



Grundfos IE5 solution cools Saudi's indoor garden

The Situation

Saudi Arabia is transforming into a global hub for tourism and commercial spaces. With Saudi Vision 2030, the nation focuses on creating world-class attractions, integrating advanced technologies, prioritizing sustainability and efficiency.

A client in Saudi Arabia was setting up an extensive indoor garden and encountered unique challenges in its chilled water (CHW) project specifications. The project required vertical inline pumps with IE3 efficiency motors and external VFDs to meet its operational goals. This specific pump design was chosen to allow for easy mechanical seal replacements without needing to the motor. Additionally, all pumps had to be integrated with the Building Management System (BMS) for continuous monitoring and control.

Customer required a holistic solution that address all these challenges.

The Solution

Grundfos proposed an innovative solution by offering close-coupled vertical inline pumps instead of the specified long-coupled design. This design significantly reduced vibrations, extended the mechanical seal life, and eliminated the need for realignment.

Grundfos's TP/TPE pumps featured internally flushed mechanical seals, providing greater durability compared to external flushing lines. With fewer components in the pump casing, maintenance requirements were minimized.

Additionally, some of the pumps were equipped with IE5 permanent magnet motors with built-in Variable Frequency Drives (VFDs), offering substantial energy savings. Use of CIM modules allowed seamless integration with the Building Automation System (BAS), enhancing efficiency and responsiveness.

Customer awarded the project to Grundfos not only for our advanced technologies but also for the strong, consistent pre and post-sales support. At every challenge, a Grundfos representative was there to offer a solution.

Mina Sidhom,
Senior Sales Development Manager, CBS

GRUNDFOS 

Possibility in every drop



upto 30%
energy savings

106.56 mT/year
CO₂ reduction

105.723 SAR/year
OPEX reduction

The Outcome

Grundfos exceeded project expectations by introducing advanced IE5 motors permanent magnet motors with built-in VFDs, cutting energy consumption upto 30% compared to the standard IE3 motors. Grundfos solution's seamless integration with Building Automation Systems (BAS) through CIM modules delivered a more efficient, responsive solution.

Beyond delivering complete chilled and hot water packages, Grundfos's comprehensive technical training empowered consultants and contractors, driving industry awareness of smart solutions that enhance energy efficiency, reliability, and lower maintenance costs.

Grundfos Supplied

TP-Closed couple vertical inline pumps

TPE-Close coupled vertical inline pumps with IE5 motors



TPE pumps

LSV

TP pumps

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