

Sustainable Cooling at Jungceylon in Phuket



Challenge

Jungceylon is one of the largest premier shopping and leisure malls located in Phuket. The mall embarked on a mission to transform the shopping mall experience by upgrading the central air conditioning facilities to comply with Singapore's Green Mark platinum standard, while ensuring the upgrading works do not disrupt the mall's operations.

Solution

Trane was selected to upgrade the chiller plant system. Solutions include:

- High accuracy chiller plant control management system complies with Green Mark's measurement and verification requirements.
- New high-efficiency chiller unit with a capacity of 2,200 RT.
- Replaced all major equipment such as water pumps, cooling towers, water treatment systems, ball tube cleaning systems.
- Major design breakthrough in reconfiguring piping layout and converting to a variable flow primary pumping system configuration, leading to high chilled water pumping efficiency.

Result

The upgraded chiller plant achieved a 30.8% energy saving and an operational efficiency of below 0.65 kW/RT, yielding an estimated energy saving of 2,134,113 kWh/year.

Jungceylon successfully achieved demonstrating excellence in energy efficiency and sustainability.

Project Highlights

Market: Thailand

Segment: Retail

- Products and Services used:**
- Chiller Model CVHH
 - Water pumps, cooling towers, water treatment systems, ball tube cleaning systems
 - Energy management System

Featured Products



Product name: Series E™ CenTraVac™ CVHH Water-Cooled Chiller

At a glance:

- Capacity range: 900-2000 RT
- Refrigerant: R-1233zd(E)
- Direct drive multistage compressors
- Semi-hermetic compressor design
- Rapid restart after power failure
- Energy saving options such as free cooling, thermal storage, heat recovery, heat pump and Adaptive Frequency™ drives



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