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Powerful water treatment system with new technology

The Saudi-Arabian drinking-water producer Makkah Water Company has, for now, finished updating and expanding capacity at its main plant in Jeddah. The new, high-performance water treatment system from Krones passed final acceptance testing in October 2022. Before that, acceptance testing on two new high-speed filling lines was completed in spring of 2022.

Makkah Water Company began operations and production in 1975. The main plant in Jeddah now has seven complete lines from Krones up and running. In its second plant, Al Janoub in the city of Gizan in southern Saudi Arabia, Makkah Water is still working with mix-and-match lines that include a variety of blow molders, fillers, and labelers from Krones. Whereas the Jeddah plant produces Safa water, the Gizan plant is focused on the Mozn brand.

In this project phase, Makkah Water had the existing wet end of an 81,000-bph line replaced with an ErgoBloc L. Later in the update project, the company then decided to swap out two more existing lines for Krones systems. Each of the three ErgoBloc L lines fills still table water at 81,000 containers per hour.

**Treating demineralized seawater**

The water treatment system is among the largest of its kind that Krones has built to date, rated at three times 110 cubic meters per hour. The system, which actually comprises three units, each equipped with ultrafiltration, reverse osmosis, and electrodeionization, processes demineralized seawater. With the new electrodeionization (EDI) module, whose debut installation is this one at Makkah Water, the result is ultrapure, deionized water to which the desired minerals can then be added. The addition of the EDI module is especially important for producing still table water whose mineral content has no tolerance for deviation, as is the case at Makkah Water. In addition, the scope of supply also included an activated-carbon filter and modules for remineralization and ozonization: The Hydronomic MDS mineral-dosing station uses a mass flow meter to deliver highly precise quantities of various minerals. The Hydronomic OZ water ozonization system stabilizes the product microbiologically prior to filling.

"The new water treatment system replaced our existing equipment. Installation and commissioning went according to plan," explains owner Sheikh Ali. "For this water treatment project, we chose to work with Krones based on the new technology and our long and excellent partnership – and that has so far served us well," he explains.

Fig.: 202211EX05\_0243  
At the Jeddah site, Makkah Water now fills its Safa brand with an ErgoBloc L.

Fig.: 202211EX05\_0266  
The Hydronomic MDS mineral-dosing station uses a mass flow meter to deliver highly precise quantities of various minerals.

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