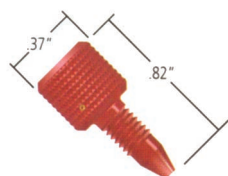


One Piece or Two?

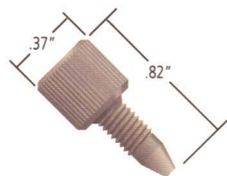
A one-piece fitting is more convenient and less cumbersome, since the ferrule cannot stick in a receiving port and the fitting is more easily found if dropped. With two-Piece Fingertight, you only replace the ferrule instead of the entire unit, making these Fingertights more economical than the one-piece version.

One Piece Fingertight Fittings

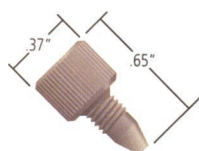
All of our One-Piece Fingertight Fittings are designed to be used with 1/16" OD tubing, except the M-645 (1/32") and P-100 (1/8").



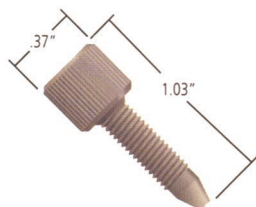
UP-F-100
10-32 Kel-F™ Fitting
Max Pressure 276 bar



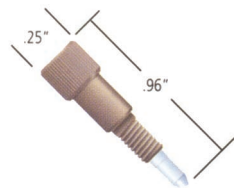
UP-F-120
10-32 PEEK™ Fitting
Max Pressure 414 bar



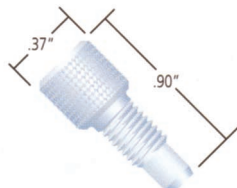
UP-F-127
10-32 PEEK™ Fitting
Max Pressure 414 bar



UP-F-130
10-32 PEEK™ Fitting
Max Pressure 414 bar



UP-M-645
6-40 PEEK/Kel-F™ Fitting
for 1/32" OD tubing
Max Pressure 121-224 bar



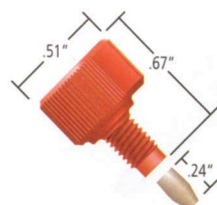
UP-P-100
1/14-28 Kel-F™ Fitting
for 1/8" OD tubing
Max Pressure 69 bar

One-Piece Fingertight Fittings^{1,2}

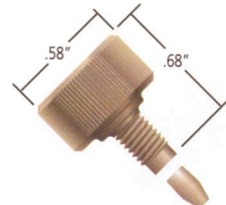
Cat.No.	Description	Qty.
UP-F-100x	Kel-F, Red, 10-32 for 1/16" OD tubing	10-pk
UP-F-120x	PEEK, Natural, 10-32 1/16" OD tubing	10-pk
UP-F-127x	PEEK, Natural, 10-32 Short 1/16" OD tubing	10-pk
UP-F-130x	PEEK, Natural, 10-32 Long 1/16" OD tubing	10-pk
UP-M-645x	PEEK/Kel-F, Natural, 6-40, for 1/32" OD tubing	10-pk
UP-P-100	Kel-F, Natural, 1/4-28, for 1/8" OD tubing	ea.

Two-Piece Fingertight Fittings

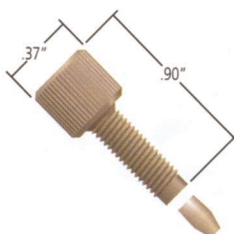
Our original Two-Piece Fingertight Fittings were designed exclusively for 1/16" OD tubing. We now offer optional ferrules for connecting 1/32" OD and 190 µm OD tubing with any Fingertight nut on last page. Our M-215 Conductive Perfluorelastomer Ferrule is designed for mass spectrometer electrospray applications.



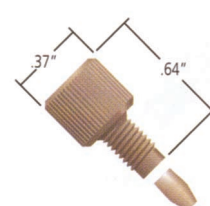
UP-F-200
10-32 Delrin™ Winged Nut
with F-142 PEEK™ Ferrule



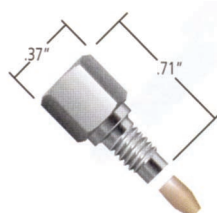
UP-F-300
10-32 PEEK™ Double Winged Nut
with F-142 PEEK™ Ferrule



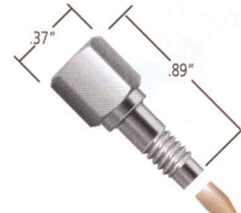
UP-F-330
10-32 PEEK™ Nut
with F-142 PEEK™ Ferrule



UP-F-331
10-32 PEEK™ Nut
with F-142 PEEK™ Ferrule



UP-F-140
10-32 Stainless Steel Nut
with F-142 PEEK™ Ferrule



UP-F-150
10-32 Stainless Steel Nut
with F-142 PEEK™ Ferrule

To order please follow these guidelines:

1/16" OD tubing

Select the desired nut, which comes complete with the appropriate ferrule. Or order the optional UP-F-142N Ferrule, along with the desired nut by replacing the "x" at the end of its product number with "-01". For instance, if you want an UP-F-113 Ferrule Nut, order UP-F-200-01, not UP-F-200x.

Please note: "-0.1" denotes a single nut without the ferrule.

1/32" OD tubing

Select the UP-F-113 Ferrule. Order the desired nut by replacing the "x" at the end of its product number with "-0.1", as described above.

190 µm OD tubing

Select the UP-F-148 Ferrule. Order the desired nut by replacing the "x" at the end of its product number with "-0.1", as described above.

Tk Fingertight Fittings - Stainless Steel Tubing

360-510 µm OD tubing

For electrospray applications, choose the UP-M-215 Conductive Ferrule. Order the desired nut by replacing the "x" at the end of its product number with "-0.1", as described at previous page.

Two-Piece Polymer Fingertight Fittings

Cat.No.	Description	Qty.
UP-F-200x	Delrin Nuts, Red, with UP-F-142 Ferrules, 10-32	10-pk
UP-F-300x	PEEK Nuts, Natural, with UP-F-142 Ferrules, 10-32	10-pk
UP-F-330x	Long PEEK Nuts, Natural, with UP-F-142 Ferrules, 10-32	10-pk
UP-F-331x	Short PEEK Nuts, Natural, with UP-F-142 Ferrules, 10-32	10-pk

Two-Piece Stainless Steel Fingertight Fittings

UP-F-140x	Stainless Steel Nuts, with UP-F-142 Ferrules, 10-32	10-pk
UP-F-150x	Long Stainless Steel Nuts, with UP-F-142 Ferrules, 10-32	10-pk



UP-F-113 Optional PEEK Ferrule for 1/32" OD tubing	UP-F-142N Optional Tefzel™ Ferrule for 1/16" OD tubing	UP-F-148 Optional Kel-F™ Ferrule for 190µm OD tubing	UP-M-215 Optional Perfluoroelastomer Ferrule for 360-510µm OD tubing (conductive)
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Replacement Ferrules

Cat.No.	Description	Qty.
For 1/16" OD Tubing		
UP-F-142x	PEEK Ferrules, Natural	10-pk
UP-F-142Nx	Tefzel Ferrules, Natural	10-pk
For 1/32" OD Tubing		
UP-F-113	PEEK Ferrules, Natural	ea.
For 360-510 µm OD Tubing		
UP-F-151	Kel-F Ferrule, Natural	ea.
UP-M-215	Conductive Perfluoroelastomer Ferrules, Black	ea.
For 190 µm OD Tubing		
UP-F-148	Kel-F Ferrule, Natural	ea.

Stainless Steel Tubing

- Precut 316 Stainless Steel*
- The Cleanest, Best Finish available
- Color-Coded Banding for easy identification



Stainless Steel, .005" (125µm) ID x 1/16" OD (Red Colour Band)

Reference	Length
UP-U-152	5 cm
UP-U-153	10 cm
UP-U-154	20 cm
UP-U-155	30 cm
UP-U-156	0.5 m
UP-U-157	1 m**
UP-U-158	1.5 m**
UP-U-160	7.5 m**

Stainless Steel, .010" (.25mm) ID x 1/16" OD (Blue Colour Band)

Reference	Length
UP-U-111	5 cm
UP-U-112	10 cm
UP-U-113	20 cm
UP-U-114	30 cm
UP-U-132	0.5 m
UP-U-133	1 m**
UP-U-106	1.5 m**
UP-U-162	7.5 m**

Stainless Steel, .007" (175µm) ID x 1/16" OD (Black Colour Band)

Reference	Length
UP-U-126	5 cm
UP-U-127	10 cm
UP-U-128	20 cm
UP-U-129	30 cm
UP-U-130	0.5 m
UP-U-131	1 m**
UP-U-108	1.5 m**
UP-U-161	7.5 m**

Stainless Steel, .020" (.50mm) ID x 1/16" OD (Yellow Colour Band)

Reference	Length
UP-U-101	5 cm
UP-U-102	10 cm
UP-U-103	20 cm
UP-U-104	30 cm
UP-U-134	0.5 m
UP-U-135	1 m**
UP-U-105	1.5 m**
UP-U-163	7.5 m**

** All Stainless Steel tubing of longer than 1m is coiled.

PEEK™ Tubing

- 1/16", 1/8" and 1.8mm ODs Available
- Biocompatible, Inert and Easily Cut
- Great for High Pressure Applications



PEEK (polyetheretherketone) polymer tubing is biocompatible, chemically inert to most solvents, and can be used to replace stainless steel tubing in most liquid analytical systems. Unlike stainless steel and titanium tubing, PEEK tubing is flexible and can be easily cut to desired lengths. PEEK tubing can be used with stainless steel or polymer fittings.

The benefits of PEEK polymer tubing include a high pressure rating (up to 7,000 psi in most cases) and a high temperature rating (maximum continuous use temperature of 100°C). Additionally, PEEK tubing has a very smooth internal surface, which causes less turbulence than similar sized metal tubing. Turbulence can cause remixing of separated sample bands and dilution of bands by the mobile phase. Of all our polymer tubing materials, PEEK is the least permeable to gas.

PEEK tubing 1/16" OD X 5'

Reference	Description	Colour	psi	bar
UP-1560	.0025" (65 µm) ID	Natural	7,000 psi	(483 bar)*
UP-1561	.004" (100 µm) ID	Black	7,000 psi	(483 bar)*
UP-1535	.005" (125 µm) ID	Red	7,000 psi	(483 bar)*
UP-1562	.006" (150 µm) ID	Purple	7,000 psi	(483 bar)*
UP-1536	.007" (175 µm) ID	Yellow	7,000 psi	(483 bar)*
UP-1531	.010" (.25 mm) ID	Natural	7,000 psi	(483 bar)*
UP-1531B	.010" (.25 mm) ID	Blue	7,000 psi	(483 bar)*
UP-1565	.015" (.40 mm) ID	Gray	7,000 psi	(483 bar)*
UP-1532	.020" (.50 mm) ID	Orange	7,000 psi	(483 bar)*
UP-1533	.030" (.75 mm) ID	Green	7,000 psi	(483 bar)*
UP-1538	.040" (1.00 mm) ID	Natural	5,000 psi	(345 bar)*
UP-1537	.055" (1.40 mm) ID	Natural	500 psi	(345 bar)*

PEEK tubing 1/8" OD X 5'

Reference	Description	Colour	psi	bar
UP-1534	.062" (1.60 mm) ID	Natural	4,000 psi	(276 bar)*
UP-1544	.080" (2.00 mm) ID	Natural	3,000 psi	(207 bar)*

PEEK tubing 1.8 mm OD X 5'

Reference	Description	Colour	psi	bar
UP-1545	.010" (.25 mm) ID	Natural	7,000 psi	(483 bar)*
UP-1546	.020" (.50 mm) ID	Natural	7,000 psi	(483 bar)*
UP-1547	.030" (.75 mm) ID	Natural	7,000 psi	(483 bar)*
UP-1540	.042" (1.05 mm) ID	Natural	5,000 psi	(345 bar)*
UP-1539	.055" (1.40 mm) ID	Natural	500 psi	(34 bar)*

Polymer Tubing Cutters

for 1/16", 1/8", 3/16", 1/4" and 5/16 OD tubing



Polymer tubing cutters

Reference	Description
UP-A-327	Standard Polymer Tubing Cutter* for 1/16" and 1/8" OD tubing
UP-A-329	Large Bore Polymer Tubing Cutter* for 3/16" - 5/16" OD tubing
UP-A-328	Replacement Blades for A-327 and A-329 - 5 pk.

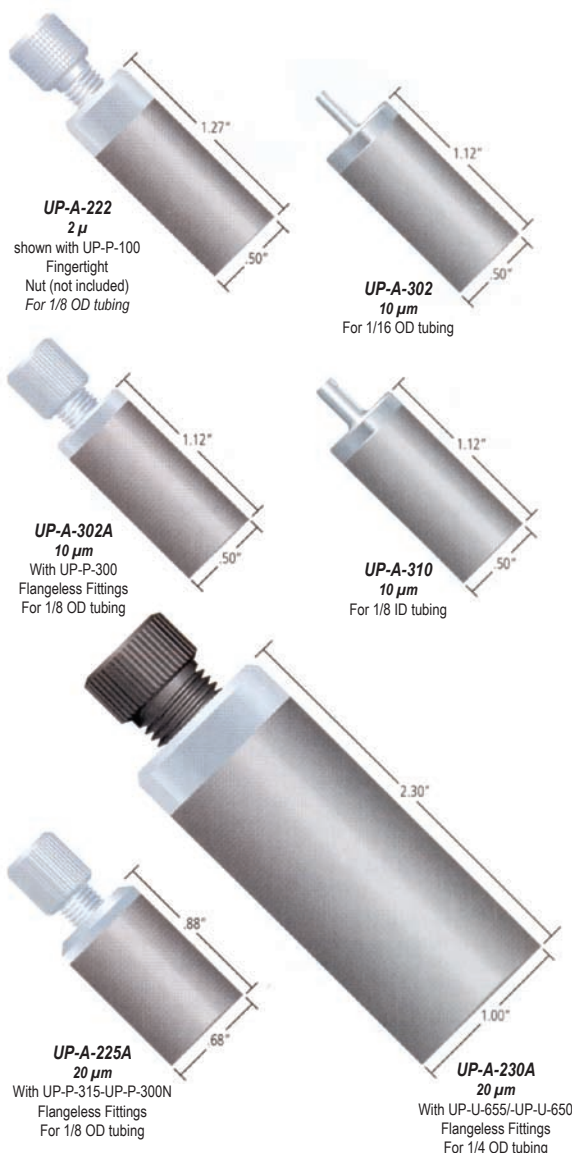
Tk Inlet Solvent Filters

General Use Inlet Solvent Filters

- Large Surface Areas
- Disposable
- 2 µm, 10 µm and 20 µm Filters Available
- General use and Prep Filters for Higher Flow Applications

It is good practice to filter your solvents to prevent pump damage. These 316 stainless steel filters provide that protection. Their large surface areas also mean longer life without pump cavitation.

Because filters should be changed periodically, we make it easy to replace them, without tools. For those filters using a plastic nut, thread the nut into the filter and finger tighten. Our other filters have stems, allowing easy insertion directly into your inlet tubing. Please Note: The internal design of the UP-A-309 and the UP-A-230A Filters allows solvent to be drawn to within 1/8" (3.2mm) of the bottom of your solvent bottle, with Bottom-of-the-Bottle™ designs similar to the stainless steel and UHMWPE filters.



General Use Inlet Filters

For Analytical HPLC

Reference	Description
UP-A-220	10µm Inlet Solvent Filter, for 1/8" OD tubing ¹
UP-A-221	UP-A-220, 5-pack, for 1/8" OD tubing ¹
UP-A-222	2µm Inlet Solvent Filter, for 1/8" OD tubing ¹
UP-A-223	UP-A-222, 5-pack, for 1/8" OD tubing ¹
UP-A-228	2µm Inlet Solvent Filter with stem, for 1/8" ID tubing
UP-A-302	10µm Inlet Solvent Filter with stem, for 1/16" ID tubing
UP-A-302A	10µm Inlet Solvent Filter with Flangeless Fittings, for 1/8" OD tubing ²
UP-A-309	10µm Inlet Solvent Filter with stem, for 1/16" ID tubing

For Waters™ Analytical HPLC Systems

UP-A-231A	20µm Inlet Solvent Filter for 3/16" OD tubing ³
UP-A-310	10µm Inlet Solvent Filter with stem, for 1/8" tubing

For Preparative HPLC Systems

UP-A-225	20µm Inlet Solvent Filter with stem, for 1/16" ID tubing
UP-A-225A	20µm Inlet Solvent Filter with Flangeless Fittings, for 1/8" OD tubing ⁴
UP-A-226A	10µm Inlet Solvent Filter, for 5/16" OD tubing ⁵
UP-A-227A	10µm Inlet Solvent Filter, for 1/4" OD tubing ⁶
UP-A-230A	20µm Inlet Solvent Filter, for 1/4" OD tubing ⁶
UP-A-231A	20µm Inlet Solvent Filter, for 3/16" OD tubing ⁶
UP-A-311	10µm Inlet Solvent Filter with stem, for 1/16" ID tubing
UP-A-311A	10µm Inlet Solvent Filter with Flangeless Fittings, for 1/8" OD tubing ²

¹ Requires a UP-P-100 Fitting (not included). Order the UP-A-210 Kit above, or purchase the UP-P100 alone.

² Includes a UP-P-315 Tefzel™ (ETFE) Nut and a UP-P-300 ETFE Ferrule.

³ Includes a UP-P-132 PEEK™ Nut and a UP-P-133 ETFE Ferrule.

⁴ Includes a UP-P-315 ETFE Nut and a UP-P-300N ETFE Ferrule.

⁵ Includes a UP-U-622 PEEK Nut and a UP-U-660 ETFE Ferrule.

⁶ Includes a UP-U-655 PEEK Nut and a UP-U-650 ETFE Ferrule.

Maximum Suggested Flow Rates

Flow Rates are determined by porosity surface area

Reference	Porosity	Max. Flow Rate
UP-A-222	2 µm	10 mL/min.
UP-A-220	10 µm	40 mL/min.
UP-A-302	10 µm	40 mL/min.
UP-A-302A	10 µm	40 mL/min.
UP-A-309	10 µm	40 mL/min.
UP-A-310	10 µm	40 mL/min.
UP-A-225	20 µm	100 mL/min.
UP-A-225A	20 µm	100 mL/min.
UP-A-226A	10 µm	100 mL/min.
UP-A-227A	10 µm	100 mL/min.
UP-A-230A	20 µm	100 mL/min.
UP-A-231A	20 µm	100 mL/min.
UP-A-311	10 µm	100 mL/min.
UP-A-311A	10 µm	100 mL/min.

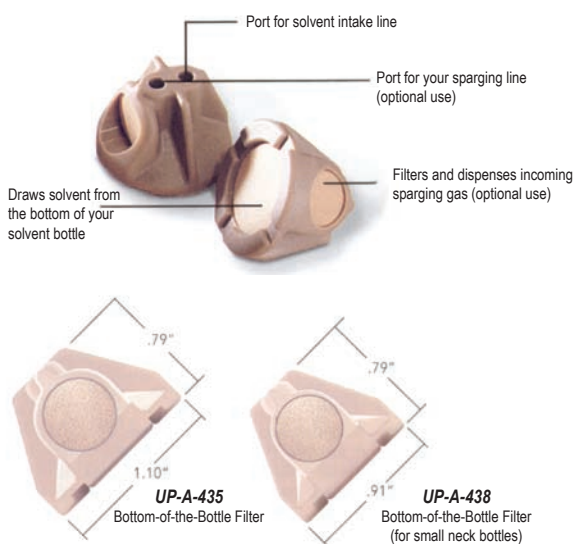
Bottle Caps - PEEK Bottom-of-the-Bottle Solvent Filters

PEEK Bottom-of-the-Bottle Solvent Filters

- Our Most Recommended Filtering Unit!
- 100% PEEK Polymer Construction
- Easy Operation - No fittings required!

These Upchurch Scientific biocompatible filters are made from 100% PEEK polymer. Each has two PEEK frits. The bottom frit (2µm or 10µm) will draw solvents from within 0.28" (2mm) of the bottom of the solvent bottle. The 2µm frit on the side may be used for a 1/8" OD helium sparging line.

To use, simply press fit your appropriately sized Teflon® tubing firmly into the top holes. That's it!



UHMWPE Bottom-of-the-Bottle Solvent Filters

Reference	Description
UP-A-445	10µm UHMWPE Filter Assembly for 1/16" OD tubing ¹
UP-A-446	10µm UHMWPE Filter Assembly for 1/8" OD tubing ²
UP-A-427	10µm UHMWPE Replacement Solvent Filter Cups, 5pk

PEEK Bottom-of-the-Bottle Solvent Filters

Reference	Description
UP-A-435	2µm PEEK Filter for 1/8" OD tubing
UP-A-436	2µm PEEK Filter for 3/16" OD tubing ³
UP-A-437	2µm PEEK Filter for 1/8" OD tubing for small-neck (GL-38) bottles
UP-A-438	10µm PEEK Filter for 1/8" OD tubing for small-neck (GL-38) bottles
UP-A-440	10µm PEEK Filter for 1/8" OD tubing
UP-A-441	10µm PEEK Filter for 3/16" OD tubing ³
UP-A-450	2µm PEEK Filter for 1/16" OD tubing
UP-A-451	10µm PEEK Filter for 1/16" OD tubing
UP-A-452	2µm PEEK Filter for 1/16" OD tubing for small-neck (GL-38) bottles
UP-A-453	10µm PEEK Filter for 1/16" OD tubing for small-neck (GL-38) bottles

¹ Includes a UP-P-200 Tefzel™ Ferrule and a UP-P-245 Teflon™ PFA Nut

² Includes a UP-P-300 Tefzel™ Ferrule and a UP-P-345 Teflon™ PFA Nut

³ Typically for Waters® systems.

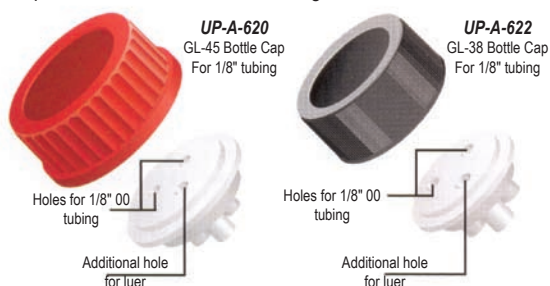
Bottle Caps

- Inexpensive
- Extremely Simple - No Threaded Ports or Fittings!

If you are looking for a bottle cap that is quick and easy, but still allows many options, we have just what you need!

These injection-molded caps are manufactured of inert Tefzel™ and polypropylene. They fit standard GL-45 or smaller-neck GL-38 bottles.

Three holes are provided in each insert. With two of the holes you simply push your tubing straight through. The third hole, with a luer taper, can be used for a number of Options. Any male luer will fit snugly in this hole, or you can use our UP-A-626 or UP-A-627 Plug. The exceptions are the UP-A-610 and UP-A-610B Bottle Caps. Please see the note to the right.



Bottle Caps for UP-GL-45, 1L Bottles

Reference	Description
UP-A-610	for 3/16" OD tubing, red
UP-A-610B	for 3/16" OD tubing, blue
UP-A-620	for 1/8" OD tubing, red
UP-A-620B	for 1/8" OD tubing, blue
UP-A-630	for 1/16" OD tubing, red
UP-A-630B	for 1/16" OD tubing, blue

Bottle Caps for UP-GL-38, 4L Bottles

Reference	Description
UP-A-622	for 1/8" OD tubing, black or white ¹
UP-A-632	for 1/16" OD tubing, black or white ¹



Bottle Cap Plugs and Adapter

Reference	Description
UP-A-626	Bottle Cap Plug for luer hole, UHMWPE
UP-A-627	Filter Bottle Cap Plug for luer hole, UHMWPE with 20 µm stainless steel Irit
UP-A-628	Bottle Cap Plug for 1/16" or 1/8" hole, UHMWPE
UP-A-629	Filter Bottle Cap Plug for 1/16" or 1/8" hole, UHMWPE with 20 µm stainless steel Irit
UP-P-600	Bottle Cap Adapter for 1/8" hole ² , PEEK to connect 1/32" OD tubing

¹ Designed for use with The UP-A-622 and UP-A-632 Bottle Cap rings now come in black or white, depending on availability

Tk Precolumn and Inline Filters

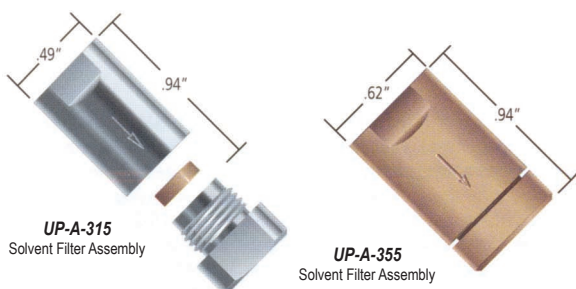
Increase the Life of your Column

A precolumn filter placed between the sample injection valve and the HPLC column protects the column from particles originating in the sample and from pump/valve seal wear. Why use a precolumn filter when there is a frit at the head of the column itself? Because changing the column frit risks ruining the column by disturbing the column packing. A precolumn filter provides relatively inexpensive insurance against column damage, and changing its frit is easy.

Precolumn Filters

- 0.5 µm or 2 µm Frits Available
- Great Column Protection
- Stainless Steel and Biocompatible PEEK™ Polymer Versions Available

These Precolumn Filters have .020" diameter thru-holes and 8° distribution cones for minimal band spreading and mixing. They are available in stainless steel (UP-A-315/UP-A-316), pressure rated to 9,000 psi (620 bar) and biocompatible PEEK polymer versions (UP-A-355/UP-A-356), pressure rated to 5,000 psi (345 bar). Choose either the 0.5 µm or 2 µm version to filter particulates from your flow path.



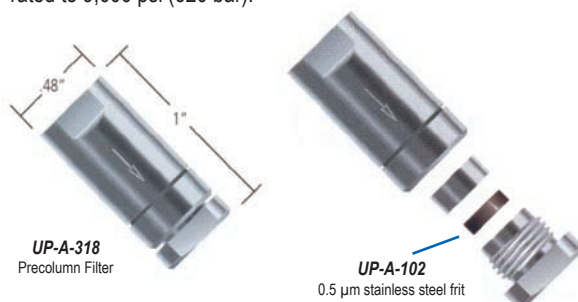
Precolumn Filters

Reference	Description	Swept Volume*
UP-A-315	2µm Solvent Filter Assembly, with UP-A-101 Frit	1.4 µL
UP-A-316	0.5µm Solvent Filter Assembly, with UP-A-102 Frit	1.3 µL
UP-A-355	2µm Solvent Filter Assembly, with UP-A-700 ID PEEK Frit, Biocompatible	1.4 µL
UP-A-356	0.5µm Solvent Filter Assembly, with UP-A-701 ID PEEK Frit, Biocompatible	1.3 µL
UP-A-101x	2µm Replacement Frits, Stainless Steel, 10-pk	0.74 µL
UP-A-102x	0.5µm Replacement Frits, Stainless Steel, 10-pk	0.61 µL
UP-A-700	2µm Replacement Frit, PEEK Polymer	0.74 µL
UP-A-701	0.5µm Replacement Frit, PEEK Polymer	0.61 µL

Ultra-Low Volume Precolumn Filter

- Our Lowest Swept Volume Precolumn Filter for 1/16" OD Tubing

With a .010" diameter thru-hole, our UP-A-318 Filter has one of the lowest swept volumes (0.61µL*) of any HPLC filter available, ensuring maximum protection with no band broadening. Pressure rated to 9,000 psi (620 bar).



Ultra-Low Volume Precolumn Filters

Reference	Description	Swept Volume*
UP-A-318	0.5µm Solvent Filter Assembly, with UP-A-102 Frit	0.84 µL
UP-A-102x	0.5µm Replacement Frits, Stainless Steel, 10-pk	0.61 µL

Inline Solvent Filter

- Excellent for General Purpose In line Use
- Placed between the pump and sample injection valve, our Inline Solvent Filter traps particles released through normal piston seal wear. Without an inline filter, these particles can be flushed through your system's tubing to the sample injection valve, resulting in valve damage and further system contamination. This filter is pressure rated to 8,500 psi (586 bar) and uses a 2µm stainless steel frit with a PEEK ring. An 8° distribution cone spreads the flow of the mobile phase over the entire surface of the frit, while the .050" diameter thru-hole allows proper solvent flow.



Inline Solvent Filters

Reference	Description	Swept Volume*
UP-A-314	2.0µm Solvent Filter Assembly, with UP-A-100 Frit	4.0 µL
UP-A-100x	2.0µm Replacement Frits, Stainless Steel, 10-pk	1.4 µL

* Swept volumes include/reflect theoretical frit volume values.

Deuterium Lamps for a Detector Tk

Agilent Deuterium Lamps



Cat.No	Model	Description	Ref. Agilent
TR-G1103-60001	Agilent 1100	Visible Light Bulb	N/A
TR-LD-AGI-100	Agilent 1050 A	D2 Lamp	79853-60002
TR-LD-AGI-100LL	Agilent 1050 A	Longlife D2 Lamp	79851-60002
TR-LD-AGI-101	Agilent 1050 C 1050 DAD 1090, 1040	D2 Lamp	79883-60002
TR-LD-AGI-104	Agilent 1100 VWD	D2 Lamp	G1314-60100
TR-LD-AGI-104-LL	Agilent 1100 VWD	Longlife D2 Lamp	2140-0585
TR-LD-AGI-105	Agilent 1100 DAD 8453	D2 Lamp	2140-0590
TR-LD-AGI-105LL	Agilent 1100 DAD	Longlife D2 Lamp	5181-1530
TR-LD-AGI-106	Agilent 8452	D2 Lamp	08452-60104
TR-LD-AGI-107	Agilent CE System Lamp		2140-0585
TR-LX-AGI-100	Agilent 1046 FLD,	Xe Lamp	2140-0549
TR-LX-AGI-101	Agilent 1100 FLD,	Xe Lamp	2140-0600

Waters Deuterium Lamps



Cat.No	Model	Description	Ref. Waters
TR-LD-WAT-100	Waters 480LC 481LC 481 Lambda Max	D2 Lamp	WAT099499
TR-LD-WAT-101	Waters 484	D2 Lamp	WAT080357
TR-LD-WAT-102	Waters 486	D2 Lamp	WAT080678
TR-LD-WAT-104LL	Waters 996, 2996 PDA	Longlife D2 Lamp	WAT052586
TR-LD-WAT-105LL	Waters 2487 Alliance	Longlife D2 Lamp	WAS081142
TR-LD-WAT-134	Waters 990/991/994	D2 Lamp	WAT021516
TR-LX-WAT-150MO	Waters 470 474 2475	Xe Lamp	3132

Shimadzu Deuterium Lamps



Cat.No	Model	Description	Ref. Shimadzu
TR-LD-SHI-100	Shimadzu LC4A LC6A SPD2A SPD6A SPD6AV SP4	D2 lamp	062-65056-03
TR-LD-SHI-101-LL	Shimadzu SPD10A, 10A3, 10AV, 10AVP, 20A, 20AV	Longlife D2 Lamp	228-34016-02
TR-LD-SHI-102	Shimadzu Spectrophotometer	D2 Lamp	200-75503-00
TR-LD-SHI-102LL	Shimadzu Spectrophotometer	Longlife D2 Lamp	200-75503-01
TR-LD-SHI-103LL	Shimadzu LC2010	Longlife D2 Lamp	228-37401
TR-LD-SHI-104	Shimadzu SPD-M10A, M10AV	D2 Lamp	N/A
TR-LX-SHI-150MO	Shimadzu RF1501.5301 5000	Xe Lamp	200-81500
TR-LX-SHI-150S	Shim. RF540 RF535 RF551 RF500 RF10A RF10AXL	Xe Lamp	N/A
TR-LX-SHI-75XE	Shimadzu RF530 RF510	Xe Lamp	N/A

Varian Deuterium Lamps



Cat.No	Model	Description	Ref. Varian
TR-LD-VAR-100	Varian 2050 2550 5500	D2 Lamp	
TR-LD-VAR-101	Varian 75 series, AA & Spectra A series Superscan	D2 Lamp	5610021800
TR-LD-VAR-102	Varian Cary 1 4 5 100 300 400 500	D2 Lamp	5610013250
TR-LD-VAR-103LL	Varian UV50/100/200 9050 Prostar 310, Vista 5000, 5500	Longlife D2 Lamp	0391615691
TR-LD-VAR-103LLE	Varian UV50/100/200 9050 Prostar 310 Retur bracked	Longlife D2 Lamp	N/A
TR-LD-VAR-104	Varian Prostar 330 DAD	D2 Lamp	393570502
TR-LD-VAR-105LL	Varian Prostar 325 335	Longlife D2 Lamp	110715400
TR-LD-VAR-107	Varian Cary 2200/2300, 210, 219	D2 Lamp	5618000100
TR-LD-VAR-122	Varian UV10	D2 Lamp	N/A
TR-LD-VAR-149	Varian UV634 635 Variscan	D2 Lamp	56-100132-00
TR-LX-VAR-100	Varian Prostar 320 , UV-1	Xe Lamp	R007200556
TR-LX-VAR-101	Varian 9070	Xe Lamp	N/A
TR-LX-VAR-152H	Varian Prostar 363	Xe Lamp	392613103

Tk Deuterium Lamps for a Detector

Merck Hitachi Deuterium Lamps



Cat.No	Model	Description	Ref. Hitachi
TR-LD-MEH-100	Hitachi L & U Series	D2 Lamp	HITA 890-2430
TR-LD-MEH-101	Hitachi 100-10, 124, 100-40, 100-50, 100-60	D2 Lamp	982-1035
TR-LD-MEH-102	Hitachi 101, 102, 111	D2 Lamp	N/A
TR-LD-MEH-152	Hitachi 181	D2 Lamp	N/A
TR-LX-MEH-152H	Hitachi Fluorescence Detector	Xe Lamp	N/A

Dionex Deuterium Lamps



Cat.No	Model	Description	Ref. Dionex
TR-LD-DIO-100	Dionex CES1 CZESYST 2001 VDM-2	D2 Lamp	40651
TR-LD-DIO-102LL	Dionex PDA-100, PDA-3000, AD-25	Longlife D2 Lamp	939016T
TR-LD-DIO-103	Dionex AD20	D2 Lamp	N/A
TR-LD-DIO-104	Ultimate Dionex UVD 3000 Nano LC	D2 Lamp	N/A
TR-LD-DIO-108	Dionex Durrum	D2 Lamp	N/A
TR-LD-GYN-100LL	Dionex / Gynkotek UVD 320/160/170S 340 DAD	Longlife D2 Lamp	5053, 1204
TR-LX-DIO-150S	Dionex Fluorescence Detector	Xe Lamp	N/A

Gilson Deuterium Lamps



Cat.No	Model	Description	Ref. Gilson
TR-LD-GIL-100	Gilson Holochrome	D2 Lamp	N/A
TR-LD-GIL-101	Gilson 115/116/117/118/119/151/152/155/156	D2 Lamp	100326
TR-LD-GIL-105	Gilson 170 D.A.D.	D2 Lamp	2140-0590
TR-LD-GIL-105LL	Gilson 170 D.A.D.	Longlife D2 Lamp	5181-1530
TR-LX-GIL-150MO	Gilson 122	Xe Lamp	N/A

TSP Deuterium Lamps



Cat.No	Model	Description	Ref. TSP
TR-LD-TSP-100	TSP 3100	D2 Lamp	N/A
TR-LD-TSP-101	TSP SP8400 8480 8430 8440 8450 8490 8200	D2 Lamp	3302-9540
TR-LD-TSP-102	TSP UV100/1000/2000/3000, Focus, CE Series	D2 Lamp	9551-0023
TR-LD-TSP-106	TSP UV 6000 DAD Surveyor	D2 Lamp	108052
TR-LD-TSP-150	TSP LC871	D2 Lamp	N/A
TR-LD-TSP-101	TSP FL2000, FL3000, LC304	Xe Lamp	N/A

ABI Deuterium Lamps



Cat.No	Model	Description	Ref. ABI
TR-LD-ABI-100	ABI 757 759 783A 785A 1000S FS980 120A 130A	D2 Lamp	2900-0484

Deuterium Lamps for a Detector **Tk**

Perkin Elmer Deuterium Lamps

Cat.No	Model	Description	Ref. Perkin Elmer
TR-LD-PER-100	Perkin Elmer Series 200	D2 Lamp	N2920149
TR-LD-PER-101	PE AAnalyst 100,300,3100,3110,3300	D2 Lamp	N0370119
TR-LD-PER-102	Perkin Elmer Series 200 DAD	D2 Lamp	N2922046
TR-LD-PER-103	PE LC235,1335,LC55,65,75,85,95,135 Lambda 1.3 Integral	D2 Lamp	N2351285
TR-LD-PER-104	Perkin Elmer LC240, 90, 290, 295, 481	D2 Lamp	02712224
TR-LD-PER-105	Perkin Elmer LC295	D2 Lamp	02712266
TR-LD-PER-149	PE Lambda Array 3480	D2 Lamp	C6760011
TR-LD-PER-152	PE M46 M55 55E M57 575 Lambda 1 3 6 LC55 65T	D2 Lamp	N/A
TR-LD-PER-160	PE Lambda 2 4 5 7 to 45 800 900 Bio, 55X series	D2 Lamp	B016-0917
TR-LD-PER-161	Perkin Elmer 3030, 4000, 4100, 5000 Agnelist Zeeman	D2 Lamp	0057-0194
TR-LD-PER-162	Perkin Elmer 1100 , 2100, 4100	D2 Lamp	B0148615
TR-LD-PER-175	PE M550S 550SE M551S M552 M554 555	D2 Lamp	N/A
TR-LD-PER-178	PE 400 410 420 430	D2 Lamp	N/A
TR-LD-PER-181	PE M550 M551 M552 M555	D2 Lamp	B0160917
TR-LD-PER-150MO	PE 203 204 MPF2A MPF3 MPF4 650	Xe Lamp	N/A

Jasco Deuterium Lamps

Cat.No	Model	Description	Ref. Jasco
TR-LD-JAS-100	Jasco 870 875	D2 Lamp	5330-0097
TR-LD-JAS-101	Jasco 975 (B & C Series) 1570 1575, 2075	D2 Lamp	5330-0091
TR-LD-JAS-102	Jasco 530, 550, 560 570	D2 Lamp	N/A
TR-LD-JAS-103	Jasco 975 (A series)	D2 Lamp	5330-0092
TR-LD-JAS-150MO	Jasco 820 821	Xe Lamp	N/A
TR-LD-JAS-274	Jasco 920 921 1520	Xe Lamp	N/A

Kontron Deuterium Lamps

Cat.No	Model	Description	Ref. Kontron
TR-LD-KON-101	Kontron 332/335/430/432/433/770 Uvikon 430	D2 Lamp	93-00636
TR-LD-KON-102LL	Kontron 535DAD, 332/335/430/432/433/770	Longlife D2 Lamp	91-91494
TR-LD-KON-103LL	Kontron 540DAD 540+ 545V	Longlife D2 Lamp	54-02007
TR-LD-KON-104	Kontron Uvikon 922, 923, 943, 930, 932, 933, 940	D2 Lamp	90-007825T
TR-LD-KON-105	Kontron 735, Uvikon 722, 730	D2 Lamp	54-02002
TR-LT-KON-106	Kontron , Uvikon XL, XS, CSA	Tungsten Lamp	96-90297
TR-LD-KON-134	Kontron 440 DAD	D2 Lamp	91-91095
TR-LX-KON-150MO	Kontron SFM25	Xe Lamp	N/A
TR-LT-KON-100	Kontron 900 series	Tungsten Lamp	N/A

Biorad Deuterium Lamps

Cat.No	Model	Description	Ref. Biorad
TR-LD-BIO-100	Biorad 1305 1306	D2 Lamp	N/A
TR-LD-BIO-101	Biorad 206, 300, 1790, BioDimensions,	D2 Lamp	930-6106
TR-LD-BIO-125	Biorad HPE100, MDL1790, CE2000, Biofocus	D2 Lamp	N/A

Beckman Deuterium Lamps

Cat.No	Model	Description	Ref. Beckman
TR-LD-BEC-100	Beckman 163	D2 Lamp	22 947029
TR-LD-BEC-101	Beckman DU500 DU530	D2 Lamp	N/A
TR-LD-BEC-102	Beckman DU600 620 630 640 650 6000 7000 7500	D2 Lamp	514366
TR-LD-BEC-103	Beckman 166	D2 Lamp (prealigned)	239372
TR-LD-BEC-104	Beckman 164 165 167 System Gold 5200 Acta 24-36	D2 Lamp	236920
TR-LD-BEC-105	Beckman 168	D2 Lamp (prealigned)	538711
TR-LD-BEC-106	Beckman DU60 DU62 DU64 DU65 DU68 DU 70	D2 Lamp	596791
TR-LD-BEC-108	Beckman P/ACE 2000	D2 Lamp	359058
TR-LD-BEC-109	Beckman P/ACE 5000 5010 5500 5510	D2 Lamp	N/A

Tk Deuterium Lamps for a Detector

Beckman Deuterium Lamps

Cat.No	Model	Description	Ref. Beckman
TR-LD-BEC-110	Beckman P/ACE MDQ	D2 Lamp	N/A
TR-LD-BEC-149	Beckman 155	D2 Lamp	22 887153

Philips and Unicam Deuterium Lamps

Cat.No	Model	Description	Ref. Philips/Unicam
TR-LD-PHU-100	Unicam 4225	D2 Lamp	N/A
TR-LD-PHU-101	Unicam UV & Helios series	D2 Lamp	9423U/9004B
TR-LD-PHU-102	Unicam 4110	D2 Lamp	4013-166-66428
TR-LD-PHU-104	Unicam SP700 800 1700 1750 1800 8000 8800 8820	D2 Lamp	4013-160-24263
TR-LD-PHU-109	Unicam SP8450 8700 8710 8720 8730 8740 8750	D2 Lamp	N/A
TR-LD-PHU-121	Unicam SP8620 SP8625	D2 Lamp	N/A
TR-LD-PHU-127	Unicam SP8 8150 8200 8400 8500 8600 8740 5600	D2 Lamp	4013-163-75402
TR-LD-PHU-150	Unicam LC3 LCUV 4020 4025	D2 Lamp	4013-164-45861
TR-LD-PHU-171	Unicam 4021 4120 D.A.D.	D2 Lamp	4013-164-39401
TR-LD-PYU-120	Pye Unicam SP500	D2 Lamp	4013-160-94202

LKB-Pharmacia Deuterium Lamps

Cat.No	Model	Description	Ref. LKB
TR-LD-LKB-100	LKB Pharmacia 2141 4050 4054 Ultraspec	D2 Lamp	N/A
TR-LD-LKB-101	LKB Productor 2140	D2 Lamp	8010-3135

Cecil Deuterium Lamps

Cat.No	Model	Description	Ref. Cecil
TR-LD-CEC-111	Cecil Series 2 1000 to 9000 CE	D2 Lamp	N/A

Knauer Deuterium Lamps

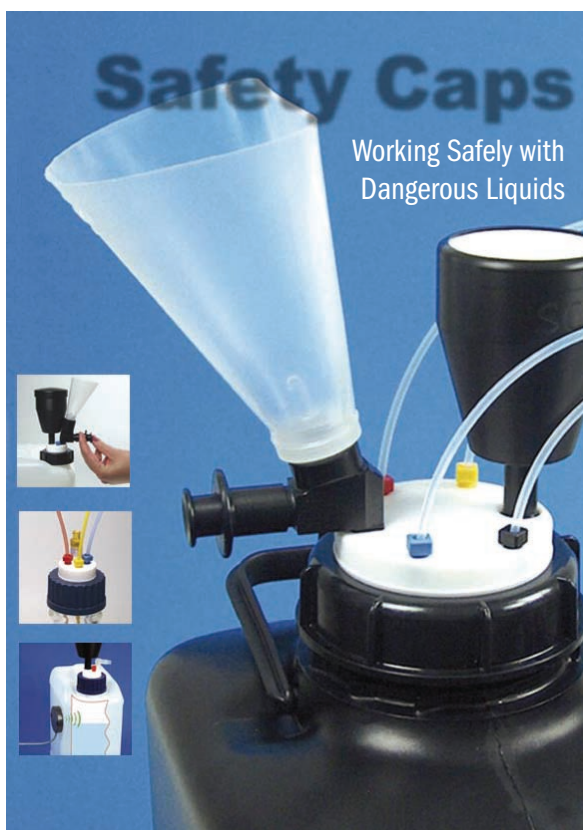
Cat.No	Model	Description	Ref. Knauer
TR-LD-KNA-101LL	Knauer Wellichrom K2000 K2500 K2501 D2	Longlife D2 Lamp	N/A

LDC Deuterium Lamps

Cat.No	Model	Description	Ref. LDC
TR-LD-LDC-100	LDC 3000 & 4000 Series Spectromonitor I II III D	D2 Lamp	108035
TR-LD-LDC-102	LDC 5000 D.A.D.	D2 Lamp	N/A
TR-LX-LDC-150MO	LDC FM4100	Xe Lamp	

ACS Deuterium Lamps

Cat.No	Model	Description	Ref. ACS
TR-LD-ACS-100	ACS LC 750 11E 12	D2 Lamp	N/A



Dangers and hazards in many laboratories



Safety for HPLC users

Vapours and gases of dangerous liquids can cause damage to your health and to your environment. Bottles and containers with unsafe contents always have to be sealed reliably to avoid health hazards and environment pollution.

Many directives are already regulated by law - in addition, you should always take care of your health and integrity yourself.

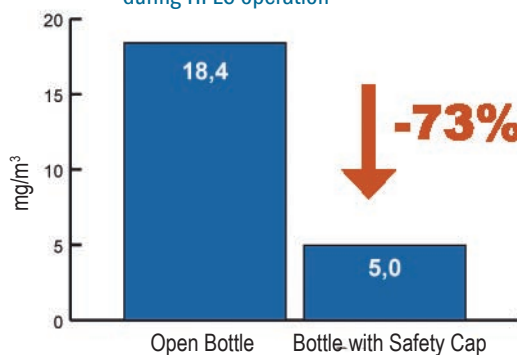
Troubleshooting by SCAT Safety Caps

- **No escape of hazardous vapours**
Integrated air valve and exhaust filters keep your containers sealed safely.
- **No pollution**
Containers always remain shut, even during extraction or filling of liquids.
- **No shift of tubing**
Tubes remain fixed - no air intake into sensitive equipment like chromatography systems
- **Easy container exchange**
Safety Caps are freely turnable without twisting tubes.
- **No air intake**
No interruption of chromatography processes.

Reduce pollution

Ecological and sanitary damage can be reduced intensely by SCAT Safety Caps. Officially accredited testing laboratories verify a reduction of toxic concentrations in the air amounting to 73%.

Emissions of Acetronile in a test laboratory during HPLC operation

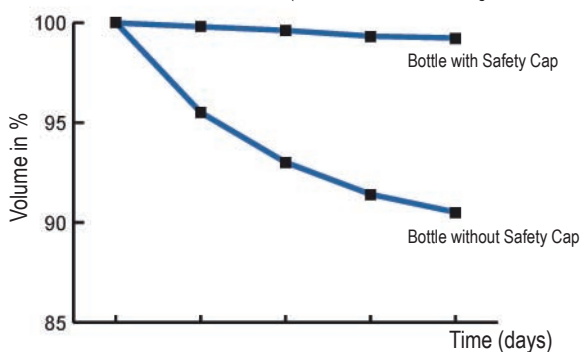


Avoid shrinkage

Spend less money on chemicals - SCAT Safety Caps avoid decrease of expensive solvents which otherwise evaporate into extraction hoods or into the environmental air.

Solvent shrinkage

Methanol-Water mixture (80/20 after 1 week of testing)



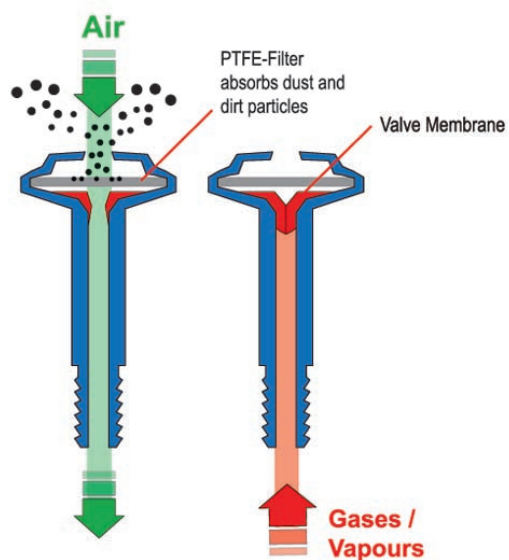
Tk HPLC Safety Caps

Safe and comfortable

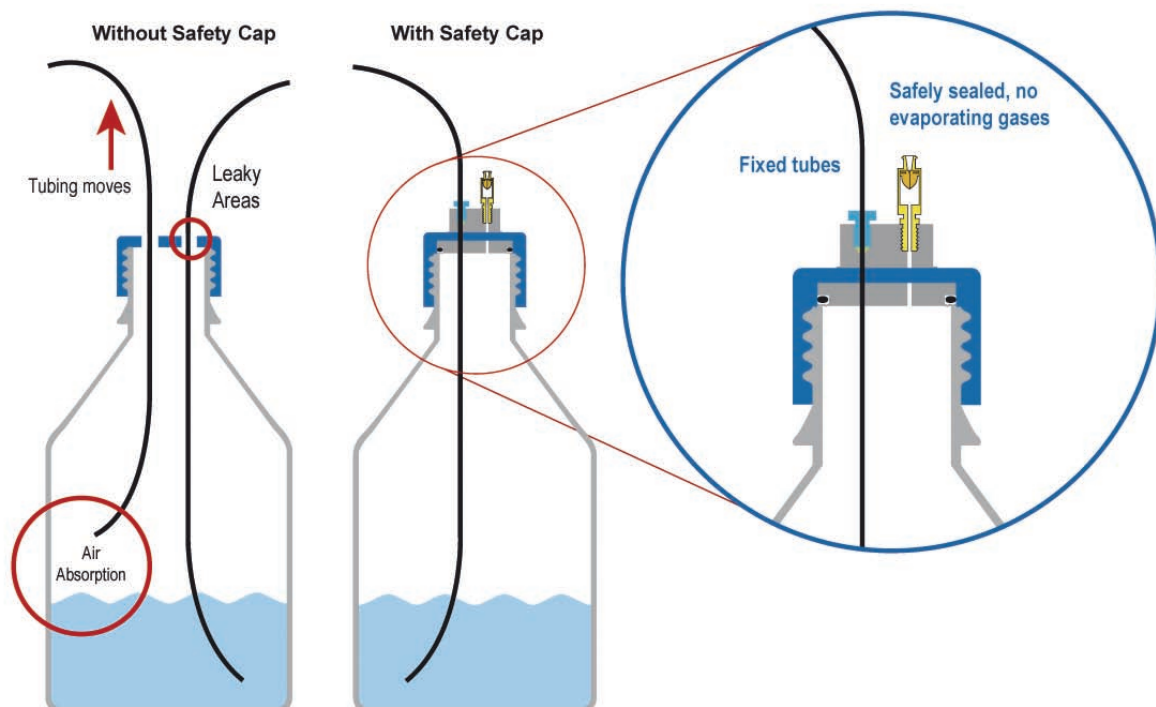
Safety Caps rotate freely without twisting tubes. Even when using multiple connectors, you can easily exchange your containers and reservoirs without interruptions.

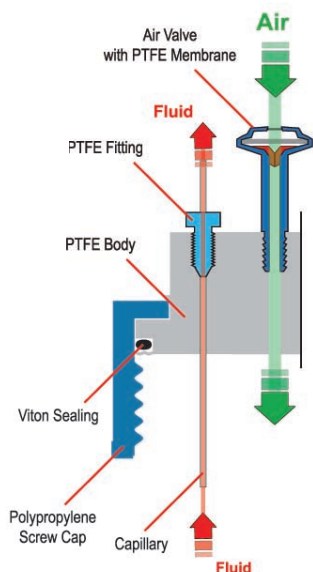


Air Valve Function



The Difference in Liquid Handling





Safety Caps GL 45 - Safe Fluid Supply

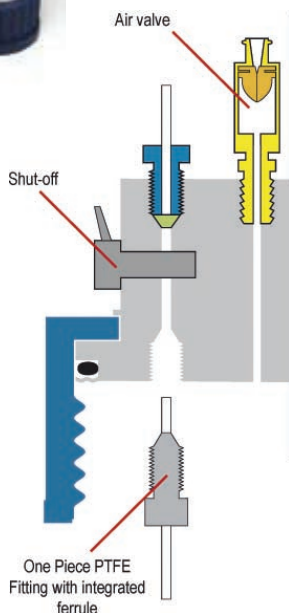
Safe venting for pressure equalization during the solvent supply by integrated air valve. Protection against dangerous solvent vapours.

Available connectors for tubing:

- 1.6mm (1/16") OD
- 2.3mm OD
- 3.2mm (1/8") OD

Cat.No	Description
SCA-107019	Safety Cap I, GL 45 1 port for 3.2mm (1/8") OD tubing
SCA-107909	Safety Cap II, GL 45 2 ports for 3.2mm (1/8") OD tubing
SCA-107910	Safety Cap III, GL 45 3 ports for 3.2mm (1/8") OD tubing
SCA-108032	Safety Cap I, GL 45 for 3/16" tubing 1 port for 4.7mm (3/16") OD tubing

Adapters for other thread sizes available



Safety Caps GL 45 - with Shut-Off

Remove or exchange your reservoirs easily by using the **shut-off** to stop the liquid flow. Especially recommended for HPLC use.

Available connectors for tubing:

- 1.6mm (1/16") OD
- 2.3mm OD
- 3.2mm (1/8") OD

Cat.No	Description
SCA-107119	Safety Cap I with Shut-Off, GL 45 1 port for 3.2mm (1/8") OD tubing
SCA-107919	Safety Cap II with Shut-Off, GL 45 2 ports for 3.2mm (1/8") OD tubing
SCA-107920	Safety Cap III with Shut-Off, GL 45 3 ports for 3.2mm (1/8") OD tubing

Adapters for other thread sizes available



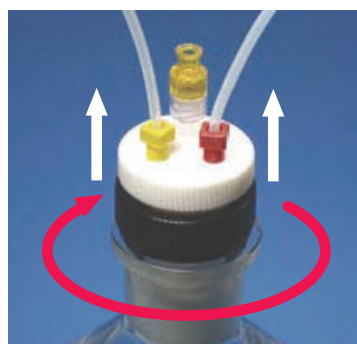
Safety Caps (2 in 1) for GL 45

Ports with shut-off plus 1 standard port each.

Available connectors for tubing:

- 1.6mm (1/16") OD
- 2.3mm OD
- 3.2mm (1/8") OD

Cat.No	Description
SCA-107219	Safety Cap II (2 in 1), GL 45 1 port (standard), 1 port with shut-off
SCA-107319	Safety Cap III (2 in 1), GL 45 1 port (standard), 2 ports with shut-off



Safety Cap for NS 29/32mm bottles

For ground neck bottles with NS 29/32mm diameter. With counter nut for easy disconnecting and removal even after long time of use. **Ports for tubing with 1.6mm (1/16"), 2.3mm and 3.2mm (1/8") OD.**

Cat.No	Description	Pk
SCA-107607	Safety Cap for NS 29/32 bottles 2 ports for tubing with 3.2mm (1/8") OD	1



Adapter: GL45 to NS 29/32mm

For use with GL45 Safety Caps on bottles with a NS 29/32mm ground neck. **With counter nut** for easy disconnecting and removal even after long time of use.

Cat.No	Description	Pk
SCA-107509	Adapter GL45 to NS 29/32mm Core material: PTFE. Counter nut: PP.	1



NEW !!!

Air Valve for Safety Caps

Appropriate for all Safety Caps. **Recommended service life: 6 months..**

Cat.No	Description	Pk
SCA-107010	Air Valve for Safety Caps	1
SCA-117010;1	Air Valve with Filter Function	1



Bottles (Clear Glass) - GL 45 Thread

Round bottles with scale (ml) and screw cap.
Also available with protective covering!

Cat.No	Volume	Cat.No. with protective Covering
SCA-501117	250 ml	SCA-101994
SCA-501116	500 ml	SCA-101995
SCA-501113	1000 ml	SCA-101996
SCA-501118	2000 ml	SCA-101997
SCA-501125	5000 ml	SCA-101998



Bottles (Brown Glass) - GL 45 Thread

Round bottles (brown glass) with scale (ml) and screw cap.

Cat.No	Volume
SCA-501121	250 ml
SCA-501120	500 ml
SCA-501119	1000 ml



Square Bottles (Clear Glass) - GL 45 Thread

Four-cornered bottles for space saving placement. Each bottle with scale (ml) and screw cap.

Cat.No	Volume
SCA-501112	250 ml
SCA-501115	500 ml
SCA-501110	1000 ml

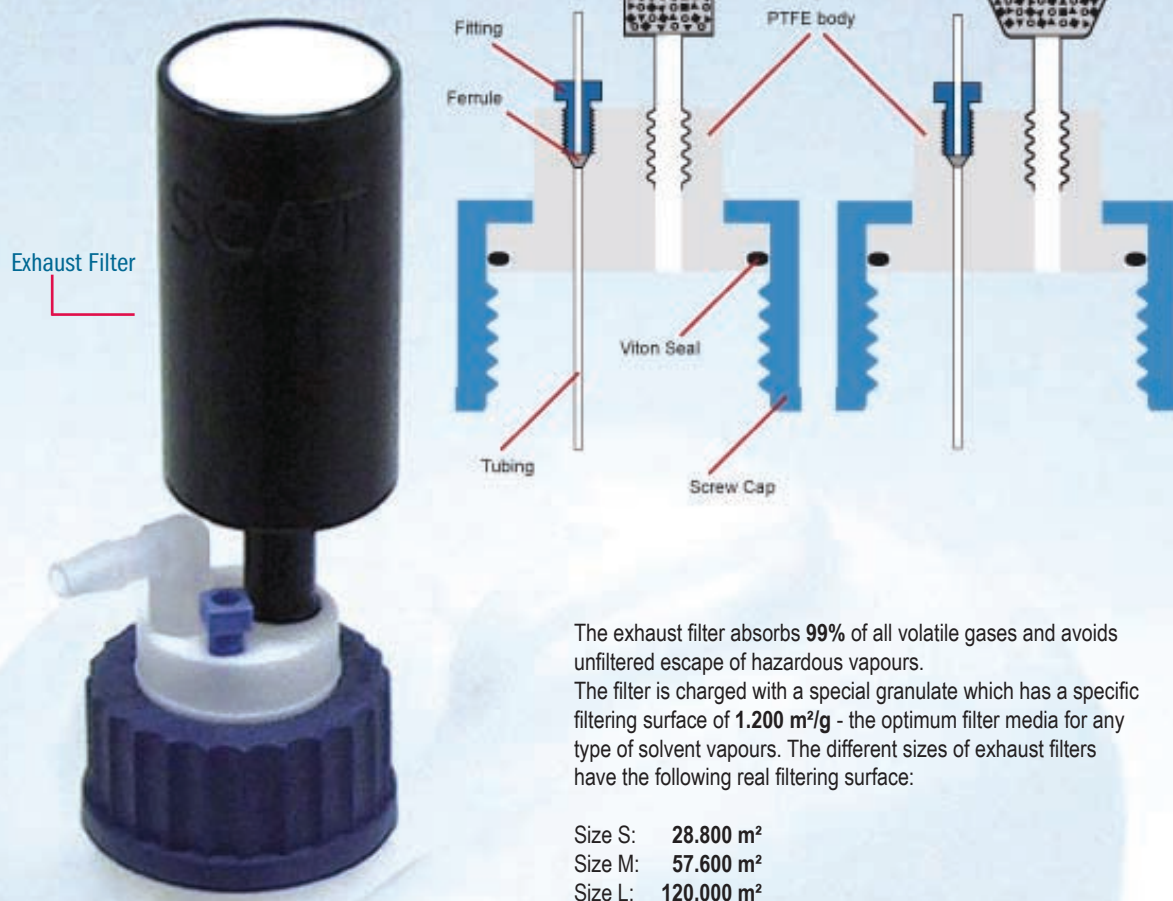
Safety Waste Caps for Safe Disposal of Liquid Waste

Find appropriate Safety Waste Caps for most common thread sizes on the following pages.

The exhaust filters can be used with any SCAT Safety Waste Cap.

Only pure PTFE and PE is used for the construction of Safety Waste Caps, so they have a high chemical resistance against aggressive organic solvents.

The exhaust filters are suitable for all Safety Waste Caps and can be exchanged easily.

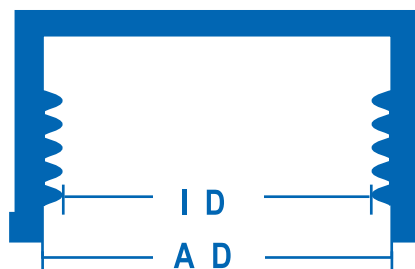


Safety Waste Caps

Each Safety Waste Cap has got a port for the exhaust filter.
Fittings and ferrules for tubing with 2.3mm and 3.2mm (1/8") OD are included in delivery.

Adapters and ports for other tubing size are also available.

Please note this information for ordering:



ID = Internal Diameter of the Cap Thread
AD = External Diameter of the Cap Thread



Thread S 60/61



ID approx. 55.5 mm, AD approx. 61 mm



Cat Nbr.	SCA-107918	SCA-107925	SCA-107916	SCA-107944
Tubing Ports	3x 2.3/3.2mm OD	2x 2.3/3.2mm OD	3x 2.3/3.2mm OD	2x 2.3/3.2mm OD
Leak Ports	---	1x 6-8mm ID	---	1x 6-8mm ID
Antistatic Port	---	---	Yes	Yes

Note: The exhaust filteres are not included. Please order your exhaust filteres separately.



S 60 / S 61 - Containers (PE-HD - optional: conductive PE-HD)

Select from different Materials: PE-HD or **electrically conductive PE-HD**.
Each container delivered with screw cap and UN approval.

Cat Nbr.	Volume	Material	Measurements (LxBxH) in mm
SCA-107953	10 L	PE-HD (conductive)	198 x 264 x 298
SCA-108028	10 L	PE-HD (conductive)	230 x 195 x 340
SCA-108027	20 L	PE-HD (conductive)	298 x 198 x 498
SCA-107956	20 L	PE-HD (translucent)	290 x 255 x 390
SCA-107959	30 L	PE-HD (translucent)	380 x 280 x 400
SCA-108042	10 L	PE-HD (conductive)	
NEW		with level floater	380 x 280 x 420
SCA-108043	20 L	PE-HD (conductive)	
NEW		with level floater	298 x 198 x 518
SCA-108056	20 L	PE-HD (translucent)	
NEW		with level floater	290 x 255 x 450

Tk HPLC Safety Waste Caps



Thread GL 45



ID approx. 41.5 mm, AD approx. 45 mm



Leak port for bigger tubing sizes

Cat Nbr.	SCA-107912	SCA-107923
Tubing Ports	3x 2.3/3.2mm OD	2x 2.3/3.2mm OD
Leak Ports	---	1x 6-8mm ID
Antistatic Port	---	---



GL 45 - Containers (PE-HD)

Qualified for any Safety Caps with GL45 thread.
Made of chemically resistant PE-HD.

Cat Nbr.	Volume	Measurements (LxBxH) in mm
SCA-107950	2.5 L	150 x 122 x 194
SCA-107951	5.0 L	192 x 145 x 247
SCA-107952	10.0 L	231 x 192 x 317



Thread S 55



ID approx. 50.5 mm, AD approx. 55 mm



Cat Nbr.	SCA-107917	SCA-107924	SCA-107936	SCA-107943
Tubing Ports	3x 2.3/3.2mm OD	2x 2.3/3.2mm OD	3x 2.3/3.2mm OD	2x 2.3/3.2mm OD
Leak Ports	---	1x 6-8mm ID	---	1x 6-8mm ID
Antistatic Port	---	---	Yes	Yes



S 55 - Containers (PE-HD)

Qualified for any Safety Caps with S55 thread.
Made of chemically resistant PE-HD.

Cat Nbr.	Volume	Thread	Measurements (LxBxH) in mm
SCA-107957	5.0 L	S 55	182 x 162 x 235
SCA-107955	10.0 L	S 55	230 x 196 x 310



Thread S 51



ID approx. 45.5 mm, AD approx. 50 mm



Cat Nbr.	SCA-107930	SCA-107922	SCA-107935	SCA-107942
Tubing Ports	3x 2.3/3.2mm OD	2x 2.3/3.2mm OD	3x 2.3/3.2mm OD	2x 2.3/3.2mm OD
Leak Ports	---	1x 6-8mm ID	---	1x 6-8mm ID
Antistatic Port	---	---	Yes	Yes

Note: The exhaust filters are not included. Please order your exhaust filters separately.



S 51 - Containers (PE-HD)

Qualified for any Safety Caps with S51 thread.
Made of chemically resistant PE-HD.

Cat Nbr.	Volume	Thread	Measurements (LxBxH) in mm
SCA-107958	5.0 L	S 51	165 x 190 x 223



Thread S 65



ID approx. 62 mm, AD approx. 65.5 mm



Ports and connectors for
other tubing sizes are
also available !

Cat Nbr.	SCA-108046	SCA-108047
Tubing Ports	5x 2.3/3.2mm OD	4x 2.3/3.2mm OD
Leak Ports	---	1x 6-8mm ID
Antistatic Port	---	---



S 65 - Containers (PE-HD)

Qualified for any Safety Caps with S65 thread.
Made of chemically resistant PE-HD.

Cat Nbr.	Volume	Measurements (LxBxH) in mm
SCA-107704	10 L	Round Container S65 Height 430mm, Original Screw Cap Ø 210mm.



Thread S 70/71



ID approx. 66 mm, AD approx. 71.5 mm



Cat Nbr.	SCA-107913	SCA-107926	SCA-107915	SCA-107945
Tubing Ports	3x 2.3/3.2mm OD	2x 2.3/3.2mm OD	3x 2.3/3.2mm OD	2x 2.3/3.2mm OD
Leak Ports	---	1x 6-8mm ID	---	1x 6-8mm ID
Antistatic Port	---	---	Yes	Yes



S 70 / S 71 - Containers (PE-HD, electroconductive)

Qualified for any Safety Caps with S70 / 71 thread.

Made of chemically resistant PE-HD, **electroconductive or translucent**

Cat Nbr.	Volume	Measurements (LxBxH) in mm	Kind
SCA-107954	30 L	265 x 425 x 365	electroconductive
SCA-107940	60 L	330 x 360 x 620	electroconductive
SCA-107710	60 L	330 x 360 x 620	translucent



Thread B 83



ID approx. 83 mm, AD approx. 90 mm



Without
photo

Ports and connectors for
other tubing sizes are
also available !

Cat Nbr.	SCA-107034	SCA-107036
Tubing Ports	4x 2.3/3.2mm OD	4x 2.3/3.2mm OD
Leak Ports	1x 6-8mm ID	---
Antistatic Port	---	---



B 83 - Containers (PE-HD)

Qualified for any Safety Caps with B83 thread.

Made of chemically resistant PE-HD.

Cat Nbr.	Volume	Measurements (LxBxH) in mm
SCA-107706	10 L	Round Container B83, Height 390mm, with Screw Cap

Safety Waste Caps - with Safety Funnel

SCAT Safety Funnels are solely opened when disposing waste fluids. When releasing the opening mechanism, the waste container closes automatically. Furthermore you can discharge fluids permanently through the tubing ports (e.g. for HPLC applications).

The exhaust filter avoids unfiltered escape of hazardous vapours. The most reliable way to collect waste fluids.



Cat Nbr.	Thread	Tubing Ports with Safety Funnel
SCA-108132	S 50	2 ports for 2.3/3.2mm OD tubing
SCA-108033	S 55	2 ports for 2.3/3.2mm OD tubing
SCA-108034	S 60 / 61	2 ports for 2.3/3.2mm OD tubing
SCA-108150	S 65	2 ports for 2.3/3.2mm OD tubing
SCA-108035	S 70 / 71	2 ports for 2.3/3.2mm OD tubing
SCA-108151	B 83	4 ports for 2.3/3.2mm OD tubing
SCA-108152	S 90	4 ports for 2.3/3.2mm OD tubing
SCA-108153	S 95	4 ports for 2.3/3.2mm OD tubing 1 leak port for 6-8mm ID tubing

Please order your exhaust filters separately.



Optimum protection: Waste Cap with safety funnel and conductive container with level floater.

Tk Exhaust Filters for Safety Caps

120,000 sqm screening surface versus hazardous vapours for clean air.

Our multicomponent granulate offers a specific filtering surface of 1.200 sqm/g and absorbs 99% of all particulate materials evaporating from your solvents.



Exhaust Filters (standard)

Cat Nbr.	SCA-107911	SCA-107914	SCA-107615
Size	S	M	L

The screening surfaces of the different filter sizes are:

Size S: 28.800 sqm

Size M: 57.600 sqm

Size L: 120.000 sqm

The lifetime of exhaust filters depends on concentration and chemical quality of the used solvent mixtures. To calculate the individual lifetime of the filters for your application, please ask your Sales Representative.



Optional:
Exhaust filter with splash guard

Exhaust Filters (with splash guard)

Cat Nbr.	SCA-107985	SCA-107982	SCA-107986
Size	S	M	L
	with splash guard	with splash guard	with splash guard



Join Adapters for Exhaust Filters

Not enough space in your lab? Don't worry - with our special adapters, you can fix the exhaust filter in any position you like. Practical, space-saving and flexible.

The extension offers more free moving space for connecting tubes to the cap.
The adapters can be joined in multiple ways (see photos).

Cat Nbr.	Description	Picture	Profile
SCA-107621	Extension for exhausted filters <i>(can be joined with any other adapter)</i>		
SCA-107622	Angle adapter (fixed) for exhausted filters <i>(can be joined with any other adapter)</i>		
SCA-107624	Angle adapter for exhausted filters <i>(can be joined with any other adapter)</i>		



Collect your solvents and laboratory waste safely

SCAT Safety Funnels are made up of electroconductive PE-HD. The **ball valve** only opens during disposal of liquid waste. Evaporation of hazardous solvent dases is prevented.



Available for most standard container sizes!
The **earthing cable** (included in delivery) prevents electrostatic charge.



Safety Funnels (PE-HD, electroconductive)

Available with and without sieve. Delivered with antistatic cable.

Cat Nbr.	Cap	Material	Cat Nbr. with sieve
SCA-107672	GL 45	PE-HD (electroconductive), black	SCA-108972
SCA-107674	S 51	PE-HD (electroconductive), black	SCA-108974
SCA-107675	S 55	PE-HD (electroconductive), black	SCA-108975
SCA-107671	S 60 / 61	PE-HD (electroconductive), black	SCA-108971
SCA-107676	S 65	PE-HD (electroconductive), black	SCA-108976
SCA-107678	S 70 / 71	PE-HD (electroconductive), black	SCA-108978
SCA-107677	B 83	PE-HD (electroconductive), black	SCA-108977
SCA-107673	S 90	PE-HD (electroconductive), black	SCA-108973



Safety Funnels (PE-HD)

Available with and without sieve. Delivered with antistatic cable.

Cat Nbr.	Cap	Material	Cat Nbr. with sieve
SCA-107972	GL 45	PE-HD, white	SCA-108672
SCA-107974	S 51	PE-HD, white	SCA-108674
SCA-107975	S 55	PE-HD, white	SCA-108675
SCA-107971	S 60 / 61	PE-HD, white	SCA-108671
SCA-107976	S 65	PE-HD, white	SCA-108676
SCA-107978	S 70 / 71	PE-HD, white	SCA-108678
SCA-107979	B 83	PE-HD, white	SCA-108679
SCA-107973	S 90	PE-HD, white	SCA-108673



Stainless Steel Sieve (singular) for Safety Funnels

Cat Nbr.	Description
SCA-107715	Stainless steel sieve, singular, for safety funnels. Housing: PE-HD, electroconductive, black. Sieve: Stainless steel.

Tk Accessories and Consumables

Polypropylene Fittings

For 1.6, 2.3 and 3.2mm OD tubing (same fitting for all sizes).
Please choose suitable PTFE ferrules for your tubing size separately (see below).



Cat Nbr.	Description	Unit
SCA-160304	Polypropylene Fittings, coloured	Box of 10

PTFE Ferrules

For Polypropylene Fittings. Please take care of correct assembling



Cat Nbr.	Description	Unit
SCA-107905	PTFE Ferrules, ID=1.6mm (1/16")	Box of 10
SCA-107906	PTFE Ferrules, ID=2.3mm	Box of 10
SCA-107908	PTFE Ferrules, ID=3.2mm (1/8")	Box of 10

PTFE Plugs for Safety Caps

If several Safety Cap ports are temporarily not in use, you can close them with PTFE plugs. That way you maintain protection against escaping vapours.



Cat Nbr.	Description	Unit
SCA-160504	PTFE Plugs for Standard Ports	Box of 10
SCA-160506	PTFE Plug for Leak Ports	Box of 1
SCA-107620	PTFE Plug for Exhaust Filter Ports	Box of 1

PTFE 3-way Angled Collector for Leak Port

Suitable for the leak port on all Safety Caps. Space-saving version.



NEW

Cat Nbr.	Description	Unit
SCA-160131	3-way Angled Collector for Leak Port 3 Ports for 1.6/2.3/3.2mm OD tubing Materials: Collector PTFE, Fittings Polypropylene	Box of 1
SCA-160130	3-way Angled Collector for Leak Port 2 Ports for 1.6/2.3/3.2mm OD tubing 1 Leak Port for 6-8mm ID tubing Materials: Collector PTFE, Fittings Polypropylene	Box of 1

PTFE Distance Rings for GL45 Safety Caps

Distance Rings for Safety Caps. For short neck bottles.



NEW

Cat Nbr.	Description	Unit
SCA-107020	PTFE Distance Rings for GL 45	Box of 1

Electroconductive Plastic Tubing

Made of electrically conductive PTFE. Extremely light, for safe transfer of flammable and sensitive fluids



Cat Nbr.	ID	OD	Profile
SCA-10801	6.0 mm	8.0 mm	Plane

Thread Adapters

Suit Safety Caps to nearly any kind of bottle or container. Simply choose a qualified adapter for your thread size.



Cat Nbr.	Container	Safety Cap	Material, Colour
SCA-107993	GL 32	GL 45	PTFE, white
SCA-107996	GL 32	GL 45	Polypropylene, natural
SCA-107992	GL 38	GL 45	PTFE, white
SCA-107995	GL 38	GL 45	Polypropylene, natural
SCA-107991	GL 40/S 40	GL 45	PTFE, white
SCA-107994	GL 40/S 40	GL 45	Polypropylene, natural
SCA-117094	GL 45	S 55	PTFE, white
SCA-107094	GL 45	S 55	Polypropylene, natural
SCA-107093	S 51	GL 45	Polypropylene, natural
SCA-117095	S 51	S 55	PTFE, white
SCA-107095	S 51	S 55	Polypropylene, natural
SCA-107097	S 51	S 60	Polypropylene, natural
SCA-107099	S 55	GL 45	Polypropylene, natural
SCA-107096	S 55	S 60	Polypropylene, natural
SCA-108021	2" BSP	S 60 (interior)	Polypropylene, grey
SCA-108022	2" BSP	S 60 (exterior)	Polypropylene, black
SCA-108444	2" Fine Thread	S 63 - S 65	Polypropylene, white
SCA-107022	2" Fine Thread	TriSure Grob	Polypropylene, orange

Y-Connectors (Polypropylene)

For any kind of flexible tubing (e.g. silicone)



Cat Nbr.	for Tubing ID	Cat Nbr.	for Tubing ID
SCA-107801	3 mm	SCA-107804	6-7 mm
SCA-107802	4 mm	SCA-107806	8-9 mm
SCA-107803	5 mm	SCA-107807	11 mm

Straight Connectors for Leak Port

These connectors fit into the leak port on any SCAT Safety Waste Cap.



Leak port for major sized tubing

Cat Nbr.	OD (Tubing ID)	Cat Nbr.	OD (Tubing ID)
SCA-107811	2-3 mm	SCA-107814	5-6 mm
SCA-107812	3-4 mm	SCA-107816	6-8 mm
SCA-107813	4-5 mm	SCA-107817	10 mm

Angle Connectors for Leak Port

These connectors fit into the leak port on any SCAT Safety Waste Cap.



Leak port for major sized tubing

Cat Nbr.	OD (Tubing ID)
SCA-107808	6.40 - 8.00 mm
SCA-107810	9.50 - 10.50 mm

Conical Connectors and Reducers

For any kind of flexible tubing (e.g. silicone).



Cat Nbr.	Side 1 tubing ID	Side 2 Tubing ID
SCA-107818	11 to 15 mm	7 to 12 mm
SCA-107819	7 to 11 mm	4 to 7 mm
SCA-107820	10.5 to 16 mm	6.5 to 12 mm
SCA-107821	12 to 16 mm	4 to 8 mm
SCA-107822	6.5 to 11 mm	3 to 7.5 mm
SCA-107823	6.5 to 11 mm	6.5 to 11 mm
SCA-107824	4.2 to 8 mm	4.2 to 8 mm
SCA-107825	3 to 5.9 mm	3 to 5.9 mm
SCA-107826	5 to 18 mm	7.5 to 18 mm

Tk Hamilton SoftGrip™ 2nd. Generation Pipettes

For 50 years, Hamilton has been synonymous with outstanding precision fluid measuring products. We extended our world renowned syringe expertise to the SoftGrip pipettes specifically designed to minimize hand strain, fatigue, and injuries. The results set the standard for quality, comfort, and precision. You'll feel the difference the first time you pick one up.

Outstanding Quality

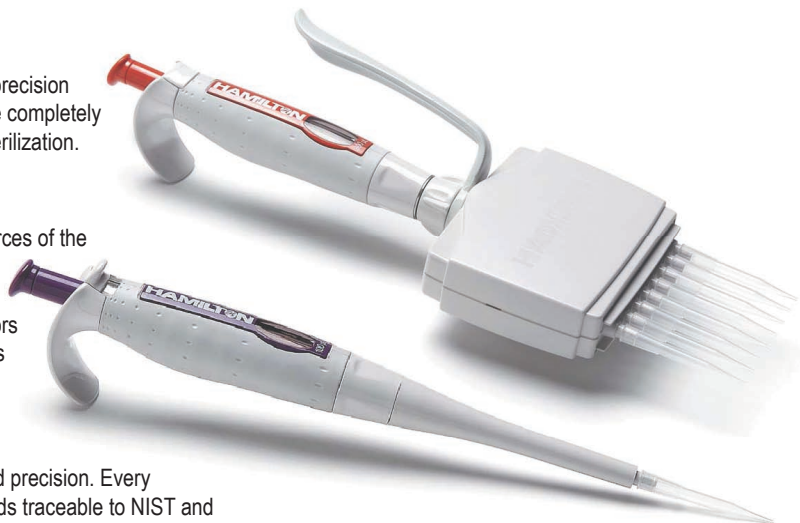
The SoftGrip pipette, with its award-winning, innovative design,* is built to last just like our precision syringe products. SoftGrip manual pipettes are completely autoclavable for easy decontamination and sterilization.

Total Comfort

The soft, ergonomic shape and low plunger forces of the SoftGrip pipette reduce hand and wrist fatigue as compared to other pipettes. Using SoftGrip pipettes decrease the risk factors associated with pipette-related repetitive stress injuries such as carpal tunnel syndrome.

Guaranteed Accuracy and Precision

SoftGrip pipettes deliver superior accuracy and precision. Every pipette is calibrated at the factory with standards traceable to NIST and shipped with a Certificate of Calibration documenting the pipette's accuracy and precision. Accuracy is guaranteed with Hamilton AdvanTip™ Precision Pipette Tips.



Relaxed Grip

Ergonomically contoured handle with soft, non-slip surface fits perfectly in your hand to minimize fatigue.



Soft Plunger Action

Low-force, sloped plunger button lessens thumb extension and overuse.



Light, Balanced Feel

Curved hilt supports the pipette to provide finer control while pipetting.



Maintains Volume Setting

Isolated volume adjustment ring prevents accidental volume changes.



Enhanced Comfort

Separate tip ejector button with curved shape reduces hand motion.



One Stroke Tip Ejection

Lever-action ejector removes all tips on the first stroke and is easily re-set for left-handed operation.

Hamilton SoftGrip™ 2nd. Generation Pipettes Tk

SoftGrip Pipettes – Single Channel

- Wide Selection of Ergonomic Pipettes
- Completely Autoclavable
- Guaranteed Accuracy and Precision

SoftGrip pipettes routinely receive the highest user satisfaction score of 10 on 11 different aspects of a pipette, including plunger and eject forces, weight, diameter, and texture. Choose from six adjustable volume and ten fixed volume SoftGrip pipettes covering 0.2 µL to 1 mL. All pipettes have color-coded plunger buttons and labels for easy volume identification.

SoftGrip air-displacement pipettes are built from high quality, state-of-the-art materials designed to provide years of reliable service. All pipettes are completely autoclavable for easy decontamination and sterilization without the need for disassembly and recalibration.

The isolated volume ring prevents accidental volume changes. A magnified, easy-to-read micrometer ensures reproducible, accurate volume setting. Each pipette meets or exceeds industry standards for accuracy and precision when used with Hamilton AdvanTip Precision Pipette Tips.



SoftGrip Adjustable Volume Pipettes, 0.2 µL - 1 mL

Cat.No.	Volume	Increments (µL)	Color		At 10% of Pipette Volume Accuracy Precision		At 100% of Pipette Volume Accuracy Precision	
					within ±%	within +%	within ±%	within +%
HA-55019-30	0.2-2 µL	0.002	Aqua	●	8.00	4.00	1.20	0.60
HA-55019-32	1-10 µL	0.02	Purple	●	2.50	1.20	0.80	0.40
HA-55019-34	2.5-25 µL	0.02	Forest Green	●	4.50	1.50	0.80	0.20
HA-55019-36	10-100 µL	0.2	Violet	●	1.80	0.70	0.60	0.15
HA-55019-38	30-300 µL	0.2	Brick Red	●	1.20	0.40	0.40	0.15
HA-55019-40	100 µL-1 mL	2.0	Sky Blue	●	1.60	0.50	0.30	0.12

SoftGrip Fixed Volume Pipettes, 5 µL - 1 mL

Cat.No.	Volume	Color		At 100% of Pipette Volume Accuracy Precision	
				within ±%	within +%
HA-55019-01	5 µL	Steel Blue	●	1.40	0.75
HA-55019-03	10 µL	Purple	●	0.80	0.40
HA-55019-05	25 µL	Forest Green	●	0.80	0.30
HA-55019-07	50 µL	Sandstone	●	0.60	0.30
HA-55019-09	100 µL	Violet	●	0.50	0.20
HA-55019-11	200 µL	Mustard	●	0.40	0.18
HA-55019-13	250 µL	Burnt Orange	●	0.40	0.18
HA-55019-15	300 µL	Brick Red	●	0.40	0.18
HA-55019-17	500 µL	Olive Green	●	0.40	0.18
HA-55019-19	1 mL	Sky Blue	●	0.30	0.12

Tk Hamilton SoftGrip™ 2nd. Generation Pipettes

Selecting the Right Hamilton AdvanTip Pipette Tip

Pipette Cat.No.	Pipette Volume	Hamilton Tip
HA-55019-30	0.2-2 µL	10 µL
HA-55019-32	1-10 µL	10 µL
HA-55019-34	2.5-25 µL	200 µL
HA-55019-36	10-100 µL	200 µL
HA-55019-38	30-300 µL	300 µL
HA-55019-40	100 µL-1 mL	1000 µL
HA-55019-03	5 µL	10 µL
HA-55019-05	10 µL	10 µL

Pipette Cat.No.	Pipette Volume	Hamilton Tip
HA-55019-07	25 µL	200 µL
HA-55019-09	50 µL	200 µL
HA-55019-11	100 µL	200 µL
HA-55019-13	200 µL	200 µL
HA-55019-15	250 µL	300 µL
HA-55019-17	300 µL	300 µL
HA-55019-19	500 µL	1000 µL
HA-55019-21	1 mL	1000 µL



SoftGrip Single Channel Pipette Carousel

Keeps pipettes safe and within easy reach.
Constructed of heavy, solvent-resistant plastic.

Cat.No.	Description
HA-53578-01	Holds Six Single Channel Pipettes



Calibration Labels

Quickly record and view calibration data with labels placed on your pipettes.

Cat.No.	Description
HA-1987-01	Calibration Labels, 120/pk



Calibration Key

For simple calibration in the field, one key is provided with each SoftGrip pipette.

Cat.No.	Description
HA-34002	Calibration Key

Hamilton SoftGrip™ 2nd. Generation Pipettes Tk

SoftGrip Pipettes – Multi-Channel

- Easily Adjusts for Left-Hand Operation
- Completely Autoclavable
- Guaranteed Accuracy and Precision

Hamilton SoftGrip pipettes are available as 8-channel and 12-channel adjustable volume manual pipettes in two volume ranges covering 5 µL to 50 µL and 30 µL to 300 µL. The pipettes have color-coded plunger buttons and labels for quick volume identification.

The unique, long tip ejector lever and movable lower body can be rotated a full 360° relative to the handle to provide maximum comfort for left- or right-handed use.

Additionally, the easily activated tip ejector lever releases all the tips in single stroke.

Made of the finest materials, an entire SoftGrip multi-channel pipette can be autoclaved without the need for disassembly and recalibration.

Accuracy and precision is guaranteed when used with Hamilton AdvanTip Precision Pipette Tips.



SoftGrip Multi-Channel Pipettes, 8-Channel, 5 µL - 300 µL

Cat.No.	Volume	Increments (µL)	Color		At 10% of Pipette Volume		At 100% of Pipette Volume	
					Accuracy Precision		Accuracy Precision	
					within ±%	within +%	within ±%	within +%
HA-55019-50	5-50 µL x 8	0.02	Sandstone	●	2.00	2.00	0.80	0.35
HA-55019-52	30-300 µL x 8	0.02	Brick Red	●	1.20	0.70	0.50	0.30

SoftGrip Multi-Channel Pipettes, 12-Channel, 5 µL - 300 µL

Cat.No.	Volume	Increments (µL)	Color		At 10% of Pipette Volume		At 100% of Pipette Volume	
					Accuracy Precision		Accuracy Precision	
					within ±%	within +%	within ±%	within +%
HA-55019-54	5-50 µL x 12	0.02	Sandstone	●	5.00	2.00	1.00	0.50
HA-55019-56	30-300 µL x 12	0.2	Brick Red	●	2.40	1.20	1.00	0.50



SoftGrip Multi-Channel Pipette Stand

Keeps pipettes safe and within easy reach. Constructed of heavy, non-skid, metallic casting.

Cat.No.	Description
HA-34195	Holds One Multi-Channel Pipette



Calibration Labels

Quickly record and view calibration data with labels placed on your pipettes.

Cat.No.	Description
HA-1987-01	Calibration Labels, 120/pk

Selecting the Right Hamilton AdvanTip Pipette Tip

Pipette	Pipette	
Cat.No.	Volume	Hamilton Tip
HA-55019-50	5-50 µL x 8	200 µL
HA-55019-52	30-300 µL x 8	300 µL
HA-55019-54	5-50 µL x 12	200 µL
HA-55019-56	30-300 µL x 12	300 µL

Calibration Key

For simple calibration in the field, one key is provided with each SoftGrip pipette.

Cat.No.	Description
HA-34002	Calibration Key



Tk Universal AdvanTip™ LT and Precision Pipette Tips

AdvanTip LT Pipette Tips – Low Retention Tips



10 µL Pipette Tips

Volume Range: 0.2-10 µL • Recommended for 2, 5, and 10 µL pipettes.

Description	Low Retention	Standard	Total Tips
10 µL, Bulk, 1000 tips/bag	HA-23008-10		1000
10 µL, Bulk, Extended Length, 1000 tips/bag	HA-23005-14	HA-11005-14	1000
10 µL, Racked, 96 tips/rack	HA-23006-01	HA-11006-01	960
10 µL, Racked, Extended Length, 96 tips/rack	HA-23003-15	HA-11003-15	960
10 µL, Racked, Pre-Sterilized, 96 tips/rack	HA-23003-01	HA-11003-01	960
10 µL, Racked, Extended Length, Pre-Sterilized, 96 tips/rack	HA-23003-25	HA-11003-25	960
10 µL, Racked, Filter, Pre-Sterilized, 96 tips/rack	HA-23003-02	HA-11003-02	960
10 µL, Racked, Extended Length, Filter, Pre-Sterilized, 96 tips/rack	HA-23003-26	HA-11003-26	960
10 µL, Stacked Rack, 96 tips/rack, 5 racks/stack		HA-11003-11	480



100 µL Pipette Tips

Volume Range: 2-100 µL • Recommended for 20, 25, 50, and 100 µL pipettes.

Description	Low Retention	Standard	Total Tips
100 µL, Racked, Filter, Pre-Sterilized, 96 tips/rack	HA-23003-10		960



200 µL Pipette Tips

Volume Range: 2-200 µL • Recommended for 20, 25, 50, 100, and 200 µL pipettes • Also, can be used with 300 µL pipettes when pipetting volumes of 200 µL or less.

Description	Low Retention	Standard	Total Tips
200 µL, Bulk, 1000 tips/bag	HA-23008-20		1000
200 µL, Racked, 96 tips/rack	HA-23006-03	HA-11006-03	960
200 µL, Racked, Pre-Sterilized, 96 tips/rack	HA-23003-03	HA-11003-03	960
200 µL, Racked, Filter, Pre-Sterilized, 96 tips/rack*	HA-23003-04	HA-11003-04	960
200 µL, Stacked Rack, 96 tips/rack, 5 racks/stack		HA-11003-05	480

* Not for use with 100 µL Softouch Pipettes. See 100 µL tips.



300 µL Pipette Tips

Volume Range: 2-300 µL • Recommended for 250 and 300 µL pipettes.

Description	Low Retention	Standard	Total Tips
300 µL, Bulk, 1000 tips/bag	HA-23008-30		1000
300 µL, Racked, 96 tips/rack	HA-23006-06	HA-11006-06	960
300 µL, Racked, Pre-Sterilized, 96 tips/rack	HA-23003-06	HA-11003-06	960
300 µL, Racked, Filter, Pre-Sterilized, 96 tips/rack	HA-23003-07	HA-11003-07	960

Universal AdvanTip™ LT and Precision Pipette Tips Tk



1 mL Pipette Tips

Volume Range: 100-1000 µL • Recommended for 500 and 1000 µL pipettes.

Description	Low Retention	Standard	Total Tips
1000 µL, Bulk, 1000 tips/bag	HA-23008-40		1000
1000 µL, Racked, 100 tips/rack	HA-23006-08		1000
1000 µL, Racked, Pre-Sterilized, 100 tips/rack	HA-23003-08	HA-11003-08	1000
1000 µL, Racked, Filter, Pre-Sterilized, 100 tips/rack	HA-23003-09	HA-11003-09	1000

Macrovolume Pipette Tips



1200 µL Macrovolume Pipette Tips

Volume Range: 500-1200 µL • Recommended for 1200 µL SofTouch™ electronic pipettes.

Description	Low Retention	Standard	Total Tips
1200 µL, Racked, 96 tips/rack, 10 racks/box		HA-11009-18	960



5 mL Macrovolume Pipette Tips

Volume Range: 100-5000 µL • Recommended for 5 mL SofTouch electronic pipettes.

Description	Low Retention	Standard	Total Tips
5 mL, Bulk, 100 tips/bag		HA-11009-10	100
5 mL, Racked, 50 tips/rack, 10 racks/box 1		HA-1006-28	500



Design offers many advantages

- All electrodes are printed with an indelible serial number
- Individual test certificates with measured values
- Indelible marking means long-term readability
- Ergonomic electrode head
- Proven electrolyte sealing system
- High-quality seal between electrode head and cable (IP 68)
- Integrated, captive seal at the electrode plug head
- Blue interior buffer gives visual indication of contact with the pH diaphragm

Watering cap with screw lock

- Easy removal of the watering cap by means of the screw lock
- Secure sealing in the watering cap
- No spillage of electrolyte when removing the watering cap



LIQ-GLASS

HA-238000 Liq-Glass (without cable)

HA-238180 Liq-Glass BNC

HA-238185 Liq-Glass DIN

- Robust, combination pH electrode for daily laboratory use
- Universally applicable, even in strong acids as well as in normal laboratory use
- Ideally suited for acid/base titrations
- Serial number, certificate

Specifications: pH: 0 to 14
Electrolyte: 3 M KCl (refillable)
Diaphragm: ceramic
Temperature sensor: no

T: -10 to 100°C
Shaft material: glass
Reference system: EVEREF
Sensor connection: S7 connector head, 1 m BNC or 1 m DIN



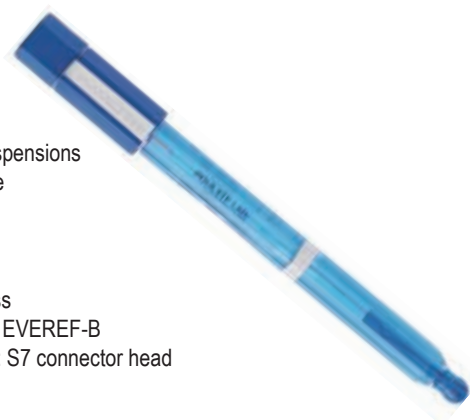
POLILYTE LAB

HA-238403 Polilyte Lab

- Maintenance-free, robust, combination pH electrode for easy use
- Universally applicable, especially suited for measurements in emulsions and suspensions
- Thanks to the SINGLE PORE clogging of the diaphragm is practically impossible
- Serial number, certificate

Specifications: pH: 0 to 14
Electrolyte: POLISOLVE (maintenance-free)
Diaphragm: SINGLE PORE
Temperature sensor: no

T: -10 to 80°C
Shaft material: glass
Reference system: EVEREF-B
Sensor connection: S7 connector head



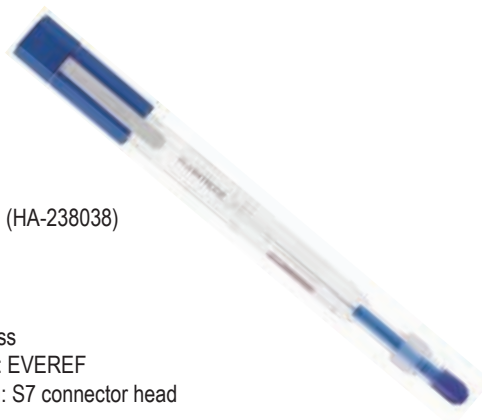
FLUSHTRODE

HA-238060 Flushtrode

- Easy-to-clean, combination glass electrode with sleeve diaphragm
- Ideally suited for viscous samples, ion-weak media, or media containing protein (e.g. cosmetics)
- For samples containing protein, the electrode should be filled with PROTELYTE (HA-238038)
- Serial number, certificate

Specifications: pH: 0 to 14
Electrolyte: 3 M KCl (refillable)
Diaphragm: sleeve diaphragm
Temperature sensor: no

T: -10 to 80°C
Shaft material: glass
Reference system: EVEREF
Sensor connection: S7 connector head



SLIMTRODE

HA-238150 Slimtrode

- pH electrode with 6 mm shaft diameter, for measurements in test tubes
- Universally applicable, even in strong acids as well as in normal laboratory use
- Long-term-stable EVEREF system
- Serial number, certificate

Specifications: pH: 0 to 14
Electrolyte: 3 M KCl (refillable)
Diaphragm: ceramic
Temperature sensor: no

T: 0 to 100°C
Shaft material: glass
Reference system: EVEREF
Sensor connection: S7 connector head



FILLTRODE

HA-242064 Filltrode

- Robust pH electrode with plastic shaft
- Multiple applications, thanks to its flat membrane: e.g. for viscous media
- Easy to clean
- The ring diaphragm prevents clogging
- Serial number, certificate

Specifications: pH: 0 to 14
Electrolyte: SKYLYTE-CL (refillable)
Diaphragm: ring diaphragm
Temperature sensor: no

T: 0 to 60°C
Shaft material: plastic
Reference system: EVEREF
Sensor connection: S7 connector head



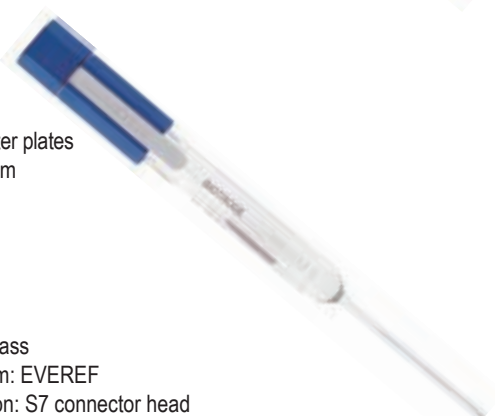
BIOTRODE

HA-238140 Biotrode

- Combination pH electrode for measurements in very small volumes, e.g. microtiter plates
- Ideally suited for solutions containing protein, prevents clogging of the diaphragm
- Long-term-stable EVEREF system
- Requires an immersion depth of only 7 mm
- Serial number, certificate

Specifications: pH: 0 to 14
Electrolyte: Protelyte (refillable)
Diaphragm: ceramic
Temperature sensor: no

T: 0 to 100°C
Shaft material: glass
Reference system: EVEREF
Sensor connection: S7 connector head



MINITRODE

HA-238100 Minitrode

- Combination pH electrode for measurements in very small volumes, e.g. vials
- Long-term-stable EVEREF system
- Requires an immersion depth of only 7 mm
- Serial number, certificate

Specifications: pH: 0 to 14
Electrolyte: 3 M KCl (refillable)
Diaphragm: ceramic
Temperature sensor: no

T: 0 to 100°C
Shaft material: glass
Reference system: EVEREF
Sensor connection: S7 connector head



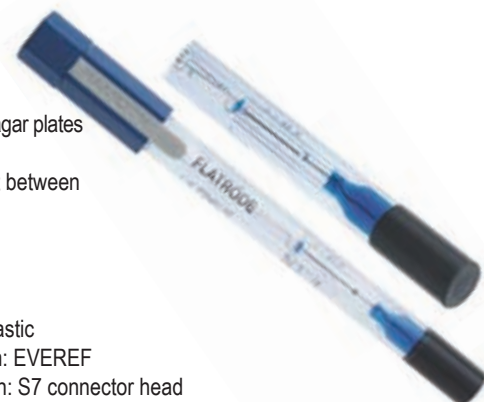
FLATRODE

HA-238401 Flatrode

- pH electrode with super-flat membrane for measurements of surfaces, e.g. paper, agar plates
- Robust plastic shaft and ring diaphragm
- Ring diaphragm guarantees quick response time because of enhanced contact between sample and reference
- Long-term-stable EVEREF system
- Serial number, certificate

Specifications: pH: 0 to 14
Electrolyte: SKYLYTE-CL (refillable)
Diaphragm: ring diaphragm
Temperature sensor: no

T: 0 to 60°C
Shaft material: Plastic
Reference system: EVEREF
Sensor connection: S7 connector head



FOODTRODE

HA-238285 Foodtrode

- Robust, combination pH electrode for measurements in media containing protein
- 3 ceramic diaphragms guarantee quick and accurate measurements
- Easy to clean
- Long-term-stable, thanks to EVEREF system
- Serial number, certificate

Specifications: pH: 0 – 14
Electrolyte: PROTELYTE (refillable)
Diaphragm: 3 x ceramic
Temperature sensor: no

T: -10 to 100°C
Shaft material: glass
Reference system: EVEREF
Sensor connection: S7 connector head



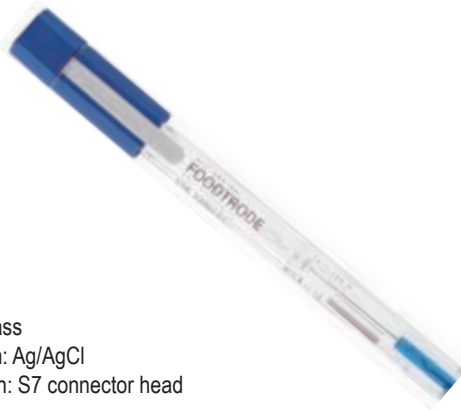
DOUBLE PORE

HA-238400 Double Pore

- Maintenance-free, combination pH puncture electrode
- Especially for use with solid and semi-solid samples
- Ideally suited for measurements in meat and cheese
- SINGLE POREs makes blockage of the diaphragm practically impossible
- Serial number, certificate

Specifications: pH: 0 to 14
Electrolyte: POLISOLVE (maintenance-free)
Diaphragm: 2 x SINGLE POREs
Temperature sensor: no

T: 0 to 60°C
Shaft material: glass
Reference system: Ag/AgCl
Sensor connection: S7 connector head

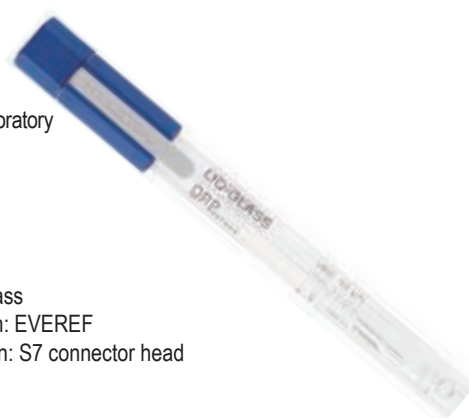


LIQ-GLASS ORP

HA-238145 Liq-Glass ORP

- Robust, combination Redox electrode for all usual Redox measurements in the laboratory
- Universally applicable, even in strong acids as well as in normal laboratory use
- Long-term-stable EVEREF system
- Serial number, certificate

Specifications: Redox: ± 000 mV
 Electrolyte: 3 M KCl (refillable)
 Diaphragm: 3 x ceramic
 Temperature sensor: no
 T: -10 to 100°C
 Shaft material: glass
 Reference system: EVEREF
 Sensor connection: S7 connector head



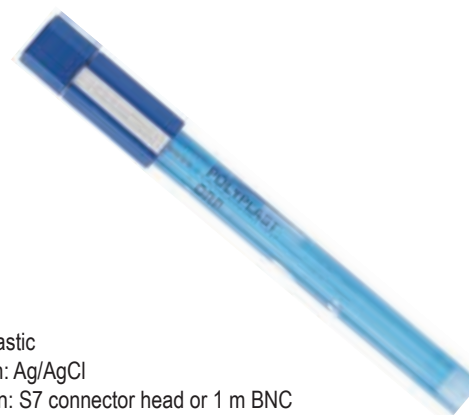
POLYPLAST ORP

HA-238385 Polyplast ORP

HA-238384 Polyplast ORP BNC

- Robust, maintenance-free, combination Redox electrode
- Shatter-proof plastic shaft
- Especially for water and sewage
- Serial number, certificate

Specifications: Redox: ± 000 mV
 Electrolyte: POLISOLVE (maintenance-free)
 Diaphragm: SINGLE PORE
 Temperature sensor: no
 T: 0 to 60°C
 Shaft material: Plastic
 Reference system: Ag/AgCl
 Sensor connection: S7 connector head or 1 m BNC



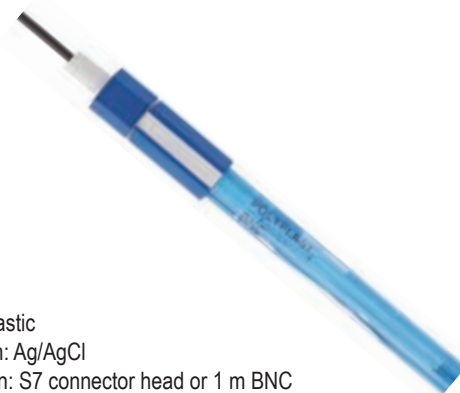
POLYPLAST

HA-238380 Polyplast

HA-238381 Polyplast BNC

- Robust, maintenance-free, combination pH electrode
- Shatter-proof plastic shaft
- Especially for water and sewage
- Serial number, certificate

Specifications: pH: 0 to 14
 Electrolyte: POLISOLVE (maintenance-free)
 Diaphragm: SINGLE PORE
 Temperature sensor: no
 T: 0 to 60°C
 Shaft material: Plastic
 Reference system: Ag/AgCl
 Sensor connection: S7 connector head or 1 m BNC



DURACAL pH Buffers

Cat. Nbr.	pH Value	Accuracy	Stability (in months)	Certified by	Packaging unit
HA-238917	4.01	$\pm 0.01 / \pm 0.02$	24/60	DKD	3 X 500 mL
HA-238918	7.00	$\pm 0.01 / \pm 0.02$	24/60	DKD	3 X 500 mL
HA-238919	9.21	± 0.02	60	DKD	3 X 500 mL

Redox Buffers

Cat. Nbr.	Redox Value	Accuracy	Stability (in months)	Certified by	Packaging unit
HA-238228	271 mV	± 5 mV	24	None	500 mL
HA-238322	475 mV	± 5 mV	24	None	250 mL
HA-238227	475 mV	± 5 mV	24	None	500 mL

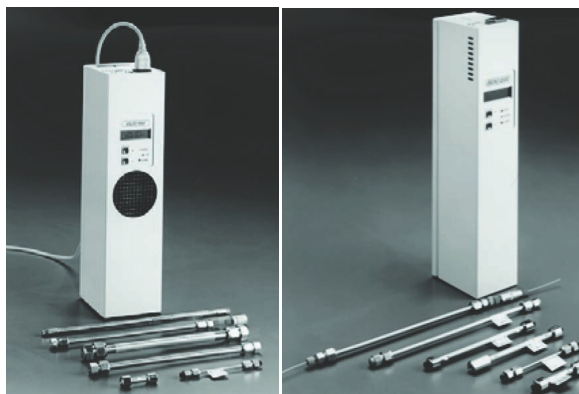
Tk HPLC Column Heaters



CIL heaters can accommodate any type of length of HPLC columns from any supplier.

Main features are:

- **Functional and Compact**
Can be used with any instrument and any column
Remote control
Rheodyne or Vici valves can be installed internally
Mobile phase preheating (optional)
- **Accurate**
The opposite metal mesh beds guarantee uniform temperature spread as the metal acts as an ideal heat conductor while, at the same time, allowing air to circulate freely (patented).
Electronic temperature regulation produces reproducible retention times (CV < 1%)
- **Safe**
Mobile phase leaks easily detectable (leak detector)



Standard Column Heaters

Cat. Nbr.	Model	Dimensions	T range	Stability	Accuracy	Applications
CI-100-025-220P	Croco-Cil Short	25x8x8 cm	RT-99°C	±0.1°C	±0.5°C	Short columns and guard columns
CI-100-040-220P	Croco-Cil Standard	40x8x8 cm	RT-99°C	±0.1°C	±0.5°C	Standard length columns and guard columns
CI-100-080-220P	Croco-Cil Double Length	80x8x8 cm	RT-99°C	±0.1°C	±0.5°C	Long columns
CI-100-040-220TW	Croco-Cil Triple Wide	40x24x8 cm	RT-99°C	±0.1°C	±0.5°C	GPC, 1" ID columns
CI-G3080	Gecko-2000	40x8x10.5 cm	30-80°C	±0.2°C	±1.0°C	Anal. Column and guard columns
CI-560PEL	560CIL (Peltier Effect)	40x10x10 cm	5-60°C	±0.5°C	±1.0°C	Anal. Column and guard columns
CI-99PEL	IglooCil (Peltier Effect)	41x16x11 cm	5-99°C	±0.5°C	±0.8°C	Anal. Column and guard columns

Tk Sample Injection Rheodyne™ Valves

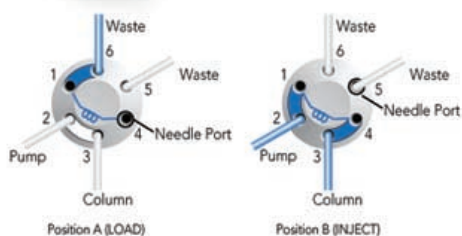
Complet range of HPLC sample injectors, from nanoscale to preparative applications.

Rheodyne Injecion Valves for Microscale Applications

Model 8125

Manufactured in stainless steel and designed for 1.0 and 2.0 mm microbore columns. This sample injector can also be used for analytical columns between 3.0 and 5.0 mm ID. Maximum recommended injection volume is 200 µl.

Cat.No	Description
RH-8125	Microscale sample injector, dual mode, stainless steel



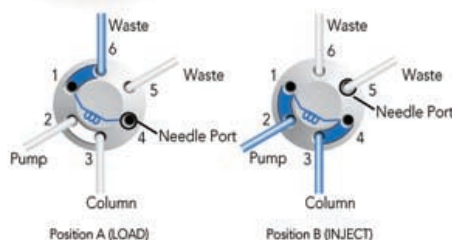
Rheodyne Injecion Valves for Analytical Applications

Models 7725, 7725i, 9725 and 9725i

All these well recognized valves are manufactured in 316 stainless steel. Some specialized features include :

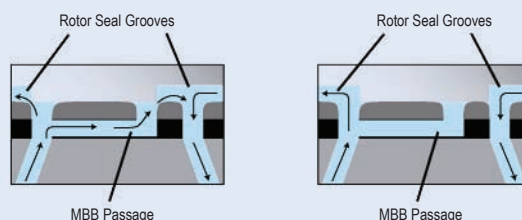
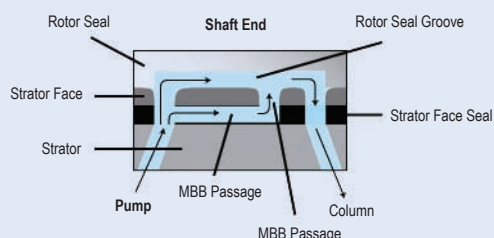
- The Rheodyne patented Make-Before-Break (MBB™) architecture allows continuous flow between LOAD and INJECT positions wich greatly reduces transient pressure shocks that disrupt your system.
- Wide 30° portangles offer easier access to fittings using the Rheodyne wrench (P/N RH-6810).
- Front-end pressure screw makes easy to adjust and maintain pressure.
- A built-in position sensor switch ("i" versions) provides a "start" signal to the instrument
- Small diameter internal flow paths assure minimal dispersion.

Cat.No	Description	Stator Material
RH-7725	Dual Mode Analytical Injector	Stainless Steel
RH-7725i	Dual Mode Analytical Injector with switch	Stainless Steel
RH-9725	Dual Mode Analytical Injector	PEEK
RH-9725i	Dual Mode Analytical Injector wiyh switch	PEEK



Patented Rheodyne MBB Design:

Flow paths of Model 7725 and 9725 with patented Rheodyne MBB design



Sample Injection Rheodyne™ Valves Tk

Rheodyne Injection Valves for Preparative Applications

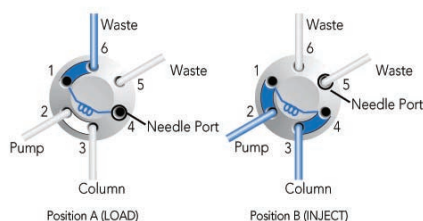
Models 3725-038, 3725i-038, 3725 and 3725i



These valves have been designed for high injection volumes and flow rates up to 100 ml/min. 1/8" or 1/16" tubing can be attached using the right fitting adapter.

MBB™ patented Rheodyne architecture allows continuous and stable flow when switching from LOAD to INJECT.

Cat.No	Description
RH-3725-038	Preparative Scale Injector, Dual Mode, Stainless Steel
RH-3725i-038	Preparative Scale Injector with switch, Dual Mode, Stainless Steel
RH-3725	Preparative Scale Injector, Dual Mode, PEEK
RH-3725i	Preparative Scale Injector with switch, Dual Mode, PEEK



Rheodyne Rotor Seals and Stators



- Genuine Rheodyne Parts
- For Popular Rheodyne Valves

A rotor seal is a polymeric disc that makes a high pressure seal against the stator in a valve. The seal wears with use and is one of the few valve parts that may need to be replaced routinely. Stators need replacement only if the threaded ports are damaged or the sealing surface is scored.

Vespe™ blend Rotor Seals have an operating pH range of 0-10. Tefzel™ are usable at a pH range from 0 to 14. Some stators can also be manufactured in stainless steel.

Rotors Vespe

Cat.No	Valve	Material
RH-7010-039	7010,7000,7040	Vespe
RH-7030-003	7030	Vespe
RH-7060-070	7060,7066	Vespe
RH-7125-047	7125,7725	Vespe
RH-7410-038	7410	Vespe
RH-7413-013	7413	Vespe
RH-8125-038	8125	Vespe

Rotors Tefzel

Cat.No	Valve	Material
RH-7010-071	7010,7010-087,7000,7040	Tefzel
RH-7030-015	7030	Tefzel
RH-7060-074	7060,7066,9060	Tefzel
RH-7125-079	7125,7125-081,7725	Tefzel
RH-7410-075	7410	Tefzel
RH-8125-097	8125	Tefzel
RH-9010-051	9010	Tefzel
RH-9125-082	9125,9725	Tefzel

Rotors Peek

Cat.No	Valve	Material
RH-3030-005	3030,3030-038	Peek
RH-3060-001	3060,3060-038	Peek
RH-3710-008	3000,3000-038,3710,3710-038	Peek
RH-3725-018	3725,3725-038	Peek
RH-7610-011	7610-400,7610-600	Peek

Stators

Cat.No	Valve
RH-3060-009	3060
RH-3725-006	3725,3710-038,3000-038
RH-3725-085	3725-038,3710-038,3000-038,3030-038
RH-7010-040	7010,7125,7000,7030,7040
RH-7010-066	7125-081,7010-087
RH-7060-039	7060,7066
RH-7410-041	7410,7413
RH-7610-048	7610-600
RH-7725-010	7725
RH-8125-098	8125
RH-9060-016	9060
RH-9125-043	9125,9010,9030,9725

Tk Sample Injection Rheodyne™ Valves

Rheodyne RheBuild™ Kits

Included in each individualized RheBuild Kit are genuine Rheodyne parts, tools and instructions to maintain the precision and performance of your Rheodyne valve. Rheodyne kits eliminate individual part ordering at a very convenient price.



RheBuild Kit	Model
RH-3725-999	3725, 3725i, 3725-038, 3735i-038
RH-7010-996	Conversion Kit with strator for 7010 model
RH-7010-997	7010 strator included
RH-7010-999	7010 and 7010 models
RH-7125-999	7125, 7126
RH-7410-999	7410
RH-7520-999	7520, 7526
RH-7725-999	7725, 7725i
RH-8125-999	8125, 8126
RH-9010-999	9010
RH-9125-999	9125, 9126
RH-9725-999	9725, 9725i

Sampling Loops for Rheodyne Injection Valves

Available in stainless steel and PEEK. Please note that stainless steel loops are not interchangeable between valve types 7125, 7010 and 7725.



Stainless Steel Sampling Loops for 7125 and 7010 Valves (Not to be used in 7725 Valves)

Cat.No.	Volume	Tubing
RH-7020	5 µL Loop	0,18 mm (0,007")ID x 1/16" OD
RH-7021	10 µL Loop	0,30 mm (0,012")ID x 1/16" OD
RH-7022	20 µL Loop	0,51mm (0,020")ID x 1/16" OD
RH-7023	50 µL Loop	0,51 mm (0,020")ID x 1/16" OD
RH-7024	100 µL Loop	0,51 mm (0,020")ID x 1/16" OD
RH-7025	200 µL Loop	0,76 mm (0,030")ID x 1/16" OD
RH-7026	500 µL Loop	0,76 mm (0,030")ID x 1/16" OD
RH-7027	1000 µL Loop	0,76 mm (0,030")ID x 1/16" OD
RH-7028	2000 µL Loop	1 mm (0,040")ID x 1/16" OD
RH-7029	5000 µL Loop	1 mm (0,040")ID x 1/16" OD
RH-1876	10000 µL Loop	2 mm (0,080")ID x 1/8" OD
RH-1877	20000 µL Loop	2 mm (0,080")ID x 1/8" OD

Stainless Steel Sampling Loops for 3725-038 and 3725i-038 valves

Cat.No.	Volume	Tubing
RH-3065-018	2000 µL Loop	2 mm (0,080")ID x 1/8" OD
RH-3065-019	5000 µL Loop	2 mm (0,080")ID x 1/8" OD
RH-3065-023	10000 µL Loop	2 mm (0,080")ID x 1/8" OD
RH-3065-025	20000 µL Loop	2 mm (0,080")ID x 1/8" OD

Stainless Steel Sampling Loops for 7725 and 7725i (Not to be used in 7125 valves)

Cat.No.	Volume	Tubing
RH-7755-020	5 µL Loop	0,18 mm (0,007")ID x 1/16" OD
RH-7755-021	10 µL Loop	0,30 mm (0,012")ID x 1/16" OD
RH-7755-022	20 µL Loop	0,30mm (0,012")ID x 1/16" OD
RH-7755-023	50 µL Loop	0,51 mm (0,020")ID x 1/16" OD
RH-7755-024	100 µL Loop	0,51 mm (0,020")ID x 1/16" OD
RH-7755-025	200 µL Loop	0,76 mm (0,030")ID x 1/16" OD
RH-7755-026	500 µL Loop	0,76 mm (0,030")ID x 1/16" OD
RH-7755-027	1000 µL Loop	0,76 mm (0,030")ID x 1/16" OD
RH-7755-028	2000 µL Loop	1 mm (0,040")ID x 1/16" OD
RH-7755-029	5000 µL Loop	1 mm (0,040")ID x 1/16" OD
RH-1876	10000 µL Loop	2 mm (0,080")ID x 1/8" OD
RH-1877	20000 µL Loop	2 mm (0,080")ID x 1/8" OD

Stainless Steel Sampling Loops for 8125 and 7010 Valves (Please use RH-7755-029 for vol. >50 µl)

Cat.No.	Volume	Tubing
RH-8020	5 µL Loop	0,2 mm (0,008")ID x 1/16" OD
RH-8021	10 µL Loop	0,2 mm (0,008")ID x 1/16" OD
RH-8022	20 µL Loop	0,25 mm (0,010")ID x 0,020" OD
RH-8023	50 µL Loop	0,3 mm (0,012")ID x 1/16" OD

Sample Injection Rheodyne™ Valves Tk

PEEK Sampling Loops for 3725 and 3725i Valves



Cat.No.	Volume	Tubing
RH-3055-018	2000 µL Loop	1,6 mm(0,062")ID x 1/8" OD
RH-3055-019	5000 µL Loop	1,6 mm(0,062")ID x 1/8" OD
RH-3055-023	10000 µL Loop	2 mm(0,080")ID x 1/8" OD
RH-3055-025	20000 µL Loop	2 mm(0,080")ID x 1/8" OD

PEEK Sampling Loops for 9725 and 9010

Cat.No.	Volume	Tubing
RH-7755-015	2 µL Loop	Internal Loop
RH-9055-020	5 µL Loop	0,18 mm(0,007")ID x 1/16" OD
RH-9055-021	10 µL Loop	0,25 mm(0,010")ID x 1/16" OD
RH-9055-022	20 µL Loop	0,25 mm(0,010")ID x 1/16" OD
RH-9055-023	50 µL Loop	0,51 mm(0,020")ID x 1/16" OD
RH-9055-024	100 µL Loop	0,51 mm(0,020")ID x 1/16" OD
RH-9055-025	200 µL Loop	0,51 mm(0,020")ID x 1/16" OD
RH-9055-026	500 µL Loop	0,76 mm(0,030")ID x 1/16" OD
RH-9055-027	1000 µL Loop	0,76 mm(0,030")ID x 1/16" OD
RH-9055-028	2000 µL Loop	0,76 mm(0,030")ID x 1/16" OD
RH-9055-029	5000 µL Loop	0,76 mm(0,030")ID x 1/16" OD
RH-9055-033	10000 µL Loop	0,76 mm(0,030")ID x 1/16" OD

PEEK Sampling Loops for 7725 and 7725i

Cat.No.	Volume	Tubing
RH-7755-015	2 µL Loop	Internal Loop

RHEFLEX Fittings

Cat.No.	Description
RH-6000-083	Nut and Ferrule for 1/8" Loop, 5u.
RH-6000-210	Ferrules for 1/8" loops, 10u.
RH-6000-211	Nuts and ferrules for 1/16" Loops, 10u.
UP-P-331	Super Flangeless Nut for RH-1876 and RH-1877 1/8" Loops, 1u.
UP-P-350X	Super Flangeless Ferrule for RH-1876 and RH-1877 Loops, 10u.
UP-P-654	PEEK adapter for RH-1876 and RH-1877 1/8" Loops, 1u.

RHEFLEX Fittings for PEEK Loops

Cat.No.	Description
RH-6000-251	PEEK Ferrules for 1/16" Loops, 10u
RH-6000-254	PEEK Nuts and ferrules for 1/16" Loops, 10u
RH-6000-078	PEEK Nuts and Ferrules for 1/8" Loops, 1u
RH-6000-079	PEEK Ferrules for 1/8" Loops, 5u

Rheodyne Accessories

Accessories for the Injection Port

Cat.No.	Description
RH-7012	Stainless Steel Loop Filler Point
RH-9012	PEEK Loop Filler Point
RH-9013	PEEK Needle Port
RH-7125-054	Needle Port Cleaner
RH-9125-076	Suction Needle Adapter (for Model 9725)

Mounting Brackets

Rheodyne mounting brackets and panels of different shapes and sizes organize and provide a sturdy support for Rheodyne valves. The Ring Stand Mounting Bracket now allows the valves to mount onto common laboratory equipment.

Cat.No.	Description
RH-7160	Mounting Panel
RH-7160-010	Valve Angle Bracket
RH-7160-029	Ring Stand Mounting Bracket



Other Accessories

Cat.No.	Description
RH-7161-020	Position Sensor Switch for 7125
RH-7161-016	Pos. Sensor Switch for 7010, 7410, 7000, 7030, and 7040
RH-7165	Pos. Sensor Switch for 7250
RH-6810	Rheodyne Wrench

