

Hotel converted from former government office building, awarded a 4.5-star NABERS Energy rating utilising CITY MULTI heat recovery technology.



Project Info

Application

Abode Hotel, Woden

Location

Woden, ACT

The Challenge

Canberra developers Geocon converted the 1970s Juliana House building, the former home of the Commonwealth Department of Ageing, into a hotel. The developers aimed to secure a 4.5 NABERS star rating, making it the first hotel to reach above a three-star rating.

All energy systems that impacted the NABERS rating would need to contribute to reduce energy consumption to help achieve the 4.5 star rating.

A part of the energy management requirements is individual control of heating and cooling for different rooms so that only rooms in use would have air conditioning on.

The Solution

Mitsubishi Electric CITY MULTI VRF heat recovery system was selected for the adaptive reuse of an older office building into the Abode Hotel. The system provides simultaneous heating and cooling of different rooms throughout the hotel.

The Team

HVAC Contractor

Elite Heating & Cooling

Developer

Geocon

Hotels often required cooling in some areas while providing heating in other areas & CITY MULTI is the only Variable Refrigerant Flow (VRF) system able to offer simultaneous heating & cooling using two pipes instead of the usual three. The reduction of refrigerant piping has the added benefit of reduced installation costs compared to a 3-pipe system.

Individual hotel rooms, meeting & function rooms & tenancy spaces can be individually turned on & off depending on occupancy, saving energy when not in use.

The outdoor units were placed on the roof, two per floor, freeing up valuable space on each floor where traditional water cooled central plant would have been located. This increased the rentable space available as much as possible. The heat recovery system contributed to the overall energy savings for Abode Woden which was awarded the 4.5 NABERS star rating, making it the highest NABERS rated hotel at the time.

UNIT INFORMATION



Outdoor Units

PURY-P500YSJM-A1 x 1
PURY-P400YSJM-A1 x 1
PURY-P350YJM-A x 8
PURY-P300YJM-A x 1



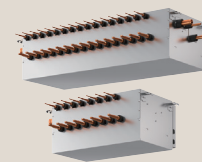
PURY-P200YJM-A x 3



Indoor Units

PEFY-P100VMA-E x 1
PEFY-P125VMA-E x 1
PEFY-P140VMA-E x 2
PEFY-P20VMA-E x 48

PEFY-P25VMA-E x 55
PEFY-P32VMA-E x 22
PEFY-P40VMA-E x 29



BNC

CMB-P108V-GA1 x 1
CMB-P104V-GB1 x 9
CMB-P1013V-GA1 x 1
CMB-P1013V-G1 x 8



Controllers

AG-150A-J x 2
PAC-SC51KUA-J x 2
PAC-SE55RA x 158
PAC-YG50ECA-J x 3
PAR-21MAAJ x 158