

SUSTAINABILITY SOLUTIONS

# AquaRecover<sub>ri</sub>



## WASTEWATER PURIFICATION

REDUCE WATER CONSUMPTION **BY 80%**

PROCESS **TOP-QUALITY WATER**

**LIMIT** LANDFILL COSTS

# AquaRecoveri

## SEWAGE TREATMENT

### Oysters: harmony between nature and technology

In nature, oysters play a crucial role in water purification. Thanks to their natural filtration process, a single oyster can filter up to 190 litres of water a day, eliminating impurities and improving the quality of the water in its environment. This extraordinary capacity is a testament to the balance and efficiency that nature has perfected millions of years.

### Our containers innovation inspired by nature

Like the others, our wastewater reclamation containers are designed to purify and reclaim water in an efficient and sustainable way. Through an advanced purification process, our containers remove contaminants and restore water quality for reuse, relieving pressure on water resources and reducing the environmental impact of industry.

### The essential similarity: purification as a pillar of sustainability

- 1. Natural efficiency vs. technological efficiency:** Just as oysters naturally purify water, our containers do so using the most advanced technology. These two solutions, one derived from nature and the other from human innovation, show that it is possible to keep water clean and safe for reuse.
- 2. Positive impact on environment:** Oysters contribute to the health of aquatic ecosystems by maintaining the water balance. Similarly, our containers enable industries to operate more sustainably, reducing their water footprint and ensuring that water, a vital resource, can be used again and again without degrading its quality.
- 3. Adaptability and Resilience:** Oysters thrive in a variety of aquatic environments and continue to filter water even under difficult conditions. Our containers, inspired by this ability, are designed to provide reliable and efficient purification, no matter how complex the industrial challenges.





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With water no longer a stable resource in many parts of the world, and prices continuing to soar, reusing water makes good economic and environmental sense. Especially now, when several European countries are already applying strict regulations on waste water and other limitations.

We know how to help you meet these challenges and reduce your water consumption.

## CHALLENGES

### 1. Water is no longer a stable resource

- Groundwater is becoming increasingly scarce
- Groundwater extraction permits are being phased out or restricted

### 2. Strict regulations on waste water discharges

- Limiting the volume of waste water
- Limitations on characteristics such as COD, heavy metals, AOX, etc.
- Prices continue rise
- Public water is becoming more expensive
- Tax levels on wastewater discharges
- continue to rise

## THE SOLUTION

### Do you need to reduce your water while limiting waste water discharges?

With AquaRecoveri, you can reduce your water consumption by at least 80% thanks to

A sustainable water supply with a cost-effective, plug-and-play solution that offers the best water quality for your industrial process.

The AquaRecoveri ready-to-connect container system recovers, treats and recycles wastewater, converting it into top-quality water for your washing processes and boiler room.

The system also replaces the water equipment in your laundry. In short, it's an all-in-one water solution.

### AquaRecoveri technology is ideal for :

- Remove the f er
- Water softening
- Boiler water (reverse osmosis)
- Heat exchangers
- Waste water treatment



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Without AquaRecoveri	With AquaRecoveri
<ul style="list-style-type: none"> <li>• Investment in several water facilities (iron remover, water softener, heat exchanger, etc.)</li> <li>• High maintenance and lifecycle costs for various water devices</li> <li>• Many hours supervision and maintenance for the various installations</li> <li>• Large volume waste water</li> <li>• Contaminated effluent</li> </ul>	<ul style="list-style-type: none"> <li>• Investment in a single installation</li> <li>• Low maintenance and operating</li> <li>• 1 supervisor for 1 installation</li> <li>• Limited volume waste water</li> <li>• Effluent free components such as microplastics, heavy metals and bacteria</li> <li>• Excellent water quality</li> </ul>



## Water consumption :

Throughout the process, water consumption is reduced by at least 80%.



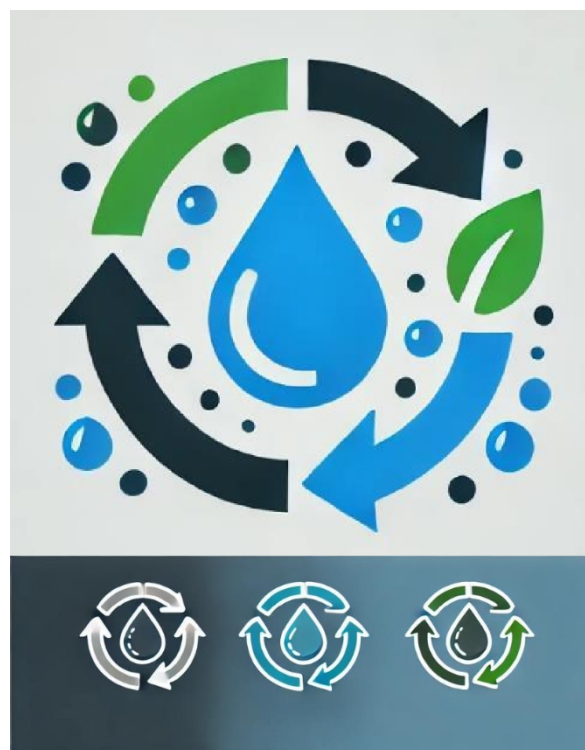
## Water treatment and purification:

No additional treatment (such as a water softener or reverse osmosis) is required. The unit generates water washing and .



## Discharge:

Less than 20% of process water discharged. Waste water contains substances such as microplastics, heavy metals and bacteria.



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## AQUARECOVERI TECHNOLOGY :

### Efficiency and sustainability in industrial water treatment

We have developed an innovative, high-performance technology for treating industrial water and wastewater. Our solution is essentially plug and play, presented in an all-in-one container that makes it easy to integrate into any industrial process. AquaRecoveri can be installed quickly and easily, enabling treatment to be carried out immediately at site from contaminated water.

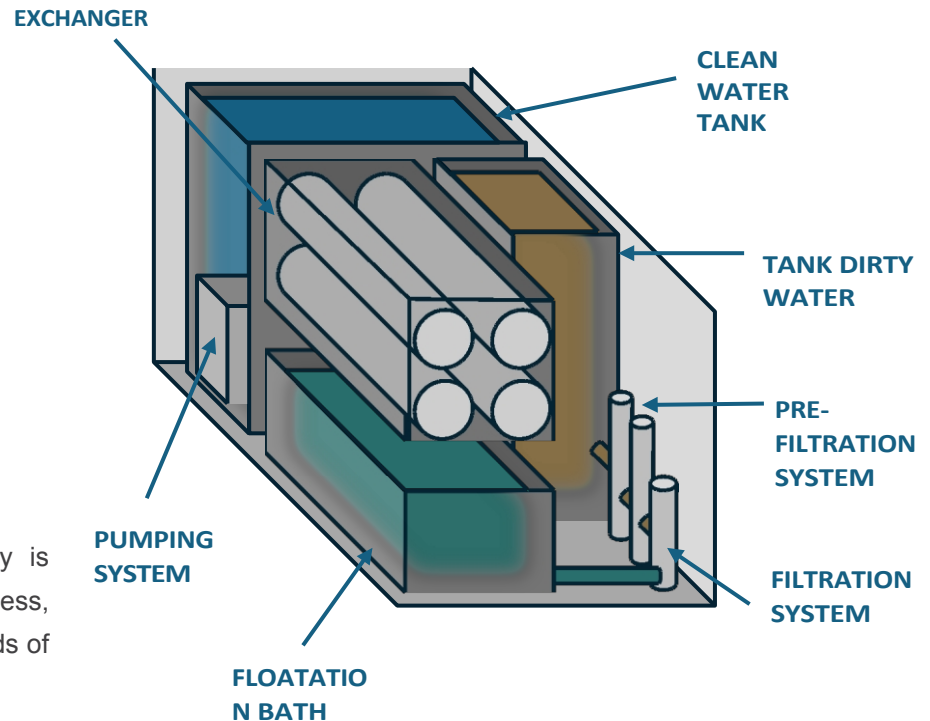
Inside the all-in-one container, our technology is based on an advanced distillation process, recognised as one of the most advanced methods of distillation in the world.

for purifying wastewater. However, during the distillation process, there is a significant disadvantage: high energy consumption.

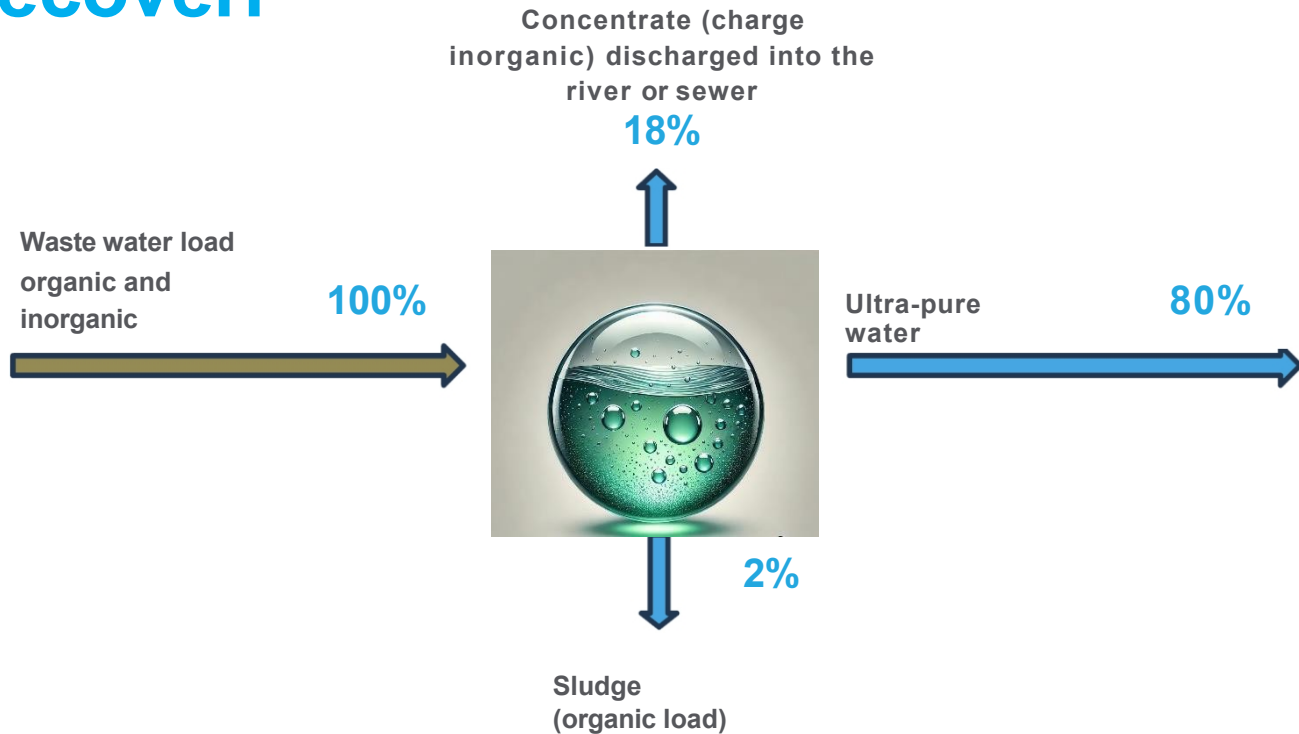
Fortunately, we have reinvented the thermodynamic cycle of distillation to make it much more environmentally friendly, while significantly reducing its energy consumption. This process was validated after more than a decade of research and development, during which we tested and perfected our technology in a variety of industries and under extreme conditions.

One of the major advantages of our technology is that it does not clog up, unlike other methods, such as nanofiltration or reverse osmosis, which can quickly become ineffective when water is heavily loaded with contaminants. Thanks to our unique approach, we are able to recover up to 80% water, ready for reuse in your industrial processes.

Our AquaRecoveri technology represents an efficient and sustainable water solution, specially designed to respond to today's environmental and energy challenges. It's an ideal option for industries looking to improve their water management while reducing their environmental impact.



# Aqua Recoveri



## RESULTS

### Quality process

- Excellent water quality for industrial processes
- Lower conductivity

### Increased efficiency

- 80% reduction in water consumption
- Significant savings in landfill sites
- costs
- CO2 emission savings and carbon credits

### Sustainable operations

- Less than 20% waste water
- No substances in wastewater (heavy metals, microplastics and bacteria)
- Reduction of COD, BOD, AOX and suspended solids
- Limited ecotoxicity

### Flexible Concept

- Ready-to-hook-up compressor system
- Personalized care
- All-in-one unit no additional water treatment required)
- Technical installation simple

# Aqua Recoveri

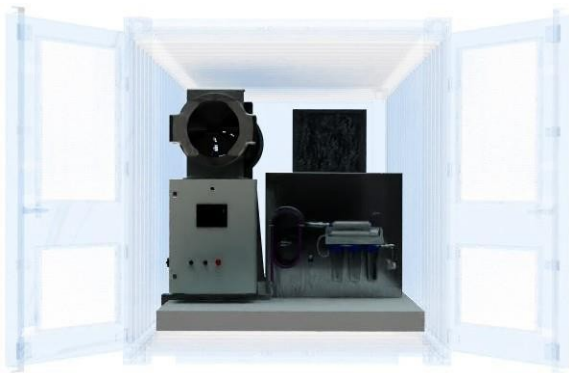
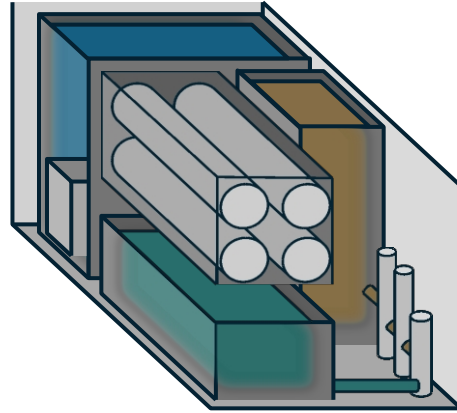
## Aqua Recoveri

### CHARACTERISTICS OF AQUARECOVERI

Our generators are fitted as standard with a pump that delivers water at between 2 and 2.5 bars, while for electricity, we can adopt the water outlet at the

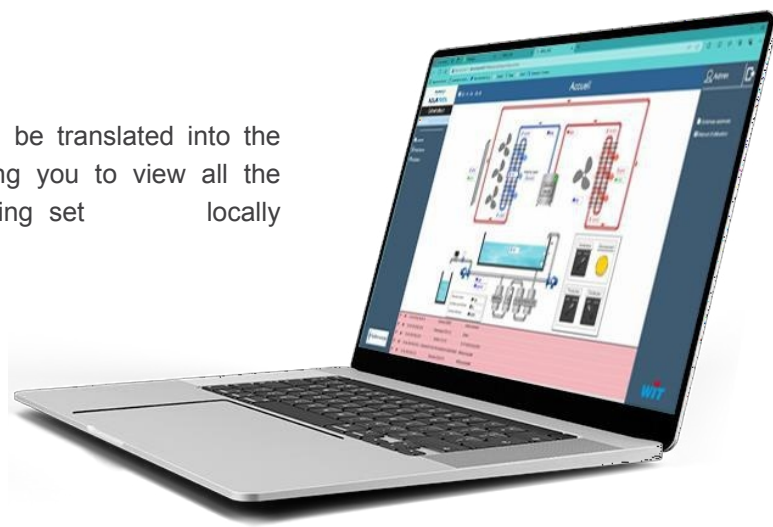
Depending on the customer's choice, we can use Victaulic fittings, screwed fittings or flanged fittings. This does not affect the price, but makes the job easier for the customer, who is the user. These points are discussed during construction of the generator.

The drawing shows the hydraulic installation of our generating sets, the network elements are not mentioned on this drawing, the valves...



- Our production and water network comply with standards
- ISO 24510 and ISO 46001 standards.
- Mineralization and PH management of the water produced are generally integrated into our generators.
- These points are discussed with each customer when the order is placed.

The remote control interface can be translated into the language of your choice, allowing you to view all the operating criteria of the generating set locally or remotely



# Aqua Recoveri

## Documentation technique : Aquathea

### Introduction

In a context where industrial laundries consume large volumes of water, the treatment and reuse of grey water represents a sustainable and cost-effective solution. Genfisa-Solutions offers a high-performance system incorporating cutting-edge technologies to optimise the efficiency, quality and profitability of operations.

### System organisation and components

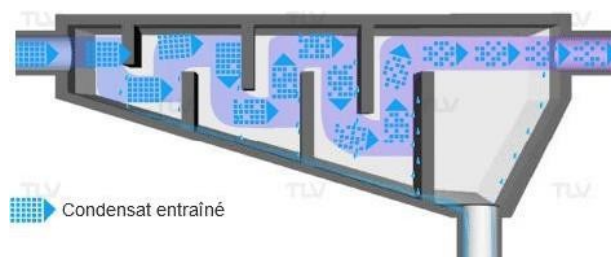
#### 1. Effluent collection

- Origin: Water from washing machines, rinsers and pre-wash basins.
- Network: Dedicated collection via separate pipes to avoid contamination.
- Benefits: Simple connection to existing infrastructure.



#### 2. Pre-treatment: Screening

- Function: To retain solid particles such as textile fibres, hair and other debris.
- Equipment: Genfisa mechanical or static screen.
- Fineness of filtration: Screens adapted from 1 to 5 mm.



#### 3. Prefiltration

- Function: Reduction of suspended matter (sand, soap residue, etc.).

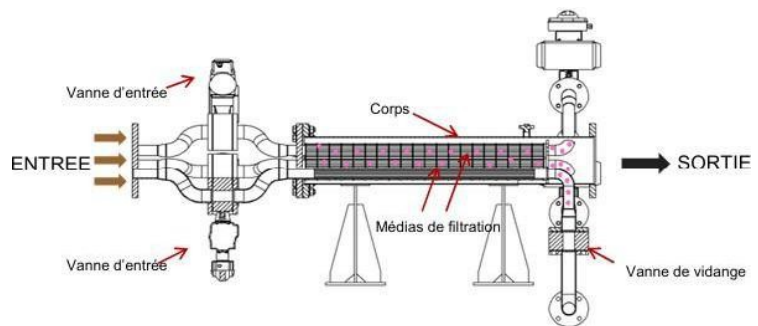


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- Technology:
- Fine-mesh sieves or Genfisa filter cartridges.
- Easy maintenance with manual or semi-automatic cleaning options.

## 4. Main filtration: self-cleaning filter

- Function: Removal of microscopic particles for clear, reusable water.
- Technology:
- Fully automated non-return filter.
- Long life and low maintenance.



## 5. Disinfection (optional)

- Objective: To guarantee clean water for subsequent cycles.
  - Possible technologies :
- UV: Elimination of bacteria and viruses.
- Chlorination: Prolonged effectiveness storage.
- Ozonation: powerful, environmentally-friendly disinfection.

# Aqua Recoveri

## 6. Treated water storage

Features:

- 316 L stainless steel tanks (Genfisa patented design).
- Reinforced protection against secondary contamination.
- Advantages: Suitable for large volumes, up to 500 m<sup>3</sup>/day.



## 7. Distribution

- Function :
- Send the recycled water to the washing or rinsing machines.
- Equipment:
- High-efficiency pumps.
- Automation to adjust pressure and flow as required.

## 8. Standards and certifications

- NF EN ISO 11204: Measurement of sound pressure levels in controlled environments.
- IEC 60204-1: Safety of industrial electrical equipment.
- ISO 20426: Design of drinking water distribution systems.
- ISO 20761: Industrial water reuse.
- ISO TC/282: Standards for water treatment and reuse.
- ISO 15839 (T 90-550) : Accuracy and reliability of water quality analyses.
- Directive 2006/42/EC: Safety of machinery



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## CONTACT US

Find out more about our cutting-edge solutions, such as our industrial heat pumps, which reduce energy , carbon footprints, achieve net zero emissions targets and reduce energy costs for customers. Give us a call, send us an email or visit our website to fill in the contact form and we'll get back to you as soon as possible.



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