



WORLDWIDE



150.000 m³/day
total installed capacity of
R.O. desalination plants

350.000 m³/day
total installed capacity
of **filtration plants**



AGRICULTURAL



INDUSTRIAL



RECREATIONAL

THE WATER SPECIALISTS

Clean, fresh water is not only essential for human life; it's also vital in **agricultural, industrial and recreational applications**, and in preserving the environment. Additionally, water available from nature is rarely suitable for drinking or for meeting the various demanding needs of the industrial sector. Treating water and making it suitable for specific uses and applications is a critical requirement in today's world.

Watera is an international company headquartered in **Luxembourg**, active in the water treatment market **since 1963**. In addition to Luxembourg, Watera Group is directly present, through wholly owned subsidiaries, in a number of countries in **Eastern and Southern Europe**, including **Italy, Greece, the Czech Republic, Slovakia, Romania and Bulgaria**, and it is also active in **the Middle East and Africa**.

Since its founding, Watera has been dedicated to providing **the technical and scientific solutions that ensure that water, regardless of its source and characteristics, is treated to meet the highest standards needed for its intended use**.

Today, with the extensive experience and the unique know-how that Watera has built over its more than fifty year history, it is extremely well positioned and capable to readily address and satisfy even the most demanding water treatment needs.

On many occasions, Watera Group companies have been recognized for providing effective solutions that successfully addressed even the most difficult and challenging water treatment requirements. Individual Watera companies in different countries have earned numerous awards for their innovative and energy efficient water treatment plant designs, and their advanced automated monitoring and control systems.

In fact, based on its experience and know-how, as well as its impressive reference list, Watera can rightfully be designated as the "Water Specialists".



SOLUTION

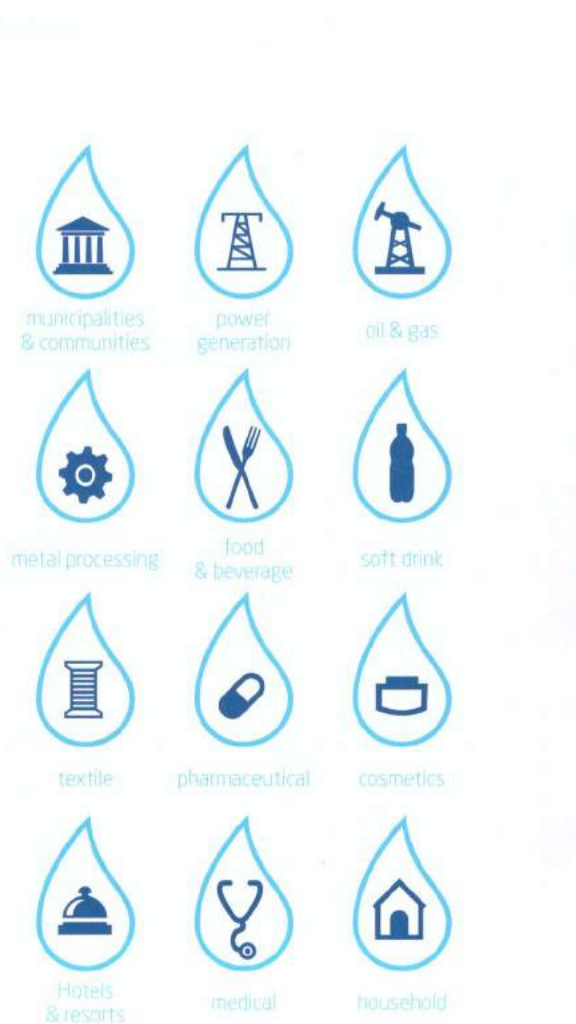
ANALYSIS

PROBLEM



The total **volume of water on Earth** is about **1.4 billion cubic kilometers**. Of this volume, only about **200,000 km³**, or less than **0.015%**, is usable fresh water*. At the same time, water use has been growing at more than twice the rate of population growth. **Water is the essential element** in a growing number of processes and products. However, water available from nature is very rarely suitable for meeting such specific requirements. Watera is uniquely positioned to perform this task by **applying the most advanced technologies and processes in water treatment**.

FROM WATER TO WATERA



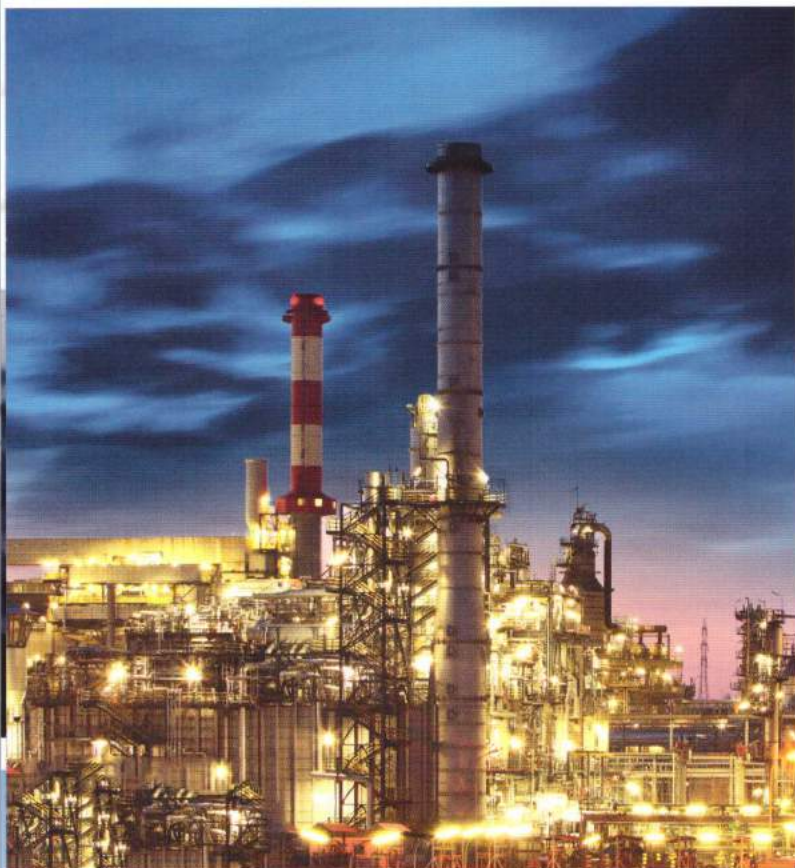
Watera's main assets are its **highly knowledgeable and skilled engineering and technical staff** and its **vertically integrated manufacturing capability**. This capability rests with its two manufacturing plants and one assembly facility, all located in Europe. These facilities are specifically designed and equipped for the **manufacture and assembly of water treatment systems**. They have a **total production floor area of 10.000 m²** and a **total floor area including office and warehousing-space of 19.500 m²**. In addition, a network of long-term strategic relationships with some of the most prominent international water treatment-related component manufacturers and a unique water treatment system automation research and development center also contribute to **Watera's strong position in the international water treatment market**.

Large **municipalities** and small **communities** have used Watera's systems to satisfy their requirements in drinkable water by treating available supplies of unsuitable fresh water or seawater. **Powerplants, refineries, oil & gas, metal processing and coating, food & beverage, soft drink, textile and dyeing, pharmaceutical and cosmetics companies** rely on Watera's expertise for satisfying their needs of suitable water for use in either products or processes. **Hotels and resorts** ensure the quality of water supplied to their guests by using Watera's water treatment equipment. **Hospitals** rely on Watera for satisfying their water treatment needs while numerous private individuals take advantage of Watera's **household** water treatment systems to ensure that they enjoy the benefits of clean, pure water in their homes.

Over the years, more and more organizations and individuals place their trust in Watera's experience to provide them with the water they need from the water they have. From large scale industrial applications and municipal water works to small scale water treatment systems, **Watera can make the difference**.

*source UN-Water Organization

WATER... ESSENTIAL FOR EVERY ACTIVITY



Chemical processing

Water is a critical ingredient in chemical manufacturing; high-quality water is needed for a range of applications, namely, production, material processing, and cooling. Low conductivity/ high purity water is of significant importance for the preparation of numerous products in the chemical industry such as chemicals, detergents and cosmetics.



Power Generation

Power generation is dominated by thermal-electric power plants (TPPs), which use a heat-driven power cycle. Extremely high purity water for thermoelectric power is turned into steam by the primary heat source in order to drive the turbine to produce electricity and is circulated continuously in a closed circuit steam cycle. Also, among other applications, water is



Municipalities & Communities

Watera provides innovative solutions to municipalities and municipal water utilities. Through constant research and relying on the experience it has built over its long successful history, Watera has perfected original leading-edge technologies in the municipal sector that meet the strictest requirements for drinking water. Hundreds of water supply authorities have selected Watera's systems, for their proven robustness, consistent quality and outstanding performance combined with optimal operating and running costs. The standardized design with easy expansion options results in significant savings in both capital and operating costs. Salts, Iron, Manganese, Arsenic, Ammonia and blurriness pollutants are removed effectively by Watera's innovative technologies and processes.



Metal Processing

used to cool the system so as to condense the steam and recycle it. Last but not least, water is used in fog systems for inlet air cooling. Watera's application of advanced technologies provides solutions for ultra-high purity water to the power generating industry.

In metal processing, such as in steel, copper, and aluminum production, low conductivity and low-hardness water is required for various cooling water needs in steel mills, rolling mills and smelters, as well as for casting in foundries. Demineralized water is an absolute prerequisite for paint shops to ensure a high quality finished end product.

WATER... ESSENTIAL FOR EVERY ACTIVITY



Food & Beverage

A very wide-ranging sector with demanding requirements in terms of water quality. For dairy products such as milk, yogurt and cheese low conductivity water is needed for steam generation, evaporative condensers, bottling line cleaning, and CIP. For canned products high quality water is required mainly as an ingredient of the end product as well as for steam generation. For breweries, soft drinks and fruit juices water with a moderate pH, hardness, conductivity and controlled alkalinity is needed as a critical ingredient of the end product.

Hospitality

In hotels, the use of Watera's filtering, softening and reverse osmosis desalination technologies ensure a prolonged lifetime for both kitchen (boilers, steam ovens, ice cube makers etc.) and wellness equipment (steam baths, spas, sophisticated water massage systems, etc.). For resorts, meeting not only peak seasonal water demands but also ongoing water requirements in areas where access to sweet water is limited, either due to water scarcity or high purchasing costs, Watera's brackish or sea water desalination units have proven a very reliable and cost-effective solution.



Household

For home use Watera offers small, reliable systems for the treatment of drinking water "at the point of use," which not only frees the user from reliance on expensive and difficult to handle bottled water, but also allows them to have readily available water of high hygienic standards for all food preparation uses. In addition, since the largest proportion of water entering a home is used for cleaning, personal care, household appliances and for the bathroom, Watera provides solutions for treating larger volumes of water to optimize its characteristics in order to ensure convenience, savings and a long lifetime for all household appliances that use water.

SYSTEMS & SOLUTIONS FOR EVERY NEED



~ Reverse osmosis

The reverse osmosis (RO) technology takes advantage of a natural process based on the physical property of certain semi-permeable membranes to separate water from the substances dissolved in it. By applying appropriate pressure, water forced through the membrane separates into pure water (permeate) and concentrated brine (reject). Moreover, this technology also provides an excellent defense against micro-pollutants, pesticides, pyrogens, viruses and bacteria that may also be found in the water.

Reverse osmosis technology is applied to treat both brackish water and seawater. Watera's brackish water treatment units are available for a wide range of needs and are fully equipped

with all appropriate instrumentation for easy operation and control. For arid areas in close proximity to the sea, Watera's sea water RO units offer a reliable alternative for municipalities, communities, manufacturing and power plants, resorts and other potential users to cover their needs in fresh properly-treated water. Watera's systems encompass the most recent innovations in membrane and energy recovery technologies, which combined with Watera engineers' experience and know-how, ensure a long-life and an optimized operational cost. In both cases, a proprietary PLC based automation & control software, built into each unit, allows for remote monitoring of all critical parameters and control of the unit.



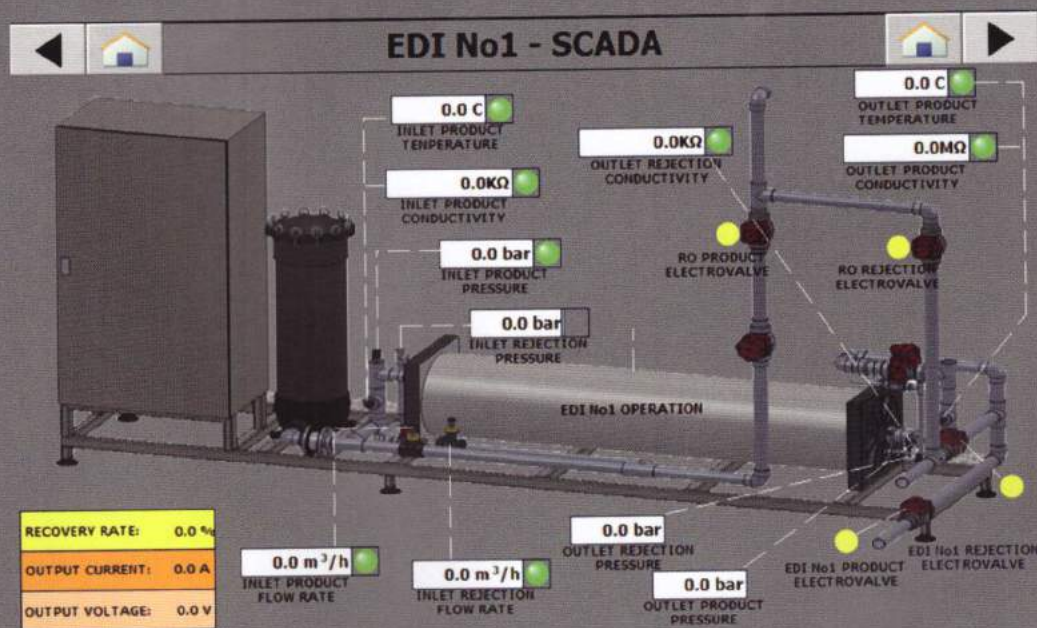
Filtration

Watera offers a complete range of selective removal and absorption multimedia filters that eliminate suspended solids, inorganic pollutants such as Iron, Manganese, Arsenic, Nickel, Mercury etc., turbidity, smell, taste, free chlorine and chlorine derivatives, and THMs. Moreover, selective filtration is a powerful process which is often applied as pretreatment to other technologies like reverse osmosis desalination.

Ultrafiltration

Ultrafiltration or UF is a pressure-driven membrane separation process used to remove particulate matter from aqueous solutions. Ultrafiltration membranes have typical pore sizes in the range of 0.01 to 0.10 μm and efficiently remove bacteria and most viruses, colloids and silt. The smaller the nominal pore size, the higher the removal efficiency. Watera's Ultrafiltration units provide an efficient water treatment for re-cycling purposes making it suitable for applications such as irrigation or chillers or as pre-treatment to a reverse osmosis plant.

SYSTEMS & SOLUTIONS FOR EVERY NEED



Electrodeionization (EDI)

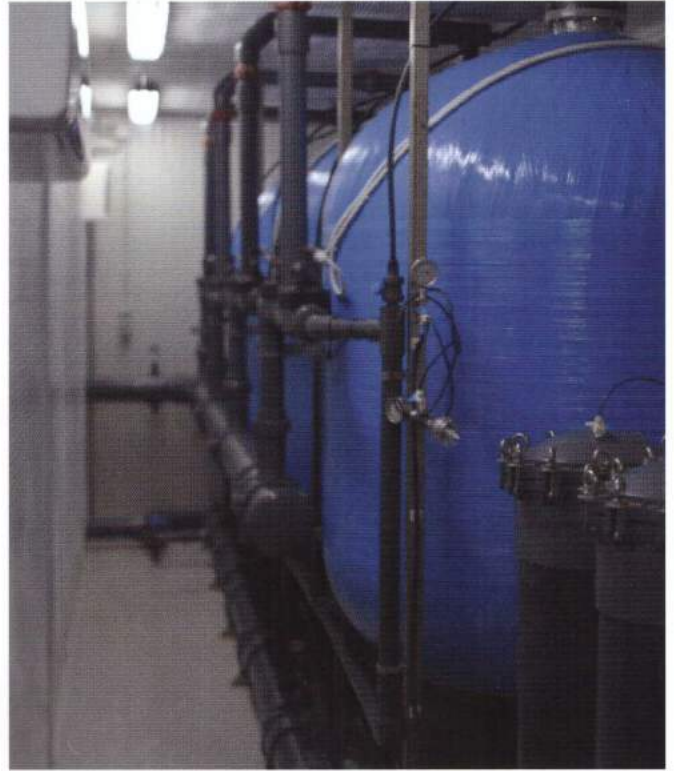
Electrodeionization is a relatively novel technology for the production of ultra pure water, without the use of chemicals. This is in principle accomplished by means of the combined use of selective membranes and ion-exchange resins. A continuous electric current source is connected to an anode and a cathode, which keep the resin activated while the electric field between anode and cathode facilitates the water electrolysis and the separation of the dissolved ions.

Thanks to this process it is possible to produce high purity water (>17.5 MOhms · cm) from water which has been already demineralised by reverse osmosis deionization. The recovery ratio can exceed 95%. Watera's EDI range is designed and manufactured according to the most stringent quality, safety and emission standards. Materials used, particularly those in contact with water, are of proven resistance to corrosion.



Water recycling

Watera designs and assembles specialized, smart, tested, flexible systems for tertiary treatment of waste water treatment plants that produce water suitable for industrial use, chillers, irrigation or numerous other applications.

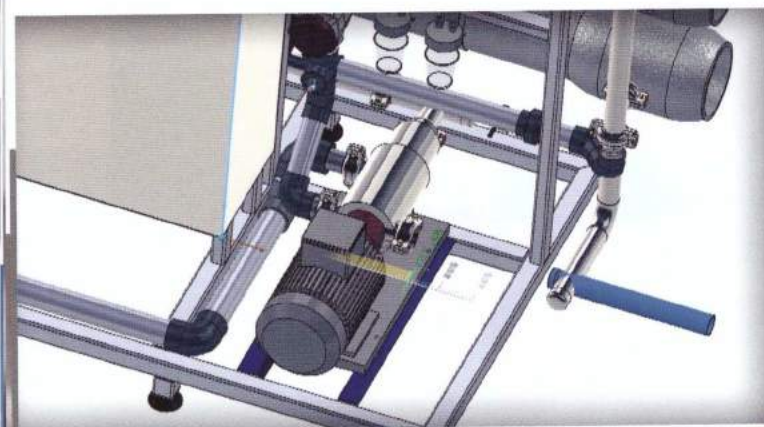


Containerized units

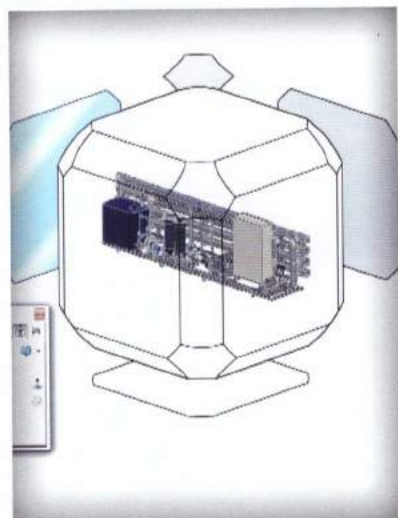
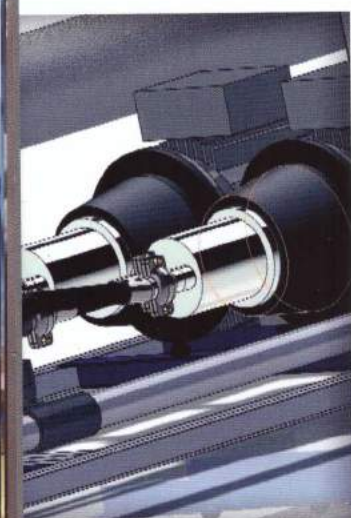
Flexible, pre-engineered, pre-assembled, ergonomic portable units, for every type of water treatment system installed inside standard 20' or 40' insulated containers. Compact units for filtration, brackish or sea water desalination, disinfection, recycling, are available in a broad range of capacities for drinking, irrigation or other applications. Through the use of such pre-assembled units, on-site installation becomes very easy and requires much less time while remote user-friendly monitoring and control of the system via GSM or web connection is available to ensure effective preventive maintenance and trouble-free operation.



EXPERIENCE YOU CAN RELY ON



Over its more than 50 years in the water treatment field, the Watera International Group has supplied state-of-the-art water treatment systems and has provided advanced water treatment solutions to numerous clients. Besides designing and developing water treatment systems utilizing state of the art 3-D software tools, the group applies a vertically integrated manufacturing approach that aims towards ensuring that lead times are minimized while at the same time product quality is strictly controlled. Within this context all products are fully tested prior to leaving the factory.



The Watera Group manufacturing operation has been certified to ISO's management system standards in order to ensure efficiency and effectiveness. More precisely it has been certified to ISO 9001:2008 standards for its quality management system, ISO 14001:2004 standards for its environmental management system and ISO 1801:2008 standards for its health and safety management system. Watera also applies the CE mark on all of its products as well as the Medical CE mark on products designed and manufactured for use in demanding medical applications.

A specialized installation team of technicians led by qualified engineers ensures the timely and efficient installation and commissioning of water treatment systems supplied by Watera companies. The after sales department of each Watera company ensures the long-term operation of the equipment supplied at required performance levels. This is achieved by the well-trained and experienced technicians and engineers and an abundance of spare parts.

Indicative of Watera's size and long term record of success is the total installed capacity of Reverse Osmosis desalination plants which exceeds 150.000 m³/day (39.6 million US gpd). Of this, almost 40% is for seawater and the remaining 60% for high brackish and brackish water.

The total installed capacity of filtration plants is in excess of 350.000 m³/day (92.6 million US gpd).

Watera's systems are characterized by their advanced, robust and highly energy efficient design, and the incorporation of specialized state-of-the-art know-how, particularly with respect to the proprietary PLC-based automation software which allows for remote monitoring and control of all critical parameters of each water treatment system.



