

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

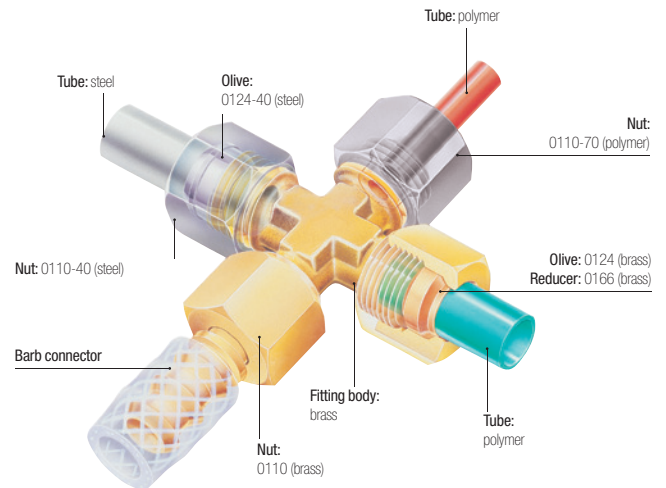
- Pneumatics
- Cooling
- Automotive Process
- Lubrication
- Fluid Transmission
- Packaging
- Industrial Machinery

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

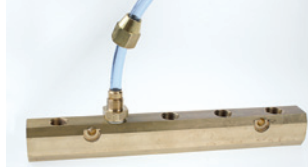


For metal tubing, de-burr the tube prior to connection. Tube bending should be done before connection.



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).

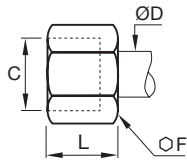


It is recommended to use an insert in order to prevent tube creeping (diameter > 14mm)

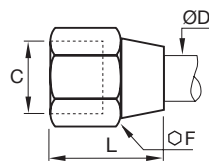
Recommended Nut Tightening Torque

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

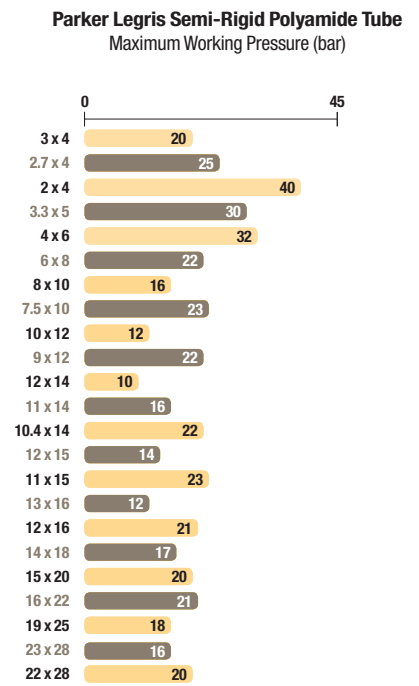
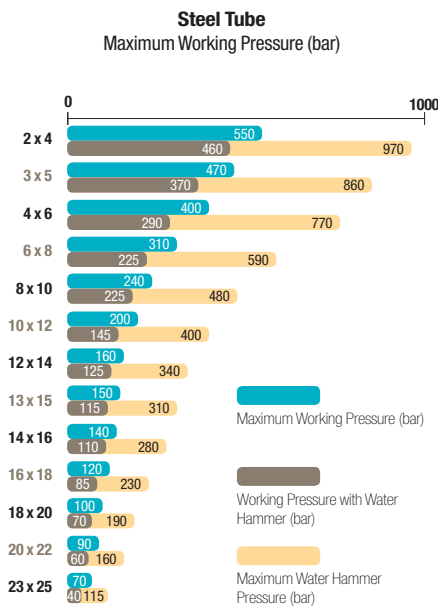
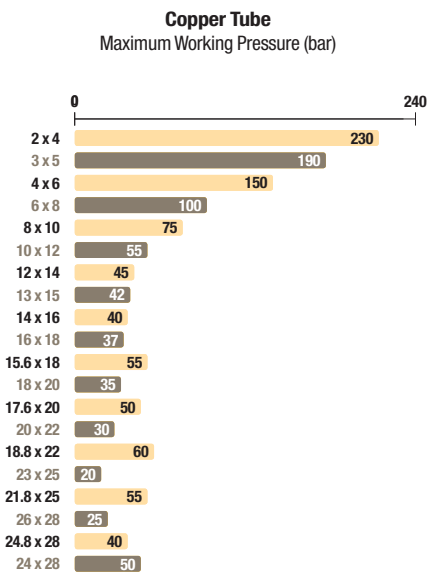
Polyamide tube: semi-rigid
For rigid polyamide tube, multiply the figures in this table by 1.8.

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


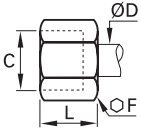

Temperature °C	-40°C / -15°C	-15°C / +30°C	+30°C / +50°C	+50°C / +70°C	+70°C / +100°C
Factor	1.8	1	0.68	0.55	0.31

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


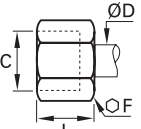

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Complementary Brass Compression Fittings


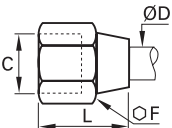

0110 Brass Nut

	Brass		ØD	C		F	L	kg
			4	M8x1	0110 04 00	10	11	0.005
			5	M10x1	0110 05 00	12	11	0.006
			6	M10x1	0110 06 00	13	11	0.008
			8	M12x1	0110 08 00	14	13	0.008
			10	M16x1.5	0110 10 00	19	15	0.019
			12	M18x1.5	0110 12 00	22	15	0.026
			14	M20x1.5	0110 14 00	24	15	0.029
			15	M20x1.5	0110 15 00	24	15	0.028
			16	M22x1.5	0110 16 00	27	17	0.042
			18	M24x1.5	0110 18 00	30	18	0.057
			20	M27x1.5	0110 20 00	32	18	0.057
			22	M30x1.5	0110 22 00	36	19	0.078
			25	M33x1.5	0110 25 00	41	21	0.121
			28	M36x1.5	0110 28 00	42	21	0.110


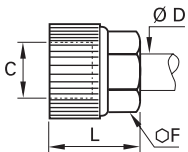

0110..40 Steel Nut

	Zinc-plated steel		ØD	C		F	L	kg
			4	M8x1	0110 04 00 40	10	11	0.004
			5	M10x1	0110 05 00 40	12	11.5	0.005
			6	M10x1	0110 06 00 40	13	12	0.008
			8	M12x1	0110 08 00 40	14	13.5	0.008
			10	M16x1.5	0110 10 00 40	19	16	0.018
			12	M18x1.5	0110 12 00 40	22	16.5	0.027
			14	M20x1.5	0110 14 00 40	24	17	0.030
			15	M20x1.5	0110 15 00 40	24	17	0.029
			16	M22x1.5	0110 16 00 40	27	18	0.042
			18	M24x1.5	0110 18 00 40	30	19	0.056
			20	M27x1.5	0110 20 00 40	32	20.5	0.061
			22	M30x1.5	0110 22 00 40	36	21.5	0.085

0110..60 Brass Long Nut

	Brass		ØD	C		F	L	kg
			4	M8x1	0110 04 00 60	11	14.5	0.007
			5	M10x1	0110 05 00 60	13	17	0.008
			6	M10x1	0110 06 00 60	13	17.5	0.011
			8	M12x1	0110 08 00 60	16	20	0.019
			10	M16x1.5	0110 10 00 60	20	23	0.032
			12	M18x1.5	0110 12 00 60	22	25	0.039
			14	M20x1.5	0110 14 00 60	24	30	0.051
			15	M20x1.5	0110 15 00 60	24	30	0.049
			16	M22x1.5	0110 16 00 60	27	32	0.070
			18	M24x1.5	0110 18 00 60	30	35	0.098
			20	M27x1.5	0110 20 00 60	32	35	0.102
			22	M30x1.5	0110 22 00 60	36	36	0.129

0110..70 Technical Polymer Nut-Olive

	Technical polymer		ØD	C		F	L	kg
			4	M8x1	0110 04 00 70	8	13	0.008
			6	M10x1	0110 06 00 70	11	15	0.002
			8	M12x1	0110 08 00 70	13	16	0.002
			10	M16x1.5	0110 10 00 70	17	19	0.004
			12	M18x1.5	0110 12 00 70	19	19	0.005
			14	M20x1.5	0110 14 00 70	22	20	0.005
			16	M22x1.5	0110 16 00 70	24	21	0.008

NB: polymer nut-olives should not be used on metal tubing.