

Quantum

ENERGY TECHNOLOGIES



SOLAR HOT WATER...

ON TAP DAY AND NIGHT

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WHEN QUALITY & RELIABILITY MATTER ...

Quantum are the experts in Heat Pump Water Heating technology. With over 30 years experience and development, our Heat Pump Water Heaters have been tried and tested to perform reliably and efficiently - in even the harshest conditions throughout all of Australia.

Our patented Tank Wrap technology, commitment to continuous development, and the ongoing subsequent introduction of market leading innovations, ensures that Quantum remain the number one choice of "those in the know" when it comes to Heat Pumps.

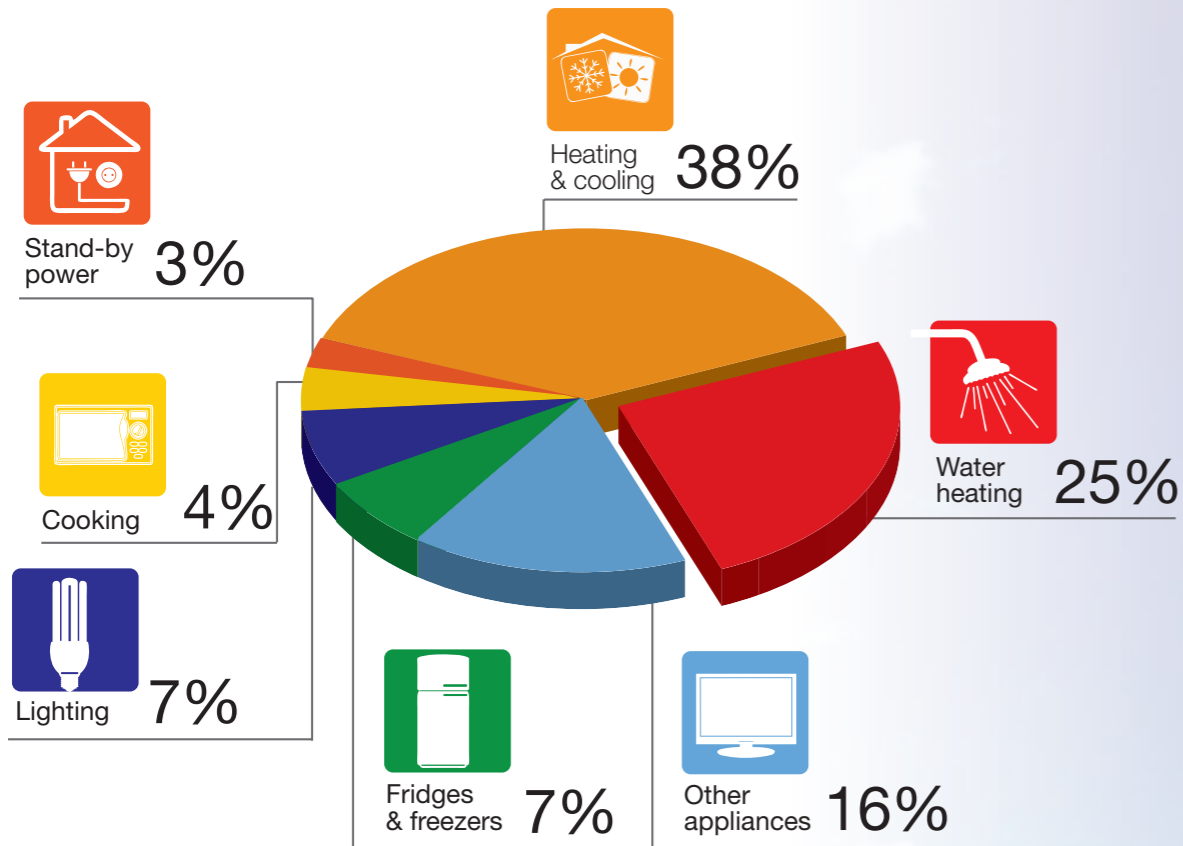
To meet the ever increasing demand of our customers and the Australian market, Quantum have now released a complete range of Electric Storage Hot Water Systems (HWS); with a strong focus on strength, performance, durability, and style. Our electric HWS will really outshine your existing system.

With new features and styling, our new range is sure to impress

Reliability
Quality

DID YOU KNOW?

Hot water heating can account for more than 30% of your homes' total energy usage, and is the single highest contributor to your annual electricity bills, using more energy than all of your other domestic appliances combined?



WHAT CAN YOU DO?

With rising energy costs and government incentives still available - it makes sense to upgrade to an energy efficient Solar Hot Water System (HWS)!

In Australia, between 50 and 95 per cent of your household hot water requirements can generally be supplied by a Solar HWS... Replacing an inefficient hot water system is one of the simplest, most economical, high impacting, carbon-reducing, opportunities available to the consumer today - which means that by installing one of our systems, you'll use far less energy, and dramatically reduce your household's footprint.

WHAT ARE MY OPTIONS?

Most people are aware of three ways to generate hot water – electric, gas and conventional solar; but there is a fourth, and it's one of the most efficient hot water systems available.... The Quantum Solar Heat Pump.

Our system can provide you with energy efficient solar hot water – without the need for roof panels!

SOLAR WITHOUT THE SUN

CONVENTIONAL SOLAR VS SOLAR HEAT PUMP

Solar HWS typically consists of collector panels or tubes which water flows through, connected to a storage tank. Water is heated by the sun and is pumped or flows between the tank and panel as hot water.

However, a Quantum Solar Heat Pump (unlike conventional solar HWS) makes use of the heat in the ambient air around the system, and a reverse refrigeration process to heat the water. This means WE DON'T NEED THE SUN to be shining, and what's more, it's so efficient that it can provide reliable hot water 24 hours a day, even in temperatures as low as -15°C. Only a Quantum can do that!



HOW DOES IT WORK?

A SIMPLE CONCEPT - BRILLIANTLY EXECUTED.

The Quantum Solar Heat Pump works on a patented refrigeration principle similar to that found in an air conditioner, or refrigerator – but in reverse.

- 1. SUN HEATS THE AIR** - Heat pumps rely on ambient air temperature rather than incidental sunshine. Utilising refrigeration principles, OUR heat pump can operate without direct sunlight, and can produce hot water in rain, hail or shine, without the need for a booster element!
- 2. ENERGISED AIR INDUCTED INTO HEAT PUMP** – Once the air has been drawn into the heat pump, this passes over the evaporator preheating the refrigerant (that boils at a very low temperature). This preheated refrigerant is then compressed causing its' temperature to be raised and superheating the refrigerant.
- 3. ENERGY TRANSFERRED TO HEAT COLD WATER** – using Quantum's PATENTED TANK WRAP TECHNOLOGY; this superheated refrigerant is guided through copper tubes (condenser) wrapped around the outside of the tank, turning the whole tank into a heat exchanger which heats the entire volume of water from the outside in.
- 4. COLD AIR EXPELLED** – Once the heat has been extracted from the air, the cold air is discharged from the heat pump via a fan, and the refrigerant liquid is forced back into the evaporator to start the process again until the water in the storage tank reaches the desired temperature.

2 YEAR WARRANTY



Not many household appliances can provide you a financial benefit, let alone pay for themselves – however a Quantum heat pump can do exactly that!

Once installed, a Quantum could save you thousands of dollars in energy bills compared to other forms of water heating, as well as reducing your greenhouse gas emissions, and reducing the environmental footprint of your home.

A SOLAR HOT WATER SYSTEM THAT PAYS FOR ITSELF

HOT WATER HEATING COST COMPARISON



PROVEN PERFORMANCE OVER TIME



As the innovators and experts of heat pump technology, Quantum has the largest range of compact heat pumps available in Australia – enabling you to select the right solution for the right application.

Our extensive range of products can service single bedroom/ bathroom residences, right through to multi level offices, hotels, motels, resorts, recreational facilities, retail outlets; and everything in between. We can tailor a solution for your needs!

Installing a Quantum solar heat pump system is also very simple and almost identical to installing a regular electric hot water system. There are no roof panels or additional components, meaning an easy, trouble-free conversion from electric hot water to sustainable and reliable solar hot water for your home.

MODEL NUMBER	150-08AC6-290 Domestic Compact 150 Litre	200-08AC6-290 Domestic Compact 200 Litre	270-08AC6-290 Domestic Compact 270 Litre	340-08AC6-290 Domestic Compact 340 Litre
Storage Sizes (Litres)	150	200	270	340
Rated Size (Litres)	130	175	250	315
Heat Output (kW)	3.61	3.61	3.81	3.81
Power Input (kW) (1)	0.84	0.84	0.84	0.84
COP of Heating (1)	4.3	4.3	4.53	4.53
Water Temp Setting	58°C	58°C	58°C	58°C
Maximum Tank Temp Setting	60°C	60°C	60°C	60°C
Compressor	Rotary	Rotary	Rotary	Rotary
Refrigerant	R290	R290	R290	R290
Electrical Supply (1)	220-240V/50Hz/1Ph			
Circuit	10 Amps	10 Amps	10 Amps	10 Amps
Water Connections	3/4" BSP - 20mm			
PT R Valve Setting	1,000kPa			
Expansion Ctrl Valve (ECV) Setting	850kPa			
PLV (without ECV fitted / with ECV fitted)	500 - 600kPa / 350 - 500kPa			
Operating Sound Level at 1.5M	50dBA	50dBA	48dBA	48dBA
Dimensions (Height x Diameter)	1620mm x 540mm	1950mm x 540mm	1900mm x 650mm	2200mm x 650mm
Nett (Empty) Weight	100kg	115kg	135kg	170kg
Ambient Air Operating Temperature	-15°C to +40°C			
Hot Water Production Rate L/hr (COP)	72 (4.30)	72 (4.30)	75 (4.53)	75 (4.53)

AMBIENT AIR	HOT WATER PRODUCTION RATE , LITRES PER HOUR (COP)			
35°C	110 (5.55)	110 (5.55)	113 (5.75)	113 (5.75)
30°C	98 (5.12)	98 (5.12)	102 (5.42)	102 (5.42)
25°C	85 (4.73)	85 (4.73)	89 (4.98)	89 (4.98)
20°C	72 (4.30)	72 (4.30)	75 (4.53)	75 (4.53)
15°C	58 (3.88)	58 (3.88)	61 (4.08)	61 (4.08)
10°C	48 (3.45)	48 (3.45)	51 (3.64)	51 (3.64)
5°C	38 (3.03)	38 (3.03)	42 (3.19)	42 (3.19)
0°C	31 (2.60)	31 (2.60)	33 (2.75)	33 (2.75)
-5°C	26 (2.18)	26 (2.18)	29 (2.30)	29 (2.30)
-10°C	24 (1.75)	24 (1.75)	26 (1.86)	26 (1.86)

Note (1): Rated at ambient 20°C and 60% RH, water heated from 20°C to 60°C.

Suitable for **Small Households**

Suitable for **Small to medium Households**

Suitable for **Average Households**

Suitable for **Large Households**





QUANTUM ELECTRIC HOT WATER SYSTEM

Electric Storage Water Heaters have long been a staple inclusion in the Australian family home.

Whilst new and alternative technologies are available to reduce energy costs, environmental impacts, and carbon omissions; we understand that in some instances these products may not be suitable.

That's why we've developed the **Quantum Premium Electric** Storage Water Heater range.

- COMPLETE PRODUCT RANGE: 25L - 400L
- STYLISH BRUSHED ALUMINIUM FINISH
- DURABLE INCOLOY® HEATING ELEMENT
- DUAL HANDED ACROSS THE RANGE
- 7 YEAR CYLINDER WARRANTY

STYLISH GERMAN ALUMINIUM FINISH

We choose the best finishes for all aspects of our homes; why should our hot water system be any different? Quantum have sourced world class external finishing materials from Germany, with a primary focus on strength, aesthetics and style — to compliment the rest of your homes' appliances.

INCOLOY® HEATING ELEMENT

Incoloy® is a "Superalloy" designed for excellent corrosive resistance, in addition to superior strength at high temperatures. It is a more advanced material than that which is found in other traditional electric water heaters (copper). Our new Incoloy® Element will deliver your hot water, for an extended lifetime, being less susceptible to corrosion.



SYDNEY
MELBOURNE
BRISBANE
ADELAIDE
PERTH
DARWIN
HOBART

For more information about Quantum Energy and our range of solar heat pump and electric storage hot water systems, please contact our Customer Support Centre.

1800 383 888

www.quantumenergy.com.au



Quantum Energy Technologies Pty Ltd

ABN: 88 095 959 327

Postal Address: PO Box 553, Strawberry Hills NSW 2012