

# *Desalination*



**Standardised Packaged Desalination Plant  
1,500 m<sup>3</sup>/day unit  
35% Recovery  
Pre Filtration and Post Mineralisation based on  
Reverse Osmosis Desalination**

**KIRTON**  
WHEREVER WATER IS RECYCLED





## **KIRTON ENGINEERING IS A SPECIALIST COMPANY AT THE FOREFRONT OF WATER TREATMENT**

Established in 1969, Kirton Engineering are experienced in all aspects of technologies in the desalination field. Our company has designed, manufactured, operated, and maintained the following types of Membrane and Desalination plants:

- Reverse osmosis
- Nanofiltration
- Ultrafiltration
- Microfiltration plants
- Mobile test units and pilot plant equipment

All individually designed for effluent treatment, brackish water treatment and seawater desalination.

Kirton Engineering Limited has manufactured Desalination and Membrane Plants for diverse industrial applications worldwide. We are also able to supply and support other water treatment equipment, including softeners, ion exchange plant, filtration systems and UV disinfection equipment. All backed up with a comprehensive spares service including replacement RO/NF membrane elements, specialist antiscalants and cleaning chemicals, softening/ion exchange resins, most types of cartridge/bag filter, including all major pump manufacturers spares.

Reverse Osmosis membrane technologies have great potential for increasing water use efficiency through recycling, for decontaminating water and for environmental repair through purifying or providing water. Recycling water can also relieve the pressure on overstressed natural water sources.

## **SHORTAGES OF FRESHWATER HAVE ENCOURAGED MANY TO LOOK MORE SERIOUSLY TO WHERE THE MAJORITY OF THE WATER IS – THE SEA.**

Sea Water Desalination systems produced by Kirton Engineering are suitable for TDS ranging from 30,000 to 47,000. They comprise of pre filtration and high pressure Reverse Osmosis membrane filtration, producing a product water quality of less than 500 mg/l TDS and a recovery rate in the region of 35%.

In addition to the sea, there is a potential water supply in vast reserves of naturally brackish ground and surface water. The lower concentrates of salts mean that the desalination of brackish water is often a more economic desalination proposition than seawater. Brackish Water systems are suitable for TDS ranging from 100mg/l to 10,000 TDS and comprise of pre filtration and Reverse Osmosis Membrane Filtration. The product water quality of 2 to 200 TDS depends upon the feed quality. The recover rates are in excess of 80%.

Kirton Engineering Limited offers fully skilled, trained and highly experienced fitters and engineers. We offer site teams worldwide and all work complies with CDM regulations. This makes us highly qualified to propose the plant to best meet the client's requirements.



## CUSTOMER REFERENCE LIST

Customer Name	Address	Date of contract	Contract Description
Sea Dragon Technical Services Ltd	UK	2009	Sea Water Reverse Osmosis Desalination Units (2 x off shore) - North Sea, Scotland
Sea Dragon Technical Services Ltd	Mexico	2009	Sea Water Reverse Osmosis Desalination Unit (off shore) – Gulf of Mexico
Sea Dragon Technical Services Ltd	Russia	2009	Sea Water Reverse Osmosis Desalination Unit (off shore) - Russia
Veolia Water	UK	2008	Kyle & Balmacara WTW UF system
Veolia Water	UK	2008	Kinlochbervie WTW UF System
SADRA - Khesht	Middle East	2008	Reverse Osmosis Unit 650m <sup>3</sup> /day
Guilfords Textiles (UK)	Derbyshire (UK)	2008	Effluent Treatment & Recycle Unit. Comprising of solids separation and filtration. Ultrafiltration and Reverse Osmosis
Grampian Foods	UK	2008	Reverse Osmosis System
Siemens Memcor Ltd	Ireland	2008	Ennis Drinking Water Treatment Plant
Siemens Memcor Ltd	UK	2008	Thames Water Filtration Unit
Iron-Ore Mining	Middle East	2007	3000 m <sup>3</sup> /Day Brackish Water Reverse Osmosis Unit
Local Municipality	Middle East	2007	400 m <sup>3</sup> /Day Sea Water Desalination Reverse Osmosis Unit
Petro Chemical Company	Middle East	2007	Engineering And Design Stage 60,000 m <sup>3</sup> /day Reverse Osmosis Unit.
Siemens Memcor Ltd	UK / Europe	2006	1080 m <sup>3</sup> /day Industrial Water Treatment Reverse Osmosis Unit
MDF / Pulp & Paper	Middle East	2006	Industrial Waste Water Treatment & Recycle – 4200m <sup>3</sup> /day
Raja Railways	Middle East	2006	Industrial Water Application Reverse Osmosis
Tavazon Farab Company	Middle East	2005	Sea Water Desalination Reverse Osmosis Desalination Unit.
Tavazon Farab Company	Middle East	2005	Reverse Osmosis Desalination Unit. Pre & Membrane Filtration.
SADRA Marine Industrial Company	Middle East	2004	Sea Water Desalination (Persian Gulf) – Pre Filtration – Reverse Osmosis & Post Filtration. WHO Water Standards. ATEX Approved Offshore.
Oil Refining Company	Middle East	2002	Effluent treatment and Recycle. Media Filtration and Reverse Osmosis. 10,000 m <sup>3</sup> /day
P Mulrines	Ireland	2005	Potable Water Filtration Unit - Coca Cola Specification
Kronospan Limited	Wales	2004	River Water Abstraction. Media Filtration and Chemical Treatment
Nexfor (Cowie) Limited	Scotland (UK)	2001	Effluent Treatment. Media Filtration and Reverse Osmosis.
Ultrastrip Inc (USA)	Florida (USA)	2000	Effluent Treatment & Recycle Unit. Comprising of solids separation and filtration. Ultrafiltration and Reverse Osmosis
Dove Valley Food Process	UK	2003	Effluent Treatment & Recycle Unit. Comprising of solids separation, filtration and disinfection
Scottish Water PLC	Scotland	2003	Rainwater Harvesting and Filtration for a large Hospital
Golden West Foods Limited	Manchester (UK)	2001	Effluent Treatment. Solids separation.