

## PF-1 PREFILTERS- VANE PUMP SYSTEMS

Up to five different filters are used on these Spectra Watermakers to make sure that no damaging foreign materials enter the system. There are up to four filters in the system to clean the feed water of abrasive materials while the system is in operation, and a fifth filter that prevents the entrance of chlorine during fresh water flushing.

In “Mk I” style systems, manufactured before 2007, the feed water is filtered in two stages. First it enters a fine mesh metal sea strainer then passes through a fifty micron pleated cellulose filter. These protect the vane pump from damage due to abrasion from silt and hard shelled plankton found in the feed water. After passing through the pump the feed water enters the filter housings containing 20 and 5 micron elements. These filters remove very fine particles which could damage the Clark pump and which would shorten membrane life.

In “Mk II” style systems, manufactured after 2007 and designated by the system model name, the feed water is filtered through a coarse strainer before it enters a brushless DC centrifugal boost pump. The boost pump forces water through the 20 and 5 micron filters (some systems will have only a 5 micron filter), before entering the feed water inlet on the feed pump.

Service schedules will vary widely depending on how and where the system is used. If large amounts of feed water are run through the system in a relatively short period in biologically fertile near shore waters, the prefilters will plug up, the pressure drop across the filters will rise, product production and quality will drop, and the system will sense plugged filters and give a service prefilters or check strainer alarm if so equipped.

When operated only an hour or two a day in inland or near shore waters, the trapped plankton will begin to decay in the filters long before the elements plug up, and the bacteria involved in the decay will cause a “rotten egg” smell in the product water. This decay will set in overnight in tropical waters, or after a week or two in high latitudes. If handled gently, and changed regularly before they get too smelly or plugged up, filters in this service can be cleaned a limited number of times.

In crystal clear blue water conditions the filters may need to be cleaned much less frequently.

The charcoal filter used in the fresh water flush system will not plug up unless you have some incredibly dirty domestic water in your boat. Six months after installation the charcoal filter element will lose its effectiveness at removing any membrane damaging chlorine which may be present in domestic water. Charcoal filter elements must be replaced every six months. Charcoal filter elements cannot be cleaned.

To ensure that filter elements fit properly and remove chlorine effectively, they should be purchased at factory authorized dealers. Our element part number is FT-FTC-XX. The last two digits indicate the micron rating, e.g. FT-FTC-05 is for a 5 micron element. Charcoal elements are FT-FTC-CC.

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