Reverse Osmosis

Series 800

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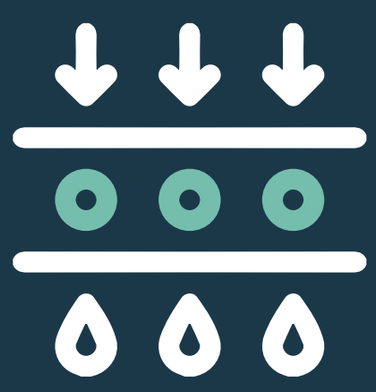
Reverse Osmosis

Reverse Osmosis is a **highly effective water purification process to reject minerals and ions dissolved in water.** This process, which is used in a variety of applications, is based on the principle of membrane separation, where a semipermeable membrane acts as a barrier to retain dissolved impurities and allows purified water to pass through.



The Reverse Osmosis process consists of pumping water at high pressure through a semipermeable membrane, which allows the passage of water and rejects macromolecules and ionized dissolved species (mineral salts).

- **Industrial Water Treatment – Reuse**
- **Municipal Water**
- **Wastewater Treatment – Demineralization – Desalination**

The Reverse Osmosis system offers high efficiency in removing a wide variety of contaminants from water, including dissolved solids, organic compounds, heavy metals, chemicals and other unwanted species.

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Advantages of Reverse Osmosis

Process Water Purification:

High effectiveness in removing impurities, chemicals and contaminants from water, making it an ideal choice for process water purification in various industrial applications.

Water reuse and savings:

Can be used to treat and recycle this wastewater, allowing its reuse in industrial processes, which helps alleviate concerns associated with the acquisition of fresh water and wastewater treatment.

Contaminant removal:

Can be adapted to address specific contaminants through proper membrane selection and system design. This provides flexibility and efficiency in removing specific contaminants to meet industry standards and requirements.

Applications

- **Beverage water treatment**
- **Water reuse**
- **Seawater desalination**
- **Production of demineralized water for industrial processes**
- **Purification of treated • wastewater**
- **Municipal drinking water**
- **Fluoride and arsenic removal**

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Reverse Osmosis Series 800

Developed specifically for flow rates above 20 gallons per minute, the UTK-800 Series stands out as a line of reverse osmosis equipment that guarantees robustness and optimization in each operation. **The 800 Series offers designs with the latest energy-saving membrane technology, providing exceptional performance in removing dissolved salts, particles, organic compounds, minerals, solids and other impurities from water.**

This system can be equipped with media **pre-filters, chemical dosing systems (pre-chlorination, anti-scaling, dechlorination, post-chlorination and post-pH)** and are mounted on a self-supporting structure constructed of stainless steel.

Our standard Reverse Osmosis systems are carefully designed to **facilitate after-sales support efficiently,** in addition, each equipment can be integrated with other standard solutions (depth filters, activated carbon filters, dosing systems) according to the need of each application.

Special Applications

- **Boron rejection >95%**
- **Removal of bromides as a precursor to bromates in bottled water**
- **Recovery of RO concentrate with high TDS content**
- **Wastewater reuse**
- **CIP Waste Recovery**

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Highlights:

Treatment capacity:

Offers the ability to produce large volumes of purified water per day.

Robust and durable design:

High quality materials and strength to ensure long service life and reliable performance, even in demanding industrial environments.

State-of-the-art technology:

Incorporate latest generation energy-saving membranes, ensuring efficient operation and reduced consumption.

Easy installation and maintenance:

Designed for user comfort, offer simple installation and easy maintenance, optimizing plant efficiency.

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INTEGRATED WATER TREATMENT AND MONITORING

Control and monitoring:

TAMI system to remotely connect and monitor equipment to ensure its best operation and manage efficient predictive and preventive maintenance remotely.

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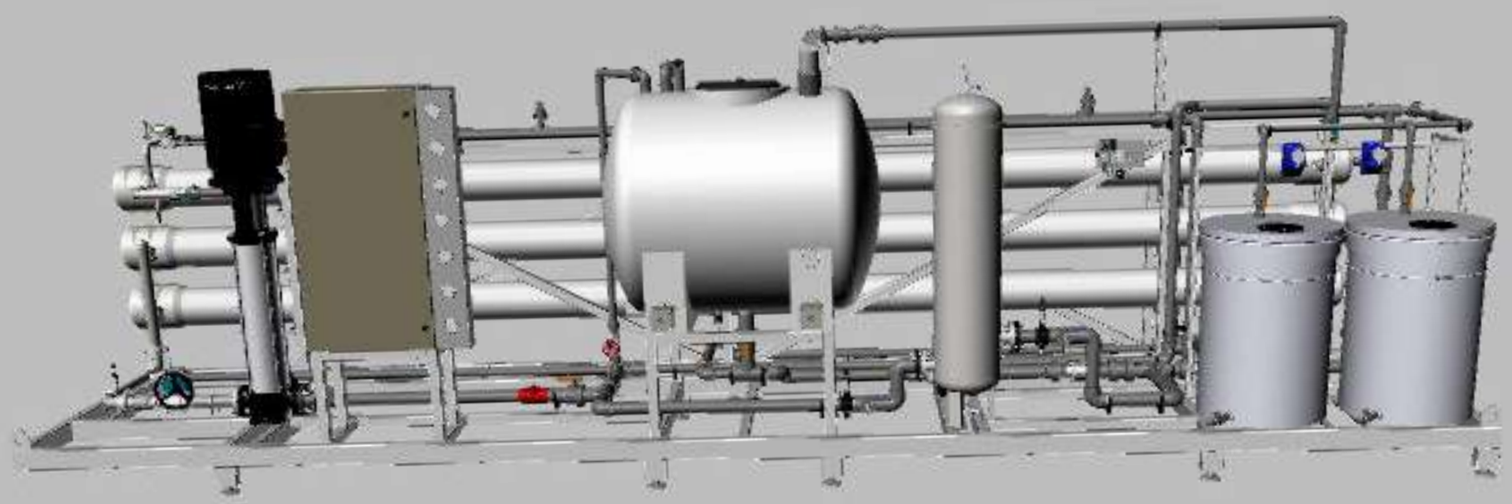

Technical Characteristics of the Equipment

- Selection of membrane type for each application
- Cartridge filtration
- Integrated PLC based control system
- High pressure pipes in stainless steel
- Antifouling and dispersant chemical feed
- In-line digital conductivity meter with temperature compensation
- Fast Flush Quick Cleaning System
- Low pressure switch
- Self-supporting structure constructed of stainless steel
- Individual housing check valves in permeate to prevent siphoning
- Individual membrane housing sampling

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Optional for some Specific Processes

- Automatic pH control
- Premium instrumentation
- Sanitary construction
- Membranes for hot water sanitization
- Online SDI Meter
- Built-in Clean in Place (CIP) unit
- Built-in ultraviolet (UV) radiation equipment
- High Pressure Pump in 316SS

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Clean in Place Unit (CIP)

The incorporation of a fully integrated CIP unit represents an advantage over other options on the market, since it is not necessary to use an external cleaning system with hoses for routine cleaning.

Permeate Flush

Highly recommended to avoid premature deterioration of membranes during periods of inactivity, even more so in drinking water applications, cosmetics or pharmaceutical industries, where the addition of biocides in line is not allowed.

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Key CIP Advantages

Minimizes system downtime.

Allows cleaning of each stage independently.

Built into the system so that the use of external hoses and pumping is not necessary.

Fully automatic and ready for chemical washing.

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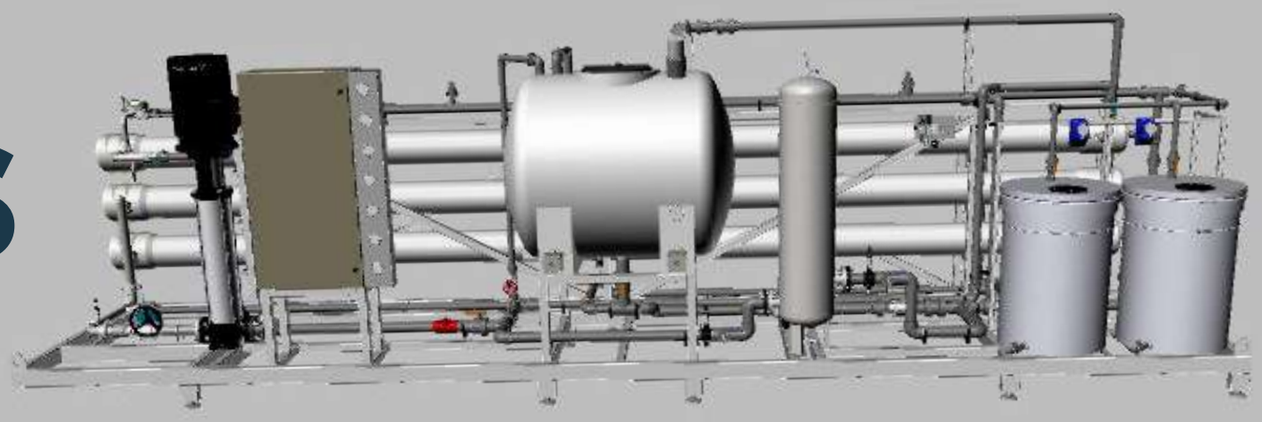

Model	Arran-gement	Number of Membrane (8*)	Production				Recovery	Dimensions (inches)	Weight (lbs)	Power (hp)
			GPD		GPM			L x W x H		
			Min.	Max.	Min.	Max.				
UTK-805	1x5	5	22,000	41,000	15	28	55%	145x31.5x67	1742	10
UTK-810	1x5 1x5	10	44,000	82,000	30	56	72%	145x31.5x67	2204	20
UTK-815	2x5 1x5	15	67,000	127,000	46	88	79%	224.5x35.5x67	2,976	20
UTK-818	2x6 1x6	18	76,000	149,000	52	103	84%	264x35.5x67	3,417	25
UTK-824	3x6 1x6	24	101,000	200,000	70	138	77%	264x43x71	4,189	40
UTK-830	3x6 2x6	30	133,000	254,000	92	176	81%	264x43x71	4,740	40
UTK-836	4x6 2x6	36	152,000	298,000	105	206	84%	264x43x71	5,071	50
UTK-842	5x6 2x6	42	178,000	349,000	123	242	80%	264x43x71	5,512	60
UTK-848	5x6 3x6	48	203,000	399,000	140	277	82%	264x43x71	6,063	60
UTK-854	6x6 3x6	54	228,000	447,000	158	310	82%	264x43x71	7,055	80
UTK-860	7x6 3x6	60	254,000	498,000	176	345	82%	264x43x71	8,047	80
UTK-866	8x6 3x6	66	279,000	545,000	193	378	82%	264x90.5x71	9,370	80
UTK-872	8x6 4x6	72	304,000	596,000	211	413	82%	264x90.5x71	9,590	100
UTK-878	9x6 4x6	78	330,000	647,000	229	449	85%	264x90.5x71	9,921	100
UTK-884	10x6 4x6	84	355,000	697,000	246	484	85%	264x90.5x71	11,023	120
UTK-890	10x6 5x6	90	380,000	748,000	263	519	85%	264x90.5x71	12,125	120

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Value from Water

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