



# COMMERCIAL HEAT PUMP & GUARDIAN

## ST MARY'S TOWERS RETREAT CENTRE – DOUGLAS PARK



Father Stephen Dives from the historic St Mary's Towers, located on 500 acres of natural bushland in Sydney's Macarthur region, approached Rheem when a competitor's heat pumps at the retreat failed after less than five years in operation. Douglas Park is a rural area with no gas or LPG available on site. Limited capacity three-phase power on the site meant electric water heaters were not an option and the warm water system had to comply with NSW Department of Fair Trading guidelines.

### Hot Water Requirements

Rheem was asked to provide a cost-effective solution to provide for the hot water and warm water needs of up to 50 people. Rheem's challenge was to provide a suitable selection to service a building with an anticipated consumption requirement of 1250 litres over a one hour peak period each day and a total of 1875 litres every 24 hours.

### Solution

- 1 x Heavy duty electric 613315 w/ 3 x 3.6kW heating elements
- 2 x 953022 heat pumps
- 3 x 610430 storage tanks
- 1 x 940160 160L/min Guardian warm water
- 1 x 940002 250L/min ultraviolet disinfection



## FACTS & FIGURES

### Estimated Annual Hot Water Consumption

342,178 litres based on 50% occupancy

### Estimated Annual Running Cost\*

Electric Only: \$5,015 p.a.

Electric and heat pump: \$1,376 p.a.

Estimated Savings: \$3,639 p.a. providing a 5.1-year payback period based on 24c per kWh

Owner: Missionaries of the Sacred Heart

Installed by: Eymael Plumbing



\* Data correct as at January 2017. Natural Gas estimated at 2.5 cents/MJ

