Solar powered desalination and water purification
WORLD'S LEADING PRODUCTS IN WATER PURIFICATION POWERED BY RENEWABLE ENERGY

Solar Water Solutions is a Finnish water technology company. Our job is to provide safe and sustainable drinking water locally in remote off-grid locations.

WWW.SOLARWATERSOLUTIONS.FI
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WORLD’S GREENEST REVERSE OSMOSIS SOLUTION

Make your own clean, 100% disinfected drinking water from seawater, lakes, rivers or boreholes.

Stand-alone SolarRO units operate directly with solar energy, without the need of batteries or energy storage.

Quality drinking water production as low as 1 USD per 1000 liters or 0,001 USD per one liter.

Low life-cycle costs. SolarRO PRO unit’s pay-back period using free solar energy is only 2–4 years.
PRODUCE DRINKING WATER LOCALLY USING SOLAR ENERGY

Mobile and scalable products to suit your capacity requirements.

The SolarRO units are easy to install and operate with low maintenance. No adjustments needed.

The units operate effectively, with optimal water production rate regardless of the fluctuations in solar irradiation.

The system can start, operate and stop automatically.
# PRODUCT LINE

## FRESH AND BRACKISH WATER PRODUCTS

<table>
<thead>
<tr>
<th></th>
<th>SolarRO MINI 50</th>
<th>SolarRO MINI 150</th>
<th>SolarRO PRO 300</th>
<th>SolarRO PRO 700</th>
<th>SolarRO PRO 1500</th>
</tr>
</thead>
<tbody>
<tr>
<td>Permeate production max L/ hour*</td>
<td>50</td>
<td>150</td>
<td>300</td>
<td>660</td>
<td>1550</td>
</tr>
</tbody>
</table>

## SEA WATER PRODUCTS

<table>
<thead>
<tr>
<th></th>
<th>SolarRO PRO 250 SW</th>
<th>SolarRO PRO 750 SW</th>
<th>SolarRO PRO 1500 SW</th>
<th>SolarRO PRO 3500 SW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Permeate production max L/ hour*</td>
<td>250</td>
<td>750</td>
<td>1500</td>
<td>3500</td>
</tr>
</tbody>
</table>

*BW* Brackish water TDS 500–6.000 mg/L; *SW* Seawater: TDS 30.000–40.000 mg/L. Please refer to technical details and daily solar production curve for tested results.

Design and specifications are subject to change without prior notice.
SolarRO MINI Series
SolarRO MINI Series

Safe and durable system.

Easy and quick maintenance.

**High quality product water.** In our MINI units we use modern, high quality thin-film composite RO (Reverse Osmosis) membranes, which remove all impurities, bacteria, viruses and other contaminants from the feed water, leaving only high-quality water as the end product. Active Carbon filter and the UV treatment at the end of the purification process give the drinking water a good taste and ensure its 100% disinfection.

**Energy source.** The SolarRO MINI units operate directly with solar panels, without any batteries between. But you can switch it to grid, generator or batteries anytime.

**Easy to use.** Just install the unit’s suction hose into the water source, connect the solar PV cables and push the start button and you begin to get clean water. No adjustments needed.

**Self-priming pump.** Up to 1.5m height. For greater lifts you can use a feed pump, which we can provide.

**Quick and easy maintenance.** All the filters and membranes are readily accessible for very easy replacement. They can be changed in a few minutes. Depending on the user case, pre-treatment filters should be changed 2–4 times per year. We recommend changing the RO membranes every 3–5 years.

**Great durability.** The MINI units are made from the very best materials and the metallic body, pressure vessels and tubes can withstand tens of years.

- Designed, built and tested in Finland
- Lightweight, compact and mobile
- Frame is made of non corrosive sea aluminum
- Can operate continuously the whole day
- Low energy consumption
- Silent operation
- Output Ph 6.7-8.5
- UV lamp operating time 9000 hours
- Fully CE compliant
SolarRO MINI 50

Make your own, high quality drinking water from boreholes, lakes, rivers or floodwater.

Light and portable solution.
Easy to operate. No adjustments needed.

Production capacity from lakes, rivers, ponds or floodwater 50 L/h and from 0.6% saline brackish water 25 L/h.
SolarRO MINI 50

Technical Specification

| Tested approx. product water (permeate) flow | 50L/hr          ——  25L/hr |
| Feed water | Lake/ River   | Brackish |
| Feed water TDS | 500 mg/L      ——  6,000 mg/L |
| Test water temperature | 18°C          |
| Salt rejection | 99%          |
| Motor | 12VDC/120W |
| Pump | Diaphragm |
| System pressure | 9bar, automatically self-adjusting |
| Pressure Vessel | 2521, SS 316L |
| Membrane | 1 x 2521, polyamide |
| RO tubing | SS 316L |
| Pre-filter | 3 x 5” 5µm, 50µm PP Filter and 5µm Activated Carbon |
| Pre-filter casing | 3 x 5” PVC |
| Permeate post treatment | Ultraviolet-disinfection + Activated Carbon |
| Ultraviolet lamp life span | 9000 hours |
| Permeate quality | pH 6.5 - 8.5, 100% disinfected |
| Power requirement | max. 150Wp |
| PV panel (recommended) | 2 x á 140 Wp / 17Voc or 1 x 250-275 Wp / 37Voc |
| Dimensions | L=73cm, B=28cm, H=29cm |
| Weight | 15Kg |

Optional equipment & accessories

- Submersible or on site feed water pump (230VAC or 12VDC) when lift height is over 1.5m
- Feed water hose 25m or 50m, including 100mic mesh filter
- Water storage tank for permeate 60L, 100L, 150L
- Replacement filters (2 pcs PPT filters + 1pc active carbon, 1 pc membrane)
- AC/DC transformer for grid application
- PV panel package (example: 2x 140Wp + DC controller)
- Back-up battery package 85Ah
- TDS meter
SolarRO MINI 50 Emergency Case

Easy to transport.

Suitable for acute need of clean drinking water.
Produce clean high-quality drinking water from lakes, rivers, boreholes or floodwater.

Compact and mobile solution.
SolarRO MINI 150

Clean drinking water production from lakes, rivers, ponds or floodwater
150 L/h and 0.6% saline brackish water 60 L/h.
### Technical Specification

| Tested approx. product water (permeate) flow: | 150L/hr | 60L/hr |
| Feed water | Lake/ River | Brackish |
| Feed water TDS | 500 mg/L | 6,000 mg/L |
| Test water temperature | 18°C | 99% |
| Salt Rejection | 0.37kW/230 VAC or 300W/24 VDC |
| Motor | Rotary vane |
| Pump | 9 - 12 bar, automatically self adjusting |
| System pressure | 2 x 2521, SS316L |
| Pressure Vessel | 2 x 2521, polyamide |
| Membrane | SS 316L |
| RO tubing | 3 x 10" (5µm, 50µm, 100µm PP filter) |
| Pre-filter | 3 x 10" PVC |
| Pre-filter casing | 1 x 5" 5um 800mg Active Carbon, Ultraviolet |
| Permeate post treatment | 9000 hours |
| UV lamp life span | pH 6.5–8.5, 100% disinfected |
| Permeate quality | max. 250Wp |
| Power requirement | 4 x 250-275 Wp / <37Voc |
| PV panels recommended | L = 77cm, B = 45cm, H = 44cm |
| Dimensions | 28 Kg |

### Optional equipment & accessories

- Submersible or on site feed water pump (230VAC or 24VDC) when lift height is over 1.5m
- Feed water hose 25m or 50m, including 100mic washable pre-filter
- Water storage tank for permeate 100L, 200L, 300L
- Replacement filters (3 pcs PPT filters + 1pc Active Carbon + 2pcs membranes)
- PV panel package (example: 4 x 265Wp + DC controller)
- Backup battery package 250Ah
- TDS meter
SolarRO PRO Series
SolarRO PRO Series

Self-sufficient and affordable drinking water supply.

Operational costs reduced up to 90%, low life-cycle costs.

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High quality product water. In our units we use modern, high quality thin-film composite RO (Reverse Osmosis) membranes, which remove all impurities, bacteria, viruses and other contaminants from the feed water, leaving only high-quality water as the end product. Active Carbon Filter and UV treatment at the end of the purification process give the drinking water a good taste and ensure its 100% disinfection.

Energy source. SolarRO PRO unit operates directly with solar panels, without any batteries between. You can also switch it to grid or generator for clean water production during non-solar hours.

Easy use. Install the unit’s suction hose into the water source, connect the solar PV cables and push the start button and you begin to get clean water. No other adjustments needed.

Water source. When water source is a borehole or well, usually a submersible pump is used to feed water into an intermediate tank, which can be on the ground level or higher installed. The unit uses this tank as its water source.

Easy maintenance. All the filters and membranes are readily accessible for very easy replacement. The filters can be changed to new ones in a couple of minutes. Also the membranes are very easy to replace, taking 5–10 minutes each. Depending on the user case, pre-treatment filters should be changed 2–4 times per year. We recommend changing the RO membranes every 3–5 years.

The PRO units have an integrated membrane cleaning system for better production efficiency and longer membrane life span.

Great durability. The SolarRO PRO units are made from the very best materials and the aluminium frame, pressure vessels and tubes are expected to withstand at least twenty years.

- Frame is sea aluminum
- Can operate continuously the whole day
- Low energy consumption
- Silent run (< 54 dB from 1 meter distance)
- Fully CE compliant
- Competitive investment cost – no batteries or energy storage needed
- Easy to install, plug & play system
- The system can run dry
- Fully automatic system
- Low energy consumption
- No chemicals used

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Make your own clean quality drinking water from brackish water sources.

Sustainable water production.
Clean drinking water production from lakes, rivers and boreholes 300 L/h and from 0.6% saline brackish water 190 L/h.

SolarRO PRO 300 BW
SolarRO PRO 300

Solar daily output 2 m³

Hourly values

Output (liter)

8:00 9:00 10:00 11:00 12:00 13:00 14:00 15:00 16:00

Output with generator or electricity: 7 m³ / day (24h) // Output from borehole water when TDS 6,000 mg/L; max. 190 LPH

SolarRO PRO 300

Daily permeate output
Feed water: Borehole
Feed water TDS 500 mg/L
Feed volume 7 LPM max.
Water temperature 20 °C
Permeate output 300 LPH max.
Permeate TDS 37 mg/L

Power options
Solar PV panels 8 pcs à 250 Wp
Generator 1 kW / 230 VAC / 50 Hz
Grid 230 VAC
SolarRO PRO 300

Technical Specification

Tested approx. product water (permeate) flow:
- 300 L/h
- 190 L/h

Feed water:
- Lake/ River
- Brackish

Feed water TDS:
- 500 mg/L
- 6,000 mg/L

Test water temperature:
- 20°C

Salt Rejection:
- 99 %

Motor:
- 0.5kW/230 VAC or 400W/24 VDC

Pump:
- Rotary vane

System pressure:
- 14 - 15 bar, automatically self-adjusting

Pressure Vessel:
- 4 x 2521, SS316L

Membrane:
- 4 x 2521, polyamide

RO tubing:
- SS 316L

Pre-filter:
- 2 x Big Blue 10” (5µm, 50µm PP filter)
- 2 x Big Blue 10” PVC

Pre-filter casing:
- 1 x 10” 5um 800mg Activated Carbon + Ultraviolet

Permeate post treatment:
- 9000 hours

UV lamp life span:
- pH 6.5-8.5, TDS 37-95 mg/L, 100% disinfected

Permeate quality:
- max. 500W

Power requirement:
- 8 x 250-290 Wp / < 40 Voc

PV panels recommended:
- Grid 230VAC or 1kW Generator or Battery 24V

Alternative power supply:
- L =91cm, B =90cm, H =62cm

Dimensions:
- 105 kg

Weight:

Optional equipment & accessories

- Submersible or on site feed water pump (230VAC or 24VDC) when
lift height is over 1.5m
- Feed water hose 25m or 50m, including 100mic washable pre-filter
- Water storage tank for permeate 100L, 200L, 300L
- Replacement filters (3 pcs PPT filters + 1pc Active Carbon + 2pcs membranes)
- PV panel package (example: 4 x 250Wp + DC controller)
- Backup battery package 250Ah
- TDS meter
Clean quality drinking water from brackish water sources.

Low operational costs. Affordable water supply.
Clean drinking water production from lakes, rivers and boreholes 660 L/h and from 0.6% saline brackish water 440 L/h.
**SolarRO PRO 700**

**Solar daily output 4.8 m³**

<table>
<thead>
<tr>
<th>Hourly values</th>
<th>8:00</th>
<th>9:00</th>
<th>10:00</th>
<th>11:00</th>
<th>12:00</th>
<th>13:00</th>
<th>14:00</th>
<th>15:00</th>
<th>16:00</th>
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<tbody>
<tr>
<td>600</td>
<td></td>
<td></td>
<td>400</td>
<td>200</td>
<td>400</td>
<td>200</td>
<td>200</td>
<td>200</td>
<td>200</td>
</tr>
</tbody>
</table>

**Output (liter)**

- 0.38
- 0.53
- 0.61
- 0.64
- 0.64
- 0.64
- 0.60
- 0.50
- 0.35

**Output with generator or electricity:** 15 m³ / day (24h)

- Output from borehole water when TDS 6.000 mg/L; max. 440 LPH
- Output from borehole water when TDS 500 mg/L; max. 660 LPH

**SolarRO PRO 700**

**Daily permeate output**
- Feed water: Borehole
- Feed water TDS 500 mg/L
- Feed volume 15 LPM max.
- Water temperature 20 °C
- Permeate output 0.66 m³/h
- Permeate TDS < 42 mg/L

**Power options**
- Solar PV panels 10-12 pcs à 265 Wp
- Generator 1 kW / 400 VAC / 50 Hz
- Grid 230 VAC
Technical Specification

Tested approx. product water (permeate) flow: 660 L/h — 440 L/h
Feed water: Lake/ River, Brackish
Feed water TDS: 500 mg/L — 6,000 mg/L
Test water temperature: 20°C
Salt Rejection: 99.4%
Motor: 0.75 kW/230 VAC/50Hz
Pump: Rotary vane
System pressure: 16bar, automatically self-adjusting
Pressure Vessel: 4 x 2540, composite
Membrane: 4 x 2540, polyamide
RO tubing: SS 316L
Pre-filter: 3 x Big Blue 10” (5µm, 50µm, 100µm PP filter)
Pre-filter casing: 3 x Big Blue 10” PVC
Permeate post treatment: 1 x 10” 5µm 800mg activated carbon + Ultraviolet
UV lamp life span: 9,000 hours
Permeate quality: pH 6.5 - 8.5, TDS 37 - 75 mg/L, 100% disinfected
Power requirement: max. 0.75kW
PV panels recommended: 10 x 250-290 Wp / < 40 Voc
Alternative power supply: Grid 230VAC or 1kW/ 230VAC/ 50Hz generator
Dimensions: L = 1.5m, W = 0.6m, H = 1.4m
Weight: 170kg
Potable drinking water from brackish water sources.

Weatherproof and durable solution.
Clean drinking water production from lakes, rivers and boreholes 1550 L/h and from 0.6% saline brackish water 1100 L/h.
SolarRO PRO 1500

Solar daily output 10 m³

Hourly values

Output (liter)

8:00 9:00 10:00 11:00 12:00 13:00 14:00 15:00 16:00

Output with generator or electricity: 36 m³/ day (24h) // Output from borehole water when TDS 6.000 mg/L; max. 1100 LPH
Output from borehole when TDS 500 mg/L; max. 1500 LPH

SolarRO PRO 1500

Daily permeate output
Feed water: Borehole
Feed water TDS 2.100 mg/L
Feed volume 38 LPM max.
Water temperature 20 °C
Permeate output 1.5m³ / h
Permeate TDS < 150 mg / L

Power options
Solar PV panels 20 pcs á 265 Wp
Generator 3 kW / 400 VAC / 50 Hz
Grid 400 VAC
# Technical Specification

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tested approx. product water (permeate) flow:</td>
<td>1500 L/h — 1100 L/h</td>
</tr>
<tr>
<td>Feed water</td>
<td>Lake/River — Brackish</td>
</tr>
<tr>
<td>Feed water TDS</td>
<td>500 mg/L — 6000 mg/L</td>
</tr>
<tr>
<td>Test water temperature</td>
<td>20°C</td>
</tr>
<tr>
<td>Salt Rejection</td>
<td>99.4%</td>
</tr>
<tr>
<td>Motor</td>
<td>2.2kW/230 VAC/50Hz</td>
</tr>
<tr>
<td>Pump</td>
<td>Rotary vane</td>
</tr>
<tr>
<td>System pressure</td>
<td>16 bar, automatically self-adjusting</td>
</tr>
<tr>
<td>Pressure Vessel</td>
<td>6-8 x 4040, composite</td>
</tr>
<tr>
<td>Membrane</td>
<td>6-8 x 4040, polyamide</td>
</tr>
<tr>
<td>RO tubing</td>
<td>SS 316L</td>
</tr>
<tr>
<td>Pre-filter</td>
<td>3 x Big Blue 20&quot; (5µm, 50µm, 100µm PP filter)</td>
</tr>
<tr>
<td>Pre-filter casing</td>
<td>3 x Big Blue 20&quot; PVC</td>
</tr>
<tr>
<td>Permeate post treatment</td>
<td>Ultraviolet-disinfection</td>
</tr>
<tr>
<td>UV lamp life span</td>
<td>9,000 hours</td>
</tr>
<tr>
<td>Permeate quality</td>
<td>pH 6.5 - 8.5, TDS 37 - 75 mg/L, 100% disinfected</td>
</tr>
<tr>
<td>Power requirement</td>
<td>max. 2.2kW</td>
</tr>
<tr>
<td>PV panels recommended</td>
<td>20 x 250-290 Wp / &lt; 40 Voc</td>
</tr>
<tr>
<td>Alternative power supply</td>
<td>3-ph/400VAC or Generator 3kW/400VAC 50Hz</td>
</tr>
<tr>
<td>Dimensions</td>
<td>L = 1.65m, W = 0.9m, H = 1.6m</td>
</tr>
<tr>
<td>Weight</td>
<td>400kg</td>
</tr>
</tbody>
</table>
SolarRO PRO INSTALLATION EXAMPLE
SolarRO PRO Series

OPTIONAL EQUIPMENT & ACCESSORIES

- Submersible pump
- Feed water supply pump
- Water storage tanks for permeate
- PV panel package + inverter according to customer requirement
- Filtration maintenance packages (PPT filters & membranes)
SolarRO PRO SW Series
Modular design makes the system scalable to required water needs.

Potable water from seawater.

High quality product water. In our products we use modern, high quality thin-film composite RO (Reverse Osmosis) membranes, which remove all impurities, bacteria, viruses and other contaminants from the feed water, leaving only high-quality water as the end product. Active Carbon filter and UV treatment at the end of the purification process give the drinking water a good taste and ensure its 100% disinfection.

Energy source. SolarRO PRO (SW) units operates directly with solar panels, without any batteries between. You can also switch it to grid or generator for clean water production during non-solar hours.

Easy use. Install the unit’s suction hose into the water source, connect the solar PV cables and push the start button and you begin to get clean water. No other adjustments needed.

Water source. When water source is a borehole or well, usually a submersible pump is used to feed water into an intermediate tank, which can be on the ground level or higher installed. The unit uses this tank as its water source.

Easy maintenance. All the filters and membranes are readily accessible for very easy replacement. The filters can be changed to new ones in a couple of minutes. Also the membranes are very easy to replace, taking 5–10 minutes each. Depending on the user case, pre-treatment filters should be changed 2–4 times per year. We recommend changing the RO membranes every 3–5 years.

The PRO (SW) units have an integrated membrane cleaning system for better production efficiency and longer membrane life span.

Great durability. The SolarRO Pro units are made from the very best materials and the aluminium frame, pressure vessels and tubes are expected to withstand at least twenty years.

- Operates 100% with solar energy
- Can be switched to grid or generator as back-up
- Competitive investment cost – no batteries or energy storage needed
- Operational costs reduced up to 90%
- Easy to install, plug & play system
- The system can run dry
- Fully automatic system
- Low maintenance
- Low energy consumption
- No chemicals used
- Weatherproof
High-quality drinking water from the sea in off-grid locations.

Safe and durable solution.
Clean drinking water production from seawater 250 L/h.
SolarRO PRO 250 SW

Daily permeate output
Feed water: Pacific
Feed water TDS 33.000 mg/L
Feed volume 9.5 LPM max.
Water temperature 20 °C
Permeate output 250 liters/h
Permeate TDS < 96 mg/L

Power options
Solar PV panels 10 pcs á 265 Wp
Generator 2 kW / 230 VAC / 50 Hz
Grid 230 VAC

Solar daily output 2 m³

Hourly values

Output (liter)

Output with generator or electricity: 6 m³ / day (24h) // Output from Atlantic water when TDS 36.000 mg/L; max. 230 LPH
Output from Mediterranean water when TDS 40.000 mg/L; max. 200 LPH
## Technical Specification

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
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<tbody>
<tr>
<td>Tested approx. product water (permeate) flow:</td>
<td>250 L/h — 230 L/h</td>
</tr>
<tr>
<td>Feed water</td>
<td>Pacific — Atlantic</td>
</tr>
<tr>
<td>Feed water TDS</td>
<td>33,000 mg/L — 36,000 mg/L</td>
</tr>
<tr>
<td>Test water temperature</td>
<td>20°C</td>
</tr>
<tr>
<td>Salt Rejection</td>
<td>99.4%</td>
</tr>
<tr>
<td>Motor</td>
<td>1.5kW/230 VAC/50Hz</td>
</tr>
<tr>
<td>Pump</td>
<td>High pressure feed max. 9.5 LPM</td>
</tr>
<tr>
<td>System pressure</td>
<td>52 bar, automatically self-adjusting</td>
</tr>
<tr>
<td>Pressure Vessel</td>
<td>4 x 2540 SW, composite</td>
</tr>
<tr>
<td>Membrane</td>
<td>4 x 2540 SW, polyamide</td>
</tr>
<tr>
<td>RO tubing</td>
<td>SS 316L</td>
</tr>
<tr>
<td>Pre-filter</td>
<td>3 x Big Blue 10” (5µm, 50µm, 100µm PP filter)</td>
</tr>
<tr>
<td>Pre-filter casing</td>
<td>3 x Big Blue 10” PVC</td>
</tr>
<tr>
<td>Permeate post treatment</td>
<td>1 x 10” 5µm 800mg Activated Carbon + Ultraviolet</td>
</tr>
<tr>
<td>UV lamp life span</td>
<td>9,000 hours</td>
</tr>
<tr>
<td>Permeate quality</td>
<td>pH 6.5 - 8.5, TDS 85 - 160 mg/L, 100% disinfected</td>
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<tr>
<td>Power requirement</td>
<td>max. 1.5kW</td>
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<tr>
<td>PV panels recommended</td>
<td>10 x 250-290 Wp / &lt; 40 Voc</td>
</tr>
<tr>
<td>Alternative power supply</td>
<td>Grid 230VAC or Generator 2kW/230VAC/50Hz</td>
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<tr>
<td>Dimensions</td>
<td>L = 1.5m, W = 60cm, H = 1.4m</td>
</tr>
<tr>
<td>Weight</td>
<td>170kg</td>
</tr>
</tbody>
</table>
Potable drinking water from the sea in remote locations.

Just plug and switch.
Clean drinking water production from seawater up from 600 litres/hour.
**Output (liter)**

- **Output with generator or electricity:** 18 m³ / day (24h) // Output from Atlantic (TDS 36.000 mg/L): max. 0.7 m³/h
- Output from Mediterranean (TDS 40.000 mg/L): max. 0.6 m³/h

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**SolarRO PRO 750 SW**

- **Daily permeate output**
  - Feed water: Pacific
  - Feed water TDS 33.000 mg/L
  - Feed volume 30LPM max.
  - Water temperature 20 °C
  - Permeate output 0.8 m³/h
  - Permeate TDS 220 mg/L

- **Power options**
  - Solar PV panels 20 pcs à 265 Wp
  - Generator 4 kW / 440 VAC / 50 Hz
  - Grid 400 VAC
## Technical Specifications

<table>
<thead>
<tr>
<th>Feed water type</th>
<th>Pacific</th>
<th>Atlantic</th>
<th>Mediterranean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tested average permeate flow</td>
<td>750 L/h</td>
<td>700 L/h</td>
<td>600 L/h</td>
</tr>
<tr>
<td>Feed water TDS</td>
<td>33,000 mg/L</td>
<td>36,600 mg/L</td>
<td>40,000 mg/L</td>
</tr>
</tbody>
</table>

| Salt Rejection | 99,40 % |
| Motor | 4 kW; 400VAC, 50Hz |
| Pump | High pressure feed 30 LPM/50Hz |
| System pressure | 55 bar, automatically self-adjusting |
| Pressure Vessels | 6 x 4040 SW, composite |
| Membranes | 6 x 4040 SW, polyamide |
| RO tubing | Duplex and SS 316L |
| Prefilters | 4 x Big Blue 20” (5µm, 25µm, 50µm, 100µm PP filter) |
| Permeate post treatment: | 400 J/m² |
| | 9,000 h |
| Power Supply: | Solar PV panels recommended |
| | Solar Inverter 32 x 265Wp / < 40Voc |
| Alternative/ Back-up power supply: | 3-ph 380 - 480VAC 50 Hz |
| Dimensions: | RO Unit Stand L = 148cm, W = 100cm, H = 160cm |
| Product water: | pH 6.5 - 8.5; TDS < 270 mg/L; 100% disinfected |

---

**Feed water type:**
- **Pacific:** 33,000 mg/L
- **Atlantic:** 36,600 mg/L
- **Mediterranean:** 40,000 mg/L

**Feed water type:**
- **Pacific:** 750 L/h
- **Atlantic:** 700 L/h
- **Mediterranean:** 600 L/h

**Feed water TDS:**
- **Pacific:** 33,000 mg/L
- **Atlantic:** 36,600 mg/L
- **Mediterranean:** 40,000 mg/L
Potable drinking water from seawater.

Modular design makes the system scalable.
Clean drinking water production from seawater up from 1300 litres/hour.
SolarRO PRO 1500 SW

Hourly values

Output (liter)

9:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00

8:00

1600
1200
800

Solar daily output 12 m³

Daily permeate output
Feed water: Pacific
Feed water TDS 33.000 mg/L
Feed volume 60 LPM max.
Water temperature 20 °C
Permeate output 1.6 m³/h
Permeate TDS 260 mg/L

Power options
Solar PV panels 40 pcs á 265 Wp
Generator 8 kW / 440 VAC / 50 Hz
Grid 400 VAC

Output with generator or electricity: 38 m³ / day (24h) // Output from Atlantic (TDS 36.000 mg/L): max. 1.5 m³/h
Output from Mediterranean (TDS 40.000 mg/L): max. 1.3 m³/h
### Technical Specifications

<table>
<thead>
<tr>
<th>Feed water type</th>
<th>Pacific Ocean</th>
<th>Atlantic</th>
<th>Mediterranean</th>
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</thead>
<tbody>
<tr>
<td>Tested average permeate flow</td>
<td>1500 L/h</td>
<td>1400 L/h</td>
<td>1300 L/h</td>
</tr>
<tr>
<td>Feed water TDS</td>
<td>&lt;33,000 mg/L</td>
<td>&lt;36,000 mg/L</td>
<td>&lt;40,000 mg/L</td>
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</table>

| Salt Rejection                   | 99.40 %       |
| Motor                            | 7kW; 400VAC, 50Hz |
| Pump                             | High pressure feed 60 LPM/50Hz |
| System pressure                   | 56bar, automatically self-adjusting |
| Pressure Vessels                  | 6 x 4080, 1000psi composite |
| Membranes                         | 12 x 4040 SW, polyamide |
| RO tubing                         | Duplex and SS 316L |
| Prefilters                        | 20 inch x 5 element (5µm, 50µm, 100µm PP filter) |

**Permeate post treatment:**
- Ultraviolet lamp: 400 J/m²
- Ultraviolet lamp rated life: 9,000 h

**Product water:**
- Water (permeate) quality: pH 6.5–8.5; TDS < 270 mg/L; 100% disinfected

**Power Supply:**
- Solar PV panels recommended: 40 x 250-290 Wp / < 40 Voc
- Solar Inverter: 8kW
- Alternative/ Back-up power supply: 3-ph 380 - 480VAC 50 Hz

**Dimensions:**
- RO Unit Stand: L=260cm, W=100cm, H=158cm
- Solar PV panels: 40 x 250-290 Wp / < 40 Voc
- Solar Inverter: 8kW
- Alternative/ Back-up power supply: 3-ph 380 - 480VAC 50 Hz
- Dimensions: L=260cm, W=100cm, H=158cm
Clean drinking water production from seawater up from 3000 litres/hour.
Solar daily output 25 m³

Output (m³)

Hourly values

Output with generator or electricity: 84 m³ / day (24h) // Output from Atlantic (TDS 36.000 mg/L): max. 3.3 m³/h
Output from Mediterranean (TDS 40.000 mg/L): max. 3.0 m³/h

SolarRo PRO 3500 SW

Daily permeate output
Feed water: Pacific
Feed water TDS 33.000 mg/L
Feed volume 136 LPM max.
Water temperature 20 °C
Permeate output 3.5 m³/h
Permeate TDS 320 mg/L

Power options
Solar PV panels 80 pcs á 265 Wp
Generator 20 kW / 440 VAC / 50 Hz
Grid 400 VAC
## Technical Specifications

### Feed water
- **Pacific**: 3.5 m³/h, 33,000 mg/L
- **Atlantic**: 3.3 m³/h, 36,000 mg/L
- **Mediterranean**: 3.0 m³/h, 40,000 mg/L

### Salt Rejection
- **99.40%**

### Motor
- **15kW; 460VAC, 60Hz**

### Pump
- **High pressure feed max. 138 LPM**
- **56bar, automatically self-adjusting**

### System pressure
- **3 x 8080, 1000psi composite**

### Pressure Vessels
- **6 x 8040 SW, polyamide**
- **2205 Duplex**
- **30 inch x 5 element (5µm, 50µm, 100µm PP filter)**

### Membranes
- **Permeate post treatment:**
- **Ultraviolet lamp**
- **Ultraviolet lamp rated life**
- **400 J/m²**
- **9,000 h**

### RO tubing
- **Product water:**
- **Water (permeate) quality**
- **pH 6.5 - 8.5; TDS < 270 mg/L; 100% disinfected**

### Power Supply:
- **Solar PV panels recommended**
- **80 x 250-290 Wp / < 40 Voc**
- **Solar Inverter**
- **20kW**

### Alternative/ Back-up power supply:
- **3-ph 380 - 480VAC 50 Hz**

### Dimensions:
- **RO Unit Stand**
- **L=280cm, W=90cm, H=170cm**
OPTIONAL EQUIPMENT & ACCESSORIES

- Submersible pump
- Pre filtration
- Feed water supply pump
- Water storage tanks for permeate
- PV panel package + inverter according to customer requirements
- Filtration maintenance package (PPT filters + membranes)
SolarRO KEY BENEFITS

• Operates 100% with solar energy
• Zero CO2 emissions
• Competitive investment cost – no batteries or energy storage needed
• Mobile and easy to relocate
• Easy to install and operate with low maintenance
• Fully automatic system – filters and RO membranes are quick to replace
• Integrated membrane cleaning system
• Energy source can be simply switched to grid or a generator – 24/7 hybrid models
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<td>Economical life-cycle costs</td>
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<td>Operates worldwide with local service partners</td>
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<td>Committed to environmental sustainability</td>
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JUST PLUG & DRINK

Let’s get in touch!

www.solarwatersolutions.fi