The Omni-Lok™ Fitting System

Inside.....

A flangeless fitting system with a firmly attached ferrule permitting repeated connect/disconnect and tight connection even in PTFE ports

- Recess in fitting leads to maximum thread engagement
- Stays sealed when finger tight, even in shallow PTFE ports
- PTFE, Tefzel® or PEEK™ ferrules
- Designed for 1/8” and 1/16” outside diameter tubing
- Pressure ratings up to 1000 psi (69 bar)
- Robust, glass-filled Polypropylene fitting nuts

Omni-Lok™ Type S ferrule

The Omni-Lok™ Type S ferrule is available in Tefzel® or PEEK™. A Stainless Steel lock ring is assembled onto the ferrule and attaches it firmly to the end of hard wall tubing allowing repeated connect and disconnect of the fitting nut without twisting the tubing.

Omni-Lok™ Type P ferrule

The pre-assembled Omni-Lok™ Type P ferrule consists of a Stainless Steel casing and a PTFE sealing surface that attaches to the end of hard wall tubing to create an all PTFE flow path and allows repeated connect and disconnect of the fitting nut without twisting the tubing.

Close-Packing Glass-Filled Polypropylene Fitting Nuts

These robust, 30% glass-filled polypropylene fitting nuts are available in versions for Omni-Lok™ ferrules and for inverted cones and come in eight different colors for easy line identification. The compact head ensures a close-packing design that can be used in small spaces. The built-in recess securely houses the Omni-Lok™ ferrule resulting in maximum thread engagement.

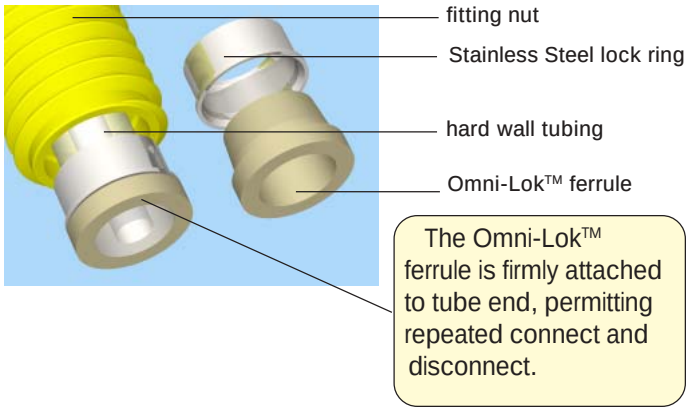
Inverted Cone Option

The inverted cone option provides a means to assemble a flangeless fitting quickly and economically with no tools required. Just fit the fitting nut on the tubing and fit the Tefzel® cone to the end of the tubing and screw into the port.

Omni-Lok™ Type S Ferrules

Features

- Bio-compatible Tefzel® or PEEK™ ferrules
- Minimal to zero dead volume
- Specifically designed for use with solenoid valves and shallow PTFE ports
- Fitting nut spins freely without twisting the tubing



Specifications

- Materials: - lock ring: 316 Stainless Steel
  - ferrule: Tefzel® or PEEK™
- Tubing sizes: 1/16” O.D. and 1/8” O.D.

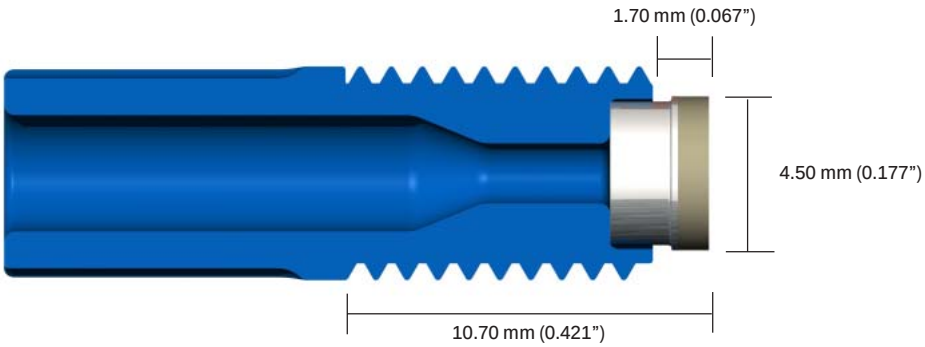
Tubing:

Omni-Lok™ ferrule material	Compatible Tubing Types				
	PTFE	FEP	PEEK™	Stainless Steel	Tefzel®
Tefzel®	✓	✓		✓	✓
PEEK™	✓	✓	✓		✓

How it works

1. The Stainless Steel lock ring is compressed onto the ferrule.
2. The external angle of the ferrule conflicts with the internal angle of the lock ring.
3. The sharp edge of the ferrule becomes engaged with the tube, holding the tube firmly.
4. The ferrule and case are now permanently together, with tube retained.
5. The fitting nut is assembled onto the tube behind the ferrule and lock ring.
6. The Omni-Lok™ Type S fitting system is screwed into a 1/4”-28 UNF threaded port.

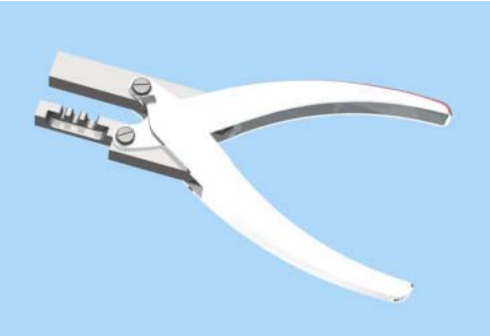
Dimensions:



Assembling The Omni-Lok™ Type S Fitting System

Omnifit Omni-Lok™ Type S Assembly tool

- Easy assembly of the Omni-Lok™ Type S in only seconds
- Available for purchase from Bio-Chem Valve and Omnifit under part number **008AT**



1	Cut the tube end square. For best results, use the Omnifit tubing cutter part number 3062 (See Fittings Spec Sheet).

2	Fit the Omni-Lok™ ferrule and lock ring onto the squarely cut tube end and load into the slot in the assembly tool that most closely fits the outside of the tube.

3	Push the tube up against the tool face to ensure a no dead volume connection. Simultaneously, squeeze the tool handles together until the lip of the lock ring and the lip of the ferrule come together as shown. This assembly is now ready for use.

How to Order Omni-Lok™ Type S ferrules and the Omni-Lok™ Assembly Tool

Omni-Lok™ Type S ferrules

Part Number	Description	Tubing O.D.	Pack Size
008FK16	PEEK™ ferrule with stainless steel lock ring	1/16" (1.6 mm)	10
008FZ16	Tefzel® ferrule with stainless steel lock ring	1/16" (1.6 mm)	10
008FK32	PEEK™ ferrule with stainless steel lock ring	1/8" (3.2 mm)	10
008FZ32	Tefzel® ferrule with stainless steel lock ring	1/8" (3.2 mm)	10

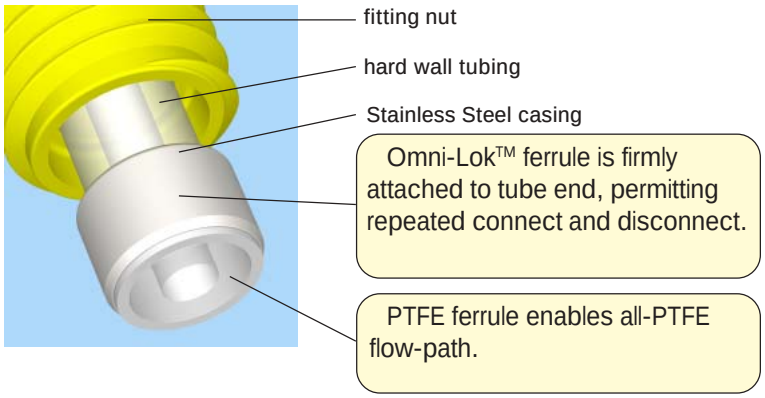
Omni-Lok™ Assembly Tool

Part Number	Description
008AT	Omni-Lok™ Assembly Tool

Omni-Lok™ Type P Ferrules

Features

- Secure up to 1,000 psi (69 bar) pressure when finger-tight
- Minimal to zero dead volume
- Allows an all-PTFE flow path
- Fitting nut spins freely without twisting the tubing
- Designed for use in solenoid valves and shallow PTFE ports



Specifications

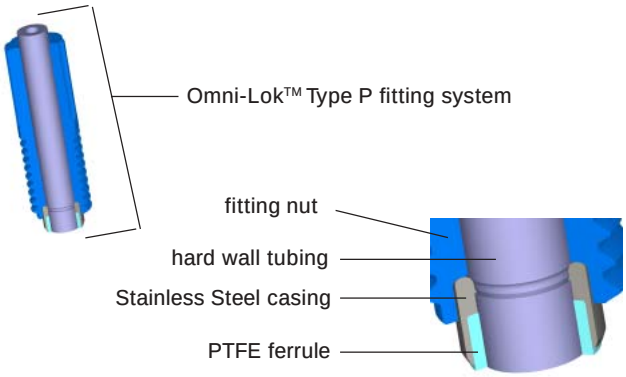
- Materials: - casing: 316 stainless steel
  - ferrule: PTFE (polytetrafluoroethylene)
- Tubing sizes: 1/16” O.D. and 1/8” O.D.

Tubing:

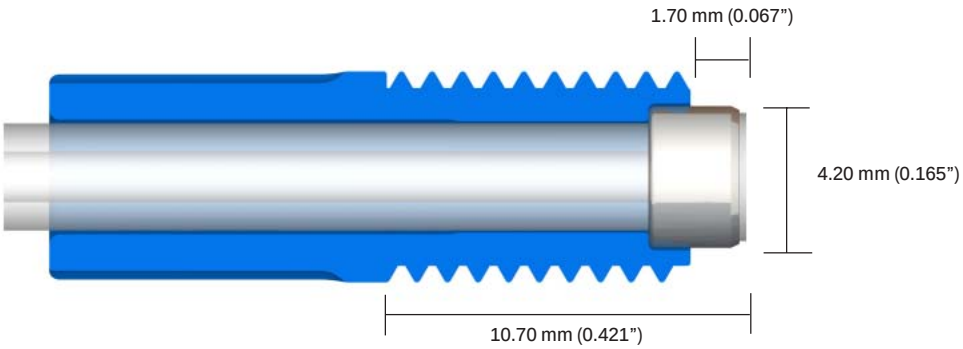
Omni-Lok™ ferrule material	Compatible Tubing Types				
	PTFE	FEP	PEEK™	Stainless Steel	Tefzel®
PTFE	✓	✓			✓

How it works

1. The pre-assembled Omni-Lok™ Type P ferrule is mounted onto the end of hardwall tubing.
2. The barb in the Stainless Steel casing cuts a groove into the tubing and becomes permanently attached.
3. The fitting nut is assembled onto the tube behind the ferrule.
4. The Omni-Lok™ Type P fitting system is screwed into a 1/4”-28 UNF threaded port.



Dimensions:



Assembling The Omni-Lok™ Type P Fitting System

1	With a scalpel, cut the tubing to form a point approximately 30mm long. This enables the tube to be passed through the ferrule. 
2	Fit the close-packing polypropylene fitting nut to the tube. Then fit an Omni-Lok™ Type P ferrule to the tube ensuring the PTFE seal is facing towards the pointed tube end. 
3	With the aid of pliers or similar, pull the pointed tube end through the ferrule until the PTFE sealing surface has reached the uncut section of the tube. Keeping the ferrule as perpendicular as possible to the tube will ensure the best performance. Rotate the ferrule around the tube 3 or 4 times to seat the ferrule on the tube correctly. 
4	Using a scalpel, cut the pointed tube end as close to the ferrule as possible, ensuring the end of the ferrule is not cut. Tube assembly is now ready for use. 

Safety precautions
Always take care when using scalpels. Always make tube cuts away from the body and keep fingers away from blade.

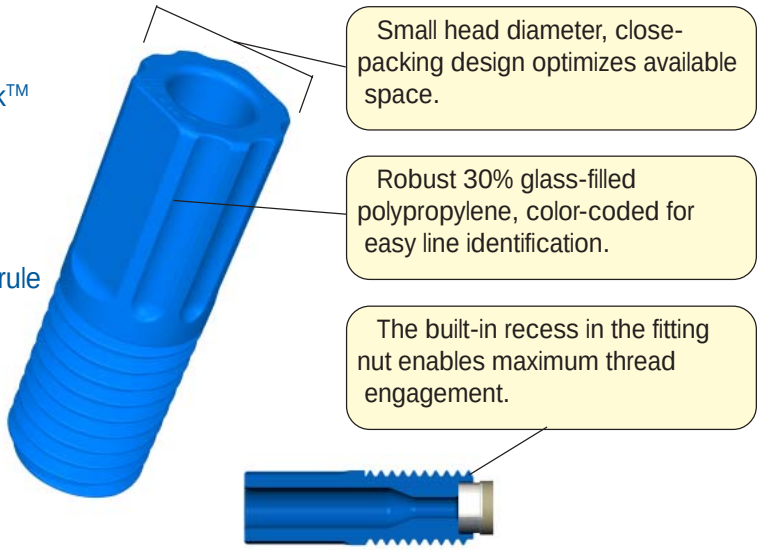
How to Order Omni-Lok™ Type P ferrules

Part Number	Description	Tubing O.D.	Pack Size
008FT16	One-piece PTFE ferrule & stainless steel case	1/16"	10
008FT32	One-piece PTFE ferrule & stainless steel case	1/8"	10

Close-Packing Glass-Filled Polypropylene Fitting Nuts

Features

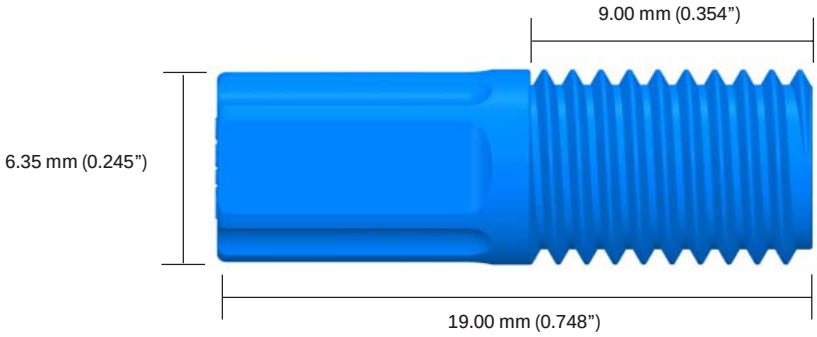
- Simple, finger-tight installation
- Recess in fitting securely houses the Omni-Lok™ ferrule or Inverted Cone, permitting maximum thread engagement
- Versions for 1/16” and 1/8” outside diameter tubing
- Versions for Inverted Cone and Omni-Lok™ ferrule types



Specifications

- Material: 30% glass-filled Polypropylene
- Threads: 1/4”-28 UNF
- Color Options: black, blue, green, gray, orange, red, white, yellow

Dimensions:



How to Order Close-Packing Glass-Filled Polypropylene Fitting Nuts

Example Part Number:

008N	F	16	—	Y	C	5	U

008N Product group designator: 008N Fitting

F For ferrule type: F Omni-Lok™ Type P or S; C Inverted Cone*

16 For tubing Size: 16 1/16” (1.6mm) O.D.; 32 1/8” (3.2mm) O.D.

Y Fitting nut material: Y Glass-filled Polypropylene

C Head size: C Close-packing (small)

5 Thread type: 5 1/4”-28 UNF, standard

U Color: B Black; U Blue; A Gray; G Green; N Orange; R Red; H White; Y Yellow; M Mixed of 8 colors**

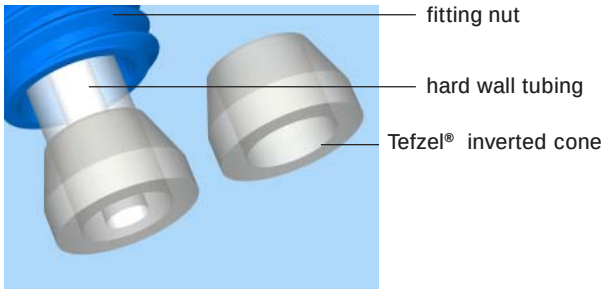
The example part number above, 008NF16-YC5U, designates a Close-Packing Polypropylene fitting nut for 1/16” O.D. tubing, blue color with 1/4”-28 UNF threads designed for an Omni-Lok™ type P or S ferrule. **Supplied in packs of Ten (10).**

* Fitting nuts for Inverted Cones are available in Blue (U) only.
** Mixed colors are supplied in packs of Eight (8).

Inverted Cone Option

Features

- Chemically resistant, bio-compatible Tefzel® cone material
- Sealing pressure rated to 500 psi (34 bar) for 1/16” O.D. tubing and up to 250 psi (17 bar) for 1/8” O.D. tubing
- Quick, easy installation
- No tools required
- Economical

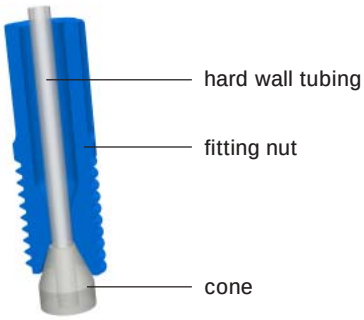


Specifications

- Cone material: Tefzel®
- Tubing Sizes: 1/16” O.D. and 1/8” O.D.
- Tubing Type: hard wall tubing only

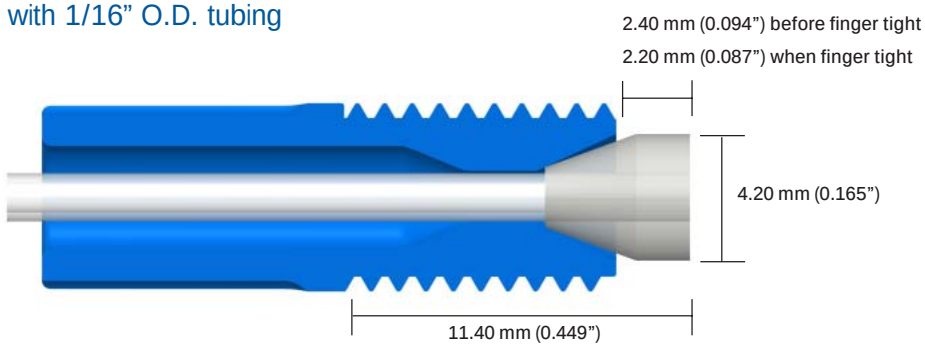
How it works:

1. An Inverted Cone and fitting nut are assembled onto the end of squarely cut tubing.
2. The fitting is screwed into a 1/4”-28 UNF port until finger tight.
3. The angle of the Inverted Cone is different to that in the fitting.
4. When screwed finger tight into a port, this difference causes compression of the inverted cone at the small end. This makes the cone grip the tube and also creates a seal.

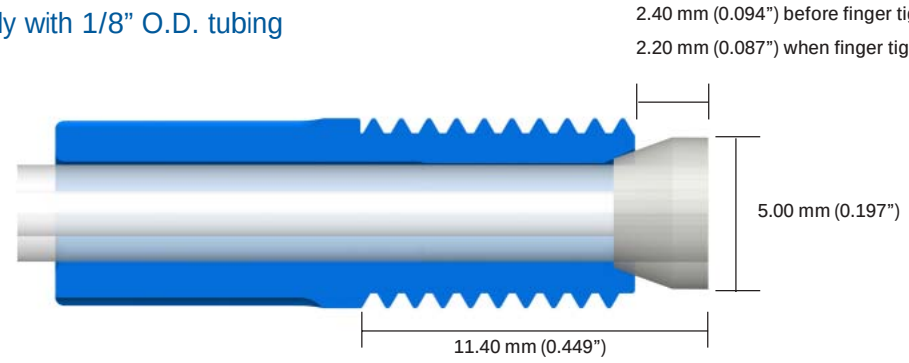


Dimensions:

Inverted Cone Assembly with 1/16” O.D. tubing



Inverted Cone Assembly with 1/8” O.D. tubing



Inverted Cone Option (contd.)

Assembling Inverted Cones:

1. Cut tube end square and push through fitting nut then through the small end of the cone until the tube end is flush with the large end of the cone.
2. Screw in until finger tight into a standard 1/4”-28 UNF flat-bottomed port.

How to Order Inverted Cone ferrules

Part Number	Tubing O.D.	Material	Pack Size
008CZ16	1/16" (1.6 mm)	Tefzel®	10
008CZ32	1/8" (3.2 mm)	Tefzel®	10

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