



# COMMERCIAL HEAT PUMP

## ANU UNION COURT STUDENT ACCOMMODATION

The ANU Union Court (Buildings 152 and 156) is part of the Australian National University student accommodation. Situated on Griffin's Municipal Axis, Building 152 consists of 450 one-bedroom student rooms, while Building 156 features a swimming pool, gym and health and wellbeing amenities.

### Hot Water Requirements

The hydraulic consultant, Sellick Consultants, required high efficiency hot water plants for the two new buildings in line with the university's innovative sustainable design focus. The main hot water plant for Building 152 needed to provide hot water needs for 450 students, with an 11,250L peak load. The requirement for Building 156, which features 32 showers and 44 basins, was 3,464L over the peak.

### Solution

Rheem recommended commercial heat pumps because of their high efficiency and low energy input. The heat pumps also require a significantly smaller footprint compared with a traditional solar thermal plant, which freed up valuable space in the buildings.

To overcome the challenge of ensuring sufficient hot water, even during Canberra's periods of low ambient temperatures, while also maximising the efficiency of the heat pump operation at all other times, a strategically-controlled electric boost was installed. In addition, space issues were overcome by utilising large capacity stainless steel tanks and double stacking horizontal discharge heat pumps.



## FACTS & FIGURES

### Building 152

1 x Rheem Commercial Heat Pump system consisting of:

- 8 x Rheem Commercial Heat Pump model 953022/H – Horizontal Discharge
- 6 x Rheem RT2000N9ALU Stainless Steel Storage Tanks
- 6 x 30Kw Heating Elements 050353
- 8 x Grundfos CM3-2 Primary Circulator 366084
- 2 x Heat Pump Controllers 052140

### Building 156

1 x Rheem Commercial Heat Pump system consisting of:

- 3 x Rheem Commercial Heat Pump model 953022
- 4 x Rheem RT1000N9ALU Stainless Steel Storage Tanks
- 4 x 15Kw Heating Elements 050353
- 3 x Grundfos CM3-2 Primary Circulator 366084
- 1 x Heat Pump Controller 052140

Hydraulic Consultant: Sellick Consultants

Installing Contractor: AMS

