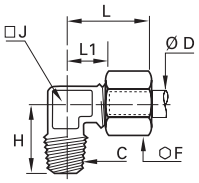
Brass Compression Fittings

0109 Stud Elbow, Male BSPT Thread



Brass



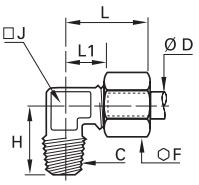
ØD	C		F	H	J	L max	L1	kg
4	R1/8	0109 04 10	10	17	8	19	9.5	0.016
	R1/4	0109 04 13	10	20	10	19	11	0.026
5	R1/8	0109 05 10	12	17.5	8	21	11	0.019
	R1/4	0109 05 13	12	21.5	10	22	12	0.028
6	R1/8	0109 06 10	13	18	8	22	11	0.021
	R1/4	0109 06 13	13	21.5	10	22	12	0.031
8	R1/8	0109 08 10	14	18.5	10	28	15	0.028
	R1/4	0109 08 13	14	22	10	28	15	0.033
	R3/8	0109 08 17	14	24	12	28	15	0.044
10	R1/4	0109 10 13	19	25	12	30	14.5	0.052
	R3/8	0109 10 17	19	25.5	12	30	14.5	0.060
	R1/2	0109 10 21	19	32	19	36	21	0.109
12	R1/4	0109 12 13	22	26	15	30	15	0.074
	R3/8	0109 12 17	22	27	15	30	15	0.077
	R1/2	0109 12 21	22	32	19	36	21	0.116
14	R3/8	0109 14 17	24	30	19	35	18	0.105
	R1/2	0109 14 21	24	32	19	35	18	0.112
15	R3/8	0109 15 17	24	30	19	35	18	0.099
	R1/2	0109 15 21	24	32	19	35	18	0.106
16	R3/8	0109 16 17	27	30	19	39	21	0.120
	R1/2	0109 16 21	27	33.5	19	39	21	0.130
	R3/4	0109 16 27	27	36.5	23	41	23	0.189
18	R1/2	0109 18 21	30	35.5	23	41	21.5	0.182
	R3/4	0109 18 27	30	36.5	23	41	21.5	0.199
20	R1/2	0109 20 21	32	36.5	23	42	21.5	0.181
	R3/4	0109 20 27	32	38	23	42	21.5	0.200
22	R3/4	0109 22 27	36	40	27	50	30	0.288
	R1	0109 22 34	36	44	27	50	30	0.342
25	R3/4	0109 25 27	41	43	27	54	30	0.325
	R1	0109 25 34	41	44	27	54	30	0.367
28	R3/4	0109 28 27	42	46	32	54	30	0.402
	R1	0109 28 34	42	48	32	54	30	0.384

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

0109 Stud Elbow, Male NPT Thread



Brass



ØD	C		F	H	J	L max	L1	kg
6	NPT1/8	0109 06 11	13	18	8	22	11	0.021
	NPT1/4	0109 06 14	13	21.5	10	22	12	0.030
8	NPT1/8	0109 08 11	14	18.5	10	28	15	0.028
	NPT1/4	0109 08 14	14	22	10	28	15	0.033
10	NPT1/4	0109 10 14	19	25	12	30	14.5	0.053

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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

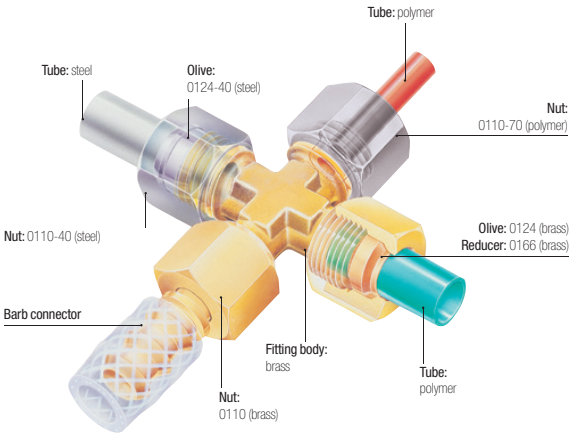
Pneumatics
Cooling
Automotive Process
Lubrication
Fluid Transmission
Packaging
Industrial Machinery

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

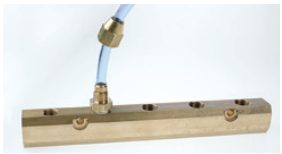


For metal tubing, de-burr the tube prior to connection. Tube bending should be done before connection.



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

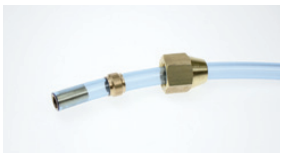


Push the tube up against the shoulder of the body of the fitting and hand tighten.

Final Assembly



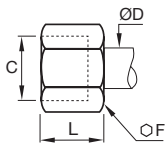
Tighten the nut using a spanner or torque wrench to enable the olive to bite on the tube, the connection being completed when the recommended tightening torque is reached (see tables below).



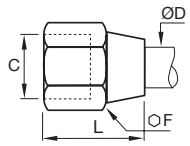
It is recommended to use an insert in order to prevent tube creeping (diameter > 14mm)

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.

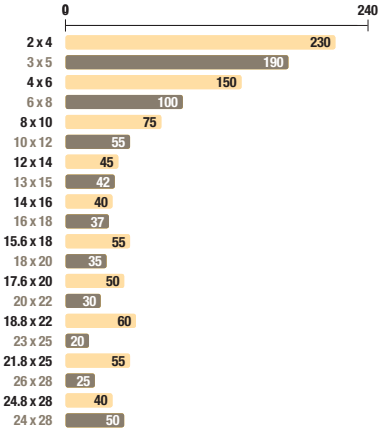
Recommended Tube-Fitting Assembly Configurations

Assembled using Parker Legris brass olive and nut.

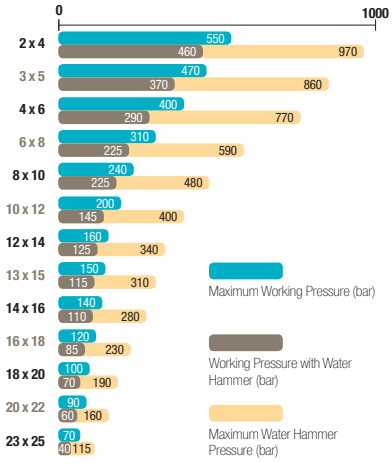
Assembled using Parker Legris steel olive and nut (nut type 0110..40).

Assembled using Parker Legris brass olive and nut.

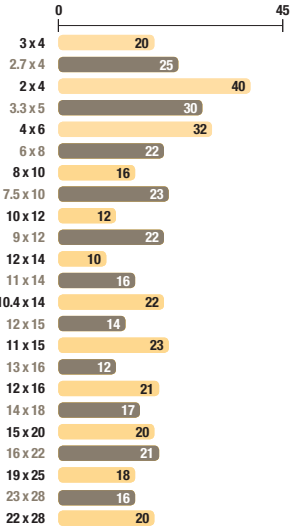
Copper Tube
Maximum Working Pressure (bar)



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.

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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