OPERATION AND
SERVICE GUIDE
O-885G
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SERIES 'G' & 'GH-HP' PLASTIC FILTER CHAMBERS

Refer to Bulletin C-107 and Parts Lists: P-5500 (Series 'G') and P-6100 and P-6150 (Series 'GH-HP').

⚠ 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 gasket 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 a gasket seal at cover, base and vent valve. Verify solution compatibility with gasket 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 gasket. A suitable lubricant applied to the gasket 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-109-1). 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 CARTRIDGES

1. Stop pump. Close inlet and outlet valves, open drain and vent. Loosen tee handles at cover and lift cover off shell.
2. Remove top separator plate and spring seat assemblies.
3. Grasp the end of the cartridge and lift straight up to remove from chamber. Set aside for cleaning or disposal. For chambers using less than full length cartridges, the cross post or center guide can be pulled after removing the top cartridge.
4. Insert new cartridges. Replace top separator plate, top seat plate and spring assembly. Be sure cartridges are flushed properly if made of polypropylene fibers.
5. Replace molded cover on shell, aligning shell edge with gasket groove. Place FRP cover-plate on top of molded cover. Pull cover and FRP cover-plate down by tightening two diametrically opposite tee handles. Be sure shell and liner are properly positioned under cover gasket. Tighten remaining tee handles, keeping the cover as even as possible.
6. Close drain, open outlet valve and inlet valve. As the solution rises in the chamber, air will escape at the vent. Close vent valve when solution appears with out bubbles.

SLEEVE FILTRATION (Bulletin M-108-1)

Chambers are available with reusable sleeve filter assemblies for use as a precoat filter only. Refer to Parts List P-8600-1 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 'G' Chamber holds 12 sleeves. The 'GH-HP' Chamber is available in 4, 5, 7 or 11 sleeve count. 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 gasket 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.

TEMPERATURE / PRESSURE LIMITATION CHARTS

'G' CHAMBERS			'GH-HP' CHAMBERS								
MAXIMUM PRESSURE AT OPERATING TEMPERATURE WITH TOP & BOTTOM REINFORCING PLATES			MAXIMUM PRESSURE AT OPERATING TEMPERATURE WITH TOP & BOTTOM REINFORCING PLATES								
TEMP.	PSI *		TEMP.	PL		PPL	CL		CVL	KL	
	PL & PPL	CL & CVL	F°	1½"	2" & 3"	2"	1½"	2" & 3"	2" & 3"	1½"	2"
70°F	80	80	70°F	140	110	100	140	110	130	135	120
100°F	75	75	100°F	95	75	64	120	100	105	110	95
120°F	40	70	120°F	60	50	52	100	80	85	90	80
140°F	25	55	140°F	35	25	40	75	60	65	80	70
170°F	–	35	170°F	–	–	31	50	40	40	60	55
200°F	–	20	200°F	–	–	–	30	25	25	50	45

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

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