

Corning® Closed Systems Solutions

We've Done it For You!

In an effort to achieve regulatory compliance and reduce contamination risks, many production groups explore the possibility of utilizing closed systems. There is currently a lack of preassembled sterile products on the market. Corning's closed system solution line of products is designed to meet this need.

Features

- ▶ "No assembly required" sterile product offerings
- ▶ Class VI material
- ▶ SAL 10^{-6} sterilization level
- ▶ Multiple product offerings for up and downstream processing
- ▶ Customizable solutions for your production needs
- ▶ Products are double-bagged for GMP applications.

Benefits

- ▶ No cleaning
- ▶ No sterilization (reduced autoclave burden)
- ▶ No validation (once initially validated)
- ▶ No preparation of tubing or components
- ▶ Reduced labor expense
- ▶ Reduced changeover time
- ▶ Reduced floor space for prep and capital equipment
- ▶ Ease of purchase (filling components are preconfigured and ready to use)
- ▶ Ease of scalability (fluid path validated from R&D through clinical)
- ▶ Scheduling flexibility (consistent availability of filling components to better cope with shifting schedules and demands)



CORNING

Corning® CellSTACK® Culture Chamber Solutions

The Corning CellSTACK Culture Chambers are one of Corning's most reliable and fully tested cell culture products. Whether your cells grow attached or in suspension, Corning has cell culture scale-up products that will meet your requirements.

- ▶ A wide variety of CellSTACK Culture Chamber filling and venting accessories are available
- ▶ Corning offers more versatile accessories to reduce contamination risks when processing CellSTACK Chambers.
- ▶ Corning is willing to customize additional accessories to meet customer needs. See the Corning Custom Closed Systems Solutions brochure (Corning literature number CLS-CC-063) for more details.

Available in Five Sizes

- ▶ 1-Stack with 636 cm² cell growth area
- ▶ 2-Stack with 1,272 cm² cell growth area
- ▶ 5-Stack with 3,180 cm² cell growth area
- ▶ 10-Stack with 6,360 cm² cell growth area
- ▶ 40-Stack with 25,440 cm² cell growth area



Corning CellSTACK Culture Chambers

Features and Benefits

- ▶ Greater Chamber Durability
 - Superior mechanical strength and structural integrity
 - Self-venting caps prevent pressure build-up during transport
 - 100% leak tested prior to shipping
- ▶ Greater Cleanliness
 - Improved assembly procedures reduce particulates
 - Certified nonpyrogenic and sterilized
- ▶ Continuous Supply Reliability
 - Manufactured in USA under GMP conditions
- ▶ Easier to Use
 - Larger openings with threaded closures and vented caps
 - Footprint identical to competitor's product



Aseptic Transfer Cap Accessories for CellSTACK Culture Chambers

Aseptic Transfer Caps for Corning® CellSTACK® Culture Chambers



Cat. No. 3332 – Universal Cap, with vented overcap, sterile

Designed to fit pre-existing filling systems for other product brands.



Cat. No. 3282 – Fill cap, 1/8" (3.2 mm) ID tubing, female Luer lock with male Luer plug, sterile



Cat. No. 3328 – Fill cap, female MPC, 1/4" (6.4 mm) ID with male end cap, sterile

Fill cap available with 1/4" (6.4 mm) ID and 3/8" (9.5 mm) ID



Cat. No. 3339 – Fill cap, male MPC, 3/8" (9.5 mm) ID with female end cap, sterile

Fill cap available with 1/4" (6.4 mm) ID and 3/8" (9.5 mm) ID



Cat. No. 3284 – Vent cap, 1/4" (6.4 mm) ID tubing, 7 cm length, Pall® Bacterial Air Vent, sterile

This filter is recommended for filling rates greater than 2L/minute.



Cat. No. 3333 – Fill cap, 1/4" (6.4 mm) ID tubing, 70 cm length, male MPC with female end cap, sterile

Aseptic Transfer Caps for CellSTACK Culture Chambers Ordering Information

Cat. No.	Description	Qty/ Pk	Qty/ Cs
3332	Universal cap*, with vented overcap, sterile	1	4
3281	Vent cap, 3/8" (9.5 mm) ID tubing, 7 cm length, Pall Acro 50, PVDF filter, sterile	1	5
3282	Fill cap, 1/8" (3.2 mm) ID tubing, female Luer lock with male Luer plug, sterile	1	5
3283	Fill cap, 3/8" (9.5 mm) ID tubing and 5/16" (7.94 mm) barbed fitting, sterile	1	5
3284	Vent cap, 3/8" (9.5 mm) ID tubing, 7 cm length, Pall Bacterial Air Vent, sterile	1	4
3324	Two vented over caps and one solid over cap for the Universal Cap, sterile	5	100
3333	Fill cap*, 1/4" (6.4 mm) ID tubing, 70 cm length, male MPC with female end cap, sterile	1	4
3328	Fill cap, female MPC, 1/4" (6.4 mm) ID barbed fitting with male end cap, sterile	1	4
3329	Fill cap, female MPC, 3/8" (9.5 mm) ID barbed fitting with male end cap, sterile	1	4
3334	Fill cap, male MPC, 1/4" (6.4 mm) ID barbed fitting with female end cap, sterile	1	4
3339	Fill cap, male MPC with male end cap, 3/8" (9.5 mm) ID barbed fitting with female end cap, sterile	1	4

*All caps are 33 mm thread caps.

MPC, medical plastic coupler; MLL, male Luer lock

Corning® Polycarbonate Erlenmeyer and Fernbach Flasks

Corning baffled and plain Erlenmeyer and Fernbach culture flasks are ideal for shaker culture applications and storage. Like all Corning flasks, the Erlenmeyer flasks are certified nonpyrogenic and sterile.

Corning Erlenmeyer and Fernbach culture flasks are:

► *More Robust*

- Polycarbonate construction: USP Class VI material provides excellent optical clarity and mechanical strength
- Unlike PETG, flasks will not collapse when autoclaving media or sanitizing waste
- Unlike glass, flasks will not break when dropped

► *More Options*

- Sizes range from 125 mL to 3L
- Baffled or plain bottom options in every size
- Available as closed system solution

► *More Reliable*

- Molded-in graduations for accuracy
- Vent cap option for continuous gas exchange while ensuring sterility and preventing leakage
- Individually packaged and radiation sterilized for ease of use
- All flasks have the highest Sterility Assurance Level (SAL) of 10^{-6}
- Certified nonpyrogenic
- All flasks are RNase-/DNase-free

A Complete Line for Your Shaker Culture, Liquid Handling and Storage Needs

Corning Erlenmeyer Flasks are sterile, disposable and are ideal for all shaker culture applications as well as liquid handling and storage. Corning Erlenmeyer flasks are available with baffled and plain bottoms in the 125 mL, 250 mL, 500 mL, 1L, 2L and 3L sizes. The 125 mL through 1L flasks are available with flat caps or filtered vent caps. The 2L and 3L flasks are available with vent caps.



Pipetting is not practical or convenient for aseptically filling or emptying culture vessels that use more than several hundred milliliters of medium. As a result, pouring is often used instead but this increases the risk of contamination. To solve this problem Corning has developed aseptic transfer caps for filling Disposable 1L, 2L and 3L Erlenmeyer Flasks. These new transfer caps will reduce contamination as well as enhance the productivity of your cell culture operations.

Key Features

- Double-bagged and sterilized to 10^{-6} SAL
- 50 mm diameter vent filter with a 0.2 μ m pore PVDF membrane
- Dip tubes are angled to fit each vessel
- Assemblies can be autoclaved
- Uses C-Flex tubing and a polypropylene dip tube
- Choice of male Luer lock or MPC quick disconnect for the Erlenmeyer flasks

Corning® Aseptic Transfer Caps for Disposable 1L, 2L and 3L Erlenmeyer Flasks

The venting port ends in a 50 mm diameter vent filter with a 0.2 µm pore PVDF membrane and a barbed fitting. The liquid transfer port uses either:

- ▶ A 1/4" ID (3/8" OD) C-Flex tubing on the external side of the cap ending in a male medical-grade polycarbonate (MPC) male disconnect with a sealing cap
- ▶ A 1/8" ID (1/4" OD) C-Flex tubing on the external side of the cap ending in a male Luer lock (MLL) closed with a female Luer cap.

The internal end is a rigid polypropylene dip tube designed to reach the bottom of the flask.

Corning Aseptic Transfer Caps Ordering Information

Cat. No.	Description	Sterile	Qty/Cs
431444	43 mm cap, 1L, dip tube with 0.2 µm vent, MLL	Yes	5
431445	43 mm cap, 1L, dip tube with 0.2 µm vent, MPC	Yes	5
431446	48 mm cap, 2L, dip tube with 0.2 µm vent, MLL	Yes	6
431447	48 mm cap, 2L, dip tube with 0.2 µm vent, MPC	Yes	6
431448	70 mm cap, 3L, dip tube with 0.2 µm vent, MLL	Yes	4
431449	70 mm cap, 3L, dip tube with 0.2 µm vent, MPC	Yes	4

MLL, Male Luer lock; MPC, Medical plastic coupler

Preassembled Closed System Solution Erlenmeyer Flasks

Corning Erlenmeyer Flasks are now available as closed system solutions. They are sterile and arrive individually doubled-bagged and preassembled. They are available for the 1L, 2L and 3L flask sizes. The preassembled transfer caps have two ports. One port ends in a 0.2 µm filter, and the other port is C-Flex tubing, ending in either a male Luer lock or a male polycarbonate quick connect. The dip tube reaches all the way to the bottom of the flask for easy aseptic transfer of your liquid handling processes.

Preassembled Closed System Solution Erlenmeyer Flasks Ordering Information

Cat. No.	Description	Sterile	Qty/Cs
431510	1L flask with dip tube with 0.2 µm vent, MLL	Yes	4
431516	1L flask with dip tube with 0.2 µm vent, MPC	Yes	4
431512	2L flask with dip tube with 0.2 µm vent, MLL	Yes	3
431518	2L flask with dip tube with 0.2 µm vent, MPC	Yes	3
431514	3L flask with dip tube with 0.2 µm vent, MLL	Yes	2
431520	3L flask with dip tube with 0.2 µm vent, MPC	Yes	2
11440	1L flask with dip tube with 0.2 µm MLL/FLL filter, MLL	Yes	4



431444, 431446 and 431448
Aseptic Transfer Caps, MLL



431518 and 431520
Erlenmeyer Flasks for Closed
System Solution, MPC



431512 and 431514
Erlenmeyer Flasks for Closed
System Solution, MLL



11440 Erlenmeyer Flask with
attachment for Luer syringe
at the vent.

Corning® 1L and 3L Disposable Spinner Flasks



3546, 3559 1L and 3L Disposable Spinner Flasks, MPC Quick Connect



3569, 3579 1L and 3L Disposable Spinner Flasks, Luer Lock



3565, 3562 and 3564 Aseptic Transfer Cap, Luer Lock



3528, 3545 and 3558 Aseptic Transfer Cap, MPC Quick Connect

- ▶ Vessel and Impeller are constructed of USP Class VI and ISO 10993-18 compliant materials.
- ▶ All Corning Disposable Spinner Flasks, Aseptic Transfer Caps and replacement caps have the highest standard Sterility Assurance Level (SAL) of 10^{-6} .
- ▶ Assembled in a Class 10,000 clean room
- ▶ Product meets USP XXIV: 71 Bacteriostasis, Fungistasis and Sterility Standards
- ▶ Each system is supplied individually double-bagged.
- ▶ Vented, solid cap, and preassembled Closed System Solution vessels available
- ▶ Replacement caps and Aseptic Transfer Caps also sold separately
- ▶ Preassembled Closed System Solution vessels have one aseptic connector assembled to one side arm. Opposite side arm has a solid cap.
- ▶ Three-year shelf life from date of manufacture

Technical Specifications

Parameter	1L (Cat. No. 3561)	3L (Cat. No. 3563)
Vessel height	245 mm	259 mm
Vessel diameter	137 mm	188 mm
Vessel width	203 mm	256 mm
Sidearm opening (ID)	39 mm	39 mm
Sidearm cap diameter (OD)	54 mm (GL 45 threads)	54 mm (GL 45 threads)
Paddle size (W x H)	69 x 215 mm	105 x 227 mm
Maximum drive speed	150 rpm	150 rpm
Magnet	ALNICO	ALNICO

Aseptic Transfer Caps for Disposable Spinner Flasks

Cat. No.	Description	Compatible with Cat. No.	Qty/Cs
3562	Side arm aseptic transfer cap, 1/8" dip tube with 0.2 μ m pore, vent, MLL*	3561	2
3545	Side arm aseptic transfer cap, 1/4" dip tube with 0.2 μ m pore, vent, MPC**	3561	2
3564	Side arm aseptic transfer cap, 1/8" dip tube with 0.2 μ m pore, vent, MLL*	3563	2
3558	Side arm aseptic transfer cap, 1/4" dip tube with 0.2 μ m pore, vent, MPC**	3563	2

Preassembled Closed Systems Solution Disposable Spinner Flasks

Preassembled Flasks have one aseptic connector preassembled to one side arm. Opposite side arm has a flat cap.

Cat. No.	Description	Capacity (L)	Preassembled with 1 Aseptic Transfer Cap Cat. No.	Qty/Cs
3569	Disposable spinner flask, preassembled	1	3562	6
3546	Disposable spinner flask, preassembled	1	3545	6
3579	Disposable spinner flask, preassembled	3	3564	4
3559	Disposable spinner flask, preassembled	3	3558	4

Corning® Centrifuge Tubes

Corning offers a full line of disposable, premium quality conical centrifuge tubes manufactured from high quality, ultra-clear resins. These tubes meet the quality and performance standards demanded by researchers.

Corning Centrifuge Tubes offer:

- ▶ *High Speed 15 mL and 50 mL tubes*
 - Highest RCF rating available
 - 95kPA (14 psi) pressure-tested
 - Certified RNase-/DNase-free
 - Certified nonpyrogenic
 - Sterile
- ▶ *Large Volume 250 mL and 500 mL tubes*
 - Ideal for large volume centrifugation
 - Best choice for cell harvesting and purification
 - Certified nonpyrogenic
 - Sterile

Preassembled Closed Systems Solution Centrifuge Tubes

Sterile Closed System centrifuge tubes arrive individually double bagged and pre-assembled. The caps have two ports: One port ends in a 0.2 µm filter, and the other port is C-Flex tubing, ending in a male Luer. Dip tubes, where available, reach all the way to the bottom of the flask for easy aseptic transfer during your liquid handling processes.

Features

- ▶ Preassembled
- ▶ Double-bagged for GMP applications
- ▶ Animal component free vessels
- ▶ BSE/TSE compliant accessories
- ▶ SAL 10⁻⁶ sterilization
- ▶ Wide range of product offerings
- ▶ Customizable solutions
- ▶ Available in 50 mL and 500 mL centrifuge tube sizes

Preassembled Closed Systems Solution Centrifuge Tubes Ordering Information

Cat. No.	Description	Qty/Pk	Pk/Cs
11750	500 mL centrifuge tube, sterile, with dip tube, 0.2 µm filter with MLL/FLL end, C-Flex 1/8" ID x 1/4" OD tubing, MLL	1	2
11705	50 mL centrifuge tube, sterile, with dip tube, 0.2 µm filter with MLL/ FLL end, C-Flex 1/8" ID x 1/4" OD tubing, MLL	1	2
11706	50 mL centrifuge tube, sterile, 0.2 µm filter with MLL/ FLL end, C-Flex 1/8" ID x 1/4" OD tubing, MLL	1	2



15 mL and 50 mL Centrifuge Tubes



500 and 250 mL Centrifuge Tubes



11705 and 11706
50 mL Centrifuge Tubes with MLL Dip Tube and 0.2 µm filter



11750 500 mL Centrifuge Tube with MLL Dip Tube and 0.2 µm filter

For additional product or technical information, please visit www.corning.com/lifesciences or call 800.492.1110. Customers outside the United States, call +1.978.442.2200 or contact your local Corning sales office listed below.

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