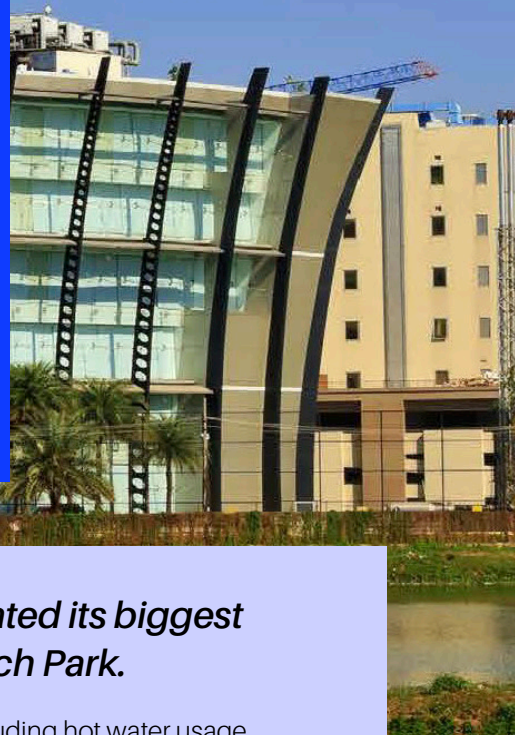


COPELAND HEAT PUMPS

Copeland installed sanitary heat pumps in topmost search engine company office facility in India



Recently, US-based search engine company has inaugurated its biggest office in Bengaluru, located at Bagmane Constellation Tech Park.

The facility would accommodate 900–1,000 employees with all basic amenities, including hot water usage in washrooms, gymnasium, dormitories, canteen, etc. Company management appointed a Bengaluru-based consultant for selecting a green product to serve the hot water requirement.

Challenge

As part of company's green initiative, the project required the use of a renewable source of energy to generate 500,000 LPD of hot water. However, to address the limitations of renewable technology, like the unavailability of sufficient sunlight all through the year, it was decided to install hybrid system using most efficient, reliable & locally developed technology.

Solution

The Copeland system integrator partnered with a consultant to supply a robust and dependable heat pump system and coupled it with solar heaters. Copeland supplied 6 machines of 1,000 LPH capacity which is integrated with 50KL capacity hot water mixing tank. The hot water temperature requirement is different for various end uses in the same office building, as mentioned below.

Canteen kitchen	40°C–45°C
Bathroom showers in gymnasium	38°C–42°C
Steam bath in gymnasium area	60°C
Wash basins in office area	32°C–35°C

The Heat Pump works on a simple principle. Heat absorbed from atmospheric air by the evaporator and the heat of compression is rejected through the water-cooled condenser. The maximum water temperature that can be reached is limited by condenser design LMTD and the maximum condensing temperature permissible for the compressor. Similarly, Heat Pump heating capacity is limited by the evaporating temperature range of the compressor. It helps in



reduction of carbon emissions in the atmosphere, as it saves up to 70% energy against electric geyser, 56% against solar with electric backup heater, and 55% to 60% energy efficient against LPG and diesel-fired boilers.

It is environment friendly and climate independent with low maintenance. Besides being reliable & efficient, the heat pump contributes to a more sustainable environment by utilizing renewable energy sources. Combining renewable sources and applying vapor compression technology results in sustainable means of water heating. It is helping large corporations achieve sustainability goals. These systems are fully automatic, so manual interventions are not needed. Copeland heat pumps are indigenously designed, manufactured and proven for Indian climatic conditions.



Result

Copeland team worked closely with the consultant and project owner to calculate the LPD hot water requirement of the project. Heat pump integration with hot water mixing tank alongside plumbing work is seamlessly completed by Copeland's authorized System Integrator partner. The team was present during installation and commissioning of heat pumps at the site.

System installation and commissioning was completed in September 2021. With the success of this project, the same customer is planning to install the heat pump in its Hyderabad facility.

Copeland is in unique position to serve sanitary water heating requirement in India by providing a locally built, GreenPro Certified, highly efficient, reliable product range supported with a strong channel network and service support.

To learn more, visit copeland.com

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