

Case study

Oasis Shopping Centre

Oasis Shopping Centre revitalised with Fujitsu General’s innovative HVAC solutions

The Oasis Shopping Centre has been transformed under the stewardship of Abacus Group into a modern retail hub with the support of Precise Air Group and featuring Fujitsu General solutions. Originally built in 1989 and acquired in 2015, the centre’s re-development focused on sustainability and efficiency, aligning with contemporary environmental standards.



Background

The revitalised Oasis Shopping Centre boasts a diverse range of office spaces, retail amenities, and modern cafe and dining options, with more than 110 specialty stores across its two levels. The redevelopment of the 21,260m² multi-purpose centre includes upgraded facilities that cater to both small and large businesses, providing a comfortable and sustainable environment for all occupants.

The centre is enhanced with the next generation of heating, ventilation, and air conditioning (HVAC) systems, including two water cooled Turbocor Magnetic Bearing Chillers (600kW and 1600kW), which optimises energy efficiency while maintaining a pleasant atmosphere for shoppers and tenants alike.

The Project

The Oasis Shopping Centre needed a modern HVAC system to meet its sustainability and efficiency goals. Its existing chiller was outdated, using old technology and refrigerants with high global warming potential (GWP). The incumbent system’s inefficiencies increased maintenance costs and raised the risk of failure, both of which were unacceptable.

The centre’s redevelopment required a new solution that could handle the centre’s varying demands, from peak shopping hours

to quieter periods. It was also essential for a low-load chiller to serve small tenancies efficiently. Fujitsu General and Precise Air Group worked together to design a customised HVAC system for the centre. This included installing two Turbocor chillers, which provide high energy efficiency and low maintenance needs, aligning with the centre’s environmental objectives.

Project Overview

Abacus Group and Precise Air Group selected the Turbocor chillers for their exceptional energy efficiency, oil-free operation, and use of HFO refrigerant R513a. The chillers can also ramp down at low loads, matching the building’s varying heat demands and reducing both energy consumption and maintenance costs significantly.

John Courtney, general manager – assets, retail, and development, Abacus Group, said, “As Abacus Group was developing its building services strategy, it was critical to engage with partners who could help make it happen. Abacus Group partnered with Fujitsu General and Precise Air and the team was very pleased that collaborating during the engineering and specifications stage resulted in a low GWP chiller being selected for the project to reduce both energy costs and the centre’s carbon footprint.”

Outcome

The new Turbocor chillers have created significant energy savings and reduced greenhouse gas emissions, while the oil-free operation and advanced diagnostics have minimised maintenance requirements and improved system reliability. The low GWP refrigerant has also contributed to a lower carbon footprint. The Oasis Shopping Centre now benefits from a more efficient, cost-effective, and sustainable HVAC system, aligning with the Abacus Group's commitment to sustainable property management and development.

John Courtney said, "The new chiller from Fujitsu General uses an eco-friendly refrigerant which reduces global warming potential significantly compared to traditional refrigerants. The Turbocor chillers were a perfect fit for Abacus Group's needs, meeting the functional brief while minimising environmental impact."



Project Overview

Site: Oasis Shopping Centre, Gold Coast, QLD

Client/Project Manager: Abacus Group / Precise Air Group

- Completion date: April 2024
- Application: Shopping Centre
- Installer/contractor: Precise Air Group

Product Overview

Outdoor units:

- 1 x 600kW AIRSTAGE Water Cooled Turbocor Magnetic Bearing Chiller
- 1x 1600kw AIRSTAGE Water Cooled Turbocor Magnetic Bearing Chiller

Controls:

- Danfoss Control & Components
- BACnet® Gateway connected to BMS

ABACUS

PreciseAir™
Fresh Thinking

AIRSTAGE