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*We have not inherited the world
from our forefathers, we have
borrowed it from our children.*



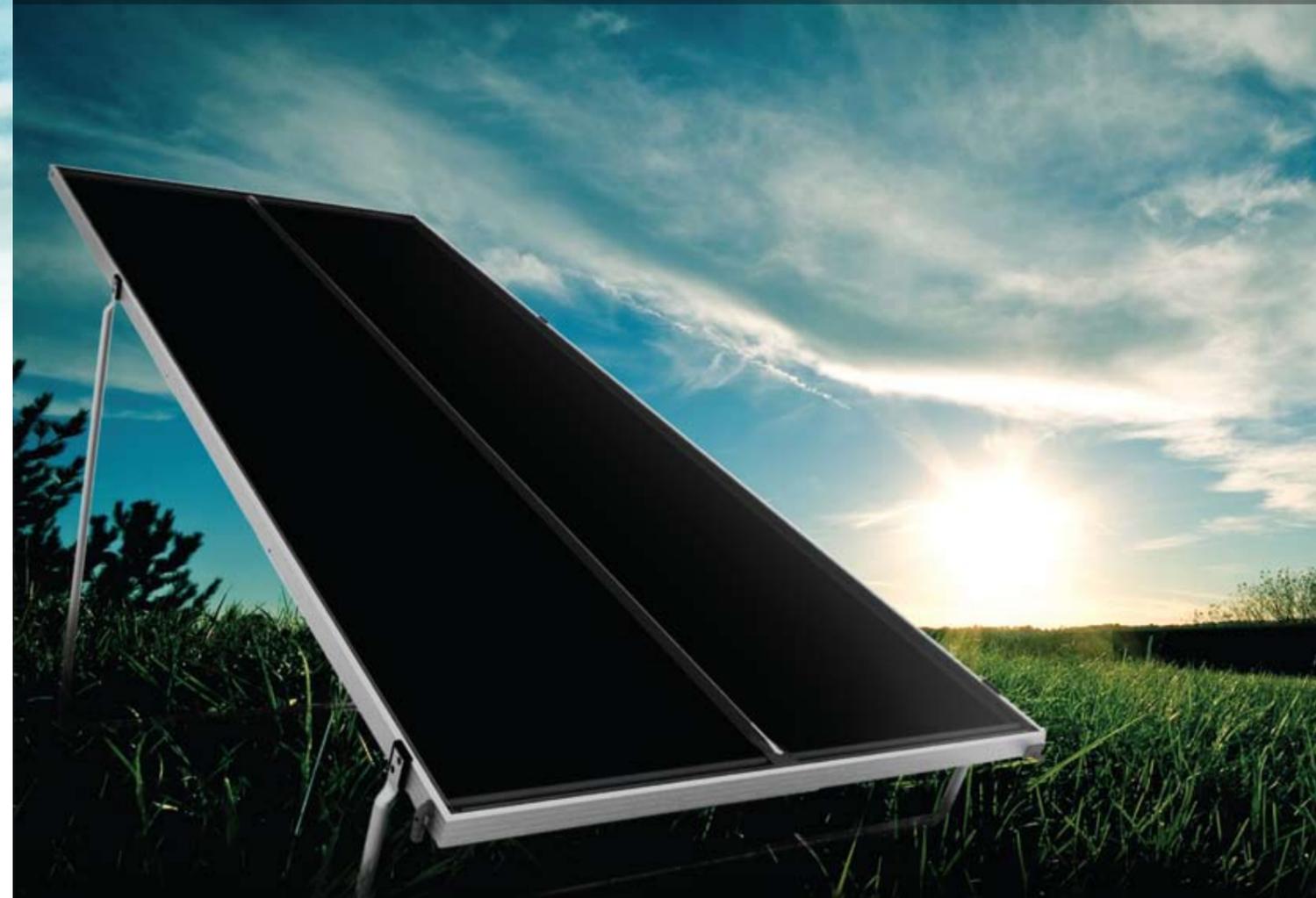
FCUBED

Solar Water Processors

Carocel™

SOLAR WATER
DESALINATION / PURIFICATION

Direct Solar Powered
Desalination & Zero Liquid
Discharge Technology



FCUBED is proud to provide a solution for the world's growing water crisis. 'Renewable energy desalination / purification'

CAROCELL Direct Solar Powered Desalination Technology is one of the most efficient and cost effective product of its kind in the world.

The system produces safe, high quality potable water from any water source, including, polluted, contaminated, industrial waste water, brackish ground water, saline aquifers and sea water.

How It Works

The system receives impure water by gravity or pump into a feeder pipe at the top of the unit. The input water slowly runs down the solar collector/evaporator being evenly dispersed. Solar energy heats the water, it vaporizes and then condenses on the inside of the composite plastic panel enclosure. Droplets of distilled water run down into a pure water outlet at the bottom of the unit.

Greater efficiency of purified water output has been achieved through the unique distillation system design. The design includes composite layers of the water tight panel enclosure and the surface treatment of the solar collector. As well as allowing the moist air to circulate, producing condensate on the interior front and back surfaces of the enclosing panel.

CAROCELL Direct Solar Powered Desalination

Technology working at an ambient temperature heats the input water causing a vapour condensation change precluding all bacteria and pathogens, therefore eliminating water borne diseases. Exposure to ultra violet light and extreme heat from solar energy through the advanced composite panel enhances the germ killing process. Output water through distillation is purified to a level of 0.5-2ppm of (TDS) totally dissolved solids (sea water is measured at 35,000ppm TDS).

CAROCELL Solar Waterpurifiers only use the sun's energy, there are - no moving parts, no electronics, it is robust and easy to set up, low maintenance and very low in operating costs because the waterpurifier only needs solar energy. The feed water can be supplied by gravity/pressure or pump enabling it to be completely versatile to fit within your current demand.

CAROCELL 3000

Water Output*:
Temperature 20°C 16 Litres / DAY
Temperature 30°C 20 Litres / DAY
Dimensions: 1110 x 2880mm
Surface Area: 3.0m²
Weight: 20kg

CAROCELL 6000

Water Output*:
Temperature 20°C 32 Litres / DAY
Temperature 30°C 40 Litres / DAY
Dimensions: 2220 x 2880mm
Surface Area: 6.0m²
Weight: 30kg

* Water output may vary depending on solar energy available. International Patents Pending



Carocell panels are a breakthrough in Solar Desalination.

- 55 – 65% efficiency solar energy to distilled water, with peak efficiencies over 80%
- 50% more efficient than most comparable products
- 5 – 25% of the installed cost of comparable products

Low cost, robust, modular solar panels can be ground or roof mounted. The design enables multiple panels to be connected together to produce larger quantities of distilled water from a single source.

Desalination is becoming the preferred option for purifying water using a wide variety of processes. Most are extremely energy intensive. Solar desalination uses the same natural processes that produce the world's rainfall, (evaporation and cooling of the vapour to form condensation).

Carocell / direct solar desalination enables the broad use of solar desalination for both basic water needs and large scale desalination projects.

The Carocell panel is the perfect product for fast deployment in disaster relief situations.

Carocell technology also boasts Zero Liquid Discharge technology, which converts sea water, waste brine or industrial waste water into drinking water and valuable fractionalised salts and minerals. (for further information on ZLD visit www.fcubed.com.au)

Benefits of Solar Desalination / Distillation

- Low cost modular desalination/distillation panel
- Produces distilled water from any source
- Simple robust design and operation
- Gravity or pump fed
- Waste hot water by-product
- Ground or Roof mounting
- Complete solar generation
- No green house emissions (potential carbon credits)
- No ongoing energy costs
- No filters or costly membranes
- No chemicals
- Single Unit operation
- Multiple Unit Industrial Water Farm producing distilled/deionized water
- Zero Liquid Discharge (ZLD) No waste brine stream when Carocell panels in series in a solar water farm
- Dewatering industrial liquid waste
- Environmental and political benefits
- Health Benefits - Saves lives

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Key Market Verticals

- Rural / Domestic
- Urban (hybrid)
- Humanitarian / Aid / Disaster relief
- Agriculture / Horticulture
- Bottled water
- Industrial / Mining