

# 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



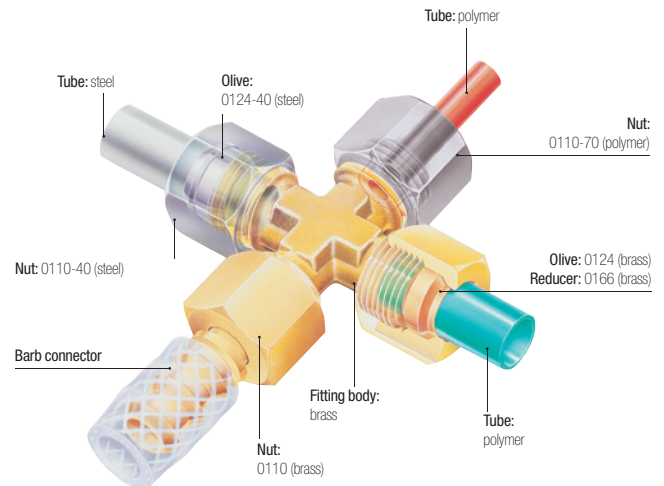
**Applications**  
 Pneumatics  
 Cooling  
 Automotive Process  
 Lubrication  
 Fluid Transmission  
 Packaging  
 Industrial Machinery

## Technical Characteristics

<b>Compatible Fluids</b>	Water, machining oil, fuel, hydraulic oil, compressed air, chemical fluids, disinfectants
<b>Working Pressure</b>	Vacuum to 550 bar
<b>Working Temperature</b>	-40°C to +250°C
<b>Tightening Torque</b>	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

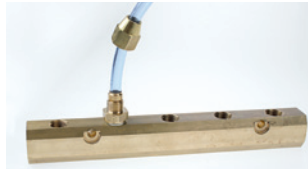


For metal tubing, de-burr the tube prior to connection. Tube bending should be done before connection.



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).

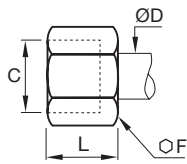


It is recommended to use an insert in order to prevent tube creeping (diameter > 14mm)

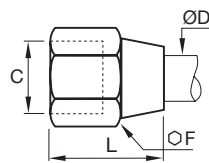
## Recommended Nut Tightening Torque

### 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)	Ø F 0110	Ø F 0110..60	Max. daN.m Copper or Brass	Ø 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

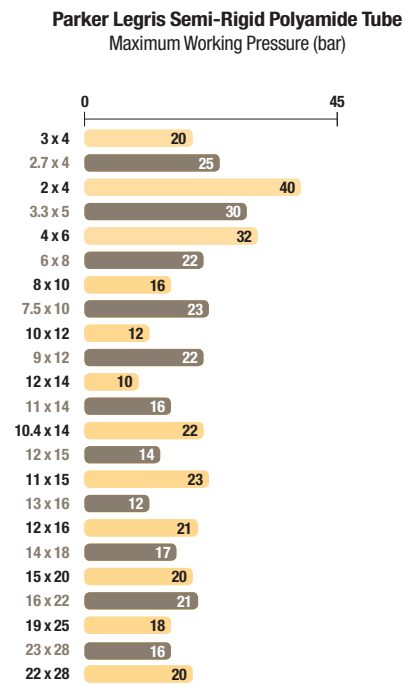
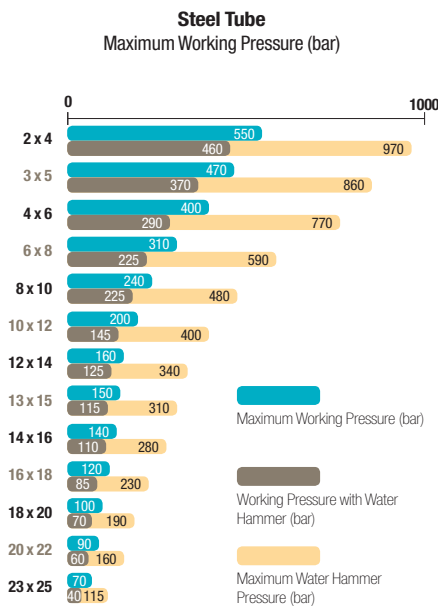
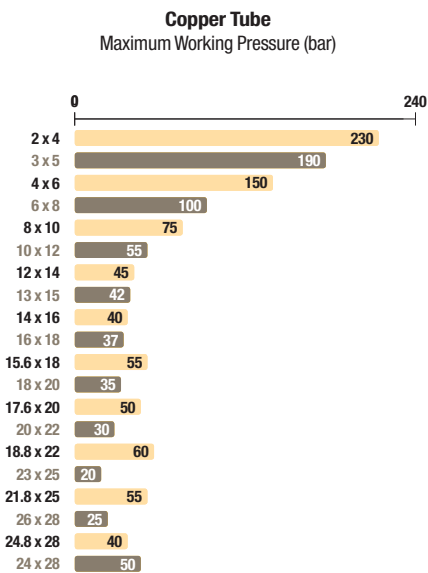
**Polyamide tube:** semi-rigid  
For rigid polyamide tube, multiply the figures in this table by 1.8.

## 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.



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.

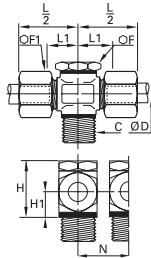
The above recommendations are given in good faith. However, since each application is different, it is advisable to undertake tests in actual working conditions.

# Brass Compression Fittings

## 0119 Double Banjo with Captive Sealing Washer, Male BSPP Thread



Brass, technical polymer



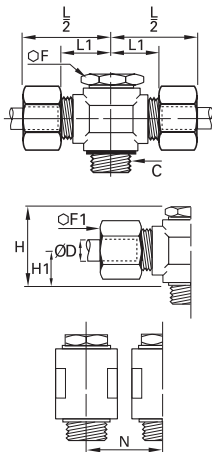
ØD	C		F	F1	H	H1	L1	L/2	N	kg
4	G1/8	<a href="#">0119 04 10</a>	14	10	24	9.5	14.5	24	17.5	0.049
	G1/8	<a href="#">0119 06 10</a>	14	13	24	9.5	14.5	25	17.5	0.056
6	G1/4	<a href="#">0119 06 13</a>	17	13	25	10	16	26.5	21	0.038
	G1/8	<a href="#">0119 08 10</a>	14	14	24	9.5	15.5	28	17.5	0.069
8	G1/4	<a href="#">0119 08 13</a>	17	14	25	10	15.5	28	21	0.074
	G3/8	<a href="#">0119 08 17</a>	22	14	32	13	18	30.5	26.5	0.140
10	G1/4	<a href="#">0119 10 13</a>	17	19	31	13	19	34	23	0.156
	G3/8	<a href="#">0119 10 17</a>	22	19	32	13	19	34	26.5	0.165
12	G1/4	<a href="#">0119 12 13</a>	17	22	34	14.5	19	34	23	0.180
	G3/8	<a href="#">0119 12 17</a>	22	22	35	14.5	19	34	26.5	0.182
14	G1/4	<a href="#">0119 14 13</a>	17	24	37	16	20.5	37.5	28	0.246
	G3/8	<a href="#">0119 14 17</a>	22	24	38	16	20.5	37.5	28	0.247
	G1/2	<a href="#">0119 14 21</a>	27	24	40	16	20.5	38	32.5	0.219

Thread with pre-assembled washer  
Sealing washers 0602 can be found in Chapter 9.

## 0119..39 Double Banjo with Bi-Material Seal, Male BSPP Thread



Brass, zinc-plated steel with NBR seal



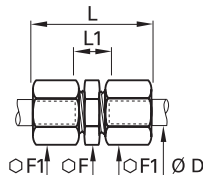
ØD	C		F	F1	H	H1	L1	L/2	N	kg
4	G1/8	<a href="#">0119 04 10 39</a>	14	10	23	9.5	14.5	24	17.5	0.050
	G1/8	<a href="#">0119 05 10 39</a>	14	12	23	9.5	14.5	25	17.5	0.049
5	G1/4	<a href="#">0119 05 13 39</a>	17	12	24	10	126	26	21	0.072
	G1/8	<a href="#">0119 06 10 39</a>	14	13	23	9.5	14.5	25	17.5	0.056
6	G1/4	<a href="#">0119 06 13 39</a>	17	13	24	10	16	26	21	0.071
	G1/8	<a href="#">0119 08 10 39</a>	14	14	23	9.5	15.5	28	17.5	0.072
8	G1/4	<a href="#">0119 08 13 39</a>	17	14	24	10	15.5	28	21	0.080
	G3/8	<a href="#">0119 08 17 39</a>	22	14	31.5	13.5	18	30	26.5	0.118
10	G1/4	<a href="#">0119 10 13 39</a>	17	19	30	13	19	34	23	0.156
	G3/8	<a href="#">0119 10 17 39</a>	22	19	31.5	13.5	19	34	26.5	0.167
12	G1/4	<a href="#">0119 12 13 39</a>	17	22	33	14.5	19	34	23	0.180
	G3/8	<a href="#">0119 12 17 39</a>	22	22	34.5	15	19	34	26.5	0.183
14	G1/4	<a href="#">0119 14 13 39</a>	17	24	36	16	20.5	37	28	0.248
	G3/8	<a href="#">0119 14 17 39</a>	22	24	37.5	16.5	20.5	37	28	0.247
15	G1/2	<a href="#">0119 14 21 39</a>	27	24	39	16.5	20.5	38	32.5	0.262
	G3/8	<a href="#">0119 15 17 39</a>	22	24	37.5	16.5	20.5	37	28	0.246
18	G1/2	<a href="#">0119 15 21 39</a>	27	24	40	16.5	20.5	38	32.5	0.251
	G1/2	<a href="#">0119 18 21 39</a>	27	30	47	20	24.5	43	36	0.469
20	G3/4	<a href="#">0119 20 27 39</a>	32	32	50	20.5	24.5	44	39	0.638
	G3/4	<a href="#">0119 22 27 39</a>	32	36	54	22.5	24.5	45	39	0.610

Thread with pre-assembled washer  
Bi-material sealing washers, part number 0139, can be found in Chapter 9.

## 0106 Equal Tube-to-Tube Connector



Brass



ØD		F	F1	L <sub>max</sub>	L1	kg
4	<a href="#">0106 04 00</a>	10	10	28	10	0.016
5	<a href="#">0106 05 00</a>	11	12	31	11	0.023
6	<a href="#">0106 06 00</a>	11	13	32	11	0.026
8	<a href="#">0106 08 00</a>	13	14	36	10	0.031
10	<a href="#">0106 10 00</a>	17	19	42	13	0.070
12	<a href="#">0106 12 00</a>	19	22	42	13	0.092
14	<a href="#">0106 14 00</a>	22	24	45	11	0.104
15	<a href="#">0106 15 00</a>	22	24	45	11	0.097
16	<a href="#">0106 16 00</a>	24	27	48	13	0.141
18	<a href="#">0106 18 00</a>	27	30	53	14	0.186
20	<a href="#">0106 20 00</a>	30	32	56	14	0.211
22	<a href="#">0106 22 00</a>	32	36	60	14	0.283
25	<a href="#">0106 25 00</a>	36	41	64	14	0.396
28	<a href="#">0106 28 00</a>	41	42	64	14	0.399