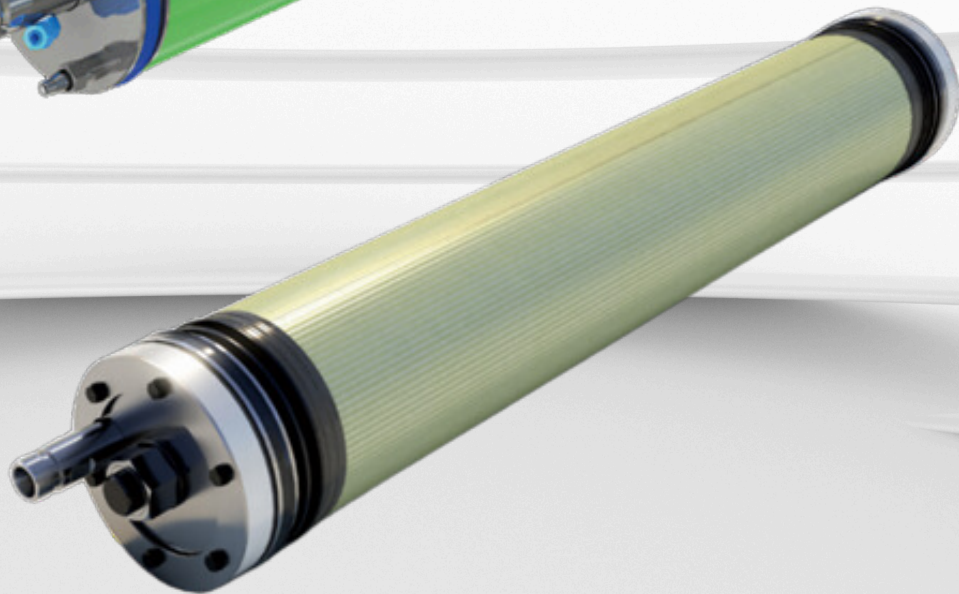
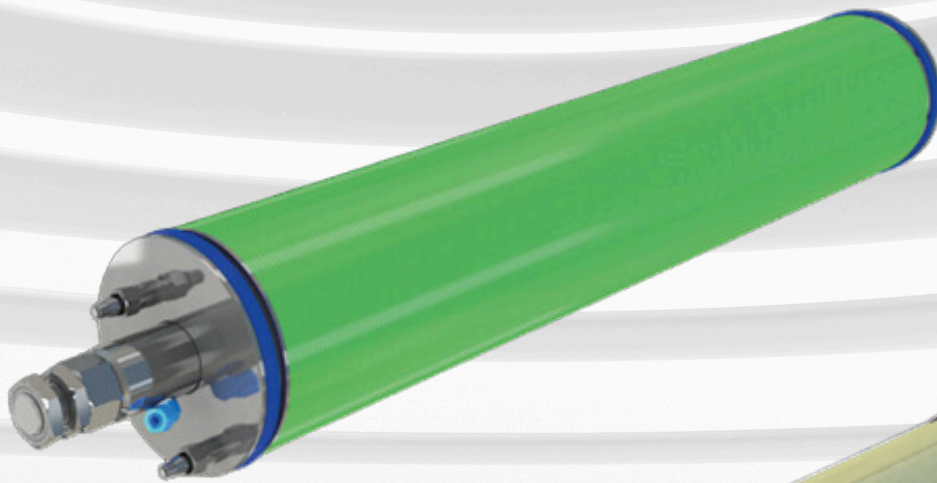




SRP ULRTA HIGH PRESSURE

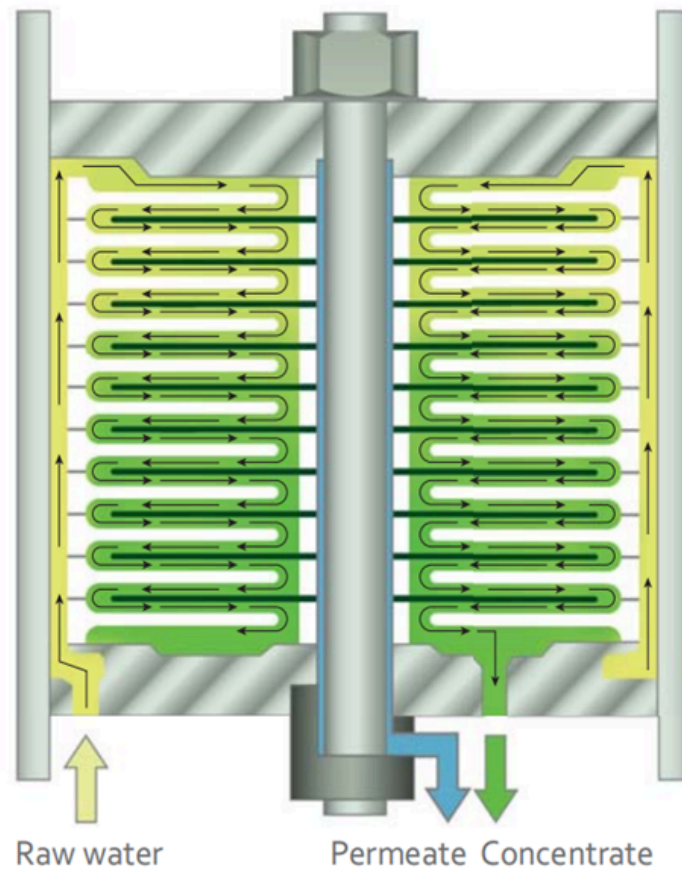
DTRO Disc Type Reverse Osmosis Membranes

STRO Spiral Type Reverse Osmosis Membranes



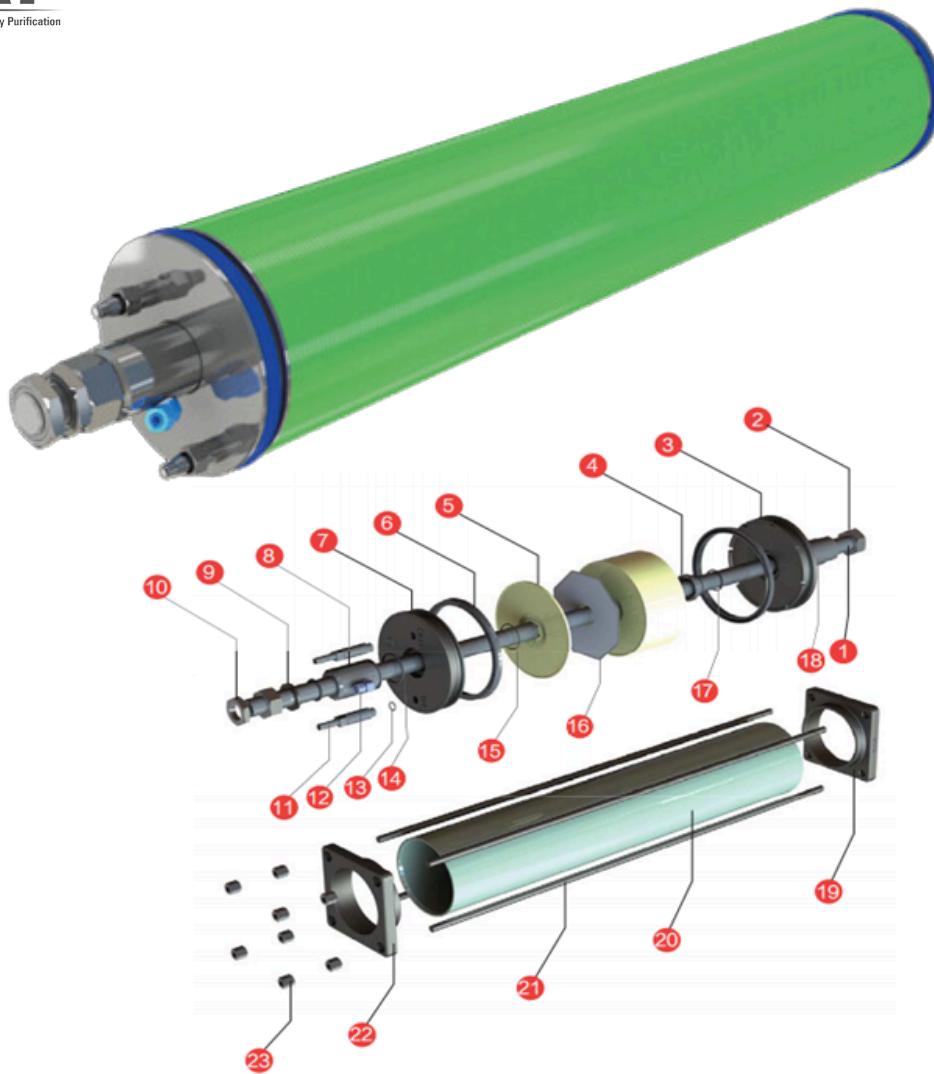
DTRO Disc Type Reverse Osmosis Membranes

SRP DTRO (Disc Type Reverse Osmosis) membrane represents a significant advancement in wastewater treatment technology. Designed to tackle the most challenging industrial effluents and landfill leachate, the DTRO membrane stands out for its robust structural integrity and exceptional performance in Zero Liquid Discharge (ZLD) systems.

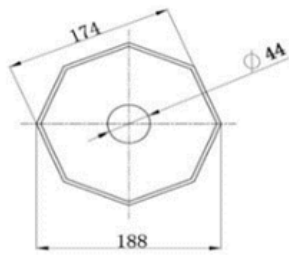


MODULE DETAIL

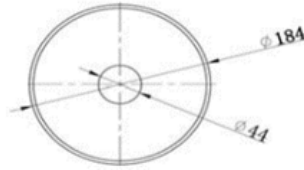
Type	Membrane Area (m ²)	Flux (L/h)	Max. Operating Pressure (bar)	Rejection (%)	Wet Weight (Kg)
SRP DT90	9.4	250	90	99	70
SRP DT120	9.4	200	120	98	100
SRP DT160	9.4	200	160	98	100



ITEM INDICATOR	ITEM NAME	ITEM INDICATOR	ITEM NAME
1	Tie rod	13	O-ring 14-2
2	Thick nut	14	O-ring 52-4
3	Top flange	15	O-ring 48-2
4	Distance fitting	16	Membrane cushion
5	Hydraulic disc	17	O-ring 39-3
6	Lipseal	18	Screwing tie rod
7	End flange	19	Reinforced top flange
8	Screwing tie rod	20	Membrane vessel
9	Tie rod gasket	21	Reinforced rod
10	Thin nut	22	Reinforced end flange
11	Inlet/Outlet connection	23	Reinforced nut
12	Permeate connector		



Octagonal



Round

Technology Configuration

The DTRO membrane utilizes a unique disc tube configuration, which sets it apart from conventional spiral-wound membranes. This design involves a series of membrane discs and spacers stacked together within a pressure vessel.

The disc tube configuration offers several key advantages:

- **Enhanced Flow Dynamics:** The open-channel design between the discs facilitates a high-turbulence flow regime, minimizing fouling and scaling. This ensures consistent performance even with high-solids wastewater.
- **High-Pressure Tolerance:** The DTRO membrane operates effectively at high pressures, making it ideal for treating highly polluted effluents. Its ability to withstand up to 160 bar pressures ensures maximum water recovery and concentrate reduction.
- **Modular Design:** The modular nature of the DTRO system allows for easy scalability and maintenance. Each module can be independently serviced, reducing downtime and operational costs.

OPERATING CONDITIONS

pH Range	3-12 (Operating) 2-12 (CIP)
Max Temperature	5~35 °C

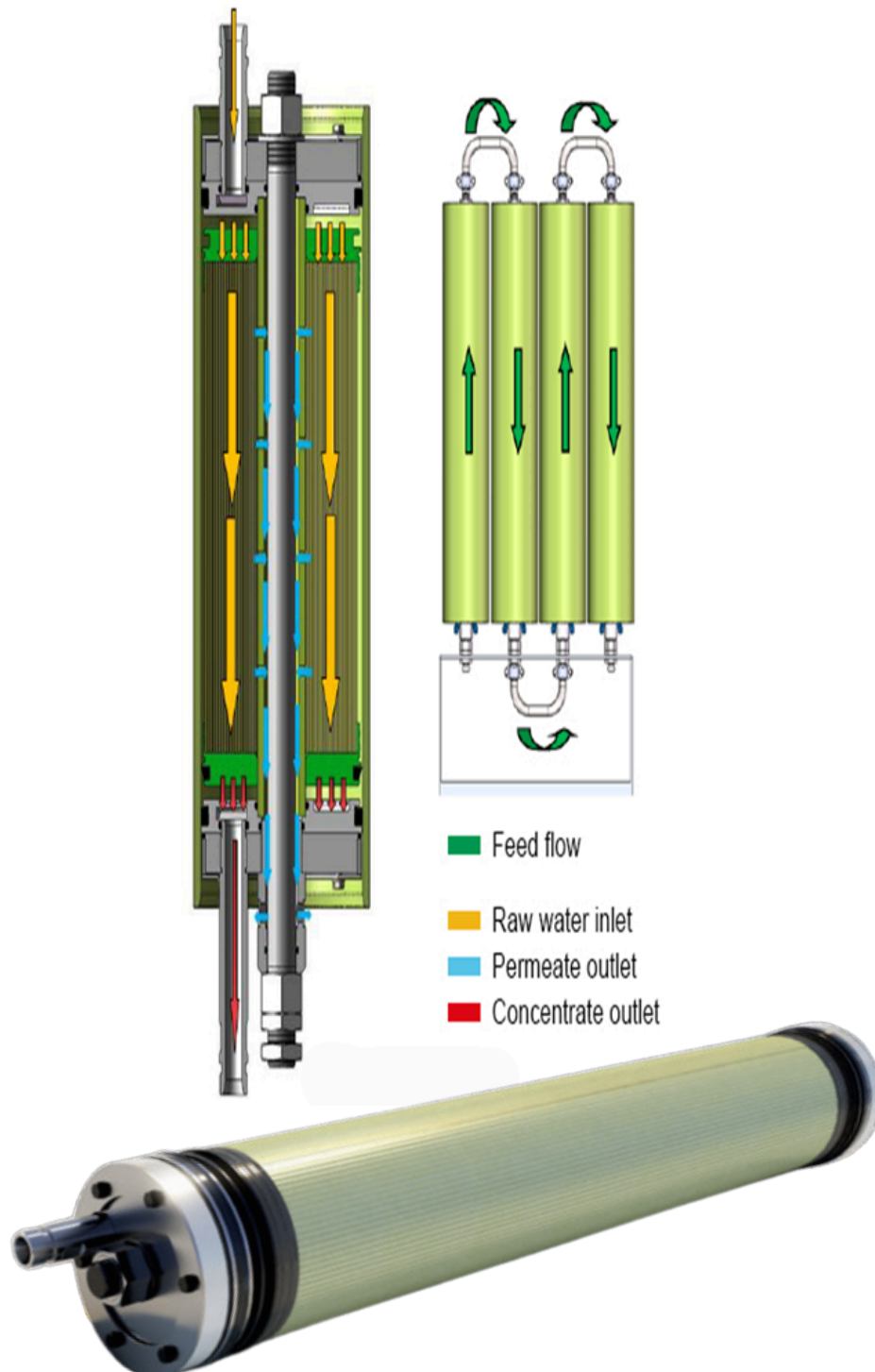
Uniqueness of Structural Integrity

The structural integrity of the DTRO membrane is a defining feature that contributes to its reliability and longevity in harsh treatment environments. Key aspects of its structural design include:

- **Robust Materials:** The DTRO membrane is constructed from high-quality materials that resist chemical degradation and mechanical stress. This durability ensures a prolonged operational lifespan, even under extreme conditions.
- **Pressure-Resistant Components:** The membrane discs and spacers are engineered to endure high-pressure operations without deformation or failure. This resilience is critical for maintaining consistent performance and preventing membrane rupture.
- **Optimized Sealing Mechanisms:** The DTRO system incorporates advanced sealing technologies that prevent leakage and ensure tight connections between modules. This precision engineering enhances the overall efficiency and safety of the treatment process.

STRO Spiral Type Reverse Osmosis Membranes

SRP STRO (Spiral Type Reverse Osmosis) Membrane is an advanced filtration technology designed for the efficient treatment of leachate and high-salt wastewater. Utilizing a specialized spiral wound structure and industrial anti-fouling RO/NF membranes, it ensures stable, long-term operation even under challenging conditions where conventional membranes fail.



MODULE DETAIL

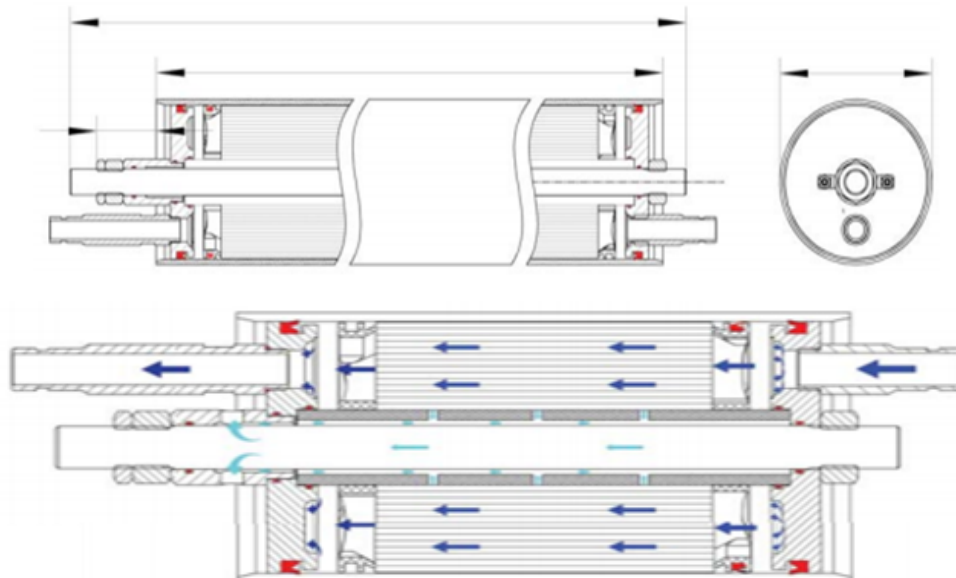
Type	Membrane Area (m ²)	Flux (L/h)	Max. Operating Pressure (bar)	Rejection (%)	Wet Weight (Kg)
SRP ST90-25	25	500	90	98.5	60
SRP ST90-30	30	600	90	98.5	70
SRP ST90-30	30	500	120	98.5	100

STRO ELEMENT

Element Model	Membrane Area (m ²)	Permeate Flow Rate (L/h)	Max. Operating Pressure (bar)	Minimum Rejection (%)	Feed Spacer Thickness (mil parallel)	Membrane
SRP ST-2235	25	500	90	98.5	31	ST-22
SRP ST-1335	25	625	90	99	31	ST-13
SRP ST-2240	30	600	120	98.5	31	ST-22
SRP ST-1340	30	750	90	99	31	ST-13

OPERATING CONDITIONS

pH Range	3-12 (Operating) 2-12 (CIP)
Max Temperature	5~35 °C



Technology Configuration

The STRO Membrane technology incorporates a robust and innovative design to address specific industrial filtration needs:

Spiral Wound Membrane Structure: Ensures optimal performance and high efficiency in filtration processes.

Industrial Anti-Fouling Membranes: Reduces fouling and extends the service life of the membranes.

Special Grid Channel Design: Facilitates long-term stable operation by maintaining consistent flow dynamics.

Modular Components: Includes elements such as RO/NF membranes, connection and end flanges, pipelines, tie-rod, and pressure vessel.

Efficient Flow Distribution: Wastewater is evenly distributed and processed to enhance water recovery and minimize energy consumption.

Uniqueness of Structural Integrity

The STRO Membrane stands out due to its superior structural integrity, designed to meet the demanding conditions of modern wastewater treatment:

Enhanced Durability: Built to withstand higher pressures and lower feed water quality.

Longer Cleaning Cycles: Designed for prolonged cleaning cycles, reducing maintenance frequency.

High Concentration Ratio: Capable of operating efficiently at higher concentration ratios.

Custom Grid Channel: Unique design ensures even flow distribution and reduces the risk of clogging.

Series Connection: Membrane modules can be connected in series, enhancing recovery rates and reducing operational costs.

Applications

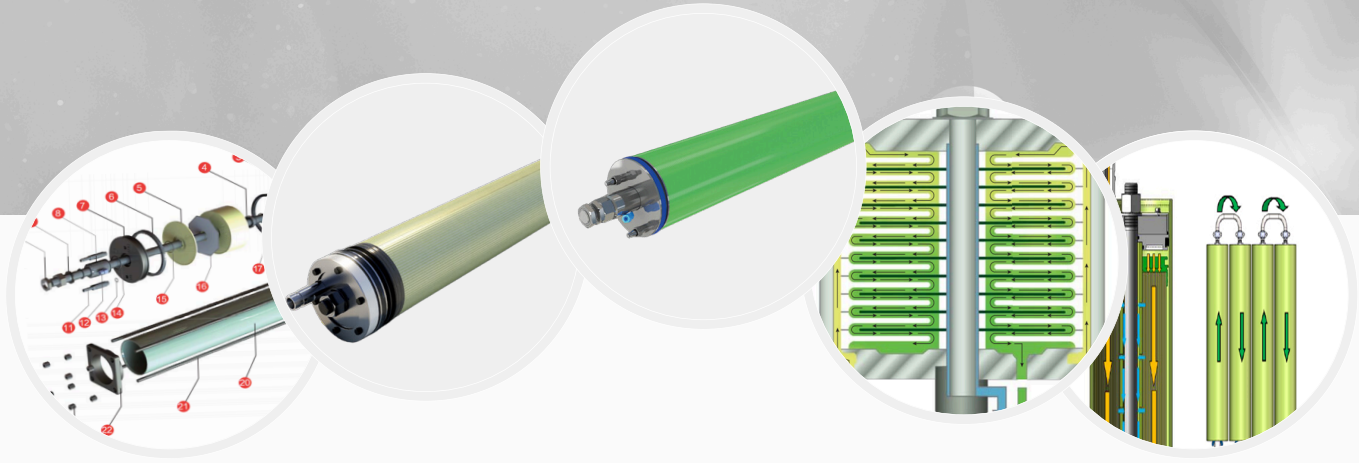
- High COD/BOD wastewater treatment.
- Treatment & re-use of Leachate from landfills.
- ZLD application of Desulfurization wastewater & Industrial wastewater.
- Reject treatment from Spiral RO plants and increase efficiency of evaporator.
- Effluent treatment from the Textile Industry and dyeing unit, Coal chemical wastewater.

Advantages

- Outstanding anti-fouling properties, optimized packing density, and no dead zones.
- High turbulences of the feed stream Reduced risks of clogging or crystallization.
- Evenly distributed and self-cleaning hydraulic circulation.
- Simply pre-treatment, the feed SDI can be up to 15.
- Different pressure levels available, up to 160 bar.
- Withstand up to 160 bar pressures ensures maximum water recovery and concentrate reduction

Disclaimer

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