



# SUB-ADMIRAL<sup>®</sup> FILTRATION SYSTEMS

OPERATION AND  
SERVICE GUIDE  
O-475  
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## DESCRIPTION

1. Sub-Admiral filtration systems comprise a modified Series 'E', 'EC', or 'EH' vertical seal-less pump with an adaptor assembly to accept cartridge(s) mounted to the suction post.
2. A range of adaptors are available designed to accept a selection of **SERFILCO** cartridges. Due to physical variances between the pumps and the cartridge styles available, no single adaptor will fit all Sub-Admiral models.

## SAFETY PRECAUTIONS

1. Read Operating Instructions and Instructions supplied with chemicals to be used.
2. Refer to Chemical Resistance Data Chart for compatibility of materials to be used.
3. Note temperature and pressure limitations.
4. Personnel operating and servicing the equipment should always wear suitable protective clothing, face mask or goggles, apron and gloves.
5. Ensure all fittings and connections are correctly matched and properly tightened.
6. If system has been used, flush thoroughly with a neutralising solution to prevent potential hazard to personnel.
7. To avoid possible electric shock, never handle live equipment when wet or standing in water. Be sure power supply is disconnected and isolated.
8. During normal operation, motors become "hot to the touch" - avoid contact.

## INSTALLATION/PRE-START-UP

1. Inspect all component parts/fittings for damage sustained during shipping/handling.
2. Review any accompanying pump/motor Operating Instructions.
3. Systems are to be installed immersed in the process tank secured to the tank flange by means of the clamp supplied with ES Systems or bolts with ECS & EHS. Motor must always be installed above tank rim.
4. Static solution level must be higher than pump impeller.
5. Check power source for correct voltage and phase - connect power via a suitable motor starter with appropriately rated current sensing/cutout devices to protect the motor.
6. Check for correct direction of rotation of 3 phase motors by momentarily "jogging" the motor, i.e. an instantaneous ON-OFF operation of the starter.  
To change direction of rotation interchange any two lines L1, L2, L3.

CAUTION: - Running motor in reverse may cause the impeller to unscrew if it is immersed in liquid, and serious damage will occur. Check direction of rotation while pump is dry, i.e. no torque applied to the impeller.

Note - Sub-Admiral pumps can run dry.

7. Install filter cartridges of your choice.
8. Ensure discharge / eductor is submerged and directed towards the bottom or side of tank.

## START-UP

1. System will automatically prime when motor is energised since it is installed with impeller immersed in process liquid.

## USE WITH FILTER CARTRIDGES

1. **SERFILCO** Depth Cartridges have an equivalent dirt holding capacity to that of 3½ sq.ft. (.35 sq.m) 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 micron ratings and types, selection being dependent on application.
2. Refer to **SERFILCO** Product Catalogue or Bulletin M-109A-1 for general information and types of **SERFILCO** cartridges.

## USE WITH CARBON CARTRIDGES

There are different types of activated carbon cartridges, which may be used in conjunction with the filter assembly. Refer to Technical Bulletin TR-100-1. Activated carbon removes organics from plating solutions, taste, odour and colour from potable water and purifies industrial waste effluents.

## TO REPLACE CARTRIDGES

1. Stop motor and isolate electrical supply.
2. Lift system out of solution slowly and carefully to avoid dislodging any particulates/sludge adhering to the outside of the filter media.
3. Remove any filter -core plugs, loosen grip screws/hold down caps as appropriate and remove dirty cartridges.
4. Replace cartridges and secure with grip screws/hold down caps.

**IMPORTANT** - Refit filter core plugs if appropriate.

5. Lift system back into process tank and secure to tank flange.
6. Review contents of INSTALLATION/PRE-START UP Section for compliance, before starting motor.

## TROUBLE SHOOTING/HINTS

1. If solution aeration/foaming is observed, check:
  - 1.1 Column 'weep' holes are at least 1" below solution level.
  - 1.2 Filter cartridges are not blocked or of an incorrect type.
2. **SERFILCO** Sub-Admiral systems are designed for continuous operation 24 hours a day.

## REPLACEMENT PARTS

Refer to appropriate Parts List to order recommended spare parts for Pump/Motor prior to their need, thereby avoiding prolonged shut-down of the system and possible loss of production.