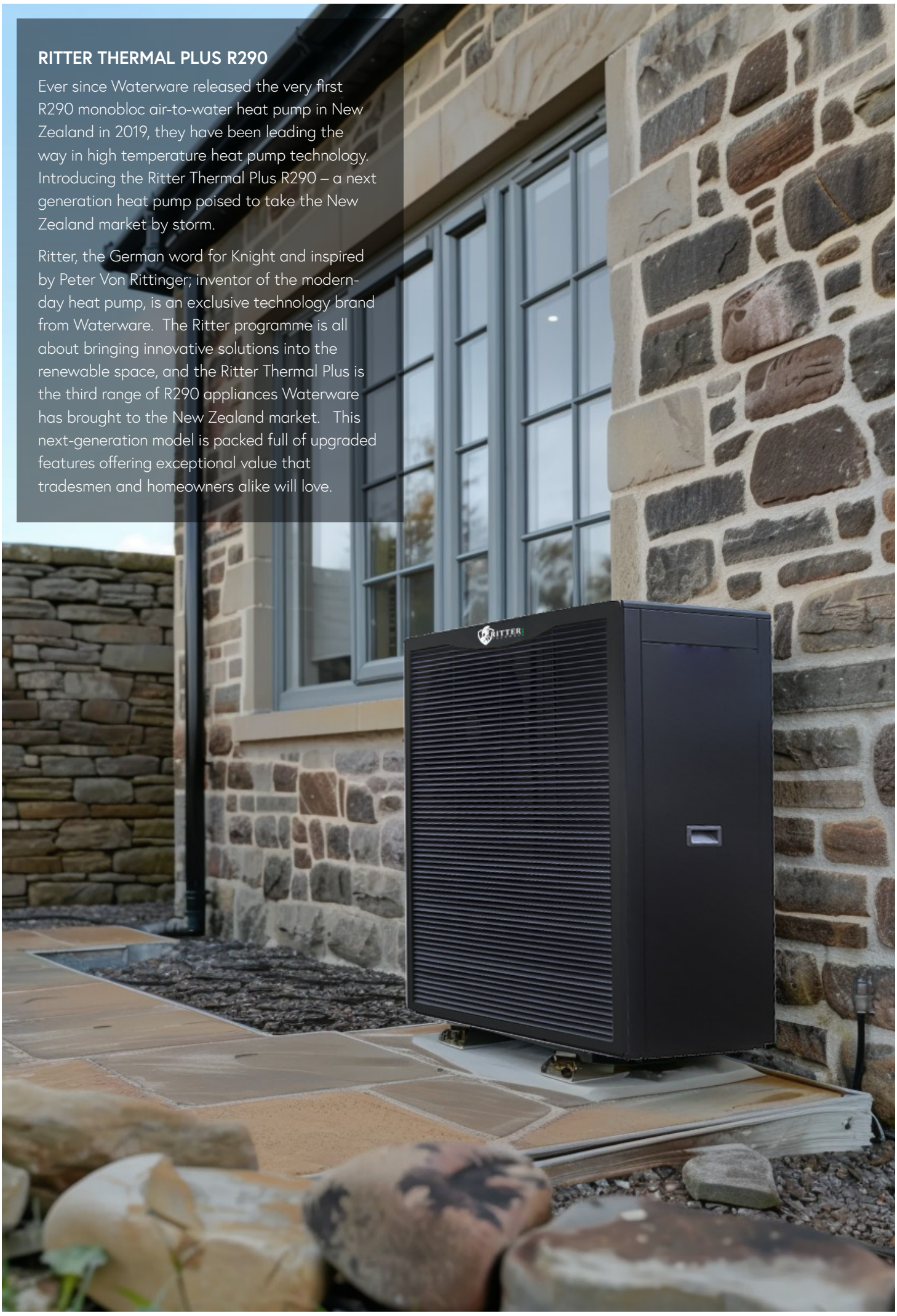
RITTER THERMAL+

RITTER

RITTER THERMAL PLUS R290

Ever since Waterware released the very first R290 monobloc air-to-water heat pump in New Zealand in 2019, they have been leading the way in high temperature heat pump technology. Introducing the Ritter Thermal Plus R290 – a next generation heat pump poised to take the New Zealand market by storm.

Ritter, the German word for Knight and inspired by Peter Von Rittinger; inventor of the modern-day heat pump, is an exclusive technology brand from Waterware. The Ritter programme is all about bringing innovative solutions into the renewable space, and the Ritter Thermal Plus is the third range of R290 appliances Waterware has brought to the New Zealand market. This next-generation model is packed full of upgraded features offering exceptional value that tradesmen and homeowners alike will love.



RITTER R290 HEATPUMP

THE FUTURE OF HOME COMFORT

R290: SUSTAINABILITY AND PERFORMANCE

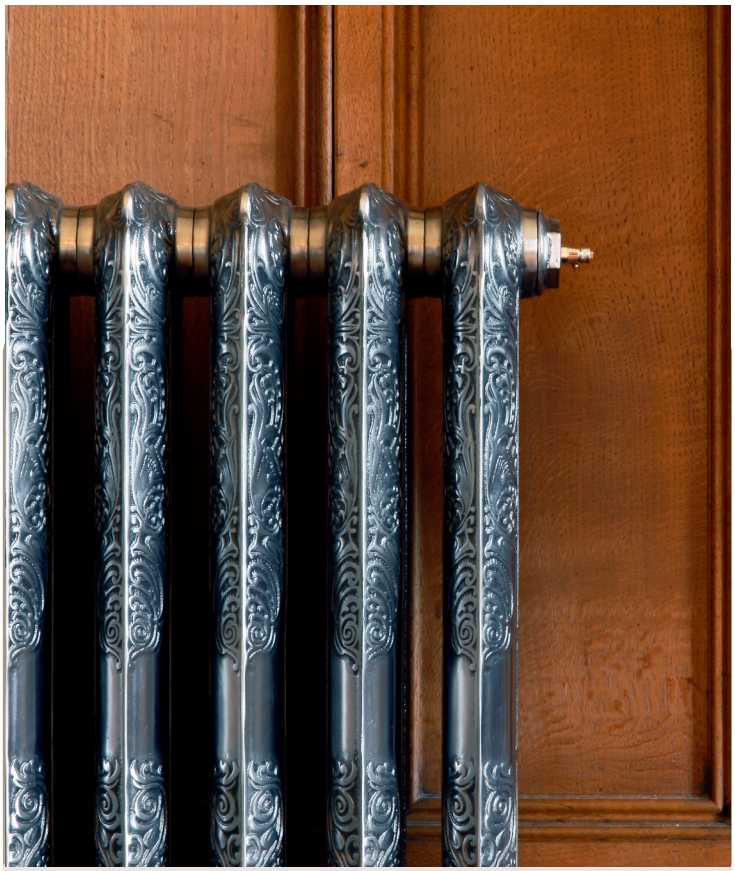
Imagine a future where your home is heated and cooled efficiently, comfortably, and with minimal environmental impact. That future is closer than you think, and it's powered by R290, a natural refrigerant that is transforming home comfort.

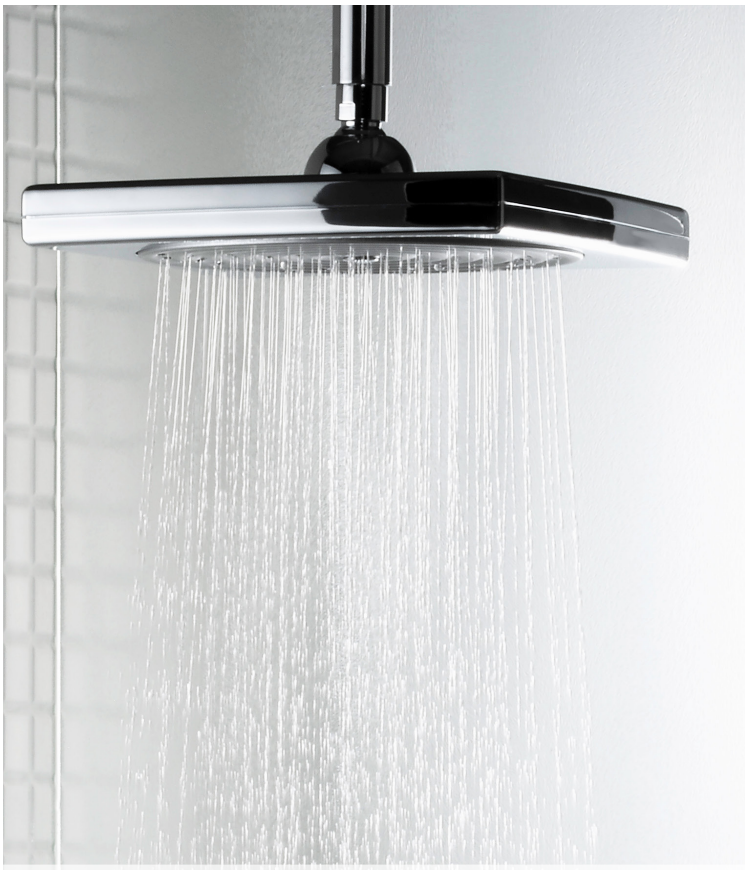
Unlike traditional refrigerants, R290 boasts an incredibly low global warming potential (GWP) of just 3. This means switching to the Ritter R290 air-to-water heat pump significantly reduces your carbon footprint, contributing to a healthier planet for future generations. But R290's benefits extend far beyond sustainability.

R290 appliances with full inverter technology can maintain a high coefficient of performance (COP) in a wide range of applications and operational temperatures. Maintaining high COP is all about reduced electrical consumption and therefore lowering running costs.

But R290 isn't just environmentally and economically sound; it's also versatile. It seamlessly integrates into any hydronic heating system, providing powerful warmth through radiators and/or underfloor heating. Additionally, it can generate hot water for your entire home without the need for electrical boosting, ensuring blissful showers and clean dishes without sacrificing sustainability.

So, if you're looking for an efficient, sustainable, and future-proof home comfort solution, look no further than R290. It's not just a refrigerant; it's a revolution in responsible home comfort and here to stay.





Ritter R290 Thermal is the perfect solution if you are switching from gas or diesel to electric.

RADIATOR READY

The Ritter R290 Thermal Plus is optimized for radiator & hot water applications, which makes it ideal if your thinking about moving away from gas or diesel to electric, or attempting to integrate with them. Flow temperatures of up to 75C mean hot radiators that don't need to be oversized, and existing systems can be repowered to a more renewable solution. Waterware offer an extensive range of radiant heating solutions including conventional steel panels, aluminium panels and cast iron radiators.

High Efficiency Hot Water

HOT WATER PRODUCTION

When you're looking for a reliable hot water system, look no further. The Ritter R290 can provide all the hot water required for the sanitary needs of your house or building using the heat pump as the primary source of energy without the need for electric backup. Waterware offer an extensive range of high-quality stainless steel indirect hot water cylinders with heat exchange coils sized specifically for R290 heat pumps.

RITTER R290 HEATPUMP

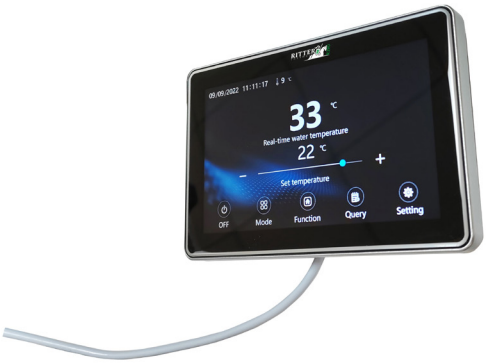
COMMERCIAL APPLICATIONS

RITTER THERMAL PLUS R290 FEATURE LIST

- Stunning new metal case design with full width grills and invisible fans.
- 5-inch TFT colour touch screen thermostat with Wi-Fi app included.
- Two models with nominal ratings of 12kW and 18kW.
- Flow temperatures up to 75C, operation down to –25C.
- Electronic pump, PRV and expansion vessel on board.
- Satellite DTU for remote diagnostics and commissioning.
- MODBUS, for BMS integration, cascade, PV and hybrid ready.
- Premium anti-vibration feet available as optional extra.

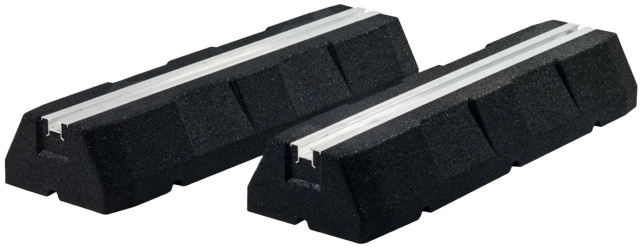
CONTROLLER INCLUDED

Most heat pumps come with basic controllers that are diffcult to use and unsightly on the wall. The Ritter Thermal Plus R290 comes with a slim and stylish 5" TFT colour touch screen that provides both form and function. Easy to navigate and setup, it also comes with Wi-Fi connectivity so can also be controlled by a phone app for the ultimate in convenience. Getting the most our of your heat pump was never so easy!



PREMIUM FOOT SUPPORTS

The latest Ritter can also be upgraded further by adding jumbo size rubber mounting feet. With a sturdy aluminium rail and all hardware included, these quality rails provide superior weight distribution and absorb vibration to minimise noise transfer. They also come complete with four spirit levels so that feet can be easily adjusted to ensure that the heat pump is perfectly level every time.

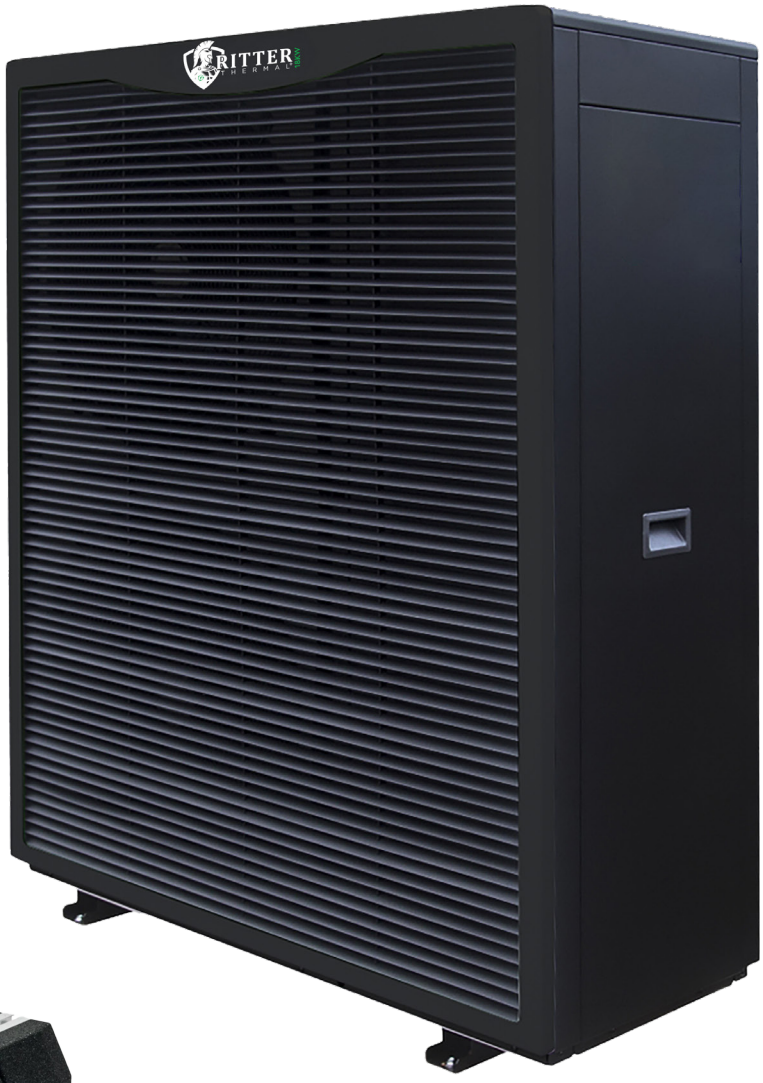


A WINNING FORMULA:

The key to unlocking R290's full potential lies in expertise. Waterware, a leading provider of sustainable solutions, demonstrates this with their unrivalled experience in R290 appliances and advanced control systems. These intelligent systems can seamlessly integrate R290 heat pumps with traditional boilers, ensuring reliable performance while maximizing efficiency and minimizing reliance on fossil fuels.

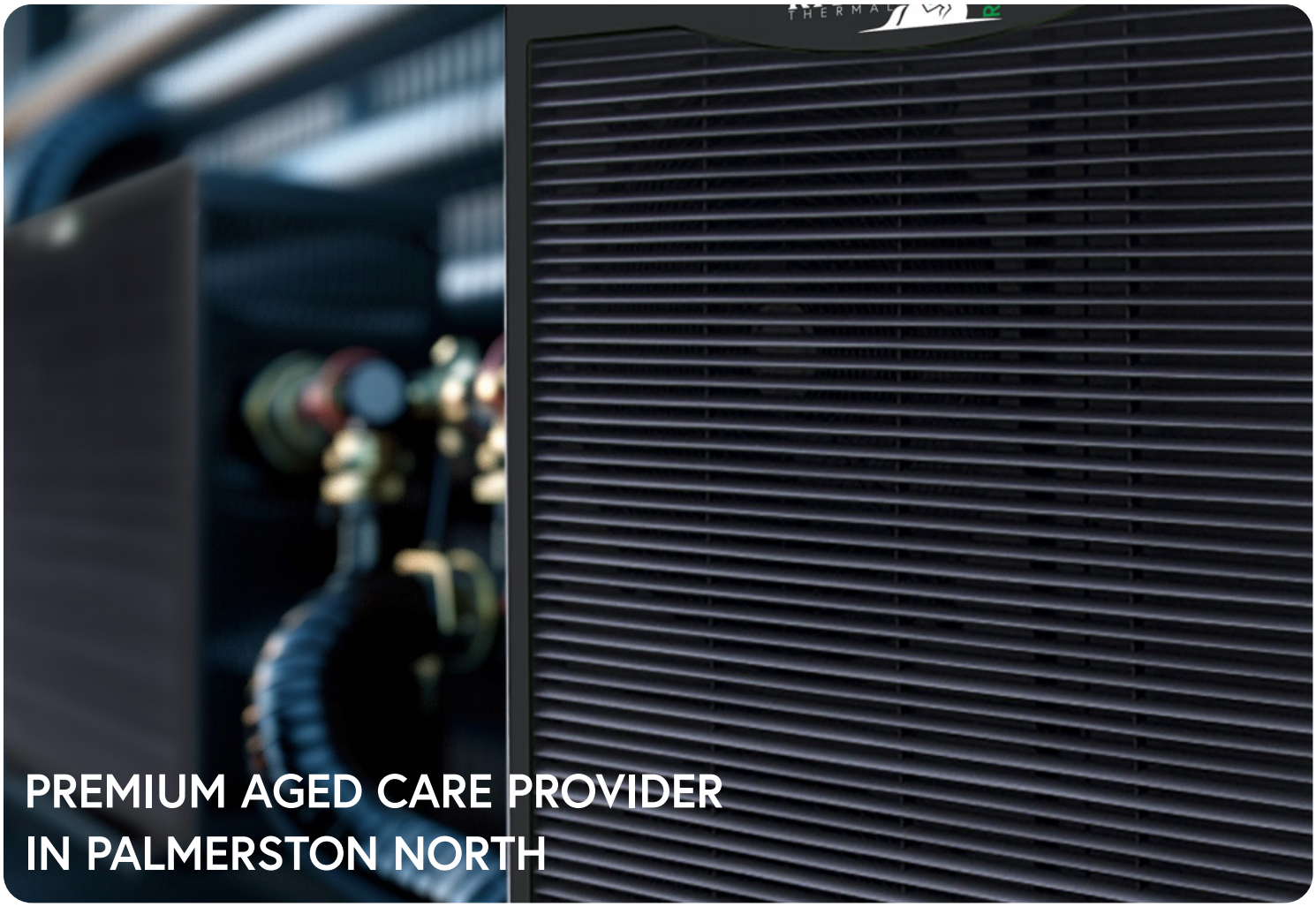
THE FUTURE IS NOW:

Don't wait for regulations to push you towards sustainability. Be a leader and embrace the future today. R290 heat pumps are not just a fad but a revolution in responsible comfort and efficiency. Partner with a trusted provider like Waterware to unlock the full potential of this technology and join the movement towards a healthier planet and a more prosperous future.



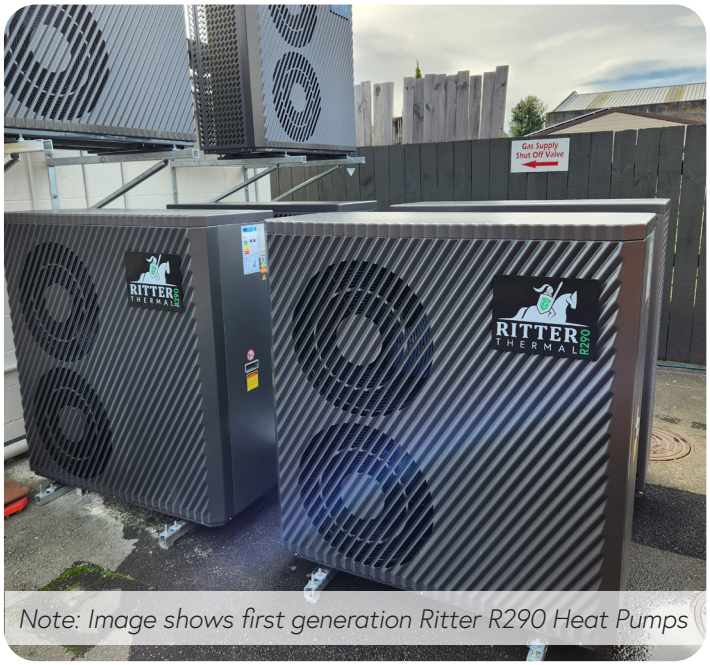
RITTER R290 HEATPUMP

CASE STUDY



PREMIUM AGED CARE PROVIDER IN PALMERSTON NORTH

The client had an ageing gas fired plant of 300kW powering a combination of underfloor heating and hot water production which was due for replacement. As an organization they had a strong drive for decarbonization and environmental responsibility. Replacing the existing plant with a hybrid gas and heat pump solution allowed them to guarantee performance while at the same time drastically reduce their carbon footprint.



Note: Image shows first generation Ritter R290 Heat Pumps

What were the critical requirements that needed to be taken into consideration during the hot water production & heating solution implementation?

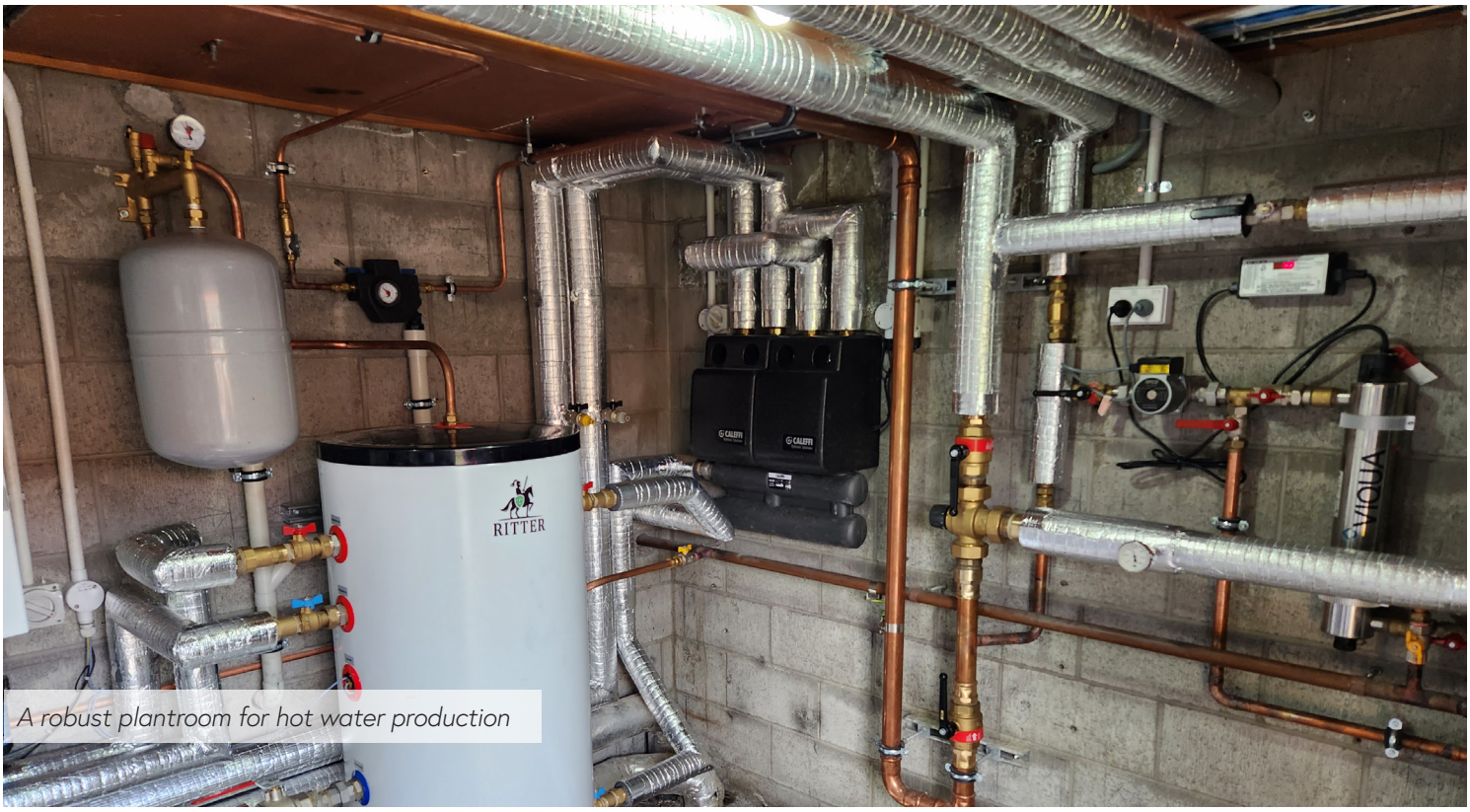
It was critical to manage the system change over, a temporary system was implemented so we could provide hot water while the existing plant room was stripped and rebuilt with the new equipment. Then changeover was then completed in a couple of hours.

What specific solution did Waterware provide to address the Client's hot water production needs?

The system was split into two standalone plants, a dedicated system for hot water and a dedicated system for heating and cooling via the floor. Part of the transition to a heat pump driven system opened the possibility of adding slab cooling functionality to the existing floor heating system. The ability to cool the building radiantly via the floor was a brand-new concept to the client, being able to use existing infrastructure to provide this new functionality was an unexpected gain for them.

RITTER R290 HEATPUMP

CASE STUDY



A robust plantroom for hot water production

In what ways does waterware's hot water production solution differentiate itself from other solutions available in the market?

Two main unique expertise used in this project is advanced hybrid control which integrates gas and heat pump in an intelligent way, the gas boiler backup's are only activated if the heat pumps can not keep up with the loads by themselves. Due to the system design with multiple heat pumps in cascade with gas boiler backups gives a scalable solution with a huge range of efficient operation. The second area of expertise is in radiant cooling, being able to control the water temperature to avoid the dew point allows the existing floor heating system to provide some cooling power to the building during summer.

What were the key products or technologies utilized in Waterware's solution for the Client's hot water & heating systems?

The use of Ritter high temperature R290 air to water heat pumps in conjunction with Vaillant gas condensing boilers with advanced Messana system controls allows for the package to be delivered in a trouble free and cost-effective way.

How can Waterware extend its expertise and assistance to other projects in the field of hot water & heating?

Waterware has a ground up solutions based focus, with a full range of products and expertise we can provide innovative solutions in the renewable energy space for hot water and heating/cooling space.

FEATURES

Eco Friendly

Developed with the most cutting-edge heat pump technology and modern design to meet stringent requirements for efficiency, stability and quietness.

Capabilities

The versatility and technology of the R290 heatpump means it can power all of Waterware's solutions, which include Radiant surface technologies, radiators & hot water production.

Low running costs

Although the initial costs can be higher, after a few years, most people experience a substantial decrease in their heating bills.

RITTER R290 HEATPUMP

FEATURES & SPECIFICATIONS

Ritter Thermal+ R290 Heatpump		HPRP6HT	HPRP12HT	HPRP18HT
Power Supply		230V~1PH	230V~1PH	230V~1PH
Heating Condition -Ambient Temp. (DB/WB): 7/6°C, Water Temp. (In/Out): 30/35°C				
Heating Capacity Range	kW	2.92-9.10	4.30 - 15.20	7.24 - 21.90
Heating Power Input Range	kW	0.61-2.11	0.87 - 3.73	1.5 - 5.88
Rated Heating Capacity	kW	6.23	12.05	18.01
COP		4.77	4.62	4.40
Medium Temperature Condition -Ambient Temp. (DB/WB): 7/6°C, Water Temp. (In/Out): 47/55°C				
Hot Water Capacity Range	kW	2.99-8.16	4.25 - 14.55	6.36 - 19.45
Hot Water Power Input Range	kW	1.03-2.92	1.45 - 4.28	2.15 - 6.87
Rated Heating Capacity	kW	6.12	12.18	18.00
COP		3.06	3.01	3.02
Cooling Condition -Ambient Temp. (DB/WB): 35/24°C, Water Temp. (In/Out): 12/7°C				
Cooling Capacity Range	kW	1.38-5.7	3.65 - 11.40	4.55 - 17.20
Cooling Power Input Range	kW	0.67-2.44	1.12 - 3.97	1.85 - 7.31
Rated Cooling Capacity	kW	4.56	8.23	14.32
EER		2.67	2.59	2.44
Operational Parameters				
Max. Current Input	A	15	24.5	32
Water Flow Rate	m3/h	1.00	2.06	3.10
Refrigerant	kg	R290		
Sound Pressure Level	dB(A)	46	52	54
Sound Power Level	dB(A)	60	68	70
Operating Ambient Temperature	°C	-25 - 45		
Water Temperature Range	°C	20 - 75		
Water Pressure Drop (max)	kPa	20	20	55
Circulation Pump Water Head	m	9	9	12.5
Expansion Vessel Capacity	L	6	6	8
ErP Level (35°C)		A+++		
Water Connections		G1"	G1"	G1-1/4"
Unit Dimension(L/W/H)	mm	1187 x 438 x 808	1287 x 458 x 908	1187 x 508 x 1460
Dry Weights	kg	110	123	184

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Powered by WATERWARE

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