

***Electric Heating Control System and Solenoid Valve to Support the Productivity
of a Solar Seawater Distillator***

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ABSTRACT

The availability of clean water from natural resources is shrinking due to high population growth rates and poor water management. Many people living in coastal areas with hot climates experience water shortages and it is very expensive to meet their clean water needs. Distillator is a tool to get clean water by distillation. The distillator in this study uses a heating system and an automatic water filling system in order to increase the fresh water produced. The heating system uses a water mug type heating element with a rated power of 500 watts and the proportional control value used is 1.2. The water filling system uses an aquarium pump with a power of 12 watts 800 liters/hour with a water level sensor using an ultrasonik sensor. The highest fresh water product that can be produced in the study is on July 26, 2022 with the results of fresh water productivity as much as 620ml in testing using a temperature set point of 70°C with an energi requirement of 1.34Kwh.

Keyword: *Distilator, heating element, aquarium pump.*