

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

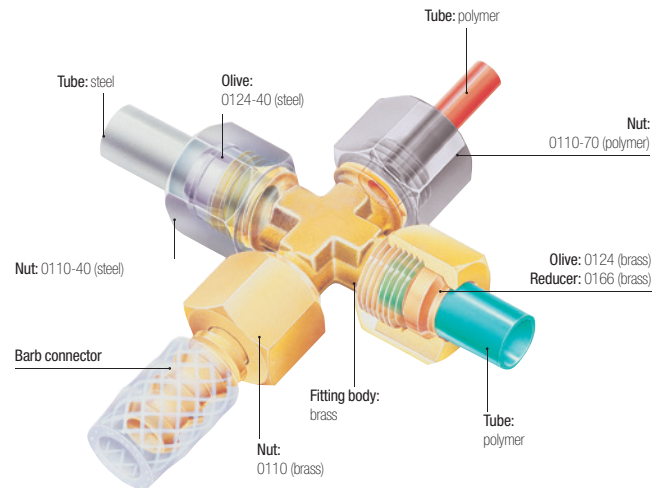
- Pneumatics
- Cooling
- Automotive Process
- Lubrication
- Fluid Transmission
- Packaging
- Industrial Machinery

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

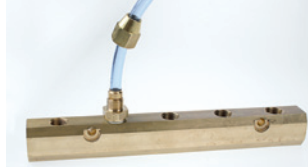


For metal tubing, de-burr the tube prior to connection. Tube bending should be done before connection.



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).

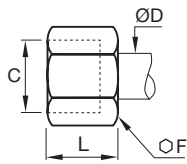


It is recommended to use an insert in order to prevent tube creeping (diameter > 14mm)

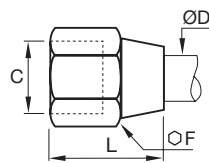
Recommended Nut Tightening Torque

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

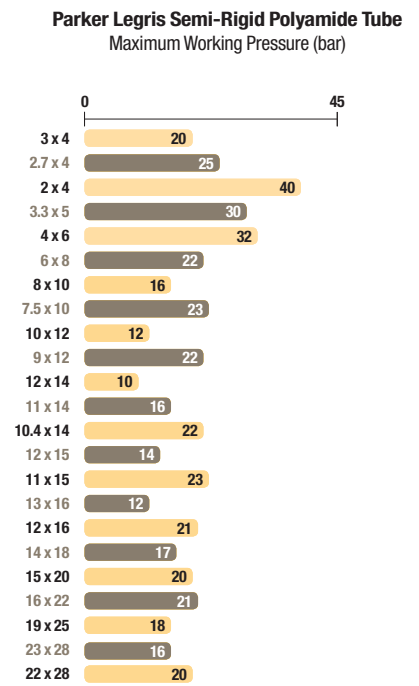
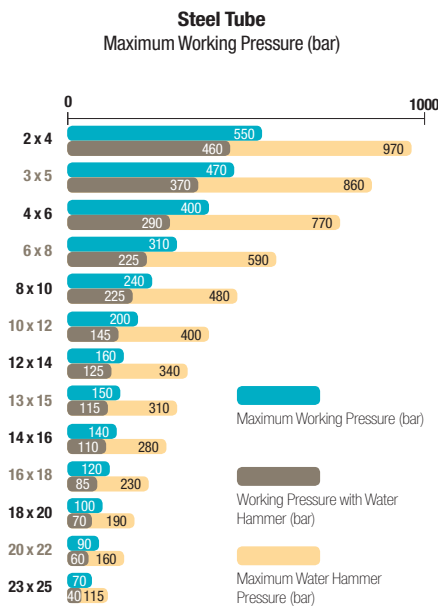
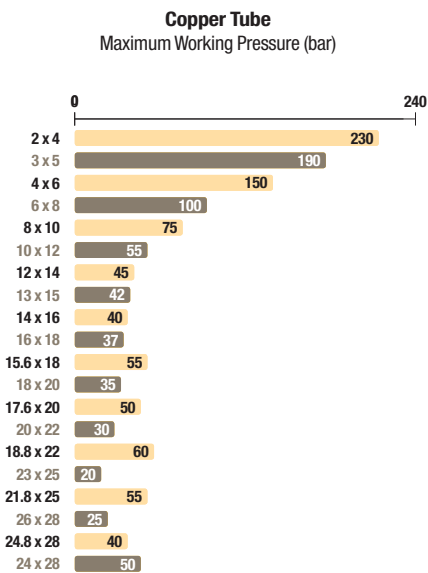
Polyamide tube: semi-rigid
For rigid polyamide tube, multiply the figures in this table by 1.8.

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.

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 Adaptors

0163 Unequal Reducer, Male BSPT/Female BSPP Thread

Image	Material	Diagram	C1	C2	Icon	F	L	kg
	Brass		R1/4	G1/8	0163 13 10	14	16	0.009
			R3/8	G1/8	0163 17 10	17	16.5	0.020
				G1/4	0163 17 13	17	16.5	0.012
			R1/2	G1/8	0163 21 10	22	21	0.048
				G3/8	0163 21 17	22	21	0.024
			R3/4	G1/4	0163 27 13	27	24	0.084
				G3/8	0163 27 17	27	24	0.069
				G1/2	0163 27 21	27	24	0.046

0169 Increaser, Male/Female BSPP Thread

Image	Material	Diagram	C1	C2	Icon	E1	E2	F	L	kg
	Brass, technical polymer		G1/8	G1/4	0169 10 13	5	11	17	16	0.019
				G3/8	0169 10 17	5	14	22	19.5	0.039
			G1/4	G3/8	0169 13 17	7	14	22	19.5	0.041
				G1/2	0169 13 21	7	14.5	27	20.5	0.062
			G3/8	G1/2	0169 17 21	8	14.5	27	20.5	0.062
				G3/4	0169 17 27	8	15.5	32	22	0.082
			G1/2	G3/4	0169 21 27	9.5	15.5	32	22.5	0.087

With fitted captive seal

0121 Straight Male Adaptor, Male BSPT Thread

Image	Material	Diagram	C1	C2	Icon	F	L	kg
	Brass		R1/8	R1/8	0121 10 10	11	19	0.009
			R1/8	R1/8	0121 13 10	14	23.5	0.017
			R1/4	R1/4	0121 13 13	14	27	0.020
				R1/8	0121 17 10	17	24	0.021
			R3/8	R1/4	0121 17 13	17	27.5	0.025
				R3/8	0121 17 17	17	28	0.026
			R1/2	R1/8	0121 21 10	22	28.5	0.042
				R1/4	0121 21 13	22	32	0.045
				R3/8	0121 21 17	22	32.5	0.045
			R3/4	R1/2	0121 21 21	22	36	0.052
				R1/4	0121 27 13	27	35	0.078
				R3/8	0121 27 17	27	35.5	0.078
				R1/2	0121 27 21	27	39	0.085
			R1	R3/4	0121 27 27	27	40	0.091
				R3/8	0121 34 17	36	38.5	0.127
				R1/2	0121 34 21	36	42	0.134
				R3/4	0121 34 27	36	43	0.143
				R1	0121 34 34	36	46	0.154
				R1/2	0121 42 21	46	46.5	0.220
				R3/4	0121 42 27	46	47.5	0.224
			R1 1/4	R1	0121 42 34	46	50.5	0.239
				R1 1/4	0121 42 42	46	53	0.230

0121 Equal Adaptor, Male NPT/BSPT Thread

Image	Material	Diagram	C1	C2	Icon	F	L	kg
	Brass		NPT1/8	R1/8	0121 11 10	11	19	0.009
			NPT1/4	R1/4	0121 14 13	14	27	0.021
			NPT3/8	R3/8	0121 18 17	17	28	0.026
			NPT1/2	R1/2	0121 22 21	22	36	0.052
			NPT3/4	R3/4	0121 28 27	27	40	0.090