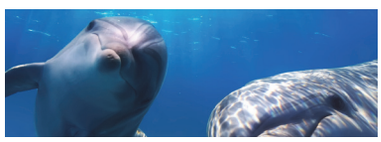
ROfine
Reverse Osmosis

Advantages e Applications

- Removal of dissolved minerals, metals and other particles benefits systems integrity. The water is free of contaminants or particles that can create corrosion, fouling, cause water to smell unpleasant, taste poorly and take on unusual colors.
- Reverse Osmosis systems are friendly to the environment, as they do not produce or use any harmful chemicals during the process.
- Reverse Osmosis systems are compact, and space requirements are less than with other similar processes.
- Energy efficient and ideally suited for separation and recovery applications. Reverse Osmosis performs a separation without a phase change or thermal energy use.



Welcome to Enkrott's World!

Water is essential to life. However, the world's water needs are increasing. These rates cause a pressure increase in living conditions, especially in poor countries. It is estimated that two thirds of the world population could live in the future in conditions of stress caused by low water availability...
It is necessary that we all preserve the common element which is water for future generations, using the best practices and techniques of conservation, reuse and recycling.
In Enkrott we know well what that is. We develop and apply engineering and products solutions for over 50 years.

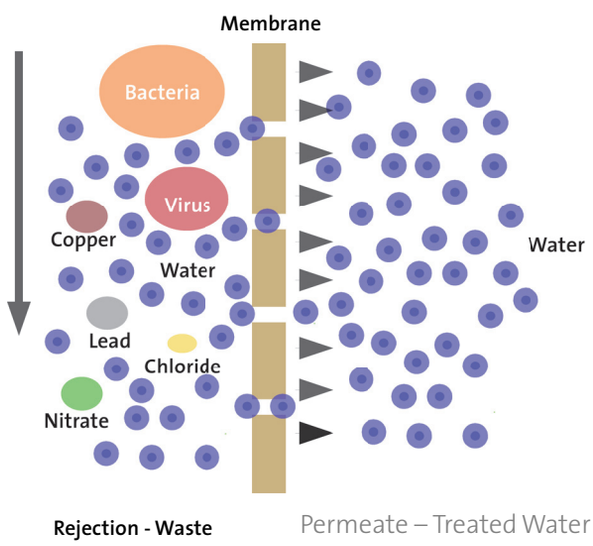
We have given users the ability to utilize various sources of less noble water to feed their processes, treat it with techniques that minimize environmental impact and supply people with an appropriate water for their health.
Water is everything for us! It is our raw material and our purpose. The impacts of water in various industrial processes, the equipment that use water in their usual operations and the well-being of populations are the goals of our knowledge.

Reverse Osmosis in Water Treatment

Reverse Osmosis (RO) is a water purification technology that uses a semipermeable membrane. In RO, an applied pressure is used to overcome osmotic pressure retaining the particles and microorganisms on the pressurized side of the membrane and allowing the passage of the pure water molecules to the other side.

Reverse Osmosis processes have been widely used for separation and concentration (recovery) of solutes in many fields.

Reverse osmosis can remove many types of molecules and ions from solutions and is used in both industrial processes and production of potable water



Reverse Osmosis for Brackish Water (BW)

Model	Permeate (l/h)	Number of 8" membranes	Connection load (kW)	Dimensions (mm) H x W x D
BW3	3.000	3	5,5	1800 x 4000 x 1000
BW4	4.000	4	7,5	1800 x 3000 x 1000
BW6	6.000	6	7,5	1800 x 4000 x 1000
BW8	8.000	8	7,5	1800 x 4000 x 1000
BW9	9.000	9	11	1800 x 4000 x 1000
BW10	10.000	10	15	1800 x 6000 x 1000
BW12	12.000	12	15	1800 x 5000 x 1000
BW15	15.000	15	18,5	1800 x 5000 x 1000
BW20	20.000	24	18,5	1800 x 6000 x 1200
BW25	25.000	25	30	1800 x 6000 x 1200*
BW30	30.000	30	30	1800 x 6000 x 1200*
BW40	40.000	42	37	1800 x 7000 x 1200*
BW50	50.000	54	45	1800 x 7000 x 1200*

* Reference values and dependent on the project raw water salinity

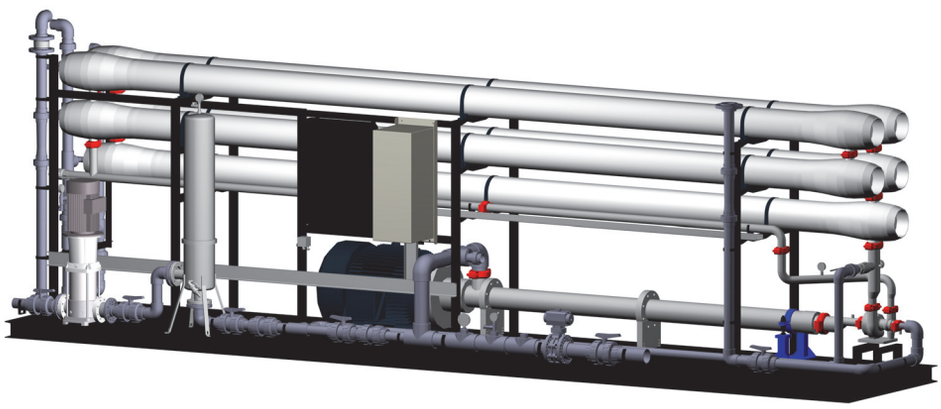
Reverse Osmosis for Brackish Water (BW)

Reference Values

- Average flux rate of 27 l/m²/h
- Recovery rate of 65-75%

Admissible raw water

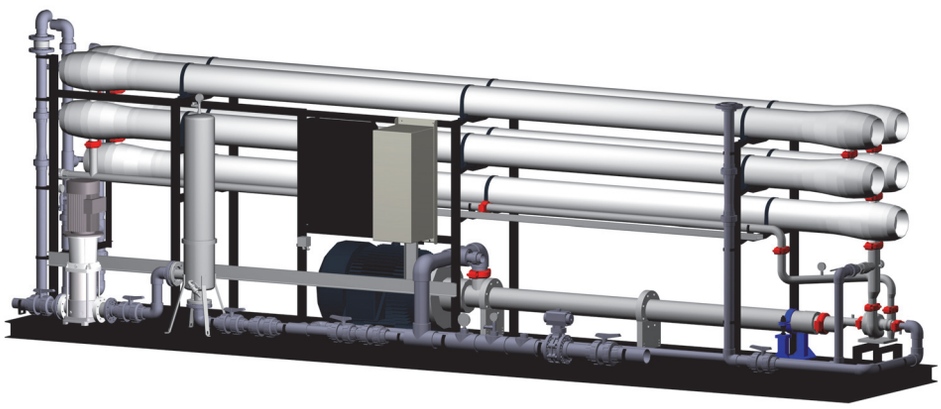
- Salinity max. 5.000 ppm
- pH between 3-10
- Silt index < 3
- Free chlorine < 0.1 ppm
- Fe + Mn < 0.2 ppm
- Total hardness < 0.1 °dH
- Bacterial count < 100 CFU/ml
- Turbidity < 0.5 NTU
- COD < 5 ppm as O2



Reverse Osmosis for Sea Water (SW)

Model	Permeate * (l/h)	Number of 8" membranes	Connection load * (kW)	Dimensions (mm) * H x W x D
SW3	2.500	3	20 (Without recovery)	2000 x 4500 x 1200
SW4	3.000	4	30 (Without recovery)	2000 x 5500 x 1200
SW6	5.000	6	25	2000 x 4800 x 1200
SW8	6.600	8	32	2000 x 5200 x 1400
SW10	8.300	10	35	2000 x 6300 x 1400
SW12	10.000	12	45	2000 x 5200 x 1400
SW15	12.500	15	55	2000 x 6300 x 1400
SW20	16.700	20	65	2000 x 6300 x 1400
SW24	20.000	24	70	2000 x 8000 x 1400
SW30	25.000	30	110	2000 x 8000 x 1400
SW36	30.000	36	115	2000 x 8000 x 1400
SW42	35.000	42	140	2600 x 8000 x 2400
SW48	40.000	48	160	2600 x 8000 x 2800
SW72	50.000	72	170	2600 x 8000 x 3400

* Reference values and dependent on the project raw water salinity



Reverse Osmosis for Sea Water (SW)

Reference Values

- Average flux rate depending on the raw water
- Recovery rate of aprox.40%

Admissible raw water

- Salinity max. 38.000 ppm
- pH between 3-10
- Silt index < 3
- Free chlorine < 0.1 ppm
- Fe + Mn < 0.2 ppm
- Total hardness < 0.1 °dH
- Bacterial count < 100 CFU/ml
- Turbidity < 0.5 NTU
- COD < 5 ppm as O2

PORTUGAL

Enkrott S.A.
Quinta do Lavi, bloco B, nº7
Zona industrial da abrunheira
2710 – 089 SINTRA – PORTUGAL
T +351 219 156 380
F +351 219 156 420

ANGOLA

Enkrott África Lda
Município de Belas, Bairro do sossego
Benfica- Via Rápida
LUANDA – SUL – ANGOLA
T +244 932 890 332
F +244 919 018 075

CABO VERDE

EQCVA. Lda
Av. Santiago
Palmarejo
CIDADE DA PRAIA – CABO VERDE

www.enkrott.com

ADDING VALUE TO YOUR WATER

Cat. Nº ULF URCECA