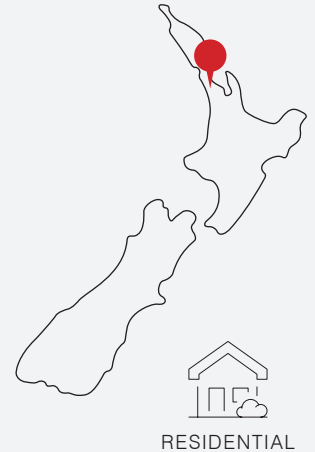


Project Showcase: The Switch from Gas to AquaCore Hot Water Heating



AUCKLAND



A unique installation for cleaner, cost-effective water heating.

In the developing suburb of Hobsonville, Auckland, a young family decided to update their 4 bedroom home to have a cleaner, more efficient way to heat their hot water.

By switching from gas water heating to next generation AquaCore Hot Water Heat Pump Technology, the family can enjoy lower water heating costs while reducing environmental impact. Paired with a stylish outdoor Heat Pump Cover, the completely outdoor installation of the AquaCore system resulted in the ultimate space-saving gas replacement solution.

EQUIPMENT BREAKDOWN

- Black Diamond AquaCore Hot Water Heat Pump System
- 300L External Cylinder
- Mitsubishi Electric Wi-Fi Control App
- Custom Premium Heat Pump Cover

The Goal

Concerned about the escalating daily gas charge, the homeowners wanted to upgrade their water heating to a more renewable energy source that could result in significant savings for this family of three.

As the home already had electric cooking and only used gas for water heating, replacing the gas set-up with a more cost-effective and future-proof system made sense.



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The Challenge

The home was built in 2022 with instant gas water heating and, therefore, had not been designed with an internal space for a hot water cylinder. Reluctant to delegate garage or laundry space for a cylinder and module, outdoor installation without penetrating the cedar cladding and weatherproof membrane of the house were key requirements.

The property's coastal location and the preference for outdoor installation also meant that corrosion prevention treatment and weatherproof encasing would be necessary to ensure better product longevity.

The chosen system needed to offer quick recovery times and meet the same demand as the gas provided to ensure they were not compromising performance and had readily available hot water when making the change.



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The Black Diamond AquaCore Solution

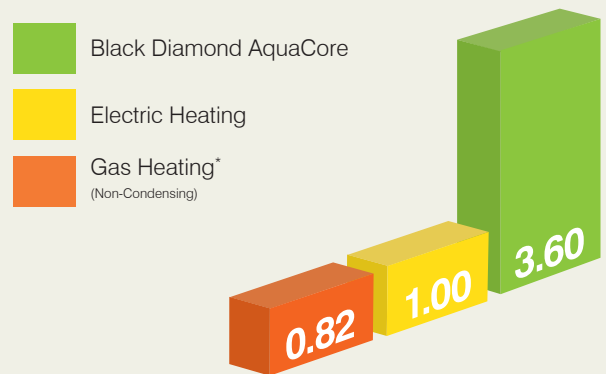
Developed locally and specifically for New Zealand conditions, the Black Diamond AquaCore utilises tried and tested heat pump technology to heat hot water. Boasting an impressive COP of 3.6, for every 1kW of power used, the AquaCore can produce up to 3.6kW of heating output.

Compared to typical gas and direct electric heating systems that can have higher running costs with inefficient COPs as low as 0.82*, the Black Diamond AquaCore Hot Water Heat Pump provides a real energy efficient alternative.

After removing the existing gas unit at the side of the building and successfully capping the gas, ACE Plumbing and Heating utilised the water pipes to connect to a new 300L external cylinder and AquaCore Hot Water Heat Pump nearby.

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

COP Comparison Chart



Please note: The AquaCore module is not waterproof and therefore requires sheltering from the elements. The homeowners completed this project with a custom heat pump cover.

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Quick Recovery and Fast Heat up Times Make it the Ultimate Gas Alternative

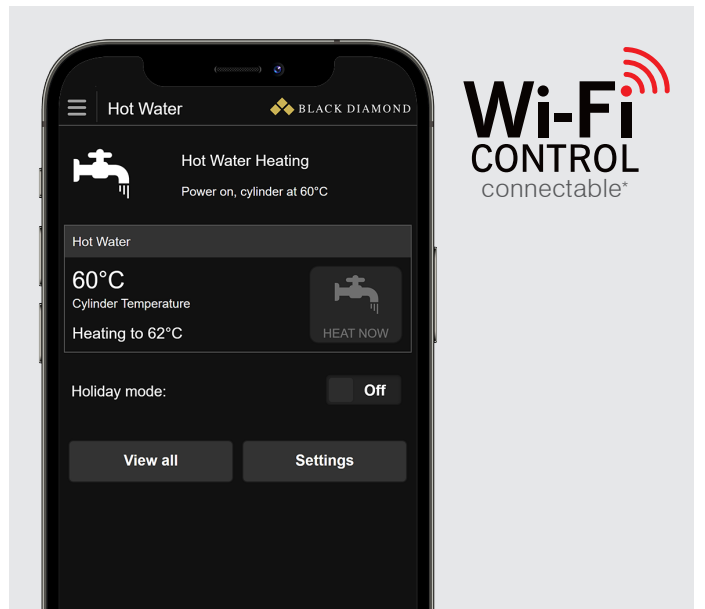
Because the water is heated to 62°C by the AquaCore module and pumped directly into the top of the cylinder, the hot water is ready to use immediately – reducing the chance of cold showers during peak times.



Connectable Wi-Fi Control – Makes Tapping into Free Power Hours Easy and Offers Remote Control for Holidays

With Wi-Fi Control available through the mobile app, the outdoor location is not an issue for the homeowners when it comes to control. While the unit is an easy “set and forget” for the family, they find the Wi-Fi Control feature great for maximising energy savings by using the app to take advantage of their power provider’s free hour of power in the evenings. The family can set a recurring schedule so hot water is ready to use when it’s most needed.

As avid travellers, the Holiday Mode can easily be switched on and off remotely, so they can save on heating costs while away and ensure the hot water is on and ready to go before they arrive home.

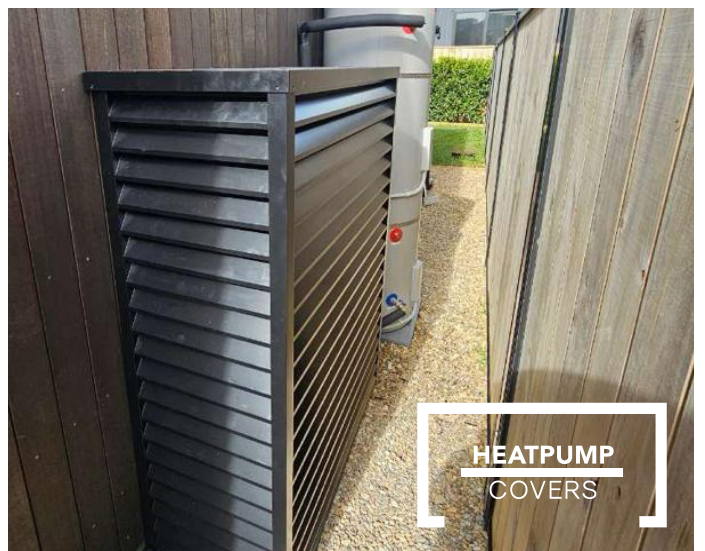


Heat Pump Cover Keeps Exterior Aesthetics Tidy While Protecting From the Elements

The challenge of designing and manufacturing a suitable weatherproof enclosure was solved through a custom Premium Heat Pump Cover. The aluminium cover, powder-coated to black with a dark cedar top, fits seamlessly into its environment at the side of the property.

Specifically designed for heat pumps, air is controlled by keeping the inlet and outlet separate. The precise design takes the flow of the louvre into consideration so the heat pump continues to perform as it should.

Furthermore, to protect the system from the coastal environment, the external condenser was treated with industry-trusted NYALIC® clear surface protectant to ensure better longevity.



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The Result – Reliable and Efficient Domestic Hot Water



The homeowners were able to set and forget their new AquaCore system and say it has well-exceeded expectations;

“The system performs equal to gas but at a significant cost saving. I now have peace of mind, knowing that hot water heating in our home will remain affordable for years to come.”



The garage is free from equipment clutter, keeping the space for vehicles and tools. Furthermore, the household gets far more out of the free power hour offered through their energy provider now that the home no longer relies on gas.

With a little one in the home, the AquaCore more than keeps up with the family’s hot water requirements. The owners look forward to seeing how their new system will affect their next utility bill and are pleased their impact on the environment has been minimised.

Full Equipment Breakdown

Hot Water Heat Pump:

Black Diamond AquaCore Hot Water Heat Pump System

Controller:

Mitsubishi Electric Wi-Fi Control App

Weather Protection:

Custom Premium Heat Pump Cover

Water Storage:

300L External Cylinder

Installer:

