



# COMMERCIAL HEAT PUMP



LOW AMBIENT OPERATION OPTIONS

COMPACT AND FLEXIBLE DESIGN

DUCTED AND NON-DUCTED MODELS

RHEEM RELIABILITY

ATTRACTS RENEWABLE ENERGY CERTIFICATES

High Efficiency Heat Pump  
Water Heater

Capacity up to 22kW

Specification options available

Warranty 2 years<sup>#</sup>

INSTALL A RHEEM®



Rheem commercial heat pumps provide hot water to Southern Ocean Lodge – Kangaroo Island, SA

# HIGH EFFICIENCY HEAT PUMP WATER HEATING

Understanding hot water is what Rheem does best and this experience has led to the development of a truly commercial grade heat pump that delivers high thermal efficiency and hot water at 60°C, something not all heat pumps can boast.

## BUILT TOUGH

Rheem's Commercial Heat Pump is designed with the commercial user in mind. Up to 22kW output means over 6,500 litres of hot water can be produced per day.

Only the world's best components have been selected to ensure optimal performance and durability.

Superior scroll compressor technology is employed to provide a quieter unit and the reliability expected in a commercial product.

The entire evaporator coil is epoxy coated to provide long lasting protection from corrosive atmospheres and a stainless steel heat exchanger provides protection on the water side.

## OPTIONS

The Rheem Commercial Heat Pump is available with a range of options including:

- Dipped evaporator coils to provide extra protection in corrosive environments.

- Aluminium or stainless steel cabinet
- Horizontal discharge fans (non ducted models only)

Horizontal discharge models can be stacked two high to reduce plant footprint.

Ducted models are designed to discharge the cold air outside of the plant room. Maximum static pressure in the duct is 40Pa and a duct 565mm wide x 800mm high with minimum resistance at the duct outlet is recommended.

## HIGH EFFICIENCY

The Rheem Commercial Heat Pump has an average Coefficient of Performance (COP) of 3.81<sup>1</sup>, which means more than 73% of the energy used to produce hot water is free from the atmosphere. Naturally, the hotter the conditions the better the performance.

The evaporator incorporates rifle bore copper tubes, which increase heat transfer by up to 20% over smooth bore tubing. Slit aluminium fins provide even greater transfer of heat from the air to the refrigerant.

## ALL WEATHER PERFORMANCE

Automatic defrost is now a standard feature on every Rheem Commercial Heat Pump. This feature allows the heat pump to continue performing in low ambient temperature conditions by diverting a portion of the hot refrigerant to the evaporator coil to melt any ice which may form.

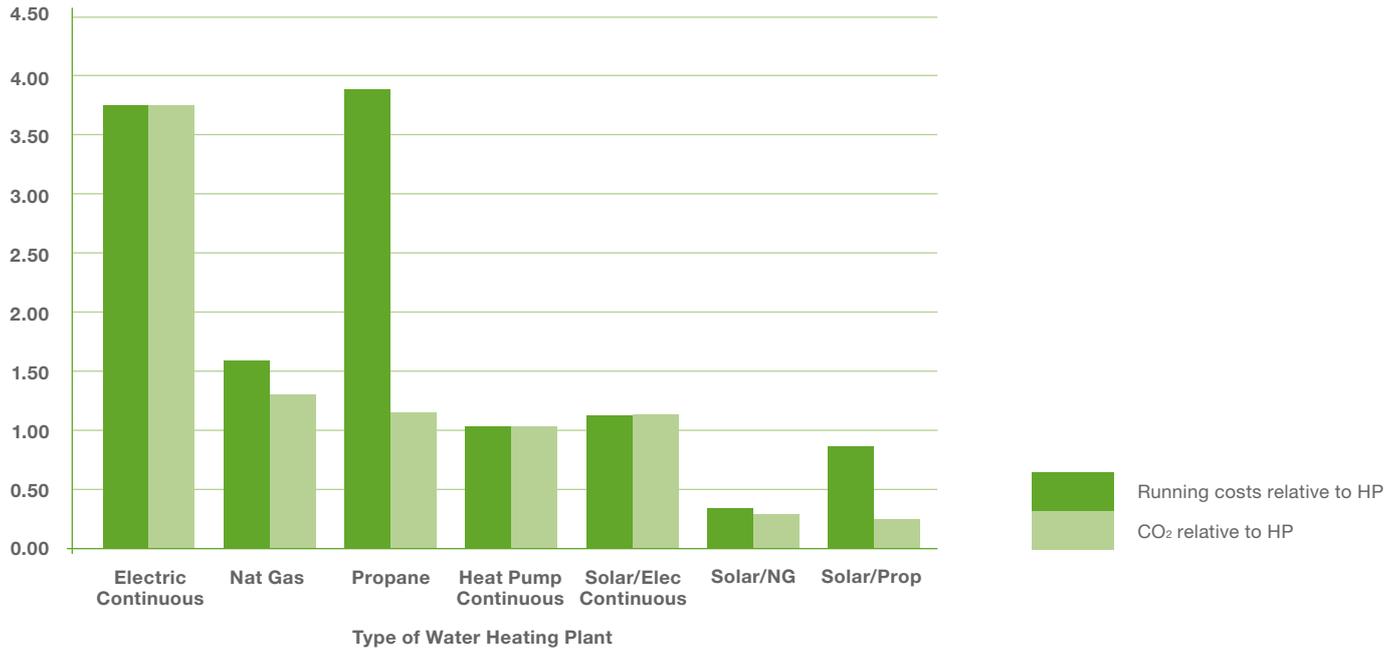
## RENEWABLE ENERGY CERTIFICATES

The Rheem Commercial Heat Pump is eligible to create renewable energy certificates (RECs). Your Rheem Technical Sales representative can advise the RECs applicable to your installation.

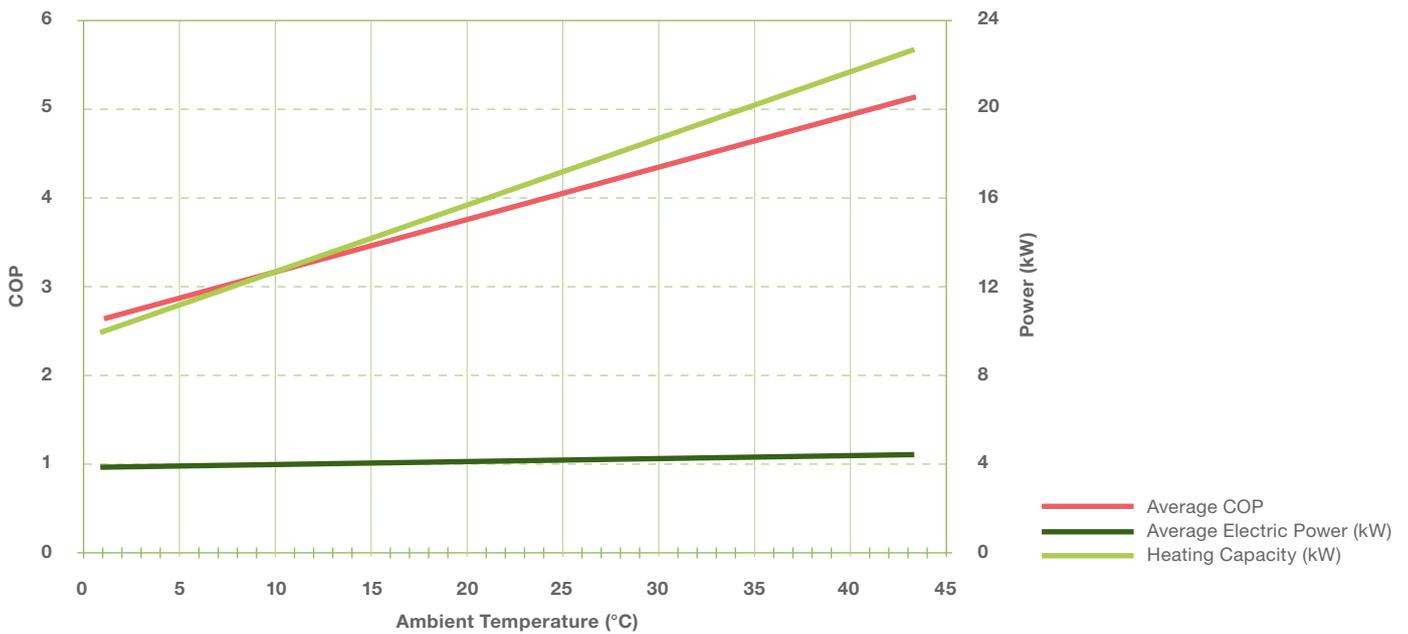
## RHEEM BACK-UP

Like all Rheem commercial water heaters, the Commercial Heat Pump is supported by a nation wide service team and local technical support, to ensure correct sizing, specification and installation.

## RELATIVE RUNNING COST AND CO<sub>2</sub> EMISSIONS<sup>3</sup>



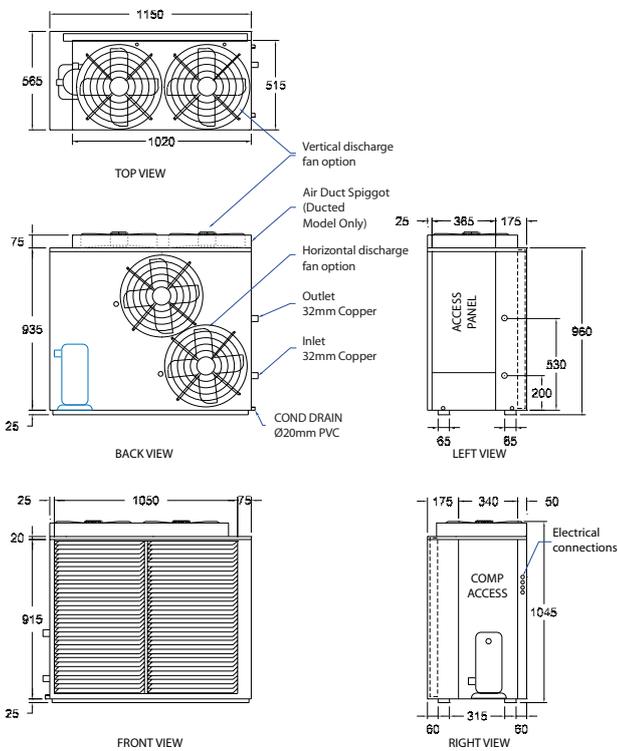
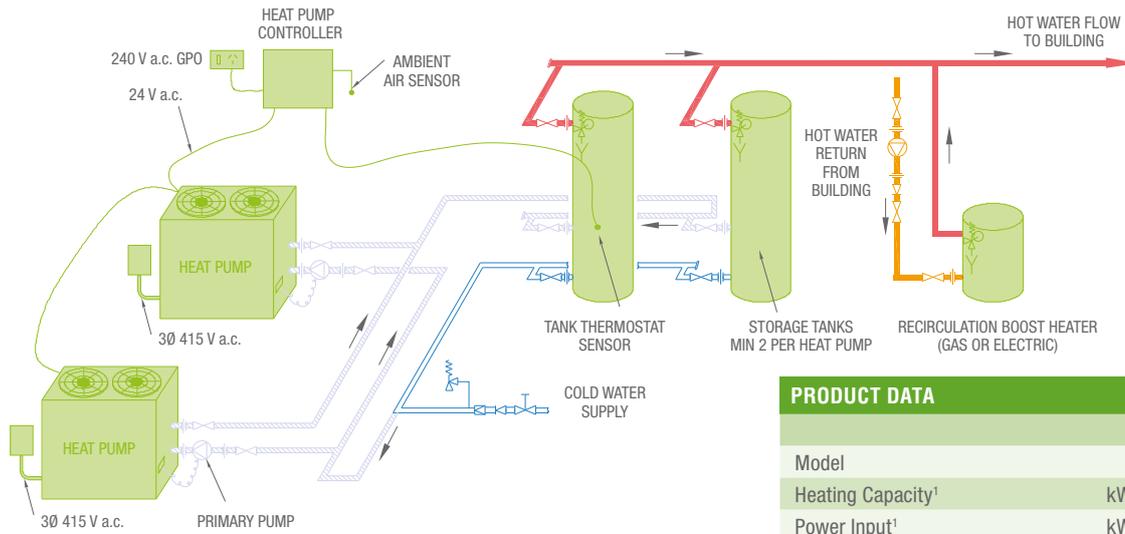
## INPUT, OUTPUT AND COP VS AMBIENT TEMPERATURE



### RECOVERY

	Ambient Temperature °C (60% RH)							
	5	10	15	20	25	30	35	40
Output (kW)	11.25	12.75	14.25	15.75	17.25	18.75	20.25	21.75
Recovery – Litres per hour at								
20°C rise	484	548	613	677	742	806	871	935
30°C rise	323	366	409	452	495	538	581	624
35°C rise	276	313	350	387	424	461	498	534
40°C rise	242	274	306	339	371	403	435	468
45°C rise	215	244	272	301	330	358	387	416
50°C rise	194	219	245	271	297	323	348	374
55°C rise	176	199	223	246	270	293	317	340

# TYPICAL INSTALLATION



## PRODUCT DATA

	Ducted	Non Ducted
Model	952 022	953 022
Heating Capacity <sup>1</sup>	kW 16	16
Power Input <sup>1</sup>	kW 4.2	4.2
Coefficient of Performance <sup>1</sup>	3.8	3.8
Recovery @ 45°C Rise <sup>1</sup>	L/hr 300	300
Operating Range	°C 0 – 40	0 – 40
Outlet Temperature	°C 60	60
Refrigerant	R22	R22
Pressure Relief Valve Setting	kPa 1,000	1,000
Expansion Control Valve Setting <sup>2</sup>	kPa 850	850
Maximum Water Supply Pressure		
Without ECV	kPa 800	800
With ECV	kPa 650	650
Electrical Connection	3 Phase / 415V / 50Hz	
Current per Phase (running)	Amps 11.7	11.7
Minimum Circuit Size (per phase)	Amps 20	20
Air Flow	L/s 1,600	1,600
Maximum Static Pressure	Pa 40	-
Minimum Ventilation per inlet and outlet	m <sup>2</sup> 1	1
Sound Pressure Level @ 1m	dBA 70	61
Approx Weight Empty	kg 120	120
Approx Weight Full	kg 125	125
Plumbing Connections	32mm Copper	
Storage per Heat Pump	L 400 to 4,000	

## HEAT PUMP PIPE SIZING CHART

Number of Heat Pumps in Parallel	1	2	3	4	5	6
Primary Pump	Grundfos UPS 32-80B					
Branch Size	32	32	32	32	32	32
Header Size	32	50	65	65	80	80

Note: Header pipe sizing is based on a total length of 20m of primary flow and return piping and 10 bends, excluding equa-flow manifolds on storage tanks and heat pumps.

## ACCESSORIES

Storage Tank 410L	610430	Primary Circulator	UPS32-80B
Storage Tank 1,000L	1000SS	Controller	052140

<sup>#</sup> Warranty: 2 year parts and labour on sealed system. 1 year parts and labour on remainder  
<sup>1</sup> 20°C / 60%RH.

<sup>2</sup> ECV not supplied with the water heater.

<sup>3</sup> Comparison will vary depending upon your location, configuration of system installed, type of water heater being

replaced, hot water consumption and fuel tariff. Maximum financial savings can be achieved only when the tariff for the electric water heater replaced was 24 hour continuous. CO<sub>2</sub> emissions for fuel types is based on AGO published information. Materials and data are subject to change without notice due to ongoing product improvements.

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