

HYBRID CITY MULTI solution allowed for staged installation and compliance with refrigerant concentration regulations in AS/NZS 5149 without requiring a refrigerant leak detection system.



## Project Info

### Application

MannaCare – aged care facility

### Location

Doncaster. VIC

### The Challenge

MannaCare is an aged care facility located in Doncaster, a suburb to the north of Melbourne. The facility has been in operation since circa 1984 providing 90 rooms for elderly patients care.

Through 2018-2019 a refurbishment of the existing aged care site was carried out to upgrade and modernise the facilities for residents, staff and visitors. This included mechanical system upgrades and air conditioning systems to serve new accommodation rooms.

As the facility was to remain operational during the construction work, the air conditioning was required to be installed in stages. However, the real challenge was in meeting Australia's refrigerant concentration standards (AS/NZS 5149), given the small size of the accommodation rooms.

## The Team

### Client

MannaCare

### HVAC Contractor

Boyle & Grigg Airconditioning

### The Solution

Mitsubishi Electric HYBRID CITY MULTI system offered a versatile solution and allowed for staged installation that corresponded to the construction program. The system uses refrigerant only between the outdoor unit and the Hydro BC Controller (HBC), and water between the HBC Controller and the indoor units.

Using the HYBRID CITY MULTI system also allowed the air conditioning system to comply with the refrigerant concentration regulation in AS/NZS 5149 without requiring a refrigerant leak detection system. Low static ceiling concealed units with 200mm height for low ceilings, met the client's requirement for discreet system.

The HYBRID CITY MULTI provided simultaneous heating and cooling (R2) and uses heat recovery between the heating and cooling units to increase system efficiency by reducing the input energy of the system.

## UNIT INFORMATION



### Outdoor Units

PURY-P300YLM-A x 1  
PURY-P350YLM-A x 1  
PURY-P450YLM-A x 2  
PURY-P650YSLM-A x 1  
MXZ-8C140VAMD-A x 1

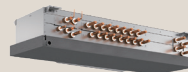


### Indoor Units

PEFY-P100VMH-E2.TH x 1  
PEFY-P140VMH-E2.TH x 1  
PEFY-P200VMS-E x 3  
PEFY-WP25VMS1-E.TH x 15  
PEFY-WP32VMS1-E x 10

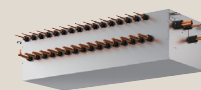


PEFY-WP40VMS1-E x 6  
PLFY-WP32VBM-E x 1  
PLFY-WP40VBM-E x 1  
SLZ-KA35VAQR2.TH x 3



### HBC

CMB-WP1016V-GA1 x 1  
CMB-WP108V-GA1 x 3



### BNC

CMB-P1010V-GA1 x 1



### Controllers

AE-200E x 1  
PAC-SE55RA-E x 38  
PAR-33MAA-J x 41

Commissioned: 2019