RHEEM THERMAL

COMMERCIAL HEAT PUMP WATER HEATER

BUILT TO LAST - HIGH EFFICIENCY - EASY INTEGRATION

DESIGNED AND MANUFACTURED BY RHEEM

A HISTORY OF C°MFORT

Brothers Richard and Donald Rheem founded Rheem Manufacturing Company in Emeryville, CA, in 1925. While the company has produced several products in its nearly 100 years of operation, Rheem is currently the only manufacturer in the world that produces heating, cooling, water heating, pool & spa heating and commercial refrigeration products and it is the leading manufacturer of water heating products in North America.

AWARD-WINNING INNOVATIONS

From industry-leading technologies to next-generation energy efficiencies, Rheem has been a pioneer in developing some of the most innovative advancements in heating, cooling and water heating. With a long list of award-winning solutions, Rheem continues to deliver advanced comfort, savings and experiences to our customers—just as we've done for nearly 100 years.

A TRUSTED FAMILY OF BRANDS

Both in the US and abroad, innovative products from the Rheem family of brands lead the industries they serve. To maintain our leadership position regardless of the brand badge affixed to them—our products must always be unique in the marketplace, relevant to our customers' lifestyles, and authentic to our company's values.

EVERHOT Raypak A Rheem Company RUUD

07 Research & Development Centers

10 Lab Facilities

25 Global Manufacturing Centers

500 Engineers / Scientists

WHY CHOOSE RHEEM

Rheem water heaters were first introduced to Southeast Asia in 1968. For over 50 years Rheem has provided residential and commercial expertise, maintaining a good reputation and gaining trust from project specifiers, developers, installers and end users through out all of Asia.

Offering a wide range of water heaters designed to meet the unique needs and requirements of almost any commercial application, Rheem is dedicated to providing innovative water heating solutions to commercial projects across SEA. From inception to commissioning, Rheem application engineers, sales, and customer service teams are available to provide support to our local partners to deliver a personalized consultation to their client's commercial projects.

Our expertise and advantages:

Project Installation Support

Rheem coordinates with our local partners to help ensure the Rheem Thermal Water Heater fits their client's project specifications and to help support projects all the way through to commissioning.

Design Customization Capability

Rheem supports our partners to deliver highly customizable projects using our extensive knowledge and project library. Thus helping provide the exact solution for projects across Southeast Asia.

Regional Technical Support

Rheem remotely supports our partners located across SEA to design and deliver flexible and highly customized water heating solutions for their client's needs on projects.

EXPERTISE

- **Hot water system conceptualization flexibility tailored for customer's requirements**
- **Library with 1000s of projects to pull from**
- **AutoCAD and Revit (BIM) drawings**
- **Exclusive commercial hot water system operation and maintenance manuals**
- **Building plumbing designs**
- **Method of installation statements**
- **Customized electrical control system designs**

Manufactured in accordance with:

CERTIFIED ISO 9001:2015 COMPANY

WaterMark

AS/NZS APPROVED

UNDERSTANDING THE NEEDS AND EXPECTATIONS OF INTERESTED PARTIES

Rheem's Thermal Heat Pump Water Heaters and Chillers are designed and manufactured in accordance with Australian and New Zealand regulatory standards. Rheem Thermal Systems Group is continously seeking to improve the performance of its products. Hence, the design, specifications and standard compliance may change without notice. Product data should be verified at time of purchase.

Rheem

Our commitment to SUSTAINABILITY

For nearly 100 years, Rheem has been a leader in heating, cooling and water heating innovation. And we continue to lead with our bold approach to improvements for our products and processes to dramatically cut our impact on the environment, while empowering both our customers and employees to work and live sustainability. It's all a part of our bold vision for the future and equally bold commitment:

One of our 2025 Commitments is we will reduce greenhouse gas emissions by 50% and achieve zero waste to landfill in our global manufacturing operations.

DESIGNED FOR ZERO WASTE

DEGREES OF **LEADERSHIP**

DEGREES OF **INNOVATION**

DEGREES OF **EFFICIENCY**

A GREATER DEGREE OF GOOD

Our Heat Pump Family

Air-to-Water Heat Pump

An air-to-water heat pump absorbs heat from the surrounding air and transfers it into the water line. Heat pumps transfer heat by circulating refrigerants through a cycle of evaporation and condensation- basically the reversed process of a household refrigerator where the heat energy produced is used for water heating and the by-product is cold air. This system yields a relatively high Coefficient of Performance (COP) in ASEAN countries having a minimum of 25°C ambient temperature, requiring less amount of electricity to generate heat for hot water use.

Water-to-Water Heat Pump

A water-to-water heat pump typically transfers heat from industrial water. In normal installations, water sources can be from the chiller side or cooling tower side of the building's centralized air cooling system that provides a relatively constant heat source with which the heat pump utilizes the waste heat energy from other equipment and converts it to a heat source to generate heat more efficiently for hot water use.

UNDERSTANDING HOT WATER

Is What Rheem Does Best

With nearly 100 years of hot water experience, Rheem knows a thing or two about designing for your needs. Our Rheem Thermal's features and durability ensure customers' businesses stay up and running.

BUILT TO LAST LONGER

- Manufactured in Australia
- Marine grade Aluminium case
- Rheem Cote® anti-corrosion treatment to provide ultra-protection to evaporator
- Isolated compressor compartment to avoid contact with rain water
- Titanium heat exchanger options to guard against aggressive water quality

HIGH EFFICIENCY

- High COP up to 5.2
- High EER up to 4.2
- Oversized evaporator for maximum heat capture
- Intelligent circulation pump control

EASY INTEGRATION

- Intelligent weatherproof controller with LED display
- Easy temp and pressure monitoring
- Tariff optimizing intelligent control
- Multiple operation scheduler control
- Clear error descriptions display on the screen
- High level interfacing for BMS – BACnet - Modbus

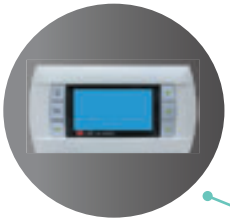
Built to Last

- Marine Grade Aluminium
- Rheem Cote®
- Titanium

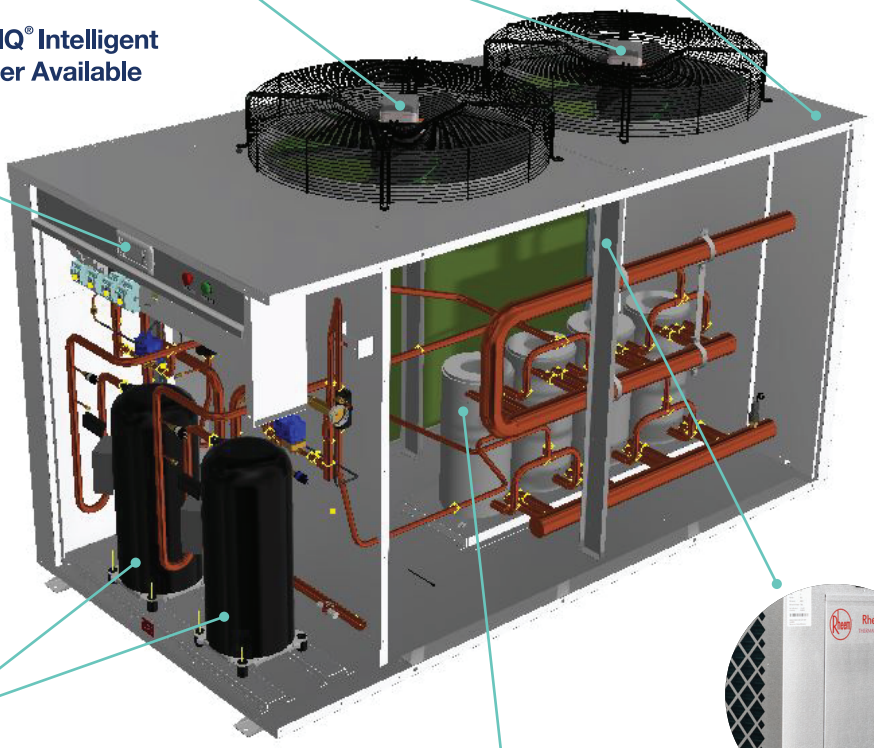
REASONS TO GO WITH RHEEM THERMAL

EBM Papst High Static
Exhaust Fan Available

Rheem Cote® High Resistance
Anti-Corrosion Coating and
Oversized Evaporator for max
heat capture and protection.



Rheem IQ® Intelligent
Controller Available



Marine Grade
Aluminium Case

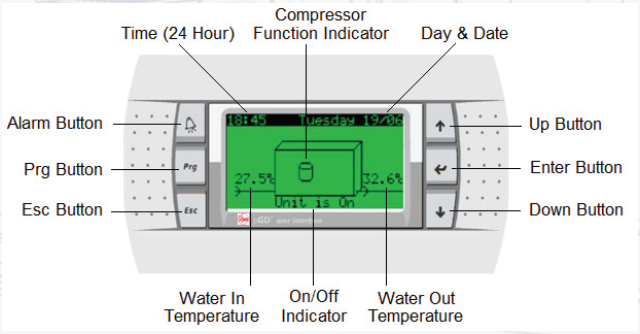
World Renowned
Copeland Compressor

High Efficiency
Dual Coil Condenser

Manufactured in
Australia by Rheem

Rheem IQ™ - Smart Technology

Intelligently monitor all critical temperature and pressure points.



MULTIPLE SAFETY PROTECTION AND ERROR CODES INDICATION

- Fast and easy troubleshooting
- Intelligent circulation pump control

BETTER ENERGY COSTS SAVINGS

- Reduce cost through staging, scheduling and tariff optimization.

HIGH LEVEL INTERFACE CONNECTIVITY FOR BMS MONITORING

- 100+ Available Parameters for Remote Monitoring, Support BACNET & MODBUS
- BMS interface
- Centralized control panel
- 100+ Available Parameters for BMS monitoring
- Supports BACnet MS/TP, BACnet TCP/IP and pCOweb serial card
- Suitable for indoor or outdoor installation
- PCo connectivity

Sydney Opera House

Creating a sustainable future for an architectural icon.

When it comes to challenging retrofits, few can match the task of helping the Sydney Opera House win a prestigious 4 Star Green Star rating from the Green Building Council of Australia.

Completed in 1973, Australia's most iconic structure required a series of energy efficiency improvements in order to see it become one of the few World Heritage buildings to be awarded green certification. Two key areas to be addressed was the generation of internal hot water and the ability to remove heat from the building.

Rheem was asked to take part in the ambitious project in late 2014, due to its extensive array of hot water system expertise. Not surprisingly, the task wasn't a simple one.

The Opera House represents a unique proposition, in that it bears a constant cooling load due to the lighting and people loads. The building draws water from Sydney Harbour through large capacity heat exchangers and uses it to transfer heat (generated by chillers, which keep the internal spaces at the desired temperature) to the harbour. So the key question became: how could the heat generated by the chillers also be used to improve energy efficiency and make a powerful case for green credentials?

A unique dual benefit solution

Rheem commissioned the installation of two Rheem Thermal water-to-water hot water heat pumps deep within the Opera House structure in July 2015. Both units were designed to extract heat from the air conditioning condenser water loop at high efficiency for use in heating the building's hot water storage capacity.

In carrying out that task, the condenser water is cooled, so the heat pump not only provides high efficiency hot water but assists with the task of chilling, or dispersing heat out of the building. When you combine the efficiencies in hot water and chilling, the Rheem Thermal Heat Pump is operating at a COP of above 7.0, making the system a crucial component of the energy efficiency improvements which led to the 4 Star Green Star performance rating.

The project was unique and required considerable direct involvement by Rheem in the application design. The expertise Rheem Thermal has in water heat pump design, and particularly around water-to-water-type heat pumps, proved to be invaluable.

Features

- 2 units of Rheem Thermal hot water heat pumps
- Design capacity of 2100L per hour
- Watermarked plate heat exchangers
- Reduced energy consumption by more than 10%

Holiday Resort Baruna Bali

The Holiday Resort Baruna Bali is built in a traditional low-rise Balinese style, complementing its beachfront setting. When the resort underwent a major renovation and refurbishment- all major mechanical, hydraulic and electrical services were replaced and upgraded with the latest high efficiency systems available.

With 195 rooms a number of kitchens, bars, laundry, gym and day spa facilities. The hotel owners expressed their desire to incorporate the latest high efficiency water heating systems into the hydraulic design. This resulted in the installation of the first and largest hot water hybrid solar/heat pump system in Indonesia.

The system design features solar pre-heat, consisting of Rheem solar collectors and storage feeding into a heat pump and storage boost system. In the event solar gain is reduced by inclement weather the heat pump system automatically boosts the water ensuring an uninterrupted hot water supply to guests and facilities within the resort.

Installation included:

- 192 Rheem solar collectors
- 11 Rheem Thermal hot water heat pumps
- 63 Rheem storage tanks
- 5 separate hot water zones
- Design capacity 60,000L per day
- Savings in excessive 80%

The Rheem Thermal heat pumps were an ideal choice for boosting in this climate. COP's of 4-5 are experienced. Traditionally when solar pre-heat systems are installed electric or gas boost heaters are used to boost in times of less solar gain. Boosting with a heat pump reduces the energy a traditional electric or gas heater would use to boost the water by 75-80% making this the most energy efficient system available.

Rheem Thermal Specifications

Description	Model		
	RTHW Series (High Temp)	RTHW Series	RTHW Series (60Hz)
Application	Domestic Hot Water / Process Industry		
Refrigerant Type	R134A	R407C	
*COP (Nominal)	Up to 5.0	Up to 5.2	Up to 5.1
Rated Outlet Water Temperature	65°C	61°C	
Max. Outlet Water Temperature	70°C (> 20°C Ambient)	65°C (> 20°C ambient)	
Working Ambient Range	0°C - 46°C		
Defrost	Hot Gas Injection		
**Heating Capacity Range	20 – 183kW (Standard Models)	10 – 136kW (Standard Models)	30 - 65kW (Standard Models)
	*Rating conditions: 30°C ambient, 60% RH, 39°C water in, 45°C water out	*Rating conditions: 30°C ambient , 60% RH, 39°C water in, 45°C water out	*Rating conditions: 30°C ambient, 60% RH, 39°C water in, 45°C water out
	**Higher heating capacity available (up to 307kW)	**Higher heating capacity available (up to 549kW)	**Higher heating capacity available

Description	Model	
	RTWW Series (High Temp)	RTWW Series
Application	Domestic Hot Water / Process Industry	
Refrigerant Type	R134A	R407C
*Heating COP (Nominal)	Up to 5.3	
*Cooling EER (Nominal)	Up to 4.3	
Rated Outlet Water Temperature	65°C	55°C
Max. Outlet Water Temperature	70°C	61°C
Working Source Inlet Range	10°C - 35°C	10°C - 35°C
Defrost	Hot Gas Injection	
**Heating Capacity Range	33 – 176kW (Standard Models)	23 – 128kW (Standard Models)
	*Rating conditions: Heating: 39°C water in, 45°C water out, Cooling: 20°C water in, 15°C water out	*Rating conditions: Heating: 39°C water in, 45°C water out, Cooling: 20°C water in, 15°C water out
	**Higher heating capacity available (up to 352kW)	**Higher heating capacity available

Model variations

Model
- RTHW - Air to Water
- RTWW - Water to Water

Refrigerant
- R134A
- R407C

Electrical
- 380-420V/3Ph/50Hz
- 220-240V/1Ph/50Hz
- 380/3Ph/60Hz

Options Continued
- Horizontal Air
- Opposite Hand
- Built-in Pump
- Double Coated Evap Coil
- Noise Reduction, BMS Card
- Powder Coated Finish
- Stackable Units

Evaporator
- Single Wall Shell & Tube Copper
- ABS Titanium Shell & Tube
- Double Wall Coaxial Copper
- Double Wall Brazed Plate
- Single Wall Brazed Plate

Condenser
- Single Wall Shell & Tube Copper
- ABS Titanium Shell & Tube
- Double Wall Coaxial Copper
- Double Wall Brazed Plate
- Single Wall Brazed Plate

Options
- Carel Easy
- Rheem IQ
- Reverse Cycle
- Vertical Air

CONTACT US

Call us +65-6872 1161
E-mail us at SalesAsia@Rheem.com
Or visit www.RheemAsia.com