Worldwide Experience
Superior Technology

About the Company
Pure Aqua is a company with a strong philosophy and drive to develop and apply solutions to the world’s water treatment challenges.

We believe that both our technology and experience will help resolve the growing shortage of clean water worldwide.

Goals and Motivations
Our goal is to provide environmentally sustainable systems and equipment that produce high quality water.

Thus, we ensure our technological contribution to water preservation by supplying the means and making it highly accessible.

Capabilities and Expertise
As an ISO 9001:2008 certified company with over a decade of experience, Pure Aqua has secured its position as a leading manufacturer of reverse osmosis systems worldwide.

We provide packaged systems and technical support for water treatment plants, industrial wastewater reuse, and brackish and seawater reverse osmosis plants.

Having strong working relationships with our suppliers gives us the capability to provide cost effective and competitive water and wastewater treatment systems for a wide range of applications.
Seawater Reverse Osmosis Systems

System Overview
Designed to convert seawater to potable water, desalination systems use high quality reverse osmosis seawater membranes. The process separates dissolved salts by only allowing pure water to pass through the membrane fabric.

Key Features
- Energy recovery units on 64,000 GPD or greater
- Non-metalic cartridge filter housing
- Duplex SS 2205, multi-stage HP pump
- Duplex SS 2205 high pressure piping
- VFD adjustable soft start
- Safety shutdown valves and switches
- Corrosion resistant instrumentation
- High rejection TFC spiral wound membranes

System Capacities
Pure Aqua desalination systems are designed to provide high through-put water with minimum power consumption. These efficient models have capacities from 380 to 500,000 GPD. Larger systems can be custom designed and manufactured.

Advanced Technologies
These systems use proven technologies resulting in reliable performance and efficient operation. Pure Aqua has many years of experience in commercial and industrial RO system engineering, and is capable of custom engineering systems to meet specialized water treatment applications.
Reverse osmosis systems are used to purify water and remove salts and other impurities from tap and brackish water. This process is capable of rejecting bacteria, sugars, proteins, particles, dyes, and other dissolved constituents.

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Experience
Pure Aqua’s extensive experience in engineering and manufacturing allows us to customize reverse osmosis systems to meet a wide range of customer requirements and specifications.

Benefits of Reverse Osmosis
Pure Aqua’s reverse osmosis systems feature high quality fabrication and components. Leveraging new and improved technologies increases efficiency and output of the systems, while reducing their environmental impact.

Global Network
Pure Aqua’s primary expertise is reverse osmosis systems. Using new technologies in computer aided design, these systems have achieved worldwide recognition for quality and reliability.
Containerized Water Treatment Systems

System Overview
Pure Aqua has the ability to engineer any of our water treatment systems in a containerized version with various configurations for most applications. Containerization of a water treatment plant includes the container and complete installation of all components.

Advanced 3D Modeling
Pure Aqua supplies a full line of standard and fully customizable containerized water treatment plants, all designed using the most advanced computer aided design software.

Standard Features
- 20 or 40 ft standard shipping container
- Centralized external connections
- Interconnecting piping and wiring
- 460V/3Ph/60Hz power supply
- Pretreatment mounting and plumbing
- Centralized control panels
- Operations and maintenance manuals
- Full 3D/2D CAD drawings
**Philosophy**  
Pure Aqua is a global leader in water treatment solutions. Our values permeate through every level of operation to ensure that we remain true to our principles.

**Experience**  
Pure Aqua has the experience and engineering expertise to design and manufacture almost any water treatment plant using the latest technologies.

**Technology**  
Using the latest technology in 3D Computer Aided Design (CAD) software allows for highly detailed and functional design. This reduces material cost and environmental impact, while maintaining quality and reliability.

Pure Aqua is actively committed to continuous improvement in every aspect of our business. As a result, we consistently meet and surpass industry standards in engineering and manufacturing with every system.

Pure Aqua understands that water treatment regulations and on time delivery are critical to the economics of a water treatment plant. Our experienced staff is capable of handling logistics and startup operations.

Our staff is capable of supplying and supporting custom water treatment systems for a wide range of applications.

Our modular and compact systems are engineered for ease of integration and delivery to many locations worldwide.
Global Network
Pure Aqua executes projects through global partners in order to utilize local resources. Utilizing global partnerships, Pure Aqua’s engineering and supply chain teams are ready to respond to any technical, mechanical or electrical needs.

Quality and Reliability
Our systems are not only cost efficient, they are also designed to last and maintain high performance and efficiency. Our global project management expertise offers customers on-time delivery and schedule certainty.

Turnkey Solutions
As one of the world’s leading water treatment engineering companies, Pure Aqua is uniquely positioned to provide customers with full-service, turnkey solutions worldwide.
System Overview
Pure Aqua’s pressure filters clarify water by removing sediment, turbidity, iron, tastes, odors, suspended particles, and unwanted color, all of which are commonly found in surface water.

Benefits of Pretreatment
Pretreating the feed water is, in most cases, required and recommended to protect RO membranes from fouling. Removing suspended solids prevents clogging in the membrane fabric.

Experience
Pure Aqua supplies many standard and custom engineered prefiltration systems using fiberglass or steel media tanks that meet a wide range of water treatment applications.
Ultrafiltration Systems

System Overview
Ultrafiltration is a pressure driven membrane separation process that removes suspended or particulate matter, including colloids and silt from water. Ultrafiltration is more reliable than conventional multimedia filtration due to its fine mesh size.

Benefits of Ultrafiltration
In addition to superior turbidity removal, ultrafiltration also efficiently removes most bacteria and viruses.

Ultrafiltration systems are a cost effective means of purifying surface water in remote locations. Pure Aqua has supplied hundreds of UF systems worldwide, some of which are solar powered, and mobile for surface water treatment.

Ultrafiltration systems can eliminate the need for clarifiers and multimedia filters. Standard design is based on a UF module with outside-in flow configuration, which allows for less plugging, higher solids loading, higher flow area and easy cleaning.

Key Features of UF
- Stainless steel backwash pump
- Electrically actuated valves
- Microprocessor control panel
- Differential pressure switch
- Liquid filled pressure gauges
- Schedule 80 PVC piping
- 150 um flushable screen
- NEMA 12 enclosure
- Motor starters
- Flow meter
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**System Process**

The membrane separation process eliminates the clarifier and allows high volumetric loading, resulting in a smaller footprint. The MBR can produce high quality effluent with high BOD5 removal (about 98%) and virtually complete TSS removal.

**System Operation**

The membrane modules are placed directly in the bioreactor. Each module configuration comprises of an element block and an aeration block.

The element block contains a number of membrane elements stacked at equal intervals, each of which have flat sheet membranes attached on both sides of a supporting panel.
Water Treatment Chemicals

Overview
We understand how critical membrane performance is to your reverse osmosis system. Pure Aqua supplies a wide range of chemicals for all stages of the water treatment process.

Membrane Fouling
The membrane separation process utilizes a high-pressure feed to force water through a semi-permeable barrier. As the water passes through the membrane, contaminants are rejected.

During normal operation, membranes can become fouled by colloidal material, inorganic oxides, biological matter, and scaling salts.

Membrane Fouling
Fouling involves the entrapment of material in the feed water that deposits on the surface of the membrane. Deposits can accrue until they cause a reduction in flow, increase in feed pressure requirements, and loss of salt rejection. Many chemicals work to combat scaling and fouling by bonding with contaminants in the water.

Chemical Products
We offer a complete line of products to extend the life of membrane elements, improve the quality of water produced, and reduce the amount of maintenance and cleaning your reverse osmosis system requires.

- Antiscalants (scale inhibitor)
- Antifoulants
- Biocides
- Coagulants
- RO powder cleaners

Chemical Dosing
Reverse osmosis chemicals prevent foulants from attaching or sticking to the surface of the membrane and precipitate from developing.

Potential contaminants are then allowed to pass through the membrane and into the drain flow without harming the membrane.
Worldwide Installations
Customized Solutions

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