



WATER AND WASTEWATER TECHNOLOGIES

MOVING TOWARDS A MORE SUSTAINABLE FUTURE

With more than 20 years of experience, ECODEPUR[®] is committed with the protection of the quality and availability of water resources for present and future generations.

ECODEPUR[®] SYSTEMS FOR AN EFFICIENT AND EFFECTIVE MANAGEMENT OF WATER RESOURCES

We develop and manufacture a wide range of equipment and systems for an efficient and effective management of water resources comprising storage; treatment; recycling and reuse. Guided by the sustainable development and circular economy concepts we are committed with the protection of water resources, presenting targeted solutions for each market in which we operate, following the international trends and guidelines in the fight against water scarcity.

Since our creation in 2002, we have systematically invested in innovation, technology and production capacity in order to meet the specific requirements of each market in which we operate, assuring ECODEPUR[®] International development.

An international reference for sustainable and reliable water and wastewater solutions



OUR TECHNOLOGY



INVESTIGATION AND DEVELOPMENT

Counting with a highly qualified and specialised technical team and in permanent collaboration with several technological centers, ECODEPUR® offers the best solution for the specific needs of each project.



INDUSTRIAL CAPACITY

With over 40 years of experience, HENRIQUES SGPS GROUP has the capacity and experience to assure the high-quality standard of all manufactured equipment.



COMPACT AND MODULAR TECHNOLOGIES

ECODEPUR® technologies are developed and manufactured for a simple and quick installation, startup and maintenance.



INTERNATIONAL EXPERIENCE

With a vast international experience covering more than 40 countries we develop the best solution for each case, respecting the required standards and supporting our clients according to their specific needs.



STANDARDS AND CERTIFICATIONS

ECODEPUR® technologies are developed and manufactured according to EN ISO 9001 requirements in order to assure a high standard of quality and reliability.

The compliance with the international requirements is attested by the certification and technical approval of our solutions by EU notified bodies.



SUSTAINABLE DEVELOPMENT AND CIRCULAR ECONOMY

We assume our environmental responsibilities, reason for which we're EN ISO 14001 certified by TÜV Rheinland Portugal. Our equipment is recyclable and recoverable contributing for the preservation of natural resources and waste reduction.



AFTER SALES SERVICE AND MAINTENANCE

In order to ensure our clients satisfaction, a highly qualified and specialized team is available to provide all required assistance regarding the management of installed ECODEPUR systems.



URBAN WASTEWATER TREATMENT AND REUSE

Package wastewater treatment plants

The urban wastewater treatment allows the elimination of contaminants from water before discharge in the environment (soil/water).

ECODEPUR[®] package wastewater treatment plants are designed and built in order to respect the legally imposed discharge reject limits.

APPLICATIONS

- ✔ Small population clusters;
- ✔ Condominiums;
- ✔ Tourist complexes;
- ✔ Service Stations;
- ✔ Restaurants;
- ✔ Construction sites;
- ✔ Schools and Universities;
- ✔ Athletic complexes;
- ✔ Camping Parks;
- ✔ Military facilities;
- ✔ Petroleum and gas exploration fields;
- ✔ Domestic-like wastewater from industrial unities.

ADDITIONAL EQUIPMENT

- ✔ Ultrasonic and electromagnetic flow meters;
- ✔ Bar Racks with manual cleaning;
- ✔ Automatic screw screens;
- ✔ Compact pretreatment units;
- ✔ Active carbon deodorization filters;
- ✔ Sludge treatment and dehydration;
- ✔ Remote monitoring and management.

ECODEPUR[®] PACKAGE WASTEWATER TREATMENT PLANT SBR TYPE

Compact/Package system for urban wastewater treatment in an ECODEPUR[®] SBR reactor (Sequencing Batch Reactor).

The activated sludge process by a Sequenced Bath Reactor (SBR) is mainly characterized by the aeration and the sludge settling being prosecuted sequentially, in a cyclical form, on the same tank/reactor.

ECODEPUR[®] PACKAGE WASTEWATER TREATMENT PLANT MBBR TYPE

The MBBR technology (Moving Bed Biofilm Reactors) is based on the development of biomass in synthetic biofilm carriers that float in the mixed liquor of Bio-reactor.

Generally, MBBR systems are used when there are space limitations for the installation, once it allows an important reactor volume reduction when compared with conventional activated sludge systems, keeping the desired treatment performances

ECODEPUR[®] PACKAGE WASTEWATER TREATMENT PLANT SBBR TYPE

The SBBR technology (Sequencing Biofilm Batch Reactor) combines the advantages of SBR (sequential and cyclical operation) and MBBR systems (biomass development in synthetic biofilm carriers).

As the MBBR systems, the SBBR technology is also generally used when there are space limitations for the installation, once it allows an important volume reduction when compared with conventional activated sludge systems, keeping the desired treatment performances.

ECODEPUR[®] PACKAGE WASTEWATER TREATMENT PLANT MBR TYPE

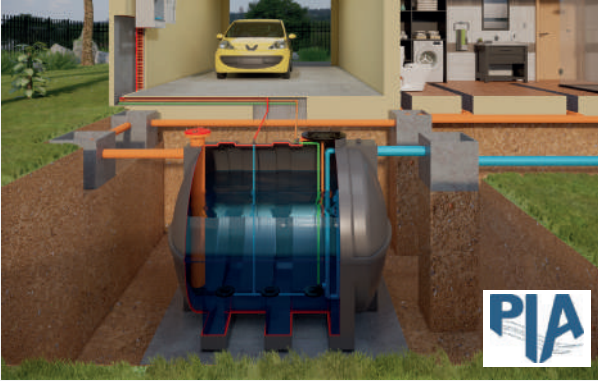
The membrane bioreactor (MBR) is a technology for wastewater treatment that combines biological treatment with membrane filtration technology. This technology offers numerous advantages, allowing a high biomass concentration; elimination of sludge settling stage and overall improvement of the treated water quality.



MICRO WASTEWATER TREATMENT PLANT (MICRO WWTP) ECODEPUR® AQUADEPUR®

The Micro SBR AQUADEPUR® combines the advantages of a ultracompact solution with the performance reliability of a Sequencing Batch Reactor (SBR).

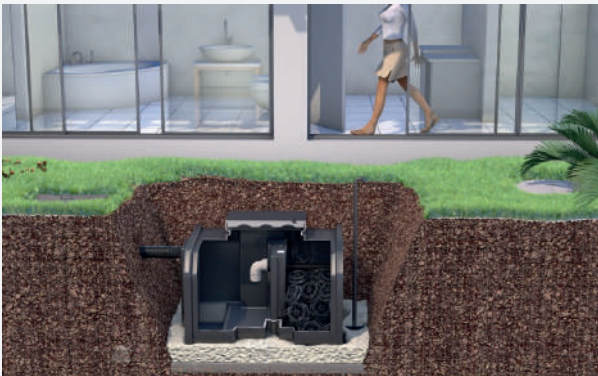
CE EN 12566-3



BIOLOGICAL SEPTIC TANK

The Biological Septic Tank, ECODEPUR® BIOFIX is a compact wastewater treatment system that combines primary settling, sludge anaerobic digestion and aerobic biological filtration.

CE EN 12566-1



SEPTIC TANK ECODEPUR® FS

The Septic Tank, ECODEPUR® FS is a compact wastewater treatment system that combines primary settling and sludge anaerobic digestion.

CE EN 12566-1



HOLDING TANK ECODEPUR® FE

The ECODEPUR® FE Holding Tanks are intended for wastewater storage in places where the treated effluent drainage is not feasible or legally allowed.



ECODEPUR® systems for wastewater treatment and reuse

How to treat wastewater in order to reuse it?

The use of unconventionally water resources through recycling and reuse contribute to a safe, available and accessible water supply, reducing energy needs and environmental impacts.

In this way wastewater treatment and reuse is a key element for a sustainable management of water resources. It's a new water source that requires lower investments and energy costs when compared to other alternative sources as desalination.

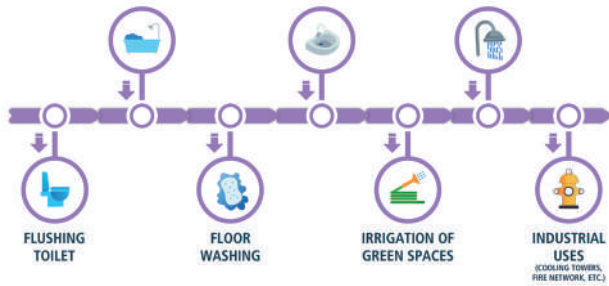
ECODEPUR® presents a wide range of modular systems for wastewater treatment and reuse in non-potable uses. Tell us your specific needs! We will give you the best solution for your water recycling & reuse project!

GREY WATER TREATMENT & REUSE

Each day we produce low contaminated water that can be reused in non-potable usages after proper treatment.

The wastewater reuse, as a water scarcity fighting strategy, is one of the biggest challenges that humanity will face in the next years.

Grey Water Collection and Treatment



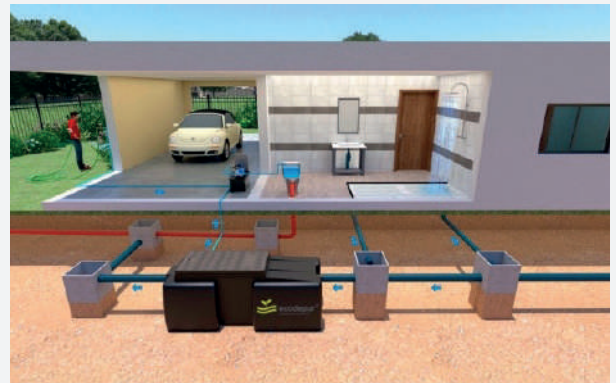
Legal and Normative Standards

European Standard EN 1717	European Standard EN 16941-2
Protection against pollution of potable water installations and general requirements of devices to prevent pollution by backflow.	On-site non-potable water systems Part 2: Systems for the use of treated greywater

The Greywater Recycler System ECODEPUR® BIOX/SPRAC allows a significantly reduces consumption domestic water supply, providing not only a real contribution to the preservation of the "water" resource, but also a profitable investment with short-term economic returns.

SPRAC ECODEPUR® BIOX DOMUS

The Greywater Recycler System ECODEPUR® BIOX DOMUS is intended for the collection and treatment of greywater (baths, showers, hand basins) in order to produce recycled water for non-potable uses such and flush toilets; irrigation and firefighting reserves, for populations up to 10 Equivalent Inhabitants.



SPRAC ECODEPUR® BIOX PRO

The Greywater Recycler System ECODEPUR® BIOX PRO is intended for the collection and treatment of greywater (baths, showers, hand basins) in order to produce recycled water for non-potable uses such us flush toilets; irrigation and firefighting reserves. The Greywater Recycler System ECODEPUR® BIOX PRO is available in standard solutions up to 88,9 m³/day of recycling capacity. Taylor Made solutions or bigger capacities available on request.



RAINWATER HARVESTING AND REUSE SYSTEMS

Rainwater reuse contributes to reduce the potable water demand for non-potable uses as irrigation, car washing, flush toilets, irrigation, among others.

In this way rainwater reuse contributes to the water resources preservation and prevents their overexploitation.

Rainwater can be collected in roofs and terraces in order to be reused in dry seasons. Rainwater reuse also helps to relief drainage systems and wastewater treatment plants.

APPLICATIONS/NON-POTABLE USES

- Flush toilets;
- Laundry (the use of rain water for laundry without any specific treatment must only be considered when washing is made at temperatures above 55°C);
- Car and pavements washing;
- Irrigation;
- Industrial uses.

SAAP ECODEPUR® AQUAPLUVIA

The rainwater reuse systems are designed and manufactured in order to allow rainwater treatment and storage for reuse purposes.



ECODEPUR® PLUVIA SMARTBOX Smart Water Management System

The ECODEPUR® PLUVIA SMARTBOX, Smart Water Management System, is a complete system that controls and operates the water pressurisation for reuse purposes.

It optimises the use of recycled water, allows the automatic operation of the system and assures water availability for the intended uses.



WASH WATER RECYCLING SYSTEMS

TECHNICAL BENEFIT

Creation of a strategic water reserve, useful in periods of water scarcity or temporary interruptions (ruptures, ...)






ENVIRONMENTAL BENEFIT

High reduction of contaminants level released to the natural environment, in order to comply with the legislation in force, promoting the preservation of natural resources (water) and water consumption reduction contributing thus for water conservation and sustainable use.

ECONOMICAL BENEFIT

The system reduces up to 90% water consumption in washing operations (considering evaporation losses), resulting not only in an effective contribution to the preservation of water resources but also a worthwhile investment with economic return by reducing water supply costs.

APPLICATIONS/NON-POTABLE USES

-  Carwash systems;
-  Truck wash systems;
-  Train wash systems;
-  Airplanes;
-  Among others.

ECODEPUR® DEPURWASH® Wash Water Recycling Systems

The ECODEPUR® DEPURWASH Wash Water Recycling Systems were developed in order to guarantee the best price/quality relationship and achieve the following objectives:

- Manage and recycle all generated wash water;
- Optimise the use of recycled water in the different stages of the washing cycle;
- Treat the contaminate loading present in wash water;
- Prevent all microbiological risk in reuse operations;
- Allow automatic operation;
- Assure the quality of the washing operation (high quality water);
- Full compliance with water discharge regulations.



The treatment and reuse of Wash Water involves a series of in line treatment procedures in order to achieve the required quality for washing operations.

- Sludge Trap;
- Class 1 Oil Separator;
- Biological Reactor;
- Filtration;
- Disinfection;
- Recycled Water storage.



OILY WASTEWATER TREATMENT (OIL SEPARATION)

The Oil Water Separators also named Oil Interceptors are typically used in a variety of industrial and commercial applications to remove sand, grit, oil, and other contaminants from wastewater before it is discharged.

The use of Oil Water Separators prevents the water/soil contamination, ensuring compliance with environmental regulations.

APPLICATIONS

- Service Stations;
- Garage Forecourts;
- Car Parks;
- Workshops;
- Supermarket / Shopping Centres;
- Distribution Warehouses;
- Car Wash Bays;
- Scrap Yards;
- Car Garages;
- Fuel Storage Sites;
- Distribution/Haulage Centres;
- Waste Transfer Sites;
- Airports;
- Ports;
- Business/Commercial Parks/Industrial Estates.

OPTIONAL EQUIPMENT

- Oil & Sludge Alarm Systems;
- Access Covers ECODEPUR®;
- Absorption and degradation units for oils and fats;
- Oil Skimmers.



ECODEPUR® DEPUROIL® OIL SEPARATORS

Intended to remove sand, grit, oil, and other contaminants from oily wastewater. Class 1 according to EN 858 standard, presenting double coalescent cell and automatic closure device. Designed in order to achieve an oil concentration in the treated wastewater < 5 mg/l in the EN 858 test conditions. DEPUROIL® range is available up to 15 l/s and is designed to treat highly contaminated oily wastewater (e.g. Service Stations; Car Wash Bays, ...).

OPTIONAL: Bypass and integrated pumping station.



ECODEPUR® OILTECH OIL SEPARATORS

Intended to remove sand, grit, oil, and other contaminants from oily wastewater. Class 1 according to EN 858 standard, presenting coalescent cell and automatic closure device. Designed in order to achieve an oil concentration in the treated wastewater < 5 mg/l in the EN 858 test conditions. OILTECH® range is available up to 30 l/s and is designed to treat low contaminated oily wastewater (e.g. Car Garages, ...).

OPTIONAL: Bypass and integrated pumping station.



ECODEPUR® TECHNOIL® OIL SEPARATORS

Intended to remove sand, grit, oil, and other contaminants from oily wastewater. Class 1 according to EN 858 standard, presenting coalescent cell and automatic closure device. Designed in order to achieve an oil concentration in the treated wastewater < 5 mg/l in the EN 858 test conditions. TECHNOIL® range is available up to 600 l/s in a single module and is designed to treat contaminated runoff water from impermeabilized surfaces as airports; sea ports and scrap yards.



ECODEPUR® DS SLUDGE TRAPS

The Sludge Traps ECODEPUR® DS are mainly used to remove settleable substances before being sent to the oil water separator.



FAT, OIL AND GREASE SEPARATION

(FOG)

Wastewater from food preparation contains fats, oils and greases (FOG) of animal or vegetable origin.

These products can cause deposits in the sanitary sewer systems, heavily disturbing wastewater collection, drainage, pumping and treatment as well as conducting to the development of nauseating odours and toxic gases.

The installation of a grease separator can retain fats, oils and grease, before entering the sewers avoiding damage to downstream sanitation systems.

APPLICATIONS

- 🌿 Restaurants;
- 🌿 Canteens;
- 🌿 Hotels;
- 🌿 Schools;
- 🌿 Bars;
- 🌿 Residential areas;
- 🌿 Camping Parks;
- 🌿 Laundries;
- 🌿 Any site with high quantity of Grease and Oil.

OPTIONAL

- 🌿 Oil Alarm Systems;
- 🌿 Access Covers ECODEPUR®;
- 🌿 Absorption and degradation units for oils and fats.

GREASE SEPARATORS ECODEPUR® GORTECH®

Appropriated to separate fats, oils and greases of vegetable and animal origin from wastewater. Made in Polyethylene, high capacity, manual cleaning and buried installation. Without energetic consumption.

CE EN 1825



GREASE SEPARATORS GORTECH® SELF CLEAN

Appropriated to separate fats, oils and greases of vegetable and animal origin from wastewater. Made in stainless steel for under sink installation with automatic cleaning.

GREASE SEPARATORS ECODEPUR® SG-ECO PE

Appropriated to separate greases and oils of vegetable and animal origin from wastewater. Made in Polyethylene for under sink installation and manual cleaning. Without energetic consumption.



PREFABRICATED PUMPING STATIONS

Complete stations made of polyethylene or glass-fibre reinforced polyester equipped with submersible pumps (up to 3) for wastewater or rainwater.

Standard or Taylor Made Plug & Play Solutions.

APPLICATIONS

- 🌿 Sewage pumping;
- 🌿 Rainwater pumping.



PREFABRICATED PE ECODEPUR® ECO PUMPING STATIONS

Plug & Play Standard complete stations made of polyethylene, supplied with one or two pumps, control panel, piping, valves, auto-couplings, guide rails and level control. Ready to lower the pumps down to the auto-couplings.

PREFABRICATED PE ECODEPUR® SR PUMPING STATIONS

Plug & Play, Taylor Made, complete stations made of glass-fibre reinforced polyester, supplied with two or three pumps, basket filter, fall protection safety grid, piping (PVC or stainless steel), valves (installed inside the tank or in an independent valve chamber), auto-couplings, guide rails, and level control. Ready to lower the pumps down to the auto-couplings.



WATER STORAGE

ECODEPUR® WATER STORAGE TANKS

Water storage tanks for underground or above ground installations according to the required volume and application. .



INDUSTRIAL AND AGRO-INDUSTRIAL WASTEWATER TREATMENT

ECODEPUR[®] has extensive experience in the design and construction of industrial wastewater treatment plants, applying the best available solutions for each particular case.

The chosen technologies depend of several factors as the physic/chemic characteristics of the wastewater to be treated, available energy sources, operational costs, among others.

APLICACIONES

- ✓ Wineries;
- ✓ Dairy Industry;
- ✓ Process Water Reuse;
- ✓ Oil and Gas Industry;
- ✓ Hospitals, Pharmaceuticals and Laboratories;
- ✓ Slaughterhouses and Meat Processing;
- ✓ Fish Processing and Preservation;
- ✓ Textile Industry;
- ✓ Ceramic and glass industry.

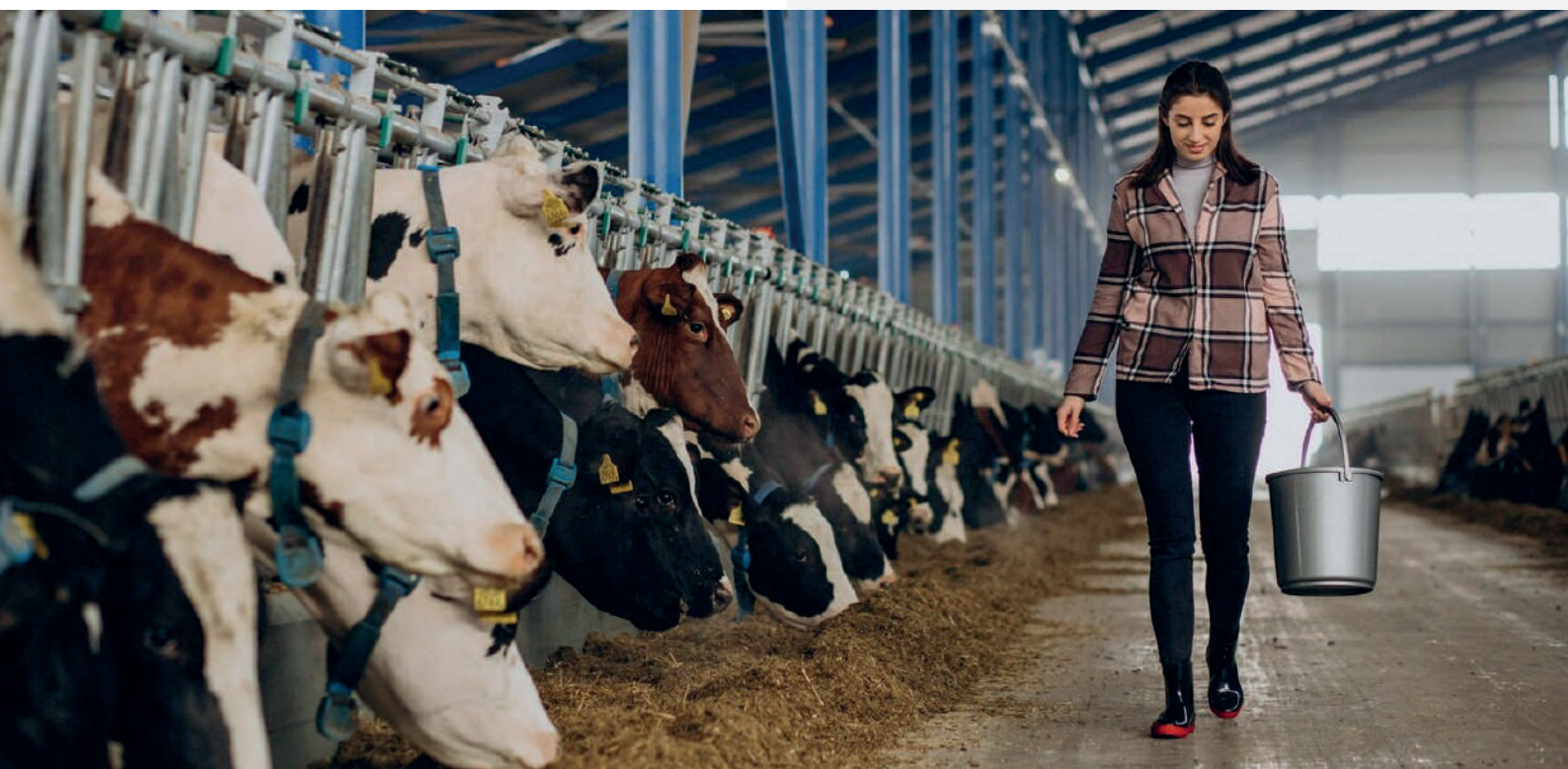
PHYSICAL AND CHEMICAL TREATMENT TECHNOLOGIES:

- ✓ Coagulation;
- ✓ Flocculation;
- ✓ Filtration/Microfiltration/Ultrafiltration;
- ✓ Lamellar Sedimentation/Settling;
- ✓ Dissolved Air Flotation;
- ✓ Ozonation;
- ✓ UV;
- ✓ Neutralisation;
- ✓ Adsorption;
- ✓ Advanced Oxidation Processes (POA).



BIOLOGICAL TECHNOLOGIES:

- ✓ SBR (Sequencing Batch Reactor);
- ✓ MBBR (Moving Bed Biofilm Reactor);
- ✓ MBR (Membrane Bio Reactor);
- ✓ SBBR (Sequencing Biofilm Batch Reactor);
- ✓ UASB (Up flow Anaerobic Sludge Blanket).



DRINKING WATER TREATMENT

ECODEPUR® presents a wide range of technologies for potable water production applying the best available solutions for each particular case.

The use of state-of-the-art technologies, including ultrafiltration and electrodialysis, represents a constant evolution of the applied treatment processes as well as the optimization of the respective operational costs allowing their application to an increasingly broader range of applications.

APPLICATIONS

- ✔ Small population clusters;
- ✔ Condominiums;
- ✔ Tourist complexes;
- ✔ Service Stations;
- ✔ Restaurants;
- ✔ Construction sites;
- ✔ Schools and Universities;
- ✔ Athletic complexes;
- ✔ Camping Parks;
- ✔ Military facilities;
- ✔ Petroleum and gas exploration field;
- ✔ Industry (different uses).



CONTAINER, MOBILE TREATMENT PLANTS FOR DRINKING WATER

Container, mobile water treatment plants are an optimum and highly flexible way of obtaining drinking water from wells, open resources, side and shore wells, sea and brackish water. They provide and ensure perfectly clean drinking water for permanent as well as emergency assurance of drinking water according to the strictest hygiene standards.

The water treatment systems are embedded in the ISO containers [10ft., 20ft. and 40ft.].

Each container treatment plant is a unique system proposed and manufactured according to the particular specification and requirements of the customer.

MEMBRANE PROCESSES

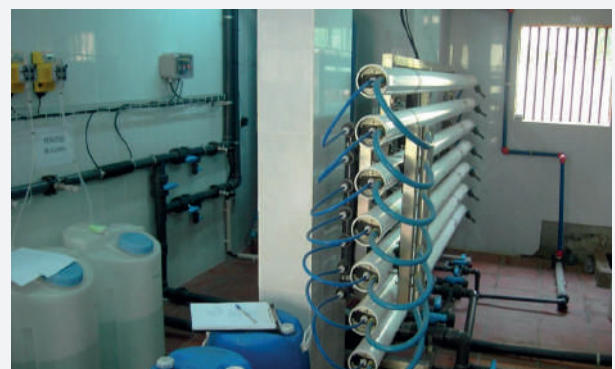
- ✔ Reverse Osmosis;
- ✔ Nano and Ultrafiltration;
- ✔ Sea and Brackish Water Desalination.

FILTRATION & DEMINERALIZATION

- ✔ Multimedia filters;
- ✔ Mesh filters;
- ✔ Centrifugal filters;
- ✔ Ion exchange processes (softening; iron removal; ...).

DISINFECTION

- ✔ Chlorination;
- ✔ Ozonation;
- ✔ UV.





SOME OF OUR PROJECTS

The essential is to work for a more sustainable future in order to protect and preserve our planet ensuring the present and next generations wellbeing.





URBAN WASTEWATER TREATMENT AND REUSE



GREYWATER TREATMENT & REUSE



RAINWATER HARVESTING AND REUSE SYSTEMS



WASH WATER RECYCLING SYSTEMS



OILY WASTEWATER TREATMENT (OIL SEPARATION)



FAT, OIL AND GREASE (FOG) SEPARATION



PREFABRICATED PUMPING STATIONS



WATER STORAGE



INDUSTRIAL AND AGRO-INDUSTRIAL WASTEWATER TREATMENT



DRINKING WATER TREATMENT



WATER AND WASTEWATER TECHNOLOGIES



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