



PLASTIC FILTER CHAMBERS

Refer to Bulletins C-105 ('L' Chambers), C-106 ('S' Chambers), C-112 ('HF' Chambers), C-113 ('GC' Chambers) and Parts Lists P-9700 and P-195 ('L' Chambers), P-4400 ('S' Chambers), P-867 ('HF' Chambers) and P-5525 ('GC' Chambers)

! SAFETY PRECAUTIONS BEFORE USING CHAMBER

1. Read operating instructions and instructions supplied with chemicals to be used.
2. Refer to a chemical resistance data chart for compatibility of all materials with solution to be used.
3. Note pressure limitations.
4. Operating personnel should always wear suitable protective clothing: face mask or goggles, apron and gloves.
5. All piping must be supported and aligned independently of chamber.
6. Always close valves slowly to avoid hydraulic shock.
7. Ensure that all fittings, connections, and cover are tight.

BEFORE CHANGING APPLICATION OR PERFORMING MAINTENANCE

1. Wear protective clothing as described in item 4 above.
2. Flush chamber thoroughly with a neutralizing solution to prevent possible harm to personnel.
3. Verify compatibility of materials as stated in item 2 of Safety Precautions above.

PRE-INSTALLATION

These units incorporate either an "O"-ring or a gasket seal at the cover and an "O"-ring at the vent plug. Standard units are equipped with EPDM elastomers, Viton is optional. Verify compatibility of all components with the solution, maximum operating temperature, and pressure. Refer to unit model number and bulletin to identify materials of construction for your model. Unit is shipped completely assembled and ready for installation. Filter cartridges must be ordered separately.

INSTALLATION

The filter chamber is normally supported in the pipe line, mounted on a solid, flat surface. Carefully note inlet, outlet, and drain connections. Install in proper direction of flow. Ball valves installed immediately before the inlet and after the outlet are suggested to prevent flooding when replacing expended cartridges. A check valve installed on the chamber discharge line will prevent back siphoning when the system is shut down. Installing a

hose from the vent valve back to the process tank will prevent solution from spraying when venting the unit.

INSTALLING DOUBLE OPEN END (D.O.E.) CARTRIDGES

Chambers for cartridges 10 inches and under use a tube-guide; chambers for cartridges twenty-inches and up use a cross-post with retaining ring. Insert the appropriate guide into the base of the chamber. Cartridges of varying lengths can be combined to fill the chamber. The shortest should be positioned at the top of the chamber. A rubber spacer is supplied with the chamber. It is used, if necessary, either between cartridges or at the top of the filter cartridge if stacked height is insufficient to assure a pressure tight seal. Series 'GC', 'HF', and 'S' chambers either incorporate a one piece molded polypropylene compression top seat spring or a 316 stainless steel coated compression spring with seat plate and cap guard to hold the filter cartridge in place. Series 'GC' utilizes a top separator plate installed over the compression springs. Note there is a dimple mark on the top of the plate. Install dimple (top up) 180 degrees opposite the filter chamber outlet. Check that "O"-ring/gasket is properly seated in groove of cover. A suitable rubber lubricant applied to the gasket will facilitate the seal. Install cover, then top support plate (used on Series 'GC' & 'HF' only; optional for Series 'S') on chamber, checking engagement of cover groove. Tighten cover hold-downs in an alternating pattern. Do not over-tighten cover. Cartridges made of synthetic fibers should be flushed properly before use.

INSTALLING SINGLE OPEN END (S.O.E.) CARTRIDGES

Insert cartridges with "O"-rings facing towards chamber base. Firmly press down to seat "O"-rings into base. Check that "O"-ring/gasket is properly seated in groove of cover. A suitable rubber lubricant applied to the "O"-ring/gasket will facilitate the seal. Install cover, then top support plate (used on Series GC & HF only. Optional for Series 'S') on chamber, checking engagement of cover groove. Tighten cover hold-downs in an alternating pattern. Do not over-tighten cover. Cartridges made of synthetic fibers should be flushed properly before use.

OPERATION

Open inlet valve slowly while checking for gasket

leaks. Open vent valve enough to bleed trapped air from unit. Close when liquid without air bubbles appears. As the filter cartridge removes contaminants, the pressure drop across the unit will slowly rise. This can be observed by installing a SERFILCO gauge guard assembly onto the filter chamber cover. In normal operation, it is desirable to change cartridges when a rise of 25 PSI above initial pressure has been reached and should never exceed 35 PSI differential pressure. A drop in flow will reflect a rise in pressure if a centrifugal pump is being used. When flow drops below an acceptable point, filter cartridges should be changed.

Example: Pump is capable of 60 GPM, producing a maximum pressure of 18 PSI. After installing new filter cartridges into chamber, the pressure gauge on the cover reads 3 PSI. When the pressure gauge reading increases to 17 PSI, the flow is now reduced to 15 GPM. (The reduction in flow can be determined by referring to the flow curve for the specific pump being used. The relationship between pressure drop and the point at which the flow rate indicates the need to change cartridges will vary depending upon the pump being used.) Cartridges are exhausted and should be replaced.

TO REPLACE D.O.E. FILTER CARTRIDGES

1. Wear protective clothing when servicing the filter chamber.
2. Stop the pump. Close inlet and outlet valves. Open the drain and vent. Loosen cover hold-downs, lift cover from shell.
3. Remove top seat spring assemblies.
4. Lift cartridges straight up to remove from chamber. For chambers 20 inch and up using less than full length cartridges, the cross-post can be lifted to remove cartridges after the first cartridge has been removed. Set spent cartridges aside in a container for cleaning or disposal.

5. Install clean cartridges following installation instructions on preceding page.

TO REPLACE S.O.E. FILTER CARTRIDGES

1. Wear protective clothing when servicing the filter chamber.
2. Stop the pump. Close inlet and outlet valves. Open the drain and vent. Loosen cover hold-downs, lift cover from shell.
3. Lift cartridges straight up to remove from chamber. Set spent cartridges aside in a container for cleaning or disposal.
4. Insert new cartridge. Firmly press down to seat "O"-rings and continue to follow installation instructions on preceding page .
5. Review section on installing cartridges.

SLEEVE FILTRATION (Bulletin M-108)

All models are available with reusable sleeve filter assemblies for use as a precoat filter only. Refer to Parts List P-4400 for correct numbers to convert from cartridge to sleeve filter. When using as a precoat sleeve filter, the solution clarification will be in the sub-micron to 5 micron range. Each 10" of sleeve length is .6 sq. ft. of precoat area. Polypropylene sleeves may be laundered and reused or a second set of sleeves may be purchased to permit alternate usage. Flow will gradually diminish as dirt is removed from the tank. When flow rate has reduced to the point where it is no longer practical to continue filtration, the filter must be backwashed or removed and cleaned. The pressure gauge is valuable in determining when backwashing is required. An approximate 10 to 15 PSI drop from the initial point is a workable guideline.

SLEEVE LENGTH	10"	20"	30"	40"	50"
OZ. OF FILTER AID	5	10	15	20	25



SERFILCO, LTD.

2900 MacArthur Blvd. 847-509-2900
 Northbrook, IL 60062-2005 U.S.A. 800-323-5431
 e-mail: sales@serfilco.com FAX: 847-559-1995
 www.serfilco.com