

# THE BOOKLET



SUNSTONE  
WATER GROUP EUROPE

# Specialised in Water Treatment.

## Welcome

Sunstone Water Group Europe is based in Denmark and operates internationally. We specialise in two core aspects within water and wastewater treatment: drinking water production and treatment/reuse of industrial process water.

*State-of-the-art  
treatment techniques.*



# About us

Sunstone Water Group's design philosophy is decentralised water and wastewater purification, at the point source of water and pollution, by using state-of-the-art treatment techniques.



Our standardized solution is the Clean Water Unit (CWU) delivered in a 40-foot patented container. Moreover, we are able to design and transform our treatment unit to match specific set-ups and footprint restrictions.

The Clean Water Unit removes, amongst other, bacteria, viruses, pesticides and salts. Also, pharmaceutical residues / API's, and microplastics. The end result is high quality water suitable as drinking water and approved by the EPA in the United States for drinking water consumption.



# Specialised solutions



## Triple benefits

Also, we offer specialised solutions for the process industry which results in triple benefits:

**Reduction of  
water usage**



**Energy  
savings**



**Lower wastewater  
discharge**



The technology can be offered with **attractive operational costs** and service solutions, allowing you to focus on your core business activities.

## Advanced technology

Advanced tested technology and know-how combined



## Fast delivery

Fast delivery and turn-key installation



## Flexible business models (BOO, BOT)

To meet your current and future needs



## Service pack

Service pack with possibility for remote monitoring and full service on site.

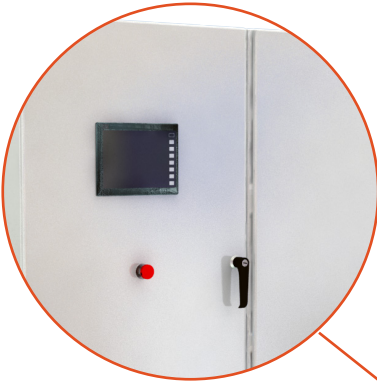


## Financing projects

# Clean Water Unit

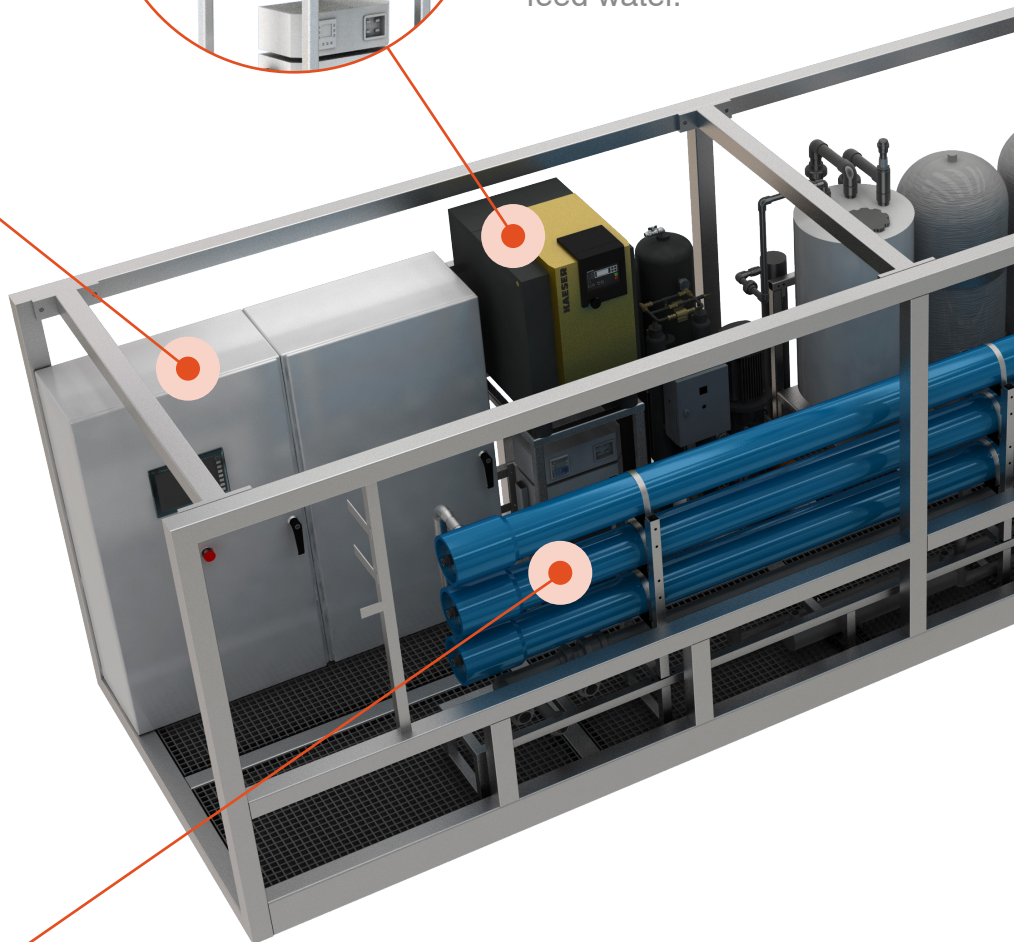
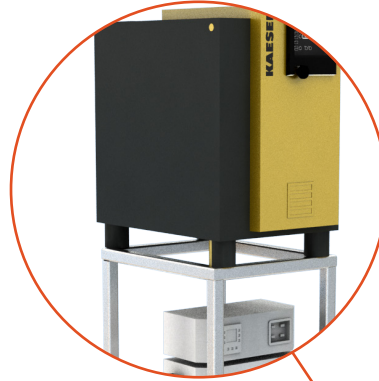
## Ozonation

Disinfection and initial break-up of organic material is done by injecting Ozone in to the feed water.



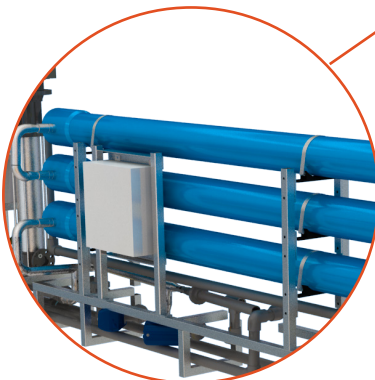
## Electrical control system

A complete integrated control system. It provides full automation with as little operator intervention as possible.



## Reverse Osmosis System

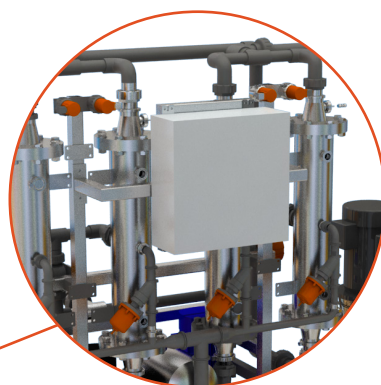
A complete Reverse Osmosis system for the reduction of salinity to acceptable drinking water levels meeting WHO standards and current EU directives.





### CIP System

A complete CIP (Cleaning In Place) system that can be used with the UF systems.



### Ceramic Membrane Ultra-filtration (UF) system

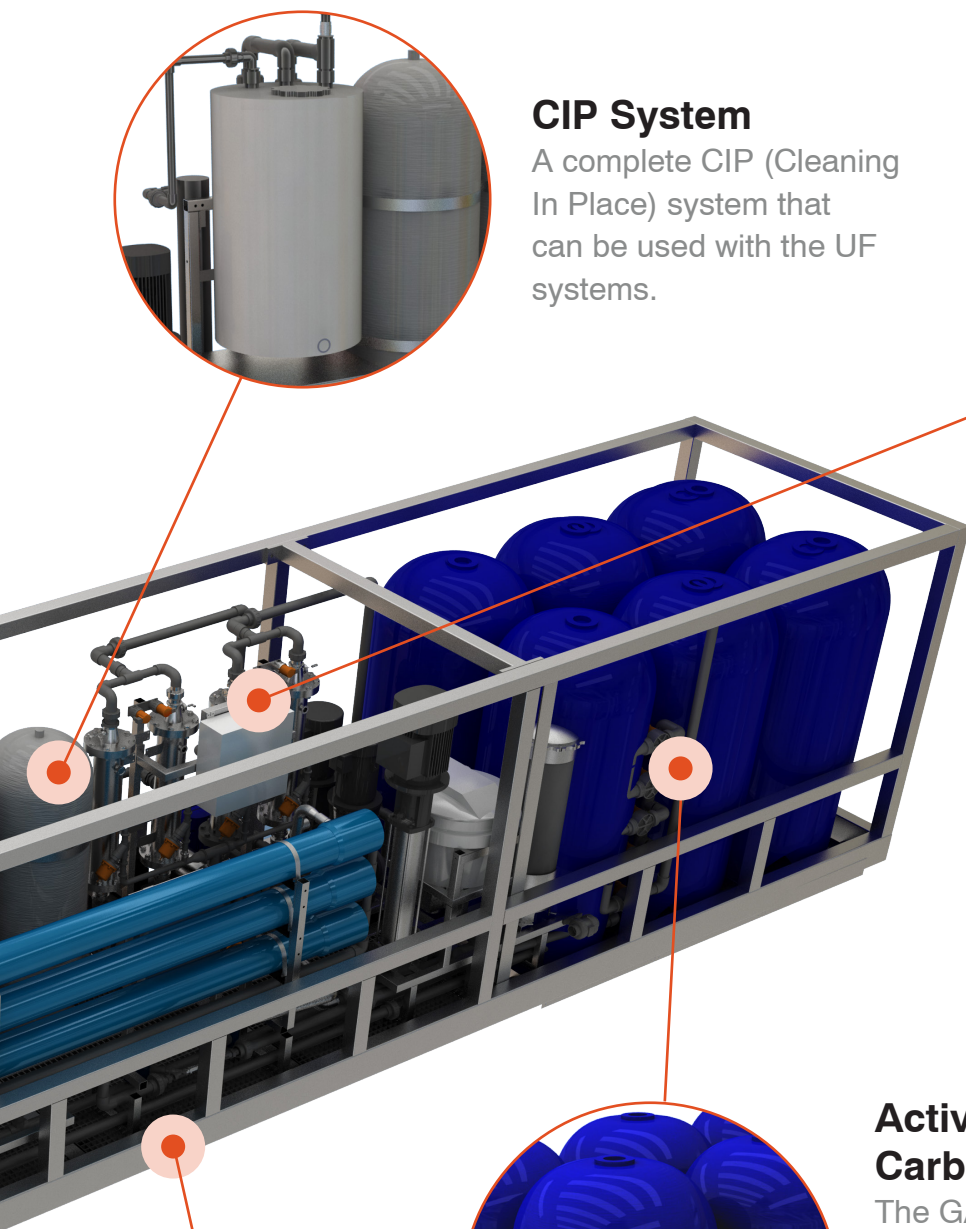
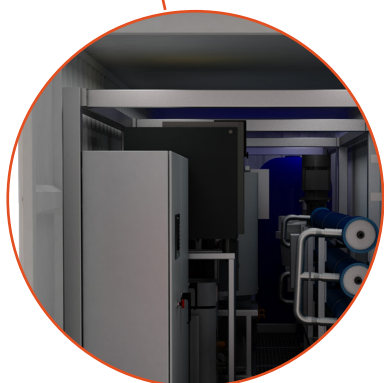
Our ceramic membranes are used to separate solids and dissolved macromolecules, eliminate viruses and bacteria, retain the fermented biomass and remove particulate chemical oxygen demand (COD).

### Activated Carbon Filtration

The GAC after the UF filter removes small organic molecules, medications, chlorine, pollutants and toxins, as well as many other types of chemical elements and compounds from the water.

### Climate control

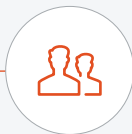
All components are mounted in a single patented 40-foot container. Climate control ensures optimal operational conditions. The patented frame allows for easy mounting of components, ensures safety in shipping and easy access during maintenance.



# Clean Water Unit

## Modules

<b>Pre-filter:</b>	Removes particles larger than 50-200 micron.
<b>Ozone:</b>	Advanced Oxidation Processes, (AOP). Disinfection and degradation of organic matter.
<b>UV-light:</b>	Disinfection and catalyzer for AOP
<b>Ultra-filtration:</b>	Removal of particular matter, bacteria and virus with ceramic membranes.
<b>Active carbon filter:</b>	Removal of dissolved matters.
<b>Reverse Osmosis:</b>	Removal of salt and other molecules.
<b>Final adjustment:</b>	Giving drinking water the needed characteristics, e.g. in terms of pH or mineral content.
<b>CIP:</b>	Automated cleaning processes of membranes and pipes.



### Versatile user scenarios

The Clean Water Unit is designed for a number of purification scenarios including surface water, saltwater intrusion, energy-water reclamation and disaster relief for emergency water usage.

Sunstone can customise the unit configuration to the specific water treatment needs through predefined modules. It can also be used within industrial process industries.



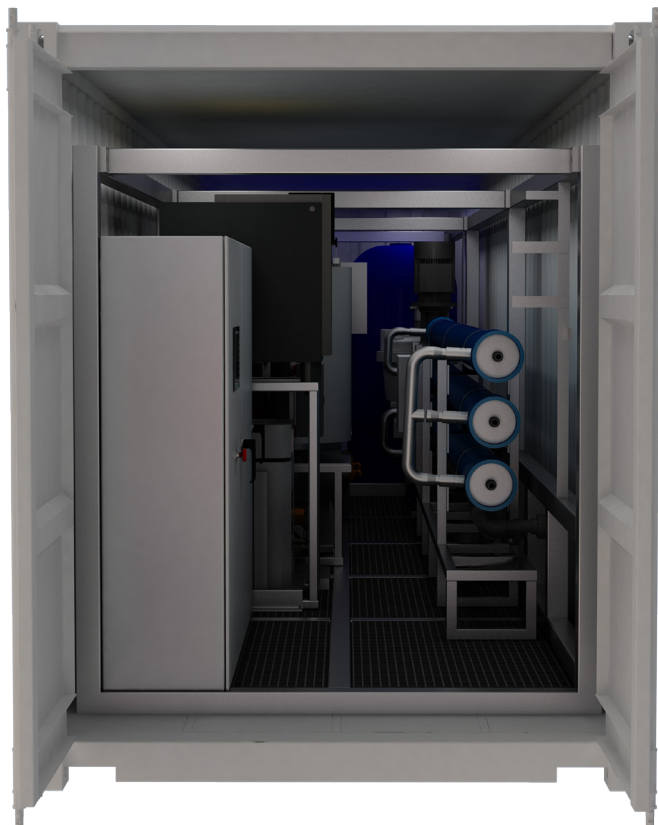
### Worldwide delivery

The modules are mounted on a steel frame that allows for easy transport and relocation regardless of whether it is shipped by air, sea, rail or over-the-road.

The unit is temperature controlled for optimum production climate in hot or cold weather



# Technical information



Container type	40 feet mobile reefer container
Container measurements	Length= 40', 12.2 meter
	Height= 9'6, 2.9 meter
	Width = 8', 2.4 meter
Built in a complete frame	Stainless Steel Frame
Weight excl. Cooling Container	10,000 kg (20,000 Lb)
Weight incl. Cooling Container	14.500 kg (29.000 Lb)
Weight in Purifying Mode (W/ Water)	30.000 kg (60.000 Lb)
Power consumption	Brackish water: 0.75 - 1.2 kw/m <sup>3</sup>
	Sea water incl. recovery 2.55 kw/m <sup>3</sup> , excl. recovery max 4.5 kw/m <sup>3</sup>
(Depending of water source)	
Power supply	400-480 Volt AC, 3 Phase, 40-60 Hz
Capacity (inlet)	20 m <sup>3</sup> /h, depending on water source
Durability	Can withstand an earthquake
Cleaning	The system can back flush (CIP)











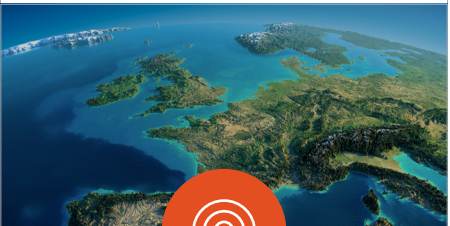



## Easy operations

- ✓ The unit can be operated and controlled off-site.
- ✓ An online remote monitoring system lets you access real-time and saved data.
- ✓ Adjust set-points and receive operational warnings/alarms.
- ✓ Control and schedule maintenance.

# Technical footprint

Sunstone Water Group delivers High-End solutions.

Cornerstones in our drinking water solutions:

		
 <h3>Trouble-free</h3> <p>Trouble-free operation and best in class Life Cycle Costs</p>	 <h3>Best quality</h3> <p>Components of best available quality</p>	 <h3>Best working conditions</h3> <p>Climatized and insulated containers - secure the best working conditions</p>
		
 <h3>Flexible</h3> <p>Plant can be delivered with bottling machine and/or user payment system</p>	 <h3>Plug &amp; Play</h3> <p>When we say mobile, we mean it, 100% containerised and Plug &amp; Play.</p>	 <h3>Remote control</h3> <p>Possible to operate the unit remotely using 3G mobile access</p>



### Ecologic

The unit can be powered by generators, wind or solar - besides from normal power grid.



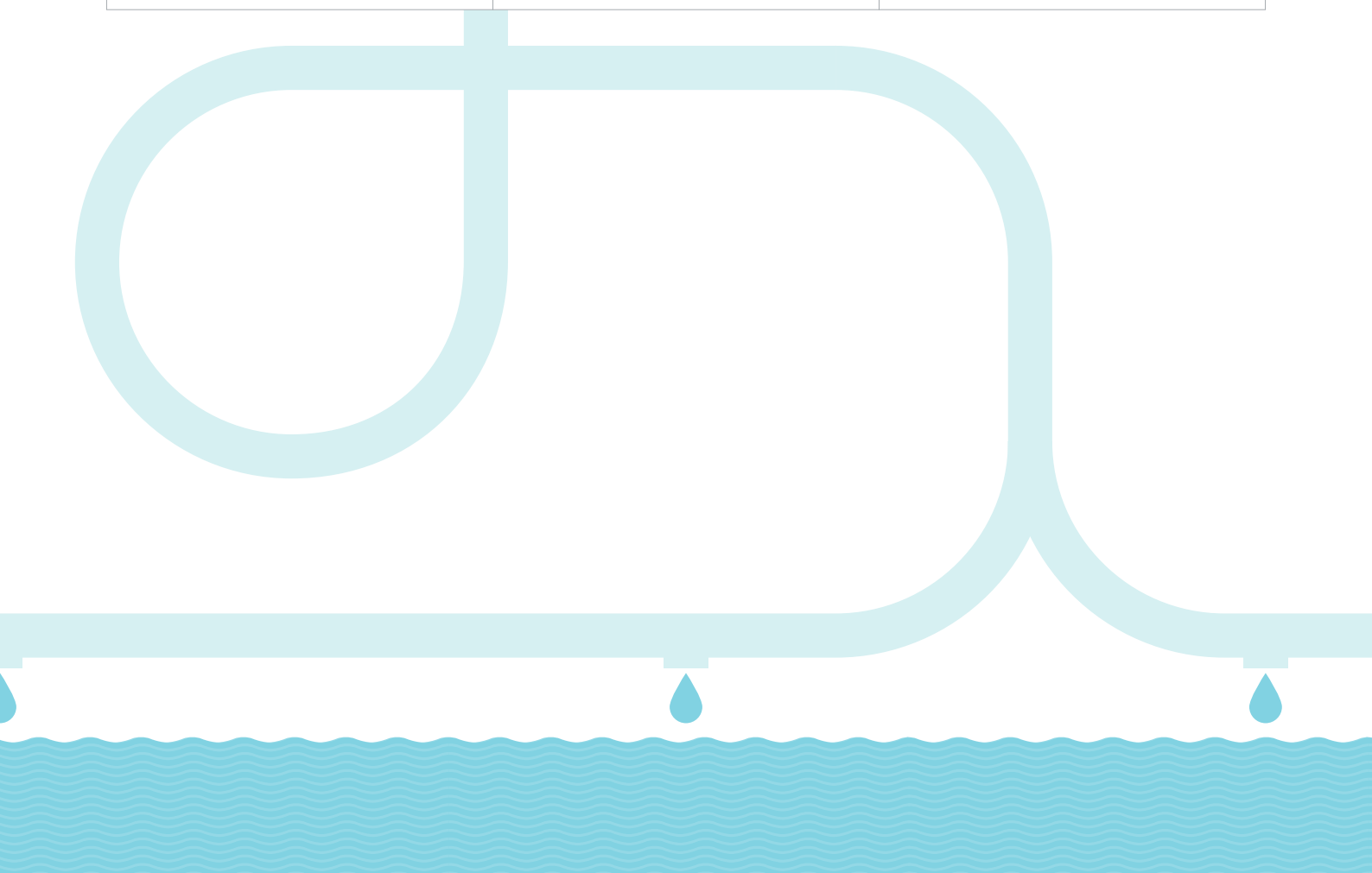
### Secure water supply

Storage tanks in container available - secure water supply by gravitation



### SmartGrid

SmartGrid control is possible - treat and move water when energy is cheap or free





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