ENGINEERING TOMORROW

Case story | Gefico

Gefico and **Danfoss install** 1800 m^3 / day RO plant **in record time**

APP pumps and **iSave ERDs** were the **perfect choice** for a SWRO plant in a Jamaican hotel

Cooperation between Gefico and Danfoss began many years ago when the Spanish SWRO specialist began using some of its first APP pumps in maritime installations. Since then, Gefico has delivered hundreds of sea- and land-based projects based on Danfoss technology worldwide. None of these projects, however, was completed as fast as a recent SWRO plant for a Jamaican hotel.

The challenge:

Design, manufacture and install a complete RO plant for a new luxury hotel in under four months

Managers responsible for the construction of a new luxury hotel in Jamaica knew from the start that they would need to produce all of their own fresh water. For a number of reasons, however, commissioning of the new plant was delayed. So, while the list of design demands was long – including best-in-class OPEX, extensive control automations and plug-and-play simplicity – the lead time was not.

"The biggest challenge we faced in this project was timing," explains Álvaro Fraguela, Gefico's sales director. "We ended up with only a four-month window for the entire project, so there was very little time for mistakes of any kind. But our engineering department was confident that they could deliver and have the plant running in time when the hotel opened its door for the hotel's first guests."

The solution

Two plug-and-play trains built around **Danfoss APP pumps and iSave ERDs**

"We were not in doubt that we would use Danfoss APP pumps and iSave ERDs for this project," says Marta Herva, head of Gefico's engineering department.

"Many years of close cooperation with Danfoss in both sea- and land-based sectors have given us a lot of experience with their technology, and we were confident that they would meet the customer's needs for energy efficiency. Because the Danfoss solution is also extremely compact and requires fewer components than alternatives, it also simplified building the skid-based plants necessary for plug-and-play installation simplicity."

To ensure that the hotel would always be able to produce enough fresh water, even during routine or emergency maintenance procedures, engineers recommended a two-train 1800 m^3/day plant, with each 900 m^3/day train built around Danfoss components:

1 APP 38/1500 with 90 kW tropical insulated motor with space heaters
1 iSave 50 with 18,5 kW tropical insulated motor with space heaters
4 Danfoss VLT® AQUA Drives

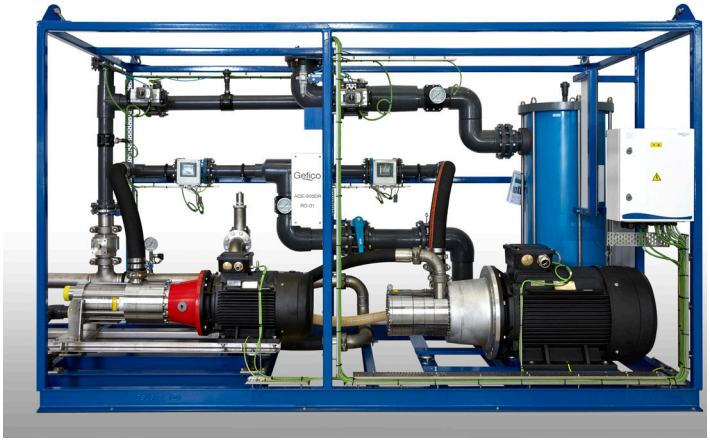
The result:

Plenty of water on time for the hotel opening – **and predictably low OPEX**

Gefico designed, built and tested the plug-and-play skids at their facilities in Spain before shipping them to Jamaica, where they arrived just weeks before the hotel opened. In all, the lead time was under four months.

Installation of the plug-and-play trains was predictably simple and fast, with just a few piping connections necessary on site, and operations have been smooth since the plant went online.

"In addition to very good energy efficiency to get the best possible OPEX, it is important for our customer to reduce maintenance to the absolute minimum," says Fraguela, "so Danfoss's long maintenance intervals are a definite plus in this regard, too." To further simplify maintenance, the plants are fully automatic and can be monitored and operated remotely from the hotel's control center.



Gefico

For over 40 years, Gefico has designed and manufactured water treatment solutions for a broad spectrum of maritime and land-based needs. With more than 7000 offshore and onshore installations, many in extremely harsh environments, Gefico's dedication to quality management and sustainability continues to serve demanding clients worldwide.

For more information, see www.gefico.com

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