



SIEGERTECH

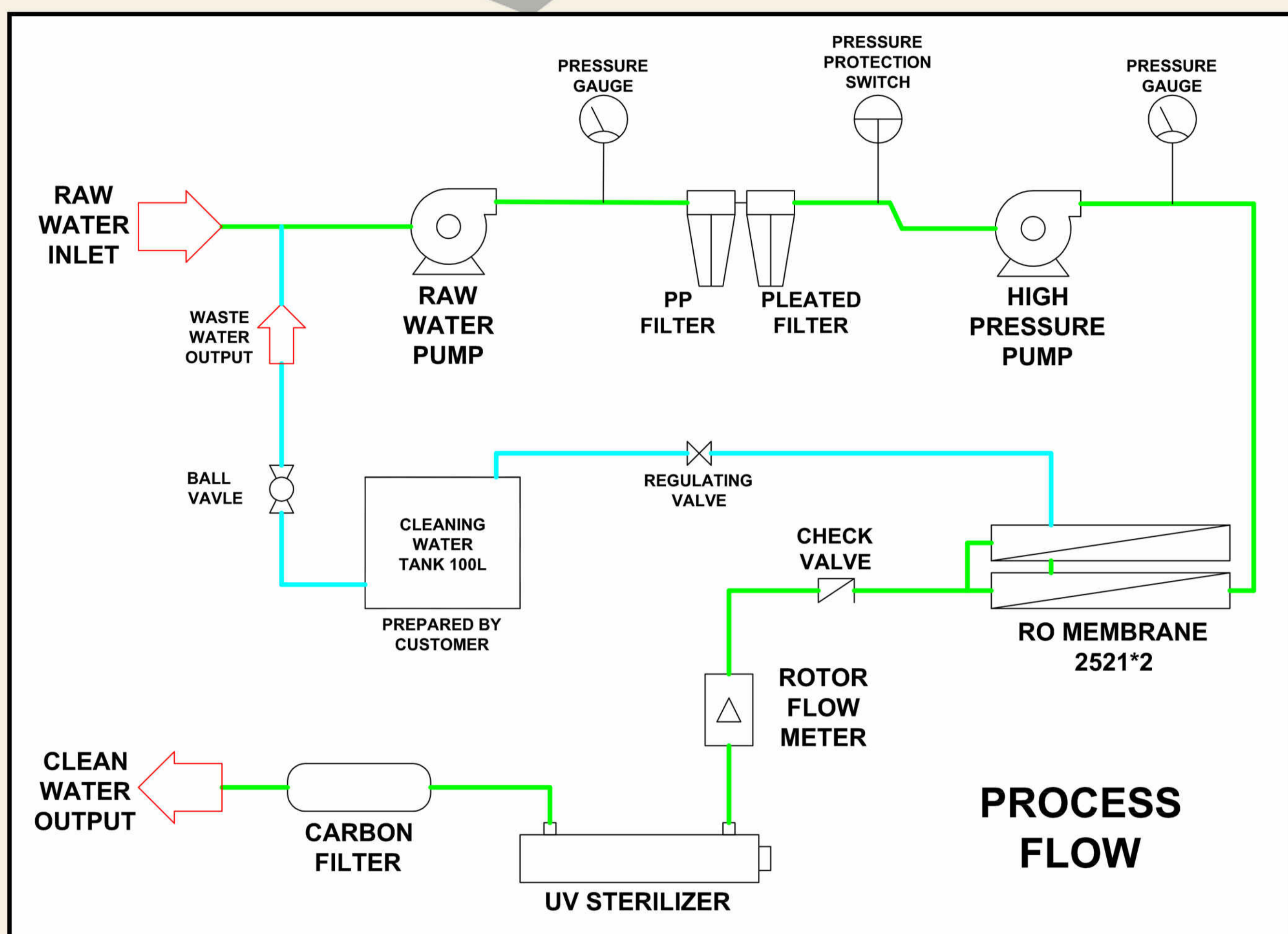
PORTABLE SEAWATER DESALINATION UNIT

ST-SWRO-500LPD/1000LPD/2000LPD



SIEGERTECH SEAWATER DESALINATION

PROCESS FLOW



MAIN SYSTEM CONFIGURATIONS

Model/main configuration	ST-SWRO-500LPD	ST-SWRO-1000LPD	ST-SWRO-2000LPD
Core filtration component	USA DOW2521 sea water desalination membrane 1 pcs	USA DOW2521 sea water desalination membrane 2 pcs	USA DOW2540 sea water desalination membrane 2 pcs
Pretreatment	5 micron PP filter and 1 micron pleated filter		
Post treatment	10W America Hanovia UV sterilizer and big T33 coconut shell activated carbon		
Raw water pump	Lingxiao pump, suction head 6m, 1.5TPH flow rate, pump lift 25M		
High-pressure pump	SS316L high-pressure pump		
Instrument	Raw water pump inlet water pressure gauge, high-pressure pump inlet water pressure gauge, fresh water flow meter		
Real Time conductivity meter	Korida conductivity meter		
Optional Configuration	liquid level switch, pressure tank		

- ▶ The two major technologies that are used around the world for seawater desalination are Distillation and Reverse Osmosis. Both technologies need energy to operate and produce fresh water.
- ▶ Siegertech's Portable Seawater Desalination Units use Reverse Osmosis membrane technology because of the high desalination rate, low energy consumption and low cost.
- ▶ Designed to convert seawater to drinking water, our Seawater Desalination Units use high quality membranes and our proven technology to give dependable performance and to comply with GB5749-2006 People's Republic of China National Standards for Drinking Water Quality, WHO Guidelines for Drinking-water Quality & other international drinking water quality standards.

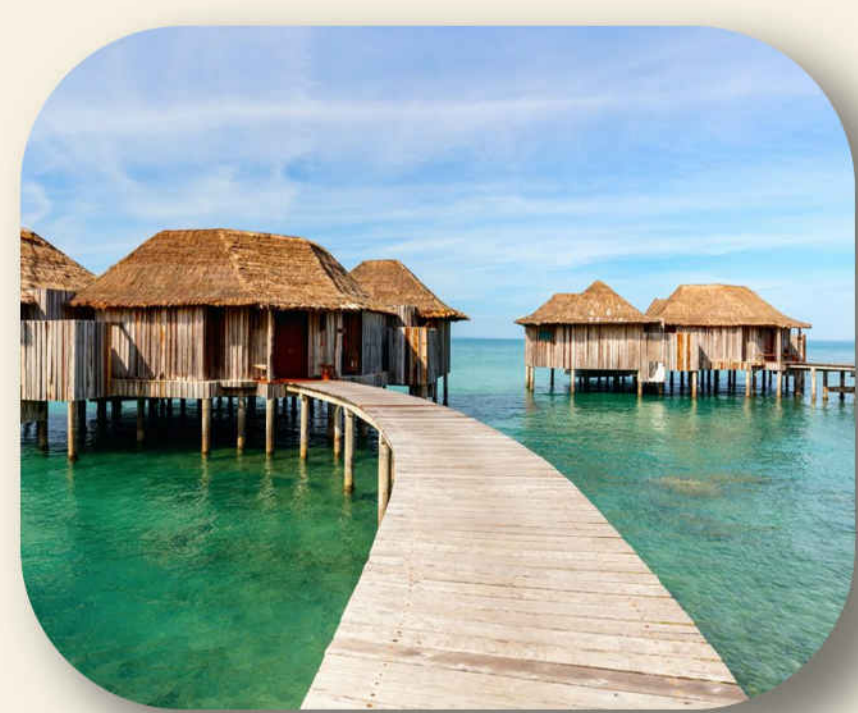
Seawater Reverse Osmosis (SWRO)

- ▶ Seawater Reverse Osmosis is a simple process that involves a high pressure pump, forcing seawater through semi-permeable membranes. Salt, bacteria, colloids and other impurities are rejected by the membrane and only the tiniest water molecules are permitted to pass, leaving you with purified water at the other end.
- ▶ The process begins by passing seawater through various pre-filters to remove many of the solids and particles from the water. Seawater then goes through the reverse osmosis process. A High Pressure Pump forces the pre-treated seawater through a set of semi-permeable membranes at high pressure. The membranes remove the particles the pre-filters missed by letting water flow through but blocking the salt, organics, bacteria, microbes and impurities. Thus, the water beyond the membrane, called permeate, is purified and desalinated. The residual concentrated salt water leaves via a pressure control valve. The permeate is sterilized with a UV sterilizer system to kill any remaining bacteria and microbes. Finally, the permeate is passed through an activate carbon filter to remove any peculiar smell and improve the taste. The result is clean potable drinking water.

APPLICATION RANGE



MARINE
Ships, Fishing Boats,
Yachts, Navy & Marine Police Patrol Boats.



ISLAND / SEASIDE RESORT
Seaside Houses / Villas,
Resorts & Restaurants



SIEGERTECH ENGINEERING (M) SDN BHD (732171-V)

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PORTABLE SEAWATER DESALINATION UNIT

ST-SWRO-500LPD/1000LPD/2000LPD



ST-SWRO-500LPD SPECIFICATIONS

ST-SWRO-500LPD			
*Testing flow rate	45L/H	Recovery rate	4%
*Suggested to use flow rate	25L/H	Power	1.9KW
Voltage	220V 50HZ	Working temperature	5-45°C
Inlet water TDS	<45000ppm	Freshwater TDS	<600ppm
Design pressure	1000PSI	Working pressure	≤850PSI
Inlet water residual chlorine	<0.1ppm	Inlet water SDI	<5
Inlet water turbidity	<1	Inlet water PH	Neutral
Machine net size	64*50*55 (cm)	Machine net weight	60KG
Machine packing size	75*60*79 (cm)	Machine packing gross weight	80KG



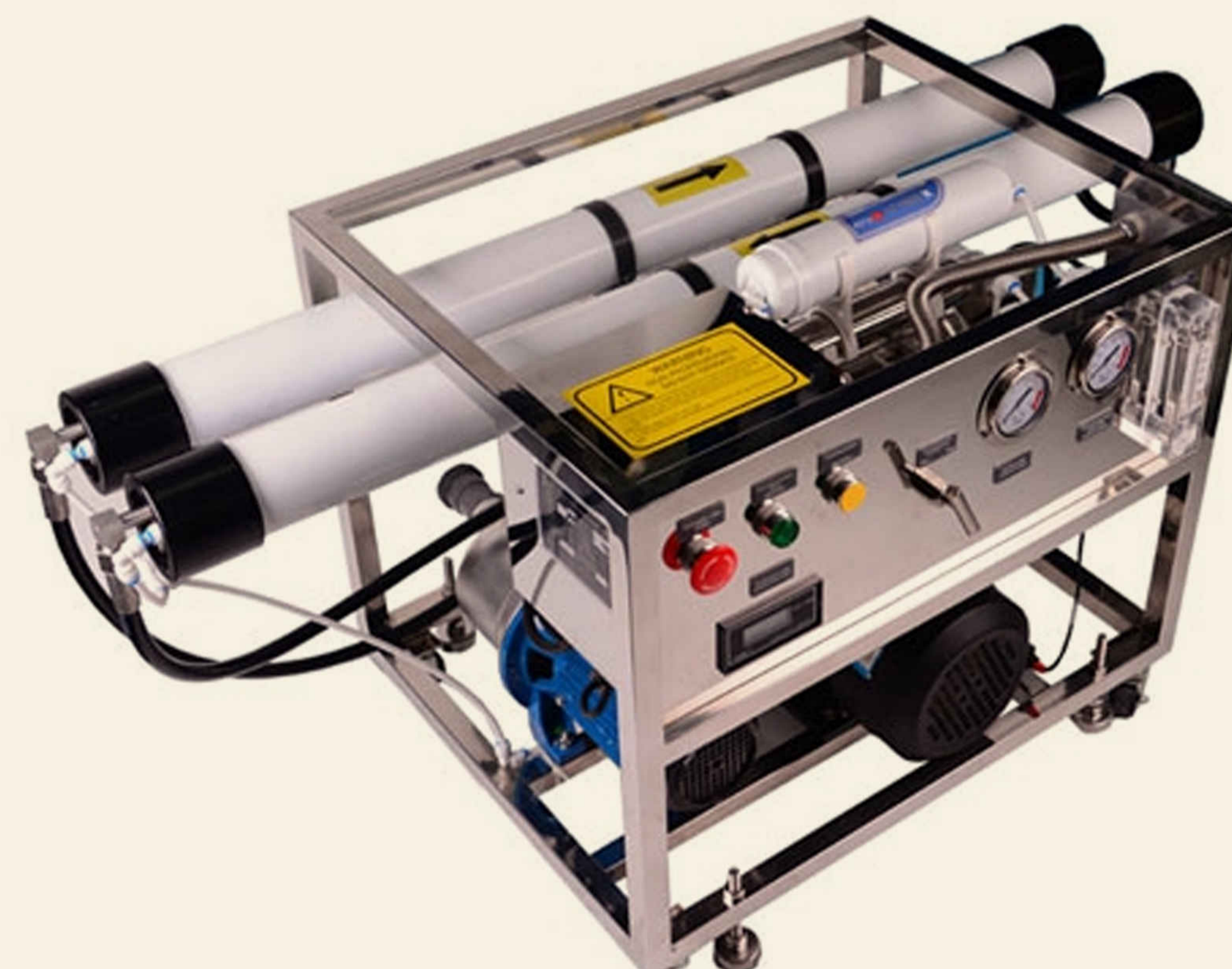
ST-SWRO-1000LPD SPECIFICATIONS

ST-SWRO-1000LPD			
*Testing flow rate	80L/H	Recovery rate	8%
*Suggested to use flow rate	50L/H	Power	1.9KW
Voltage	220V 50HZ	Working temperature	5-45°C
Inlet water TDS	<45000ppm	Freshwater TDS	<600ppm
Design pressure	1000PSI	Working pressure	≤850PSI
Inlet water residual chlorine	<0.1ppm	Inlet water SDI	<5
Inlet water turbidity	<1	Inlet water PH	Neutral
Machine net size	64*50*55 (cm)	Machine net weight	70KG
Machine packing size	75*60*79 (cm)	Machine packing gross weight	90KG



ST-SWRO-2000LPD SPECIFICATIONS

ST-SWRO-2000LPD			
*Testing flow rate	160L/H	Recovery rate	15%
*Suggested to use flow rate	100L/H	Power	1.9KW
Voltage	220V 50HZ	Working temperature	5-45°C
Inlet water TDS	<45000ppm	Freshwater TDS	<600ppm
Design pressure	1000PSI	Working pressure	≤850PSI
Inlet water residual chlorine	<0.1ppm	Inlet water SDI	<5
Inlet water turbidity	<1	Inlet water PH	Neutral
Machine net size	110*50*55 (cm)	Machine net weight	80KG
Machine packing size	123*60*73 (cm)	Machine packing gross weight	101KG



Consumable replacement cycle : Applicable to all models above

1. 5 Micron PP Filter and 1 Micron Pleated Filter : 3 months (average)
2. Carbon Filter : 6 months (average)
3. UV Lamp : 9000 hours or 1 year (average)
4. USA DOW RO Membrane : 3 years (average)

Note : The above recommendation is to maintain the equipment, running 20 hours / per day, in proper working condition.

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