

# Grundfos pumps in 1,000 m<sup>3</sup>/day RO plant in Algeria

ASTRAMATIC S.A., BARCELONA, SPAIN, IS AN ENGINEERING AND CONSULTING COMPANY THAT DESIGNS, BUILDS, MANUFACTURES, AND MAINTAINS INDUSTRIAL PROCESS WATER TREATMENT PLANTS ADAPTED TO ALL NEEDS AND SITUATIONS.

Astramatic recently built and installed a highly advanced Reverse Osmosis water purification plant in Algeria. The plant has a capacity of 1,000 m<sup>3</sup>/day, and a variety of Grundfos pumps help to keep the processes moving flawlessly. The plant was inaugurated recently by the Algerian Prime Minister and it has already been widely acclaimed for its unique design and great efficiency.

## THE SITUATION

Astramatic S.A. specialises in designing and building water treatment plants on a turnkey-basis. Although based in Barcelona, Astramatic frequently operates abroad and often in third-world countries. Most plants that the company builds have been purpose designed according to customer requirements and special local conditions. In the present case, the customer required a system that would allow for variations in the pumping capacity according to fluctuations in the chloride concentration in the well.

## THE SOLUTION

Due to special circumstances at the plant location, it was decided to construct the plant in transportable containers, connected through pipes with vitaulic auto-couplings. One container holds the pre-treatment unit with pumps and the process control panel.

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### TOPIC:

One-stop shopping for all pumping needs - Compact design - Reduced installation costs - Low power consumption

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### LOCATION:

Barcelona, Spain

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### COMPANY:

Astramatic S.A.

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A second container holds the RO plant with Grundfos BM pumps in two connected lines, 3+3 in series and parallel in order to meet the required 52 bars pressure. The pumps are connected electrically via a single 37 kW frequency converter. This allows for a much simplified control panel and enables starting and stopping of the modules according to the water salinity conditions.

In a third container, the water filters of silex and active carbon are located.

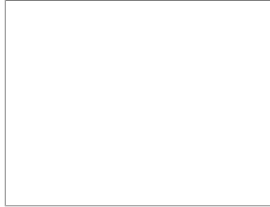
The plant comprises a total of 6 units of Grundfos BM 46-19 in version R, installed in series and parallel to obtain a modular flow and sufficient pressure. A Grundfos NK bronze pump was installed to provide the raw water supply for the plant. A Grundfos CRN 90 pump takes care of the cleaning of the membrane, and several DMS dosing pumps handle the precise dosing of chemicals for the process.

#### THE OUTCOME

Thanks to the modular system, the efficiency of the Grundfos pumps, and not least the simplicity of the piping and the control panel, the plant has operated flawlessly from day one in spite of considerable variations in the salinity of the raw water.

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## Related Products



BM  
Grundfos BM 加壓模組



NK、NKG、NKE、NKGE  
Grundfos 提供幾近無限的長軸連接型 (NK) 端吸式泵浦系列。