



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

The Situation

Data centers are growing rapidly across geographies – thanks to digital transformation of business processes further accelerated by COVID-19 pandemic. With big data, cloud computing, internet of things, e-commerce and remote work policies, the need for data centers has gone up manifold across the world. And in UAE, many data centers are being set up due its 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 UAE had a specific issue to be addressed in his upcoming facility. With air-cooled chillers deployed for air-conditioning, there was a challenge in getting the optimal efficiency to keep the PUE low.

Also, under the hot climatic conditions of UAE, the HVAC circulation pumps were to be installed in roof top exposing it to extreme temperatures within the given space.

The Solution

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

“Variable frequency drive based hydro booster systems are used to allow monitoring and control of critical system parameters to ensure maximum efficiency and optimized 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



said Vignesh Babu, Senior Sales Manager at Grundfos Gulf Distribution.

Grundfos Hydro MPC E and Hydro Multi E water boosting systems with IP55 rated MGE motors were the perfect choice to withstand the harsh temperatures of 50 deg ambient at this data centre 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" - says Vignesh Babu.

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 datacenter through Grundfos's booster system with premium IE5 efficiency MGE motors. Further by integrating these hydro boosters with building management systems facilities team could get a detailed overview of HVAC pumps & booster system performance as well.

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 IE5 efficiency motors
4 x SLV pumps with wastewater control panels
Data communication modules for HVAC pumps & booster systems



Hydro Multi E



NBE pump