

## Proportioning Bromination System for 35-Meter Patrol Boats

### Features:

- Brominator solution for low-flow desalinator
- Flow sensor to monitor current flow and total flow through the bromine cartridge
- Temperature gauge for accurate indication of water temperature

### Description:

The Model 6652-C100, drawing no. 8711-G501 brominator is a self-contained unit designed to apply a small concentration of bromine to the potable water supply aboard ship. The brominator is designed for manual operation. It requires connection to one or more potable water storage tanks.

Bromine is applied by passing the incoming water through a cartridge containing a bromine-impregnated resin. The water dissolves bromine from the resin.

Potable water storage requires disinfection to prevent the growth of disease-causing organisms. Bromine is an effective disinfectant when applied to water in small concentrations, but in moderate to large concentrations, it is toxic to humans. So the operation must be performed under controlled conditions, to ensure proper treatment.

This brominator is a unique design for a low-flow desalinator. The system uses a venturi injector to create suction on the bromine canister, along with a metering valve to regulate the flow. The onboard flowmeter displays the flow in multiple programmable units, both English and SI. The system is configured for 240 VAC at 50 Hz, and can be supplied configured for 115 VAC at 60 Hz.

### Specifications:

The HLI Model 6652-C100 is designed and built in accordance with ABS under contract from Swiftships, member Apex Group of Companies, and selected for the 35-meter patrol boat, a triple-waterjet vessel designed to operate in coastal waters out to approximately 200 miles from shore and up to sea state 4.

- Operation: Manual.
- Duty: Continuous.
- Capacity: Treats 800 gallons per day at a flow rate of 5 gallons per minute to an adjustable bromine concentration ranging from 0.2 to 2.0 ppm.
- Power requirements: Universal AC 100 - 240 VAC  $\pm$  10%, regulated 50 - 60 Hz, 24 VA max.
- Operating ambient temperature: 4 - 35° C (degrees Celsius).
- Inlet water conditions:  
Temperature: 4 - 35° C.  
Pressure: Up to 25 psig.
- Outlet water conditions: Bromine concentration 0.2 to 2.0 parts per million.
- Bromine cartridge life span: 1500 total gallons through cartridge (one cartridge per month at high treatment level).
- Weight: 35 pounds (calculated).



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