

تصنيع Tasnee

شركة تصنيع لحلول المياه ش م م
Tasnee Water Solutions Company LLC



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PIONEERING
PURITY,
ENGINEERED IN
OMAN



WHO WE ARE!

Tasnee Water Solutions Company LLC, a trailblazing industrial leader based in the sultanate of Oman, specializes in cutting-edge water treatment solutions. As the first entity in the middle east to manufacture reverse osmosis (RO) membranes, we operate state-of-the-art, fully automated facility. Our innovative desalination technologies position us at the forefront of tackling the region's critical water scarcity challenges.

Founded on a strong commitment to excellence and sustainability, Tasnee metal is devoted to producing premium quality water purification membranes that provide clean, reliable, and sustainable water solutions across diverse applications. In 2018, Dr. Salim Abdulla and founders envisioned creating a "MADE IN OMAN" brand for membrane technology. Despite encountering numerous challenges during the early stages of development, their steadfast dedication and relentless efforts have propelled Tasnee to new heights. Their aspiration to contribute sustainable solutions to the middle east has been the driving force behind the company's success, positioning Oman as a leader in cutting-edge water treatment technologies.



MISSION

To provide innovative, sustainable, and high-quality water treatment solutions through the manufacturing of world-class Reverse Osmosis membranes, ensuring access to clean and reliable water for communities, industries, and ecosystems across the Middle East and beyond."

VISION

To lead the global water treatment industry with cutting-edge desalination technologies, positioning Oman as a hub for sustainable water solutions and contributing to a water-secure future for the region



CORE VALUES

Expertise:
Leverage knowledge
in semipermeable
membrane processes

Quality:
Ensure
removal of
contaminants

Customer-Centric:
Prioritize exceptional
service and support

Sustainability:
Commitment to
environmentally
responsible solutions

Innovation:
Continuously
improve and innovate
membrane technology



Product Description:

Reverse Osmosis (RO) Membrane: A Pioneering Water Purification Solution

Introducing our state-of-the-art Reverse Osmosis (RO) membrane, a revolutionary water purification system engineered to deliver pristine drinking water for residential, commercial, and industrial applications. Leveraging pioneering membrane technology, our RO membrane boasts an unparalleled contaminant removal efficiency of high purification encompassing:

What Sets Us Apart:

Exceptional Performance:

High purification, contaminant removal, durable membrane material, and compact design for versatile applications.

How it Works:

- The Reverse Osmosis membrane module facilitates a precise and efficient water purification process, wherein:
- Influx: Water enters the RO membrane module, initiating the purification sequence.
- Pressurization: Hydraulic pressure drives the water through the membrane's microscopic pores, measuring merely 0.0001 microns in diameter.
- Selective Permeation: The semi-permeable membrane allows water molecules to pass through, while rejecting impurities and contaminants due to their larger molecular size.
- Rejection and Removal: The rejected impurities are efficiently flushed away, preventing accumulation and ensuring optimal membrane performance.
- Permeate: The purified water, now free from contaminants, emerges from the membrane.

Reverse Osmosis (RO) Membrane Technology

Our cutting-edge Reverse Osmosis membranes leverage advanced Thin-Film Composite (TFC) technology, showcasing exceptional performance characteristics:

Key Features

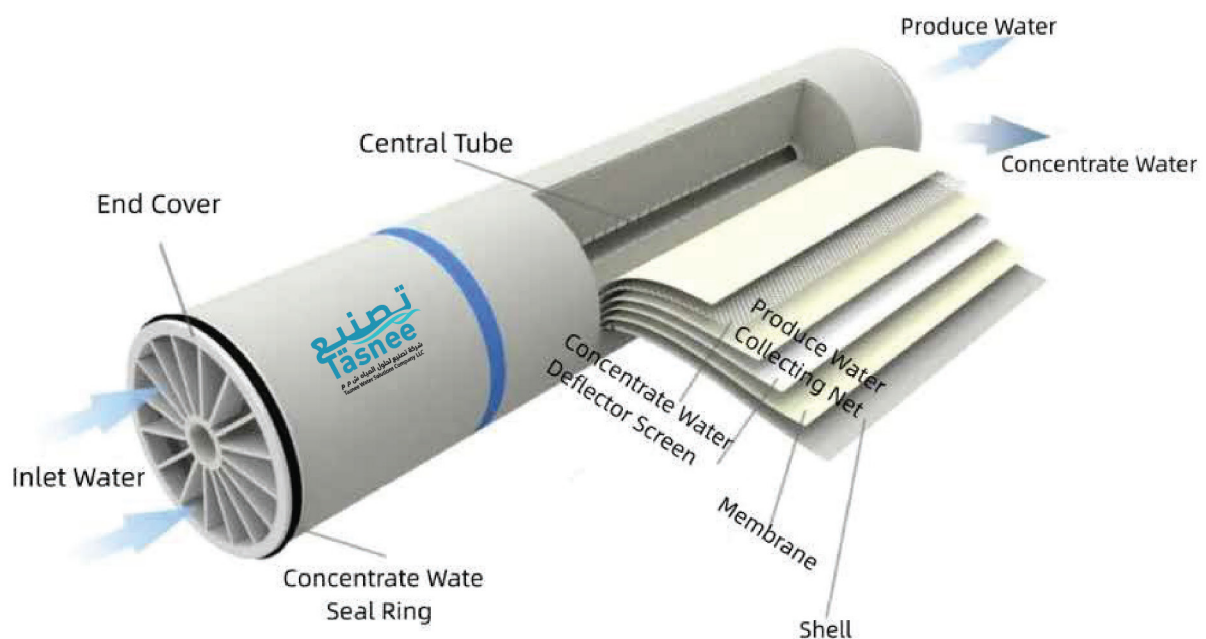
- High flux rates for enhanced water productivity
- Low energy consumption for reduced operational costs
- Impressive up to 99.7% rejection rate of dissolved solids

Membrane Architecture

- Durable polyamide thin-film layer for optimal selectivity
- Polyester support layer for added strength and stability
- Antifouling surface treatment for minimized membrane fouling

Proprietary Technologies

- Enhanced Flux Technology (EFT): Boosts membrane productivity
- Low-Energy Consumption (LEC) design: Minimizes energy requirements
- Advanced Membrane Rejuvenation (AMR): Extends membrane lifespan



Applications and **Commercial Use**

Our Reverse Osmosis (RO) membranes are ideal for various commercial settings, providing a reliable and efficient water purification solution:

Institution and Apartment

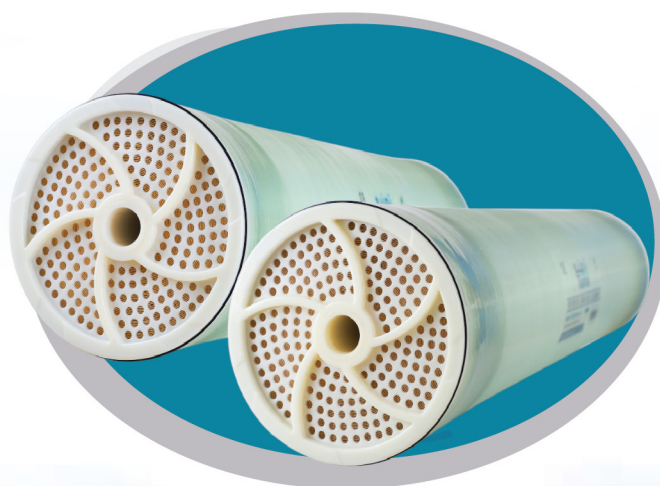
- Ensures clean drinking water for customers
- Reduces contaminants affecting food and beverage quality
- Increases equipment lifespan (e.g., coffee machines, ice makers)
- Supports health and hygiene standards

Hotels and Hospitality:

- Provides clean drinking water for guests and staff
- Enhances guest experience and satisfaction
- Reduces maintenance and replacement costs for equipment
- Supports health and hygiene standards

Offices and Buildings:

- Offers clean drinking water for employees
- Increases productivity and well-being
- Reduces absenteeism due to waterborne illnesses
- Supports health and hygiene standards



Applications and Industrial Use

Our Reverse Osmosis (RO) membranes play a crucial role in various large-scale industrial processes:

Desalination

- Efficient seawater desalination for municipalities and industries, with high salt rejection and reduced energy consumption.

Oil and Gas

- Process water treatment for oil and gas production, removing contaminants and protecting equipment from corrosion.

Municipal Water

- Potable water production for cities and communities, ensuring compliance with drinking water regulations and minimizing energy costs.

Pharmaceuticals

- Purified water production for manufacturing and research, meeting regulatory requirements (USP, EP, JP) and reducing contamination risk.



Efficiency: Unparalleled Water Quality

- High rejection rate: up to 99.7% removal of dissolved solids, bacteria, viruses, and other impurities
- Improved water quality: meets or exceeds international standards
- Advanced membrane technology: optimized for efficient water purification
- Consistent performance: reliable and stable water quality

Longevity: Durable and Resilient

- Long lifespan: up to 3-5 years (depending on operating conditions)
- Durability: resistant to extreme water
- conditions (temperature, pH, pressure)
- Tested in all extreme site conditions: proven performance in harsh environments
- Low maintenance: easy to clean and maintain, reducing replacement costs

Membrane variants to suit requirements

- High rejection model: optimized for high-contaminant water sources
- High flow model: designed for large-scale water purification needs
- Seawater membranes: specialized for desalination applications
- Brackish water membranes: suitable for treating brackish water sources
- Customizable models: tailored to specific customer requirements

Customer Requirement: Tailored Solutions

- Feed water-specific designs: tailored to your unique water source
- Flexible membrane configurations: optimized for your specific application
- Bespoke solutions: leveraging our in-house production line for customized products
- Material selection: choice of materials to suit your requirements







Household Sewage Treatment Plant (Customized STP unit for Oman & GCC)

TASNEE SPECIALISES IN

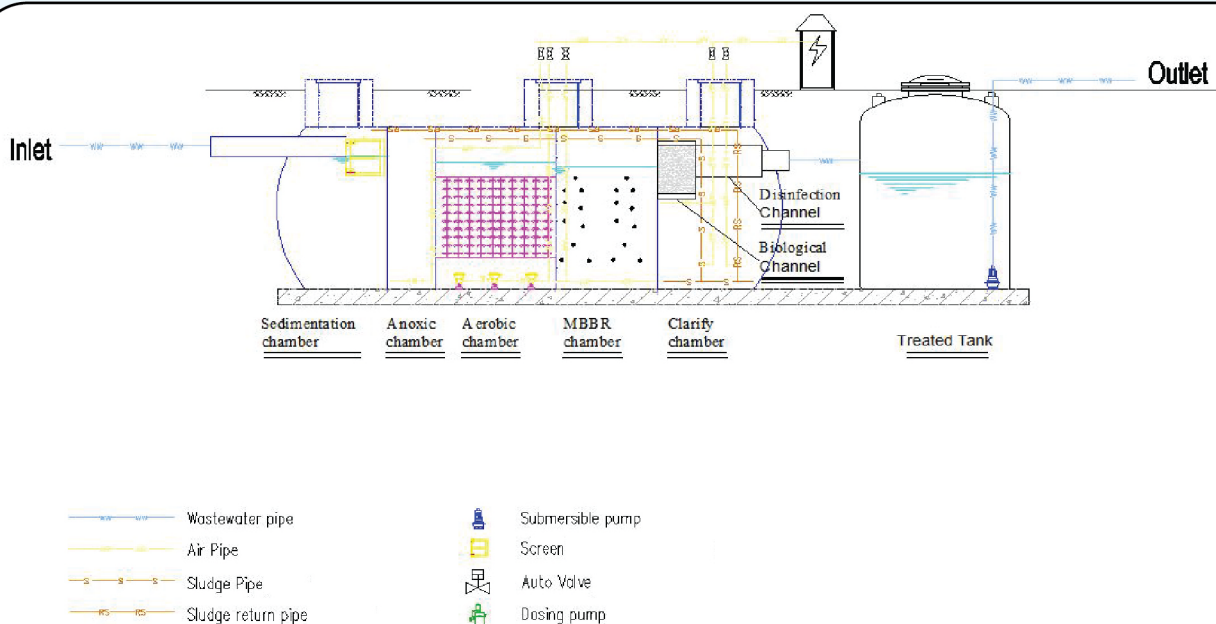


Processing capacity : SMC 2m³/d, SMC 3m³/d
: FRP 3m³/d

Specializes in decentralized sewage treatment technologies Offering solutions as single house sewage treatment plant (STP)

Effluent Quality

NO	Parameter	Outlet	Unit
1	COD	<150	mg/L
2	BOD5	<15	mg/L
3	NH3-N	<5	mg/L
4	SS	<15	mg/L
5	PH	6-9	
6	Faecal Coliform Bacteria (per 100 ml)	<200	MPN/100ml
7	Viable Nematode Ova	<1	MPN/1



Features and Benefits of Domestic Wastewater Treatment Unit

- High energy efficiency with very low noise levels during operation.
- Odor-free design thanks to an integrated and sealed treatment system.
- Easy to operate and maintain without the need for advanced technical skills.
- Quick and simple installation suitable for various residential locations.
- Treated water can be reused for irrigation and agriculture, supporting sustainability.
- Fully automatic operation with no need for a dedicated operator.
- Environmentally friendly, helping reduce the ecological impact of wastewater.
- Compact design that saves space and allows installation in tight areas.
- Free from harmful emissions or toxic gases during operation.
- Long service life due to the use of high-quality, corrosion-resistant materials.
- Can be integrated with smart home systems for remote monitoring and control.
- Low operating costs compared to traditional systems.
- Reduces dependence on public sewage networks, ideal for remote or rural areas.
- Improves groundwater quality by reducing contaminated water discharge.
- Contributes to achieving national sustainability goals and lowering environmental footprint.
- Reduces the cost of wastewater disposal through reuse.
- Modular and scalable system allowing for easy expansion when needed.
- Can be used during emergencies or natural disasters as a reliable water treatment source.
- Increases property value by incorporating advanced, independent treatment systems.
- Aesthetic and enclosed design that does not affect the visual appearance of the site.
- High safety levels against contamination or leakage due to advanced sealing systems.
- Helps reduce carbon emissions compared to transporting wastewater to distant plants.



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For more information about Tasnee Water Solutions Company LLC
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