



SERIES 'G' PLASTIC FILTER CHAMBERS MANUFACTURED AFTER 02/2004

OPERATION AND
SERVICE GUIDE
O-0887A
JULY 2007

Refer to Bulletin C-107 and Parts Lists: P-5460

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 plastic material 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 and connections and cover are tightened.

BEFORE CHANGING APPLICATION OR PERFORMING MAINTENANCE

1. Wear protective clothing as described in item 4 above.
2. Flush chamber thoroughly with a neutralizing solution.
3. Verify compatibility of materials as stated in item 2 above. (SAFETY PRECAUTIONS)

CAUTION

Chamber covers, shell base assemblies and o-ring elastomers are available in a variety of materials. Refer to unit Model No. and bulletin to identify material of construction for your model. **Verify compatibility of all components with solution, maximum operating temperature and pressure.** These units incorporate an o-ring seal at cover, base and vent valve. Verify solution compatibility with o-ring material. **DO NOT OVER-TIGHTEN COVER.** Cover should be sealed securely, not overtight to cause stress or failure of cover. If leakage occurs, open the unit and clean and inspect o-ring. A suitable lubricant applied to the o-ring will facilitate the seal. Replace if stretched or otherwise damaged.

INSTALLATION

Carefully note IN, OUT and DRAIN connections. Install in the proper direction of flow. Unit is shipped completely assembled and ready for installation. Filter cartridges are not included. Filter cartridges must be ordered separately (See M-109). Have replacement quantity in stock.

1. Filter chamber is free standing and stable when inlet and outlet piping is completed.
2. Inlet and discharge piping should be equal to port size. Smaller pipe size for low flow rates is acceptable when consideration for system pressure loss is included.
3. Install valve on inlet and outlet of chamber to facilitate cartridge replacement.
4. Drain connection can also be valved for convenience.

TO REPLACE FILTER CARTRIDGE

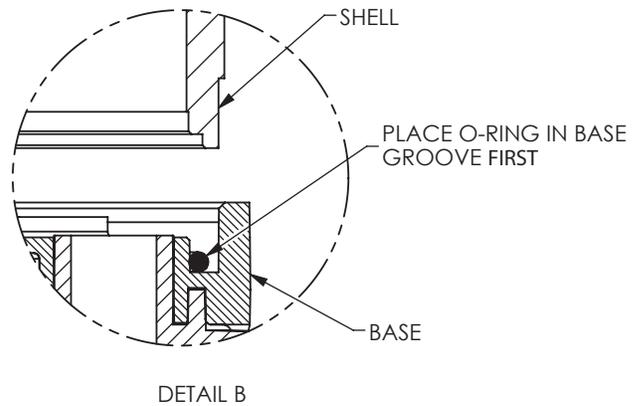
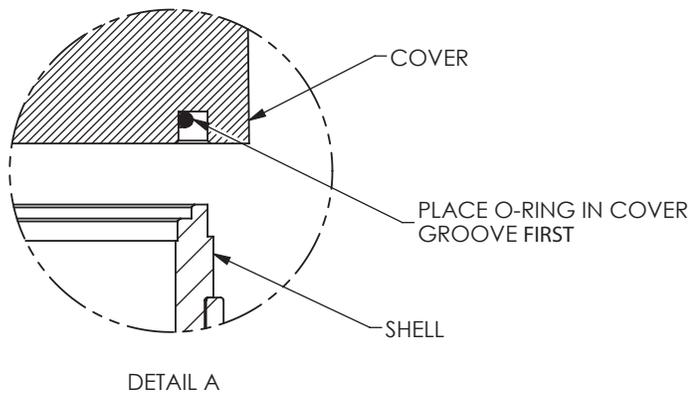
1. Turn off pump. Close inlet and outlet valves, open drain and vent. Loosen tee handles at cover, and lift the fiberglass reinforcement plate and molded cover off shell.
2. Turning counter clockwise, remove the filter cartridge hold down caps.
3. The cross posts are threaded into the molded base. Removal is not necessary when changing the cartridges. Grasp the end of the filter cartridge, and lift straight up to remove from chamber. Set aside for cleaning or disposal.
4. Insert new cartridges, and replace the filter hold down caps making sure that the caps are firmly seated into the cartridges.
5. Wipe clean the bottom groove of the molded cover, and place the o-ring in cover groove. (See sketch on page 2, Detail A) Wipe clean the top edge of the shell, and place the molded cover on to the shell aligning the shell edge with the gasket groove. Place the reinforcement plate on top of the molded cover. Firmly tighten the tee handles evenly using a star or crisscross pattern. **DO NOT OVER TIGHTEN.**
6. Close the drain valve, open outlet and inlet valves. As solution rises in the chamber air will escape at the vent valve. Close the vent valve when the solution appears without air bubbles.

SLEEVE FILTRATION (Bulletin M-108)

Chambers are available with reusable sleeve filter assemblies for use as a precoat filter only. Refer to Parts List P-8600 for correct numbers to convert from cartridge to sleeve filter. When using as a 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. Flow rate may be prolonged by periodically adding small amounts of filter aid. When flow rate has reduced to the point where it is no longer practical to continue filtration, the filter must be backwashed or 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.

Each chamber holds 12 sleeves. Sleeve length depends upon the chamber height.

Sleeves will hold approximately 1 to 1.5 ounces of filter aid per 10" length.



OPERATION

Open inlet valve to filter slowly, checking for o-ring leak. If leakage occurs, see CAUTION on page 1. Loosen vent valve to bleed entrapped air. Tighten when liquid without bubbles appears. As the filter cartridge removes contaminants, the pressure drop across the unit will slowly rise. This is measured by the pressure gauge mounted on the chamber cover. In normal operation, it is desirable to change cartridges when a rise of 15 to 20 pounds above initial pressure has been reached.

In no case should pressure exceed what is listed on the pressure limitation chart below. A rise in pressure

will be reflected by a drop in flow if a centrifugal pump is being used. When flow drops below an acceptable point, filter cartridges should be changed.

Chamber will accept 10", 20", 30" or 40" wound depth cartridges or combination of these lengths to achieve the equivalent cartridge height required for these chambers. Wound, pleated, membrane and carbon cartridges may be installed. Standard model chamber accepts DOE (double open end) cartridges. Chambers with optional 222 "O"- ring cartridges (SOE) are available. SOE (single open end) cartridges must be full unit length, i.e. they cannot be stacked to attain the desired height.

PRESSURE / TEMPERATURE

MAXIMUM PRESSURE AT OPERATING TEMPERATURE WITH TOP & BOTTOM REINFORCING PLATES			
TEMPERATURE	PSI ¹		
	PL	PPL	CL
70°F	80	75	80
100°F	75	60	75
120°F	40	50	70
140°F	25	40	55
170°F	-	15	35
200°F	-	-	30

FLOW RATE vs. PRESSURE DIFFERENTIAL ²		
MODEL	@ 5 PSI	@ 15 PSI
11/2" 'G'	60 GPM 227 LPM	110 GPM 416 LPM

¹ Maximum differential pressure from inlet to outlet (across separator plate) is 40 PSI @ 70°F

² With 15 micron depth wound cartridges.



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