

Commercial Hot Water

Make a difference...

Quantum
Eco Hot Water

SOLAR
heat pumps

The Company



Quantum Energy Technologies

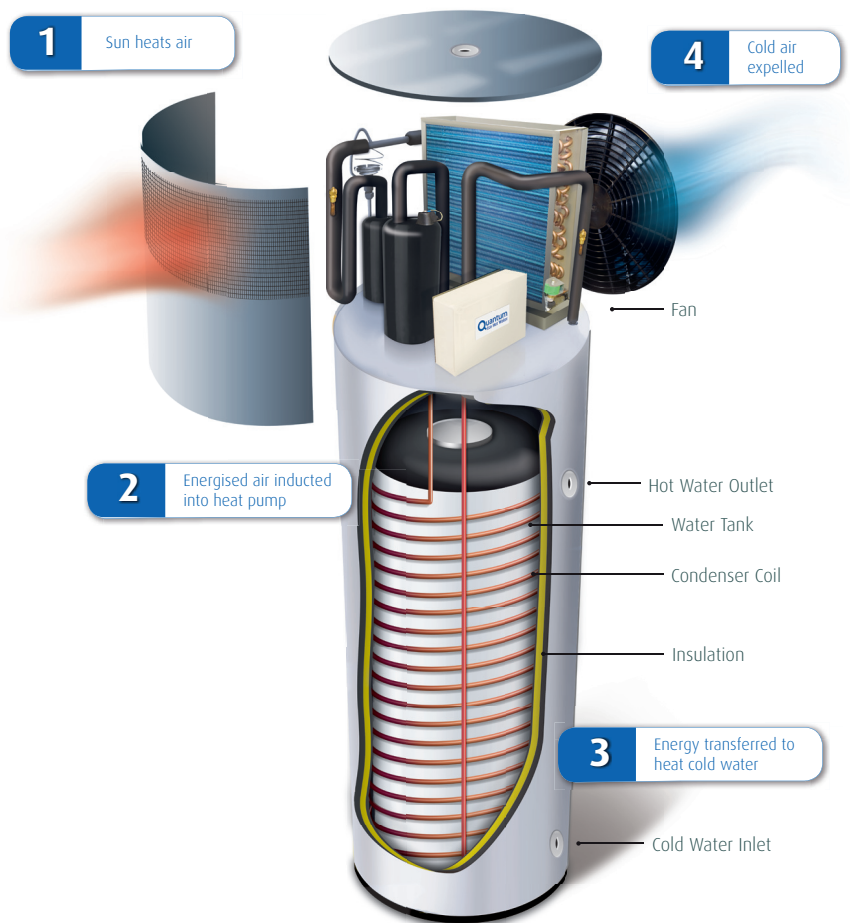
The Quantum story is based on innovation and the quest to harness renewable energy to produce sustainable hot water. The origins of the company go back to the mid 1970's, when extensive research work was undertaken by the University of Melbourne in the development of heat pump technology for the production of hot water. The technology has been progressively developed, and Quantum now produces hot water heaters, pool heaters as well as residential, commercial and industrial building heaters.

Over the years there has been growing interest in technologies that reduce energy consumption and greenhouse gas emissions. Since the mid 1970's, Quantum has been dedicated to manufacturing the highest quality products with a strong focus on technical innovation and energy efficiency, making it possible for organisations of any size to use a sustainable source of energy to produce hot water.

Quantum Energy Technologies is a wholly owned subsidiary of Quantum Energy Limited, an Australian publicly listed company with proprietary patented hot water heat pump technology. This technology was developed in Australia and there is currently a wide variety of organisations using the Quantum technology throughout Australia, New Zealand, Asia and Europe.

With over 30 years of on-going product development of a proven technology, Quantum is able to confidently provide worry free operation and product reliability. A Quantum hot water heat pump will deliver your business financial and environmental benefits for many years to come.

■ ■ ■ The Heat Pump Explained...



Over 30 years of on-going product development provides a “worry free” operation using proven technology

Hot water heat pumps are often confused with solar hot water, and in some ways this confusion is justified. Solar hot water heaters rely on incidental sunshine to affect the heating while hot water heat pumps take heat from the ambient air and use this energy source to heat the water. The Quantum heat pump does not need direct sunshine to operate nor does it need large roof panels; in fact for commercial applications the units look like traditional hot water heaters. Day or night, rain, hail or shine, they produce hot water but with efficiencies such that traditional hot water heating bills can be slashed by 50-75%.

The Quantum heat pump is a patented system whereby heat from the ambient air is absorbed by an environmentally friendly refrigerant in the evaporator. This refrigerant gas is then compressed which causes the gas's temperature to be raised. This hot gas is passed through copper tubes wrapped around the outside of the water tank. Heat from the tubes is then transferred to the water inside the tank.

Once the heat from the compressed gas has been transferred to the water in the tank, the gas becomes a liquid again, and then passes through an expansion device (TX valve) and back to the evaporator. The cycle is repeated until the water in the storage tank reaches 60°C.

The Quantum heat pump's efficiency stems from the fact that it requires only minimal electricity to operate. It works in temperatures from as low as -10°C up to 40+°C **without the need for boosting**, and at the same time reduces your carbon footprint.

What Makes Quantum Australia's Leading Supplier of Heat Pumps



There is an easy way that your business can significantly reduce operating expenses, whilst participating in environmentally conscious business practice.

Quantum is able to tailor a specific hot water system that best suits your business needs. Quantum provides the most effective, efficient and economical hot water solutions, with a significant reduction of upfront capital expenditure*.



Savings of up to 75% on running costs



Estimated payback period within two years**



Over 30 years of on-going product development provides a "worry free" operation using proven technology



Easy and low cost installation



Saves energy and reduces greenhouse gas emissions

*Subject to available rebates

Light Commercial Product Range

The Quantum Titan water heater is specifically designed with patented Tank Wrap™ technology for commercial use, featuring an energy collector that recovers heat energy from ambient air to produce up to 3,500 litres of hot water in a day.

Able to operate as a stand alone 340L storage unit or manifolded together to form a self contained unit suitable for commercial and industrial applications, the Quantum Titan 340L affords businesses, architects and developers alike great flexibility and design freedom.

Ambient Temperature	Single		Three Manifold System*		1020	
	Titan Compact Titan Split		Titan Compact Titan Split		Titan 1020	
	First Hour	Additional hour (COP)	First Hour	Additional hour (COP)	First Hour	Additional hour (COP)
35°C	514	199 (5.31)	1,542	597 (5.31)	1,144	199 (5.22)
30°C	492	177 (4.69)	1,476	351 (4.69)	1,122	177 (4.61)
25°C	469	154 (4.09)	1,407	462 (4.09)	1,099	154 (4.02)
20°C	446	131 (3.57)	1,338	393 (3.57)	1,076	131 (3.51)
15°C	424	109 (3.03)	1,272	327 (3.03)	1,052	109 (2.98)
10°C	405	90 (2.53)	1,215	270 (2.53)	1,035	90 (2.48)
5°C	388	73 (2.09)	1,164	219 (2.09)	1,018	73 (2.05)
0°C	374	59 (1.71)	1,122	177 (1.71)	1,004	59 (1.68)
-5°C	366	51 (1.50)	1,098	153 (1.50)	996	51 (1.47)
-10°C	360	45 (1.34)	1,080	135 (1.34)	990	45 (1.31)

Tested at 60% relative humidity air and water heated from 20°C to 60°C

Titan Compact



Titan Split



Titan 1020



Model	340-17ACW-134	340TiH-134	1020-17ACW-134
Storage Size (Litres)	340	340	1,020
Rated Size (Litres)	315	315	945
Dimensions (Height x Diameter)	2,300 x 650mm	2,110 x 650mm	(1x)2,300 x 650mm, (2x) 1,673 x 650mm
Weight Empty	180 kg	165kgs + 35kg (air box)	(1x) 180kg, (2) 100kg
Heat Output*	6.1kW	6.1kW	6.1kW
Power Input*	1.71kW	1.71kW	1.74kW
COP of Heating*	3.57	3.57	3.51
Water Temp Setting	60°C	60°C	60°C
Compressor	39.0cc Rotary	39.0cc Rotary	39.0cc Rotary
Refrigerant	R134a	R134a	R134a
Electrical Supply	220-240V/50Hz/1Ph	220-240V/50Hz/1Ph	220-240V/50Hz/1Ph
Circuit	15 Amps	15 Amps	15 Amps
Water Connections	3/4" BSP	3/4" BSP	3/4" BSP
PTR Valve Setting	1,000kPa	1,000kPa	1,000kPa
Expansion Ctrl Valve (ECV) Setting	850kPa	850kPa	850kPa
Pressure Limiting Valve (without ECV fitted / with ECV fitted)	500 or 600kPa / 350 or 500kPa	500 or 600kPa / 350 or 500kPa	500 or 600kPa / 350 or 500kPa
Sound Level	58dBA	58dBA	58dBA
Ambient Air Operating Temperature	-10°C to 40+°C	-10°C to 40+°C	-10°C to 40+°C

*When three or more units are installed at the one site they must be on an equal flow manifold. For further information and installation guidelines please visit the Quantum website www.quantumecohotwater.com.au

SOLAR heat pumps

Making a difference is even easier...
with significant rebates

Install a Quantum, claim your RECs, then enjoy your drastically reduced start up costs and operating expenses!

The Australian Federal Government supports a national strategy to reduce electricity consumption. In a bid to encourage a reduction in commercial energy usage, a rebate scheme was introduced to offer significant financial assistance towards the installation of sustainable energy products. Renewable Energy Certificates (RECs) are created when a Quantum heat pump hot water system is installed. The rules and regulations pertaining to the production and assignment of RECs is managed by the Office of Renewable Energy Regulator (ORER).

Renewable Energy Certificates (REC's)

*REC's are the trading credits that are created when you purchase and install an eligible solar or heat pump hot water system.

Customers can assign their REC's to Quantum and enjoy a once off lump sum payment. The exact number of REC's depends on the part of Australia you live in and model you install. Call us or refer to the website www.rec-registry.gov.au for more information.



Distributed By:

See how much of a **difference** your business can make – to the bottom line and the environment!

For more information on how Quantum can help you, log on to

www.quantumecohotwater.com.au

or simply call Quantum to
organise a quote or locate
your closest distributor

1800 383 888

Conditions

Subject to satisfying the provisions of the Renewable Energy (Electricity) Act 2000. Quantum cannot take responsibility for changes to the regulations, applied number of RECs, nor their value, that affect the level of the rebate, and rely on the end user complying with the Act and completing the necessary documentation to obtain the rebate.



Sydney Melbourne Brisbane Adelaide Perth Darwin Hobart

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