

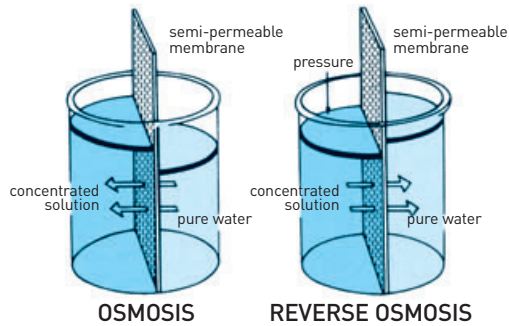
REVERSE OSMOSIS

Culligan®

The answer to your needs for
everyday and industrial water



CULLIGAN: WORLD LEADER IN THE WATER TREATMENT



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 it took hold 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.

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 everything suggests that this trend is bound to become stronger in the future.

In these pictures we see a few Culligan plants for the conditioning of brackish or sea water: single-user systems or large plants to desalinate water for coastal communities, villages and entire cities.

And we should not forget the container plants, excellent in solving temporary-needs problems or emergency situations.



SW Series equipment, for the desalination of sea water.

Sea water desalination system: 3 lines processing 500 m³ per day.





Water for work

MFP

An “evergreen” well-known for its reliability and robustness. Available in the basic model (MFP3 Series) or in the new MFP4 Series, featuring an electronic control panel, with conductivity meters and flow meters. All functions are easily readable on the display.



MFP3, MFP4 and R.O.² Series are also available in the Medical Version (Medical Device No. 0373)

R.O.²

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



There is no industrial activity that may 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 necessities.

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.

IW E model

Similar to IW standard equipment, it is suitable for water with low salinity (1500 ppm maximum). It allows low purchasing and maintaining costs, thanks to low-pressure membranes. Its versatility, the utilization of standard components and the easy manufacturing make IW E simple, safe and intelligent equipment.

IW E is available in two versions:

- STANDARD, with pressures monitoring and control.
- SPECIAL, featuring an electronic control board, displaying also flow rates and conductivity. This board is up to control also external pre-treatment units.

AVAILABLE OPTIONAL:

control panel, flushing kit, pre-filters.



IW - IWE Series equipment, for industrial and drinking water applications.



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			
DESALINATORS FOR SEA WATER						
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		
DOUBLE REVERSE OSMOSIS DESALINATORS IN SERIES						
R.O. ² 400	2.2 + 2.2	1	1/2	500	1000 x 750 x 1650	220
R.O. ² 800	2.2 + 2.2	1	1/2	1000	1000 x 750 x 1650	260
R.O. ² 1200	3 + 3	1	1/2	1500	1000 x 750 x 1650	310
R.O. ² 1600	4 + 4	1	1/2	2000	1000 x 750 x 1650	350
DESALINATORS FOR BRACKISH WATERS						
MFP 400	1.5	1	1/2	500	500 x 660 x 1550	115
MFP 800	1.5	1	1/2	1000	500 x 660 x 1550	140
MFP 1200	2.2	1	1/2	1500	500 x 660 x 1550	170
MFP 1600	2.2	1	1/2	2000	500 x 660 x 1550	190
MFP 2200	4	1	3/4	2500	500 x 660 x 1800	220
MFP 2800	4	1	3/4	3000	500 x 660 x 1800	250
MFP 3300	4	1	3/4	3500	500 x 660 x 1800	280
IW 5	15	2	1	5000	5000 x 800 x 2150	-
IW E 5	4	2	1 1/2	5000	3800 x 1200 x 1600	650
IW 6	15	2	1 1/2	6000	6000 x 800 x 2150	-
IW 8	15	2 1/2	2	8000	5000 x 800 x 2150	-
IW E 8	7.5	2	2	8000	3800 x 1200 x 1600	710
IW 10	22	2 1/2	2	10000	4000 x 870 x 2150	-
IW 12	22	2 1/2	2	12000	6000 x 870 x 2350	-
IW E 12	11	2	2	12000	3800 x 1200 x 1600	950
IW 14	15 + 15	2 1/2	2 1/2	14000	7000 x 1200 x 2350	-
IW 16	15 + 15	2 1/2	2 1/2	16000	6000 x 1200 x 2350	-
IW E 16	11	2	2	16000	5500 x 1200 x 2000	1280
IW 18	15 + 15	2 1/2	2 1/2	18000	7000 x 1200 x 2350	-
IW 20	15 + 15	2 1/2	2 1/2	20000	7000 x 1200 x 2350	-
IW E 20	15	3	2	20000	5500 x 1200 x 2000	1370
IW 22	22 + 22	3	2 1/2	22000	5000 x 1200 x 2350	-
IW E 23	15	3	2	23000	7200 x 1200 x 2000	1600
IW 24	22 + 22	3	2 1/2	24000	6000 x 1500 x 2350	-
IW 26	22 + 22	3	2 1/2	26000	6000 x 1500 x 2350	-
IW E 26	18.5	3	2 1/2	26000	7200 x 1200 x 2000	1850
IW 28	22 + 22	4	3	28000	7000 x 1500 x 2350	-
IW 30	22 + 22	4	3	30000	7000 x 1500 x 2350	-
IW E 30	22	3	2 1/2	30000	7200 x 1200 x 2000	2100

* Average flow rate based on the following hypothetical data (except for sea water desalimators): temperature 20 °C; TDS 1500 ppm as NaCl; recovery ratio 75%.

** Dimensions are approximate and may change.


Operating 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 SW, RO², IW and IW E desalimators are delivered without the electrical control panel. Series MFP desalimators are equipped with electrical control panel.

 Designed and manufactured according to CE Directives in force

QUALITY SYSTEM CERTIFIED ACCORDING TO UNI EN ISO 9001:2000 NORM

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

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With three manufacturing plants and more than a hundred dealers, agents and representatives all over Europe, Culligan is next door wherever you are. Each and every user enjoys outstanding after-sales service. Culligan is present in every area thanks to its engineers and technicians who are ready to act for you quickly and efficiently. The Culligan organisation is represented worldwide in more than 90 countries. The logistic support it provides enables each licensee and dealer to guarantee exceptional services during and after the warranty period (one year, covering manufacturing faults and corrosion).