

Water Desalination Equipment Market to Reach \$32.3B by 2035, Growing at 8.6% CAGR | Transparency Market Research

Water desalination equipment, including RO, MSF and ED technologies, play a vital role in addressing water scarcity by converting saline water into freshwater.

WILMINGTON, DE, UNITED STATES, September 11, 2025 / EINPresswire.com/ -- The global water desalination equipment market is poised for significant growth in the coming years. Valued at USD 13.0 billion in 2024, the market is projected to expand at a Compound Annual Growth Rate (CAGR) of 8.6%, reaching an estimated USD 32.3 billion by the



end of 2035. This growth is primarily driven by the increasing global water scarcity, technological advancements, and a growing demand for reliable and sustainable freshwater sources.

Market Overview: Water desalination equipment refers to the systems that convert saline or



Reverse Osmosis (RO) technology leads the market, offering energyefficient solutions for both municipal and industrial water needs."

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brackish water into potable freshwater, addressing the critical issue of water scarcity in arid and semi-arid regions. Desalination plays an essential role in supplementing freshwater supplies for municipal, industrial, and agricultural needs, particularly in regions with limited access to natural freshwater sources. Reverse Osmosis (RO) is the dominant technology in the market due to its energy efficiency and scalability, making it the preferred choice for large-scale desalination plants worldwide. The market is segmented by technology, source of water, and application. The technologies used in desalination

equipment range from Reverse Osmosis (RO) to Multi-Stage Flash (MSF) and Multi-Effect Distillation (MED). The primary sources of water for desalination are seawater, brackish water,

and river water. The applications for desalinated water span municipal, industrial, and agricultural uses, with each sector benefiting from advances in desalination technology.

Key Drivers of Market Growth

Several factors are driving the demand for water desalination equipment, which include:

- 1. Escalating Global Water Scarcity: The global water crisis is intensifying, with over 2.3 billion people living in water-scarce regions. By 2030, global water demand is expected to surpass supply by 40%, underscoring the need for alternative water sources like desalination.
- 2. Rising Demand for Freshwater: Population growth, urbanization, and industrialization have led to a significant increase in demand for clean freshwater. Desalination offers a viable solution, particularly in regions that lack access to natural freshwater bodies.
- 3. Technological Advancements: Innovations in desalination technology, including energy recovery devices, next-generation membranes, and hybrid systems, are making desalination processes more efficient, cost-effective, and environmentally friendly.
- 4. Expanding Industrial and Municipal Applications: Desalination is increasingly used in industries such as oil & gas, power generation, and municipal water supply. As industries expand, the need for sustainable water solutions grows, making desalination equipment indispensable.

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Key Players and Industry Leaders

- Alfa Laval
- · Aquatech International
- Danfoss
- Doosan Enerbility
- Guangzhou KangYang Seawater Desalination Equipment Co., Ltd.
- IDE Technologies
- LG Chem
- Suez Water Technologies & Solutions
- Toray Industries, Inc.
- Veolia Water Technologies
- Wärtsilä
- Xylem
- Other Leading Companies

Recent Developments

The desalination market is witnessing several key developments:

1. Aquatech's Seawater RO Plant: In 2025, Aquatech will begin construction on a large-scale

seawater reverse osmosis (RO) plant in Corpus Christi, Texas. This facility, with a capacity of 30 million gallons per day (113 MLD), will be the largest of its kind in the Americas. The plant will utilize advanced electrochemical methods to reduce energy consumption and biofouling.

2. Veolia's RO Plant in Abu Dhabi: In 2023, Veolia secured a USD 280 million contract to design and build the Mirfa 2 reverse osmosis desalination plant in Abu Dhabi. With a capacity of 550,000 cubic meters per day, the plant will serve up to 210,000 households and will feature energy-efficient technologies that aim to reduce energy usage by up to 80%.

New Opportunities and Challenges

While the water desalination market offers substantial growth opportunities, it is not without its challenges:

Opportunities:

- 1. Increasing Investments in Water Infrastructure: Governments and industries are investing heavily in desalination projects to secure a reliable freshwater supply, particularly in regions facing severe water shortages.
- 2. Rising Demand for Agricultural Water: Countries like India and Australia are increasingly investing in desalination technologies to ensure a stable water supply for agricultural use, which represents a growing market for desalination equipment.
- 3. Energy Efficiency Innovations: The continued development of energy recovery technologies and next-generation membranes presents an opportunity to lower operational costs and make desalination more sustainable.

Challenges:

- 1. High Energy Consumption: Desalination processes, particularly reverse osmosis, require significant energy input, which can make them costly. Developing energy-efficient technologies is crucial to overcoming this challenge.
- 2. Environmental Concerns: The brine by-product of desalination can negatively impact marine ecosystems if not properly managed. Addressing these environmental concerns is vital for the long-term sustainability of desalination technologies.
- 3. Capital Investment: Desalination plants require significant upfront capital investment, which can be a barrier for some regions and industries.

Latest Market Trends

Several trends are shaping the future of the water desalination equipment market:

- 1. Hybrid Desalination Systems: The integration of reverse osmosis with thermal desalination techniques is becoming increasingly popular. Hybrid systems offer greater flexibility, improved energy recovery, and more efficient freshwater production.
- 2. Membrane Advancements: The development of advanced membranes with higher permeability and lower fouling potential is driving improvements in desalination efficiency.
- 3. Sustainability Focus: As environmental concerns grow, there is an increasing focus on making desalination processes more sustainable through energy recovery, <u>renewable energy</u> integration, and brine disposal solutions.

Future Outlook

The future outlook for the water desalination equipment market is promising, with a steady CAGR of 8.6% anticipated from 2025 to 2035. As global water demand continues to rise and climate change exacerbates water scarcity, desalination will play an increasingly critical role in ensuring long-term water security. Technological innovations will continue to reduce costs, improve efficiency, and make desalination more accessible to regions that need it the most.

Market Segmentation

The water desalination equipment market can be segmented by technology, water source, and application:

- 1. By Technology:
- o Reverse Osmosis (RO)
- o Multi-Stage Flash (MSF)
- o Multi-Effect Distillation (MED)
- o Mechanical Vapor Compression (MVC)
- o Electrodialysis
- o Nanofiltration
- 2. By Source:
- o Seawater
- o Brackish Water
- o River Water
- 3. By Application:
- o Municipal
- o Industrial
- o Agricultural

Regional Insights

The Middle East & Africa (MEA) region dominates the global desalination market, accounting for nearly 50% of the global share. Countries like Saudi Arabia, the UAE, and Kuwait rely heavily on desalination for their municipal water supply. The Asia Pacific (APAC) region, with its rapidly growing coastal populations and industrial development, is the second-largest contributor to the market. North America and Europe are also seeing increasing investments in desalination infrastructure, driven by regions such as California, Texas, and Spain.

Why Buy This Report?

This report provides valuable insights into the water desalination equipment market, covering

key drivers, market trends, and opportunities. It offers an in-depth analysis of market segmentation, regional trends, and the competitive landscape, helping stakeholders make informed decisions. With detailed information on key players, industry developments, and future projections, this report is an essential resource for businesses, investors, and policymakers in the water desalination sector.

By purchasing this report, you will gain access to:

- Comprehensive market data and forecasts
- Insights into the latest technological advancements
- Detailed profiles of key players and their strategies
- A clear understanding of regional market dynamics
- Key trends and challenges shaping the future of desalination

The water desalination equipment market is poised for substantial growth, driven by technological innovation, increasing demand for freshwater, and a global push for sustainable water solutions.

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