



HYDROVOLTA

LOW PRESSURE SEAWATER DESALINATION

WITH HYDROVOLTA HYBRID PATENTED TECHNOLOGY



50-70% water recovery



10 bar operating pressure



+20-25% salinity discharge



Less chemical consumption

Sea Water / Brackish



30-35%
Drinking water

+100%
Salinity discharge

65-70%
Discharge water

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



20-35% water recovery



70 bar operating pressure



+100-150% salinity discharge



More chemicals



Higher energy consumption

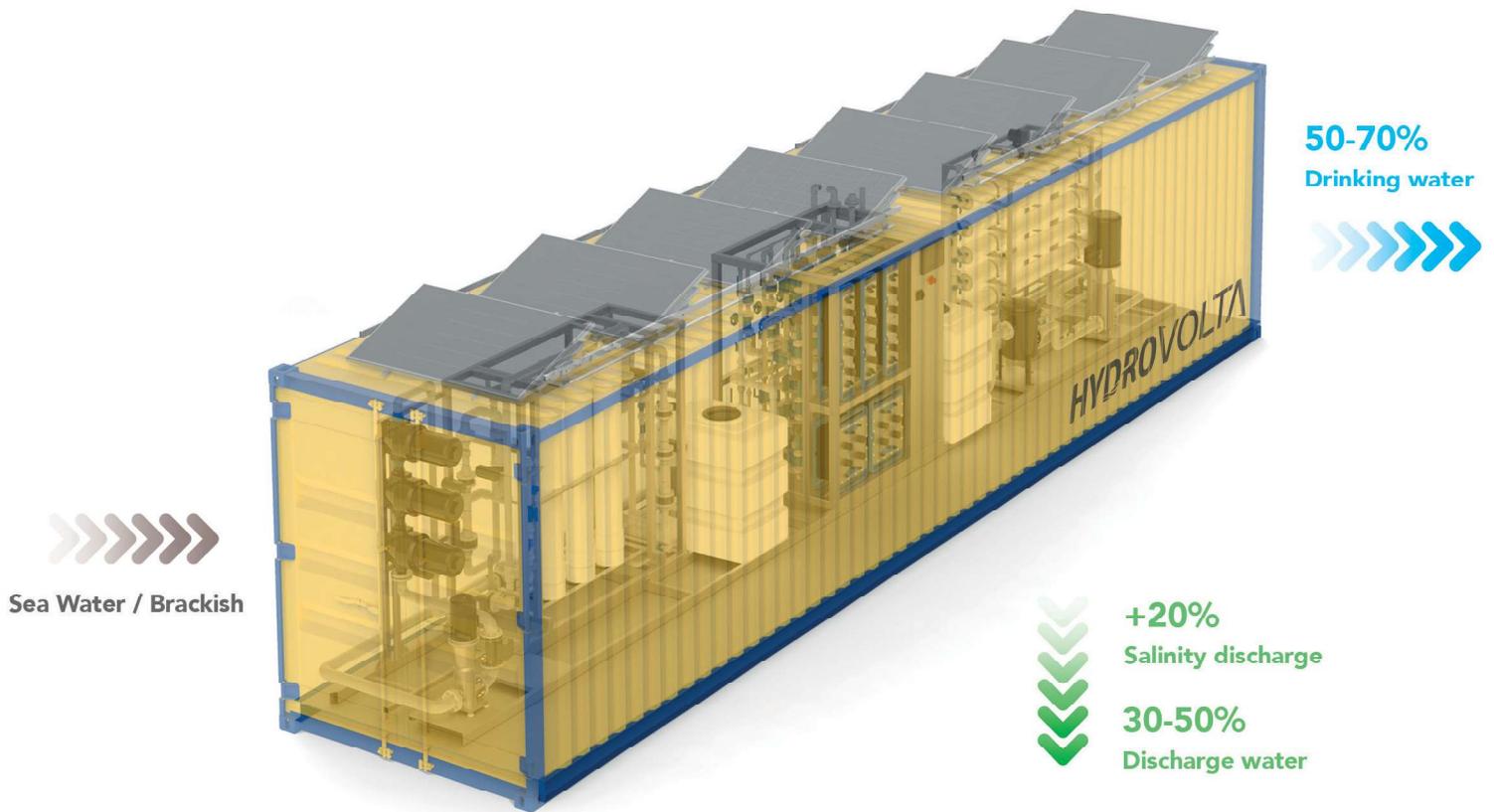


External cleaning



Complicated pre-treatment

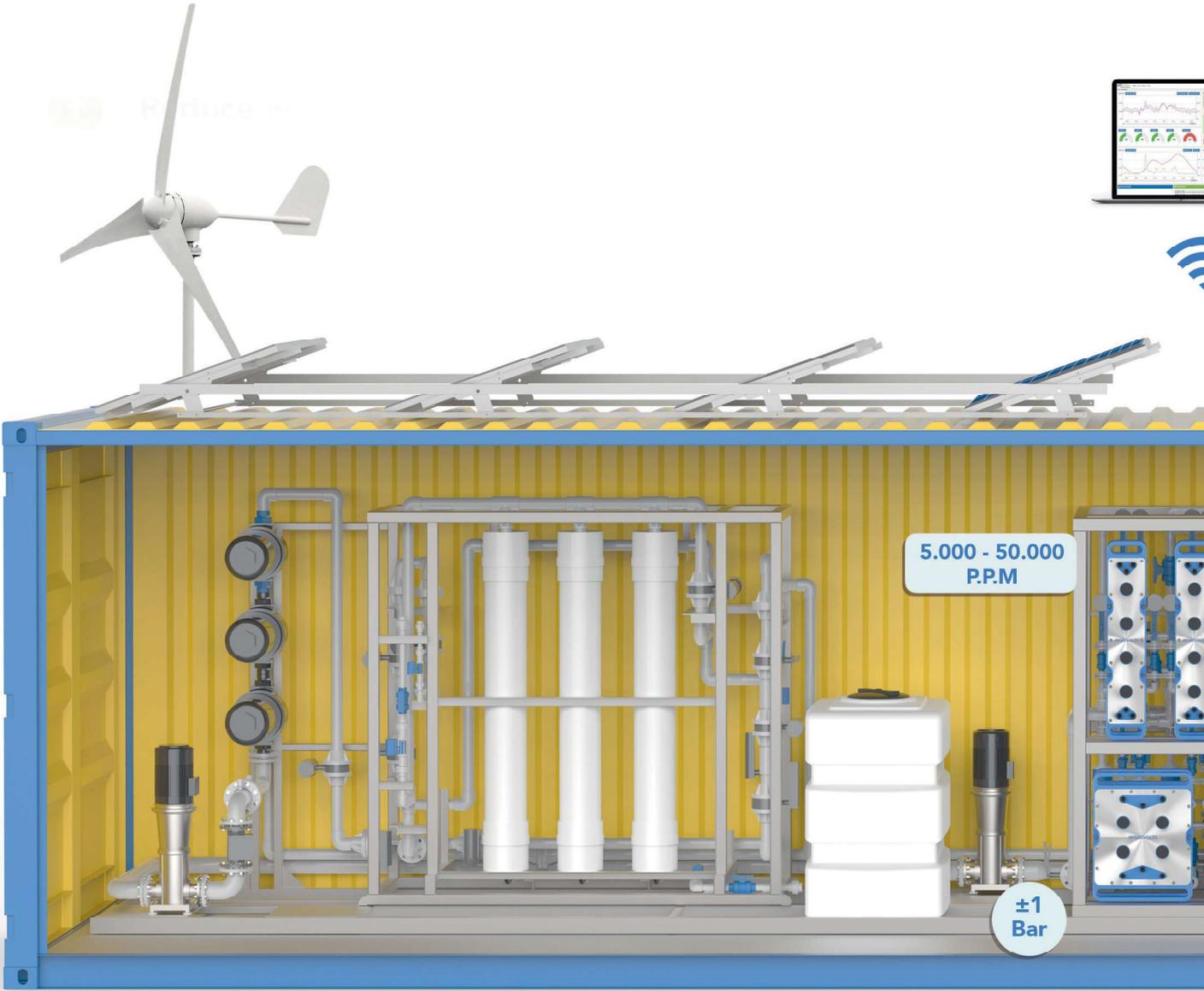
Extensive maintenance



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



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Pretreatment

Automatic cleaning sediment filter and ultrafiltration with auto backwash.

Heating/cooling

Constant temperature of feed water.

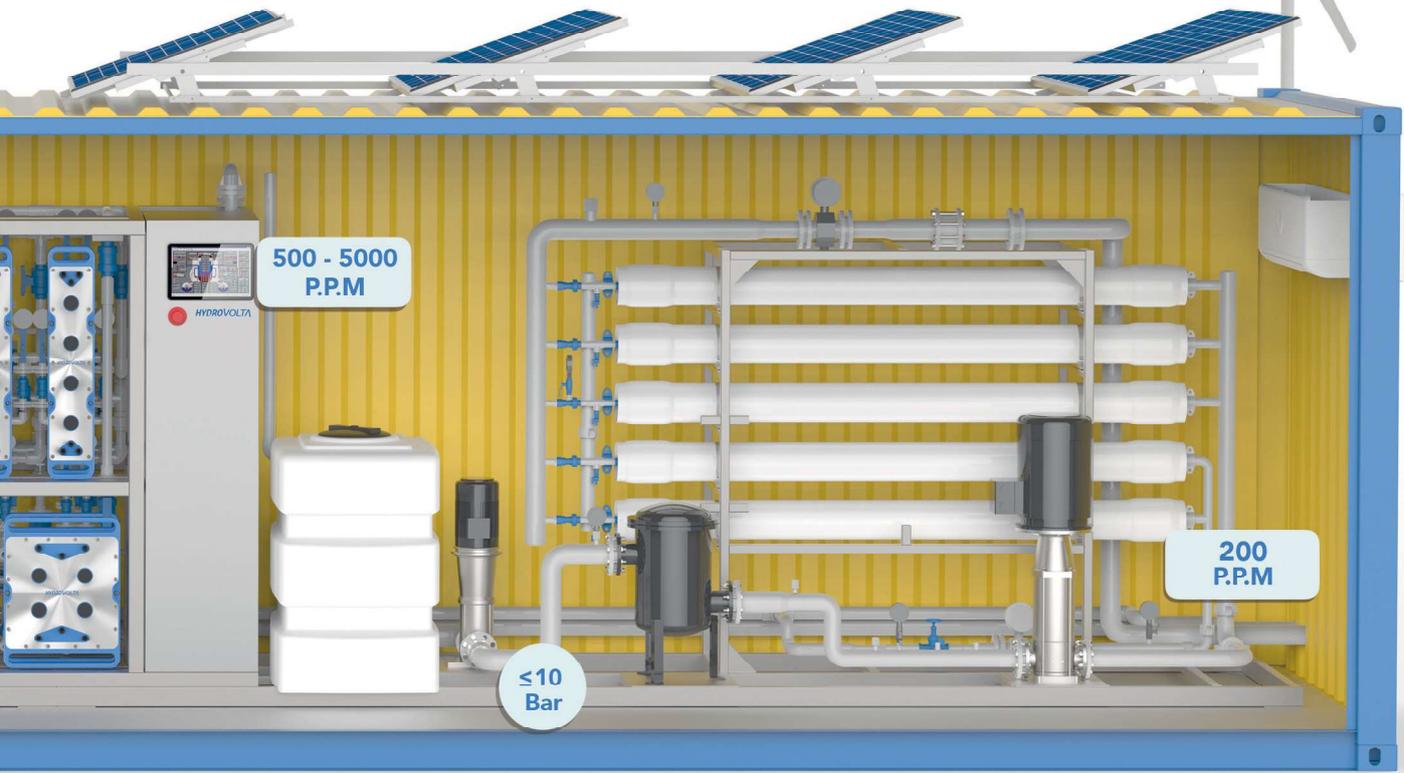
Ultrasound technology

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.



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SonixED™

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

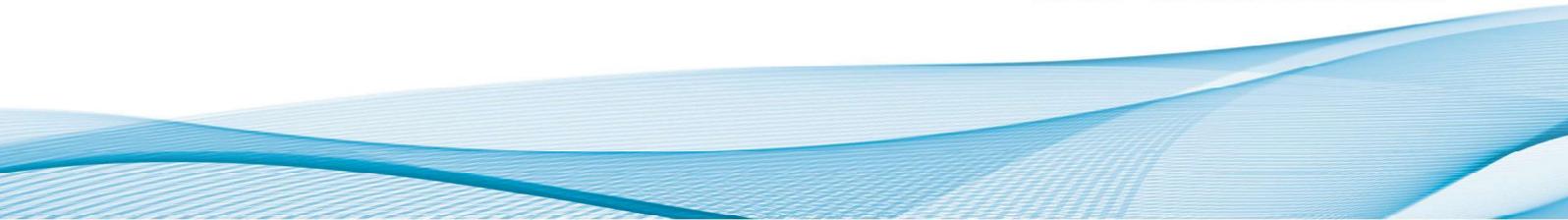
Low-pressure RO*

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

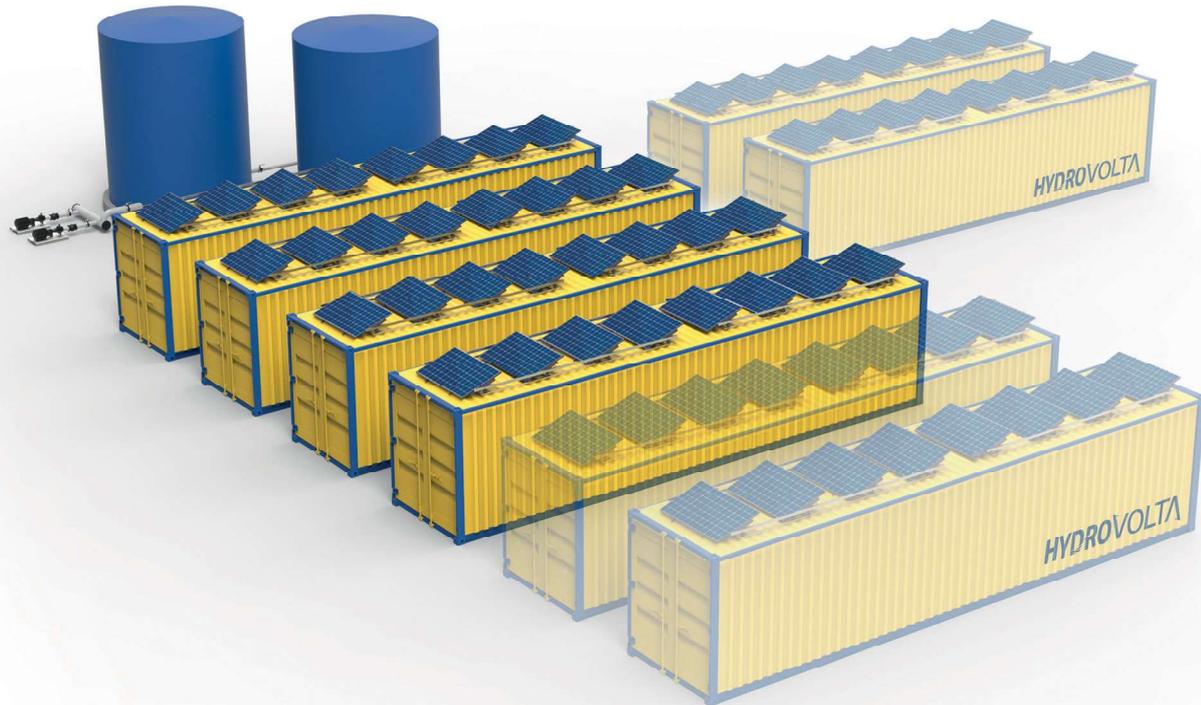
Less CIP cleaning and longer electrode and membrane lifetime

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.

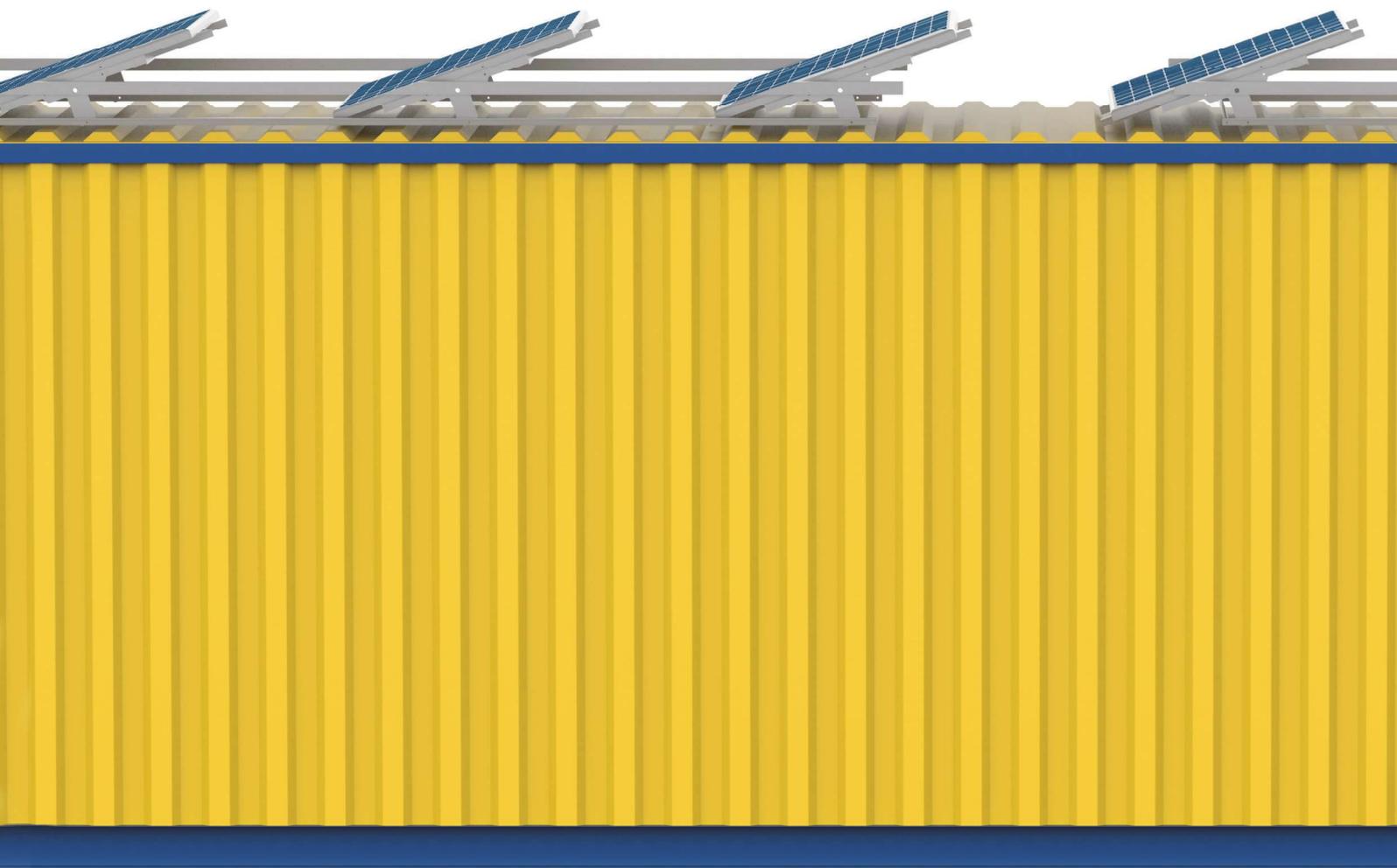


Specifications

Flow rate (per unit)	1 - 15 m ³ /h
Power consumption	1.5 - 3.5 kWh/m ³
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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