

# Stainless Steel Compression Fitting Range

## Stainless Steel Fittings

### Stud Fittings

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BSPT  
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**1805**  
NPT  
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BSPT  
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NPT  
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### Tube-to-Tube Fittings

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# Stainless Steel Compression Fittings

**Manufactured in 316L stainless steel**, these fittings combine all the advantages of the "universal" compression fitting with **excellent resistance** to environmental conditions and **corrosive fluids**. They are pressure and temperature-resistant and are able to withstand strong vibration and water hammer.

## Product Advantages

### For Use in Many Environments

Manufactured in 316L stainless steel  
 Suitable for all environments and fluids  
 Resistant to water hammer and vibration  
 Excellent sealing and retention of the tube  
 Suitable for pneumatic and medium pressure hydraulic applications  
 Metallic sealing guarantees maximum service life

### Many Tube Options

Possibility of easily connecting different tube materials and diameters to the same fitting body  
 No tube support required for rigid and semi-rigid polyamide tubing below 12 mm



Food Process  
 Fluid Transmission  
 Pneumatics  
 Automotive Process  
 Petrochemical  
 Chemical  
 Offshore Oil & Gas

### Applications

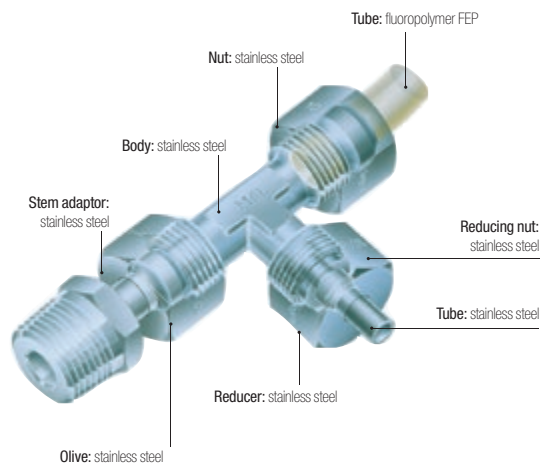
## Technical Characteristics

<b>Compatible Fluids</b>	Many fluids					
<b>Working Pressure</b>	Vacuum to 400 bar (80 bar in corrosive environments)					
<b>Working Temperature</b>	-60°C to +250°C with metal tubing					

<b>Tightening Torques</b>	DN	6	8	10	12	16
	daN.m	2	3	4	6.5	9.5

Reliable performance is dependent upon the type of fluid conveyed and tubing being used. Guaranteed for use with a vacuum of 755 mm Hg (99% vacuum). Thread sealing must be guaranteed by user.

### Component Materials



Silicone-free

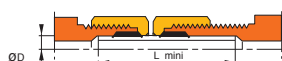
### Maximum Bore Diameters

The table below shows the recommended compatibility of tube size, BSPP male thread and maximum bore.

Tube O.D	BSPP Thread	Max. Bore
6	G1/8	4
6-8-10	G1/4	7
10-12	G3/8	11
16	G1/2	14

### Tube Length for Assembly

Minimum length of tube (L) between 2 fittings.



ØD	L mm	ØD	L mm
4	26.5	10	39
6	26	12	39
8	32	16	46.5

### Regulations

DI: 2002/95/EC (RoHS), 2011/65/EC  
 DI: 97/23/EC (PED)  
 RG: 1935/2004  
 RG: 1907/2006 (REACH)  
 DI: 94/09/EC (ATEX)  
 FDA: 21 CFR 177.1550  
 NACE MR0175: compatible materials  
 ISO 15156-1/-2/-3: compatible materials

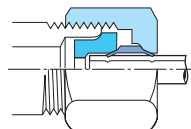
# Stainless Steel Compression Fittings

## Installation

### Fitting

The fitting comprises three parts (body/olive/nut). For assembly procedure, please see Brass Compression Fitting page.

### Diagram: Assembled Fitting

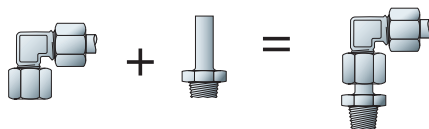


A very slight distortion of the tube appears; this shows the fitting has been correctly tightened.

### Orientable Elbow Assembly

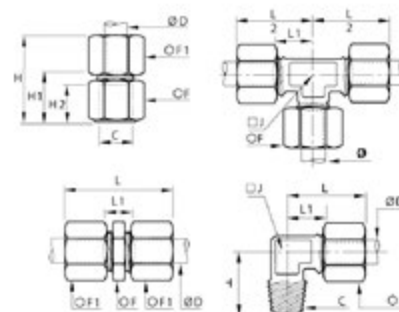
Elbow  
**1802**

Adaptor  
**1820**



### Customised Fittings

If our standard range does not meet your needs, Parker Legris can develop customised solutions for your applications.



## Technical Characteristics

The use of Parker Legris stainless steel compression fittings is dependant on the tube material. Tables of recommended working pressure for the different tubes are shown below.

### Recommended Tube Type

#### Semi-rigid polyamide or fluoropolymer tube

#### Stainless steel tube

"Thin Wall" cold-drawn seamless, annealed and passivated: wall thickness tolerance  $\pm 0.1$  mm. For use with "thin wall" stainless steel tube from 6 mm to 16 mm O.D., maximum wall thickness 1 mm.

### Recommended Tube/Fitting Assembly Configurations

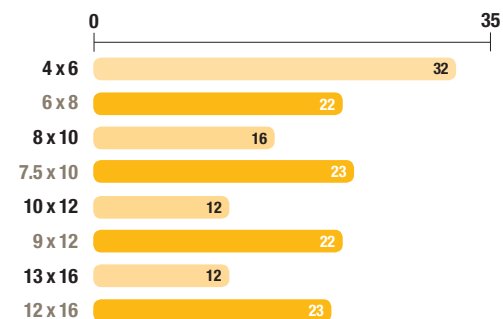
Assembled using Parker Legris olive and nut in stainless steel, with a tube support.

#### Stainless steel tube

Stainless steel tube: in cold-rolled straight lengths  
Coiled annealed stainless tube: reduces working pressure by 35%; do not use if there is vibration.

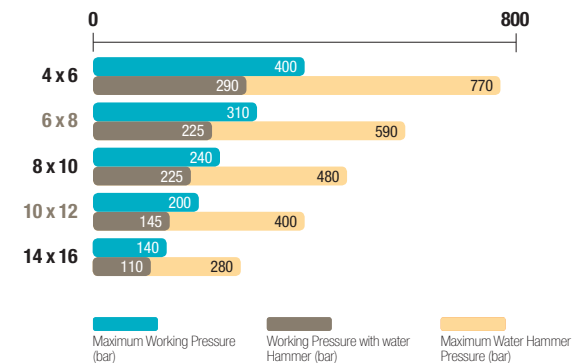
#### Semi-Rigid Polyamide Tube

Maximum Working Pressure (bar)



#### Stainless Steel Tube

Maximum Working Pressure (bar)



### Working Pressure Coefficients for Semi-Rigid Tubing

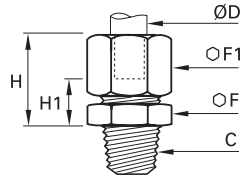
Temperature °C	-40°C / -15°C	-15°C / +30°C	+30°C / +50°C	+50°C / +70°C	+70°C / +100°C
Factor	1.8	1	0.68	0.55	0.31

The above recommendations are given in good faith. However, since each application is different, it is advisable to undertake tests in actual working conditions.

# Stainless Steel Compression Fittings

## 1805 Stud Fitting, Male BSPT Thread

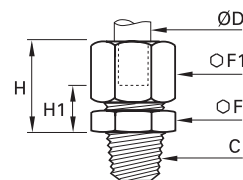
Stainless steel 316L



ØD	C		F	F1	H <sub>max</sub>	H1	Kg
6	R1/8	1805 06 10	12	13	19.5	7.5	0.017
	R1/4	1805 06 13	14	13	19.5	7.5	0.024
8	R1/8	1805 08 10	13	14	21	7	0.019
	R1/4	1805 08 13	14	14	21	7	0.025
10	R1/4	1805 10 13	17	19	25.5	9	0.043
	R3/8	1805 10 17	17	19	25.5	9	0.049
	R1/2	1805 10 21	22	19	26.5	10	0.077
12	R1/4	1805 12 13	19	22	26	9	0.054
	R3/8	1805 12 17	19	22	26	9	0.057
	R1/2	1805 12 21	22	22	27	10	0.081
16	R3/8	1805 16 17	24	27	28.5	9.5	0.085
	R1/2	1805 16 21	24	27	28.5	9.5	0.095

## 1805 Stud Fitting, Male NPT Thread

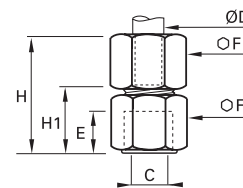
Stainless steel 316L



ØD	C		F	F1	H <sub>max</sub>	H1	Kg
6	NPT1/8	1805 06 11	12	13	19.5	7.5	0.018
	NPT1/4	1805 06 14	14	13	19.5	7.5	0.027
	NPT3/8	1805 06 18	19	13	20.5	8.5	0.033
8	NPT1/2	1805 06 22	22	13	21.5	9.5	0.049
	NPT1/8	1805 08 11	13	14	21	7	0.020
	NPT1/4	1805 08 14	14	14	21	7	0.027
10	NPT1/4	1805 10 14	17	19	25.5	9	0.046
	NPT3/8	1805 10 18	19	19	25.5	9	0.055
	NPT1/2	1805 10 22	22	19	26.5	10	0.081
12	NPT1/4	1805 12 14	19	22	26	9	0.056
	NPT3/8	1805 12 18	19	22	26	9	0.060
	NPT1/2	1805 12 22	22	22	27	10	0.087
16	NPT3/8	1805 16 18	24	27	28.5	9.5	0.087
	NPT1/2	1805 16 22	24	27	28.5	9.5	0.097

## 1814 Stud Fitting, Female BSPP Thread

Stainless steel 316L

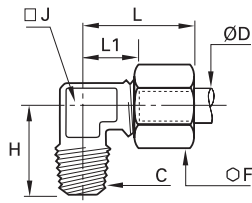


ØD	C		E	F	F1	H <sub>max</sub>	H1	Kg
6	G1/8	1814 06 10	7.5	14	13	29	17	0.023
	G1/4	1814 06 13	11	17	13	29	21	0.032
8	G1/4	1814 08 13	11	17	14	34.5	20.5	0.033
	G3/8	1814 10 17	11.5	22	19	38.5	22	0.064
10	G1/2	1814 10 21	15	27	19	43	26.5	0.094
	G3/8	1814 12 17	11.5	22	22	39	22	0.073
12	G1/2	1814 12 21	15	27	22	43.5	26.5	0.103
	G1/2	1814 16 21	15	27	27	45	26	0.121

# Stainless Steel Compression Fittings

## 1809 Stud Elbow, Male BSPT Thread

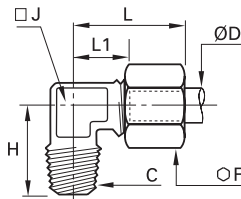
Stainless steel 316L



ØD	C		F	H	J	L <sub>max</sub>	L1	Kg
6	R1/8	<a href="#">1809 06 10</a>	13	18	8	25.5	13.5	0.020
	R1/4	<a href="#">1809 06 13</a>	13	23	10	25.5	13.5	0.029
8	R1/8	<a href="#">1809 08 10</a>	14	20.5	10	28.5	14.5	0.026
	R1/4	<a href="#">1809 08 13</a>	14	23	10	28.5	14.5	0.030
10	R1/4	<a href="#">1809 10 13</a>	19	25	12	32.5	16	0.050
	R3/8	<a href="#">1809 10 17</a>	19	25.5	12	32.5	16	0.058
12	R1/2	<a href="#">1809 10 21</a>	19	32	18	36.5	20	0.093
	R1/4	<a href="#">1809 12 13</a>	22	26	14	34	17	0.067
16	R3/8	<a href="#">1809 12 17</a>	22	27	14	34	17	0.069
	R1/2	<a href="#">1809 12 21</a>	22	32	18	37	20	0.100
16	R3/8	<a href="#">1809 16 17</a>	27	28.5	18	39.5	21	0.108
	R1/2	<a href="#">1809 16 21</a>	27	31.5	18	39.5	21	0.115

## 1809 Stud Elbow, Male NPT Thread

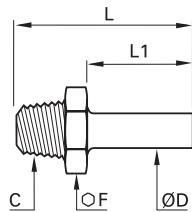
Stainless steel 316L



ØD	C		F	H	J	L <sub>max</sub>	L1	Kg
6	NPT1/8	<a href="#">1809 06 11</a>	13	19.5	8	25.5	13.5	0.021
	NPT1/4	<a href="#">1809 06 14</a>	13	25.5	10	25.5	13.5	0.032
	NPT3/8	<a href="#">1809 06 18</a>	13	28	12	27	15	0.046
	NPT1/2	<a href="#">1809 06 22</a>	13	34	12	29	17	0.071
8	NPT1/8	<a href="#">1809 08 11</a>	14	22	10	28.5	14.5	0.027
	NPT1/4	<a href="#">1809 08 14</a>	14	25.5	10	28.5	14.5	0.033
10	NPT1/4	<a href="#">1809 10 14</a>	19	27.5	12	32.5	16	0.052
	NPT3/8	<a href="#">1809 10 18</a>	19	28	12	32.5	16	0.062
	NPT1/2	<a href="#">1809 10 22</a>	19	35	18	36.5	20	0.096
12	NPT1/4	<a href="#">1809 12 14</a>	22	28.5	14	34	17	0.068
	NPT3/8	<a href="#">1809 12 18</a>	22	29.5	14	34	17	0.073
	NPT1/2	<a href="#">1809 12 22</a>	22	35	18	37	20	0.104
16	NPT3/8	<a href="#">1809 16 18</a>	27	31	18	39.5	21	0.110
	NPT1/2	<a href="#">1809 16 22</a>	27	34.5	18	39.5	21	0.116

## 1820 Stud Standpipe, Male BSPT Thread

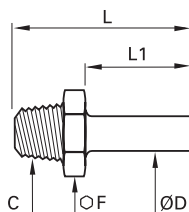
Stainless steel 316L



ØD	C		F	L	L1	Kg
6	R1/8	<a href="#">1820 06 10</a>	12	26.5	15	0.009
	R1/4	<a href="#">1820 06 13</a>	14	31	15	0.018
8	R1/8	<a href="#">1820 08 10</a>	12	28.5	17	0.008
	R1/4	<a href="#">1820 08 13</a>	14	33	17	0.017
10	R1/4	<a href="#">1820 10 13</a>	14	36	20	0.017
	R3/8	<a href="#">1820 10 17</a>	17	36.5	20	0.025
12	R1/2	<a href="#">1820 10 21</a>	22	41	20	0.053
	R1/4	<a href="#">1820 12 13</a>	14	36	20	0.016
16	R3/8	<a href="#">1820 12 17</a>	17	36.5	20	0.022
	R1/2	<a href="#">1820 12 21</a>	22	41	20	0.049
16	R3/8	<a href="#">1820 16 17</a>	17	39.5	23	0.022
	R1/2	<a href="#">1820 16 21</a>	22	44	23	0.039

## 1820 Stud Standpipe, Male NPT Thread

Stainless steel 316L



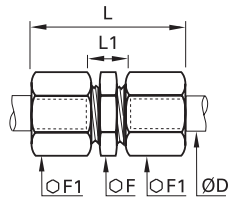
ØD	C		F	L	L1	Kg
6	NPT1/8	<a href="#">1820 06 11</a>	12	26.5	15	0.010
	NPT1/4	<a href="#">1820 06 14</a>	14	31	15	0.019
8	NPT1/8	<a href="#">1820 08 11</a>	12	28.5	17	0.009
	NPT1/4	<a href="#">1820 08 14</a>	14	33	17	0.019
10	NPT1/4	<a href="#">1820 10 14</a>	14	36	20	0.018
	NPT3/8	<a href="#">1820 10 18</a>	19	36.5	20	0.032
12	NPT1/2	<a href="#">1820 10 22</a>	22	41	20	0.060
	NPT1/4	<a href="#">1820 12 14</a>	14	36	20	0.019
16	NPT3/8	<a href="#">1820 12 18</a>	19	36.5	20	0.028
	NPT1/2	<a href="#">1820 12 22</a>	22	41	20	0.053
16	NPT3/8	<a href="#">1820 16 18</a>	19	39.5	23	0.027
	NPT1/2	<a href="#">1820 16 22</a>	22	44	23	0.042

Stainless Steel Compression Fittings

# Stainless Steel Compression Fittings

## 1806 Equal Tube-to-Tube Connector

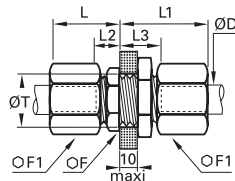
Stainless steel 316L



ØD		F	F1	L <sub>max</sub>	L1	Kg
6	<a href="#">1806 06 00</a>	12	13	34.5	11	0.024
8	<a href="#">1806 08 00</a>	13	14	38.5	10	0.029
10	<a href="#">1806 10 00</a>	17	19	46	13	0.066
12	<a href="#">1806 12 00</a>	19	22	47	13	0.085
16	<a href="#">1806 16 00</a>	24	27	51	13	0.136

## 1816 Equal Bulkhead Connector

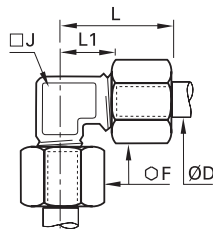
Stainless steel 316L



ØD		F	F1	L <sub>max</sub>	L1 <sub>max</sub>	L2	L3	ØT <sub>min</sub>	Kg
6	<a href="#">1816 06 00</a>	13	13	28	19	7.5	17	10.5	0.035
8	<a href="#">1816 08 00</a>	14	14	29	20	7	17	12.5	0.042
10	<a href="#">1816 10 00</a>	19	19	33	25	9	19	16.5	0.093
12	<a href="#">1816 12 00</a>	22	22	33	25	9	19	18.5	0.113
16	<a href="#">1816 16 00</a>	27	27	36	28	9.5	19.5	22.5	0.179

## 1802 Equal Elbow

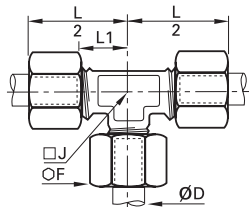
Stainless steel 316L



ØD		F	J	L <sub>max</sub>	L1	Kg
6	<a href="#">1802 06 00</a>	13	8	25.5	13.5	0.027
8	<a href="#">1802 08 00</a>	14	10	28.5	14.5	0.035
10	<a href="#">1802 10 00</a>	19	12	32.5	16	0.069
12	<a href="#">1802 12 00</a>	22	14	34	17	0.093
16	<a href="#">1802 16 00</a>	27	18	39.5	21	0.152

## 1804 Equal Tee

Stainless steel 316L



ØD		F	J	L1	L/2	Kg
6	<a href="#">1804 06 00</a>	13	8	13.5	25.5	0.039
8	<a href="#">1804 08 00</a>	14	10	14.5	28.5	0.049
10	<a href="#">1804 10 00</a>	19	12	16	32.5	0.102
12	<a href="#">1804 12 00</a>	22	14	17	34	0.132
16	<a href="#">1804 16 00</a>	27	18	21	39.5	0.215



Stainless Steel  
Compression Fittings

Compression Fittings

# Complementary Stainless Steel Fittings

## Reducers, Olives and Nuts

This innovative reducer system, using a full range of nuts and olives, enables **different diameters** of stainless steel, fluoropolymer or polymer tubes to be fitted onto **a single Parker Legris compression fitting**.

### Product Advantages

#### Efficient Solution

Reduces envelope dimensions  
Quick and easy to assemble, whatever the diameters and tube material  
Improved stock management  
Silicone-free

#### Multiple Combinations

A single connector for up to 3 different tube materials and sizes.  
Example:
 

- Advanced PE tubing 6 mm O.D.
- stainless steel tubing 8 mm O.D.
- fluoropolymer tubing 12 mm O.D. or braided PVC hose 10 mm I.D.

 A full range of olives and nuts to optimise all assembly operations



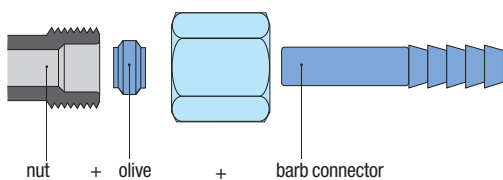
Food Process  
Fluid Transmission  
Pneumatics  
Automotive Process  
Petrochemical  
Cooling & Heating  
Chemical  
Offshore Oil & Gas

Applications

### Reducer Assembly Procedure

Operation	Assembly Sequence	Assembled Fitting
<p><b>1</b> <b>Assemble the reducer</b> Place the reducer in the fitting body.</p>	<p><b>1</b></p>	
<p><b>2</b> <b>Assemble the nut and olive</b> Place the nut and then the olive onto the tube.</p>	<p><b>2</b></p>	
<p><b>3</b> <b>Assemble the nut</b> Push the tube into the fitting until it bottoms on the reducer. Tighten the nut to the recommended torque (see opposite page).</p>	<p><b>3</b></p>	

### Assembly: Barb Connectors



#### Regulations

DI: 2002/95/EC (RoHS), 2011/65/EC  
DI: 97/23/EC (PED)  
RG: 1935/2004  
RG: 1907/2006 (REACH)  
DI: 94/09/EC (ATEX)  
FDA: 21 CFR 177.1550  
NACE MR0175: compatible materials  
ISO 15156-1/-2/-3: compatible materials

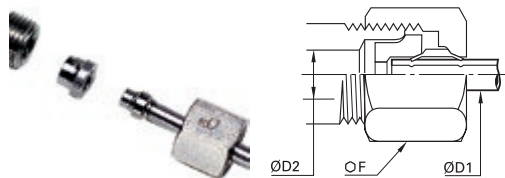
Our barb connector 1822 is designed to be also used with different types of hose. It is secured using the nut and olive provided with the fitting.



# Stainless Steel Compression Fittings

## 1866 3-Piece Reducer

Stainless steel 316L



ØD1	ØD2		F	Kg
6	8	<a href="#">1866 06 08</a>	14	0.011
	10	<a href="#">1866 06 10</a>	19	0.027
	12	<a href="#">1866 06 12</a>	22	0.040
8	10	<a href="#">1866 08 10</a>	19	0.025
	12	<a href="#">1866 08 12</a>	22	0.037
10	12	<a href="#">1866 10 12</a>	22	0.034
	16	<a href="#">1866 10 16</a>	27	0.065
12	16	<a href="#">1866 12 16</a>	27	0.061

## 1824 Stainless Steel Olive

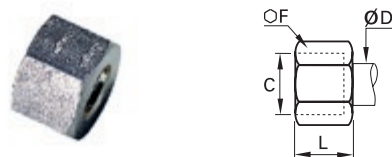
Stainless steel 316L



ØD		Kg
6	<a href="#">1824 06 00</a>	0.001
8	<a href="#">1824 08 00</a>	0.001
10	<a href="#">1824 10 00</a>	0.003
12	<a href="#">1824 12 00</a>	0.004
16	<a href="#">1824 16 00</a>	0.005

## 1810 Stainless Steel Nut

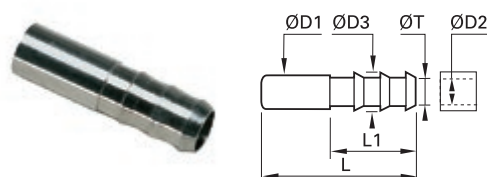
Stainless steel 316L



ØD	C		F	L	Kg
6	M10x1	<a href="#">1810 06 00</a>	13	11	0.007
8	M12x1	<a href="#">1810 08 00</a>	14	13	0.008
10	M16x1.5	<a href="#">1810 10 00</a>	19	15	0.017
12	M18x1.5	<a href="#">1810 12 00</a>	22	15	0.024
16	M22x1.5	<a href="#">1810 16 00</a>	27	17	0.041

## 1822 Barb Adaptor for Hose

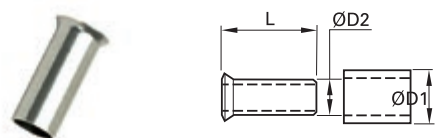
Stainless steel 316L



ØD1	ØD2		ØD3	L	L1	ØT min	Kg
6	7	<a href="#">1822 06 07</a>	9	37.5	22.5	6	0.006
	6	<a href="#">1822 08 06</a>	8	40	22.5	5	0.007
8	7	<a href="#">1822 08 07</a>	9	40	22.5	6	0.007
	10	<a href="#">1822 08 10</a>	12.5	40	22.5	9	0.011
10	7	<a href="#">1822 10 07</a>	9	43	22.5	6	0.009
	10	<a href="#">1822 10 10</a>	12.5	43	22.5	9	0.013
12	10	<a href="#">1822 12 10</a>	12.2	43	22.5	9	0.012
	13	<a href="#">1822 12 13</a>	15	50	29.5	13	0.016

## 1827 Stainless Steel Tube Support for Fluoropolymer Tubing

Stainless steel 316L



ØD1	ØD2		L	Kg
6	4	<a href="#">1827 06 00</a>	11.5	0.001
8	6	<a href="#">1827 08 00</a>	14	0.001
10	8	<a href="#">1827 10 00</a>	18	0.001
12	9	<a href="#">1827 12 09</a>	18	0.001
	10	<a href="#">1827 12 00</a>	18	0.001
16	14	<a href="#">1827 16 00</a>	18	0.002

This tube support is necessary when using fluoropolymer tubing at all temperatures compatible with the fitting/tubing assembly.

