



# Grundfos integrated pump solutions adeptly address space constraints in a UAE data center

## The situation

Data centers are growing rapidly across geographies—thanks to digital transformation of business processes further accelerated by the COVID-19 pandemic. With big data, cloud computing, internet of things, e-commerce, and remote work policies, demand for data centers has increased exponentially across the globe. Many data centers are being established in the UAE thanks to the strategic location, business-friendly policies, technology investments, stable environment, and advanced infrastructure, making it an attractive destination for data center investments in the Gulf region.

One such client who was setting up a data center in the UAE had a specific issue to be addressed at his prospective facility. With air-cooled chillers deployed for air-conditioning, there was a challenge in achieving optimal efficiency to keep the PUE low.

Also, under the hot climatic conditions of the UAE, the HVAC circulation pumps were to be installed on the rooftop, exposing them to extreme temperatures within the given space.

## The solution

The client had chosen to go with an adiabatic chiller booster system to improve the heat transfer efficiency of the evaporator coils with Grundfos booster sets configured to supply treated water to the circulation tank.

Grundfos Gulf Distribution Senior Sales Manager explains: “We used a variable frequency drive based hydro booster systems to allow for critical system parameters to be constantly monitored and adjusted for, resulting in maximum efficiency and reduced energy consumption.”

**“One of the great advantages of Grundfos Hydro Booster system is its control features.”**

Vignesh Babu, Senior Sales Manager  
Grundfos Gulf Distribution

**GRUNDFOS** 

Possibility in every drop



Grundfos Hydro MPC E and Hydro Multi E water boosting systems with IPSS rated MGE motors were the perfect choice to withstand the harsh temperatures of 50 deg ambient at this data center facility.

“One of the great advantages of Grundfos Hydro Booster system is its control features which switches off the booster system during periods of low consumption - saving significant amount of energy,” Vignesh Babu comments.

### The outcome

Grundfos was able to act as a one-stop-shop, providing the design expertise and the necessary equipment, resulting in a much easier commissioning process.

Grundfos solutions led to a maximum of 30% reduction in energy consumption in this data center via the Grundfos booster system with premium IES efficiency MGE motors. Further, by integrating these hydro boosters with building management systems, the facilities team were able to obtain a detailed overview of HVAC pumps & booster system performance.

### Grundfos supplied

- 33 x 15kW NBE HVAC circulation pumps with IE4 efficiency motors
- 33 x suction diffusers
- 5 x Hydro MPC E and Hydro Multi E Booster systems with IES efficiency motors
- 4 x SLV pumps with wastewater control panels
- Data communication modules for HVAC pumps & booster systems



Hydro Multi E



NBE pump