

## Effluent Treatment & Recycling

Industrial Water & Wastewater



*Customized solutions for your industry*





**Industrial process waste water**



**Waste water from cleaning**



**Clear Water Usage after treatment**

## Industrial Effluent Treatment

Process water and wastewater treatment is critical for every industry. Each industry has its own set of requirements which determines treatment needs: from ultra clean process water to recycling of wastewater. MENA-Water provides cutting edge solutions for the industries to meet these challenges, which day by day are more stringent.

## We Offer Concepts and Plants for All Industrial Sectors

- Food and Beverages
- Meat Processing
- Pulp and Paper
- Oil & Gas
- Leachate
- Dairy factories
- Animal farming
- Textile and Tannery
- Organic waste
- Others

## Concepts

For treating the effluents, our experts evaluate the requirement, case-by-case, to find out the best solution. Our review always included the internal process water management which is usually the first step in the improvement.

Even for an existing treatment plant when it is overloaded or facing difficulties to meet the capacity or the treated water quality, MENA-Water provides an economical solution of plant expansion and upgrade on a limited space.

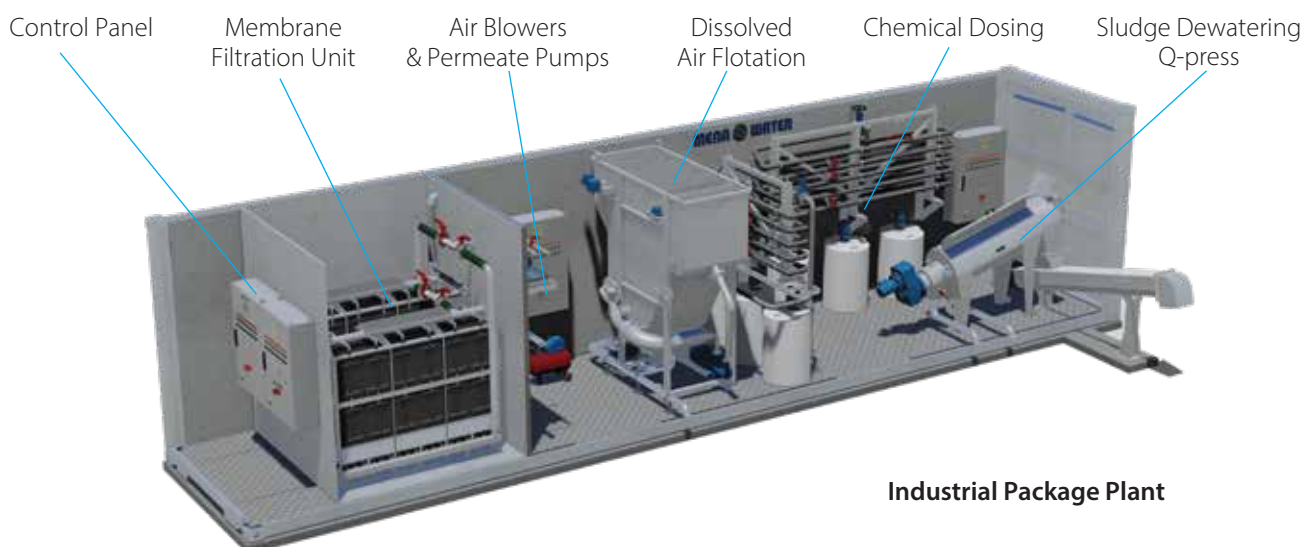
The treated effluent can be re-used in different applications, such as:

## Water Reuse

- Heating systems
- Manufacturing process
- Products washing
- Floor washing
- Direct discharge to surface water
- Cooling systems
- Irrigation
- Car washing
- Service water

## MENA-Water Offers Complete Treatment Systems

The treatment processes can include physicochemical and biological systems in combination with MBR technology, and can be followed by reverse osmosis system to reclaim the effluents for reuse. They can be tailored to very specific demands such as removal of very high TOC or COD using advanced oxidation, or other technologies.



**Industrial Package Plant**



# Special Process Technologies

## Micro Screening

The Micro screening can replace a conventional primary treatment. It is ideal for municipal and industrial wastewater treatment plants offering a very small footprint, saving major infrastructure and investment cost.

Screenings dewatering is integrated part of the machine. It removes organic and inorganic solids as fine as 20 micron and helps to optimize the next treatment steps.



Micro Screening

## Dissolved Air Flotation Systems (DAF)

DAF systems are designed for removal of many types of contaminants via air induced flotation with the help of chemicals, where solids/gas agglomerates and is floated up by on air stream. The solids are removed from the top of the water surface by a skimmer.

This process is particularly suitable for treating contaminated industrial pollutants such as fats, oils & grease (FOG), solids, proteins, petrol and many other contaminants from different industries. The DAF system can be installed prior to biological treatment as pre-treatment step or as stand alone system.



DAF

## Membrane Bio Reactor (MBR)

This is a wastewater treatment process combining biological treatment with submerged UF membrane filtration. In the biological stage the degradation of organic matter and nutrients takes place. Afterwards the mixed liquor is separated by on UF membrane filtration in the MBR system.

The MBR system has many advantages, such as high treated water quality, small footprint, easy upgrade facilities, very good price-performance ratio, automatic operation & low maintenance, bacteria free effluent and minimal excess sludge production, less odor emissions.



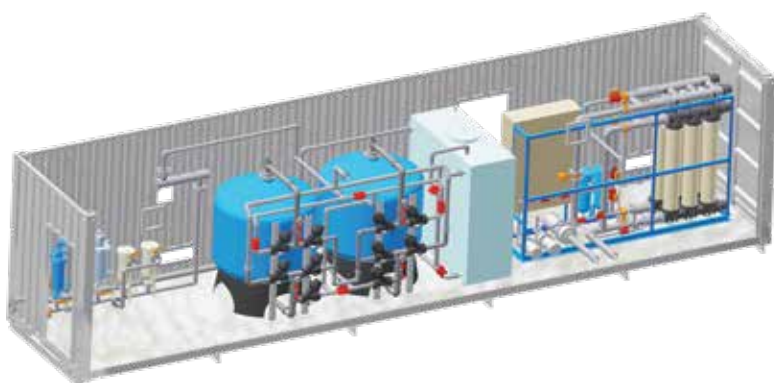
MBR Package Plant

## Reverse Osmosis (RO) Processes

The Reverse Osmosis System is a membrane separation process using a semi permeable membrane, in which dissolved solids, bacteria, viruses and all particles bigger than the membrane pore size will be removed. It produces sweet water in the permeate stream.



RO Plant



# MENA WATER

OUR AIM - YOUR CONFIDENCE



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