 1/2 | 12.70 | 7/16 | 11.11 | 12.8 | 15.4 | 17.6 | 24.4 |
| UUC-03 | 3/16 | 4.76 | 3.0 | 1/2 | 12.70 | 1/2 | 12.70 | 14.0 | 16.4 | 17.8 | 24.7 |
| UUC-04 | 1/4 | 6.35 | 4.8 | 1/2 | 12.70 | 9/16 | 14.28 | 15.1 | 17.4 | 19.6 | 26.8 |
| UUC-05 | 5/16 | 7.93 | 6.4 | 5/8 | 15.87 | 5/8 | 15.87 | 16.6 | 18.8 | 22.6 | 30.3 |
| UUC-06 | 3/8 | 9.52 | 7.0 | 5/8 | 15.87 | 11/16 | 17.46 | 16.7 | 18.9 | 23.1 | 30.4 |
| UUC-08 | 1/2 | 12.7 | 10.0 | 13/16 | 20.63 | 7/8 | 22.22 | 22.7 | 21.6 | 25.9 | 35.9 |
| UUC-10 | 5/8 | 15.87 | 12.0 | 13/16 | 20.63 | 1 | 25.40 | 24.5 | 22.0 | 28.7 | 38.9 |
| UUC-12 | 3/4 | 19.05 | 12.0 | 1-1/16 | 26.98 | 1-1/8 | 28.57 | 24.4 | 21.9 | 29.7 | 39.8 |
| UUC-14 | 7/8 | 22.22 | 18.0 | 1-3/16 | 30.16 | 1-1/4 | 31.75 | 26.0 | 22.0 | 34.5 | 44.7 |
| UUC-16 | 1 | 25.4 | 22.0 | 1-3/8 | 34.92 | 1-1/2 | 38.10 | 31.1 | 26.1 | 36.8 | 48.9 |

Connects Metric Tube

| Part No. | Tube OD T | Dimensions (mm) | | | | | | | |
|----------|--------------|-----------------|---------|---------|------|------|------|------|--|
| | mm | E Min. | h mm | H mm | F | G | I | L | |
| UUC-M03 | 3 | 2.3 | 12.70 | 11.11 | 12.7 | 15.3 | 17.6 | 24.3 | |
| UUC-M06 | 6 | 4.8 | 12.70 | 14.28 | 15.3 | 17.6 | 16.9 | 26.3 | |
| UUC-M08 | 8 | 6.4 | 15.87 | 15.87 | 16.3 | 18.7 | 22.4 | 29.9 | |
| UUC-M10 | 10 | 8.0 | 20.63 | 19.05 | 17.3 | 19.5 | 25.9 | 33.6 | |
| UUC-M12 | 12 | 9.5 | 20.63 | 22.22 | 22.8 | 21.7 | 25.9 | 36.0 | |
| UUC-M16 | 16 | 12.0 | 26.98 | 25.40 | 24.5 | 22.0 | 29.7 | 39.9 | |
| UUC-M18 | 18 | 16.0 | 26.98 | 30.16 | 24.5 | 22.0 | 29.7 | 39.9 | |
| UUC-M20 | 20 | 16.0 | 34.92 | 31.75 | 26.2 | 22.1 | 36.3 | 46.6 | |
| UUC-M22 | 22 | 18.0 | 34.92 | 31.75 | 26.2 | 22.1 | 36.3 | 46.6 | |
| UUC-M25 | 25 | 22.0 | 34.92 | 38.10 | 31.1 | 26.1 | 36.8 | 48.9 | |

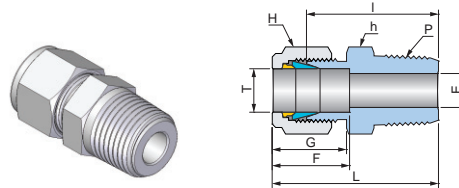
Part Numbers of Tee & Cross

Firstly, indicate the size of 1 to 2 as run.
Secondly, indicate the size of 3 to 4 as branch.
(3 for Tee and Cross, 4 for Cross only.)



Dimensions are for reference only and are subject to change without prior notice.
E is minimum opening. F, G and L are typical finger tight.

Male Connector
UMC



Connects Fractional(Inch) Tube to Female NPT Thread

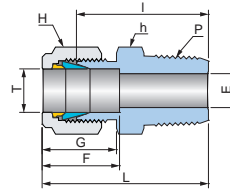
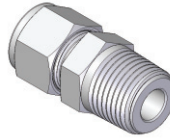
| Part No. | Tube OD | | P NPT | Dimensions (mm) | | | | | | | | |
|-----------|-----------|-------|----------|-----------------|--------|-------|-------|-------|------|------|------|-------|
| | T inch | mm | | E Min. | h | | H | | F | G | I | L |
| | | | | | inch | mm | inch | mm | | | | |
| UMC-0101N | 1/16 | 1.58 | 1/16 | 1.3 | 5/16 | 7.93 | 5/16 | 7.93 | 9.0 | 11.1 | 20.0 | 24.0 |
| UMC-0102N | 1/16 | 1.58 | 1/8 | 1.3 | 7/16 | 11.10 | 5/16 | 7.93 | 9.0 | 11.1 | 22.4 | 26.4 |
| UMC-0104N | 1/16 | 1.58 | 1/4 | 1.3 | 9/16 | 14.28 | 5/16 | 7.93 | 9.0 | 11.1 | 27.5 | 31.5 |
| UMC-0201N | 1/8 | 3.17 | 1/16 | 2.3 | 7/16 | 11.10 | 7/16 | 11.10 | 12.7 | 15.4 | 23.1 | 29.9 |
| UMC-0202N | 1/8 | 3.17 | 1/8 | 2.3 | 7/16 | 11.10 | 7/16 | 11.10 | 12.7 | 15.4 | 23.9 | 30.7 |
| UMC-0204N | 1/8 | 3.17 | 1/4 | 2.3 | 9/16 | 14.28 | 7/16 | 11.10 | 12.7 | 15.4 | 29.0 | 35.8 |
| UMC-0206N | 1/8 | 3.17 | 3/8 | 2.3 | 11/16 | 17.46 | 7/16 | 11.10 | 12.7 | 15.4 | 29.2 | 36.0 |
| UMC-0208N | 1/8 | 3.17 | 1/2 | 2.3 | 7/8 | 22.22 | 7/16 | 11.10 | 12.7 | 15.4 | 35.6 | 42.4 |
| UMC-0302N | 3/16 | 4.76 | 1/8 | 3.0 | 7/16 | 11.10 | 1/2 | 12.70 | 14.0 | 16.4 | 24.7 | 31.6 |
| UMC-0304N | 3/16 | 4.76 | 1/4 | 3.0 | 9/16 | 14.28 | 1/2 | 12.70 | 14.0 | 16.4 | 29.7 | 36.6 |
| UMC-0401N | 1/4 | 6.35 | 1/16 | 4.8 | 1/2 | 12.70 | 9/16 | 14.28 | 15.1 | 17.4 | 25.4 | 32.6 |
| UMC-0402N | 1/4 | 6.35 | 1/8 | 4.8 | 1/2 | 12.70 | 9/16 | 14.28 | 15.1 | 17.4 | 25.4 | 32.6 |
| UMC-0404N | 1/4 | 6.35 | 1/4 | 4.8 | 9/16 | 14.28 | 9/16 | 14.28 | 15.1 | 17.4 | 30.5 | 37.7 |
| UMC-0406N | 1/4 | 6.35 | 3/8 | 4.8 | 11/16 | 17.46 | 9/16 | 14.28 | 15.1 | 17.4 | 31.0 | 38.2 |
| UMC-0408N | 1/4 | 6.35 | 1/2 | 4.8 | 7/8 | 22.22 | 9/16 | 14.28 | 15.1 | 17.4 | 37.4 | 44.6 |
| UMC-0412N | 1/4 | 6.35 | 3/4 | 4.8 | 1-1/16 | 26.98 | 9/16 | 14.28 | 15.1 | 17.4 | 38.9 | 46.1 |
| UMC-0502N | 5/16 | 7.93 | 1/8 | 4.8 | 9/16 | 14.28 | 5/8 | 15.87 | 16.6 | 18.8 | 26.7 | 34.4 |
| UMC-0504N | 5/16 | 7.93 | 1/4 | 6.4 | 9/16 | 14.28 | 5/8 | 15.87 | 16.6 | 18.8 | 31.3 | 39.0 |
| UMC-0506N | 5/16 | 7.93 | 3/8 | 6.4 | 11/16 | 17.46 | 5/8 | 15.87 | 16.6 | 18.8 | 31.8 | 39.5 |
| UMC-0602N | 3/8 | 9.52 | 1/8 | 4.8 | 5/8 | 15.87 | 11/16 | 17.46 | 16.7 | 18.9 | 28.0 | 35.3 |
| UMC-0604N | 3/8 | 9.52 | 1/4 | 7.0 | 5/8 | 15.87 | 11/16 | 17.46 | 16.7 | 18.9 | 32.5 | 39.8 |
| UMC-0606N | 3/8 | 9.52 | 3/8 | 7.0 | 11/16 | 17.46 | 11/16 | 17.46 | 16.7 | 18.9 | 32.5 | 39.8 |
| UMC-0608N | 3/8 | 9.52 | 1/2 | 7.0 | 7/8 | 22.22 | 11/16 | 17.46 | 16.7 | 18.9 | 38.9 | 46.2 |
| UMC-0612N | 3/8 | 9.52 | 3/4 | 7.0 | 1-1/16 | 26.98 | 11/16 | 17.46 | 16.7 | 18.9 | 40.4 | 47.7 |
| UMC-0616N | 3/8 | 9.52 | 1 | 7.0 | 1-3/8 | 34.92 | 11/16 | 17.46 | 16.7 | 18.9 | 47.0 | 54.3 |
| UMC-0802N | 1/2 | 12.70 | 1/8 | 4.8 | 13/16 | 20.63 | 7/8 | 22.22 | 22.7 | 21.6 | 28.7 | 38.7 |
| UMC-0804N | 1/2 | 12.70 | 1/4 | 7.0 | 13/16 | 20.63 | 7/8 | 22.22 | 22.7 | 21.6 | 33.3 | 43.3 |
| UMC-0806N | 1/2 | 12.70 | 3/8 | 10.0 | 13/16 | 20.63 | 7/8 | 22.22 | 22.7 | 21.6 | 33.3 | 43.3 |
| UMC-0808N | 1/2 | 12.70 | 1/2 | 10.0 | 7/8 | 22.22 | 7/8 | 22.22 | 22.7 | 21.6 | 38.9 | 48.9 |
| UMC-0812N | 1/2 | 12.70 | 3/4 | 10.0 | 1-1/16 | 26.98 | 7/8 | 22.22 | 22.7 | 21.6 | 40.4 | 50.4 |
| UMC-0816N | 1/2 | 12.70 | 1 | 10.0 | 1-3/8 | 34.92 | 7/8 | 22.22 | 22.7 | 21.6 | 47.0 | 57.0 |
| UMC-1006N | 5/8 | 15.87 | 3/8 | 10.0 | 15/16 | 23.81 | 1 | 25.40 | 24.5 | 22.0 | 34.0 | 44.2 |
| UMC-1008N | 5/8 | 15.87 | 1/2 | 12.0 | 15/16 | 23.81 | 1 | 25.40 | 24.5 | 22.0 | 38.9 | 49.1 |
| UMC-1012N | 5/8 | 15.87 | 3/4 | 12.0 | 1-1/16 | 26.98 | 1 | 25.40 | 24.5 | 22.0 | 40.4 | 50.6 |
| UMC-1206N | 3/4 | 19.05 | 3/8 | 10.0 | 1-1/16 | 26.98 | 1-1/8 | 28.57 | 24.4 | 21.9 | 35.4 | 45.5 |
| UMC-1208N | 3/4 | 19.05 | 1/2 | 12.0 | 1-1/16 | 26.98 | 1-1/8 | 28.57 | 24.4 | 21.9 | 40.4 | 50.5 |
| UMC-1212N | 3/4 | 19.05 | 3/4 | 16.0 | 1-1/16 | 26.98 | 1-1/8 | 28.57 | 24.4 | 21.9 | 40.4 | 50.5 |
| UMC-1216N | 3/4 | 19.05 | 1 | 16.0 | 1-3/8 | 34.92 | 1-1/8 | 28.57 | 24.4 | 21.9 | 47.0 | 57.1 |
| UMC-1412N | 7/8 | 22.22 | 3/4 | 16.0 | 1-1/4 | 30.16 | 1-1/4 | 31.75 | 26.0 | 22.0 | 40.4 | 50.6 |
| UMC-1416N | 7/8 | 22.22 | 1 | 18.0 | 1-3/8 | 34.92 | 1-1/4 | 31.75 | 26.0 | 22.0 | 47.0 | 57.2 |
| UMC-1608N | 1 | 25.40 | 1/2 | 22.0 | 1-3/8 | 34.92 | 1-1/2 | 38.10 | 31.1 | 26.1 | 45.2 | 57.3 |
| UMC-1612N | 1 | 25.40 | 3/4 | 22.0 | 1-3/8 | 34.92 | 1-1/2 | 38.10 | 31.1 | 26.1 | 45.2 | 57.3 |
| UMC-1616N | 1 | 25.40 | 1 | 22.0 | 1-3/8 | 34.92 | 1-1/2 | 38.10 | 31.1 | 26.1 | 50.0 | 62.1 |
| UMC-2016N | 1-1/4 | 31.75 | 1 | 22.0 | 1-3/4 | 44.44 | 1-7/8 | 47.63 | 41.0 | 39.0 | 55.1 | 76.9 |
| UMC-2020N | 1-1/4 | 31.75 | 1-1/4 | 27.0 | 1-3/4 | 44.44 | 1-7/8 | 47.63 | 41.0 | 39.0 | 55.1 | 76.9 |
| UMC-2424N | 1-1/2 | 38.10 | 1-1/2 | 34.0 | 2-1/8 | 53.97 | 2-1/4 | 57.15 | 50.1 | 45.3 | 61.7 | 89.0 |
| UMC-3232N | 2 | 50.80 | 2 | 46.0 | 2-3/4 | 69.85 | 3 | 76.20 | 69.1 | 63.5 | 76.2 | 114.3 |

ISO Tapered threads are available for all fractional UMC. To order, add "R" as a suffix instead of "N".

Dimensions are for reference only and are subject to change without prior notice.

E is minimum opening. F, G and L are typical finger tight.

Male Connector
UMC



Connects Metric Tube to Female ISO Tapered Thread

| Part No. | Tube OD T mm | P ISO7/1 | Dimensions (mm) | | | | | | |
|------------|--------------------|-------------|-----------------|---------|---------|------|------|------|------|
| | | | E Min. | h mm | H mm | F | G | I | L |
| UMC-M0202R | 2 | 1/8 | 1.7 | 11.11 | 11.11 | 12.8 | 15.1 | 23.9 | 30.4 |
| UMC-M0302R | 3 | 1/8 | 2.3 | 11.11 | 11.11 | 12.7 | 15.3 | 23.9 | 30.6 |
| UMC-M0304R | 3 | 1/4 | 2.3 | 14.28 | 11.11 | 12.7 | 15.3 | 29.0 | 35.7 |
| UMC-M0402R | 4 | 1/8 | 2.3 | 11.11 | 12.70 | 13.7 | 16.1 | 24.6 | 31.1 |
| UMC-M0404R | 4 | 1/4 | 2.3 | 14.28 | 12.70 | 13.7 | 16.1 | 29.7 | 36.2 |
| UMC-M0602R | 6 | 1/8 | 4.8 | 12.70 | 14.28 | 15.3 | 17.6 | 25.4 | 32.8 |
| UMC-M0604R | 6 | 1/4 | 4.8 | 14.28 | 14.28 | 15.3 | 17.6 | 30.5 | 37.9 |
| UMC-M0606R | 6 | 3/8 | 4.8 | 17.46 | 14.28 | 15.3 | 17.6 | 31.0 | 38.4 |
| UMC-M0608R | 6 | 1/2 | 4.8 | 22.22 | 14.28 | 15.3 | 17.6 | 37.4 | 44.8 |
| UMC-M0802R | 8 | 1/8 | 4.8 | 14.28 | 15.87 | 16.3 | 18.7 | 26.7 | 34.3 |
| UMC-M0804R | 8 | 1/4 | 6.4 | 14.28 | 15.87 | 16.3 | 18.7 | 31.3 | 38.8 |
| UMC-M0806R | 8 | 3/8 | 6.4 | 17.46 | 15.87 | 16.3 | 18.7 | 31.8 | 39.3 |
| UMC-M0808R | 8 | 1/2 | 6.4 | 22.22 | 15.87 | 16.3 | 18.7 | 38.1 | 45.6 |
| UMC-M1002R | 10 | 1/8 | 4.8 | 17.46 | 19.05 | 17.3 | 19.5 | 28.7 | 36.4 |
| UMC-M1004R | 10 | 1/4 | 7.0 | 17.46 | 19.05 | 17.3 | 19.5 | 33.3 | 41.0 |
| UMC-M1006R | 10 | 3/8 | 8.0 | 17.46 | 19.05 | 17.3 | 19.5 | 33.3 | 41.0 |
| UMC-M1008R | 10 | 1/2 | 8.0 | 22.22 | 19.05 | 17.3 | 19.5 | 38.9 | 46.6 |
| UMC-M1202R | 12 | 1/8 | 4.8 | 20.63 | 22.22 | 22.8 | 21.7 | 28.7 | 38.8 |
| UMC-M1204R | 12 | 1/4 | 7.0 | 20.63 | 22.22 | 22.8 | 21.7 | 33.3 | 43.4 |
| UMC-M1206R | 12 | 3/8 | 9.5 | 20.63 | 22.22 | 22.8 | 21.7 | 33.3 | 43.4 |
| UMC-M1208R | 12 | 1/2 | 9.5 | 22.22 | 22.22 | 22.8 | 21.7 | 38.9 | 49.0 |
| UMC-M1212R | 12 | 3/4 | 9.5 | 26.98 | 22.22 | 22.8 | 21.7 | 38.9 | 49.0 |
| UMC-M1404R | 14 | 1/4 | 7.0 | 22.22 | 23.81 | 24.8 | 22.3 | 34.0 | 44.4 |
| UMC-M1406R | 14 | 3/8 | 10.0 | 22.22 | 23.81 | 24.8 | 22.3 | 33.3 | 43.8 |
| UMC-M1408R | 14 | 1/2 | 12.0 | 23.81 | 23.81 | 24.8 | 22.3 | 38.9 | 49.4 |
| UMC-M1508R | 15 | 1/2 | 12.0 | 23.81 | 25.40 | 24.4 | 22.0 | 38.9 | 49.0 |
| UMC-M1606R | 16 | 3/8 | 10.0 | 23.81 | 25.40 | 24.5 | 22.0 | 34.0 | 44.2 |
| UMC-M1608R | 16 | 1/2 | 12.0 | 23.81 | 25.40 | 24.5 | 22.0 | 38.9 | 49.1 |
| UMC-M1612R | 16 | 3/4 | 12.0 | 26.98 | 25.40 | 24.5 | 22.0 | 38.9 | 49.1 |
| UMC-M1808R | 18 | 1/2 | 12.0 | 26.98 | 30.16 | 24.5 | 22.0 | 40.4 | 50.9 |
| UMC-M1812R | 18 | 3/4 | 16.0 | 26.98 | 30.16 | 24.5 | 22.0 | 40.4 | 50.9 |
| UMC-M2008R | 20 | 1/2 | 12.0 | 30.16 | 31.75 | 26.2 | 22.1 | 42.2 | 52.5 |
| UMC-M2012R | 20 | 3/4 | 16.0 | 30.16 | 31.75 | 26.2 | 22.1 | 42.2 | 52.5 |
| UMC-M2208R | 22 | 1/2 | 12.0 | 30.16 | 31.75 | 26.2 | 22.1 | 42.2 | 52.5 |
| UMC-M2212R | 22 | 3/4 | 16.0 | 30.16 | 31.75 | 26.2 | 22.1 | 42.2 | 52.5 |
| UMC-M2508R | 25 | 1/2 | 12.0 | 34.92 | 38.10 | 31.1 | 26.1 | 45.2 | 57.3 |
| UMC-M2512R | 25 | 3/4 | 16.0 | 34.92 | 38.10 | 31.1 | 26.1 | 45.2 | 57.3 |
| UMC-M2516R | 25 | 1 | 22.0 | 34.92 | 38.10 | 31.1 | 26.1 | 50.0 | 62.1 |
| UMC-M2816R | 28 | 1 | 22.0 | 41.27 | 47.63 | 41.1 | 38.8 | 51.6 | 73.7 |
| UMC-M2820R | 28 | 1-1/4 | 22.0 | 44.45 | 47.63 | 41.1 | 38.8 | 53.2 | 75.3 |
| UMC-M3020R | 30 | 1-1/4 | 26.0 | 46.04 | 47.50 | 41.1 | 38.8 | 53.2 | 75.3 |
| UMC-M3220R | 32 | 1-1/4 | 27.0 | 46.04 | 50.80 | 40.9 | 38.6 | 56.6 | 79.0 |
| UMC-M3824R | 38 | 1-1/2 | 33.0 | 55.56 | 57.15 | 49.9 | 45.1 | 64.0 | 91.1 |

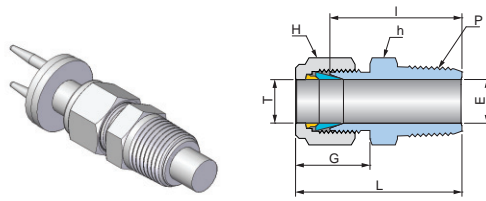
NPT threads are available for all metric UMC. To order, add "N" as a suffix instead of "R".

Dimensions are for reference only and are subject to change without prior notice.
E is minimum opening. F, G and L are typical finger tight.

Tube to Male Pipe

Thermocouple
Male Connector

UTMC



Connects Fractional(Inch) Tube to Female NPT Thread

| Part No. | Tube OD T | | P NPT | Dimensions (mm) | | | | | | | |
|------------|--------------|-------|----------|-----------------|--------|-------|-------|-------|------|------|------|
| | inch | mm | | E Min. | h | | H | | G | I | L |
| | | | | | inch | mm | inch | mm | | | |
| UTMC-0204N | 1/8 | 3.17 | 1/4 | 3.36 | 9/16 | 14.28 | 7/16 | 11.11 | 15.4 | 29.0 | 35.8 |
| UTMC-0206N | 1/8 | 3.17 | 3/8 | 3.36 | 11/16 | 17.46 | 7/16 | 11.11 | 15.4 | 29.2 | 36.0 |
| UTMC-0406N | 1/4 | 6.35 | 3/8 | 6.53 | 11/16 | 17.46 | 9/16 | 14.28 | 17.4 | 31.0 | 38.2 |
| UTMC-0408N | 1/4 | 6.35 | 1/2 | 6.53 | 7/8 | 22.22 | 9/16 | 14.28 | 17.4 | 37.4 | 44.6 |
| UTMC-0608N | 3/8 | 9.52 | 1/2 | 9.7 | 7/8 | 22.22 | 11/16 | 17.46 | 18.9 | 38.9 | 46.2 |
| UTMC-0812N | 1/2 | 12.70 | 3/4 | 12.88 | 1-1/16 | 26.98 | 7/8 | 22.22 | 21.6 | 40.4 | 50.4 |
| UTMC-0816N | 1/2 | 12.70 | 1 | 12.88 | 1-3/8 | 34.92 | 7/8 | 22.22 | 21.6 | 47.0 | 57.0 |

ISO Tapered threads are available for all fractional UTMC. To order, add "R" as a suffix instead of "N".

Connects Metric Tube to Female ISO Tapered Thread

| Part No. | Tube OD T | P ISO7/1 | Dimensions (mm) | | | | | |
|-------------|--------------|-------------|-----------------|-------|-------|------|------|------|
| | | | E Min. | h | | G | I | L |
| | mm | | | mm | mm | | | |
| UTMC-M0404R | 4 | 1/4 | 4.18 | 14.28 | 12.70 | 16.1 | 29.7 | 36.2 |
| UTMC-M0606R | 6 | 3/8 | 6.18 | 17.46 | 14.28 | 17.6 | 31.0 | 38.4 |
| UTMC-M0608R | 6 | 1/2 | 6.18 | 22.22 | 14.28 | 17.6 | 37.4 | 44.8 |
| UTMC-M0806R | 8 | 3/8 | 8.18 | 17.46 | 15.87 | 18.7 | 31.8 | 39.3 |
| UTMC-M0808R | 8 | 1/2 | 8.18 | 22.22 | 15.87 | 18.7 | 38.1 | 45.6 |
| UTMC-M1008R | 10 | 1/2 | 10.18 | 22.22 | 19.05 | 19.5 | 38.9 | 46.6 |
| UTMC-M1212R | 12 | 3/4 | 12.18 | 26.98 | 22.22 | 21.7 | 38.9 | 49.0 |

NPT threads are available for all metric fractional UTMC. To order, add "N" as a suffix instead of "R".

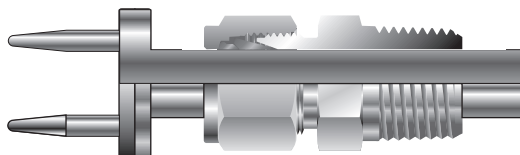
Bored - Through Fittings

Bored-through male connectors handle thermocouples or tip tubes easily.

Most Uni-Lok male connectors can be bored-through fittings.

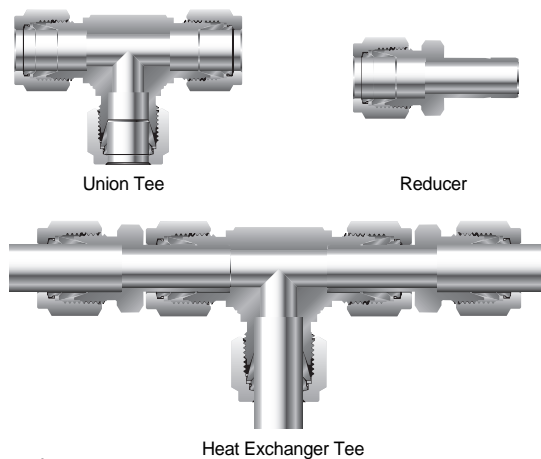
The following fittings are impractical to make bored-through fittings.

- Male connector with small pipe thread end as 1/8"
- Male connectors which tube fitting end is larger than pipe thread end such as 06UMC-02R- or M12UME-04N-



Heat Exchanger Tee

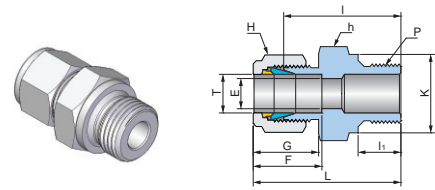
Uni-Lok union tees and reducers can make heat exchange tees.



Dimensions are for reference only and are subject to change without prior notice.
E is minimum opening. F, G and L are typical finger tight.

Male Connector
for Bonded Seal

UMC-G



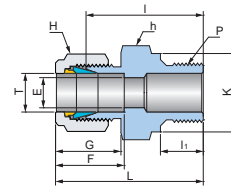
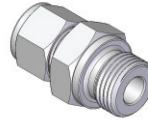
Connects Fractional(Inch) Tube to Female ISO Parallel Thread

| Part No. | Tube OD T | | P ISO 228/1 | Dimensions (mm) | | | | | | | | | | |
|-----------|--------------|-------|-------------------|-----------------|--------|-------|-------|-------|------|------|------|------|------|------|
| | inch | mm | | E Min. | h | | H | | F | G | I | li | L | K |
| | | | | | inch | mm | inch | mm | | | | | | |
| UMC-0202G | 1/8 | 3.17 | 1/8 | 2.3 | 9/16 | 14.28 | 7/16 | 11.11 | 12.8 | 15.4 | 23.4 | 7.1 | 30.2 | 13.8 |
| UMC-0204G | 1/8 | 3.17 | 1/4 | 2.3 | 3/4 | 19.05 | 7/16 | 11.11 | 12.8 | 15.4 | 28.7 | 11.2 | 35.5 | 18.0 |
| UMC-0206G | 1/8 | 3.17 | 3/8 | 2.3 | 7/8 | 22.22 | 7/16 | 11.11 | 12.8 | 15.4 | 29.7 | 11.2 | 36.5 | 21.8 |
| UMC-0402G | 1/4 | 6.35 | 1/8 | 4.8 | 9/16 | 14.28 | 9/16 | 14.28 | 15.1 | 17.4 | 24.9 | 7.1 | 32.1 | 13.8 |
| UMC-0404G | 1/4 | 6.35 | 1/4 | 4.8 | 3/4 | 19.05 | 9/16 | 14.28 | 15.1 | 17.4 | 30.2 | 11.2 | 37.4 | 18.0 |
| UMC-0406G | 1/4 | 6.35 | 3/8 | 4.8 | 7/8 | 22.22 | 9/16 | 14.28 | 15.1 | 17.4 | 31.5 | 11.2 | 38.7 | 21.8 |
| UMC-0408G | 1/4 | 6.35 | 1/2 | 4.8 | 1-1/16 | 26.98 | 9/16 | 14.28 | 15.1 | 17.4 | 37.3 | 14.2 | 44.5 | 26.0 |
| UMC-0604G | 3/8 | 9.52 | 1/4 | 6.0 | 3/4 | 19.05 | 11/16 | 17.46 | 16.7 | 18.9 | 31.8 | 11.2 | 39.1 | 18.0 |
| UMC-0606G | 3/8 | 9.52 | 3/8 | 7.0 | 7/8 | 22.22 | 11/16 | 17.46 | 16.7 | 18.9 | 33.0 | 11.2 | 40.3 | 21.8 |
| UMC-0608G | 3/8 | 9.52 | 1/2 | 7.1 | 1-1/16 | 26.98 | 11/16 | 17.46 | 16.7 | 18.9 | 38.6 | 14.2 | 45.9 | 26.0 |
| UMC-0802G | 1/2 | 12.70 | 1/8 | 10.0 | 7/8 | 22.22 | 7/8 | 22.22 | 22.7 | 21.6 | 28.5 | 7.1 | 38.5 | 13.8 |
| UMC-0804G | 1/2 | 12.70 | 1/4 | 10.0 | 13/16 | 20.63 | 7/8 | 22.22 | 22.7 | 21.6 | 32.5 | 11.2 | 42.5 | 18.0 |
| UMC-0806G | 1/2 | 12.70 | 3/8 | 10.0 | 7/8 | 22.22 | 7/8 | 22.22 | 22.7 | 21.6 | 33.0 | 11.2 | 43.0 | 21.8 |
| UMC-0808G | 1/2 | 12.70 | 1/2 | 10.0 | 1-1/16 | 26.98 | 7/8 | 22.22 | 22.7 | 21.6 | 38.9 | 14.2 | 48.9 | 26.0 |
| UMC-1208G | 3/4 | 19.05 | 1/2 | 16.0 | 1-1/16 | 26.98 | 1-1/8 | 28.57 | 24.4 | 21.9 | 38.9 | 14.2 | 49.0 | 26.0 |
| UMC-1212G | 3/4 | 19.05 | 3/4 | 16.0 | 1-3/8 | 34.92 | 1-1/8 | 28.57 | 24.4 | 21.9 | 42.7 | 15.7 | 52.8 | 32.0 |
| UMC-1612G | 1 | 25.40 | 3/4 | 16.0 | 1-3/8 | 34.92 | 1-1/2 | 38.10 | 31.1 | 26.1 | 45.2 | 15.7 | 57.3 | 32.0 |
| UMC-1616G | 1 | 25.40 | 1 | 22.0 | 1-5/8 | 41.27 | 1-1/2 | 38.10 | 31.1 | 26.1 | 47.8 | 18.3 | 59.9 | 39.0 |

Dimensions are for reference only and are subject to change without prior notice.
E is minimum opening. F, G and L are typical finger tight.

Tube to Male Pipe

Male Connector for Bonded Seal **UMC-G**



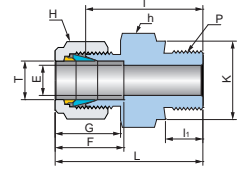
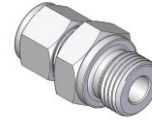
Connects Metric Tube to Female ISO Parallel Thread

| Part No. | Tube OD T mm | P ISO 228/1 | Dimensions (mm) | | | | | | | | |
|------------|--------------------|-------------------|-----------------|---------|---------|------|------|------|----------------|------|------|
| | | | E Min. | h mm | H mm | F | G | I | I ₁ | L | K |
| UMC-M0202G | 2 | 1/8 | 1.7 | 14.28 | 12.70 | 12.8 | 15.1 | 23.4 | 7.1 | 30.0 | 13.8 |
| UMC-M0302G | 3 | 1/8 | 2.4 | 14.28 | 11.11 | 12.7 | 15.3 | 23.4 | 7.1 | 30.1 | 13.8 |
| UMC-M0304G | 3 | 1/4 | 2.3 | 19.05 | 11.11 | 12.7 | 15.3 | 28.7 | 11.2 | 35.4 | 18.0 |
| UMC-M0402G | 4 | 1/8 | 2.3 | 14.28 | 12.70 | 13.7 | 16.1 | 24.1 | 7.1 | 30.6 | 13.8 |
| UMC-M0404G | 4 | 1/4 | 2.3 | 19.05 | 12.70 | 13.7 | 16.1 | 29.4 | 11.2 | 36.0 | 18.0 |
| UMC-M0602G | 6 | 1/8 | 4.8 | 14.28 | 14.28 | 15.3 | 17.6 | 24.9 | 7.1 | 32.3 | 13.8 |
| UMC-M0604G | 6 | 1/4 | 4.8 | 19.05 | 14.28 | 15.3 | 17.6 | 30.2 | 11.2 | 37.6 | 18.0 |
| UMC-M0606G | 6 | 3/8 | 4.8 | 22.22 | 14.28 | 15.3 | 17.6 | 31.5 | 11.2 | 38.9 | 21.8 |
| UMC-M0608G | 6 | 1/2 | 4.8 | 26.98 | 14.28 | 15.3 | 17.6 | 37.3 | 14.2 | 44.7 | 26.0 |
| UMC-M0802G | 8 | 1/8 | 6.4 | 15.87 | 15.87 | 16.3 | 18.7 | 25.7 | 7.1 | 33.3 | 13.8 |
| UMC-M0804G | 8 | 1/4 | 6.4 | 19.05 | 15.87 | 16.3 | 18.7 | 31.0 | 11.2 | 38.6 | 18.0 |
| UMC-M0806G | 8 | 3/8 | 6.4 | 22.22 | 15.87 | 16.3 | 18.7 | 31.8 | 11.2 | 39.4 | 21.8 |
| UMC-M0808G | 8 | 1/2 | 6.4 | 26.98 | 15.87 | 16.3 | 18.7 | 38.1 | 14.2 | 45.7 | 26.0 |
| UMC-M1004G | 10 | 1/4 | 8.0 | 19.05 | 19.05 | 17.3 | 19.5 | 31.8 | 11.2 | 39.5 | 18.0 |
| UMC-M1006G | 10 | 3/8 | 8.0 | 22.22 | 19.05 | 17.3 | 19.5 | 33.0 | 11.2 | 40.7 | 21.8 |
| UMC-M1008G | 10 | 1/2 | 8.0 | 26.98 | 19.05 | 17.3 | 19.5 | 38.9 | 14.2 | 46.6 | 26.0 |
| UMC-M1204G | 12 | 1/4 | 9.5 | 22.22 | 22.22 | 22.8 | 21.7 | 32.5 | 11.2 | 42.6 | 18.0 |
| UMC-M1206G | 12 | 3/8 | 9.5 | 22.22 | 22.22 | 22.8 | 21.7 | 33.0 | 11.2 | 43.1 | 21.8 |
| UMC-M1208G | 12 | 1/2 | 9.5 | 26.98 | 22.22 | 22.8 | 21.7 | 38.7 | 14.2 | 48.8 | 26.0 |
| UMC-M1212G | 12 | 3/4 | 9.5 | 34.92 | 22.22 | 22.8 | 21.7 | 42.7 | 15.7 | 52.8 | 32.0 |
| UMC-M1508G | 15 | 1/2 | 11.9 | 26.98 | 25.40 | 24.4 | 21.9 | 38.9 | 14.2 | 48.9 | 26.0 |
| UMC-M1606G | 16 | 3/8 | 12.0 | 23.81 | 25.40 | 24.5 | 22.0 | 34.0 | 11.2 | 44.2 | 21.8 |
| UMC-M1608G | 16 | 1/2 | 12.0 | 26.98 | 25.40 | 24.5 | 22.0 | 38.9 | 14.2 | 49.1 | 26.0 |
| UMC-M1808G | 18 | 1/2 | 12.0 | 26.98 | 30.16 | 24.5 | 21.9 | 38.9 | 14.2 | 49.1 | 26.0 |
| UMC-M1812G | 18 | 3/4 | 16.0 | 34.92 | 30.16 | 24.5 | 21.9 | 42.7 | 15.7 | 52.9 | 32.0 |
| UMC-M2008G | 20 | 1/2 | 16.0 | 30.16 | 31.75 | 26.2 | 22.1 | 40.4 | 14.2 | 50.7 | 26.0 |
| UMC-M2012G | 20 | 3/4 | 16.0 | 34.92 | 31.75 | 26.2 | 22.1 | 42.7 | 15.7 | 52.9 | 32.0 |
| UMC-M2208G | 22 | 1/2 | 18.0 | 30.16 | 31.75 | 26.2 | 22.1 | 40.4 | 14.2 | 50.7 | 26.0 |
| UMC-M2212G | 22 | 3/4 | 18.0 | 34.92 | 31.75 | 26.2 | 22.1 | 42.7 | 15.7 | 52.9 | 32.0 |
| UMC-M2512G | 25 | 3/4 | 22.0 | 34.92 | 38.10 | 31.1 | 26.1 | 45.2 | 15.7 | 57.3 | 32.0 |
| UMC-M2516G | 25 | 1 | 19.8 | 41.27 | 38.10 | 31.1 | 26.1 | 47.8 | 18.3 | 59.9 | 39.0 |
| UMC-M2816G | 28 | 1 | 22.0 | 44.45 | 47.63 | 41.1 | 38.8 | 49.3 | 18.3 | 71.4 | 39.0 |
| UMC-M2820G | 28 | 1-1/4 | 22.0 | 50.80 | 46.04 | 41.1 | 38.8 | 53.1 | 19.8 | 75.2 | 49.0 |
| UMC-M3220G | 32 | 1-1/4 | 27.0 | 50.80 | 50.80 | 40.9 | 38.6 | 55.9 | 19.8 | 77.8 | 49.0 |
| UMC-M3824G | 38 | 1-1/2 | 33.0 | 55.56 | 60.30 | 49.9 | 45.1 | 63.2 | 22.1 | 90.3 | 54.7 |

Dimensions are for reference only and are subject to change without prior notice.
E is minimum opening. F, G and L are typical finger tight.

Male Connector for
Metal Gasket

UMC-M

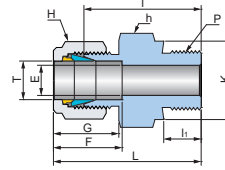
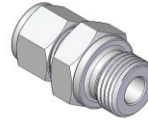


Connects Fractional(Inch) Tube to Female ISO Parallel Thread

| Part No. | Tube OD T | | P ISO 228/1 | Dimensions (mm) | | | | | | | | | | |
|-----------|--------------|-------|-------------------|-----------------|--------|-------|-------|-------|------|------|------|----------------|------|------|
| | inch | mm | | E Min. | h | | H | | F | G | I | I ₁ | L | K |
| | | | | | inch | mm | inch | mm | | | | | | |
| UMC-0202M | 1/8 | 3.17 | 1/8 | 2.3 | 9/16 | 14.28 | 7/16 | 11.11 | 12.8 | 15.4 | 23.4 | 7.1 | 30.2 | 13.8 |
| UMC-0204M | 1/8 | 3.17 | 1/4 | 2.3 | 3/4 | 19.05 | 7/16 | 11.11 | 12.8 | 15.4 | 28.7 | 11.2 | 35.5 | 18.0 |
| UMC-0206M | 1/8 | 3.17 | 3/8 | 2.3 | 7/8 | 22.22 | 7/16 | 11.11 | 12.8 | 15.4 | 29.7 | 11.2 | 36.5 | 21.8 |
| UMC-0402M | 1/4 | 6.35 | 1/8 | 2.3 | 9/16 | 14.28 | 9/16 | 14.28 | 15.1 | 17.4 | 24.9 | 7.1 | 32.1 | 13.8 |
| UMC-0404M | 1/4 | 6.35 | 1/4 | 4.8 | 3/4 | 19.05 | 9/16 | 14.28 | 15.1 | 17.4 | 30.2 | 11.2 | 37.4 | 18.0 |
| UMC-0406M | 1/4 | 6.35 | 3/8 | 4.8 | 7/8 | 22.22 | 9/16 | 14.28 | 15.1 | 17.4 | 31.5 | 12.0 | 38.7 | 22.0 |
| UMC-0408M | 1/4 | 6.35 | 1/2 | 4.8 | 1-1/16 | 26.98 | 9/16 | 14.28 | 15.1 | 17.4 | 37.3 | 14.2 | 44.5 | 25.9 |
| UMC-0604M | 3/8 | 9.52 | 1/4 | 7.0 | 3/4 | 19.05 | 11/16 | 17.46 | 16.7 | 18.9 | 31.8 | 11.2 | 39.1 | 18.0 |
| UMC-0606M | 3/8 | 9.52 | 3/8 | 7.0 | 7/8 | 22.22 | 11/16 | 17.46 | 16.7 | 18.9 | 32.9 | 12.0 | 40.2 | 22.0 |
| UMC-0608M | 3/8 | 9.52 | 1/2 | 7.0 | 1-1/16 | 26.98 | 11/16 | 17.46 | 16.7 | 18.9 | 38.6 | 14.0 | 45.9 | 26.0 |
| UMC-0804M | 1/2 | 12.70 | 1/4 | 7.0 | 13/16 | 20.63 | 7/8 | 22.22 | 22.7 | 21.6 | 32.5 | 11.2 | 42.5 | 18.0 |
| UMC-0806M | 1/2 | 12.70 | 3/8 | 10.0 | 7/8 | 22.22 | 7/8 | 22.22 | 22.7 | 21.6 | 33.0 | 11.2 | 43.0 | 21.8 |
| UMC-0808M | 1/2 | 12.70 | 1/2 | 10.0 | 1-1/16 | 26.98 | 7/8 | 22.22 | 22.7 | 21.6 | 38.9 | 14.0 | 48.9 | 26.0 |
| UMC-1208M | 3/4 | 19.05 | 1/2 | 12.0 | 1-1/16 | 26.98 | 1-1/8 | 28.57 | 24.4 | 21.9 | 38.8 | 14.2 | 49.0 | 25.9 |
| UMC-1212M | 3/4 | 19.05 | 3/4 | 16.0 | 1-5/16 | 33.33 | 1-1/8 | 28.57 | 24.4 | 21.9 | 42.6 | 15.7 | 53.0 | 32.0 |
| UMC-1612M | 1 | 25.40 | 3/4 | 16.0 | 1-3/8 | 34.92 | 1-1/2 | 38.10 | 31.1 | 26.1 | 45.2 | 15.7 | 57.3 | 32.0 |
| UMC-1616M | 1 | 25.40 | 1 | 20.0 | 1-5/8 | 41.27 | 1-1/2 | 38.10 | 31.1 | 26.0 | 47.8 | 18.3 | 59.9 | 39.0 |

Dimensions are for reference only and are subject to change without prior notice.
E is minimum opening. F, G and L are typical finger tight.

Male Connector
for Metal Gasket
UMC-M

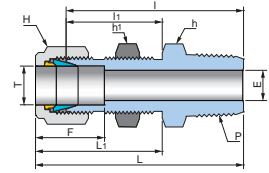
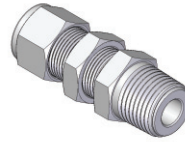


Connects Metric Tube to Female ISO Parallel Thread

| Part No. | Tube OD T mm | P ISO 228/1 | Dimensions (mm) | | | | | | | | |
|------------|--------------------|-------------------|-----------------|---------|---------|------|------|------|----------------|------|------|
| | | | E Min. | h mm | H mm | F | G | I | h _i | L | K |
| UMC-M0302M | 3 | 1/8 | 2.3 | 14.28 | 11.11 | 12.7 | 15.3 | 23.4 | 7.1 | 30.1 | 14.0 |
| UMC-M0304M | 3 | 1/4 | 2.3 | 19.05 | 11.11 | 12.7 | 15.3 | 28.7 | 11.2 | 35.4 | 18.0 |
| UMC-M0402M | 4 | 1/8 | 2.3 | 14.28 | 12.70 | 13.7 | 16.1 | 24.1 | 7.1 | 30.6 | 13.8 |
| UMC-M0404M | 4 | 1/4 | 2.3 | 19.05 | 12.70 | 13.7 | 16.1 | 29.4 | 11.2 | 36.0 | 18.0 |
| UMC-M0602M | 6 | 1/8 | 4.0 | 14.28 | 14.28 | 15.3 | 17.6 | 24.9 | 7.1 | 31.4 | 14.0 |
| UMC-M0604M | 6 | 1/4 | 4.8 | 19.05 | 14.28 | 15.3 | 17.6 | 30.2 | 11.2 | 37.6 | 18.0 |
| UMC-M0606M | 6 | 3/8 | 4.8 | 22.22 | 14.28 | 15.3 | 17.6 | 31.5 | 12.0 | 38.9 | 22.0 |
| UMC-M0608M | 6 | 1/2 | 4.8 | 26.98 | 14.28 | 15.3 | 17.6 | 37.3 | 14.0 | 44.7 | 26.0 |
| UMC-M0802M | 8 | 1/8 | 6.4 | 15.87 | 15.87 | 16.3 | 18.7 | 25.7 | 7.1 | 33.3 | 14.0 |
| UMC-M0804M | 8 | 1/4 | 6.4 | 19.05 | 15.87 | 16.3 | 18.7 | 31.1 | 11.2 | 38.7 | 18.0 |
| UMC-M0806M | 8 | 3/8 | 6.4 | 22.22 | 15.87 | 16.3 | 18.7 | 32.3 | 12.0 | 39.9 | 22.0 |
| UMC-M0808M | 8 | 1/2 | 6.4 | 26.98 | 15.87 | 16.3 | 18.7 | 38.2 | 14.0 | 45.8 | 26.0 |
| UMC-M1004M | 10 | 1/4 | 8.0 | 19.05 | 19.05 | 17.3 | 19.5 | 31.8 | 11.2 | 39.5 | 18.0 |
| UMC-M1006M | 10 | 3/8 | 8.0 | 22.22 | 19.05 | 17.3 | 19.5 | 33.0 | 12.0 | 40.7 | 22.0 |
| UMC-M1008M | 10 | 1/2 | 8.0 | 26.98 | 19.05 | 17.3 | 19.5 | 38.9 | 14.0 | 46.6 | 26.0 |
| UMC-M1204M | 12 | 1/4 | 9.5 | 22.22 | 22.22 | 22.8 | 21.7 | 32.5 | 12.0 | 42.6 | 18.0 |
| UMC-M1206M | 12 | 3/8 | 9.5 | 22.22 | 22.22 | 22.8 | 21.7 | 33.0 | 12.0 | 43.1 | 22.0 |
| UMC-M1208M | 12 | 1/2 | 9.5 | 26.98 | 22.22 | 22.8 | 21.7 | 38.9 | 14.0 | 49.0 | 26.0 |
| UMC-M1212M | 12 | 3/4 | 9.5 | 34.92 | 22.22 | 22.8 | 21.7 | 42.7 | 16.0 | 52.8 | 32.0 |
| UMC-M1408M | 14 | 1/2 | 12.0 | 26.98 | 23.81 | 24.8 | 22.3 | 38.4 | 14.0 | 48.9 | 26.0 |
| UMC-M1508M | 15 | 1/2 | 12.0 | 26.98 | 25.40 | 24.4 | 21.9 | 38.4 | 14.0 | 48.5 | 26.0 |
| UMC-M1606M | 16 | 3/8 | 8.0 | 23.81 | 25.40 | 24.5 | 22.0 | 33.8 | 11.2 | 44.0 | 21.8 |
| UMC-M1608M | 16 | 1/2 | 12.0 | 26.98 | 25.40 | 24.5 | 22.0 | 38.4 | 14.0 | 48.6 | 26.0 |
| UMC-M1808M | 18 | 1/2 | 16.0 | 26.98 | 30.16 | 24.5 | 21.9 | 38.4 | 14.0 | 48.6 | 26.0 |
| UMC-M1812M | 18 | 3/4 | 16.0 | 34.92 | 30.16 | 24.5 | 21.9 | 42.7 | 15.7 | 52.9 | 32.0 |
| UMC-M2008M | 20 | 1/2 | 18.0 | 30.16 | 31.75 | 26.2 | 22.1 | 40.4 | 14.0 | 50.7 | 26.0 |
| UMC-M2012M | 20 | 3/4 | 16.0 | 34.92 | 31.75 | 26.2 | 22.1 | 42.7 | 15.7 | 53.0 | 32.0 |
| UMC-M2212M | 22 | 3/4 | 18.0 | 34.92 | 31.75 | 26.2 | 22.1 | 42.7 | 16.0 | 52.9 | 32.0 |
| UMC-M2512M | 25 | 3/4 | 16.0 | 34.92 | 38.10 | 31.1 | 26.1 | 45.2 | 15.7 | 57.3 | 32.0 |
| UMC-M2516M | 25 | 1 | 20.0 | 41.27 | 38.10 | 31.1 | 26.1 | 47.8 | 18.3 | 60.0 | 39.0 |
| UMC-M2816M | 28 | 1 | 22.0 | 41.27 | 46.04 | 41.1 | 38.8 | 49.3 | 18.3 | 71.4 | 39.0 |
| UMC-M2820M | 28 | 1-1/4 | 22.0 | 50.80 | 47.63 | 41.1 | 38.8 | 53.1 | 20.0 | 75.2 | 49.0 |
| UMC-M3220M | 32 | 1-1/4 | 27.0 | 50.80 | 50.80 | 40.9 | 38.6 | 55.9 | 19.8 | 77.8 | 49.0 |
| UMC-M3824M | 38 | 1-1/2 | 33.1 | 55.56 | 60.30 | 49.9 | 45.1 | 61.7 | 19.8 | 88.8 | 54.7 |

Dimensions are for reference only and are subject to change without prior notice.
E is minimum opening. F, G and L are typical finger tight.

Bulkhead Male Connector
UBMC



Connects Fractional(Inch) Tube to Female NPT Thread

| Part No. | Tube OD T | | P NPT | Dimensions (mm) | | | | | | | | | | | | | |
|------------|--------------|-------|----------|-----------------|--------|-------|----------------|-------|-------|-------|------|------|----------------|------|----------------|-----------------------|---------------------------|
| | inch | mm | | E Min. | h | | h ₁ | | H | | F | I | I ₁ | L | L ₁ | Panel Hole Size | Max Panel Thickness |
| | | | | | inch | mm | inch | mm | inch | mm | | | | | | | |
| UBMC-0202N | 1/8 | 3.17 | 1/8 | 2.3 | 1/2 | 12.70 | 1/2 | 12.7 | 7/16 | 11.11 | 12.8 | 39.9 | 24.6 | 46.7 | 31.4 | 8.3 | 12.7 |
| UBMC-0402N | 1/4 | 6.35 | 1/8 | 4.8 | 5/8 | 15.87 | 5/8 | 15.87 | 9/16 | 14.28 | 15.1 | 42.2 | 26.2 | 49.4 | 33.4 | 11.5 | 10.2 |
| UBMC-0404N | 1/4 | 6.35 | 1/4 | 4.8 | 5/8 | 15.87 | 5/8 | 15.87 | 9/16 | 14.28 | 15.1 | 46.0 | 26.2 | 53.2 | 33.4 | 11.5 | 10.2 |
| UBMC-0604N | 3/8 | 9.52 | 1/4 | 7.0 | 3/4 | 19.05 | 3/4 | 19.05 | 11/16 | 17.46 | 16.7 | 50.0 | 29.5 | 57.3 | 36.8 | 14.7 | 11.2 |
| UBMC-0606N | 3/8 | 9.52 | 3/8 | 7.0 | 3/4 | 19.05 | 3/4 | 19.05 | 11/16 | 17.46 | 16.7 | 49.7 | 29.5 | 57.0 | 36.8 | 14.7 | 11.2 |
| UBMC-0608N | 3/8 | 9.52 | 1/2 | 7.0 | 15/16 | 23.81 | 15/16 | 23.81 | 11/16 | 17.46 | 16.7 | 56.4 | 29.5 | 63.7 | 36.8 | 14.7 | 11.2 |
| UBMC-0806N | 1/2 | 12.70 | 3/8 | 10.0 | 15/16 | 23.81 | 15/16 | 23.81 | 7/8 | 22.22 | 22.7 | 53.1 | 31.8 | 63.1 | 41.8 | 19.5 | 12.7 |
| UBMC-0808N | 1/2 | 12.70 | 1/2 | 10.0 | 15/16 | 23.81 | 15/16 | 23.81 | 7/8 | 22.22 | 22.7 | 58.7 | 31.8 | 68.7 | 41.8 | 19.5 | 12.7 |
| UBMC-1212N | 3/4 | 19.05 | 3/4 | 16.0 | 1-3/16 | 30.16 | 1-3/16 | 30.16 | 1-1/8 | 28.57 | 24.4 | 66.0 | 37.3 | 76.1 | 47.4 | 25.8 | 16.8 |
| UBMC-1616N | 1 | 25.40 | 1 | 22.0 | 1-5/8 | 41.27 | 1-5/8 | 41.27 | 1-1/2 | 38.10 | 31.1 | 81.4 | 45.2 | 93.5 | 57.3 | 33.7 | 19.1 |

ISO Tapered threads are available for all fractional UBMC. To order, add "R" as a suffix instead of "N".

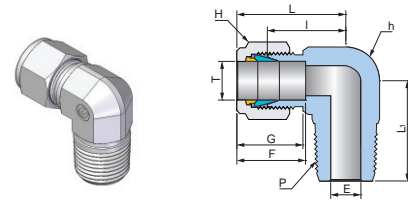
Connects Metric Tube

| Part No. | Tube OD T | | P ISO7/1 | Dimensions (mm) | | | | | | | | | | |
|-------------|--------------|-----|-------------|-----------------|---------|----------------------|---------|------|------|----------------|------|----------------|-----------------------|---------------------------|
| | mm | mm | | E Min. | h mm | h ₁ mm | H mm | F | I | I ₁ | L | L ₁ | Panel Hole Size | Max Panel Thickness |
| | | | | | | | | | | | | | | |
| UBMC-M0602R | 6 | 1/8 | 4.8 | 15.87 | 15.87 | 14.28 | 15.3 | 42.2 | 26.2 | 49.6 | 33.6 | 11.5 | 10.2 | |
| UBMC-M0604R | 6 | 1/4 | 4.8 | 15.87 | 15.87 | 14.28 | 15.3 | 46.0 | 26.2 | 53.4 | 33.6 | 11.5 | 10.2 | |
| UBMC-M0804R | 8 | 1/4 | 6.4 | 17.46 | 17.46 | 15.87 | 16.3 | 49.0 | 28.4 | 56.6 | 35.9 | 13.1 | 11.2 | |
| UBMC-M1004R | 10 | 1/4 | 8.0 | 22.22 | 22.22 | 19.05 | 17.3 | 52.0 | 29.5 | 59.7 | 37.2 | 16.2 | 11.2 | |
| UBMC-M1206R | 12 | 3/8 | 9.5 | 23.81 | 23.81 | 22.22 | 22.8 | 53.1 | 31.8 | 63.2 | 41.9 | 19.5 | 12.7 | |
| UBMC-M1208R | 12 | 1/2 | 9.5 | 23.81 | 23.81 | 22.22 | 22.8 | 58.1 | 31.8 | 68.2 | 41.9 | 19.5 | 12.7 | |

NPT threads are available for all metric UBMC. To order, add "N" as a suffix instead of "R".

Dimensions are for reference only and are subject to change without prior notice.
E is minimum opening. F, G and L are typical finger tight.

Male Elbow
UME



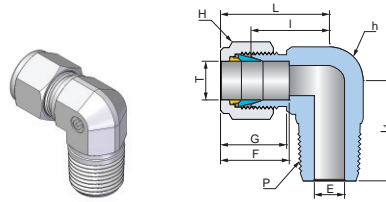
Connects Fractional(Inch) Tube to Female NPT Thread

| Part No. | Tube OD T | | P NPT | Dimensions (mm) | | | | | | | | | |
|-----------|--------------|-------|----------|-----------------|---------|-------|-------|-------|------|------|------|-------|----------------|
| | inch | mm | | E Min. | h | | H | | F | G | I | L | L ₁ |
| | | | | | inch | mm | inch | mm | | | | | |
| UME-0101N | 1/16 | 1.68 | 1/16 | 1.3 | 1/2 | 12.70 | 5/16 | 7.93 | 9.0 | 11.1 | 17.0 | 21.0 | 17.8 |
| UME-0102N | 1/16 | 1.68 | 1/8 | 1.3 | 7/16 | 11.11 | 5/16 | 7.93 | 9.0 | 11.1 | 15.2 | 19.2 | 17.8 |
| UME-0202N | 1/8 | 3.17 | 1/8 | 2.3 | 1/2 | 12.70 | 7/16 | 11.11 | 12.8 | 15.4 | 19.4 | 26.2 | 19.8 |
| UME-0204N | 1/8 | 3.17 | 1/4 | 2.3 | 1/2 | 12.70 | 7/16 | 11.11 | 12.8 | 15.4 | 18.0 | 24.8 | 23.4 |
| UME-0206N | 1/8 | 3.17 | 3/8 | 2.3 | 11/16 | 17.46 | 7/16 | 11.11 | 12.8 | 15.4 | 22.2 | 29.0 | 26.1 |
| UME-0208N | 1/8 | 3.17 | 1/2 | 2.3 | 13/16 | 20.63 | 7/16 | 11.11 | 12.8 | 15.4 | 22.9 | 29.7 | 33.0 |
| UME-0302N | 3/16 | 4.76 | 1/8 | 3.0 | 1/2 | 12.70 | 1/2 | 12.70 | 14.0 | 16.4 | 18.8 | 25.7 | 18.8 |
| UME-0304N | 3/16 | 4.76 | 1/4 | 3.0 | 1/2 | 12.70 | 1/2 | 12.70 | 14.0 | 16.4 | 18.8 | 25.7 | 23.4 |
| UME-0401N | 1/4 | 6.35 | 1/16 | 4.8 | 1/2 | 12.70 | 9/16 | 14.28 | 15.1 | 17.4 | 19.6 | 26.8 | 17.8 |
| UME-0402N | 1/4 | 6.35 | 1/8 | 4.8 | 1/2 | 12.70 | 9/16 | 14.28 | 15.1 | 17.4 | 19.6 | 26.8 | 18.4 |
| UME-0404N | 1/4 | 6.35 | 1/4 | 4.8 | 1/2 | 12.70 | 9/16 | 14.28 | 15.1 | 17.4 | 19.6 | 26.8 | 23.4 |
| UME-0406N | 1/4 | 6.35 | 3/8 | 4.8 | 11/16 | 17.46 | 9/16 | 14.28 | 15.1 | 17.4 | 22.4 | 29.6 | 26.2 |
| UME-0408N | 1/4 | 6.35 | 1/2 | 4.8 | 13/16 | 20.63 | 9/16 | 14.28 | 15.1 | 17.4 | 24.4 | 31.6 | 33.0 |
| UME-0412N | 1/4 | 6.35 | 3/4 | 4.8 | 1-1/16 | 26.98 | 9/16 | 14.28 | 15.1 | 17.4 | 28.3 | 35.5 | 36.8 |
| UME-0502N | 5/16 | 7.93 | 1/8 | 6.4 | 9/16 | 14.28 | 5/8 | 15.87 | 16.6 | 18.8 | 21.3 | 29.0 | 19.8 |
| UME-0504N | 5/16 | 7.93 | 1/4 | 6.4 | 9/16 | 14.28 | 5/8 | 15.87 | 16.6 | 18.8 | 21.3 | 29.0 | 24.6 |
| UME-0506N | 5/16 | 7.93 | 3/8 | 6.4 | 11/16 | 17.46 | 5/8 | 15.87 | 16.6 | 18.8 | 23.1 | 30.8 | 26.2 |
| UME-0602N | 3/8 | 9.52 | 1/8 | 7.0 | 5/8 | 15.87 | 11/16 | 17.46 | 16.7 | 18.9 | 23.1 | 30.4 | 20.8 |
| UME-0604N | 3/8 | 9.52 | 1/4 | 7.0 | 5/8 | 15.87 | 11/16 | 17.46 | 16.7 | 18.9 | 23.1 | 30.4 | 25.4 |
| UME-0606N | 3/8 | 9.52 | 3/8 | 7.0 | 11/16 | 17.46 | 11/16 | 17.46 | 16.7 | 18.9 | 23.9 | 31.2 | 26.2 |
| UME-0608N | 3/8 | 9.52 | 1/2 | 7.0 | 13/16 | 20.63 | 11/16 | 17.46 | 16.7 | 18.9 | 25.9 | 33.2 | 33.0 |
| UME-0612N | 3/8 | 9.52 | 3/4 | 7.0 | 1-1/16 | 26.98 | 11/16 | 17.46 | 16.7 | 18.9 | 29.7 | 37.0 | 36.9 |
| UME-0802N | 1/2 | 12.70 | 1/8 | 10.0 | 13/16 | 20.63 | 7/8 | 22.22 | 22.7 | 21.6 | 25.9 | 35.9 | 23.3 |
| UME-0804N | 1/2 | 12.70 | 1/4 | 10.0 | 13/16 | 20.63 | 7/8 | 22.22 | 22.7 | 21.6 | 25.9 | 35.9 | 28.3 |
| UME-0806N | 1/2 | 12.70 | 3/8 | 10.0 | 13/16 | 20.63 | 7/8 | 22.22 | 22.7 | 21.6 | 25.9 | 35.9 | 28.3 |
| UME-0808N | 1/2 | 12.70 | 1/2 | 10.0 | 13/16 | 20.63 | 7/8 | 22.22 | 22.7 | 21.6 | 25.9 | 35.9 | 33.0 |
| UME-0812N | 1/2 | 12.70 | 3/4 | 10.0 | 1-1/16 | 26.98 | 7/8 | 22.22 | 22.7 | 21.6 | 29.7 | 39.7 | 36.8 |
| UME-0816N | 1/2 | 12.70 | 1 | 10.0 | 1-3/8 | 34.92 | 7/8 | 22.22 | 22.7 | 21.6 | 34.6 | 44.6 | 46.5 |
| UME-1006N | 5/8 | 15.87 | 3/8 | 12.0 | 15/16 | 23.81 | 1 | 25.40 | 24.5 | 22.0 | 26.9 | 37.1 | 30.2 |
| UME-1008N | 5/8 | 15.87 | 1/2 | 12.0 | 15/16 | 23.81 | 1 | 25.40 | 24.5 | 22.0 | 26.9 | 37.1 | 34.1 |
| UME-1012N | 5/8 | 15.87 | 3/4 | 12.0 | 1-1/16 | 26.98 | 1 | 25.40 | 24.5 | 22.0 | 29.7 | 39.9 | 36.9 |
| UME-1206N | 3/4 | 19.05 | 3/8 | 16.0 | 1-1/16 | 26.98 | 1-1/8 | 28.57 | 24.4 | 21.9 | 29.7 | 39.8 | 31.9 |
| UME-1208N | 3/4 | 19.05 | 1/2 | 16.0 | 1-1/16 | 26.98 | 1-1/8 | 28.57 | 24.4 | 21.9 | 29.7 | 39.8 | 36.9 |
| UME-1212N | 3/4 | 19.05 | 3/4 | 16.0 | 1-1/16 | 26.98 | 1-1/8 | 28.57 | 24.4 | 21.9 | 29.7 | 39.8 | 36.9 |
| UME-1216N | 3/4 | 19.05 | 1 | 16.0 | 1-3/8 | 34.92 | 1-1/8 | 28.57 | 24.4 | 21.9 | 34.5 | 44.6 | 46.5 |
| UME-1412N | 7/8 | 22.22 | 3/4 | 16.0 | 1-3/8 | 34.92 | 1-1/4 | 31.75 | 26.0 | 22.0 | 34.5 | 44.7 | 41.7 |
| UME-1608N | 1 | 25.40 | 1/2 | 22.0 | 1-3/8 | 34.92 | 1-1/2 | 38.10 | 31.1 | 26.1 | 36.5 | 48.6 | 41.9 |
| UME-1612N | 1 | 25.40 | 3/4 | 22.0 | 1-3/8 | 34.92 | 1-1/2 | 38.10 | 31.1 | 26.1 | 36.5 | 48.6 | 41.8 |
| UME-1616N | 1 | 25.40 | 1 | 22.0 | 1-3/8 | 34.92 | 1-1/2 | 38.10 | 31.1 | 26.1 | 36.5 | 48.6 | 46.5 |
| UME-2016N | 1-1/4 | 31.75 | 1 | 27.0 | 1-11/16 | 42.86 | 1-7/8 | 47.63 | 40.8 | 38.5 | 44.0 | 65.8 | 51.3 |
| UME-2020N | 1-1/4 | 31.75 | 1-1/4 | 27.0 | 1-11/16 | 42.86 | 1-7/8 | 47.63 | 40.8 | 38.5 | 44.0 | 65.8 | 51.1 |
| UME-2424N | 1-1/2 | 38.10 | 1-1/2 | 34.0 | 2-3/16 | 55.56 | 2-1/4 | 57.15 | 50.1 | 45.3 | 56.4 | 83.7 | 64.6 |
| UME-3232N | 2 | 50.80 | 2 | 46.0 | 2-3/4 | 69.85 | 3 | 76.20 | 69.1 | 63.5 | 69.8 | 107.9 | 70.6 |

ISO Tapered threads are available for all fractional UME. To order, add "R" as a suffix instead of "N".

Dimensions are for reference only and are subject to change without prior notice.
 E is minimum opening. F, G and L are typical finger tight.

Male Elbow
UME



Connects Metric Tube to Female ISO Tapered Thread

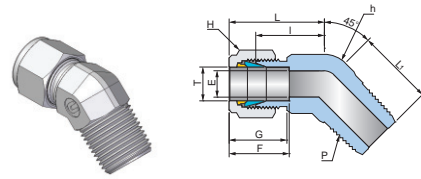
| Part No. | Tube OD T mm | P ISO7/1 | Dimensions (mm) | | | | | | | |
|------------|--------------------|-------------|-----------------|---------|---------|------|------|------|------|----------------|
| | | | E Min. | h mm | H mm | F | G | I | L | L ₁ |
| UME-M0302R | 3 | 1/8 | 2.3 | 12.70 | 11.11 | 12.7 | 15.3 | 17.0 | 23.7 | 17.8 |
| UME-M0304R | 3 | 1/4 | 2.4 | 12.70 | 11.11 | 12.7 | 15.3 | 18.0 | 24.7 | 23.4 |
| UME-M0402R | 4 | 1/8 | 2.3 | 12.70 | 12.70 | 13.7 | 16.1 | 18.9 | 25.4 | 18.4 |
| UME-M0404R | 4 | 1/4 | 2.3 | 12.70 | 12.70 | 13.7 | 16.1 | 18.9 | 25.4 | 23.4 |
| UME-M0602R | 6 | 1/8 | 4.8 | 12.70 | 14.28 | 15.3 | 17.6 | 19.6 | 27.0 | 18.4 |
| UME-M0604R | 6 | 1/4 | 4.8 | 12.70 | 14.28 | 15.3 | 17.6 | 19.6 | 27.0 | 23.4 |
| UME-M0606R | 6 | 3/8 | 4.8 | 17.46 | 14.28 | 15.3 | 17.6 | 22.4 | 29.8 | 26.2 |
| UME-M0608R | 6 | 1/2 | 4.8 | 20.63 | 14.28 | 15.3 | 17.6 | 24.4 | 31.8 | 33.0 |
| UME-M0802R | 8 | 1/8 | 6.4 | 14.28 | 15.87 | 16.3 | 18.7 | 21.7 | 29.3 | 19.8 |
| UME-M0804R | 8 | 1/4 | 6.4 | 14.28 | 15.87 | 16.3 | 18.7 | 21.7 | 29.3 | 24.6 |
| UME-M0806R | 8 | 3/8 | 6.4 | 17.46 | 15.87 | 16.3 | 18.7 | 23.1 | 30.7 | 26.2 |
| UME-M0808R | 8 | 1/2 | 6.4 | 20.63 | 15.87 | 16.3 | 18.7 | 25.4 | 32.9 | 33.0 |
| UME-M1002R | 10 | 1/8 | 8.0 | 17.46 | 19.05 | 17.3 | 19.5 | 23.9 | 31.6 | 21.1 |
| UME-M1004R | 10 | 1/4 | 7.0 | 17.46 | 19.05 | 17.3 | 19.5 | 23.9 | 31.6 | 26.1 |
| UME-M1006R | 10 | 3/8 | 8.0 | 17.46 | 19.05 | 17.3 | 19.5 | 23.9 | 31.6 | 26.1 |
| UME-M1008R | 10 | 1/2 | 8.0 | 20.63 | 19.05 | 17.3 | 19.5 | 25.9 | 33.6 | 33.0 |
| UME-M1202R | 12 | 1/8 | 9.5 | 20.63 | 22.22 | 22.8 | 21.7 | 25.9 | 36.0 | 23.6 |
| UME-M1204R | 12 | 1/4 | 9.5 | 20.63 | 22.22 | 22.8 | 21.7 | 25.9 | 36.0 | 28.2 |
| UME-M1206R | 12 | 3/8 | 9.5 | 20.63 | 22.22 | 22.8 | 21.7 | 25.9 | 36.0 | 28.2 |
| UME-M1208R | 12 | 1/2 | 9.5 | 20.63 | 22.22 | 22.8 | 21.7 | 25.9 | 36.0 | 33.0 |
| UME-M1212R | 12 | 3/4 | 9.5 | 26.98 | 22.22 | 22.8 | 21.7 | 29.7 | 39.8 | 36.8 |
| UME-M1408R | 14 | 1/2 | 12.0 | 23.81 | 23.81 | 24.8 | 22.3 | 26.9 | 37.4 | 34.1 |
| UME-M1508R | 15 | 1/2 | 12.0 | 23.81 | 25.40 | 24.4 | 21.9 | 26.9 | 36.9 | 34.1 |
| UME-M1606R | 16 | 3/8 | 12.0 | 23.81 | 25.40 | 24.5 | 22.0 | 27.8 | 38.0 | 31.5 |
| UME-M1608R | 16 | 1/2 | 12.0 | 23.81 | 25.40 | 24.5 | 22.0 | 26.9 | 37.1 | 34.1 |
| UME-M1612R | 16 | 3/4 | 12.0 | 26.98 | 25.40 | 24.5 | 22.0 | 29.7 | 39.9 | 36.9 |
| UME-M1808R | 18 | 1/2 | 16.0 | 26.98 | 30.16 | 24.5 | 21.9 | 29.7 | 39.9 | 36.9 |
| UME-M1812R | 18 | 3/4 | 16.0 | 26.98 | 30.16 | 24.5 | 21.9 | 29.7 | 39.9 | 36.9 |
| UME-M2008R | 20 | 1/2 | 16.0 | 34.92 | 31.75 | 26.2 | 22.1 | 34.5 | 44.8 | 41.7 |
| UME-M2012R | 20 | 3/4 | 16.0 | 34.92 | 31.75 | 26.2 | 22.1 | 36.8 | 47.1 | 41.9 |
| UME-M2212R | 22 | 3/4 | 16.0 | 34.92 | 31.75 | 26.2 | 22.1 | 34.5 | 44.8 | 41.7 |
| UME-M2512R | 25 | 3/4 | 22.0 | 34.92 | 38.10 | 31.1 | 26.1 | 36.5 | 48.6 | 41.7 |
| UME-M2516R | 25 | 1 | 22.0 | 34.92 | 38.10 | 31.1 | 26.1 | 36.5 | 48.6 | 46.5 |
| UME-M3020R | 30 | 1-1/4 | 26.0 | 46.04 | 49.21 | 41.1 | 38.8 | 48.3 | 70.4 | 53.1 |
| UME-M3220R | 32 | 1-1/4 | 27.0 | 46.04 | 49.21 | 40.9 | 38.6 | 49.3 | 71.2 | 53.1 |
| UME-M3832R | 38 | 1-1/2 | 33.0 | 55.56 | 60.32 | 49.9 | 45.1 | 56.4 | 83.5 | 60.4 |

NPT threads are available for all metric UME. To order, add "N" as a suffix instead of "R".

Dimensions are for reference only and are subject to change without prior notice.
E is minimum opening. F, G and L are typical finger tight.

45° Male Elbow

UMVE



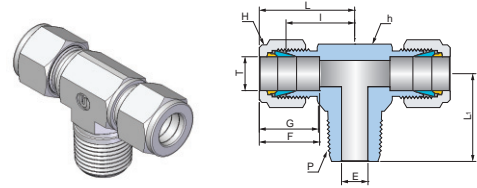
Connects Fractional(Inch) Tube to Female NPT Thread

| Part No. | Tube OD T | | P NPT | Dimensions (mm) | | | | | | | | | |
|------------|--------------|-------|----------|-----------------|-------|-------|-------|-------|------|------|------|------|----------------|
| | inch | mm | | E Min. | h | | H | | F | G | I | L | L ₁ |
| | | | | | inch | mm | inch | mm | | | | | |
| UMVE-0402N | 1/4 | 6.35 | 1/8 | 4.8 | 1/2 | 12.70 | 9/16 | 14.28 | 15.1 | 17.4 | 17.3 | 24.5 | 16.5 |
| UMVE-0404N | 1/4 | 6.35 | 1/4 | 4.8 | 1/2 | 12.70 | 9/16 | 14.28 | 15.1 | 17.4 | 17.3 | 24.5 | 21.0 |
| UMVE-0602N | 3/8 | 9.52 | 1/8 | 4.8 | 5/8 | 15.87 | 11/16 | 17.46 | 16.7 | 18.9 | 20.6 | 27.9 | 18.3 |
| UMVE-0604N | 3/8 | 9.52 | 1/4 | 7.0 | 5/8 | 15.87 | 11/16 | 17.46 | 16.7 | 18.9 | 20.6 | 27.9 | 22.9 |
| UMVE-0606N | 3/8 | 9.52 | 3/8 | 7.0 | 7/8 | 22.22 | 11/16 | 17.46 | 16.7 | 18.9 | 24.6 | 31.9 | 28.0 |
| UMVE-0806N | 1/2 | 12.70 | 3/8 | 10.0 | 7/8 | 22.22 | 7/8 | 22.22 | 22.7 | 21.6 | 24.6 | 34.6 | 28.0 |
| UMVE-0808N | 1/2 | 12.70 | 1/2 | 10.0 | 7/8 | 22.22 | 7/8 | 22.22 | 22.7 | 21.6 | 24.6 | 34.6 | 28.0 |
| UMVE-1212N | 3/4 | 19.05 | 3/4 | 16.0 | 1-1/8 | 28.57 | 1-1/8 | 28.57 | 24.4 | 21.9 | 23.9 | 34.0 | 31.0 |
| UMVE-1616N | 1 | 25.40 | 1 | 22.0 | 1-3/8 | 34.92 | 1-1/2 | 38.10 | 31.1 | 26.1 | 28.2 | 40.3 | 37.8 |

ISO Tapered threads are available for all fractional UMVE. To order, add "R" as a suffix instead of "N".

Dimensions are for reference only and are subject to change without prior notice.
E is minimum opening. F, G and L are typical finger tight.

Male Branch Tee UMBT



Connects Fractional(Inch) Tube to Female NPT Thread

| Part No. | Tube OD T | | P NPT | Dimensions (mm) | | | | | | | | | |
|------------|--------------|-------|----------|-----------------|--------|-------|-------|-------|------|------|------|------|----------------|
| | inch | mm | | E Min. | h | | H | | F | G | I | L | L ₁ |
| | | | | | inch | mm | inch | mm | | | | | |
| UMBT-0202N | 1/8 | 3.17 | 1/8 | 2.3 | 1/2 | 12.70 | 7/16 | 11.11 | 12.8 | 15.4 | 18.0 | 24.8 | 18.0 |
| UMBT-0204N | 1/8 | 3.17 | 1/4 | 2.3 | 1/2 | 12.70 | 7/16 | 11.11 | 12.8 | 15.4 | 18.0 | 24.8 | 23.4 |
| UMBT-0302N | 3/16 | 4.76 | 1/8 | 3.0 | 7/16 | 11.11 | 1/2 | 12.70 | 14.0 | 16.4 | 17.8 | 24.7 | 17.8 |
| UMBT-0402N | 1/4 | 6.35 | 1/8 | 4.8 | 1/2 | 12.70 | 9/16 | 14.28 | 15.1 | 17.4 | 19.6 | 26.8 | 18.4 |
| UMBT-0404N | 1/4 | 6.35 | 1/4 | 4.8 | 1/2 | 12.70 | 9/16 | 14.28 | 15.1 | 17.4 | 19.6 | 26.8 | 23.4 |
| UMBT-0502N | 5/16 | 7.93 | 1/8 | 6.4 | 9/16 | 14.28 | 5/8 | 15.87 | 16.6 | 18.8 | 21.3 | 29.0 | 20.8 |
| UMBT-0604N | 3/8 | 9.52 | 1/4 | 7.0 | 5/8 | 15.87 | 11/16 | 17.46 | 16.7 | 18.9 | 23.1 | 30.4 | 25.4 |
| UMBT-0606N | 3/8 | 9.52 | 3/8 | 7.0 | 11/16 | 15.87 | 11/16 | 17.46 | 16.7 | 18.9 | 23.6 | 30.9 | 26.0 |
| UMBT-0806N | 1/2 | 12.70 | 3/8 | 10.0 | 13/16 | 20.63 | 7/8 | 22.22 | 22.7 | 21.6 | 25.9 | 35.9 | 26.2 |
| UMBT-0808N | 1/2 | 12.70 | 1/2 | 10.0 | 13/16 | 20.63 | 7/8 | 22.22 | 22.7 | 21.6 | 25.6 | 35.6 | 33.0 |
| UMBT-1008N | 5/8 | 15.87 | 1/2 | 12.0 | 1 | 25.40 | 1 | 25.40 | 24.5 | 22.0 | 28.7 | 38.9 | 35.9 |
| UMBT-1212N | 3/4 | 19.05 | 3/4 | 16.0 | 1-1/16 | 26.98 | 1-1/8 | 28.57 | 24.4 | 21.9 | 29.7 | 39.8 | 36.9 |

ISO Tapered threads are available for all fractional UMBT. To order, add "R" as a suffix instead of "N".

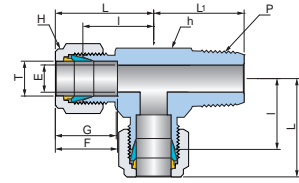
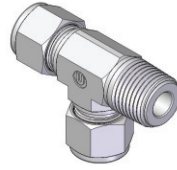
Connects Metric Tube to Female ISO Tapered Thread

| Part No. | Tube OD T | | P ISO7/1 | Dimensions (mm) | | | | | | | |
|-------------|--------------|-----|-------------|-----------------|---------|---------|------|------|------|------|----------------|
| | mm | mm | | E Min. | h mm | H mm | F | G | I | L | L ₁ |
| | | | | | | | | | | | |
| UMBT-M0302R | 3 | 1/8 | 2.3 | 11.11 | 11.11 | 12.7 | 15.3 | 17.0 | 23.7 | 17.8 | |
| UMBT-M0304R | 3 | 1/4 | 2.3 | 12.70 | 11.11 | 12.7 | 15.3 | 18.0 | 24.7 | 23.4 | |
| UMBT-M0402R | 4 | 1/8 | 2.3 | 12.70 | 12.70 | 13.7 | 16.1 | 18.8 | 25.3 | 18.8 | |
| UMBT-M0602R | 6 | 1/8 | 4.8 | 12.70 | 14.28 | 15.3 | 17.6 | 19.6 | 27.0 | 18.4 | |
| UMBT-M0604R | 6 | 1/4 | 4.8 | 12.70 | 14.28 | 15.3 | 17.6 | 19.6 | 27.0 | 23.4 | |
| UMBT-M0802R | 8 | 1/8 | 6.4 | 14.28 | 15.87 | 16.3 | 18.7 | 22.3 | 29.9 | 20.2 | |
| UMBT-M0804R | 8 | 1/4 | 6.4 | 14.28 | 15.87 | 16.3 | 18.7 | 22.3 | 29.9 | 24.6 | |
| UMBT-M1004R | 10 | 1/4 | 8.0 | 17.46 | 19.05 | 17.3 | 19.5 | 23.8 | 31.5 | 26.0 | |
| UMBT-M1006R | 10 | 3/8 | 8.0 | 17.46 | 19.05 | 17.3 | 19.5 | 23.9 | 31.6 | 26.0 | |
| UMBT-M1204R | 12 | 1/4 | 9.5 | 20.63 | 22.22 | 22.8 | 21.7 | 25.9 | 36.0 | 26.2 | |
| UMBT-M1206R | 12 | 3/8 | 10.0 | 20.63 | 22.22 | 22.8 | 21.7 | 25.9 | 36.0 | 28.2 | |
| UMBT-M1208R | 12 | 1/2 | 9.5 | 20.63 | 22.22 | 22.8 | 21.7 | 25.9 | 36.0 | 33.0 | |
| UMBT-M1606R | 16 | 3/8 | 12.0 | 25.40 | 25.40 | 24.5 | 22.0 | 28.7 | 38.9 | 30.9 | |
| UMBT-M1608R | 16 | 1/2 | 12.0 | 25.40 | 25.40 | 24.5 | 22.0 | 28.7 | 38.9 | 35.9 | |
| UMBT-M2012R | 20 | 3/4 | 16.0 | 34.92 | 31.75 | 26.2 | 22.1 | 36.8 | 47.1 | 43.5 | |

NPT threads are available for all metric UMBT. To order, add "N" as a suffix instead of "R".

Dimensions are for reference only and are subject to change without prior notice.
E is minimum opening. F, G and L are typical finger tight.

Male Run Tee UMRT



Connects Fractional Tube to Female NPT Thread

| Part No. | Tube OD T | | P NPT | Dimensions (mm) | | | | | | | | | |
|------------|--------------|-------|----------|-----------------|--------|-------|-------|-------|------|------|------|------|----------------|
| | inch | mm | | E Min. | h | | H | | F | G | I | L | L ₁ |
| | | | | | inch | mm | inch | mm | | | | | |
| UMRT-0202N | 1/8 | 3.17 | 1/8 | 2.3 | 1/2 | 12.70 | 7/16 | 11.11 | 12.8 | 15.4 | 18.0 | 24.8 | 18.4 |
| UMRT-0204N | 1/8 | 3.17 | 1/4 | 2.3 | 1/2 | 12.70 | 7/16 | 11.11 | 12.8 | 15.4 | 18.0 | 24.8 | 23.4 |
| UMRT-0302N | 3/16 | 4.76 | 1/8 | 3.0 | 7/16 | 11.11 | 1/2 | 12.70 | 14.0 | 16.4 | 17.8 | 24.7 | 17.8 |
| UMRT-0402N | 1/4 | 6.35 | 1/8 | 4.8 | 1/2 | 12.70 | 9/16 | 14.28 | 15.1 | 17.4 | 19.6 | 26.8 | 18.4 |
| UMRT-0404N | 1/4 | 6.35 | 1/4 | 4.8 | 1/2 | 12.70 | 9/16 | 14.28 | 15.1 | 17.4 | 19.6 | 26.8 | 23.4 |
| UMRT-0502N | 5/16 | 7.94 | 1/8 | 4.8 | 9/16 | 14.28 | 5/8 | 15.87 | 16.6 | 18.8 | 22.6 | 30.3 | 20.8 |
| UMRT-0604N | 3/8 | 9.52 | 1/4 | 7.0 | 5/8 | 15.87 | 11/16 | 17.46 | 16.7 | 18.9 | 23.1 | 30.4 | 25.4 |
| UMRT-0606N | 3/8 | 9.52 | 3/8 | 7.0 | 11/16 | 17.46 | 11/16 | 17.46 | 16.7 | 18.9 | 23.6 | 30.9 | 26.0 |
| UMRT-0806N | 1/2 | 12.70 | 3/8 | 10.0 | 13/16 | 20.63 | 7/8 | 22.22 | 22.7 | 21.6 | 25.9 | 35.9 | 26.0 |
| UMRT-0808N | 1/2 | 12.70 | 1/2 | 10.0 | 13/16 | 20.63 | 7/8 | 22.22 | 22.7 | 21.6 | 25.9 | 35.9 | 33.0 |
| UMRT-1008N | 5/8 | 15.87 | 1/2 | 12.0 | 1 | 25.40 | 1 | 25.40 | 24.5 | 22.0 | 28.7 | 38.9 | 35.9 |
| UMRT-1212N | 3/4 | 19.05 | 3/4 | 16.0 | 1-1/16 | 26.98 | 1-1/8 | 28.57 | 24.4 | 21.9 | 29.7 | 39.8 | 36.9 |

ISO Tapered threads are available for all fractional UMRT. To order, add "R" as a suffix instead of "N".

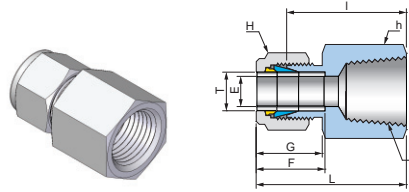
Connects Metric Tube to Female ISO Tapered Thread

| Part No. | Tube OD T | | P ISO7/1 | Dimensions (mm) | | | | | | | |
|-------------|--------------|-----|-------------|-----------------|---------|---------|------|------|------|------|----------------|
| | mm | mm | | E Min. | h mm | H mm | F | G | I | L | L ₁ |
| | | | | | | | | | | | |
| UMRT-M0304R | 3 | 1/4 | 2.3 | 12.70 | 11.11 | 12.7 | 15.3 | 18.0 | 24.7 | 23.4 | |
| UMRT-M0402R | 4 | 1/8 | 2.3 | 11.11 | 12.70 | 13.7 | 16.1 | 18.8 | 25.3 | 18.8 | |
| UMRT-M0602R | 6 | 1/8 | 4.8 | 12.70 | 14.28 | 15.3 | 17.6 | 19.6 | 27.0 | 18.8 | |
| UMRT-M0604R | 6 | 1/4 | 4.8 | 12.70 | 14.28 | 15.3 | 17.6 | 19.6 | 27.0 | 23.4 | |
| UMRT-M0802R | 8 | 1/8 | 4.8 | 14.28 | 15.87 | 16.3 | 18.7 | 21.3 | 28.9 | 19.8 | |
| UMRT-M0804R | 8 | 1/4 | 6.4 | 14.28 | 15.87 | 16.3 | 18.7 | 22.0 | 29.6 | 24.9 | |
| UMRT-M1004R | 10 | 1/4 | 7.0 | 17.46 | 19.05 | 17.3 | 19.5 | 23.9 | 31.6 | 26.0 | |
| UMRT-M1006R | 10 | 3/8 | 8.0 | 17.46 | 19.05 | 17.3 | 19.5 | 23.9 | 31.6 | 28.2 | |
| UMRT-M1204R | 12 | 1/4 | 9.5 | 20.63 | 22.22 | 22.8 | 21.7 | 25.9 | 36.0 | 26.2 | |
| UMRT-M1206R | 12 | 3/8 | 10.0 | 20.63 | 22.22 | 22.8 | 21.7 | 25.9 | 36.0 | 26.0 | |
| UMRT-M1208R | 12 | 1/2 | 9.5 | 20.63 | 22.22 | 22.8 | 21.7 | 25.9 | 36.0 | 33.0 | |
| UMRT-M1606R | 16 | 3/8 | 12.0 | 25.40 | 25.40 | 24.5 | 22.0 | 28.7 | 38.9 | 30.9 | |
| UMRT-M1608R | 16 | 1/2 | 12.0 | 25.40 | 25.40 | 24.5 | 22.0 | 28.7 | 38.9 | 35.9 | |
| UMRT-M2012R | 20 | 3/4 | 16.0 | 31.75 | 31.75 | 26.2 | 22.1 | 34.5 | 44.8 | 41.7 | |

NPT threads are available for all metric UMRT. To order, add "N" as a suffix instead of "R".

Dimensions are for reference only and are subject to change without prior notice.
E is minimum opening. F, G and L are typical finger tight.

Female Connector
UFC



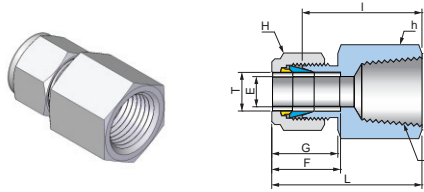
Connects Fractional Tube to Male NPT Thread

| Part No. | Tube OD T | | P NPT | Dimensions (mm) | | | | | | | | |
|-----------|--------------|-------|----------|-----------------|--------|-------|-------|-------|------|------|------|-------|
| | inch | mm | | E Min. | h | | H | | F | G | I | L |
| | | | | | inch | mm | inch | mm | | | | |
| UFC-0202N | 1/8 | 3.17 | 1/8 | 2.3 | 9/16 | 14.28 | 7/16 | 11.11 | 12.8 | 15.4 | 22.1 | 28.9 |
| UFC-0204N | 1/8 | 3.17 | 1/4 | 2.3 | 3/4 | 19.05 | 7/16 | 11.11 | 12.8 | 15.4 | 26.9 | 33.7 |
| UFC-0302N | 3/16 | 4.76 | 1/8 | 3.0 | 9/16 | 14.28 | 1/2 | 12.70 | 14.0 | 16.4 | 23.1 | 30.0 |
| UFC-0402N | 1/4 | 6.35 | 1/8 | 4.8 | 9/16 | 14.28 | 9/16 | 14.28 | 15.1 | 17.4 | 23.8 | 30.9 |
| UFC-0404N | 1/4 | 6.35 | 1/4 | 4.8 | 3/4 | 19.05 | 9/16 | 14.28 | 15.1 | 17.4 | 28.4 | 35.6 |
| UFC-0406N | 1/4 | 6.35 | 3/8 | 4.8 | 7/8 | 22.22 | 9/16 | 14.28 | 15.1 | 17.4 | 30.2 | 37.4 |
| UFC-0408N | 1/4 | 6.35 | 1/2 | 4.8 | 1-1/16 | 26.98 | 9/16 | 14.28 | 15.1 | 17.4 | 35.1 | 42.3 |
| UFC-0502N | 5/16 | 7.93 | 1/8 | 6.4 | 9/16 | 14.28 | 5/8 | 15.87 | 16.6 | 18.8 | 24.6 | 32.3 |
| UFC-0504N | 5/16 | 7.93 | 1/4 | 6.4 | 3/4 | 19.05 | 5/8 | 15.87 | 16.6 | 18.8 | 29.3 | 37.0 |
| UFC-0602N | 3/8 | 9.52 | 1/8 | 7.0 | 5/8 | 15.87 | 11/16 | 17.46 | 16.7 | 18.9 | 25.4 | 32.7 |
| UFC-0604N | 3/8 | 9.52 | 1/4 | 7.0 | 3/4 | 19.05 | 11/16 | 17.46 | 16.7 | 18.9 | 30.2 | 37.5 |
| UFC-0606N | 3/8 | 9.52 | 3/8 | 7.0 | 7/8 | 22.22 | 11/16 | 17.46 | 16.7 | 18.9 | 31.8 | 39.1 |
| UFC-0608N | 3/8 | 9.52 | 1/2 | 7.0 | 1-1/16 | 26.98 | 11/16 | 17.46 | 16.7 | 18.9 | 36.6 | 43.9 |
| UFC-0612N | 3/8 | 9.52 | 3/4 | 7.0 | 1-5/16 | 33.33 | 11/16 | 17.46 | 16.7 | 18.9 | 40.4 | 47.7 |
| UFC-0804N | 1/2 | 12.70 | 1/4 | 10.0 | 13/16 | 20.63 | 7/8 | 22.22 | 22.7 | 21.6 | 30.2 | 40.2 |
| UFC-0806N | 1/2 | 12.70 | 3/8 | 10.0 | 7/8 | 22.22 | 7/8 | 22.22 | 22.7 | 21.6 | 31.8 | 41.8 |
| UFC-0808N | 1/2 | 12.70 | 1/2 | 10.0 | 1-1/16 | 26.98 | 7/8 | 22.22 | 22.7 | 21.6 | 36.6 | 46.6 |
| UFC-0812N | 1/2 | 12.70 | 3/4 | 10.0 | 1-5/16 | 33.33 | 7/8 | 22.22 | 22.7 | 21.6 | 38.1 | 48.1 |
| UFC-1006N | 5/8 | 15.87 | 3/8 | 12.0 | 15/16 | 23.81 | 1 | 25.40 | 24.5 | 22.0 | 31.8 | 42.0 |
| UFC-1008N | 5/8 | 15.87 | 1/2 | 12.0 | 1-1/16 | 26.98 | 1 | 25.40 | 24.5 | 22.0 | 36.8 | 47.0 |
| UFC-1208N | 3/4 | 19.05 | 1/2 | 16.0 | 1-1/16 | 26.98 | 1-1/8 | 28.57 | 24.4 | 21.9 | 36.6 | 46.7 |
| UFC-1212N | 3/4 | 19.05 | 3/4 | 16.0 | 1-5/16 | 33.33 | 1-1/8 | 28.57 | 24.4 | 21.9 | 38.1 | 48.2 |
| UFC-1412N | 7/8 | 22.22 | 3/4 | 18.0 | 1-5/16 | 33.33 | 1-1/4 | 31.75 | 26.0 | 22.0 | 39.6 | 49.8 |
| UFC-1612N | 1 | 25.40 | 3/4 | 22.0 | 1-3/8 | 34.92 | 1-1/2 | 38.10 | 31.1 | 26.1 | 41.1 | 53.2 |
| UFC-1616N | 1 | 25.40 | 1 | 22.0 | 1/5-8 | 41.27 | 1-1/2 | 38.10 | 31.1 | 26.1 | 50.0 | 62.1 |
| UFC-2020N | 1-1/4 | 31.75 | 1-1/4 | 27.0 | 2-1/8 | 53.98 | 1-7/8 | 47.63 | 40.8 | 38.5 | 52.6 | 74.4 |
| UFC-2424N | 1-1/2 | 38.10 | 1-1/2 | 34.0 | 2-3/8 | 60.33 | 2-1/4 | 57.15 | 50.1 | 45.3 | 56.1 | 83.4 |
| UFC-3232N | 2 | 50.80 | 2 | 46.0 | 2-7/8 | 73.03 | 3 | 76.20 | 69.1 | 63.5 | 64.3 | 102.4 |

ISO Tapered threads are available for all fractional UFC. To order, add "R" as a suffix instead of "N".

Dimensions are for reference only and are subject to change without prior notice.
E is minimum opening. F, G and L are typical finger tight.

Female Connector
UFC



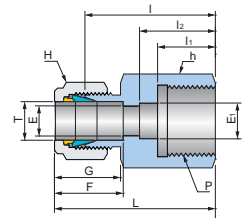
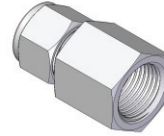
Connects Metric Tube to Male ISO Tapered Thread

| Part No. | Tube OD | P ISO7/1 | Dimensions (mm) | | | | | | |
|------------|---------|-------------|-----------------|---------|---------|------|------|------|------|
| | T mm | | E Min. | h mm | H mm | F | G | I | L |
| UFC-M0302R | 3 | 1/8 | 2.3 | 14.28 | 11.11 | 12.7 | 15.3 | 22.1 | 28.8 |
| UFC-M0304R | 3 | 1/4 | 2.3 | 19.05 | 11.11 | 12.7 | 15.3 | 26.9 | 33.6 |
| UFC-M0402R | 4 | 1/8 | 2.3 | 14.28 | 12.70 | 13.7 | 16.1 | 23.1 | 26.9 |
| UFC-M0602R | 6 | 1/8 | 4.8 | 14.28 | 14.28 | 15.3 | 17.6 | 23.8 | 31.2 |
| UFC-M0604R | 6 | 1/4 | 4.8 | 19.05 | 14.28 | 15.3 | 17.6 | 28.4 | 35.8 |
| UFC-M0606R | 6 | 3/8 | 4.8 | 22.22 | 14.28 | 15.3 | 17.6 | 29.5 | 36.9 |
| UFC-M0608R | 6 | 1/2 | 4.8 | 26.98 | 14.28 | 15.3 | 17.6 | 35.0 | 42.4 |
| UFC-M0802R | 8 | 1/8 | 6.4 | 14.28 | 15.87 | 16.3 | 18.7 | 24.6 | 32.2 |
| UFC-M0804R | 8 | 1/4 | 6.4 | 19.05 | 15.87 | 16.3 | 18.7 | 29.5 | 37.1 |
| UFC-M0806R | 8 | 3/8 | 6.4 | 22.22 | 15.87 | 16.3 | 18.7 | 30.2 | 37.8 |
| UFC-M0808R | 8 | 1/2 | 6.4 | 26.98 | 15.87 | 16.3 | 18.7 | 35.8 | 43.4 |
| UFC-M1002R | 10 | 1/8 | 8.0 | 17.46 | 19.05 | 17.3 | 19.5 | 25.4 | 33.1 |
| UFC-M1004R | 10 | 1/4 | 8.0 | 19.05 | 19.05 | 17.3 | 19.5 | 30.2 | 37.9 |
| UFC-M1006R | 10 | 3/8 | 8.0 | 22.22 | 19.05 | 17.3 | 19.5 | 31.0 | 38.7 |
| UFC-M1008R | 10 | 1/2 | 8.0 | 26.98 | 19.05 | 17.3 | 19.5 | 36.6 | 44.3 |
| UFC-M1202R | 12 | 1/8 | 8.0 | 22.22 | 22.22 | 22.8 | 21.7 | 28.4 | 38.5 |
| UFC-M1204R | 12 | 1/4 | 9.5 | 22.22 | 22.22 | 22.8 | 21.7 | 30.2 | 40.3 |
| UFC-M1206R | 13 | 3/8 | 9.5 | 22.22 | 22.22 | 22.8 | 21.7 | 31.0 | 41.1 |
| UFC-M1208R | 14 | 1/2 | 9.5 | 26.98 | 22.22 | 22.8 | 21.7 | 36.6 | 46.7 |
| UFC-M1212R | 15 | 3/4 | 9.5 | 33.33 | 22.22 | 22.8 | 21.7 | 38.9 | 49.0 |
| UFC-M1508R | 15 | 1/2 | 12.0 | 26.98 | 25.40 | 24.4 | 21.9 | 36.5 | 46.6 |
| UFC-M1608R | 16 | 1/2 | 12.0 | 26.98 | 25.40 | 24.5 | 22.0 | 36.5 | 46.7 |
| UFC-M2008R | 20 | 1/2 | 16.0 | 30.16 | 31.75 | 26.2 | 22.1 | 37.8 | 48.1 |
| UFC-M2012R | 20 | 3/4 | 18.0 | 33.33 | 31.75 | 26.2 | 22.1 | 39.6 | 49.9 |
| UFC-M2212R | 22 | 3/4 | 18.0 | 34.92 | 31.75 | 26.2 | 22.1 | 39.6 | 49.9 |
| UFC-M2216R | 22 | 1 | 18.0 | 41.27 | 31.75 | 26.2 | 22.1 | 47.8 | 58.1 |
| UFC-M2512R | 25 | 3/4 | 22.0 | 34.92 | 38.10 | 31.1 | 26.1 | 41.1 | 53.2 |
| UFC-M2516R | 25 | 1 | 22.0 | 41.27 | 38.10 | 31.1 | 26.1 | 50.0 | 62.1 |

NPT threads are available for all metric UFC. To order, add "N" as a suffix instead of "R".

Dimensions are for reference only and are subject to change without prior notice.
E is minimum opening. F, G and L are typical finger tight.

Gauge Connector
UGC



Connects Fractional Tube to ISO Parallel Thread (Gauge)

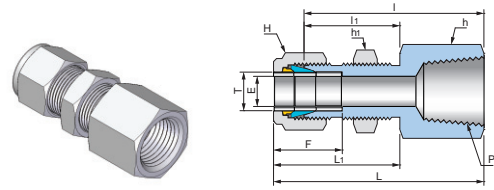
| Part No. | Tube OD T | | P (PF) | Dimensions (mm) | | | | | | | | | | | |
|-----------|--------------|-------|-----------|-----------------|----------------|--------|-------|-------|-------|------|------|------|----------------|----------------|------|
| | inch | mm | | E Min. | E ₁ | h | | H | | F | G | I | I ₁ | I ₂ | L |
| | | | | | | inch | mm | inch | mm | | | | | | |
| UGC-0402G | 1/4 | 6.35 | 1/8 | 4.8 | - | 9/16 | 14.28 | 9/16 | 14.28 | 15.1 | 17.4 | 26.3 | 12.0 | - | 33.5 |
| UGC-0404G | 1/4 | 6.35 | 1/4 | 4.8 | 5.5 | 3/4 | 19.05 | 9/16 | 14.28 | 15.1 | 17.4 | 30.2 | 13.0 | 17.0 | 37.4 |
| UGC-0406G | 1/4 | 6.35 | 3/8 | 4.8 | 6.5 | 15/16 | 23.81 | 9/16 | 14.28 | 15.1 | 17.4 | 30.2 | 14.2 | 20.3 | 37.4 |
| UGC-0408G | 1/4 | 6.35 | 1/2 | 4.8 | 6.6 | 1-1/16 | 26.98 | 9/16 | 14.28 | 15.1 | 17.4 | 36.1 | 18.8 | 24.9 | 43.3 |
| UGC-0504G | 5/16 | 7.93 | 1/4 | 5.6 | - | 3/4 | 19.05 | 5/8 | 15.87 | 16.6 | 18.8 | 31.0 | 13.0 | - | 38.7 |
| UGC-0508G | 5/16 | 7.93 | 1/2 | 7.0 | - | 1-1/16 | 26.98 | 5/8 | 15.87 | 16.6 | 18.8 | 33.0 | 18.8 | - | 40.7 |
| UGC-0604G | 3/8 | 9.52 | 1/4 | 5.5 | - | 3/4 | 19.05 | 11/16 | 17.46 | 16.7 | 18.9 | 31.8 | 13.0 | - | 39.1 |
| UGC-0606G | 3/8 | 9.52 | 3/8 | 6.5 | - | 15/16 | 23.81 | 11/16 | 17.46 | 16.7 | 18.9 | 31.2 | 14.2 | - | 38.5 |
| UGC-0608G | 3/8 | 9.52 | 1/2 | 7.0 | - | 1-1/16 | 26.98 | 11/16 | 17.46 | 16.7 | 18.9 | 34.5 | 19.0 | - | 41.8 |
| UGC-0804G | 1/2 | 12.70 | 1/4 | 10.0 | 5.5 | 7/8 | 22.22 | 7/8 | 22.22 | 22.7 | 21.6 | 31.8 | 13.0 | - | 41.8 |
| UGC-0806G | 1/2 | 12.70 | 3/8 | 10.0 | 6.5 | 15/16 | 23.81 | 7/8 | 22.22 | 22.7 | 21.6 | 34.3 | 14.2 | - | 44.3 |
| UGC-0808G | 1/2 | 12.70 | 1/2 | 10.0 | 7.0 | 1-1/16 | 26.98 | 7/8 | 22.22 | 22.7 | 21.6 | 38.1 | 19.0 | - | 48.1 |

Connects Metric Tube to ISO Parallel Thread (Gauge)

| Part No. | Tube OD T | | P (PF) | Dimensions (mm) | | | | | | | | | | | |
|------------|--------------|----|-----------|-----------------|----------------|-------|-------|------|------|------|------|------|----------------|----------------|---|
| | mm | mm | | E Min. | E ₁ | h | | H | | F | G | I | I ₁ | I ₂ | L |
| | | | | | | mm | mm | mm | mm | | | | | | |
| UGC-M0304G | 3 | | 1/4 | 2.3 | 5.5 | 19.05 | 11.11 | 12.7 | 15.3 | 28.7 | 13.0 | 17.0 | 35.4 | | |
| UGC-M0604G | 6 | | 1/4 | 4.8 | 5.5 | 19.05 | 14.28 | 15.3 | 17.6 | 30.2 | 13.0 | 17.0 | 37.6 | | |
| UGC-M0606G | 6 | | 3/8 | 4.8 | 6.5 | 23.81 | 14.28 | 15.3 | 17.6 | 30.2 | 14.2 | 20.3 | 37.6 | | |
| UGC-M0608G | 6 | | 1/2 | 4.8 | 7.0 | 26.98 | 14.28 | 15.3 | 17.6 | 36.3 | 19.0 | 25.0 | 43.7 | | |
| UGC-M0804G | 8 | | 1/4 | 6.4 | 5.5 | 19.05 | 15.87 | 16.3 | 18.7 | 31.0 | 13.0 | - | 38.6 | | |
| UGC-M0808G | 8 | | 1/2 | 6.4 | - | 26.98 | 15.87 | 16.3 | 18.7 | 33.0 | 19.0 | - | 40.6 | | |
| UGC-M1004G | 10 | | 1/4 | 5.5 | - | 19.05 | 19.05 | 17.3 | 19.5 | 31.8 | 13.0 | - | 39.5 | | |
| UGC-M1006G | 10 | | 3/8 | 6.5 | - | 23.81 | 19.05 | 17.3 | 19.5 | 31.2 | 14.0 | - | 38.9 | | |
| UGC-M1008G | 10 | | 1/2 | 7.0 | - | 26.98 | 19.05 | 17.3 | 19.5 | 34.5 | 19.0 | - | 42.2 | | |
| UGC-M1204G | 12 | | 1/4 | 9.5 | 5.58 | 22.22 | 22.22 | 22.8 | 21.7 | 31.8 | 15.0 | - | 41.9 | | |
| UGC-M1206G | 12 | | 3/8 | 6.5 | - | 23.81 | 22.22 | 22.8 | 21.7 | 34.3 | 14.0 | - | 44.4 | | |
| UGC-M1208G | 12 | | 1/2 | 9.5 | 7.0 | 26.98 | 22.22 | 22.8 | 21.7 | 38.1 | 19.0 | - | 48.2 | | |
| UGC-M2008G | 20 | | 1/2 | 7.0 | - | 30.16 | 31.75 | 26.2 | 22.1 | 44.2 | 19.0 | - | 54.5 | | |
| UGC-M2208G | 22 | | 1/2 | 7.0 | - | 30.16 | 31.75 | 26.2 | 22.1 | 44.2 | 19.0 | - | 54.5 | | |

Dimensions are for reference only and are subject to change without prior notice.
E is minimum opening. F, G and L are typical finger tight.

Bulkhead Female Connector UBFC



Connects Fractional(Inch) Tube to Male NPT Thread

| Part No. | Tube OD T | | P NPT | Dimensions (mm) | | | | | | | | | | | | | |
|------------|--------------|-------|----------|-----------------|--------|-------|----------------|-------|-------|-------|------|------|----------------|------|----------------|-----------------------|---------------------------|
| | inch | mm | | E Min. | h | | h ₁ | | H | | F | I | I ₁ | L | L ₁ | Panel Hole Size | Max Panel Thickness |
| UBFC-0202N | 1/8 | 3.17 | 1/8 | 2.3 | 9/16 | 14.28 | 1/2 | 12.70 | 7/16 | 11.11 | 12.8 | 38.1 | 24.6 | 44.9 | 31.4 | 8.3 | 12.7 |
| UBFC-0402N | 1/4 | 6.35 | 1/8 | 4.8 | 5/8 | 15.87 | 5/8 | 15.87 | 9/16 | 14.28 | 15.1 | 39.6 | 26.2 | 46.8 | 33.4 | 11.5 | 10.2 |
| UBFC-0404N | 1/4 | 6.35 | 1/4 | 4.8 | 3/4 | 19.05 | 5/8 | 15.87 | 9/16 | 14.28 | 15.1 | 44.5 | 26.2 | 51.7 | 33.4 | 11.5 | 10.2 |
| UBFC-0604N | 3/8 | 9.52 | 1/4 | 7.0 | 3/4 | 19.05 | 3/4 | 19.05 | 11/16 | 17.46 | 16.7 | 47.8 | 29.5 | 55.1 | 36.8 | 14.7 | 11.2 |
| UBFC-0806N | 1/2 | 12.70 | 3/8 | 10.0 | 15/16 | 23.81 | 15/16 | 23.81 | 7/8 | 22.22 | 22.7 | 51.6 | 31.8 | 61.6 | 41.8 | 19.4 | 12.7 |
| UBFC-0808N | 1/2 | 12.70 | 1/2 | 10.0 | 1-1/16 | 26.98 | 15/16 | 23.81 | 7/8 | 22.22 | 22.7 | 56.4 | 31.8 | 66.4 | 41.8 | 19.4 | 12.7 |
| UBFC-1212N | 3/4 | 19.05 | 3/4 | 16.0 | 1-5/16 | 33.33 | 1-3/16 | 30.16 | 1-1/8 | 28.57 | 24.4 | 63.6 | 37.3 | 73.7 | 47.4 | 25.8 | 16.8 |

ISO Tapered threads are available for all fractional UBFC. To order, add "R" as a suffix instead of "N".

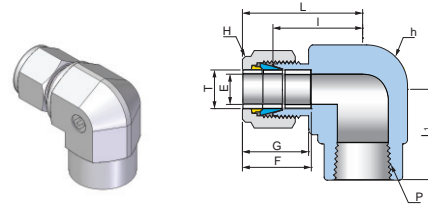
Connects Metric Tube to Male ISO Tapered Thread

| Part No. | Tube OD T | | P ISO7/1 | Dimensions (mm) | | | | | | | | | | |
|-------------|--------------|--|-------------|-----------------|-------|----------------|-------|------|------|----------------|------|----------------|-----------------------|---------------------------|
| | mm | | | E Min. | h | h ₁ | H | F | I | I ₁ | L | L ₁ | Panel Hole Size | Max Panel Thickness |
| UBFC-M0602R | 6 | | 1/8 | 4.8 | 15.87 | 15.87 | 14.28 | 15.3 | 39.6 | 26.2 | 47.0 | 33.6 | 11.5 | 10.2 |
| UBFC-M0604R | 6 | | 1/4 | 4.8 | 19.05 | 15.87 | 14.28 | 15.3 | 44.5 | 26.2 | 51.9 | 33.6 | 11.5 | 10.2 |
| UBFC-M0804R | 8 | | 1/4 | 6.4 | 19.05 | 17.46 | 15.87 | 16.3 | 46.7 | 28.4 | 54.3 | 35.9 | 13.1 | 11.2 |
| UBFC-M1208R | 12 | | 1/2 | 9.5 | 26.98 | 23.81 | 22.22 | 22.8 | 56.4 | 31.8 | 66.5 | 41.9 | 19.5 | 12.7 |

NPT threads are available for all metric UBFC. To order, add "N" as a suffix instead of "R".

Dimensions are for reference only and are subject to change without prior notice.
E is minimum opening. F, G and L are typical finger tight.

Female Elbow
UFE



Connects Fractional(Inch) Tube to Male NPT Thread

| Part No. | Tube OD T | | P NPT | Dimensions (mm) | | | | | | | | | |
|-----------|--------------|-------|----------|-----------------|---------|-------|-------|-------|------|------|------|------|----------------|
| | inch | mm | | E Min. | h | | H | | F | G | I | L | L ₁ |
| | | | | | inch | mm | inch | mm | | | | | |
| UFE-0202N | 1/8 | 3.17 | 1/8 | 2.3 | 1/2 | 12.70 | 7/16 | 11.11 | 12.8 | 15.4 | 18.0 | 24.8 | 19.1 |
| UFE-0204N | 1/8 | 3.17 | 1/4 | 2.3 | 13/16 | 20.63 | 7/16 | 11.11 | 12.8 | 15.4 | 22.8 | 29.6 | 23.4 |
| UFE-0302N | 3/16 | 4.76 | 1/8 | 3.0 | 5/8 | 15.87 | 1/2 | 12.70 | 14.0 | 16.4 | 20.8 | 27.7 | 19.1 |
| UFE-0402N | 1/4 | 6.35 | 1/8 | 4.8 | 1/2 | 12.70 | 9/16 | 14.28 | 15.1 | 17.4 | 19.6 | 26.8 | 19.1 |
| UFE-0404N | 1/4 | 6.35 | 1/4 | 4.8 | 13/16 | 20.63 | 9/16 | 14.28 | 15.1 | 17.4 | 24.4 | 31.6 | 23.4 |
| UFE-0406N | 1/4 | 6.35 | 3/8 | 4.8 | 13/16 | 20.63 | 9/16 | 14.28 | 15.1 | 17.4 | 24.5 | 31.7 | 22.3 |
| UFE-0408N | 1/4 | 6.35 | 1/2 | 4.8 | 1-1/16 | 26.98 | 9/16 | 14.28 | 15.1 | 17.4 | 29.7 | 36.9 | 29.5 |
| UFE-0502N | 5/16 | 7.93 | 1/8 | 6.4 | 9/16 | 14.28 | 5/8 | 15.87 | 16.6 | 18.8 | 21.3 | 29.0 | 19.1 |
| UFE-0504N | 5/16 | 7.93 | 1/4 | 6.4 | 13/16 | 20.63 | 5/8 | 15.87 | 16.6 | 18.8 | 25.3 | 33.0 | 23.4 |
| UFE-0602N | 3/8 | 9.52 | 1/8 | 7.0 | 5/8 | 15.87 | 11/16 | 17.46 | 16.7 | 18.9 | 23.1 | 30.4 | 19.1 |
| UFE-0604N | 3/8 | 9.52 | 1/4 | 7.0 | 13/16 | 20.63 | 11/16 | 17.46 | 16.7 | 18.9 | 25.9 | 33.2 | 23.4 |
| UFE-0606N | 3/8 | 9.52 | 3/8 | 7.0 | 13/16 | 20.63 | 11/16 | 17.46 | 16.7 | 18.9 | 25.9 | 33.2 | 22.3 |
| UFE-0608N | 3/8 | 9.52 | 1/2 | 7.0 | 1-1/16 | 26.98 | 11/16 | 17.46 | 16.7 | 18.9 | 29.6 | 36.9 | 29.5 |
| UFE-0804N | 1/2 | 12.70 | 1/4 | 10.0 | 13/16 | 20.63 | 7/8 | 22.22 | 22.7 | 21.6 | 25.9 | 35.9 | 23.4 |
| UFE-0806N | 1/2 | 12.70 | 3/8 | 10.0 | 13/16 | 20.63 | 7/8 | 22.22 | 22.7 | 21.6 | 25.9 | 35.9 | 22.3 |
| UFE-0808N | 1/2 | 12.70 | 1/2 | 10.0 | 1-1/16 | 26.98 | 7/8 | 22.22 | 22.7 | 21.6 | 29.6 | 39.6 | 29.5 |
| UFE-1006N | 5/8 | 15.87 | 3/8 | 12.0 | 15/16 | 23.81 | 1 | 25.40 | 24.5 | 22.0 | 27.8 | 38.0 | 27.0 |
| UFE-1008N | 5/8 | 15.87 | 1/2 | 12.0 | 1-1/16 | 26.98 | 1 | 25.40 | 24.5 | 22.0 | 29.8 | 40.0 | 29.5 |
| UFE-1208N | 3/4 | 19.05 | 1/2 | 16.0 | 1-1/16 | 26.98 | 1-1/8 | 28.57 | 24.4 | 21.9 | 29.7 | 29.5 | 39.8 |
| UFE-1212N | 3/4 | 19.05 | 3/4 | 16.0 | 1-3/8 | 34.92 | 1-1/8 | 28.57 | 24.4 | 21.9 | 34.5 | 44.6 | 31.8 |
| UFE-1412N | 7/8 | 22.22 | 3/4 | 18.0 | 1-1/4 | 31.75 | 1-1/4 | 31.75 | 26.0 | 22.0 | 34.5 | 44.7 | 31.8 |
| UFE-1612N | 1 | 25.40 | 3/4 | 22.0 | 1-3/8 | 34.92 | 1-1/2 | 38.10 | 31.1 | 26.1 | 36.8 | 48.9 | 36.8 |
| UFE-1616N | 1 | 25.40 | 1 | 22.0 | 1-11/16 | 42.86 | 1-1/2 | 38.10 | 31.1 | 26.1 | 41.4 | 53.5 | 38.1 |

ISO Tapered threads are available for all fractional UFE. To order, add "R" as a suffix instead of "N".

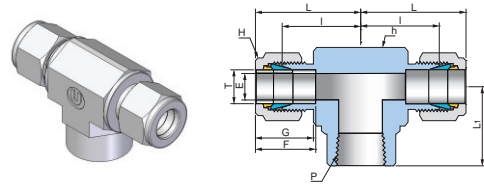
Connects Metric Tube to Male ISO Tapered Thread

| Part No. | Tube OD T | | P ISO7/1 | Dimensions (mm) | | | | | | | | | |
|------------|--------------|-----|-------------|-----------------|---------|---------|------|------|------|------|----------------|--|--|
| | mm | mm | | E Min. | h mm | H mm | F | G | I | L | L ₁ | | |
| | | | | | | | | | | | | | |
| UFE-M0602R | 6 | 1/8 | 4.8 | 12.70 | 14.28 | 15.3 | 17.6 | 19.6 | 27.0 | 19.1 | | | |
| UFE-M0604R | 6 | 1/4 | 4.8 | 20.63 | 14.28 | 15.3 | 17.6 | 24.4 | 31.8 | 23.4 | | | |
| UFE-M0606R | 6 | 3/8 | 4.8 | 20.63 | 14.28 | 15.3 | 17.6 | 24.5 | 31.9 | 22.3 | | | |
| UFE-M0608R | 6 | 1/2 | 6.4 | 26.98 | 14.28 | 15.3 | 17.6 | 28.0 | 35.4 | 29.5 | | | |
| UFE-M0804R | 8 | 1/4 | 6.4 | 20.63 | 15.87 | 16.3 | 18.7 | 25.3 | 32.9 | 23.4 | | | |
| UFE-M0808R | 8 | 1/2 | 6.4 | 26.98 | 15.87 | 16.3 | 18.7 | 28.0 | 35.6 | 29.5 | | | |
| UFE-M1002R | 10 | 1/8 | 8.0 | 17.46 | 19.05 | 17.3 | 19.5 | 23.9 | 31.6 | 19.1 | | | |
| UFE-M1004R | 10 | 1/4 | 8.0 | 20.63 | 19.05 | 17.3 | 19.5 | 26.0 | 33.7 | 23.4 | | | |
| UFE-M1006R | 10 | 3/8 | 8.0 | 20.63 | 19.05 | 17.3 | 19.5 | 25.9 | 33.6 | 22.3 | | | |
| UFE-M1008R | 10 | 1/2 | 8.0 | 26.98 | 19.05 | 17.3 | 19.5 | 29.8 | 37.5 | 29.5 | | | |
| UFE-M1204R | 12 | 1/4 | 9.5 | 20.63 | 22.22 | 22.8 | 21.7 | 25.8 | 35.9 | 23.4 | | | |
| UFE-M1206R | 12 | 3/8 | 9.5 | 20.63 | 22.22 | 22.8 | 21.7 | 25.9 | 36.0 | 22.3 | | | |
| UFE-M1208R | 12 | 1/2 | 9.5 | 26.98 | 22.22 | 22.8 | 21.7 | 29.6 | 39.7 | 29.5 | | | |
| UFE-M1608R | 16 | 1/2 | 12.0 | 26.98 | 25.40 | 24.5 | 22.0 | 29.7 | 39.9 | 28.4 | | | |

NPT threads are available for all metric UFE. To order, add "N" as a suffix instead of "R".

Dimensions are for reference only and are subject to change without prior notice.
E is minimum opening. F, G and L are typical finger tight.

Female Branch Tee UFBT



Connects Fractional(Inch) Tube to Male NPT Thread

| Part No. | Tube OD T | | P NPT | Dimensions (mm) | | | | | | | | | |
|------------|--------------|-------|----------|-----------------|---------|-------|-------|-------|------|------|------|------|----------------|
| | inch | mm | | E Min. | h | | H | | F | G | I | L | L ₁ |
| | | | | | inch | mm | inch | mm | | | | | |
| UFBT-0202N | 1/8 | 3.17 | 1/8 | 2.3 | 5/8 | 15.87 | 7/16 | 11.11 | 12.8 | 15.4 | 19.9 | 26.7 | 19.1 |
| UFBT-0402N | 1/4 | 6.35 | 1/8 | 4.8 | 5/8 | 15.87 | 9/16 | 14.28 | 15.1 | 17.4 | 21.5 | 28.7 | 19.1 |
| UFBT-0404N | 1/4 | 6.35 | 1/4 | 4.8 | 13/16 | 20.63 | 9/16 | 14.28 | 15.1 | 17.4 | 24.4 | 31.6 | 26.2 |
| UFBT-0604N | 3/8 | 9.52 | 1/4 | 7.0 | 13/16 | 20.63 | 11/16 | 17.46 | 16.7 | 18.9 | 25.9 | 33.2 | 26.2 |
| UFBT-0804N | 1/2 | 12.70 | 1/4 | 10.0 | 13/16 | 20.63 | 7/8 | 22.22 | 22.7 | 21.6 | 25.9 | 35.9 | 26.2 |
| UFBT-0806N | 1/2 | 12.70 | 3/8 | 10.0 | 13/16 | 20.63 | 7/8 | 22.22 | 22.7 | 21.6 | 25.9 | 35.9 | 22.3 |
| UFBT-0808N | 1/2 | 12.70 | 1/2 | 10.0 | 1-1/16 | 26.98 | 7/8 | 22.22 | 22.7 | 21.6 | 29.5 | 39.5 | 29.0 |
| UFBT-1008N | 5/8 | 15.87 | 1/2 | 12.0 | 1-1/16 | 26.98 | 1 | 25.40 | 24.5 | 22.0 | 29.7 | 39.9 | 29.0 |
| UFBT-1212N | 3/4 | 19.05 | 3/4 | 16.0 | 1-3/8 | 34.92 | 1-1/8 | 28.57 | 24.4 | 21.9 | 34.6 | 44.7 | 36.8 |
| UFBT-1612N | 1 | 25.40 | 3/4 | 22.0 | 1-3/8 | 34.92 | 1-1/2 | 38.10 | 31.1 | 26.1 | 36.8 | 48.9 | 36.8 |
| UFBT-1616N | 1 | 15.40 | 1 | 22.0 | 1-11/16 | 42.86 | 1-1/2 | 38.10 | 31.1 | 26.1 | 41.3 | 53.4 | 38.1 |

ISO Tapered threads are available for all fractional UFBT. To order, add "R" as a suffix instead of "N".

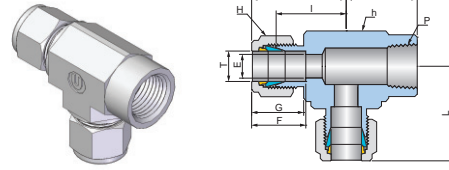
Connects Metric Tube to Male ISO Tapered Thread

| Part No. | Tube OD T | | P ISO7/1 | Dimensions (mm) | | | | | | | |
|-------------|--------------|-----|-------------|-----------------|---------|---------|------|------|------|------|----------------|
| | mm | mm | | E Min. | h mm | H mm | F | G | I | L | L ₁ |
| | | | | | | | | | | | |
| UFBT-M0602R | 6 | 1/8 | 4.8 | 15.87 | 14.28 | 15.3 | 17.6 | 21.5 | 28.9 | 19.1 | |
| UFBT-M0604R | 6 | 1/4 | 4.8 | 20.63 | 14.28 | 15.3 | 17.6 | 24.4 | 31.8 | 26.2 | |
| UFBT-M0606R | 6 | 3/8 | 4.8 | 20.63 | 14.28 | 15.3 | 17.6 | 24.4 | 31.8 | 22.4 | |
| UFBT-M0608R | 6 | 1/2 | 4.8 | 25.40 | 14.28 | 15.3 | 17.6 | 27.2 | 34.6 | 28.4 | |
| UFBT-M0802R | 8 | 1/8 | 6.4 | 15.87 | 15.87 | 16.3 | 18.7 | 22.4 | 29.9 | 19.1 | |
| UFBT-M0804R | 8 | 1/4 | 6.4 | 20.63 | 15.87 | 16.3 | 18.7 | 25.4 | 32.9 | 26.2 | |
| UFBT-M0806R | 8 | 3/8 | 6.4 | 20.63 | 15.87 | 16.3 | 18.7 | 25.2 | 32.8 | 22.4 | |
| UFBT-M0808R | 8 | 1/2 | 6.4 | 26.98 | 15.87 | 16.3 | 18.7 | 28.0 | 35.6 | 29.0 | |
| UFBT-M1004R | 10 | 1/4 | 8.0 | 20.63 | 19.05 | 17.3 | 19.5 | 26.0 | 33.7 | 26.2 | |
| UFBT-M1006R | 10 | 3/8 | 8.0 | 20.63 | 19.05 | 17.3 | 19.5 | 25.9 | 33.6 | 22.4 | |
| UFBT-M1008R | 10 | 1/2 | 8.0 | 26.98 | 19.05 | 17.3 | 19.5 | 29.5 | 37.2 | 29.0 | |
| UFBT-M1204R | 12 | 1/4 | 9.5 | 20.63 | 22.22 | 22.8 | 21.7 | 25.9 | 36.0 | 26.2 | |
| UFBT-M1206R | 12 | 3/8 | 9.5 | 20.63 | 22.22 | 22.8 | 21.7 | 25.9 | 36.0 | 22.3 | |
| UFBT-M1208R | 12 | 1/2 | 9.5 | 26.98 | 22.22 | 22.8 | 21.7 | 29.5 | 39.6 | 29.0 | |
| UFBT-M1608R | 16 | 1/2 | 12.0 | 26.98 | 25.40 | 24.5 | 22.0 | 29.7 | 39.9 | 29.0 | |

NPT threads are available for all metric UFBT. To order, add "N" as a suffix instead of "R".

Dimensions are for reference only and are subject to change without prior notice.
E is minimum opening. F, G and L are typical finger tight.

Female Run Tee UFRT



Connects Fractional(Inch) Tube to Male NPT Thread

| Part No. | Tube OD T | | P NPT | Dimensions (mm) | | | | | | | | | |
|------------|--------------|-------|----------|-----------------|---------|-------|-------|-------|------|------|------|------|----------------|
| | inch | mm | | E Min. | h | | H | | F | G | I | L | L ₁ |
| | | | | | inch | mm | inch | mm | | | | | |
| UFRT-0202N | 1/8 | 3.17 | 1/8 | 2.3 | 5/8 | 15.87 | 7/16 | 11.11 | 12.8 | 15.4 | 19.9 | 26.7 | 19.1 |
| UFRT-0402N | 1/4 | 6.35 | 1/8 | 4.8 | 9/16 | 14.28 | 9/16 | 14.28 | 15.1 | 17.4 | 19.6 | 26.8 | 19.1 |
| UFRT-0404N | 1/4 | 6.35 | 1/4 | 4.8 | 13/16 | 20.63 | 9/16 | 14.28 | 15.1 | 17.4 | 24.4 | 31.6 | 26.2 |
| UFRT-0604N | 3/8 | 9.52 | 1/4 | 7.0 | 13/16 | 20.63 | 11/16 | 17.46 | 16.7 | 18.9 | 25.9 | 33.2 | 26.2 |
| UFRT-0806N | 1/2 | 12.70 | 3/8 | 10.0 | 13/16 | 20.63 | 7/8 | 22.22 | 22.7 | 21.6 | 25.9 | 35.9 | 22.3 |
| UFRT-0808N | 1/2 | 12.70 | 1/2 | 10.0 | 1-1/16 | 26.98 | 7/8 | 22.22 | 22.7 | 21.6 | 29.5 | 39.5 | 28.9 |
| UFRT-1212N | 3/4 | 19.05 | 3/4 | 16.0 | 1-3/8 | 34.92 | 1-1/8 | 28.57 | 24.4 | 21.9 | 34.6 | 44.7 | 36.8 |
| UFRT-1612N | 1 | 25.40 | 3/4 | 22.0 | 1-3/8 | 34.92 | 1-1/2 | 38.10 | 31.1 | 26.1 | 36.8 | 48.9 | 36.8 |
| UFRT-1616N | 1 | 25.40 | 1 | 22.0 | 1-11/16 | 42.86 | 1-1/2 | 38.10 | 31.1 | 26.1 | 41.4 | 53.5 | 38.1 |

ISO Tapered threads are available for all fractional UFRT. To order, add "R" as a suffix instead of "N".

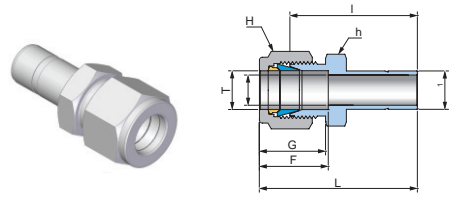
Connects Metric Tube to Male ISO Tapered Thread

| Part No. | Tube OD T | | P ISO7/1 | Dimensions (mm) | | | | | | | |
|-------------|--------------|-----|-------------|-----------------|---------|---------|------|------|------|------|----------------|
| | mm | mm | | E Min. | h mm | H mm | F | G | I | L | L ₁ |
| | | | | | | | | | | | |
| UFRT-M0602R | 6 | 1/8 | 4.8 | 12.70 | 14.28 | 15.3 | 17.6 | 19.6 | 27.0 | 19.1 | |
| UFRT-M0604R | 6 | 1/4 | 4.8 | 20.63 | 14.28 | 15.3 | 17.6 | 24.4 | 31.8 | 26.2 | |
| UFRT-M0608R | 6 | 1/2 | 4.8 | 26.98 | 14.28 | 15.3 | 17.6 | 28.6 | 36.0 | 28.9 | |
| UFRT-M0802R | 8 | 1/8 | 6.4 | 15.87 | 15.87 | 16.3 | 18.7 | 22.4 | 30.0 | 19.1 | |
| UFRT-M0804R | 8 | 1/4 | 6.4 | 20.63 | 15.87 | 16.3 | 18.7 | 25.4 | 32.9 | 26.2 | |
| UFRT-M0806R | 8 | 3/8 | 6.4 | 20.63 | 15.87 | 16.3 | 18.7 | 25.4 | 32.9 | 22.3 | |
| UFRT-M0808R | 8 | 1/2 | 6.4 | 25.40 | 25.40 | 16.3 | 18.7 | 28.0 | 35.6 | 28.4 | |
| UFRT-M1004R | 10 | 1/4 | 8.0 | 20.63 | 19.05 | 17.3 | 19.5 | 26.0 | 33.7 | 26.2 | |
| UFRT-M1204R | 12 | 1/4 | 9.5 | 20.63 | 22.22 | 22.8 | 21.7 | 25.9 | 36.0 | 22.4 | |
| UFRT-M1206R | 12 | 3/8 | 9.5 | 20.63 | 22.22 | 22.8 | 21.7 | 25.9 | 36.0 | 22.4 | |
| UFRT-M1208R | 2 | 1/2 | 9.5 | 26.98 | 22.22 | 22.8 | 21.7 | 29.7 | 39.8 | 28.4 | |
| UFRT-M1608R | 16 | 1/2 | 12.0 | 25.40 | 25.40 | 24.5 | 22.0 | 29.7 | 39.9 | 28.4 | |

NPT threads are available for all metric UFRT. To order, add "N" as a suffix instead of "R".

Dimensions are for reference only and are subject to change without prior notice.
E is minimum opening. F, G and L are typical finger tight.

Reducer
UR

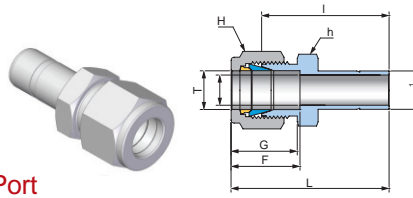


Connects Fractional(Inch) Tube to Fractional Uni-Lok Port

| Part No. | Tube OD T | | Tube OD T ₁ | | Dimensions (mm) | | | | | | | | |
|----------|--------------|-------|---------------------------|-------|-----------------|--------|-------|-------|-------|------|------|-------|-------|
| | inch | mm | inch | mm | E Min. | h | | H | | F | G | I | L |
| | | | | | | inch | mm | inch | mm | | | | |
| UR-0202T | 1/8 | 3.17 | 1/8 | 3.17 | 2.3 | 7/16 | 11.11 | 7/16 | 11.11 | 12.8 | 15.4 | 26.9 | 33.7 |
| UR-0203T | 1/8 | 3.17 | 3/16 | 4.76 | 2.3 | 7/16 | 11.11 | 7/16 | 11.11 | 12.8 | 15.4 | 27.7 | 34.5 |
| UR-0204T | 1/8 | 3.17 | 1/4 | 6.35 | 2.3 | 7/16 | 11.11 | 7/16 | 11.11 | 12.8 | 15.4 | 29.5 | 36.3 |
| UR-0206T | 1/8 | 3.17 | 3/8 | 9.52 | 2.3 | 7/16 | 11.11 | 7/16 | 11.11 | 12.8 | 15.4 | 31.0 | 37.8 |
| UR-0208T | 1/8 | 3.17 | 1/2 | 12.70 | 2.3 | 9/16 | 14.28 | 7/16 | 11.11 | 12.8 | 15.4 | 37.6 | 44.4 |
| UR-0302T | 3/16 | 4.76 | 1/8 | 3.17 | 2.0 | 7/16 | 11.11 | 1/2 | 12.70 | 14.0 | 16.4 | 28.2 | 35.1 |
| UR-0304T | 3/16 | 4.76 | 1/4 | 6.35 | 3.0 | 7/16 | 11.11 | 1/2 | 12.70 | 14.0 | 16.4 | 30.5 | 37.4 |
| UR-0402T | 1/4 | 6.35 | 1/8 | 3.17 | 4.8 | 1/2 | 12.70 | 9/16 | 14.28 | 15.1 | 17.4 | 29.5 | 36.7 |
| UR-0403T | 1/4 | 6.35 | 3/16 | 4.76 | 3.0 | 1/2 | 12.70 | 9/16 | 14.28 | 15.1 | 17.4 | 30.2 | 37.4 |
| UR-0404T | 1/4 | 6.35 | 1/4 | 6.35 | 4.8 | 1/2 | 12.70 | 9/16 | 14.28 | 15.1 | 17.4 | 31.8 | 38.9 |
| UR-0405T | 1/4 | 6.35 | 5/16 | 7.93 | 4.8 | 1/2 | 12.70 | 9/16 | 14.28 | 15.1 | 17.4 | 32.5 | 39.7 |
| UR-0406T | 1/4 | 6.35 | 3/8 | 9.52 | 4.8 | 1/2 | 12.70 | 9/16 | 14.28 | 15.1 | 17.4 | 33.3 | 40.5 |
| UR-0408T | 1/4 | 6.35 | 1/2 | 12.70 | 4.8 | 9/16 | 14.28 | 9/16 | 14.28 | 15.1 | 17.4 | 38.9 | 46.1 |
| UR-0410T | 1/4 | 6.35 | 5/8 | 15.87 | 4.8 | 11/16 | 17.46 | 9/16 | 14.28 | 15.1 | 17.4 | 40.6 | 48.0 |
| UR-0412T | 1/4 | 6.35 | 3/4 | 19.05 | 4.8 | 13/16 | 20.63 | 9/16 | 14.28 | 15.1 | 17.4 | 40.4 | 48.1 |
| UR-0506T | 5/16 | 7.93 | 3/8 | 9.52 | 6.4 | 9/16 | 14.28 | 5/8 | 15.87 | 16.6 | 18.8 | 34.5 | 42.2 |
| UR-0508T | 5/16 | 7.93 | 1/2 | 12.70 | 6.4 | 9/16 | 14.28 | 5/8 | 15.87 | 16.6 | 18.8 | 40.1 | 47.8 |
| UR-0604T | 3/8 | 9.52 | 1/4 | 6.35 | 7.0 | 5/8 | 15.87 | 11/16 | 17.46 | 16.7 | 18.9 | 34.0 | 41.3 |
| UR-0606T | 3/8 | 9.52 | 3/8 | 9.52 | 7.0 | 5/8 | 15.87 | 11/16 | 17.46 | 16.7 | 18.9 | 35.8 | 43.1 |
| UR-0608T | 3/8 | 9.52 | 1/2 | 12.70 | 7.0 | 5/8 | 15.87 | 11/16 | 17.46 | 16.7 | 18.9 | 41.1 | 48.4 |
| UR-0610T | 3/8 | 9.52 | 5/8 | 15.87 | 7.0 | 11/16 | 17.46 | 11/16 | 17.46 | 16.7 | 18.9 | 42.9 | 50.2 |
| UR-0612T | 3/8 | 9.52 | 3/4 | 19.05 | 7.0 | 13/16 | 20.63 | 11/16 | 17.46 | 16.7 | 18.9 | 42.9 | 50.2 |
| UR-0804T | 1/2 | 12.70 | 1/4 | 6.35 | 10.0 | 13/16 | 20.63 | 7/8 | 22.22 | 22.7 | 21.6 | 34.6 | 44.6 |
| UR-0806T | 1/2 | 12.70 | 3/8 | 9.52 | 10.0 | 13/16 | 20.63 | 7/8 | 22.22 | 22.7 | 21.6 | 36.6 | 46.6 |
| UR-0808T | 1/2 | 12.70 | 1/2 | 12.70 | 10.0 | 13/16 | 20.63 | 7/8 | 22.22 | 22.7 | 21.6 | 42.2 | 52.2 |
| UR-0810T | 1/2 | 12.70 | 5/8 | 15.87 | 10.0 | 13/16 | 20.63 | 7/8 | 22.22 | 22.7 | 21.6 | 43.7 | 53.7 |
| UR-0812T | 1/2 | 12.70 | 3/4 | 19.05 | 10.0 | 13/16 | 20.63 | 7/8 | 22.22 | 22.7 | 21.6 | 43.7 | 53.7 |
| UR-0816T | 1/2 | 12.70 | 1 | 25.40 | 10.0 | 1-1/16 | 26.98 | 7/8 | 22.22 | 22.7 | 21.6 | 52.1 | 62.1 |
| UR-1012T | 5/8 | 15.87 | 3/4 | 19.05 | 12.0 | 15/16 | 23.81 | 1 | 25.40 | 24.5 | 22.0 | 44.5 | 54.7 |
| UR-1014T | 5/8 | 15.87 | 7/8 | 22.22 | 12.0 | 15/16 | 23.81 | 1 | 25.40 | 24.5 | 22.0 | 46.0 | 56.2 |
| UR-1016T | 5/8 | 15.87 | 1 | 25.40 | 12.0 | 1-1/16 | 26.98 | 1 | 25.40 | 24.5 | 22.0 | 50.8 | 61.0 |
| UR-1208T | 3/4 | 19.05 | 1/2 | 12.70 | 16.0 | 1-1/16 | 26.98 | 1-1/8 | 28.57 | 24.4 | 21.9 | 44.5 | 54.6 |
| UR-1216T | 3/4 | 19.05 | 1 | 25.40 | 16.0 | 1-1/16 | 26.98 | 1-1/8 | 28.57 | 24.4 | 21.9 | 52.3 | 62.4 |
| UR-1620T | 1 | 25.40 | 1-1/4 | 31.75 | 22.0 | 1-3/8 | 34.92 | 1-1/2 | 38.10 | 31.1 | 26.1 | 68.3 | 80.4 |
| UR-1624T | 1 | 25.40 | 1-1/2 | 38.10 | 22.0 | 1-5/8 | 41.27 | 1-1/2 | 38.10 | 31.1 | 26.1 | 77.0 | 89.1 |
| UR-2024T | 1-1/4 | 31.75 | 1-1/2 | 38.10 | 27.0 | 1-7/8 | 47.62 | 2-1/4 | 57.15 | 40.8 | 38.5 | 82.0 | 104.0 |
| UR-2032T | 1-1/4 | 31.75 | 2 | 50.80 | 27.0 | 1-7/8 | 47.62 | 1-7/8 | 47.62 | 40.8 | 38.5 | 103.1 | 125.0 |
| UR-2432T | 1-1/2 | 38.10 | 2 | 50.80 | 34.0 | 2-1/4 | 57.15 | 2-1/4 | 57.15 | 50.1 | 45.3 | 104.1 | 131.4 |

Dimensions are for reference only and are subject to change without prior notice.
E is minimum opening. F, G and L are typical finger tight.

Reducer
UR



Connects Metric Tube to Metric Uni-Lok Port

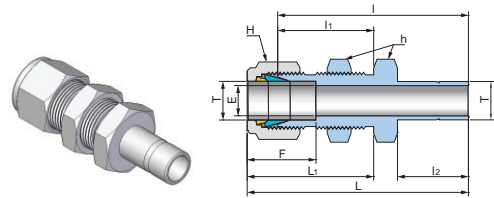
| Part No. | Tube OD | Tube OD | Dimensions (mm) | | | | | | |
|------------|---------|----------------|-----------------|-------|-------|------|------|------|------|
| | T | T ₁ | E | h | H | F | G | I | L |
| | mm | mm | Min. | mm | mm | | | | |
| UR-M03M04T | 3 | 4 | 2.3 | 12.70 | 12.70 | 12.7 | 15.3 | 28.4 | 35.1 |
| UR-M03M06T | 3 | 6 | 2.3 | 11.11 | 11.11 | 12.7 | 15.3 | 29.5 | 36.2 |
| UR-M06M08T | 6 | 8 | 4.8 | 14.28 | 14.28 | 15.3 | 17.6 | 32.5 | 39.9 |
| UR-M06M10T | 6 | 10 | 4.8 | 14.28 | 14.28 | 15.3 | 17.6 | 33.3 | 40.7 |
| UR-M06M12T | 6 | 12 | 4.8 | 14.28 | 14.28 | 15.3 | 17.6 | 41.6 | 49.0 |
| UR-M08M06T | 8 | 6 | 4.8 | 15.87 | 15.87 | 16.3 | 18.7 | 32.8 | 40.4 |
| UR-M08M10T | 8 | 10 | 6.4 | 14.28 | 15.87 | 16.3 | 18.7 | 34.2 | 41.8 |
| UR-M08M12T | 8 | 12 | 6.4 | 15.87 | 15.87 | 16.3 | 18.7 | 40.1 | 47.7 |
| UR-M10M06T | 10 | 6 | 8.0 | 17.46 | 19.05 | 17.3 | 19.5 | 34.8 | 42.5 |
| UR-M10M12T | 10 | 12 | 8.0 | 19.05 | 19.05 | 17.3 | 19.5 | 43.1 | 50.8 |
| UR-M12M06T | 12 | 6 | 9.5 | 22.22 | 22.22 | 22.8 | 21.7 | 34.8 | 44.9 |
| UR-M12M10T | 12 | 10 | 9.5 | 22.22 | 22.22 | 22.8 | 21.7 | 36.6 | 46.7 |
| UR-M12M16T | 12 | 16 | 9.5 | 22.22 | 22.22 | 22.8 | 21.7 | 43.7 | 53.8 |
| UR-M12M18T | 12 | 18 | 9.5 | 22.22 | 22.22 | 22.8 | 21.7 | 43.7 | 53.8 |
| UR-M16M12T | 16 | 12 | 12.0 | 23.81 | 25.40 | 24.5 | 22.0 | 42.9 | 53.1 |
| UR-M18M12T | 18 | 12 | 15.0 | 26.98 | 30.16 | 24.5 | 22.0 | 44.5 | 54.7 |
| UR-M18M16T | 18 | 16 | 16.0 | 26.98 | 30.16 | 24.5 | 22.0 | 46.1 | 56.3 |
| UR-M20M16T | 20 | 16 | 18.0 | 30.16 | 31.75 | 26.2 | 22.1 | 47.8 | 58.1 |
| UR-M20M18T | 20 | 18 | 14.0 | 30.16 | 31.75 | 26.2 | 22.1 | 47.8 | 58.1 |
| UR-M22M20T | 22 | 20 | 15.0 | 30.16 | 31.75 | 26.2 | 22.1 | 49.3 | 59.6 |
| UR-M22M25T | 22 | 25 | 18.0 | 30.16 | 31.75 | 26.2 | 22.1 | 54.1 | 64.4 |
| UR-M25M18T | 25 | 18 | 14.0 | 37.92 | 38.10 | 31.1 | 26.1 | 50.8 | 63.0 |
| UR-M25M20T | 25 | 20 | 15.0 | 34.92 | 38.10 | 31.1 | 26.1 | 52.3 | 64.4 |

Connects Metric Tube to Fractional(Inch) Uni-Lok Port

| Part No. | Tube OD | Tube OD | | Dimensions (mm) | | | | | | | |
|-----------|---------|----------------|-------|-----------------|-------|--------|-------|------|------|------|------|
| | T | T ₁ | | E | h | H | | F | G | I | L |
| | mm | inch | mm | Min. | mm | inch | mm | | | | |
| UR-M0302T | 3 | 1/8 | 3.17 | 2.0 | 12.70 | 1/2 | 12.70 | 12.7 | 15.3 | 26.9 | 33.6 |
| UR-M0304T | 3 | 1/4 | 6.35 | 2.4 | 12.70 | 1/2 | 12.70 | 12.7 | 15.3 | 29.5 | 36.2 |
| UR-M0604T | 6 | 1/4 | 6.35 | 4.8 | 12.70 | 9/16 | 14.28 | 15.3 | 17.6 | 31.8 | 39.2 |
| UR-M0605T | 6 | 5/16 | 7.93 | 4.8 | 14.28 | 9/16 | 14.28 | 15.3 | 17.6 | 32.5 | 39.9 |
| UR-M0606T | 6 | 3/8 | 9.52 | 4.8 | 14.28 | 9/16 | 14.28 | 15.3 | 17.6 | 33.3 | 40.7 |
| UR-M0608T | 6 | 1/2 | 12.70 | 4.8 | 14.28 | 9/16 | 14.28 | 15.3 | 17.6 | 38.9 | 46.3 |
| UR-M0806T | 8 | 3/8 | 9.52 | 6.4 | 14.28 | 5/8 | 15.87 | 16.3 | 18.7 | 34.5 | 42.1 |
| UR-M0808T | 8 | 1/2 | 12.70 | 6.4 | 15.87 | 5/8 | 15.87 | 16.3 | 18.7 | 40.1 | 47.7 |
| UR-M1006T | 10 | 3/8 | 9.52 | 7.0 | 17.46 | 3/4 | 19.05 | 17.3 | 19.5 | 36.6 | 44.3 |
| UR-M1008T | 10 | 1/2 | 12.70 | 7.0 | 17.46 | 3/4 | 19.05 | 17.3 | 19.5 | 42.2 | 49.9 |
| UR-M1208T | 12 | 1/2 | 12.70 | 9.5 | 20.63 | 7/8 | 22.22 | 22.8 | 21.7 | 42.2 | 52.3 |
| UR-M1212T | 12 | 3/4 | 19.05 | 9.5 | 22.22 | 7/8 | 22.22 | 22.8 | 21.7 | 43.7 | 53.8 |
| UR-M1812T | 18 | 3/4 | 19.05 | 15.0 | 26.98 | 1-3/16 | 30.16 | 24.5 | 22.0 | 46.0 | 56.2 |
| UR-M1816T | 18 | 1 | 25.40 | 15.0 | 26.98 | 1-3/16 | 30.16 | 24.5 | 22.0 | 52.3 | 62.5 |

Dimensions are for reference only and are subject to change without prior notice.
E is minimum opening. F, G and L are typical finger tight.

Bulkhead Reducer UBR



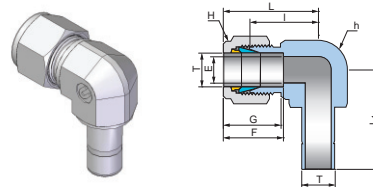
Connects Fractional(Inch) Tube to Fractional Uni-Lok Port

| Part No. | Tube OD T | | Dimensions (mm) | | | | | | | | | | | | |
|-----------|--------------|-------|-----------------|-------|-------|-------|-------|------|------|----------------|----------------|------|----------------|-----------------------|---------------------------|
| | inch | mm | E Min. | h | | H | | F | I | I ₁ | I ₂ | L | L ₁ | Panel Hole Size | Max Panel Thickness |
| UBR-0202T | 1/8 | 3.17 | 2.3 | 1/2 | 12.70 | 7/16 | 11.11 | 12.8 | 42.9 | 24.6 | 13.5 | 49.7 | 31.4 | 8.3 | 12.7 |
| UBR-0404T | 1/4 | 6.35 | 4.8 | 5/8 | 15.87 | 9/16 | 14.28 | 15.1 | 48.5 | 26.2 | 16.0 | 55.7 | 33.4 | 11.5 | 10.2 |
| UBR-0606T | 3/8 | 9.52 | 7.0 | 3/4 | 19.05 | 11/16 | 17.46 | 16.7 | 53.8 | 29.5 | 18.0 | 61.1 | 36.8 | 14.7 | 11.2 |
| UBR-0808T | 1/2 | 12.70 | 10.0 | 15/16 | 23.81 | 7/8 | 22.22 | 22.7 | 62.7 | 31.8 | 23.5 | 72.7 | 41.8 | 19.4 | 12.7 |

Connects- Metric Tube to Metric Uni-Lok Port

| Part No. | Tube OD T | Dimensions (mm) | | | | | | | | | | | |
|-------------|--------------|-----------------|---------|---------|------|------|----------------|----------------|------|----------------|-----------------------|---------------------------|--|
| | mm | E Min. | h mm | H mm | F | I | I ₁ | I ₂ | L | L ₁ | Panel Hole Size | Max Panel Thickness | |
| UBR-M03M03T | 3 | 2.0 | 12.70 | 11.11 | 12.7 | 43.0 | 24.6 | 13.5 | 49.7 | 31.3 | 8.3 | 12.7 | |
| UBR-M06M06T | 6 | 4.8 | 15.87 | 14.28 | 15.3 | 48.5 | 26.2 | 15.9 | 55.9 | 33.6 | 11.5 | 10.2 | |
| UBR-M08M08T | 8 | 6.4 | 17.46 | 15.87 | 16.3 | 53.1 | 28.4 | 17.5 | 60.7 | 36.0 | 13.1 | 11.2 | |
| UBR-M12M12T | 12 | 9.5 | 23.81 | 22.22 | 22.8 | 62.7 | 31.8 | 23.0 | 72.8 | 41.9 | 19.4 | 12.7 | |

Elbow Reducer UER



Connects Fractional(Inch) Tube to Fractional Uni-Lok Port

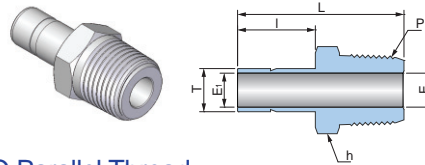
| Part No. | Tube OD T | | Dimensions (mm) | | | | | | | | | |
|-----------|--------------|-------|-----------------|-------|-------|-------|-------|------|------|------|------|----------------|
| | inch | mm | E Min. | h | | H | | F | G | I | L | L ₁ |
| UER-0202T | 1/8 | 3.17 | 2.3 | 3/8 | 9.52 | 7/16 | 11.11 | 12.8 | 15.4 | 15.7 | 22.5 | 20.6 |
| UER-0404T | 1/4 | 6.35 | 4.8 | 1/2 | 12.70 | 9/16 | 14.28 | 15.1 | 17.4 | 19.6 | 26.8 | 25.0 |
| UER-0606T | 3/8 | 9.52 | 7.0 | 5/8 | 15.87 | 11/16 | 17.46 | 16.7 | 18.9 | 23.1 | 30.4 | 26.0 |
| UER-0808T | 1/2 | 12.70 | 10.0 | 13/16 | 20.63 | 7/8 | 22.22 | 22.7 | 21.6 | 25.9 | 35.9 | 37.3 |

Connects Metric Tube to Metric Uni-Lok Port

| Part No. | Tube OD T | Dimensions (mm) | | | | | | | | |
|-------------|--------------|-----------------|---------|---------|------|------|------|------|----------------|--|
| | mm | E Min. | h mm | H mm | F | G | I | L | L ₁ | |
| UER-M03M03T | 3 | 2.3 | 9.52 | 12.70 | 12.7 | 15.3 | 15.7 | 22.4 | 20.5 | |
| UER-M06M06T | 6 | 4.8 | 12.70 | 14.28 | 15.3 | 17.6 | 19.6 | 27.0 | 25.1 | |
| UER-M08M08T | 8 | 6.4 | 14.28 | 15.87 | 16.3 | 18.7 | 21.3 | 28.9 | 27.2 | |
| UER-M10M10T | 10 | 8.0 | 17.46 | 19.05 | 17.3 | 19.5 | 23.9 | 31.6 | 29.5 | |
| UER-M12M12T | 12 | 9.5 | 20.63 | 22.22 | 22.8 | 21.7 | 25.9 | 36.0 | 37.3 | |

Male Adapter

UMA



Connects Fractional(Inch) Tube to Female ISO Parallel Thread

| Part No. | Tube OD | | P NPT | Dimensions (mm) | | | | | |
|------------|---------|-------|----------|-----------------|------------------------|--------|-------|------|-------|
| | T | | | E Min. | E ₁ Min. | h | | l | L |
| | inch | mm | | | | inch | mm | | |
| UMA-02T02N | 1/8 | 3.17 | 1/8 | 4.8 | 1.8 | 7/16 | 11.11 | 13.5 | 29.5 |
| UMA-03T02N | 3/16 | 4.76 | 1/8 | 4.8 | 3.0 | 7/16 | 11.11 | 14.2 | 30.2 |
| UMA-04T02N | 1/4 | 6.35 | 1/8 | 4.8 | 4.8 | 7/16 | 11.11 | 16.0 | 31.9 |
| UMA-04T04N | 1/4 | 6.35 | 1/4 | 4.8 | 4.8 | 9/16 | 14.28 | 16.2 | 37.0 |
| UMA-05T02N | 5/16 | 7.93 | 1/8 | 4.8 | 6.4 | 7/16 | 11.11 | 16.8 | 32.8 |
| UMA-05T04N | 5/16 | 7.93 | 1/4 | 7.0 | 6.4 | 9/16 | 14.28 | 16.8 | 38.1 |
| UMA-06T04N | 3/8 | 9.52 | 1/4 | 7.0 | 7.0 | 9/16 | 14.28 | 17.8 | 38.1 |
| UMA-06T06N | 3/8 | 9.52 | 3/8 | 7.0 | 7.0 | 11/16 | 17.46 | 17.8 | 39.6 |
| UMA-06T08N | 3/8 | 9.52 | 1/2 | 12.0 | 7.0 | 7/8 | 22.22 | 17.8 | 45.2 |
| UMA-08T04N | 1/2 | 12.70 | 1/4 | 7.0 | 10.0 | 9/16 | 14.28 | 23.8 | 44.5 |
| UMA-08T06N | 1/2 | 12.70 | 3/8 | 10.0 | 10.0 | 11/16 | 17.46 | 23.5 | 44.5 |
| UMA-08T08N | 1/2 | 12.70 | 1/2 | 10.0 | 10.0 | 7/8 | 22.22 | 23.5 | 50.5 |
| UMA-10T08N | 5/8 | 15.87 | 1/2 | 12.7 | 12.7 | 7/8 | 22.22 | 24.4 | 52.3 |
| UMA-12T12N | 3/4 | 19.05 | 3/4 | 15.0 | 15.0 | 1-1/16 | 26.98 | 26.0 | 52.3 |
| UMA-14T12N | 7/8 | 22.22 | 3/4 | 18.0 | 17.0 | 1-1/16 | 26.98 | 26.7 | 54.3 |
| UMA-16T16N | 1 | 25.40 | 1 | 22.0 | 22.0 | 1-3/8 | 34.92 | 31.0 | 66.0 |
| UMA-20T20N | 1-1/4 | 31.75 | 1-1/4 | 27.0 | 27.0 | 1-3/4 | 44.45 | 40.0 | 80.2 |
| UMA-24T24N | 1-1/2 | 31.75 | 1-1/2 | 33.0 | 33.0 | 2-1/8 | 53.98 | 51.5 | 94.4 |
| UMA-32T32N | 2 | 38.10 | 2 | 45.0 | 45.0 | 2-3/4 | 69.85 | 68.4 | 119.3 |

ISO Tapered threads are available for all fractional UMA. To order, add "R" as a suffix instead of "N".

Connects Fractional Uni-Lok Port to Female NPT Thread

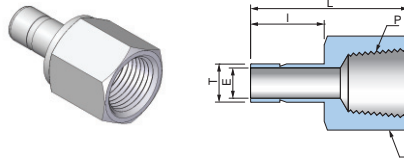
| Part No. | Tube OD | | P (PT) | Dimensions (mm) | | | | |
|-------------|---------|-------|-----------|-----------------|------------------------|---------|------|---|
| | T | | | E Min. | E ₁ Min. | h mm | l | L |
| | mm | | | | | | | |
| UMA-M03T02R | 3 | 1/8 | 4.0 | 1.8 | 12.70 | 13.2 | 29.4 | |
| UMA-M06T02R | 6 | 1/8 | 4.1 | 4.1 | 11.11 | 16.2 | 32.8 | |
| UMA-M06T04R | 6 | 1/4 | 4.0 | 4.0 | 14.28 | 16.2 | 38.1 | |
| UMA-M08T04R | 8 | 1/4 | 6.4 | 6.4 | 14.28 | 17.7 | 39.1 | |
| UMA-M10T04R | 10 | 1/4 | 7.0 | 8.0 | 14.28 | 17.8 | 39.9 | |
| UMA-M10T06R | 10 | 3/8 | 8.0 | 8.0 | 17.46 | 17.8 | 40.6 | |
| UMA-M10T08R | 10 | 1/2 | 8.0 | 8.0 | 22.22 | 17.8 | 45.2 | |
| UMA-M12T04R | 12 | 1/4 | 7.0 | 9.0 | 14.28 | 23.5 | 46.5 | |
| UMA-M12T06R | 12 | 3/8 | 9.0 | 9.0 | 17.46 | 23.5 | 46.2 | |
| UMA-M12T08R | 12 | 1/2 | 8.9 | 8.9 | 22.22 | 24.3 | 52.0 | |
| UMA-M18T08R | 18 | 1/2 | 12.0 | 14.0 | 22.22 | 25.9 | 53.2 | |
| UMA-M18T12R | 18 | 3/4 | 16.0 | 14.0 | 26.98 | 25.9 | 53.2 | |
| UMA-M20T12R | 20 | 3/4 | 15.5 | 15.5 | 26.98 | 30.0 | 58.0 | |
| UMA-M25T16R | 25 | 1 | 19.5 | 19.5 | 34.92 | 35.7 | 70.7 | |
| UMA-M28T16R | 28 | 1 | 23.0 | 23.0 | 34.92 | 31.7 | 74.7 | |
| UMA-M28T20R | 28 | 1-1/4 | 23.0 | 23.0 | 46.04 | 31.7 | 76.2 | |
| UMA-M30T20R | 30 | 1-1/4 | 25.0 | 25.0 | 46.04 | 40.0 | 80.0 | |
| UMA-M32T20R | 32 | 1-1/4 | 27.0 | 27.0 | 46.04 | 40.0 | 81.0 | |
| UMA-M38T24R | 38 | 1-1/2 | 33.0 | 33.0 | 55.56 | 51.5 | 92.2 | |

NPT threads are available for all metric UMA. To order, add "N" as a suffix instead of "R".

Dimensions are for reference only and are subject to change without prior notice.
E is minimum opening. F, G and L are typical finger tight.

Female Adapter

UFA



Connects Fractional Uni-Lok Port to Male NPT Thread

| Part No. | Tube OD T | | P NPT | Dimensions (mm) | | | | |
|------------|-----------|-------|----------|-----------------|--------|-------|------|-------|
| | inch | mm | | E Min. | h | | I | L |
| | | | | | inch | mm | | |
| UFA-02T02N | 1/8 | 3.17 | 1/8 | 1.8 | 9/16 | 14.28 | 13.5 | 31.5 |
| UFA-02T04N | 1/8 | 3.17 | 1/4 | 1.8 | 3/4 | 19.05 | 13.5 | 34.6 |
| UFA-03T02N | 3/16 | 4.76 | 1/8 | 3.0 | 9/16 | 14.28 | 14.2 | 32.0 |
| UFA-03T04N | 3/16 | 4.76 | 1/4 | 3.0 | 3/4 | 19.05 | 14.2 | 35.8 |
| UFA-04T02N | 1/4 | 6.35 | 1/8 | 4.3 | 9/16 | 14.28 | 16.2 | 33.0 |
| UFA-04T04N | 1/4 | 6.35 | 1/4 | 4.3 | 3/4 | 19.05 | 16.2 | 37.1 |
| UFA-04T06N | 1/4 | 6.35 | 3/8 | 4.3 | 7/8 | 22.22 | 16.2 | 39.4 |
| UFA-04T08N | 1/4 | 6.35 | 1/2 | 4.3 | 1-1/16 | 26.98 | 16.2 | 43.7 |
| UFA-05T02N | 5/16 | 7.93 | 1/8 | 6.4 | 9/16 | 14.28 | 16.8 | 34.3 |
| UFA-05T04N | 5/16 | 7.93 | 1/4 | 6.4 | 3/4 | 19.05 | 16.8 | 37.6 |
| UFA-06T02N | 3/8 | 9.52 | 1/8 | 7.0 | 9/16 | 14.28 | 17.8 | 34.3 |
| UFA-06T04N | 3/8 | 9.52 | 1/4 | 7.0 | 3/4 | 19.05 | 17.8 | 38.1 |
| UFA-06T06N | 3/8 | 9.52 | 3/8 | 7.0 | 7/8 | 22.22 | 17.8 | 40.4 |
| UFA-06T08N | 3/8 | 9.52 | 1/2 | 7.0 | 1-1/16 | 26.98 | 17.8 | 46.7 |
| UFA-08T04N | 1/2 | 12.70 | 1/4 | 9.3 | 3/4 | 19.05 | 23.8 | 43.4 |
| UFA-08T06N | 1/2 | 12.70 | 3/8 | 9.3 | 7/8 | 22.22 | 24.3 | 45.4 |
| UFA-08T08N | 1/2 | 12.70 | 1/2 | 10.0 | 1-1/16 | 26.98 | 23.5 | 52.3 |
| UFA-10T06N | 5/8 | 15.87 | 3/8 | 12.0 | 7/8 | 22.22 | 24.7 | 48.3 |
| UFA-10T08N | 5/8 | 15.87 | 1/2 | 12.7 | 1-1/16 | 26.98 | 24.4 | 53.2 |
| UFA-10T12N | 5/8 | 15.87 | 3/4 | 12.0 | 1-1/4 | 31.75 | 24.7 | 55.4 |
| UFA-12T08N | 3/4 | 19.05 | 1/2 | 15.0 | 1-1/16 | 26.98 | 24.7 | 53.8 |
| UFA-12T12N | 3/4 | 19.05 | 3/4 | 15.0 | 1-1/4 | 31.75 | 24.7 | 55.4 |
| UFA-12T16N | 3/4 | 19.05 | 1 | 15.0 | 1-5/8 | 41.27 | 24.7 | 58.4 |
| UFA-14T12N | 7/8 | 22.22 | 3/4 | 17.0 | 1-1/4 | 31.75 | 26.7 | 57.2 |
| UFA-16T12N | 1 | 25.40 | 3/4 | 20.0 | 1-1/4 | 31.75 | 31.0 | 60.7 |
| UFA-16T16N | 1 | 25.40 | 1 | 22.0 | 1-5/8 | 41.27 | 31.0 | 68.8 |
| UFA-20T20N | 1-1/4 | 31.75 | 1-1/4 | 27.0 | 2-1/8 | 53.98 | 40.0 | 77.7 |
| UFA-24T24N | 1-1/2 | 31.75 | 1-1/2 | 33.0 | 2-3/8 | 60.33 | 51.5 | 88.9 |
| UFA-32T32N | 2 | 38.10 | 2 | 45.0 | 2-7/8 | 73.03 | 68.4 | 107.4 |

ISO Tapered threads are available for all fractional UMA. To order, add "R" as a suffix instead of "N".

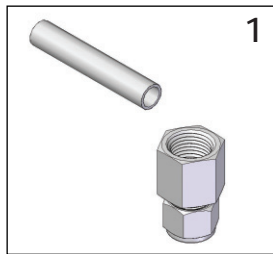
Connects Metric Uni-Lok Port to Male ISO Tapered Thread

| Part No. | Tube OD | P (PT) | Dimensions (mm) | | | |
|-------------|---------|-----------|-----------------|---------|------|------|
| | T | | E Min. | h mm | I | L |
| | mm | | | | | |
| UFA-M03T02R | 3 | 1/8 | 1.8 | 14.28 | 13.2 | 31.2 |
| UFA-M06T02R | 6 | 1/4 | 4.1 | 14.28 | 16.2 | 32.5 |
| UFA-M06T04R | 6 | 1/4 | 4.1 | 19.05 | 16.2 | 37.1 |
| UFA-M08T04R | 8 | 1/4 | 5.5 | 19.05 | 17.7 | 37.6 |
| UFA-M10T04R | 10 | 1/4 | 7.0 | 19.05 | 17.8 | 38.1 |
| UFA-M10T06R | 10 | 3/8 | 7.0 | 22.22 | 17.8 | 40.1 |
| UFA-M10T08R | 10 | 1/2 | 7.1 | 26.98 | 17.8 | 46.5 |
| UFA-M12T04R | 12 | 1/4 | 9.0 | 19.05 | 24.3 | 43.7 |
| UFA-M12T06R | 12 | 3/8 | 9.0 | 22.22 | 23.5 | 46.0 |
| UFA-M12T08R | 12 | 1/2 | 8.9 | 26.98 | 24.3 | 52.3 |
| UFA-M18T12R | 18 | 3/4 | 14.0 | 31.75 | 24.9 | 54.8 |

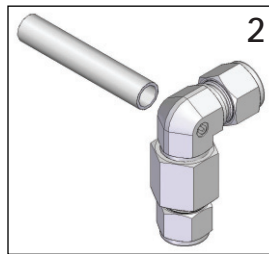
NPT threads are available for all metric UMA. To order, add "N" as a suffix instead of "R".

Dimensions are for reference only and are subject to change without prior notice.
E is minimum opening. F, G and L are typical finger tight.

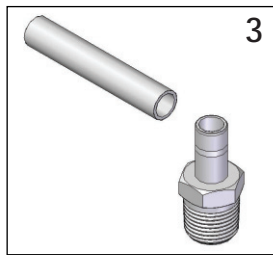
How To Eliminate Alignment Problem



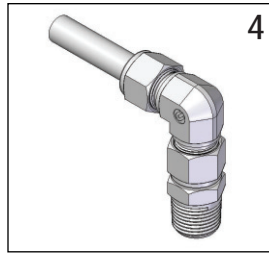
1 When the tubing is required to install to the female port in a desired direction as shown.



2 The male elbow (UME) could not be positioned in a desired direction.

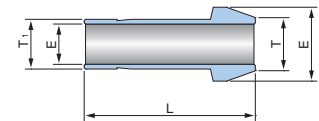
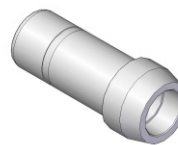


3 To correct the direction, assemble Male Adaptor (UMA) in the female port firstly.



4 Insert Uni-Lok port of Union Elbow (UEU) into the tube stub end of Male Adaptor (UMA). Set the direction and assemble Union Elbow (UEU) according to Uni-Lok assembly instruction.

Port Connector UPC



Connects Fractional Uni-Lok Port

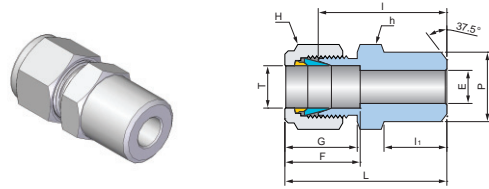
| Part No. | Tube OD T | | Tube OD T ₁ | | Dimensions (mm) | |
|-----------|--------------|-------|---------------------------|-------|-----------------|------|
| | inch | mm | inch | mm | E Min. | L |
| UPC-0202T | 1/8 | 3.17 | 1/8 | 3.17 | 1.8 | 23.1 |
| UPC-0402T | 1/4 | 6.35 | 1/8 | 3.17 | 2.3 | 22.7 |
| UPC-0404T | 1/4 | 6.35 | 1/4 | 6.35 | 4.3 | 25.0 |
| UPC-0505T | 5/16 | 7.93 | 5/16 | 7.93 | 6.4 | 25.9 |
| UPC-0602T | 3/8 | 9.52 | 1/8 | 3.17 | 2.3 | 23.1 |
| UPC-0604T | 3/8 | 9.52 | 1/4 | 6.35 | 4.3 | 25.1 |
| UPC-0606T | 3/8 | 9.52 | 3/8 | 9.52 | 7.0 | 26.5 |
| UPC-0804T | 1/2 | 12.70 | 1/4 | 6.35 | 4.3 | 29.3 |
| UPC-0806T | 1/2 | 12.70 | 3/8 | 9.52 | 7.0 | 31.0 |
| UPC-0808T | 1/2 | 12.70 | 1/2 | 12.70 | 9.0 | 36.3 |
| UPC-1208T | 3/4 | 19.05 | 1/2 | 12.70 | 9.0 | 36.8 |
| UPC-1212T | 3/4 | 19.05 | 3/4 | 19.05 | 15.0 | 37.6 |
| UPC-1616T | 1 | 25.40 | 1 | 25.40 | 20.0 | 48.3 |

Connects Metric Uni-Lok Port

| Part No. | Tube OD T | Tube OD T ₁ | Dimensions (mm) | |
|-------------|--------------|---------------------------|-----------------|------|
| | mm | mm | E Min. | L |
| UPC-M03M03T | 3 | 3 | 6.0 | 22.2 |
| UPC-M06M03T | 6 | 3 | 1.8 | 22.6 |
| UPC-M06M06T | 6 | 6 | 4.1 | 24.6 |
| UPC-M08M06T | 8 | 6 | 4.1 | 24.7 |
| UPC-M08M08T | 8 | 8 | 6.0 | 25.9 |
| UPC-M10M06T | 10 | 6 | 4.1 | 26.2 |
| UPC-M10M10T | 10 | 10 | 8.0 | 27.3 |
| UPC-M12M06T | 12 | 6 | 4.1 | 29.7 |
| UPC-M12M10T | 12 | 10 | 8.0 | 30.4 |
| UPC-M12M12T | 12 | 12 | 8.8 | 36.2 |
| UPC-M16M12T | 16 | 12 | 9.0 | 36.2 |
| UPC-M16M16T | 16 | 16 | 12.0 | 38.0 |

Dimensions are for reference only and are subject to change without prior notice.
E is minimum opening. F, G and L are typical finger tight.

Pipe Butt Weld Connector UWBC



Connects Fractional Tube to Pipe Butt Welded System

| Part No. | Tube OD T | | P (BW) | | Dimensions (mm) | | | | | | | | | |
|------------|--------------|-------|-----------|-------|-----------------|--------|-------|-------|-------|------|------|------|----------------|------|
| | inch | mm | Nom | O.D. | E Min. | h | | H | | F | G | I | I ₁ | L |
| | | | | | | inch | mm | inch | mm | | | | | |
| UWBC-0202P | 1/8 | 3.17 | 1/8 | 10.30 | 2.3 | 7/16 | 11.11 | 7/16 | 11.11 | 12.8 | 15.4 | 23.9 | 9.7 | 30.7 |
| UWBC-0302P | 3/16 | 4.76 | 1/8 | 10.30 | 3.0 | 7/16 | 11.11 | 1/2 | 12.70 | 14.0 | 16.4 | 24.6 | 9.7 | 31.5 |
| UWBC-0402P | 1/4 | 6.35 | 1/8 | 10.30 | 4.8 | 1/2 | 12.70 | 9/16 | 14.28 | 15.1 | 17.4 | 25.4 | 9.7 | 32.6 |
| UWBC-0404P | 1/4 | 6.35 | 1/4 | 13.70 | 4.8 | 9/16 | 14.28 | 9/16 | 14.28 | 15.1 | 17.4 | 30.5 | 14.2 | 37.7 |
| UWBC-0502P | 5/16 | 7.93 | 1/8 | 10.30 | 5.0 | 9/16 | 14.28 | 5/8 | 15.87 | 16.6 | 18.8 | 26.7 | 9.7 | 34.4 |
| UWBC-0504P | 5/16 | 7.93 | 1/4 | 13.70 | 6.4 | 9/16 | 14.28 | 5/8 | 15.87 | 16.6 | 18.8 | 31.2 | 14.2 | 38.9 |
| UWBC-0604P | 3/8 | 9.52 | 1/4 | 13.70 | 7.0 | 5/8 | 15.87 | 11/16 | 17.46 | 16.7 | 18.9 | 32.5 | 14.2 | 39.8 |
| UWBC-0606P | 3/8 | 9.52 | 3/8 | 17.10 | 7.0 | 11/16 | 17.46 | 11/16 | 17.46 | 16.7 | 18.9 | 32.5 | 14.2 | 39.8 |
| UWBC-0608P | 3/8 | 9.52 | 1/2 | 21.30 | 7.0 | 7/8 | 22.22 | 11/16 | 17.46 | 16.7 | 18.9 | 38.9 | 19.0 | 46.2 |
| UWBC-0806P | 1/2 | 12.70 | 3/8 | 17.10 | 10.0 | 13/16 | 20.63 | 7/8 | 22.22 | 22.7 | 21.6 | 33.3 | 14.2 | 43.3 |
| UWBC-0808P | 1/2 | 12.70 | 1/2 | 21.30 | 10.0 | 7/8 | 22.22 | 7/8 | 22.22 | 22.7 | 21.6 | 39.0 | 19.1 | 49.0 |
| UWBC-0812P | 1/2 | 12.70 | 3/4 | 26.67 | 10.0 | 1-1/16 | 26.98 | 7/8 | 22.22 | 22.7 | 21.6 | 40.4 | 19.0 | 50.4 |
| UWBC-1008P | 5/8 | 15.87 | 1/2 | 21.30 | 12.0 | 15/16 | 23.81 | 1 | 25.40 | 24.5 | 22.0 | 38.9 | 19.1 | 49.1 |
| UWBC-1212P | 3/4 | 19.05 | 3/4 | 26.67 | 16.0 | 1-1/16 | 26.98 | 1-1/8 | 28.57 | 24.4 | 21.9 | 40.4 | 19.0 | 50.5 |
| UWBC-1616P | 1 | 25.40 | 1 | 33.40 | 22.0 | 1-3/8 | 34.92 | 1-1/2 | 38.10 | 31.1 | 26.1 | 50.0 | 23.9 | 62.1 |

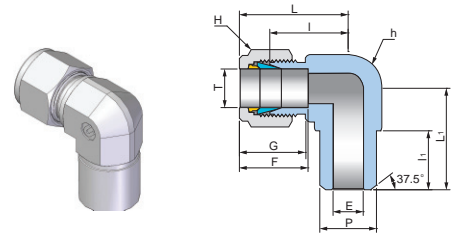
Connects Metric Tube to Pipe Butt Welded System

| Part No. | Tube OD T | | P (BW) | | Dimensions (mm) | | | | | | | |
|-------------|--------------|-----|-----------|-----------|-----------------|-------|------|------|------|------|----------------|---|
| | mm | Nom | O.D. | E Min. | h | | H | F | G | I | I ₁ | L |
| | | | | | mm | mm | | | | | | |
| UWBC-M0302P | 3 | 1/8 | 10.3 | 2.3 | 11.11 | 11.11 | 12.7 | 15.3 | 23.1 | 9.7 | 29.8 | |
| UWBC-M0402P | 4 | 1/8 | 10.3 | 2.3 | 11.11 | 12.70 | 13.7 | 16.1 | 24.1 | 9.7 | 30.6 | |
| UWBC-M0602P | 6 | 1/8 | 10.3 | 4.8 | 12.70 | 14.28 | 15.3 | 17.6 | 25.4 | 9.7 | 32.8 | |
| UWBC-M0604P | 6 | 1/4 | 13.7 | 4.8 | 14.28 | 14.28 | 15.3 | 17.6 | 30.5 | 14.2 | 37.9 | |
| UWBC-M0802P | 8 | 1/8 | 10.3 | 6.4 | 14.28 | 15.87 | 16.3 | 18.7 | 26.7 | 9.7 | 34.3 | |
| UWBC-M0804P | 8 | 1/4 | 13.7 | 6.4 | 14.28 | 15.87 | 16.3 | 18.7 | 31.2 | 14.2 | 38.8 | |
| UWBC-M0808P | 8 | 1/2 | 21.3 | 6.4 | 22.22 | 15.87 | 16.3 | 18.7 | 37.3 | 19.0 | 44.9 | |
| UWBC-M1004P | 10 | 1/4 | 13.7 | 7.1 | 17.46 | 19.05 | 17.3 | 19.5 | 33.3 | 14.2 | 41.0 | |
| UWBC-M1006P | 10 | 3/8 | 17.1 | 8.0 | 17.46 | 19.05 | 17.3 | 19.5 | 33.3 | 14.2 | 41.0 | |
| UWBC-M1008P | 10 | 1/2 | 21.3 | 8.0 | 22.22 | 19.05 | 17.3 | 19.5 | 38.1 | 19.0 | 45.8 | |
| UWBC-M1204P | 12 | 1/4 | 13.7 | 9.5 | 20.63 | 22.22 | 22.8 | 21.7 | 33.3 | 14.2 | 43.4 | |
| UWBC-M1206P | 12 | 3/8 | 17.1 | 9.5 | 20.63 | 22.22 | 22.8 | 21.7 | 33.3 | 14.2 | 43.4 | |
| UWBC-M1208P | 12 | 1/2 | 21.3 | 9.5 | 22.22 | 22.22 | 22.8 | 21.7 | 38.9 | 19.1 | 49.0 | |
| UWBC-M1508P | 15 | 1/2 | 21.3 | 12.0 | 23.81 | 25.40 | 24.4 | 21.9 | 38.9 | 19.0 | 49.0 | |
| UWBC-M1608P | 16 | 1/2 | 21.3 | 12.0 | 23.81 | 25.40 | 24.5 | 22.0 | 38.9 | 19.1 | 49.1 | |
| UWBC-M1808P | 18 | 1/2 | 21.3 | 15.0 | 26.98 | 30.16 | 24.5 | 21.9 | 40.4 | 19.0 | 50.6 | |

Dimensions are for reference only and are subject to change without prior notice.
E is minimum opening. F, G and L are typical finger tight.

Pipe Butt Weld Elbow

UWBE

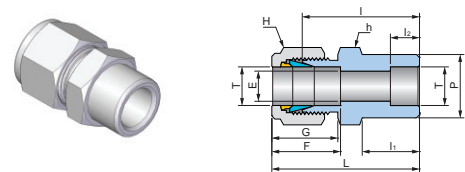


Connects Fractional Tube to Pipe Butt Welded System

| Part No. | Tube OD T | | P (BW) | | Dimensions (mm) | | | | | | | | | | |
|------------|--------------|-------|-----------|-------|-----------------|--------|-------|-------|-------|------|------|------|----------------|------|----------------|
| | inch | mm | Nom | O.D. | E Min. | h | | H | | F | G | I | I ₁ | L | L ₁ |
| | | | | | | inch | mm | inch | mm | | | | | | |
| UWBE-0202P | 1/8 | 3.17 | 1/8 | 10.30 | 2.3 | 1/2 | 12.70 | 7/16 | 11.11 | 12.8 | 15.4 | 19.4 | 9.7 | 26.2 | 19.8 |
| UWBE-0404P | 1/4 | 6.35 | 1/4 | 13.70 | 4.8 | 1/2 | 12.70 | 9/16 | 14.28 | 15.1 | 17.4 | 19.6 | 13.8 | 26.8 | 23.4 |
| UWBE-0604P | 3/8 | 9.52 | 1/4 | 13.70 | 7.0 | 5/8 | 15.87 | 11/16 | 17.46 | 16.7 | 18.9 | 23.1 | 14.0 | 30.4 | 25.3 |
| UWBE-0808P | 1/2 | 12.70 | 1/2 | 21.30 | 10.0 | 13/16 | 20.63 | 7/8 | 22.22 | 22.7 | 21.6 | 25.9 | 19.0 | 35.9 | 33.0 |
| UWBE-1212P | 3/4 | 19.05 | 3/4 | 26.67 | 16.0 | 1-1/16 | 26.98 | 1-1/8 | 28.57 | 24.4 | 21.9 | 29.7 | 19.0 | 39.8 | 36.9 |

Tube Socket Weld Connector

UWSC

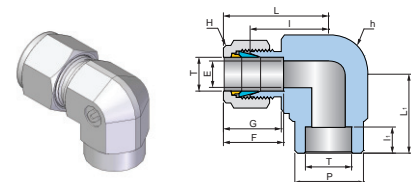


Connects Fractional Tube to Tube Socket Welded System

| Part No. | Tube OD T | | Dimensions (mm) | | | | | | | | | | | |
|------------|--------------|-------|-----------------|------|--------|-------|-------|-------|------|------|------|----------------|----------------|------|
| | inch | mm | E Min. | P | h | | H | | F | G | I | I ₁ | I ₂ | L |
| | | | | | inch | mm | inch | mm | | | | | | |
| UWSC-0202T | 1/8 | 3.17 | 2.3 | 7.8 | 7/16 | 11.11 | 7/16 | 11.11 | 12.8 | 15.4 | 22.4 | 8.6 | 6.4 | 29.0 |
| UWSC-0404T | 1/4 | 6.35 | 4.8 | 11.2 | 1/2 | 12.70 | 9/16 | 14.28 | 15.1 | 17.4 | 26.2 | 10.4 | 7.9 | 33.5 |
| UWSC-0606T | 3/8 | 9.52 | 7.0 | 15.7 | 5/8 | 15.87 | 11/16 | 17.46 | 16.7 | 18.9 | 30.2 | 11.9 | 9.7 | 37.6 |
| UWSC-0808T | 1/2 | 12.70 | 10.0 | 19.0 | 13/16 | 20.63 | 7/8 | 22.22 | 22.7 | 21.6 | 31.0 | 11.9 | 12.7 | 41.1 |
| UWSC-1212T | 3/4 | 19.05 | 16.0 | 26.7 | 1-1/16 | 26.98 | 1-1/8 | 28.57 | 24.4 | 21.9 | 33.3 | 11.9 | 14.2 | 43.4 |
| UWSC-1616T | 1 | 25.40 | 22.0 | 33.3 | 1-3/8 | 34.92 | 1-1/2 | 38.10 | 31.1 | 26.1 | 40.4 | 14.2 | 19.1 | 52.6 |

Tube Socket Weld Elbow

UWSE



Connects Fractional Tube to Tube Socket Welded System

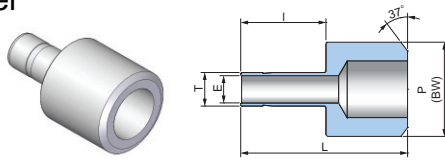
| Part No. | Tube OD T | | Dimensions (mm) | | | | | | | | | | |
|------------|--------------|-------|-----------------|-------|-------|-------|-------|------|------|------|----------------|------|----------------|
| | inch | mm | E Min. | h | | H | | F | G | I | I ₁ | L | L ₁ |
| | | | | inch | mm | inch | mm | | | | | | |
| UWSE-0404T | 1/4 | 6.35 | 4.8 | 1/2 | 12.70 | 9/16 | 14.28 | 15.1 | 17.4 | 19.6 | 7.0 | 26.8 | 19.6 |
| UWSE-0606T | 3/8 | 9.52 | 7.0 | 5/8 | 15.87 | 11/16 | 17.46 | 16.7 | 18.9 | 23.1 | 9.7 | 30.4 | 23.1 |
| UWSE-0808T | 1/2 | 12.70 | 10.0 | 13/16 | 20.63 | 7/8 | 22.22 | 22.7 | 21.6 | 25.9 | 12.7 | 35.9 | 20.7 |

Dimensions are for reference only and are subject to change without prior notice.
E is minimum opening. F, G and L are typical finger tight.

Tube to Welded System

Pipe Butt Weld Adapter

UWBA

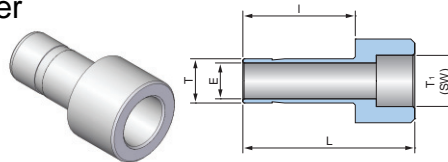


Connects Fractional Tube to Pipe Butt Welded System

| Part No. | Tube OD T | | P (BW) | | Dimensions(mm) | |
|-------------|--------------|-------|-----------|-------|----------------|------|
| | inch | mm | inch | mm | E Min. | L |
| UWBA-04T04P | 1/4 | 6.35 | 1/4 | 13.70 | 4.3 | 29.0 |
| UWBA-06T08P | 3/8 | 9.52 | 1/2 | 21.30 | 7.0 | 37.1 |
| UWBA-08T08P | 1/2 | 12.70 | 1/2 | 21.30 | 9.3 | 42.2 |
| UWBA-08T12P | 1/2 | 12.70 | 3/4 | 26.67 | 9.3 | 42.7 |
| UWBA-12T12P | 3/4 | 19.05 | 3/4 | 26.67 | 15.0 | 47.5 |

Tube Socket Weld Adapter

UWSA

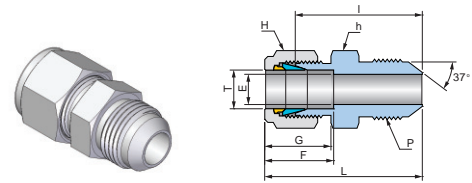


Connects Fractional Tube to Tube Socket Welded System

| Part No. | Tube OD T | | T ₁ (SW) | | Dimensions(mm) | |
|-------------|--------------|-------|------------------------|-------|----------------|------|
| | inch | mm | inch | mm | E Min. | L |
| UWSA-04T04T | 1/4 | 6.35 | 1/4 | 6.35 | 4.3 | 29.0 |
| UWSA-06T06T | 3/8 | 9.52 | 3/8 | 9.52 | 7.0 | 37.0 |
| UWSA-08T08T | 1/2 | 12.70 | 1/2 | 12.70 | 9.3 | 42.2 |
| UWSA-12T12T | 3/4 | 19.05 | 3/4 | 19.05 | 15.0 | 47.5 |

Dimensions are for reference only and are subject to change without prior notice.
E is minimum opening. F, G and L are typical finger tight.

AN Union UUA

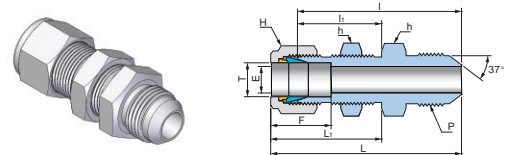


Connects Fractional Tube to An Flared Tube

| Part No. | Tube OD T | | AN Tube Flare Size | | Straight Thread P(U) | Dimensions (mm) | | | | | | | | |
|-----------|--------------|-------|-----------------------|-------|----------------------------|-----------------|-------|-------|-------|-------|------|------|------|------|
| | inch | mm | inch | mm | | E Min. | h | | H | | F | G | I | L |
| | | | | | | | inch | mm | inch | mm | | | | |
| UUA-0202S | 1/8 | 3.17 | 1/8 | 3.17 | 5/16-24 | 1.5 | 7/16 | 11.11 | 7/16 | 11.11 | 12.8 | 15.4 | 24.9 | 31.5 |
| UUA-0204S | 1/8 | 3.17 | 1/4 | 6.35 | 7/16-20 | 2.3 | 1/2 | 12.70 | 7/16 | 11.11 | 12.8 | 15.4 | 28.4 | 35.1 |
| UUA-0404S | 1/4 | 6.35 | 1/4 | 6.35 | 7/16-20 | 4.3 | 1/2 | 12.70 | 9/16 | 14.28 | 15.1 | 17.4 | 30.2 | 37.6 |
| UUA-0505S | 5/16 | 7.93 | 5/16 | 7.93 | 1/2-20 | 5.8 | 9/16 | 14.28 | 5/8 | 15.87 | 16.6 | 18.8 | 31.0 | 38.4 |
| UUA-0604S | 3/8 | 9.52 | 1/4 | 6.35 | 7/16-20 | 4.3 | 5/8 | 15.87 | 11/16 | 17.46 | 16.7 | 18.9 | 32.3 | 39.6 |
| UUA-0606S | 3/8 | 9.52 | 3/8 | 9.52 | 9/16-18 | 7.0 | 5/8 | 15.87 | 11/16 | 17.46 | 16.7 | 18.9 | 32.3 | 39.6 |
| UUA-0808S | 1/2 | 12.70 | 1/2 | 12.70 | 3/4-16 | 10.0 | 13/16 | 20.63 | 7/8 | 22.22 | 22.7 | 21.6 | 35.8 | 46.0 |
| UUA-1212S | 3/4 | 19.05 | 3/4 | 19.05 | 1-1/16-12 | 15.5 | 1-1/8 | 28.57 | 1-1/8 | 28.57 | 24.4 | 21.9 | 43.2 | 53.3 |
| UUA-1616S | 1 | 25.40 | 1 | 25.40 | 1-5/16-12 | 21.3 | 1-3/8 | 34.92 | 1-1/2 | 38.10 | 31.1 | 26.1 | 49.3 | 61.5 |

AN is Navy and Air Force standard for 37 degree flared fittings (SAE J514).

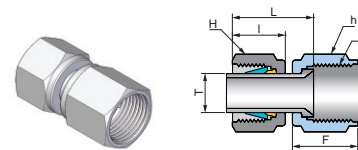
AN Bulkhead Union UBUA



Connects Fractional Tube to An Flared Tube

| Part No. | Tube OD T | | AN Tube Flare Size | | Straight Thread P(U) | Dimensions (mm) | | | | | | | | | | | |
|------------|--------------|-------|-----------------------|-------|----------------------------|-----------------|--------|-------|-------|-------|------|------|----------------|------|----------------|-----------------------------|---------------------------|
| | inch | mm | inch | mm | | E Min. | h | | H | | F | I | I ₁ | L | L ₁ | Panel Hole Drill Size | Max Panel Thickness |
| | | | | | | | inch | mm | inch | mm | | | | | | | |
| UBUA-0404S | 1/4 | 6.35 | 1/4 | 6.35 | 7/16-20 | 4.3 | 5/8 | 15.87 | 9/16 | 14.28 | 15.1 | 46.5 | 26.2 | 53.8 | 33.5 | 11.5 | 10.2 |
| UBUA-0606S | 3/8 | 9.52 | 3/8 | 9.52 | 9/16-18 | 7.0 | 3/4 | 19.05 | 11/16 | 17.46 | 16.7 | 49.8 | 29.5 | 57.2 | 36.8 | 14.7 | 11.2 |
| UBUA-0808S | 1/2 | 12.70 | 1/2 | 12.70 | 3/4-16 | 10.0 | 15/16 | 23.81 | 7/8 | 22.22 | 22.7 | 55.6 | 31.8 | 65.8 | 41.9 | 19.4 | 12.7 |
| UBUA-1212S | 3/4 | 19.05 | 3/4 | 19.05 | 1-1/16-12 | 15.5 | 1-3/16 | 30.16 | 1-1/8 | 28.57 | 24.4 | 68.8 | 37.3 | 79.0 | 47.5 | 25.8 | 16.8 |
| UBUA-1616S | 1 | 25.40 | 1 | 25.40 | 1-5/16-12 | 21.3 | 1-5/8 | 41.27 | 1-1/2 | 38.10 | 31.1 | 80.3 | 45.2 | 92.5 | 57.4 | 33.7 | 19.1 |

AN Adapter UAA

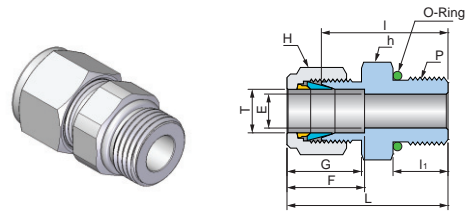


Connects Fractional Tube to An Flared Tube

| Part No. | Tube OD T | | AN Tube Flare Size | | Straight Thread P(U) | Dimensions (mm) | | | | | | |
|-----------|--------------|-------|-----------------------|-------|----------------------------|-----------------|-------|-------|-------|------|------|------|
| | inch | mm | inch | mm | | h | | H | | F | I | L |
| | | | | | | inch | mm | inch | mm | | | |
| UAA-0202S | 1/8 | 3.17 | 1/8 | 3.17 | 5/16-24 | 3/8 | 9.52 | 7/16 | 11.11 | 13.7 | 13.5 | 18.5 |
| UAA-0204S | 1/8 | 3.17 | 1/4 | 6.35 | 7/16-20 | 9/16 | 14.28 | 7/16 | 11.11 | 15.7 | 13.5 | 19.1 |
| UAA-0404S | 1/4 | 6.35 | 1/4 | 6.35 | 7/16-20 | 9/16 | 14.28 | 9/16 | 14.28 | 15.7 | 15.7 | 21.3 |
| UAA-0606S | 3/8 | 9.52 | 3/8 | 9.52 | 9/16-18 | 11/16 | 17.46 | 11/16 | 17.46 | 18.3 | 17.5 | 24.9 |
| UAA-0808S | 1/2 | 12.70 | 1/2 | 12.70 | 3/4-16 | 7/8 | 22.22 | 7/8 | 22.22 | 21.6 | 23.1 | 31.8 |

Dimensions are for reference only and are subject to change without prior notice.
E is minimum opening. F, G and L are typical finger tight.

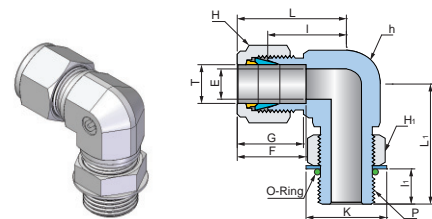
SAE/MS Male Connector UMCS



Connects Fractional Tube to SAE/MS Straight Thread Boss

| Part No. | Tube OD T | | Straight Thread P(U) | Dimensions (mm) | | | | | | | | | |
|------------|--------------|-------|----------------------------|-----------------|--------|-------|-------|-------|------|------|------|------|------|
| | inch | mm | | E Min. | h | | H | | F | G | I | li | L |
| | | | | | inch | mm | inch | mm | | | | | |
| UMCS-0202U | 1/8 | 3.17 | 5/16-24 | 2.3 | 7/16 | 11.11 | 7/16 | 11.11 | 12.8 | 15.4 | 2.3 | 7.6 | 30.1 |
| UMCS-0404U | 1/4 | 6.35 | 7/16-20 | 4.8 | 9/16 | 14.28 | 9/16 | 14.28 | 15.1 | 17.4 | 26.7 | 9.1 | 33.9 |
| UMCS-0406U | 1/4 | 6.35 | 9/16-18 | 4.8 | 11/16 | 17.46 | 9/16 | 14.28 | 15.1 | 17.4 | 28.2 | 9.9 | 35.4 |
| UMCS-0408U | 1/4 | 6.35 | 3/4-16 | 4.8 | 7/8 | 22.22 | 9/16 | 14.28 | 15.1 | 17.4 | 30.2 | 11.2 | 37.4 |
| UMCS-0410U | 1/4 | 6.35 | 7/8-14 | 4.8 | 1 | 25.40 | 9/16 | 14.28 | 15.1 | 17.4 | 33.3 | 12.7 | 40.5 |
| UMCS-0505U | 5/16 | 7.93 | 1/2-20 | 6.0 | 5/8 | 15.87 | 5/8 | 15.87 | 16.6 | 18.8 | 27.4 | 9.1 | 34.8 |
| UMCS-0604U | 3/8 | 9.52 | 7/16-20 | 5.0 | 5/8 | 15.87 | 11/16 | 17.46 | 16.7 | 18.9 | 28.2 | 9.1 | 35.6 |
| UMCS-0606U | 3/8 | 9.52 | 9/16-18 | 7.0 | 11/16 | 17.46 | 11/16 | 17.46 | 16.7 | 18.9 | 29.7 | 9.9 | 37.1 |
| UMCS-0608U | 3/8 | 9.52 | 3/4-16 | 7.0 | 7/8 | 22.22 | 11/16 | 17.46 | 16.7 | 18.9 | 31.8 | 11.2 | 39.1 |
| UMCS-0610U | 3/8 | 9.52 | 7/8-14 | 7.0 | 1 | 25.40 | 11/16 | 17.46 | 16.7 | 18.9 | 34.8 | 12.7 | 42.2 |
| UMCS-0806U | 1/2 | 12.70 | 9/16-18 | 7.0 | 13/16 | 20.63 | 7/8 | 22.22 | 22.7 | 21.6 | 29.0 | 9.9 | 39.1 |
| UMCS-0808U | 1/2 | 12.70 | 3/4-16 | 10.0 | 7/8 | 22.22 | 7/8 | 22.22 | 22.7 | 21.6 | 31.8 | 11.2 | 41.9 |
| UMCS-0810U | 1/2 | 12.70 | 7/8-14 | 10.0 | 1 | 25.40 | 7/8 | 22.22 | 22.7 | 21.6 | 34.8 | 12.7 | 45.0 |
| UMCS-0812U | 1/2 | 12.70 | 1-1/16-12 | 10.0 | 1-1/4 | 31.75 | 7/8 | 22.22 | 22.7 | 21.6 | 38.9 | 15.0 | 49.0 |
| UMCS-1008U | 5/8 | 15.87 | 3/4-16 | 10.0 | 15/16 | 23.81 | 1 | 25.40 | 24.5 | 22.0 | 31.8 | 11.2 | 41.9 |
| UMCS-1010U | 5/8 | 15.87 | 7/8-14 | 12.0 | 1 | 25.40 | 1 | 25.40 | 24.5 | 22.0 | 35.1 | 12.7 | 45.2 |
| UMCS-1208U | 3/4 | 19.05 | 3/4-16 | 10.0 | 1-1/16 | 26.98 | 1-1/8 | 28.57 | 24.4 | 21.9 | 35.8 | 11.2 | 46.0 |
| UMCS-1212U | 3/4 | 19.05 | 1-1/16-12 | 16.0 | 1-1/4 | 31.80 | 1-1/8 | 28.57 | 24.4 | 21.9 | 38.9 | 15.0 | 49.0 |
| UMCS-1612U | 1 | 25.40 | 1-1/16-12 | 16.0 | 1-3/8 | 34.92 | 1-1/2 | 38.10 | 31.1 | 26.1 | 41.1 | 15.0 | 53.3 |
| UMCS-1616U | 1 | 25.40 | 1-5/16-12 | 22.0 | 1-1/2 | 38.10 | 1-1/2 | 38.10 | 31.1 | 26.1 | 42.2 | 15.0 | 54.4 |

SAE/MS Male Elbow Positionable UMES

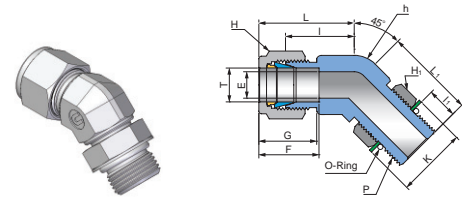


| Part No. | Tube OD T | | Straight Thread P(U) | Dimensions (mm) | | | | | | | | | | | | | |
|------------|--------------|-------|----------------------------|-----------------|--------|-------|-------|-------|----------------|-------|------|------|------|------|------|----------------|------|
| | inch | mm | | E Min. | h | | H | | H ₁ | | F | G | I | li | L | L ₁ | K |
| | | | | | inch | mm | inch | mm | inch | mm | | | | | | | |
| UMES-0404U | 1/4 | 6.35 | 7/16-20 | 4.8 | 1/2 | 12.70 | 9/16 | 14.28 | 9/16 | 14.28 | 15.1 | 17.4 | 21.1 | 9.9 | 28.4 | 28.4 | 16.5 |
| UMES-0505U | 5/16 | 7.93 | 1/2-20 | 6.0 | 9/16 | 14.28 | 5/8 | 15.87 | 5/8 | 15.87 | 16.6 | 18.8 | 22.9 | 9.9 | 30.2 | 39.5 | 18.3 |
| UMES-0606U | 3/8 | 9.52 | 9/16-18 | 7.0 | 5/8 | 15.87 | 11/16 | 17.46 | 11/16 | 17.46 | 16.7 | 18.9 | 24.6 | 11.2 | 32.0 | 32.3 | 20.1 |
| UMES-0608U | 3/8 | 9.52 | 3/4-16 | 7.0 | 13/16 | 20.63 | 11/16 | 17.46 | 7/8 | 22.22 | 16.7 | 18.9 | 27.4 | 12.7 | 34.8 | 37.8 | 25.7 |
| UMES-0808U | 1/2 | 12.70 | 3/4-16 | 10.0 | 13/16 | 20.63 | 7/8 | 22.22 | 7/8 | 22.22 | 22.7 | 21.6 | 27.4 | 12.7 | 37.6 | 37.8 | 25.7 |
| UMES-1010U | 5/8 | 15.87 | 7/8-14 | 12.0 | 1 | 25.40 | 1 | 25.40 | 1 | 25.40 | 24.5 | 22.0 | 29.5 | 14.2 | 39.6 | 43.4 | 29.5 |
| UMES-1212U | 3/4 | 19.05 | 1-1/16-12 | 16.0 | 1-1/16 | 26.98 | 1-1/8 | 28.57 | 1-1/8 | 28.57 | 24.4 | 21.9 | 31.2 | 16.8 | 41.4 | 48.8 | 36.6 |
| UMES-1616U | 1 | 25.40 | 1-5/16-12 | 22.0 | 1-3/8 | 34.92 | 1-1/2 | 38.10 | 1-1/2 | 38.10 | 31.1 | 26.1 | 38.4 | 16.8 | 50.5 | 53.6 | 43.9 |

Dimensions are for reference only and are subject to change without prior notice.
E is minimum opening. F, G and L are typical finger tight.

SAE/MS 45° Male Elbow
Positionable

UMVES

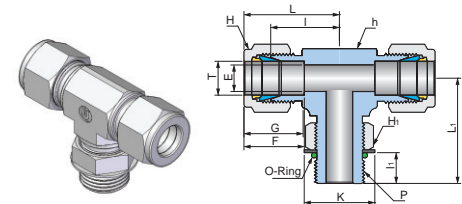


Connects Fractional Tube to SAE/MS Straight Thread Boss

| Part No. | Tube OD T | | Straight Thread P(U) | Dimensions (mm) | | | | | | | | | | | | | |
|-------------|--------------|-------|----------------------------|-----------------|--------|-------|-------|-------|----------------|-------|------|------|------|----------------|------|----------------|------|
| | inch | mm | | E Min. | h | | H | | H ₁ | | F | G | I | I ₁ | L | L ₁ | K |
| UMVES-0404U | 1/4 | 6.35 | 7/16-20 | 4.8 | 1/2 | 12.70 | 9/16 | 14.28 | 9/16 | 14.28 | 15.1 | 17.4 | 18.3 | 9.9 | 25.5 | 25.7 | 16.5 |
| UMVES-0606U | 3/8 | 9.52 | 9/16-18 | 7.0 | 5/8 | 15.87 | 11/16 | 17.46 | 11/16 | 17.46 | 16.7 | 18.9 | 20.6 | 11.2 | 27.9 | 28.2 | 20.1 |
| UMVES-0808U | 1/2 | 12.70 | 3/4-16 | 10.0 | 13/16 | 20.63 | 7/8 | 22.22 | 7/8 | 22.22 | 22.7 | 21.6 | 21.8 | 12.7 | 31.8 | 32.3 | 25.7 |
| UMVES-1212U | 3/4 | 19.05 | 1-1/16-12 | 16.0 | 1-1/16 | 26.98 | 1-1/8 | 28.57 | 1-1/8 | 28.57 | 24.4 | 21.9 | 29.7 | 16.8 | 39.8 | 47.2 | 36.6 |
| UMVES-1616U | 1 | 25.40 | 1-5/16-12 | 22.0 | 1-3/8 | 34.92 | 1-1/2 | 38.10 | 1-1/2 | 38.10 | 31.1 | 26.1 | 35.3 | 16.8 | 47.4 | 50.5 | 43.9 |

SAE/MS Male Branch Tee-Positionable

UMBTS

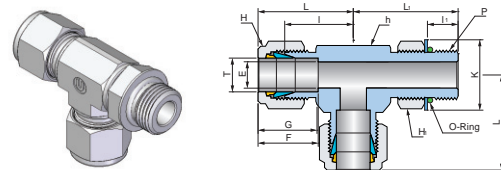


Connects Fractional Tube to SAE/MS Straight Thread Boss

| Part No. | Tube OD T | | Straight Thread P(U) | Dimensions (mm) | | | | | | | | | | | | | |
|-------------|--------------|-------|----------------------------|-----------------|--------|-------|-------|-------|----------------|-------|------|------|------|----------------|------|----------------|------|
| | inch | mm | | E Min. | h | | H | | H ₁ | | F | G | I | I ₁ | L | L ₁ | K |
| UMBTS-0404U | 1/4 | 6.35 | 7/16-20 | 4.8 | 1/2 | 12.70 | 9/16 | 14.28 | 9/16 | 14.28 | 15.1 | 17.4 | 21.1 | 9.9 | 28.4 | 28.4 | 16.5 |
| UMBTS-0606U | 3/8 | 9.52 | 9/16-18 | 7.0 | 5/8 | 15.87 | 11/16 | 17.46 | 11/16 | 17.46 | 16.7 | 18.9 | 24.6 | 11.2 | 32.0 | 32.3 | 20.1 |
| UMBTS-0808U | 1/2 | 12.70 | 3/4-16 | 10.0 | 13/16 | 20.63 | 7/8 | 22.22 | 7/8 | 22.22 | 22.7 | 21.6 | 27.4 | 12.7 | 37.6 | 37.8 | 25.7 |
| UMBTS-1212U | 3/4 | 19.05 | 1-1/16-12 | 16.0 | 1-1/16 | 26.98 | 1-1/8 | 28.57 | 1-1/8 | 31.75 | 24.4 | 21.9 | 31.2 | 16.8 | 41.4 | 48.8 | 36.6 |
| UMBTS-1616U | 1 | 25.40 | 1-5/16-12 | 22.0 | 1-3/8 | 34.92 | 1-1/2 | 38.10 | 1-1/2 | 38.10 | 31.1 | 26.1 | 38.4 | 16.8 | 50.5 | 53.6 | 43.9 |

SAE/MS Male Run Tee-Positionable

UMRTS



Connects Fractional Tube to SAE/MS Straight Thread Boss

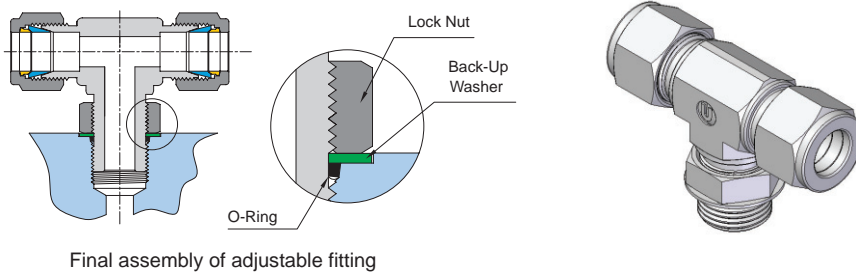
| Part No. | Tube OD T | | Straight Thread P(U) | Dimensions (mm) | | | | | | | | | | | | | |
|-------------|--------------|-------|----------------------------|-----------------|-------|-------|-------|-------|----------------|-------|------|------|------|----------------|------|----------------|------|
| | inch | mm | | E Min. | h | | H | | H ₁ | | F | G | I | I ₁ | L | L ₁ | K |
| UMRTS-0404U | 1/4 | 6.35 | 7/16-20 | 4.8 | 1/2 | 12.70 | 9/16 | 14.28 | 9/16 | 14.28 | 15.1 | 17.4 | 21.1 | 9.9 | 28.4 | 28.4 | 16.5 |
| UMRTS-0606U | 3/8 | 9.52 | 9/16-18 | 7.0 | 5/8 | 15.87 | 11/16 | 17.46 | 11/16 | 17.46 | 16.7 | 18.9 | 24.6 | 11.2 | 32.0 | 32.3 | 20.1 |
| UMRTS-0808U | 1/2 | 12.70 | 3/4-16 | 10.0 | 13/16 | 20.63 | 7/8 | 22.22 | 7/8 | 22.22 | 22.7 | 21.6 | 27.4 | 12.7 | 37.6 | 37.8 | 25.7 |
| UMRTS-1212U | 3/4 | 19.05 | 1-1/16-12 | 16.0 | 1-1/8 | 28.57 | 1-1/8 | 28.57 | 1-1/8 | 31.75 | 24.4 | 21.9 | 31.2 | 16.8 | 41.4 | 48.8 | 36.6 |
| UMRTS-1616U | 1 | 25.40 | 1-5/16-12 | 22.0 | 1-3/8 | 34.92 | 1-1/2 | 38.10 | 1-1/2 | 38.10 | 31.1 | 26.1 | 38.4 | 16.8 | 50.5 | 50.5 | 43.9 |

Dimensions are for reference only and are subject to change without prior notice.
E is minimum opening. F, G and L are typical finger tight.

Positionable SAE/MS Straight Thread Fittings Information

Application

To orient Uni-Lok port of tube fittings in the certain direction to be desired, the positionable fittings are useful for the installation at tanks or vessels without welding or brazing.



Installation Instructions

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

O-ring Ordering Information for SAE/MS Straight Thread Boss

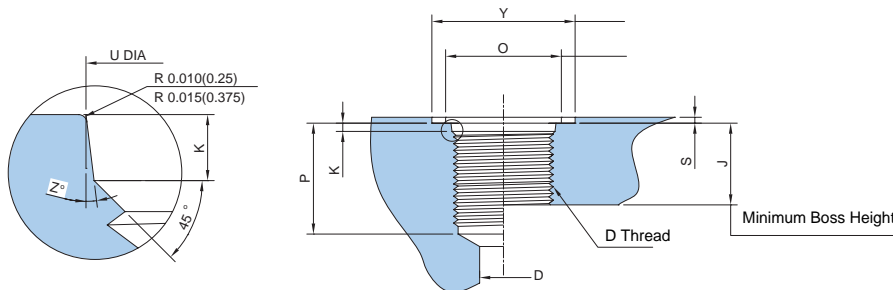
O-Ring can be ordered with the part numbers as shown below. The standard material is Buna-N.

Fluorocarbon FKM is available with the designator -F instead of B.

| Part No. | Tube O.D. | Uniform Size Number | Dimension (inch) | |
|----------|-----------|---------------------|------------------|---------------|
| | | | I.D. | Cross Section |
| OU-02-B | 1/8 | 902 | 0.239 | 0.064 |
| OU-03-B | 3/16 | 903 | 0.301 | 0.064 |
| OU-04-B | 1/4 | 904 | 0.351 | 0.072 |
| OU-05-B | 5/16 | 905 | 0.414 | 0.072 |
| OU-06-B | 3/8 | 906 | 0.468 | 0.078 |
| OU-08-B | 1/2 | 908 | 0.644 | 0.087 |
| OU-10-B | 5/8 | 910 | 0.755 | 0.097 |

| Part No. | Tube O.D. | Uniform Size Number | Dimension (inch) | |
|----------|-----------|---------------------|------------------|---------------|
| | | | I.D. | Cross Section |
| OU-12-B | 3/4 | 912 | 0.924 | 0.116 |
| OU-14-B | 7/8 | 914 | 1.048 | 0.116 |
| OU-16-B | 1 | 916 | 1.171 | 0.116 |
| OU-20-B | 1-1/4 | 920 | 1.475 | 0.118 |
| OU-24-B | 1-1/2 | 924 | 1.720 | 0.118 |
| OU-32-B | 2 | 932 | 2.337 | 0.118 |

SAE/MS Internal Straight Thread Boss Information



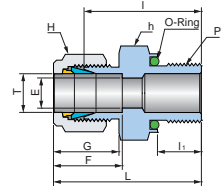
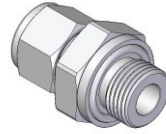
Recommended Spot Face Diameter
This surface shall be square with the thread pitch diameter within 0.010(0.25) FIR when measured at outside diameter.

This dimension applies only when tap drill can not pass through entire boss.

| Tube O.D. | Thread Size | D (Min) | J (Min) | K | O (Min) | P (Min) | U | Y | S (Max) | Z |
|-----------|-------------|---------|---------|-----|---------|---------|------|----|---------|-----|
| 1/8 | 5/16-24 | 1.6 | 10.0 | 1.9 | 11 | 12.0 | 9.1 | 17 | 1.6 | 12° |
| 3/16 | 3/8-24 | 3.2 | 10.0 | 1.9 | 13 | 12.0 | 10.7 | 19 | 1.6 | 12° |
| 1/4 | 7/16-20 | 4.4 | 11.5 | 2.4 | 15 | 14.0 | 12.4 | 21 | 1.6 | 12° |
| 5/16 | 1/2-20 | 6.0 | 11.5 | 2.4 | 16 | 14.0 | 14.0 | 23 | 1.6 | 12° |
| 3/8 | 9/16-18 | 7.5 | 12.7 | 2.5 | 18 | 15.5 | 15.6 | 25 | 1.6 | 12° |
| 1/2 | 3/4-16 | 10.0 | 14.3 | 2.5 | 22 | 17.5 | 20.6 | 30 | 2.4 | 15° |
| 5/8 | 7/8-14 | 12.5 | 16.7 | 2.5 | 26 | 20.0 | 23.9 | 34 | 2.4 | 15° |
| 3/4 | 1-1/16-12 | 16.0 | 19.0 | 3.3 | 32 | 23.0 | 29.2 | 41 | 2.4 | 15° |
| 7/8 | 1-3/16-12 | 18.0 | 19.0 | 3.3 | 35 | 23.0 | 32.3 | 45 | 2.4 | 15° |
| 1 | 1-5/16-12 | 21.0 | 19.0 | 3.3 | 38 | 23.0 | 35.5 | 49 | 3.2 | 15° |
| 1-1/4 | 1-5/8-12 | 27.0 | 19.0 | 3.3 | 48 | 23.0 | 43.5 | 58 | 3.2 | 15° |
| 1-1/2 | 1-7/8-12 | 33.0 | 19.0 | 3.3 | 54 | 23.0 | 49.8 | 65 | 3.2 | 15° |
| 2 | 2-1/2-12 | 70.0 | 19.0 | 3.3 | 70 | 23.0 | 65.7 | 88 | 3.2 | 15° |

1. Diameter U shall be concentric with thread pitch diameter within 0.13 full indicator reading (FIR) and shall be free from longitudinal and spiral tool marks. Angular tool marks up to 2.5 Micro meter max shall be permissible.
2. Maximum recommended spot face depth to permit sufficient wrench grip for proper tightening of fitting or locknut.
3. If face of boss is on a machined surface, dimensions Y and S need not apply as long as R 0.25/0.375 is maintained to avoid damage to the O-ring during installation.
4. Tap drill depths given require use of a bottoming taps to produce the specified full thread lengths. Where standard taps are used, the tap drill depths must be increased accordingly.
5. Figures are for reference only, as any boss can be used for a tubing size depending upon other design criteria.

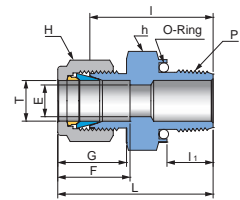
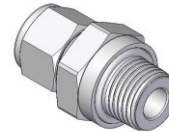
O-Seal Straight Thread Connector UMOS



Connects Fractional Tube to Female Straight Thread

| Part No. | Tube OD T | | Straight Thread P (U) | Dimensions (mm) | | | | | | | | | |
|------------|--------------|-------|-----------------------------|-----------------|-------|-------|-------|-------|------|------|------|----------------|------|
| | inch | mm | | E Min. | h | | H | | F | G | I | I ₁ | L |
| UMOS-0202U | 1/8 | 3.17 | 5/16-24 | 2.3 | 9/16 | 14.28 | 7/16 | 11.11 | 12.8 | 15.4 | 26.2 | 8.6 | 32.8 |
| UMOS-0303U | 3/16 | 4.76 | 3/8-24 | 3.0 | 5/8 | 15.87 | 1/2 | 12.70 | 14.0 | 16.4 | 27.7 | 9.7 | 34.3 |
| UMOS-0404U | 1/4 | 6.35 | 7-16-20 | 4.8 | 3/4 | 19.05 | 9/16 | 14.28 | 15.1 | 17.4 | 31.0 | 10.4 | 38.4 |
| UMOS-0505U | 5/16 | 7.93 | 1/2-20 | 6.4 | 7/8 | 22.22 | 5/8 | 15.87 | 16.6 | 18.8 | 33.3 | 11.2 | 40.6 |
| UMOS-0606U | 3/8 | 9.52 | 9/16-18 | 7.0 | 15/16 | 23.81 | 11/16 | 17.46 | 16.7 | 18.9 | 35.1 | 11. | 42.4 |
| UMOS-0808U | 1/2 | 12.70 | 3/4-16 | 10.0 | 1-1/8 | 28.57 | 7/8 | 22.22 | 22.7 | 21.6 | 35.8 | 11.9 | 46.0 |
| UMOS-1212U | 3/4 | 19.05 | 1-1/16-12 | 16.0 | 1-1/2 | 38.10 | 1-1/8 | 28.57 | 24.4 | 21.9 | 42.2 | 14.2 | 52.3 |
| UMOS-1616U | 1 | 25.40 | 1-5/16-12 | 22.0 | 1-3/4 | 44.45 | 1-1/2 | 38.10 | 31.1 | 26.1 | 46.0 | 14.2 | 58.2 |

O-Seal PipeThread Connector UMOP



Connects Fractional Tube to Female NPT Thread

| Part No. | Tube OD T | | P (NPT) | Dimensions (mm) | | | | | | | | | |
|------------|--------------|-------|------------|-----------------|--------|-------|-------|-------|------|------|------|----------------|------|
| | inch | mm | | E Min. | h | | H | | F | G | I | I ₁ | L |
| UMOP-0202N | 1/8 | 3.17 | 1/8 | 2.3 | 3/4 | 19.05 | 7/16 | 11.11 | 12.8 | 15.4 | 26.2 | 7.1 | 32.8 |
| UMOP-0402N | 1/4 | 6.35 | 1/8 | 4.8 | 3/4 | 19.05 | 9/16 | 14.28 | 15.1 | 17.4 | 27.7 | 7.1 | 35.1 |
| UMOP-0404N | 1/4 | 6.35 | 1/4 | 4.8 | 15/16 | 23.81 | 9/16 | 14.28 | 15.1 | 17.4 | 31.0 | 9.7 | 38.4 |
| UMOP-0604N | 3/8 | 9.52 | 1/4 | 7.0 | 15/16 | 23.81 | 11/16 | 17.46 | 16.7 | 18.9 | 32.5 | 9.7 | 39.9 |
| UMOP-0606N | 3/8 | 9.52 | 3/8 | 7.0 | 1-1/8 | 28.57 | 11/16 | 17.46 | 16.7 | 18.9 | 34.0 | 10.4 | 41.4 |
| UMOP-0608N | 3/8 | 9.52 | 1/2 | 7.0 | 1-5/16 | 33.33 | 11/16 | 17.46 | 16.7 | 18.9 | 39.6 | 13.5 | 47.0 |
| UMOP-0808N | 1/2 | 12.70 | 1/2 | 10.0 | 1-5/16 | 33.33 | 7/8 | 22.22 | 22.7 | 21.6 | 39.6 | 13.5 | 49.8 |
| UMOP-1212N | 3/4 | 19.05 | 3/4 | 16.0 | 1-1/2 | 38.10 | 1-1/8 | 28.57 | 24.4 | 21.9 | 42.2 | 14.2 | 52.3 |

ISO Tapered threads are available for all fractional UMOP. To order, add "R" as a suffix instead of "N".

Dimensions are for reference only and are subject to change without prior notice.
E is minimum opening. F, G and L are typical finger tight.

O-Seal Fittings Information

Application

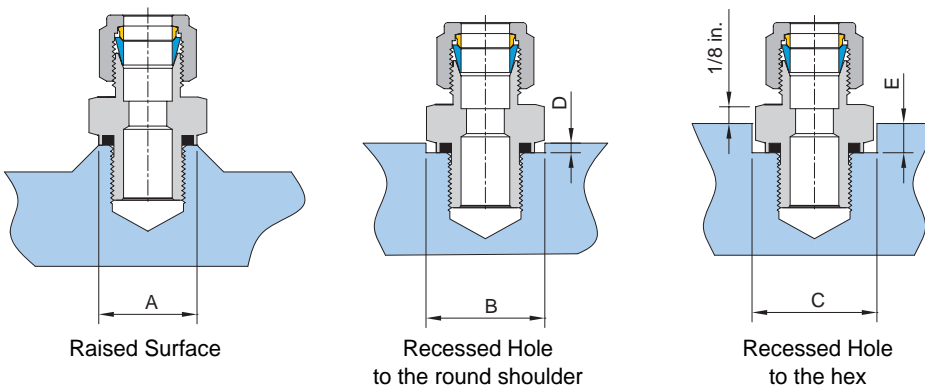
Uni-Lok O-Seal fittings can be directly installed into the existing pipe threads or straight thread ports. As they have short thread length, thread interference does not occur whereas it is common on tapered thread and the leak tightness is obtained by O-ring additionally. The standard Buna-N O-ring has a precision groove, the groove provides anti-extrusion of O-ring at high pressure and controlled squeeze for vacuum tight sealing. To attain a leak tight installation, smooth flat surface perpendicular to the axis of the threads is required.

Installation Instructions

1. Hand tighten Uni-Lok O-Seal fittings into the port until the O-ring compresses on the port.
2. Wrench-tighten the fittings lightly until the fittings contacts the face of port.

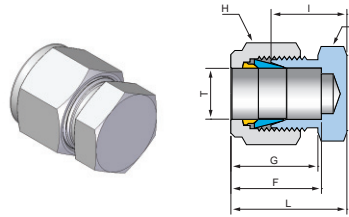
Note : The fitting body is always held by back-up wrench when installing or disassembling tubing to or from Uni-Lok port end to get a proper sealing.

Mounting Dimensions of O-Seal Fittings



| Part No. | Straight Thread (U) | Pipe Thread (NPT) | Dimensions (mm) Min | | | | | |
|------------|---------------------|-------------------|---------------------|------|------|-----|------|------|
| | | | A | B | C | D | E | |
| UMOS-0202U | 5/16-24 | - | 12.7 | 15.0 | 16.8 | 2.3 | 5.6 | |
| UMOP-0202N | - | 1/8 | 17.5 | 19.8 | 22.0 | 4.0 | 7.1 | |
| UMOS-0303U | 3/8-24 | - | 14.2 | 16.8 | 19.0 | 2.0 | 5.6 | |
| UMOS-0404U | 7/16-20 | - | 17.5 | 19.8 | 22.0 | 4.0 | 7.1 | |
| UMOP-0402N | - | 1/8 | | | | | 7.1 | |
| UMOP-0404N | - | 1/4 | 22.1 | 24.6 | 28.0 | | 7.9 | |
| UMOS-0505U | 1/2-20 | - | 19.1 | 23.1 | 26.0 | | 6.0 | 11.2 |
| UMOS-0606U | 9/16-18 | - | 20.6 | 24.6 | 28.0 | | | |
| UMOP-0606N | - | 3/8 | 25.4 | 29.5 | 33.0 | 8.6 | | |
| UMOP-0608N | - | 1/2 | 31.0 | 34.0 | 39.0 | 6.0 | 11.2 | |
| UMOS-0808U | 3/4-16 | - | 25.4 | 29.5 | 33.0 | 4.0 | 8.6 | |
| UMOP-0808N | - | 1/2 | 31.0 | 34.0 | 39.0 | 6.0 | 11.2 | |
| UMOS-1212U | 1-1/16-12 | - | 35.8 | 38.9 | 44.0 | | 12.7 | |
| UMOS-1616U | 1-5/16-12 | - | 42.9 | 45.2 | 52.0 | | 14.2 | |

Tube Cap
UC



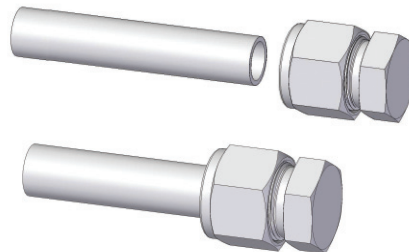
Connects Fractional Tube

| Part No. | Tube OD | | Dimensions (mm) | | | | | | | |
|----------|---------|-------|-----------------|-------|-------|-------|------|------|------|------|
| | T | | h | | H | | F | G | I | L |
| | inch | mm | inch | mm | inch | mm | | | | |
| UC-02 | 1/8 | 3.17 | 7/16 | 11.11 | 7/16 | 11.11 | 12.8 | 15.4 | 13.5 | 20.3 |
| UC-03 | 3/16 | 4.76 | 7/16 | 11.11 | 1/2 | 12.70 | 14.0 | 16.4 | 14.7 | 21.6 |
| UC-04 | 1/4 | 6.35 | 1/2 | 12.70 | 9/16 | 14.28 | 15.1 | 17.4 | 16.0 | 23.2 |
| UC-05 | 5/16 | 7.93 | 9/16 | 14.28 | 5/8 | 15.87 | 16.6 | 18.8 | 17.0 | 24.7 |
| UC-06 | 3/8 | 9.52 | 5/8 | 15.87 | 11/16 | 17.46 | 16.7 | 18.9 | 18.3 | 25.6 |
| UC-08 | 1/2 | 12.70 | 13/16 | 20.63 | 7/8 | 22.22 | 22.7 | 21.6 | 19.1 | 29.1 |
| UC-10 | 5/8 | 15.87 | 15/16 | 23.81 | 1 | 25.40 | 24.5 | 22.0 | 19.8 | 30.0 |
| UC-12 | 3/4 | 19.05 | 1-1/16 | 26.98 | 1-1/8 | 28.57 | 24.4 | 21.9 | 21.3 | 31.4 |
| UC-14 | 7/8 | 22.22 | 1-3/16 | 30.16 | 1-1/4 | 31.75 | 26.0 | 22.0 | 23.9 | 34.1 |
| UC-16 | 1 | 25.40 | 1-3/8 | 34.92 | 1-1/2 | 38.10 | 31.1 | 26.1 | 26.2 | 38.3 |
| UC-20 | 1-1/4 | 31.75 | 1-3/4 | 44.45 | 1-7/8 | 47.62 | 41 | 39 | 31.2 | 53.0 |
| UC-24 | 1-1/2 | 38.10 | 2-1/8 | 53.97 | 2-1/4 | 57.15 | 50.1 | 45.3 | 37.3 | 64.6 |
| UC-32 | 2 | 50.80 | 2-3/4 | 69.85 | 3 | 76.20 | 69.1 | 63.5 | 49.3 | 87.4 |

Connects Metric Tube

| Part No. | Tube OD | | Dimensions (mm) | | | | | |
|----------|---------|-------|-----------------|------|------|------|------|---|
| | T | | h | H | F | G | I | L |
| | mm | mm | mm | mm | | | | |
| UC-M03 | 3 | 11.11 | 11.11 | 12.7 | 15.3 | 13.5 | 20.2 | |
| UC-M04 | 4 | 11.11 | 12.70 | 13.7 | 16.1 | 14.7 | 21.2 | |
| UC-M06 | 6 | 14.28 | 14.28 | 15.3 | 17.6 | 15.7 | 23.1 | |
| UC-M08 | 8 | 15.87 | 15.87 | 16.3 | 18.7 | 17.0 | 24.6 | |
| UC-M10 | 10 | 17.46 | 19.05 | 17.3 | 19.5 | 19.0 | 26.7 | |
| UC-M12 | 12 | 22.22 | 22.22 | 22.8 | 21.7 | 19.0 | 29.7 | |
| UC-M15 | 15 | 23.81 | 25.40 | 24.4 | 22.0 | 19.8 | 29.9 | |
| UC-M16 | 16 | 23.81 | 25.40 | 24.5 | 22.0 | 19.8 | 30.0 | |
| UC-M18 | 18 | 26.98 | 30.16 | 24.5 | 22.0 | 21.3 | 31.5 | |
| UC-M20 | 20 | 30.16 | 31.75 | 26.2 | 22.1 | 23.9 | 24.2 | |
| UC-M22 | 22 | 30.16 | 31.75 | 26.2 | 22.1 | 23.9 | 34.2 | |
| UC-M25 | 25 | 34.92 | 38.10 | 31.1 | 26.1 | 26.2 | 38.3 | |
| UC-M28 | 28 | 41.27 | 47.63 | 41.1 | 38.8 | 27.7 | 49.8 | |
| UC-M30 | 30 | 44.45 | 47.50 | 41.1 | 38.8 | 28.6 | 50.7 | |
| UC-M32 | 32 | 46.04 | 50.80 | 40.9 | 38.6 | 32.8 | 54.7 | |
| UC-M38 | 38 | 38.10 | 55.56 | 49.9 | 45.1 | 37.8 | 64.9 | |

Installation Instruction



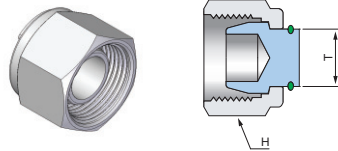
1. Insert tube end into the cap to bottom on the shoulder of the cap.
2. Finger-tighten the nut
3. Wrench-tighten the nut 1-1/4 turns, holding the body with a backup wrench, or vice.

Note

Tighten 1/8 turn for 1/16, 1/8, and 3/16 inch and 2, 3, and 4 mm Uni-Lok tube fittings .

Dimensions are for reference only and are subject to change without prior notice. E is minimum opening. F, G and L are typical finger tight.

Tube Plug UP



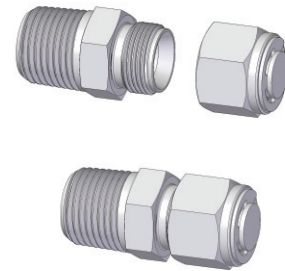
Connects Fractional Tube

| Part No. | Tube OD T | | H | |
|----------|--------------|-------|-------|-------|
| | inch | mm | inch | mm |
| UP-02 | 1/8 | 3.17 | 7/16 | 11.11 |
| UP-03 | 3/16 | 4.76 | 1/2 | 12.70 |
| UP-04 | 1/4 | 6.35 | 9/16 | 14.28 |
| UP-05 | 5/16 | 7.93 | 5/8 | 15.87 |
| UP-06 | 3/8 | 9.52 | 11/16 | 17.46 |
| UP-08 | 1/2 | 12.70 | 7/8 | 22.22 |
| UP-10 | 5/8 | 15.87 | 1 | 25.40 |
| UP-12 | 3/4 | 19.05 | 1-1/8 | 28.57 |
| UP-14 | 7/8 | 22.22 | 1-1/4 | 31.75 |
| UP-16 | 1 | 25.40 | 1-1/2 | 38.10 |
| UP-20 | 1-1/4 | 31.75 | 1-7/8 | 47.62 |
| UP-24 | 1-1/2 | 38.10 | 2-1/4 | 57.15 |
| UP-32 | 2 | 50.80 | 3 | 76.20 |

Connects Metric Tube

| Part No. | Tube OD T | H |
|----------|--------------|-------|
| | mm | mm |
| UP-M03 | 3 | 11.11 |
| UP-M04 | 4 | 12.70 |
| UP-M06 | 6 | 14.28 |
| UP-M08 | 8 | 15.87 |
| UP-M10 | 10 | 19.05 |
| UP-M12 | 12 | 22.22 |
| UP-M15 | 15 | 25.40 |
| UP-M16 | 16 | 25.40 |
| UP-M18 | 18 | 30.16 |
| UP-M20 | 20 | 31.75 |
| UP-M22 | 22 | 31.75 |
| UP-M25 | 25 | 38.10 |
| UP-M28 | 28 | 46.04 |
| UP-M30 | 30 | 49.21 |
| UP-M32 | 32 | 49.21 |
| UP-M38 | 38 | 60.32 |

Installation Instructions



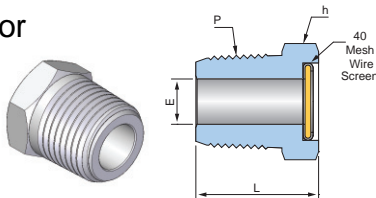
1. Remove the nut and ferrules from the Uni-Lok tube fitting body.
2. Finger-tighten the plug.
3. Tighten the plug 1/4 turn beyond the finger-tight position, holding the body with a backup wrench, or vice.

Note

Do not tighten 1-1/4 turns as this has machined ferrule not the standard ferrules.

Tighten 1/8 turn for 1/16, 1/8, and 3/16 inch and 2, 3, and 4 mm Uni-Lok tube fittings

Vent Protector UVP



Connects Fractional NPT Thread

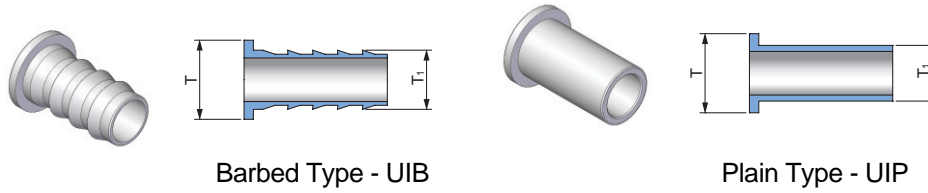
| Part No. | Dimensions (mm) | | | |
|----------|-----------------|--------|-------|------|
| | E Min. | H | | L |
| | | inch | mm | |
| UVP-04N | 7.0 | 9/16 | 14.28 | 19.8 |
| UVP-06N | 10.0 | 11/16 | 17.46 | 20.5 |
| UVP-08N | 12.0 | 7/8 | 22.22 | 26.2 |
| UVP-12N | 18.0 | 1-1/16 | 26.98 | 27.0 |

ISO Tapered threads are available for all fractional UVP. To order, add "R" as a suffix instead of "N".

Dimensions are for reference only and are subject to change without prior notice.
E is minimum opening. F, G and L are typical finger tight.

Tube Inset

UI



Barbed Type - UIB

Plain Type - UIP

Connects Fractional Tube

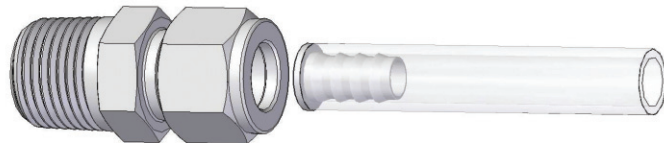
| Part No. | Tube OD T | | Tube OD T ₁ | |
|----------|--------------|-------|---------------------------|-------|
| | inch | mm | inch | mm |
| UI-0302 | 3/16 | 4.76 | 1/8 | 3.17 |
| UI-0402 | 1/4 | 6.35 | 1/8 | 3.17 |
| UI-0403 | 1/4 | 6.35 | 3/16 | 4.76 |
| UI-0502 | 5/16 | 7.93 | 1/8 | 3.17 |
| UI-0503 | 5/16 | 7.93 | 3/16 | 4.76 |
| UI-0504 | 5/16 | 7.93 | 1/4 | 6.35 |
| UI-0603 | 3/8 | 9.52 | 3/16 | 4.76 |
| UI-0604 | 3/8 | 9.52 | 1/4 | 6.35 |
| UI-0804 | 1/2 | 12.70 | 1/4 | 6.35 |
| UI-0806 | 1/2 | 12.70 | 3/8 | 9.52 |
| UI-1006 | 5/8 | 15.87 | 3/8 | 9.52 |
| UI-1008 | 5/8 | 15.87 | 1/2 | 12.70 |
| UI-1208 | 3/4 | 19.05 | 1/2 | 12.70 |
| UI-1210 | 3/4 | 19.05 | 5/8 | 15.87 |
| UI-1612 | 1 | 25.40 | 3/4 | 19.05 |

Connects Metric Tube

| Part No. | Tube OD T | Tube OD T ₁ |
|-----------|--------------|---------------------------|
| | mm | mm |
| UI-M06M04 | 6 | 4 |
| UI-M08M06 | 8 | 6 |
| UI-M10M08 | 10 | 8 |
| UI-M12M08 | 12 | 8 |
| UI-M12M10 | 12 | 10 |

Installation Instruction

Uni-Lok Inserts are used for Nylon, soft plastic tubing including PTFE and PFA as instructed below. The Insert supports the soft tubing internally and make them to be assembled to Uni-Lok port without any collapse.

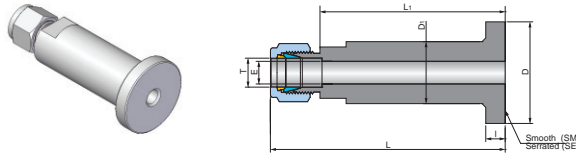


1. Fully insert the soft tubing into Uni-Lok Insert.
2. Insert them into Uni-Lok port.
3. Finger-tighten the nut.
4. Tight the nut 1-1/4 turns with a wrench, holding the body with a backup wrench, or vice.

Note

In 3/16 Uni-Lok tube fittings, tighten 3/4 turn.

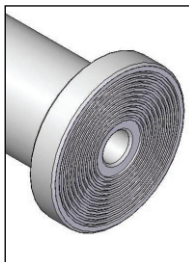
Lapped Flange Connector ULFC



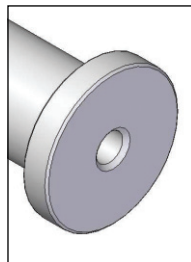
Connects Fractional Tube to Flange

| Part No. | Tube OD | Flange Seal | Dimensions (mm) | | | | | | Flange Surface Finish (Ra, μm) |
|------------|---------|-------------|-----------------|----------------|-----|------|----------------|---------|--|
| | T | | L | L ₁ | I | D | D ₁ | d (Min) | |
| ULFC-04-SM | 1/4 | SM | 80.8 | 56.5 | 6.5 | 35.0 | 22.2 | 4.8 | 3.2 - 6.3 |
| ULFC-04-SE | 1/4 | SE | 80.8 | 56.5 | 6.5 | 35.0 | 22.2 | 4.8 | 6.3 - 12.5 |
| ULFC-06-SM | 3/8 | SM | 82.3 | 56.5 | 6.5 | 35.0 | 22.2 | 7.1 | 3.2 - 6.3 |
| ULFC-06-SE | 3/8 | SE | 82.3 | 56.5 | 6.5 | 35.0 | 22.2 | 7.1 | 6.3 - 12.5 |
| ULFC-08-SM | 1/2 | SM | 84.8 | 56.5 | 6.5 | 35.0 | 22.2 | 10.4 | 3.2 - 6.3 |
| ULFC-08-SE | 1/2 | SE | 84.8 | 56.5 | 6.5 | 35.0 | 22.2 | 10.4 | 6.3 - 12.5 |

Uni-Lok Lapped Flange Connector connects process flange to instrument. Uni-Lok port is constructed integrally out of ANSI B16.5 Class 2500 flange. The flange seal surface has Smooth (SM) and Concentric Serrated (SE).

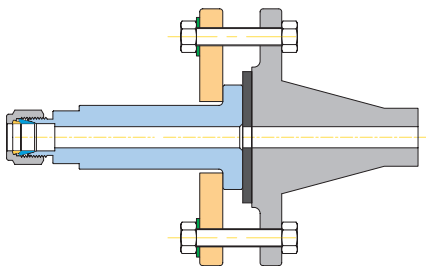


SE-Serrated



SM-Smooth

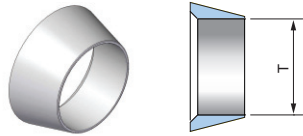
Uni-Lok Lapped Flange Connector is installed into slip-on and welding neck flanges, using sealing gasket on the flange seal face.



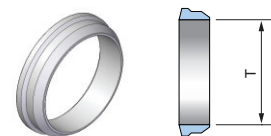
Dimensions are for reference only and are subject to change without prior notice.

Spare Parts

Front Ferrule UFF



Back Ferrule UBF



Fractional Tube

| Part No. | Tube OD T | |
|----------|--------------|-------|
| | inch | mm |
| UFF-02 | 1/8 | 3.17 |
| UFF-03 | 3/16 | 4.76 |
| UFF-04 | 1/4 | 6.35 |
| UFF-05 | 5/16 | 7.93 |
| UFF-06 | 3/8 | 9.52 |
| UFF-08 | 1/2 | 12.70 |
| UFF-10 | 5/8 | 15.87 |
| UFF-12 | 3/4 | 19.05 |
| UFF-14 | 7/8 | 22.22 |
| UFF-16 | 1 | 25.40 |
| UFF-20 | 1-1/4 | 31.75 |
| UFF-24 | 1-1/2 | 37.10 |
| UFF-32 | 2 | 50.80 |

Metric Tube

| Part No. | Tube OD T |
|----------|--------------|
| | mm |
| UFF-M03 | 3 |
| UFF-M04 | 4 |
| UFF-M06 | 6 |
| UFF-M08 | 8 |
| UFF-M10 | 10 |
| UFF-M12 | 12 |
| UFF-M15 | 15 |
| UFF-M16 | 16 |
| UFF-M18 | 18 |
| UFF-M20 | 20 |
| UFF-M22 | 22 |
| UFF-M25 | 25 |
| UFF-M28 | 28 |
| UFF-M30 | 30 |
| UFF-M32 | 32 |
| UFF-M38 | 38 |

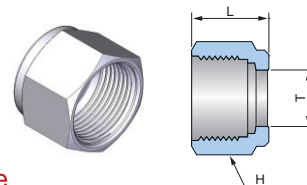
Fractional Tube

| Part No. | Tube OD T | |
|----------|--------------|-------|
| | inch | mm |
| UBF-02 | 1/8 | 3.17 |
| UBF-03 | 3/16 | 4.76 |
| UBF-04 | 1/4 | 6.35 |
| UBF-05 | 5/16 | 7.93 |
| UBF-06 | 3/8 | 9.52 |
| UBF-08 | 1/2 | 12.70 |
| UBF-10 | 5/8 | 15.87 |
| UBF-12 | 3/4 | 19.05 |
| UBF-14 | 7/8 | 22.22 |
| UBF-16 | 1 | 25.40 |
| UBF-20 | 1-1/4 | 31.75 |
| UBF-24 | 1-1/2 | 37.10 |
| UBF-32 | 2 | 50.80 |

Metric Tube

| Part No. | Tube OD T |
|----------|--------------|
| | mm |
| UBF-M03 | 3 |
| UBF-M04 | 4 |
| UBF-M06 | 6 |
| UBF-M08 | 8 |
| UBF-M10 | 10 |
| UBF-M12 | 12 |
| UBF-M15 | 15 |
| UBF-M16 | 16 |
| UBF-M18 | 18 |
| UBF-M20 | 20 |
| UBF-M22 | 22 |
| UBF-M25 | 25 |
| UBF-M28 | 28 |
| UBF-M30 | 30 |
| UBF-M32 | 32 |
| UBF-M38 | 38 |

Nut UN



Fractional Tube

| Part No. | Tube OD T | | H | | L |
|----------|--------------|-------|-------|-------|------|
| | inch | mm | inch | mm | mm |
| UN-02 | 1/8 | 3.17 | 7/16 | 11.11 | 11.9 |
| UN-03 | 3/16 | 4.76 | 1/2 | 12.70 | 11.9 |
| UN-04 | 1/4 | 6.35 | 9/16 | 14.28 | 12.7 |
| UN-05 | 5/16 | 7.93 | 5/8 | 15.87 | 13.4 |
| UN-06 | 3/8 | 9.52 | 11/16 | 17.46 | 14.2 |
| UN-08 | 1/2 | 12.70 | 7/8 | 22.22 | 17.5 |
| UN-10 | 5/8 | 15.87 | 1 | 25.40 | 17.5 |
| UN-12 | 3/4 | 19.05 | 1-1/8 | 28.57 | 17.5 |
| UN-14 | 7/8 | 22.22 | 1-1/4 | 31.75 | 17.5 |
| UN-16 | 1 | 25.40 | 1-1/2 | 38.10 | 20.6 |
| UN-20 | 1-1/4 | 31.75 | 1-7/8 | 47.63 | 31.7 |
| UN-24 | 1-1/2 | 37.10 | 2-1/4 | 57.15 | 38.1 |
| UN-32 | 2 | 50.80 | 3 | 76.20 | 52.3 |

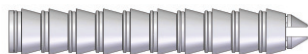
Metric Tube

| Part No. | Tube OD T | H | L |
|----------|--------------|-------|------|
| | mm | mm | mm |
| UN-M03 | 3 | 11.11 | 11.9 |
| UN-M04 | 4 | 12.70 | 11.9 |
| UN-M06 | 6 | 14.28 | 12.7 |
| UN-M08 | 8 | 15.87 | 13.4 |
| UN-M10 | 10 | 19.05 | 15.1 |
| UN-M12 | 12 | 22.22 | 17.5 |
| UN-M15 | 15 | 25.40 | 17.5 |
| UN-M16 | 16 | 25.40 | 17.5 |
| UN-M18 | 18 | 30.16 | 17.5 |
| UN-M20 | 20 | 31.75 | 17.5 |
| UN-M22 | 22 | 31.75 | 17.5 |
| UN-M25 | 25 | 38.10 | 20.6 |
| UN-M28 | 28 | 46.04 | 30.6 |
| UN-M30 | 30 | 49.21 | 23.7 |
| UN-M32 | 32 | 49.21 | 34.4 |
| UN-M38 | 38 | 60.32 | 40.6 |

Dimensions are for reference only and are subject to change without prior notice.

Ferrule Set

UFS



Fractional Tube

| Part No. | Tube OD T | |
|----------|--------------|-------|
| | inch | mm |
| UFS-02 | 1/8 | 3.17 |
| UFS-04 | 1/4 | 6.35 |
| UFS-06 | 3/8 | 9.52 |
| UFS-08 | 1/2 | 12.70 |

Metric Tube

| Part No. | Tube OD T |
|----------|--------------|
| | mm |
| UFS-M04 | 4 |
| UFS-M06 | 6 |
| UFS-M08 | 8 |
| UFS-M10 | 10 |
| UFS-M12 | 12 |

Ferrules can be ordered as a set with an arbor.
Each arbor holds 10 ferrule sets.

Ferrule & Nut Set

UFNS



Fractional Tube

| Part No. | Tube OD T | |
|----------|--------------|-------|
| | inch | mm |
| UFNS-02 | 1/8 | 3.17 |
| UFNS-04 | 1/4 | 6.35 |
| UFNS-06 | 3/8 | 9.52 |
| UFNS-08 | 1/2 | 12.70 |

Metric Tube

| Part No. | Tube OD T |
|----------|--------------|
| | mm |
| UFNS-M04 | 4 |
| UFNS-M06 | 6 |
| UFNS-M08 | 8 |
| UFNS-M10 | 10 |
| UFNS-M12 | 12 |

Ferrules and nut can be ordered as a set with an arbor.
Each arbor holds 5 ferrule and nut sets.

Dimensions are for reference only and are subject to change without prior notice.



본사 및 제1공장

인천광역시 남동구 고잔동 725-13번지
남동공단 152블럭 12롯트 ☎ 405-822
전화 : 032-822-6600
팩스 : 032-822-6604

제2공장

인천광역시 남동구 고잔동 684-7번지
남동공단 114블럭 8롯트 ☎ 405-818
전화 : 032-433-6601
팩스 : 032-441-7600

Headquarters & 1st Factory

152 Block-12 Lot, Namdong Indus-Park, 725-13,
Gojan-Dong, Namdong-Gu, Incheon, Korea
Tel : +82-32-821-6673
Fax : +82-32-822-6604

2nd Factory

114 Block-8 Lot, Namdong Indus-Park, 684-7,
Gojan-Dong, Namdong-Gu, Incheon, Korea
Tel : +82-32-433-6601
Fax : +82-32-441-7600