



**1. HYBRID SOLAR DESALINATION PLANT 5 m3/day SEMI-MOBILE (DHSM5)**

Semi-Mobile water treatment plant DHSM5, of sea water by reverse osmosis and fed mainly by photovoltaic energy supported by a small gasoil generator..

It consists of a **hydraulic block** to treat water and an **energy block** for providing electrical power to the plant, with an assembly time of less than 7 days.

The hydraulic block is a water treatment plant; it transforms seawater providing drinking water treated with chlorine for human use.

The energy block uses solar energy (solar panels) + a generator or conventional energy (electric grid connection) to power the hydraulic block.

**2. PLANT CHARACTERISTICS**

SOURCE OF THE WATER TO BE TREATED:	<b>Sea water in tank, minimum 20 m<sup>3</sup> / day</b>
PRESSURE OF THE WATER TO BE TREATED:	<b>2,5 bar (1,62 m<sup>3</sup> / hour)</b>
TDS. POWER:	<b>42.000 mg/l</b>
TDS. PERMEATED:	<b>&lt;350 ppm</b>
TREATED FLOW:	<b>5 m<sup>3</sup> / day</b>
DUTY CYCLE:	<b>10 hours a day.</b>
ENERGY CONSUMPTION:	<b>33 kWh / day</b>
SOLAR PLANT SURFACE:	<b>9 m X 1.55 m</b>

The energy block allows operation during 10 hours a day, time needed to treat water, keeping sewage service even at night, thanks to the electric batteries that are recharged daily.

On days when solar energy is insufficient, the water treatment plant stops, being the water supply determined by the capacity of the regulating reservoir. This reservoir can absorb water consumption peaks, specific solar lacks and keep residual chlorine required for human consumption. The ideal capacity of the reservoir according to the drinking water production of the plant is 20 m3.

**3. PHOTOVOLTAIC TREATMENT PLANT, COMPONENTS AND SYSTEMS:**

