



LABMASTER[®] & MINI SPACE-SAVER[®] FILTRATION SYSTEMS

SINGLE COLUMN CHAMBERS

Refer to Bulletins F-203 (Labmaster) and F-204 (Space-Saver) and Parts Lists P-1 and P-10.

! SAFETY PRECAUTIONS BEFORE STARTING PUMP

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

BEFORE CHANGING APPLICATION OR PERFORMING MAINTENANCE

1. Wear protective clothing as described in item 4 above.
2. Flush pump 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.
4. Shut off power to motor at disconnect switch.

PRE-START-UP

1. Review accompanying pump-motor Operating Instructions to assure proper start-up.
2. Install all hoses (disconnected for shipping) and tighten hose clamps.
3. Check that filter chamber plastic knobs are secure and vent plug is closed.
4. Install cartridge filter of your choice.

START-UP

1. Secure hoses so they do not fall out of tank.
2. Install all hoses (disconnected for shipping) and tighten hose clamps. Siphon breakers in the suction line to the pump and filter discharge to the tank should be installed as a further precautionary measure to limit and minimize the amount of liquid lost by back siphoning. An effective siphon breaker is a small hole drilled in suction & discharge lines approximately 2" to 4" below normal solution level.
3. Prime pump according to pump operating instructions and energize motor.
4. Open air vent in cover to release air from chamber. Tighten vent plug when solution level rises to top of chamber.

TO USE AS A CARTRIDGE FILTER

1. SERFILCO cartridge filters have a dirt holding capacity equivalent to that of 3½ sq. ft. of surface filter

media of the same density. The cartridge traps the soil in the fibrous structure as the solution passes through it. Cartridges are available in a variety of porosities permitting use of coarse cartridges that have a greater dirt holding capacity or you can use dense cartridges to obtain optimum clarity.

2. Refer to SERFILCO Product Catalog for general information, types and prices of cartridge filters and filter sleeves or other miscellaneous filter media.

TO REPLACE SERFILCO FILTER CARTRIDGES

IMPORTANT: Filter chamber shell is permanently sealed to the base. When shell and base are different materials (Specials), a flat gasket will provide the seal when the filter assembly is compressed by the four plastic knobs. Be sure to vent and drain chamber before opening.

1. Stop pump and remove four plastic knobs at cover and lift cover straight up.
2. Remove top used cartridge by lifting straight out. If several 10" cartridges are stacked, the lower cartridges may be removed by lifting the crosspost over which the cartridges are stacked. A ring at the bottom of the crosspost lifts all cartridges.
3. Replace with clean cartridges. **IMPORTANT:** Use gasket spacer between cartridges if stacked height is insufficient for proper closure and cartridge seal, or if used cartridges have been cleaned and replaced.
4. Replace cover, check engagement of cover groove, tighten plastic knobs.

TO USE WITH CARBON CARTRIDGES

There are several types of activated carbon cartridges, and a granular carbon filled mini-canister which may be used with the filter assembly. Refer to Technical Bulletin TF-133. Activated carbon removes organics from plating solutions, taste, odor and color from potable water and purifies industrial waste effluents. Refer to SERFILCO Product Catalog for specifications on the various carbon cartridges, chambers and canisters.

TO USE WITH CARBON PURIFICATION CHAMBER (Refer to Figures 1 & 2)

Carbon chamber is available in three styles:

1. Carbon Cartridge. See Operating Instruction O-330.
2. Bulk Granular Carbon. See Operating Instruction O-300.
3. Bulk Carbon Mini-Canister. See Operating Instruction O-530.

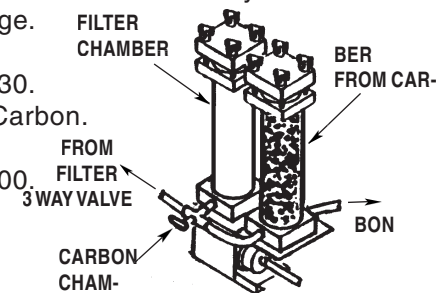


FIGURE 1

All three styles operate on the same principle and have identical piping arrangements as shown in Figures 1 & 2. Three-way valve allows filtered solution to be returned directly to tank, or to be routed through carbon chamber and then to tank or allow only a portion of the filtered solution to flow through the carbon chamber.

Size of filtration/purification system, tank size, productivity, etc, and your operating experiences will determine the best use of the carbon purification chamber.

TO PRIME PUMP

Unless the pump is installed with a flooded suction, it will be necessary to prime the pump. A rubber priming bulb is supplied with each pump and is in the same plastic bag as the suction strainer if pump is supplied with a filtration system.

For 5/8" and 3/4" I.D. Hose:

Insert the suction end of the bulb (flat ended valve) into the discharge hose. End of hose should be sealed against the bulb body. Alternately squeeze and release the bulb. Liquid will rise in the suction hose and motor should be started when solution is seen coming out of the pump discharge hose.

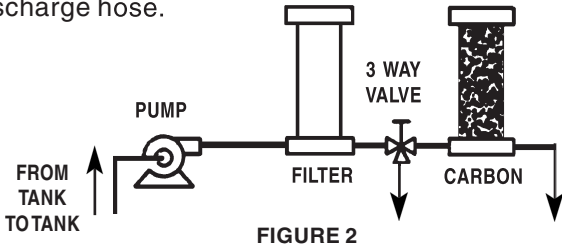


FIGURE 2

TO USE WITH PRIMING/SLURRY CHAMBER (Refer to Figures 3 & 4)

The priming/slurry chamber has two distinct user advantages:

- A. To facilitate priming of the pump.
- B. To precoat filter media. Refer to the following respective operating instructions.

A. TO PRIME PUMP

1. Close valve V1, open V2 and fill slurry tank with solution. Some solution will also flow into filter chamber.
2. Place end of filter discharge hose into slurry tank.

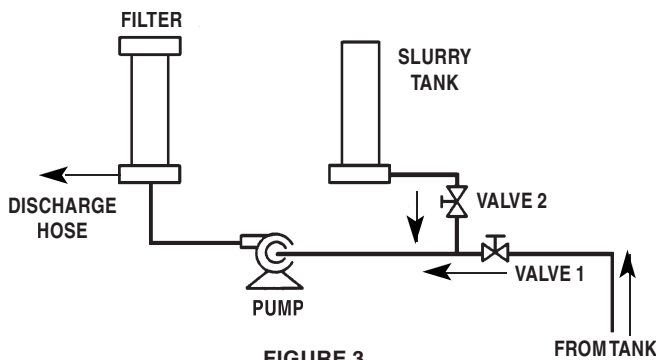


FIGURE 3

3. Energize motor. Solution will now recirculate between slurry tank, pump & filter. Add solution to slurry tank to approximately 2/3 full.
4. Slowly open valve V1 to drain solution from plating tank. This will be noted by an increase of solution level in slurry tank.
5. Then close V2. Transfer discharge hose to plating tank & fully open V1.

FILTER AID APPLICATION

1. Prior to applying precoat the solution must be recirculating between slurry tank, pump & filter.
2. Place end of filter discharge hose in slurry tank.
3. Energize motor. Solution will now recirculate between slurry tank, pump & filter. Add solution to slurry tank to approximately 2/3 full.
4. Transfer discharge hose to plating tank, fully open V1 and close V2.

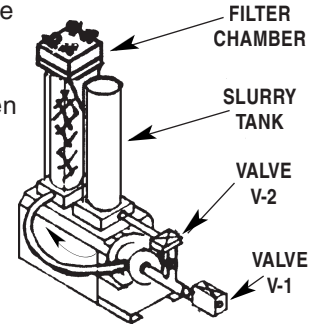


FIGURE 4

POWDERED CARBON

1. After precoating with filter aid, a slurry of 2-4 oz. of powdered carbon and 1-2 oz. filter aid per 10" cartridge may be applied following the above procedure. **IMPORTANT:** The powdered carbon and filter aid should be pre-mixed dry, then added to the "slurry tank" and precoated over the base precoat of the filter aid.
2. Filter cartridges and sleeves can be washed and pre-coated again for future service. For a thorough cleaning of the chamber, flush with water.
3. When replacing washed cartridges that will be pre-coated, use spacer-washer between adjacent cartridges to assure a proper seal of cartridge ends.
4. Filter aid data sheet lists various brands and types of filter aid. Refer to Technical Bulletin TM-101.

FILTRATION TIPS

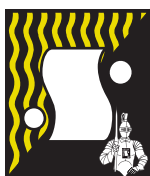
If synthetic filter cartridge is used, flush with 5 gallons of warm (110° to 140°F) water for each 10" of cartridge length. This removes any sizing agent used in the manufacture of the cartridge. Soaking is not adequate.

REPLACEMENT PARTS

Refer to Parts List P-9700 for the filter chamber. Order necessary spare parts for filter chamber and pump-motor PRIOR to their need, thereby avoiding shut-down of the filter assembly or unnecessary expediting.

REPLACEMENT CARTRIDGES

Have a quantity in stock, available for immediate use.



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