

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

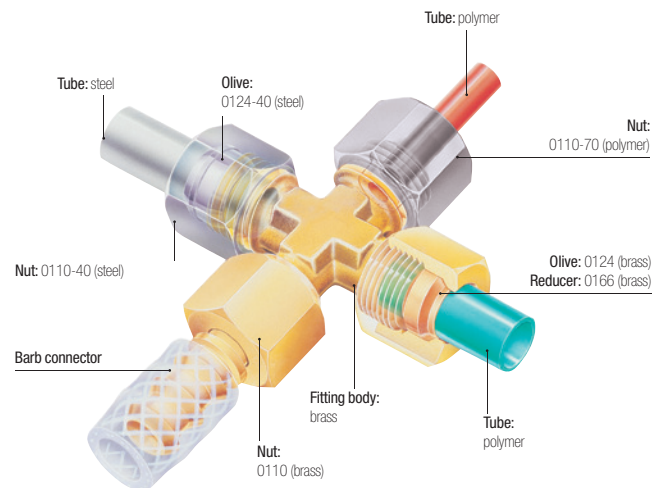
- Pneumatics
- Cooling
- Automotive Process
- Lubrication
- Fluid Transmission
- Packaging
- Industrial Machinery

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

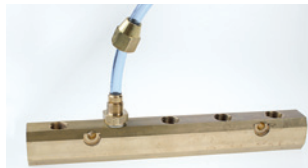


For metal tubing, de-burr the tube prior to connection. Tube bending should be done before connection.



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).

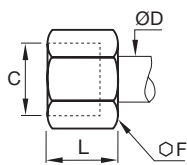


It is recommended to use an insert in order to prevent tube creeping (diameter > 14mm)

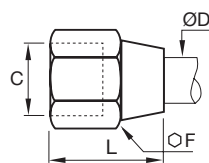
Recommended Nut Tightening Torque

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)	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

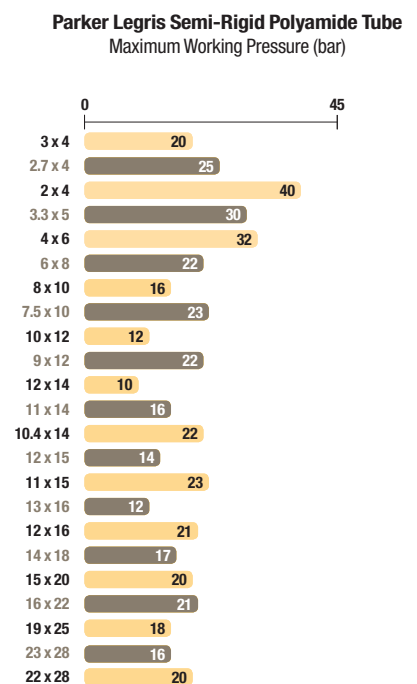
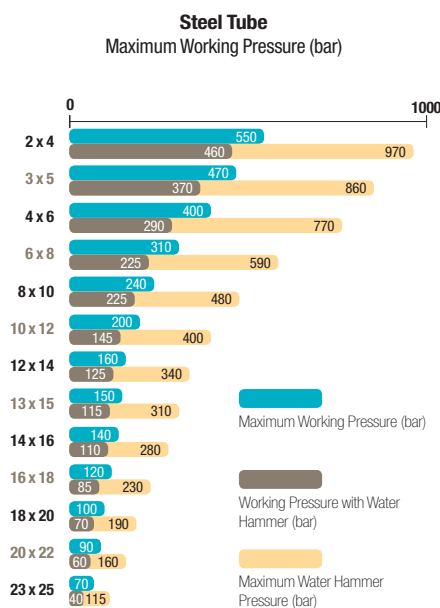
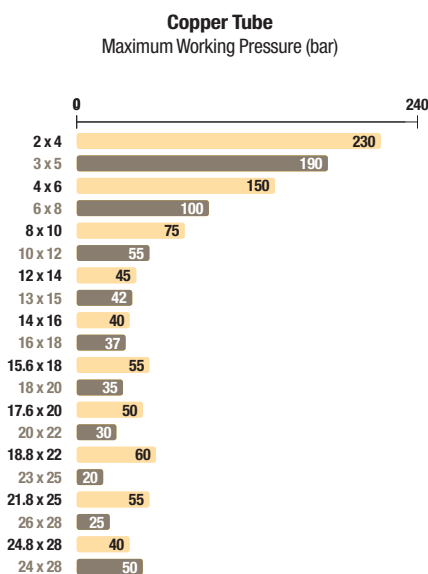
Polyamide tube: semi-rigid
For rigid polyamide tube, multiply the figures in this table by 1.8.

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


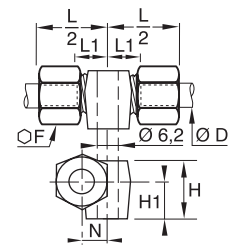
Temperature °C	-40°C / -15°C	-15°C / +30°C	+30°C / +50°C	+50°C / +70°C	+70°C / +100°C
Factor	1.8	1	0.68	0.55	0.31

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


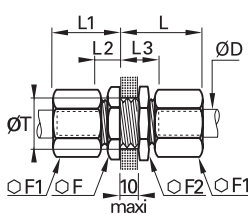
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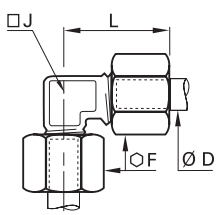
0113 Equal Tube-to-Tube Connector with Mounting Boss

	Brass	ØD		F	H	H1	L1	L/2	N	kg
		4	0113 04 00	10	10.5	7	9.5	19	6	0.022
		6	0113 06 00	13	13	9	10	20.5	7	0.033
		8	0113 08 00	14	14.5	9.5	11	23.5	8	0.041
		10	0113 10 00	19	19.5	12.5	11	26	9	0.082
		12	0113 12 00	22	22	14	12	26.5	11	0.107
		14	0113 14 00	24	25	16	11	28	12	0.122

0116 Equal Bulkhead Connector

	Brass	ØD		F	F1	F2	L max	L1 max	L2	L3	ØT min	kg
		4	0116 04 00	10	10	13	27	17	7	17	8.3	0.024
		5	0116 05 00	13	12	14	28	18	7.5	17.5	10.3	0.035
		6	0116 06 00	13	13	14	28	19	7.5	17.5	10.3	0.037
		8	0116 08 00	14	14	17	29	20	7	17	12.3	0.045
		10	0116 10 00	19	19	22	33	25	9	19	16.5	0.101
		12	0116 12 00	22	22	22	33	25	9	19	18.5	0.121
		14	0116 14 00	24	24	24	35	25	8	18	20.5	0.145
		15	0116 15 00	24	24	24	35	25	8	18	20.5	0.134
		16	0116 16 00	27	27	27	36	28	9.5	19.5	22.5	0.189
		18	0116 18 00	27	30	30	40	30	10.5	20.5	24.5	0.237
		20	0116 20 00	32	30	32	41	31	11	21	27.5	0.274
		22	0116 22 00	36	36	36	42	32	11	21	30.5	0.372
		25	0116 25 00	36	41	38	46	36	11	21	33.5	0.469

0102 Equal Elbow

	Brass	ØD		F	J	L max	kg
		4	0102 04 00	10	5	19	0.016
		5	0102 05 00	12	8	21	0.024
		6	0102 06 00	13	8	22	0.027
		8	0102 08 00	14	10	28	0.038
		10	0102 10 00	19	12	30	0.073
		12	0102 12 00	22	15	30	0.098
		14	0102 14 00	24	19	35	0.133
		15	0102 15 00	24	19	35	0.122
		16	0102 16 00	27	19	39	0.164
		18	0102 18 00	30	23	41	0.231
		20	0102 20 00	32	23	42	0.233
		22	0102 22 00	36	27	50	0.371
		25	0102 25 00	41	27	54	0.446
		28	0102 28 00	42	32	54.5	0.478