



Install
a Rheem®

COMMERCIAL CASE STUDY



Rheem Powers Sustainable Hot Water at Rio Tinto's Gudai-Darri Mine

Gudai-Darri, Rio Tinto's first greenfield iron ore mine in Western Australia's Pilbara region in over a decade, is a technologically advanced facility with a 43-million-tonne annual capacity. Rheem Commercial collaborated with SPP Group, Primero, and Aussie Modular Solutions to deliver a sustainable hot water system for the mine's transit shower lounge, supporting 400 end-of-swing showers and a total demand of 24,000 litres.

THE CHALLENGE

The mine required a robust hot water system to meet high-demand shower facilities in a remote, harsh environment. Key challenges included:

- Providing 24,000 litres of hot water daily for 400 workers' showers.
- Ensuring safety and accessibility for system monitoring and maintenance in a high-risk mining environment.
- Reducing energy consumption to align with Rio Tinto's sustainability goals.
- Complying with occupational health and safety (OH&S) standards in a remote location.

THE SOLUTION

Rheem implemented a tailored hot water solution, featuring:

Three Rheem 953027 Air-to-Water Heat Pumps: Delivered high-efficiency hot water with a Coefficient of Performance (COP) of 4.0.

Three 1000L Storage Tanks (610100): Ensured sufficient capacity for peak demand.

LAN Cable Monitoring (17495): Enabled ground-level monitoring of stacked heat pumps, reducing OH&S risks associated with working at height.

Collaborative Assembly: Skids assembled near Perth by Aussie Modular Solutions and Holdfast Contracting, with Rheem's support, ensuring compliance with Australian Standards (AS/NZS 3500).

THE IMPACT

The system delivered significant outcomes:

Reliability: Met the daily 24,000-litre hot water demand, supporting worker welfare.

Safety: Ground-level monitoring via LAN cables eliminated risks of working at height.

Energy Efficiency: Achieved up to 40% energy savings compared to traditional systems, reducing operational costs.

Sustainability: High-efficiency heat pumps supported Rio Tinto's environmental goals.

Compliance: Adhered to OH&S and Australian regulatory standards, ensuring safe operation.

This project showcased Rheem's ability to deliver sustainable, safe, and efficient hot water solutions in challenging industrial settings, enhancing operational reliability at Gudai-Darri mine.

THE KIT

Male showers:

- 7 x Rheem 35kW Air to Water heat pump horizontal outlet
- 6 x Rheem 3000L SS storage tanks RT3000N9ALU-1
- 6 x Rheem 30kW Commercial Electrical Heating Unit
- 3x Rheem LAN cables 17495

Female showers:

- 1 x Rheem 35kW Air to Water heat pump horizontal outlet stackable 953035HS
- 2 x Rheem 35kW Air to Water heat pump horizontal outlet 953035HO
- 3 x Rheem 3000L SS storage tanks RT3000N9ALU-1
- 3 x Rheem 30kW Commercial Electrical Heating Unit



**CONTACT THE
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