Bottle caps, reservoirs and accessories

Inside.....

Safe, simple and economic liquid containment

- Positive containment of laboratory chemicals and vapors
- Chemically inert wetted parts
- Robust and easy to use
- Anti-twist design
- GL45, GL32 and 38-430 sizes
- 2, 3 and 4 port caps

Open solvent bottles can allow harmful solvent vapor to escape and chemicals to be spilled. Omnifit bottle caps and accessories help prevent these problems and give you the security of a safe and dependable solvent delivery system.

'T' Series
Luer ported / straight through tubing

- Simple and versatile
- No need for fitting nuts and ferrules
- Each port accommodates a male luer or 1/8" OD hard wall tube
- Optional integrated check valve and filter

'Q' Series
1/4"-28 UNF threaded ports

- Robust Stainless Steel threaded ports for standard 1/4"-28 UNF threaded fitting nuts and adaptors
- Optional valves for easy on/off control of individual fluid lines

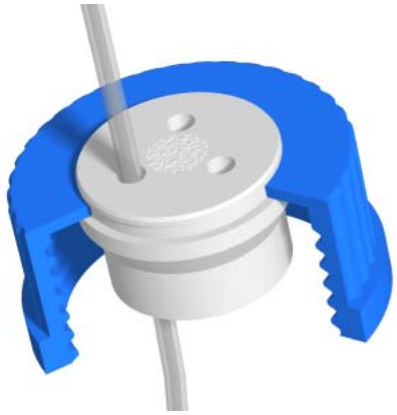
'C' Series
'Omnifit Cap' connections

- Independent control of each fluid line with easy operation on/off valves
- Versatile tube connection system for hard wall (semi-rigid) tubing up to 4mm OD

Design Features

Anti-twist cap

All of the Omnifit bottle caps now have this feature allowing the body to spin freely within the 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.



Solid PTFE body

The inner body of each Omnifit bottle cap is manufactured 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.

Selecting a bottle cap

Several factors should be considered when selecting a suitable bottle cap for your application. Please use this guide to help select the best Omnifit bottle cap for your application.

Which series cap do I need?

Removing a liquid from a bottle requires a small amount of pressure or vacuum to be applied to one of the ports of the bottle cap.

- If you are removing liquid by applying pressure to push liquid out of the bottle, we recommend a 'C' or 'Q' series cap. These caps both have connections suitable for pressure applications. Choose a cap that has sufficient ports for both your fluid lines and a separate air inlet.
- If you are removing liquid using a peristaltic or similar pump to pull liquid from the bottle, you must leave one port open to atmosphere to equilibrate the pressure. We recommend a 'T' series cap with integrated check valve and filter. This will only allow air in when vacuum is applied, does not require a separate port to be given up for venting, and prevents particulate contamination entering the bottle.

For pressure and vacuum applications we only recommend using Omnifit pressure rated reservoirs found in this brochure.

What type of tubing connections should I use?

‘T’ Series: Luer ported / straight-through tubing with optional check valve and filter

This very easy to use and versatile range of caps requires no fittings - simply push 1/8” OD hard wall tubing through the ports. Each port also accepts male Luer connectors. ‘T’-series bottle caps are available with an optional built-in check valve to allow pressure equilibration and a filter to prevent debris entering the bottle.

Materials
Screw cap - Polypropylene
Body - PTFE
Check valve - Fluorocarbon
Inlet filter - 10µm PTFE

With integral check valve and inlet filter

Prevent vapors escaping into the work environment and contamination entering the reservoir by using this cap with integrated one-way check valve. The combined air inlet filter and check valve enables air to flow into the bottle to replace liquid as it is removed while preventing particulate contamination.

Without valve and filter

Simplicity and versatility are the main features of this cap. Many different fluid line connection options can be accommodated with the combined 1/8" tube and Luer port. Not recommended for use under pressure with luer products fitted as no Luer lock is employed.

Notes

Connect softwall tubing using a barb to male luer adaptor that simply fits into a port! (see page 6)

Easily and securely remove liquid using a syringe - no septum to pierce, just fit the male luer of the syringe into a port.

Plug unused ports with the Luer Plug #009LP to prevent ingress of particulates and egress of harmful vapors.

Fit 1/16" OD tubing using the #009LA Luer Adaptor.

GL45

2 way	3 way	4 way
		
00945T-2F	00945T-3F	00945T-4F

38-430

2 way	3 way	4 way
		
00938T-2F	00938T-3F	00938T-4F

GL45

2 way	3 way	4 way
		
00945T-2	00945T-3	00945T-4

38-430

2 way	3 way	4 way
		
00938T-2	00938T-3	00938T-4

GL32

2 way

00932T-2

‘Q’ Series: 1/4”-28 UNF ported with optional valves

‘Q’ Series caps offer the simplest way to connect tubing via 1/4”-28 ports and fitting nuts. We recommend using the Omnifit Omni-Lok™ or Gripper fitting systems. Each port has a robust Stainless Steel thread insert to enable repeated connect/disconnect. Easy operation on/off valves on each fluid line are an optional extra.

Materials (where applicable)
Screw cap - Polypropylene
Body - PTFE
Rotors - PCTFE
Tubing - 1/8” OD x 1.5mm ID
Thread inserts - Stainless Steel

With valves

Easily control the flow of liquid into and out of the bottle with the integrated valves. Each fluid line can be switched on or off independently.

Without valves

Compact design can be used where head space is limited.

1.8mm holes through the PTFE cap body to allow 1/16” OD tubing to pass straight through into the bottle. This allows quick and easy tube adjustment to suit any height of bottle when used in conjunction with Omnifit Omni-Lok™ fittings and cone ferrules.

Notes

Completely contain vapor by using the combined check valve and filter element (Part# 009VF) - see ‘C’ and ‘Q’ series accessories for more details.

Connect softwall tubing using Omnifit PEEK™ barbed adaptors with male 1/4”-28 threads (see Adaptors & Couplings spec sheet).

Color code fluid lines for easy identification using Omni-Lok™ or Gripper fitting nuts.

GL45

2 way	3 way	4 way
		
00945Q-2V	00945Q-3V	00945Q-4V

38-430

2 way	3 way	4 way
		
00938Q-2V	00938Q-3V	00938Q-4V

GL32

3 way

00932Q-3V

GL45

2 way	3 way	4 way
		
00945Q-2	00945Q-3	00945Q-4

38-430

2 way	3 way	4 way
		
00938Q-2	00938Q-3	00938Q-4

‘C’ Series: Omnifit Connector caps with valves

These caps utilize the ‘Omnifit Cap’ connection system for easy and versatile tube connection. Each fluid line has a valve to control fluid flow. 1/8” OD hardwall tubing can be connected directly into the cap using PTFE cones supplied, or fitting nuts such as the Omni-Lok™ can be screwed into the 1/4”-28 threaded cap.

Materials (where applicable)
Screw cap - Polypropylene
Omnifit connection cap - Polypropylene
Body - PTFE
Rotors - PCTFE
Tubing - PTFE 1/8” OD x 1.5mm ID

Easily control the flow of liquid into and out of the bottle with the integrated valves. Each fluid line can be switched on or off independently.

‘Omnifit Cap’ connector provides an inert connection system for most hardwall tubing sizes between 0.5mm and 4mm OD using PTFE cones or Viton® ‘O’-rings available separately. Also allows tubing connection via fitting nut and ferrule and fitment of 1/4”-28 threaded accessories.

Notes

Completely contain vapor by using the combined check valve and filter element (Part# 009VF) - see ‘C’ and ‘Q’ series accessories for more details.

Connect softwall tubing using Omnifit PEEK™ barbed adaptors with male 1/4”-28 threads (see Adaptors & Couplings spec sheet).

Color code fluid lines for easy identification using Omni-Lok™ or Gripper fitting nuts or connector caps.

GL45

2 way	3 way	4 way
		
00945C-2V	00945C-3V	00945C-4V

38-430

2 way	3 way	4 way
		
00938C-2V	00938C-3V	00938C-4V

General Accessories - suitable for all cap types

Media Filtration *All these products push directly onto 1/8" OD PTFE tubing that is supplied with most Omnifit bottle caps*

Filter bubblers
Porous PTFE or stainless steel elements, suitable for filtration or sparging applications.

Bottom of the bottle filters
These all-PTFE bottom of the bottle filters provide inert solvent filtration. Slots in the body allow the filter to sit on the bottom of the bottle allowing removal of virtually all of the liquid.

The 00FIL-020 is easy-to-use, disposable and ecomomical.

Fits all bottle types

009PFB

Materials
Body - PTFE
Filter element - PTFE 3µm

Fits all bottle types

009SFB

Materials
Body - PTFE
Filter element - Stainless Steel 10µm

Fits GL32 or 38-430 bottles

009F-32

Fits GL45 bottles

009F-45

Materials
Body - PTFE
Filter element - PTFE 10µm

Replacement elements (20 pack)
009FE-32 - PTFE 10µm
009FE-45 - PTFE 10µm

Fits all bottle types

00FIL-020

Materials
Body - Polypropylene
Filter element - Polyethylene 20µm

'C' and 'Q' Series Accessories

Combined check valve and filter
To prevent vapor escape and particulate contamination whilst allowing pressure equilibration, use this check valve and filter screwed directly into a 1/4"-28 UNF port. The check valve is normally closed and only opens when the bottle is subject to low vacuum, whilst the filter cleans in-coming air.

009VF

Materials
Body - PTFE
Check valve - Fluorocarbon
Filter - PTFE 10µm

Tube connection products
For all tube connection requirements please refer to the web site or contact any of the offices for assistance.

For 'C' series caps
- 'O'-rings and cones to connect a wide range of tubing between 0.5mm and 4mm OD.
- Caps in 8 different colors for line identification.
- M6 threaded caps to connect M6 fitting nuts.

For 'C' and 'Q' series caps
- Omni-Lok™ and Gripper fitting ranges with nuts in 8 different colors.
- 1/4"-28 UNF thread to barb adaptors for connection of soft wall tubing.

General Accessories (contd.)

'T' Series Accessories - (2 pack)

Luer port blanking plug
A press-fit plug to close off any unused Luer ports.

Luer port to 1/16" tube adaptor
Enables connection of 1/16" OD tubing. Just pull the tubing through the adaptor and press-fit into any Luer port.

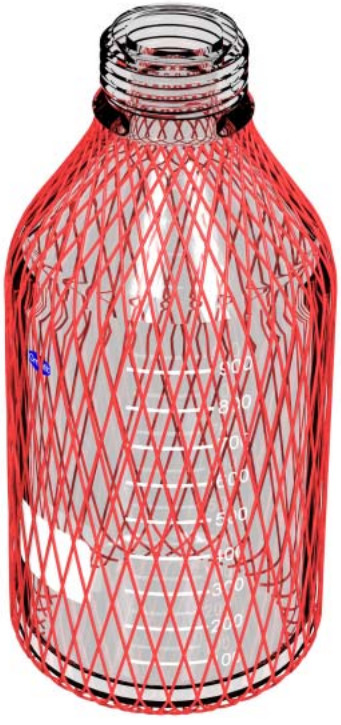
Luer to barb adaptor

Allows connection of soft wall tubing to a Luer port. Press-fit the adaptor into a Luer port and push the soft wall tubing on.

Note: Only 2 can be used with a 4-way cap.

	1/16" OD tube	1/16" ID tube	1/8" ID tube	1/4" ID tube
				
009LP	009LA	009BA-16	009BA-32	009BA-63
Materials		**Materials**		
PTFE		Polypropylene		

Reservoirs



Plain GL45

Omnifit reservoirs are made from chemically resistant and stable borosilicate glass and are available in plain glass or plastic coated. Pressure rated bottles are available in the 1000ml size.

- Indelible volumetric markings
- Plastic netting to help prevent scratching and chipping and to improve handling

Further options

- Plastic coating to protect contents from UV damage by reducing light transmission to < 50% for wavelengths of ~390nm & < 10% for wavelengths of ~380nm. It also serves to help contain a broken bottle and its contents if breakage occurs.
- Pressure resistant bottles are rated to -1/+1.5 bar.

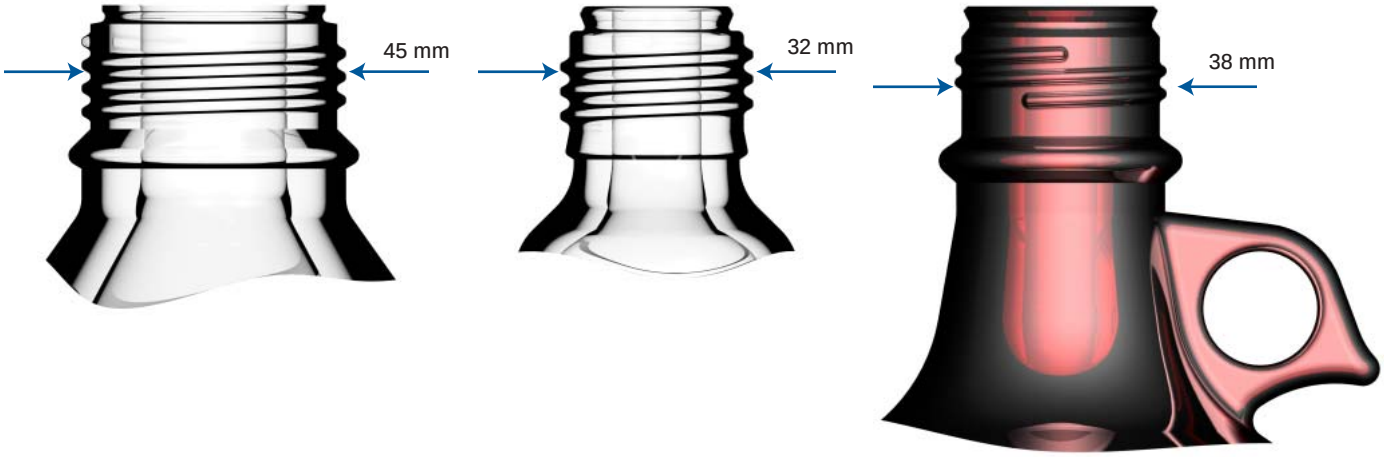
Plastic coated GL45

	Volume (mL)	50	100	250	500	1000	2000
GL32	Plain	3400					
GL45	Plain		3401	3402	3403	3404	3405
	Plastic coated		3407	3408	3409	3410	3411
	-1/+1.5 bar pressure rated **Plain**					3406	
	-1/+1.5 bar pressure rated **Plastic coated**					3412	

Reservoir Thread Sizes

Omnifit bottle caps are designed to fit the threads most commonly found on solvent reservoirs manufactured from glass. Two of these types of bottle, GL45 and GL32 are shown in the reservoir section on the previous page. To identify which thread type you have, simply measure the diameter of the thread and compare to the threads shown below.

GL45	GL32	38-430



Technical Specifications

Pressure

- Omnifit 'C' and 'Q' series bottle caps are pressure rated to +20/-10 psi.
- Omnifit 'T' series caps when used with vacuum are rated to -10 psi. 'T' Series without valve used only with 1/8" tube fitted in the ports and no luer products fitted, pressure rating is 20 psi. Not recommended for pressure applications with male Luers fitted. 'T' series with valve not recommended for pressure applications.
- Only Omnifit bottles specified as pressure rated are recommended for pressure or vacuum delivery of liquids. It is important to consider this specification when designing your system. Always treat glass bottles with care.

Temperature

- Omnifit bottle caps are rated for continuous use up to 50^0 C.
- Bottle caps and bottles can be autoclaved. For 'C' series caps, 'Omnifit Cap' connectors must be removed for autoclaving. Bottles should not be autoclaved with bottle caps tightly fastened.

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