



## LOW PRESSURE SEAWATER DESALINATION

WITH HYDROVOLTA HYBRID PATENTED TECHNOLOGY



50-70% water recovery



10 bar operating pressure



+20-25% salinity discharge



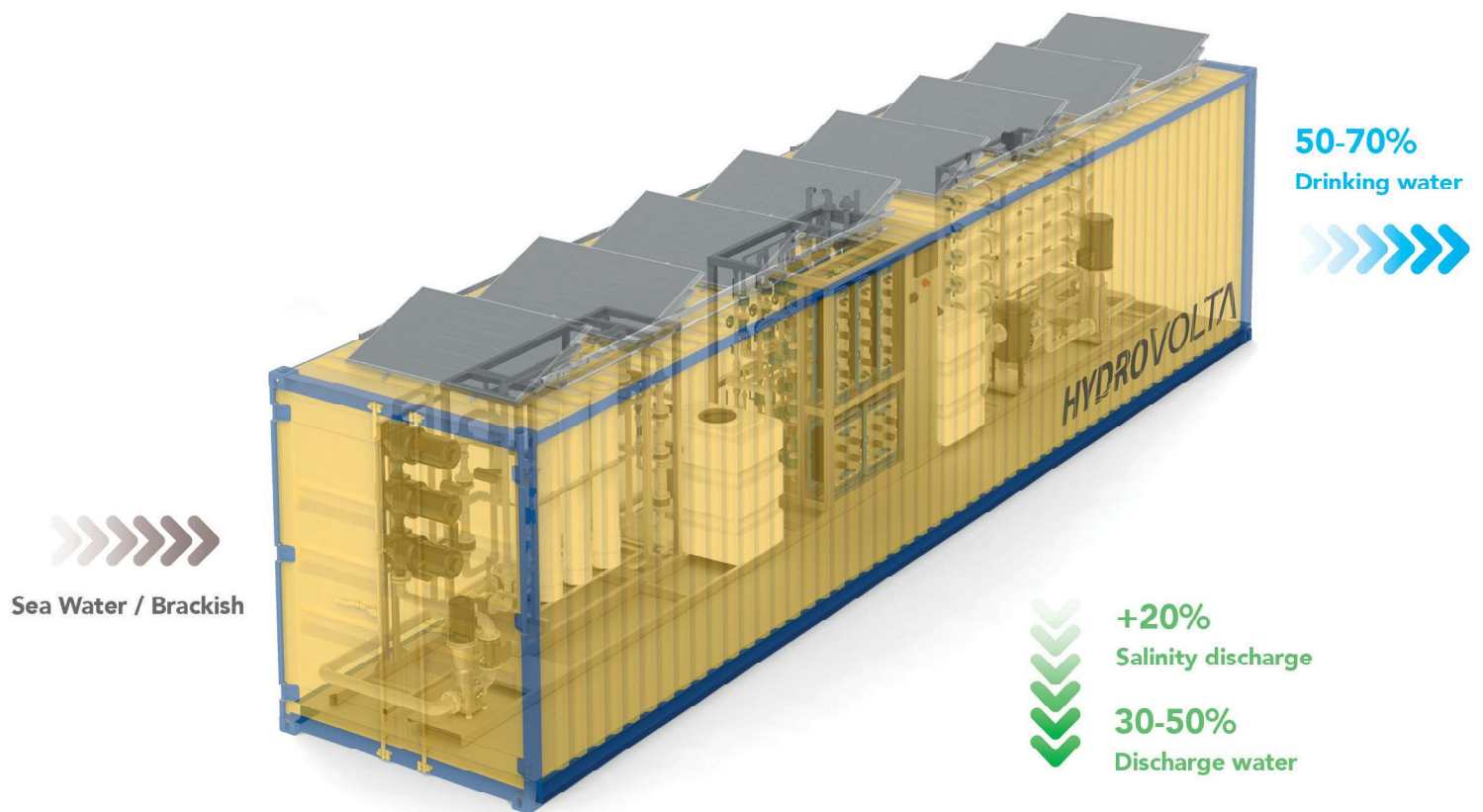
Less chemical consumption





## 1 TRADITIONAL REVERSE OSMOSIS (S.W.R.O.)

- 💧 20-35% water recovery
- 🔧 70 bar operating pressure
- ✖ +100-150% salinity discharge
- 🧪 More chemicals
- 🔌 Higher energy consumption
- 🔄 External cleaning
- 🌊 Complicated pre-treatment

**Extensive maintenance**



## HYDROVOLTA HYBRID SYSTEM

-  50-70% water recovery
-  10 bar operating pressure
-  +20-25% salinity discharge
-  Lower chemical consumption
-  Lower energy consumption
-  Self-cleaning
-  Simple pre-treatment
- Maintenance free**



# HYDROVOLTA HYBRID



## Pretreatment

Automatic cleaning sediment filter and ultrafiltration with auto backwash.

## Heating/cooling

Constant temperature of feed water.

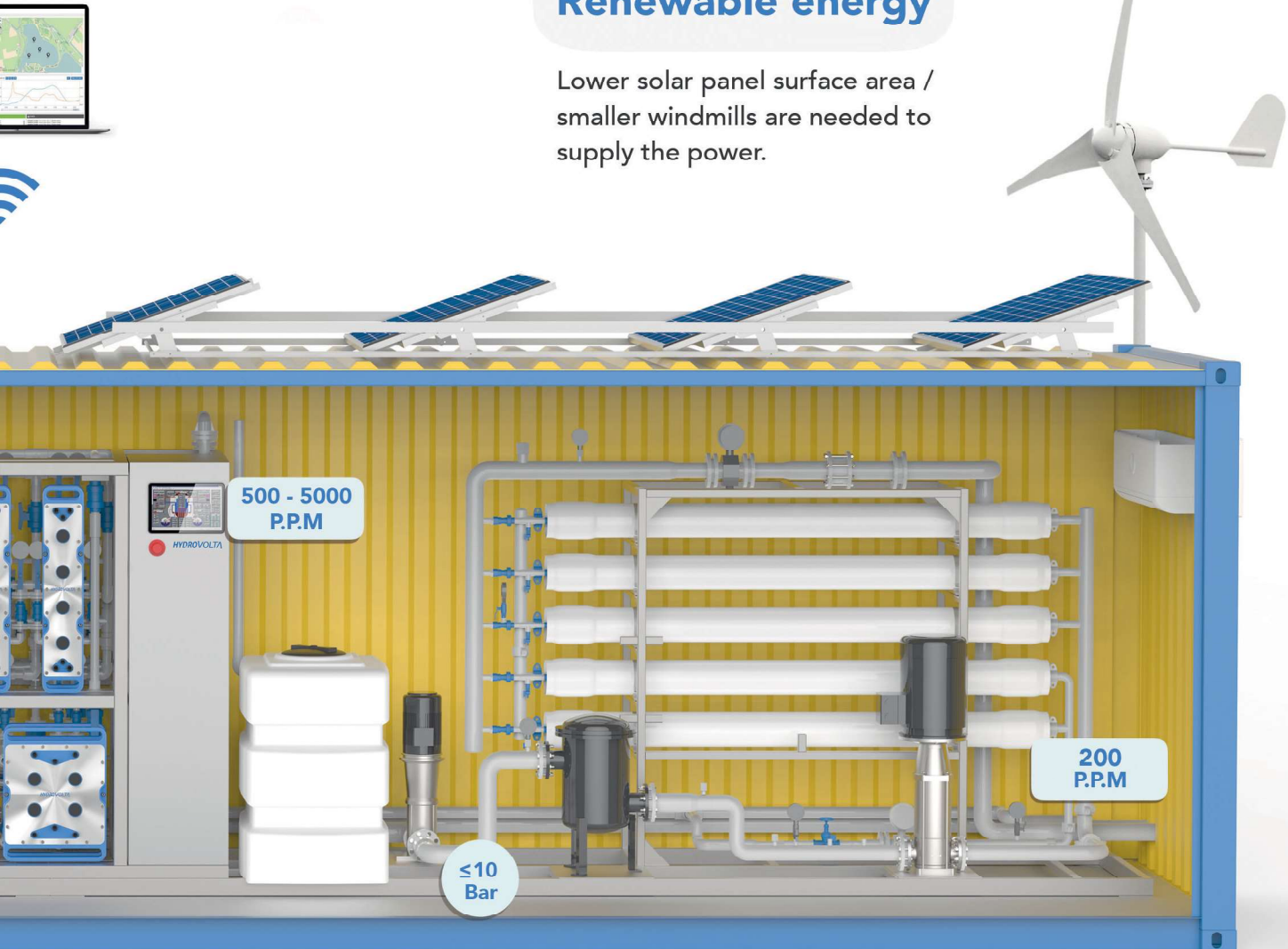
## Ultrasound technology

Reduced chemicals usage.  
Reduction of downtime.  
Low fouling tendency.

## SOLUTION FEATURES

### Renewable energy

Lower solar panel surface area / smaller windmills are needed to supply the power.



### SonixED™

Low voltage operation to introduce the salinity of water to the further step (low-pressure RO) in a smart way.

### Low-pressure RO\*

Lower pressure than typical S.W.R.O.  
Reuse of RO\* reject into system

### Chlorine generator

Proper sanitation against bacteria and viruses. (optional)

\* RO= reversed osmosis

S.W.R.O = sea water reversed osmosis





Low fouling tendency due to ultrasound supported by high quality ion-exchange membranes

Self-cleaning supported by ultrasound

Lower pre-treatment requirements

Optimal sealing for leak-free operation

Less maintenance & reduction of downtime

Reliable performance

Longer polarity reversal time

Efficient energy consumption

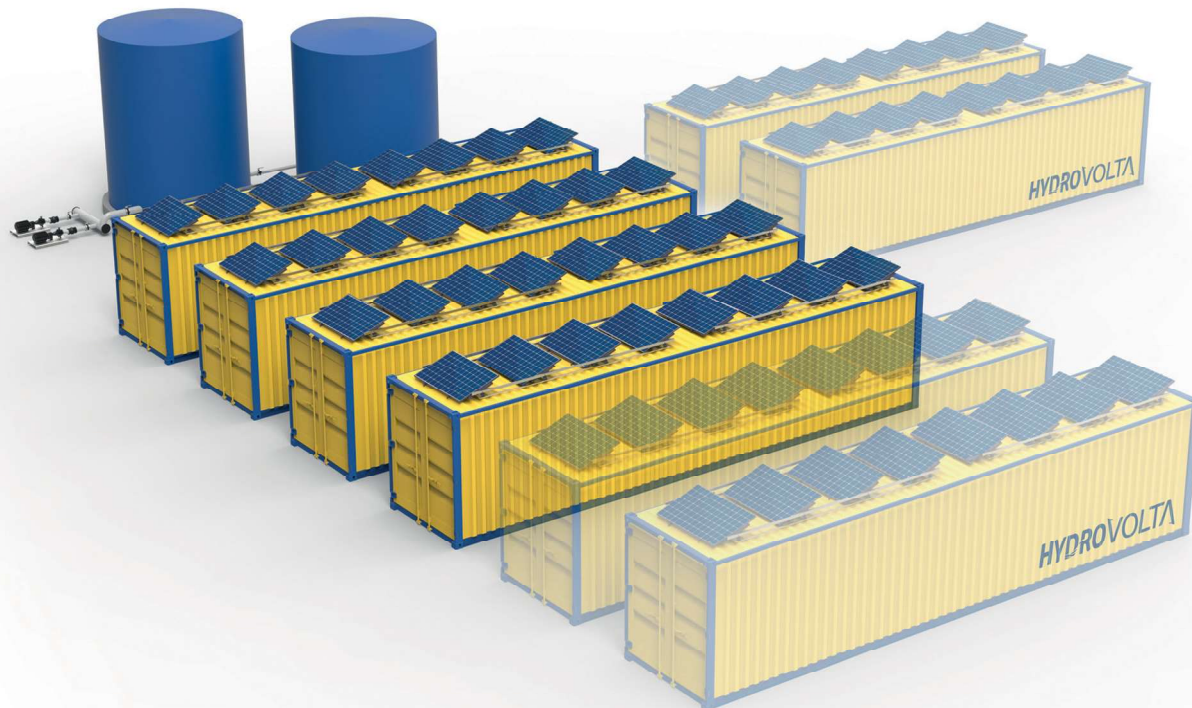
Less CIP cleaning and longer electrode and membrane lifetime

Modular design

# HYBRID WATER TECHNOLOGY™

## MODULAR AND EXPANDABLE

Hydro Volta provides a compact and modular unit and it is adaptable for all demands from stand-alone to large-scale desalination plans.

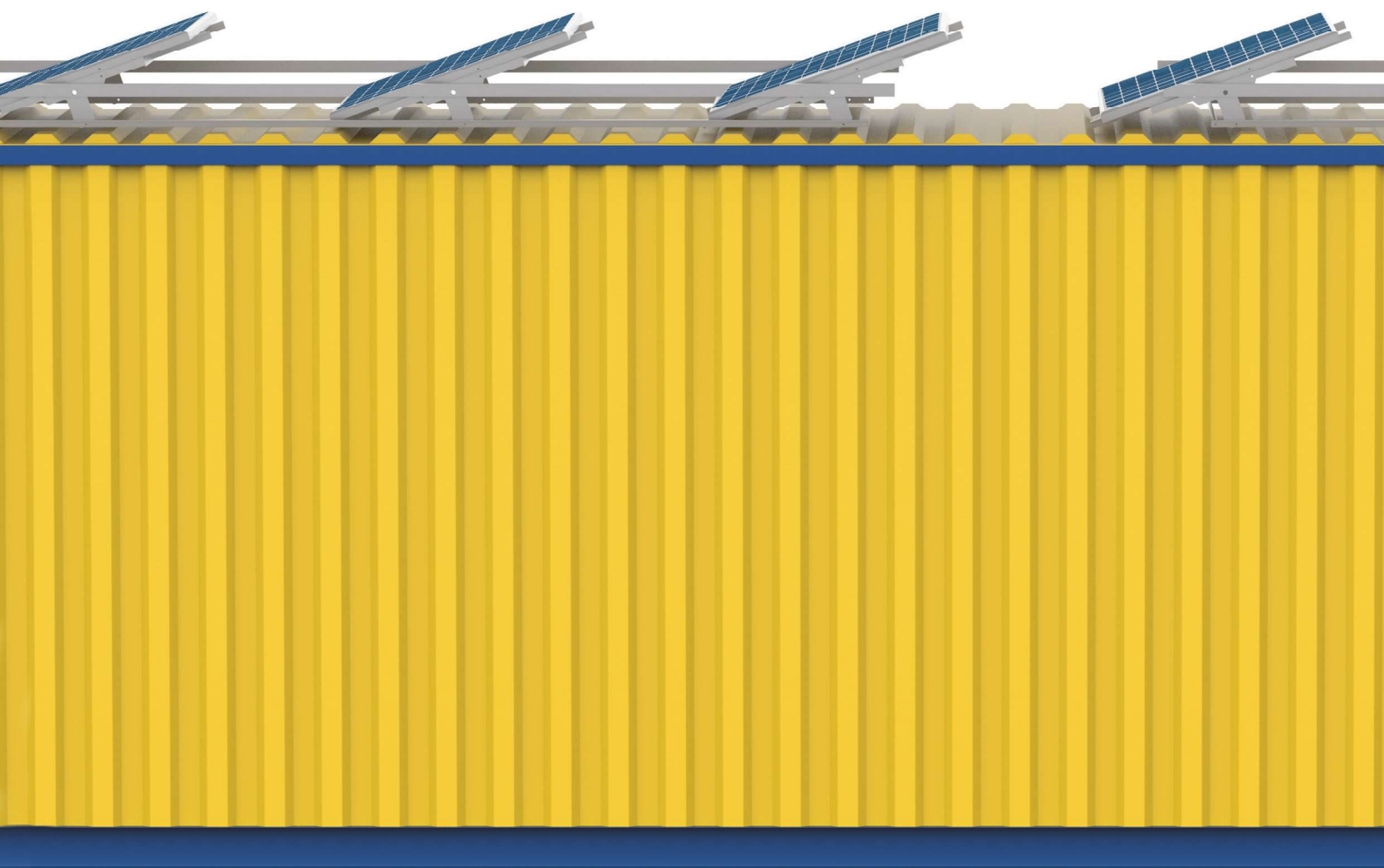


### Specifications

Flow rate (per unit)	1 - 15 m³/h
Power consumption	1.5 - 3.5 kWh/m³
Water recovery	≤ 70%
Salt rejection	≤ 99.9%
Feed water salinity	≤ 50.000 ppm
Product water salinity	~ 500 ppm
Discharge water salinity	≤ 60.000 ppm
Operating pressure	1 - 10 bar
Temperature	5 - 40 °C
PH	2 - 12
Free chlorine tolerance (continuous)	0.5 - 1 ppm

### Materials of construction

Pumps	Plastics, Ti, SST
Framework	Plastics, SST
Pipes & fittings	PVC, PP
Control panel	IP 67



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