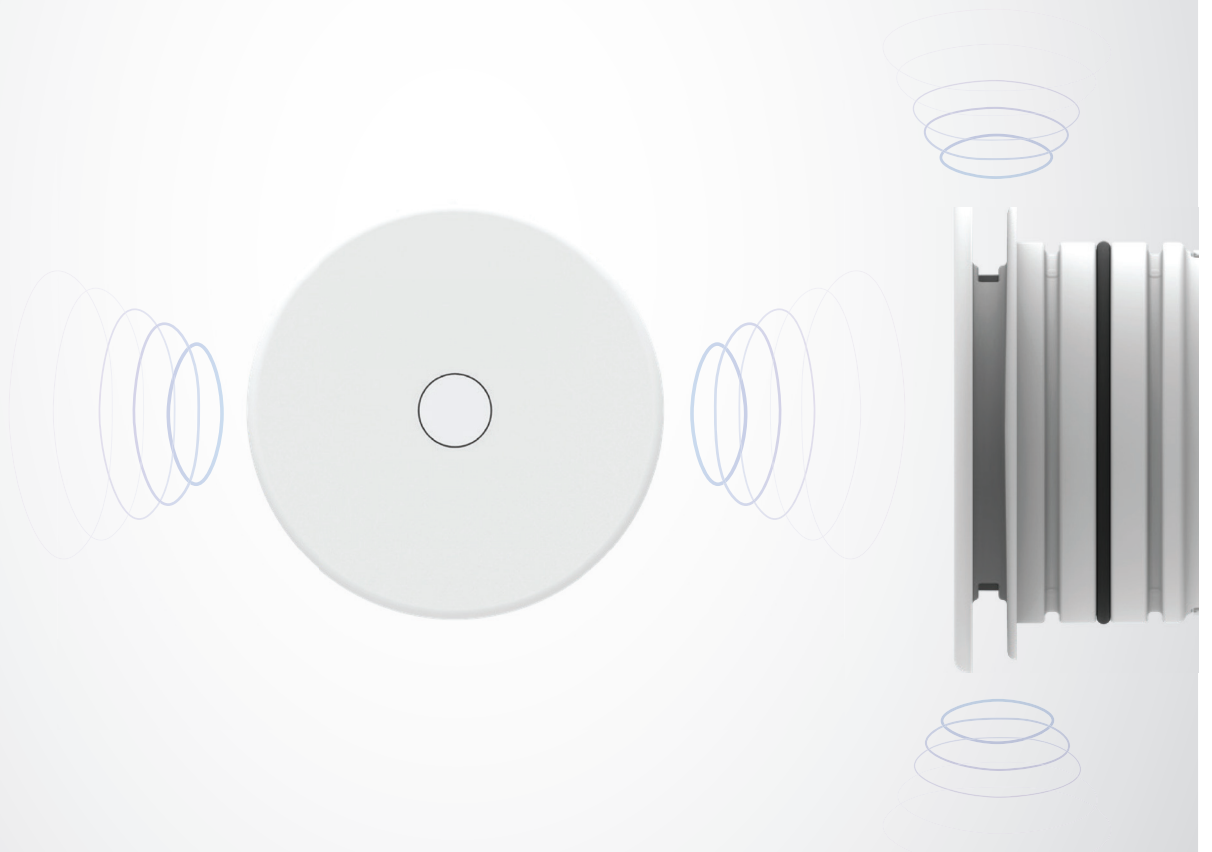




messana®  
hydronic technologies

## Climate Control

INTEGRATED HEATING, COOLING & VENTILATION



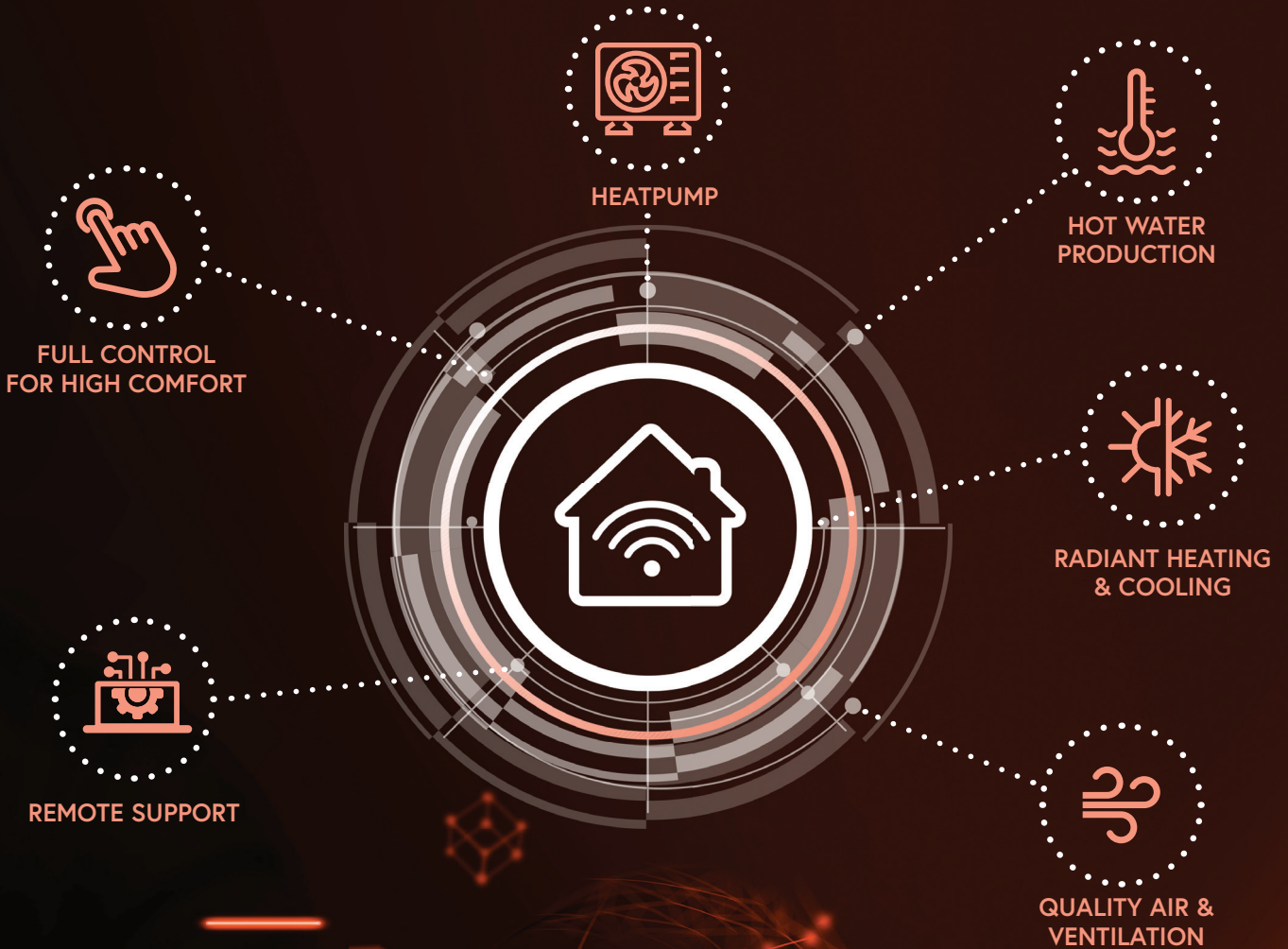
**WATERWARE**  
SOLUTIONS

[waterware.co.nz](http://waterware.co.nz)

# Explore the latest home climate control technology

Messana's CLIMATE CONTROL PLATFORM was designed for radiant based heating & cooling systems with integrated heat recovery ventilation and hot water production.

With 20 years of experience in hydronic radiant cooling and heating, Messana has developed a unique control technology that modulates the system to deliver perfect comfort and optimal air quality.





## Make yourself at home with a higher level of comfort

### One unique control platform for combined radiant and air systems

As the world becomes increasingly more connected, we have seen the rise of "smart" buildings. These buildings are able to control all aspects of the indoor environment, and can be used to provide a healthier, more comfortable space for occupants.

When it comes to building comfort and efficiency, there is no one-size-fits-all solution, *until now!* Every building and every office space is different, that's why Waterware believes in making sure that each of our clients gets exactly what they need for their specific project. That means we work with you from start to finish—we'll design your system based on your needs and specifications.

In order to give you better control over your space, we integrate several technologies into our systems: Active HRV (ventilating with heat recovery, dehumidification and active heating & cooling), radiant surface heating & cooling (floor & ceiling) and hot water production all driven by an air-to-water heat pump.

This is controlled using the Messana App which communicates with the mSense sensors around the building, temperature, humidity & air quality are all monitored to ensure perfect comfort and control. With sensors in multiple zones, which are all monitored individually enable a high level of flexibility and control.



#### mBox

The main unit of a home climate system. Typically installed in the mechanical room, it regulates the building's energy flow to produce optimal comfort. It controls heat resources with multi-staging, Domestic Hot Water and Heat Recovery Ventilation based on Indoor Air Quality.



#### mSense

Indoor Temperature and Relative Humidity (dewpoint) do not tell the whole story of what is happening in our homes. mSense measures three fundamental indoor environmental parameters that influence the wellbeing and thermal conditions of occupants: operative temperature, relative humidity and air quality. In the past, typical room thermostats only provided air temperature as the sole index of thermal conditions in your home.





## The next big thing is here, we have the technology

**Messana Climate Control has a zone based system which gives the user complete control over the indoor environment.**

We know life gets busy, with Messana climate control you can stay on top of the things that matter to you, even when you're away from home.

The Messana phone or web-based app offers full control of your radiant cooling and heating system from anywhere in the world. The easy to use, at your fingertips interface manages even the most sophisticated systems. It fits seamlessly into your life to provide the perfect temperature in any space at any time.



## Features



### Room comfort sensors

Monitors operative temperature, humidity and indoor air quality (IAQ) to deliver the best comfort in your home.



### Advanced Energy Saving

Delivers just enough heat (or "cool", by radiant heat extraction) to meet internal loads avoiding heat pump cycling.



### Automatic backup

Set up multiple configurations, then back them up, to use as and when the conditions suit.



## Breathe easy with Active Air

The Messana air treatment units are designed to work with radiant heating and cooling systems. They can be used to dehumidify, cool, heat and change the air in a home or building.

Messana air treatment units recover heat from the expelled air and transfers it to the fresh air which enters the building. This means the radiant system needs to add less energy to the home to keep it at optimal temperature. More than 90% yield is guaranteed by the high-efficiency counter-current heat recovery system.

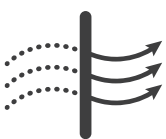
The appliance features a water coil which is connected to the heat pump system, this allows dehumidification and active heating and cooling of the fresh air which enters the building.

A controllable flap can change the mix of fresh and recycled air allowing the control system to balance dehumidification power with fresh air introduction delivering air with optimal temperature and humidity.

All of these functions are seamlessly modulated by the controls platform delivering a stress free user experience.



## Features



### Clean air

Automatic management from the controls platform, set and forget for reliable humidity, temperature and air quality.



### Full Control

Manual or automatic humidity control, for reliable and silent heat recovery.



### Highly Efficient

Delivering optimal comfort with minimal running costs and maximum efficiency.





## Leading they way in Radiant Energy

Radiant energy heating and cooling has many benefits, and it's the underlying reason why Waterware has developed expertise in this area with two technologies available for commercial and residential applications, Active Ceiling and Underfloor.

These systems all provide a uniformity of temperature, are silent, healthy, and represent a low running cost option for home or commercial heating and cooling solutions. With no air blowers there is no air movement, and no recirculation or collection of dust particles resulting in cleaner air. All systems can be efficiently managed through a centralised controller that caters to zoning requirements. This allows you to minimise any wasted heat. Utilizing air to water heat pumps for the primary energy source these systems feature low running costs, are environmentally friendly and have the opportunity to take advantage of solar PV systems further reducing running costs and the environmental foot print.

### Features and Benefits of Radiant Energy



INVISIBLE



REDUCED AIR  
MOVEMENT



LOW RUNNING  
COST



SILENT



SUSTAINABLE

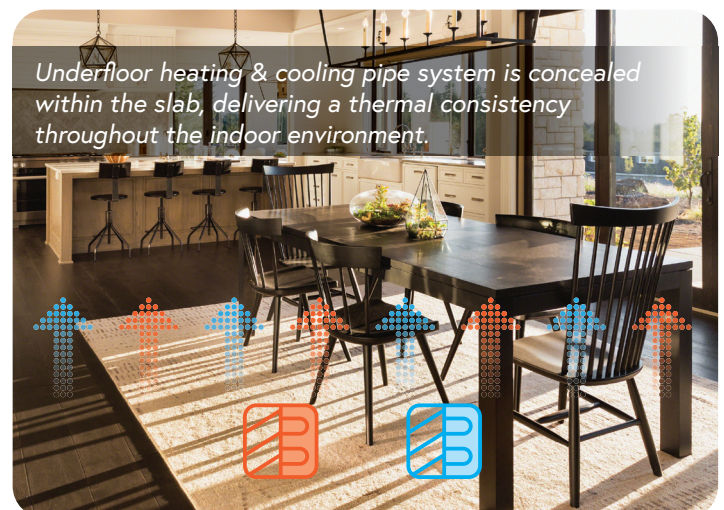


HYGIENIC

All of Waterware's radiant energy systems can be integrated with domestic hot water production, saving you up to 70% on your hot water bill. Waterware's in-house team of technical specialists will work with you to design a solution that meets your requirements, as well as full technical support during and after the project.

### Radiant surfaces

The heating and cooling system is designed to work in conjunction with the radiant based system by adding or removing energy from the zones to keep the zones at the desired temperature. This is done by combining hydronic floor & ceiling heating and cooling with an active HRV system. The active HRV system can directly support the radiant based system by dehumidifying the air when required and delivering directly heated or cooled air along with the ventilation requirements.





# The Engine

**The world is getting warmer. We know this, and we know that it's not good for us.**

But here's the thing: there's something you can do about it—and it starts with your air conditioning system.

Waterware, along with our suppliers has developed a new line of high-efficiency air to water heat pumps called Ritter R290. These heat pumps use R290 refrigerant, which has been recognized as an environmentally friendly refrigerant with the most development potential in the industry.

And with our commitment to reducing carbon emissions, we're proud to be part of the solution!

## What is R290?

R290 is a hydrofluoroolefin (HFO), which means it's naturally occurring, and it's derived from carbon dioxide. It has clear advantages over alternative refrigerants: approx. 75% less filling quantity is needed, it has low global warming potential (GWP) which is a comparative value that indicates the greenhouse effect of a green house gas. The Ritter R290 also provides significant product benefits for customers, such as a high flow temperature of 75°C, which makes the solution perfect for radiant applications but also Domestic hot water production.

## Why R290?

R290 has been used in refrigerators and air conditioning for decades, but now it's making its way into heat pumps.

Why? Because it's an environmentally friendly refrigerant that won't cause shortages like CO2 will. With R290, we can continue to use our heat pumps without worrying about running out of refrigerant or having to pay exorbitant amounts of money for it.



## Hot Water Production

When you're looking for a reliable hot water system, look no further. Our system can provide the hot water required for the sanitary needs of your house or building using the Heat pump as the primary source of energy supported by electric backup in times of need.

### SMART domestic hot water control

Optimizes multi-stage heating systems (heat pump with boiler backup) as well as recirculating pumps through programmed scheduling, temperature and/or room based presence sensors to provide instantaneous hot water supply only when needed.

## 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

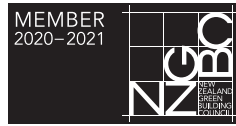
The versatility and technology of the R290 heatpump means it not only powers Messana Climate Control it can power all of Waterware's solutions, which include Radiant surface technologies, radiators & hot water production.



### Low running costs

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

Proud members of



# WATERWARE



An air to water heatpump harvests free energy from the ambient environment - it consumes 1 unit of energy to harvest up to 4 i.e. 400% efficient. The unit consumed comes from conventional electricity and over 80% of NZ's electricity comes from renewable technologies like hydro, solar and wind.

[waterware.co.nz](http://waterware.co.nz)  
[info@waterware.co.nz](mailto:info@waterware.co.nz)  
+64 9 273 9191

