



BE-LOK INSTRUMENT FITTING  
INC

# Tube Fittings

100% Factory Tested For Both Crack & Reseal



Engineering Expertise

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# Introduction

**BE-LOK INSTRUMENT FITTINGS INC.** A fast-growing manufacturing company spread across an area of 5500 m<sup>2</sup> (Meters Squared). We are having experience and expertise with advanced technology in design, development and production of high-quality fittings and valves for Instrumentation, Hydraulic, Chemical Injection and Oil & Gas Applications.

We are having state of the art manufacturing facility. We use the Latest manufacturing technologies for highest precision and lowest tolerance. Our well-equipped Manufacturing and Testing facilities is most comprehensive, technically advanced and system oriented.

We manufacture all our products in our own manufacturing facilities under strict quality assurance procedure.

Our products are in line with international specification requirements in quality, safety, consistency and reliability apart from the competitive price. We ensure that our products are quality checked before being shipped to our clients' location.

We are recognised by International Quality Management Systems & Certified by ISO 9001:2015, ISO 14001:2015, ISO 45001:2018, PED 2014/68/EU, ASTM F1387-19, Interchangeability Test Report, MSS-SP-99-2016a etc.

As we are having 20% Market in Domestic Areas and have a 80% hold in international market.

# Contents

General information

01

Ordering Information

16

Male Connector - BMC  
Imperial Tube x NPT  
Threads



17

Male Connector - BMC  
Metric Tube x NPT  
Threads



18

Male Connector - BMC  
Imperial Tube x ISO  
Tapered Threads (BSPT)



19

Male Connector - BMC  
Metric Tube x ISO  
Tapered Threads (BSPT)



20

Male Connector - BMC  
Imperial Tube x ISO  
Parallel Threads (BSPP)



21

Male Connector - BMC  
Metric Tube x ISO Parallel  
Threads (BSPP)



22

Male Connector - BMC  
Imperial Tube x ISO  
Parallel Threads (RP)



23

Male Connector - BMC  
Metric Tube x ISO  
Parallel Threads (RP)



24

Male Connector - BMC  
Imperial Tube x Flare  
Tube (37°)



25

Male Connector - BMC  
Metric Tube x Metric  
Threads



25

Male Connector - BMC  
Imperial Tube x SAE/MS  
Straight Threads



26

Male Connector - BMC  
Imperial Tube x SAE/MS  
Straight Threads with O  
Seal



27

Male Connector - BMC  
Imperial Tube x ISO  
Parallel Threads with O  
Seal



27

Male Bore Through Connector  
BMCBT  
Metric Tube x NPT  
Thread



28

Male Bore Through  
Connector - BMCBT  
Imperial Tube x NPT  
Threads



28

Bulkhead Male Connector - BBMC  
Imperial Tube x Flare  
Tube



29

Bulkhead Male Connector - BBMC  
Imperial Tube x NPT  
Threads



29

Bulkhead Male Connector - BBMC  
Metric Tube x NPT  
Threads



29

Male Elbow - BME  
Imperial Tube x NPT  
Threads



30

Male Elbow - BME  
Metric Tube x NPT  
Threads



31

Male Elbow - BME  
Imperial Tube x ISO  
Tapered Threads  
(BSPT)



32

Male Elbow - BME  
Metric Tube x ISO  
Tapered Threads  
(BSPT)



33

Metric Elbow 45°-BLME  
Metric Tube x NPT  
Threads



34

Male Elbow 45°-BLME  
Imperial Tube x  
NPT Threads



34

Positionable Male Elbow-  
BME (POS)  
Metric Tube x ISO  
Parallel Threads (BSPP)



35

Positionable Male Elbow  
BME (POS)  
Imperial Tube x  
SAE/MS Straight Threads



35

Male Run Tee - BMRT  
Metric Tube x NPT  
Threads



36

Male Run Tee - BMRT  
Imperial Tube x NPT  
Threads



36

Positionable Male Run Tee  
BMRT (POS)  
Imperial Tube x  
SAE/MS Straight Threads  
(BSPP)



37

Positionable Male Run Tee  
BMRT (POS)  
Imperial Tube x ISO  
Parallel Threads (BSPP)



37

Positionable Male Run Tee  
BMRT (PSO)  
Metric Tube x ISO  
Parallel Threads (BSPP)



37

Male Branch Tee-BMBT  
Metric Tube x NPT  
Threads



38

Male Branch Tee - BMBT  
Imperial Tube x NPT  
Threads



38

Positionable Male Branch Tee  
BMBT (POS)  
Imperial Tube x SAE/  
MS Straight Threads



39



# Contents

Positionable Male Branch  
Tee-BMPT(POS)  
Imperial Tube x ISO  
Parallel Threads (BSPP)



39

Positionable Male Branch  
Tee-BMPT(POS)  
Metric Tube x ISO  
Parallel Threads (BSPP)



39

Female Connector-BFC  
Imperial Tube x NPT  
Threads



40

Female Connector-BFC  
Metric Tube x NPT  
Threads



41

Female Connector-BFC  
Imperial Tube x ISO  
Tapered Threads (BSPT)



42

Female Connector-BFC  
Metric Tube x ISO  
Tapered Threads (BSPT)



43

Female Connector-BFC  
Metric Tube x ISO  
Parallel Threads (BSPP)



44

Female Connector - BFC  
Imperial Tube x ISO  
Parallel Threads (BSPP)



44

Female Connector-BFC  
Metric Tube x Metric  
Threads



45

Female Connector-BFC  
Imperial Tube x Metric  
Threads



45

Bulkhead Female  
Connector-BBFC  
Metric Tube x NPT  
Threads



46

Bulkhead Female  
Connector-BBFC  
Imperial Tube x NPT  
Threads



46

Female Elbow-BFE  
Metric Tube x NPT  
Threads



47

Female Elbow-BFE  
Imperial Tube x NPT  
Threads



47

Female Run Tee-BFRT  
Metric Tube x NPT  
Threads



48

Female Run Tee-BFRT  
Imperial Tube x NPT  
Threads



48

Female Branch Tee-BFBT  
Metric Tube x NPT  
Threads



49

Female Branch Tee-BFBT  
Imperial Tube x NPT  
Threads



49

Union -BL  
Metric Tube



50

Union -BL  
Imperial Tube



50

Reducing Union-BRU  
Imperial Tube



51

Reducin Union-BRU  
Metric Tube



52

Bulkhead Union-BRU  
Metric Tube



53

Bulkhead Union-BRU  
Imperial Tube



53

Union Elbow-BUE  
Metric Tube



54

Union Elbow-BUE  
Imperial Tube



54

Reducing Union Elbow - BRUE  
Metric Tube



55

Reducing Union Elbow - BRUE  
Imperial Tube



55

Union Tee - BUT  
Imperial Tube



56

Union Tee - BUT  
Metric Tube



56

Reducing Union Tee - BRUT  
Imperial Tube



57

Reducing Union Tee - BRUT  
Mertic Tube



58

Union Cross - BUC  
Metric Tube



59

Union Cross - BUC  
Imperial Tube



59

Reducer - BR  
Imperial Tube



60

Reducer - BR  
Metric Tube



61



# Contents

Reducer -BL  
Metric Tube x Imperial  
Tube



62

Bulkhead Reducer - BBR  
Imperial Tube



62

Reducer Elbow - BRE  
Imperial Tube



63

Reducer Elbow - BRE  
Metric Tube



63

Male Adapter - BMA  
Imperial Tube x NPT  
Threads



64

Male Adapter - BMA  
Metric Tube x NPT  
Threads



65

Male Adapter -BMA  
Imperial Tube x ISO  
Tapered Threads (BSPT)



66

Male Adapter - BMA  
Imperial Tube x ISO  
Parallel Threads (BSPP)



67

Male Adapter - BMA  
Metric Tube x ISO  
Parallel Threads (BSPP)



67

Male Adapter - BMA  
Imperial Tube x SAE / MS  
Straight Threads



68

Male Adapter - BMA  
Metric Tube x ISO  
Parallel Threads (BSPP)



68

Female Adapter - BMA  
Imperial Tube x NPT  
Threads



69

Female Adapter - BFA  
Metric Tube x NPT  
Threads



70

Female Adapter - BFA  
Imperial Tube x ISO  
Tapered Threads  
(BSPT)



71

Female Adapter - BFA  
Imperial Tube x ISO  
Parallel Threads (RP)



72

Female Adapter - BFA  
Metric Tube x ISO  
Parallel Threads  
(RSPT)



72

Female Adapter - BFA  
Imperial Tube x ISO  
Parallel Threads (RG)



73

Female Adapter - BFA  
Metric Tube x ISO  
Parallel Threads (RP)



73

Female Adapter - BFA  
Metric Tube x ISO  
Parallel Threads (RG)



73

Port Connector -BPC  
Imperial Tube



74

Port Connector -BPC  
Metric Tube



74

Reducing Port Connector  
BRPC  
Imperial Tube



75

Reducing Port Connector  
BRPC  
Metric Tube



75

Male Pipe weld Connector  
BMWCC  
Metric Tube x Pipe  
Socket Weld



76

Male Pipe weld Connector  
BMWCC  
Imperial Tube x Pipe  
Socket Weld



76

Male Pipe Weld Elbow-BSWE  
Imperial Tube x Pipe  
Butt Weld



77

Male Pipe Weld Elbow-BSWE  
Imperial Tube x Tube  
Socket Weld



77

Male Pipe Weld Elbow-BSWE  
Imperial Tube x Tube  
Socket Weld



77

Gauge Connector - BGC  
Metric Tube x ISO  
Parallel Threads



78

Gauge Connector - BGC  
Imperial Tube x ISO  
Parallel Threads



78

Gauge Connector -BGC  
Metric Tube x Metric  
Threads



79

Gauge Connector -BGC  
Imperial Tube x Metric  
Threads



79

Tube Plug - BTP  
Metric Tube



80

Tube Plug - BTP  
Imperial Tube



80

Tube Cap - BTP  
Metric Tube



80

Tube Cap - BTP  
Imperial Tube



80

# Contents

**Nut - BL  
Metric Tube**



81

**Nut - BL  
Imperial Tube**



81

**Back Ferrule - BRF  
Metric Tube  
Imperial Tube**



82

**Front Ferrule - BFF  
Metric Tube  
Imperial Tube**



82

**Kit & Sets of Front & Back  
Ferrules & Nuts - BFS, BNFS  
Imperial Tube  
Metric Tube**



83

**Pipe Insert - BIN  
Imperial Tube  
Metric Tube**



84

**Dielectric Fittings**



85

**Gaskets for Parallel  
Threads**



86

**Other Products**

90



# Features

- Easy to install
- Sizes range available from 1/16" & 2" and 2mm to 50mm. Diverse materials and configurations are available.
- Female nut threads are silver-plated to reduce the friction against the body threads & to prevent galling.
- Fittings are easy to disassemble & re-assemble.
- Precisely machined components ensure perfect deformation of the ferrules and tubing.
- Every fitting is stamped with sizes, material, and heat code.

# Tube Handling

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

Tubing ends should be capped so any foreign materials will not fall inside during transportation & storage.

Do not drag across tubing rack, cement, gravel or any rough surface.

Do use correct tube cutter for tube material. The wrong cutter may result in excessive deformation of the tube end.

Do not cut deep with each turn of cutting.

Tube cutters and hacksaws should be sharp enough.

Hacksaws blades should have at least 32 teeth per inch.

Do deburr tube ends before inserting in fittings.

# Function

The **BE-LOK** tube fitting is a mechanism used both to seal and to grip tubing. The geometry **BE-LOK** fitting produces a leak-tight assembly.

To assemble, simply insert the tube into the complete assembly until the tube bottoms-out against the shoulder of the **BE-LOK** fitting body. The two ferrules are driven forward between the nut & fitting body using the mechanical force created by rotating the nut clockwise using wrench. Compression nut threads are silver plated which prevents galling. The back ferrule is driven against the tapered rear of the front ferrule and front ferrule is driven by force into the tapered mouth of the body. The rear ferrule is swaged radially inwards on the tube while lifting the front ferrule out to form a full-faced seal on the tapered surface of the body. Back ferrule locks together the fitting and tube forms a primary seal which absorbs the pressure pulses & vibration. Front ferrule forms a secondary seal which achieves the connection tube and fitting & guarantee a bubble tight Zero Leak Sealing.

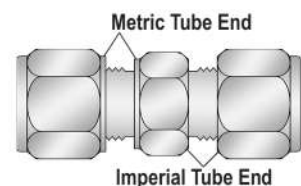
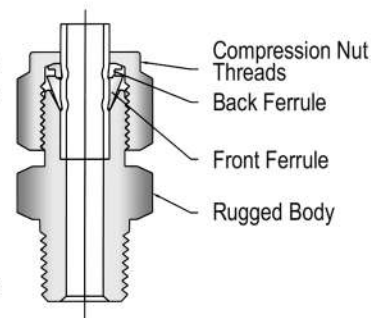
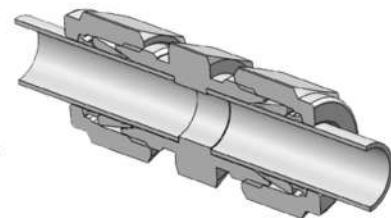
The 1-1/4 turn of the nut from the hand tight position assures consistent drive of the sealing members. It ensure an effective seal against high pressure as well as ultra high vacuum conditions.

Rugged body construction, High precision machined surface finished and standardize tolerance provides maximum trouble free service life in severe working conditions.

Note : The above illustrated sealing action of a **BE-LOK** Tube Fitting which takes place when the assembly is fully tightened.

# Identification of BE-LOK Tube Fittings

The metric size of **BE-LOK** Tube Fittings have extra stepped shoulder on the body and nut to distinguish them from the imperial size.





## Pressure Ratings

**BE-LOK** tube fitting ends are rated to the working pressure of tubing as listed in Tubing Section. Careful selection of high-quality tubing is important when installing safe, leak-tight system.

Stress values are based on ASME Code for Pressure Piping B31.3, Process Piping, at ambient temperature.

| Stress Values as per ASME B31.3 |                         |      |               |                           |      |
|---------------------------------|-------------------------|------|---------------|---------------------------|------|
| Material                        | Allowable Stress Values |      | Design Factor | Ultimate Tensile Strength |      |
|                                 | psig                    | bar  |               | psig                      | bar  |
| SS 316                          | 20000                   | 1378 | 3.75:1        | 75000                     | 5170 |
| Brass                           | 10000                   | 689  | 4:1           | 40000                     | 2760 |
| Steel                           | 20000                   | 1378 | 3:1           | 60000                     | 4140 |

## Elasticity Limit

Operating temperature range of fittings with threaded end connections.

The temperature range of threaded end connections may be limited by the characteristics used for sealing Teflon tape or sealant for tapered threads, as well as the characteristics of the materials of the gaskets for cylindrical threads. The table shows the operating temperature range for gaskets of different materials.

| Gasket Type    | Material                         | Temperature Min | Temperature Max |
|----------------|----------------------------------|-----------------|-----------------|
| RS gasket      | Nitrile Butadiene Rubber (BunaN) | -25°C -13°F     | 110°C 230°F     |
|                | Fluorocarbon (FKM)               | -15°C 5°F       | 204°C 400°F     |
| RP / RG gasket | Copper                           | -198°C -325°F   | 204°C 400°F     |
|                | Stainless Steel                  | -254°C -425°F   | 538°C 1000°F    |
| RG gasket      | Polytetrafluoroethylene (PTFE)   | -54°C -65°F     | 232°C 450°F     |
|                | Vulcanized Fiber                 | -60°C -76°F     | 105°C 221°F     |
| O-ring         | Nitrile Butadiene Rubber (BunaN) | -30°C -22°F     | 110°C 230°F     |
|                | Fluorocarbon (FKM)               | -20°C -4°F      | 204°C 400°F     |

## Standard for Raw Materials

**BE-LOK** tube fitting are supplied in various materials to satisfy the needs of various applications including pulp & paper mills, petrochemical, chromatography, on shore & off-shore oil & gas, refinery, analytical instrumentation, steel, mill, pharmaceutical, chemical, power generation plants, shipbuilding, and alternative fuels.

| Material           | Bar Stock                                    | Forging                           | Tubing   |
|--------------------|--|-----------------------------------|--|
| SS 316             | ASTM A276 / ASTM A479                        | ASTM A182 / ASTM SA182            | ASTM A213 / ASTM A249 / ASTM A269 / ASTM A1016 / ASTM A632 |
| Alloy 400          | ASTM B164 / ASTM SB164                       | ASTM B564 / ASTM SB564            | ASTM B165  |
| Alloy 600          | ASTM B166 / ASTM SB166                       | ASTM B564 / ASTM SB564            | ASTM B167  |
| Alloy 625          | ASTM B446                                    | ASTM B564 / ASTM SB564            | ASTM B444  |
| Alloy 825          | ASTM B425                                    | ASTM B564 / ASTM SB564            | ASTM B163 / ASTM B423 / ASTM B704                          |
| Alloy C-276        | ASTM B574                                    | ASTM SB564                        | ASTM B622 / ASTM B626                                      |
| Super Duplex (6MO) | ASTM A276 / ASTM A479                        | ASTM A182                         | ASTM A269  |
| Super Duplex 2750  | ASTM A276 / ASTM A479                        | ASTM A182                         | ASTM A789  |
| Duplex 2205        | ASTM A479                                    | ASTM A182                         | ASTM A789  |
| Duplex 2507        | ASTM A479                                    | ASTM A182                         | ASTM A789  |
| Brass              | ASTM B16 (Alloy 360) / ASTM B453 (Alloy 345) | ASTM B283 / ASTM B124 (Alloy 377) | ASTM B75 (Temper "O")                                      |
| Copper             | -  | -                                 | ASTM B68 / ASTM B88 / ASTM B251 / ASTM B75                 |

## SAE / MS Pressure Ratings

| Pressure Ratings for SAE / MS Threads Ends |                                    |     |            |     |
|--|------------------------------------|-----|------------|-----|
| Thread Size                                | 316 Stainless Steel & Carbon Steel |     |            |     |
|  | Non-Adjustable                     |     | Adjustable |     |
|  | psig                               | bar | psig       | bar |
| 5/16-24                                    | 4568                               | 315 | 4568       | 315 |
| 3/8-24                                     |                                    |     |            |     |
| 7/16-20                                    |                                    |     |            |     |
| 1/2-20                                     |                                    |     | 3626       | 250 |
| 9/16-18                                    |                                    |     |            |     |
| 3/4-16                                     | 3626                               | 250 | 2900       | 200 |
| 7/8-14                                     |                                    |     |            |     |
| 1-1/16-12                                  | 2900                               | 200 | 2320       | 160 |
| 1-3/16-12                                  |                                    |     |            |     |
| 1-5/16-12                                  |                                    |     |            |     |
| 1-5/8-12                                   | 2320                               | 160 | 1813       | 125 |
| 1-7/8-12                                   |                                    |     |            |     |
| 2-1/2-12                                   |                                    |     |            |     |

## NPT & ISO / BSP Tapered Threads Ends

Pressure ratings for fittings with both tube fitting and pipe thread ends are determined by the end connection with the lower pressure rating.

NPT or ISO / BSP Tapered Threads Pressure Ratings :

The table lists pressure ratings for male & female tapered pipe thread ends. For female & male pipe threads to have the same pressure rating in the same nominal pipe size, the female thread would require a heavier wall, resulting in a fitting too large & bulky to be practical.

| Pressure Ratings for NPT & ISO / BSP Tapered Thread Ends |                                    |     |               |     |             |     |               |     |
|--|------------------------------------|-----|---------------|-----|-------------|-----|---------------|-----|
| Thread Size  | 316 Stainless Steel & Carbon Steel |     |               |     | Brass       |     |               |     |
|  | Male Thread                        |     | Female Thread |     | Male Thread |     | Female Thread |     |
|  | psig                               | bar | psig          | bar | psig        | bar | psig          | bar |
| 1/16   | 11000                              | 757 | 6700          | 460 | 5500        | 378 | 3300          | 227 |
| 1/8  | 10000                              | 690 | 6500          | 447 | 5000        | 344 | 3200          | 220 |
| 1/4  | 8000                               | 551 | 6600          | 454 | 4000        | 275 | 3300          | 227 |
| 3/8  | 7800                               | 537 | 5300          | 365 | 3900        | 268 | 2600          | 179 |
| 1/2  | 7700                               | 530 | 4900          | 337 | 3800        | 261 | 2400          | 165 |
| 3/4  | 7300                               | 502 | 4600          | 316 | 3600        | 248 | 2300          | 158 |
| 1  | 5300                               | 365 | 4400          | 303 | 2600        | 179 | 2200          | 151 |
| 1-1/4  | 6000                               | 410 | 5000          | 344 | 3000        | 200 | 2500          | 172 |
| 1-1/2  | 5000                               | 344 | 4600          | 317 | 2500        | 172 | 2300          | 158 |
| 2  | 3900                               | 268 | 3900          | 268 | 1900        | 130 | 1900          | 130 |

Working Pressure is based on process piping ANSI / ASME B31.3 at ambient temperature. To determine pressure rating in accordance with ASME B31.1, Power Piping :

\* Stainless steel material- multiply by 0.94. \*Carbon steel material- multiply by 0.85. \*Brass material rating remain the same.

\* To determine MPa, multiply bar by 0.10.



## Working Pressure

- \* The maximum working pressure of the tube ends at ambient temperature are determined by the maximum working pressure of the **BE-LOK** Tubing that is used.
- \* The maximum working pressures of the thread ends at ambient temperature are as above.
- \* To get the maximum working pressure at elevated temperature, use the maximum working pressure at ambient temperature to multiply the factors in the form of Elevated Temperature Factors in Tubing Section.
- \* The maximum working pressure of the whole fitting is determined by the end connection with the lowest pressure rating.

## ISO / BSP Parallel Pressure Ratings







| Working Pressure of Adjustable ISO / BSP Parallel Thread Ends (PP) |                                    |     |
|--|------------------------------------|-----|
| Thread Size  | 316 stainless Steel & Carbon Steel |     |
|  | psig                               | bar |
| 1/8, 1/4, 3/8  | 4568                               | 315 |
| 1/2, 3/4, 1"   | 2320                               | 160 |

## Pipe Thread Sealants

Pipe thread sealant for tapered pipe thread assembly is essential to ensure leak-free thread sealing. Sealant usually contain a lubricant. Thread sealant fills the voids between the threads and prevents thread galling. Wrap PTFE tape clockwise from first thread. Do not overhang the first thread; the tape may get into the fluid system.

## Standard Thread Size

| Specification  | Thread  |
|--|---|
| ASME B1.20.1 (NPT)<br>SAE AS71051  | NPT Conical Thread<br>       |
| ISO 7-1<br>BS EN 10226-1 (BSPT)<br>DIN 2999 (Male Thread Only)<br>JIS B0203 (PT) | ISO Tapered Thread (RT)<br>  |
| ISO 228-1<br>BS 2779 (BSPP)<br>JIS B0202 (PF)<br>DIN 3852 FORM A                 | ISO Parallel Thread (RS)<br> |
| ISO 228-1<br>BS 2779 (BSPP)<br>JIS B0202 (PF)<br>DIN 3852 FORM B                 | ISO Parallel Thread (RP)<br> |
| ISO 228-1<br>BS 2779 (BSPP)<br>JIS B0202 (PF)<br>SAE J475 SAE 1926               |                              |
| ISO 228-1<br>BS 2779 (BSPP)<br>JIS B0202 (PF)<br>EN 837-1 & EN 837-3             | ISO Parallel Thread (RG)<br> |

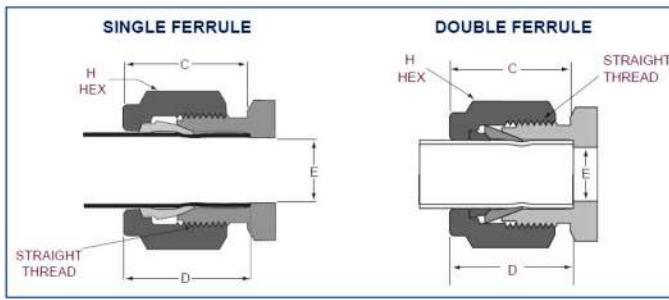
| Specification  | Thread  |
|--|---|
| ISO 228-1<br>BS 2779 (BSPP)<br>JIS B0202 (PF)<br>DIN 3852 FORM Z | ISO Parallel Thread (RP)<br> |
| ISO 228-1<br>BS 2779 (BSPP)<br>JIS B0202 (PF)<br>DIN 3852 FORM Y | ISO Parallel Thread (RJ)<br> |
| ASME B1.1<br>ISO R725<br>SAE J475<br>SAE J514                    | SAE Parallel Thread<br>      |
| ASME B1.1<br>ISO R725<br>SAE J475<br>SAE J514                    |                              |
| ASME B1.1<br>ISO R725<br>SAE J475<br>SAE J514                    |                              |
| ASME B1.20.1<br>SAE AS71051<br>SAE J514                          |                              |

## Pressure Units & Their Ratio :

1 bar = 100 kPa = 14.503 psi  
 1 kPa = 0.01 bar = 0.145 psi  
 1 psi = 0.069 bar = 6.89 kPa  
 1 kg/cm<sup>2</sup> = 0.98 bar = 14.22 psi



# Tube End Dimensional data



## Millimeters

| Size | Tube O.D. | Straight Thread | C    | H Hex | E Dia | D Tube INS. Depth |
|------|-----------|-----------------|------|-------|-------|-------------------|
| 2    | 2mm       | 5/16-20         | 15.3 | 12.0  | 1.7   | 12.9              |
| 3    | 3mm       | 5/16-20         | 15.3 | 12.0  | 2.4   | 12.9              |
| 4    | 4mm       | 3/8-20          | 16.1 | 12.0  | 2.4   | 13.7              |
| 6    | 6mm       | 7/16-20         | 17.7 | 14.0  | 4.8   | 15.3              |
| 8    | 8mm       | 1/2-20          | 18.6 | 15.0  | 6.4   | 16.2              |
| 10   | 10mm      | 5/8-20          | 19.5 | 18.0  | 7.9   | 17.2              |
| 12   | 12mm      | 3/4-20          | 22.0 | 22.0  | 9.5   | 22.8              |
| 14   | 14mm      | 7/8-20          | 22.0 | 24.0  | 11.1  | 24.4              |
| 15   | 15mm      | 7/8-20          | 22.0 | 24.0  | 11.9  | 24.4              |
| 16   | 16mm      | 7/8-20          | 22.0 | 24.0  | 12.7  | 24.4              |
| 18   | 18mm      | 1-20            | 22.0 | 27.0  | 15.1  | 24.4              |
| 20   | 20mm      | 1-1/8-20        | 22.0 | 30.0  | 15.9  | 26.0              |
| 22   | 22mm      | 1-1/8-20        | 22.0 | 30.0  | 18.3  | 26.0              |
| 25   | 25mm      | 1-5/16-20       | 26.5 | 35.0  | 21.8  | 31.3              |

## Inches

| Size | Tube O.D. | Straight Thread | C    | H Hex | E Dia | D Tube INS. Depth |
|------|-----------|-----------------|------|-------|-------|-------------------|
| 1    | 1/16      | 10 - 32         | 0.43 | 5/16  | 0.052 | 0.34              |
| 2    | 1/8       | 5/16 - 20       | 0.60 | 7/16  | 0.093 | 0.50              |
| 3    | 3/16      | 3/8 - 20        | 0.64 | 1/2   | 0.125 | 0.54              |
| 4    | 1/4       | 7/16 - 20       | 0.70 | 9/16  | 0.187 | 0.60              |
| 5    | 5/16      | 1/2 - 20        | 0.73 | 5/8   | 0.250 | 0.64              |
| 6    | 3/8       | 9/16 - 20       | 0.76 | 11/16 | 0.281 | 0.67              |
| 8    | 1/2       | 3/4 - 20        | 0.87 | 7/8   | 0.406 | 0.90              |
| 10   | 5/8       | 7/8 - 20        | 0.87 | 1     | 0.500 | 0.96              |
| 12   | 3/4       | 1 - 20          | 0.87 | 1-1/8 | 0.625 | 0.96              |
| 14   | 7/8       | 1-1/8 - 20      | 0.87 | 1-1/4 | 0.750 | 1.03              |
| 16   | 1         | 1-5/16 - 20     | 1.05 | 1-1/2 | 0.875 | 1.24              |
| 20   | 1-1/4     | 1-5/8 - 20      | 1.52 | 1-7/8 | 1.090 | 1.61              |
| 24   | 1-1/2     | 1-15/16 - 20    | 1.77 | 2-1/4 | 1.340 | 1.96              |
| 32   | 2         | 2-5/8 - 20      | 2.47 | 2-3/4 | 1.810 | 2.65              |

## Pressure Ratings For Tubes

### Fractional Stainless Steel Tubing :

Allowable working pressures are calculated from an S value of 20,000 psi (137.8 MPa) for ASTM A269 tubing at -20 to 100°F (-28 to 37°C), as listed in ASME B31.3 and ASTM A213 tubing at -20 to 100°F (-28 to 37°C), as listed in ASME B31.1, except as noted.

### Fractional Seamless Stainless Tubing - Working Pressure in psig

|                          |       | wall Thickness (in.) |       |       |       |       |       |       |       |       |       |       |       |       |       |
|--------------------------|-------|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| in.                      | 0.012 | 0.014                | 0.016 | 0.020 | 0.028 | 0.035 | 0.049 | 0.065 | 0.083 | 0.095 | 0.109 | 0.102 | 0.134 | 0.156 | 0.188 |
| Working Pressure in psig |       |                      |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 1/16                     | 6800  | 8100                 | 9400  | 12000 |       |       |       |       |       |       |       |       |       |       |       |
| 1/8                      |       |                      |       |       | 8500  | 10900 |       |       |       |       |       |       |       |       |       |
| 3/16                     |       |                      |       |       | 5400  | 7000  | 10200 |       |       |       |       |       |       |       |       |
| 1/4                      |       |                      |       |       | 4000  | 5100  | 7500  | 10200 |       |       |       |       |       |       |       |
| 5/16                     |       |                      |       |       |       | 4000  | 5800  | 8000  |       |       |       |       |       |       |       |
| 3/8                      |       |                      |       |       |       | 3300  | 4800  | 6500  | 8600  |       |       |       |       |       |       |
| 1/2                      |       |                      |       |       |       | 2400  | 3500  | 4700  | 6200  |       |       |       |       |       |       |
| 5/8                      |       |                      |       |       |       |       | 2900  | 4000  | 5200  | 6000  |       |       |       |       |       |
| 3/4                      |       |                      |       |       |       |       | 2400  | 3300  | 4200  | 4900  | 5800  | 6400  |       |       |       |
| 7/8                      |       |                      |       |       |       |       | 2000  | 2800  | 3600  | 4200  | 4800  | 5400  | 6100  |       |       |
| 1                        |       |                      |       |       |       |       |       | 2400  | 3100  | 3600  | 4200  | 4700  | 5300  |       |       |
| 1-1/4                    |       |                      |       |       |       |       |       |       | 2400  | 2800  | 3300  | 3600  | 4100  | 4900  |       |
| 1-1/2                    |       |                      |       |       |       |       |       |       |       | 2300  | 2700  | 3000  | 3400  | 4000  | 4900  |
| 2                        |       |                      |       |       |       |       |       |       |       |       | 2000  | 2200  | 2500  | 2900  | 3600  |

Fully annealed austenitic Type 304 or 316 seamless tubing ASTM A213. or equivalent.

Tubing to be free from scratches, draw mark, dirt, dust, flat spots, and suitable for bending & flaring

Recommended hardness : 80 HRB or less.

Safety Factor = 4 considering tensile strength to be 75,000 psi at room temperature.

### For Welded Tubing

For welded and drawn tubing, a derating factor must be applied for weld integrity :

- \* For double-welded tubing, multiply working pressure by 0.85
- \* For single-welded tubing, multiply working pressure by 0.85.

# Pressure Ratings For Tubes

## Metric Stainless Steel Tubing :

Allowable working pressures are calculated from an S value of 20,000 psi (137.8 MPa) for EN ISO 1127 tubing (D4 T4 tolerance for 3 to 12mm; D4, T3 tolerance 14 to 50mm) at -28 to 37°C (-20 to 100°F), as listed in ASME B31.1 and ASTM A213 tubing at -28 to 37°C (-20 to 100°F), except as noted.

### Metric Seamless Stainless Tubing - Working Pressure in Bar

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

High-quality, fully annealed (Type 304, 304/304L, 316, 316/316L, 317, 317/317L, 321, 347) stainless steel tubing, EN ISO 1127 or equivalent.

Tubing to be free from scratches, draw mark, dirt, dust, flat spots, and suitable for bending and flaring.

Recommended hardness : 80 HRB or less.

Safety factor = 4 considering tensile strength to be 75,000 psi at room temperature.

### For Welded Tubing

For welded and drawn tubing, a derating factor must be applied for weld integrity :

- \* For double-welded tubing, multiply working pressure by 0.85
- \* For single-welded tubing, multiply working pressure by 0.85.



# Pressure Ratings For Tubes

## Metric Copper Tubing - Working Pressure in Bar

Allowable working pressure are calculated from an S value of 41.3 MPa (6,000 psi) for ASTM B75, ASTM B88, and EN 1057 tubing at -28 to 37°C (-20 to 100°F), as listed in ASME B31.3 and ASME B31.1.

### Metric Copper Tubing - Working Pressure in bar

| OD<br>mm                | Wall Thickness (mm) |     |     |     |     |     |     |     |     |     |     |
|-------------------------|---------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|                         | 0.7                 | 0.8 | 1.0 | 1.2 | 1.5 | 1.6 | 1.8 | 2.0 | 2.2 | 2.5 | 3.0 |
| Working Pressure in Bar |                     |     |     |     |     |     |     |     |     |     |     |
| 3                       | 225                 | 260 |     |     |     |     |     |     |     |     |     |
| 4                       | 165                 | 191 | 244 | 295 |     |     |     |     |     |     |     |
| 6                       |                     | 122 | 157 | 192 | 245 | 263 |     |     |     |     |     |
| 8                       |                     | 89  | 114 | 140 | 179 | 193 |     |     |     |     |     |
| 10                      |                     | 70  | 89  | 109 | 140 | 150 | 172 | 193 |     |     |     |
| 12                      |                     | 58  | 73  | 89  | 114 | 123 | 140 | 158 |     |     |     |
| 14                      |                     |     | 62  | 76  | 96  | 103 | 118 | 133 | 148 | 171 | 209 |
| 16                      |                     |     | 54  | 66  | 83  | 89  | 102 | 114 | 127 | 147 | 180 |
| 18                      |                     |     | 48  | 58  | 74  | 79  | 90  | 101 | 112 | 129 | 159 |
| 22                      |                     |     | 39  | 47  | 59  | 64  | 72  | 81  | 90  | 103 | 126 |
| 25                      |                     |     | 34  | 41  | 52  | 56  | 63  | 71  | 78  | 90  | 110 |

High-quality, soft annealed seamless copper tubing, ASTM B75 & EN 1057 or equivalent. soft annealed (Temper 0) copper water tube, type K or type L to ASTM B88. Safety factor = 5 considering tensile strength to be 30,000 psi at room temperature.

## Fractional Copper Tubing :

Allowable working pressure are calculated from an S value of 41.3 MPa (6,000 psi) for ASTM B75, ASTM B88, and EN 1057 tubing at -28 to 37°C (-20 to 100°F), as listed in ASME B31.3 & ASME B31.1.

### Fractional Copper Tubing - Working Pressure in psig

| in                       | Wall Thickness (in) |       |       |       |       |       |       |       |       |       |  |
|--------------------------|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|
|                          | 0.028               | 0.030 | 0.035 | 0.049 | 0.065 | 0.083 | 0.095 | 0.109 | 0.120 | 0.134 |  |
| Working Pressure in psig |                     |       |       |       |       |       |       |       |       |       |  |
| 1/8                      | 2700                | 3000  | 3600  |       |       |       |       |       |       |       |  |
| 3/16                     | 1800                | 1900  | 2300  | 3400  |       |       |       |       |       |       |  |
| 1/4                      | 1300                | 1400  | 1600  | 2500  | 3500  |       |       |       |       |       |  |
| 5/16                     |                     |       | 1300  | 1900  | 2700  |       |       |       |       |       |  |
| 3/8                      |                     |       | 1000  | 1600  | 2200  |       |       |       |       |       |  |
| 1/2                      |                     |       | 800   | 1100  | 1600  | 2100  |       |       |       |       |  |
| 5/8                      |                     |       |       | 900   | 1200  | 1600  | 1900  |       |       |       |  |
| 3/4                      |                     |       |       | 700   | 1000  | 1300  | 1500  | 1800  |       |       |  |
| 7/8                      |                     |       |       | 600   | 800   | 1100  | 1300  | 1500  |       |       |  |
| 1                        |                     |       |       | 500   | 700   | 900   | 1100  | 1300  | 1500  |       |  |
| 1 1/8                    |                     |       |       |       | 600   | 800   | 1000  | 1100  | 1300  | 1400  |  |

High-quality, soft annealed seamless copper tubing, ASTM B75 or equivalent. soft annealed (Temper 0) copper water tube, type K or type L to ASTM B88. Recommended hardness : 60 HRB or less. Safety factor = 5 considering tensile strength to be 30,000 psi at room temperature

# Pressure Ratings For Tubes

## Metric Alloy 400 Tubing :

Allowable working pressure are calculated from an S value of 128.9 MPa (18,700 psi) for ASTM B165 tubing at -28 to 37°C (-20 to 100°F), as listed in ASME B31.3 and ASME B31.1.

### Metric Alloy 400 Tubing - Working Pressure in Bar

| OD<br>mm                | Wall Thickness (mm) |     |     |     |     |     |     |     |     |     |
|-------------------------|---------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|                         | 0.8                 | 1.0 | 1.2 | 1.5 | 1.8 | 2.0 | 2.2 | 2.5 | 2.8 | 3.0 |
| Working Pressure in Bar |                     |     |     |     |     |     |     |     |     |     |
| 6                       | 310                 | 390 | 490 | 620 |     |     |     |     |     |     |
| 8                       |                     | 290 | 350 | 450 |     |     |     |     |     |     |
| 10                      |                     | 220 | 280 | 350 |     |     |     |     |     |     |
| 12                      |                     | 180 | 230 | 290 |     |     |     |     |     |     |
| 14                      |                     | 160 | 190 | 240 | 270 |     |     |     |     |     |
| 18                      |                     |     | 150 | 200 | 240 | 270 | 300 |     |     |     |
| 20                      |                     |     |     | 180 | 210 | 240 | 270 | 290 |     |     |
| 25                      |                     |     |     |     | 170 | 190 | 210 | 240 | 270 | 290 |

High-quality, fully annealed seamless alloy 400 hydraulic tubing, ASTM B165 or equivalent.

Hardness not to exceed 75 HRB or 137 HV.

Tubing to be free of scratches, suitable for bending and flaring.

## Fractional Alloy 400 Tubing :

Allowable working pressure are calculated from an S value of 18,700 psi (128.9 MPa) for ASTM B165 tubing at -20 to 100°F (-28 to 37°C), as listed in ASME B31.3 & ASME B31.1.

### Fractional Alloy 400 Tubing - Working Pressure in psig

| in.                      | Wall Thickness (in) |       |       |       |       |       |       |       |
|--------------------------|---------------------|-------|-------|-------|-------|-------|-------|-------|
|                          | 0.028               | 0.035 | 0.049 | 0.065 | 0.083 | 0.095 | 0.109 | 0.120 |
| Working Pressure in psig |                     |       |       |       |       |       |       |       |
| 1/8                      | 7900                | 10200 |       |       |       |       |       |       |
| 1/4                      | 3700                | 4800  | 7000  | 9600  |       |       |       |       |
| 3/8                      |                     | 3100  | 4400  | 6100  |       |       |       |       |
| 1/2                      |                     | 2300  | 3300  | 4400  |       |       |       |       |
| 3/4                      |                     |       | 2200  | 3000  | 4000  | 4600  |       |       |
| 1                        |                     |       |       | 2200  | 2900  | 3400  | 3900  | 4300  |

High-quality, soft annealed seamless alloy 400 hydraulic tubing, ASTM B165 or equivalent.

Hardness not to exceed 75 HRB or 137 HV.

Tubing to be free of scratches, suitable for bending and flaring.

Safety Factor is 3.74 to 1, considering ultimate tensile strength of 70,000 psi.

# Pressure Ratings For Tubes

## Metric Alloy C-276 Tubing :

Allowable working pressure are based on equations from ASME B31.3 & ASME B31.1 for a maximum S value of 137.8 MPa (20,000 psi).

### Metric Alloy C-276 Tubing - Working Pressure in Bar

| OD<br>mm                | Tube Wall Thickness (mm) |     |     |     |
|-------------------------|--------------------------|-----|-----|-----|
|                         | 0.8                      | 1.0 | 1.2 | 1.5 |
| Working Pressure in Bar |                          |     |     |     |
| 6                       | 310                      | 420 | 520 | 670 |
| 8                       |                          | 310 | 390 | 500 |
| 10                      |                          | 240 | 300 | 380 |
| 12                      |                          | 200 | 240 | 310 |

High-quality, fully annealed seamless alloy C-276 tubing, ASTM B622 or equivalent. Hardness not to exceed 100 HRB or 248 HV. Tubing to be free of scratches, suitable for bending and flaring. OD tolerance not to exceed  $\pm 0.13\text{mm}$ .

## Fractional Alloy C-276 Tubing :

Allowable working pressure are based on equations from ASME B31.3 and ASME B31.1 for a maximum S value of 20,000 psi (137.8 MPa).

### Fractional Alloy C-276 Tubing - Working Pressure in psig

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

High-quality, fully annealed alloy C-276 tubing, ASTM B622 or equivalent. Hardness not to exceed 100 HRB or 248 HV. Tubing to be free of scratches, suitable for bending & flaring. OD tolerance not to exceed  $\pm 0.13\text{mm}$ .

## Fractional Alloy 600 Tubing :

Allowable working pressure are based on equations from ASME B31.3 and ASME B31.1 for a maximum S value of 20,000 psi (137.8 MPa).

### Fractional Alloy 600 Tubing - Working Pressure in psig

| in.                      | Wall Thickness (in) |       |       |       |
|--------------------------|---------------------|-------|-------|-------|
|                          | 0.028               | 0.035 | 0.049 | 0.065 |
| Working Pressure in psig |                     |       |       |       |
| 1/4                      | 4000                | 5100  | 7500  | 10200 |
| 3/8                      |                     | 3300  | 4800  | 6500  |
| 1/2                      |                     | 2600  | 3700  | 5100  |



# Pressure Ratings For Tubes

## Metric Alloy 600 Tubing :

Allowable working pressure are based on equations from ASME B31.3 & ASME B31.1 for a maximum S value of 137.8 MPa (20,000 psi).

### Metric Alloy 600 Tubing - Working Pressure in Bar

| OD                             | Tube Wall Thickness (mm) |     |     |     |
|--------------------------------|--------------------------|-----|-----|-----|
| mm                             | 0.8                      | 1.0 | 1.2 | 1.5 |
| <b>Working Pressure in Bar</b> |                          |     |     |     |
| 6                              | 310                      | 420 | 520 | 670 |
| 10                             |                          | 240 | 300 | 380 |
| 12                             |                          | 200 | 240 | 310 |

High-quality, fully annealed, Cold drawn # 1 temper alloy 600 seamless alloy tubing, ASTM B167 or equivalent. Hardness not to exceed 92 HRB or 198 HV. Tubing to be free of scratches, suitable for bending and flaring.

## Fractional Alloy 2507 Super Duplex Tubing :

Allowable working pressure are calculated from an S value of 38,700 psi (266.8 MPa) for ASTM A789 tubing at - 20 to 100°F (-28 to 37°C), as listed in ASME B31.3.

### Fractional Alloy 2507 Super Duplex Tubing - Working Pressure in psig

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

High-quality, fully annealed alloy 2507 super duplex tubing , ASTM A789 or equivalent. Hardness not to exceed 32 HRC. Tubing to be free of scratches, suitable for bending and flaring.

## Fractional Alloy 825 Tubing :

Allowable working pressure are calculated from an S value of 23,000 psi (160.0 MPa) for ASTM B163 and ASTM B423 seamless tubing at -20 to 100°F (-28 to 37°C), as listed in ASME BPV 2007 Section II, Part D or ASME B31.3 For ASTM B704, Class 1 or equivalent welded and drawn tubing, multiply working pressure by 0.85.

### Fractional Alloy 800 Tubing - Working Pressure in psig

|                                 | Wall Thickness (in) |       |       |       |       |
|---------------------------------|---------------------|-------|-------|-------|-------|
| in.                             | 0.035               | 0.049 | 0.065 | 0.083 | 0.095 |
| <b>Working Pressure in psig</b> |                     |       |       |       |       |
| 1/4                             | 6400                | 9300  | 11600 |       |       |
| 3/8                             | 4100                | 5900  | 8200  |       |       |
| 1/2                             | 3000                | 4300  | 5900  |       |       |
| 3/4                             |                     |       | 3800  | 4900  | 5800  |
| 1                               |                     |       | 2800  | 3600  | 4200  |

# Pressure Ratings For Tubes

## Metric Alloy 825 Tubing :

Allowable working pressures are calculated from an S value of 160.6 MPa (23,300 psi) for ASTM B163 & ASTM B423 seamless tubing at -28 to 37°C (-20 to 100°F), as listed in ASME BPV 2007 Section II, Part D or ASME B31.3. For ASTM B704, Class 1 or equivalent welded and drawn tubing, multiply working pressure by 0.85.

### Metric Alloy 825 Tubing - Working Pressure in Bar

| OD<br>mm                | Tube Wall Thickness (mm) |     |     |     |     |     |     |     |
|-------------------------|--------------------------|-----|-----|-----|-----|-----|-----|-----|
|                         | 0.8                      | 1.0 | 1.2 | 1.5 | 1.8 | 2.0 | 2.2 | 2.5 |
| Working Pressure in Bar |                          |     |     |     |     |     |     |     |
| 6                       | 410                      | 530 | 660 |     |     |     |     |     |
| 10                      |                          | 300 | 370 | 480 |     |     |     |     |
| 12                      |                          | 250 | 300 | 390 | 480 |     |     |     |
| 18                      |                          |     |     | 240 | 300 | 340 | 380 | 400 |
| 25                      |                          |     |     |     |     | 240 | 260 | 300 |

High-quality, fully annealed seamless alloy 825 tubing, ASTM B163, ASTM B423, or equivalent. Fully annealed welded alloy 825 tubing, ASTM B704, Class 1 or equivalent. Hardness not to exceed HR 90 or 201 HV. Tubing to be free of scratches, suitable for bending & flaring.

## Fractional Alloy 625 Tubing :

Allowable working pressure are calculated from an S value of 26,000 psi (184.1 MPa) for ASTM B444 Grade 2 tubing at -20 to 100°F (-28 to 37°C), as listed in ASME BPV 2007 Section II, Part D, Table 1B; tubing outside diameter & wall thickness tolerance from ASTM B444 for small-diameter tube.

### Fractional Alloy 625 Tubing - Working Pressure in psig

| OD<br>in.                | Wall Thickness (in) |       |       |
|--------------------------|---------------------|-------|-------|
|                          | 0.035               | 0.049 | 0.065 |
| Working Pressure in psig |                     |       |       |
| 1/4                      | 7300                | 10700 | 14600 |
| 3/8                      | 4700                | 6800  | 9400  |
| 1/2                      | 3500                | 5000  | 6800  |

High-quality, fully annealed seamless alloy 625 tubing, ASTM B444, Grade 1 or 2, or equivalent. Hardness not to exceed 25 HRC or 266 HV. Tubing to be free of scratches, suitable for bending & flaring.

## Metric Alloy 625 Tubing :

Allowable working pressure are calculated from an S value of 184.1 MPa (26,700 psi) for ASTM B444 Grade 2 tubing at -28 to 37°C (-20 to 100°F), as listed in ASME BPV 2007 Section II, Part D, Table 1B; tubing outside diameter and wall thickness tolerance from ASTM B444 for small-diameter tube.

### Metric Alloy 625 Tubing - Working Pressure in bar

| in.                      | Wall Thickness (in) |       |       |       |
|--------------------------|---------------------|-------|-------|-------|
|                          | 0.028               | 0.035 | 0.049 | 0.065 |
| Working Pressure in psig |                     |       |       |       |
| 1/4                      | 4000                | 5100  | 7500  | 10200 |
| 3/8                      |                     | 3300  | 4800  | 6500  |
| 1/2                      |                     | 2600  | 3700  | 5100  |

# Pressure Ratings For Tubes

## Metric Alloy 254 Tubing :

Allowable working pressures are calculated from an S value of 186.8 MPa (27,100 psig) for ASTM A213 tubing at -20 to 100°F (-28 to 37°C), as listed in ASTM B31.3 and ASME B31.1, except as noted.

### Metric Alloy 254 Tubing - Working Pressure in psig

| OD                      | Tube Wall Thickness (mm) |     |     |     |     |     |
|-------------------------|--------------------------|-----|-----|-----|-----|-----|
| mm                      | 0.8                      | 1   | 1.2 | 1.5 | 1.8 | 2   |
| Working Pressure in Bar |                          |     |     |     |     |     |
| 6                       | 430                      | 580 | 740 | 980 |     |     |
| 8                       |                          | 420 | 530 | 710 |     |     |
| 10                      |                          | 330 | 420 | 550 | 700 | 790 |
| 12                      |                          | 270 | 340 | 450 | 570 | 650 |

High-quality, fully annealed seamless or welded & drawn alloy 254 hydraulic tubing, ASTM A269 or ASTM A213, or equivalent. Hardness not to exceed 96 HRB. Tubing to be free of scratches, suitable for bending & flaring.

## Fractional Alloy 254 Tubing :

Allowable working pressure are calculated from an S value of 186.8 MPa (27,100 psig) for ASTM A213 tubing at -20 to 100°F (-28 to 37°C), as listed in ASME B31.3 and ASME B31.1, except as noted.

### Fractional Alloy 254 Tubing - Working Pressure in psig

| OD                       | Wall Thickness (in) |       |       |       |       |
|--------------------------|---------------------|-------|-------|-------|-------|
| in                       | 0.028               | 0.035 | 0.049 | 0.065 | 0.083 |
| Working Pressure in psig |                     |       |       |       |       |
| 1/4                      | 5400                | 6900  | 10100 | 13900 |       |
| 3/8                      |                     | 4500  | 6500  | 8900  |       |
| 1/2                      |                     | 3500  | 5000  | 6900  | 9000  |

High-quality, fully annealed seamless or welded and drawn alloy 254 hydraulic tubing, ASTM A269 or ASTM A213, or equivalent. Hardness not to exceed 96 HRB.

Tubing to be free of scratches, suitable for bending and flaring.

### For Welded Tubing

- \* For welded and drawn tubing, a derating factor must be applied for weld integrity :
- \* For double-welded tubing, multiply working pressure by 0.85
- \* For single-welded tubing, multiply working pressure by 0.80



## ▶ Tube Selection Date

### Hardness

- \* Tube must be softer than fitting material. The metal tubing must be fully annealed and suitable for bending and flaring. Tubing hardness must be selected according to the information as below.

### Surface

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

### Ovality

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

### Well Thickness

- \* The pressure rating tables list tubing working pressure ratings in wide range of wall thickness. A too thin wall may collapse and a too thick wall not properly be deformed by the ferrule action. Do not use tubing wall thickness not listed in the tables below.

### Weld Tubing

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

## ▶ Temperature De-Rating Factors

To determine allowable working pressure at elevated temperatures, multiply allowable working pressure from the tubing pressure rating table by a factor shown in the table as below.

Example : Type 316 stainless steel 1/2 in. OD 0.049 in . wall at 1000°F

- \* The allowable working pressure at -20 to 100°F (-28 to 37°C) is 3700 psig
- \* The elevated temperature factor for 1000°F (537°C) is 0.76 : 3700 psig 0.76 = 2812 psig
- \* The allowable working pressure for 316 SS 1/2 in. OD 0.049 in. wall tubing at 1000°F (537°C) is 2812 psig.

### Lowering Factors for Elevated Temperatures

| Temperature |     | Tubing Material |                |              |                |              |      |               |              |              |              |
|-------------|-----|-----------------|----------------|--------------|----------------|--------------|------|---------------|--------------|--------------|--------------|
|             |     | Copper          | SS<br>316/316L | Alloy<br>400 | Alloy<br>C-276 | Alloy<br>600 | Ti   | Alloy<br>2507 | Alloy<br>825 | Alloy<br>625 | Alloy<br>254 |
| °F          | °C  |                 |                |              |                |              |      |               |              |              |              |
| 200         | 93  | 0.80            | 1.00           | 0.87         | 1.00           | 1.00         | 0.86 | 0.90          | 1.00         | 0.93         | 0.90         |
| 400         | 204 | 0.50            | 0.96           | 0.79         | 0.96           | 0.96         | 0.61 | 0.82          | 0.90         | 0.85         | 0.74         |
| 600         | 315 |                 | 0.85           | 0.79         | 0.85           | 0.85         | 0.45 |               | 0.84         | 0.79         | 0.67         |
| 800         | 426 |                 | 0.79           | 0.75         | 0.79           | 0.79         |      |               | 0.81         | 0.75         |              |
| 1000        | 537 |                 | 0.76           |              | 0.76           | 0.35         |      |               |              | 0.73         |              |

Dual-certified grades such as 304/304L, 316/316L, and 317/317L meet the requirement for the lower maximum carbon content of the L grades and the higher minimum yield and tensile strength of the non-L grades. Use of 2507 super duplex stainless steel at temperature above 482°F (250°C) causes micro structural changes that lead to embrittlement & loss of corrosion resistance. Derating factor at 482°C F (250°C) is 0.81.

### Pre-Swaging

Pre-Swaging BE-LOK Ferrules onto tubing.

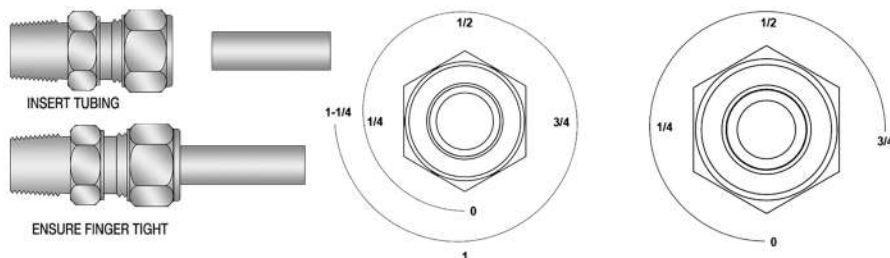
|            |    |  |
|------------|----|--|
| Dimensions | in | 1/2, 5/8, 3/4, 1, 1/4, 1-1/2 and 2.                      |
| rings      | mm | 12, 14, 15, 16, 18, 20, 22, 25, 28, 30, 32, 38, 42, & 50 |

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

# Installation

**BE-LOK®** Tube Fittings up to 1" or 25mm

1. Loosen the nut 1/4 turn from finger-tight position.
2. Insert tubing into the tube fitting, make sure that the tubing rests firmly on the shoulder of the port.
3. Finger-tighten the nut.
4. Tighten the nut 1-1/4 turns with wrench while holding the body of the fitting or the valve steady. (Fig. 1).  
For small-sized fittings (1/16", 1/8" & 3/16", 2mm, 3mm and 4mm), tighten the nut 3/4 turn with wrench (Fig.2).  
For sizes over (1" & 25mm), tighten the nut 1-1/2 turn with hydraulic swaging tool equipment.



## Reinstallation (all sizes)

1. Mark the tube at the back of the nut, mark a line along the nut and fitting body flats.
2. Insert tubing with pre-swaged ferrules into the fitting body until the front ferrule seats.
3. Then rotate the nut with a wrench to the previous pulled-up position as indicated by the marks on the tube and the flats.
4. Tighten the nut slightly with wrench

## Plugs & Port Connectors

1. Tighten the plug or port connector 1/4 turn from the finger-tight position while holding the body of the fitting steady. For small-sized fittings (1/16", 1/8" & 3/16", 2mm, 3mm and 4mm), tighten the nut 1/8 turn with wrench.

## Reinstallation

Tighten slightly with a wrench from the finger-tight position.

The Installation Instructions of the tube adapter end of port connectors are the same as the **BE-LOK®** Tube Fittings...

## Single Ferrule Tube Fittings

**BE-LOK®** Single Ferrule Tube Fittings are identical to **BE-LOK®** Double Ferrule Tube Fitting in pressure & temperature ratings.

### Components:

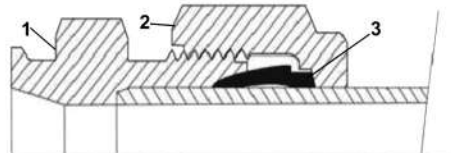
This Fitting includes single ferrule with standard **BE-LOK** Fitting Body and Nut. Designed with highest quality standards.

### Dimensions:

**BE-LOK** single ferrule tube fittings are dimensionally identical to **BE-LOK** double ferrule tube fittings.

### Ordering Information :

To order 3/8" OD x 1/4" NPT SS 316 Male Connector with single ferrule, SF should be added at the end of the part number. i.e. BMC-06-4N-SS-SF For more details about part numbers, see ordering information





# Ordering Information

## BE-LOK BMC-06-4G-SS-SF-SG

| Type of Fitting |                             |
|-----------------|-----------------------------|
| MC              | Male Connector              |
| MCBT            | Male Bore Through Connector |
| BMC             | Bulkhead Male Connector     |
| ME              | Male Elbow                  |
| LME             | Male Elbow 45° Angle        |
| PME             | Positionable Male Elbow     |
| MRT             | Male Run Tee                |
| MBT             | Male Branch Tee             |
| FC              | Female Connector            |
| BFC             | Bulkhead Female Connector   |
| FE              | Female Elbow                |
| FRT             | Female Run Tee              |
| FBT             | Female Branch Tee           |
| U               | Union                       |
| RU              | Reducing Union              |
| BU              | Bulkhead Union              |
| UE              | Union Elbow                 |
| RUE             | Reducing Union Elbow        |
| UT              | Union Tee                   |
| RUT             | Reducing Union Tee          |
| UC              | Union Cross                 |
| R               | Reducer                     |
| BR              | Bulkhead Reducer            |
| RE              | Reducer Elbow               |
| MA              | Male Adapter                |
| FA              | Female Adapter              |
| PC              | Port Connector              |
| RPC             | Reducing Port Connector     |
| MWC             | Male Pipe Weld Connector    |
| MWE             | Male Pipe Weld Elbow        |
| SWC             | Tube Socket Weld Connector  |
| SWE             | Tube Socket Weld Elbow      |
| GC              | Gauge Connector             |
| TP              | Tube Plug                   |
| TC              | Tube Cap                    |
| N               | Nut                         |
| FF              | Front Ferrule               |
| BF              | Back Ferrule                |
| IN              | Pipe Insert                 |

| Tube Outer Diameter |       |     |      |
|---------------------|-------|-----|------|
| 01                  | 1/16  | M02 | 2mm  |
| 02                  | 1/8   | M03 | 3mm  |
| 03                  | 3/16  | M04 | 4mm  |
| 04                  | 1/4   | M06 | 6mm  |
| 05                  | 5/8   | M08 | 8mm  |
| 06                  | 3/8   | M10 | 10mm |
| 08                  | 1/2   | M12 | 12mm |
| 10                  | 5/8   | M14 | 14mm |
| 12                  | 3/4   | M16 | 16mm |
| 14                  | 7/8   | M18 | 18mm |
| 16                  | 1     | M20 | 20mm |
| 20                  | 1-1/4 | M22 | 22mm |
| 24                  | 1-1/2 | M25 | 25mm |
| 32                  | 2     | M28 | 28mm |
|                     |       | M30 | 30mm |
|                     |       | M32 | 32mm |
|                     |       | M38 | 38mm |
|                     |       | M50 | 50mm |

| Thread Dimension |                |
|------------------|----------------|
| 1                | 1/16           |
| 2                | 1/8            |
| 3                | 3/16           |
| 4                | 1/4            |
| 6                | 3/8            |
| 8                | 1/2 M8x1.0     |
| 10               | M10x1.0        |
| 12               | 3/4 or M12x1.5 |
| 14               | 7/8 or M14x1.5 |
| 16               | 1" or M16x1.5  |
| 18               | M18x1.5        |
| 20               | M20x1.5        |
| 22               | M22x1.5        |
| 24               | 1-1/2          |
| 27               | M27x2.0        |
| 32               | 2"             |

| Type of Threads |                           |
|-----------------|---------------------------|
| N               | NPT Threads               |
| R               | ISO Tapered Threads (RT)  |
| G               | ISO Parallel Threads (RS) |
| RP              | ISO Parallel Threads (RP) |
| M               | Metric Threads            |
| J               | Falre 37° (JIC)           |
| S               | SAE / MS Straight Threads |
| PBW             | Pipe Butt-welded          |
| TSW             | Tube Socket Weld          |

| Material  |                   |
|-----------|-------------------|
| SS        | 316 SS            |
| MO-400    | Alloy 400         |
| MO-600    | Alloy 600         |
| INC-625   | Alloy 625         |
| INC-825   | Alloy 825         |
| HC        | Alloy C-276       |
| 6MO       | Alloy 254 (SMO)   |
| SDSS-2750 | Super Duplex 2750 |
| DSS-2205  | Duplex 2205       |
| B         | Brass             |

| Type of Ferrule |                      |
|-----------------|----------------------|
| SF              | Single ring          |
| -               | Two Rings (Standard) |

| Additionally |                     |
|--------------|---------------------|
| SG           | NACE                |
| OXY          | Oxygen purification |
| POS          | Positioned fitting  |
| DIE          | Dielectric fitting  |

### Example 1 : Tube to Pipe Ends

The part number below shows male connector stainless steel type 316, Tube OD 1/4" x 1/4" NPT.

| B | MC | 04 | 4N | SS |
|---|----|----|----|----|
| 1 | 2  | 3  | 4  | 5  |

1. BE-LOK® Tube fitting designates as "B"
2. Name of Fittings : See fitting type designator
3. Tube OD : see tube OD designator
4. Pipe thread end : see pipe threads designator
5. Material : see fitting material designator

### Example 2 : Tube to Tube Ends

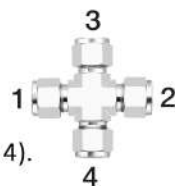
BE-LOK® Union tube OD 1/4" material SS316

| B | U | 04 | SS |
|---|---|----|----|
| 1 | 2 | 3  | 5  |

Refer to respective designator & symbol

### Example 3 : Tees and Crosses

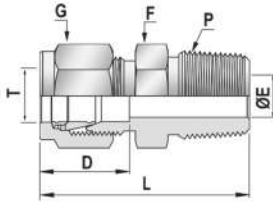
For tees, the run (1+2) shall precede the branch (3).  
For Crosses, the run (1 to 2) shall precede the branch (3 to 4).



\*The E dimension is the minimum nominal opening. This fittings may have a larger opening at the pipe / straight thread end. All dimensions are in millimeters unless otherwise specified. Dimensions are for reference only, subject to change.



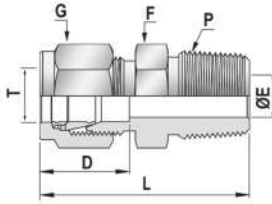
# Male Connector



## Imperial Tube x NPT Threads

| Part No       | Tube O.D. |         | B<br>NPT | E<br>Min<br>mm | Width Across Flat |           | D<br>mm | L<br>mm |
|---------------|-----------|---------|----------|----------------|-------------------|-----------|---------|---------|
|               | T<br>Inch | T<br>mm |          |                | F<br>Inch         | G<br>Inch |         |         |
| BMC-01-1N-SS  | 1/16      | 1.58    | 1/16     | 1.27           | 5/16              | 5/16      | 8.63    | 23.83   |
| BMC-01-2N-SS  | 1/16      | 1.58    | 1/8      | 1.27           | 7/16              | 5/16      | 8.63    | 26.33   |
| BMC-02-2N-SS  | 1/8       | 3.17    | 1/8      | 4.80           | 7/16              | 7/16      | 14.85   | 33.80   |
| BMC-02-4N-SS  | 1/8       | 3.17    | 1/4      | 4.80           | 9/16              | 7/16      | 14.85   | 39.30   |
| BMC-02-6N-SS  | 1/8       | 3.17    | 3/8      | 4.80           | 11/16             | 7/16      | 14.85   | 35.80   |
| BMC-02-8N-SS  | 1/8       | 3.17    | 1/2      | 4.80           | 7/8               | 7/16      | 14.85   | 42.16   |
| BMC-03-2N-SS  | 3/16      | 4.76    | 1/8      | 3.04           | 7/16              | 1/2       | 13.71   | 31.24   |
| BMC-03-4N-SS  | 3/16      | 4.76    | 1/4      | 3.04           | 9/16              | 1/2       | 13.71   | 36.32   |
| BMC-04-2N-SS  | 1/4       | 6.35    | 1/8      | 4.80           | 1/2               | 9/16      | 15.30   | 34.00   |
| BMC-04-4N-SS  | 1/4       | 6.35    | 1/4      | 4.80           | 9/16              | 9/16      | 15.30   | 39.00   |
| BMC-04-6N-SS  | 1/4       | 6.35    | 3/8      | 4.80           | 11/16             | 9/16      | 15.30   | 39.00   |
| BMC-04-8N-SS  | 1/4       | 6.35    | 1/2      | 4.80           | 7/8               | 9/16      | 15.30   | 45.50   |
| BMC-04-12N-SS | 1/4       | 6.35    | 3/4      | 4.80           | 1-1/16            | 9/16      | 15.30   | 46.50   |
| BMC-05-2N-SS  | 5/16      | 7.93    | 1/8      | 4.80           | 9/16              | 5/8       | 16.25   | 34.03   |
| BMC-05-4N-SS  | 5/16      | 7.93    | 1/4      | 6.35           | 9/16              | 5/8       | 16.25   | 38.60   |
| BMC-05-6N-SS  | 5/16      | 7.93    | 3/8      | 6.35           | 11/16             | 5/8       | 16.25   | 39.11   |
| BMC-06-2N-SS  | 3/8       | 9.52    | 1/8      | 4.82           | 5/8               | 11/16     | 17.10   | 35.30   |
| BMC-06-4N-SS  | 3/8       | 9.52    | 1/4      | 7.10           | 5/8               | 11/16     | 17.10   | 40.00   |
| BMC-06-6N-SS  | 3/8       | 9.52    | 3/8      | 7.10           | 11/16             | 11/16     | 17.10   | 40.50   |
| BMC-06-8N-SS  | 3/8       | 9.52    | 1/2      | 7.10           | 7/8               | 11/16     | 17.10   | 46.50   |
| BMC-06-12N-SS | 3/8       | 9.52    | 3/4      | 7.10           | 1-1/16            | 11/16     | 17.10   | 48.40   |
| BMC-08-2N-SS  | 1/2       | 12.70   | 1/8      | 4.80           | 13/16             | 7/8       | 22.80   | 38.80   |
| BMC-08-4N-SS  | 1/2       | 12.70   | 1/4      | 7.10           | 7/8               | 7/8       | 22.80   | 46.70   |
| BMC-08-6N-SS  | 1/2       | 12.70   | 3/8      | 7.10           | 7/8               | 7/8       | 22.80   | 44.50   |
| BMC-08-8N-SS  | 1/2       | 12.70   | 1/2      | 10.40          | 7/8               | 7/8       | 22.80   | 49.00   |
| BMC-08-12N-SS | 1/2       | 12.70   | 3/4      | 10.40          | 1-1/16            | 7/8       | 22.80   | 50.70   |
| BMC-08-16N-SS | 1/2       | 12.70   | 1        | 10.40          | 1-3/8             | 7/8       | 22.80   | 57.75   |
| BMC-10-6N-SS  | 5/8       | 15.87   | 3/8      | 7.10           | 15/16             | 1         | 24.30   | 45.00   |
| BMC-10-8N-SS  | 5/8       | 15.87   | 1/2      | 10.40          | 15/16             | 1         | 24.30   | 49.00   |
| BMC-10-12N-SS | 5/8       | 15.87   | 3/4      | 12.70          | 1-1/16            | 1         | 24.30   | 50.50   |
| BMC-12-8N-SS  | 3/4       | 19.05   | 1/2      | 10.40          | 1-1/16            | 1-1/8     | 22.60   | 50.00   |
| BMC-12-12N-SS | 3/4       | 19.05   | 3/4      | 15.00          | 1-1/16            | 1-1/8     | 22.60   | 51.50   |
| BMC-12-16N-SS | 3/4       | 19.05   | 1        | 15.00          | 1-3/8             | 1-1/8     | 22.60   | 58.00   |
| BMC-14-12N-SS | 7/8       | 22.22   | 3/4      | 15.00          | 13/16             | 1-1/4     | 25.90   | 50.54   |
| BMC-14-16N-SS | 7/8       | 22.22   | 1        | 18.28          | 1-3/8             | 1-1/4     | 25.90   | 57.15   |
| BMC-16-8N-SS  | 1         | 25.40   | 1/2      | 10.40          | 1-3/8             | 1-1/2     | 31.30   | 57.40   |
| BMC-16-12N-SS | 1         | 25.40   | 3/4      | 15.00          | 1-3/8             | 1-1/2     | 31.30   | 57.40   |
| BMC-16-16N-SS | 1         | 25.40   | 1        | 22.00          | 1-3/8             | 1-1/2     | 31.30   | 64.00   |
| BMC-20-16N-SS | 1-1/4     | 31.75   | 1        | 22.00          | 1-3/4             | 1-7/8     | 41.14   | 77.20   |
| BMC-20-20N-SS | 1-1/4     | 31.75   | 1-1/4    | 27.68          | 1-3/4             | 1-7/8     | 41.14   | 77.20   |
| BMC-24-24N-SS | 1-1/2     | 38.10   | 1-1/2    | 34.00          | 2-1/8             | 2-1/4     | 50.03   | 88.90   |
| BMC-32-32N-SS | 2         | 50.80   | 2        | 45.97          | 2-3/4             | 3         | 67.56   | 113.50  |

# Male Connector

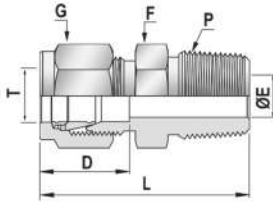


## Metric Tube x NPT Threads

| Part No        | Tube O.D. | B<br>NPT | E<br>Min<br>mm | Width Across Flat |           | D<br>mm | L<br>mm |
|----------------|-----------|----------|----------------|-------------------|-----------|---------|---------|
|                | T<br>mm   |          |                | F<br>Inch         | G<br>Inch |         |         |
| BMC-M02-2N-SS  | 2         | 1/8      | 1.70           | 12                | 12        | 12.90   | 30.50   |
| BMC-M03-2N-SS  | 3         | 1/8      | 2.40           | 12                | 12        | 12.90   | 29.70   |
| BMC-M03-4N-SS  | 3         | 1/4      | 2.40           | 14                | 12        | 12.90   | 35.60   |
| BMC-M04-2N-SS  | 4         | 1/8      | 2.40           | 12                | 12        | 13.70   | 31.20   |
| BMC-M04-4N-SS  | 4         | 1/4      | 2.40           | 14                | 12        | 13.70   | 36.30   |
| BMC-M06-2N-SS  | 6         | 1/8      | 4.20           | 12                | 14        | 15.50   | 32.80   |
| BMC-M06-4N-SS  | 6         | 1/4      | 4.20           | 14                | 14        | 15.50   | 39.50   |
| BMC-M06-6N-SS  | 6         | 3/8      | 4.20           | 17                | 14        | 15.50   | 41.25   |
| BMC-M06-8N-SS  | 6         | 1/2      | 4.20           | 22                | 14        | 15.50   | 46.30   |
| BMC-M06-12N-SS | 6         | 3/4      | 4.20           | 27                | 14        | 15.50   | 48.00   |
| BMC-M08-2N-SS  | 8         | 1/8      | 4.20           | 14                | 16        | 16.30   | 34.20   |
| BMC-M08-4N-SS  | 8         | 1/4      | 6.00           | 15                | 16        | 16.30   | 40.00   |
| BMC-M08-6N-SS  | 8         | 3/8      | 6.00           | 18                | 16        | 16.30   | 41.50   |
| BMC-M08-8N-SS  | 8         | 1/2      | 6.00           | 22                | 16        | 16.30   | 46.60   |
| BMC-M10-2N-SS  | 10        | 1/8      | 4.80           | 18                | 19        | 18.10   | 38.00   |
| BMC-M10-4N-SS  | 10        | 1/4      | 7.10           | 18                | 19        | 18.10   | 41.70   |
| BMC-M10-6N-SS  | 10        | 3/8      | 8.00           | 18                | 19        | 18.10   | 42.10   |
| BMC-M10-8N-SS  | 10        | 1/2      | 8.00           | 22                | 19        | 18.10   | 47.00   |
| BMC-M12-4N-SS  | 12        | 1/4      | 7.10           | 22                | 22        | 22.30   | 45.00   |
| BMC-M12-6N-SS  | 12        | 3/8      | 7.10           | 22                | 22        | 22.30   | 43.40   |
| BMC-M12-8N-SS  | 12        | 1/2      | 9.50           | 22                | 22        | 22.30   | 49.20   |
| BMC-M12-12N-SS | 12        | 3/4      | 9.50           | 27                | 22        | 22.30   | 51.60   |
| BMC-M12-16N-SS | 12        | 1        | 9.50           | 35                | 22        | 22.30   | 57.70   |
| BMC-M14-8N-SS  | 14        | 1/2      | 11.90          | 24                | 25        | 23.60   | 49.00   |
| BMC-M15-8N-SS  | 15        | 1/2      | 11.90          | 24                | 25        | 24.40   | 49.00   |
| BMC-M16-4N-SS  | 16        | 1/4      | 7.10           | 24                | 25        | 24.40   | 44.10   |
| BMC-M16-6N-SS  | 16        | 3/8      | 9.50           | 24                | 25        | 24.40   | 44.10   |
| BMC-M16-8N-SS  | 16        | 1/2      | 11.90          | 24                | 25        | 24.40   | 49.00   |
| BMC-M16-12N-SS | 16        | 3/4      | 12.70          | 27                | 25        | 24.40   | 49.00   |
| BMC-M18-8N-SS  | 18        | 1/2      | 11.90          | 27                | 30        | 24.40   | 49.50   |
| BMC-M18-12N-SS | 18        | 3/4      | 15.00          | 27                | 30        | 24.40   | 50.50   |
| BMC-M20-8N-SS  | 20        | 1/2      | 11.90          | 30                | 32        | 26.00   | 52.30   |
| BMC-M20-12N-SS | 20        | 3/4      | 15.90          | 30                | 32        | 26.00   | 52.30   |
| BMC-M22-12N-SS | 22        | 3/4      | 15.90          | 30                | 32        | 26.00   | 52.30   |
| BMC-M22-16N-SS | 22        | 1        | 18.30          | 35                | 32        | 26.00   | 57.90   |
| BMC-M25-12N-SS | 25        | 3/4      | 15.90          | 35                | 38        | 31.30   | 57.50   |
| BMC-M25-16N-SS | 25        | 1        | 22.80          | 35                | 38        | 31.30   | 62.30   |
| BMC-M28-16N-SS | 28        | 1        | 22.80          | 41                | 46        | 36.60   | 72.40   |
| BMC-M28-20N-SS | 28        | 1-1/4    | 22.80          | 46                | 46        | 36.60   | 73.10   |
| BMC-M30-20N-SS | 30        | 1-1/4    | 26.20          | 46                | 50        | 39.60   | 77.20   |
| BMC-M32-20N-SS | 32        | 1-1/4    | 28.60          | 46                | 50        | 42.00   | 79.60   |
| BMC-M38-24N-SS | 38        | 1-1/2    | 33.70          | 55                | 60        | 49.40   | 91.60   |



# Male Connector

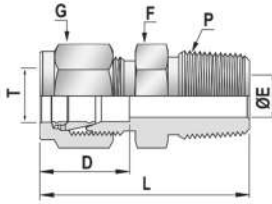


## Impertial Tube x ISO Tapered Threads (BSPT)

| Part No       | Tube O.D. |         | B<br>BSPT | E<br>Min<br>mm | Width Across Flat |           | D<br>mm | L<br>mm |
|---------------|-----------|---------|-----------|----------------|-------------------|-----------|---------|---------|
|               | Inch      | T<br>mm |           |                | F<br>Inch         | G<br>Inch |         |         |
| BMC-01-1R-SS  | 1/16      | 1.58    | 1/16      | 1.27           | 5/16              | 5/16      | 8.63    | 23.83   |
| BMC-01-2R-SS  | 1/16      | 1.58    | 1/8       | 1.27           | 7/16              | 5/16      | 8.63    | 26.33   |
| BMC-02-2R-SS  | 1/8       | 3.17    | 1/8       | 4.80           | 7/16              | 7/16      | 14.85   | 33.80   |
| BMC-02-4R-SS  | 1/8       | 3.17    | 1/4       | 4.80           | 9/16              | 7/16      | 14.85   | 39.30   |
| BMC-02-6R-SS  | 1/8       | 3.17    | 3/8       | 4.80           | 11/16             | 7/16      | 14.85   | 35.80   |
| BMC-02-8R-SS  | 1/8       | 3.17    | 1/2       | 4.80           | 7/8               | 7/16      | 14.85   | 42.16   |
| BMC-03-2R-SS  | 3/16      | 4.76    | 1/8       | 3.04           | 7/16              | 1/2       | 13.71   | 31.24   |
| BMC-03-4R-SS  | 3/16      | 4.76    | 1/4       | 3.04           | 9/16              | 1/2       | 13.71   | 36.32   |
| BMC-04-2R-SS  | 1/4       | 6.35    | 1/8       | 4.80           | 1/2               | 9/16      | 15.30   | 34.00   |
| BMC-04-4R-SS  | 1/4       | 6.35    | 1/4       | 4.80           | 9/16              | 9/16      | 15.30   | 39.00   |
| BMC-04-6R-SS  | 1/4       | 6.35    | 3/8       | 4.80           | 11/16             | 9/16      | 15.30   | 39.00   |
| BMC-04-8R-SS  | 1/4       | 6.35    | 1/2       | 4.80           | 7/8               | 9/16      | 15.30   | 45.50   |
| BMC-04-12R-SS | 1/4       | 6.35    | 3/4       | 4.80           | 1-1/16            | 9/16      | 15.30   | 46.50   |
| BMC-05-2R-SS  | 5/16      | 7.93    | 1/8       | 4.80           | 9/16              | 5/8       | 16.25   | 34.03   |
| BMC-05-4R-SS  | 5/16      | 7.93    | 1/4       | 6.35           | 9/16              | 5/8       | 16.25   | 38.60   |
| BMC-05-6R-SS  | 5/16      | 7.93    | 3/8       | 6.35           | 11/16             | 5/8       | 16.25   | 39.11   |
| BMC-06-2R-SS  | 3/8       | 9.52    | 1/8       | 4.82           | 5/8               | 11/16     | 17.10   | 35.30   |
| BMC-06-4R-SS  | 3/8       | 9.52    | 1/4       | 7.10           | 5/8               | 11/16     | 17.10   | 40.00   |
| BMC-06-6R-SS  | 3/8       | 9.52    | 3/8       | 7.10           | 11/16             | 11/16     | 17.10   | 40.50   |
| BMC-06-8R-SS  | 3/8       | 9.52    | 1/2       | 7.10           | 7/8               | 11/16     | 17.10   | 46.50   |
| BMC-06-12R-SS | 3/8       | 9.52    | 3/4       | 7.10           | 1-1/16            | 11/16     | 17.10   | 48.40   |
| BMC-08-2R-SS  | 1/2       | 12.70   | 1/8       | 4.80           | 13/16             | 7/8       | 22.80   | 38.80   |
| BMC-08-4R-SS  | 1/2       | 12.70   | 1/4       | 7.10           | 7/8               | 7/8       | 22.80   | 46.70   |
| BMC-08-6R-SS  | 1/2       | 12.70   | 3/8       | 7.10           | 7/8               | 7/8       | 22.80   | 44.50   |
| BMC-08-8R-SS  | 1/2       | 12.70   | 1/2       | 10.40          | 7/8               | 7/8       | 22.80   | 49.00   |
| BMC-08-12R-SS | 1/2       | 12.70   | 3/4       | 10.40          | 1-1/16            | 7/8       | 22.80   | 50.70   |
| BMC-08-16R-SS | 1/2       | 12.70   | 1         | 10.40          | 1-3/8             | 7/8       | 22.80   | 57.75   |
| BMC-10-6R-SS  | 5/8       | 15.87   | 3/8       | 7.10           | 15/16             | 1         | 24.30   | 45.00   |
| BMC-10-8R-SS  | 5/8       | 15.87   | 1/2       | 10.40          | 15/16             | 1         | 24.30   | 49.00   |
| BMC-10-12R-SS | 5/8       | 15.87   | 3/4       | 12.70          | 1-1/16            | 1         | 24.30   | 50.50   |
| BMC-12-8R-SS  | 3/4       | 19.05   | 1/2       | 10.40          | 1-1/16            | 1-1/8     | 22.60   | 50.00   |
| BMC-12-12R-SS | 3/4       | 19.05   | 3/4       | 15.00          | 1-1/16            | 1-1/8     | 22.60   | 51.50   |
| BMC-12-16R-SS | 3/4       | 19.05   | 1         | 15.00          | 1-3/8             | 1-1/8     | 22.60   | 58.00   |
| BMC-14-12R-SS | 7/8       | 22.22   | 3/4       | 15.00          | 13/16             | 1-1/4     | 25.90   | 50.54   |
| BMC-14-16R-SS | 7/8       | 22.22   | 1         | 18.20          | 1-3/8             | 1-1/4     | 25.90   | 57.15   |
| BMC-16-8R-SS  | 1         | 25.40   | 1/2       | 10.40          | 1-3/8             | 1-1/2     | 31.30   | 57.40   |
| BMC-16-12R-SS | 1         | 25.40   | 3/4       | 15.00          | 1-3/8             | 1-1/2     | 31.30   | 57.40   |
| BMC-16-16R-SS | 1         | 25.40   | 1         | 22.00          | 1-3/8             | 1-1/2     | 31.30   | 64.00   |
| BMC-20-16R-SS | 1-1/4     | 31.75   | 1         | 22.00          | 1-3/4             | 1-7/8     | 41.14   | 77.20   |
| BMC-20-20R-SS | 1-1/4     | 31.75   | 1-1/4     | 27.60          | 1-3/4             | 1-7/8     | 41.14   | 77.20   |
| BMC-24-24R-SS | 1-1/2     | 38.10   | 1-1/2     | 34.00          | 2-1/8             | 2-1/4     | 50.03   | 88.90   |
| BMC-32-32R-SS | 2         | 50.80   | 2         | 45.97          | 2-3/4             | 3         | 67.56   | 113.50  |



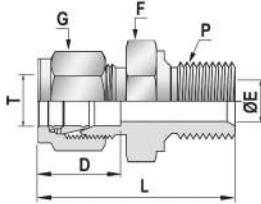
# Male Connector



## Metric Tube x ISO Tapered Threads (BSPT)

| Part No        | Tube O.D. |           | E<br>Min<br>mm | Width Across Flat |           | D<br>mm | L<br>mm |
|----------------|-----------|-----------|----------------|-------------------|-----------|---------|---------|
|                | T<br>mm   | B<br>BSPT |                | F<br>Inch         | G<br>Inch |         |         |
| BMC-M02-2R-SS  | 2         | 1/8       | 1.70           | 12                | 12        | 12.90   | 30.50   |
| BMC-M03-2R-SS  | 3         | 1/8       | 2.40           | 12                | 12        | 12.90   | 29.70   |
| BMC-M03-4R-SS  | 3         | 1/4       | 2.40           | 14                | 12        | 12.90   | 35.60   |
| BMC-M04-2R-SS  | 4         | 1/8       | 2.40           | 12                | 12        | 13.70   | 31.20   |
| BMC-M04-4R-SS  | 4         | 1/4       | 2.40           | 14                | 12        | 13.70   | 36.30   |
| BMC-M06-2R-SS  | 6         | 1/8       | 4.20           | 12                | 14        | 15.50   | 32.80   |
| BMC-M06-4R-SS  | 6         | 1/4       | 4.20           | 14                | 14        | 15.50   | 39.50   |
| BMC-M06-6R-SS  | 6         | 3/8       | 4.20           | 17                | 14        | 15.50   | 41.25   |
| BMC-M06-8R-SS  | 6         | 1/2       | 4.20           | 22                | 14        | 15.50   | 46.30   |
| BMC-M06-12R-SS | 6         | 3/4       | 4.20           | 27                | 14        | 15.50   | 48.00   |
| BMC-M08-2R-SS  | 8         | 1/8       | 4.20           | 14                | 16        | 16.30   | 34.20   |
| BMC-M08-4R-SS  | 8         | 1/4       | 6.00           | 15                | 16        | 16.30   | 40.00   |
| BMC-M08-6R-SS  | 8         | 3/8       | 6.00           | 18                | 16        | 16.30   | 41.50   |
| BMC-M08-8R-SS  | 8         | 1/2       | 6.00           | 22                | 16        | 16.30   | 46.60   |
| BMC-M10-2R-SS  | 10        | 1/8       | 4.80           | 18                | 19        | 18.10   | 38.00   |
| BMC-M10-4R-SS  | 10        | 1/4       | 7.10           | 18                | 19        | 18.10   | 41.70   |
| BMC-M10-6R-SS  | 10        | 3/8       | 8.00           | 18                | 19        | 18.10   | 42.10   |
| BMC-M10-8R-SS  | 10        | 1/2       | 8.00           | 22                | 19        | 18.10   | 47.00   |
| BMC-M12-4R-SS  | 12        | 1/4       | 7.10           | 22                | 22        | 22.30   | 45.00   |
| BMC-M12-6R-SS  | 12        | 3/8       | 7.10           | 22                | 22        | 22.30   | 43.40   |
| BMC-M12-8R-SS  | 12        | 1/2       | 9.50           | 22                | 22        | 22.30   | 49.20   |
| BMC-M12-12R-SS | 12        | 3/4       | 9.50           | 27                | 22        | 22.30   | 51.60   |
| BMC-M12-16R-SS | 12        | 1         | 9.50           | 35                | 22        | 22.30   | 57.70   |
| BMC-M14-8R-SS  | 14        | 1/2       | 11.90          | 24                | 25        | 23.60   | 49.00   |
| BMC-M15-8R-SS  | 15        | 1/2       | 11.90          | 24                | 25        | 24.40   | 49.00   |
| BMC-M16-4R-SS  | 16        | 1/4       | 7.10           | 24                | 25        | 24.40   | 44.10   |
| BMC-M16-6R-SS  | 16        | 3/8       | 9.50           | 24                | 25        | 24.40   | 44.10   |
| BMC-M16-8R-SS  | 16        | 1/2       | 11.90          | 24                | 25        | 24.40   | 49.00   |
| BMC-M16-12R-SS | 16        | 3/4       | 12.70          | 27                | 25        | 24.40   | 49.00   |
| BMC-M18-8R-SS  | 18        | 1/2       | 11.90          | 27                | 30        | 24.40   | 49.50   |
| BMC-M18-12R-SS | 18        | 3/4       | 15.00          | 27                | 30        | 24.40   | 50.50   |
| BMC-M20-8R-SS  | 20        | 1/2       | 11.90          | 30                | 32        | 26.00   | 52.30   |
| BMC-M20-12R-SS | 20        | 3/4       | 15.90          | 30                | 32        | 26.00   | 52.30   |
| BMC-M22-12R-SS | 22        | 3/4       | 15.90          | 30                | 32        | 26.00   | 52.30   |
| BMC-M22-16R-SS | 22        | 1         | 18.30          | 35                | 32        | 26.00   | 57.90   |
| BMC-M25-12R-SS | 25        | 3/4       | 15.90          | 35                | 38        | 31.30   | 57.50   |
| BMC-M25-16R-SS | 25        | 1         | 22.80          | 35                | 38        | 31.30   | 62.30   |
| BMC-M28-16R-SS | 28        | 1         | 22.80          | 41                | 46        | 36.60   | 72.40   |
| BMC-M28-20R-SS | 28        | 1-1/4     | 22.80          | 46                | 46        | 36.60   | 73.10   |
| BMC-M30-20R-SS | 30        | 1-1/4     | 26.20          | 46                | 50        | 39.60   | 77.20   |
| BMC-M32-20R-SS | 32        | 1-1/4     | 28.60          | 46                | 50        | 42.00   | 79.60   |
| BMC-M38-24R-SS | 38        | 1-1/2     | 33.70          | 55                | 60        | 49.40   | 91.60   |

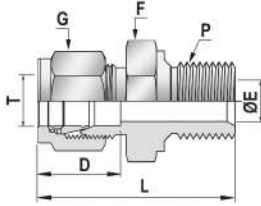
# Male Connector



## Imperial Tube x ISO Parallel Threads (BSPP)

| Part No       | Tube O.D. |       | B<br>BSPP | E<br>Min<br>mm | Width Across Flat |           |         |         |
|---------------|-----------|-------|-----------|----------------|-------------------|-----------|---------|---------|
|               | Inch      | mm    |           |                | F<br>Inch         | G<br>Inch | D<br>mm | L<br>mm |
| BMC-02-2G-SS  | 1/8       | 3.17  | 1/8       | 2.30           | 9/16              | 7/16      | 12.70   | 34.00   |
| BMC-02-4G-SS  | 1/8       | 3.17  | 1/4       | 2.30           | 3/4               | 7/16      | 12.70   | 35.30   |
| BMC-02-6G-SS  | 1/8       | 3.17  | 3/8       | 2.30           | 7/8               | 7/16      | 12.70   | 36.32   |
| BMC-02-8G-SS  | 1/8       | 3.17  | 1/2       | 2.30           | 11/16             | 7/16      | 12.70   | 42.16   |
| BMC-03-2G-SS  | 3/16      | 4.76  | 1/8       | 3.10           | 9/16              | 1/2       | 13.70   | 30.70   |
| BMC-04-2G-SS  | 1/4       | 6.35  | 1/8       | 4.10           | 9/16              | 9/16      | 15.20   | 32.26   |
| BMC-04-4G-SS  | 1/4       | 6.35  | 1/4       | 4.80           | 3/4               | 9/16      | 15.20   | 37.60   |
| BMC-04-6G-SS  | 1/4       | 6.35  | 3/8       | 4.80           | 7/8               | 9/16      | 15.20   | 38.10   |
| BMC-04-8G-SS  | 1/4       | 6.35  | 1/2       | 4.80           | 1-1/16            | 9/16      | 15.20   | 44.70   |
| BMC-05-4G-SS  | 5/16      | 7.93  | 1/4       | 5.80           | 3/4               | 5/8       | 16.20   | 38.36   |
| BMC-05-6G-SS  | 5/16      | 7.93  | 3/8       | 6.40           | 7/8               | 5/8       | 16.20   | 39.66   |
| BMC-06-2G-SS  | 3/8       | 9.52  | 1/8       | 4.00           | 5/8               | 11/16     | 16.80   | 34.03   |
| BMC-06-4G-SS  | 3/8       | 9.52  | 1/4       | 5.80           | 3/4               | 11/16     | 16.80   | 38.50   |
| BMC-06-6G-SS  | 3/8       | 9.52  | 3/8       | 7.10           | 7/8               | 11/16     | 16.80   | 40.40   |
| BMC-06-8G-SS  | 3/8       | 9.52  | 1/2       | 7.10           | 1-1/16            | 11/16     | 16.80   | 46.22   |
| BMC-08-4G-SS  | 1/2       | 12.70 | 1/4       | 5.80           | 13/16             | 7/8       | 22.90   | 42.10   |
| BMC-08-6G-SS  | 1/2       | 12.70 | 3/8       | 7.90           | 7/8               | 7/8       | 22.90   | 42.10   |
| BMC-08-8G-SS  | 1/2       | 12.70 | 1/2       | 10.40          | 1-1/16            | 7/8       | 22.90   | 47.40   |
| BMC-08-12G-SS | 1/2       | 12.70 | 3/4       | 10.40          | 15/16             | 7/8       | 22.90   | 52.50   |
| BMC-10-6G-SS  | 5/8       | 15.87 | 3/8       | 7.90           | 15/16             | 1         | 24.40   | 43.96   |
| BMC-10-8G-SS  | 5/8       | 15.87 | 1/2       | 11.90          | 11/16             | 1         | 24.40   | 49.10   |
| BMC-12-8G-SS  | 3/4       | 19.05 | 1/2       | 11.90          | 1-1/16            | 1-1/8     | 24.40   | 48.70   |
| BMC-12-12G-SS | 3/4       | 19.05 | 3/4       | 15.80          | 1-5/16            | 1-1/8     | 24.40   | 52.50   |
| BMC-16-8G-SS  | 1         | 25.40 | 1/2       | 11.90          | 1-3/8             | 1-1/2     | 31.20   | 55.80   |
| BMC-16-12G-SS | 1         | 25.40 | 3/4       | 15.90          | 1-3/8             | 1-1/2     | 31.20   | 57.40   |
| BMC-16-16G-SS | 1         | 25.40 | 1         | 19.80          | 1-5/8             | 1-1/2     | 31.20   | 59.94   |

# Male Connector

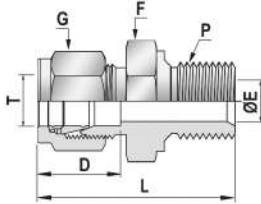


## Metric Tube x ISO Parallel Threads (BSPP)

| Part No        | Tube O.D. |           | E<br>Min<br>mm | Width Across Flat |           | D<br>mm | L<br>mm |
|----------------|-----------|-----------|----------------|-------------------|-----------|---------|---------|
|                | T<br>mm   | B<br>BSPP |                | F<br>Inch         | G<br>Inch |         |         |
| BMC-M03-2G-SS  | 3         | 1/8       | 2.40           | 14                | 12        | 12.90   | 30.00   |
| BMC-M03-4G-SS  | 3         | 1/4       | 2.40           | 19                | 12        | 12.90   | 35.30   |
| BMC-M04-2G-SS  | 4         | 1/8       | 2.40           | 14                | 12        | 13.70   | 30.70   |
| BMC-M06-2G-SS  | 6         | 1/8       | 4.20           | 14                | 14        | 15.30   | 32.30   |
| BMC-M06-4G-SS  | 6         | 1/4       | 4.20           | 19                | 14        | 15.30   | 37.60   |
| BMC-M06-6G-SS  | 6         | 3/8       | 4.20           | 22                | 14        | 15.30   | 38.90   |
| BMC-M06-8G-SS  | 6         | 1/2       | 4.20           | 27                | 14        | 15.30   | 44.70   |
| BMC-M08-2G-SS  | 8         | 1/8       | 4.00           | 15                | 16        | 16.20   | 33.20   |
| BMC-M08-4G-SS  | 8         | 1/4       | 6.40           | 19                | 16        | 16.20   | 39.80   |
| BMC-M08-6G-SS  | 8         | 3/8       | 6.40           | 22                | 16        | 16.20   | 39.80   |
| BMC-M08-8G-SS  | 8         | 1/2       | 6.40           | 27                | 16        | 16.20   | 45.60   |
| BMC-M10-4G-SS  | 10        | 1/4       | 5.80           | 19                | 19        | 17.20   | 39.40   |
| BMC-M10-6G-SS  | 10        | 3/8       | 7.90           | 22                | 19        | 17.20   | 40.60   |
| BMC-M10-8G-SS  | 10        | 1/2       | 7.90           | 27                | 19        | 17.20   | 46.50   |
| BMC-M12-4G-SS  | 12        | 1/4       | 5.80           | 22                | 22        | 22.80   | 42.60   |
| BMC-M12-6G-SS  | 12        | 3/8       | 7.90           | 22                | 22        | 22.80   | 43.10   |
| BMC-M12-8G-SS  | 12        | 1/2       | 9.50           | 27                | 22        | 22.80   | 47.40   |
| BMC-M12-12G-SS | 12        | 3/4       | 9.50           | 35                | 22        | 22.80   | 52.80   |
| BMC-M14-4G-SS  | 14        | 1/4       | 5.80           | 24                | 25        | 23.60   | 43.70   |
| BMC-M16-6G-SS  | 16        | 3/8       | 7.90           | 24                | 25        | 24.40   | 49.00   |
| BMC-M16-8G-SS  | 16        | 1/2       | 11.90          | 27                | 25        | 24.40   | 43.90   |
| BMC-M18-8G-SS  | 18        | 1/2       | 11.90          | 27                | 30        | 24.40   | 49.00   |
| BMC-M18-12G-SS | 18        | 3/4       | 15.10          | 35                | 30        | 24.40   | 52.80   |
| BMC-M20-8G-SS  | 20        | 1/2       | 11.90          | 30                | 32        | 26.00   | 50.50   |
| BMC-M20-12G-SS | 20        | 3/4       | 15.90          | 32                | 32        | 26.00   | 52.80   |
| BMC-M22-12G-SS | 22        | 3/4       | 15.90          | 32                | 32        | 26.00   | 52.80   |
| BMC-M22-16G-SS | 22        | 1         | 18.30          | 41                | 32        | 26.00   | 55.30   |
| BMC-M25-12G-SS | 25        | 3/4       | 15.90          | 35                | 38        | 31.30   | 57.50   |
| BMC-M25-16G-SS | 25        | 1         | 19.80          | 41                | 38        | 31.30   | 60.10   |



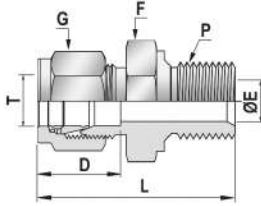
# Male Connector



## Imperial Tube x ISO Parallel Threads (RP)

| Part No        | Tube O.D. |         | B<br>BSPP | E<br>Min<br>mm | Width Across Flat |           |         | L<br>mm |
|----------------|-----------|---------|-----------|----------------|-------------------|-----------|---------|---------|
|                | Inch      | T<br>mm |           |                | F<br>Inch         | G<br>Inch | D<br>mm |         |
| BMC-02-2RP-SS  | 1/8       | 3.17    | 1/8       | 2.30           | 9/16              | 7/16      | 12.70   | 34.00   |
| BMC-02-4RP-SS  | 1/8       | 3.17    | 1/4       | 2.30           | 3/4               | 7/16      | 12.70   | 35.30   |
| BMC-02-6RP-SS  | 1/8       | 3.17    | 3/8       | 2.30           | 7/8               | 7/16      | 12.70   | 36.32   |
| BMC-02-8RP-SS  | 1/8       | 3.17    | 1/2       | 2.30           | 11/16             | 7/16      | 12.70   | 42.16   |
| BMC-03-2RP-SS  | 3/16      | 4.76    | 1/8       | 3.10           | 9/16              | 1/2       | 13.70   | 30.70   |
| BMC-04-2RP-SS  | 1/4       | 6.35    | 1/8       | 4.10           | 9/16              | 9/16      | 15.20   | 32.26   |
| BMC-04-4RP-SS  | 1/4       | 6.35    | 1/4       | 4.80           | 3/4               | 9/16      | 15.20   | 37.60   |
| BMC-04-6RP-SS  | 1/4       | 6.35    | 3/8       | 4.80           | 7/8               | 9/16      | 15.20   | 38.10   |
| BMC-04-8RP-SS  | 1/4       | 6.35    | 1/2       | 4.80           | 1-1/16            | 9/16      | 15.20   | 44.70   |
| BMC-05-4RP-SS  | 5/16      | 7.93    | 1/4       | 5.80           | 3/4               | 5/8       | 16.20   | 38.36   |
| BMC-05-6RP-SS  | 5/16      | 7.93    | 3/8       | 6.40           | 7/8               | 5/8       | 16.20   | 39.66   |
| BMC-06-2RP-SS  | 3/8       | 9.52    | 1/8       | 4.00           | 5/8               | 11/16     | 16.80   | 34.03   |
| BMC-06-4RP-SS  | 3/8       | 9.52    | 1/4       | 5.80           | 3/4               | 11/16     | 16.80   | 38.50   |
| BMC-06-6RP-SS  | 3/8       | 9.52    | 3/8       | 7.10           | 7/8               | 11/16     | 16.80   | 40.40   |
| BMC-06-8RP-SS  | 3/8       | 9.52    | 1/2       | 7.10           | 1-1/16            | 11/16     | 16.80   | 46.22   |
| BMC-08-4RP-SS  | 1/2       | 12.70   | 1/4       | 5.80           | 13/16             | 7/8       | 22.90   | 42.10   |
| BMC-08-6RP-SS  | 1/2       | 12.70   | 3/8       | 7.90           | 7/8               | 7/8       | 22.90   | 42.10   |
| BMC-08-8RP-SS  | 1/2       | 12.70   | 1/2       | 10.40          | 1-1/16            | 7/8       | 22.90   | 47.40   |
| BMC-08-12RP-SS | 1/2       | 12.70   | 3/4       | 10.40          | 15/16             | 7/8       | 22.90   | 52.50   |
| BMC-10-6RP-SS  | 5/8       | 15.87   | 3/8       | 7.90           | 15/16             | 1         | 24.40   | 43.96   |
| BMC-10-8RP-SS  | 5/8       | 15.87   | 1/2       | 11.90          | 11/16             | 1         | 24.40   | 49.10   |
| BMC-12-8RP-SS  | 3/4       | 19.05   | 1/2       | 11.90          | 1-1/16            | 1-1/8     | 24.40   | 48.70   |
| BMC-12-12RP-SS | 3/4       | 19.05   | 3/4       | 15.80          | 1-5/16            | 1-1/8     | 24.40   | 52.50   |
| BMC-16-8RP-SS  | 1         | 25.40   | 1/2       | 11.90          | 1-3/8             | 1-1/2     | 31.20   | 55.80   |
| BMC-16-12RP-SS | 1         | 25.40   | 3/4       | 15.90          | 1-3/8             | 1-1/2     | 31.20   | 57.40   |
| BMC-16-16RP-SS | 1         | 25.40   | 1         | 19.80          | 1-5/8             | 1-1/2     | 31.20   | 59.94   |

# Male Connector

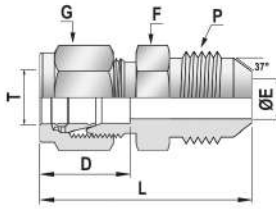


## Metric Tube x ISO Parallel Threads (RP)

| Part No         | Tube O.D. |           | E<br>Min<br>mm | Width Across Flat |           |         | L<br>mm |
|-----------------|-----------|-----------|----------------|-------------------|-----------|---------|---------|
|                 | T<br>mm   | B<br>BSPP |                | F<br>Inch         | G<br>Inch | D<br>mm |         |
| BMC-M03-2RP-SS  | 3         | 1/8       | 2.40           | 14                | 12        | 12.90   | 30.00   |
| BMC-M03-4RP-SS  | 3         | 1/4       | 2.40           | 19                | 12        | 12.90   | 35.30   |
| BMC-M04-2RP-SS  | 4         | 1/8       | 2.40           | 14                | 12        | 13.70   | 30.70   |
| BMC-M06-2RP-SS  | 6         | 1/8       | 4.20           | 14                | 14        | 15.30   | 32.30   |
| BMC-M06-4RP-SS  | 6         | 1/4       | 4.20           | 19                | 14        | 15.30   | 37.60   |
| BMC-M06-6RP-SS  | 6         | 3/8       | 4.20           | 22                | 14        | 15.30   | 38.90   |
| BMC-M06-8RP-SS  | 6         | 1/2       | 4.20           | 27                | 14        | 15.30   | 44.70   |
| BMC-M08-2RP-SS  | 8         | 1/8       | 4.00           | 15                | 16        | 16.20   | 33.20   |
| BMC-M08-4RP-SS  | 8         | 1/4       | 6.40           | 19                | 16        | 16.20   | 39.80   |
| BMC-M08-4RP-SS  | 8         | 3/8       | 6.40           | 22                | 16        | 16.20   | 39.80   |
| BMC-M08-8RP-SS  | 8         | 1/2       | 6.40           | 27                | 16        | 16.20   | 45.60   |
| BMC-M10-4RP-SS  | 10        | 1/4       | 5.80           | 19                | 19        | 17.20   | 39.40   |
| BMC-M10-6RP-SS  | 10        | 3/8       | 7.90           | 22                | 19        | 17.20   | 40.60   |
| BMC-M10-8RP-SS  | 10        | 1/2       | 7.90           | 27                | 19        | 17.20   | 46.50   |
| BMC-M12-4RP-SS  | 12        | 1/4       | 5.80           | 22                | 22        | 22.80   | 42.60   |
| BMC-M12-6RP-SS  | 12        | 3/8       | 7.90           | 22                | 22        | 22.80   | 43.10   |
| BMC-M12-8RP-SS  | 12        | 1/2       | 9.50           | 27                | 22        | 22.80   | 47.40   |
| BMC-M12-12RP-SS | 12        | 3/4       | 9.50           | 35                | 22        | 22.80   | 52.80   |
| BMC-M14-4RP-SS  | 14        | 1/4       | 5.80           | 24                | 25        | 23.60   | 43.70   |
| BMC-M14-6RP-SS  | 14        | 3/8       | 7.90           | 24                | 25        | 24.40   | 49.00   |
| BMC-M14-8RP-SS  | 14        | 1/2       | 11.90          | 27                | 25        | 24.40   | 43.90   |
| BMC-M16-6RP-SS  | 16        | 3/8       | 7.90           | 24                | 25        | 24.40   | 49.00   |
| BMC-M16-8RP-SS  | 16        | 1/2       | 11.90          | 27                | 25        | 24.40   | 43.90   |
| BMC-M18-8RP-SS  | 18        | 1/2       | 11.90          | 27                | 30        | 24.40   | 49.00   |
| BMC-M18-12RP-SS | 18        | 3/4       | 15.10          | 35                | 30        | 24.40   | 52.80   |
| BMC-M20-8RP-SS  | 20        | 1/2       | 11.90          | 30                | 32        | 26.00   | 50.50   |
| BMC-M20-12RP-SS | 20        | 3/4       | 15.90          | 32                | 32        | 26.00   | 52.80   |
| BMC-M22-12RP-SS | 22        | 3/4       | 15.90          | 32                | 32        | 26.00   | 52.80   |
| BMC-M22-16RP-SS | 22        | 1         | 18.30          | 41                | 32        | 26.00   | 55.30   |
| BMC-M25-12RP-SS | 25        | 3/4       | 15.90          | 35                | 38        | 31.30   | 57.50   |
| BMC-M25-16RP-SS | 25        | 1         | 19.80          | 41                | 38        | 31.30   | 60.10   |
| BMC-M28-8RP-SS  | 28        | 1/2       | 11.90          | 27                | 30        | 24.40   | 49.00   |
| BMC-M28-12RP-SS | 28        | 3/4       | 15.10          | 35                | 30        | 24.40   | 52.80   |
| BMC-M30-8RP-SS  | 30        | 1/2       | 11.90          | 30                | 32        | 26.00   | 50.50   |
| BMC-M32-12RP-SS | 32        | 3/4       | 15.90          | 32                | 32        | 26.00   | 52.80   |
| BMC-M38-12RP-SS | 38        | 3/4       | 15.90          | 32                | 32        | 26.00   | 52.80   |



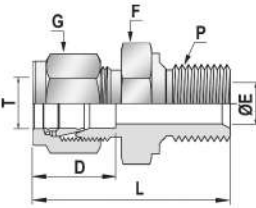
## Male Connector



### Imperial Tube x Flare Tube (37°)

| Part No       | Tube O.D. |         | B                     |                              | E<br>Min<br>mm | Width Across Flat |           |         |
|---------------|-----------|---------|-----------------------|------------------------------|----------------|-------------------|-----------|---------|
|               | Inch      | T<br>mm | Tube<br>Flare<br>Size | Straight<br>Threads<br>(UNF) |                | F<br>Inch         | G<br>Inch | D<br>mm |
| BMC-01-2J-SS  | 1/16      | 1.58    | 1/8                   | 5/16-24                      | 1.27           | 7/16              | 5/16      | 8.63    |
| BMC-02-2J-SS  | 1/8       | 3.17    | 1/8                   | 5/16-24                      | 1.52           | 7/16              | 7/16      | 12.70   |
| BMC-02-4J-SS  | 1/8       | 3.17    | 1/4                   | 7/16-20                      | 2.28           | 1/2               | 7/16      | 12.70   |
| BMC-04-4J-SS  | 1/4       | 6.35    | 1/4                   | 7/16-20                      | 4.31           | 1/2               | 9/16      | 15.24   |
| BMC-05-5J-SS  | 5/16      | 7.93    | 5/16                  | 1/2-20                       | 5.84           | 9/16              | 5/8       | 16.25   |
| BMC-06-4J-SS  | 3/8       | 9.52    | 1/4                   | 7/16-20                      | 4.31           | 5/8               | 11/16     | 16.76   |
| BMC-06-6J-SS  | 3/8       | 9.52    | 3/8                   | 9/16-18                      | 7.11           | 5/8               | 11/16     | 16.76   |
| BMC-08-8J-SS  | 1/2       | 12.70   | 1/2                   | 3/4-16                       | 9.90           | 13/16             | 7/8       | 22.86   |
| BMC-12-12J-SS | 3/4       | 19.05   | 3/4                   | 1-1/16-12                    | 15.49          | 1-1/8             | 1-1/8     | 24.38   |
| BMC-16-16J-SS | 1         | 25.40   | 1                     | 1-5/16-12                    | 21.33          | 1-3/8             | 1-1/2     | 31.24   |
| BMC-20-20J-SS | 1-1/4     | 31.75   | 1-1/4                 | 1-5/8-12                     | 27.68          | 1-3/4             | 1-7/8     | 41.14   |
| BMC-24-24J-SS | 1-1/2     | 38.10   | 1-1/2                 | 1-7/8-12                     | 33.90          | 2-1/8             | 2-1/4     | 50.03   |
| BMC-32-32J-SS | 2         | 50.80   | 2                     | 2-1/2-12                     | 45.97          | 2-3/4             | 3         | 67.56   |

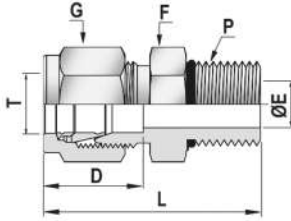
## Male Connector



### Metric Tube x Metric Tube

| Part No        | Tube O.D. |  | B<br>Metric | E<br>Min<br>mm | Width Across Flat |           |         | L<br>mm |
|----------------|-----------|--|-------------|----------------|-------------------|-----------|---------|---------|
|                | T<br>mm   |  |             |                | F<br>Inch         | G<br>Inch | D<br>mm |         |
| BMC-M06-10M-SS | 6         |  | M10x1.0     | 4.00           | 14                | 14        | 15.30   | 33.30   |
| BMC-M06-12M-SS | 6         |  | M12x1.5     | 4.20           | 18                | 14        | 15.30   | 38.20   |
| BMC-M06-20M-SS | 6         |  | M20x1.5     | 4.80           | 22                | 14        | 15.30   | 45.50   |
| BMC-M08-12M-SS | 8         |  | M12x1.5     | 6.00           | 18                | 16        | 16.20   | 40.40   |
| BMC-M08-14M-SS | 8         |  | M14x1.5     | 6.00           | 19                | 16        | 16.20   | 40.40   |
| BMC-M08-20M-SS | 8         |  | M20x1.5     | 6.40           | 22                | 16        | 16.20   | 45.90   |
| BMC-M10-14M-SS | 10        |  | M14x1.5     | 7.90           | 19                | 19        | 17.20   | 40.70   |
| BMC-M10-20M-SS | 10        |  | M20*1.5     | 8.00           | 22                | 19        | 17.20   | 47.60   |
| BMC-M12-16M-SS | 12        |  | M16x1.5     | 9.00           | 19                | 22        | 22.80   | 45.50   |
| BMC-M12-20M-SS | 12        |  | M20x1.5     | 9.50           | 22                | 22        | 22.80   | 49.50   |
| BMC-M14-20M-SS | 14        |  | M20x1.5     | 11.10          | 24                | 25        | 23.60   | 49.60   |
| BMC-M16-20M-SS | 16        |  | M20x1.5     | 12.00          | 24                | 25        | 24.40   | 49.60   |
| BMC-M18-20M-SS | 18        |  | M20x1.5     | 12.00          | 27                | 30        | 24.40   | 49.60   |
| BMC-M20-20M-SS | 20        |  | M20x1.5     | 12.00          | 30                | 32        | 26.00   | 50.50   |

# Male Connector

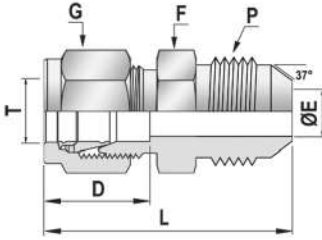


## Imperial Tube x SAE/MS Straight Threads

| Part No       | Tube O.D. |       | B<br>SAE/MS | E<br>Min<br>mm | Width Across Flat |           | D<br>mm | L<br>mm |
|---------------|-----------|-------|-------------|----------------|-------------------|-----------|---------|---------|
|               | T<br>Inch | mm    |             |                | F<br>Inch         | G<br>Inch |         |         |
| BMC-02-2S-SS  | 1/8       | 3.17  | 5/16-24     | 2.28           | 7/16              | 7/16      | 12.70   | 29.97   |
| BMC-02-4S-SS  | 1/8       | 3.17  | 7/16-20     | 2.28           | 9/16              | 7/16      | 12.70   | 31.49   |
| BMC-04-4S-SS  | 1/4       | 6.35  | 7/16-20     | 4.82           | 9/16              | 9/16      | 15.24   | 34.03   |
| BMC-04-6S-SS  | 1/4       | 6.35  | 9/16-18     | 4.82           | 11/16             | 9/16      | 15.24   | 35.56   |
| BMC-04-8S-SS  | 1/4       | 6.35  | 3/4-16      | 4.82           | 7/8               | 9/16      | 15.24   | 37.59   |
| BMC-04-10S-SS | 1/4       | 6.35  | 7/8-14      | 4.82           | 1                 | 9/16      | 15.24   | 40.64   |
| BMC-05-5S-SS  | 5/16      | 7.93  | 1/2-20      | 5.84           | 5/8               | 5/8       | 16.25   | 34.79   |
| BMC-06-4S-SS  | 3/8       | 9.52  | 7/16-20     | 5.08           | 5/8               | 11/16     | 16.76   | 35.56   |
| BMC-06-6S-SS  | 3/8       | 9.52  | 9/16-18     | 7.11           | 11/16             | 11/16     | 16.76   | 37.08   |
| BMC-06-8S-SS  | 3/8       | 9.52  | 3/4-16      | 7.11           | 7/8               | 11/16     | 16.76   | 39.11   |
| BMC-06-10S-SS | 3/8       | 9.52  | 7/8-14      | 7.11           | 1                 | 11/16     | 16.76   | 42.16   |
| BMC-08-06S-SS | 1/2       | 12.7  | 9/16-18     | 7.11           | 13/16             | 7/8       | 22.86   | 39.11   |
| BMC-08-8S-SS  | 1/2       | 12.7  | 3/4-16      | 10.41          | 7/8               | 7/8       | 22.86   | 41.91   |
| BMC-08-10S-SS | 1/2       | 12.7  | 7/8-14      | 10.41          | 1                 | 7/8       | 22.86   | 44.95   |
| BMC-08-12S-SS | 1/2       | 12.7  | 1-1/16-12   | 10.41          | 1-1/4             | 7/8       | 22.86   | 49.02   |
| BMC-10-8S-SS  | 5/8       | 15.87 | 3/4-16      | 10.66          | 15/16             | 1         | 24.38   | 41.91   |
| BMC-10-10S-SS | 5/8       | 15.87 | 7/8-14      | 12.70          | 1                 | 1         | 24.38   | 45.21   |
| BMC-12-8S-SS  | 3/4       | 19.05 | 3/4-16      | 10.66          | 1-1/16            | 1-1/8     | 24.38   | 45.97   |
| BMC-12-12S-SS | 3/4       | 19.05 | 1-1/16-12   | 15.00          | 1-1/4             | 1-1/8     | 24.38   | 49.02   |
| BMC-14-14S-SS | 7/8       | 22.22 | 1-3/16-12   | 18.28          | 1-3/8             | 1-1/4     | 25.90   | 49.02   |
| BMC-16-12S-SS | 1         | 25.40 | 1-1/16-12   | 16.76          | 1-3/8             | 1-1/2     | 31.24   | 53.34   |
| BMC-16-16S-SS | 1         | 25.40 | 1-5/16-12   | 22.35          | 1-1/2             | 1-1/2     | 31.24   | 54.35   |
| BMC-20-20S-SS | 1-1/4     | 31.75 | 1-5/8-12    | 27.68          | 1-7/8             | 1-7/8     | 41.14   | 68.32   |
| BMC-24-24S-SS | 1-1/2     | 38.10 | 1-7/8-12    | 34.03          | 2-1/8             | 2-1/4     | 50.03   | 77.72   |
| BMC-32-32S-SS | 2         | 50.80 | 2-1/2-12    | 45.97          | 2-3/4             | 3         | 67.56   | 101.60  |



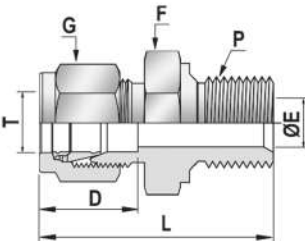
## Male Connector



### Imperial Tube x SAE/MS Straight Threads with O Seal

| Part No          | Tube O.D. |         | B<br>SAE/MS | E<br>Min<br>mm | Width Across Flat |           |         |         |
|------------------|-----------|---------|-------------|----------------|-------------------|-----------|---------|---------|
|                  | Inch      | T<br>mm |             |                | F<br>Inch         | G<br>Inch | D<br>mm | L<br>mm |
| BMC-02-2S-SS-OR  | 1/8       | 3.17    | 5/16-24     | 2.28           | 9/16              | 7/16      | 12.70   | 32.76   |
| BMC-03-3S-SS-OR  | 3/16      | 4.76    | 3/8-24      | 3.04           | 5/8               | 1/2       | 13.71   | 34.29   |
| BMC-04-4S-SS-OR  | 1/4       | 6.35    | 7/16-20     | 4.82           | 3/4               | 9/16      | 15.24   | 38.35   |
| BMC-05-5S-SS-OR  | 5/16      | 7.93    | 1/2-20      | 6.35           | 7/8               | 5/8       | 16.25   | 40.64   |
| BMC-06-6S-SS-OR  | 3/8       | 9.52    | 9/16-18     | 7.11           | 15/16             | 11/16     | 16.76   | 42.41   |
| BMC-08-8S-SS-OR  | 1/2       | 12.70   | 3/4-16      | 10.41          | 1-1/8             | 7/8       | 22.86   | 45.97   |
| BMC-12-12S-SS-OR | 3/4       | 19.05   | 1-1/16-12   | 15.74          | 1-1/2             | 1-1/8     | 24.38   | 52.32   |
| BMC-16-16S-SS-OR | 1         | 25.40   | 1-5/16-12   | 22.35          | 1-3/4             | 1-1/2     | 31.24   | 58.16   |

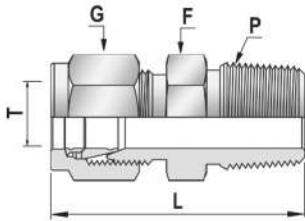
## Male Connector



### Imperial Tube x ISO Parallel with O Seal

| Part No          | Tube O.D. |         | B<br>BSPP | E<br>Min<br>mm | Width Across Flat |           |         |         |
|------------------|-----------|---------|-----------|----------------|-------------------|-----------|---------|---------|
|                  | Inch      | T<br>mm |           |                | F<br>Inch         | G<br>Inch | D<br>mm | L<br>mm |
| BMC-04-4G-SS-OR  | 1/4       | 6.35    | 1/4       | 4.80           | 3/4               | 9/16      | 15.24   | 37.60   |
| BMC-04-8G-SS-OR  | 1/4       | 6.35    | 1/2       | 4.80           | 1-1/16            | 9/16      | 15.24   | 44.70   |
| BMC-06-6G-SS-OR  | 3/8       | 9.52    | 3/8       | 7.10           | 7/8               | 11/16     | 16.76   | 40.60   |
| BMC-08-4G-SS-OR  | 1/2       | 12.70   | 1/4       | 6.40           | 13/16             | 7/8       | 22.86   | 42.90   |
| BMC-08-6G-SS-OR  | 1/2       | 12.70   | 3/8       | 7.90           | 7/8               | 7/8       | 22.86   | 42.90   |
| BMC-08-8G-SS-OR  | 1/2       | 12.70   | 1/2       | 10.40          | 1-1/16            | 7/8       | 22.86   | 47.00   |
| BMC-12-12G-SS-OR | 3/4       | 19.05   | 3/4       | 15.00          | 1-5/16            | 1-1/8     | 24.38   | 50.30   |

# Male Bore Through Connector



## Metric Tube x NPT Threads

| Part No          | Tube O.D. |          | Width Across Flat |         |         |
|------------------|-----------|----------|-------------------|---------|---------|
|                  | T<br>mm   | B<br>NPT | F<br>Inch         | G<br>mm | L<br>mm |
| BMCBT-M03-2N-SS  | 3         | 1/8      | 12                | 12      | 29.70   |
| BMCBT-M03-4N-SS  | 3         | 1/4      | 14                | 12      | 35.60   |
| BMCBT-M04-2N-SS  | 4         | 1/8      | 12                | 12      | 31.20   |
| BMCBT-M04-4N-SS  | 4         | 1/4      | 14                | 12      | 36.30   |
| BMCBT-M06-2N-SS  | 6         | 1/8      | 12                | 14      | 32.80   |
| BMCBT-M06-4N-SS  | 6         | 1/4      | 14                | 14      | 39.50   |
| BMCBT-M06-6N-SS  | 6         | 3/8      | 17                | 14      | 41.25   |
| BMCBT-M06-8N-SS  | 6         | 1/2      | 22                | 14      | 46.30   |
| BMCBT-M08-4N-SS  | 8         | 1/4      | 15                | 16      | 40.00   |
| BMCBT-M10-4N-SS  | 10        | 1/4      | 18                | 19      | 41.70   |
| BMCBT-M10-6N-SS  | 10        | 3/8      | 18                | 19      | 42.10   |
| BMCBT-M10-8N-SS  | 10        | 1/2      | 22                | 19      | 47.00   |
| BMCBT-M12-8N-SS  | 12        | 1/2      | 22                | 22      | 49.20   |
| BMCBT-M12-12N-SS | 12        | 3/4      | 27                | 22      | 51.60   |

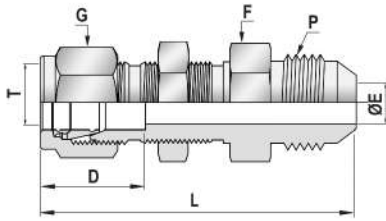
## Imperial Tube x NPT Threads

| Part No         | Tube O.D. |         | Width Across Flat |           |           |         |
|-----------------|-----------|---------|-------------------|-----------|-----------|---------|
|                 | Inch      | T<br>mm | B<br>NPT          | F<br>Inch | G<br>Inch | L<br>mm |
| BMCBT-01-1N-SS  | 1/16      | 1.58    | 1/16              | 5/16      | 5/16      | 23.83   |
| BMCBT-01-2N-SS  | 1/16      | 1.58    | 1/8               | 7/16      | 5/16      | 26.33   |
| BMCBT-01-4N-SS  | 1/16      | 1.58    | 1/4               | 9/16      | 5/16      | 31.24   |
| BMCBT-02-1N-SS  | 1/8       | 3.17    | 1/16              | 3/8       | 7/16      | 29.70   |
| BMCBT-02-2N-SS  | 1/8       | 3.17    | 1/8               | 7/16      | 7/16      | 33.80   |
| BMCBT-02-4N-SS  | 1/8       | 3.17    | 1/4               | 9/16      | 7/16      | 39.30   |
| BMCBT-03-2N-SS  | 3/16      | 4.76    | 1/8               | 7/16      | 1/2       | 31.24   |
| BMCBT-03-4N-SS  | 3/16      | 4.76    | 1/4               | 9/16      | 1/2       | 36.32   |
| BMCBT-04-4N-SS  | 1/4       | 6.35    | 1/4               | 9/16      | 9/16      | 37.84   |
| BMCBT-04-6N-SS  | 1/4       | 6.35    | 3/8               | 11/16     | 9/16      | 39.00   |
| BMCBT-04-8N-SS  | 1/4       | 6.35    | 1/2               | 7/8       | 9/16      | 45.50   |
| BMCBT-06-6N-SS  | 3/8       | 9.52    | 3/8               | 11/16     | 11/16     | 40.90   |
| BMCBT-06-8N-SS  | 3/8       | 9.52    | 1/2               | 7/8       | 11/16     | 46.50   |
| BMCBT-06-12N-SS | 3/8       | 9.52    | 3/4               | 1-1/16    | 11/16     | 48.40   |
| BMCBT-08-8N-SS  | 1/2       | 12.70   | 1/2               | 7/8       | 7/8       | 49.00   |
| BMCBT-08-12N-SS | 1/2       | 12.70   | 3/4               | 1-1/16    | 7/8       | 50.70   |
| BMCBT-12-12N-SS | 3/4       | 19.05   | 3/4               | 1-1/16    | 1-1/8     | 51.50   |
| BMCBT-16-16N-SS | 1         | 25.40   | 1                 | 1-3/8     | 1-3/8     | 62.30   |

\*ThermoCouple Connector



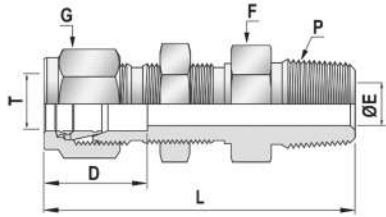
## Bulkhead Male Connector



### Imperial Tube x Flare Tube (37°)

| Part No        | Tube O.D. |       | Tube Flare Size | Straight Threads (UNF) | E* Min MM | Width Across Flat |       |       | L mm  | Panel Hole Drill Size mm | Panel Max. Thickness mm |
|----------------|-----------|-------|-----------------|------------------------|-----------|-------------------|-------|-------|-------|--------------------------|-------------------------|
|                | T Inch    | T mm  |                 |                        |           | F Inch            | G mm  | D mm  |       |                          |                         |
| BBMC-04-4J-SS  | 1/4       | 6.35  | 1/4             | 7/16-20                | 4.31      | 5/8               | 9/16  | 15.24 | 53.84 | 11.50                    | 10.16                   |
| BBMC-06-6J-SS  | 3/8       | 9.52  | 3/8             | 9/16-18                | 7.11      | 3/4               | 11/16 | 16.76 | 57.15 | 14.68                    | 11.17                   |
| BBMC-08-8J-SS  | 1/2       | 12.70 | 1/2             | 3/4-16                 | 9.90      | 1-5/16            | 7/8   | 22.86 | 65.78 | 19.44                    | 12.70                   |
| BBMC-12-12J-SS | 3/4       | 19.05 | 3/4             | 1-1/16-12              | 15.49     | 1-3/16            | 1-1/8 | 24.38 | 78.99 | 25.79                    | 16.76                   |
| BBMC-16-16J-SS | 1         | 25.40 | 1               | 1-5/16-12              | 21.33     | 1-5/8             | 1-1/2 | 31.24 | 92.45 | 33.73                    | 19.05                   |

## Bulkhead Male Connector



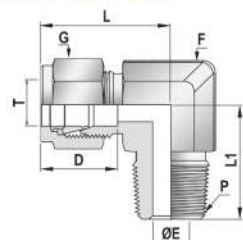
### Imperial Tube x NPT Threads

| Part No        | Tube O.D. |       | B NPT | E* Min MM | Width Across Flat |       |       | L mm   | Panel Hole Drill Size mm | Panel Max. Thickness mm |
|----------------|-----------|-------|-------|-----------|-------------------|-------|-------|--------|--------------------------|-------------------------|
|                | T Inch    | T mm  |       |           | F Inch            | G mm  | D mm  |        |                          |                         |
| BBMC-02-2N-SS  | 1/8       | 3.17  | 1/8   | 2.28      | 1/2               | 7/16  | 12.70 | 46.48  | 8.33                     | 12.70                   |
| BBMC-04-2N-SS  | 1/4       | 6.35  | 1/8   | 4.80      | 5/8               | 9/16  | 15.30 | 49.63  | 11.50                    | 10.16                   |
| BBMC-04-4N-SS  | 1/4       | 6.35  | 1/4   | 4.80      | 5/8               | 9/16  | 15.30 | 53.34  | 11.50                    | 10.16                   |
| BBMC-06-4N-SS  | 3/8       | 9.52  | 1/4   | 7.10      | 3/4               | 11/16 | 16.76 | 57.40  | 14.68                    | 11.17                   |
| BBMC-06-6N-SS  | 3/8       | 9.52  | 3/8   | 7.10      | 3/4               | 11/16 | 17.10 | 59.10  | 16.68                    | 11.17                   |
| BBMC-08-6N-SS  | 1/2       | 12.70 | 3/8   | 7.10      | 15/16             | 7/8   | 22.86 | 63.24  | 19.44                    | 12.70                   |
| BBMC-08-8N-SS  | 1/2       | 12.70 | 1/2   | 10.40     | 1                 | 7/8   | 22.86 | 68.83  | 19.44                    | 12.70                   |
| BBMC-12-12N-SS | 3/4       | 19.05 | 3/4   | 15.00     | 1-3/16            | 1-1/8 | 24.38 | 76.20  | 25.76                    | 16.80                   |
| BBMC-16-16N-SS | 1         | 25.40 | 1     | 22.35     | 1-5/8             | 1-1/2 | 31.24 | 93.21  | 33.73                    | 19.10                   |
| BBMC-20-20N-SS | 1-1/4     | 31.75 | 1-1/4 | 27.60     | 1-7/8             | 1-7/8 | 41.14 | 108.07 | 41.67                    | 19.10                   |
| BBMC-24-24N-SS | 1-1/2     | 38.10 | 1-1/2 | 33.90     | 2-1/4             | 2-1/4 | 50.03 | 120.21 | 49.61                    | 19.05                   |
| BBMC-32-32N-SS | 2         | 50.80 | 2     | 45.90     | 2-3/4             | 3     | 67.56 | 144.62 | 64.50                    | 19.05                   |

### Metric Tube x NPT Threads

| Part No        | Tube O.D. |      | B NPT | E* Min MM | Width Across Flat |      |       | L mm  | Panel Hole Drill Size mm | Panel Max. Thickness mm |
|----------------|-----------|------|-------|-----------|-------------------|------|-------|-------|--------------------------|-------------------------|
|                | T mm      | T mm |       |           | F Inch            | G mm | D mm  |       |                          |                         |
| BBMC-M06-2N-SS | 6         | 6    | 1/8   | 2.20      | 14                | 14   | 17.00 | 51.00 | 11.60                    | 12.00                   |
| BBMC-M06-4N-SS | 6         | 6    | 1/4   | 4.20      | 14                | 14   | 17.00 | 56.00 | 11.60                    | 12.00                   |
| BBMC-M10-4N-SS | 10        | 10   | 1/4   | 7.10      | 17                | 19   | 18.00 | 60.50 | 16.40                    | 10.00                   |
| BBMC-M12-4N-SS | 12        | 12   | 1/4   | 7.10      | 22                | 22   | 24.00 | 71.00 | 19.50                    | 14.00                   |
| BBMC-M12-6N-SS | 12        | 12   | 3/8   | 7.10      | 25                | 22   | 22.86 | 63.24 | 19.44                    | 12.70                   |
| BBMC-M12-8N-SS | 12        | 12   | 1/2   | 7.10      | 25                | 22   | 22.86 | 68.83 | 19.44                    | 12.70                   |

## Male Elbow

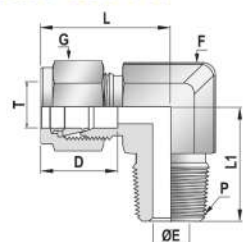


### Imperial Tube x NPT Threads

| Part No       | Tube O.D. |         | B<br>NPT | E<br>Min<br>mm | Width Across Flat |           | D<br>mm | L<br>mm | L1<br>mm |
|---------------|-----------|---------|----------|----------------|-------------------|-----------|---------|---------|----------|
|               | T<br>Inch | T<br>mm |          |                | F<br>Inch         | G<br>Inch |         |         |          |
| BME-01-1N-SS  | 1/16      | 1.58    | 1/16     | 1.20           | 7/16              | 5/16      | 8.63    | 19.05   | 17.78    |
| BME-01-2N-SS  | 1/16      | 1.58    | 1/8      | 1.20           | 7/16              | 5/16      | 8.63    | 19.05   | 17.78    |
| BME-02-2N-SS  | 1/8       | 3.17    | 1/8      | 4.80           | 1/2               | 7/16      | 12.70   | 26.25   | 17.00    |
| BME-02-4N-SS  | 1/8       | 3.17    | 1/4      | 6.00           | 9/16              | 7/16      | 12.70   | 29.75   | 26.00    |
| BME-03-2N-SS  | 3/16      | 4.76    | 1/8      | 4.80           | 1/2               | 1/2       | 13.71   | 25.40   | 18.79    |
| BME-03-4N-SS  | 3/16      | 4.76    | 1/4      | 6.00           | 9/16              | 1/2       | 13.71   | 25.40   | 23.36    |
| BME-04-2N-SS  | 1/4       | 6.35    | 1/8      | 4.80           | 1/2               | 9/16      | 15.30   | 27.00   | 16.00    |
| BME-04-4N-SS  | 1/4       | 6.35    | 1/4      | 6.00           | 9/16              | 9/16      | 15.30   | 29.50   | 24.50    |
| BME-04-6N-SS  | 1/4       | 6.35    | 3/8      | 7.10           | 11/16             | 9/16      | 15.30   | 32.00   | 26.00    |
| BME-04-8N-SS  | 1/4       | 6.35    | 1/2      | 10.40          | 13/16             | 9/16      | 15.30   | 35.00   | 33.00    |
| BME-05-2N-SS  | 5/16      | 7.93    | 1/8      | 4.80           | 9/16              | 5/8       | 16.25   | 28.70   | 19.81    |
| BME-05-4N-SS  | 5/16      | 7.93    | 1/4      | 6.00           | 9/16              | 5/8       | 16.20   | 29.77   | 24.50    |
| BME-05-6N-SS  | 5/16      | 7.93    | 3/8      | 4.80           | 11/16             | 5/8       | 16.25   | 30.48   | 28.40    |
| BME-06-2N-SS  | 3/8       | 9.52    | 1/8      | 4.80           | 5/8               | 11/16     | 17.10   | 29.60   | 20.60    |
| BME-06-4N-SS  | 3/8       | 9.52    | 1/4      | 7.10           | 5/8               | 11/16     | 17.10   | 30.50   | 26.00    |
| BME-06-6N-SS  | 3/8       | 9.52    | 3/8      | 7.10           | 11/16             | 11/16     | 17.10   | 30.00   | 28.00    |
| BME-06-8N-SS  | 3/8       | 9.52    | 1/2      | 10.40          | 7/8               | 11/16     | 17.10   | 34.00   | 33.02    |
| BME-06-12N-SS | 3/8       | 9.52    | 3/4      | 15.00          | 1-1/16            | 11/16     | 17.10   | 37.40   | 41.00    |
| BME-08-4N-SS  | 1/2       | 12.70   | 1/4      | 6.00           | 13/16             | 7/8       | 22.80   | 36.20   | 31.00    |
| BME-08-6N-SS  | 1/2       | 12.70   | 3/8      | 7.10           | 13/16             | 7/8       | 22.80   | 35.50   | 30.00    |
| BME-08-8N-SS  | 1/2       | 12.70   | 1/2      | 10.40          | 7/8               | 7/8       | 22.80   | 36.50   | 33.02    |
| BME-08-12N-SS | 1/2       | 12.70   | 3/4      | 15.00          | 1-1/16            | 7/8       | 22.80   | 41.76   | 41.00    |
| BME-10-6N-SS  | 5/8       | 15.87   | 3/8      | 7.10           | 15/16             | 1         | 22.70   | 42.60   | 32.00    |
| BME-10-8N-SS  | 5/8       | 15.87   | 1/2      | 10.40          | 15/16             | 1         | 22.70   | 41.10   | 40.00    |
| BME-10-12N-SS | 5/8       | 15.87   | 3/4      | 15.00          | 1-1/16            | 1         | 22.70   | 42.10   | 41.00    |
| BME-12-8N-SS  | 3/4       | 19.05   | 1/2      | 10.40          | 1-1/8             | 1-1/8     | 22.60   | 41.40   | 36.00    |
| BME-12-12N-SS | 3/4       | 19.05   | 3/4      | 15.00          | 1-1/16            | 1-1/8     | 22.60   | 41.90   | 41.00    |
| BME-14-12N-SS | 7/8       | 22.22   | 3/4      | 15.00          | 1-3/8             | 1-1/4     | 25.90   | 44.70   | 41.65    |
| BME-16-12N-SS | 1         | 25.40   | 3/4      | 15.00          | 1-3/8             | 1-1/2     | 26.80   | 52.05   | 45.50    |
| BME-16-16N-SS | 1         | 25.40   | 1        | 21.00          | 1-3/8             | 1-1/2     | 26.80   | 50.55   | 47.00    |
| BME-20-20N-SS | 1-1/4     | 31.75   | 1-1/4    | 27.68          | 1-11/16           | 1-7/8     | 41.14   | 66.54   | 50.50    |
| BME-24-24N-SS | 1-1/2     | 38.10   | 1-1/2    | 34.00          | 2                 | 2-1/4     | 50.00   | 77.97   | 58.50    |
| BME-32-32N-SS | 2         | 50.80   | 2        | 45.97          | 2-3/4             | 3         | 67.56   | 107.18  | 60.00    |



## Male Elbow

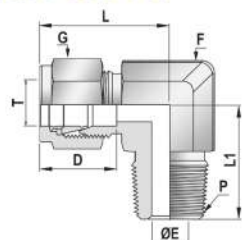


### Metric Tube x NPT Threads

| Part No        | Tube O.D. |          | E<br>Min<br>mm | Width Across Flat |           | D<br>mm | L<br>mm | L1<br>mm |
|----------------|-----------|----------|----------------|-------------------|-----------|---------|---------|----------|
|                | T<br>mm   | B<br>NPT |                | F<br>Inch         | G<br>Inch |         |         |          |
| BME-M03-2N-SS  | 3         | 1/8      | 2.40           | 12                | 12        | 12.90   | 23.60   | 17.80    |
| BME-M03-4N-SS  | 3         | 1/4      | 2.40           | 14                | 12        | 12.90   | 24.60   | 23.40    |
| BME-M04-2N-SS  | 4         | 1/8      | 2.40           | 12                | 12        | 13.70   | 25.40   | 18.80    |
| BME-M04-4N-SS  | 4         | 1/4      | 2.40           | 14                | 12        | 13.70   | 25.40   | 23.40    |
| BME-M06-2N-SS  | 6         | 1/8      | 4.20           | 12                | 14        | 15.30   | 27.75   | 17.00    |
| BME-M06-4N-SS  | 6         | 1/4      | 4.20           | 14                | 14        | 15.30   | 29.25   | 24.50    |
| BME-M06-6N-SS  | 6         | 3/8      | 4.20           | 17                | 14        | 15.30   | 32.25   | 29.00    |
| BME-M06-8N-SS  | 6         | 1/2      | 4.20           | 22                | 14        | 15.30   | 34.23   | 33.00    |
| BME-M08-2N-SS  | 8         | 1/8      | 4.80           | 15                | 16        | 16.20   | 28.95   | 19.80    |
| BME-M08-4N-SS  | 8         | 1/4      | 6.00           | 15                | 16        | 16.20   | 30.65   | 24.40    |
| BME-M08-6N-SS  | 8         | 3/8      | 6.40           | 17                | 16        | 16.20   | 30.60   | 28.00    |
| BME-M08-8N-SS  | 8         | 1/2      | 6.40           | 22                | 16        | 16.20   | 32.60   | 33.00    |
| BME-M10-2N-SS  | 10        | 1/8      | 4.80           | 18                | 19        | 17.20   | 31.50   | 23.60    |
| BME-M10-4N-SS  | 10        | 1/4      | 7.10           | 18                | 19        | 17.20   | 32.00   | 26.00    |
| BME-M10-6N-SS  | 10        | 3/8      | 7.90           | 18                | 19        | 17.20   | 31.50   | 28.00    |
| BME-M10-8N-SS  | 10        | 1/2      | 7.90           | 22                | 19        | 17.20   | 33.50   | 33.00    |
| BME-M12-2N-SS  | 12        | 1/8      | 4.80           | 22                | 22        | 22.80   | 36.00   | 23.60    |
| BME-M12-4N-SS  | 12        | 1/4      | 7.10           | 22                | 22        | 22.80   | 36.00   | 28.20    |
| BME-M12-6N-SS  | 12        | 3/8      | 9.50           | 22                | 22        | 22.80   | 36.00   | 28.20    |
| BME-M12-8N-SS  | 12        | 1/2      | 9.50           | 22                | 22        | 22.80   | 36.00   | 33.00    |
| BME-M12-12N-SS | 12        | 3/4      | 9.50           | 27                | 22        | 22.80   | 39.80   | 36.80    |
| BME-M16-6N-SS  | 16        | 3/8      | 9.50           | 25                | 25        | 24.40   | 38.00   | 30.20    |
| BME-M16-8N-SS  | 16        | 1/2      | 11.90          | 25                | 25        | 24.40   | 38.00   | 35.10    |
| BME-M16-12N-SS | 16        | 3/4      | 12.70          | 27                | 25        | 24.40   | 39.80   | 36.80    |
| BME-M18-8N-SS  | 18        | 1/2      | 11.90          | 27                | 30        | 24.40   | 41.40   | 36.00    |
| BME-M18-12N-SS | 18        | 3/4      | 15.10          | 27                | 30        | 24.40   | 39.80   | 36.80    |
| BME-M20-8N-SS  | 20        | 1/2      | 11.90          | 30                | 32        | 26.00   | 44.60   | 41.70    |
| BME-M20-12N-SS | 20        | 3/4      | 15.90          | 30                | 32        | 26.00   | 44.60   | 41.70    |
| BME-M22-12N-SS | 22        | 3/4      | 15.90          | 32                | 32        | 26.00   | 44.60   | 41.70    |
| BME-M22-16N-SS | 22        | 1        | 18.30          | 36                | 32        | 26.00   | 44.60   | 46.50    |
| BME-M25-12N-SS | 25        | 3/4      | 15.90          | 36                | 38        | 31.30   | 49.10   | 41.70    |
| BME-M25-16N-SS | 25        | 1        | 22.80          | 36                | 38        | 31.30   | 49.10   | 46.50    |
| BME-M28-16N-SS | 28        | 1        | 22.80          | 41                | 46        | 36.60   | 64.00   | 53.70    |
| BME-M30-20N-SS | 30        | 1-1/4    | 26.20          | 46                | 50        | 39.60   | 69.90   | 53.10    |
| BME-M32-20N-SS | 32        | 1-1/4    | 27.80          | 46                | 50        | 42.00   | 72.30   | 53.10    |
| BME-M38-24N-SS | 38        | 1-1/2    | 33.70          | 60                | 60        | 49.40   | 84.00   | 60.40    |



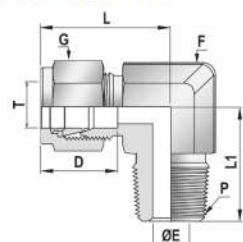
## Male Elbow



### Imperial Tube x ISO Tapered Threads (BSPT)

| Part No       | Tube O.D. |         | B<br>BSPT | E<br>Min<br>mm | Width Across Flat |           | D<br>mm | L<br>mm | L1<br>mm |
|---------------|-----------|---------|-----------|----------------|-------------------|-----------|---------|---------|----------|
|               | Inch      | T<br>mm |           |                | F<br>Inch         | G<br>Inch |         |         |          |
| BME-01-1R-SS  | 1/16      | 1.58    | 1/16      | 1.20           | 7/16              | 7/16      | 8.63    | 19.05   | 17.78    |
| BME-01-2R-SS  | 1/16      | 1.58    | 1/8       | 1.20           | 7/16              | 7/16      | 8.63    | 19.05   | 17.78    |
| BME-02-2R-SS  | 1/8       | 3.17    | 1/8       | 4.80           | 1/2               | 7/16      | 12.70   | 26.25   | 17.00    |
| BME-02-4R-SS  | 1/8       | 3.17    | 1/4       | 6.00           | 5/8               | 7/16      | 12.70   | 29.75   | 26.00    |
| BME-03-2R-SS  | 3/16      | 4.76    | 1/8       | 4.80           | 1/2               | 1/2       | 13.71   | 25.40   | 18.79    |
| BME-03-4R-SS  | 3/16      | 4.76    | 1/4       | 6.00           | 9/16              | 1/2       | 13.71   | 25.40   | 23.36    |
| BME-04-2R-SS  | 1/4       | 6.35    | 1/8       | 4.80           | 1/2               | 9/16      | 15.30   | 27.00   | 16.00    |
| BME-04-4R-SS  | 1/4       | 6.35    | 1/4       | 6.00           | 5/8               | 9/16      | 15.30   | 29.50   | 24.50    |
| BME-04-6R-SS  | 1/4       | 6.35    | 3/8       | 7.10           | 11/16             | 9/16      | 15.30   | 32.00   | 26.00    |
| BME-04-8R-SS  | 1/4       | 6.35    | 1/2       | 10.40          | 13/16             | 9/16      | 15.30   | 35.00   | 33.00    |
| BME-05-2R-SS  | 5/16      | 7.93    | 1/8       | 4.80           | 9/16              | 5/8       | 16.25   | 28.70   | 19.81    |
| BME-05-4R-SS  | 5/16      | 7.93    | 1/4       | 6.00           | 9/16              | 5/8       | 16.25   | 29.77   | 24.50    |
| BME-05-6R-SS  | 5/16      | 7.93    | 3/8       | 4.80           | 11/16             | 5/8       | 16.25   | 30.48   | 28.40    |
| BME-06-2R-SS  | 3/8       | 9.52    | 1/8       | 4.80           | 5/8               | 11/16     | 17.10   | 29.60   | 20.60    |
| BME-06-4R-SS  | 3/8       | 9.52    | 1/4       | 7.10           | 5/8               | 11/16     | 17.10   | 30.50   | 26.00    |
| BME-06-6R-SS  | 3/8       | 9.52    | 3/8       | 7.10           | 11/16             | 11/16     | 17.10   | 30.00   | 28.00    |
| BME-06-8R-SS  | 3/8       | 9.52    | 1/2       | 10.40          | 7/8               | 11/16     | 17.10   | 34.00   | 33.02    |
| BME-06-12R-SS | 3/8       | 9.52    | 3/4       | 15.00          | 1-1/16            | 11/16     | 17.10   | 37.48   | 41.00    |
| BME-08-4R-SS  | 1/2       | 12.70   | 1/4       | 6.00           | 13/16             | 7/8       | 22.80   | 36.20   | 31.00    |
| BME-08-6R-SS  | 1/2       | 12.70   | 3/8       | 7.10           | 13/16             | 7/8       | 22.80   | 35.50   | 30.00    |
| BME-08-8R-SS  | 1/2       | 12.70   | 1/2       | 10.40          | 7/8               | 7/8       | 22.80   | 36.50   | 33.02    |
| BME-08-12R-SS | 1/2       | 12.70   | 3/4       | 15.00          | 1-1/16            | 7/8       | 22.80   | 41.76   | 41.00    |
| BME-10-6R-SS  | 5/8       | 15.87   | 3/8       | 7.10           | 15/16             | 1         | 22.70   | 42.60   | 32.00    |
| BME-10-8R-SS  | 5/8       | 15.87   | 1/2       | 10.40          | 15/16             | 1         | 22.70   | 41.10   | 40.00    |
| BME-10-12R-SS | 5/8       | 15.87   | 3/4       | 15.00          | 1-1/16            | 1         | 22.70   | 42.10   | 41.00    |
| BME-12-8R-SS  | 3/4       | 19.05   | 1/2       | 10.40          | 1-1/8             | 1-1/8     | 22.60   | 41.10   | 36.00    |
| BME-12-12R-SS | 3/4       | 19.05   | 3/4       | 15.00          | 1-1/16            | 1-1/8     | 22.60   | 41.90   | 41.00    |
| BME-14-12R-SS | 7/8       | 22.22   | 3/4       | 15.00          | 1-3/8             | 1-1/4     | 25.90   | 44.70   | 41.65    |
| BME-16-12R-SS | 1         | 25.40   | 3/4       | 15.00          | 1-27/64           | 1-1/2     | 26.80   | 52.05   | 45.50    |
| BME-16-16R-SS | 1         | 25.40   | 1         | 21.00          | 1-27/64           | 1-1/2     | 26.80   | 50.55   | 47.00    |
| BME-20-20R-SS | 1-1/4     | 31.75   | 1-1/4     | 27.68          | 1-11/16           | 1-7/8     | 41.14   | 66.54   | 50.50    |
| BME-24-24R-SS | 1-1/2     | 38.10   | 1-1/2     | 34.00          | 2                 | 2-1/4     | 50.00   | 77.97   | 58.50    |
| BME-32-32R-SS | 2         | 50.80   | 2         | 45.97          | 2-3/4             | 3         | 67.56   | 107.18  | 60.00    |

## Male Elbow

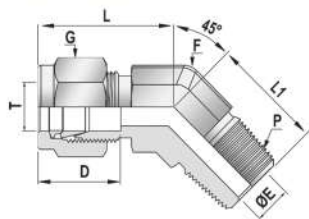


### Metric Tube x ISO Tapered Threads (BSPT)

| Part No        | Tube O.D. |           | E<br>Min<br>mm | Width Across Flat |           | D<br>mm | L<br>mm | L1<br>mm |
|----------------|-----------|-----------|----------------|-------------------|-----------|---------|---------|----------|
|                | T<br>mm   | B<br>BSPT |                | F<br>Inch         | G<br>Inch |         |         |          |
| BME-M03-2R-SS  | 3         | 1/8       | 2.40           | 12                | 12        | 12.90   | 23.60   | 17.80    |
| BME-M03-4R-SS  | 3         | 1/4       | 2.40           | 14                | 12        | 12.90   | 24.60   | 23.40    |
| BME-M04-2R-SS  | 4         | 1/8       | 2.40           | 12                | 12        | 13.70   | 25.40   | 18.80    |
| BME-M04-4R-SS  | 4         | 1/4       | 2.40           | 14                | 12        | 13.70   | 25.40   | 23.40    |
| BME-M06-2R-SS  | 6         | 1/8       | 4.20           | 12                | 14        | 15.30   | 27.75   | 17.00    |
| BME-M06-4R-SS  | 6         | 1/4       | 4.20           | 14                | 14        | 15.30   | 29.25   | 24.50    |
| BME-M06-6R-SS  | 6         | 3/8       | 4.20           | 17                | 14        | 15.30   | 32.25   | 29.00    |
| BME-M06-8R-SS  | 6         | 1/2       | 4.20           | 22                | 14        | 15.30   | 34.23   | 33.00    |
| BME-M08-2R-SS  | 8         | 1/8       | 4.80           | 15                | 16        | 16.20   | 28.95   | 19.80    |
| BME-M08-4R-SS  | 8         | 1/4       | 6.00           | 15                | 16        | 16.20   | 30.65   | 24.40    |
| BME-M08-6R-SS  | 8         | 3/8       | 6.40           | 17                | 16        | 16.20   | 30.60   | 28.00    |
| BME-M08-8R-SS  | 8         | 1/2       | 6.40           | 22                | 16        | 16.20   | 32.60   | 33.00    |
| BME-M10-2R-SS  | 10        | 1/8       | 4.80           | 18                | 19        | 17.20   | 31.50   | 23.60    |
| BME-M10-4R-SS  | 10        | 1/4       | 7.10           | 18                | 19        | 17.20   | 32.00   | 26.00    |
| BME-M10-6R-SS  | 10        | 3/8       | 7.90           | 18                | 19        | 17.20   | 31.50   | 28.00    |
| BME-M10-8R-SS  | 10        | 1/2       | 7.90           | 22                | 19        | 17.20   | 33.50   | 33.00    |
| BME-M12-2R-SS  | 12        | 1/8       | 4.80           | 22                | 22        | 22.80   | 36.00   | 23.60    |
| BME-M12-4R-SS  | 12        | 1/4       | 7.10           | 22                | 22        | 22.80   | 36.00   | 28.20    |
| BME-M12-6R-SS  | 12        | 3/8       | 9.50           | 22                | 22        | 22.80   | 36.00   | 28.20    |
| BME-M12-8R-SS  | 12        | 1/2       | 9.50           | 22                | 22        | 22.80   | 36.00   | 33.00    |
| BME-M12-12R-SS | 12        | 3/4       | 9.50           | 27                | 22        | 22.80   | 39.80   | 36.80    |
| BME-M16-6R-SS  | 16        | 3/8       | 9.50           | 25                | 25        | 24.40   | 38.00   | 30.20    |
| BME-M16-8R-SS  | 16        | 1/2       | 11.90          | 25                | 25        | 24.40   | 38.00   | 35.10    |
| BME-M16-12R-SS | 16        | 3/4       | 12.70          | 27                | 25        | 24.40   | 39.80   | 36.80    |
| BME-M18-8R-SS  | 18        | 1/2       | 11.90          | 27                | 30        | 24.40   | 41.40   | 36.00    |
| BME-M18-12R-SS | 18        | 3/4       | 15.10          | 27                | 30        | 24.40   | 39.80   | 36.80    |
| BME-M20-8R-SS  | 20        | 1/2       | 11.90          | 30                | 32        | 26.00   | 44.60   | 41.70    |
| BME-M20-12R-SS | 20        | 3/4       | 15.90          | 30                | 32        | 26.00   | 44.60   | 41.70    |
| BME-M22-12R-SS | 22        | 3/4       | 15.90          | 32                | 32        | 26.00   | 44.60   | 41.70    |
| BME-M22-16R-SS | 22        | 1         | 18.30          | 36                | 32        | 26.00   | 44.60   | 46.50    |
| BME-M25-12R-SS | 25        | 3/4       | 15.90          | 36                | 38        | 31.30   | 49.10   | 41.70    |
| BME-M25-16R-SS | 25        | 1         | 22.80          | 36                | 38        | 31.30   | 49.10   | 46.50    |
| BME-M28-16R-SS | 28        | 1         | 22.80          | 41                | 46        | 36.60   | 64.00   | 53.70    |
| BME-M30-20R-SS | 30        | 1-1/4     | 26.20          | 46                | 50        | 39.60   | 69.90   | 53.10    |
| BME-M32-20R-SS | 32        | 1-1/4     | 27.80          | 46                | 50        | 42.00   | 72.30   | 53.10    |
| BME-M38-24R-SS | 38        | 1-1/2     | 33.70          | 50                | 60        | 49.40   | 84.00   | 60.40    |



## Male Elbow



### Metric Tube x NPT Threads

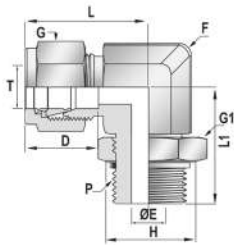
| Part No        | Tube O.D. |          | E*<br>Min<br>mm | Width Across Flat |         |         | L<br>mm | L1<br>mm |
|----------------|-----------|----------|-----------------|-------------------|---------|---------|---------|----------|
|                | T<br>mm   | B<br>NPT |                 | F<br>Inch         | G<br>mm | D<br>mm |         |          |
| BLME-M06-2N-SS | 6         | 1/8      | 4.20            | 12                | 14      | 15.24   | 23.40   | 16.80    |
| BLME-M06-4N-SS | 6         | 1/4      | 4.20            | 14                | 14      | 15.24   | 23.40   | 22.80    |
| BLME-M08-2N-SS | 8         | 1/8      | 4.80            | 16                | 16      | 16.76   | 24.30   | 16.80    |
| BLME-M10-4N-SS | 10        | 1/4      | 7.10            | 19                | 19      | 16.76   | 26.60   | 24.10    |
| BLME-M12-6N-SS | 12        | 3/8      | 9.50            | 20                | 22      | 16.76   | 29.10   | 24.10    |
| BLME-M12-8N-SS | 12        | 1/2      | 9.50            | 22                | 22      | 22.86   | 30.70   | 29.70    |
| BLME-M16-8N-SS | 16        | 1/2      | 11.90           | 24                | 24      | 24.38   | 30.70   | 29.70    |

### Imperial Tube x NPT Threads

| Part No        | Tube O.D. |         | E*<br>Min<br>mm | Width Across Flat |           |           | L<br>mm | L1<br>mm |         |
|----------------|-----------|---------|-----------------|-------------------|-----------|-----------|---------|----------|---------|
|                | T<br>Inch | T<br>mm |                 | B<br>NPT          | F<br>Inch | G<br>Inch |         |          | D<br>mm |
| BLME-02-2N-SS  | 1/8       | 3.17    | 1/8             | 2.40              | 1/2       | 7/16      | 12.70   | 22.38    | 16.51   |
| BLME-04-2N-SS  | 1/4       | 6.35    | 1/8             | 4.82              | 1/2       | 9/16      | 15.24   | 24.63    | 16.51   |
| BLME-04-4N-SS  | 1/4       | 6.35    | 1/4             | 4.82              | 9/16      | 9/16      | 15.24   | 24.63    | 21.08   |
| BLME-06-2N-SS  | 3/8       | 9.52    | 1/8             | 4.82              | 5/8       | 11/16     | 16.76   | 27.94    | 18.28   |
| BLME-06-4N-SS  | 3/8       | 9.52    | 1/4             | 7.11              | 5/8       | 11/16     | 16.76   | 27.94    | 22.86   |
| BLME-06-6N-SS  | 3/8       | 9.52    | 3/8             | 7.11              | 13/16     | 11/16     | 16.76   | 29.00    | 24.13   |
| BLME-08-6N-SS  | 1/2       | 12.70   | 3/8             | 7.11              | 13/16     | 7/8       | 22.86   | 32.00    | 24.13   |
| BLME-08-8N-SS  | 1/2       | 12.70   | 1/2             | 10.41             | 7/8       | 7/8       | 22.86   | 32.00    | 28.95   |
| BLME-12-12N-SS | 3/4       | 19.05   | 3/4             | 15.00             | 1-1/8     | 1-1/8     | 24.38   | 34.00    | 30.98   |
| BLME-16-16N-SS | 1         | 25.40   | 1               | 22.35             | 1-3/8     | 1-1/2     | 31.24   | 40.38    | 37.84   |



# Positionable Male Elbow

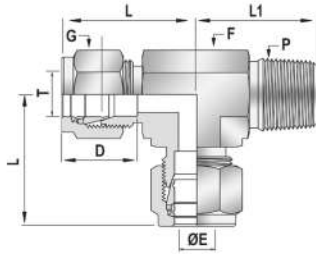


## Metric Tube x ISO Parallel Threads (BSPP)

| Part No            | Tube O.D. |  | B<br>BSPP | E*<br>Min<br>mm | Width Across Flat |           |            | D<br>mm | L<br>mm | L1<br>mm | H<br>mm |
|--------------------|-----------|--|-----------|-----------------|-------------------|-----------|------------|---------|---------|----------|---------|
|                    | T<br>mm   |  |           |                 | F<br>Inch         | G<br>Inch | G1<br>Inch |         |         |          |         |
| BME-M06-2G-SS-POS  | 6         |  | 1/8       | 4.00            | 13                | 14        | 14         | 15.30   | 27.00   | 26.40    | 17.30   |
| BME-M06-4G-SS-POS  | 6         |  | 1/4       | 4.80            | 16                | 19        | 14         | 15.30   | 29.00   | 32.30    | 22.90   |
| BME-M08-2G-SS-POS  | 8         |  | 1/8       | 4.00            | 14                | 14        | 14         | 16.20   | 28.80   | 27.40    | 17.30   |
| BME-M08-4G-SS-POS  | 8         |  | 1/4       | 5.90            | 16                | 19        | 14         | 16.20   | 29.90   | 32.20    | 22.90   |
| BME-M10-4G-SS-POS  | 10        |  | 1/4       | 5.90            | 20                | 19        | 19         | 17.20   | 33.50   | 35.00    | 22.90   |
| BME-M10-6G-SS-POS  | 10        |  | 3/8       | 7.90            | 20                | 22        | 19         | 17.20   | 33.50   | 37.10    | 26.40   |
| BME-M12-4G-SS-POS  | 12        |  | 1/4       | 5.90            | 20                | 19        | 19         | 22.80   | 36.00   | 35.00    | 22.90   |
| BME-M12-6G-SS-POS  | 12        |  | 3/8       | 7.90            | 20                | 22        | 22         | 22.80   | 36.00   | 37.10    | 26.40   |
| BME-M12-8G-SS-POS  | 12        |  | 1/2       | 9.50            | 24                | 27        | 22         | 22.80   | 38.00   | 43.40    | 32.00   |
| BME-M12-12G-SS-POS | 12        |  | 3/4       | 9.50            | 27                | 35        | 22         | 22.80   | 39.80   | 48.80    | 41.10   |

## Imperial Tube x SAE/MS Straight Threads

| Part No           | Tube O.D. |       | B<br>SAE/MS | E*<br>Min<br>mm | Width Across Flat |         |          | D<br>mm | L<br>mm | L1<br>mm | H<br>mm |
|-------------------|-----------|-------|-------------|-----------------|-------------------|---------|----------|---------|---------|----------|---------|
|                   | Inch      | mm    |             |                 | F<br>Inch         | G<br>mm | G1<br>mm |         |         |          |         |
| BME-04-4S-SS-POS  | 1/4       | 6.35  | 7/16-20     | 4.82            | 1/2               | 9/16    | 9/16     | 15.24   | 28.44   | 28.44    | 16.51   |
| BME-04-6S-SS-POS  | 1/4       | 6.35  | 9/16-18     | 4.82            | 5/8               | 9/16    | 11/16    | 15.24   | 30.48   | 32.25    | 20.06   |
| BME-05-5S-SS-POS  | 5/16      | 7.93  | 1/2-20      | 5.84            | 9/16              | 5/8     | 5/8      | 16.25   | 30.22   | 29.46    | 18.28   |
| BME-06-6S-SS-POS  | 3/8       | 9.52  | 9/16-18     | 7.11            | 5/8               | 11/16   | 11/16    | 16.76   | 32.04   | 32.25    | 20.06   |
| BME-06-8S-SS-POS  | 3/8       | 9.52  | 3/4-16      | 7.11            | 13/16             | 11/16   | 7/8      | 16.76   | 34.79   | 37.84    | 25.65   |
| BME-08-8S-SS-POS  | 1/2       | 12.70 | 3/4-16      | 10.41           | 13/16             | 7/8     | 7/8      | 22.86   | 37.69   | 37.84    | 25.66   |
| BME-10-10S-SS-POS | 5/8       | 15.87 | 7/8-14      | 12.70           | 1                 | 1       | 1        | 24.38   | 39.62   | 43.43    | 29.46   |
| BME-12-12S-SS-POS | 3/4       | 19.05 | 1-1/16-12   | 15.00           | 1-12/16           | 1-1/8   | 1-1/4    | 24.38   | 41.40   | 48.76    | 36.57   |
| BME-14-14S-SS-POS | 7/8       | 22.22 | 1-3/16-12   | 18.28           | 1-1/4             | 1-1/4   | 1-3/8    | 25.90   | 43.18   | 50.54    | 40.38   |
| BME-16-16S-SS-POS | 1         | 25.40 | 1-5/16-12   | 22.35           | 1-3/8             | 1-1/2   | 1-1/2    | 31.24   | 50.54   | 53.59    | 43.94   |
| BME-20-20S-SS-POS | 1-1/4     | 31.75 | 1-5/8-12    | 27.68           | 1-1/16            | 1-7/8   | 1-7/8    | 41.14   | 67.81   | 58.16    | 54.86   |
| BME-24-24S-SS-POS | 1-1/2     | 38.10 | 1-7/8-12    | 34.03           | 2                 | 2-1/4   | 2-1/8    | 50.03   | 77.97   | 60.45    | 62.23   |
| BME-32-32S-SS-POS | 2         | 50.80 | 2-1/2-12    | 45.97           | 2-3/4             | 3       | 2-3/4    | 67.56   | 107.18  | 71.62    | 80.26   |



### Metric Tube x NPT Threads

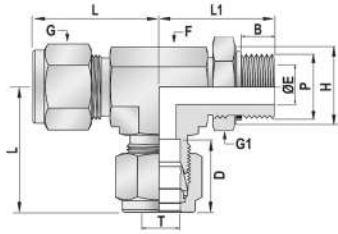
| Part No         | Tube O.D. |          | E*<br>Min<br>mm | Width Across Flat |           | D<br>mm | L<br>mm | L1<br>mm |
|-----------------|-----------|----------|-----------------|-------------------|-----------|---------|---------|----------|
|                 | T<br>mm   | B<br>NPT |                 | F<br>Inch         | G<br>Inch |         |         |          |
| BMRT-M03-2N-SS  | 3         | 1/8      | 2.40            | 12                | 12        | 12.90   | 23.60   | 17.60    |
| BMRT-M03-4N-SS  | 3         | 1/4      | 2.40            | 12                | 12        | 12.90   | 24.60   | 23.40    |
| BMRT-M04-2N-SS  | 4         | 1/8      | 2.40            | 12                | 12        | 13.70   | 25.40   | 18.80    |
| BMRT-M06-2N-SS  | 6         | 1/8      | 4.80            | 12                | 14        | 15.30   | 27.00   | 18.80    |
| BMRT-M06-4N-SS  | 6         | 1/4      | 4.80            | 14                | 14        | 15.30   | 27.00   | 23.40    |
| BMRT-M08-2N-SS  | 8         | 1/8      | 4.80            | 14                | 16        | 16.20   | 28.80   | 19.80    |
| BMRT-M08-4N-SS  | 8         | 1/4      | 6.40            | 17                | 16        | 16.20   | 28.80   | 24.40    |
| BMRT-M10-4N-SS  | 10        | 1/4      | 7.10            | 17                | 19        | 17.20   | 31.50   | 28.20    |
| BMRT-M10-6N-SS  | 10        | 3/8      | 7.90            | 20                | 19        | 17.20   | 31.50   | 28.20    |
| BMRT-M12-4N-SS  | 12        | 1/4      | 7.10            | 20                | 22        | 22.80   | 36.00   | 28.20    |
| BMRT-M12-6N-SS  | 12        | 3/8      | 9.50            | 20                | 22        | 22.80   | 36.00   | 28.20    |
| BMRT-M12-8N-SS  | 12        | 1/2      | 9.50            | 20                | 22        | 22.80   | 36.00   | 33.00    |
| BMRT-M16-6N-SS  | 16        | 3/8      | 9.50            | 25                | 25        | 24.40   | 38.00   | 30.20    |
| BMRT-M16-8N-SS  | 16        | 1/2      | 11.90           | 25                | 25        | 24.40   | 38.00   | 35.10    |
| BMRT-M20-12N-SS | 20        | 3/4      | 15.90           | 31                | 32        | 26.00   | 44.60   | 41.70    |
| BMRT-M22-12N-SS | 22        | 3/4      | 15.90           | 34                | 32        | 26.00   | 44.60   | 41.70    |
| BMRT-M22-16N-SS | 22        | 1        | 18.30           | 34                | 32        | 26.00   | 44.60   | 46.50    |
| BMRT-M25-12N-SS | 25        | 3/4      | 15.90           | 34                | 38        | 31.30   | 49.10   | 41.70    |
| BMRT-M25-16N-SS | 25        | 1        | 22.80           | 34                | 38        | 31.30   | 49.10   | 46.50    |

### Imperial Tube x NPT Threads

| Part No        | Tube O.D. |         | E*<br>Min<br>mm | Width Across Flat |           | D<br>mm | L<br>mm | L1<br>mm |           |
|----------------|-----------|---------|-----------------|-------------------|-----------|---------|---------|----------|-----------|
|                | T<br>Inch | T<br>mm |                 | B<br>NPT          | F<br>Inch |         |         |          | G<br>Inch |
| BMRT-02-2N-SS  | 1/8       | 3.17    | 1/8             | 2.28              | 1/2       | 7/16    | 14.80   | 26.15    | 18.90     |
| BMRT-02-4N-SS  | 1/8       | 3.17    | 1/4             | 2.28              | 1/2       | 7/16    | 14.80   | 30.75    | 23.05     |
| BMRT-03-2N-SS  | 3/16      | 4.76    | 1/8             | 3.04              | 1/2       | 1/2     | 13.71   | 24.38    | 17.78     |
| BMRT-04-2N-SS  | 1/4       | 6.35    | 1/8             | 4.80              | 1/2       | 9/16    | 15.30   | 26.92    | 18.79     |
| BMRT-04-4N-SS  | 1/4       | 6.35    | 1/4             | 4.80              | 1/2       | 9/16    | 15.30   | 29.00    | 24.60     |
| BMRT-04-6N-SS  | 1/4       | 6.35    | 3/8             | 4.80              | 11/16     | 9/16    | 15.30   | 33.00    | 28.56     |
| BMRT-05-2N-SS  | 5/16      | 7.93    | 1/8             | 4.80              | 9/16      | 5/8     | 16.25   | 29.71    | 20.82     |
| BMRT-06-4N-SS  | 3/8       | 9.52    | 1/4             | 6.00              | 5/8       | 11/16   | 17.10   | 29.00    | 24.40     |
| BMRT-06-6N-SS  | 3/8       | 9.52    | 3/8             | 7.10              | 11/16     | 11/16   | 17.10   | 31.70    | 29.70     |
| BMRT-08-4N-SS  | 1/2       | 12.70   | 1/4             | 6.00              | 13/16     | 7/8     | 22.80   | 36.70    | 27.00     |
| BMRT-08-6N-SS  | 1/2       | 12.70   | 3/8             | 7.10              | 7/8       | 7/8     | 22.80   | 37.20    | 28.50     |
| BMRT-08-8N-SS  | 1/2       | 12.70   | 1/2             | 10.40             | 7/8       | 7/8     | 22.80   | 38.20    | 33.48     |
| BMRT-10-8N-SS  | 5/8       | 15.87   | 1/2             | 10.40             | 15/16     | 1       | 18.10   | 38.10    | 34.00     |
| BMRT-12-12N-SS | 3/4       | 19.05   | 3/4             | 15.00             | 1-1/16    | 1-1/8   | 22.60   | 41.90    | 39.50     |
| BMRT-14-12N-SS | 7/8       | 22.22   | 3/4             | 15.74             | 1-3/8     | 1-1/4   | 25.90   | 44.70    | 41.65     |
| BMRT-16-12N-SS | 1         | 25.40   | 3/4             | 15.74             | 1-3/8     | 1-1/2   | 31.24   | 49.02    | 42.20     |
| BMRT-16-16N-SS | 1         | 25.40   | 1               | 22.35             | 1-3/8     | 1-1/2   | 31.24   | 49.00    | 46.70     |
| BMRT-20-20N-SS | 1-1/4     | 31.75   | 1-1/4           | 27.68             | 1-11/16   | 1-7/8   | 41.14   | 66.54    | 47.75     |
| BMRT-24-24N-SS | 1-1/2     | 38.10   | 1-1/2           | 33.90             | 2         | 2-1/4   | 50.00   | 77.97    | 60.45     |
| BMRT-32-32N-SS | 2         | 50.80   | 2               | 45.97             | 2-3/4     | 3       | 67.56   | 107.18   | 70.61     |

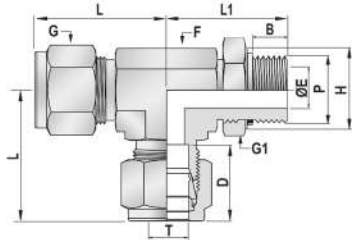


## Positionable Male Run Tee



### Imperial Tube x SAE/MS Straight Threads

| Part No            | Tube O.D. |         | B<br>SAE/MS | E*<br>Min |      | Width Across Flat |         |          | D<br>mm | B<br>mm | L<br>mm | L1<br>mm | H<br>mm |
|--------------------|-----------|---------|-------------|-----------|------|-------------------|---------|----------|---------|---------|---------|----------|---------|
|                    | Inch      | T<br>mm |             | Inch      | mm   | F<br>Inch         | G<br>mm | G1<br>mm |         |         |         |          |         |
| BMRT-04-4S-SS-POS  | 1/4       | 6.35    | 7/16-20     | 0.16      | 4.8  | 1/2               | 9/16    | 9/16     | 15.2    | 9.9     | 28.4    | 28.4     | 16.5    |
| BMRT-06-6S-SS-POS  | 3/8       | 9.52    | 9/16-18     | 0.19      | 7.1  | 5/8               | 11/16   | 11/16    | 16.8    | 11.2    | 32.0    | 32.3     | 20.1    |
| BMRT-08-8S-SS-POS  | 1/2       | 12.70   | 3/4-16      | 0.23      | 10.4 | 13/16             | 7/8     | 7/8      | 22.9    | 12.7    | 37.6    | 37.8     | 25.7    |
| BMRT-12-12S-SS-POS | 3/4       | 19.05   | 1-1/6-12    | 0.31      | 15.7 | 1-1/8             | 1-1/4   | 1-1/4    | 24.4    | 16.8    | 41.4    | 48.8     | 36.6    |
| BMRT-16-16S-SS-POS | 1         | 25.40   | 1-5/16-12   | 0.41      | 22.4 | 1-3/8             | 1-1/2   | 1-1/2    | 31.2    | 16.8    | 50.5    | 53.6     | 43.9    |
| BMRT-20-20S-SS-POS | 1-1/4     | 31.75   | 1-5/8-12    | 0.47      | 27.7 | 1-1/16            | 1-7/8   | 1-7/8    | 41.1    | 16.8    | 67.8    | 58.2     | 54.9    |
| BMRT-24-24S-SS-POS | 1-1/2     | 38.10   | 1-7/8-12    | 0.62      | 33.9 | 2                 | 2-1/4   | 2-1/8    | 50.0    | 16.8    | 78.0    | 60.5     | 62.2    |
| BMRT-32-32S-SS-POS | 2         | 50.80   | 2-1/2-12    | 0.78      | 46.0 | 2-3/4             | 3       | 2-3/4    | 67.6    | 16.8    | 107.2   | 71.6     | 80.3    |



### Imperial Tube x ISO Parallel Threads (BSPP)

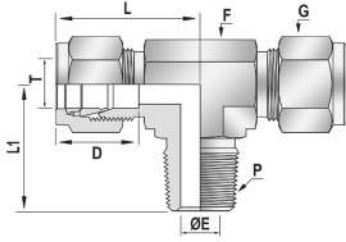
| Part No            | Tube O.D. |         | B<br>BSPP | E*<br>Min |      | Width Across Flat |         |          | D<br>mm | B<br>mm | L<br>mm | L1<br>mm | H<br>mm |
|--------------------|-----------|---------|-----------|-----------|------|-------------------|---------|----------|---------|---------|---------|----------|---------|
|                    | Inch      | T<br>mm |           | Inch      | mm   | F<br>Inch         | G<br>mm | G1<br>mm |         |         |         |          |         |
| BMRT-04-2G-SS-POS  | 1/4       | 6.35    | 1/8       | 0.16      | 4.1  | 1/2               | 9/16    | 9/16     | 15.2    | 6.6     | 26.9    | 26.4     | 17.3    |
| BMRT-04-4G-SS-POS  | 1/4       | 6.35    | 1/4       | 0.19      | 4.8  | 5/8               | 9/16    | 3/4      | 15.2    | 9.0     | 28.9    | 32.3     | 22.9    |
| BMRT-06-4G-SS-POS  | 3/8       | 9.52    | 1/4       | 0.23      | 5.8  | 5/8               | 11/16   | 3/4      | 16.8    | 9.0     | 30.5    | 32.3     | 22.9    |
| BMRT-08-6G-SS-POS  | 1/2       | 12.70   | 3/8       | 0.31      | 7.9  | 13/16             | 7/8     | 7/8      | 22.9    | 9.4     | 36.1    | 37.1     | 26.4    |
| BMRT-08-8G-SS-POS  | 1/2       | 12.70   | 1/2       | 0.41      | 10.4 | 15/16             | 7/8     | 1-1/16   | 22.9    | 13.0    | 38.1    | 43.4     | 32.0    |
| BMRT-12-8G-SS-POS  | 3/4       | 19.05   | 1/2       | 0.47      | 11.9 | 1-1/16            | 1-1/8   | 1-1/16   | 24.4    | 13.0    | 39.9    | 45.2     | 32.0    |
| BMRT-12-12G-SS-POS | 3/4       | 19.05   | 3/4       | 0.62      | 15.7 | 1-1/16            | 1-1/8   | 1-3/8    | 24.4    | 13.0    | 39.9    | 48.8     | 41.1    |
| BMRT-16-16G-SS-POS | 1         | 25.40   | 1"        | 0.78      | 19.8 | 1-3/8             | 1-1/2   | 1-5/8    | 31.2    | 13.2    | 49.0    | 53.6     | 48.5    |

### Metric Tube x ISO Parallel Threads (BSPP)

| Part No            | Tube O.D. |         | B<br>BSPP | E*<br>Min |      | Width Across Flat |         |          | D<br>mm | B<br>mm | L<br>mm | L1<br>mm | H<br>mm |
|--------------------|-----------|---------|-----------|-----------|------|-------------------|---------|----------|---------|---------|---------|----------|---------|
|                    | Inch      | T<br>mm |           | Inch      | mm   | F<br>Inch         | G<br>mm | G1<br>mm |         |         |         |          |         |
| BMRT-M06-2G-SS-POS |           | 6       | 1/8       | 4.0       | 0.16 | 12.7              | 14.0    | 14.3     | 15.3    | 6.6     | 27.0    | 26.4     | 17.3    |
| BMRT-M06-4G-SS-POS |           | 6       | 1/4       | 4.8       | 0.19 | 15.9              | 14.0    | 19.1     | 15.3    | 9.0     | 29.0    | 32.3     | 22.9    |
| BMRT-M08-2G-SS-POS |           | 8       | 1/8       | 4.0       | 0.16 | 14.3              | 16.0    | 14.3     | 16.2    | 6.6     | 28.8    | 27.5     | 17.3    |
| BMRT-M08-4G-SS-POS |           | 8       | 1/4       | 5.9       | 0.23 | 15.9              | 16.0    | 19.1     | 16.2    | 9.0     | 29.9    | 32.3     | 22.9    |
| BMRT-M10-4G-SS-POS |           | 10      | 1/4       | 5.9       | 0.23 | 20.6              | 19.0    | 19.1     | 17.2    | 9.0     | 33.5    | 35.1     | 22.9    |
| BMRT-M12-6G-SS-POS |           | 12      | 3/8       | 7.9       | 0.31 | 20.6              | 22.0    | 22.2     | 22.8    | 9.4     | 36.1    | 37.1     | 26.4    |
| BMRT-M12-8G-SS-POS |           | 12      | 1/2       | 9.5       | 0.37 | 23.8              | 22.0    | 27.0     | 22.8    | 13.0    | 38.0    | 43.5     | 32.0    |



## Male Branch Tee



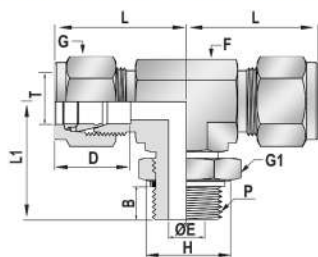
### Metric Tube x NPT Threads

| Part No         | Tube O.D. |  | B<br>NPT | E*<br>Min<br>mm | Width Across Flat |         | D<br>mm | L<br>mm | L1<br>mm |
|-----------------|-----------|--|----------|-----------------|-------------------|---------|---------|---------|----------|
|                 | T<br>mm   |  |          |                 | F<br>Inch         | G<br>mm |         |         |          |
| BMBT-M03-2N-SS  | 3         |  | 1/8      | 2.40            | 12                | 12      | 12.90   | 23.60   | 17.80    |
| BMBT-M03-4N-SS  | 3         |  | 1/4      | 2.40            | 12                | 12      | 12.90   | 24.60   | 23.40    |
| BMBT-M04-2N-SS  | 4         |  | 1/8      | 2.40            | 12                | 12      | 13.70   | 25.40   | 18.80    |
| BMBT-M06-2N-SS  | 6         |  | 1/8      | 4.80            | 12                | 14      | 15.30   | 27.00   | 18.80    |
| BMBT-M06-4N-SS  | 6         |  | 1/4      | 4.80            | 14                | 14      | 15.30   | 27.00   | 23.40    |
| BMBT-M08-2N-SS  | 8         |  | 1/8      | 4.80            | 14                | 16      | 16.20   | 28.80   | 19.80    |
| BMBT-M08-4N-SS  | 8         |  | 1/4      | 6.40            | 17                | 16      | 16.20   | 28.80   | 24.40    |
| BMBT-M10-4N-SS  | 10        |  | 1/4      | 7.10            | 17                | 19      | 17.20   | 31.50   | 28.20    |
| BMBT-M10-6N-SS  | 10        |  | 3/8      | 7.90            | 20                | 19      | 17.20   | 31.50   | 28.20    |
| BMBT-M12-4N-SS  | 12        |  | 1/4      | 7.10            | 20                | 22      | 22.80   | 36.00   | 28.20    |
| BMBT-M12-6N-SS  | 12        |  | 3/8      | 7.10            | 20                | 22      | 22.80   | 36.00   | 28.20    |
| BMBT-M12-8N-SS  | 12        |  | 1/2      | 9.50            | 22                | 22      | 22.80   | 36.00   | 33.00    |
| BMBT-M16-6N-SS  | 16        |  | 3/8      | 7.10            | 25                | 25      | 24.40   | 38.00   | 30.20    |
| BMBT-M16-8N-SS  | 16        |  | 1/2      | 11.90           | 25                | 25      | 24.40   | 38.00   | 35.10    |
| BMBT-M20-12N-SS | 20        |  | 3/4      | 15.90           | 31                | 32      | 26.00   | 44.60   | 41.70    |
| BMBT-M22-16N-SS | 22        |  | 1        | 18.30           | 34                | 32      | 26.00   | 44.60   | 46.50    |
| BMBT-M25-12N-SS | 25        |  | 3/4      | 15.90           | 34                | 38      | 31.30   | 49.10   | 41.70    |
| BMBT-M25-16N-SS | 25        |  | 1        | 22.80           | 34                | 38      | 31.30   | 49.10   | 46.50    |

### Imperial Tube x NPT Threads

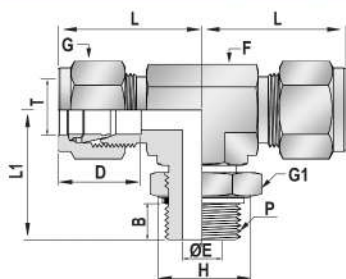
| Part No        | Tube O.D. |       | B<br>NPT | E*<br>Min<br>mm | Width Across Flat |         | D<br>mm | L<br>mm | L1<br>mm |
|----------------|-----------|-------|----------|-----------------|-------------------|---------|---------|---------|----------|
|                | T<br>mm   |       |          |                 | F<br>Inch         | G<br>mm |         |         |          |
| BMBT-02-2N-SS  | 1/8       | 3.17  | 1/8      | 2.28            | 1/2               | 7/16    | 12.70   | 24.91   | 18.90    |
| BMBT-02-4N-SS  | 1/8       | 3.17  | 1/4      | 2.28            | 1/2               | 7/16    | 12.70   | 24.91   | 23.36    |
| BMBT-03-2N-SS  | 3/16      | 4.76  | 1/8      | 3.04            | 1/2               | 1/2     | 13.71   | 24.38   | 17.78    |
| BMBT-04-2N-SS  | 1/4       | 6.35  | 1/8      | 4.80            | 1/2               | 9/16    | 15.30   | 28.00   | 20.00    |
| BMBT-04-4N-SS  | 1/4       | 6.35  | 1/4      | 4.80            | 5/8               | 9/16    | 15.30   | 29.50   | 24.00    |
| BMBT-04-6N-SS  | 1/4       | 6.35  | 3/8      | 4.80            | 11/16             | 9/16    | 15.30   | 32.60   | 28.00    |
| BMBT-05-2N-SS  | 5/16      | 7.93  | 1/8      | 4.80            | 9/16              | 5/8     | 16.25   | 29.71   | 20.82    |
| BMBT-06-4N-SS  | 3/8       | 9.52  | 1/4      | 7.10            | 5/8               | 11/16   | 17.10   | 29.00   | 24.00    |
| BMBT-06-6N-SS  | 3/8       | 9.52  | 3/8      | 7.10            | 11/16             | 11/16   | 17.10   | 32.50   | 26.00    |
| BMBT-06-8N-SS  | 3/8       | 9.52  | 1/2      | 7.10            | 7/8               | 11/16   | 17.10   | 33.25   | 34.00    |
| BMBT-08-4N-SS  | 1/2       | 12.70 | 1/4      | 10.40           | 13/16             | 7/8     | 22.80   | 37.37   | 26.50    |
| BMBT-08-6N-SS  | 1/2       | 12.70 | 3/8      | 10.40           | 7/8               | 7/8     | 22.80   | 38.20   | 30.00    |
| BMBT-08-8N-SS  | 1/2       | 12.70 | 1/2      | 10.40           | 7/8               | 7/8     | 22.80   | 36.00   | 34.00    |
| BMBT-10-8N-SS  | 5/8       | 15.87 | 1/2      | 14.00           | 15/16             | 1       | 24.86   | 38.10   | 35.05    |
| BMBT-12-12N-SS | 3/4       | 19.05 | 3/4      | 15.00           | 1-1/16            | 1-1/8   | 22.60   | 41.44   | 41.00    |
| BMBT-14-12N-SS | 7/8       | 22.22 | 3/4      | 15.74           | 1-3/8             | 1-1/4   | 25.90   | 44.70   | 41.65    |
| BMBT-16-12N-SS | 1         | 25.40 | 3/4      | 15.74           | 1-3/8             | 1-1/2   | 31.24   | 49.02   | 42.20    |
| BMBT-16-16N-SS | 1         | 25.40 | 1        | 22.35           | 1-3/8             | 1-1/2   | 31.24   | 49.02   | 46.70    |
| BMBT-20-20N-SS | 1-1/4     | 31.75 | 1-1/4    | 27.68           | 1-11/16           | 1-7/8   | 41.14   | 66.54   | 47.75    |
| BMBT-24-24N-SS | 1-1/2     | 38.10 | 1-1/2    | 33.90           | 2                 | 2-1/4   | 50.03   | 77.97   | 60.45    |
| BMBT-32-32N-SS | 2         | 50.80 | 2        | 45.97           | 2-3/4             | 3       | 67.56   | 107.18  | 70.61    |

## Positionable Male Branch Tee



### Imperial Tube x SAE/MS Straight Threads

| Part No            | Tube O.D. |         | B<br>SAE/MS | E*<br>Min |      | Width Across Flat |           |            | D<br>mm | B<br>mm | L<br>mm | L1<br>mm | H<br>mm |
|--------------------|-----------|---------|-------------|-----------|------|-------------------|-----------|------------|---------|---------|---------|----------|---------|
|                    | inch      | T<br>mm |             | inch      | mm   | F<br>Inch         | G<br>Inch | G1<br>Inch |         |         |         |          |         |
| BMBT-04-4S-SS-POS  | 1/4       | 6.35    | 7/16-20     | 0.16      | 4.8  | 1/2               | 9/16      | 9/16       | 15.2    | 9.9     | 28.4    | 28.4     | 16.5    |
| BMBT-06-6S-SS-POS  | 3/8       | 9.52    | 9/16-18     | 0.19      | 7.1  | 5/8               | 11/16     | 11/16      | 16.8    | 11.2    | 32.0    | 32.3     | 20.1    |
| BMBT-08-8S-SS-POS  | 1/2       | 12.70   | 3/4-16      | 0.23      | 10.4 | 13/16             | 7/8       | 7/8        | 22.9    | 12.7    | 37.6    | 37.8     | 25.7    |
| BMBT-12-12S-SS-POS | 3/4       | 19.05   | 1-1/8-12    | 0.31      | 15.7 | 1-1/8             | 1-1/4     | 1-1/4      | 24.4    | 16.8    | 41.4    | 48.8     | 36.6    |
| BMBT-16-16S-SS-POS | 1         | 25.40   | 1-5/8-12    | 0.41      | 22.4 | 1-3/8             | 1-1/2     | 1-1/2      | 31.2    | 16.8    | 50.5    | 53.6     | 43.9    |
| BMBT-20-20S-SS-POS | 1-1/4     | 31.75   | 1-5/8-12    | 0.47      | 27.7 | 1-1/16            | 1-7/8     | 1-7/8      | 41.1    | 16.8    | 67.8    | 58.2     | 54.9    |
| BMBT-24-24S-SS-POS | 1-1/2     | 38.10   | 1-7/8-12    | 0.62      | 33.9 | 2                 | 2-1/4     | 2-1/8      | 50.0    | 16.8    | 78.0    | 60.5     | 62.2    |
| BMBT-32-32S-SS-POS | 2         | 50.80   | 2-1/2-12    | 0.78      | 46.0 | 2-3/4             | 3         | 2-3/4      | 67.6    | 16.8    | 107.2   | 71.6     | 80.3    |



### Imperial Tube x ISO Parallel Threads (BSPP)

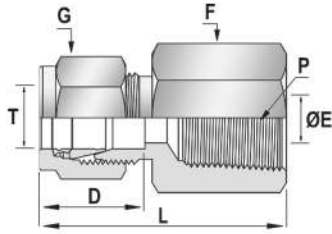
| Part No            | Tube O.D. |         | B<br>BSPP | E*<br>Min |      | Width Across Flat |           |            | D<br>mm | B<br>mm | L<br>mm | L1<br>mm | H<br>mm |
|--------------------|-----------|---------|-----------|-----------|------|-------------------|-----------|------------|---------|---------|---------|----------|---------|
|                    | inch      | T<br>mm |           | inch      | mm   | F<br>Inch         | G<br>Inch | G1<br>Inch |         |         |         |          |         |
| BMBT-04-2G-SS-POS  | 1/4       | 6.35    | 1/8       | 0.16      | 4.1  | 1/2               | 9/16      | 9/16       | 15.2    | 6.6     | 26.9    | 26.4     | 17.3    |
| BMBT-04-4G-SS-POS  | 1/4       | 6.35    | 1/4       | 0.19      | 4.8  | 5/8               | 9/16      | 3/4        | 15.2    | 9.0     | 28.9    | 32.3     | 22.9    |
| BMBT-06-4G-SS-POS  | 3/8       | 9.52    | 1/4       | 0.23      | 5.8  | 5/8               | 11/16     | 3/4        | 16.8    | 9.0     | 30.5    | 32.3     | 22.9    |
| BMBT-08-6G-SS-POS  | 1/2       | 12.70   | 3/8       | 0.31      | 7.9  | 13/16             | 7/8       | 7/8        | 22.9    | 9.4     | 36.1    | 37.1     | 26.4    |
| BMBT-08-8G-SS-POS  | 1/2       | 12.70   | 1/2       | 0.41      | 10.4 | 15/16             | 7/8       | 1-1/16     | 22.9    | 13.0    | 38.1    | 43.4     | 32.0    |
| BMBT-12-8G-SS-POS  | 3/4       | 19.05   | 1/2       | 0.47      | 11.9 | 1-1/16            | 1-1/8     | 1-1/16     | 24.4    | 13.0    | 39.9    | 45.2     | 32.0    |
| BMBT-12-12G-SS-POS | 3/4       | 19.05   | 3/4       | 0.62      | 15.7 | 1-1/16            | 1-1/8     | 1-3/8      | 24.4    | 13.0    | 39.9    | 48.8     | 41.1    |
| BMBT-16-16G-SS-POS | 1         | 25.40   | 1         | 0.78      | 19.8 | 1-3/8             | 1-1/2     | 1-5/8      | 31.2    | 13.2    | 49.0    | 53.6     | 48.5    |

### Metric Tube x ISO Parallel Threads (BSPP)

| Part No            | Tube O.D. |         | B<br>BSPP | E*<br>Min |      | Width Across Flat |           |            | D<br>mm | B<br>mm | L<br>mm | L1<br>mm | H<br>mm |
|--------------------|-----------|---------|-----------|-----------|------|-------------------|-----------|------------|---------|---------|---------|----------|---------|
|                    | inch      | T<br>mm |           | inch      | mm   | F<br>Inch         | G<br>Inch | G1<br>Inch |         |         |         |          |         |
| BMBT-M06-2G-SS-POS |           | 6       | 1/8       | 4.0       | 0.16 | 12.7              | 14.0      | 14.3       | 15.3    | 6.6     | 27.0    | 26.4     | 17.3    |
| BMBT-M06-4G-SS-POS |           | 6       | 1/4       | 4.8       | 0.19 | 15.9              | 14.0      | 19.1       | 15.3    | 9.0     | 29.0    | 32.3     | 22.9    |
| BMBT-M08-2G-SS-POS |           | 8       | 1/8       | 4.0       | 0.16 | 14.3              | 16.0      | 14.3       | 16.2    | 6.6     | 28.8    | 27.5     | 17.3    |
| BMBT-M08-4G-SS-POS |           | 8       | 1/4       | 5.9       | 0.23 | 15.9              | 16.0      | 19.1       | 16.2    | 9.0     | 29.9    | 32.3     | 22.9    |
| BMBT-M10-4G-SS-POS |           | 10      | 1/4       | 5.9       | 0.23 | 20.6              | 19.0      | 19.1       | 17.2    | 9.0     | 33.5    | 35.1     | 22.9    |
| BMBT-M12-6G-SS-POS |           | 12      | 3/8       | 7.9       | 0.31 | 20.6              | 22.0      | 22.2       | 22.8    | 9.4     | 36.1    | 37.1     | 26.4    |
| BMBT-M12-8G-SS-POS |           | 12      | 1/2       | 9.5       | 0.37 | 23.8              | 22.0      | 27.0       | 22.8    | 13.0    | 38.0    | 43.5     | 32.0    |



# Female Connector

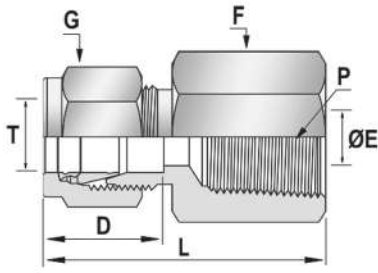


## Imperial Tube x NPT Threads

| Part No       | Tube O.D. |         | B<br>NPT | E<br>Min<br>mm | Width Across Flat |           | D<br>mm | L<br>mm |
|---------------|-----------|---------|----------|----------------|-------------------|-----------|---------|---------|
|               | Inch      | T<br>mm |          |                | F<br>Inch         | G<br>Inch |         |         |
| BFC-01-1N-SS  | 1/16      | 1.58    | 1/16     | 1.20           | 7/16              | 7/16      | 8.63    | 23.60   |
| BFC-01-2N-SS  | 1/16      | 1.58    | 1/8      | 1.20           | 9/16              | 7/16      | 8.63    | 24.30   |
| BFC-02-2N-SS  | 1/8       | 3.17    | 1/8      | 2.20           | 9/16              | 7/16      | 14.80   | 33.75   |
| BFC-02-4N-SS  | 1/8       | 3.17    | 1/4      | 2.20           | 3/4               | 7/16      | 14.80   | 39.25   |
| BFC-03-2N-SS  | 3/16      | 4.76    | 1/8      | 3.04           | 9/16              | 1/2       | 13.71   | 29.71   |
| BFC-04-2N-SS  | 1/4       | 6.35    | 1/8      | 4.80           | 9/16              | 9/16      | 15.30   | 31.50   |
| BFC-04-4N-SS  | 1/4       | 6.35    | 1/4      | 4.80           | 3/4               | 9/16      | 15.30   | 38.00   |
| BFC-04-6N-SS  | 1/4       | 6.35    | 3/8      | 4.80           | 7/8               | 9/16      | 15.30   | 38.50   |
| BFC-04-8N-SS  | 1/4       | 6.35    | 1/2      | 4.80           | 1-1/16            | 9/16      | 15.30   | 46.00   |
| BFC-05-2N-SS  | 5/16      | 7.93    | 1/8      | 6.35           | 9/16              | 5/8       | 16.25   | 32.00   |
| BFC-05-4N-SS  | 5/16      | 7.93    | 1/4      | 6.35           | 3/4               | 5/8       | 16.25   | 36.83   |
| BFC-06-2N-SS  | 3/8       | 9.52    | 1/8      | 7.10           | 5/8               | 11/16     | 17.10   | 32.40   |
| BFC-06-4N-SS  | 3/8       | 9.52    | 1/4      | 7.10           | 3/4               | 11/16     | 17.10   | 39.00   |
| BFC-06-6N-SS  | 3/8       | 9.52    | 3/8      | 7.10           | 7/8               | 11/16     | 17.10   | 41.00   |
| BFC-06-8N-SS  | 3/8       | 9.52    | 1/2      | 7.10           | 1-1/16            | 11/16     | 17.10   | 46.70   |
| BFC-06-12N-SS | 3/8       | 9.52    | 3/4      | 7.10           | 1-5/16            | 11/16     | 17.10   | 47.40   |
| BFC-08-4N-SS  | 1/2       | 12.70   | 1/4      | 10.40          | 7/8               | 7/8       | 22.80   | 43.20   |
| BFC-08-6N-SS  | 1/2       | 12.70   | 3/8      | 10.40          | 7/8               | 7/8       | 22.80   | 43.20   |
| BFC-08-8N-SS  | 1/2       | 12.70   | 1/2      | 10.40          | 1-1/16            | 7/8       | 22.80   | 50.90   |
| BFC-08-12N-SS | 1/2       | 12.70   | 3/4      | 10.40          | 1-5/16            | 7/8       | 22.80   | 51.00   |
| BFC-10-6N-SS  | 5/8       | 15.87   | 3/8      | 12.70          | 15/16             | 1         | 24.38   | 43.10   |
| BFC-10-8N-SS  | 5/8       | 15.87   | 1/2      | 12.70          | 1-1/16            | 1         | 24.38   | 50.07   |
| BFC-12-8N-SS  | 3/4       | 19.05   | 1/2      | 15.00          | 1-1/16            | 1-1/8     | 24.38   | 46.73   |
| BFC-12-12N-SS | 3/4       | 19.05   | 3/4      | 15.00          | 1-5/16            | 1-1/8     | 24.38   | 51.90   |
| BFC-14-12N-SS | 7/8       | 22.22   | 3/4      | 18.28          | 1-5/16            | 1-1/4     | 25.90   | 49.78   |
| BFC-16-12N-SS | 1         | 25.40   | 3/4      | 22.35          | 1-3/8             | 1-1/2     | 31.24   | 54.75   |
| BFC-16-16N-SS | 1         | 25.40   | 1        | 22.35          | 1-5/8             | 1-1/2     | 31.24   | 62.23   |
| BFC-20-20N-SS | 1-1/4     | 31.75   | 1-1/4    | 27.68          | 2-1/8             | 1-7/8     | 41.14   | 74.67   |
| BFC-24-24N-SS | 1-1/2     | 38.10   | 1-1/2    | 34.00          | 2-3/8             | 2-1/4     | 50.03   | 83.31   |
| BFC-32-32N-SS | 2         | 50.80   | 2        | 45.97          | 2-7/8             | 3         | 67.56   | 101.60  |



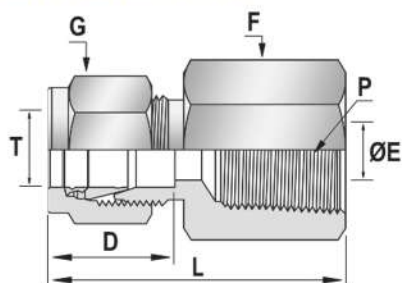
## Female Connector



### Imperial Tube x NPT Threads

| Part No        | Tube O.D. |    | B<br>NPT | E<br>Min<br>mm | Width Across Flat |           | D<br>mm | L<br>mm |
|----------------|-----------|----|----------|----------------|-------------------|-----------|---------|---------|
|                | T<br>Inch | mm |          |                | F<br>Inch         | G<br>Inch |         |         |
| BFC-M03-2N-SS  | 3         |    | 1/8      | 2.40           | 14                | 12        | 12.90   | 28.70   |
| BFC-M03-4N-SS  | 3         |    | 1/4      | 2.40           | 19                | 12        | 12.90   | 33.50   |
| BFC-M04-2N-SS  | 4         |    | 1/8      | 2.40           | 14                | 12        | 13.70   | 29.70   |
| BFC-M06-2N-SS  | 6         |    | 1/8      | 4.20           | 14                | 14        | 15.50   | 31.30   |
| BFC-M06-4N-SS  | 6         |    | 1/4      | 4.20           | 19                | 14        | 15.50   | 40.30   |
| BFC-M06-6N-SS  | 6         |    | 3/8      | 4.20           | 22                | 14        | 15.50   | 40.30   |
| BFC-M06-8N-SS  | 6         |    | 1/2      | 4.20           | 27                | 14        | 15.50   | 42.50   |
| BFC-M08-2N-SS  | 8         |    | 1/8      | 6.40           | 15                | 16        | 16.20   | 32.10   |
| BFC-M08-4N-SS  | 8         |    | 1/4      | 6.40           | 19                | 16        | 16.20   | 37.00   |
| BFC-M08-6N-SS  | 8         |    | 3/8      | 6.00           | 22                | 16        | 16.30   | 38.65   |
| BFC-M08-8N-SS  | 8         |    | 1/2      | 6.40           | 27                | 16        | 16.20   | 43.30   |
| BFC-M10-2N-SS  | 10        |    | 1/8      | 7.90           | 18                | 19        | 17.20   | 33.00   |
| BFC-M10-4N-SS  | 10        |    | 1/4      | 7.10           | 19                | 19        | 18.10   | 40.60   |
| BFC-M10-6N-SS  | 10        |    | 3/8      | 7.10           | 22                | 19        | 18.10   | 40.13   |
| BFC-M10-8N-SS  | 10        |    | 1/2      | 8.00           | 27                | 19        | 18.10   | 48.60   |
| BFC-M12-2N-SS  | 12        |    | 1/8      | 8.30           | 22                | 22        | 22.80   | 38.50   |
| BFC-M12-4N-SS  | 12        |    | 1/4      | 9.50           | 22                | 22        | 22.30   | 42.50   |
| BFC-M12-6N-SS  | 12        |    | 3/8      | 9.50           | 22                | 22        | 22.30   | 42.50   |
| BFC-M12-8N-SS  | 12        |    | 1/2      | 9.50           | 27                | 22        | 22.30   | 50.30   |
| BFC-M12-12N-SS | 12        |    | 3/4      | 9.50           | 35                | 22        | 22.80   | 54.28   |
| BFC-M15-8N-SS  | 15        |    | 1/2      | 11.90          | 27                | 25        | 24.40   | 50.90   |
| BFC-M16-8N-SS  | 16        |    | 1/2      | 12.70          | 27                | 25        | 24.40   | 46.90   |
| BFC-M20-8N-SS  | 20        |    | 1/2      | 15.90          | 30                | 32        | 26.00   | 47.90   |
| BFC-M20-12N-SS | 20        |    | 3/4      | 15.90          | 35                | 32        | 26.00   | 49.70   |
| BFC-M22-12N-SS | 22        |    | 3/4      | 18.30          | 35                | 32        | 26.00   | 49.70   |
| BFC-M22-16N-SS | 22        |    | 1        | 18.30          | 41                | 32        | 26.00   | 57.90   |
| BFC-M25-12N-SS | 25        |    | 3/4      | 22.80          | 35                | 38        | 31.30   | 53.40   |
| BFC-M25-16N-SS | 25        |    | 1        | 22.80          | 41                | 38        | 31.30   | 62.30   |

## Female Connector

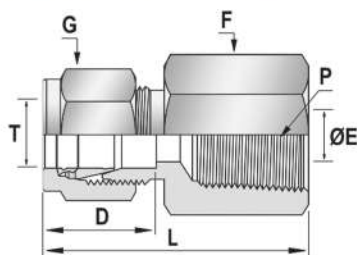


### Imperial Tube x NPT Threads

| Part No       | Tube O.D. |         | B<br>NPT | E<br>Min<br>mm | Width Across Flat |           | D<br>mm | L<br>mm |
|---------------|-----------|---------|----------|----------------|-------------------|-----------|---------|---------|
|               | Inch      | T<br>mm |          |                | F<br>Inch         | G<br>Inch |         |         |
| BFC-01-1R-SS  | 1/16      | 1.58    | 1/16     | 1.20           | 7/16              | 7/16      | 8.63    | 23.60   |
| BFC-01-2R-SS  | 1/16      | 1.58    | 1/8      | 1.20           | 9/16              | 7/16      | 8.63    | 24.30   |
| BFC-02-2R-SS  | 1/8       | 3.17    | 1/8      | 2.20           | 9/16              | 7/16      | 14.80   | 33.75   |
| BFC-02-4R-SS  | 1/8       | 3.17    | 1/4      | 2.20           | 3/4               | 7/16      | 14.80   | 39.25   |
| BFC-03-2R-SS  | 3/16      | 4.76    | 1/8      | 3.04           | 9/16              | 1/2       | 13.71   | 29.71   |
| BFC-04-2R-SS  | 1/4       | 6.35    | 1/8      | 4.80           | 9/16              | 9/16      | 15.30   | 31.50   |
| BFC-04-4R-SS  | 1/4       | 6.35    | 1/4      | 4.80           | 3/4               | 9/16      | 15.30   | 38.00   |
| BFC-04-6R-SS  | 1/4       | 6.35    | 3/8      | 4.80           | 7/8               | 9/16      | 15.30   | 38.50   |
| BFC-04-8R-SS  | 1/4       | 6.35    | 1/2      | 4.80           | 1-1/16            | 9/16      | 15.30   | 46.00   |
| BFC-05-2R-SS  | 5/16      | 7.93    | 1/8      | 6.35           | 9/16              | 5/8       | 16.25   | 32.00   |
| BFC-05-4R-SS  | 5/16      | 7.93    | 1/4      | 6.35           | 3/4               | 5/8       | 16.25   | 36.83   |
| BFC-06-2R-SS  | 3/8       | 9.52    | 1/8      | 7.10           | 5/8               | 11/16     | 17.10   | 32.40   |
| BFC-06-4R-SS  | 3/8       | 9.52    | 1/4      | 7.10           | 3/4               | 11/16     | 17.10   | 39.00   |
| BFC-06-6R-SS  | 3/8       | 9.52    | 3/8      | 7.10           | 7/8               | 11/16     | 17.10   | 41.00   |
| BFC-06-8R-SS  | 3/8       | 9.52    | 1/2      | 7.10           | 1-1/16            | 11/16     | 17.10   | 46.70   |
| BFC-06-12R-SS | 3/8       | 9.52    | 3/4      | 7.10           | 1-5/16            | 11/16     | 17.10   | 47.40   |
| BFC-08-4R-SS  | 1/2       | 12.70   | 1/4      | 10.40          | 7/8               | 7/8       | 22.80   | 43.20   |
| BFC-08-6R-SS  | 1/2       | 12.70   | 3/8      | 10.40          | 7/8               | 7/8       | 22.80   | 43.20   |
| BFC-08-8R-SS  | 1/2       | 12.70   | 1/2      | 10.40          | 1-1/16            | 7/8       | 22.80   | 50.90   |
| BFC-08-12R-SS | 1/2       | 12.70   | 3/4      | 10.40          | 1-5/16            | 7/8       | 22.80   | 51.00   |
| BFC-10-6R-SS  | 5/8       | 15.87   | 3/8      | 12.70          | 15/16             | 1         | 24.38   | 43.10   |
| BFC-10-8R-SS  | 5/8       | 15.87   | 1/2      | 12.70          | 1-1/16            | 1         | 24.38   | 50.80   |
| BFC-12-8R-SS  | 3/4       | 19.05   | 1/2      | 15.00          | 1-1/16            | 1-1/8     | 24.38   | 46.73   |
| BFC-12-12R-SS | 3/4       | 19.05   | 3/4      | 15.00          | 1-5/16            | 1-1/8     | 24.38   | 51.90   |
| BFC-14-12R-SS | 7/8       | 22.22   | 3/4      | 18.28          | 1-5/16            | 1-1/4     | 25.90   | 49.78   |
| BFC-16-12R-SS | 1         | 25.40   | 3/4      | 22.35          | 1-3/8             | 1-1/2     | 31.24   | 54.75   |
| BFC-16-16R-SS | 1         | 25.40   | 1        | 22.35          | 1-5/8             | 1-1/2     | 31.24   | 62.23   |
| BFC-20-20R-SS | 1-1/4     | 31.75   | 1-1/4    | 27.68          | 2-1/8             | 1-7/8     | 41.14   | 74.67   |
| BFC-24-24R-SS | 1-1/2     | 38.10   | 1-1/2    | 34.00          | 2-3/8             | 2-1/4     | 50.03   | 83.31   |
| BFC-32-32R-SS | 2         | 50.80   | 2        | 45.97          | 2-7/8             | 3         | 67.56   | 101.60  |



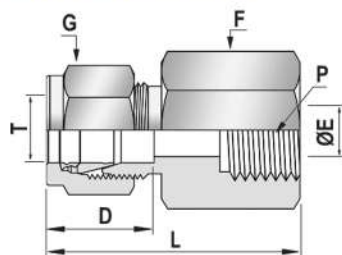
## Female Connector



### Metric Tube x ISO Tapered Threads (BSPT)

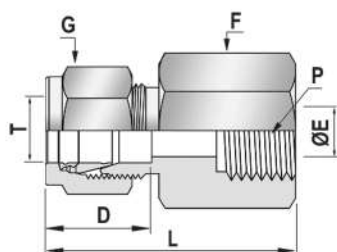
| Part No        | Tube O.D. |         | B<br>BSPT | E<br>Min<br>mm | Width Across Flat |           | D<br>mm | L<br>mm |
|----------------|-----------|---------|-----------|----------------|-------------------|-----------|---------|---------|
|                | Inch      | T<br>mm |           |                | F<br>Inch         | G<br>Inch |         |         |
| BFC-M03-2R-SS  |           | 3       | 1/8       | 2.40           | 14                | 12        | 12.90   | 28.70   |
| BFC-M03-4R-SS  |           | 3       | 1/4       | 2.40           | 19                | 12        | 12.90   | 33.50   |
| BFC-M04-2R-SS  |           | 4       | 1/8       | 2.40           | 14                | 12        | 13.70   | 29.70   |
| BFC-M06-2R-SS  |           | 6       | 1/8       | 4.20           | 14                | 14        | 15.50   | 31.30   |
| BFC-M06-4R-SS  |           | 6       | 1/4       | 4.20           | 19                | 14        | 15.50   | 40.30   |
| BFC-M06-6R-SS  |           | 6       | 3/8       | 4.20           | 22                | 14        | 15.50   | 40.30   |
| BFC-M06-8R-SS  |           | 6       | 1/2       | 4.20           | 27                | 14        | 15.50   | 42.50   |
| BFC-M08-2R-SS  |           | 8       | 1/8       | 6.40           | 15                | 16        | 16.20   | 32.10   |
| BFC-M08-4R-SS  |           | 8       | 1/4       | 6.40           | 19                | 16        | 16.20   | 37.00   |
| BFC-M08-6R-SS  |           | 8       | 3/8       | 6.40           | 22                | 16        | 16.30   | 38.65   |
| BFC-M08-8R-SS  |           | 8       | 1/2       | 6.40           | 27                | 16        | 16.20   | 43.30   |
| BFC-M10-2R-SS  |           | 10      | 1/8       | 7.90           | 18                | 19        | 17.20   | 33.00   |
| BFC-M10-4R-SS  |           | 10      | 1/4       | 7.10           | 19                | 19        | 18.10   | 40.60   |
| BFC-M10-6R-SS  |           | 10      | 3/8       | 7.10           | 22                | 19        | 18.10   | 40.13   |
| BFC-M10-8R-SS  |           | 10      | 1/2       | 8.00           | 27                | 19        | 18.10   | 48.60   |
| BFC-M12-2R-SS  |           | 12      | 1/8       | 8.30           | 22                | 22        | 22.80   | 38.50   |
| BFC-M12-4R-SS  |           | 12      | 1/4       | 9.50           | 22                | 22        | 22.30   | 42.50   |
| BFC-M12-6R-SS  |           | 12      | 3/8       | 9.50           | 22                | 22        | 22.30   | 42.50   |
| BFC-M12-8R-SS  |           | 12      | 1/2       | 9.50           | 27                | 22        | 22.30   | 50.30   |
| BFC-M12-12R-SS |           | 12      | 3/4       | 9.50           | 35                | 22        | 22.80   | 54.28   |
| BFC-M15-8R-SS  |           | 15      | 1/2       | 11.90          | 27                | 25        | 24.40   | 50.90   |
| BFC-M16-8R-SS  |           | 16      | 1/2       | 12.70          | 27                | 25        | 24.40   | 46.90   |
| BFC-M20-8R-SS  |           | 20      | 1/2       | 15.90          | 30                | 32        | 26.00   | 47.90   |
| BFC-M20-12R-SS |           | 20      | 3/4       | 15.90          | 35                | 32        | 26.00   | 49.70   |
| BFC-M22-12R-SS |           | 22      | 3/4       | 18.30          | 35                | 32        | 26.00   | 49.70   |
| BFC-M22-16R-SS |           | 22      | 1         | 18.30          | 41                | 32        | 26.00   | 57.90   |
| BFC-M25-12R-SS |           | 25      | 3/4       | 22.80          | 35                | 38        | 31.30   | 53.40   |
| BFC-M25-16R-SS |           | 25      | 1         | 22.80          | 41                | 38        | 31.30   | 62.30   |

## Female Connector



### Metric Tube x ISO Parallel Threads (BSPP)

| Part No       | Tube O.D. |  | B<br>BSPP | E<br>Min<br>mm | Width Across Flat |           | D<br>mm | L<br>mm |
|---------------|-----------|--|-----------|----------------|-------------------|-----------|---------|---------|
|               | T<br>mm   |  |           |                | F<br>Inch         | G<br>Inch |         |         |
| BFC-M03-4G-SS | 3         |  | 1/4       | 2.40           | 19                | 12        | 12.90   | 35.30   |
| BFC-M06-2G-SS | 6         |  | 1/8       | 4.00           | 14                | 14        | 15.50   | 32.40   |
| BFC-M06-4G-SS | 6         |  | 1/4       | 4.20           | 19                | 14        | 15.50   | 37.60   |
| BFC-M06-6G-SS | 6         |  | 3/8       | 4.20           | 24                | 14        | 15.50   | 37.60   |
| BFC-M06-8G-SS | 6         |  | 1/2       | 4.20           | 27                | 14        | 15.50   | 43.50   |
| BFC-M08-4G-SS | 8         |  | 1/4       | 5.50           | 19                | 16        | 16.20   | 38.50   |
| BFC-M08-6G-SS | 8         |  | 3/8       | 6.40           | 24                | 16        | 16.20   | 36.20   |
| BFC-M08-8G-SS | 8         |  | 1/2       | 7.00           | 27                | 16        | 16.20   | 41.00   |
| BFC-M10-4G-SS | 10        |  | 1/4       | 5.50           | 19                | 19        | 17.20   | 39.40   |
| BFC-M10-6G-SS | 10        |  | 3/8       | 6.50           | 24                | 19        | 17.20   | 38.80   |
| BFC-M10-8G-SS | 10        |  | 1/2       | 7.00           | 27                | 19        | 17.20   | 42.10   |
| BFC-M12-4G-SS | 12        |  | 1/4       | 5.50           | 22                | 22        | 22.80   | 41.90   |
| BFC-M12-6G-SS | 12        |  | 3/8       | 6.50           | 24                | 22        | 22.80   | 44.40   |
| BFC-M12-8G-SS | 12        |  | 1/2       | 7.00           | 27                | 22        | 22.80   | 48.20   |
| BFC-M20-8G-SS | 20        |  | 1/2       | 7.00           | 30                | 32        | 26.00   | 54.30   |
| BFC-M22-8G-SS | 22        |  | 1/2       | 7.00           | 30                | 32        | 26.00   | 54.30   |

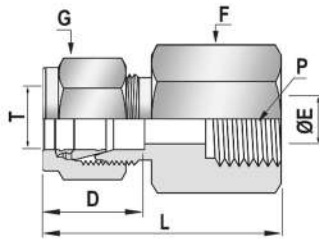


### Imperial Tube x ISO Parallel Threads (BSPP)

| Part No      | Tube O.D. |       | B<br>BSPP | E<br>Min<br>mm | Width Across Flat |           | D<br>mm | L<br>mm |
|--------------|-----------|-------|-----------|----------------|-------------------|-----------|---------|---------|
|              | T<br>Inch | mm    |           |                | F<br>Inch         | G<br>Inch |         |         |
| BFC-02-4G-SS | 1/8       | 3.17  | 1/4       | 2.30           | 3/4               | 7/16      | 12.70   | 35.30   |
| BFC-04-2G-SS | 1/4       | 6.35  | 1/8       | 4.00           | 9/16              | 9/16      | 15.24   | 32.40   |
| BFC-04-4G-SS | 1/4       | 6.35  | 1/4       | 4.80           | 3/4               | 9/16      | 15.24   | 37.60   |
| BFC-04-6G-SS | 1/4       | 6.35  | 3/8       | 4.80           | 15/16             | 9/16      | 15.24   | 37.60   |
| BFC-04-8G-SS | 1/4       | 6.35  | 1/2       | 4.80           | 1-1/16            | 9/16      | 15.24   | 43.40   |
| BFC-04-8G-SS | 5/16      | 7.93  | 1/4       | 5.50           | 3/4               | 5/8       | 16.25   | 38.40   |
| BFC-05-8G-SS | 5/16      | 7.93  | 1/2       | 7.00           | 1-1/16            | 5/8       | 16.25   | 40.90   |
| BFC-06-4G-SS | 3/8       | 9.52  | 1/4       | 5.50           | 3/4               | 11/16     | 17.10   | 39.10   |
| BFC-06-6G-SS | 3/8       | 9.52  | 3/8       | 6.60           | 15/16             | 11/16     | 17.10   | 38.60   |
| BFC-06-8G-SS | 3/8       | 9.52  | 1/2       | 7.00           | 1-1/16            | 11/16     | 17.10   | 41.90   |
| BFC-08-6G-SS | 1/2       | 12.70 | 3/8       | 6.50           | 15/16             | 7/8       | 22.80   | 44.50   |
| BFC-08-8G-SS | 1/2       | 12.70 | 1/2       | 7.00           | 1-1/16            | 7/8       | 22.80   | 48.20   |



# Female Connector



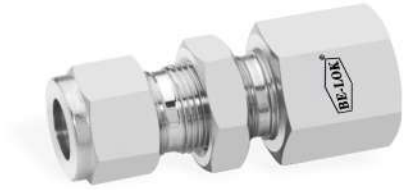
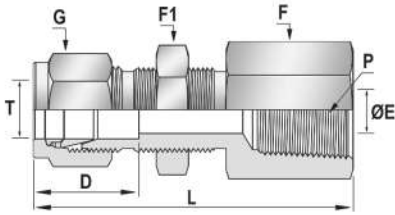
## Metric Tube x Metric Threads

| Part No        | Tube O.D. |  | B<br>Metric<br>Threads | E<br>Min<br>mm | Width Across Flat |           | D<br>mm | L<br>mm |
|----------------|-----------|--|------------------------|----------------|-------------------|-----------|---------|---------|
|                | T<br>mm   |  |                        |                | F<br>Inch         | G<br>Inch |         |         |
| BFC-M06-10M-SS | 6         |  | M10x1.0                | 4.00           | 16                | 14        | 15.30   | 33.40   |
| BFC-M06-14M-SS | 6         |  | M14x1.5                | 4.80           | 19                | 14        | 15.30   | 37.40   |
| BFC-M06-20M-SS | 6         |  | M20x1.5                | 4.80           | 27                | 14        | 15.30   | 44.00   |
| BFC-M08-8M-SS  | 8         |  | M8x1.0                 | 3.20           | 14                | 16        | 16.20   | 33.60   |
| BFC-M08-10M-SS | 8         |  | M10x1.0                | 4.00           | 16                | 16        | 16.20   | 34.30   |
| BFC-M08-14M-SS | 8         |  | M14x1.5                | 6.00           | 19                | 16        | 16.20   | 38.30   |
| BFC-M08-20M-SS | 8         |  | M20x1.5                | 6.40           | 27                | 16        | 16.20   | 44.90   |
| BFC-M10-14M-SS | 10        |  | M14x1.5                | 7.90           | 19                | 19        | 17.20   | 44.90   |
| BFC-M10-16M-SS | 10        |  | M16x1.5                | 7.90           | 22                | 19        | 17.20   | 44.90   |
| BFC-M10-20M-SS | 10        |  | M20x1.5                | 7.90           | 27                | 19        | 17.20   | 45.80   |
| BFC-M12-14M-SS | 12        |  | M14x1.5                | 9.50           | 19                | 22        | 22.80   | 44.90   |
| BFC-M12-16M-SS | 12        |  | M16x1.5                | 9.50           | 22                | 22        | 22.80   | 44.90   |
| BFC-M12-18M-SS | 12        |  | M18x1.5                | 9.50           | 24                | 22        | 22.80   | 48.30   |
| BFC-M12-20M-SS | 12        |  | M20x1.5                | 9.50           | 27                | 22        | 22.80   | 48.30   |
| BFC-M14-10M-SS | 14        |  | M10x1.0                | 4.00           | 24                | 25        | 24.40   | 42.50   |
| BFC-M14-20M-SS | 14        |  | M20x1.5                | 10.80          | 27                | 25        | 24.40   | 48.30   |
| BFC-M14-22M-SS | 14        |  | M22x1.5                | 11.10          | 30                | 25        | 24.40   | 48.30   |
| BFC-M16-20M-SS | 16        |  | M20x1.5                | 10.80          | 27                | 27        | 24.40   | 48.30   |
| BFC-M20-20M-SS | 20        |  | M20x1.5                | 10.80          | 30                | 32        | 26.00   | 48.30   |
| BFC-M25-20M-SS | 25        |  | M20x1.5                | 10.80          | 35                | 38        | 31.30   | 52.80   |
| BFC-M25-27M-SS | 25        |  | M27x2.0                | 16.10          | 35                | 38        | 31.30   | 54.40   |

## Imperial Tube x Metric Threads

| Part No       | Tube O.D. |         | B<br>Metric<br>Threads | E<br>Min<br>mm | Width Across Flat |           | D<br>mm | L<br>mm |
|---------------|-----------|---------|------------------------|----------------|-------------------|-----------|---------|---------|
|               | Inch      | T<br>mm |                        |                | F<br>Inch         | G<br>Inch |         |         |
| BFC-04-20M-SS | 1/4       | 6.35    | M20x1.5                | 4.80           | 1-1/16            | 9/16      | 15.30   | 44.10   |
| BFC-06-20M-SS | 3/8       | 9.52    | M20x1.5                | 7.10           | 1-1/16            | 11/16     | 17.10   | 45.60   |
| BFC-08-20M-SS | 1/2       | 12.70   | M20x1.5                | 10.40          | 1-1/16            | 7/8       | 22.80   | 48.15   |
| BFC-10-20M-SS | 5/8       | 15.87   | M20x1.5                | 12.70          | 1-1/16            | 1"        | 24.38   | 48.10   |
| BFC-12-20M-SS | 3/4       | 25.40   | M20x1.5                | 15.70          | 1-1/16            | 1-1/8     | 24.38   | 48.10   |

# Bulkheads Female Connector



## Metric Tube x NPT Threads

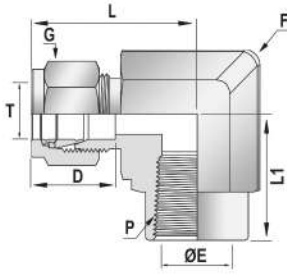
| Part No        | Tube O.D. |  | B<br>NPT | E<br>Min<br>mm | Width Across Flat |         |          | D<br>mm | L<br>mm | Panel<br>Hole<br>Drill Size<br>mm | Panel<br>Max.<br>Thickness<br>mm |
|----------------|-----------|--|----------|----------------|-------------------|---------|----------|---------|---------|-----------------------------------|----------------------------------|
|                | T<br>mm   |  |          |                | F<br>mm           | G<br>mm | F1<br>mm |         |         |                                   |                                  |
| BBFC-M06-2N-SS | 6         |  | 1/8      | 4.20           | 16                | 14      | 16       | 15.30   | 46.90   | 11.50                             | 10.20                            |
| BBFC-M06-4N-SS | 6         |  | 1/4      | 4.20           | 19                | 14      | 16       | 15.30   | 53.76   | 11.50                             | 10.20                            |
| BBFC-M08-4N-SS | 8         |  | 1/4      | 6.30           | 19                | 16      | 17       | 16.20   | 53.76   | 13.10                             | 11.20                            |
| BBFC-M12-8N-SS | 12        |  | 1/2      | 9.50           | 27                | 22      | 24       | 22.80   | 70.80   | 19.50                             | 12.70                            |

## Imperial Tube x NPT Threads

| Part No        | Tube O.D. |       | B<br>NPT | E<br>Min<br>mm | Width Across Flat |         |          | D<br>mm | L<br>mm | Panel<br>Hole<br>Drill Size<br>mm | Panel<br>Max.<br>Thickness<br>mm |
|----------------|-----------|-------|----------|----------------|-------------------|---------|----------|---------|---------|-----------------------------------|----------------------------------|
|                | Inch      | mm    |          |                | F<br>mm           | G<br>mm | F1<br>mm |         |         |                                   |                                  |
| BBFC-02-2N-SS  | 1/8       | 3.17  | 1/8      | 2.28           | 9/16              | 7/16    | 1/2      | 14.80   | 44.70   | 8.33                              | 12.70                            |
| BBFC-04-2N-SS  | 1/4       | 6.35  | 1/8      | 4.80           | 5/8               | 9/16    | 5/8      | 15.30   | 46.90   | 11.50                             | 10.16                            |
| BBFC-04-4N-SS  | 1/4       | 6.35  | 1/4      | 4.80           | 3/4               | 9/16    | 5/8      | 15.30   | 53.76   | 11.50                             | 10.16                            |
| BBFC-06-4N-SS  | 3/8       | 9.52  | 1/4      | 7.10           | 3/4               | 11/16   | 3/4      | 17.10   | 56.50   | 14.68                             | 11.17                            |
| BBFC-08-6N-SS  | 1/2       | 12.70 | 3/8      | 10.40          | 15/16             | 7/8     | 15/16    | 22.86   | 61.76   | 19.44                             | 12.70                            |
| BBFC-08-8N-SS  | 1/2       | 12.70 | 1/2      | 10.40          | 1-1/16            | 7/8     | 15/16    | 22.80   | 70.80   | 19.44                             | 12.70                            |
| BBFC-12-12N-SS | 3/4       | 19.05 | 3/4      | 15.00          | 1-1/4             | 1-1/8   | 1-3/16   | 22.60   | 74.40   | 25.79                             | 16.76                            |
| BBFC-16-16N-SS | 1         | 25.40 | 1        | 22.35          | 1-5/8             | 1-1/2   | 1-5/8    | 31.24   | 95.55   | 33.73                             | 19.05                            |
| BBFC-20-20N-SS | 1-1/4     | 31.75 | 1-1/4    | 27.68          | 1-7/8             | 1-7/8   | 1-7/8    | 41.14   | 105.59  | 41.67                             | 19.05                            |
| BBFC-24-24N-SS | 1-1/2     | 38.10 | 1-1/2    | 33.90          | 1-1/4             | 2-1/4   | 2-1/4    | 50.03   | 114.57  | 49.61                             | 19.05                            |
| BBFC-32-32N-SS | 2         | 50.80 | 2        | 45.97          | 1-3/4             | 3       | 2-3/4    | 67.56   | 132.63  | 57.94                             | 19.05                            |



## Female Elbow



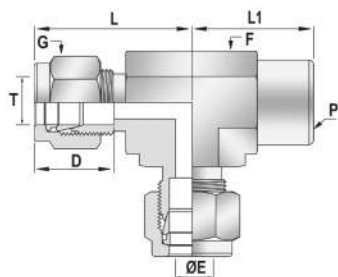
### Metric Tube x NPT Threads

| Part No       | Tube O.D.<br>T<br>mm | B<br>NPT | E<br>Min<br>mm | Width Across Flat |           | D<br>mm | L1<br>mm | L<br>mm |
|---------------|----------------------|----------|----------------|-------------------|-----------|---------|----------|---------|
|               |                      |          |                | F<br>Inch         | G<br>Inch |         |          |         |
| BFE-M06-4N-SS | 6                    | 1/4      | 4.20           | 19                | 14        | 15.50   | 26.50    | 33.23   |
| BFE-M06-6N-SS | 6                    | 3/8      | 4.20           | 24                | 14        | 15.30   | 22.40    | 29.80   |
| BFE-M06-8N-SS | 6                    | 1/2      | 4.20           | 28                | 14        | 15.30   | 28.40    | 34.60   |
| BFE-M08-4N-SS | 8                    | 1/4      | 6.40           | 19                | 16        | 16.20   | 22.40    | 30.60   |
| BFE-M08-8N-SS | 8                    | 1/2      | 6.40           | 28                | 16        | 16.20   | 28.40    | 35.20   |
| BFE-M10-4N-SS | 10                   | 1/4      | 7.90           | 19                | 19        | 18.10   | 27.00    | 33.15   |
| BFE-M10-6N-SS | 10                   | 3/8      | 7.90           | 24                | 19        | 18.10   | 30.50    | 39.43   |
| BFE-M10-8N-SS | 10                   | 1/2      | 7.90           | 28                | 19        | 18.10   | 32.00    | 40.63   |
| BFE-M12-6N-SS | 12                   | 3/8      | 9.50           | 24                | 22        | 22.30   | 30.50    | 41.08   |
| BFE-M12-8N-SS | 12                   | 1/2      | 9.50           | 28                | 22        | 22.30   | 30.70    | 41.98   |
| BFE-M16-8N-SS | 16                   | 1/2      | 12.70          | 27                | 25        | 24.40   | 28.40    | 39.50   |

### Imperial Tube x NPT Threads

| Part No       | Tube O.D. |         | B<br>NPT | E<br>Min<br>mm | Width Across Flat |           | D<br>mm | L1<br>mm | L<br>mm |
|---------------|-----------|---------|----------|----------------|-------------------|-----------|---------|----------|---------|
|               | Inch      | T<br>mm |          |                | F<br>Inch         | G<br>Inch |         |          |         |
| BFE-02-2N-SS  | 1/8       | 3.17    | 1/8      | 2.20           | 1/2               | 7/16      | 12.70   | 19.05    | 24.63   |
| BFE-02-4N-SS  | 1/8       | 3.17    | 1/4      | 2.20           | 11/16             | 7/16      | 12.70   | 22.35    | 27.82   |
| BFE-03-2N-SS  | 3/16      | 4.76    | 1/8      | 3.04           | 1/2               | 1/2       | 13.71   | 19.05    | 25.40   |
| BFE-04-2N-SS  | 1/4       | 6.35    | 1/8      | 4.80           | 1/2               | 9/16      | 15.24   | 19.05    | 26.92   |
| BFE-04-4N-SS  | 1/4       | 6.35    | 1/4      | 4.80           | 3/4               | 9/16      | 15.30   | 26.00    | 33.50   |
| BFE-04-6N-SS  | 1/4       | 6.35    | 3/8      | 4.80           | 15/16             | 9/16      | 15.30   | 22.35    | 31.75   |
| BFE-04-8N-SS  | 1/4       | 6.35    | 1/2      | 4.80           | 1-1/8             | 9/16      | 15.30   | 30.00    | 37.50   |
| BFE-05-2N-SS  | 5/16      | 7.93    | 1/8      | 6.35           | 9/16              | 5/8       | 16.25   | 19.05    | 28.70   |
| BFE-05-4N-SS  | 5/16      | 7.93    | 1/4      | 6.35           | 3/4               | 5/8       | 16.25   | 22.35    | 30.48   |
| BFE-06-2N-SS  | 3/8       | 9.52    | 1/8      | 7.11           | 5/8               | 11/16     | 16.76   | 19.05    | 30.48   |
| BFE-06-4N-SS  | 3/8       | 9.52    | 1/4      | 7.11           | 3/4               | 11/16     | 17.10   | 26.00    | 34.00   |
| BFE-06-6N-SS  | 3/8       | 9.52    | 3/8      | 7.11           | 15/16             | 11/16     | 17.10   | 30.50    | 37.90   |
| BFE-06-8N-SS  | 3/8       | 9.52    | 1/2      | 7.11           | 1-1/8             | 11/16     | 17.10   | 31.50    | 38.60   |
| BFE-08-4N-SS  | 1/2       | 12.70   | 1/4      | 10.40          | 13/16             | 7/8       | 22.80   | 27.50    | 37.70   |
| BFE-08-6N-SS  | 1/2       | 12.70   | 3/8      | 10.40          | 15/16             | 7/8       | 22.80   | 30.50    | 41.70   |
| BFE-08-8N-SS  | 1/2       | 12.70   | 1/2      | 10.40          | 1-1/8             | 7/8       | 22.80   | 31.50    | 42.20   |
| BFE-10-6N-SS  | 5/8       | 15.87   | 3/8      | 12.70          | 15/16             | 1         | 24.38   | 20.35    | 38.10   |
| BFE-10-8N-SS  | 5/8       | 15.87   | 1/2      | 12.70          | 1-1/8             | 1         | 24.38   | 28.44    | 39.87   |
| BFE-12-8N-SS  | 3/4       | 19.05   | 1/2      | 15.00          | 1-1/8             | 1-1/8     | 24.38   | 28.44    | 39.87   |
| BFE-12-12N-SS | 3/4       | 19.05   | 3/4      | 15.00          | 1-1/4             | 1-1/8     | 24.38   | 31.75    | 44.70   |
| BFE-14-12N-SS | 7/8       | 22.22   | 3/4      | 18.28          | 1-1/4             | 1-1/4     | 25.90   | 31.75    | 44.70   |
| BFE-16-12N-SS | 1         | 25.40   | 3/4      | 22.35          | 1-27/64           | 1-1/2     | 31.24   | 31.75    | 49.02   |
| BFE-16-16N-SS | 1         | 25.40   | 1        | 22.35          | 1-11/16           | 1-1/2     | 31.24   | 38.10    | 50.29   |

## Female Run Tee



### Metric Tube x NPT Threads

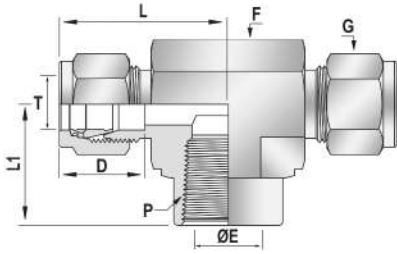
| Part No        | Tube O.D. |  | B<br>NPT | E<br>Min<br>mm | Width Across Flat |           | D<br>mm | L1<br>mm | L<br>mm |
|----------------|-----------|--|----------|----------------|-------------------|-----------|---------|----------|---------|
|                | T<br>mm   |  |          |                | F<br>Inch         | G<br>Inch |         |          |         |
| BFRT-M06-2N-SS | 6         |  | 1/8      | 4.80           | 13                | 14        | 15.30   | 27.00    | 19.00   |
| BFRT-M06-4N-SS | 6         |  | 1/4      | 4.80           | 19                | 14        | 15.30   | 29.80    | 22.40   |
| BFRT-M06-8N-SS | 6         |  | 1/2      | 4.80           | 28                | 14        | 15.30   | 34.60    | 28.40   |
| BFRT-M08-2N-SS | 8         |  | 1/8      | 6.40           | 16                | 16        | 16.20   | 29.90    | 19.00   |
| BFRT-M08-4N-SS | 8         |  | 1/4      | 6.40           | 19                | 16        | 16.20   | 30.60    | 22.40   |
| BFRT-M08-6N-SS | 8         |  | 3/8      | 6.40           | 24                | 16        | 16.20   | 32.70    | 22.40   |
| BFRT-M08-8N-SS | 8         |  | 1/2      | 6.40           | 28                | 16        | 16.20   | 35.50    | 28.40   |
| BFRT-M12-4N-SS | 12        |  | 1/4      | 9.50           | 20                | 22        | 22.80   | 36.00    | 22.40   |
| BFRT-M12-6N-SS | 12        |  | 3/8      | 9.50           | 24                | 22        | 22.80   | 36.00    | 22.40   |
| BFRT-M12-8N-SS | 12        |  | 1/2      | 9.50           | 28                | 22        | 22.80   | 39.80    | 28.40   |
| BFRT-M16-8N-SS | 16        |  | 1/2      | 12.70          | 28                | 25        | 24.40   | 39.80    | 28.40   |

### Imperial Tube x NPT Threads

| Part No        | Tube O.D. |       | B<br>NPT | E<br>Min<br>mm | Width Across Flat |           | D<br>mm | L1<br>mm | L<br>mm |
|----------------|-----------|-------|----------|----------------|-------------------|-----------|---------|----------|---------|
|                | Inch      | mm    |          |                | F<br>Inch         | G<br>Inch |         |          |         |
| BFRT-02-2N-SS  | 1/8       | 3.17  | 1/8      | 2.28           | 1/2               | 7/16      | 12.70   | 24.60    | 19.00   |
| BFRT-04-2N-SS  | 1/4       | 6.35  | 1/8      | 4.82           | 1/2               | 9/16      | 15.20   | 32.70    | 20.50   |
| BFRT-04-4N-SS  | 1/4       | 6.35  | 1/4      | 4.80           | 3/4               | 9/16      | 15.30   | 33.00    | 25.50   |
| BFRT-06-4N-SS  | 3/8       | 9.52  | 1/4      | 7.11           | 3/4               | 11/16     | 17.10   | 33.40    | 26.00   |
| BFRT-08-6N-SS  | 1/2       | 12.70 | 3/8      | 10.40          | 15/16             | 7/8       | 22.80   | 36.00    | 22.30   |
| BFRT-08-8N-SS  | 1/2       | 12.70 | 1/2      | 10.40          | 1-1/8             | 7/8       | 22.80   | 41.50    | 30.50   |
| BFRT-12-12N-SS | 3/4       | 19.05 | 3/4      | 15.00          | 1-1/4             | 1-1/8     | 24.30   | 50.40    | 39.50   |
| BFRT-16-12N-SS | 1         | 25.40 | 3/4      | 22.35          | 1-3/8             | 1-1/2     | 38.70   | 49.00    | 31.70   |
| BFRT-16-16N-SS | 1         | 25.40 | 1        | 22.35          | 1-1/16            | 1-1/2     | 38.70   | 50.20    | 38.10   |



# Female Branch Tee



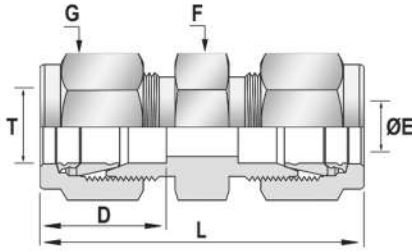
## Metric Tube x NPT Threads

| Part No        | Tube O.D.<br>T<br>mm | B<br>NPT | E<br>Min<br>mm | Width Across Flat |           | D<br>mm | L<br>mm | L1<br>mm |
|----------------|----------------------|----------|----------------|-------------------|-----------|---------|---------|----------|
|                |                      |          |                | F<br>Inch         | G<br>Inch |         |         |          |
| BFBT-M06-2N-SS | 6                    | 1/8      | 4.80           | 13                | 14        | 15.30   | 27.00   | 19.00    |
| BFBT-M06-4N-SS | 6                    | 1/4      | 4.20           | 19                | 14        | 15.50   | 33.20   | 25.50    |
| BFBT-M06-6N-SS | 6                    | 3/8      | 4.80           | 24                | 14        | 15.30   | 31.70   | 22.40    |
| BFBT-M06-8N-SS | 6                    | 1/2      | 4.80           | 28                | 14        | 15.30   | 34.70   | 28.40    |
| BFBT-M08-2N-SS | 8                    | 1/8      | 6.40           | 16                | 16        | 16.20   | 29.90   | 19.00    |
| BFBT-M08-4N-SS | 8                    | 1/4      | 6.40           | 19                | 16        | 16.20   | 30.60   | 22.40    |
| BFBT-M08-6N-SS | 8                    | 3/8      | 6.40           | 24                | 16        | 16.20   | 32.40   | 22.40    |
| BFBT-M08-8N-SS | 8                    | 1/2      | 6.40           | 28                | 16        | 16.20   | 35.20   | 28.40    |
| BFBT-M10-4N-SS | 10                   | 1/4      | 7.90           | 19                | 19        | 17.20   | 33.50   | 22.40    |
| BFBT-M10-6N-SS | 10                   | 3/8      | 7.90           | 24                | 19        | 17.20   | 33.30   | 22.40    |
| BFBT-M10-8N-SS | 10                   | 1/2      | 9.50           | 28                | 19        | 17.20   | 33.60   | 22.40    |
| BFBT-M12-4N-SS | 12                   | 1/4      | 9.50           | 20                | 22        | 22.30   | 36.50   | 26.00    |
| BFBT-M12-6N-SS | 12                   | 3/8      | 9.50           | 24                | 22        | 22.80   | 36.00   | 22.40    |
| BFBT-M12-8N-SS | 12                   | 1/2      | 9.50           | 28                | 22        | 22.30   | 41.00   | 30.50    |
| BFBT-M12-8N-SS | 16                   | 1/2      | 12.70          | 28                | 25        | 24.40   | 38.80   | 28.70    |

## Imperial Tube x NPT Threads

| Part No        | Tube O.D.<br>T |       | B<br>NPT | E<br>Min<br>mm | Width Across Flat |           | D<br>mm | L<br>mm | L1<br>mm |
|----------------|----------------|-------|----------|----------------|-------------------|-----------|---------|---------|----------|
|                | Inch           | mm    |          |                | F<br>Inch         | G<br>Inch |         |         |          |
| BFBT-02-2N-SS  | 1/8            | 3.17  | 1/8      | 2.28           | 1/2               | 7/16      | 12.70   | 24.30   | 19.00    |
| BFBT-04-2N-SS  | 1/4            | 6.35  | 1/8      | 4.80           | 5/8               | 9/16      | 15.30   | 28.50   | 20.00    |
| BFBT-04-4N-SS  | 1/4            | 6.35  | 1/4      | 4.80           | 3/4               | 9/16      | 15.30   | 33.30   | 25.70    |
| BFBT-06-4N-SS  | 3/8            | 9.52  | 1/4      | 7.10           | 3/4               | 11/16     | 17.10   | 33.20   | 25.00    |
| BFBT-06-6N-SS  | 3/8            | 9.52  | 3/8      | 7.10           | 15/16             | 11/16     | 17.10   | 35.70   | 28.80    |
| BFBT-06-8N-SS  | 3/8            | 9.52  | 1/2      | 7.10           | 1-1/8             | 11/16     | 17.10   | 37.00   | 30.70    |
| BFBT-06-12N-SS | 3/8            | 9.52  | 3/4      | 7.10           | 1-3/8             | 11/16     | 17.10   | 46.00   | 39.00    |
| BFBT-08-4N-SS  | 1/2            | 12.70 | 1/4      | 10.40          | 13/16             | 7/8       | 22.80   | 37.20   | 26.00    |
| BFBT-08-6N-SS  | 1/2            | 12.70 | 3/8      | 10.40          | 1                 | 7/8       | 22.80   | 39.20   | 28.00    |
| BFBT-08-8N-SS  | 1/2            | 12.70 | 1/2      | 10.40          | 1-1/8             | 7/8       | 22.80   | 41.90   | 30.70    |
| BFBT-10-8N-SS  | 5/8            | 15.87 | 1/2      | 12.70          | 1-1/8             | 1-1/8     | 24.30   | 41.80   | 30.70    |
| BFBT-12-12N-SS | 3/4            | 19.05 | 3/4      | 15.00          | 1-1/4             | 1-1/8     | 24.30   | 44.70   | 31.70    |
| BFBT-16-12N-SS | 1              | 25.40 | 3/4      | 22.35          | 1-27/64           | 1-1/2     | 31.20   | 49.00   | 31.70    |
| BFBT-16-16N-SS | 1              | 25.40 | 1        | 22.35          | 1-11/16           | 1-1/2     | 31.20   | 53.50   | 38.10    |

# Union



## Metric Tube

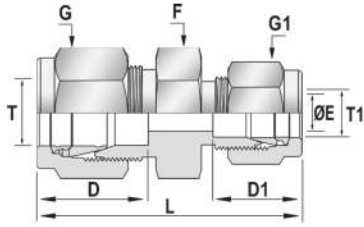
| Part No    | Tube O.D. |  | E<br>Min<br>mm | Width Across Flat |           | D<br>mm | L<br>mm |
|------------|-----------|--|----------------|-------------------|-----------|---------|---------|
|            | T<br>mm   |  |                | F<br>Inch         | G<br>Inch |         |         |
| BLK-M02-SS | 2         |  | 1.70           | 12                | 12        | 12.90   | 35.60   |
| BLK-M03-SS | 3         |  | 2.40           | 12                | 12        | 12.90   | 35.30   |
| BLK-M04-SS | 4         |  | 2.40           | 12                | 12        | 13.70   | 37.30   |
| BLK-M06-SS | 6         |  | 4.80           | 14                | 14        | 15.50   | 43.50   |
| BLK-M08-SS | 8         |  | 6.40           | 15                | 16        | 16.20   | 44.60   |
| BLK-M10-SS | 10        |  | 7.90           | 18                | 19        | 18.10   | 49.30   |
| BLK-M12-SS | 12        |  | 9.50           | 22                | 22        | 22.30   | 52.50   |
| BLK-M14-SS | 14        |  | 11.10          | 24                | 25        | 24.40   | 53.60   |
| BLK-M15-SS | 15        |  | 11.90          | 24                | 25        | 24.40   | 53.60   |
| BLK-M16-SS | 16        |  | 12.70          | 30                | 32        | 24.40   | 53.60   |
| BLK-M18-SS | 18        |  | 15.10          | 30                | 32        | 24.40   | 53.60   |
| BLK-M20-SS | 20        |  | 15.90          | 30                | 32        | 26.00   | 55.00   |
| BLK-M22-SS | 22        |  | 18.30          | 30                | 32        | 26.00   | 55.00   |
| BLK-M25-SS | 25        |  | 22.80          | 35                | 38        | 31.30   | 65.00   |
| BLK-M28-SS | 28        |  | 22.80          | 41                | 46        | 36.60   | 85.00   |
| BLK-M30-SS | 30        |  | 26.20          | 46                | 50        | 39.70   | 92.90   |
| BLK-M32-SS | 32        |  | 28.60          | 46                | 50        | 42.00   | 97.30   |
| BLK-M35-SS | 35        |  | 31.50          | 50                | 55        | 42.10   | 97.60   |
| BLK-M38-SS | 38        |  | 33.70          | 55                | 60        | 47.90   | 113.60  |
| BLK-M40-SS | 40        |  | 35.20          | 60                | 65        | 48.60   | 115.00  |
| BLK-M42-SS | 42        |  | 36.80          | 60                | 65        | 49.30   | 116.40  |
| BLK-M50-SS | 50        |  | 45.20          | 70                | 76        | 67.20   | 149.00  |

## Imperial Tube

| Part No   | Tube O.D. |       | E<br>Min<br>mm | Width Across Flat |           | D<br>mm | L<br>mm |
|-----------|-----------|-------|----------------|-------------------|-----------|---------|---------|
|           | T<br>mm   |       |                | F<br>Inch         | G<br>Inch |         |         |
| BLK-01-SS | 1/16      | 1.59  | 1.27           | 5/16              | 5/16      | 8.63    | 25.15   |
| BLK-02-SS | 1/8       | 3.17  | 2.28           | 7/16              | 7/16      | 12.70   | 35.56   |
| BLK-03-SS | 3/16      | 4.76  | 3.04           | 7/16              | 1/2       | 13.71   | 37.33   |
| BLK-04-SS | 1/4       | 6.35  | 4.80           | 1/2               | 9/16      | 15.30   | 42.50   |
| BLK-05-SS | 5/16      | 7.93  | 6.35           | 9/16              | 5/8       | 16.25   | 42.92   |
| BLK-06-SS | 3/8       | 9.52  | 7.10           | 5/8               | 11/16     | 17.10   | 46.70   |
| BLK-08-SS | 1/2       | 12.70 | 10.40          | 7/8               | 7/8       | 22.80   | 52.40   |
| BLK-10-SS | 5/8       | 15.87 | 12.70          | 15/16             | 1         | 24.38   | 52.10   |
| BLK-12-SS | 3/4       | 19.05 | 15.00          | 1-1/16            | 1-1/8     | 24.38   | 56.00   |
| BLK-14-SS | 7/8       | 22.22 | 18.28          | 1-3/16            | 1-1/4     | 25.90   | 57.30   |
| BLK-16-SS | 1         | 25.40 | 22.35          | 1-3/8             | 1-1/2     | 31.24   | 63.30   |
| BLK-20-SS | 1-1/4     | 31.75 | 27.60          | 1-3/4             | 1-7/8     | 41.10   | 92.20   |
| BLK-24-SS | 1-1/2     | 38.10 | 34.00          | 2-1/8             | 2-1/4     | 50.00   | 107.95  |
| BLK-32-SS | 2         | 50.80 | 45.97          | 2-3/4             | 3         | 67.56   | 149.35  |



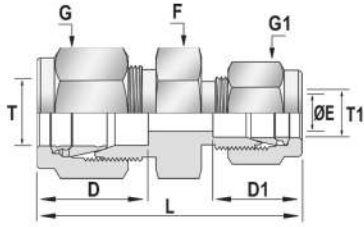
# Reducing Union



## Imperial Tube

| Part No      | Tube O.D. |            | E<br>Min<br>mm | Width Across Flat |           |            | D     | D1    | L     |
|--------------|-----------|------------|----------------|-------------------|-----------|------------|-------|-------|-------|
|              | T<br>Inch | T1<br>Inch |                | F<br>Inch         | G<br>Inch | G1<br>Inch |       |       |       |
| BRU-02-01-SS | 1/8       | 1/16       | 1.30           | 7/16              | 7/16      | 5/16       | 12.70 | 8.63  | 30.91 |
| BRU-03-02-SS | 3/16      | 1/8        | 2.30           | 7/16              | 1/2       | 7/16       | 13.71 | 12.70 | 36.57 |
| BRU-04-02-SS | 1/4       | 1/8        | 2.20           | 1/2               | 9/16      | 7/16       | 15.30 | 14.80 | 35.50 |
| BRU-04-03-SS | 1/4       | 3/16       | 3.00           | 1/2               | 9/16      | 1/2        | 15.24 | 13.71 | 39.37 |
| BRU-05-02-SS | 5/16      | 1/8        | 2.30           | 9/16              | 5/8       | 7/16       | 16.25 | 12.70 | 39.87 |
| BRU-05-04-SS | 5/16      | 1/4        | 4.80           | 9/16              | 5/8       | 9/16       | 16.25 | 15.24 | 42.16 |
| BRU-06-02-SS | 3/8       | 1/8        | 2.30           | 5/8               | 11/16     | 7/16       | 16.76 | 12.70 | 42.38 |
| BRU-06-04-SS | 3/8       | 1/4        | 4.80           | 5/8               | 11/16     | 9/16       | 17.10 | 15.30 | 44.00 |
| BRU-06-05-SS | 3/8       | 5/16       | 6.40           | 5/8               | 11/16     | 5/8        | 16.76 | 16.25 | 44.19 |
| BRU-08-02-SS | 1/2       | 1/8        | 2.30           | 7/8               | 7/8       | 7/16       | 22.86 | 12.70 | 46.40 |
| BRU-08-04-SS | 1/2       | 1/4        | 4.80           | 7/8               | 7/8       | 9/16       | 22.86 | 15.24 | 46.99 |
| BRU-08-06-SS | 1/2       | 3/8        | 7.10           | 7/8               | 7/8       | 11/16      | 22.80 | 17.10 | 50.00 |
| BRU-10-06-SS | 5/8       | 3/8        | 7.10           | 15/16             | 1         | 11/16      | 24.38 | 16.76 | 49.80 |
| BRU-10-08-SS | 5/8       | 1/2        | 10.40          | 15/16             | 1         | 7/8        | 24.38 | 22.86 | 53.58 |
| BRU-12-04-SS | 3/4       | 1/4        | 4.80           | 1-1/16            | 1-1/8     | 9/16       | 24.38 | 15.24 | 49.27 |
| BRU-12-06-SS | 3/4       | 3/8        | 7.10           | 1-1/16            | 1-1/8     | 11/16      | 24.38 | 16.76 | 50.80 |
| BRU-12-08-SS | 3/4       | 1/2        | 10.40          | 1-1/16            | 1-1/8     | 7/8        | 24.38 | 22.86 | 55.50 |
| BRU-12-10-SS | 3/4       | 5/8        | 12.70          | 1-1/16            | 1-1/8     | 1          | 24.38 | 24.38 | 55.30 |
| BRU-16-08-SS | 1         | 1/2        | 10.40          | 1-3/8             | 1-1/2     | 7/8        | 31.24 | 22.86 | 64.40 |
| BRU-16-12-SS | 1         | 3/4        | 15.00          | 1-3/8             | 1-1/2     | 1-1/8      | 31.24 | 24.38 | 65.15 |

# Reducing Union

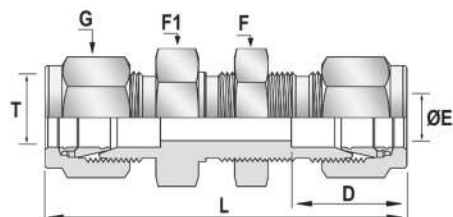


## Metric Tube

| Part No        | Tube O.D. |            | E<br>Min<br>mm | Width Across Flat |           |            | D     | D1    | L      |
|----------------|-----------|------------|----------------|-------------------|-----------|------------|-------|-------|--------|
|                | T<br>Inch | T1<br>Inch |                | F<br>Inch         | G<br>Inch | G1<br>Inch |       |       |        |
| BRU-M06-M03-SS | 6         | 3          | 2.40           | 14                | 14        | 12         | 15.30 | 12.90 | 38.60  |
| BRU-M06-M04-SS | 6         | 4          | 2.40           | 14                | 14        | 12         | 15.30 | 13.70 | 39.40  |
| BRU-M08-M06-SS | 8         | 6          | 4.80           | 16                | 16        | 14         | 16.20 | 15.30 | 42.30  |
| BRU-M10-M06-SS | 10        | 6          | 4.80           | 18                | 19        | 14         | 17.20 | 15.30 | 44.50  |
| BRU-M10-M08-SS | 10        | 8          | 6.40           | 18                | 19        | 16         | 17.20 | 16.20 | 45.10  |
| BRU-M12-M06-SS | 12        | 6          | 4.80           | 22                | 22        | 14         | 22.80 | 15.30 | 47.00  |
| BRU-M12-M08-SS | 12        | 8          | 6.40           | 22                | 22        | 16         | 22.80 | 16.20 | 47.80  |
| BRU-M12-M10-SS | 12        | 10         | 7.90           | 22                | 22        | 19         | 22.80 | 17.20 | 48.70  |
| BRU-M14-M06-SS | 14        | 6          | 4.80           | 24                | 25        | 14         | 24.40 | 15.30 | 48.80  |
| BRU-M14-M08-SS | 14        | 8          | 6.40           | 24                | 25        | 16         | 24.40 | 16.20 | 49.70  |
| BRU-M14-M10-SS | 14        | 10         | 7.90           | 24                | 25        | 19         | 24.40 | 17.20 | 49.70  |
| BRU-M14-M12-SS | 14        | 12         | 9.50           | 24                | 25        | 22         | 24.40 | 22.80 | 52.50  |
| BRU-M16-M10-SS | 16        | 10         | 7.90           | 24                | 25        | 19         | 24.40 | 17.20 | 49.50  |
| BRU-M16-M12-SS | 16        | 12         | 9.50           | 24                | 25        | 22         | 24.40 | 22.80 | 52.00  |
| BRU-M18-M10-SS | 18        | 10         | 7.90           | 27                | 30        | 19         | 24.40 | 17.20 | 51.00  |
| BRU-M18-M12-SS | 18        | 12         | 9.50           | 27                | 30        | 22         | 24.40 | 22.80 | 53.50  |
| BRU-M25-M14-SS | 25        | 14         | 11.10          | 35                | 38        | 25         | 31.30 | 24.40 | 61.10  |
| BRU-M25-M18-SS | 25        | 18         | 15.10          | 35                | 38        | 30         | 31.30 | 24.40 | 61.00  |
| BRU-M25-M20-SS | 25        | 20         | 15.90          | 35                | 38        | 32         | 31.30 | 26.00 | 62.30  |
| BRU-M30-M18-SS | 30        | 18         | 15.10          | 46                | 50        | 30         | 39.70 | 24.40 | 75.40  |
| BRU-M30-M20-SS | 30        | 20         | 15.90          | 46                | 50        | 32         | 39.70 | 26.00 | 75.40  |
| BRU-M30-M25-SS | 30        | 25         | 22.80          | 46                | 50        | 38         | 39.70 | 31.30 | 80.10  |
| BRU-M32-M18-SS | 32        | 18         | 15.10          | 46                | 50        | 30         | 42.00 | 24.40 | 77.80  |
| BRU-M32-M20-SS | 32        | 20         | 15.90          | 46                | 50        | 32         | 42.00 | 26.00 | 77.80  |
| BRU-M32-M25-SS | 32        | 25         | 22.80          | 46                | 50        | 38         | 42.00 | 31.30 | 82.30  |
| BRU-M38-M20-SS | 38        | 20         | 15.90          | 55                | 60        | 32         | 49.40 | 26.00 | 87.50  |
| BRU-M38-M25-SS | 38        | 25         | 22.80          | 55                | 60        | 38         | 49.40 | 31.30 | 92.00  |
| BRU-M38-M30-SS | 38        | 30         | 26.20          | 55                | 60        | 50         | 49.40 | 39.70 | 104.60 |



# Bulkhead Union



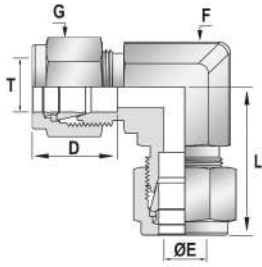
## Metric Tube

| Part No    | Tube O.D. |  | E<br>Min<br>mm | Width Across Flat |         |          | D<br>mm | L<br>mm | Panel<br>Hole<br>Drill Size<br>mm | Panel<br>Max.<br>Thickness<br>mm |
|------------|-----------|--|----------------|-------------------|---------|----------|---------|---------|-----------------------------------|----------------------------------|
|            | T<br>mm   |  |                | F<br>mm           | G<br>mm | F1<br>mm |         |         |                                   |                                  |
| BBU-M03-SS | 3         |  | 2.40           | 14                | 12      | 12       | 12.90   | 51.30   | 8.30                              | 12.70                            |
| BBU-M04-SS | 4         |  | 2.40           | 14                | 12      | 14       | 13.70   | 53.60   | 9.90                              | 12.70                            |
| BBU-M06-SS | 6         |  | 4.20           | 16                | 14      | 16       | 15.50   | 59.00   | 11.50                             | 10.20                            |
| BBU-M08-SS | 8         |  | 6.40           | 16                | 16      | 17       | 16.20   | 61.00   | 13.10                             | 11.20                            |
| BBU-M10-SS | 10        |  | 7.10           | 22                | 19      | 22       | 18.10   | 63.50   | 16.20                             | 11.20                            |
| BBU-M12-SS | 12        |  | 7.10           | 25                | 22      | 25       | 22.30   | 74.00   | 19.50                             | 12.70                            |
| BBU-M14-SS | 14        |  | 11.10          | 27                | 25      | 27       | 24.40   | 72.50   | 22.80                             | 12.70                            |
| BBU-M15-SS | 15        |  | 11.90          | 27                | 25      | 27       | 24.40   | 72.50   | 22.80                             | 12.70                            |
| BBU-M16-SS | 16        |  | 12.70          | 27                | 25      | 27       | 24.40   | 72.50   | 22.80                             | 12.70                            |
| BBU-M18-SS | 18        |  | 15.10          | 30                | 30      | 30       | 24.40   | 78.90   | 26.00                             | 16.80                            |
| BBU-M20-SS | 20        |  | 15.90          | 35                | 32      | 35       | 26.00   | 84.50   | 29.00                             | 17.00                            |
| BBU-M22-SS | 22        |  | 18.30          | 35                | 32      | 35       | 26.00   | 84.50   | 29.00                             | 19.10                            |
| BBU-M25-SS | 25        |  | 22.80          | 41                | 38      | 41       | 31.30   | 95.90   | 33.70                             | 19.10                            |
| BBU-M32-SS | 32        |  | 28.60          | 50                | 50      | 50       | 42.00   | 128.30  | 42.50                             | 19.00                            |
| BBU-M38-SS | 38        |  | 33.70          | 60                | 60      | 60       | 49.40   | 144.60  | 50.50                             | 19.00                            |

## Imperial Tube

| Part No   | Tube O.D. |       | E<br>Min<br>mm | Width Across Flat |           |            | D     | L      | Panel<br>Hole<br>Drill Size<br>mm | Panel<br>Max.<br>Thickness<br>mm |
|-----------|-----------|-------|----------------|-------------------|-----------|------------|-------|--------|-----------------------------------|----------------------------------|
|           | Inch      | mm    |                | F<br>Inch         | G<br>Inch | F1<br>Inch |       |        |                                   |                                  |
| BBU-01-SS | 1/16      | 1.59  | 1.27           | 5/16              | 5/16      | 5/16       | 8.63  | 31.50  | 5.16                              | 3.05                             |
| BBU-02-SS | 1/8       | 3.17  | 2.28           | 1/2               | 7/16      | 1/2        | 12.70 | 51.30  | 8.33                              | 12.70                            |
| BBU-03-SS | 3/16      | 4.76  | 3.04           | 9/16              | 1/2       | 9/16       | 13.71 | 53.59  | 9.92                              | 12.70                            |
| BBU-04-SS | 1/4       | 6.35  | 4.80           | 5/8               | 9/16      | 5/8        | 15.30 | 58.50  | 11.50                             | 10.16                            |
| BBU-05-SS | 5/16      | 7.93  | 6.35           | 11/16             | 5/8       | 11/16      | 16.25 | 60.70  | 13.09                             | 11.17                            |
| BBU-06-SS | 3/8       | 9.52  | 7.10           | 3/4               | 11/16     | 3/4        | 17.10 | 63.00  | 14.65                             | 11.17                            |
| BBU-08-SS | 1/2       | 12.70 | 10.40          | 1                 | 7/8       | 1          | 22.80 | 75.00  | 19.44                             | 12.70                            |
| BBU-10-SS | 5/8       | 15.87 | 12.70          | 1-1/16            | 1         | 1-1/16     | 24.38 | 72.64  | 22.62                             | 12.70                            |
| BBU-12-SS | 3/4       | 19.05 | 15.00          | 1-3/16            | 1-1/8     | 1-3/16     | 24.38 | 78.99  | 25.79                             | 16.76                            |
| BBU-14-SS | 7/8       | 22.22 | 18.28          | 1-3/8             | 1-1/4     | 1-3/8      | 25.90 | 84.58  | 28.97                             | 19.05                            |
| BBU-16-SS | 1         | 25.40 | 22.35          | 1-5/8             | 1-1/2     | 1-5/8      | 31.24 | 95.75  | 33.73                             | 19.05                            |
| BBU-20-SS | 1-1/4     | 31.75 | 27.68          | 1-7/8             | 1-7/8     | 1-7/8      | 41.40 | 123.19 | 41.67                             | 19.05                            |
| BBU-24-SS | 1-1/2     | 38.10 | 34.00          | 2-1/4             | 2-1/4     | 2-1/4      | 50.00 | 139.19 | 49.61                             | 19.05                            |
| BBU-32-SS | 2         | 50.80 | 45.90          | 2-3/4             | 3         | 2-3/4      | 67.56 | 180.34 | 67.07                             | 19.05                            |

# Union Elbow



## Metric Tube x NPT Threads

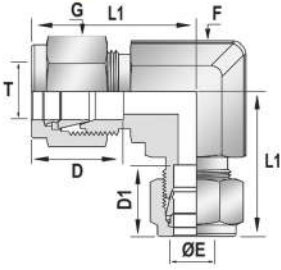
| Part No    | Tube O.D. |  | E<br>Min<br>mm | Width Across Flat |         | D     | L      |
|------------|-----------|--|----------------|-------------------|---------|-------|--------|
|            | T<br>mm   |  |                | F<br>mm           | G<br>mm |       |        |
| BUE-M02-SS | 2         |  | 1.70           | 9                 | 12      | 12.90 | 22.30  |
| BUE-M03-SS | 3         |  | 2.40           | 9                 | 12      | 12.90 | 22.30  |
| BUE-M04-SS | 4         |  | 2.40           | 12                | 12      | 13.70 | 25.40  |
| BUE-M06-SS | 6         |  | 4.20           | 14                | 14      | 15.30 | 27.00  |
| BUE-M08-SS | 8         |  | 6.40           | 16                | 16      | 16.20 | 28.80  |
| BUE-M10-SS | 10        |  | 8.00           | 18                | 19      | 18.10 | 31.50  |
| BUE-M12-SS | 12        |  | 9.50           | 20                | 22      | 22.80 | 36.00  |
| BUE-M14-SS | 14        |  | 11.10          | 25                | 25      | 24.40 | 38.80  |
| BUE-M15-SS | 15        |  | 11.90          | 25                | 25      | 24.40 | 38.80  |
| BUE-M16-SS | 16        |  | 12.70          | 25                | 25      | 24.40 | 38.80  |
| BUE-M18-SS | 18        |  | 15.10          | 27                | 30      | 24.40 | 39.80  |
| BUE-M20-SS | 20        |  | 15.90          | 31                | 32      | 26.00 | 42.60  |
| BUE-M22-SS | 22        |  | 18.30          | 31                | 32      | 26.00 | 42.60  |
| BUE-M25-SS | 25        |  | 22.80          | 36                | 38      | 31.30 | 49.10  |
| BUE-M28-SS | 28        |  | 22.80          | 41                | 46      | 36.60 | 64.00  |
| BUE-M32-SS | 32        |  | 28.60          | 46                | 50      | 42.00 | 72.30  |
| BUE-M38-SS | 38        |  | 33.70          | 50                | 60      | 49.40 | 84.00  |
| BUE-M40-SS | 40        |  | 35.20          | 60                | 65      | 48.60 | 81.90  |
| BUE-M42-SS | 42        |  | 36.80          | 60                | 65      | 49.30 | 82.50  |
| BUE-M50-SS | 50        |  | 45.20          | 70                | 76      | 67.20 | 107.00 |

## Imperial Tube x NPT Threads

| Part No   | Tube O.D. |       | E<br>Min<br>mm | Width Across Flat |         | D     | L      |
|-----------|-----------|-------|----------------|-------------------|---------|-------|--------|
|           | Inch      | mm    |                | F<br>mm           | G<br>mm |       |        |
| BUE-01-SS | 1/16      | 1.59  | 1.27           | 3/8               | 5/16    | 8.63  | 17.88  |
| BUE-02-SS | 1/8       | 3.17  | 2.28           | 3/8               | 7/16    | 12.70 | 22.35  |
| BUE-03-SS | 3/16      | 4.76  | 3.04           | 1/2               | 1/2     | 13.71 | 24.38  |
| BUE-04-SS | 1/4       | 6.35  | 4.80           | 1/2               | 9/16    | 15.30 | 27.00  |
| BUE-05-SS | 5/16      | 7.93  | 6.35           | 9/16              | 5/8     | 16.25 | 28.70  |
| BUE-06-SS | 3/8       | 9.52  | 7.10           | 5/8               | 11/16   | 17.10 | 30.00  |
| BUE-08-SS | 1/2       | 12.70 | 10.40          | 13/16             | 7/8     | 22.80 | 38.20  |
| BUE-10-SS | 5/8       | 15.87 | 12.70          | 15/16             | 1       | 24.38 | 38.80  |
| BUE-12-SS | 3/4       | 19.05 | 15.00          | 1-1/8             | 1-1/8   | 24.38 | 41.00  |
| BUE-14-SS | 7/8       | 22.22 | 18.28          | 1-1/4             | 1-1/4   | 25.90 | 44.70  |
| BUE-16-SS | 1         | 25.40 | 22.35          | 1-3/8             | 1-1/2   | 31.24 | 49.02  |
| BUE-20-SS | 1-1/4     | 31.75 | 27.68          | 1-11/16           | 1-7/8   | 41.10 | 66.54  |
| BUE-24-SS | 1-1/2     | 38.10 | 34.03          | 2                 | 2-1/4   | 50.00 | 77.97  |
| BUE-32-SS | 2         | 50.80 | 45.97          | 2-3/4             | 3       | 67.56 | 107.18 |



# Reducing Union Elbow



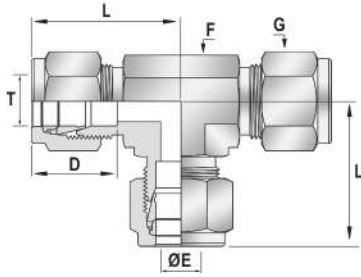
## Metric Tube

| Part No         | Tube O.D. |          | E<br>Min<br>mm | Width Across Flat |         |          | D     | D1    | L     | L1    |
|-----------------|-----------|----------|----------------|-------------------|---------|----------|-------|-------|-------|-------|
|                 | T<br>mm   | T1<br>mm |                | F<br>mm           | G<br>mm | G1<br>mm |       |       |       |       |
| BRUE-M08-M06-SS | 8         | 6        | 4.80           | 14.3              | 16.0    | 14.0     | 16.20 | 15.30 | 28.80 | 27.90 |
| BRUE-M10-M08-SS | 10        | 8        | 6.40           | 17.5              | 19.0    | 16.0     | 17.20 | 16.20 | 31.50 | 30.50 |
| BRUE-M12-M08-SS | 12        | 8        | 6.40           | 20.6              | 22.0    | 16.0     | 22.80 | 16.20 | 36.00 | 32.60 |
| BRUE-M14-M08-SS | 14        | 8        | 6.40           | 23.8              | 25.0    | 16.0     | 24.40 | 16.20 | 38.80 | 35.40 |
| BRUE-M14-M10-SS | 14        | 10       | 7.90           | 23.8              | 25.0    | 19.0     | 24.40 | 17.20 | 38.80 | 36.40 |

## Imperial Tube

| Part No       | Tube O.D. |            | E<br>Min<br>mm | Width Across Flat |           |            | D     | D1    | L     | L1    |
|---------------|-----------|------------|----------------|-------------------|-----------|------------|-------|-------|-------|-------|
|               | T<br>Inch | T1<br>Inch |                | F<br>Inch         | G<br>Inch | G1<br>Inch |       |       |       |       |
| BRUE-03-02-SS | 3/16      | 1/8        | 2.30           | 1/2               | 1/2       | 7/16       | 13.70 | 12.70 | 25.40 | 25.40 |
| BRUE-04-02-SS | 1/4       | 1/8        | 2.30           | 1/2               | 9/16      | 7/16       | 15.20 | 12.70 | 26.90 | 26.90 |
| BRUE-05-02-SS | 5/16      | 1/8        | 2.30           | 9/16              | 5/8       | 7/16       | 16.30 | 12.70 | 29.70 | 29.70 |
| BRUE-05-04-SS | 5/16      | 1/4        | 4.80           | 9/16              | 5/8       | 9/16       | 16.30 | 15.20 | 29.70 | 29.70 |
| BRUE-06-02-SS | 3/8       | 1/8        | 2.30           | 5/8               | 11/16     | 7/16       | 16.80 | 12.70 | 30.50 | 30.50 |
| BRUE-06-04-SS | 3/8       | 1/4        | 4.80           | 5/8               | 11/16     | 9/16       | 16.80 | 15.20 | 30.50 | 30.50 |
| BRUE-06-05-SS | 3/8       | 5/16       | 6.40           | 5/8               | 11/16     | 5/8        | 16.80 | 16.30 | 30.50 | 30.50 |
| BRUE-08-04-SS | 1/2       | 1/4        | 4.80           | 13/16             | 7/8       | 9/16       | 22.90 | 15.20 | 36.10 | 36.10 |
| BRUE-08-05-SS | 1/2       | 5/16       | 6.40           | 13/16             | 7/8       | 5/8        | 22.90 | 16.30 | 36.10 | 36.10 |
| BRUE-08-06-SS | 1/2       | 3/8        | 7.10           | 13/16             | 7/8       | 11/16      | 22.90 | 16.80 | 36.10 | 36.10 |
| BRUE-10-06-SS | 5/8       | 3/8        | 7.10           | 15/16             | 1         | 11/16      | 24.40 | 16.80 | 38.10 | 38.10 |
| BRUE-10-08-SS | 5/8       | 1/2        | 10.40          | 15/16             | 1         | 7/8        | 24.40 | 22.90 | 38.10 | 38.10 |
| BRUE-12-04-SS | 3/4       | 1/4        | 4.80           | 1-1/16            | 1-1/8     | 9/16       | 24.40 | 15.20 | 39.90 | 39.90 |
| BRUE-12-06-SS | 3/4       | 3/8        | 7.10           | 1-1/16            | 1-1/8     | 11/16      | 24.40 | 16.80 | 39.90 | 39.90 |
| BRUE-12-08-SS | 3/4       | 1/2        | 10.40          | 1-1/16            | 1-1/8     | 7/8        | 24.40 | 22.90 | 39.90 | 39.90 |
| BRUE-14-04-SS | 7/8       | 1/4        | 4.80           | 1-3/8             | 1-1/4     | 9/16       | 25.90 | 15.20 | 44.70 | 44.70 |
| BRUE-16-08-SS | 1         | 1/2        | 10.40          | 1-3/8             | 1-1/2     | 7/8        | 31.20 | 22.90 | 49.00 | 49.00 |
| BRUE-16-12-SS | 1         | 3/4        | 15.70          | 1-3/8             | 1-1/2     | 1-1/8      | 31.20 | 24.40 | 49.00 | 49.00 |

# Union Tee



## Imperial Tube

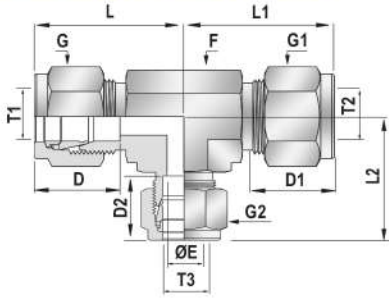
| Part No   | Tube O.D. |         | E<br>Min<br>mm | Width Across Flat |           | D     | L      |
|-----------|-----------|---------|----------------|-------------------|-----------|-------|--------|
|           | T<br>Inch | T<br>mm |                | F<br>Inch         | G<br>Inch |       |        |
| BUT-01-SS | 1/16      | 1.59    | 1.27           | 3/8               | 5/16      | 8.63  | 17.88  |
| BUT-02-SS | 1/8       | 3.17    | 2.28           | 1/2               | 7/16      | 12.70 | 28.70  |
| BUT-03-SS | 3/16      | 4.76    | 3.04           | 1/2               | 1/2       | 13.71 | 24.38  |
| BUT-04-SS | 1/4       | 6.35    | 4.82           | 1/2               | 9/16      | 15.30 | 27.50  |
| BUT-05-SS | 5/16      | 7.93    | 6.35           | 9/16              | 5/8       | 16.25 | 28.70  |
| BUT-06-SS | 3/8       | 9.52    | 7.10           | 5/8               | 11/16     | 16.50 | 28.50  |
| BUT-08-SS | 1/2       | 12.70   | 10.40          | 13/16             | 7/8       | 24.10 | 36.00  |
| BUT-10-SS | 5/8       | 15.87   | 12.70          | 15/16             | 1         | 25.27 | 39.70  |
| BUT-12-SS | 3/4       | 19.05   | 15.00          | 1-1/8             | 1-1/8     | 25.10 | 41.70  |
| BUT-14-SS | 7/8       | 22.22   | 18.28          | 1-1/4             | 1-1/4     | 25.90 | 44.70  |
| BUT-16-SS | 1         | 25.40   | 22.35          | 1-27/64           | 1-1/2     | 31.24 | 53.43  |
| BUT-20-SS | 1-1/4     | 31.75   | 27.60          | 1-11/16           | 1-7/8     | 41.14 | 66.54  |
| BUT-24-SS | 1-1/2     | 38.10   | 34.00          | 2                 | 2-1/4     | 50.00 | 77.97  |
| BUT-32-SS | 2         | 50.80   | 45.97          | 2-3/4             | 3         | 67.56 | 107.18 |

## Imperial Tube

| Part No    | Tube O.D. |          | E<br>Min<br>mm | Width Across Flat |         | D     | L      |
|------------|-----------|----------|----------------|-------------------|---------|-------|--------|
|            | T<br>mm   | T1<br>mm |                | F<br>mm           | G<br>mm |       |        |
| BUT-M02-SS | 2         |          | 1.70           | 9                 | 12      | 12.90 | 22.30  |
| BUT-M03-SS | 3         |          | 2.40           | 13                | 12      | 12.90 | 22.30  |
| BUT-M04-SS | 4         |          | 2.40           | 13                | 12      | 14.00 | 27.36  |
| BUT-M06-SS | 6         |          | 4.80           | 13                | 14      | 16.00 | 27.34  |
| BUT-M08-SS | 8         |          | 6.40           | 16                | 16      | 16.30 | 29.15  |
| BUT-M10-SS | 10        |          | 7.90           | 18                | 19      | 18.10 | 32.60  |
| BUT-M12-SS | 12        |          | 9.50           | 21                | 22      | 23.30 | 35.80  |
| BUT-M14-SS | 14        |          | 11.10          | 25                | 25      | 23.60 | 37.00  |
| BUT-M15-SS | 15        |          | 11.90          | 21                | 25      | 24.40 | 38.80  |
| BUT-M16-SS | 16        |          | 12.70          | 24                | 25      | 24.40 | 38.80  |
| BUT-M18-SS | 18        |          | 15.10          | 28                | 30      | 22.60 | 41.34  |
| BUT-M20-SS | 20        |          | 15.90          | 32                | 32      | 26.00 | 42.60  |
| BUT-M22-SS | 22        |          | 18.30          | 32                | 32      | 26.00 | 42.60  |
| BUT-M25-SS | 25        |          | 21.80          | 36                | 38      | 31.30 | 49.10  |
| BUT-M28-SS | 28        |          | 22.80          | 41                | 46      | 36.60 | 82.50  |
| BUT-M32-SS | 32        |          | 28.60          | 46                | 50      | 42.00 | 72.30  |
| BUT-M38-SS | 38        |          | 33.70          | 51                | 60      | 49.40 | 84.00  |
| BUT-M40-SS | 40        |          | 35.20          | 60                | 65      | 48.60 | 81.90  |
| BUT-M42-SS | 42        |          | 36.80          | 60                | 65      | 49.30 | 82.50  |
| BUT-M50-SS | 50        |          | 45.20          | 70                | 76      | 67.20 | 107.00 |



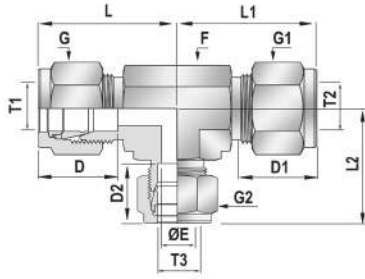
# Reducing Union Tee



## Imperial Tube

| Part No          | Tube O.D.  |            |            | E<br>Min<br>mm | Width Across Flat |           |            |            | D     | D1    | D2    | L     | L1    | L2    |
|------------------|------------|------------|------------|----------------|-------------------|-----------|------------|------------|-------|-------|-------|-------|-------|-------|
|                  | T1<br>Inch | T2<br>Inch | T3<br>Inch |                | F<br>mm           | G<br>Inch | G1<br>Inch | G2<br>Inch |       |       |       |       |       |       |
| BRUT-04-04-02-SS | 1/4        | 1/4        | 1/8        | 2.30           | 1/2               | 9/16      | 9/16       | 7/16       | 15.30 | 15.30 | 12.70 | 26.91 | 26.91 | 24.50 |
| BRUT-04-04-06-SS | 1/4        | 1/4        | 3/8        | 4.80           | 5/8               | 9/16      | 9/16       | 11/16      | 15.30 | 15.30 | 17.10 | 29.28 | 29.28 | 30.46 |
| BRUT-04-08-08-SS | 1/4        | 1/2        | 1/2        | 4.80           | 13/16             | 9/16      | 7/8        | 7/8        | 15.30 | 22.80 | 22.80 | 31.76 | 36.00 | 36.00 |
| BRUT-06-04-06-SS | 3/8        | 1/4        | 3/8        | 4.80           | 5/8               | 11/16     | 9/16       | 11/16      | 17.10 | 15.30 | 17.10 | 28.50 | 28.50 | 29.50 |
| BRUT-06-06-04-SS | 3/8        | 3/8        | 1/4        | 7.10           | 5/8               | 11/16     | 11/16      | 9/16       | 17.10 | 17.10 | 15.30 | 28.50 | 28.50 | 29.50 |
| BRUT-06-06-08-SS | 3/8        | 3/8        | 1/2        | 7.10           | 13/16             | 11/16     | 11/16      | 7/8        | 17.10 | 17.10 | 22.80 | 33.26 | 33.26 | 36.00 |
| BRUT-08-04-06-SS | 1/2        | 1/4        | 3/8        | 4.80           | 13/16             | 7/8       | 9/16       | 11/16      | 22.80 | 15.30 | 17.10 | 36.00 | 33.26 | 33.26 |
| BRUT-08-04-08-SS | 1/2        | 1/4        | 1/2        | 4.80           | 13/16             | 7/8       | 9/16       | 7/8        | 22.80 | 15.30 | 22.80 | 36.00 | 31.76 | 36.00 |
| BRUT-08-06-06-SS | 1/2        | 3/8        | 3/8        | 7.10           | 13/16             | 7/8       | 11/16      | 11/16      | 22.80 | 17.10 | 17.10 | 36.00 | 33.26 | 33.26 |
| BRUT-08-08-04-SS | 1/2        | 1/2        | 1/4        | 10.40          | 13/16             | 7/8       | 7/8        | 9/16       | 22.80 | 22.80 | 15.30 | 36.00 | 36.00 | 31.76 |
| BRUT-08-08-06-SS | 1/2        | 1/2        | 3/8        | 10.40          | 13/16             | 7/8       | 7/8        | 11/16      | 22.80 | 22.80 | 17.10 | 36.00 | 36.00 | 33.26 |
| BRUT-10-10-06-SS | 5/8        | 5/8        | 3/8        | 7.10           | 15/16             | 1         | 1          | 11/16      | 24.38 | 24.38 | 17.10 | 38.86 | 38.86 | 36.00 |
| BRUT-12-08-12-SS | 3/4        | 1/2        | 3/4        | 10.40          | 1-1/8             | 1-1/8     | 7/8        | 1-1/8      | 24.38 | 22.80 | 24.38 | 41.70 | 39.87 | 41.70 |
| BRUT-12-12-04-SS | 3/4        | 3/4        | 1/4        | 4.80           | 1-1/8             | 1-1/8     | 1-1/8      | 9/16       | 24.38 | 24.38 | 15.30 | 41.70 | 41.70 | 35.57 |
| BRUT-12-12-06-SS | 3/4        | 3/4        | 3/8        | 7.10           | 1-1/8             | 1-1/8     | 1-1/8      | 11/16      | 24.38 | 24.38 | 17.10 | 41.70 | 41.70 | 35.57 |
| BRUT-12-12-08-SS | 3/4        | 3/4        | 1/2        | 10.40          | 1-1/8             | 1-1/8     | 1-1/8      | 7/8        | 24.38 | 24.38 | 22.80 | 41.70 | 41.70 | 38.37 |
| BRUT-12-12-16-SS | 3/4        | 3/4        | 1          | 15.70          | 1-27/64           | 1-1/8     | 1-1/8      | 1-1/2      | 24.38 | 24.38 | 31.24 | 49.02 | 49.02 | 45.70 |
| BRUT-12-12-20-SS | 3/4        | 3/4        | 1-1/4      | 15.70          | 1-11/16           | 1-1/8     | 1-1/8      | 1-7/8      | 24.38 | 24.38 | 41.10 | 49.57 | 49.57 | 66.55 |
| BRUT-14-14-08-SS | 7/8        | 7/8        | 1/2        | 10.40          | 1-1/4             | 1-1/4     | 1-1/4      | 7/8        | 25.90 | 25.90 | 22.80 | 44.70 | 44.70 | 44.70 |
| BRUT-16-12-12-SS | 1          | 3/4        | 3/4        | 15.70          | 1-27/64           | 1-1/2     | 1-1/8      | 1-1/8      | 31.24 | 24.38 | 24.38 | 53.40 | 45.70 | 45.70 |
| BRUT-16-16-04-SS | 1          | 1          | 1/4        | 4.80           | 1-27/64           | 1-1/2     | 1-1/2      | 9/16       | 31.24 | 31.24 | 15.30 | 53.40 | 49.02 | 40.40 |
| BRUT-16-16-06-SS | 1          | 1          | 3/8        | 7.10           | 1-27/64           | 1-1/2     | 1-1/2      | 11/16      | 31.24 | 31.24 | 17.10 | 53.40 | 49.02 | 41.90 |
| BRUT-16-16-08-SS | 1          | 1          | 1/2        | 10.40          | 1-27/64           | 1-1/2     | 1-1/2      | 7/8        | 31.24 | 31.24 | 22.80 | 53.40 | 49.02 | 44.70 |
| BRUT-16-16-12-SS | 1          | 1          | 3/4        | 15.70          | 1-27/64           | 1-1/2     | 1-1/2      | 1-1/8      | 31.24 | 31.24 | 24.38 | 53.40 | 49.02 | 45.70 |
| BRUT-20-12-12-SS | 1-1/4      | 3/4        | 3/4        | 15.70          | 1-11/16           | 1-7/8     | 1-1/8      | 1-1/8      | 41.10 | 24.38 | 24.38 | 66.55 | 49.57 | 49.57 |
| BRUT-20-20-12-SS | 1-1/4      | 1-1/4      | 3/4        | 15.70          | 1-11/16           | 1-7/8     | 1-7/8      | 1-1/8      | 41.10 | 41.10 | 24.38 | 66.55 | 66.55 | 49.57 |
| BRUT-24-20-20-SS | 1-1/2      | 1-1/4      | 1-1/4      | 28.00          | 2                 | 2-1/4     | 1-7/8      | 1-7/8      | 50.00 | 41.10 | 41.10 | 78.00 | 71.72 | 71.72 |
| BRUT-24-24-08-SS | 1-1/2      | 1-1/2      | 1/2        | 10.40          | 2                 | 2-1/4     | 2-1/4      | 7/8        | 50.00 | 50.00 | 22.80 | 78.00 | 78.00 | 54.74 |
| BRUT-24-24-12-SS | 1-1/2      | 1-1/2      | 3/4        | 15.70          | 2                 | 2-1/4     | 2-1/4      | 1-1/8      | 50.00 | 50.00 | 24.38 | 78.00 | 78.00 | 54.74 |
| BRUT-24-24-16-SS | 1-1/2      | 1-1/2      | 1          | 22.40          | 2                 | 2-1/4     | 2-1/4      | 1-1/2      | 50.00 | 50.00 | 31.24 | 78.00 | 78.00 | 60.00 |

# Reducing Union Tee

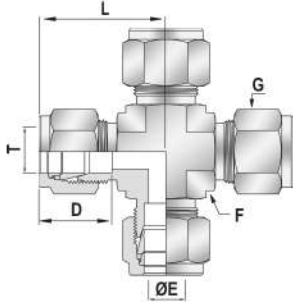


## Metric Tube

| Part No             | Tube O.D.  |            |            | E<br>Min<br>mm | Width Across Flat |           |            |            | D    | D1   | D2   | L    | L1   | L2   |
|---------------------|------------|------------|------------|----------------|-------------------|-----------|------------|------------|------|------|------|------|------|------|
|                     | T1<br>Inch | T2<br>Inch | T3<br>Inch |                | F<br>mm           | G<br>Inch | G1<br>Inch | G2<br>Inch |      |      |      |      |      |      |
| BRUT-M03-M03-M06-SS | 3          | 3          | 6          | 2.40           | 12                | 12        | 12         | 14         | 12.9 | 12.9 | 16.0 | 24.6 | 24.6 | 27.4 |
| BRUT-M08-M08-M06-SS | 8          | 8          | 6          | 4.80           | 15                | 16        | 16         | 14         | 16.3 | 16.3 | 16.0 | 29.2 | 29.2 | 28.0 |
| BRUT-M10-M10-M06-SS | 10         | 10         | 6          | 4.80           | 17                | 19        | 19         | 14         | 18.0 | 18.0 | 16.0 | 32.6 | 32.6 | 29.8 |
| BRUT-M10-M10-M12-SS | 10         | 10         | 12         | 7.90           | 20                | 19        | 19         | 22         | 18.1 | 18.1 | 23.3 | 33.5 | 33.5 | 35.8 |
| BRUT-M12-M06-M10-SS | 12         | 6          | 10         | 7.90           | 20                | 22        | 14         | 19         | 23.3 | 16.0 | 18.1 | 35.8 | 31.8 | 33.5 |
| BRUT-M12-M06-M12-SS | 12         | 6          | 12         | 4.80           | 20                | 22        | 14         | 22         | 23.3 | 16.0 | 23.3 | 35.8 | 31.8 | 35.8 |
| BRUT-M12-M10-M10-SS | 12         | 10         | 10         | 7.90           | 20                | 22        | 19         | 19         | 23.3 | 18.1 | 18.1 | 35.8 | 33.5 | 33.5 |
| BRUT-M12-M12-M10-SS | 12         | 12         | 10         | 7.90           | 20                | 22        | 22         | 19         | 23.3 | 23.3 | 18.1 | 35.8 | 35.8 | 33.5 |
| BRUT-M12-M12-M06-SS | 12         | 12         | 6          | 4.80           | 20                | 22        | 22         | 14         | 23.3 | 23.3 | 16.0 | 35.8 | 35.8 | 31.8 |
| BRUT-M15-M15-M12-SS | 15         | 15         | 12         | 9.80           | 24                | 25        | 25         | 22         | 24.4 | 24.4 | 23.3 | 38.8 | 38.8 | 38.8 |
| BRUT-M16-M16-M12-SS | 16         | 16         | 12         | 9.80           | 24                | 25        | 25         | 22         | 24.4 | 24.4 | 23.3 | 38.8 | 38.8 | 33.8 |
| BRUT-M18-M18-M12-SS | 18         | 18         | 12         | 9.80           | 28                | 30        | 30         | 22         | 22.6 | 22.6 | 23.3 | 41.3 | 43.3 | 38.3 |
| BRUT-M20-M12-M20-SS | 20         | 12         | 20         | 9.80           | 31                | 32        | 22         | 32         | 26.0 | 23.3 | 26.0 | 42.6 | 42.6 | 42.6 |
| BRUT-M20-M20-M06-SS | 20         | 20         | 6          | 4.80           | 31                | 32        | 32         | 14         | 26.0 | 26.0 | 18.1 | 42.6 | 42.6 | 38.4 |
| BRUT-M20-M20-M10-SS | 20         | 20         | 10         | 7.90           | 31                | 32        | 32         | 19         | 26.0 | 26.0 | 18.1 | 42.6 | 42.6 | 40.1 |
| BRUT-M20-M20-M12-SS | 20         | 20         | 12         | 9.80           | 31                | 32        | 32         | 22         | 26.0 | 26.0 | 23.3 | 42.6 | 42.6 | 42.6 |
| BRUT-M20-M20-M25-SS | 20         | 20         | 25         | 15.90          | 36                | 32        | 32         | 38         | 26.0 | 26.0 | 31.3 | 44.4 | 44.4 | 49.1 |
| BRUT-M20-M20-M32-SS | 20         | 20         | 32         | 15.90          | 46                | 32        | 32         | 50         | 26.0 | 26.0 | 42.0 | 52.6 | 52.6 | 72.3 |
| BRUT-M22-M22-M12-SS | 22         | 22         | 12         | 9.80           | 31                | 32        | 32         | 22         | 26.0 | 26.0 | 23.3 | 42.6 | 42.6 | 42.6 |
| BRUT-M25-M20-M20-SS | 25         | 20         | 20         | 15.90          | 36                | 38        | 32         | 32         | 31.3 | 26.0 | 26.0 | 49.1 | 44.4 | 44.4 |
| BRUT-M25-M25-M10-SS | 25         | 25         | 10         | 7.90           | 36                | 38        | 38         | 19         | 31.3 | 31.3 | 18.1 | 49.1 | 49.1 | 38.9 |
| BRUT-M25-M25-M12-SS | 25         | 25         | 12         | 9.80           | 36                | 38        | 38         | 22         | 31.3 | 31.3 | 23.3 | 49.1 | 49.1 | 44.4 |
| BRUT-M25-M25-M20-SS | 25         | 25         | 20         | 15.90          | 36                | 38        | 38         | 32         | 31.3 | 31.3 | 26.0 | 49.1 | 49.1 | 44.4 |
| BRUT-M32-M32-M20-SS | 32         | 32         | 20         | 15.90          | 46                | 50        | 50         | 32         | 42.0 | 42.0 | 26.0 | 72.3 | 72.3 | 52.6 |
| BRUT-M38-M32-M32-SS | 38         | 32         | 32         | 28.60          | 50                | 60        | 50         | 50         | 49.4 | 42.0 | 42.0 | 84.0 | 77.7 | 77.7 |
| BRUT-M38-M38-M20-SS | 38         | 38         | 20         | 15.90          | 50                | 60        | 60         | 60         | 49.4 | 49.4 | 26.0 | 84.0 | 84.0 | 58.0 |
| BRUT-M38-M38-M25-SS | 38         | 38         | 25         | 21.80          | 50                | 60        | 60         | 60         | 49.4 | 49.4 | 31.3 | 84.0 | 84.0 | 62.7 |



# Union Cross



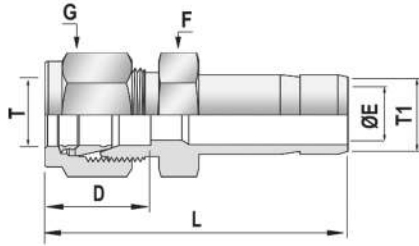
## Metric Tube

| Part No    | Tube O.D. |  | E<br>Min<br>mm | Width Across Flat |           | D     | L      |
|------------|-----------|--|----------------|-------------------|-----------|-------|--------|
|            | T<br>mm   |  |                | F<br>Inch         | G<br>Inch |       |        |
| BUC-M02-SS | 2         |  | 1.70           | 9                 | 12        | 12.90 | 22.30  |
| BUC-M03-SS | 3         |  | 2.40           | 9                 | 12        | 12.90 | 22.30  |
| BUC-M04-SS | 4         |  | 2.40           | 13                | 12        | 14.00 | 27.50  |
| BUC-M06-SS | 6         |  | 4.80           | 13                | 14        | 16.00 | 27.80  |
| BUC-M08-SS | 8         |  | 6.40           | 16                | 16        | 16.30 | 29.10  |
| BUC-M10-SS | 10        |  | 7.90           | 17                | 19        | 18.10 | 32.60  |
| BUC-M12-SS | 12        |  | 9.50           | 20                | 22        | 22.30 | 36.30  |
| BUC-M14-SS | 14        |  | 11.10          | 24                | 25        | 21.00 | 37.00  |
| BUC-M15-SS | 15        |  | 11.90          | 25                | 25        | 24.40 | 38.80  |
| BUC-M16-SS | 16        |  | 12.70          | 25                | 25        | 24.40 | 38.80  |
| BUC-M18-SS | 18        |  | 15.10          | 28                | 30        | 24.40 | 41.30  |
| BUC-M20-SS | 20        |  | 15.90          | 32                | 32        | 26.00 | 42.60  |
| BUC-M22-SS | 22        |  | 18.30          | 32                | 32        | 26.00 | 42.60  |
| BUC-M25-SS | 25        |  | 21.80          | 36                | 38        | 31.30 | 49.10  |
| BUC-M28-SS | 28        |  | 22.80          | 41                | 46        | 36.60 | 64.00  |
| BUC-M32-SS | 32        |  | 28.60          | 46                | 50        | 42.00 | 72.30  |
| BUC-M38-SS | 38        |  | 33.70          | 51                | 60        | 49.40 | 84.00  |
| BUC-M40-SS | 40        |  | 35.20          | 60                | 65        | 48.60 | 81.90  |
| BUC-M42-SS | 42        |  | 36.80          | 60                | 65        | 49.30 | 82.50  |
| BUC-M50-SS | 50        |  | 45.20          | 70                | 76        | 67.20 | 107.00 |

## Imperial Tube

| Part No   | Tube O.D. |       | E<br>Min<br>mm | Width Across Flat |           | D     | L      |
|-----------|-----------|-------|----------------|-------------------|-----------|-------|--------|
|           | Inch      | mm    |                | F<br>Inch         | G<br>Inch |       |        |
| BUC-01-SS | 1/16      | 1.59  | 1.27           | 1/2               | 5/16      | 8.63  | 17.88  |
| BUC-02-SS | 1/8       | 3.17  | 2.28           | 1/2               | 7/16      | 12.70 | 26.20  |
| BUC-03-SS | 3/16      | 4.76  | 3.04           | 1/2               | 1/2       | 13.70 | 26.80  |
| BUC-04-SS | 1/4       | 6.35  | 4.82           | 1/2               | 9/16      | 15.30 | 29.25  |
| BUC-05-SS | 5/16      | 7.93  | 6.35           | 9/16              | 5/8       | 16.20 | 29.50  |
| BUC-06-SS | 3/8       | 9.52  | 7.10           | 5/8               | 11/16     | 17.10 | 30.00  |
| BUC-08-SS | 1/2       | 12.70 | 10.40          | 13/16             | 7/8       | 22.80 | 37.60  |
| BUC-10-SS | 5/8       | 15.87 | 12.70          | 15/16             | 1         | 24.38 | 39.65  |
| BUC-12-SS | 3/4       | 19.05 | 15.00          | 1-1/8             | 1-1/8     | 22.60 | 41.70  |
| BUC-14-SS | 7/8       | 22.22 | 18.28          | 1-1/4             | 1-1/4     | 25.90 | 44.70  |
| BUC-16-SS | 1         | 25.40 | 22.35          | 1-27/64           | 1-1/2     | 31.24 | 52.80  |
| BUC-20-SS | 1-1/4     | 31.75 | 27.60          | 1-11/16           | 1-7/8     | 41.14 | 66.54  |
| BUC-24-SS | 1-1/2     | 38.10 | 34.00          | 2                 | 2-1/4     | 50.00 | 77.97  |
| BUC-32-SS | 2         | 50.80 | 45.97          | 2-3/4             | 3         | 67.56 | 107.18 |

# Reducer

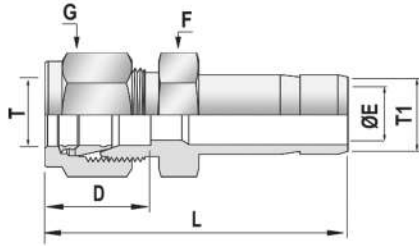


## Imperial Tube

| Part No     | Tube O.D. |         |            |          | E<br>Min<br>mm | Width Across Flat |           | D     | L      |
|-------------|-----------|---------|------------|----------|----------------|-------------------|-----------|-------|--------|
|             | T<br>Inch | T<br>mm | T1<br>Inch | T1<br>mm |                | F<br>Inch         | G<br>Inch |       |        |
| BR-01-02-SS | 1/16      | 1.59    | 1/8        | 3.17     | 1.27           | 5/16              | 7/16      | 8.63  | 32.18  |
| BR-01-04-SS | 1/16      | 1.59    | 1/4        | 6.35     | 1.27           | 5/16              | 7/16      | 8.63  | 37.48  |
| BR-02-02-SS | 1/8       | 3.17    | 1/8        | 3.17     | 2.03           | 7/16              | 7/16      | 12.70 | 33.52  |
| BR-02-03-SS | 1/8       | 3.17    | 3/16       | 4.76     | 2.28           | 7/16              | 7/16      | 12.70 | 34.29  |
| BR-02-04-SS | 1/8       | 3.17    | 1/4        | 6.35     | 2.28           | 7/16              | 7/16      | 12.70 | 36.06  |
| BR-02-06-SS | 1/8       | 3.17    | 3/8        | 9.52     | 2.28           | 7/16              | 7/16      | 12.70 | 37.59  |
| BR-02-08-SS | 1/8       | 3.17    | 1/2        | 12.70    | 2.28           | 9/16              | 7/16      | 12.70 | 44.19  |
| BR-03-02-SS | 3/16      | 4.76    | 1/8        | 3.17     | 2.03           | 7/16              | 1/2       | 13.71 | 34.79  |
| BR-03-04-SS | 3/16      | 4.76    | 1/4        | 6.35     | 3.04           | 7/16              | 1/2       | 13.71 | 37.08  |
| BR-04-02-SS | 1/4       | 6.65    | 1/8        | 3.17     | 2.03           | 1/2               | 9/16      | 15.24 | 36.83  |
| BR-04-03-SS | 1/4       | 6.35    | 3/16       | 4.76     | 3.04           | 1/2               | 9/16      | 15.24 | 37.59  |
| BR-04-04-SS | 1/4       | 6.35    | 1/4        | 6.35     | 4.80           | 1/2               | 9/16      | 15.30 | 43.00  |
| BR-04-05-SS | 1/4       | 6.35    | 5/16       | 7.93     | 4.80           | 1/2               | 9/16      | 15.24 | 39.87  |
| BR-04-06-SS | 1/4       | 6.35    | 3/8        | 9.52     | 4.80           | 1/2               | 9/16      | 15.30 | 42.00  |
| BR-04-08-SS | 1/4       | 6.35    | 1/2        | 12.70    | 4.80           | 9/16              | 9/16      | 15.30 | 49.50  |
| BR-04-10-SS | 1/4       | 6.35    | 5/8        | 15.87    | 4.82           | 11/16             | 9/16      | 15.24 | 48.00  |
| BR-04-12-SS | 1/4       | 6.35    | 3/4        | 19.05    | 4.82           | 13/16             | 9/16      | 15.24 | 47.75  |
| BR-05-06-SS | 5/16      | 7.93    | 3/8        | 9.52     | 6.35           | 9/16              | 5/8       | 16.25 | 41.91  |
| BR-05-08-SS | 5/16      | 7.93    | 1/2        | 12.70    | 6.35           | 9/16              | 5/8       | 16.25 | 47.49  |
| BR-06-04-SS | 3/8       | 9.52    | 1/4        | 6.35     | 4.80           | 5/8               | 11/16     | 17.10 | 40.90  |
| BR-06-06-SS | 3/8       | 9.52    | 3/8        | 9.52     | 7.11           | 5/8               | 11/16     | 16.76 | 43.18  |
| BR-06-08-SS | 3/8       | 9.52    | 1/2        | 12.70    | 7.11           | 5/8               | 11/16     | 17.10 | 51.30  |
| BR-06-10-SS | 3/8       | 9.52    | 5/8        | 15.87    | 7.11           | 5/8               | 11/16     | 16.76 | 51.30  |
| BR-06-12-SS | 3/8       | 9.52    | 3/4        | 19.05    | 7.11           | 11/16             | 11/16     | 16.76 | 51.30  |
| BR-08-04-SS | 1/2       | 12.70   | 1/4        | 6.35     | 4.82           | 13/16             | 7/8       | 22.86 | 44.95  |
| BR-08-06-SS | 1/2       | 12.70   | 3/8        | 9.52     | 7.11           | 13/16             | 7/8       | 22.86 | 46.73  |
| BR-08-08-SS | 1/2       | 12.70   | 1/2        | 12.70    | 9.90           | 13/16             | 7/8       | 22.86 | 52.32  |
| BR-08-10-SS | 1/2       | 12.70   | 5/8        | 15.87    | 10.40          | 13/16             | 7/8       | 22.86 | 53.84  |
| BR-08-12-SS | 1/2       | 12.70   | 3/4        | 19.05    | 10.40          | 13/16             | 7/8       | 22.86 | 60.80  |
| BR-08-16-SS | 1/2       | 12.70   | 1          | 25.40    | 10.40          | 1-1/16            | 7/8       | 22.86 | 60.90  |
| BR-10-12-SS | 5/8       | 15.87   | 3/4        | 19.05    | 12.70          | 15/16             | 1         | 24.38 | 54.61  |
| BR-10-14-SS | 5/8       | 15.87   | 7/8        | 22.22    | 12.70          | 15/16             | 1         | 24.38 | 56.13  |
| BR-10-16-SS | 5/8       | 15.87   | 1          | 25.40    | 12.70          | 1-1/16            | 1         | 24.38 | 60.96  |
| BR-12-08-SS | 3/4       | 19.05   | 1/2        | 12.70    | 9.90           | 1-1/16            | 1-1/8     | 24.38 | 54.61  |
| BR-12-16-SS | 3/4       | 19.05   | 1          | 25.40    | 15.00          | 1-1/16            | 1-1/8     | 24.38 | 62.48  |
| BR-16-20-SS | 1         | 25.40   | 1-1/4      | 31.75    | 22.35          | 1-3/8             | 1-1/2     | 31.24 | 80.50  |
| BR-16-24-SS | 1         | 25.40   | 1-1/2      | 38.10    | 22.35          | 1-5/8             | 1-1/2     | 31.24 | 89.15  |
| BR-16-32-SS | 1         | 25.40   | 2          | 50.80    | 22.35          | 2-1/8             | 1-1/2     | 31.24 | 112.50 |
| BR-20-20-SS | 1-1/4     | 31.75   | 1-1/4      | 31.75    | 27.68          | 1-3/4             | 1-7/8     | 41.14 | 104.00 |
| BR-20-24-SS | 1-1/4     | 31.75   | 1-1/2      | 38.10    | 27.68          | 1-7/8             | 1-7/8     | 41.14 | 104.14 |
| BR-20-32-SS | 1-1/4     | 31.75   | 2          | 50.80    | 27.68          | 1-7/8             | 1-7/8     | 41.14 | 125.20 |
| BR-24-32-SS | 1-1/2     | 38.10   | 2          | 50.80    | 34.03          | 2-1/4             | 3         | 50.00 | 131.30 |



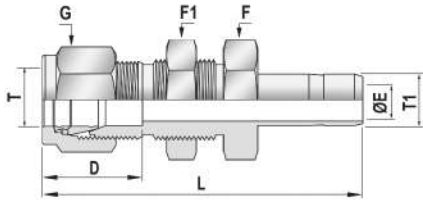
# Reducer



## Metric Tube

| Part No       | Tube O.D. |          | E<br>Min<br>mm | Width Across Flat |           | D     | L     |
|---------------|-----------|----------|----------------|-------------------|-----------|-------|-------|
|               | T<br>mm   | T1<br>mm |                | F<br>Inch         | G<br>Inch |       |       |
| BR-M03-M04-SS | 3         | 4        | 2.40           | 12                | 12        | 12.90 | 35.00 |
| BR-M03-M06-SS | 3         | 6        | 2.40           | 12                | 12        | 12.90 | 36.10 |
| BR-M03-M10-SS | 3         | 10       | 2.40           | 12                | 12        | 12.90 | 38.40 |
| BR-M04-M06-SS | 4         | 6        | 2.40           | 12                | 12        | 13.70 | 37.10 |
| BR-M06-M03-SS | 6         | 3        | 1.80           | 14                | 14        | 15.30 | 36.90 |
| BR-M06-M08-SS | 6         | 8        | 4.80           | 14                | 14        | 15.30 | 39.90 |
| BR-M06-M10-SS | 6         | 10       | 4.80           | 14                | 14        | 15.30 | 40.70 |
| BR-M06-M12-SS | 6         | 12       | 4.80           | 14                | 14        | 15.30 | 46.30 |
| BR-M08-M06-SS | 8         | 6        | 4.60           | 15                | 16        | 16.20 | 40.30 |
| BR-M08-M10-SS | 8         | 10       | 6.40           | 15                | 16        | 16.20 | 42.40 |
| BR-M08-M12-SS | 8         | 12       | 6.40           | 15                | 16        | 16.20 | 47.60 |
| BR-M10-M06-SS | 10        | 6        | 4.60           | 18                | 19        | 17.20 | 42.40 |
| BR-M10-M12-SS | 10        | 12       | 7.90           | 18                | 19        | 17.20 | 49.80 |
| BR-M10-M15-SS | 10        | 15       | 7.90           | 18                | 19        | 17.20 | 51.30 |
| BR-M10-M18-SS | 10        | 18       | 7.90           | 19                | 19        | 17.20 | 51.30 |
| BR-M12-M06-SS | 12        | 6        | 4.60           | 22                | 22        | 22.80 | 44.90 |
| BR-M12-M10-SS | 12        | 10       | 7.70           | 22                | 22        | 22.80 | 46.70 |
| BR-M12-M16-SS | 12        | 16       | 9.50           | 22                | 22        | 22.80 | 53.80 |
| BR-M12-M18-SS | 12        | 18       | 9.50           | 22                | 22        | 22.80 | 53.80 |
| BR-M12-M20-SS | 12        | 20       | 9.50           | 22                | 22        | 22.80 | 56.10 |
| BR-M12-M22-SS | 12        | 22       | 9.50           | 24                | 22        | 22.80 | 56.10 |
| BR-M12-M25-SS | 12        | 25       | 9.50           | 27                | 22        | 22.80 | 62.40 |
| BR-M16-M12-SS | 16        | 12       | 9.10           | 24                | 25        | 24.40 | 53.00 |
| BR-M18-M12-SS | 18        | 12       | 9.10           | 27                | 30        | 24.40 | 54.60 |
| BR-M18-M16-SS | 18        | 16       | 12.70          | 27                | 30        | 24.40 | 56.10 |
| BR-M18-M20-SS | 18        | 20       | 15.10          | 27                | 30        | 24.40 | 57.60 |
| BR-M18-M22-SS | 18        | 22       | 15.10          | 27                | 30        | 24.40 | 57.60 |
| BR-M18-M25-SS | 18        | 25       | 15.10          | 27                | 30        | 24.40 | 62.40 |
| BR-M20-M16-SS | 20        | 16       | 12.70          | 30                | 32        | 24.40 | 57.90 |
| BR-M20-M18-SS | 20        | 18       | 13.90          | 30                | 32        | 26.00 | 57.90 |
| BR-M20-M22-SS | 20        | 22       | 15.80          | 30                | 32        | 26.00 | 59.40 |
| BR-M20-M25-SS | 20        | 25       | 15.80          | 30                | 32        | 26.00 | 64.20 |
| BR-M22-M18-SS | 22        | 18       | 13.90          | 30                | 32        | 26.00 | 57.90 |
| BR-M22-M20-SS | 22        | 20       | 15.10          | 30                | 32        | 26.00 | 59.40 |
| BR-M22-M25-SS | 22        | 25       | 18.30          | 30                | 32        | 26.00 | 64.20 |
| BR-M25-M18-SS | 25        | 18       | 13.90          | 35                | 38        | 31.30 | 63.10 |
| BR-M25-M20-SS | 25        | 20       | 15.10          | 35                | 38        | 31.30 | 64.60 |

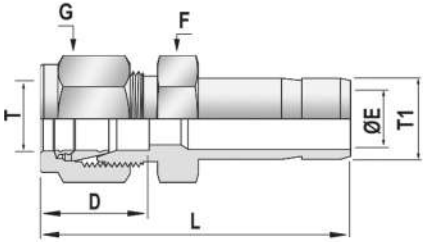
# Bulkhead Reducer



## Imperial Tube

| Part No      | Tube O.D. |         |            |          | E<br>Min<br>mm | Width Across Flat |           |            | D     | L      | Panel<br>Hole<br>Drill Size | Panel<br>Max,<br>Thickness |
|--------------|-----------|---------|------------|----------|----------------|-------------------|-----------|------------|-------|--------|-----------------------------|----------------------------|
|              | T<br>Inch | T<br>mm | T1<br>Inch | T1<br>mm |                | F<br>Inch         | G<br>Inch | F1<br>Inch |       |        |                             |                            |
| BBR-02-02-SS | 1/8       | 3.17    | 1/8        | 3.17     | 2.03           | 1/2               | 7/16      | 1/2        | 12.70 | 49.53  | 8.33                        | 12.70                      |
| BBR-04-04-SS | 1/4       | 6.35    | 1/4        | 6.35     | 4.80           | 3/4               | 9/16      | 3/4        | 15.30 | 56.00  | 11.50                       | 10.16                      |
| BBR-06-06-SS | 3/8       | 9.52    | 3/8        | 9.52     | 7.10           | 5/8               | 11/16     | 5/8        | 17.10 | 61.50  | 14.68                       | 11.17                      |
| BBR-08-08-SS | 1/2       | 12.70   | 1/2        | 12.70    | 10.40          | 15/16             | 7/8       | 15/16      | 22.86 | 75.50  | 19.44                       | 12.70                      |
| BBR-10-10-SS | 5/8       | 15.87   | 5/8        | 15.87    | 12.70          | 1-1/16            | 1         | 1-1/16     | 24.38 | 75.18  | 22.62                       | 12.70                      |
| BBR-12-12-SS | 3/4       | 19.05   | 3/4        | 19.05    | 15.00          | 1-3/16            | 1-1/8     | 1-3/16     | 24.40 | 81.53  | 25.79                       | 16.76                      |
| BBR-16-16-SS | 1         | 25.40   | 1          | 25.40    | 20.32          | 1-5/8             | 1-1/2     | 1-5/8      | 31.24 | 100.30 | 33.73                       | 19.05                      |
| BBR-20-20-SS | 1-1/4     | 31.75   | 1-1/4      | 31.75    | 27.68          | 1-7/8             | 1-7/8     | 1-7/8      | 41.14 | 124.17 | 41.67                       | 19.05                      |
| BBR-24-24-SS | 1-1/2     | 38.10   | 1-1/2      | 38.10    | 34.03          | 2-1/4             | 2-1/4     | 2-1/4      | 50.03 | 145.51 | 49.61                       | 19.05                      |
| BBR-32-32-SS | 2         | 50.80   | 2          | 50.80    | 45.97          | 2-3/4             | 3         | 2-3/4      | 67.56 | 185.82 | 57.94                       | 19.05                      |

## Reducer

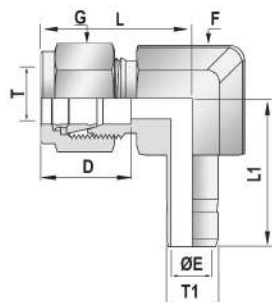


## Metric Tube x Imperial Tube

| Part No      | Tube O.D. |            |          | E<br>Min<br>mm | Width Across Flat |           | D     | L     |
|--------------|-----------|------------|----------|----------------|-------------------|-----------|-------|-------|
|              | T<br>mm   | T1<br>Inch | T1<br>mm |                | F<br>Inch         | G<br>Inch |       |       |
| BR-M03-02-SS | 3         | 1/8        | 3.17     | 2.00           | 12                | 12        | 12.90 | 33.50 |
| BR-M03-04-SS | 3         | 1/4        | 6/35     | 2.40           | 12                | 12        | 12.90 | 36.10 |
| BR-M06-04-SS | 6         | 1/4        | 6.35     | 4.80           | 14                | 14        | 15.30 | 39.20 |
| BR-M06-05-SS | 6         | 5/16       | 7.93     | 4.80           | 14                | 14        | 15.30 | 39.90 |
| BR-M06-06-SS | 6         | 3/8        | 9.52     | 4.80           | 14                | 14        | 15.30 | 40.70 |
| BR-M06-08-SS | 6         | 1/2        | 12.70    | 4.80           | 14                | 14        | 15.30 | 46.30 |
| BR-M08-06-SS | 8         | 3/8        | 9.52     | 6.40           | 15                | 16        | 16.20 | 42.00 |
| BR-M08-08-SS | 8         | 1/2        | 12.70    | 6.40           | 15                | 16        | 16.20 | 47.60 |
| BR-M10-06-SS | 10        | 3/8        | 9.52     | 7.10           | 18                | 19        | 17.20 | 44.20 |
| BR-M10-08-SS | 10        | 1/2        | 12.70    | 7.90           | 18                | 19        | 17.20 | 49.80 |
| BR-M12-08-SS | 12        | 1/2        | 12.70    | 9.50           | 22                | 22        | 22.80 | 52.30 |
| BR-M12-12-SS | 12        | 3/4        | 19.05    | 9.50           | 22                | 22        | 22.80 | 53.80 |
| BR-M18-12-SS | 18        | 3/4        | 19.05    | 15.10          | 27                | 30        | 24.40 | 56.10 |
| BR-M18-16-SS | 18        | 1          | 25.40    | 15.10          | 27                | 30        | 24.40 | 62.40 |
| BR-M25-16-SS | 25        | 1          | 25.40    | 20.20          | 35                | 38        | 31.30 | 69.50 |



# Reducer Elbow



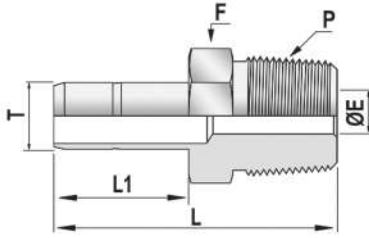
## Imperial Tube

| Part No      | Tube O.D. |         |            |          | E<br>Min<br>mm | Width Across Flat |           | D     | L     | L1    |
|--------------|-----------|---------|------------|----------|----------------|-------------------|-----------|-------|-------|-------|
|              | T<br>Inch | T<br>mm | T1<br>Inch | T1<br>mm |                | F<br>Inch         | G<br>Inch |       |       |       |
| BRE-02-02-SS | 1/8       | 3.17    | 1/8        | 3.17     | 2.28           | 3/8               | 7/16      | 12.70 | 22.30 | 20.60 |
| BRE-03-03-SS | 3/16      | 4.76    | 3/16       | 4.76     | 3.04           | 1/2               | 1/2       | 13.71 | 25.40 | 22.50 |
| BRE-04-04-SS | 1/4       | 6.35    | 1/4        | 6.35     | 4.82           | 1/2               | 9/16      | 15.24 | 27.00 | 25.00 |
| BRE-04-06-SS | 1/4       | 6.35    | 3/8        | 9.52     | 4.82           | 1/2               | 9/16      | 15.24 | 30.50 | 31.50 |
| BRE-04-08-SS | 1/4       | 6.35    | 1/2        | 12.70    | 4.82           | 1/2               | 9/16      | 15.24 | 30.50 | 32.50 |
| BRE-05-05-SS | 5/16      | 7.93    | 5/16       | 7.93     | 6.35           | 9/16              | 5/8       | 16.25 | 28.80 | 26.00 |
| BRE-06-06-SS | 3/8       | 9.52    | 3/8        | 9.52     | 7.11           | 5/8               | 11/16     | 16.76 | 31.50 | 27.10 |
| BRE-08-08-SS | 1/2       | 12.70   | 1/2        | 12.70    | 10.41          | 13/16             | 7/8       | 22.86 | 36.00 | 37.30 |
| BRE-10-10-SS | 5/8       | 15.87   | 5/8        | 15.87    | 12.70          | 15/16             | 1         | 24.38 | 38.80 | 41.80 |
| BRE-12-12-SS | 3/4       | 19.05   | 3/4        | 19.05    | 15.74          | 1-1/16            | 1-1/8     | 24.38 | 38.80 | 42.60 |
| BRE-14-14-SS | 7/8       | 22.22   | 7/8        | 22.22    | 18.28          | 1-3/16            | 1-1/4     | 25.90 | 39.80 | 49.40 |
| BRE-16-16-SS | 1         | 25.40   | 1          | 25.40    | 22.35          | 1-3/8             | 1-1/2     | 31.35 | 42.60 | 55.60 |

## Metric Tube

| Part No        | Tube O.D. |          | E<br>Min<br>mm | Width Across Flat |           | D     | L     | L1    |
|----------------|-----------|----------|----------------|-------------------|-----------|-------|-------|-------|
|                | T<br>mm   | T1<br>mm |                | F<br>Inch         | G<br>Inch |       |       |       |
| BRE-M04-M04-SS | 4         | 4        | 2.40           | 12.7              | 12        | 13.70 | 25.40 | 23.00 |
| BRE-M06-M06-SS | 6         | 6        | 4.80           | 12.7              | 14        | 15.30 | 27.00 | 25.00 |
| BRE-M08-M08-SS | 8         | 8        | 6.40           | 15.8              | 16        | 16.20 | 28.80 | 27.10 |
| BRE-M10-M10-SS | 10        | 10       | 7.90           | 17.4              | 19        | 17.20 | 31.50 | 30.00 |
| BRE-M12-M12-SS | 12        | 12       | 9.50           | 20.6              | 22        | 22.80 | 36.00 | 37.30 |
| BRE-M14-M14-SS | 14        | 14       | 11.10          | 25.4              | 25        | 24.40 | 38.80 | 41.50 |
| BRE-M15-M15-SS | 15        | 15       | 11.90          | 25.4              | 25        | 24.40 | 38.80 | 41.60 |
| BRE-M16-M16-SS | 16        | 16       | 12.70          | 25.4              | 25        | 24.40 | 38.80 | 41.60 |
| BRE-M18-M18-SS | 18        | 18       | 15.10          | 26.9              | 30        | 24.40 | 39.80 | 42.50 |
| BRE-M20-M20-SS | 20        | 20       | 15.90          | 31.8              | 32        | 26.00 | 42.60 | 47.00 |
| BRE-M22-M22-SS | 22        | 22       | 18.30          | 31.8              | 32        | 26.00 | 42.60 | 47.20 |
| BRE-M25-M25-SS | 25        | 25       | 21.80          | 34.9              | 38        | 31.30 | 49.10 | 55.20 |

# Male Adapter

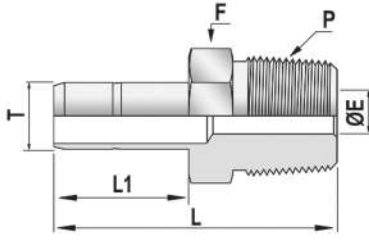


## Imperial Tube x NPT Threads

| Part No       | Tube O.D. |       | B<br>NPT | E*<br>Min<br>mm | Width Across Flat | L      | L1    |
|---------------|-----------|-------|----------|-----------------|-------------------|--------|-------|
|               | Inch      | mm    |          |                 | F<br>Inch         |        |       |
| BMA-02-2N-SS  | 1/8       | 3.17  | 1/8      | 1.80            | 7/16              | 29.50  | 13.45 |
| BMA-02-4N-SS  | 1/8       | 3.17  | 1/4      | 1.80            | 9/16              | 34.80  | 13.45 |
| BMA-03-2N-SS  | 3/16      | 4.76  | 1/8      | 2.70            | 7/16              | 30.22  | 14.20 |
| BMA-03-4N-SS  | 3/16      | 4.76  | 1/4      | 2.70            | 9/16              | 35.56  | 14.20 |
| BMA-04-02-SS  | 1/4       | 6.35  | 1/8      | 4.80            | 7/16              | 31.80  | 15.75 |
| BMA-04-4N-SS  | 1/4       | 6.35  | 1/4      | 4.80            | 9/16              | 37.00  | 15.75 |
| BMA-04-6N-SS  | 1/4       | 6.35  | 3/8      | 4.80            | 11/16             | 37.84  | 15.75 |
| BMA-04-8N-SS  | 1/4       | 6.35  | 1/2      | 4.80            | 7/8               | 43.43  | 15.75 |
| BMA-05-2N-SS  | 5/16      | 7.93  | 1/8      | 6.00            | 7/16              | 32.76  | 16.80 |
| BMA-05-4N-SS  | 5/16      | 7.93  | 1/4      | 6.00            | 9/16              | 38.10  | 16.80 |
| BMA-06-2N-SS  | 3/8       | 9.52  | 1/8      | 7.10            | 7/16              | 33.50  | 17.50 |
| BMA-06-4N-SS  | 3/8       | 9.52  | 1/4      | 7.10            | 9/16              | 39.60  | 17.50 |
| BMA-06-6N-SS  | 3/8       | 9.52  | 3/8      | 7.10            | 11/16             | 39.60  | 17.50 |
| BMA-06-8N-SS  | 3/8       | 9.52  | 1/2      | 7.10            | 7/8               | 44.80  | 17.50 |
| BMA-08-4N-SS  | 1/2       | 12.70 | 1/4      | 10.00           | 9/16              | 44.50  | 23.20 |
| BMA-08-6N-SS  | 1/2       | 12.70 | 3/8      | 10.00           | 11/16             | 47.70  | 23.20 |
| BMA-08-8N-SS  | 1/2       | 12.70 | 1/2      | 10.00           | 7/8               | 52.30  | 23.20 |
| BMA-10-6N-SS  | 5/8       | 15.87 | 3/8      | 12.70           | 11/16             | 47.40  | 24.70 |
| BMA-10-8N-SS  | 5/8       | 15.87 | 1/2      | 12.70           | 7/8               | 52.30  | 24.70 |
| BMA-10-12N-SS | 5/8       | 15.87 | 3/4      | 12.70           | 1-1/16            | 52.30  | 24.70 |
| BMA-12-8N-SS  | 3/4       | 19.05 | 1/2      | 14.90           | 7/8               | 53.80  | 24.70 |
| BMA-12-12N-SS | 3/4       | 19.05 | 3/4      | 14.90           | 1-1/16            | 53.80  | 24.70 |
| BMA-12-16N-SS | 3/4       | 19.05 | 1        | 14.90           | 1-3/8             | 57.91  | 24.70 |
| BMA-14-12N-SS | 7/8       | 22.22 | 3/4      | 17.20           | 1-1/16            | 54.30  | 26.70 |
| BMA-16-12N-SS | 1         | 25.40 | 3/4      | 20.00           | 1-1/16            | 58.70  | 31.70 |
| BMA-16-16N-SS | 1         | 25.40 | 1        | 20.00           | 1-3/8             | 66.00  | 31.70 |
| BMA-20-20N-SS | 1-1/4     | 31.75 | 1-1/4    | 26.50           | 1-3/4             | 80.26  | 40.00 |
| BMA-24-24N-SS | 1-1/2     | 38.10 | 1-1/2    | 32.10           | 2-1/8             | 94.48  | 51.50 |
| BMA-32-32N-SS | 2         | 50.80 | 2        | 40.80           | 2-3/4             | 119.38 | 68.40 |



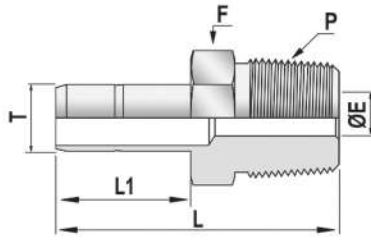
# Male Adapter



## Metric Tube x NPT Threads

| Part No        | Tube O.D. |    | B<br>NPT | E*<br>Min<br>mm | Width Across Flat | L     | L1    |
|----------------|-----------|----|----------|-----------------|-------------------|-------|-------|
|                | T<br>Inch | mm |          |                 | F<br>Inch         |       |       |
| BMA-M03-2N-SS  | 3         |    | 1/8      | 1.80            | 12                | 29.40 | 13.50 |
| BMA-M03-4N-SS  | 3         |    | 1/4      | 1.80            | 14                | 35.00 | 13.50 |
| BMA-M06-2N-SS  | 6         |    | 1/8      | 4.00            | 12                | 32.80 | 15.70 |
| BMA-M06-4N-SS  | 6         |    | 1/4      | 4.00            | 14                | 38.10 | 15.70 |
| BMA-M06-6N-SS  | 6         |    | 3/8      | 4.00            | 18                | 37.00 | 15.70 |
| BMA-M06-8N-SS  | 6         |    | 1/2      | 4.00            | 22                | 43.40 | 15.70 |
| BMA-M08-2N-SS  | 8         |    | 1/8      | 4.80            | 12                | 33.50 | 16.80 |
| BMA-M08-4N-SS  | 8         |    | 1/4      | 5.60            | 14                | 39.10 | 16.80 |
| BMA-M08-6N-SS  | 8         |    | 3/8      | 5.60            | 17                | 37.80 | 16.80 |
| BMA-M08-8N-SS  | 8         |    | 1/2      | 5.60            | 22                | 43.00 | 16.80 |
| BMA-M10-4N-SS  | 10        |    | 1/4      | 7.10            | 16                | 39.90 | 17.50 |
| BMA-M10-6N-SS  | 10        |    | 3/8      | 7.10            | 17                | 40.60 | 17.50 |
| BMA-M10-8N-SS  | 10        |    | 1/2      | 7.10            | 22                | 45.20 | 17.50 |
| BMA-M12-4N-SS  | 12        |    | 1/4      | 7.10            | 14                | 46.50 | 23.10 |
| BMA-M12-6N-SS  | 12        |    | 3/8      | 8.80            | 17                | 46.50 | 23.10 |
| BMA-M12-8N-SS  | 12        |    | 1/2      | 8.80            | 22                | 51.80 | 23.10 |
| BMA-M14-8N-SS  | 14        |    | 1/2      | 10.90           | 22                | 53.20 | 24.70 |
| BMA-M14-12N-SS | 14        |    | 3/4      | 10.90           | 27                | 53.20 | 24.70 |
| BMA-M16-8N-SS  | 16        |    | 1/2      | 11.90           | 22                | 52.50 | 24.70 |
| BMA-M18-8N-SS  | 18        |    | 1/2      | 13.90           | 22                | 53.20 | 24.70 |
| BMA-M18-12N-SS | 18        |    | 3/4      | 13.90           | 27                | 53.20 | 24.70 |
| BMA-M20-12N-SS | 20        |    | 3/4      | 13.90           | 27                | 54.30 | 26.60 |
| BMA-M28-16N-SS | 28        |    | 1        | 22.20           | 35                | 74.70 | 31.70 |
| BMA-M28-20N-SS | 28        |    | 1-1/4    | 23.80           | 46                | 76.20 | 31.70 |
| BMA-M32-20N-SS | 32        |    | 1-1/4    | 27.40           | 46                | 81.00 | 40.00 |
| BMA-M38-24N-SS | 38        |    | 1-1/2    | 33.30           | 55                | 92.20 | 51.50 |

# Male Adapter

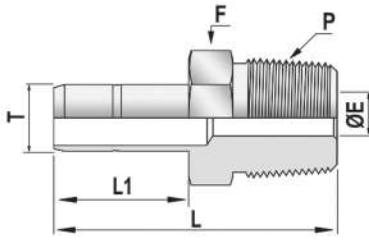


## Imperial Tube x ISO Tapered Threads (BSPT)

| Part No       | Tube O.D. |       | B<br>BSPT | E*<br>Min<br>mm | Width Across Flat<br>F<br>Inch | L      | L1    |
|---------------|-----------|-------|-----------|-----------------|--------------------------------|--------|-------|
|               | Inch      | mm    |           |                 |                                |        |       |
| BMA-02-2R-SS  | 1/8       | 3.17  | 1/8       | 1.80            | 7/16                           | 29.50  | 13.45 |
| BMA-02-4R-SS  | 1/8       | 3.17  | 1/4       | 1.80            | 9/16                           | 34.80  | 13.45 |
| BMA-03-2R-SS  | 3/16      | 4.76  | 1/8       | 2.70            | 7/16                           | 30.22  | 14.20 |
| BMA-03-4R-SS  | 3/16      | 4.76  | 1/4       | 2.70            | 9/16                           | 35.56  | 14.20 |
| BMA-04-2R-SS  | 1/4       | 6.35  | 1/8       | 4.80            | 7/16                           | 31.80  | 15.75 |
| BMA-04-4R-SS  | 1/4       | 6.35  | 1/4       | 4.80            | 9/16                           | 37.00  | 15.75 |
| BMA-04-6R-SS  | 1/4       | 6.35  | 3/8       | 4.80            | 11/16                          | 37.84  | 15.75 |
| BMA-04-8R-SS  | 1/4       | 6.35  | 1/2       | 4.80            | 7/8                            | 43.43  | 15.75 |
| BMA-05-2R-SS  | 5/16      | 7.93  | 1/8       | 6.00            | 7/16                           | 32.76  | 16.80 |
| BMA-05-4R-SS  | 5/16      | 7.93  | 1/4       | 6.00            | 9/16                           | 38.10  | 16.80 |
| BMA-06-2R-SS  | 3/8       | 9.52  | 1/8       | 7.10            | 7/16                           | 33.50  | 17.50 |
| BMA-06-4R-SS  | 3/8       | 9.52  | 1/4       | 7.10            | 9/16                           | 39.60  | 17.50 |
| BMA-06-6R-SS  | 3/8       | 9.52  | 3/8       | 7.10            | 11/16                          | 39.60  | 17.50 |
| BMA-06-8R-SS  | 3/8       | 9.52  | 1/2       | 7.10            | 7/8                            | 44.80  | 17.50 |
| BMA-08-4R-SS  | 1/2       | 12.70 | 1/4       | 10.00           | 9/16                           | 44.50  | 23.20 |
| BMA-08-6R-SS  | 1/2       | 12.70 | 3/8       | 10.00           | 11/16                          | 47.70  | 23.20 |
| BMA-08-8R-SS  | 1/2       | 12.70 | 1/2       | 10.00           | 7/8                            | 52.30  | 23.20 |
| BMA-10-6R-SS  | 5/8       | 15.87 | 3/8       | 12.70           | 11/16                          | 47.40  | 24.70 |
| BMA-10-8R-SS  | 5/8       | 15.87 | 1/2       | 12.70           | 7/8                            | 52.30  | 24.70 |
| BMA-10-12R-SS | 5/8       | 15.87 | 3/4       | 12.70           | 1-1/16                         | 52.30  | 24.70 |
| BMA-12-8R-SS  | 3/4       | 19.05 | 1/2       | 14.90           | 7/8                            | 53.80  | 24.70 |
| BMA-12-12R-SS | 3/4       | 19.05 | 3/4       | 14.90           | 1-1/16                         | 53.80  | 24.70 |
| BMA-12-16R-SS | 3/4       | 19.05 | 1         | 14.90           | 1-3/8                          | 57.91  | 24.70 |
| BMA-14-12R-SS | 7/8       | 22.22 | 3/4       | 17.20           | 1-1/16                         | 54.30  | 26.70 |
| BMA-16-12R-SS | 1         | 25.40 | 3/4       | 20.00           | 1-1/16                         | 58.70  | 31.70 |
| BMA-16-16R-SS | 1         | 25.40 | 1         | 20.00           | 1-3/8                          | 66.00  | 31.70 |
| BMA-20-20R-SS | 1-1/4     | 31.75 | 1-1/4     | 26.50           | 1-3/4                          | 80.26  | 40.00 |
| BMA-24-24R-SS | 1-1/2     | 38.10 | 1-1/2     | 32.10           | 2-1/8                          | 94.48  | 51.50 |
| BMA-32-32R-SS | 2         | 50.80 | 2         | 40.80           | 2-3/4                          | 119.38 | 68.40 |

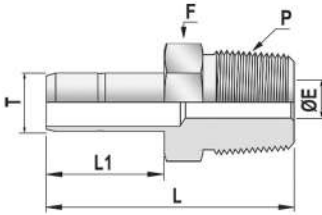


# Male Adapter



## Imperial Tube x ISO Parallel Threads (BSPP)

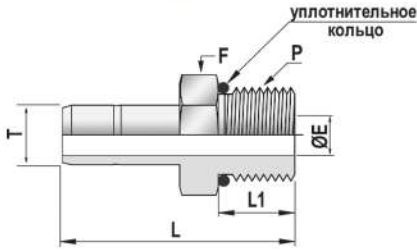
| Part No       | Tube O.D. |         | B<br>BSPP | E*<br>Min<br>mm | Width Across Flat | L     | L1    | L2    |
|---------------|-----------|---------|-----------|-----------------|-------------------|-------|-------|-------|
|               | T<br>Inch | T<br>mm |           |                 | F<br>Inch         |       |       |       |
| BMA-02-2G-SS  | 1/8       | 3.17    | 1/8       | 2.00            | 9/16              | 31.00 | 13.45 | 7.10  |
| BMA-02-4G-SS  | 1/8       | 3.17    | 1/4       | 2.00            | 3/4               | 35.80 | 13.45 | 11.20 |
| BMA-04-2G-SS  | 1/4       | 6.35    | 1/8       | 4.00            | 9/16              | 30.50 | 15.75 | 7.10  |
| BMA-04-4G-SS  | 1/4       | 6.35    | 1/4       | 4.20            | 3/4               | 36.00 | 15.75 | 11.20 |
| BMA-06-4G-SS  | 3/8       | 9.52    | 1/4       | 5.80            | 3/4               | 39.90 | 17.50 | 11.20 |
| BMA-06-6G-SS  | 3/8       | 9.52    | 3/8       | 6.90            | 7/8               | 40.60 | 17.50 | 11.20 |
| BMA-08-4G-SS  | 1/2       | 12.70   | 1/4       | 5.80            | 3/4               | 47.00 | 23.10 | 11.20 |
| BMA-08-6G-SS  | 1/2       | 12.70   | 3/8       | 7.90            | 7/8               | 47.70 | 23.10 | 11.20 |
| BMA-08-8G-SS  | 1/2       | 12.70   | 1/2       | 9.40            | 1-1/16            | 49.80 | 23.10 | 14.20 |
| BMA-12-12G-SS | 3/4       | 19.05   | 3/4       | 15.00           | 1-5/16            | 54.90 | 24.65 | 15.70 |
| BMA-16-16G-SS | 1         | 25.40   | 1         | 19.80           | 1-5/8             | 65.80 | 31.20 | 18.30 |



## Metric Tube x ISO Tapered Threads (BSPT)

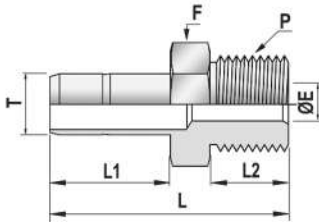
| Part No        | Tube O.D. |         | B<br>BSPT | E*<br>Min<br>mm | Width Across Flat | L     | L1    |
|----------------|-----------|---------|-----------|-----------------|-------------------|-------|-------|
|                | T<br>mm   | T<br>mm |           |                 | F<br>mm           |       |       |
| BMA-M03-2R-SS  | 3         | 3       | 1/8       | 1.80            | 12                | 29.40 | 13.20 |
| BMA-M06-2R-SS  | 6         | 6       | 1/8       | 4.20            | 12                | 32.80 | 15.70 |
| BMA-M06-4R-SS  | 6         | 6       | 1/4       | 4.20            | 14                | 38.10 | 15.70 |
| BMA-M08-4R-SS  | 8         | 8       | 1/4       | 6.00            | 14                | 39.10 | 16.80 |
| BMA-M08-6R-SS  | 8         | 8       | 3/8       | 6.00            | 17                | 39.10 | 16.80 |
| BMA-M10-4R-SS  | 10        | 10      | 1/4       | 7.70            | 14                | 39.90 | 17.50 |
| BMA-M10-6R-SS  | 10        | 10      | 3/8       | 7.70            | 17                | 40.60 | 17.50 |
| BMA-M10-8R-SS  | 10        | 10      | 1/2       | 7.70            | 22                | 45.20 | 17.50 |
| BMA-M12-4R-SS  | 12        | 12      | 1/4       | 9.50            | 14                | 46.50 | 23.10 |
| BMA-M12-6R-SS  | 12        | 12      | 3/8       | 9.50            | 17                | 46.20 | 23.10 |
| BMA-M12-8R-SS  | 12        | 12      | 1/2       | 9.50            | 22                | 51.80 | 23.10 |
| BMA-M18-8R-SS  | 18        | 18      | 1/2       | 13.90           | 22                | 53.20 | 24.70 |
| BMA-M18-12R-SS | 18        | 18      | 3/4       | 13.90           | 27                | 53.20 | 24.70 |
| BMA-M28-16R-SS | 28        | 28      | 1         | 22.20           | 35                | 74.70 | 31.70 |
| BMA-M28-20R-SS | 28        | 28      | 1-1/4     | 23.80           | 46                | 76.20 | 31.70 |
| BMA-M32-20R-SS | 32        | 32      | 1-1/4     | 27.40           | 46                | 81.00 | 40.00 |
| BMA-M38-24R-SS | 38        | 38      | 1-1/2     | 33.30           | 55                | 92.20 | 51.50 |

# Male Adapter



## Imperial Tube x SAE/MS Straight Threads

| Part No       | Tube O.D. |       | B<br>SAE/MS | E*<br>Min<br>mm | Width Across Flat |       |       |
|---------------|-----------|-------|-------------|-----------------|-------------------|-------|-------|
|               | T<br>Inch | mm    |             |                 | F<br>Inch         | L     | L1    |
| BMA-02-2S-SS  | 1/8       | 3.17  | 5/16-24     | 2.03            | 7/16              | 30.48 | 7.62  |
| BMA-04-4S-SS  | 1/4       | 6.35  | 7/16-20     | 4.20            | 9/16              | 35.30 | 9.14  |
| BMA-04-6S-SS  | 1/4       | 6.35  | 9/16-18     | 4.20            | 11/16             | 36.07 | 9.90  |
| BMA-06-4S-SS  | 3/8       | 9.52  | 7/16-20     | 5.10            | 9/16              | 37.08 | 9.14  |
| BMA-06-6S-SS  | 3/8       | 9.52  | 9/16-18     | 6.85            | 11/16             | 38.61 | 9.90  |
| BMA-06-8S-SS  | 3/8       | 9.52  | 3/4-16      | 6.85            | 7/8               | 40.64 | 11.17 |
| BMA-08-6S-SS  | 1/2       | 12.70 | 9/16-18     | 7.11            | 11/16             | 44.20 | 9.90  |
| BMA-08-8S-SS  | 1/2       | 12.70 | 3/4-16      | 9.40            | 7/8               | 46.23 | 11.17 |
| BMA-10-10S-SS | 5/8       | 15.87 | 7/8-14      | 11.94           | 1                 | 49.28 | 12.70 |
| BMA-12-12S-SS | 3/4       | 19.05 | 1-1/16-12   | 15.00           | 1-1/4             | 53.34 | 14.98 |
| BMA-16-16S-SS | 1         | 25.40 | 1-5/16-12   | 20.32           | 1-1/2             | 61.21 | 14.98 |
| BMA-20-20S-SS | 1-1/4     | 31.75 | 1-5/8-12    | 26.00           | 1-7/8             | 71.37 | 15.10 |
| BMA-24-24S-SS | 1-1/2     | 38.10 | 1-7/8-12    | 31.60           | 2-1/8             | 83.31 | 15.10 |

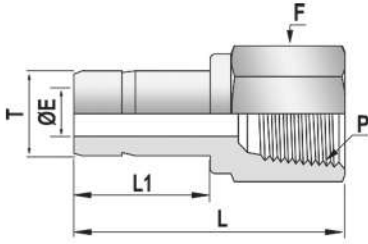


## Metric Tube x ISO Parallel Threads (BSPP)

| Part No        | Tube O.D. |    | B<br>BSPP | E*<br>Min<br>mm | Width Across Flat |       |       |       |
|----------------|-----------|----|-----------|-----------------|-------------------|-------|-------|-------|
|                | T<br>mm   | mm |           |                 | F<br>mm           | L     | L1    | L2    |
| BMA-M06-2G-SS  | 6         |    | 1/8       | 4.00            | 14                | 30.40 | 15.70 | 7.10  |
| BMA-M06-4G-SS  | 6         |    | 1/4       | 4.00            | 19                | 38.90 | 15.70 | 11.20 |
| BMA-M08-4G-SS  | 8         |    | 1/4       | 5.60            | 19                | 40.10 | 16.80 | 11.20 |
| BMA-M10-4G-SS  | 10        |    | 1/4       | 5.90            | 19                | 40.90 | 17.50 | 11.20 |
| BMA-M10-6G-SS  | 10        |    | 3/8       | 7.10            | 22                | 41.70 | 17.50 | 11.20 |
| BMA-M10-8G-SS  | 10        |    | 1/2       | 7.10            | 27                | 44.70 | 17.50 | 14.20 |
| BMA-M12-4G-SS  | 12        |    | 1/4       | 6.40            | 19                | 47.00 | 23.10 | 11.20 |
| BMA-M12-6G-SS  | 12        |    | 3/8       | 7.90            | 22                | 47.20 | 23.10 | 11.20 |
| BMA-M12-8G-SS  | 12        |    | 1/2       | 8.80            | 27                | 50.50 | 23.10 | 14.20 |
| BMA-M18-8G-SS  | 18        |    | 1/2       | 11.90           | 27                | 51.30 | 24.60 | 14.20 |
| BMA-M18-12G-SS | 18        |    | 3/4       | 13.90           | 35                | 55.90 | 24.60 | 15.70 |
| BMA-M38-24G-SS | 38        |    | 1-1/2     | 31.60           | 55                | 91.90 | 52.80 | 22.10 |



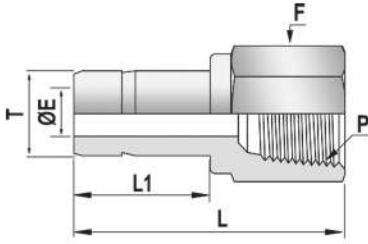
# Female Adapter



## Imperial Tube x NPT Threads

| Part No       | Tube O.D. |       | B<br>NPT | E*<br>Min<br>mm | Width Across Flat | L      | L1    |
|---------------|-----------|-------|----------|-----------------|-------------------|--------|-------|
|               | Inch      | mm    |          |                 | F<br>Inch         |        |       |
| BFA-02-2N-SS  | 1/8       | 3.17  | 1/8      | 1.80            | 9/16              | 31.50  | 13.45 |
| BFA-02-4N-SS  | 1/8       | 3.17  | 1/4      | 1.80            | 3/4               | 35.30  | 13.45 |
| BFA-03-2N-SS  | 3/16      | 4.76  | 1/8      | 2.70            | 9/16              | 32.00  | 14.20 |
| BFA-03-4N-SS  | 3/16      | 4.76  | 1/4      | 2.70            | 3/4               | 35.81  | 14.20 |
| BFA-04-2N-SS  | 1/4       | 6.35  | 1/8      | 4.80            | 9/16              | 29.60  | 15.75 |
| BFA-04-4N-SS  | 1/4       | 6.35  | 1/4      | 4.80            | 3/4               | 35.80  | 15.75 |
| BFA-04-6N-SS  | 1/4       | 6.35  | 3/8      | 4.80            | 7/8               | 37.80  | 15.75 |
| BFA-04-8N-SS  | 1/4       | 6.35  | 1/2      | 4.80            | 1-1/16            | 43.80  | 15.75 |
| BFA-05-2N-SS  | 5/16      | 7.93  | 1/8      | 6.00            | 9/16              | 34.29  | 16.80 |
| BFA-05-4N-SS  | 5/16      | 7.93  | 1/4      | 6.00            | 3/4               | 37.59  | 16.80 |
| BFA-06-2N-SS  | 3/8       | 9.52  | 1/8      | 7.10            | 9/16              | 34.29  | 17.50 |
| BFA-06-4N-SS  | 3/8       | 9.52  | 1/4      | 7.10            | 3/4               | 37.50  | 17.50 |
| BFA-06-6N-SS  | 3/8       | 9.52  | 3/8      | 7.10            | 7/8               | 40.38  | 17.50 |
| BFA-06-8N-SS  | 3/8       | 9.52  | 1/2      | 7.10            | 1-1/16            | 46.73  | 17.50 |
| BFA-08-4N-SS  | 1/2       | 12.70 | 1/4      | 10.00           | 3/4               | 43.43  | 23.20 |
| BFA-08-6N-SS  | 1/2       | 12.70 | 3/8      | 10.00           | 7/8               | 47.00  | 23.20 |
| BFA-08-8N-SS  | 1/2       | 12.70 | 1/2      | 10.00           | 1-1/16            | 53.00  | 23.20 |
| BFA-10-6N-SS  | 5/8       | 15.87 | 3/8      | 12.70           | 7/8               | 48.26  | 24.70 |
| BFA-10-8N-SS  | 5/8       | 15.87 | 1/2      | 12.70           | 1-1/16            | 53.84  | 24.70 |
| BFA-10-12N-SS | 5/8       | 15.87 | 3/4      | 12.70           | 1-1/4             | 55.37  | 24.70 |
| BFA-12-8N-SS  | 3/4       | 19.05 | 1/2      | 14.90           | 1-1/16            | 54.50  | 24.70 |
| BFA-12-12N-SS | 3/4       | 19.05 | 3/4      | 14.90           | 1-1/4             | 56.50  | 24.70 |
| BFA-12-16N-SS | 3/4       | 19.05 | 1        | 14.90           | 1-5/8             | 58.42  | 24.70 |
| BFA-14-12N-SS | 7/8       | 22.22 | 3/4      | 17.20           | 1-1/4             | 57.15  | 26.70 |
| BFA-16-12N-SS | 1         | 25.40 | 3/4      | 20.06           | 1-1/4             | 63.00  | 31.70 |
| BFA-16-16N-SS | 1         | 25.40 | 1        | 20.06           | 1-5/8             | 64.26  | 31.70 |
| BFA-20-20N-SS | 1-1/4     | 31.75 | 1-1/4    | 27.68           | 2-1/8             | 77.72  | 40.00 |
| BFA-24-24N-SS | 1-1/2     | 38.10 | 1-1/2    | 33.27           | 2-3/8             | 88.90  | 51.50 |
| BFA-32-32N-SS | 2         | 50.80 | 2        | 44.45           | 2-7/8             | 107.44 | 68.40 |

# Female Adapter

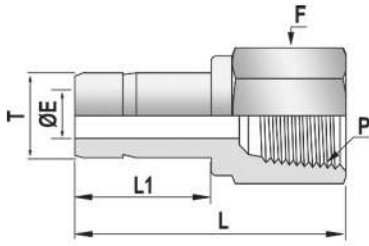


## Metric Tube x NPT Threads

| Part No        | Tube O.D. | B<br>NPT | E*<br>Min<br>mm | Width Across Flat |       | L1    |
|----------------|-----------|----------|-----------------|-------------------|-------|-------|
|                | T<br>mm   |          |                 | F<br>Inch         | L     |       |
| BFA-M03-2N-SS  | 3         | 1/8      | 1.80            | 14                | 31.50 | 13.50 |
| BFA-M03-4N-SS  | 3         | 1/4      | 1.80            | 19                | 35.30 | 13.50 |
| BFA-M04-4N-SS  | 4         | 1/4      | 2.20            | 19                | 35.00 | 14.20 |
| BFA-M06-2N-SS  | 6         | 1/8      | 4.00            | 14                | 32.50 | 15.70 |
| BFA-M06-4N-SS  | 6         | 1/4      | 4.00            | 19                | 37.10 | 15.70 |
| BFA-M06-6N-SS  | 6         | 3/8      | 4.00            | 22                | 39.60 | 15.70 |
| BFA-M06-8N-SS  | 6         | 1/2      | 4.00            | 27                | 45.50 | 15.70 |
| BFA-M08-2N-SS  | 8         | 1/8      | 5.60            | 14                | 34.30 | 16.80 |
| BFA-M08-4N-SS  | 8         | 1/4      | 5.60            | 19                | 37.60 | 16.80 |
| BFA-M08-8N-SS  | 8         | 1/2      | 5.60            | 27                | 46.00 | 16.80 |
| BFA-M10-4N-SS  | 10        | 1/4      | 7.10            | 19                | 38.10 | 17.50 |
| BFA-M10-6N-SS  | 10        | 3/8      | 7.10            | 22                | 40.10 | 17.50 |
| BFA-M10-8N-SS  | 10        | 1/2      | 7.10            | 27                | 46.50 | 17.50 |
| BFA-M12-4N-SS  | 12        | 1/4      | 8.80            | 19                | 43.70 | 23.10 |
| BFA-M12-6N-SS  | 12        | 3/8      | 8.80            | 22                | 46.00 | 23.10 |
| BFA-M12-8N-SS  | 12        | 1/2      | 8.80            | 27                | 52.30 | 23.10 |
| BFA-M16-6N-SS  | 16        | 3/8      | 12.70           | 24                | 48.00 | 24.70 |
| BFA-M16-8N-SS  | 16        | 1/2      | 12.70           | 27                | 53.10 | 24.70 |
| BFA-M18-12N-SS | 18        | 3/4      | 13.90           | 32                | 54.10 | 24.70 |
| BFA-M20-8N-SS  | 20        | 1/2      | 15.10           | 27                | 54.00 | 26.60 |
| BFA-M20-12N-SS | 20        | 3/4      | 15.10           | 32                | 56.00 | 26.60 |



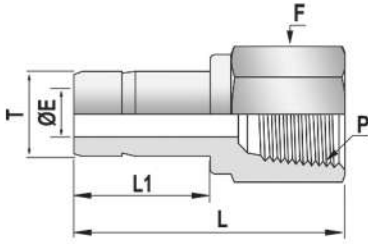
# Female Adapter



## Imperial Tube x ISO Tapered Threads

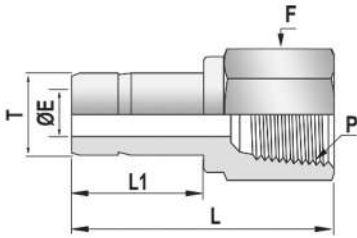
| Part No       | Tube O.D. |       | B<br>BSPT | E*<br>Min<br>mm | Width Across Flat |        | L     | L1 |
|---------------|-----------|-------|-----------|-----------------|-------------------|--------|-------|----|
|               | T<br>Inch | mm    |           |                 | F<br>Inch         | L      |       |    |
| BFA-02-2R-SS  | 1/8       | 3.17  | 1/8       | 1.80            | 9/16              | 31.50  | 13.45 |    |
| BFA-02-4R-SS  | 1/8       | 3.17  | 1/4       | 1.80            | 3/4               | 35.30  | 13.45 |    |
| BFA-03-2R-SS  | 3/16      | 4.76  | 1/8       | 2.70            | 9/16              | 32.00  | 14.20 |    |
| BFA-03-4R-SS  | 3/16      | 4.76  | 1/4       | 2.70            | 3/4               | 35.81  | 14.20 |    |
| BFA-04-2R-SS  | 1/4       | 6.35  | 1/8       | 4.80            | 9/16              | 29.60  | 15.75 |    |
| BFA-04-4R-SS  | 1/4       | 6.35  | 1/4       | 4.80            | 3/4               | 35.80  | 15.75 |    |
| BFA-04-6R-SS  | 1/4       | 6.35  | 3/8       | 4.80            | 7/8               | 37.80  | 15.75 |    |
| BFA-04-8R-SS  | 1/4       | 6.35  | 1/2       | 4.80            | 1-1/16            | 43.80  | 15.75 |    |
| BFA-05-2R-SS  | 5/16      | 7.93  | 1/8       | 6.00            | 9/16              | 34.59  | 16.80 |    |
| BFA-05-4R-SS  | 5/16      | 7.93  | 1/4       | 6.00            | 3/4               | 37.59  | 16.80 |    |
| BFA-06-2R-SS  | 3/8       | 9.52  | 1/8       | 7.10            | 9/16              | 34.29  | 17.50 |    |
| BFA-06-4R-SS  | 3/8       | 9.52  | 1/4       | 7.10            | 3/4               | 37.50  | 17.50 |    |
| BFA-06-6R-SS  | 3/8       | 9.52  | 3/8       | 7.10            | 7/8               | 40.38  | 17.50 |    |
| BFA-06-8R-SS  | 3/8       | 9.52  | 1/2       | 7.10            | 1-1/16            | 46.73  | 17.50 |    |
| BFA-08-4R-SS  | 1/2       | 12.70 | 1/4       | 10.00           | 3/4               | 43.43  | 23.20 |    |
| BFA-08-6R-SS  | 1/2       | 12.70 | 3/8       | 10.00           | 7/8               | 47.00  | 23.20 |    |
| BFA-08-8R-SS  | 1/2       | 12.70 | 1/2       | 10.00           | 1-1/16            | 53.00  | 23.20 |    |
| BFA-10-6R-SS  | 5/8       | 15.87 | 3/8       | 12.70           | 7/8               | 48.26  | 24.70 |    |
| BFA-10-8R-SS  | 5/8       | 15.87 | 1/2       | 12.70           | 1-1/16            | 53.84  | 24.70 |    |
| BFA-10-12R-SS | 5/8       | 15.87 | 3/4       | 12.70           | 1-1/4             | 55.37  | 24.70 |    |
| BFA-12-8R-SS  | 3/4       | 19.05 | 1/2       | 14.90           | 1-1/16            | 54.50  | 24.70 |    |
| BFA-12-12R-SS | 3/4       | 19.05 | 3/4       | 14.90           | 1-1/4             | 56.50  | 24.70 |    |
| BFA-12-16R-SS | 3/4       | 19.05 | 1         | 14.90           | 1-5/8             | 58.42  | 24.70 |    |
| BFA-14-12R-SS | 7/8       | 22.22 | 3/4       | 17.20           | 1-1/4             | 57.15  | 26.70 |    |
| BFA-16-12R-SS | 1         | 25.40 | 3/4       | 20.00           | 1-1/4             | 63.00  | 31.70 |    |
| BFA-16-12R-SS | 1         | 25.40 | 1         | 20.00           | 1-5/8             | 64.26  | 31.70 |    |
| BFA-20-20R-SS | 1-1/4     | 31.75 | 1-1/4     | 27.60           | 2-1/8             | 77.72  | 40.00 |    |
| BFA-24-24R-SS | 1-1/2     | 38.10 | 1-1/2     | 33.20           | 2-3/8             | 88.90  | 51.50 |    |
| BFA-32-32R-SS | 2         | 50.80 | 2         | 44.40           | 2-7/8             | 107.40 | 68.40 |    |

# Female Adapter



## Imperial Tube x ISO Parallel Threads (RP)

| Part No       | Tube O.D. |       | B<br>BSPP | E*<br>Min<br>mm | Width Across Flat |       |       |       |
|---------------|-----------|-------|-----------|-----------------|-------------------|-------|-------|-------|
|               | T<br>Inch | mm    |           |                 | F<br>Inch         | L     | L1    | L2    |
| BFA-04-2RP-SS | 1/4       | 6.35  | 1/8       | 4.57            | 9/16              | 31.75 | 15.75 | 13.00 |
| BFA-04-4RP-SS | 1/4       | 6.35  | 1/4       | 4.57            | 3/4               | 38.10 | 15.75 | 18.50 |
| BFA-06-4RP-SS | 3/8       | 9.52  | 1/4       | 7.11            | 3/4               | 39.40 | 17.50 | 18.50 |
| BFA-06-6RP-SS | 3/8       | 9.52  | 3/8       | 7.11            | 7/8               | 39.90 | 17.50 | 18.50 |
| BFA-08-8RP-SS | 1/2       | 12.70 | 1/2       | 9.90            | 1-1/16            | 49.50 | 23.20 | 22.10 |

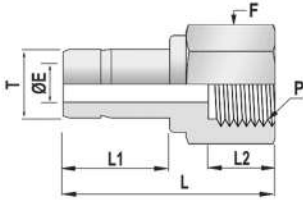


## Metric Tube x Tapered Threads (BSPT)

| Part No        | Tube O.D. |  | B<br>BSPT | E*<br>Min<br>mm | Width Across Flat |       |       |
|----------------|-----------|--|-----------|-----------------|-------------------|-------|-------|
|                | T<br>mm   |  |           |                 | F<br>mm           | L     | L1    |
| BFA-M03-2R-SS  | 3         |  | 1/8       | 1.80            | 14                | 31.50 | 13.50 |
| BFA-M03-4R-SS  | 3         |  | 1/4       | 1.80            | 19                | 35.30 | 13.50 |
| BFA-M04-4R-SS  | 4         |  | 1/4       | 2.20            | 19                | 35.00 | 14.20 |
| BFA-M06-2R-SS  | 6         |  | 1/8       | 4.00            | 14                | 32.50 | 15.70 |
| BFA-M06-4R-SS  | 6         |  | 1/4       | 4.00            | 19                | 37.10 | 15.70 |
| BFA-M06-6R-SS  | 6         |  | 3/8       | 4.00            | 22                | 39.60 | 15.70 |
| BFA-M06-8R-SS  | 6         |  | 1/2       | 4.00            | 27                | 45.50 | 15.70 |
| BFA-M08-2R-SS  | 8         |  | 1/8       | 5.60            | 14                | 34.30 | 16.80 |
| BFA-M08-4R-SS  | 8         |  | 1/4       | 5.60            | 19                | 37.60 | 16.80 |
| BFA-M08-8R-SS  | 8         |  | 1/2       | 5.60            | 27                | 46.00 | 16.80 |
| BFA-M10-4R-SS  | 10        |  | 1/4       | 7.10            | 19                | 38.10 | 17.50 |
| BFA-M10-6R-SS  | 10        |  | 3/8       | 7.10            | 22                | 40.10 | 17.50 |
| BFA-M10-8R-SS  | 10        |  | 1/2       | 7.10            | 27                | 46.50 | 17.50 |
| BFA-M12-4R-SS  | 12        |  | 1/4       | 8.80            | 19                | 43.70 | 23.10 |
| BFA-M12-6R-SS  | 12        |  | 3/8       | 8.80            | 22                | 46.00 | 23.10 |
| BFA-M12-8R-SS  | 12        |  | 1/2       | 8.80            | 27                | 52.30 | 23.10 |
| BFA-M16-6R-SS  | 16        |  | 3/8       | 12.70           | 24                | 48.00 | 24.70 |
| BFA-M16-8R-SS  | 16        |  | 1/2       | 12.70           | 27                | 53.10 | 24.70 |
| BFA-M18-12R-SS | 18        |  | 3/4       | 13.90           | 32                | 54.10 | 24.70 |
| BFA-M20-8R-SS  | 20        |  | 1/2       | 15.10           | 27                | 54.00 | 26.60 |
| BFA-M20-12R-SS | 20        |  | 3/4       | 15.10           | 32                | 56.00 | 26.60 |

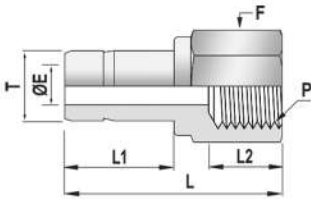


# Female Adapter



## Imperial Tube x ISO Parallel Threads (RG)

| Part No      | Tube O.D. |       | B<br>BSPP | E*<br>Min<br>mm | Width Across Flat |       |       |       |
|--------------|-----------|-------|-----------|-----------------|-------------------|-------|-------|-------|
|              | T<br>Inch | mm    |           |                 | F<br>Inch         | L     | L1    | L2    |
| BFA-04-2G-SS | 1/4       | 6.35  | 1/8       | 4.57            | 9/16              | 31.75 | 15.75 | 13.00 |
| BFA-04-4G-SS | 1/4       | 6.35  | 1/4       | 4.57            | 3/4               | 38.10 | 15.75 | 18.50 |
| BFA-06-6G-SS | 3/8       | 9.52  | 3/8       | 7.11            | 7/8               | 39.90 | 17.50 | 18.50 |
| BFA-08-8G-SS | 1/2       | 12.70 | 1/2       | 9.90            | 1-1/16            | 49.50 | 23.20 | 22.10 |



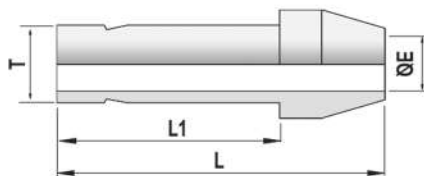
## Metric Tube x Tapered Threads (RP)

| Part No        | Tube O.D. |    | B<br>BSPP | E*<br>Min<br>mm | Width Across Flat |       |       |       |
|----------------|-----------|----|-----------|-----------------|-------------------|-------|-------|-------|
|                | T<br>mm   | mm |           |                 | F<br>mm           | L     | L1    | L2    |
| BFA-M06-2RP-SS | 6         | 6  | 1/8       | 4.60            | 14                | 32.50 | 15.70 | 13.00 |
| BFA-M06-4RP-SS | 6         | 6  | 1/4       | 4.60            | 19                | 37.80 | 15.70 | 18.50 |
| BFA-M08-4RP-SS | 8         | 8  | 1/4       | 6.30            | 19                | 38.30 | 16.80 | 18.50 |
| BFA-M10-6RP-SS | 10        | 10 | 3/8       | 7.70            | 22                | 39.90 | 17.50 | 18.50 |
| BFA-M12-8RP-SS | 12        | 12 | 1/2       | 9.10            | 27                | 49.50 | 23.10 | 22.10 |

## Metric Tube x ISO Parallel Threads (RG)

| Part No       | Tube O.D. |    | B<br>BSPP | E*<br>Min<br>mm | Width Across Flat |       |       |       |
|---------------|-----------|----|-----------|-----------------|-------------------|-------|-------|-------|
|               | T<br>mm   | mm |           |                 | F<br>mm           | L     | L1    | L2    |
| BFA-M06-2G-SS | 6         | 6  | 1/8       | 4.00            | 14                | 32.00 | 15.70 | 12.00 |
| BFA-M06-4G-SS | 6         | 6  | 1/4       | 4.00            | 19                | 35.30 | 15.70 | 13.00 |
| BFA-M06-6G-SS | 6         | 6  | 3/8       | 4.00            | 24                | 38.40 | 15.70 | 14.20 |
| BFA-M06-8G-SS | 6         | 6  | 1/2       | 4.00            | 27                | 42.90 | 15.70 | 18.90 |
| BFA-M08-4G-SS | 8         | 8  | 1/4       | 5.60            | 19                | 33.00 | 16.80 | 13.00 |
| BFA-M08-6G-SS | 8         | 8  | 3/8       | 5.60            | 24                | 39.30 | 16.80 | 14.20 |
| BFA-M08-8G-SS | 8         | 8  | 1/2       | 5.60            | 27                | 43.70 | 16.80 | 18.90 |
| BFA-M10-4G-SS | 10        | 10 | 1/4       | 7.10            | 19                | 34.50 | 17.50 | 13.00 |
| BFA-M10-6G-SS | 10        | 10 | 3/8       | 7.10            | 24                | 39.30 | 17.50 | 14.20 |
| BFA-M10-8G-SS | 10        | 10 | 1/2       | 7.10            | 27                | 40.10 | 17.50 | 18.90 |
| BFA-M12-4G-SS | 12        | 12 | 1/4       | 8.80            | 19                | 40.10 | 23.10 | 14.20 |
| BFA-M12-6G-SS | 12        | 12 | 3/8       | 8.80            | 24                | 44.90 | 23.10 | 18.90 |
| BFA-M12-8G-SS | 12        | 12 | 1/2       | 8.80            | 27                | 48.80 | 23.10 | 18.90 |
| BFA-M15-8G-SS | 15        | 15 | 1/2       | 12.00           | 27                | 49.00 | 24.60 | 18.90 |
| BFA-M16-8G-SS | 16        | 16 | 1/2       | 12.40           | 27                | 49.00 | 24.60 | 18.90 |
| BFA-M18-8G-SS | 18        | 18 | 1/2       | 13.90           | 27                | 49.30 | 24.90 | 18.90 |
| BFA-M20-8G-SS | 20        | 20 | 1/2       | 15.10           | 27                | 50.70 | 26.60 | 18.90 |
| BFA-M25-8G-SS | 25        | 25 | 1/2       | 19.80           | 30                | 56.10 | 31.70 | 18.90 |

## Port Connector



## Imperial Tube

| Part No   | Tube O.D. |         | E<br>Min<br>mm | L     | L1    |
|-----------|-----------|---------|----------------|-------|-------|
|           | Inch      | T<br>mm |                |       |       |
| BPC-02-SS | 1/8       | 3.17    | 1.80           | 22.35 | 15.75 |
| BPC-04-SS | 1/4       | 6.35    | 4.20           | 24.63 | 18.79 |
| BPC-05-SS | 5/16      | 7.93    | 6.00           | 25.90 | 20.06 |
| BPC-06-SS | 3/8       | 9.52    | 7.10           | 26.16 | 20.32 |
| BPC-08-SS | 1/2       | 12.70   | 9.70           | 35.81 | 25.90 |
| BPC-12-SS | 3/4       | 19.05   | 15.00          | 37.33 | 27.68 |
| BPC-16-SS | 1         | 25.40   | 20.10          | 48.26 | 34.54 |

## Metric Tube

| Part No    | Tube O.D. |  | E<br>Min<br>mm | L     | L1    |
|------------|-----------|--|----------------|-------|-------|
|            | T<br>mm   |  |                |       |       |
| BPC-M03-SS | 3         |  | 1.80           | 22.20 | 15.70 |
| BPC-M06-SS | 6         |  | 4.20           | 24.60 | 18.70 |
| BPC-M08-SS | 8         |  | 6.00           | 25.90 | 20.00 |
| BPC-M10-SS | 10        |  | 7.60           | 26.10 | 20.20 |
| BPC-M12-SS | 12        |  | 9.00           | 35.80 | 26.00 |
| BPC-M16-SS | 16        |  | 12.70          | 37.40 | 27.80 |
| BPC-M18-SS | 18        |  | 13.90          | 37.40 | 27.90 |
| BPC-M20-SS | 20        |  | 15.10          | 38.90 | 29.20 |
| BPC-M22-SS | 22        |  | 17.90          | 39.20 | 29.30 |
| BPC-M25-SS | 25        |  | 19.80          | 49.50 | 34.50 |
| BPC-M28-SS | 28        |  | 23.80          | 63.50 | 48.30 |
| BPC-M32-SS | 32        |  | 27.40          | 69.70 | 52.40 |
| BPC-M38-SS | 38        |  | 32.00          | 81.90 | 61.40 |

## Application

Connecting insert for connecting two **BE-LOK** tube fittings one size to another at a minimum distance from one another without using tube section.

## Mounting the connection Insert

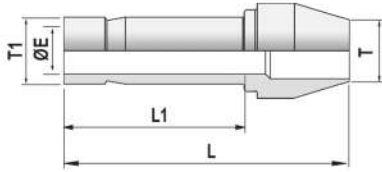
The side of the connecting insert that simulates the ferrules is mounted first. Unscrew the nut of the pipe fittings and remove the ferrules. Set insert with put the nut on it, simulating ferrules in the fitting body and tighten the nut manually. While holding the fitting body stationary, tighten the nut with a wrench 1/4 turn to fittings with a diameter of 6mm (1/4") or more or 1/8 turn for fittings of 4mm (1/8") or less.

The tube fitting is mounted on the other side of the connection insert (with a notch) similar to installing a fitting on a tube. Insert the notched end into the tube connect it all the way into the fitting body and tighten the fitting nut by hand. Then holding fixed fitting body, tighten the nut with a wrench one turn and a quarter for the fittings diameter from 6mm (1/4") or more or 3/4 turn for fittings with a diameter of 4mm (1/8") or less.

Subsequent, if necessary, disassembly / assembly of the fitting is carried out in accordance with this procedure for tube pipe fittings.



# Reducing Port Connector



## Imperial Tube

| Part No       | Tube O.D. T |       | Tube O.D. T1 |       | E Min mm | L     | L1    |
|---------------|-------------|-------|--------------|-------|----------|-------|-------|
|               | Inch        | mm    | Inch         | mm    |          |       |       |
| BRPC-02-01-SS | 1/8         | 3.17  | 1/16         | 1.59  | 0.80     | 17.27 | 8.64  |
| BRPC-04-02-SS | 1/4         | 6.35  | 1/8          | 3.17  | 2.10     | 22.60 | 13.45 |
| BRPC-06-02-SS | 3/8         | 9.52  | 1/8          | 3.17  | 2.10     | 23.11 | 13.45 |
| BRPC-06-04-SS | 3/8         | 9.52  | 1/4          | 6.35  | 4.20     | 24.89 | 15.75 |
| BRPC-08-04-SS | 1/2         | 12.70 | 1/4          | 6.35  | 4.20     | 29.21 | 15.75 |
| BRPC-08-06-SS | 1/2         | 12.70 | 3/8          | 9.52  | 7.10     | 30.48 | 17.67 |
| BRPC-12-08-SS | 3/4         | 19.05 | 1/2          | 12.70 | 9.90     | 37.85 | 23.20 |
| BRPC-16-08-SS | 1           | 25.40 | 1/2          | 12.70 | 9.90     | 42.67 | 24.47 |
| BRPC-16-12-SS | 1           | 25.40 | 3/4          | 19.05 | 15.00    | 43.43 | 25.90 |

## Metric Tube

| Part No         | Tube O.D. T |    | Tube O.D. T1 |    | E Min mm | L     | L1    |
|-----------------|-------------|----|--------------|----|----------|-------|-------|
|                 | mm          | mm | mm           | mm |          |       |       |
| BRPC-M06-M03-SS | 6           | 3  | 6            | 3  | 2.00     | 22.60 | 13.50 |
| BRPC-M08-M06-SS | 8           | 6  | 8            | 6  | 4.20     | 24.70 | 15.70 |
| BRPC-M10-M06-SS | 10          | 6  | 10           | 6  | 4.20     | 25.80 | 15.70 |
| BRPC-M10-M08-SS | 10          | 8  | 10           | 8  | 6.00     | 26.10 | 16.80 |
| BRPC-M12-M06-SS | 12          | 6  | 12           | 6  | 4.20     | 29.10 | 15.70 |
| BRPC-M12-M08-SS | 12          | 8  | 12           | 8  | 6.00     | 29.80 | 16.80 |
| BRPC-M12-M10-SS | 12          | 10 | 12           | 10 | 7.70     | 30.40 | 17.50 |
| BRPC-M16-M12-SS | 16          | 12 | 16           | 12 | 9.10     | 36.80 | 23.10 |
| BRPC-M28-M25-SS | 28          | 25 | 28           | 25 | 19.80    | 56.50 | 33.00 |
| BRPC-M32-M25-SS | 32          | 25 | 32           | 25 | 19.80    | 60.30 | 33.00 |
| BRPC-M38-M25-SS | 38          | 25 | 38           | 25 | 19.80    | 65.80 | 33.00 |

## Application

Connecting insert adapter is designed to connect two **BE-LOK** tube fittings of different diameters between each other at a minimum distance from one another.

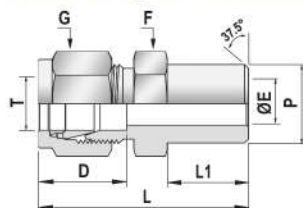
## Mounting the adapter Insert

The side of the connecting insert, simulates the ferrules is mounted first. Unscrew the nut of the pipe fittings and remove the ferrules. Set insert an adapter with a nut worn on it, simulating ferrules in the fitting body and tighten the nut by hand. While holding the fitting body stationary, tighten the nut with a wrench 1/4 turn for fittings with a diameter of 6mm (1/4") or move or 1/8" turn for fittings from 4mm (1/8") or less.

Installing a tube fitting on the other side of the adapter insert (with a notch) made in the same way as fitting a pipe. You must insert the notched end into tube the connector all way into the fitting body and tighten the fitting nut by hand. Then, holding the fitting body stationary, tighten the nut with a wrench one turn and a quarter to fitting with a diameter of 6 mm (1/4") or move or 3/4 turn for fittings with a diameter of 4mm (1/8") or less.

Subsequent, if necessary, disassembly / assembly of the fitting is carried out in accordance with this procedure for crimp pipe fittings.

# Male Pipe Weld Connector



## Metric Tube x Pipe Butt Weld

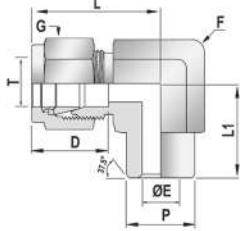
| Part No           | Tube O.D. |  | B<br>Male Pipe |      | E<br>Min<br>mm | Width Across Flat |           | D     | L1    | L     |
|-------------------|-----------|--|----------------|------|----------------|-------------------|-----------|-------|-------|-------|
|                   | T<br>mm   |  | Nominee        | mm   |                | F<br>Inch         | G<br>Inch |       |       |       |
| BMWC-M03-2PBW-SS  | 3         |  | 1/8            | 10.3 | 2.40           | 12                | 12        | 12.90 | 9.70  | 29.70 |
| BMWC-M04-2PBW-SS  | 4         |  | 1/8            | 10.3 | 2.40           | 12                | 12        | 13.70 | 9.70  | 30.70 |
| BMWC-M06-2PBW-SS  | 6         |  | 1/8            | 10.3 | 4.20           | 14                | 14        | 15.30 | 9.70  | 32.80 |
| BMWC-M06-4PBW-SS  | 6         |  | 1/4            | 13.7 | 4.80           | 14                | 14        | 15.30 | 14.20 | 37.60 |
| BMWC-M08-2PBW-SS  | 8         |  | 1/8            | 10.3 | 5.10           | 15                | 16        | 16.20 | 9.70  | 34.20 |
| BMWC-M08-4PBW-SS  | 8         |  | 1/4            | 13.7 | 6.40           | 15                | 16        | 16.20 | 14.20 | 38.70 |
| BMWC-M08-8PBW-SS  | 8         |  | 1/2            | 21.3 | 6.40           | 22                | 16        | 16.20 | 19.00 | 44.80 |
| BMWC-M10-4PBW-SS  | 10        |  | 1/4            | 13.7 | 7.10           | 18                | 19        | 17.20 | 14.20 | 40.90 |
| BMWC-M10-6PBW-SS  | 10        |  | 3/8            | 17.1 | 7.90           | 18                | 19        | 17.20 | 14.20 | 40.10 |
| BMWC-M10-8PBW-SS  | 10        |  | 1/2            | 21.3 | 7.90           | 22                | 19        | 17.20 | 19.00 | 45.70 |
| BMWC-M12-4PBW-SS  | 12        |  | 1/4            | 13.7 | 7.10           | 22                | 22        | 22.80 | 14.20 | 43.40 |
| BMWC-M12-6PBW-SS  | 12        |  | 3/8            | 17.1 | 9.50           | 22                | 22        | 22.80 | 14.20 | 43.40 |
| BMWC-M12-8PBW-SS  | 12        |  | 1/2            | 21.3 | 9.50           | 24                | 22        | 22.80 | 19.00 | 49.20 |
| BMWC-M14-12PBW-SS | 14        |  | 3/4            | 26.7 | 10.40          | 24                | 24        | 24.40 | 20.60 | 50.50 |
| BMWC-M15-8PBW-SS  | 15        |  | 1/2            | 21.3 | 11.90          | 24                | 24        | 24.40 | 19.00 | 49.00 |
| BMWC-M16-8PBW-SS  | 16        |  | 1/2            | 21.3 | 12.70          | 24                | 24        | 24.40 | 19.00 | 49.00 |
| BMWC-M18-8PBW-SS  | 18        |  | 1/2            | 21.3 | 13.50          | 27                | 30        | 24.40 | 19.00 | 50.50 |
| BMWC-M32-20PBW-SS | 32        |  | 1-1/4          | 48.3 | 28.60          | 46                | 50        | 42.00 | 23.90 | 79.60 |
| BMWC-M38-20PBW-SS | 38        |  | 1-1/2          | 60.3 | 33.70          | 55                | 60        | 49.40 | 26.20 | 91.60 |

## Imperial Tube x Pipe Butt Weld

| Part No          | Tube O.D. |       | B<br>Male Pipe |      | E<br>Min<br>mm | Width Across Flat |           | D     | L1    | L      |
|------------------|-----------|-------|----------------|------|----------------|-------------------|-----------|-------|-------|--------|
|                  | T<br>Inch | mm    | Nominee        | mm   |                | F<br>Inch         | G<br>Inch |       |       |        |
| BMWC-02-2PBW-SS  | 1/8       | 3.17  | 1/8            | 10.3 | 2.28           | 7/16              | 7/16      | 12.70 | 9.65  | 31.24  |
| BMWC-03-2PBW-SS  | 3/16      | 4.76  | 1/8            | 10.3 | 3.04           | 7/16              | 1/2       | 13.71 | 9.65  | 31.24  |
| BMWC-04-2PBW-SS  | 1/4       | 6.35  | 1/8            | 10.3 | 4.82           | 1/2               | 9/16      | 15.24 | 9.65  | 32.76  |
| BMWC-04-4PBW-SS  | 1/4       | 6.35  | 1/4            | 13.7 | 4.82           | 9/16              | 9/16      | 15.24 | 14.22 | 37.84  |
| BMWC-05-2PBW-SS  | 5/16      | 7.93  | 1/8            | 10.3 | 5.08           | 9/16              | 5/8       | 16.25 | 9.65  | 37.03  |
| BMWC-05-4PBW-SS  | 5/16      | 7.93  | 1/4            | 13.7 | 6.35           | 9/16              | 5/8       | 16.25 | 14.22 | 38.60  |
| BMWC-06-4PBW-SS  | 3/8       | 9.52  | 1/4            | 13.7 | 7.11           | 5/8               | 11/16     | 16.76 | 14.22 | 39.87  |
| BMWC-06-6PBW-SS  | 3/8       | 9.52  | 3/8            | 17.1 | 7.11           | 11/16             | 11/16     | 16.76 | 14.22 | 39.87  |
| BMWC-06-8PBW-SS  | 3/8       | 9.52  | 1/2            | 21.3 | 7.11           | 7/8               | 11/16     | 16.76 | 19.05 | 43.23  |
| BMWC-08-6PBW-SS  | 1/2       | 12.70 | 3/8            | 17.1 | 10.41          | 13/16             | 7/8       | 22.86 | 14.22 | 43.43  |
| BMWC-08-8PBW-SS  | 1/2       | 12.70 | 1/2            | 21.3 | 10.41          | 7/8               | 7/8       | 22.86 | 19.05 | 49.02  |
| BMWC-08-12PBW-SS | 1/2       | 12.70 | 3/4            | 26.7 | 10.41          | 1-1/16            | 7/8       | 22.86 | 19.05 | 50.54  |
| BMWC-10-8PBW-SS  | 5/8       | 15.87 | 1/2            | 21.3 | 12.70          | 15/16             | 1         | 24.38 | 19.05 | 49.02  |
| BMWC-12-12PBW-SS | 3/4       | 19.05 | 3/4            | 26.7 | 15.74          | 1-1/16            | 1-1/8     | 24.38 | 19.05 | 50.54  |
| BMWC-16-16PBW-SS | 1         | 25.40 | 1              | 33.4 | 22.35          | 1-3/8             | 1/1-2     | 31.24 | 23.88 | 62.23  |
| BMWC-20-20PBW-SS | 1-1/4     | 31.75 | 1-1/4          | 42.2 | 27.68          | 1-3/4             | 2         | 41.40 | 23.88 | 77.21  |
| BMWC-24-24PBW-SS | 1-1/2     | 38.10 | 1-1/2          | 48.3 | 34.00          | 2-1/8             | 2-1/4     | 50.00 | 26.16 | 88.90  |
| BMWC-32-32PBW-SS | 2         | 50.80 | 2              | 60.3 | 45.97          | 2-3/4             | 3         | 68.56 | 26.92 | 113.53 |



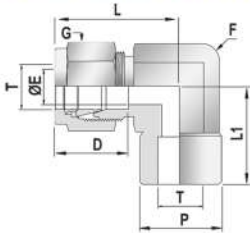
## Male Pipe Weld Elbow



### Imperial Tube x Pipe Butt Weld

| Part No          | Tube O.D. |       | B Male Pipe |       | E Min mm | Width Across Flat |        | D     | L1    | L     |
|------------------|-----------|-------|-------------|-------|----------|-------------------|--------|-------|-------|-------|
|                  | Inch      | mm    | Nominee     | mm    |          | F Inch            | G Inch |       |       |       |
| BMWE-02-2PBW-SS  | 1/8       | 3.17  | 1/8         | 10.29 | 2.28     | 7/16              | 7/16   | 12.70 | 23.36 | 18.29 |
| BMWE-04-4PBW-SS  | 1/4       | 6.35  | 1/4         | 13.72 | 4.82     | 1/2               | 9/16   | 15.24 | 26.92 | 23.36 |
| BMWE-06-4PBW-SS  | 3/8       | 9.52  | 1/4         | 13.72 | 7.11     | 5/8               | 11/16  | 16.75 | 30.48 | 25.40 |
| BMWE-08-8PBW-SS  | 1/2       | 12.70 | 1/2         | 21.34 | 10.41    | 13/16             | 7/8    | 22.86 | 36.06 | 33.02 |
| BMWE-12-12PBW-SS | 3/4       | 19.05 | 3/4         | 26.67 | 15.74    | 1-1/16            | 1-1/8  | 24.38 | 39.87 | 36.83 |

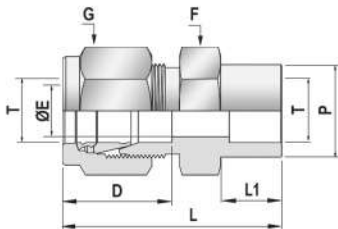
## Tube Socket Weld Elbow



### Imperial Tube x Tube Socket Weld

| Part No          | Tube O.D. |       | B Male Pipe |       | E Min mm | Width Across Flat |        | D     | L1    | L     |
|------------------|-----------|-------|-------------|-------|----------|-------------------|--------|-------|-------|-------|
|                  | Inch      | mm    | Nominee     | mm    |          | F Inch            | G Inch |       |       |       |
| BSWE-04-4TSW-SS  | 1/4       | 6.35  | 1/4         | 12.70 | 4.82     | 1/2               | 9/16   | 15.24 | 26.92 | 19.55 |
| BSWE-06-6TSW-SS  | 3/8       | 9.52  | 3/8         | 15.74 | 7.11     | 5/8               | 11/16  | 16.76 | 30.49 | 23.11 |
| BSWE-08-8TSW-SS  | 1/2       | 12.70 | 1/2         | 20.57 | 10.41    | 13/16             | 7/8    | 22.86 | 36.05 | 25.90 |
| BSWE-12-12TSW-SS | 3/4       | 19.05 | 3/4         | 26.92 | 15.74    | 1-1/16            | 1-1/8  | 24.38 | 39.87 | 29.71 |
| BSWE-16-16TSW-SS | 1         | 25.40 | 1           | 35.05 | 22.35    | 1-3/8             | 1-1/2  | 31.24 | 49.02 | 36.83 |

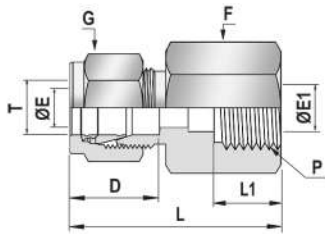
## Tube Socket Weld Connector



### Imperial Tube x Pipe Socket Weld

| Part No          | Tube O.D. |       | B Male Pipe |       | E Min mm | Width Across Flat |        | D     | L1    | L     |
|------------------|-----------|-------|-------------|-------|----------|-------------------|--------|-------|-------|-------|
|                  | Inch      | mm    | Nominee     | mm    |          | F Inch            | G Inch |       |       |       |
| BSWC-02-2TSW-SS  | 1/8       | 3.17  | 1/8         | 7.87  | 2.28     | 7/16              | 7/16   | 12.70 | 8.63  | 28.95 |
| BSWC-04-4TSW-SS  | 1/4       | 6.35  | 1/4         | 11.17 | 4.82     | 1/2               | 9/16   | 15.24 | 10.41 | 33.52 |
| BSWC-06-6TSW-SS  | 3/8       | 9.52  | 3/8         | 15.74 | 7.11     | 5/8               | 11/16  | 16.76 | 11.93 | 37.59 |
| BSWC-08-8TSW-SS  | 1/2       | 12.70 | 1/2         | 19.05 | 10.41    | 13/16             | 7/8    | 22.86 | 11.93 | 41.14 |
| BSWC-12-12TSW-SS | 3/4       | 19.05 | 3/4         | 26.67 | 15.74    | 1-1/16            | 1-1/8  | 24.38 | 11.93 | 43.43 |
| BSWC-16-16TSW-SS | 1         | 25.40 | 1           | 33.27 | 22.35    | 1-3/8             | 1-1/2  | 31.24 | 14.22 | 52.57 |

# Gauge Connector



## Metric Tube x ISO Parallel Threads (BSPP)

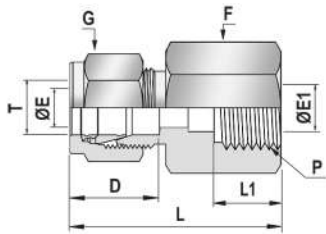
| Part No       | Tube O.D. |  | B<br>BSPP | Min     |          | Width Across Flat |         | D     | L     | L1    |
|---------------|-----------|--|-----------|---------|----------|-------------------|---------|-------|-------|-------|
|               | T<br>mm   |  |           | E<br>mm | E1<br>mm | F<br>mm           | G<br>mm |       |       |       |
| BGC-M03-4G-SS | 3         |  | 1/4       | 2.40    | 5.50     | 19                | 12      | 12.90 | 35.30 | 12.90 |
| BGC-M06-4G-SS | 6         |  | 1/4       | 4.20    | 5.50     | 19                | 14      | 15.30 | 37.60 | 12.90 |
| BGC-M06-6G-SS | 6         |  | 3/8       | 4.20    | 6.50     | 24                | 14      | 15.30 | 37.60 | 14.20 |
| BGC-M06-8G-SS | 6         |  | 1/2       | 4.20    | 7.00     | 27                | 14      | 15.30 | 43.00 | 18.80 |
| BGC-M08-4G-SS | 8         |  | 1/4       | 5.50    | 5.50     | 19                | 16      | 16.20 | 38.50 | 12.90 |
| BGC-M08-6G-SS | 8         |  | 3/8       | 6.50    | 6.50     | 24                | 16      | 16.20 | 36.20 | 14.20 |
| BGC-M08-8G-SS | 8         |  | 1/2       | 7.00    | 7.00     | 27                | 16      | 16.20 | 40.50 | 18.80 |
| BGC-M10-4G-SS | 10        |  | 1/4       | 5.50    | 5.50     | 19                | 19      | 17.20 | 39.40 | 12.90 |
| BGC-M10-6G-SS | 10        |  | 3/8       | 6.50    | 6.50     | 24                | 19      | 17.20 | 38.80 | 14.20 |
| BGC-M10-8G-SS | 10        |  | 1/2       | 7.00    | 7.00     | 27                | 19      | 17.20 | 41.40 | 18.00 |
| BGC-M12-4G-SS | 12        |  | 1/4       | 5.50    | 5.50     | 22                | 22      | 22.80 | 41.90 | 12.90 |
| BGC-M12-6G-SS | 12        |  | 3/8       | 6.50    | 6.50     | 24                | 22      | 22.80 | 44.40 | 14.20 |
| BGC-M12-8G-SS | 12        |  | 1/2       | 7.00    | 7.00     | 27                | 22      | 22.80 | 48.20 | 18.80 |
| BGC-M14-8G-SS | 14        |  | 1/2       | 7.00    | 7.00     | 27                | 25      | 23.60 | 48.20 | 18.80 |
| BGC-M20-8G-SS | 20        |  | 1/2       | 7.00    | 7.00     | 30                | 32      | 26.00 | 54.30 | 18.80 |
| BGC-M22-8G-SS | 22        |  | 1/2       | 7.00    | 7.00     | 30                | 32      | 26.00 | 54.30 | 18.80 |

## Imperial Tube x Tube Socket Weld

| Part No      | Tube O.D. |       | B<br>BSPP | Min     |          | Width Across Flat |         | D     | L     | L1    |
|--------------|-----------|-------|-----------|---------|----------|-------------------|---------|-------|-------|-------|
|              | Inch      | mm    |           | E<br>mm | E1<br>mm | F<br>mm           | G<br>mm |       |       |       |
| BGC-02-4G-SS | 1/8       | 3.17  | 1/4       | 2.40    | 5.5      | 9/16              | 9/16    | 15.24 | 33.55 | 12.00 |
| BGC-04-4G-SS | 1/4       | 6.35  | 1/4       | 4.82    | 5.5      | 3/4               | 9/16    | 15.24 | 37.59 | 12.95 |
| BGC-04-6G-SS | 1/4       | 6.35  | 3/8       | 4.82    | 6.5      | 15/16             | 9/16    | 15.24 | 37.59 | 14.22 |
| BGC-04-8G-SS | 1/4       | 6.35  | 1/2       | 4.82    | 7.0      | 1-1/16            | 9/16    | 15.24 | 43.43 | 18.80 |
| BGC-05-4G-SS | 5/16      | 7.93  | 1/4       | 5.58    | 5.5      | 3/4               | 5/8     | 16.25 | 38.35 | 12.95 |
| BGC-05-8G-SS | 5/16      | 7.93  | 1/2       | 7.11    | 7.0      | 1-1/16            | 5/8     | 16.25 | 40.38 | 18.80 |
| BGC-06-4G-SS | 3/8       | 9.52  | 1/4       | 5.58    | 5.5      | 3/4               | 11/16   | 16.76 | 39.12 | 12.95 |
| BGC-06-6G-SS | 3/8       | 9.52  | 3/8       | 6.60    | 6.5      | 15/16             | 11/16   | 16.76 | 38.61 | 14.22 |
| BGC-06-8G-SS | 3/8       | 9.52  | 1/2       | 7.11    | 7.0      | 1-1/16            | 11/16   | 16.76 | 41.91 | 18.80 |
| BGC-08-4G-SS | 1/2       | 12.70 | 1/4       | 5.50    | 5.5      | 7/8               | 7/8     | 22.86 | 41.95 | 12.95 |
| BGC-08-6G-SS | 1/2       | 12.70 | 3/8       | 6.60    | 6.5      | 15/16             | 7/8     | 22.86 | 44.45 | 14.22 |
| BGC-08-8G-SS | 1/2       | 12.70 | 1/2       | 7.11    | 7.0      | 1-1/16            | 7/8     | 22.86 | 48.26 | 18.80 |



# Gauge Connector



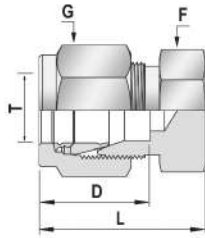
## Metric Tube x Metric Threads

| Part No        | Tube O.D. |  | B<br>Metric<br>Thread | Min     |          | Width Across Flat |         | D     | L     | L1    |
|----------------|-----------|--|-----------------------|---------|----------|-------------------|---------|-------|-------|-------|
|                | T<br>mm   |  |                       | E<br>mm | E1<br>mm | F<br>mm           | G<br>mm |       |       |       |
| BGC-M03-20M-SS | 3         |  | M20x1.5               | 2.40    | 7.00     | 27                | 12      | 12.90 | 41.60 | 19.00 |
| BGC-M06-20M-SS | 6         |  | M20x1.5               | 4.80    | 7.00     | 27                | 14      | 15.30 | 44.00 | 19.00 |
| BGC-M08-20M-SS | 8         |  | M20x1.5               | 6.40    | 7.00     | 27                | 16      | 16.20 | 44.90 | 19.00 |
| BGC-M10-20M-SS | 10        |  | M20x1.5               | 7.00    | 7.00     | 27                | 19      | 17.20 | 45.80 | 19.00 |
| BGC-M12-20M-SS | 12        |  | M20x1.5               | 7.00    | 7.00     | 27                | 22      | 22.80 | 48.30 | 19.00 |
| BGC-M14-20M-SS | 14        |  | M20x1.5               | 7.00    | 7.00     | 27                | 25      | 24.40 | 48.30 | 19.00 |
| BGC-M15-20M-SS | 15        |  | M20x1.5               | 7.00    | 7.00     | 27                | 25      | 24.40 | 48.30 | 19.00 |
| BGC-M16-20M-SS | 16        |  | M20x1.5               | 7.00    | 7.00     | 27                | 25      | 24.40 | 48.30 | 19.00 |
| BGC-M18-20M-SS | 18        |  | M20x1.5               | 7.00    | 7.00     | 27                | 30      | 24.40 | 48.30 | 19.00 |
| BGC-M20-20M-SS | 20        |  | M20x1.5               | 7.00    | 7.00     | 30                | 32      | 26.00 | 48.30 | 19.00 |
| BGC-M22-20M-SS | 22        |  | M20x1.5               | 7.00    | 7.00     | 30                | 32      | 26.00 | 48.30 | 19.00 |
| BGC-M25-20M-SS | 25        |  | M20x1.5               | 7.00    | 7.00     | 35                | 38      | 31.30 | 52.80 | 19.00 |

## Imperial Tube x Metric Threads

| Part No       | Tube O.D. |       | B<br>Metric<br>Thread | Min     |          | Width Across Flat |         | D     | L     | L1    |
|---------------|-----------|-------|-----------------------|---------|----------|-------------------|---------|-------|-------|-------|
|               | T<br>Inch | mm    |                       | E<br>mm | E1<br>mm | F<br>mm           | G<br>mm |       |       |       |
| BGC-04-20M-SS | 1/4       | 6.35  | M20x1.5               | 4.82    | 7.00     | 1-1/16            | 9/16    | 15.24 | 44.10 | 19.00 |
| BGC-05-20M-SS | 5/16      | 7.93  | M20x1.5               | 6.35    | 7.00     | 1-1/16            | 5/8     | 16.25 | 44.80 | 19.00 |
| BGC-06-20M-SS | 3/8       | 9.52  | M20x1.5               | 7.11    | 7.00     | 1-1/16            | 11/16   | 16.76 | 45.60 | 19.00 |
| BGC-08-20M-SS | 1/2       | 12.70 | M20x1.5               | 7.11    | 7.00     | 1-1/16            | 7/8     | 22.86 | 48.20 | 19.00 |

# Tube Cap



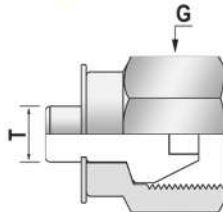
## Metric Tube

| Part No    | Tube O.D. |    | Width Across Flat |       | D     | L |
|------------|-----------|----|-------------------|-------|-------|---|
|            | T         | F  | G                 | G     |       |   |
|            | mm        | mm | mm                | mm    |       |   |
| BTC-M02-SS | 2         | 12 | 12                | 12.90 | 20.10 |   |
| BTC-M03-SS | 3         | 12 | 12                | 12.90 | 20.10 |   |
| BTC-M04-SS | 4         | 12 | 12                | 13.70 | 21.30 |   |
| BTC-M06-SS | 6         | 14 | 14                | 15.30 | 23.10 |   |
| BTC-M08-SS | 8         | 15 | 16                | 16.20 | 24.50 |   |
| BTC-M10-SS | 10        | 18 | 19                | 17.20 | 29.20 |   |
| BTC-M12-SS | 12        | 22 | 22                | 22.80 | 29.90 |   |
| BTC-M15-SS | 15        | 24 | 25                | 24.40 | 29.90 |   |
| BTC-M16-SS | 16        | 24 | 25                | 24.40 | 29.90 |   |
| BTC-M18-SS | 18        | 27 | 30                | 24.40 | 31.40 |   |
| BTC-M20-SS | 20        | 30 | 32                | 26.00 | 34.00 |   |
| BTC-M22-SS | 22        | 30 | 32                | 26.00 | 34.00 |   |
| BTC-M25-SS | 25        | 35 | 38                | 31.30 | 38.50 |   |
| BTC-M38-SS | 38        | 55 | 60                | 49.40 | 65.40 |   |

## Imperial Tube

| Part No   | Tube O.D. |       | Width Across Flat |       | D     | L     |
|-----------|-----------|-------|-------------------|-------|-------|-------|
|           | T         | F     | G                 | G     |       |       |
|           | Inch      | mm    | Inch              | mm    |       |       |
| BTC-01-SS | 1/16      | 1.59  | 5/16              | 5/16  | 8.63  | 14.18 |
| BTC-02-SS | 1/8       | 3.17  | 7/16              | 7/16  | 15.24 | 20.06 |
| BTC-03-SS | 3/16      | 4.76  | 7/16              | 1/2   | 13.71 | 21.33 |
| BTC-04-SS | 1/4       | 6.35  | 1/2               | 9/16  | 15.30 | 24.50 |
| BTC-05-SS | 5/16      | 7.93  | 9/16              | 5/8   | 16.25 | 24.38 |
| BTC-06-SS | 3/8       | 9.52  | 5/8               | 11/16 | 17.10 | 26.00 |
| BTC-08-SS | 1/2       | 12.70 | 7/8               | 7/8   | 22.80 | 30.00 |
| BTC-10-SS | 5/8       | 15.87 | 15/16             | 1     | 24.38 | 30.10 |
| BTC-12-SS | 3/4       | 19.05 | 1-1/16            | 1-1/8 | 24.38 | 31.50 |
| BTC-14-SS | 7/8       | 22.22 | 1-3/16            | 1-1/4 | 25.90 | 34.03 |
| BTC-16-SS | 1         | 25.40 | 1-3/8             | 1-1/2 | 31.24 | 38.35 |
| BTC-20-SS | 1-1/4     | 31.75 | 1-3/4             | 1-7/8 | 41.14 | 53.34 |
| BTC-24-SS | 1-1/2     | 38.10 | 2-1/8             | 2-1/4 | 50.15 | 64.51 |
| BTC-32-SS | 2         | 50.80 | 2-3/4             | 3     | 67.56 | 86.61 |

# Tube Plug



## Metric Threads

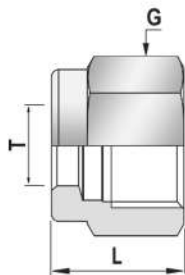
| Part No    | Tube O.D. |    | Width Across Flat |
|------------|-----------|----|-------------------|
|            | T         | F  | G                 |
|            | mm        | mm | Inch              |
| BTP-M02-SS | 2         | 12 | 12                |
| BTP-M03-SS | 3         | 12 | 12                |
| BTP-M04-SS | 4         | 12 | 12                |
| BTP-M06-SS | 6         | 14 | 14                |
| BTP-M08-SS | 8         | 16 | 16                |
| BTP-M10-SS | 10        | 19 | 19                |
| BTP-M12-SS | 12        | 22 | 22                |
| BTP-M15-SS | 15        | 25 | 25                |
| BTP-M16-SS | 16        | 25 | 25                |
| BTP-M18-SS | 18        | 30 | 30                |
| BTP-M20-SS | 20        | 32 | 32                |
| BTP-M22-SS | 22        | 32 | 32                |
| BTP-M25-SS | 25        | 38 | 38                |
| BTP-M38-SS | 38        | 60 | 60                |

## Imperial Tube

| Part No   | Tube O.D. |       | Width Across Flat |
|-----------|-----------|-------|-------------------|
|           | T         | F     | G                 |
|           | Inch      | mm    | Inch              |
| BTP-01-SS | 1/16      | 1.59  | 5/16              |
| BTP-02-SS | 1/8       | 3.17  | 7/16              |
| BTP-03-SS | 3/16      | 4.76  | 1/2               |
| BTP-04-SS | 1/4       | 6.35  | 9/16              |
| BTP-05-SS | 5/16      | 7.93  | 5/8               |
| BTP-06-SS | 3/8       | 9.52  | 11/16             |
| BTP-08-SS | 1/2       | 12.70 | 7/8               |
| BTP-10-SS | 5/8       | 15.87 | 1                 |
| BTP-12-SS | 3/4       | 19.05 | 1-1/8             |
| BTP-14-SS | 7/8       | 22.22 | 1-1/4             |
| BTP-16-SS | 1         | 25.40 | 1-1/2             |
| BTP-20-SS | 1-1/4     | 31.75 | 1-7/8             |
| BTP-24-SS | 1-1/2     | 38.10 | 2-1/4             |
| BTP-32-SS | 2         | 50.80 | 3                 |



# Nut



## Metric Tube

| Part No   | Tube O.D. |         | L     |
|-----------|-----------|---------|-------|
|           | T<br>mm   | G<br>mm |       |
| BL-M02-SS | 2         | 12      | 11.90 |
| BL-M03-SS | 3         | 12      | 11.90 |
| BL-M04-SS | 4         | 12      | 11.90 |
| BL-M06-SS | 6         | 14      | 12.70 |
| BL-M08-SS | 8         | 16      | 13.50 |
| BL-M10-SS | 10        | 19      | 15.10 |
| BL-M12-SS | 12        | 22      | 17.40 |
| BL-M14-SS | 14        | 22      | 17.40 |
| BL-M15-SS | 15        | 25      | 17.40 |
| BL-M16-SS | 16        | 25      | 17.40 |
| BL-M18-SS | 18        | 30      | 17.60 |
| BL-M20-SS | 20        | 32      | 17.60 |
| BL-M22-SS | 22        | 32      | 18.50 |
| BL-M25-SS | 25        | 38      | 20.60 |
| BL-M28-SS | 28        | 46      | 30.60 |
| BL-M32-SS | 32        | 50      | 34.40 |
| BL-M38-SS | 38        | 60      | 40.60 |
| BL-M42-SS | 42        | 65      | 40.60 |
| BL-M50-SS | 50        | 76      | 52.60 |

## Imperial Tube

| Part No  | Tube O.D. |       | G<br>Inch | L     |
|----------|-----------|-------|-----------|-------|
|          | Inch      | mm    |           |       |
| BL-01-SS | 1/16      | 1.59  | 5/16      | 7.92  |
| BL-02-SS | 1/8       | 3.17  | 7/16      | 12.00 |
| BL-03-SS | 3/16      | 4.76  | 1/2       | 12.10 |
| BL-04-SS | 1/4       | 6.35  | 9/16      | 12.70 |
| BL-05-SS | 5/16      | 7.93  | 5/8       | 13.50 |
| BL-06-SS | 3/8       | 9.52  | 11/16     | 14.30 |
| BL-08-SS | 1/2       | 12.70 | 7/8       | 17.50 |
| BL-10-SS | 5/8       | 15.87 | 1         | 17.52 |
| BL-12-SS | 3/4       | 19.05 | 1-1/8     | 17.80 |
| BL-14-SS | 7/8       | 22.22 | 1-1/4     | 17.92 |
| BL-16-SS | 1         | 25.40 | 1-1/2     | 21.00 |
| BL-20-SS | 1-1/4     | 31.75 | 1-7/8     | 31.75 |
| BL-24-SS | 1-1/2     | 38.10 | 2-1/4     | 38.10 |
| BL-32-SS | 2         | 50.80 | 3         | 52.32 |

Part No Tube O.D. T mm Width Across Flat G mm

Part No Tube O.D. T Inch Width Across Flat G Inch

# Back Ferrule



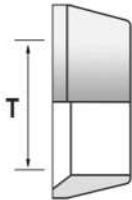
## Metric Tube

| Part No    | Tube O.D. |    |
|------------|-----------|----|
|            | T         | mm |
| BBF-M02-SS | 2         |    |
| BBF-M03-SS | 3         |    |
| BBF-M04-SS | 4         |    |
| BBF-M06-SS | 6         |    |
| BBF-M08-SS | 8         |    |
| BBF-M10-SS | 10        |    |
| BBF-M12-SS | 12        |    |
| BBF-M14-SS | 14        |    |
| BBF-M16-SS | 16        |    |
| BBF-M18-SS | 18        |    |
| BBF-M20-SS | 20        |    |
| BBF-M22-SS | 22        |    |
| BBF-M25-SS | 25        |    |
| BBF-M28-SS | 28        |    |

## Imperial Tube

| Part No   | Tube O.D. |       |
|-----------|-----------|-------|
|           | Inch      | mm    |
| BBF-01-SS | 1/16      | 1.59  |
| BBF-02-SS | 1/8       | 3.17  |
| BBF-03-SS | 3/16      | 4.76  |
| BBF-04-SS | 1/4       | 6.35  |
| BBF-05-SS | 5/16      | 7.93  |
| BBF-06-SS | 3/8       | 9.52  |
| BBF-08-SS | 1/2       | 12.70 |
| BBF-10-SS | 5/8       | 15.87 |
| BBF-12-SS | 3/4       | 19.05 |
| BBF-14-SS | 7/8       | 22.22 |
| BBF-16-SS | 1         | 25.40 |
| BBF-20-SS | 1-1/4     | 31.75 |
| BBF-24-SS | 1-1/2     | 38.10 |
| BBF-32-SS | 2         | 50.80 |

# Front Ferrule



## Metric Tube

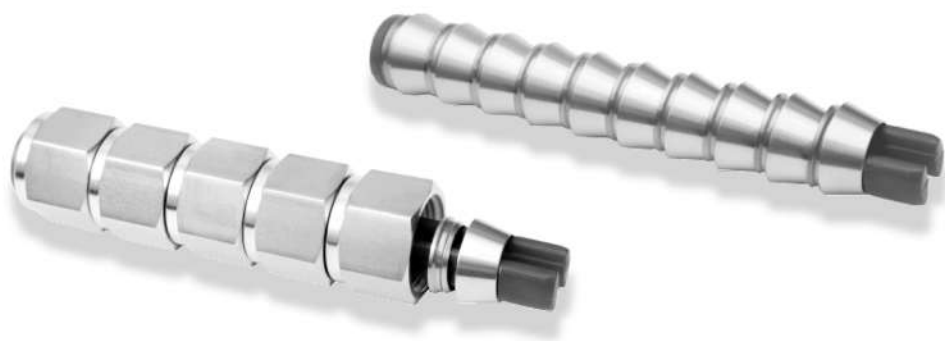
| Part No    | Tube O.D. |    |
|------------|-----------|----|
|            | T         | mm |
| BFF-M02-SS | 2         |    |
| BFF-M03-SS | 3         |    |
| BFF-M04-SS | 4         |    |
| BFF-M06-SS | 6         |    |
| BFF-M08-SS | 8         |    |
| BFF-M10-SS | 10        |    |
| BFF-M12-SS | 12        |    |
| BFF-M14-SS | 14        |    |
| BFF-M16-SS | 16        |    |
| BFF-M18-SS | 18        |    |
| BFF-M20-SS | 20        |    |
| BFF-M22-SS | 22        |    |
| BFF-M25-SS | 25        |    |
| BFF-M28-SS | 28        |    |

## Imperial Tube

| Part No   | Tube O.D. |       |
|-----------|-----------|-------|
|           | Inch      | mm    |
| BFF-01-SS | 1/16      | 1.59  |
| BFF-02-SS | 1/8       | 3.17  |
| BFF-03-SS | 3/16      | 4.76  |
| BFF-04-SS | 1/4       | 6.35  |
| BFF-05-SS | 5/16      | 7.93  |
| BFF-06-SS | 3/8       | 9.52  |
| BFF-08-SS | 1/2       | 12.70 |
| BFF-10-SS | 5/8       | 15.87 |
| BFF-12-SS | 3/4       | 19.05 |
| BFF-14-SS | 7/8       | 22.22 |
| BFF-16-SS | 1         | 25.40 |
| BFF-20-SS | 1-1/4     | 31.75 |
| BFF-24-SS | 1-1/2     | 38.10 |
| BFF-32-SS | 2         | 50.80 |



## Kit and Sets of Front & Back Ferrule Nuts



All front & back of **BE-LOK** can be purchased separately and in a set, including complete with a nut. Packing ferrules in sets simplifies their storage and installation, and also protects against damage during transportation.

The following sets of ferrule and nuts are available for order:

### PFS Ferrule Set

The Kit consists of one front and one back ferrule of **BE-LOK**. To order it is necessary also indicate the outer diameter of the tube in accordance with the configuration table. For example, a set of ferrules for a tube with an outer diameter of 3/8 inch will be **BFS-04**, and for a tube with an outer diameter of 6mm will be **BFS-M06**

### Set of Ferrule and Nuts BNFS

The Kit consists of one front and one back ferrule of **BE-LOK**. To order it is necessary also indicate the outer diameter of the tube in accordance with the configuration table. For example, a set of ferrules for the tube with an outer diameter of 3/8 inch will be **BNFS-06**, and for a tube with an outer 8mm diameter will be **BNFS-M08**.

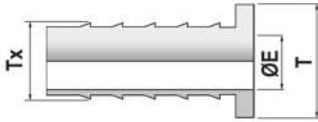
### Set of 10 Sets of Ferrules BFS-SET

The Set consists of 10 front and 10 back ferrules of **BE-LOK**. To order, You must also specify outer diameter of the tube in accordance with the configuration table. For example, a set of 10 sets ferrules for a tube with an outer diameter of 1/2 inch will be **BFS-08-SET**, and for a tube with an outer 12mm diameter will be **BFS-M12-SET**.

### Set of 5 Sets of Ferrules BNFS-SET Nut

The set consists of 5 front, 5 back ferrules and 5 nuts **BE-LOK**. To order, you must specify also the outer diameter of the tube in accordance with the configuration table. For example, a set of 5 sets ferrules and nuts for a tube with an outer diameter of 3/4 inch will be **BNFS-12-SET**, and for a tube with outer diameter 14mm will be **BNFS-M14-SET**.

# Pipe Insert



## Metric Tube

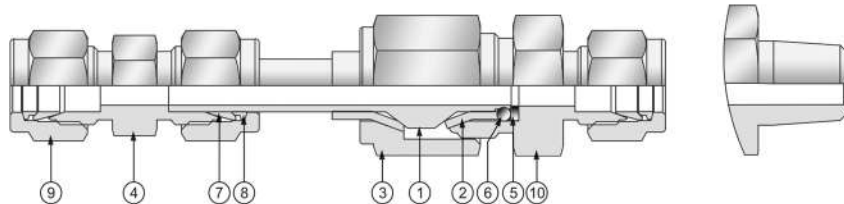
| Part No        | Tube O.D. |          | Tube I.D. |         | E<br>Min<br>mm |
|----------------|-----------|----------|-----------|---------|----------------|
|                | T<br>mm   | Tx<br>mm | Tx<br>mm  | T<br>mm |                |
| BIN-M06-M04-SS | 6         | 4        | 4         | 6       | 2.80           |
| BIN-M08-M06-SS | 8         | 6        | 6         | 8       | 4.40           |
| BIN-M10-M08-SS | 10        | 8        | 8         | 10      | 6.40           |
| BIN-M12-M08-SS | 12        | 8        | 8         | 12      | 6.40           |
| BIN-M12-M10-SS | 12        | 10       | 10        | 12      | 8.30           |

## Imperial Tube

| Part No        | Tube O.D. |       | Tube I.D. |       | E<br>Min<br>mm |
|----------------|-----------|-------|-----------|-------|----------------|
|                | Inch      | mm    | Inch      | mm    |                |
| BIN-03-02-SS   | 3/16      | 4.36  | 1/8       | 3.17  | 2.30           |
| BIN-04-02-SS   | 1/4       | 6.35  | 1/8       | 3.17  | 2.30           |
| BIN-04-0.17-SS | 1/4       | 6.35  | 0.17      | 4.32  | 2.80           |
| BIN-04-03-SS   | 1/4       | 6.35  | 3/16      | 4.76  | 3.50           |
| BIN-05-02-SS   | 5/16      | 7.93  | 1/8       | 3.17  | 2.30           |
| BIN-05-03-SS   | 5/16      | 7.93  | 3/16      | 4.76  | 3.00           |
| BIN-05-04-SS   | 5/16      | 7.93  | 1/4       | 6.35  | 4.80           |
| BIN-06-03-SS   | 3/8       | 9.52  | 3/16      | 4.76  | 3.00           |
| BIN-06-04-SS   | 3/8       | 9.52  | 1/4       | 6.35  | 4.80           |
| BIN-08-04-SS   | 1/2       | 12.70 | 1/4       | 6.35  | 4.80           |
| BIN-08-06-SS   | 1/2       | 12.70 | 3/8       | 9.52  | 7.90           |
| BIN-10-06-SS   | 5/8       | 15.87 | 3/8       | 9.52  | 7.90           |
| BIN-10-08-SS   | 5/8       | 15.87 | 1/2       | 12.70 | 11.10          |
| BIN-12-08-SS   | 3/4       | 19.05 | 1/2       | 12.70 | 11.10          |
| BIN-12-10-SS   | 3/4       | 19.05 | 5/8       | 15.87 | 14.20          |
| BIN-16-12-SS   | 1         | 25.40 | 3/4       | 19.05 | 17.50          |



# Material of Construction

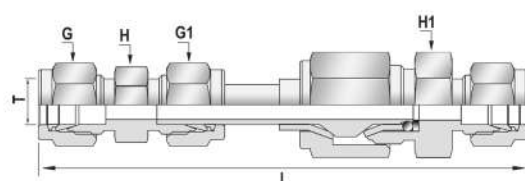
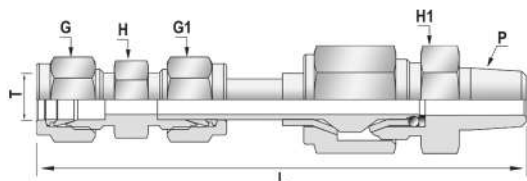


| Sr.No. | Description    | Material          | Qty. |
|--------|----------------|-------------------|------|
| 1      | Port Connector | ASTM A 479-316 SS | 1    |
| 2      | Insulator      | Polyamideimide    | 2    |
| 3      | Nut            | ASTM A 479-316 SS | 1    |
| 4      | Union          | ASTM A 479-316 SS | 1    |
| 5      | Packing        | Teflon (PTFE)     | 1    |
| 6      | O-Ring         | Viton             | 1    |

| Sr.No. | Description                     | Material          | Qty. |
|--------|---------------------------------|-------------------|------|
| 7      | Front Ferrule                   | ASTM A 479-316 SS | 3    |
| 8      | Back Ferrule                    | ASTM A 479-316 SS | 3    |
| 9      | Union Nut                       | ASTM A 479-316 SS | 1    |
| 10     | Reducing Union / Male Connector | ASTM A 479-316 SS | 1    |

| Technical Data                                     |                                    |
|--|------------------------------------|
| Electrical resistance of Insulator @ 70° F (20° C) | 10 X 106 Ohm at 30V DC             |
| Pressure Rating                                    | 34.47 MPa (5000 psi)               |
| Temperature Rating                                 | -40° C to 93° C (-40° F to 200° F) |

## Ba3Mepbl



### Male Connector Dielectric Fitting

| Part No           | Tube O.D. |       | B<br>NPT | G     | G1    | H   | H1  | L   |
|-------------------|-----------|-------|----------|-------|-------|-----|-----|-----|
|                   | Inch      | mm    |          |       |       |     |     |     |
| BMC-06-4N-SS-DIE  | 3/8       | 9.52  | 1/4      | 11/16 | 11/16 | 5/8 | 5/8 | 114 |
| BMC-08-4N-SS-DIE  | 1/2       | 12.70 | 1/4      | 7/8   | 11/16 | 7/8 | 7/8 | 118 |
| BMC-M12-4N-SS-DIE | -         | 12.00 | 1/4      | 22    | 11/16 | 22  | 22  | 118 |

### Union Dielectric Fitting

| Part No       | Tube O.D. |       | G     | G1    | H   | H1  | L   |
|---------------|-----------|-------|-------|-------|-----|-----|-----|
|               | Inch      | mm    |       |       |     |     |     |
| BU-04-SS-DIE  | 1/4       | 6.35  | 9/16  | 11/16 | 5/8 | 7/8 | 118 |
| BU-06-SS-DIE  | 3/8       | 9.52  | 11/16 | 11/16 | 5/8 | 7/8 | 119 |
| BU-08-SS-DIE  | 1/2       | 12.70 | 7/8   | 11/16 | 7/8 | 7/8 | 126 |
| BU-M06-SS-DIE | -         | 6.00  | 14    | 17    | 16  | 22  | 118 |
| BU-M08-SS-DIE | -         | 8.00  | 16    | 17    | 16  | 22  | 118 |
| BU-M10-SS-DIE | -         | 10.00 | 18    | 17    | 18  | 22  | 119 |
| BU-M12-SS-DIE | -         | 12.00 | 22    | 17    | 22  | 22  | 126 |

## Dielectric Fittings

Dielectric fittings are designed to isolate instruments and measuring equipment from the effects of electric currents, voltage and static discharges.

### Features :

Material- 316 SS Stainless Steel for use in aggressive environments.

Polyamideimide insulation with high electrical, Chemical, UV resistance and low water absorption maintain dielectric strength and integrity when operating in a wide climatic range.

Pipe crimp or conical threaded fittings ends provide a direct connection with technological pipelines.

All **BE-LOK** dielectric fittings provide maximum flow throughout.



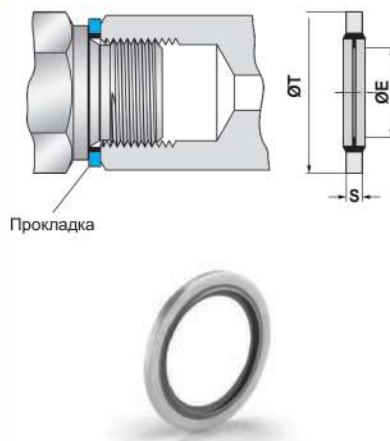
# Gaskets for Parallel Threads

The sealing of cylindrical threads in accordance with DIN-ISO-228/1 is carried out directly by metal. Metal as a result of compression of the sealing surfaces on the outside of the thread or due to the use of special sealing gasket.

## Seals for External Parallel Threads G (RS)

**BE-LOK** PRS gaskets provide outer seal parallel thread ISO. The gasket consists of an inner ring made of FKM material or Buna-N attached to an outer ring made of stainless or carbon steel .

| ISO Gaskets For Parallel Threads ISO |                 |                    |           |      |      |      |      |      |
|--------------------------------------|-----------------|--------------------|-----------|------|------|------|------|------|
| Outer Ring Material                  |                 | Thread Size<br>ISO | Dimension |      |      |      |      |      |
| Stainless<br>Steel 316               | Carbon<br>Steel |                    | T         |      | E    |      | S    |      |
|                                      |                 |                    | Inch      | Inch | mm   | Inch | mm   | Inch |
| BRS-S-02                             | BRS-C-02        | 1/8                | 0.63      | 15.9 | 0.41 | 10.4 | 0.08 | 2.0  |
| BRS-S-04                             | BRS-C-04        | 1/4                | 0.81      | 20.6 | 0.54 | 13.7 | 0.08 | 2.0  |
| BRS-S-06                             | BRS-C-06        | 3/8                | 0.94      | 23.8 | 0.68 | 17.3 | 0.08 | 2.0  |
| BRS-S-08                             | BRS-C-08        | 1/2                | 1.13      | 28.6 | 0.85 | 21.6 | 0.09 | 2.5  |
| BRS-S-12                             | BRS-C-12        | 3/4                | 1.38      | 34.9 | 1.06 | 26.9 | 0.09 | 2.5  |
| BRS-S-16                             | BRS-C-16        | 1                  | 1.69      | 42.9 | 1.33 | 33.8 | 0.09 | 2.5  |
| BRS-S-20                             | BRS-C-20        | 1- 1/4             | 2.01      | 51.1 | 1.67 | 42.4 | 0.09 | 2.5  |
| BRS-S-24                             | BRS-C-24        | 1- 1/2             | 2.33      | 59.2 | 1.92 | 48.8 | 0.09 | 2.5  |
| BRS-S-32                             | BRS-C-32        | 2                  | 2.88      | 73.0 | 2.39 | 60.7 | 0.13 | 3.0  |



## PRS Gaskets for External Metric Threads

In appearance and design, **BE-LOK** PRS gaskets for outdoor metric threads are similar to gasket for ISO external cylindrical threads. Designations and dimensions of PRS gaskets for external metric threads are given in the table.

| ISO Gaskets For Parallel Threads ISO |                 |           |           |      |      |      |      |     |
|--------------------------------------|-----------------|-----------|-----------|------|------|------|------|-----|
| Outer Ring Material                  |                 | Inch      | Dimension |      |      |      |      |     |
| Stainless<br>Steel 316               | Carbon<br>Steel |           | T         |      | E    |      | S    |     |
|                                      |                 |           | Inch      | mm   | Inch | mm   | Inch | mm  |
| BRS-S-08M                            | BRS-C-08M       | M8 x 1.0  | 13.0      | 0.51 | 0.34 | 8.7  | 0.04 | 1.0 |
| BRS-S-10M                            | BRS-C-10M       | M10 x 1.0 | 16.0      | 0.63 | 0.42 | 10.7 | 0.06 | 1.5 |
| BRS-S-12M                            | BRS-C-12M       | M12 x 1.5 | 18.0      | 0.71 | 0.50 | 12.7 | 0.06 | 1.5 |
| BRS-S-14M                            | BRS-C-14M       | M14 x 1.5 | 22.0      | 0.87 | 0.58 | 14.7 | 0.06 | 1.5 |
| BRS-S-16M                            | BRS-C-16M       | M16 x 1.5 | 24.0      | 0.95 | 0.66 | 16.7 | 0.06 | 1.5 |
| BRS-S-18M                            | BRS-C-18M       | M18 x 1.5 | 26.0      | 1.02 | 0.74 | 18.7 | 0.06 | 1.5 |
| BRS-S-20M                            | BRS-C-20M       | M20 x 1.5 | 28.0      | 1.10 | 0.82 | 20.7 | 0.06 | 1.5 |
| BRS-S-22M                            | BRS-C-22M       | M22 x 1.5 | 30.0      | 1.18 | 0.89 | 22.7 | 0.08 | 2.0 |
| BRS-S-24M                            | BRS-C-24M       | M24 x 1.5 | 32.0      | 1.26 | 0.97 | 24.7 | 0.08 | 2.0 |
| BRS-S-27M                            | BRS-C-27M       | M27 x 2.0 | 36.0      | 1.42 | 1.09 | 27.2 | 0.08 | 2.0 |
| BRS-S-30M                            | BRS-C-30M       | M30 x 2.0 | 39.0      | 1.54 | 1.10 | 30.7 | 0.08 | 2.0 |
| BRS-S-36M                            | BRS-C-36M       | M36 x 2.0 | 48.0      | 1.90 | 1.44 | 36.7 | 0.10 | 2.5 |
| BRS-S-48M                            | BRS-C-48M       | M48 x 2.0 | 59.0      | 2.32 | 1.90 | 48.7 | 0.12 | 3.0 |

## Ordering Information :

To order sealing gaskets for threads M8x1.0 must be added at the end of the code products from the table code for inner ring material:

- F- for FKM (standard)
- B- for Buna-N (on request)





# Gaskets for Parallel Threads

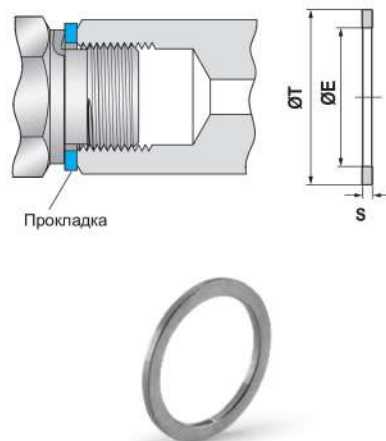
## Seals for External Parallel Threads G (RS)

BE-LOK PRS Metal seals provide ISO parallel thread seals according to DIN 3852 FORM B.

Gaskets are made of copper, PRP gaskets can be used in conjunction with fittings with parallel ISO threads in accordance with DIN 3852 FORM A.

The use of PRS gasket in conjunction with ISO parallel threaded fittings, made in accordance with DIN 3852 FORM B (RP- thread) is not allowed.

| ISO Gaskets For Parallel Threads ISO |                 |                    |           |      |      |      |      |     |
|--------------------------------------|-----------------|--------------------|-----------|------|------|------|------|-----|
| Outer Ring Material                  |                 | Thread Size<br>ISO | Dimension |      |      |      |      |     |
| Stainless<br>Steel 316               | Carbon<br>Steel |                    | T         |      | E    |      | S    |     |
|                                      |                 | Inch               | Inch      | mm   | Inch | mm   | Inch | mm  |
|                                      |                 | 1/8                | 0.59      | 15.0 | 0.39 | 9.9  | 0.04 | 1.0 |
|                                      |                 | 1/4                | 0.75      | 19.1 | 0.52 | 13.2 | 0.06 | 1.5 |
|                                      |                 | 3/8                | 0.91      | 23.1 | 0.66 | 16.8 | 0.06 | 1.5 |
|                                      |                 | 1/2                | 1.06      | 26.9 | 0.83 | 21.1 | 0.06 | 1.5 |
|                                      |                 | 3/4                | 1.30      | 33.0 | 1.05 | 26.7 | 0.08 | 2.0 |
|                                      |                 | 1                  | 1.58      | 40.1 | 1.31 | 33.3 | 0.08 | 2.0 |
|                                      |                 | 1- 1/4             | 1.96      | 49.8 | 1.66 | 42.2 | 0.08 | 2.0 |
|                                      |                 | 1- 1/2             | 2.30      | 58.4 | 1.89 | 48.0 | 0.08 | 2.0 |
|                                      |                 | 2                  | 2.88      | 73.0 | 2.39 | 60.7 | 0.13 | 3.0 |



## Sealing Copper Gaskets for External Parallel Metric Threads

BE-LOK Copper PRS gaskets Can Also Be Used for sealing external metric threads made in accordance with GOST 24705-2004 (ISO 724 : 1993).

The designations and dimensions of PRS copper gaskets for metric threads are given in the table.

| BRP Gaskets For Metric Threads |                          |           |      |      |      |     |      |
|--------------------------------|--------------------------|-----------|------|------|------|-----|------|
| Copper Sealing<br>Ring         | Metric<br>Thread<br>Size | Dimension |      |      |      |     |      |
|                                |                          | T         |      | E    |      | S   |      |
|                                |                          | mm        | Inch | mm   | Inch | mm  | Inch |
| BRP-CU-08M                     | M8 x 1.0                 | 13.20     | 0.52 | 8.2  | 0.32 | 1.5 | 0.06 |
| BRP-CU-10M                     | M10 x 1.0                | 15.20     | 0.60 | 10.2 | 0.40 | 1.5 | 0.06 |
| BRP-CU-12M                     | M12 x 1.5                | 18.20     | 0.72 | 12.7 | 0.42 | 2.0 | 0.08 |
| BRP-CU-14M                     | M14 x 1.5                | 20.20     | 0.80 | 14.2 | 0.56 | 2.0 | 0.08 |
| BRP-CU-16M                     | M16 x 1.5                | 22.20     | 0.87 | 16.2 | 0.64 | 2.0 | 0.08 |
| BRP-CU-18M                     | M18 x 1.5                | 24.20     | 0.95 | 18.2 | 0.72 | 2.0 | 0.08 |
| BRP-CU-20M                     | M20 x 1.5                | 26.20     | 1.03 | 20.2 | 0.80 | 2.0 | 0.08 |
| BRP-CU-22M                     | M22 x 1.5                | 28.20     | 1.11 | 22.2 | 0.87 | 2.0 | 0.08 |
| BRP-CU-24M                     | M24 x 1.5                | 30.20     | 1.19 | 24.2 | 0.95 | 2.0 | 0.08 |
| BRP-CU-27M                     | M27 x 1.5                | 33.30     | 1.31 | 27.2 | 1.07 | 2.5 | 0.10 |
| BRP-CU-30M                     | M30 x 1.5                | 37.30     | 1.47 | 30.2 | 1.19 | 2.5 | 0.10 |
| BRP-CU-36M                     | M36 x 1.5                | 43.30     | 1.70 | 36.2 | 1.43 | 2.5 | 0.10 |
| BRP-CU-48M                     | M48 x 1.5                | 56.30     | 2.22 | 48.2 | 1.90 | 2.5 | 0.10 |

### Ordering Information :

**BRP-CU-20M**  
 BE-LOK  
 Gasket type  
 Gasket Material  
 (Copper)  
 Thread dimension  
 (M20x1.5)



# Gaskets for Parallel Threads

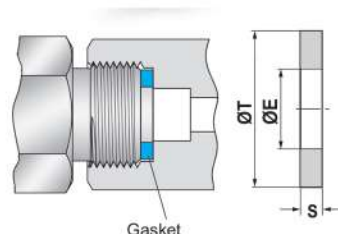
## Seals for External Parallel Threads G (RS)

BE-LOK PRS Metal seals provide ISO parallel internal thread seals according to DIN 3852 FORM Y.

Sealing is carried out by means of the pressure of the end surface of the external thread on the sealing a ring located on the flat bottom of the internal thread.

Gaskets are made of copper. Other gasket available (SS 316, PTFE).

| ISO Gaskets For Parallel Threads ISO             |                    |           |      |      |      |      |     |
|--|--------------------|-----------|------|------|------|------|-----|
| Article (Order Code)<br>Copper Sealing<br>Rings. | Thread Size<br>ISO | Dimension |      |      |      |      |     |
|  |                    | T         |      | E    |      | S    |     |
|  | Inch               | Inch      | mm   | Inch | mm   | Inch | mm  |
| BRG-CU-04  | 1/4                | 0.42      | 10.7 | 0.30 | 7.6  | 0.07 | 1.8 |
| BRG-CU-06  | 3/8                | 0.56      | 14.2 | 0.34 | 8.6  | 0.09 | 2.3 |
| BRG-CU-08  | 1/2                | 0.70      | 17.8 | 0.36 | 9.1  | 0.10 | 2.5 |
| BRG-CU-12  | 3/4                | 0.92      | 23.4 | 0.63 | 16.0 | 0.10 | 2.5 |



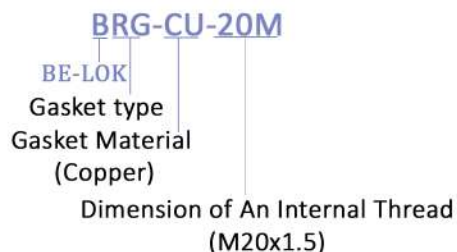
## PRG Gaskets for Metric Internal Threads

In appearance and execution of the company's PRG gasket BE-LOK for internal metric threads are similar to gaskets for internal G- threads.

Designations and dimensions PRS sealing gaskets for metric threads are shown in the table.

| BRP Gaskets For Metric Internal Threads |                          |           |      |      |      |     |      |
|---|--------------------------|-----------|------|------|------|-----|------|
| Copper Sealing<br>Ring                  | Metric<br>Thread<br>Size | Dimension |      |      |      |     |      |
|   |                          | T         |      | E    |      | S   |      |
|   |                          | mm        | Inch | mm   | Inch | mm  | Inch |
| BRG-CU-10M                              | M10 x 1.0                | 8.3       | 0.33 | 3.3  | 0.13 | 1.8 | 0.07 |
| BRG-CU-12M                              | M12 x 1.5                | 9.7       | 0.38 | 5.4  | 0.21 | 2.0 | 0.08 |
| BRG-CU-14M                              | M14 x 1.5                | 11.7      | 0.38 | 6.4  | 0.25 | 2.0 | 0.08 |
| BRG-CU-16M                              | M16 x 1.5                | 13.7      | 0.54 | 8.4  | 0.33 | 2.0 | 0.08 |
| BRG-CU-18M                              | M18 x 1.5                | 15.7      | 0.62 | 10.0 | 0.39 | 2.0 | 0.08 |
| BRG-CU-20M                              | M20 x 1.5                | 17.6      | 0.69 | 11.4 | 0.45 | 2.0 | 0.08 |
| BRG-CU-22M                              | M22 x 1.5                | 19.6      | 0.77 | 13.4 | 0.53 | 2.0 | 0.08 |
| BRG-CU-24M                              | M24 x 1.5                | 21.6      | 0.85 | 13.9 | 0.55 | 2.0 | 0.08 |
| BRG-CU-27M                              | M27 x 1.5                | 24.0      | 0.95 | 14.8 | 0.58 | 2.5 | 0.10 |

### Ordering Information :



To order a gasket made of another material, its is necessary to replace the letter in the product code material code copper (CU) to another possible of the following :

- S- For stainless steel gasket SS 316
- T- For Teflon gaskets (PTFE) \*

The operating temperature range for gaskets made of various materials is specified in the table on page 2 of the catalog.

Dimensions of PTFE gaskets as well as gaskets for measuring instruments (pressure gauge, etc) may differ from the sizes indicated in the table. Specify the necessary sizes when ordering.

# Products



**Flange Adapter**



**Pipe Fitting**



**Flare Fitting**



**Valve Manifold**



**Thermowells**



**Check Valve**



**Tube Fitting**



**Needle Valve**



**Weld Fitting**



**Swivel Adapter**



**High Pressure**



**Gauge Root**



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