

## SOLARMAAX 10GPH TROPIC COMPACT 12V SPECIFICATIONS

**Production Rate: 10 Gallons per hour, 38 liters per hour.  
240 Gallons per day, 900 liters per day.**

The production rate is set by the displacement of the Enhanced Clark Pump energy recovery device and the feed flow rate. The *SolarMaax 10Gph Tropic Compact 12v* uses a 10% displacement Enhanced Clark Pump so 10% of the feed water flow is turned into product water. Water temperature and salinity affect operating pressure but have little effect on production rate. Changes in feed flow do have an effect, the more feed flow the more product. Supplying good voltage to the feed pump gives the best production rate. Running the system while the batteries are bulk charging gives the highest production rates.

### RO Membrane:

The *SolarMaax 10Gph Tropic Compact 12V* Watermaker is equipped with **DOW Filmtec®** RO Membrane(s)

Membrane Type: Polyamide Thin-Film Composite

Model: SW2521 (Tropic)

Range of Operating Pressures: 650 to 1000 psi (45 to 69 bar)

Normal Operating Pressure: Set by feed water conditions and feed flow rate.

Salt Rejection rate: 99.4%

Maximum Operating Temperature: 113°F (45°C)

Minimum Storage/Operating Temp: 32°F (0°C)

Maximum Operating Pressure: 1,000 psi, (69 bar)

Maximum Pressure Drop: 15 psi (1 bar)

pH Range, Continuous Operation: 2-11

pH Range, short-term cleaning: 1-12

Free Chlorine Tolerance: <0.1ppm

### Electrical Power Requirements:

11.0 amps @ 12.5-14.4 VDC

6.0 amps @ 25.0 – 28.8 VDC

### The Enhanced Clark Pump Hydraulic Pressure Intensifier:

Manufactured by Electromaax for marine and military use. The Clark Pump uses the Feed/Boost pump flow pressure to intensify the pressure of the flow through the RO membranes high enough for reverse osmosis to occur. There are no electrical components.

Displacement:	10 %
Feed Flow range:	1.0 gpm (3.78 lpm) to 4.0 gpm (15.14 lpm)
Maximum Inlet pressure:	up to 125 psi (8.6 bar)
Maximum Working Pressure:	1000 psi (68.9 bar)
Maximum operating temperature:	113°F (45°C)
Maximum storage temperature:	140°F (60.0°C)
Pump Dimensions:	26.38" (67cm) W, 5.75" (14.6cm) D, 8.0" (20.32cm) H
Pressure Relief Valve:	Manually open ½ turn for priming and servicing.

## **Feed Pumps: Qty x 1**

Motor:	Permanent magnet type, fully enclosed, fan cooled, 1/8 hp
Pump Body:	Thermoplastic
Pump Type	3 chamber diaphragm
Typical Amp Draw:	8 to 11 amps, 12VDC
Recommended fuse size:	15 amps, 12VDC
Average Flow Rate	1.5 gpm (6.8 lpm)

## **Pressure Vessel:**

Filament wound fiberglass/epoxy compound with non-metallic wetted surfaces. Easily removeable end caps for membrane replacement with larger than standard internal porting and fittings for increased energy efficiency.

The most compact complete assembly available

Max pressure	1000 psi (69 Bar)
Burst pressure	3000 psi (207 Bar)

## **Prefilter and Auto Fresh Water Flush Filter housings:**

Industry standard, 10-inch, plastic, filter housings. Accepting 9.75" by 2.5" high flow carbon filter elements.

## **Clark Pump and Pressure Vessel Assembly:**

Dimensions:	16.3" (41.3 cm) W, 24.8" (63.0 cm) L, 9.1" (23.1 cm) H
Weight:	34.2 lbs. (15.5 kg)

## **Feed Pump Assembly:**

Dimensions:	13.2" (33.5 cm) W, 8.63" (21.9 cm) D, 13.1" (33.2 cm) H
Weight:	11.2 lbs. (5.1 kg)

## **Shipping:**

Level 1 with 21" Membrane: ships in 2 boxes

Box 1 – 18"(45.7 cm) x 18"(45.7cm) x 14"(35.6) weight: 26 lbs.

Box 2 – 29"(73.7cm) x 17"(43.2cm) x 12"(30.5cm) weight: 42 lbs.