

# Culligan MATRIX

SOLUTIONS™

## REVERSE OSMOSIS

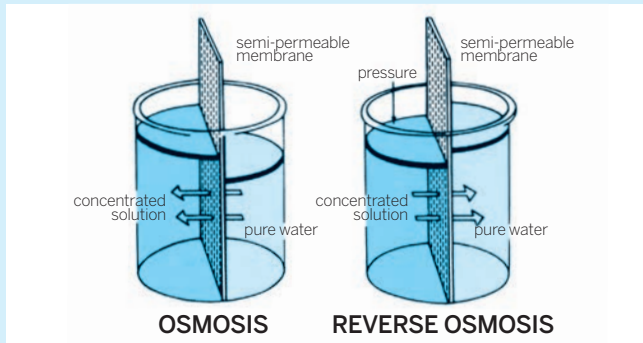
The answer to your needs for every day and industrial water



CULLIGAN: BETTER WATER. PURE AND SIMPLE.

CE *Equipment according to CE Directives in force*

# REVERSE OSMOSIS



This technology makes use of the ability of certain **semi-permeable membranes** to separate water from the substances dissolved in it. By applying a certain pressure, the water is forced through the membrane: **the pure water (permeate) will be separated from the water containing the salts (reject).**

The osmotic membrane, which reaches the highest practicable level of filtration, acts as a barrier to salts and inorganic matter, and also to organic substances with molecular weight higher than 100: it therefore provides an excellent defense against micro-pollutants, pesticides, pyrogenics, viruses and bacteria that may also be found in the water.

**Reverse Osmosis** is a physical type of procedure that does not require the use of any chemical regenerants. Reverse Osmosis technology has been rapidly winning acclaim, and its use has grown quickly owing to its versatility, its excellent performance and its simple application. In a period of a few years the types of membranes available have increased. They have been designed for increasingly specific applications.

**Culligan** was among the first companies worldwide to use Reverse Osmosis for a wide range of products.

In the following pages we will present some of the more important ones, dividing them by area of application. The list is not exhaustive: in fact a feature of the Reverse Osmosis technology is its extreme flexibility, which makes it possible to solve a problem using the standard products available.

# DAILY WATER



The first, essential use of water is for drinking. Water is used as a beverage, but there is no food in which water is absent, either as an ingredient or as a preparation liquid. There is no beverage or liquor in which water is not the fundamental ingredient.

**Reverse Osmosis** plays a role in the drinking water sector, and our indicators suggest that this trend is likely to become stronger in the future.

In this brochure you can see a few **Culligan** plants for the conditioning of brackish or sea water; single-user systems or larger plants to desalinate water for coastal communities, villages and entire cities.

Culligan also supplies container plants, excellent for solving temporary-needs problems or emergency situations.

# WATER FOR WORK



There are few industrial activities that can do without a specific type of treated water.

From boiler water, which must meet precise chemico-physical Standards, to process water, which must meet precise characteristics required by the production process.

In this sector too the Reverse Osmosis technology has assumed a role of pre-eminence, owing to its flexibility, economy, and the simplicity of its use.



# SW

Industrial desalinators, designed to offer safe operation, high performance and easy maintenance.

Manufacturing materials, especially the ones in contact with water, are corrosion resistant (AISI 316 Stainless Steel, PVC or Polyethylene) and food-graded.

These units are suitable to treat water with salinity up to 45000 ppm.



SW Series equipment, for the desalination of sea water

# MFP 4-44

Compact desalination system, with steel frame and with no welded parts, corrosion-proof material. The flexibility, reliability and robustness offer the maximum guarantee in all applications, making this system very versatile. It is provided with electronic control panel, which allows an easy reading of flow and conductivity of treated water, as well as of all operating parameters.



MFP and R.O.<sup>2</sup> Series are also available in the Medical version (Medical Device CE 0434)

# IWE – IWL

Industrial desalinators, designed to provide safe operation with high performance and easy maintenance.

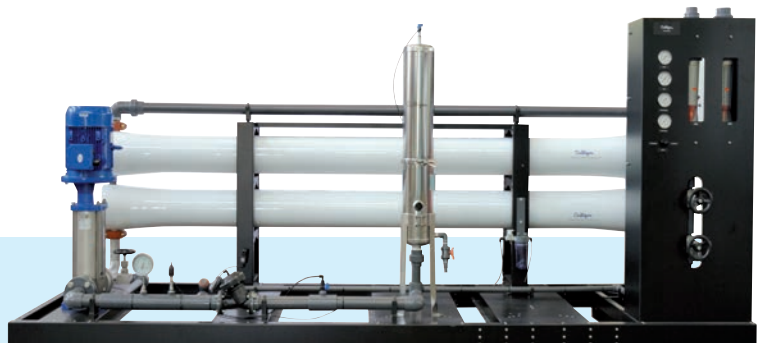
They are manufactured from materials that are corrosion-resistant, food grade material (AISI 316 Stainless Steel, PVC or Polyethylene). These units are suitable to treat water with a low salinity up to 3000 ppm. Initial purchase price and ongoing maintenance costs are competitive, thanks to low-pressure membranes. The versatility and utilisation of standard components ensures the units are easy to manufacture, making the IWE and IWL simple, safe equipment.

- **IWE**, complete with pressure monitoring control;
- **IWL**, features an electronic control board, displaying flow rates and conductivity. This board can also control pre-treatment units.

## AVAILABLE OPTIONAL

Control panel, flushing kit, pre-filters.

IWE - IWL Series equipment, for industrial and drinking water applications



# R.O.<sup>2</sup>

Double Reverse Osmosis in series is the top model in this range, combining the production of excellent water with great versatility.



# TECHNICAL SPECIFICATIONS

MODEL	INSTALLED POWER kW	PIPE FITTINGS		NOMINAL FLOW RATE * l/h	DIMENSIONS width x depth x height ** mm	SHIPPING WEIGHT kg
		in (feeding) inches	out (product) inches			
<b>DESALINATORS FOR SEA WATER</b>						
SW 300	5.5	1	1/2	300	CHANGES ACCORDING TO CONFIGURATION	
SW 600	5.5	1	1/2	600		
SW 900	15	1 1/2	3/4	900		
SW 1500	18.5	1 1/2	1	1500		
SW 2000	18.5	1 1/2	1	2000		
SW 3000	37	2	1 1/2	3000		
SW 4000	45	2 1/2	1 1/2	4000		
SW 6000	55	2 1/2	1 1/2	6000		
<b>DOUBLE REVERSE OSMOSIS DESALINATORS IN SERIES</b>						
R.O. <sup>2</sup> 400	1.5 + 1.5	1	1/2	500	1000 x 750 x 1700	220
R.O. <sup>2</sup> 800	2.2 + 2.2	1	1/2	1000	1000 x 750 x 1700	260
R.O. <sup>2</sup> 1200	3 + 3	1	1/2	1500	1000 x 750 x 1700	310
R.O. <sup>2</sup> 1600	4 + 4	1	1/2	2000	1000 x 750 x 1700	350
<b>DESALINATORS FOR BRACKISH WATER</b>						
MFP 4-44 400	1.5	1	1/2	450	500 x 660 x 1550	115
MFP 4-44 800	1.5	1	1/2	900	500 x 660 x 1550	140
MFP 4-44 1200	2.2	1	1/2	1350	500 x 660 x 1550	170
MFP 4-44 1600	2.2	1	1/2	1800	500 x 660 x 1550	190
MFP 4-44 2200	4	1	3/4	2350	500 x 660 x 1800	220
MFP 4-44 2800	4	1	3/4	2850	500 x 660 x 1800	250
MFP 4-44 3300	4	1	3/4	3350	500 x 660 x 1800	280
IWE - IWL 5	5.5	2	1 1/2	5000	4850 x 1200 x 1800	650
IWE - IWL 8	5.5	2	1 1/2	8000	3850 x 1200 x 1800	710
IWE - IWL 12	11	2	2	12000	3850 x 1200 x 1800	950
IWE - IWL 16	11	2	2	16000	4850 x 1200 x 1800	1280
IWE - IWL 20	15	3	2 1/2	20000	6850 x 1200 x 1800	1370
IWE - IWL 23	18.5	3	2 1/2	23000	6850 x 1200 x 1800	1600
IWE - IWL 26	18.5	3	2 1/2	25000	4850 x 1200 x 2100	1850
IWE - IWL 30	18.5	3	2 1/2	30000	6850 x 1200 x 2100	2100
IWE - IWL 36	22	3	2 1/2	35000	6850 x 1200 x 2100	2500

\* Average flow rate based on the following hypothetical data (except for sea water desalimators): temperature 20 °C; TDS 3000 ppm as NaCl; recovery ratio 75%.

\*\* Dimensions are approximate and may change.  
Inlet water pressure: >2 bar.

**POWER SUPPLY:** 380 V - 50 Hz three-phase. The installed power may vary depending on the specific features of the project.

**NOTES:**

Series IWE, IW L, R.O.<sup>2</sup> and SW desalimators are delivered without the electrical control panel. Series MFP desalimators are equipped with electrical control panel.



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QUALITY SYSTEM CERTIFIED ACCORDING TO UNI EN ISO 9001:2008 NORM

Culligan reserves the right to change any technical or design specifications for the models shown in this brochure.

Culligan Guarantee – Any manufacturing defects and corrosion are covered by the Culligan guarantee's norms.

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