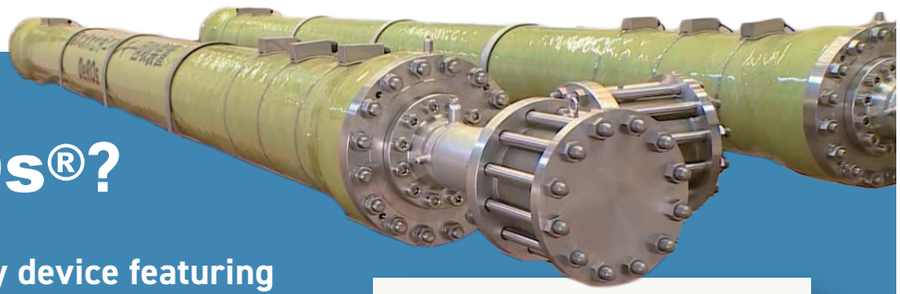
DMW CORPORATION

DeROs®

Energy Recovery Device for Reverse Osmosis Desalination Plants



What is DeROs®?

Japan's first energy recovery device featuring adjustable, wide-range freshwater supply.

DeROs® is an environmentally friendly isobaric, multi-cylinder type energy recovery device for SWRO plants featuring high efficiency, low pulsation, low noise, extremely low mixing/overflush rate, with wide and variable flow range capable of adjusting to freshwater demand.

- ***High efficiency***
- ***Low pulsation***
- ***Low noise***
- ***Extremely low mixing***
- ***Extremely low overflush***
- ***Wide and variable flow range***

The DeROs® Advantage

- ***50% reduction*** in power consumption by capturing the energy in high-pressure brine
- ***Industry-leading, wide-range*** adjustable freshwater output
- ***Virtually eliminates water production interruptions***
  DeROs® can connect to multiple units allowing for membrane maintenance with only minimal adjustment.

DeROs® at a glance

Efficiency
99.8%*

Overflush
Less than 1%

Mixing
Less than 1%

Noise
75 dB (A)

* Capacity : 2,000m³/day, Pressure 8MPa

DMW Package Solution

Our equipment package of high-pressure pumps, booster pumps and **DeROs®** Energy Recovery Devices allows for precise control of freshwater supply with maximum performance.

SUSTAINABLE DEVELOPMENT GOALS

Committed to United Nations Sustainable Development Goals
We are proudly committed to the advancement of the United Nations Sustainable Development Goals.
The following four SDGs closely align with our vision of how **DeROs®** can be a part of that commitment.

With our mission to innovate and develop technology to improve efficiency and reduce environmental impact, **DeROs®** is helping to move both DMW and our valued customers toward a more sustainable future.

How DeROs® Works

Through the use of multiple cylinders arranged in parallel, low-pressure seawater and high-pressure brine are alternately fed into the system. As high-pressure brine is discharged from the RO membrane unit, it pressurizes low-pressure seawater inside the device while simultaneously receiving seawater and draining low-pressure brine after energy recovery.

This fluid-to-fluid energy transfer mechanism is what enables **DeROs®** to achieve its industry-leading energy recovery efficiency as high as 98%.

Isobaric Multi-Cylinder Type ERD

With the **DeROs®** isobaric, multi-cylinder type design, the amount of freshwater produced can be controlled by modifying the speed of the pistons. As the flow rate of the high-pressure pump is adjusted, the piston speed automatically adjusts to allow for a wide range of flow rates.

Virtually eliminates cleaning downtime

Utilizing the **DeROs®** adjustable flow rate, water production can be maintained even while selected RO units are undergoing cleaning.

DeROs® Media

DeROs® was featured on a documentary TV program showcasing state-of-the-art science and technology in Japan. Watch to learn more.
URL : https://www.dmw.co.jp/news/data/en_galileo_x.mp4

About DMW Corporation

Since its foundation in 1910, DMW Corporation has been a trusted leader in the design and manufacture of pumps, fans and blowers for the oil and gas industry, specializing in one-of-a-kind solutions for industry-leading companies all over the world.
Building upon 110 years of experience and expertise, DMW Corporation has harnessed the strength of its innovative capabilities to create Japan's first Energy Recovery System for Reverse Osmosis Desalination Plants.

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