Potabilizers

Facet International

F Series

Facet potabilizers are designed to meet the need on board ship to treat the water produced by evaporators, in such a way as to produce suitable drinking water. This is achieved using the processes of re-hardening and sterilization.

RE-HARDENING OF WATER: This process consists of adding mineral salts to distilled water, in sufficient quantities to achieve a pH of between 7.5 and 8, always below 12 ºF.

The water produced by the on board water evaporators has the following characteristics:

- Salinity: Between 0.5 and 4 ppm of NaCl
- pH: ~6
- CO2 content: 40 mg/l.
- Oxygen present.

The pH value of ~6 is caused by the presence of carbonic gas, which is produced by the decomposition of the carbonates present in sea water. This gas is found dissolved in the distilled water.

When the mineral salts are added to distilled water, the CO2 is neutralised and the pH of the water is increased.

STERILIZATION OF WATER: Once the necessary mineral salts have been added, the water must be sterilized to remove the bacteria which have survived the process of evaporation, which takes place under vacuum conditions and at 60 ºC.

This sterilization is carried out using ultraviolet radiation.

With this method, the water which is to be treated is passed through a chamber where it is subjected to radiation from U.V. generators. These generators are isolated from the water by means of a protective, isothermic casing. With a radiation level of 2.573 Å, a significant transformation occurs in the metabolism of the cells. This is followed by a slowing down of their reproductive functions until the bacteria are totally eliminated.

MODE OF OPERATION

Facet fresh water potabilizers have two main constituent parts:

- RE-HARDENING FILTER
- STERILIZER

The distilled water, which comes from the evaporator or from the storage tank, is passed through the generator's re-hardening filter, where the water flows uniformly through the bed of mineral salts and takes them up. In this way, the necessary re-hardening, or pH adjustment, is achieved.

Next, part or all of the mineralised water passes through the treatment chamber of the sterilizer,where it is treated using ultraviolet radiation.

In the next page, we can see a typical flow diagram.

The models (F-75 to F-2000-2) incorporate a mineral salts regeneration system.

OPTIONS

- Skid assembly
- UV sensor
- Automatic doser
- Active carbon filter
- By-pass to the sterilizer
- By-pass to the rehardening filter
- By-pass to the active carbon filter

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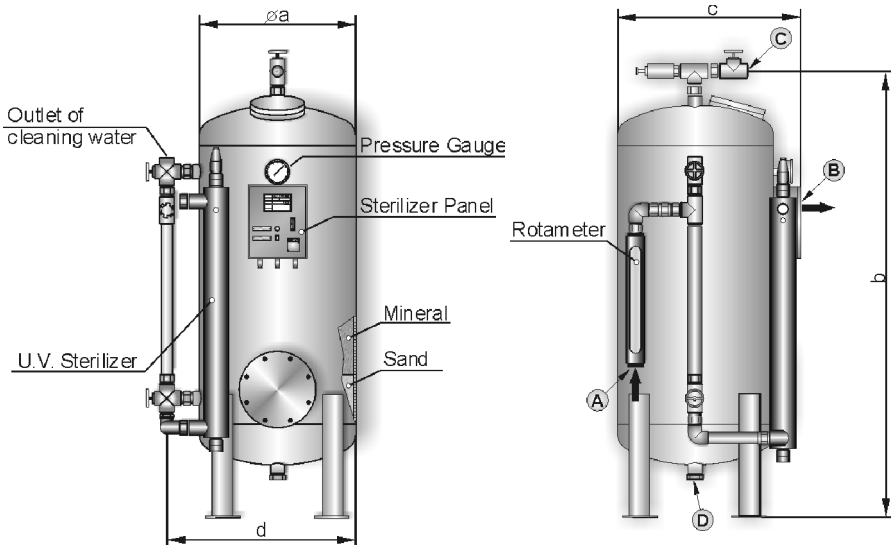
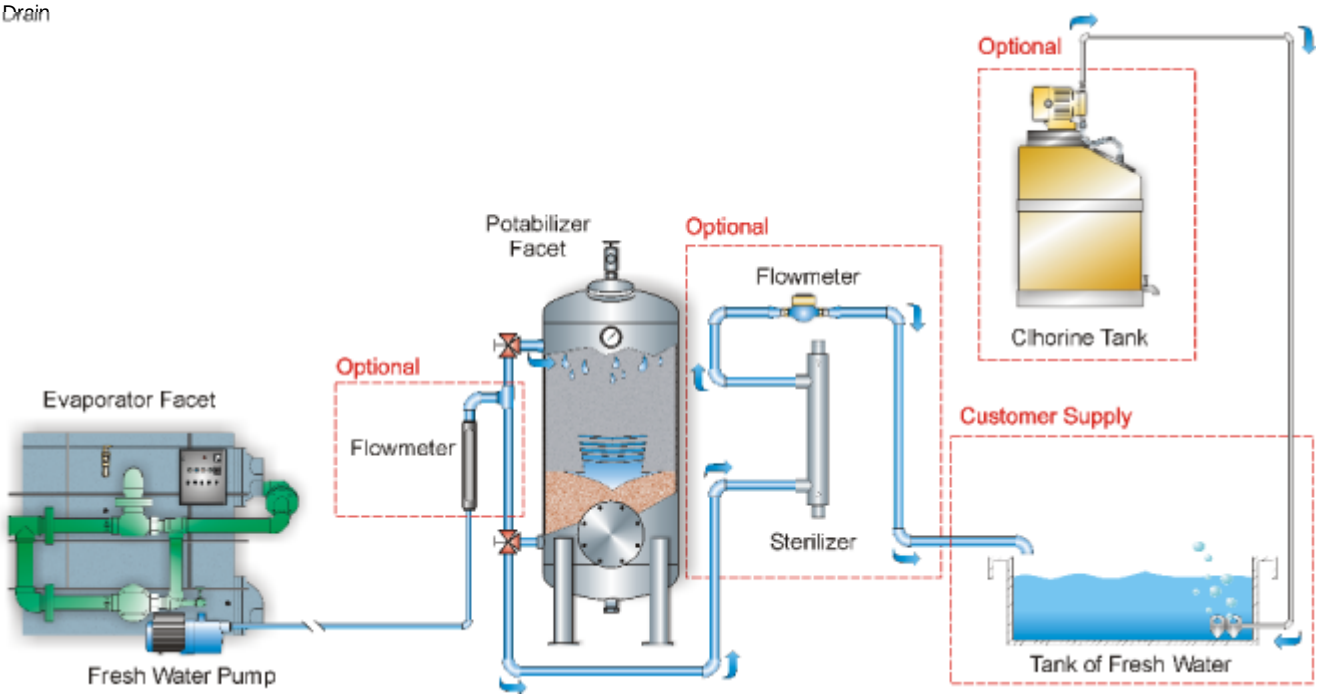


LEGEND

A. Input
B. Output
C. Vent
D. Drain



MODEL	CAPACITY (m^3/h)	WEIGHT (EMPTY) (kg)	WEIGHT (OPERAT.) (kg)	DIMENSIONS (mm)				NOZZLES	
				ø a	b	c	d	A	B
F-40-2/500	0.5	83	120	220	1330	470	460	3/4''RH	1/2'' RH
F-50-2/1000	0.8	110	140	324	1335	825	565	1" RH	1" RH
F-75-2/1000	1	127	160	350	1150	525	455	1" RH	3/4" RH
F-150-2/3000	2.5	240	300	450	1285	540	545	1" RH	3/4" RH
F-300-2/3000	3	380	470	550	1630	710	680	1" RH	3/4" RH
F-300-2/5000	5	380	470	550	1630	710	680	1" RH	1" RH
F-500-2/7000	8	510	645	650	1790	850	780	1 1/4" RH	1 1/4" RH
F-750-2/1X36	10	665	880	800	1900	1200	1000	2" RH	2" RH
F-1500-2/1X36	16	1270	1630	1000	2220	1250	1150	2" RH	2" RH
F-2000-2/1X48	20	1560	2015	1100	2160	1420	1400	2" RH	2" RH

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