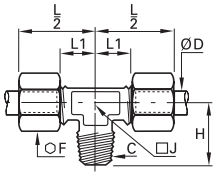
# Brass Compression Fittings

## 0108 Stud Branch Tee, Male BSPT Thread



Brass




| ØD | C | | F | H | J | L1 | L/2 | kg |
|---|---|---|---|---|---|---|---|---|
| 4 | R1/8 | 0108 04 10 | 10 | 17 | 8 | 9.5 | 19 | 0.025 |
| 5 | R1/8 | 0108 05 10 | 12 | 17.5 | 8 | 11 | 21 | 0.017 |
| 6 | R1/8 | 0108 06 10 | 13 | 18 | 8 | 11 | 22 | 0.032 |
| | R1/4 | 0108 06 13 | 13 | 21.5 | 10 | 16 | 27 | 0.047 |
| 8 | R1/8 | 0108 08 10 | 14 | 18.5 | 10 | 15 | 28 | 0.045 |
| | R1/4 | 0108 08 13 | 14 | 22 | 10 | 15 | 28 | 0.050 |
| | R3/8 | 0108 08 17 | 14 | 24 | 12 | 15 | 28 | 0.061 |
| 10 | R1/4 | 0108 10 13 | 19 | 25 | 12 | 14.5 | 30 | 0.084 |
| | R3/8 | 0108 10 17 | 19 | 25.5 | 12 | 14.5 | 30 | 0.090 |
| 12 | R1/4 | 0108 12 13 | 22 | 26 | 15 | 15 | 30 | 0.116 |
| | R3/8 | 0108 12 17 | 22 | 27 | 15 | 15 | 30 | 0.117 |
| 14 | R3/8 | 0108 14 17 | 24 | 30 | 19 | 18 | 35 | 0.153 |
| | R1/2 | 0108 14 21 | 24 | 32 | 19 | 18 | 35 | 0.168 |
| 15 | R3/8 | 0108 15 17 | 24 | 30 | 19 | 18 | 35 | 0.145 |
| | R1/2 | 0108 15 21 | 24 | 32 | 19 | 18 | 35 | 0.155 |
| 16 | R3/8 | 0108 16 17 | 27 | 30 | 19 | 21 | 39 | 0.190 |
| | R1/2 | 0108 16 21 | 27 | 33.5 | 19 | 21 | 39 | 0.203 |
| 18 | R1/2 | 0108 18 21 | 30 | 35.5 | 23 | 21.5 | 41 | 0.265 |
| | R3/4 | 0108 18 27 | 30 | 36.5 | 23 | 21.5 | 41 | 0.292 |
| 20 | R3/4 | 0108 20 27 | 32 | 38 | 23 | 21.5 | 42 | 0.298 |
| 22 | R3/4 | 0108 22 27 | 36 | 40 | 27 | 29 | 50 | 0.435 |
| | R1 | 0108 22 34 | 36 | 44 | 27 | 29 | 50 | 0.466 |

Metric taper threads or Briggs (NPT threads) are available by special order, subject to minimum quantities.

# Brass Compression Fittings

These **"universal"** fittings provide users with **numerous connection** options for a wide variety of tube materials without the need for tube threading or soldering. This range **guarantees** excellent long-term sealing and performance.

## Product Advantages

**Simple to Install and Use**

- Suitable for pneumatic and medium pressure hydraulic applications
- Compatible with many industrial fluids
- Large product range: 22 configurations
- Excellent sealing due to the tightening of the olive onto the tube
- Metallic sealing guarantees maximum service life
- High strength brass for increased mechanical reliability

**Wide Variety of Tubing**

- Connection of different types of tubing and hose: metal, polymer, steel, rubber, etc.
- Multiple tube diameters can be connected using the Parker Legris reducer assembly system
- No insert required for rigid and semi-rigid polyamide tubing below 14 mm



**Applications**

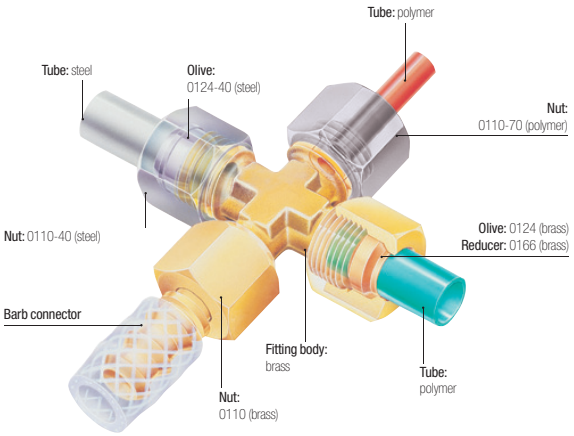
Pneumatics
Cooling
Automotive Process
Lubrication
Fluid Transmission
Packaging
Industrial Machinery

## Technical Characteristics

| | |
|---|---|
| **Compatible Fluids** | Water, machining oil, fuel, hydraulic oil, compressed air, chemical fluids, disinfectants |
| **Working Pressure** | Vacuum to 550 bar |
| **Working Temperature** | -40°C to +250°C |
| **Tightening Torque** | See "Technical Characteristics" on opposite page |

Reliable performance is dependent upon the type of fluid conveyed, component materials and tubing being used.
Guaranteed for use with a vacuum of 755 mm Hg (99% vacuum).

### Component Materials




**Silicone-free**

### Maximum Bore Diameters

The table below shows the recommended compatibility of tube size, BSPP male thread and maximum bore.

| Tube O.D. | BSPP Thread | Max. Bore |
|---|---|---|
| 4-5-6 | G1/8 | 4 |
| 6-8-10 | G1/4 | 7 |
| 10-12-14 | G3/8 | 11 |
| 14-15-16-18 | G1/2 | 14 |
| 18-20-22 | G3/4 | 18 |
| 22-25-28 | G1 | 24 |

### Tube Length for Assembly

Minimum length of tube (L) between 2 fittings.



| ØD | L (mm) | ØD | L (mm) | ØD | L (mm) |
|---|---|---|---|---|---|
| 4 | 26.5 | 12 | 39 | 20 | 51 |
| 5 | 26 | 14 | 41 | 22 | 54 |
| 6 | 26 | 15 | 41 | 25 | 62 |
| 8 | 32 | 16 | 46.5 | 28 | 62 |
| 10 | 39 | 18 | 49.5 | | |

### Regulations

**CNOMO:** E07.21.115N
(for robotic equipment in the automotive industry)
**DI:** 97/23/EC (PED)
**RG:** 1907/2006 (REACH)
**DI:** 2002/95/EC (RoHS)
**DI:** 94/9/EC (ATEX)

# Technical Characteristics

## Installing Compression Fittings

### Cutting the Tube



Cut the polymer or metal tube square.

### Preparing the Connection

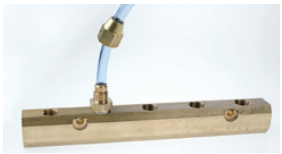


For metal tubing, de-burr the tube prior to connection. Tube bending should be done before connection.



Slide the nut onto the tube; lubricate the threads on the body and nut along with the olive to facilitate tightening (for metal tubing as well). Fit the olive onto the end of the tube.

### Connecting the Tube

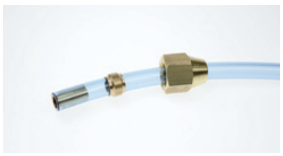


Push the tube up against the shoulder of the body of the fitting and hand tighten.

### Final Assembly



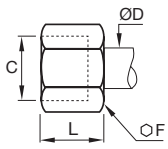
Tighten the nut using a spanner or torque wrench to enable the olive to bite on the tube, the connection being completed when the recommended tightening torque is reached (see tables below).



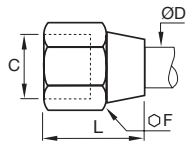
It is recommended to use an insert in order to prevent tube creeping (diameter > 14mm)

## Recommended Nut Tightening Torque

**Tightening torque in daN.m =**
maximum tightening torque of a 0110 nut and 0124 olive with copper, brass or steel tube.




Nut 0110 and 0110..40




Nut 0110..60

| Ø D (mm) | ⬡ F 0110 | ⬡ F 0110..60 | Max. daN.m Copper or Brass | ⬡ F 0110..40 | Max. daN.m Steel |
|---|---|---|---|---|---|
| 4 | 10 | 11 | 0.7 | 10 | 1.5 |
| 5 | 12 | 13 | 0.7 | 12 | 1.5 |
| 6 | 13 | 13 | 1.5 | 13 | 2.5 |
| 8 | 14 | 16 | 1.5 | 14 | 2.5 |
| 10 | 19 | 20 | 1.8 | 19 | 3 |
| 12 | 22 | 22 | 3 | 22 | 4.5 |
| 14 | 24 | 24 | 3.5 | 24 | 5.5 |
| 15 | 24 | 24 | 4 | 24 | 6 |
| 16 | 27 | 27 | 5 | 27 | 7 |
| 18 | 30 | 30 | 6 | 30 | 9 |
| 20 | 32 | 32 | 6 | 32 | 10 |
| 22 | 36 | 36 | 7 | 36 | 12 |
| 25 | 41 | 41 | 8 | 41 | 13 |
| 28 | 42 | | 9 | | |

## Customised Fittings

Working directly with its customers and based on its knowledge and experience, Parker Legris can design customised brass compression fittings for specific requirements using the customer's specifications.

The range of compression fittings also offers nickel chemical surface treatment in order to improve the corrosion resistance and chemical compatibility of the fittings (the model number of the fitting is then given the suffix 99).



The above recommendations are given in good faith. However, since each application is different, it is advisable to undertake tests in actual working conditions.

# Technical Characteristics

The use of Parker Legris brass compression fittings is dependant on the tube material.
Tables of recommended working pressure for the different tubes are shown below.

## Recommended Tube Type

**Copper tube:** copper which has been "cold rolled", cold drawn and in straight lengths.
**Brass tube:** in cold-rolled straight lengths (same working pressure as for copper tube).
**"Coiled annealed" copper tube:** reduces working pressure by 35%; must be avoided completely if vibration is present.

**Steel tube:** "thin wall" cold drawn, seamless, bright annealed and in straight lengths.
6 mm to 16 mm O.D.: max. wall thickness 1 mm
Above 16 mm O.D.: max. wall thickness 1.5 mm

**Polyamide tube:** semi-rigid
For rigid polyamide tube, multiply the figures in this table by 1.8.

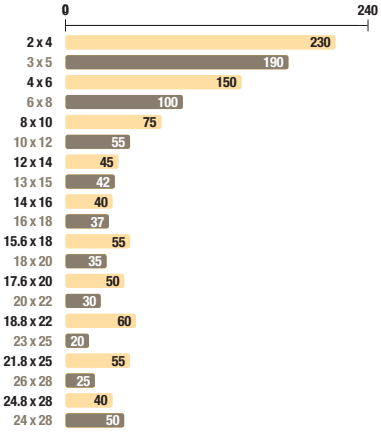
## Recommended Tube-Fitting Assembly Configurations

Assembled using Parker Legris brass olive and nut.

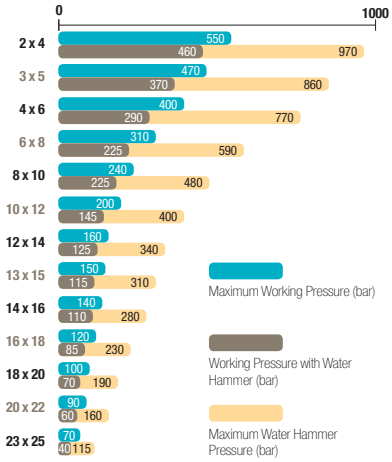
Assembled using Parker Legris steel olive and nut (nut type 0110..40).

Assembled using Parker Legris brass olive and nut.

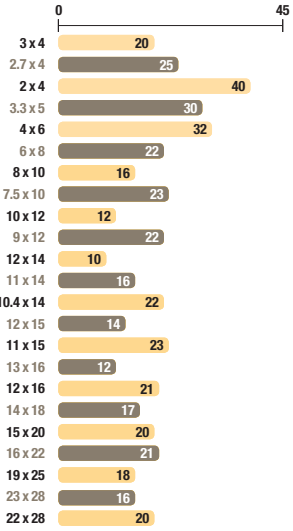
**Copper Tube**
Maximum Working Pressure (bar)




**Steel Tube**
Maximum Working Pressure (bar)




**Parker Legris Semi-Rigid Polyamide Tube**
Maximum Working Pressure (bar)




When using a plastic nut type 0110..70, the maximum working pressure is 10 bar, for all diameters.

**Working Pressure Coefficients for Semi-Rigid Polyamide Tubing**

| Temperature °C | -40°C / -15°C | -15°C / +30°C | +30°C / +50°C | +50°C /+70°C | +70°C /+100°C |
|---|---|---|---|---|---|
| Factor | 1.8 | 1 | 0.68 | 0.55 | 0.31 |

Parker Legris brass compression fittings are not compatible with ammonia and its derivatives.

The above recommendations are given in good faith. However, since each application is different, it is advisable to undertake tests in actual working conditions.



Tel: +45 63 12 83 00 | Email: ps@hymatik.com | www.hymatik.com | Hvidkaervej 27a, DK-5250 Odense SV, Denmark

# Compression Fittings

### Brass Compression Fittings
(P. 5-5)



**Fluids:** compressed air, non-corrosive industrial fluids
**Materials:** forged or machined brass
**Pressure:** 550 bar
**Temperature:** -40°C to +250°C
**Ø metric:** 4 mm to 28 mm

### Stainless Steel Compression Fittings
(P. 5-31)



**Fluids:** compressed air, coolants, industrial and corrosive fluids
**Materials:** 316L stainless steel
**Pressure:** 400 bar
**Temperature:** -40°C to +250°C
**Ø metric:** 6 mm to 16 mm

### PL Nickel-Plated Brass Spigot Fittings
(P. 5-41)



**Fluids:** compressed air, compatible industrial fluids
**Materials:** forged or machined nickel-plated brass
**Pressure:** 40 bar
**Temperature:** -40°C to +100°C
**Ø metric:** 4 mm to 14 mm

## Compression Fitting Part Numbers

**0105 14 27 99**

**Item Type**
01XX: brass
18XX: stainless steel

**Ø**
04 = 4 mm
06 = 6 mm
...
20 = 20 mm
28 = 28 mm

**Thread**
10 = 1/8
13 = 1/4
...
21 = 1/2
27 = 3/4

**Suffix**
39: bonded seal
40: treated steel
60: nut
70: polymer nut
99: chemical nickel

## PL Fitting Part Numbers

**F3BPL 8/10 -1/4**

**Item Type**
FBPL
F3BPL
HBPL
WBPL
...

**Ø**
2.7/4
4/6
6/8
7.5/10
8/10
10/12
11/14

**Thread**
BSPT & NPT:
1/8
1/4
3/8
...
Metric:
M10
M12