



SolVac® Filter Holder

Magnetic filter holder simplifies clean-up and degassing of mobile phase solvents and other solutions

- Sample volume is not limited by size of collection vessels used with bottle-top filters.
- Versatile design. Fits most HPLC bottles, flasks, and containers, and eliminates added steps of washing flasks and transferring mobile phase solvents from flask to reservoir.
- Draws directly from HPLC solvent bottle. Less likely to spill aggressive solvents than glass funnels or disposable cups.
- Durable plastic construction. Less likely to break than glass funnels, assemblies, or pick-up adaptors.
- Patented magnetic seal is reliable and leak proof. Eliminates the possibility of membrane shifting or tearing which can occur with aluminum clamps or threaded holders.
- Reusable, chemically resistant polypropylene construction. Resistant to common HPLC mobile phase solvents such as methanol, acetonitrile, and tetrahydrofuran.
- Unlimited membrane selection. Accepts 47 mm disc filters with choice of membrane based on the type of solvent or solution being filtered.



Applications

Use the SolVac filter holder to remove contaminating particulate and degas mobile phase solvents. Easily permits the filtration of up to 4 liters of mobile phase solvent at once without the need to continuously refill a filter funnel. Place the SolVac filter holder on a receiving vessel rated for vacuum applications, connect to a vacuum source, place the inlet tube into the solvent to be filtered, and begin filtration.

Durable polypropylene construction provides chemical compatibility for common HPLC mobile phase solvents such as methanol, acetonitrile, and tetrahydrofuran. All filter holder surfaces that come into direct contact with your mobile phase are polypropylene. In addition, the durable plastic construction means the device will not shatter if accidentally dropped, which can occur with glass funnels, assemblies, or pick-up adaptors.

Specifications

Materials of Construction

Upper Housing, Housing Base:

Polypropylene

Feedline Tubing:

Ultra chemical-resistant Tygon[◆],
4.8 mm (3/16 in.) ID

Thumb Clamp:

Celcon[◆] plastic

Feedline Sinkers:

PTFE

Vacuum Port Adaptor, Membrane Seal Gasket, and Seal Gasket:

Polyethylene

Effective Filtration Area

10.2 cm²

Filter Size

Accepts 47 mm filter

Inlet/Outlet Connections

Tapered inlet accepts 3.2 - 6.4 mm (1/8 - 1/4 in.)
ID tubing; outlet seals to bottles with openings
17.8 - 48.3 mm (0.7 - 1.9 in.) OD

Vacuum Port Adaptor

4.8 - 7.9 mm (3/16 - 5/16 in.) tapered hose barb

Maximum Vacuum

64 cm Hg (25 in. Hg) at 25 °C

Operating Temperature

Ambient; not to exceed 38 °C (100 °F); not autoclavable

Chemical Compatibility

500 mL of each of the following HPLC-grade solvents—
water, acetonitrile, methanol, tetrahydrofuran, hexane,
and NMP—were filtered through a new SolVac filter holder.
Three-milliliter aliquots from each filtrate were tested for
extractable materials under common HPLC conditions.
None of the chromatograms exhibited any trace of
extractables leached from the SolVac filter holder to
the final filtrate.

How to Use



1. Place base on the receiving vessel with gasket seal seated on the rim of the vessel.* Place the membrane on the clean, dry filter support. If using wwPTFE turn on vacuum to remove potential curling and seat the filter disc.



2. Attach inlet feedline tubing to the tapered inlet on the upper housing. Place upper housing onto housing base to securely seal the membrane.



3. While holding filter housing assembly on receiving vessel, attach vacuum tubing from vacuum source to the vacuum port adaptor located on the side of the housing base.



4. Place feedline tubing into solvent to be filtered. Be sure sinker is located well below the surface of the solvent, preferably on the bottom of the vessel. Place the thumb clamp just above the solvent bottle and close it.



5. Apply vacuum while firmly holding the SolVac filter housing, applying even pressure to both sides, onto the receiving vessel until full vacuum is drawn. When the required vacuum is achieved and the system is “charged,” open the thumb clamp to start the filtration. Continue to filter until all of the solvent is drawn through or the receiving vessel is full.

NOTE: To stop the filtration at any time, close the thumb clamp. After closing the thumb clamp it is possible to change the reservoir vessel.

** Always use a safety-coated receiving vessel that is less than 4 L and rated for vacuum applications. Failure to do so may result in implosion of the receiving vessel and potential injury to the user.*

Recommendations for Optimum Performance

- Always begin filtration using a dry membrane and a clean, dry support base to prevent airlock, which can decrease or prevent liquid flow.

PTFE, wwPTFE and Supported Membranes. Certain membranes such as supported membranes and fibrous media (e.g. PTFE and glass fiber) may not seal well in the SolVac filter holder due to the rigidity of the membrane or media surface. This may result in reduced flow rate. To correct this occurrence, place a membrane seal gasket on top of the membrane prior to final assembly of the filter holder. Make sure that you save these gaskets once you are done with your filtration so that you can use them in the future.

wwPTFE membranes: To ensure that the membrane is seated properly within the SolVac, turn the vacuum source on to draw the membrane to the lower half of the housing and prevent curvature within the device before closing the upper half of the housing.

Membranes. Once membranes are wetted with fluid, they do not allow air to pass through them. Because of this, it is critical that the PTFE sinker is on the bottom of the reservoir you are filtering from to minimize the potential to draw air into the filter holder prior to completing filtration.

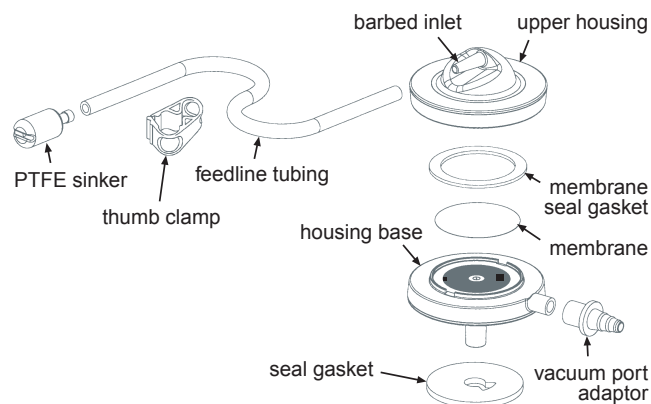
- Always be sure sinker and feedline remain below the surface of the solvent to prevent air from getting into the feedline and creating an airlock.
- Use a receiving vessel that is of equal or greater volume than the vessel containing the mobile phase solvent to be filtered. Always monitor the filtration process to prevent overflow.
- For optimum performance use vacuum pressure of 51 - 64 cm (20 - 25 in.) Hg.
- Conventional lab vacuum pumps such as Pall Laboratory vacuum pumps are ideal for use with the SolVac filter holder.

Recommendations for Cleaning

The SolVac filter holder is made of durable polypropylene and can be cleaned in the same manner as glassware, or by rinsing an empty holder with the solvent to be filtered. After discarding the rinse fluid, be sure to dry the membrane support prior to placing the membrane into the holder. Do not autoclave.

Order Information

| VWR US Cat. No. | VWR EU Cat. No. | Pall Part No. | Description | Pkg |
|--------------------|--------------------|------------------|--|--------|
| 28145-283 | 514-4001 | 4020 | SolVac filter holder with 61 cm (2 ft.) feedline tubing, sinker, vacuum port adaptor, thumb clamp, 2 membrane seal gaskets, and 2 seal gaskets | 1/pkg |
| 28145-285 | 516-7568 | 4022 | 122 cm (4 ft.) replacement feedline tubing | 1/pkg |
| 28145-287 | 514-4099 | 4023 | Replacement seal gaskets | 10/pkg |
| 28145-289 | 514-4100 | 4025 | Membrane seal gasket kit | 10/pkg |
| 28145-291 | 516-7571 | 4026 | Sinker replacement kit | 2/pkg |
| 28145-293 | 516-7572 | 4028 | Clamp replacement kit | 2/pkg |



Complementary Products

Mobile Phase Membrane Disc Filters

| VWR US Cat. No. | VWR EU Cat. No. | Pall Part No. | Description | Application | Pore Size | Pkg |
|--------------------|--------------------|------------------|--|--|--------------|---------|
| 76308-706 | 514-1109 | 60539 | wwPTFE (water wettable PTFE), 47 mm | Recommended for use with organics and aqueous liquids | 0.2 µm | 50/pkg |
| 76308-712 | 514-1110 | 60548 | wwPTFE (water wettable PTFE), 47 mm | Recommended for use with organics and aqueous liquids | 0.45 µm | 50/pkg |
| 28150-021 | 514-4042 | 66143 | TF-200 (PTFE), 47 mm | Recommended for use with all organic liquids | 0.2 µm | 100/pkg |
| 28149-962 | 514-4044 | 66149 | TF-450 (PTFE), 47 mm | Recommended for use with all organic liquids | 0.45 µm | 100/pkg |
| 28150-837 | 514-4046 | 66155 | TF-1000 (PTFE), 47 mm | Recommended for use with all organic liquids | 1 µm | 100/pkg |
| 28140-040 | 514-4055 | 66602 | Nylaflo™ (nylon), 47 mm | Not recommended for use with acidic solutions | 0.2 µm | 100/pkg |
| 28140-141 | 514-4057 | 66608 | Nylaflo (nylon), 47 mm | Not recommended for use with acidic solutions | 0.45 µm | 100/pkg |
| 28147-978 | 514-4163 | 60301 | Supor® 200 (polyethersulfone), 47 mm, plain | Not recommended for use with ketones | 0.2 µm | 100/pkg |
| 28147-640 | 514-4157 | 60173 | Supor 450 (polyethersulfone), 47 mm, plain | Not recommended for use with ketones | 0.45 µm | 100/pkg |

Vacushield™ Vent Device**

| VWR US Cat. No. | VWR EU Cat. No. | Pall Part No. | Description | Pkg |
|--------------------|--------------------|------------------|----------------|-------|
| 55095-006 | 514-4115 | 4402 | 0.45 µm, 50 mm | 3/pkg |


**Recommended to protect valve and pump components from damage when filtering aqueous solutions

Stainless Steel Forceps

| VWR US Cat. No. | VWR EU Cat. No. | Pall Part No. | Description | Pkg |
|--------------------|--------------------|------------------|---|-------|
| 30033-042 | 514-4149 | 51147 | Stainless steel forceps, black | 1/pkg |
| 34181-102 | 232-0142 | 4690 | Stainless steel forceps, multi-colored | 3/pkg |



Ordering:
vwr.com

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