



# CASE STUDY

## The Challenge

Parched on the Red Sea



### LOCATION

Sharm El-Sheikh, Egypt

### PROJECT

Marriot Sharm El-Sheikh Hotel

### PRODUCT CONFIGURATION

AquaBold™ High Pressure Pump  
& Advanced TurboCharger™

### CAPACITY

500 m<sup>3</sup>/day

Miles and miles of gorgeous Red Sea coastline draw tourists to Egypt every year. And while most of Egypt's residents have access to fresh water from the River Nile, transporting it to the farthest reaches of the Egyptian coast is expensive. Tourism is a significant part of Egypt's economy, and coastal towns are looking to seawater reverse osmosis (SWRO) desalination as an option for bringing fresh water to tourist destinations.

Hydro-Solutions, a subsidiary of Express Industrial Co., is a leader in the design, manufacturing and installation of desalination plants. It is also active in the operation and maintenance of these plants. Hydro-Solutions has been supplying potable water for more than seven years to Marriot Sharm El-Sheikh Hotel in Na'ama Bay through a SWRO desalination plant. Based on its experience with low-quality welded sheet pumps that caused continuous noise and leaks, Hydro-Solutions demanded a higher quality replacement.



## The Innovation Solution

# Energy Recovery's Aquabold™ High Pressure Pump

An evaluation of high-quality, high-efficiency pumps with casted components from global suppliers led to an obvious choice: Energy Recovery's Aquabold 2X3X5. Using the AquaBold eliminated the annoying noise, leaks and vibration issues that Hydro-Solutions faced from its sheet metal pumps. From the casted impellers, diffusers and case, to the process-fluid lubricated internal bearings, the AquaBold has been designed from the ground up for maintenance-free operation specifically for desalination applications. Hydro-Solutions also chose to use one of Energy Recovery's Advanced TurboCharger products to lower operation costs by recovering excess energy. Installation was easy since the pump, motor and turbocharger arrived already coupled and aligned on one common base.



## The Result

# Higher Quality, Less Maintenance Required and a Longer Life

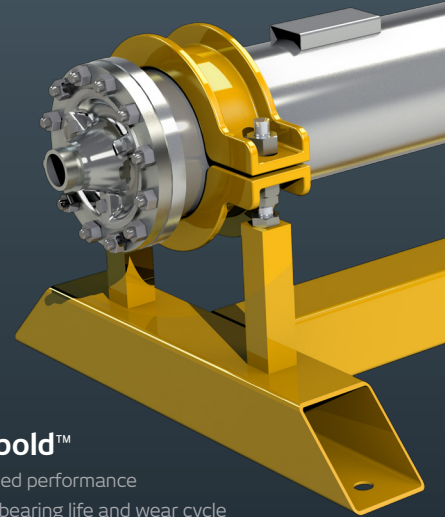
The installation of the AquaBold was quick, easy and maintenance-free - adding 15 years of life to the plant. Since commissioning, it has reduced plant noise and eliminated leaks and vibrations. After almost three years of operating with Energy Recovery technologies, routine checkups have shown the AquaBold and Advanced TurboCharger are operating at above-expected efficiency with no measurable wear or need for service.

**"We selected Energy Recovery's AquaBold™ pump because it has proven the highest quality on the casted pump market."**

**Ayman El Sersy**  
Technical Director at Express Industrial Co. Hydro-Solutions

## WHERE DESIGN MEETS ECONOMICS

After a quarter of a century, we're still raising the bar with innovative desalination solutions. Our isobaric and centrifugal technologies are the most efficient and reliable solutions on the desalination market today.



### Aquabold™

- Optimized performance
- Longer bearing life and wear cycle
- Casted, duplex metal for higher quality and availability



### TurboCharger

- Optimized efficiency with 3D geometry impellers
- Volute insert technology for field flexibility
- Lowest installation cost

**About Energy Recovery** Energy Recovery Inc. (NASDAQ: ERII) technology harvests the power of pressure from high-pressure fluid flows and pressure cycles. Through collaboration with industry, Energy Recovery helps make industrial processes in the water, oil & gas, and chemical industries more profitable and environmentally sustainable. Headquartered in the San Francisco Bay Area, Energy Recovery has offices in Madrid, Shanghai, and Dubai. For more information, visit [energyrecovery.com](http://energyrecovery.com)

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