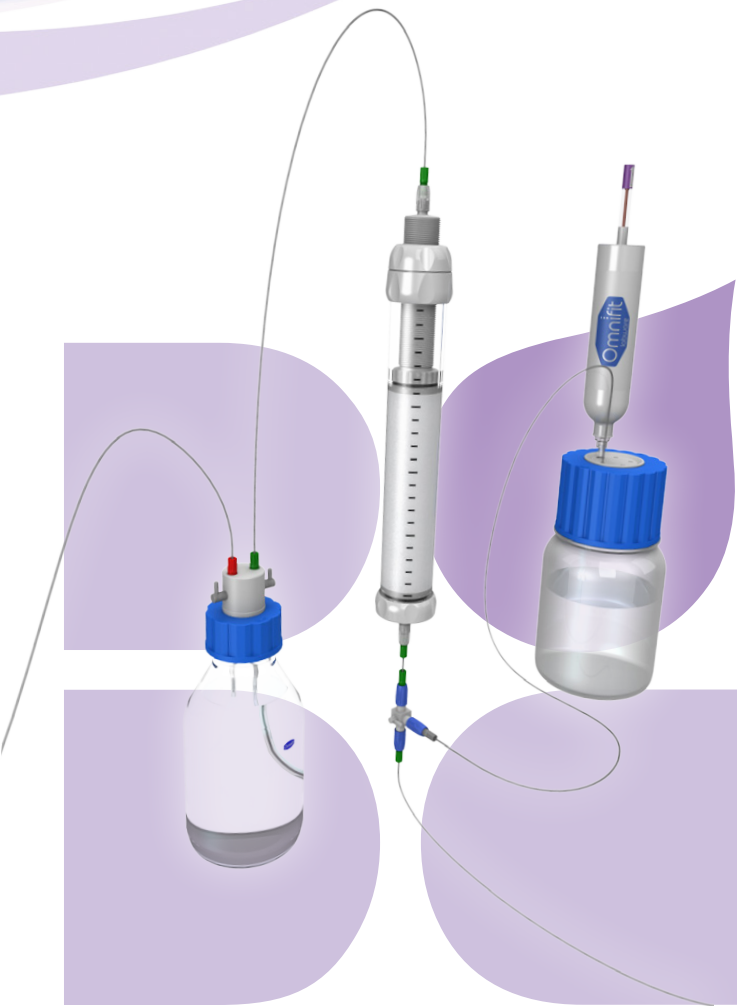




# Omnifit® Labware



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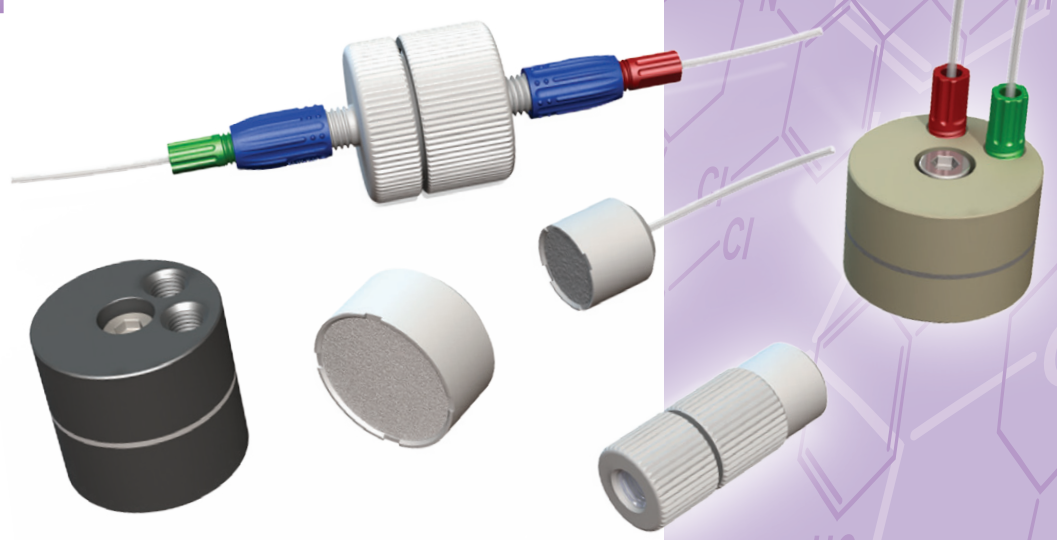
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## Solvent Safety Bottle Caps

### Selection guide

In the table below:

1. Choose the connection type you require for your fluid lines;
2. Locate the thread type of the bottle you wish to connect to;
3. Turn to the pages indicated to see full details and ordering information for each system.

Bottle Thread	Fluid Line Connection		
	Threaded fittings + optional on-off valves on each line	Straight-through tubes and/or Luer connections	Waste collection
GL32	00932Q (Page 6)	00932T (Page 8)	
GL45	00945Q (Page 6)	00945T (Page 8)	00945TW (Page 10)
38-430 (Glass)	00938Q (Page 6)	00938T (Page 8)	00938TW (Page 10)
38-430 (Plastic)	00938PQ (Page 6)	00938PT (Page 8)	
S40	00945Q (Page 6) + S40 thread adaptor (Page 13)	00945T (Page 8) + S40 thread adaptor (Page 13)	
53B			00953TW (Page 10)
83B			00983TW (Page 10)

### Guide to thread types



## Closed solvent systems

Open solvent bottles can allow harmful solvent vapor to escape and chemicals to be spilled. Omnifit® Labware bottle caps and accessories help prevent these problems and give you the security of a safe and dependable solvent delivery system. Caps can be used on the supply side to provide closed delivery systems for safe supply of solvents. An optional check valve and filter enables pressure equalization and prevents contamination. Caps can also be used for safe disposal of solvent waste, providing a closed waste system.

### What are the benefits of a closed system?

- **Safety** - closed solvent supply systems prevent vapor leakage into the atmosphere, protecting lab staff from exposure to toxic fumes.
- **Contamination control** - prevents ingress of particulates.
- **Protection of mixing ratios** - prevents evaporation of solvent leading to altered concentration of reagents or ratios of mixtures.

### Where should you use a closed system?

- **HPLC** - mobile phase handling, both solvent supply and waste collection.
- **Fermentation or culture preparation** - where sterile transfer of culture media or addition of reagents to closed systems is required.
- **All labs working with solvents, reagent supply and waste handling** - where safety and contamination control are paramount in life sciences, analytical chemistry, clinical, and biotech.

### What are the key differences between the Omnifit® Labware bottle cap ranges?

#### Q-series with ¼"-28 UNF threaded ports

- Optional valves offer easy on-off control of individual fluid lines, ideal for selecting flow or for closing off lines prior to removing caps to change or re-fill solvent bottles.
- Robust threaded ports for standard ¼"-28 UNF threaded fitting nuts and adaptors give a secure connection ideal for repeated connect / disconnect.
- Optional screw-in check valve and filter accessory enables pressure equalization while keeping the system closed and preventing both particulate contamination and evaporation of expensive or harmful chemicals.

#### T-series with Luer ports

- Simple and easy-to-use with no need for fitting nuts and ferrules (for ⅛" OD semi-rigid tube). Tubing passes straight through the cap for a continuous fluid path.
- Luer ports take standard male Luer components including a range of accessories for different tubing types and sizes.
- Optional integrated check valve and filter enables pressure equalization while keeping the system closed and preventing particulate contamination or evaporation of expensive or harmful chemicals.
- A Luer connection solvent vapor trap can be used to contain / control vapor egress into the environment.

### T-series for solvent waste collection

Omnifit® Labware solvent waste caps are designed to suit a variety of common laboratory waste vessels. Because waste systems require positive pressure to be applied in pumping waste solvent into the bottle, a vent port is required to allow pressure equalization. In order to control vapor in the environment released via the vent port, precautions for vapor containment should be made, such as placing the system in a fume hood or connecting a vapor trapping unit. To control vapor escape:

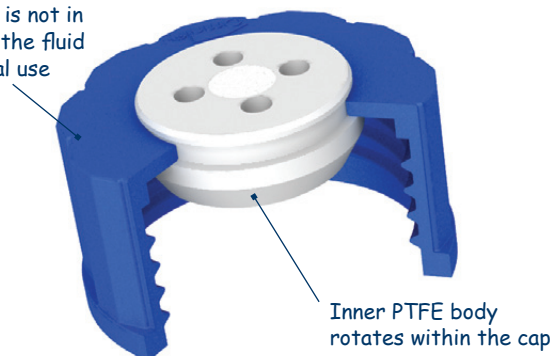
- A solvent trap (Part # 009CF-TW) should be screw-fitted into the ¼"-28 UNF threaded vent port. As liquid flows into the bottle by gravity flow or is pumped into the bottle, vapor can pass out through the trap, equalizing pressure. Dangerous solvent vapor is neutralized by the activated carbon contained in the unit.
- The integral break-through detector indicates by a simple color-change when the vapor trap needs to be replaced. Once the active medium within the vapor trap has become saturated with solvent, the color change strip turns red, indicating to users that the unit must be replaced.
- Any unused ports must be sealed using a Luer plug (part # 009LP) to prevent solvent vapor escaping directly into the environment. Note: The push-fit nature of the vapor trap and Luer plugs mean that only low positive pressure should be applied to prevent Luer connections being loosened.

## Anti-twist design

All Omnifit® Labware bottle caps have this anti-twist feature, allowing the body to spin freely within the cap. The benefit of this design is that tubes no longer get twisted when the cap is fitted or removed from the bottle and there is no need to disconnect fluid lines before unscrewing the cap.

The inner body of each Omnifit® Labware cap is made from PTFE, providing the highest chemical inertness. PTFE also creates a reliable seal to the glass bottle with no need for extra seals or O-rings.

Outer PP cap is not in contact with the fluid path in normal use



Plastics: ETFE = ethylene tetrafluoroethylene PP = polypropylene  
 PTFE = polytetrafluoroethylene PC = polycarbonate  
 PEEK™ = polyetheretherketone PCTFE = polychlorotrifluoroethylene

Trademarks: PEEK™ is a registered trademark of Victrex plc.  
 Omnifit® Labware, Omni-Lok™ are trademarks of Diba Industries Ltd.

## Q-Series Solvent Bottle Caps

1/4"-28 UNF ports with optional on-off valves

- Accept standard male 1/4"-28 UNF fittings
- Anti-twist design
- Optional on-off valves to control individual fluid lines

Omnifit® Labware Q-series is a versatile range of caps with the security of threaded fitting nuts to ensure a leak-free, vapor-tight seal - ideal for repeated connect / disconnect.

### Anti-twist design

The anti-twist design allows the PTFE body to spin freely within the outer blue cap. This means no more twisted tubes when the cap is fitted or removed and no need to disconnect fluid lines before unscrewing the cap.

### Tubing connections

Q-series caps offer a secure way to connect tubing using 1/4"-28 UNF fitting nuts. Each port has a robust stainless steel thread insert to enable repeated connect/disconnect.

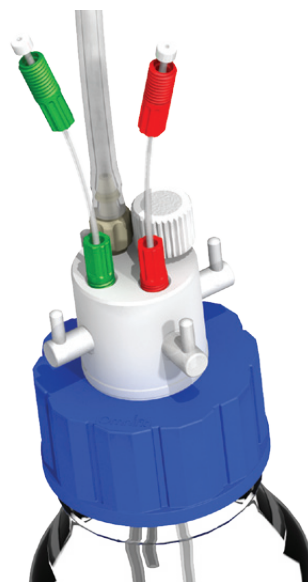
- Semi-rigid tubing can be connected using standard 1/4"-28 UNF threaded fittings and fluid lines can be color-coded for easy identification using colored fitting nuts.
- Softwall tube, such as silicone, can be connected using Dibafit™ PEEK™ thread to barb adaptors.
- A length of 1/8" OD PTFE tubing is supplied fitted inside the cap and extending into the bottle. This can be cut to fit, or easily replaced if a longer length is required.
- Non-valved caps have Ø1.8mm (0.07") through-holes enabling 1/16" OD semi-rigid tubing to be passed straight through into the bottle. Tube can be secured at the required height using an Omni-Lok™ inverted cone fitting.

### On-off valves

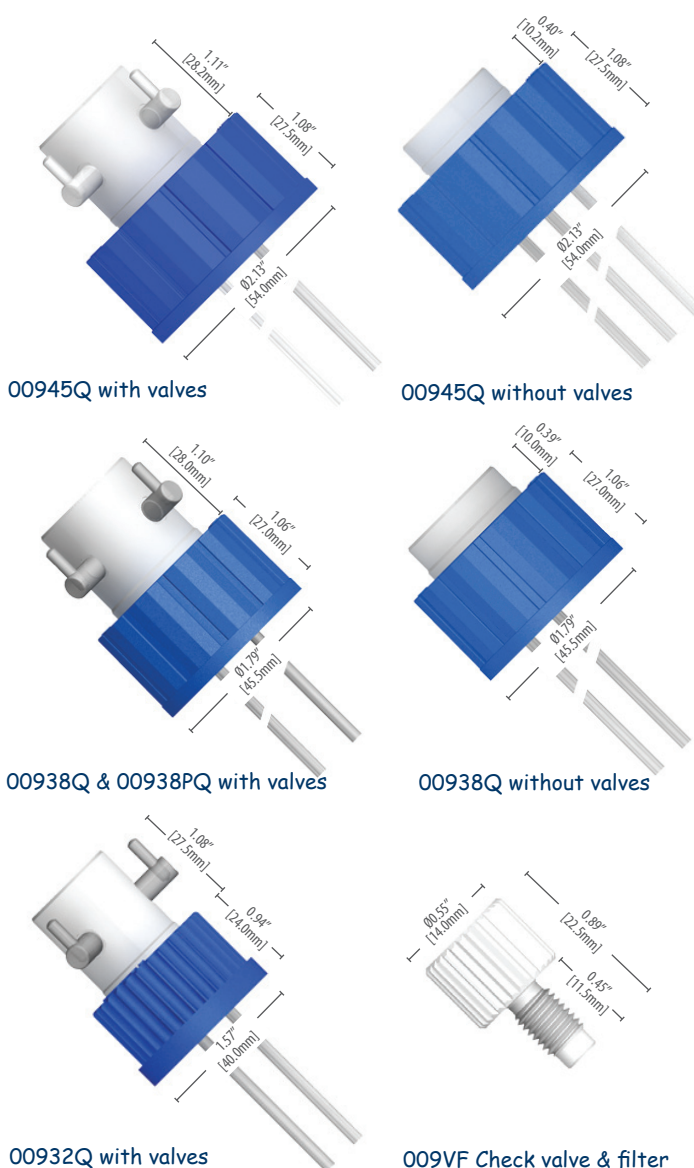
On-off valves enable easy control of liquid flow into and out of the bottle, as each fluid line can be switched on or off independently. Changing bottles is easy - simply close off the fluid lines and switch the cap onto a new reservoir without leaks. Caps without valves have a compact design ideal when head space is limited.

### Materials

The solid PTFE inner body provides the highest chemical inertness. The PTFE creates a reliable seal to the glass bottle with no need for extra seals or O-rings. In normal use, the outer cap is not wetted. All caps can be autoclaved.



## Dimensions



## Technical specifications

### Materials:

Outer cap	Glass-filled PP
Body	PTFE
Internal rotor (caps with on/off valves)	PCTFE

### Operating pressures (except 00938PQ\*):

Vacuum	-10 psi
+ve pressure	20 psi

### Autoclavability:

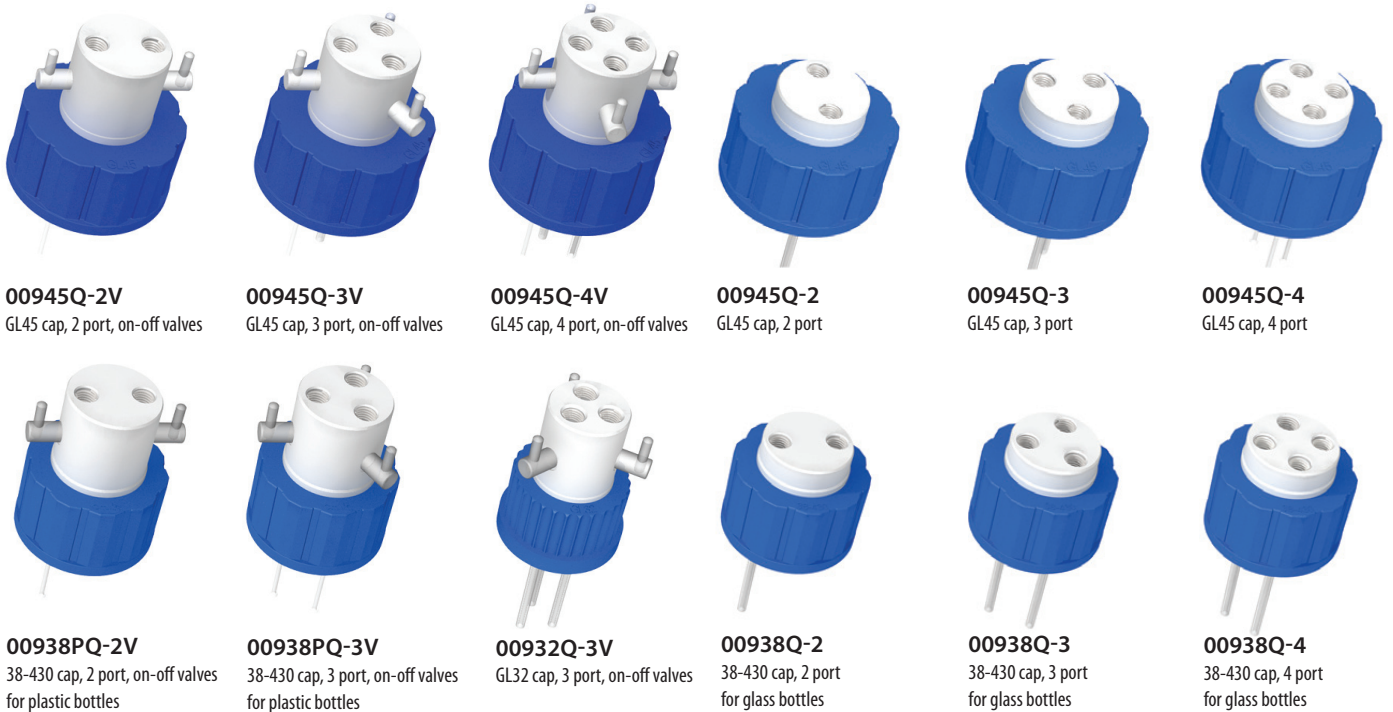
All caps can be autoclaved.

Q-series caps with on-off valves

Ordering information				
GL45 THREAD				
PART NUMBER	BOTTLE THREAD	PORTS	ON-OFF VALVES	QTY
00945Q-2V	GL45	2 x 1/4•28	YES	ea
00945Q-3V	GL45	3 x 1/4•28	YES	ea
00945Q-4V	GL45	4 x 1/4•28	YES	ea
38-430 (GL38) PLASTIC BOTTLE THREAD				
00938PQ-2V	38-430	2 x 1/4•28	YES	ea
00938PQ-3V	38-430	3 x 1/4•28	YES	ea
GL32THREAD				
00932Q-3V	GL32	3 x 1/4•28	YES	ea

Q-series caps without on-off valves

Ordering information				
GL45 THREAD				
PART NUMBER	BOTTLE THREAD	PORTS	ON-OFF VALVES	QTY
00945Q-2	GL45	2 x 1/4•28	NO	ea
00945Q-3	GL45	3 x 1/4•28	NO	ea
00945Q-4	GL45	4 x 1/4•28	NO	ea
38-430 (GL38) GLASS BOTTLE THREAD				
00938Q-2	38-430	2 x 1/4•28	NO	ea
00938Q-3	38-430	3 x 1/4•28	NO	ea
00938Q-4	38-430	4 x 1/4•28	NO	ea



PLEASE NOTE: The design of the 38-430 thread is different for glass and plastic bottles and therefore, different caps are available these. Please ensure you order the correct version, as the caps may not seal correctly if used on the wrong bottle.

**CAUTION!** Use only vacuum or pressure-rated bottles  
 \*00938PQ caps are designed to fit plastic bottles which are unsuitable for vacuum or pressurized applications. Therefore, 00938PQ caps are not pressure-rated.

Closed systems

To fully close a solvent system, a screw-in check valve and filter (Part# 009VF) can be used in any spare port. This allows pressure to be equalized while preventing particulate contamination. Vapor is completely contained within the bottle by the one-way check valve. When liquid is withdrawn, air is allowed into the bottle, equalizing pressure.

Ordering information		
SCREW-IN CHECK VALVE AND FILTER		
PART NUMBER	DESCRIPTION	QTY
009VF	Inlet check valve & filter, 1/4•28 thread	ea

## T-Series Solvent Bottle Caps

### Luer ports combined with straight-through tubing connections plus optional check valve and filter

- Straight-through connection for 1/8" OD semi-rigid tube e.g. PTFE, ETFE, FEP.
- Other sizes and types of tube can be connected using Luer adaptors.
- Optional check valve and filter allows pressure equalization and prevents particulate contamination
- Ideal for vacuum applications

The Omnifit® Labware T-series is a very easy to use and versatile range of caps that require no additional fittings to connect 1/8" OD semi-rigid tubing. Tubing pushes straight through the port creating a liquid and vapor-tight seal.

### Anti-twist design

The anti-twist design allows the PTFE body to spin freely within the outer blue cap. This means no more twisted tubes when the cap is fitted or removed and no need to disconnect fluid lines before unscrewing the cap.

### Tubing connections

- 1/8" OD semi-rigid tubing pushes straight through the port creating a liquid and vapor-tight seal.
- 1/16" OD semi-rigid tubing can be connected using a Luer adaptor part #009LA (page 12).
- Softwall tubing such as peristaltic pump tubing can be connected using a range of Luer to barb adaptors (see page 12).
- Luer ports also mean you can easily and securely remove liquid using a syringe - no septum to pierce, just fit the male luer of the syringe into a port.

### Integral check valve and filter

The optional check valve and filter offers many advantages for the laboratory user. The one-way check valve:

- Allows pressure equalization - as liquid is drawn out of the bottle under vacuum, air is allowed in preventing dangerous negative pressurization of the bottle.
- Prevents vapor escape - helping protect the laboratory environment and personnel from dangerous chemical vapor.
- Helps conserve valuable contents from evaporation, minimizing the loss of valuable chemicals or changes in chemical mixtures.
- The air inlet is covered by a 10µm filter to prevent particulate contamination.

### Materials

The solid PTFE inner body provides the highest chemical inertness. The PTFE creates a reliable seal to the glass bottle with no need for extra seals or O-rings. In normal use, the outer cap is not wetted.

### Pressure & temperature ratings

T-series caps are ideal for use in vacuum applications. T-series caps without an integral check valve and filter can also be used in positive pressure applications but only when 1/8" OD through tubes are used. T-series caps with male Luers fitted are not recommended for positive pressure applications. All caps can be autoclaved.



### Technical specifications

#### Materials:

Outer cap	Glass-filled PP
Inner sealing face	PTFE
Check valve	Fluorocarbon
Filter	10µm PTFE

#### Pressure ratings:

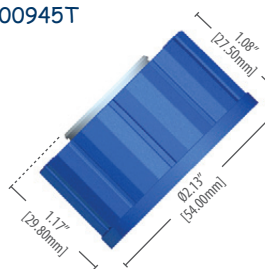
	Vacuum	+ve pressure
T-series without valve*; with 1/8" OD through tubes	-10 psi	20 psi
T-series without valve*; with male Luers	-10 psi	Not recommended
T-series with valve*	-10 psi	Not recommended

#### Autoclavability:

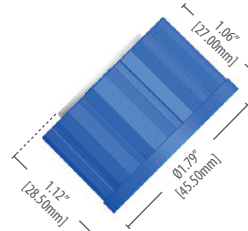
All caps can be autoclaved.

### Dimensions

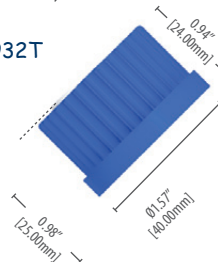
00945T



00938T &amp; 00938PT



00932T



**CAUTION! Use only vacuum or pressure-rated bottles**

\* Except 00938PT caps. These caps are designed to fit plastic bottles which are unsuitable for vacuum or pressurized applications. Therefore, 00938PQ caps are not pressure-rated.



T-series caps with integral check valve and filter

T-series caps without integral check valve and filter

Ordering information				
GL45 THREAD				
PART NUMBER	BOTTLE THREAD	PORTS	CHECK VALVE & FILTER	QTY
00945T-2F	GL45	2 x Luer	YES	ea
00945T-3F	GL45	3 x Luer	YES	ea
00945T-4F	GL45	4 x Luer	YES	ea
38-430 (GL38) GLASS BOTTLE THREAD				
00938T-2F	38-430	2 x Luer	YES	ea
00938T-3F	38-430	3 x Luer	YES	ea
00938T-4F	38-430	4 x Luer	YES	ea
38-430 (GL38) PLASTIC BOTTLE THREAD				
00938PT-2F	38-430	2 x Luer	YES	ea

Ordering information				
GL45 THREAD				
PART NUMBER	BOTTLE THREAD	PORTS	CHECK VALVE & FILTER	QTY
00945T-2	GL45	2 x Luer	NO	ea
00945T-3	GL45	3 x Luer	NO	ea
00945T-4	GL45	4 x Luer	NO	ea
38-430 (GL38) GLASS BOTTLE THREAD				
00938T-2	38-430	2 x Luer	NO	ea
00938T-3	38-430	3 x Luer	NO	ea
00938T-4	38-430	4 x Luer	NO	ea
38-430 (GL38) PLASTIC BOTTLE THREAD				
00938PT-2	38-430	2 x Luer	NO	ea
GL32THREAD				
00932T-2	GL32	2 x Luer	NO	ea



**00945T-2F**  
GL45, 2 port, check valve/filter



**00945T-3F**  
GL45, 3 port, check valve/filter



**00945T-4F**  
GL45, 4 port, check valve/filter



**00945T-2**  
GL45 cap, 2 port



**00945T-3**  
GL45 cap, 3 port



**00945T-4**  
GL45 cap, 4 port



**00938T-2F**  
38-430, 2 port, check valve/filter for glass bottles



**00938T-3F**  
38-430, 3 port, check valve/filter for glass bottles



**00938T-4F**  
38-430, 4 port, check valve/filter for glass bottles



**00938T-2**  
38-430, 2 port for glass bottles



**00938T-3**  
38-430, 3 port for glass bottles



**00938T-4**  
38-430, 4 port for glass bottles



**00938PT-2F**  
38-430, 2 port, check valve/filter for plastic bottles



**00938PT-2**  
38-430, 2 port for plastic bottles



**00932T-2**  
GL32 cap, 2 port

PLEASE NOTE: The design of the 38-430 thread is different for glass and plastic bottles and therefore, different caps are available for these. Please ensure you order the correct version, as the caps may not seal correctly if used on the wrong bottle.

For Luer adaptors and plugs, see page 12

## T-Series Waste Caps

### Luer ports combined with straight-through tubing connections plus ¼"-28 UNF vent port

- Straight-through connection for ⅛" OD semi-rigid tube e.g. PTFE, ETFE, FEP.
- Other sizes and types of tube can be connected using Luer adaptors.
- Vent port enables connection of vapor trap allowing pressure equalization and prevention of solvent vapor escape.

The Omnifit® Labware T-series waste caps are a very easy to use and versatile range of caps that require no additional fittings to connect ⅛" OD semi-rigid tubing. Tubing pushes straight through the port creating a liquid and vapor-tight seal.

### Anti-twist design

The anti-twist design allows the PTFE body to spin freely within the outer blue cap. This means no more twisted tubes when the cap is fitted or removed and no need to disconnect fluid lines before unscrewing the cap.

### Inlet tubing connections

- ⅛" OD semi-rigid tubing pushes straight through the port creating a liquid and vapor-tight seal.
- ⅙" OD semi-rigid tubing can be connected using a Luer adaptor part #009LA (page 12).
- Softwall tubing can be connected using one of a range of Luer to barb adaptors available separately (see page 12).

### Vent port

- An additional port is available for venting purposes. ¼"-28 UNF threads enable connection of a vapor trap (part # 009CF-TW) or connection via tubing into the user's own vapor control system.

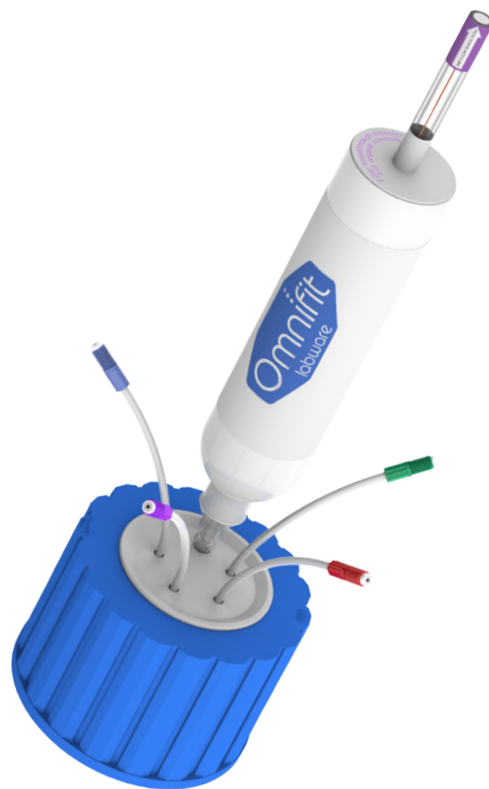
### Vapor trap and break-through indicator

The vapor trap enables the user to isolate any solvent vapor escaping from the system during pressure venting without the need to place waste bottles into a fume hood. The activated carbon traps and contains laboratory solvent vapors preventing egress into the laboratory. An integral indicator strip shows when the vapor trap is saturated by a simple color change. When the strip turns red, it is time to change the vapor trap.

- Allows pressure equalization - as liquid is collected in the waste bottle either under pressure or gravity feed, vapor is vented preventing pressurization of the bottle.
- Traps and contains escaping vapor - helping protect the laboratory environment and personnel from dangerous chemical vapor.
- Color change indicator strip alerts laboratory personnel to the saturation of the vapor trap active material. A new trap can be utilized, preventing unintentional vapor break-through.

### Materials

The solid PTFE inner body provides the highest chemical inertness. Coupled with an EPDM o-ring (53B and 83B only), this creates a reliable seal to the bottle. The GL45 and 38-430 versions have no extra seals or O-rings. In normal use, the outer cap is not wetted. All caps can be autoclaved.



## Technical specifications

### Materials:

Outer cap	Glass-filled PP
Inner sealing face	PTFE
O-ring seal (00953TW & 00983TW)	EPDM

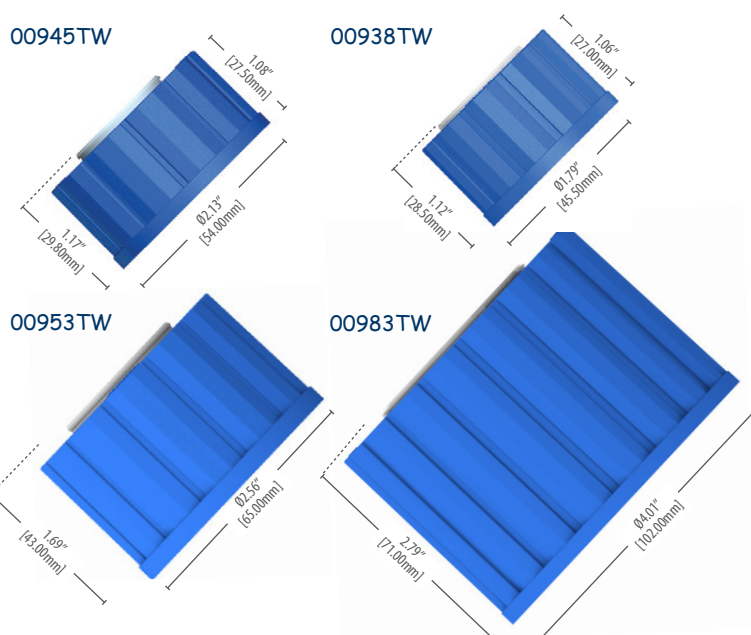
### Pressure ratings:

Not recommended for pressurized applications

### Autoclavability:

All caps can be autoclaved.

## Dimensions



T-series waste caps with vent

Ordering information				
GL45 THREAD				
PART NUMBER	BOTTLE THREAD	PORTS	VENT PORT	QTY
00945T-3W	GL45	3 x Luer	1 x 1/4"-28	ea
00945T-4W	GL45	4 x Luer	1 x 1/4"-28	ea
38-430 (GL38) GLASS BOTTLE THREAD				
00938T-3W	38-430	3 x Luer	1 x 1/4"-28	ea
00938T-4W	38-430	4 x Luer	1 x 1/4"-28	ea
53B THREAD				
00953T-4W	53B	4 x Luer	1 x 1/4"-28	ea
83B THREAD				
00983T-4W	83B	4 x Luer	1 x 1/4"-28	ea
00983T-8W	83B	8 x Luer	1 x 1/4"-28	ea



**00945T-3W**  
GL45, 3 inlet, 1 vent



**00945T-4W**  
GL45, 4 inlet, 1 vent



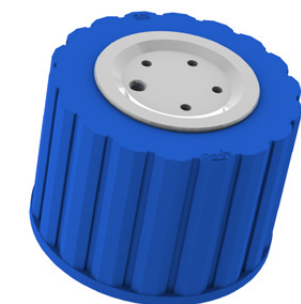
**00938T-3W**  
38-430, 3 inlet, 1 vent



**00938T-4W**  
38-430, 4 inlet, 1 vent



**00953T-4W**  
53B, 4 inlet, 1 vent



**00983T-4W**  
83B, 4 inlet, 1 vent



**00983T-8W**  
83B, 8 inlet, 1 vent

Vapor trap & indicator



Ordering information			
VAPOR TRAP & INDICATOR			
PART NUMBER	DESCRIPTION	CONNECTION THREAD	QTY
009CF-TW	Single unit	1/4"-28 UNF	ea
009CF-TWB	Bulk pack	1/4"-28 UNF	5

Due to the variety of chemicals available on the market, the differing mixtures used and the volume of use, no exact statements can be made about the durability of the solvent vapor trap. Life-time is strongly influenced by the type and composition of the chemicals used. Users should refer to the solvent break-through detector to ensure that vapor traps are replaced when necessary.

Pressure ratings

These waste caps are designed for collection of waste solvent under gravity flow or via a pump. The caps are not designed for pressurized applications. Users must ensure that appropriate venting is allowed to prevent pressure build-up in the waste container. It is recommended that a vapor trap is used to allow pressure venting while trapping any solvent vapor.

**Disclaimer:** Users should take the relevant safety precautions when using hazardous media and take adequate precautions to prevent spillage. It is the user's responsibility to check the suitability of the chosen product for their application and to ensure appropriate handling of materials used.

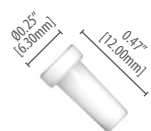
For Luer adaptors and plugs, see page 12

## T-Series Luer Adaptors

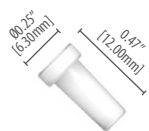
A range of Luer accessories for quick and easy connection of different tubing types and sizes to T-series caps

Simply connect the tube onto the appropriate adaptor and then push the male Luer into any T-series cap port. A Luer plug is also available to seal unused ports.

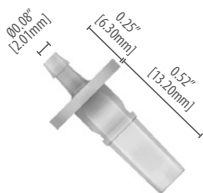
Ordering information		
LUER ADAPTORS FOR SEMI-RIGID TUBE		
PART NUMBER	DESCRIPTION	QTY
009LA	Adaptor to connect 1/16" OD semi-rigid tubing	5pk
LUER ADAPTORS FOR SOFT TUBE		
009BA-16	Barbed adaptor for 1/16" ID softwall tubing	5pk
009BA-32	Barbed adaptor for 1/8" ID softwall tubing	5pk
009BA-63	Barbed adaptor for 1/4" ID softwall tubing	5pk
LUER PLUG		
009LP	Luer plug to close unused ports	5pk



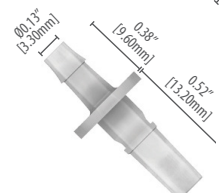
**009LA**  
Luer adaptor,  
1/16" OD tube



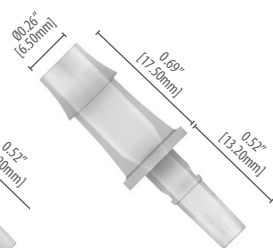
**009LP**  
Luer plug



**009BA-16**  
Luer to barb adaptor,  
1/16" ID tube



**009BA-32**  
Luer to barb adaptor,  
1/8" ID tube



**009BA-63**  
Luer to barb adaptor,  
1/4" ID tube

### Recommended barbed adaptor / tube combinations

The fit of softwall tubing to a barb connector or adaptor depends on several factors, so there is no fixed pairing of tube ID and barb size. However, we are able to recommend certain part numbers from our range of barbed adaptors to fit specific tubing supplied by Bio-Chem Fluidics. Tubing from other manufacturers must be tested by the customer to find the barbed adaptor that gives the best fit.

Barbed Adaptor Part #	BIO-CHEM FLUIDICS SOFTWALL TUBING SIZE AND TYPE								
	50S	01S	01B	02S	02B	03S	03B	05S	05B
009BA-16									
009BA-32									
009BA-63									

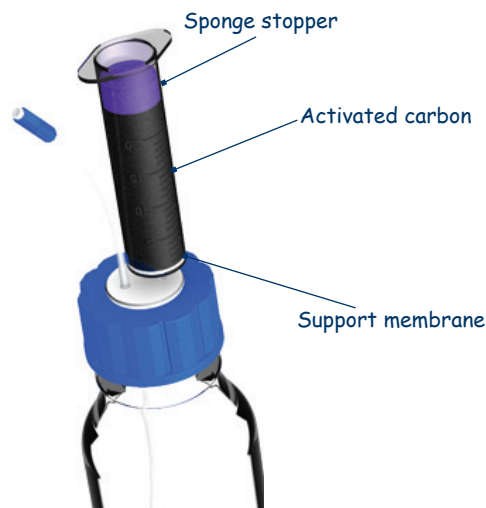
## Activated Carbon Vapor Trap

A solvent vapor trap with Luer connection for use with T-series caps

- Simple, male Luer connection fits all T-series bottle caps
- Controls solvent vapor escape from reservoirs
- Traps solvent vapor and equalizes pressure when solvent is pumped into the bottle

This simple to use solvent vapor trap push-fits into a spare Luer port on any T-series cap without a check valve and filter. For waste collection, as liquid is pumped into the bottle, vapor can pass out through the filter port, thereby equalizing pressure. Dangerous solvent vapors are absorbed by the activated carbon contained in the unit. For solvent (mobile phase) reservoir bottles, the vapor trap can be used in any spare port to control vapor escape into the environment, for example, as a result of temperature changes.

It is important that any other unused ports are sealed using a Luer plug (part # 009LP) to prevent solvent vapor escaping directly into the environment. The push-fit nature of the vapor trap and Luer plugs mean that only low positive pressure should be applied to prevent Luer connections being loosened.



### Usage

The unit contains approx. 25ml charcoal. The frequency of exchange of the unit depends on local conditions and type of solvent used. Users must determine the saturation rate of the activated carbon for their own specific solvents, concentrations and flow rates and change the unit accordingly to ensure that vapor break-through is minimized. As a guide, the capacity of the unit for methanol is approximately 1.6g and for other solvents approx. 2.5g.

Ordering information		
ACTIVATED CARBON VAPOR TRAP		
PART NUMBER	DESCRIPTION	QTY
009CF-T	Activated carbon vapor trap for T-series caps	3pk

## S40 Thread Adaptor

Convert S40 bottle threads to accept any Omnifit® Labware GL45 bottle caps from the T- and Q-series

- Fits any S40 threaded bottle
- Accepts any GL45 threaded Q or T-series bottle cap

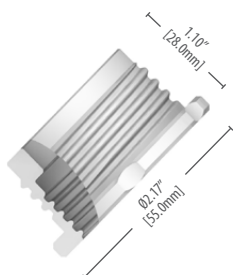
The S40 thread adaptor provides a simple way to use any Omnifit® Labware GL45 thread cap with S40 thread glass or plastic bottles. Simply screw the adaptor onto the bottle neck to make a GL45 thread connection.

### Technical specifications

#### Materials:

The S40 thread adaptor is constructed from solid PTFE providing the highest chemical inertness. The PTFE creates a reliable seal to the glass bottle with no need for extra seals or O-rings.

#### Dimensions:



#### Assembly:

Screw the S40 adaptor onto the bottle neck first. Screw any Omnifit® Labware Q- or T-series GL45 cap onto the adaptor.



### Ordering information

#### S40 TO GL45 THREAD ADAPTOR

PART NUMBER	BOTTLE THREAD	CAP THREAD	QTY
00945A-S40	S40	GL45	ea

## Pressure Rated Glass Bottles

Clear 1L glass bottles pressure rated to -1 / + 1.5 bar

- 1L GL45 thread bottles suitable for pressurised applications
- Indelible volumetric markings
- Chemically-resistant borosilicate glass

Bottles are pressure rated to -1 / +1.5 bar, so suitable for either vacuum or positive pressure applications.



### Ordering information

#### GLASS BOTTLES

PART NUMBER	BOTTLE THREAD	VOLUME	QTY
003406	GL45	1L	ea

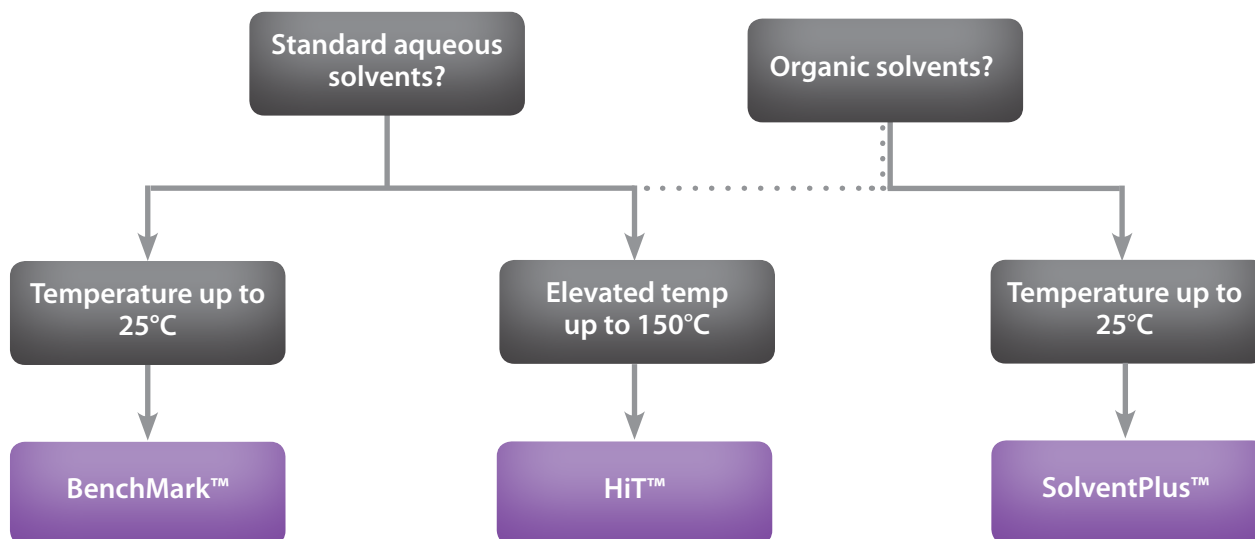
**CAUTION:** Only bottles specified as pressure rated are recommended for pressure or vacuum delivery of liquids. Always treat glass bottles with care.

# Chromatography Columns

## LC Columns Selection Guide

Omnifit Labware columns offer the maximum performance for low to mid pressure liquid chromatography or flow chemistry applications. Simple to assemble, pack and operate, our columns are available in a variety of sizes and three ranges offering the highest pressure ratings, chemical compatibilities and temperature ratings on the market.

Use the selection guide below to determine the best range for your application.



BenchMark™ columns are designed to suit the majority of standard laboratory chromatography applications. They are ideal for aqueous systems and compatible with solvents used in common liquid chromatography applications such as protein purification.

- Economical modular columns for low pressure or gravity feed, providing even distribution of eluent to the medium bed, with or without flow adapters.
- Available in seven diameters and a variety of lengths.
- Compatible with a variety of bulk media.

BenchMark™ ordering information  
pages 16-18

HiT™ columns are designed for use at elevated temperature. Borosilicate glass and PEEK™ construction gives stability at temperatures up to 150°C. Ideal for use as reactor columns for flow chemistry applications as well as chromatographic separations.

- Durable, high-performance columns for reliable and reproducible performance at elevated temperature.
- Available in three diameters and two lengths.

HiT™ ordering information on page 19

SolventPlus™ columns are designed for maximum chemical compatibility. Borosilicate glass and PTFE construction, with Chemraz® O-rings and PTFE frits, only the most inert materials are present in the fluid path. ETFE end caps and fitting nuts ensure a chemically inert connection into and out of the system.

- Designed for techniques using organic solvents such as reversed phase chromatography, but equally compatible with aqueous solvent systems.
- Available in six diameters and a variety of lengths.

SolventPlus™ ordering information  
pages 20-21

	BenchMark™	HiT™	SolventPlus™
Operating temp.	4-25°C	4-150°C	4-25°C
pH stability	1-14	1-14	1-14
Chemical stability	Resistant to aqueous solutions and most solvents used in liquid chromatography. Not resistant to acetone, ketones, chlorinated hydrocarbons, aliphatic esters, phenol, > 10% NaOH, > 10% HCl, > 5% acetic acid, or strong mineral acid.	Resistant to aqueous solutions and most solvents used in liquid chromatography and flow chemistry. Not resistant to acetone, ketones, chlorinated hydrocarbons, aliphatic esters, phenol, > 10% NaOH, > 10% HCl, > 5% acetic acid, or strong mineral acid.	Resistant to aqueous solutions and most solvents used in standard and reverse phase chromatography including toluene, DMSO, pyridine, formamide, dimethyl formamide, ethylene dichloride, and chloroform.

## Configurations

All Omnifit® Labware complete columns are supplied assembled and ready for use, with tubing and fittings to connect the column into an existing system. Three configurations are available:

- Non-adjustable with two fixed endpieces (-FF), a cost-effective option when height adjustment is not important. Note: 3mm columns are available as -FF configuration only.
- One fixed endpiece as a bed support and one adjustable endpiece (plunger) to adjust the bed height (-AF). The adjustable endpiece is designed to give the user fine control over the movement of the endpiece, minimizing the risk of disturbance to the packed bed and giving 80mm of height adjustment.
- Two adjustable endpieces (-AA) giving maximum flexibility in bed height. With an adjustable endpiece at both ends of the column, the user gains 160mm of adjustment, offering a wide range of bed lengths and volumes.

## Complete columns

All complete Omnifit® Labware columns are supplied ready-assembled in -FF, -AF or -AA configuration. Accessories included are a frit kit comprising spare PE and PTFE frits and a fittings kit comprising two lengths of ready-assembled tube and fittings to enable immediate connection to the column.

## Replacement parts and accessories

All column components are available to buy separately giving the user complete flexibility to replace lost or worn parts, or to utilize columns across a number of applications. This modular approach gives Omnifit® Labware columns an extremely long life and great flexibility in use.

An additional adjustable endpiece enables conversion of an existing fixed column to adjustable, or increased adjustability of an -AF column. Buying a second glass tube of different length, alongside a complete column, would enable the user to mix and match components for a wide range of different applications.

Bed heights & volumes	COLUMN SIZE		-FF		-AF		-AA	
	ID (mm)	Length (cm)	Bed height (cm)	Volume (ml)	Bed height (cm)	Volume (ml)	Bed height (cm)	Volume (ml)
Column assembly 3mm/25mm	3.0	2.5	2.5	0.2	N/A	N/A	N/A	N/A
Column assembly 3mm/50mm	3.0	5.0	5.0	0.4	N/A	N/A	N/A	N/A
Column assembly 3mm/100mm	3.0	10.0	10.0	0.7	N/A	N/A	N/A	N/A
Column assembly 3mm/150mm	3.0	15.0	15.0	1.1	N/A	N/A	N/A	N/A
Column assembly 6.6mm/50mm	6.6	5	2	0.7	0.24 - 2	0.1 - 0.7	0.24 - 2	0.1 - 0.7
Column assembly 6.6mm/100mm	6.6	10	7	2.4	0.24 - 7	0.1 - 2.4	0.24 - 7	0.1 - 2.4
Column assembly 6.6mm/150mm	6.6	15	12	4.1	4 - 12	1.4 - 4.1	0.24 - 12	0.1 - 4.1
Column assembly 6.6mm/250mm	6.6	25	22	7.5	14 - 22	4.8 - 7.5	6 - 22	2.1 - 7.5
Column assembly 6.6mm/400mm	6.6	40	37	12.7	29 - 37	9.9 - 12.7	21 - 37	7.2 - 12.7
Column assembly 10mm/100mm	10	10	7	5.5	0.24 - 7	0.2 - 5.5	0.24 - 7	0.2 - 5.5
Column assembly 10mm/150mm	10	15	12	9.4	4 - 12	3.1 - 9.4	0.24 - 12	0.2 - 9.4
Column assembly 10mm/250mm	10	25	22	17.3	14 - 22	11.0 - 17.3	4 - 22	3.1 - 17.3
Column assembly 10mm/400mm	10	40	37	29.1	29 - 37	22.8 - 29.1	21 - 37	16.5 - 29.1
Column assembly 10mm/500mm	10	50	47	36.9	39 - 47	30.6 - 36.9	31 - 47	24.3 - 36.9
Column assembly 15mm/100mm	15	10	7	12.4	0.24 - 7	0.4 - 12.4	0.24 - 7	0.4 - 12.4
Column assembly 15mm/150mm	15	15	12	21.2	4 - 12	7.1 - 21.2	0.24 - 12	0.4 - 21.2
Column assembly 15mm/250mm	15	25	22	38.9	14 - 22	24.7 - 38.9	6 - 22	10.6 - 38.9
Column assembly 15mm/400mm	15	40	37	65.4	29 - 37	51.2 - 65.4	21 - 37	37.1 - 65.4
Column assembly 15mm/500mm	15	50	47	83.0	39 - 47	68.9 - 83.0	31 - 47	54.8 - 83.0
Column assembly 25mm/100mm	25	10	7	34.4	0.24 - 7	1.2 - 34.4	0.24 - 7	1.2 - 34.4
Column assembly 25mm/150mm	25	15	12	58.9	4 - 12	19.6 - 58.9	0.24 - 12	1.2 - 58.9
Column assembly 25mm/250mm	25	25	22	108.0	14 - 22	68.7 - 108.0	6 - 22	29.4 - 108.0
Column assembly 25mm/400mm	25	40	37	181.6	29 - 37	142.3 - 181.6	21 - 37	103.1 - 181.6
Column assembly 25mm/500mm	25	50	47	230.7	39 - 47	191.4 - 230.7	31 - 47	152.1 - 230.7
Column assembly 35mm/150mm	35	15	12	115.4	4 - 12	38.5 - 115.4	0.24 - 12	2.3 - 115.4
Column assembly 35mm/250mm	35	25	22	211.6	14 - 22	134.7 - 211.6	6 - 22	57.7 - 211.6
Column assembly 35mm/400mm	35	40	37	355.9	29 - 37	279.0 - 355.9	21 - 37	202.0 - 355.9
Column assembly 50mm/250mm	50	25	22	440.6	14 - 22	280.4 - 440.6	6 - 22	120.2 - 440.6
Column assembly 50mm/400mm	50	40	37	741.0	29 - 37	580.7 - 741.0	21 - 37	420.5 - 741.0
Column assembly 50mm/500mm	50	50	47	941.2	39 - 47	781.0 - 941.2	31 - 47	620.8 - 941.2

## BenchMark™

BenchMark™ columns are designed to suit the majority of standard laboratory chromatography applications. They are ideal for aqueous systems and compatible with solvents used in common liquid chromatography applications such as protein purification.

- Economical modular columns for low pressure or gravity feed, providing even distribution of eluent to the medium bed, with or without flow adapters.
- Available in seven diameters and a variety of lengths.
- Compatible with a variety of bulk media.

### Complete columns inventory

When you buy a complete BenchMark™ column, you will receive:

#### Column assembly:

A ready-assembled column of -FF, -AF or -AA configuration, comprising a glass tube of the required dimensions and the 2 endpieces of your choice, pre-assembled with 25µm PE frits.

#### Frit Kit comprising:

- 2 x 30µm PTFE frits
- 2 x 10µm PTFE frits
- 2 x 10µm PE frits

#### Fittings Kit comprising:

- 2m x 1/16" OD PTFE tubing with 1/4-28 UNF fitting (PP) at one end
- 0.5m x 1/16" OD PTFE tubing with 1/4-28 UNF fitting (PP) at one end

### Technical specifications

#### Operating parameters:

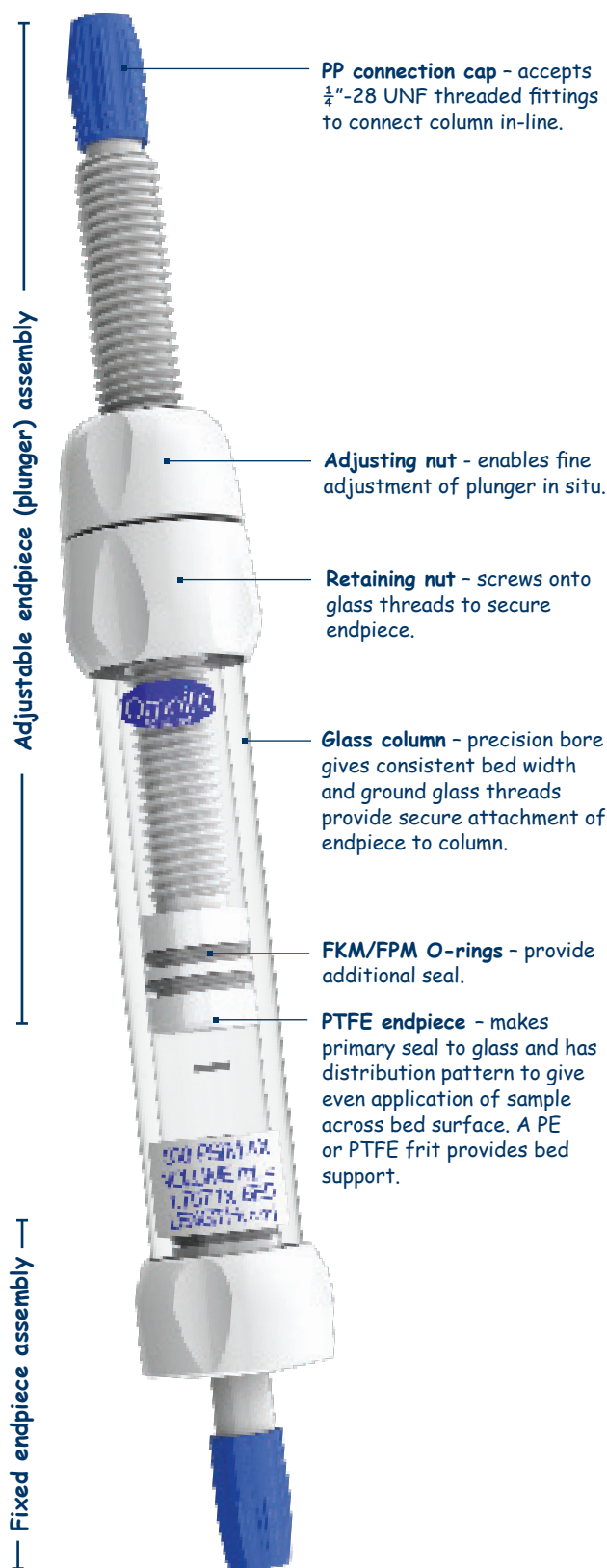
Operating temperature:	4-20°C
pH stability:	1-14
Chemical stability:	Resistant to aqueous solutions and most solvents used in liquid chromatography. Not resistant to acetone, ketones, chlorinated hydrocarbons, aliphatic esters, phenol, > 10% NaOH, > 10% HCl, > 5% acetic acid, or strong mineral acid.

#### Materials:

Glass column	Borosilicate glass
Endpiece	PTFE
Frit (bed support)	PE
O-ring	FKM/FPM
Adjusting nut	Acetal
Retaining cap	Acetal
Connection cap	Glass-filled PP
Fitting nuts	Glass-filled PP

#### Operating pressures:

6.6mm	900 psi (60 bar)
10mm	600 psi (40 bar)
15mm	300 psi (20 bar)
25mm	150 psi (10 bar)
35mm	100 psi (6.7 bar)
50mm	100 psi (6.7 bar)





## Ordering information

### COMPLETE COLUMN WITH 2 x FIXED ENDPieces

LENGTH / BORE	6.6MM	10MM	15MM	25MM	35MM	50MM
50mm	006BCC-06-05-FF					
100mm	006BCC-06-10-FF	006BCC-10-10-FF	006BCC-15-10-FF	006BCC-25-10-FF		
150mm	006BCC-06-15-FF	006BCC-10-15-FF	006BCC-15-15-FF	006BCC-25-15-FF	006BCC-35-15-FF	
250mm	006BCC-06-25-FF	006BCC-10-25-FF	006BCC-15-25-FF	006BCC-25-25-FF	006BCC-35-25-FF	006BCC-50-25-FF
400mm	006BCC-06-40-FF	006BCC-10-40-FF	006BCC-15-40-FF	006BCC-25-40-FF	006BCC-35-40-FF	006BCC-50-40-FF
500mm		006BCC-10-50-FF	006BCC-15-50-FF	006BCC-25-50-FF		006BCC-50-50-FF

### COMPLETE COLUMN WITH 1 x ADJUSTABLE & 1 x FIXED ENDPiece

50mm	006BCC-06-05-AF					
100mm	006BCC-06-10-AF	006BCC-10-10-AF	006BCC-15-10-AF	006BCC-25-10-AF		
150mm	006BCC-06-15-AF	006BCC-10-15-AF	006BCC-15-15-AF	006BCC-25-15-AF	006BCC-35-15-AF	
250mm	006BCC-06-25-AF	006BCC-10-25-AF	006BCC-15-25-AF	006BCC-25-25-AF	006BCC-35-25-AF	006BCC-50-25-AF
400mm	006BCC-06-40-AF	006BCC-10-40-AF	006BCC-15-40-AF	006BCC-25-40-AF	006BCC-35-40-AF	006BCC-50-40-AF
500mm		006BCC-10-50-AF	006BCC-15-50-AF	006BCC-25-50-AF		006BCC-50-50-AF

### COMPLETE COLUMN WITH 2 x ADJUSTABLE ENDPieces

50mm	006BCC-06-05-AA					
100mm	006BCC-06-10-AA	006BCC-10-10-AA	006BCC-15-10-AA	006BCC-25-10-AA		
150mm	006BCC-06-15-AA	006BCC-10-15-AA	006BCC-15-15-AA	006BCC-25-15-AA	006BCC-35-15-AA	
250mm	006BCC-06-25-AA	006BCC-10-25-AA	006BCC-15-25-AA	006BCC-25-25-AA	006BCC-35-25-AA	006BCC-50-25-AA
400mm	006BCC-06-40-AA	006BCC-10-40-AA	006BCC-15-40-AA	006BCC-25-40-AA	006BCC-35-40-AA	006BCC-50-40-AA
500mm		006BCC-10-50-AA	006BCC-15-50-AA	006BCC-25-50-AA		006BCC-50-50-AA

### REPLACEMENT ENDPieces

Adjustable	006BAE-06	006BAE-10	006BAE-15	006BAE-25	006BAE-35	006BAE-50
Fixed	006BFE-06	006BFE-10	006BFE-15	006BFE-25	006BFE-35	006BFE-50

### REPLACEMENT FRITS, PTFE

POROSITY / BORE	6.6MM	10MM	15MM	25MM	35MM	50MM
5µm	006FR-06-05	006FR-10-05	006FR-15-05	006FR-25-05	006FR-35-05	006FR-50-05
10µm	006FR-06-10	006FR-10-10	006FR-15-10	006FR-25-10	006FR-35-10	006FR-50-10
20µm	006FR-06-20	006FR-10-20	006FR-15-20	006FR-25-20	006FR-35-20	006FR-50-20
30µm	006FR-06-30	006FR-10-30	006FR-15-30	006FR-25-30	006FR-35-30	006FR-50-30
50µm	006FR-06-50	006FR-10-50	006FR-15-50	006FR-25-50	006FR-35-50	006FR-50-50

### REPLACEMENT FRITS, PE

25µm	006FR-06-25-PE	006FR-10-25-PE	006FR-15-25-PE	006FR-25-25-PE	006FR-35-25-PE	006FR-50-25-PE
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### REPLACEMENT O-RINGS

FKM/FPM (PK 10)	006OR-06-V	006OR-10-V	006OR-15-V	006OR-25-V	006OR-35-V	006OR-50-V
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For replacement glass tubes see page 22

## BenchMark™ Microbore

BenchMark™ Microbore columns are designed for applications requiring the smallest bed volumes. They are ideal for aqueous systems and compatible with solvents used in common liquid chromatography applications such as protein purification.

- Economical, non-adjustable columns for low pressure or gravity feed.
- 3mm diameter and a variety of lengths.
- Compatible with a variety of bulk media.

### Complete columns inventory

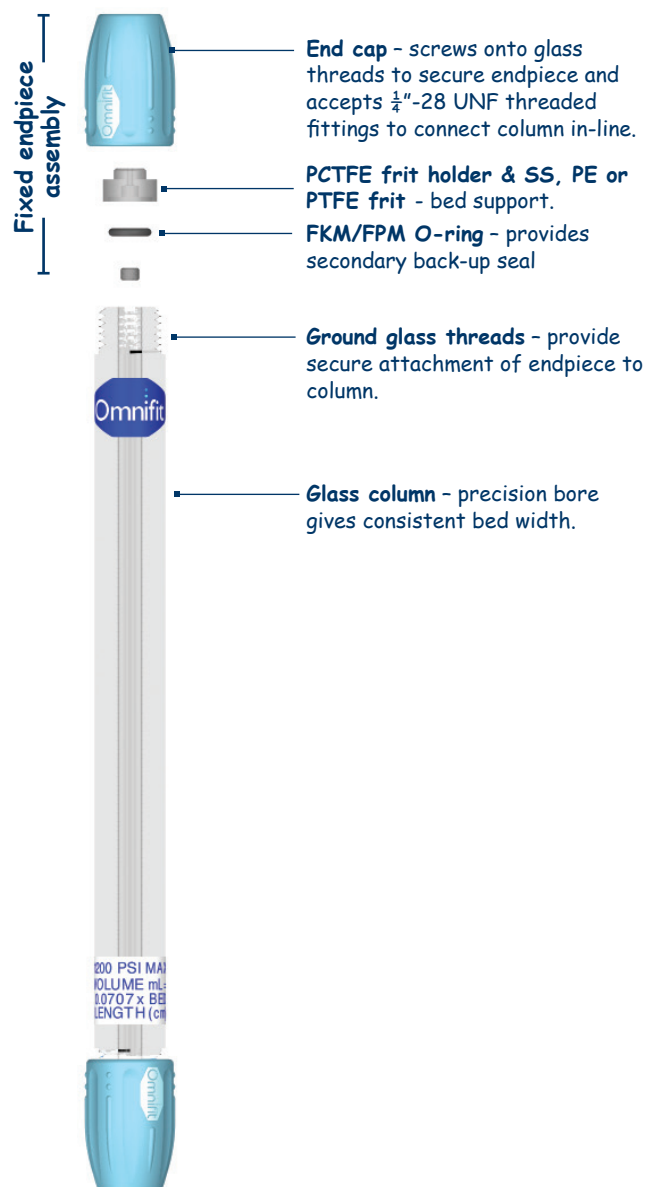
When you buy a complete BenchMark™ Microbore column, you will receive:

#### Column assembly:

A ready-assembled column comprising a glass tube of the required length and two fixed endpieces pre-assembled with 2µm SS frits.

#### Fittings Kit comprising:

- 2m x 1/16" OD PTFE tubing with 1/4-28 UNF fitting (PP) at one end
- 0.5m x 1/16" OD PTFE tubing with 1/4-28 UNF fitting (PP) at one end



## Technical specifications

### Operating parameters:

Operating temperature:	4-20°C
pH stability:	1-14
Chemical stability:	Resistant to aqueous solutions and most solvents used in liquid chromatography. Not resistant to acetone, ketones, chlorinated hydrocarbons, aliphatic esters, phenol, > 10% NaOH, > 10% HCl, > 5% acetic acid, or strong mineral acid.

### Materials:

Glass column	Borosilicate glass
Endpiece	PTFE
Frit (bed support)	SS, PE or PTFE
O-ring	FKM/FPM
Connection cap	Glass-filled PP
Fitting nuts	Glass-filled PP

### Operating pressures:

1200 psi (80 bar)

## Ordering information

### COMPLETE COLUMN WITH 2 x FIXED ENDPieces

DESCRIPTION	PART #
Column assembly 3mm/25mm 2xF	006BCC-03-02-FF
Column assembly 3mm/50mm 2xF	006BCC-03-05-FF
Column assembly 3mm/100mm 2xF	006BCC-03-10-FF
Column assembly 3mm/150mm 2xF	006BCC-03-15-FF

### REPLACEMENT ENDPieces

Complete 3mm endpiece with 5µm PTFE frit	006BFE-03-05
Complete 3mm endpiece with 10µm PTFE frit	006BFE-03-10
Complete 3mm endpiece with 20µm PTFE frit	006BFE-03-20
Complete 3mm endpiece with 30µm PTFE frit	006BFE-03-30
Complete 3mm endpiece with 50µm PTFE frit	006BFE-03-50
Complete 3mm endpiece with 25µm PE frit	006BFE-03-PE
Complete 3mm end piece with 0.2µm SS frit	006BFE-03-SS

### REPLACEMENT GLASS

Replacement glass column 3mm/25mm	006RG-03-02
Replacement glass column 3mm/50mm	006RG-03-05
Replacement glass column 3mm/100mm	006RG-03-10
Replacement glass column 3mm/150mm	006RG-03-15

### ACCESSORIES

FKM/FPM O-rings for 3mm columns (PK 10)	006OR-03-V
Column packing sleeve 3mm column	006PS-03

## HiT™

HiT™ columns are designed for use at elevated temperature. Borosilicate glass and PEEK™ construction gives stability at temperatures up to 150°C. Ideal for use as reactor columns for flow chemistry applications as well as chromatographic separations.

- Durable, high-performance columns for reliable and reproducible performance at elevated temperature.

### Complete columns inventory

When you buy a complete HiT™ column, you will receive:

#### Column assembly:

A ready-assembled column of -FF, -AF or -AA configuration, comprising a glass tube of the required dimensions and the two endpieces of your choice pre-assembled with 30µm PTFE frits.

#### Frit Kit comprising:

- 2 x 30µm PTFE frits
- 2 x 10µm PTFE frits
- 2 x 10µm PE frits

#### Fittings Kit comprising:

- 2m x 1/16" OD PTFE tubing with 1/4-28 UNF fitting (ETFE) at one end
- 0.5m x 1/16" OD PTFE tubing with 1/4-28 UNF fitting (ETFE) at one end.

## Technical specifications

### Operating parameters:

Operating temperature: 4-150°C

pH stability: 1-14

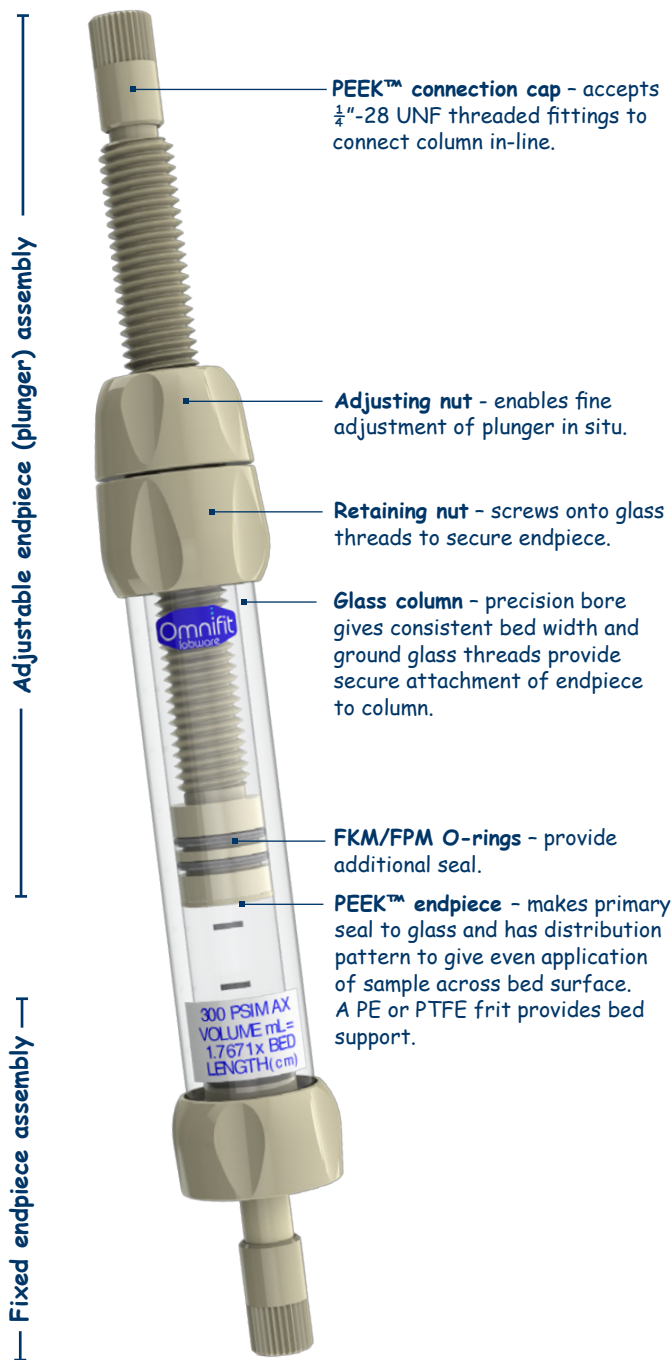
Chemical stability: Resistant to aqueous solutions and most solvents used in liquid chromatography and flow chemistry. Not resistant to acetone, ketones, chlorinated hydrocarbons, aliphatic esters, phenol, > 10% NaOH, > 10% HCl, > 5% acetic acid, or strong mineral acid.

### Materials:

Glass column	Borosilicate glass
Endpiece	PEEK™
Frit (bed support)	PE or PTFE
O-ring	FKM/FPM
Adjusting nut	PEEK™
Retaining cap	PEEK™
Connection cap	PEEK™
Fitting nuts	ETFE

### Operating pressures:

6.6mm	900 psi (60 bar)
10mm	600 psi (40 bar)
15mm	300 psi (20 bar)



PEEK™ connection cap - accepts 1/4"-28 UNF threaded fittings to connect column in-line.

Adjusting nut - enables fine adjustment of plunger in situ.

Retaining nut - screws onto glass threads to secure endpiece.

Glass column - precision bore gives consistent bed width and ground glass threads provide secure attachment of endpiece to column.

FKM/FPM O-rings - provide additional seal.

PEEK™ endpiece - makes primary seal to glass and has distribution pattern to give even application of sample across bed surface. A PE or PTFE frit provides bed support.

## Ordering information

### COMPLETE COLUMN; 1 x FIXED; 1 x ADJUSTABLE ENDPIECE

LENGTH / BORE	6.6MM	10MM	15MM
100mm	006HCC-06-10-AF	006HCC-10-10-AF	006HCC-15-10-AF
150mm	006HCC-06-15-AF	006HCC-10-15-AF	006HCC-15-15-AF

### REPLACEMENT ENDPIECES

Adj.	006HAE-06	006HAE-10	006HAE-15
Fixed	006HFE-06	006HFE-10	006HFE-15

### REPLACEMENT O-RINGS

FKM/FPM (PK 10)	006OR-06-V	006OR-10-V	006OR-15-V
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For replacement glass tubes, frits & O-rings, see page 22

## SolventPlus™

SolventPlus™ columns are designed for maximum chemical compatibility. Borosilicate glass and PTFE construction, with Chemraz® O-rings and PTFE frits, only the most inert materials are present in the fluid path. ETFE end caps and fitting nuts ensure a chemically inert connection into and out of the system.

- Designed for techniques using organic solvents such as reversed phase chromatography, but equally compatible with aqueous solvent systems.
- Available in six diameters and a variety of lengths.

### Complete columns inventory

When you buy a complete SolventPlus™ column, you will receive:

#### Column assembly:

A ready-assembled column of -FF, -AF or -AA configuration, comprising a glass tube of the required dimensions and the two endpieces of your choice pre-assembled with 30µm PE frits.

#### Frit Kit comprising:

- 2 x 30µm PTFE frits
- 2 x 10µm PTFE frits
- 2 x 10µm PE frits

#### Fittings Kit comprising:

- 2m x 1/8" OD PTFE tubing; 1/4-28 UNF fitting (ETFE) at one end
- 0.5m x 1/8" OD PTFE tubing; 1/4-28 UNF fitting (ETFE) at one end

## Technical specifications

### Operating parameters

Operating temperature: 4-20°C

pH stability: 1-14

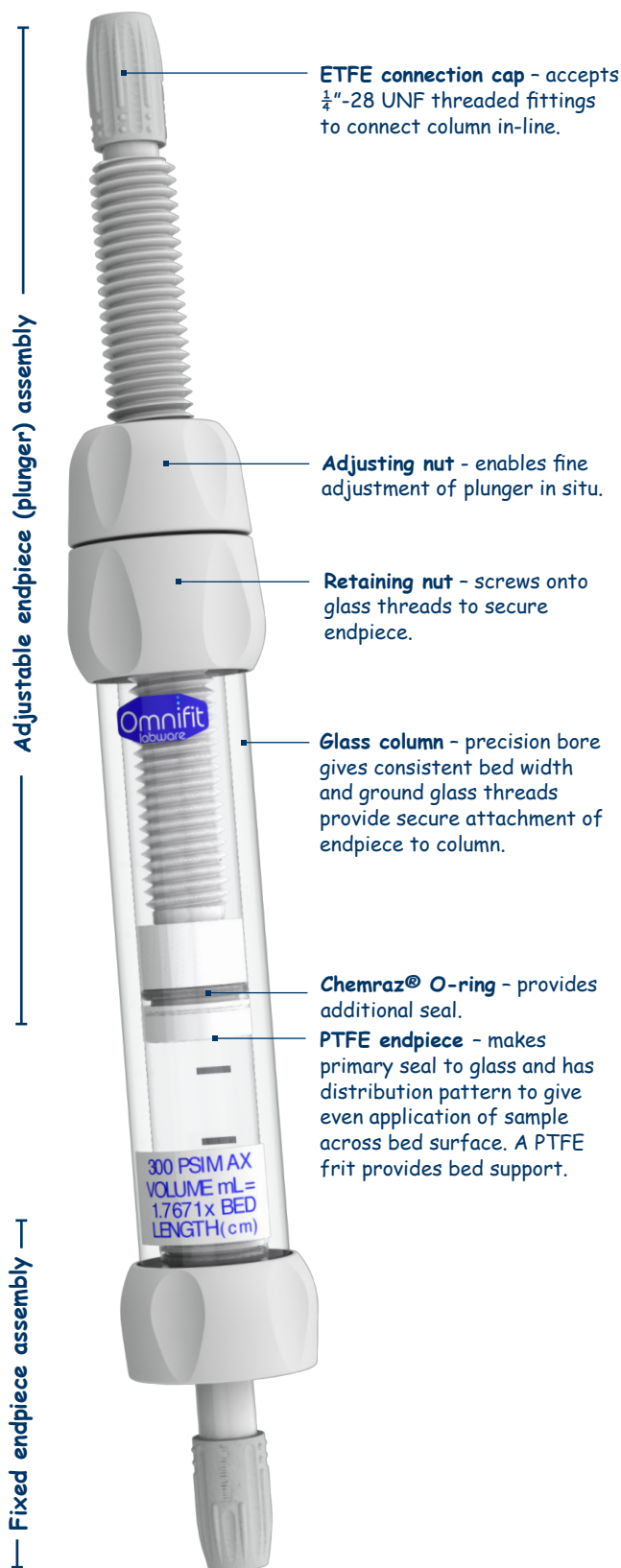
Chemical stability: Resistant to aqueous solutions and most solvents used in standard and reverse phase chromatography including toluene, DMSO, pyridine, formamide, dimethyl formamide, ethylene dichloride, and chloroform.

### Materials:

Glass column	Borosilicate glass
Endpiece	PTFE
Frit (bed support)	PE
O-ring	Chemraz®
Adjusting nut	Acetal
Retaining cap	Acetal
Connection cap	ETFE
Fitting nuts	ETFE

### Operating pressures:

6.6mm	900 psi (60 bar)
10mm	600 psi (40 bar)
15mm	300 psi (20 bar)
25mm	150 psi (10 bar)
35mm	100 psi (6.7 bar)
50mm	100 psi (6.7 bar)



## Ordering information

### COMPLETE COLUMN WITH 2 x FIXED ENDPieces

LENGTH / BORE	6.6MM	10MM	15MM	25MM	35MM	50MM
50mm	006SCC-06-05-FF					
100mm	006SCC-06-10-FF	006SCC-10-10-FF	006SCC-15-10-FF	006SCC-25-10-FF		
150mm	006SCC-06-15-FF	006SCC-10-15-FF	006SCC-15-15-FF	006SCC-25-15-FF	006SCC-35-15-FF	
250mm	006SCC-06-25-FF	006SCC-10-25-FF	006SCC-15-25-FF	006SCC-25-25-FF	006SCC-35-25-FF	006SCC-50-25-FF
400mm	006SCC-06-40-FF	006SCC-10-40-FF	006SCC-15-40-FF	006SCC-25-40-FF	006SCC-35-40-FF	006SCC-50-40-FF
500mm		006SCC-10-50-FF	006SCC-15-50-FF	006SCC-25-50-FF		006SCC-50-50-FF

### COMPLETE COLUMN WITH 1 x ADJUSTABLE & 1 x FIXED ENDPiece

50mm	006SCC-06-05-AF					
100mm	006SCC-06-10-AF	006SCC-10-10-AF	006SCC-15-10-AF	006SCC-25-10-AF		
150mm	006SCC-06-15-AF	006SCC-10-15-AF	006SCC-15-15-AF	006SCC-25-15-AF	006SCC-35-15-AF	
250mm	006SCC-06-25-AF	006SCC-10-25-AF	006SCC-15-25-AF	006SCC-25-25-AF	006SCC-35-25-AF	006SCC-50-25-AF
400mm	006SCC-06-40-AF	006SCC-10-40-AF	006SCC-15-40-AF	006SCC-25-40-AF	006SCC-35-40-AF	006SCC-50-40-AF
500mm		006SCC-10-50-AF	006SCC-15-50-AF	006SCC-25-50-AF		006SCC-50-50-AF

### COMPLETE COLUMN WITH 2 x ADJUSTABLE ENDPieces

50mm	006SCC-06-05-AA					
100mm	006SCC-06-10-AA	006SCC-10-10-AA	006SCC-15-10-AA	006SCC-25-10-AA		
150mm	006SCC-06-15-AA	006SCC-10-15-AA	006SCC-15-15-AA	006SCC-25-15-AA	006SCC-35-15-AA	
250mm	006SCC-06-25-AA	006SCC-10-25-AA	006SCC-15-25-AA	006SCC-25-25-AA	006SCC-35-25-AA	006SCC-50-25-AA
400mm	006SCC-06-40-AA	006SCC-10-40-AA	006SCC-15-40-AA	006SCC-25-40-AA	006SCC-35-40-AA	006SCC-50-40-AA
500mm		006SCC-10-50-AA	006SCC-15-50-AA	006SCC-25-50-AA		006SCC-50-50-AA

### REPLACEMENT ENDPieces

COLUMN BORE	6.6MM	10MM	15MM	25MM	35MM	50MM
Adjustable	006SAE-06	006SAE-10	006SAE-15	006SAE-25	006SAE-35	006SAE-50
Fixed	006SFE-06	006SFE-10	006SFE-15	006SFE-25	006SFE-35	006SFE-50

### REPLACEMENT FRITS, PTFE

POROSITY / BORE	6.6MM	10MM	15MM	25MM	35MM	50MM
5µm	006FR-06-05	006FR-10-05	006FR-15-05	006FR-25-05	006FR-35-05	006FR-50-05
10µm	006FR-06-10	006FR-10-10	006FR-15-10	006FR-25-10	006FR-35-10	006FR-50-10
20µm	006FR-06-20	006FR-10-20	006FR-15-20	006FR-25-20	006FR-35-20	006FR-50-20
30µm	006FR-06-30	006FR-10-30	006FR-15-30	006FR-25-30	006FR-35-30	006FR-50-30
50µm	006FR-06-50	006FR-10-50	006FR-15-50	006FR-25-50	006FR-35-50	006FR-50-50

### REPLACEMENT O-RINGS

Chemraz® (PK 2)	006OR-06-C	006OR-10-C	006OR-15-C	006OR-25-C	006OR-35-C	006OR-50-C
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For replacement glass columns see page 22

## Universal Replacement Parts

All Omnifit® Labware column components are available to buy separately giving the user complete flexibility to replace lost or worn parts, or to utilize columns across a number of applications. This modular approach gives Omnifit® Labware columns an extremely long life and great flexibility in use.

The glass tubes, frits, o-rings and accessories listed below are compatible with all three column ranges - BenchMark™, SolventPlus™ or HiT™. Simply locate the column size you require to identify the correct part numbers for ordering.

Replacement glass columns are available in a wide range of bore sizes and lengths. This not only enables you to replace a column should breakage occur, but allows you to obtain several different length columns to use with endpieces you already have for that bore size. The modular nature of our column ranges means that for the ultimate flexibility you can mix and match column sizes with different endpiece types to your specific requirements, for example where we do not offer a specific complete column configuration

Replacement frits are available in a range of porosities and in PTFE or PE, enabling you to select the most appropriate bed support for your media and chemistries. Choose the column bore you are using and select the porosity and material combination from the left-hand column.

### Ordering information

REPLACEMENT GLASS COLUMNS						
LENGTH / BORE	6.6MM	10MM	15MM	25MM	35MM	50MM
50mm	006RG-06-05					
100mm	006RG-06-10	006RG-10-10	006RG-15-10	006RG-25-10		
150mm	006RG-06-15	006RG-10-15	006RG-15-15	006RG-25-15	006RG-35-15	
250mm	006RG-06-25	006RG-10-25	006RG-15-25	006RG-25-25	006RG-35-25	006RG-50-25
400mm	006RG-06-40	006RG-10-40	006RG-15-40	006RG-25-40	006RG-35-40	006RG-50-40
500mm		006RG-10-50	006RG-15-50	006RG-25-50		006RG-50-50
REPLACEMENT FRITS, PTFE						
POROSITY / BORE	6.6MM	10MM	15MM	25MM	35MM	50MM
5µm	006FR-06-05	006FR-10-05	006FR-15-05	006FR-25-05	006FR-35-05	006FR-50-05
10µm	006FR-06-10	006FR-10-10	006FR-15-10	006FR-25-10	006FR-35-10	006FR-50-10
20µm	006FR-06-20	006FR-10-20	006FR-15-20	006FR-25-20	006FR-35-20	006FR-50-20
30µm	006FR-06-30	006FR-10-30	006FR-15-30	006FR-25-30	006FR-35-30	006FR-50-30
50µm	006FR-06-50	006FR-10-50	006FR-15-50	006FR-25-50	006FR-35-50	006FR-50-50
REPLACEMENT FRITS, PE						
25µm	006FR-06-25-PE	006FR-10-25-PE	006FR-15-25-PE	006FR-25-25-PE	006FR-35-25-PE	006FR-50-25-PE
REPLACEMENT O-RINGS						
MATERIAL / BORE	6.6MM	10MM	15MM	25MM	35MM	50MM
FKM/FPM (pk 10)	006OR-06-V	006OR-10-V	006OR-15-V	006OR-25-V	006OR-35-V	006OR-50-V
Chemraz® (pk 2)	006OR-06-C	006OR-10-C	006OR-15-C	006OR-25-C	006OR-35-C	006OR-50-C
ACCESSORIES						
COLUMN BORE	6.6MM	10MM	15MM	25MM	35MM	50MM
Packing sleeves	006PS-06	006PS-10	006PS-15	006PS-25	006PS-35	006PS-50
Frit removal tool	← 006090 →					

**NOTE:** Packing sleeves are 2-way threaded connectors designed to join two glass columns together for the purposes of filling and packing. This enables a second glass column to be employed as a filling reservoir positioned above the one to be finally used. Packing sleeves are not designed to be used under operating pressure and so cannot be used join to columns together to create a longer column for experimental use.

Omnifit® Labware: chromatography made easy

## Guidelines for use

Omnifit® Labware columns are supplied assembled and ready for use, with all the tubing, fittings and connections needed to get started, and full instructions for use. The following is a guide to the basic use of the column and is not intended to replace the full instruction manual.

### Cleaning

Endpieces and glass column should be washed before the first use to remove any possible contaminants. Suitable cleaning agents are soapy water or laboratory detergents. Glass columns are also autoclavable.

### Dismantling the column

The column is dismantled by first unscrewing the retaining cap from the ground glass threads on the glass column in order to release the endpiece, which can then be carefully pulled out of the glass tube.

### Assembling the column

The most common format for column chromatography is to use a column with one fixed and one adjustable end piece, in which case it is usual to insert the fixed endpiece first, fill the column and then fit and adjust the adjustable endpiece (plunger). The following guidelines are for an -AF configuration, but can be easily applied to other configurations.

First fit the fixed end piece which will act as the bed support. The threads on both the glass column and the retaining cap must be free from debris in order to prevent possible damage to threads. Wet the O-rings using the mobile phase or other suitable solvent. Carefully position the endpiece into the end of the column and slowly push the endpiece into the column until a stop is felt. Always keep the endpiece in line with the column; do not insert at an angle or apply an angled pressure, as this may damage the seal or the glass threads.

Once in place, the retaining cap can be screwed onto the ground glass threads to fix it in place.

### Filling and packing the column

The column can now be filled and packed with the chosen medium, using appropriate methods. Because of the diversity of chromatographic media on the market and the variety of methods and applications used, we recommend that media preparation and column packing is carried out as directed by the media manufacturer.

The glass column has graduations printed on the external surface which are intended to help the user fill the column to a specific bed height. The distance between each graduation is 10mm. Also printed on the column is a pressure and volume label. The equation on the label allows simple calculation of the bed volume when used in conjunction with the graduations. The graduation marks are provided as a guide only.

### Fitting and adjusting the adjustable endpiece

The adjusting mechanism allows the endpiece to be set in position in the chromatographic tube to give a variety of bed lengths and enables the endpiece to be finely adjusted to sit on the surface of the packed bed with minimum disturbance to the medium.

First ensure the threads on both the glass and retaining cap are free from debris. Close the column outlet (not part of column kit) to ensure that the column does not run dry. Adjust the level of liquid in the column such that 1-2 cm of liquid is above the level of the bed.

Screw the adjusting nut and retaining nut until along the endpiece until they are positioned such that the frit will sit close to the bed surface when in place within the column. Wet the O-rings using the mobile phase or other suitable solvent. Carefully position the endpiece into the end of the column and slowly push the endpiece into the column until a stop is felt. Always keep the endpiece in line with the column; do not insert at an angle or apply an angled pressure, as this may damage the seal or the glass threads. Ensure no air is trapped below the frit. Once in place, the retaining cap can be screwed onto the ground glass threads to fix it in place, ensuring that the retaining nut is not over-tightened. Holding the retaining nut, slowly turn the adjusting nut clockwise to move the plunger to the desired position in the tube.

### Connecting tubing to the column

Omni-Lok™ fittings enable quick connection and disconnection whether the columns are dismantled, assembled or even already packed. Using the pre-assembled tubing sets supplied, screw the fitting nut into the tubing connection cap until finger-tight. Connect open ends of tube into ¼"-28 UNF ports of required system.

The column can now be packed using the required solvents and an appropriate flow rate and/or pressure as recommended by the media manufacturer. As the column is packed, the bed height may reduce. If necessary, the adjustable endpiece can be lowered onto the final bed surface following the instructions for fine adjustment previously described.

### Column storage

We recommend that empty columns are stored unassembled. If columns are to be stored assembled, we recommend that a final rinse with water only is performed after cleaning. Solvents such as IPA can cause o-rings to become brittle and stick inside the column if left on the surface before storage.

## Glossary of terms

Different manufacturers use different terms for column components. To enable easy cross-reference, the following glossary lists the names used for Omnifit® Labware column parts and other commonly used terms.

- Adjustable endpiece = flow adaptor; plunger; piston
- Glass column = chromatographic tube
- Frit = bed support

#### Polymers:

ETFE = ethylene tetrafluoroethylene	PP = polypropylene
FKM/FPM = fluoroelastomer	PC = polycarbonate
PTFE = polytetrafluoroethylene	PCTFE = polychlorotrifluoroethylene
PEEK™ = polyetheretherketone	

#### Trademarks:

Chemraz® is a registered trademark of Greene, Tweed & Co.  
PEEK™ is a registered trademark of Victrex plc.  
Omnifit® Labware, Omni-Lok™ are trademarks of Diba Industries Ltd.

## Connectors, Adaptors & Valves

### Omnifit® Labware Cap-Type Connection System

**Versatile, inert connection system to join sections of tubing quickly and easily**

- Pressure rated up to 50psi (3.3 bar)
- For 0.5 - 4 mm OD rigid and semi-rigid tubing e.g. PTFE, ETFE, FEP

The Omnifit® Labware cap connection system is a versatile system for connecting different types of tubing easily and quickly. Semi-rigid polymeric tube such as PTFE, ETFE and FEP and rigid materials such as glass, PEEK and stainless steel and tubing sizes between 0.5mm and 4mm are suitable for use with these connectors. There are three connection options available depending on the level of chemical inertness required and the connection type preferred.

All connectors have a 1.5mm bore and can be used for flow-splitting, mixing and fluid line interconnection. Connectors can also be used to connect soft wall tubing by using Dibaft barbed adaptors.

### Technical specifications

#### Operating parameters:

Operating temperature:	4-60°C
Autoclavability	Can be autoclaved if connector caps are removed first
pH stability:	1 - 14

#### Materials:

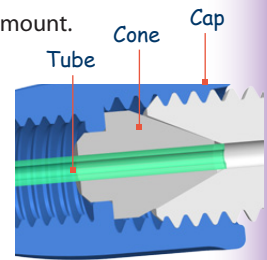
Connector body	PTFE
Connector caps	PP or ETFE*
Cone	PTFE
O-ring	FKM/FPM
Operating pressure:	50 psi (3.3 bar) (0.8mm) items have ETFE caps

### Connection options

#### PTFE cone option

Use where chemical resistance is paramount.

The OD of the tubing should be matched to a PTFE cone with a corresponding inside diameter. All Omnifit cap type connectors are supplied with 1/16" (1.5mm) cones. For tubing other than 1/16" OD, a variety of different cone sizes are available separately.

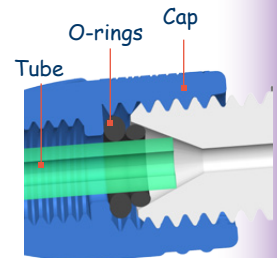


To assemble, cut the end of the tube square and push it through the 'Omnifit cap' and then through the cone until a small amount is protruding, as shown. Screw the cap back onto the connector until finger tight. The assembly is now ready for use.

#### Viton® 'O'-ring option

Use where chemical resistance is less important and also if the exact OD of the tube is not known.

All Omnifit® Labware cap-type connectors are supplied with two large and one small O-ring. Used together or separately, these O-rings enable the connection of 1 - 4mm OD tubing of indeterminate size. The 'O'-rings compress into the cone angle in the body so when the cap is tightened, a seal is created and the tube is retained.

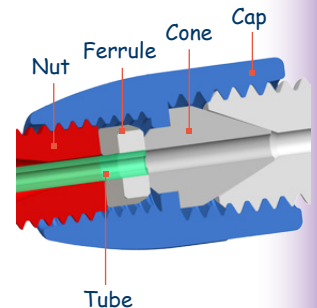


To assemble, cut tube end square and push it through the cap and then through the 'O'-rings, largest first, leaving 1 to 2mm of tube protruding from the small 'O'-ring as shown. For larger tube sizes (2.5 to 4mm OD), omit the small 'O'-ring. Screw the cap back onto the connector until finger tight. The assembly is now ready for use.

#### Nut & flat-bottom port

Omnifit® Labware caps have an internal thread that accepts 1/4"-28 UNF fittings, such as the Omni-Lok™ inverted cone or

Dibaft Gripper fitting. The PTFE cone supplied with the connector provides the flat bottom for the 1/4"-28 UNF fitting to give a leak-free connection.



To assemble, fit the cone supplied into the cap and screw down onto the mating PTFE part to finger tightness. The cap has now been converted to a 1/4"-28 UNF flat bottomed port. This port will now take any standard 1/4"-28 UNF male fitting, for example, a gripper type as shown. Alternatives include the Omni-Lok™ inverted cone fittings and also barbed fittings for connecting soft wall tubing.

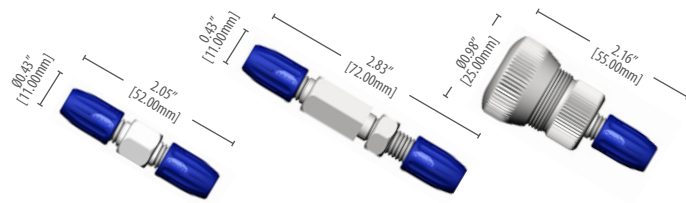
Our full range of fittings can be found in our Dibaft brochure.



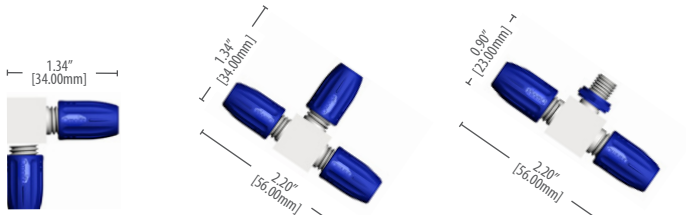
### Ordering information

#### CONNECTORS

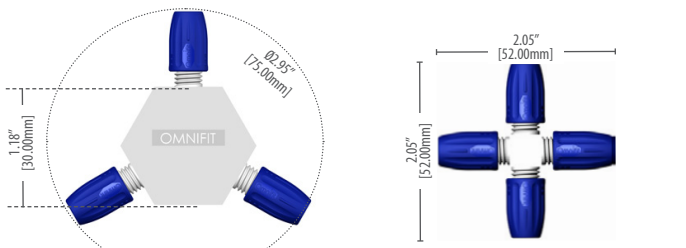
PART NUMBER	DESCRIPTION	BORE	QTY
001001	Connector, 2-way	1.5mm	3pk
001002	Connector 2-way	1.5mm	20pk
002415*	Connector, 2-way	0.8mm	ea
001003	Connector, 3-way (Hex)	1.5mm	ea
001004	Connector, 4-way	1.5mm	ea
001005	Connector, 6-way	1.5mm	ea
001006	Connector, 8-way	1.5mm	ea
001007	Connector, 2-way (mountable)	1.5mm	2pk
001008	Connector, 2-way (Universal)	1.5mm	2pk
001010	Connector, 3-way (T)	1.5mm	ea
001011	Connector, 2-way (Elbow)	1.5mm	ea
001012	Adaptor, 3-way, 1/4"-28 UNF M	1.5mm	ea



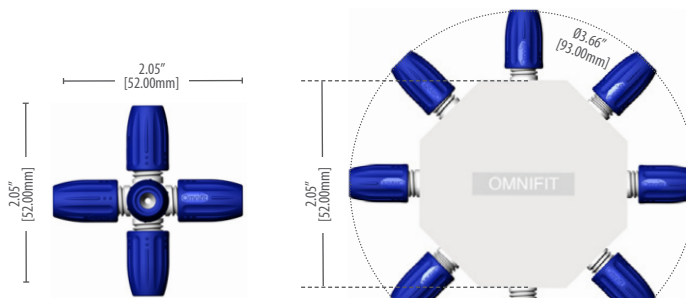
**001001/002415** Connector, 2-way  
**001007** Connector, 2-way (mountable)  
**001008** Connector, 2-way Universal



**1011** Connector, 2-way (elbow)  
**001010** Connector, 3-way (T)  
**001012** Adaptor to 1/4" UNF M, 3-way



**001003** Connector, 3-way (Hex)  
**001004** Connector, 4-way

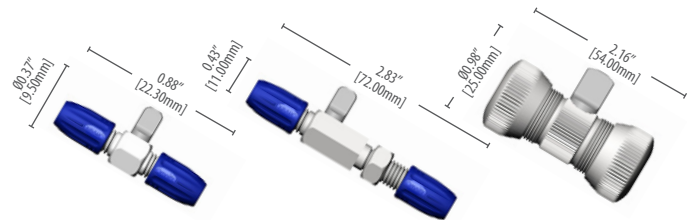


**001005** Connector, 6-way  
**001006** Connector, 8-way

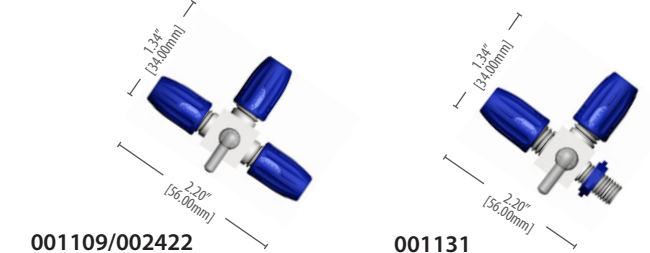
### Ordering information

#### CONNECTORS WITH VALVES

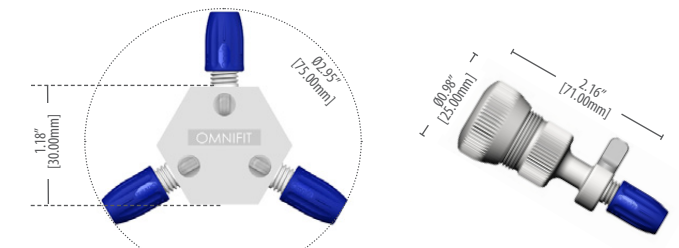
PART NUMBER	DESCRIPTION	BORE	QTY
001101	Valve, 2-way	1.5mm	ea
001102	Valve, 3-way (Hex)	1.5mm	ea
001103	Valve, 8-way	1.5mm	ea
001104	Valve, 2-way (mountable)	1.5mm	ea
001105	Valve, 2-way (Universal)	1.5mm	ea
001109	Valve, 3-way, single key	1.5mm	ea
002422*	Valve, 3-way, single key	0.8mm	ea
001129	Valve, 2-way (large)	1.5mm	ea
001131	Column bleed valve	1.5mm	ea



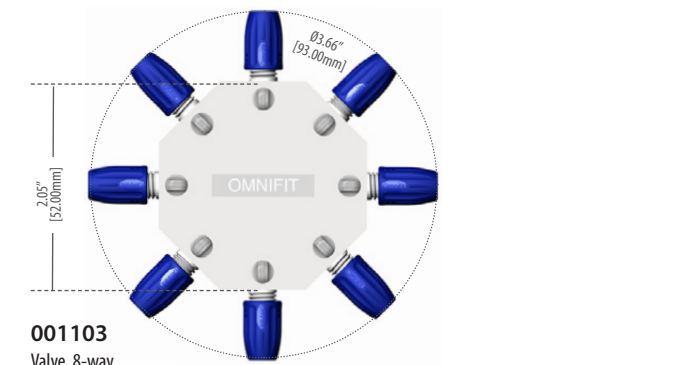
**001101** Valve, 2-way  
**001104** Valve, 2-way (mountable)  
**001129** Valve, 2-way (Large)



**001109/002422** Valve, 3-way single key  
**001131** Valve, column bleed



**001102** Valve, 3-way (Hex)  
**001105** Valve, 2-way Universal



**001103** Valve, 8-way

# Manual Rotary Valves

Versatile, inert valves with a variety of flow configurations for sampling, flow-splitting, mixing & fluid line interconnection

## Rotary valves with Omnifit Labware "cap" connections

- Pressure rated up to 50psi (3.3 bar)
- For 0.5 - 4 mm OD rigid and semi-rigid tubing e.g. PTFE, ETFE, FEP using inverted cones or 1/4"-28 UNF fittings

These small manual rotary valves use the Omnifit Labware "cap" connection system. See page 24 for details of the connection types possible. Valves are constructed from PTFE with a PCTFE rotor and have a 1.5mm bore size. They accept tubing sizes between 0.5 and 4mm OD and are pressure rated to 50 psi (3.3 bar).

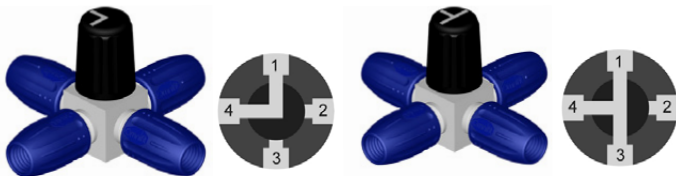
## High pressure rotary valves

- Pressure rated up to 500psi (33 bar)
- Accept 1/4"-28 UNF fittings
- M3 mounting holes

These manual rotary valves are constructed from PTFE with a PCTFE rotor and have a 0.8mm bore size, making them suitable for pressure applications up to 500 psi (33 bar). They are available in 4 and 5 port versions. All ports are 1/4"-28 UNF flat-bottom and will accept any 1/4"-28 UNF male fitting. Any spare ports can be sealed with a threaded plug (part # 002320). These valves are mountable using the pre-drilled M3 mounting holes.

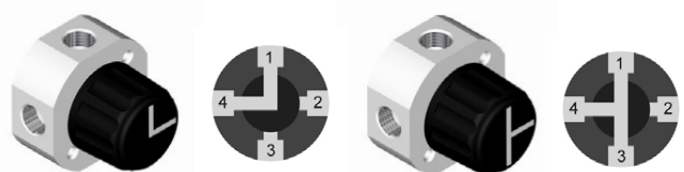
Ordering information			
ROTARY VALVES WITH CAP CONNECTION			
PART NUMBER	DESCRIPTION	CONFIGURATION	QTY
001112	Valve, 4-port	Connects 2-ports at 90° to each other	ea
001113	Valve, 4-port	Connects 3-ports in a "T"	ea
001114	Valve, 4-port	Connects adjacent pairs of ports at the same time	ea
001118	Valve, 5-port	Connects 1 common port to any one of 4 other ports	ea

Ordering information			
HIGH PRESSURE ROTARY VALVES			
PART NUMBER	DESCRIPTION	CONFIGURATION	QTY
001120	Valve, 4-port	Connects 2-ports at 90° to each other	ea
001121	Valve, 4-port	Connects 3-ports in a "T"	ea
001122	Valve, 4-port	Connects adjacent pairs of ports at the same time	ea
001126	Valve, 5-port	Connects 1 common port to any one of 4 other ports	ea



001112  
Valve, 4-port

Valve, 4-port



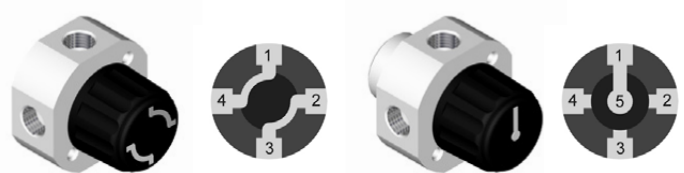
001120  
Valve, 4-port

001121  
Valve, 4-port



001114  
Valve, 4-port

001118  
Valve, 5-port



001122  
Valve, 4-port

001126  
Valve, 5-port

Dimensions: PTFE body depth: 0.51" (13.00mm)  
Diameter blue cap to blue cap: 2.16" (55.00mm)  
Knob height: 0.71" (18.00mm)

Dimensions: PTFE body depth: 0.51" (13.00mm)  
PTFE body diameter: 1.14" (29.00mm)  
Knob height: 0.59" (15.00mm)

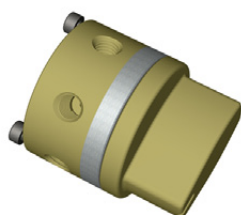


## Loop Injection Valve

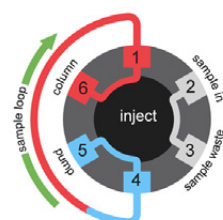
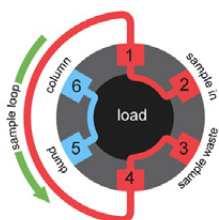
### 6-port loop injection valve

- Pressure rated up to 500psi (33 bar)
- Accepts 1/4"-28 UNF fittings
- "Click-Stop" for port identification
- M3 mounting holes

This large loop injection valve is designed for manual operation and has a "Click-stop" mechanism for easy port identification. Valve bodies are constructed from PTFE with a PEEK™ casing and the rotor is PCTFE. The valve has a 0.8mm bore size, making it suitable for pressure applications up to 500 psi (33 bar). All ports are 1/4"-28 UNF flat-bottom and will accept any 1/4"-28 UNF male fitting. Any spare ports can be sealed with a threaded plug (part # 002320). These valves are mountable using the pre-drilled M3 mounting holes.



**001127-6LI**  
Valve, 6-port loop injection



## Manual Sample Injection Valve

Designed for low pressure chromatography systems, the manual sample injection valve allows for introduction of reproducible sample volumes.

The system is supplied with 0.5mm, 1.0mm, 2.5mm loops and a 5ml syringe. spare loops are available separately.



### Ordering information

#### SAMPLE & LOOP INJECT VALVES

PART NUMBER	DESCRIPTION	QTY
001006	Manual sample injection valve	ea
001006.5	0.5ml sample loop for use with 001006	ea
001006-1	1.0ml sample loop for use with 001006	ea
001006-2	2.5ml sample loop for use with 001006	ea
001006-5	5.0ml sample loop for use with 001006	ea
001127-6LI	6-port loop injection valve	ea

## Accessories & Replacement Parts

Compatible with all Omnifit® Labware cap-style connectors and valves

### Ordering information

#### COLORED CAPS

PART NUMBER	MATERIAL	COLOR	QTY
001300	PP	Black	10pk
001301	PP	Brown	10pk
001302	PP	Red	10pk
001303	PP	Orange	10pk
001304	PP	Yellow	10pk
001305	PP	Green	10pk
001306	PP	Blue	10pk
001307	PP	Violet	10pk
001308	PP	Gray	10pk
001309	PP	White	10pk
001310	PP	Mixed	10pk
001320	ETFE	Natural	10pk

#### PTFE CONES

PART NUMBER	MATERIAL	SIZE	QTY
001502	PTFE	1/16" (1.6mm)	4pk
001504	PTFE	1/8" (3.2mm)	4pk
001506	PTFE	0.5mm	4pk
001507	PTFE	1.0mm	4pk
001508	PTFE	1.5mm	4pk
001509	PTFE	2.0mm	4pk
001510	PTFE	2.5mm	4pk
001511	PTFE	3.0mm	4pk
001512	PTFE	3.5mm	4pk
001513	PTFE	4.0mm	4pk
001514	PTFE	Blank	4pk

#### O-RINGS & SEALS

PART NUMBER	MATERIAL	TYPE	QTY
001401	FKM	O-ring, Small	10pk
001402	FKM	O-ring, Large	10pk
001404	FKM	Seal	10pk

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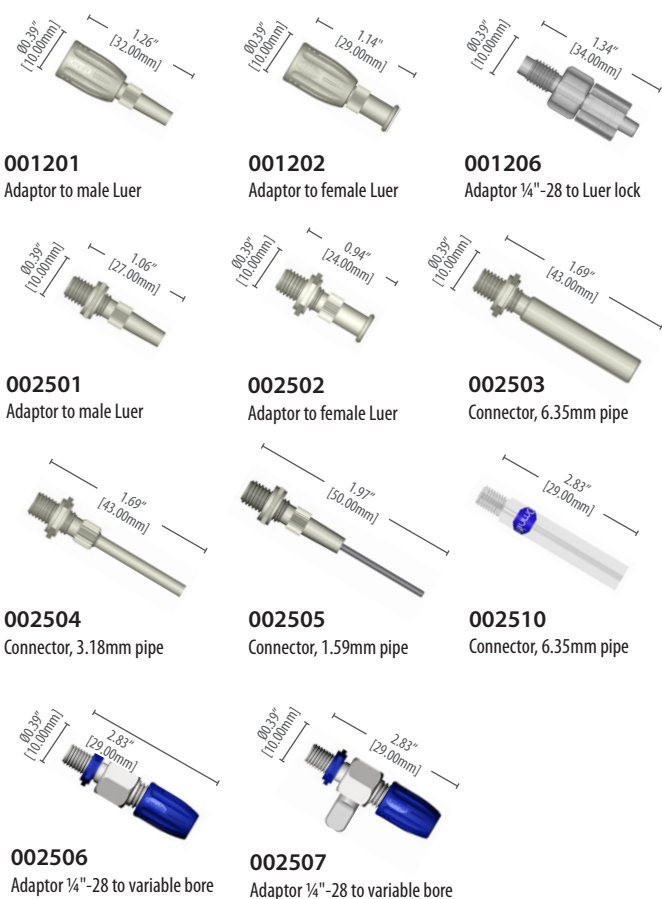
## Adaptors

### Adaptors for Omnifit® Labware connectors and valves

Cap adaptors can replace the colored cap on any Omnifit® Labware connector or valve to convert it to a male or female Luer connection. ¼"-28 UNF adaptors will fit into ¼"-28 UNF flat bottom ports in most Omnifit® labware connectors and valves. The ETFE ¼"-28 UNF male thread adaptors provide a quick, push-on connection for softwall tubing or Luer. Adaptors to male and female Luer are available. The ¼"-28 UNF male thread glass adaptors fit into any ¼"-28 UNF flat bottom ports and are suitable for flame fusing onto other glassware.

### Ordering information

CAP ADAPTORS			
PART NUMBER	DESCRIPTION	BORE	QTY
001201	Adaptor, male Luer	1.5mm	ea
001202	Adaptor, female Luer	1.5mm	ea
¼"-28 UNF ADAPTORS			
001206	Adaptor, ¼"-28 to Luer lock	1.5mm	ea
002501	Adaptor, male Luer	0.8mm	ea
002502	Adaptor, female Luer	0.8mm	ea
002503	Connector, ¼" (6.35mm) pipe	1.5mm	ea
002504	Connector, ⅜" (3.2mm) pipe	1.5mm	ea
002505	Connector, ⅙" (1.6mm) pipe	1.5mm	ea
002506	Adaptor, ¼"-28 to variable bore	1.5mm	ea
002507	Valve, ¼"-28 to variable bore	1.5mm	ea
002510	Adaptor, ¼"-28 to glass, 1.5mm	1.5mm	ea



## Filters & Bubble Traps

### Filtration & de-bubbling guide

#### Media Filtration

If you need to ensure that your solvents are free from particulate matter, some form of filtration will be needed. Omnifit® Labware offers both reservoir (bottom of bottle) and in-line filter units for the removal of particulates.

##### Reservoir filters

A reservoir filter can remove particulates from the solvent that may otherwise damage expensive hardware. It can also hold your tubing in place at the bottom of the bottle. Omnifit® Labware reservoir filters are made from biocompatible PTFE and have slots in the body that allow the filter to sit on the bottom of the bottle allowing removal of virtually all the liquid. Two sizes are available to fit GL45 and GL32 or 38-430 bottles.

##### In-line filters

An in-line filter placed upstream of any detection instrumentation can be used as a means to trap particles released through normal wear of any pump seals. Without an in-line filter, these particles could be flushed through the system resulting in damage and contamination. Omnifit® Labware in-line filters are available with 20 micron or 50 micron filters.

### Sparging

Filter bubblers or sparging filters can be used either as reservoir filters or in sparging applications. As a sparging filter, they are used to disperse sparging gas into very fine bubbles for minimal solvent disturbance and maximum sparging efficiency. Omnifit® Labware filter bubblers are made from stainless steel or PTFE and are suitable for most solvents. The PTFE version is ideal for applications where biological activity is critical and could be negatively impacted by the use of metals in the fluid path.

### De-bubbling

Dissolved gasses can result in bubble formation in pumps or detectors. Even after de-gassing solvents, bubbles may still form. The Omnifit® Labware bubble trap is used in-line to trap any bubbles which have come out of solution. Located between the reservoir and the pump, the Bubble Trap catches and retains air bubbles from the solvent before they get to the pump.

## Reservoir Filters & Bubblers

Bottom-of-bottle filters and spargers for simple, effective solvent filtration

- Push-fit onto 1/8" OD tube
- Inert, all-PTFE filter units with 10µm porosity filters
- PTFE or stainless steel bubblers

### Bottom-of-bottle filters

All-PTFE construction enables the filters to be used with the harshest chemicals. The filter units have slots in the body to enable virtually all liquid to be removed from the bottle, minimizing waste. 10µm porosity PTFE filters ensure even the smallest particulates are removed from the solvent supply.

### Filter spargers (bubblers)

PTFE or stainless steel elements are suitable for filtration or sparging applications.

### Technical specifications

Materials:	Body	Filter
009F-32	PTFE	10µm PTFE
009F-45	PTFE	10µm PTFE
009SFB	PTFE	10µm SS

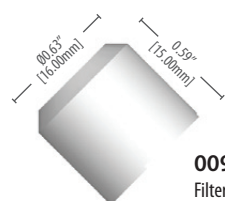
### Ordering information

#### RESERVOIR FILTERS

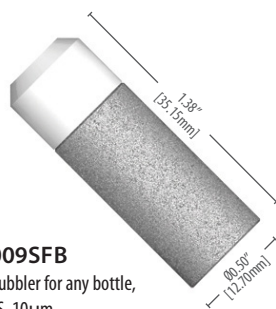
PART NUMBER	DESCRIPTION	QTY
009F-32	Bottom-of-bottle filter for GL32 /38-430 bottle	ea
009F-45	Bottom-of-bottle filter for GL45 bottle	ea
009FE-32	Replacement filters for 009F-32	20pk
009FE-45	Replacement filters for 009F-45	20pk

#### FILTER BUBBLERS

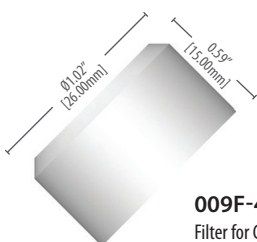
PART NUMBER	DESCRIPTION	QTY
009SFB	316 Stainless steel filter bubbler	ea



**009F-32**  
Filter for GL32 bottle,  
PTFE, 10µm



**009SFB**  
Bubbler for any bottle,  
SS, 10µm



**009F-45**  
Filter for GL45 bottle,  
PTFE, 10µm

## In-line Filters

Inert microporous filters remove particulates and protect solenoid valves and sensitive instruments

- Inert flow path with all-PTFE wetted parts
- Simple filter replacement
- Fluid distribution pattern for optimum filtration
- Easy installation in-line

These all-PTFE in-line filter units offer a highly inert flow path suitable for applications involving aggressive and high-purity fluids. The filters ensure that particulates are removed from the medium, protecting downstream instrumentation from particulate damage. PTFE solenoid valves for example, are inherently susceptible to damage from particulates.

Each filter unit comprises an all-PTFE housing which holds a removable PTFE filter. The filter element can be easily and economically replaced. A distribution pattern machined into the filter housing ensures that liquid is spread across the entire filter surface, giving maximum usage of the filter area. This distribution pattern is present on both sides of the filter housing, meaning that the filters are bi-directional with either port able to act as the inlet. However, once installed, flow direction should not be reversed, as contamination may result.

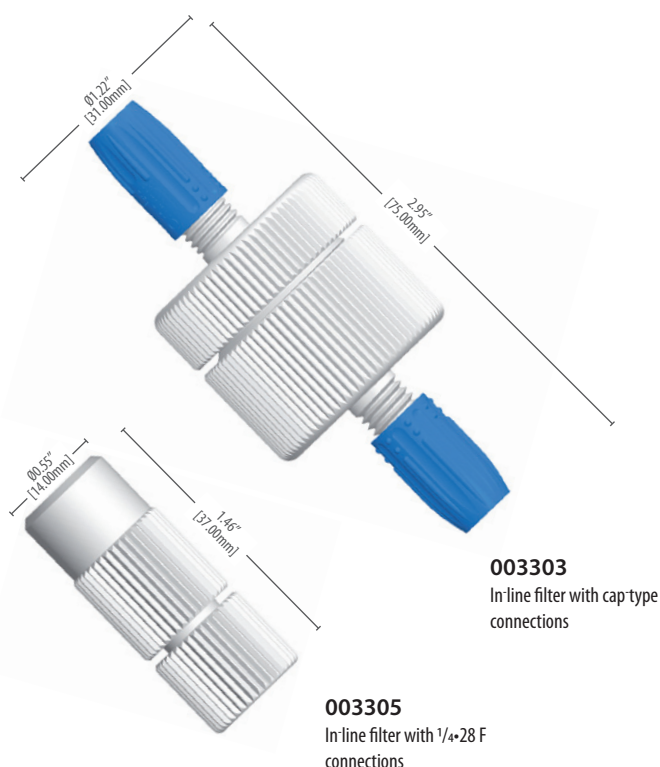
### Ordering information

#### INLINE FILTERS

PART NUMBER	FILTER	POROSITY	CONNECTION1	CONNECTION 2	QTY
003303	PTFE	50µm	Cap-style	Cap-style	ea
003305	PTFE	20µm	1/4•28 F	1/4•28 F	ea

#### SPARE FILTER ELEMENTS

PART NUMBER	DESCRIPTION	QTY
003303F50	Spare filters for 003303 (50µm)	20
003305F	Spare filters for 003305 (20µm)	20
003305F50	Spare filters for 003305 (50µm)	20



**003303**  
In-line filter with cap type connections

**003305**  
In-line filter with 1/4•28 F connections

## Bubble Trap & High Flow Bubble Trap

Effective, in-line removal of bubbles, with or without vacuum assistance

- Effective removal of bubbles from aqueous solutions
- Up to 6 ml/min flow rate or 60 ml/min under vacuum
- Quick, in-line connection with minimal maintenance

The Omnifit® Labware Bubble Trap and High-Flow Bubble Trap effectively remove bubbles\* from aqueous solutions. The units are connected in-line, downstream of a pump, using ¼"-28 UNF threaded fittings, such as Omni-Lok™.

### Operation

When a fluid containing bubbles flows through the unit, aqueous fluid is retained while bubbles are forced through a micro-porous, hydrophobic membrane (PTFE). The membrane function depends on its hydrophobicity, therefore the units are only suitable for use in aqueous systems and NOT with organic solvents.

The High Flow trap has a vacuum port on the atmosphere (dry) side of the membrane. When a vacuum is applied, the pressure differential between the system and atmosphere sides increases, causing bubbles to be sucked out of the liquid, and permitting increased liquid flow. Note: the vacuum line does not draw liquid through the trap under pressure. Its function is to accelerate the removal of bubbles across the membrane from the system (wet) side to the atmosphere (dry) side.

The High-Flow bubble trap will also operate as a stand-alone unit without a vacuum pump.

### Flow rate

Maximum flow rate depends on the amount of bubbles in the liquid. Typical operating range is 0.5 - 2.0ml/min, but up to 6ml/min can be achieved if few bubbles are present in the liquid. Up to 60ml/min can be achieved for the high-flow trap when a vacuum line is used.

For both units, the maximum differential pressure that the membrane can be exposed to is 30psi. In the high flow trap the maximum inlet (positive) pressure will be determined by the level of vacuum applied to the dry side of the membrane. If for example a full vacuum (14.5psi) was applied to the dry side, the maximum inlet pressure would be 15.5psi.

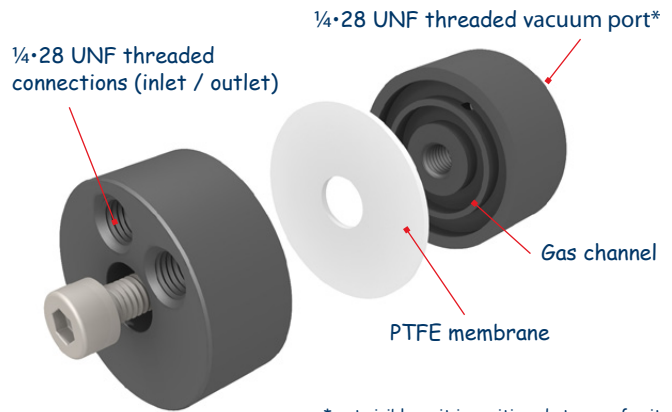
De-bubbling is effected under positive pressure. It is not possible to pull liquid through the unit under vacuum as this would introduce bubbles into the fluid. If the system back-pressure is insufficient for the unit to function, a length of tube can be fitted on the outlet side to create more back-pressure.

### Technical specifications

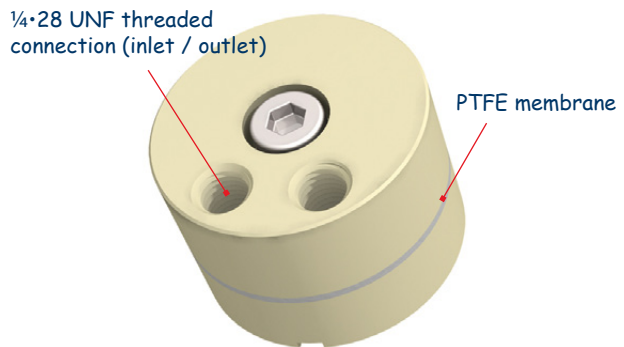
Materials:	Body	Filter
006BT	PEEK™	10µm PTFE
00BT-HF	PVC	10µm PTFE
Flow & pressure ratings:	Max. flow rate	Pressure rating (system side)
006BT	6 ml/min	30psi
00BT-HF	60 ml/min	30psi

\* Note: these bubble traps do not remove dissolved gases

### HIGH FLOW BUBBLE TRAP



### STANDARD BUBBLE TRAP



### Ordering information

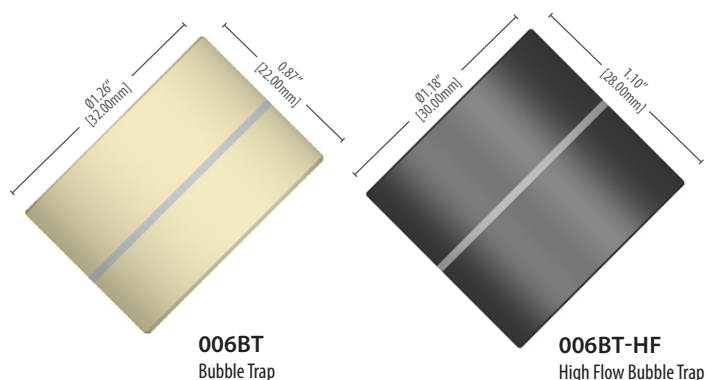
#### BUBBLE TRAPS & ACCESSORIES

PART NUMBER	DESCRIPTION	QTY
006BT	Bubble trap	ea
006BTM	Replacement filter elements, standard trap	5pk
006BT-HF	High flow bubble trap	ea
006BT-HFM	Replacement filter elements, high flow trap	5pk

### Maintenance

Membrane lifetime strongly depends on the kind of fluid used. For pure water, the lifetime may be several months or years. Buffer solutions reduce lifetime and it is advisable to flush the unit with de-ionized/distilled water after use to prevent salt crystals forming.

### Dimensions







Providing solutions for laboratory fluid handling:

- Chromatography Columns
- Solvent Safety Bottle Caps
- Bubble Traps & Filters
- Connectors & Adaptors



Standard components for fluid handling applications:

- Fittings
- Connectors & Adaptors
- Click-N-Seal™
- Omni-Lok™
- Dibafit™ Gripper
- Microbarb™



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