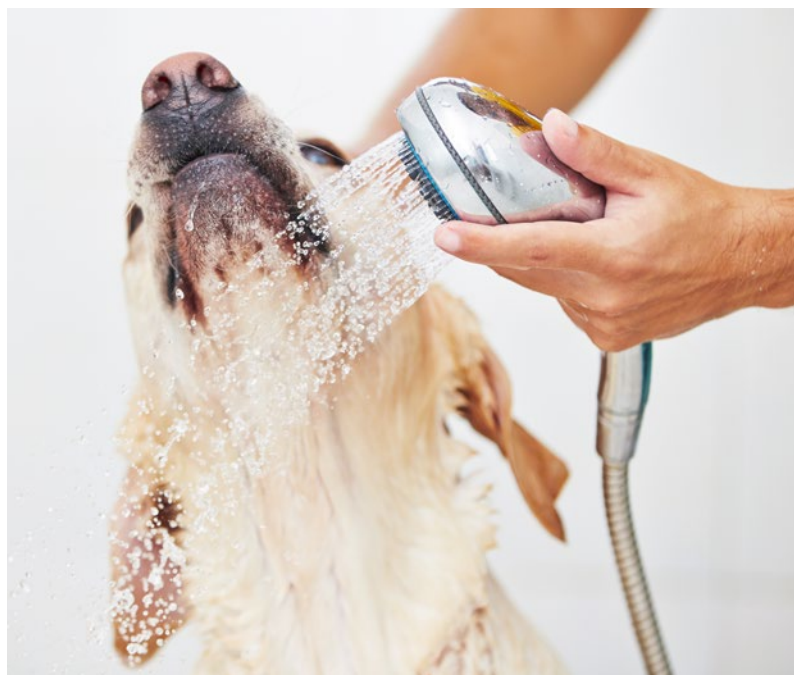


# AquaCore

The Next Generation in Energy Efficient Hot Water Heating

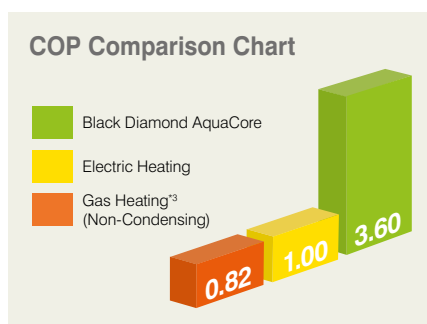


# Hot water heating can account for up to 30% of household energy use.\*1

With the ever increasing cost of electricity, there is a drive towards alternative technology that will heat our domestic hot water more efficiently. Developed locally and specifically for New Zealand conditions, the Black Diamond AquaCore utilises tried and tested heat pump technology to heat your hot water. With an AquaCore system you can enjoy hot water for the whole family all year round, no matter what the temperature is outside.

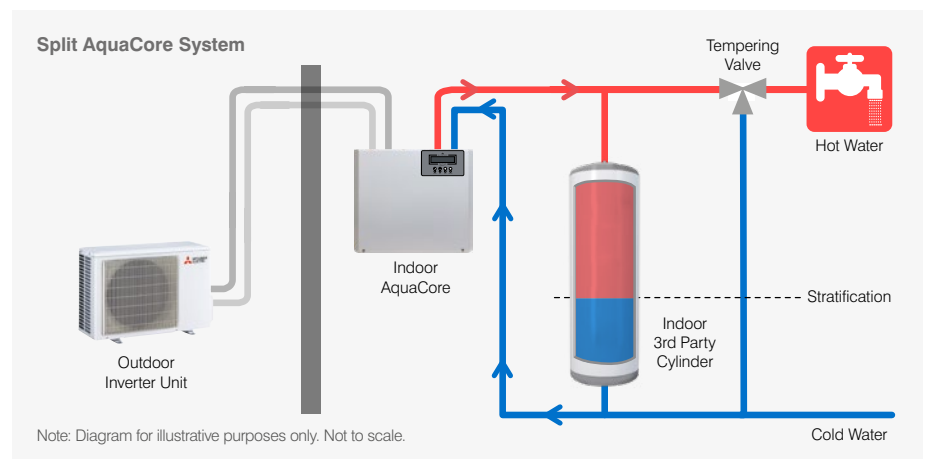
The AquaCore Hot Water Heat Pump boasts a super-efficient COP of 3.6. As a result, homeowners can anticipate up to 80%\*2 reduction in their hot water heating costs compared to their old direct electric system.

Compared to typical gas and direct electric systems that can have higher running costs with COPs as low as 0.82\*3, the Black Diamond AquaCore provides an energy efficient alternative.



## How Does it Work and What are the Key Components?

A Black Diamond AquaCore Hot Water Heat Pump is made up of 2 key components that seamlessly work together to provide super energy efficient water heating – the outdoor unit and the AquaCore unit which connects to an existing or new cylinder.



## The Indoor Unit

The Black Diamond AquaCore unit is manufactured locally and specially designed for New Zealand conditions. Acting as an intermediary between the refrigerant and water systems, the AquaCore indoor unit is packed with intelligent control systems, an easy to use interface and compatibility with Wi-Fi Control, all packed into a discrete and easy to install unit.



## Super Efficient Performance

The secret to the AquaCore's performance is how quickly it heats the tank up compared to a traditional direct electric element. In fact because it heats from the top down, even with a mostly cold tank you'll have enough hot water for a shower within 20 minutes.

The tank automatically heats up when the temperature drops to 42°C so you can be sure there will always be hot water when it counts.

Tried and tested, this technology was first introduced to New Zealand over 10 years ago and has been providing Kiwi homes with their domestic hot water needs ever since – a true testament to quality and durability!

\*1 Based on BRANZ study report SR 221, 2010, verified by EECA.

\*2 Performance will vary based on ambient conditions, water inlet temperature, installation type etc.

\*3 Based on manufacturer information for gas instant hot water heater (non-condensing).

## The Outdoor Unit

Incorporating quality and reliability into all aspects, the Japanese designed outdoor unit adds guaranteed longevity to the AquaCore system. Operating in New Zealand conditions for more than 10 years, these units are some of the highest quality, longest lasting units in the market.



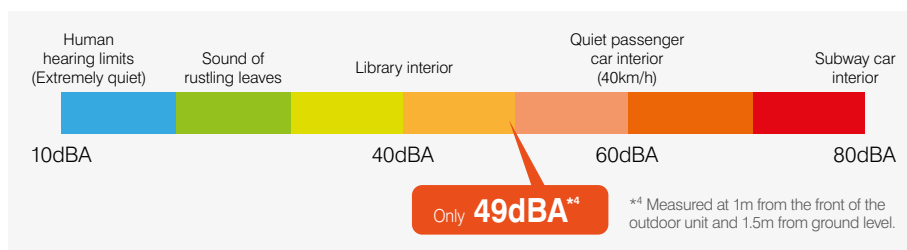
## An Environmentally Conscious Choice

The AquaCore system primarily utilises R32 refrigerant. With 1/3 of the global warming potential of traditional refrigerants and zero ozone depletion, the AquaCore provides an environmentally friendly alternative while also saving money.



## Exceptionally Quiet

Starting from just 49dB<sup>A</sup>\*, the outdoor unit provides you with hot water, all while maintaining super quiet noise levels.



## Cylinder – Retrofit or New Installation Options

Designed to be flexible in its installation, the AquaCore Hot Water Heat Pump can be paired with almost all existing mains pressure systems to efficiently heat potable hot water to 62°C.

By keeping the existing cylinder; the installation is cost effective and could shorten the payback time to approximately 3 years.



## Maximise Energy Savings with Wi-Fi Control

Why pay to heat your water 24/7 when you can maximise energy efficiencies by only heating up the water tank when you need it?

With Wi-Fi Control you can now monitor your tank temperature and start a reheat cycle when you know you're there to use it.

Now you'll never run out of hot water even when unexpected guests turn up! In addition to setting the exact water temperature, you can set up a recurring schedule to have your hot water ready-to-use when you get back home from work every night.

Furthermore, Wi-Fi Control also makes it easier for you to tap into off-peak power rates or free power hours offered by many electricity companies – maximising energy efficiencies.

The Black Diamond AquaCore comes ready with Wi-Fi Control, just connect the AquaCore indoor unit to your router with an ethernet cable\*<sup>5</sup> and download the App – saving money on heating your water has never been this simple!



**Wi-Fi**  
**CONTROL**  
connectable\*<sup>5</sup>

\*<sup>5</sup> Ensure that your AquaCore unit has a wired ethernet connection to your home's wireless router. This should be discussed with your installer and setup at the time of installation.

“Built with  
New Zealand’s  
extreme temperatures  
in mind, operating  
down to -15°C.”



**RETURN ON  
INVESTMENT**  
could be as low as  
**3 YEARS**<sup>†</sup>

<sup>†</sup> Payback period comparison based on average energy supplier costs per kWh over an average winter heating period. Actual savings may vary in line with gas and electricity price fluctuations and seasonal conditions. This is an estimate only.

## UNIT SPECIFICATIONS

<b>Operating Characteristics</b>	Rated Capacity	kW	3.2
	Flow Rate Range	[L/min]	0.6 - 2.4
	Outdoor Temperature	[°C]	-15 to +46
	Set Point	[°C]	55 to 63
	Water Input Temperature Range	[°C]	5 to 55
	Maximum Working Water Pressure	[kPa]	500
	Water Pump Maximum Head	[m]	5
<b>Power Supply</b>	Power Supply	–	230V / 1ph / 50Hz
	Maximum Current	[A]	15
<b>Refrigeration</b>	Refrigerant Connection	[mm]	6.35 / 9.52
	Refrigerants (OD/ID)	–	R32 / R134a
	Charge (OD/ID)	[g]	700 / 190 ± 10
<b>Indoor Unit</b>	Dimensions (W x D x H)	[mm]	460 x 240 x 460
	Weight	[kg]	23.1
	In / Out Water Connections	[inch]	½
<b>Outdoor Unit</b>	Dimensions (W x D x H)	[mm]	800 x 285 x 550
	Weight	[kg]	34
	Sound level*6	[dBA]	49

\*6 Measured at 1m from the front of the outdoor unit and 1.5m from ground level.

## PERFORMANCE SPECIFICATION\*7

Conditions	Ambient 19°C, Water in 14°C	Ambient 7°C, Water in 8°C	Ambient 1°C, Water in 8°C
<b>COP</b>	3.6	3.0	2.4

\*7 Rated in accordance with AS/NZS 5125



## Simple Yet Powerful Interface

- Three operation modes:
  1. Eco – lower power consumption
  2. Standard – very fast recovery
  3. Disinfect – for poor water quality areas
- Seven on/off user timers
- Smart user display with a simple, easy-to-use control panel
- Legionella compliance built into the control system

