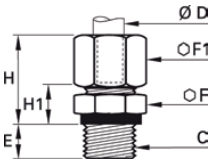
Brass Compression Fittings

0101 Stud Fitting with Captive Sealing Washer, Male BSPP and Metric Thread



Brass, technical polymer



ØD	C		E	F	F1	H max	H1	kg
4	M5x0.8	0101 04 19	5	10	10	16.5	8	0.011
	G1/8	0101 04 10	6.5	13	10	16.5	8	0.016
5	G1/8	0101 05 10	6.5	13	12	17.5	8.5	0.018
6	G1/8	0101 06 10	6.5	13	13	18	8.5	0.020
	G1/4	0101 06 13	8	17	13	18	9.5	0.030
8	G1/8	0101 08 10	6.5	13	14	19	8.5	0.021
	G1/4	0101 08 13	8	17	14	19.5	9	0.032
	G3/8	0101 08 17	11	22	14	20	10.5	0.044
10	G1/4	0101 10 13	8	17	19	24	11	0.049
	G3/8	0101 10 17	11	22	19	24	11.5	0.061
12	G1/4	0101 12 13	8	19	22	24	11	0.062
	G3/8	0101 12 17	11	22	22	24	11.5	0.069
	G1/2	0101 12 21	12	27	22	24	12	0.089
14	G3/8	0101 14 17	11	22	24	25	10.5	0.074
	G1/2	0101 14 21	12	27	24	25	11	0.094
15	G3/8	0101 15 17	11	22	24	25	10.5	0.071
	G1/2	0101 15 21	12	27	24	25	11	0.093
16	G3/8	0101 16 17	11	22	27	27	12	0.092
	G1/2	0101 16 21	12	27	27	27	12.5	0.109
18	G1/2	0101 18 21	12	27	30	29.5	12.5	0.128
	G3/4	0101 18 27	13	32	30	29.5	13	0.152
20	G3/4	0101 20 27	13	32	32	31	13	0.164
22	G3/4	0101 22 27	13	32	36	32	13	0.195
	G1	0101 22 34	15	41	36	31	13.5	0.259
25	G3/4	0101 25 27	13	36	41	35.5	13	0.261
	G1	0101 25 34	15	41	41	35.5	13	0.169
28	G1	0101 28 34	15	41	42	35.5	13.5	0.300

With pre-assembled captive sealing washer
Sealing washers 0602 are shown in Chapter 9.

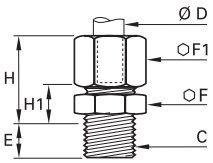
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Brass Compression Fittings

0101 Stud Fitting, Male Metric Thread



Brass



ØD	C		E	F	F1	H max	H1	kg
4	M7x1	0101 04 55	6.5	10	10	16.5	7.5	0.012
	M8x1	0101 04 56	6.5	11	10	16.5	7.5	0.013
5	M8x1	0101 05 56	6.5	11	12	17.5	8	0.016
	M10x1	0101 05 60	6.5	14	12	17.5	8.5	0.020
6	M10x1	0101 06 60	6.5	14	13	18	8.5	0.021
	M10x1.5	0101 06 62	6.5	14	13	18	8.5	0.021
8	M12x1	0101 08 65	8	17	14	19.5	9	0.029
	M12x1.25	0101 08 66	8	17	14	19.5	9	0.029
	M13x1.25	0101 08 68	8	17	14	19.5	9	0.030
10	M14x1.25	0101 10 70	8	17	19	24	11	0.047
	M14x1.5	0101 10 71	8	17	19	24	11	0.047
	M16x1.25	0101 10 74	9	19	19	24	11	0.051
	M16x1.5	0101 10 75	9	19	19	24	11	0.051
	M18x1.5	0101 10 78	9	22	19	24	11.5	0.060
12	M16x1.25	0101 12 74	9	19	22	24	11	0.061
	M16x1.5	0101 12 75	9	19	22	24	11	0.061
	M18x1.5	0101 12 78	9	22	22	24	11.5	0.070
14	M18x1.5	0101 14 78	9	22	24	25	10.5	0.077
	M20x1.5	0101 14 80	10	24	24	25	11	0.084
15	M18x1.5	0101 15 78	9	22	24	25	10.5	0.071
16	M20x1.5	0101 16 80	10	24	27	27	12.5	0.102
	M22x1.5	0101 16 82	10	27	27	27	12.5	0.111
18	M22x1.5	0101 18 82	10	27	30	29.5	12.5	0.129
	M24x1.5	0101 18 83	11	30	30	29.5	13	0.142

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

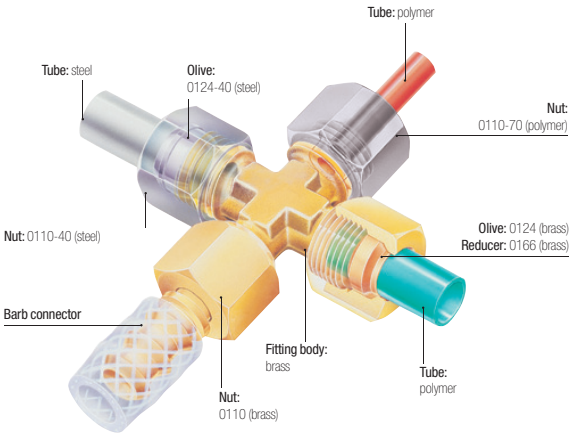
Pneumatics
Cooling
Automotive Process
Lubrication
Fluid Transmission
Packaging
Industrial Machinery

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

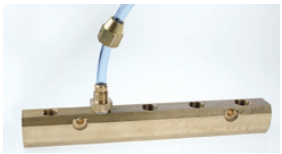


For metal tubing, de-burr the tube prior to connection. Tube bending should be done before connection.



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

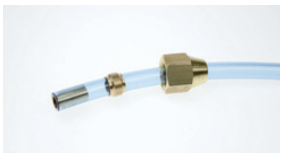


Push the tube up against the shoulder of the body of the fitting and hand tighten.

Final Assembly



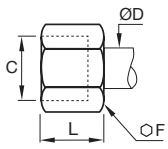
Tighten the nut using a spanner or torque wrench to enable the olive to bite on the tube, the connection being completed when the recommended tightening torque is reached (see tables below).



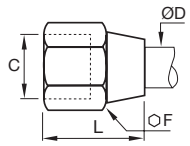
It is recommended to use an insert in order to prevent tube creeping (diameter > 14mm)

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.

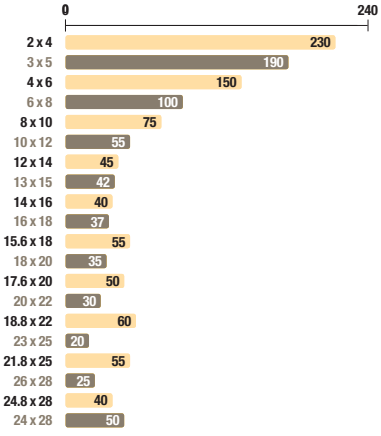
Recommended Tube-Fitting Assembly Configurations

Assembled using Parker Legris brass olive and nut.

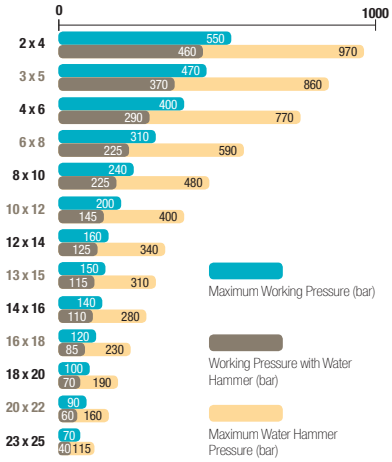
Assembled using Parker Legris steel olive and nut (nut type 0110..40).

Assembled using Parker Legris brass olive and nut.

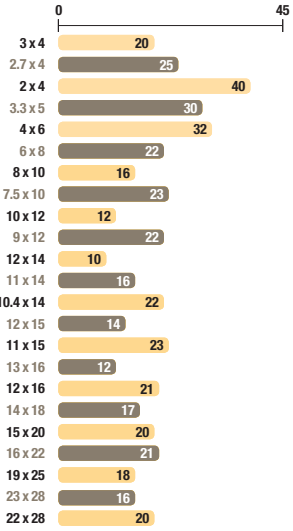
Copper Tube
Maximum Working Pressure (bar)



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.

Tel: +45 63 12 83 00 | Email: ps@hymatik.com | www.hymatik.com | Hvidkaervej 27a, DK-5250 Odense SV, Denmark

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