

GRUNDFOS DATA CENTRE SOLUTIONS:

**GRUNDFOS HELPS
QNB FINANSBANK DATA
CENTRE GO GREEN WITH
TPE2 TWIN PUMPS**REDUCED PUE VALUE
FROM 1.52 TO 1.21LOWEST AMOUNT OF
CARBON DIOXIDE
EMISSIONS

ENERGY SAVINGS OF

50%**QNB FINANSBANK, TURKEY****GRUNDFOS HELPS QNB FINANSBANK DATA CENTRE GO GREEN
WITH TPE2 TWIN PUMPS**

Founded in 1987, Finansbank is the first Turkish private bank that went public, it brought many firsts to the sector with its out-of-the-box service concept. In 2016, Finansbank and its subsidiaries were purchased by QNB-Qatar National Bank, the biggest financial organization of Qatar and the most prestigious one in the Middle East/Africa region.

QNB Finansbank is among the companies that show their environmental sensitivity and join the movement to more efficient use of energy. As Data Centres have to provide a continuous service 24/7, they are large consumers of energy, especially for cooling applications. This creates the need for reliable energy efficient solutions, therefore as part of this Efficiency Increasing Project (EIP) the focus turned to the 13 year old gas-based cooling system. Due to both energy efficiency and higher capacity, they decided to switch from a gas-based cooling system to a water-based one and thus go greener and make an impact.

THE SOLUTION

The solution was to implement a water based cooling system with Dry Coolers, Computer Rack Air Conditioners (CRAC) units and utilising Free Cooling. To further reduce the energy consumption Grundfos offered TPE2 Twin Pumps for the cooling circuits which, allowed Grundfos to be part of this very prestigious renovation project.

The design implemented consisted of 3 different CRAC systems consisting of 8 pieces at 71.8 kW cooling capacity, 6 pieces at 52.3 kW cooling capacity and 1 piece at 27.4 kW cooling capacity and 15 high efficiency class IE5 TPE2 Twin Pumps with integrated frequency converter. This water-based cooling system allowed for Free Cooling and switching the compressors off. When the outside temperature drops sufficiently the outside air is taken in, (normally during the winter months).



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RESULT

QNB Finansbank is leading the trend towards sustainable technologies, which help Data Centres reduce their environmental impact by having solutions that provide low electricity and water consumption, plus producing the lowest amount of carbon dioxide emissions. QNB Finansbank found it was easy to select Grundfos for this project because of the successful reference of Grundfos products used in QNB Finansbank Towers, which proved the high performance of Grundfos pumps and their smooth operation ensuring QNB Finansbank's confidence in Grundfos.

Once fully up and running the new cooling system will hit all the metrics; increased capacity, reduced energy, reduced CO2 and increased efficiency.



"Cooling systems are one of the highest energy consuming systems within a Data Centre, so Efficiency Increasing Projects (EIP) to create energy savings, reduce operating costs and lower carbon dioxide emissions have to be implemented to become a greener Data Centre. When the two stage EIP we are working on is implemented, we will reduce the energy consumption for cooling at QNB Finansbank Data Centre by more than 50% and the PUE value from 1.52 to 1.21. I think the biggest strength of Grundfos in Data Centre projects is the pumps that take the energy efficiency to the highest level."

Ömer Aşiran,

Mechanical Engineer / Maintenance Operation and Engineering Services, QNB Finansbank



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