

# temperzone climate innovations



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We are dedicated to innovating solutions to reduce the environmental impact of air conditioning.

### Our Ambition

At Temperzone, one of Australasia's leading manufacturers and distributors of cooling and heating solutions, our commitment to sustainability is engrained in the core values of our business.



**Les Kendall**CEO, Governing Director

Climate change and the focus on reducing energy consumption drives Temperzone's ongoing research, development and design of innovative cooling and heating solutions that are more energy-efficient and have a lower global warming potential.

Temperzone's offering of R32 refrigerant across commercial systems enables a 75% to 80% reduction in global warming potential compared to traditionally used alternatives. We currently offer the most comprehensive range of R32 refrigerant commercial products in Australia and New Zealand. In addition, we are the only company to design and manufacture this range of Temperzone commercial products locally, with manufacturing facilities in Auckland, Sydney, and Hamilton.

As technological changes occur within the air conditioning industry, Temperzone's approach to design, and commitment to research and development, enables us to deliver leading solutions that are energy efficient, reliable and optimised for applicational requirements.



**Kathryn Nicholas** Head of People & Culture



**Tony McIntosh**Chief Financial Officer



James Christopher
Chief Information Officer



**David Fargier**Chief Operating Officer



**Robert Beggs**Managing Director Australia



**Damien Walsh**Chief Customer Officer



**Carl Easton**Group Supply Manager



**Michael Joynt** Head Of Product Development



### About Us

Temperzone has been designing and manufacturing leading HVAC equipment for over 65 years. As many HVAC equipment suppliers have moved their manufacturing offshore, Temperzone has increased the size and capacity of its local Australian and New Zealand factories.

Temperzone cooling and heating products are produced in state-of-the-art manufacturing facilities in Auckland, Sydney, and Hamilton.

Temperzone utilises advanced technology at all levels of design and production. Coils, a central element to all heat exchange type products, are manufactured in the Sydney and Auckland factories. Digitally controlled sheet metal and pipework machinery provide the accuracy, consistency and throughput required of a large-scale production facility. An in-house powder coating system provides colour co-ordinated, and protective product finishes. Modern volume assembly line production has ensured lower costs and internationally competitive pricing.

In October 2009, Temperzone and Hitachi formed a strategic alliance that saw Temperzone appointed as the exclusive distributor of Hitachi Cooling & Heating products in Australia & New Zealand. With the Temperzone and Hitachi brands, Temperzone offers the most comprehensive range of air conditioning products in residential and commercial markets.



















# Our Timeline



The company changes its name to Temperzone Ltd.



Temperzone opens an office in Hong Kong to serve the growing demand for Temperzone products

2011 2012 2019

EXPORT AWARDS SUPREME WINNER Auckland 2012

Temperzone wins the Air New Zealand Export Award.

Temperzone acquire RCR Energy Products

International. Temperzone

manufactures Clever Air Handling Unit range.

Temperzone wins the ARBS Product **Excellence Award** 

for the Econex R32 inverter

package units.



Temperature Control Ltd founded by Mr Eric L. Kendall.



Temperzone acquires Bradway Engineering Pty Ltd, an Australian air conditioning manufacturer based in Blacktown, Sydney.



Temperzone relocates its Asian Regional Head Office from Hong Kong to Singapore due to increasing business in South East Asia.



Temperzone wins the Excellence in Exporting Award in the Auckland Central Business Awards.



Temperzone wins CIBSE Award for the OPA2100 ECO ULTRA package unit.



Temperzone wins the AIRAH



Temperzone becomes the sole distributor of Hitachi Cooling & Heating products

in ANZ.

Product of the Year Award for the OPA2100 ECO ULTRA package unit.

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## Our Values



#### Be Customer-driven

Always keep the customer's needs in mind by providing quality products, service, and responsiveness. Remember that customers can be internal and external, and our future relies on their ongoing support.



#### Be Solutions-focused

Seek solutions to problems and proactively participate in achieving a successful result.



#### Act Ethically

Conduct your business affairs with pride and dignity. Treat others fairly and with respect. Communicate openly and honestly.



#### Show Initiative

Take the initiative to pursue new opportunities that will bring both you and Temperzone beyond where you are today. Seek continual improvement in all tasks under your responsibility.



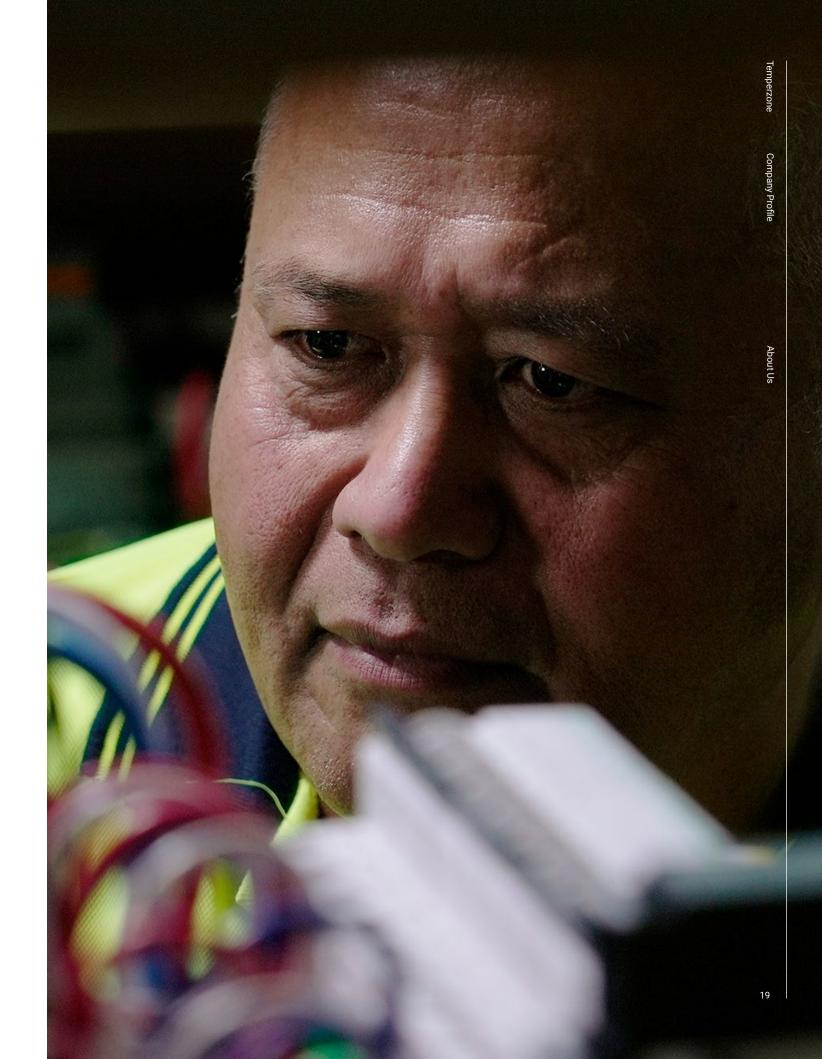
#### Be Accountable

Take responsibility for your assigned tasks and demonstrate this through words, actions, and results. Refrain from accepting faulty work, creating substandard or inferior work, or passing on shoddy work.



#### **Think Success**

Willingly accept challenges with the confidence that no undertaking is too big. Share success and believe that you can make a positive impact. Assist in spreading a "can do" attitude throughout our organisation.

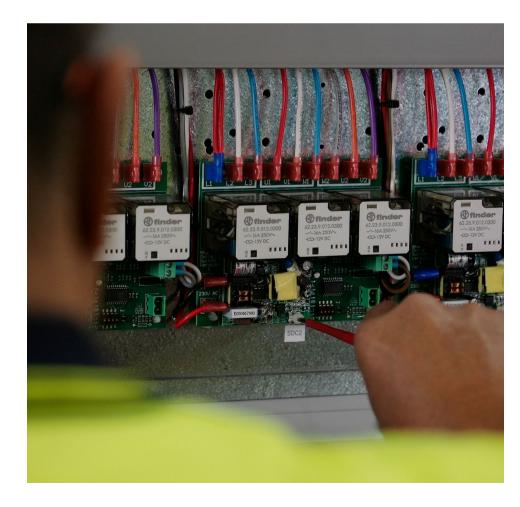








Our values guide how we interact with our colleagues, partners and customers. They are observed in every business decision we make.





### Our Service

Temperzone aims to deliver exceptional after-sales service with a highly skilled support team.

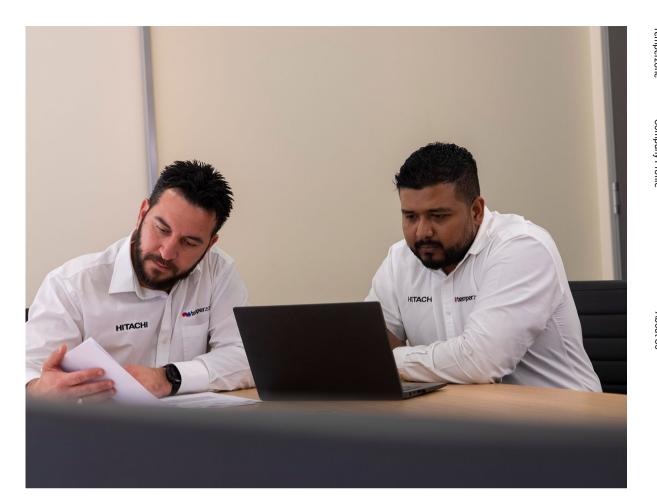


Sales

Our technical sales teams assist you in ascertaining your customers' needs. Our teams are specialists with in-depth product and service knowledge. We assist in the application and selection of our products in any project, whether commercial, retail, industrial or residential. In addition, due to our extensive range of products and continual innovation, our sales teams are available to keep you informed about new products and services.

Warranty & Technical Support

With extensive product knowledge and specialist equipment, our dedicated service teams are available to provide personalised service across both the Temperzone and Hitachi brands. In addition, we supply spare parts throughout Australasia, with overnight delivery services available for Metropolitan areas in ANZ. Our Spare Parts team consists of experienced staff who can assist with drawings and equipment parts for Temperzone products up to 20 years old. For Australian customers, Temperzone provides Start-up Assistance, a service where we help with start-up commissioning for all products across both Temperzone and Hitachi brands. Start-up Assistance is available in all major capital cities and selected regional areas. Whilst on-site, our Start-Up Assistance team can highlight the products' advanced features, help customers with data and controls, and achieve optimal performance levels.





# Our Service



#### Training

With training facilities located in Auckland, Sydney and Melbourne, customers can benefit from a wide range of hands-on interactive training sessions covering everything from installation, service, and maintenance. It is also an excellent opportunity to learn about the products' most innovative technologies and how they can be best applied to individual applications. Off-site training is also a service for those in regional or metropolitan areas. Courses are certified by modules, and training can be tailored to suit individual requirements for the entire product life cycle. This personalised service extends across Australia, New Zealand and Southeast Asia. All Temperzone and Hitachi products sold and installed within Australia and New Zealand are backed by a comprehensive warranty. The warranty period varies based on the model and application type.





# Innovation & Testing

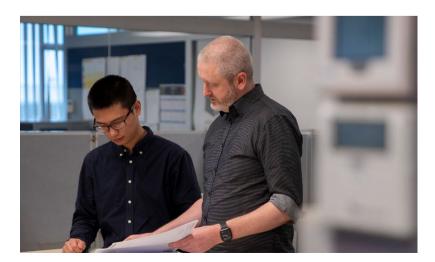
Temperzone has a specialised research and development laboratory for extensively testing air conditioning equipment across various conditions.

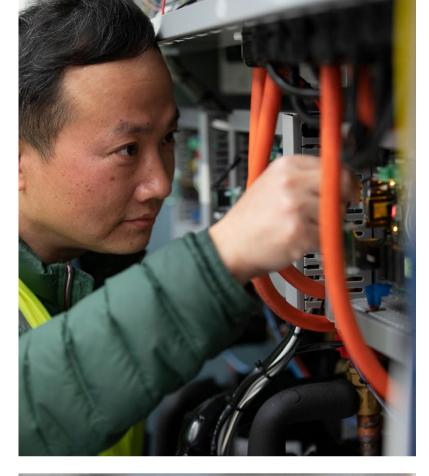
Temperzone's in-house R&D laboratory enables the development and testing of new products by international standards. In addition, Temperzone invests heavily in R&D, partnering with major international component suppliers to develop the next generation of low GWP (global warming potential), high-efficiency commercial HVAC systems.

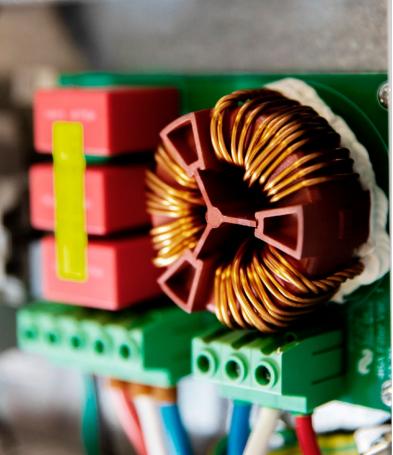
Manufacturing in Auckland, Sydney and Hamilton allows for considerable flexibility. We develop ground-up designs, from sheet metal to pipework and air-to-air heat exchangers. This removes any design limitations and the logistic challenges of importing prefabricated assemblies that other manufacturers rely on.

**Quality Assurance** 

Temperzone operates an ISO 9001:2015 certified quality management system. This system assists the company in supplying products of consistent quality – products that do what they were designed for. In addition, air conditioning systems are individually tested before they leave the factory.







Electronics plays a vital role in the control and efficiency of our units. Temperzone's unit and fan controllers are designed in-house.

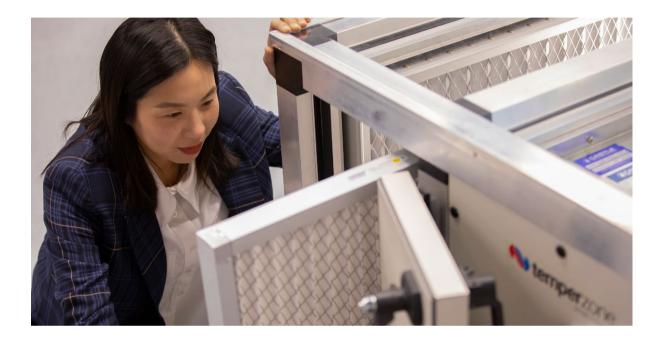
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Product Developme



# Our Research Facility

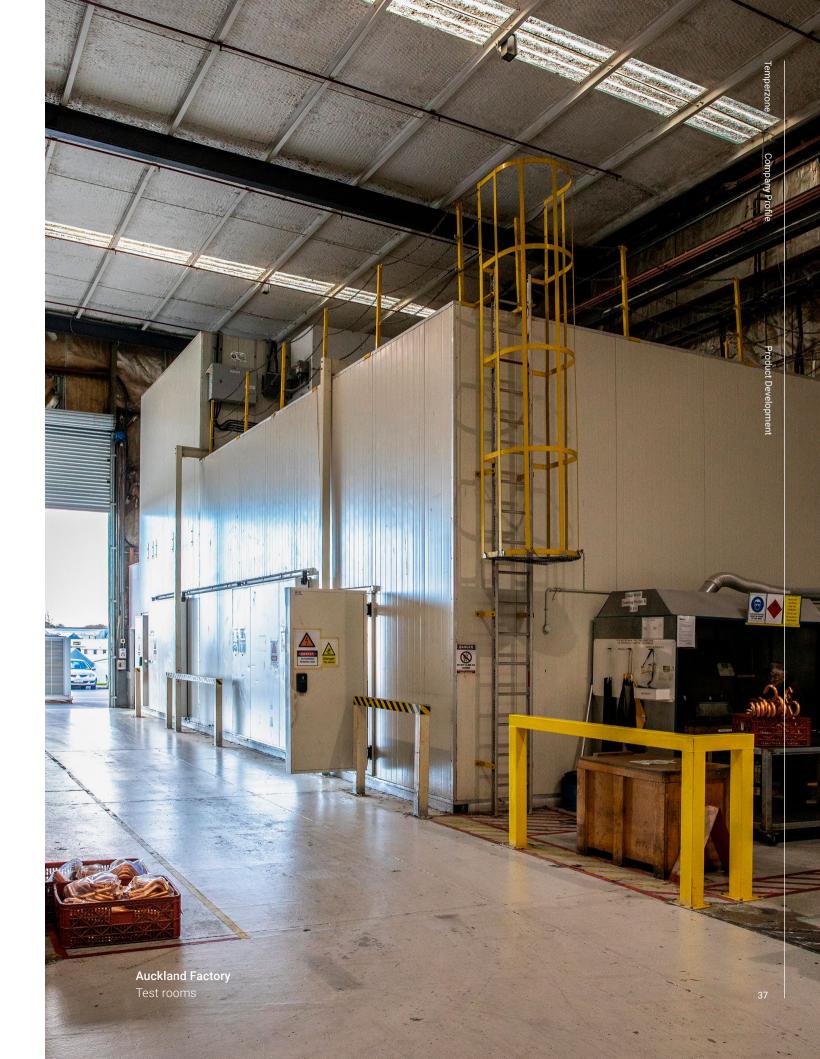
Our innovative research facility combines engineering, electronics, and compliance specialties under one roof.



- 1. Enthalpy test rooms for MEPS compliance, operational limits, and SEER testing.
- Reverberant noise test room for measuring the equipment's sound power levels at 1/3 octave bands with type1 calibrated sound level instruments.
- Hydronic platform variable water flow and pressure drop measurements for water sourced and fan coil units.
- 4. Ingress protection testing to confirm the equipment is suitable for all expected environmental conditions.
- 5. Wet testing area for equipment drainage, ponding, e.g. testing weather hood design and moisture seepage into the unit during operation.
- 6. Electrical safety testing for compliance with the appropriate AS/NZS standards.
- 7. EMI testing facility for EMC compliance of the equipment.
- 8. Software simulation for lifting calculations and structural integrity (seismic).

Temperzone's Research and Development is at the forefront of product innovation in the commercial HVAC market. In 2016 we pioneered the application of low GWP R32 refrigerant for commercial HVAC products. Developing a product required close R&D collaboration with major component suppliers as we were amongst the first worldwide to explore these alternative refrigerants in large-capacity commercial units.

Temperzone's diversification into water heating applications initiated an extensive product development programme. By utilising a remote monitoring platform with our field trial sites, we guided a continuous improvement approach to product development; this approach is unique to our industry and adapted from the methodology developed for producing consumer "Apps".



# Highly Configurable

Temperzone has been designing and manufacturing leading HVAC equipment for over 65 years.

Over the past 65+ years, Temperzone has proven its expertise in delivering on customer requirements. Our products are engineered to be highly configurable with thousands of standard pre-engineered configurations allowing for quick access to information for project design and management and reduced production lead times. These configured options allow Temperzone to provide unique solutions for various applications and product types. In the rare instance customisation is required, we have a local sales and engineering team that work with you on specific requirements.







# Categories



#### Control

Temperzone offers a range of control options and integrations with external control systems. Temperzone can consult on special projects, assisting in developing systems tailored to the application's needs.



#### Turnkey

Complex sites with multiple design requirements can experience major setbacks during construction and commissioning. We aim to provide end-to-end solutions incorporating custom options that make the mechanical services and controls installation simpler and quicker on site.



#### Innovation at the Core

Temperzone offers solution-based answers that take full consideration of system performance and application. Our team provides a fresh perspective on what's new in the market and finds ways to incorporate new technology for the end user's benefit.



#### **Humidity Control**

Temperzone's range of onboard controllers enables the ability to process specific humidity requirements, such as the option of DX reheat coils and humidifiers. This is a cost-effective approach compared to the traditional alternatives, usually purpose-built units, or sophisticated chiller setups with tailored control logic.



#### Library

Multi-connected products provide an integrated solution comprised of Temperzone AHUs, heat pump water heaters and air-cooled package units.



#### Warehouses

Project-specific units to meet airflow, capacity, control requirements and weight restrictions. Temperzone provides custom-made units to meet specific site requirements.



#### Hotels

Complete solution offering for high rise utilising Temperzone AHUs, low profile fan coil units and Hitachi screw chillers. Structured floor-by-floor delivery and unit ID requirements for a seamless project.



#### Mining

Custom units made from 316L stainless steel, Cupro-Nickel tubes and treated copper fins. Application-specific features include IP56 rated switchboard, duty/standby dampers and explosion-proof damper motors.



#### Restaurants

Integrated solution design utilising variable capacity rooftop and split ducted units with heat pump water heaters for fresh air tempering (heating coil) and potable hot water.



#### Supermarkets

Heat reclaim coils fitted into package units with reheat and humidity control. Custom projects can include the refrigeration controller I/O cards pre-wired.



## Our Partners

Supporting organisations on

their path to a low-carbon future.



Temperzone Australia Pty Ltd is a founding member of AREMA (Air-Conditioning & Refrigeration Equipment Manufacturers Association of Australia). Temperzone is an active contributor to the operations of AREMA, with our staff voluntarily filling office bearer positions and representing AREMA members' interests on various Standards Australia technical committees and Government working groups. Temperzone staff have also been selected to represent Standards Australia as technical experts on air conditioning related ISO and IEC International Standards committees and working groups.



Temperzone Ltd is a member of Climate Control Companies Association of New Zealand Inc (CCCANZ), the industry association for Heating, Ventilation, Air Conditioning, and Refrigeration (HVAC&R) companies in New Zealand. CCANZ promotes high standards of business competence and industry conduct for companies engaged in climate controlled environments.



Temperzone Australia Pty Ltd designs and manufactures HVAC equipment for the Australian market and many products have the Australian Made logo. It's Australia's most trusted, recognised and widely used country of origin symbol. It is underpinned by a third-party accreditation system, which ensures products that carry the logo are certified as 'genuinely Australian'.



Temperzone Ltd designs and manufactures HVAC equipment for the New Zealand market in its Auckland and Hamilton manufacturing facilities. Temperzone's cooling and heating equipment design considers New Zealand's coastal environmental conditions.



### Our Environmental Priorities

We are committed to minimising the environmental impact of our daily business operations and supporting others by delivering high-efficiency, low GWP refrigerant products.



#### Operational Inputs

The reduction of our consumption of energy, water, and fossil fuel-based materials. We have removed the use of methyl bromide for fumigation used for exports. Temperzone partners with suppliers and service providers who align with our goals.



#### **Reduction of GWP Components**

Transition to lower global warming potential (GWP) refrigerants such as R32 and exploring the transition to the next generation of refrigerants.



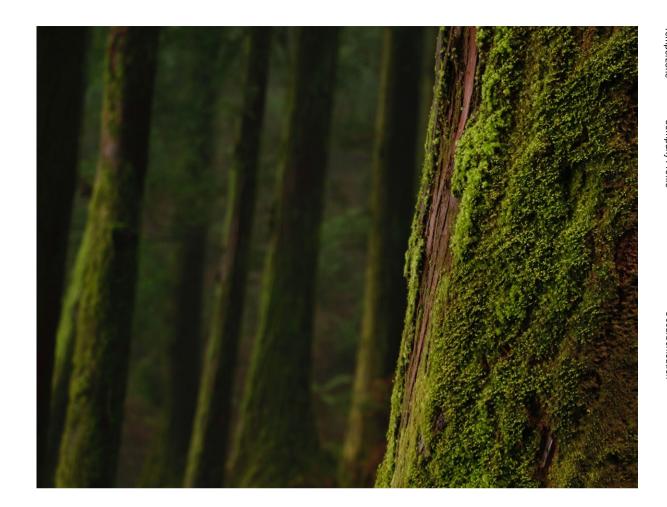
#### **Operational Outputs**

Minimising waste and ensuring the waste generated is recycled with a Zero landfill target. E.g. recycle steel, soft plastics, polystyrene, timber, cardboard, etc.



#### **Design for the Environment**

In our design process, we always consider selecting materials for reuse or recycling at the end of life, sustainable packaging, and eliminating hazardous material. In addition, our high product efficiency targets assist our customers in lowering their energy usage.



Temperzone is committed to its responsibilities as a member of the corporate community. In efforts to reduce the environmental impact of our products, Temperzone led the air conditioning industry in the early introduction of R410A refrigerant well ahead of regulatory requirements for domestic and commercial products and, in recent years, being the first to introduce R32 into commercial products.

Temperzone's goal is to offer some of the most energy-efficient products available in the market. In all aspects of its business, Temperzone is actively involved in reducing its impact on the local and global environment by reducing or eliminating pollution, recycling and increasing energy efficiency.



# Our Manufacturing Facilities



#### **Water Demand**

A water management system that uses a rainwater catchment and storage tanks for use through the facilities has been installed.



#### **Hot Water**

Heat recovered from the air conditioning system is used to produce hot water used in the offices and canteen, reducing energy demand.



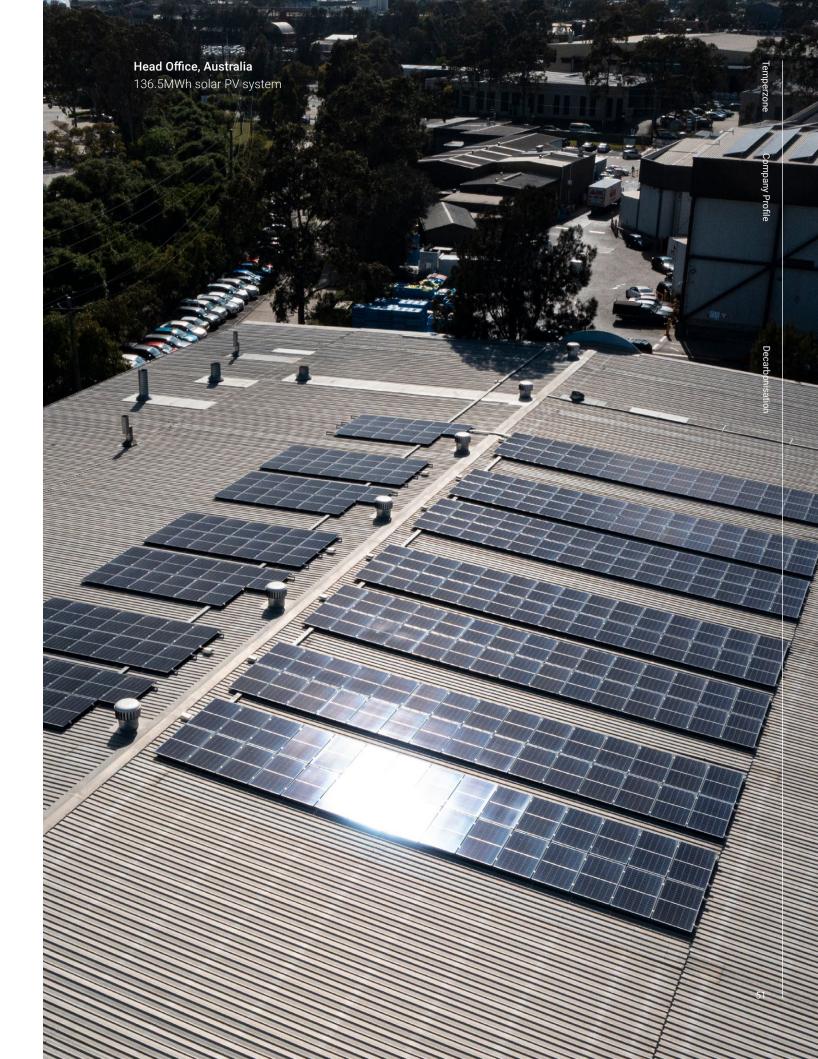
#### Lighting

A motion sensor lighting system turns the lights off and on depending on the occupancy. Through the use of skylights on the roof of the factory area, natural lighting is used when possible. In addition, Lux sensors also reduce the electric lighting on bright sunny days.



#### Solar

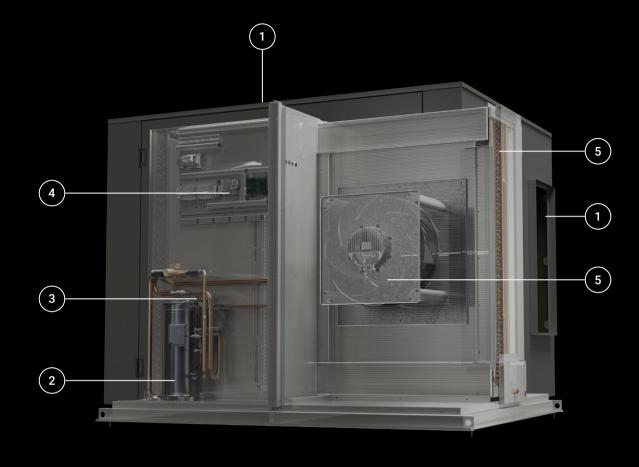
Temperzone installed a 99kWp solar system in one of its manufacturing facilities which delivers 136.5MWh of solar per annum, reducing the facility's carbon emissions by 50.4t of CO2 per year. A highly advanced monitoring, control and management system is based on a 24/7 real-time data evaluation. In addition, by securing continuous system operations, the system provides high yields of PV power under the system management.





# Econex

Award-winning Econex Packaged units offer a lower GWP solution with superior efficiency.





Using inverter compressor technology, the Econex Packaged unit range provides a precise load variation response and superior part-load performance for closer comfort control and higher energy efficiency.

Temperzone aspires to lead the commercial HVAC industry in reducing air conditioning products' global warming potential. Using R32 Refrigerant, Temperzone's Econex Packaged units enable a 71–80% reduction of Global Warming Potential (GWP) per kW of cooling compared to R410a units.



#### Efficiency

Variable-capacity systems for superior energy efficiency in all seasons.



#### Controlability

Proprietary controls for leading system control.



#### Decarbonisation

Lower Global Warming Potential (GWP) solutions.



#### Reliability

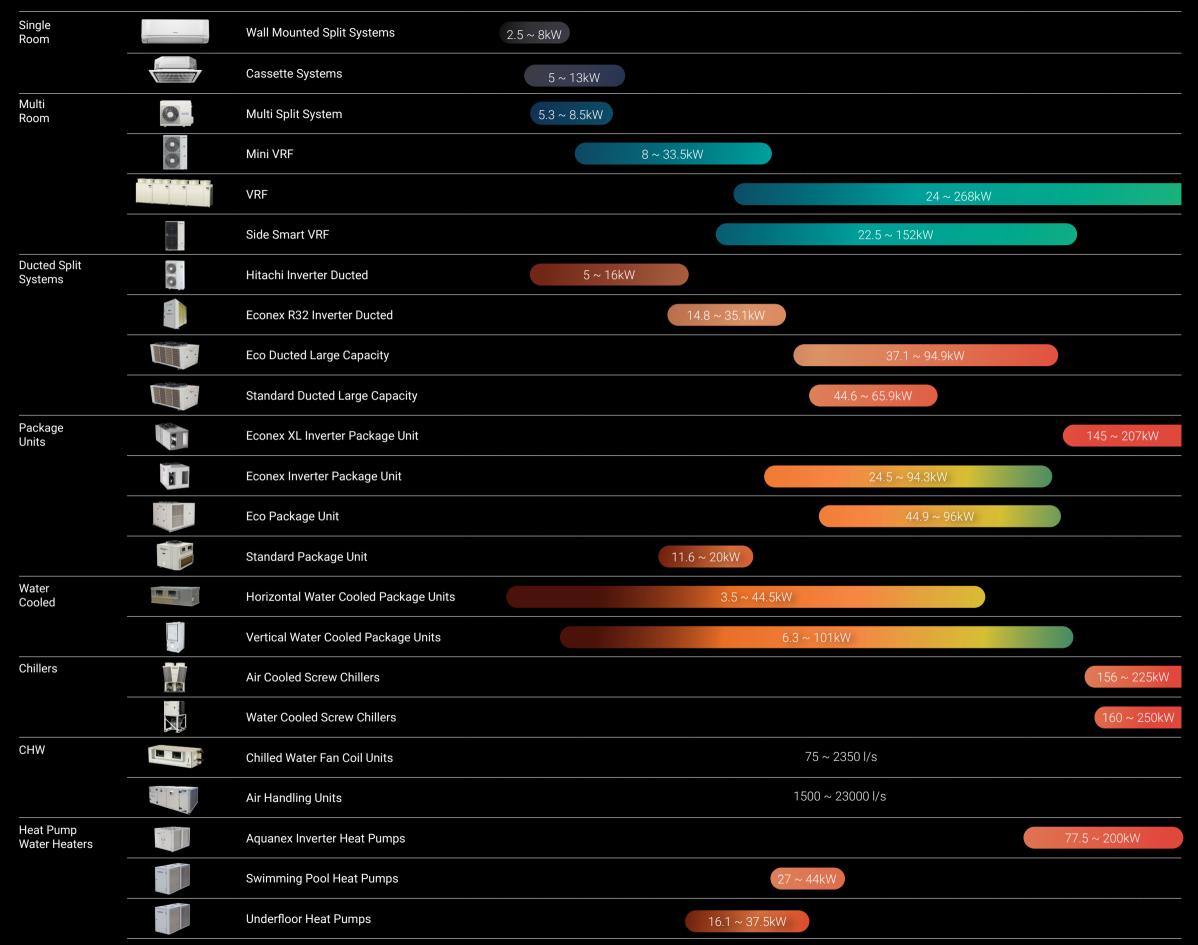
Leading system design and components for reliable operation.



#### Durability

Long life durable design and construction.

# Our Range





# Commercial

The Temperzone and Hitachi product range is one of the most extensive offerings in the market.

Across the Asia Pacific region, Temperzone units have been specified and installed across many HVAC applications. Temperzone delivers extensive support across the Temperzone and Hitachi portfolio, ensuring we provide the right solution for any application. Over the years, we have provided systems for some of Australasia's most prestigious projects, from distribution centres, hotels, shopping centres, convenience stores, office buildings, banks, and schools through to unique application solutions for process manufacturing, the mining industry and swimming pools, to name a few.



Temperzone provides a comprehensive suite of technical, application and installation information for current products and superseded products no longer manufactured.

Temperzone's partnership with Hitachi provides the perfect synergy between products, enabling us to offer cutting-edge solutions comprised of Temperzone and Hitachi products, in combination or integrated, to offer leading comfort and efficiency.









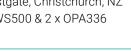


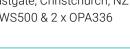






Taco Bell Eastgate, Christchurch, NZ MWS500 & 2 x OPA336







**Hector Egger** Cromwell, NZ MWH2000 HWHP & Radiators



McDonald's Flatbush Flatbush, NZ ECO Package units



Spotlight Christchurch, NZ 2 x PA 4901 units



**Burlington Rest Care** Christchurch, NZ Underfloor Heating & H/W



**Caddens Corner** Caddens, NSW, AUS ECO Split Ducted units



**Nepean Shopping** Nepean, NSW, AUS 2 x Eco Ultra OPA2100 units



**Westland Milk** Rolleston, NZ 2 x Stainless AHU, OSA950's



Woolworths Mandurah, WA, AUS Eco Ultra OPA2100 units







**Pakuwon Tower** Jakarta, Indonesia 1500 x Water Cooled (HWP)

**Fusion Gym** 

Morningside, QLD, AUS

Multiple OPA960 ECO units





PAK'nSAVE Glenfield, NZ 2 x R32 OPA2100 Inverter units



Rolleston, NZ

Plaza 88

**Bunnings Retail** 

Reynella, South AUS

Multiple OPA1370 ECO units

Selwyn Aquatic Centre

Multiple Hot Water Heat Pumps



Stanthorpe State School Stanthorpe, QLD, AUS 62 x Hitachi RPC Cassettes



**Crown Plaza Hotel** Hobart, TAS, AUS 8 x Hitachi Chillers, 250 IMDL's



Nth Kellyville School Tsuen Wan, Hong Kong 950 x Water Cooled (HWP)



Nth Kellyville, NSW, AUS 24 x Hitachi VRF Systems



Illinois Hotel Five Dock, NSW, AUS OPA Package & Hitachi VRF



Hyper-dome Loganholme, QLD, AUS 5 x OPA960 ECO Package units



**Farmers Retail** Tauranga, NZ 4 x Custom PA units

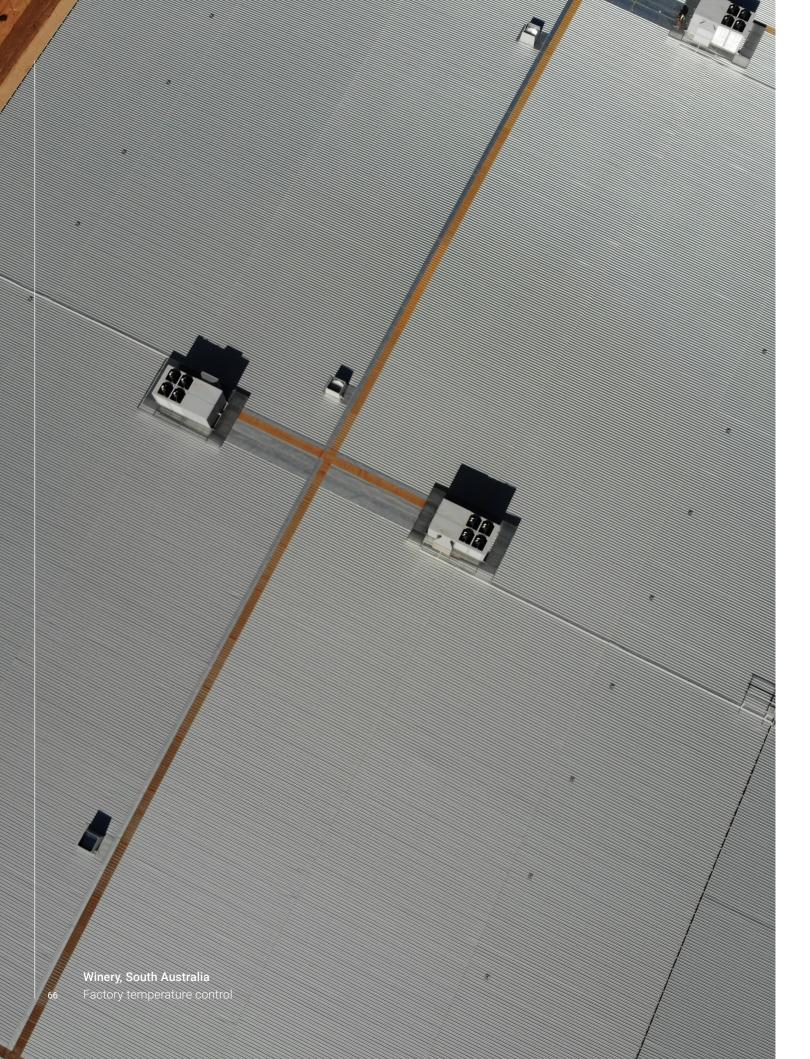


**Accolade Wine Factor** Old Reynella, South AUS 11 x OPA1370 ECO units



**Doctor's Offices** St Lennards, NSW, AUS 7 x Hitachi mini VRF Systems

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We can provide a complete product offering for any size project utilising Temperzone and Hitachi solutions.



# Temperzone designs integrated solutions to meet the challenges of various HVAC applications.

Temperzone and Hitachi products can be found in different industries and applications ranging from large-scale commercial buildings to residential homes across Australia, New Zealand, and Southeast Asia. Our diverse product range allows us to meet the unique requirements of individual market sectors and provide a comfortable and healthy environment for all occupants.

We work closely with consulting engineers, builders, mechanical contractors, control companies and property owners to offer solutions to ageing asset replacement, refrigerant phase-out targets and carbon reduction goals. There are also many corporate partners we work with to ensure whole-of-life costs are considered, parts availability, as well as unit control and monitoring methodology. The HVAC industry is evolving fast, and new technologies enable greater control, reliability, lower global warming potential and simplified installation of systems in many sectors. It is humbling to know how many people experience the comfort our innovative systems provide daily.

## Residential

By combining humanity and technology with constant innovation we create living spaces where you can enjoy perfect comfort all year round.

















Temperzone is a common choice for high-rise apartment towers due to our wide range of leading chilled water and water-cooled products. For decades, Temperzone has been market leaders in water-cooled package units. The introduction of ThermoShell technology heat exchangers has improved efficiency while allowing lower costs through a reduced water flow and water pressure drop.

Regarding keeping your home comfortable, Hitachi, through Japanese heritage and decades of experience, has taught us that harmonious living spaces lead to improved quality of life. As a result, Hitachi is one of the world's leading innovators of residential air conditioning products for home comfort.



#### Hitachi airHome 600

An AC solution that cares for itself. Cleans and maintains itself year after year and boasts an impressive list of premium features.



#### Temperzone water-cooled systems

A key fixture of many CBD high-rise developments, our innovative water-cooled units are more economical, flexible, and environmentally friendly than most air-cooled alternatives.



#### Hitachi SmartAir

Award-winning design. Combining the best form and function, enjoy easy climate control with Hitachi's advanced wall controller.



#### Hitachi Silent Iconic Cassette

A design panel in harmony with the space that responds to the needs of architectural designers.



The sky's the limit with Temperzone water-cooled systems



**Eastbourne Apartments**Fitzroy Gardens, VIC, AUS
400 x Water Cooled (HWP)



1 Central Park Chippendale, NSW, AUS 300+ IMDL CHW Fan Coils



Sugardock Apartments
Pyrmont, NSW, AUS
300+ Water Cooled (HWP)



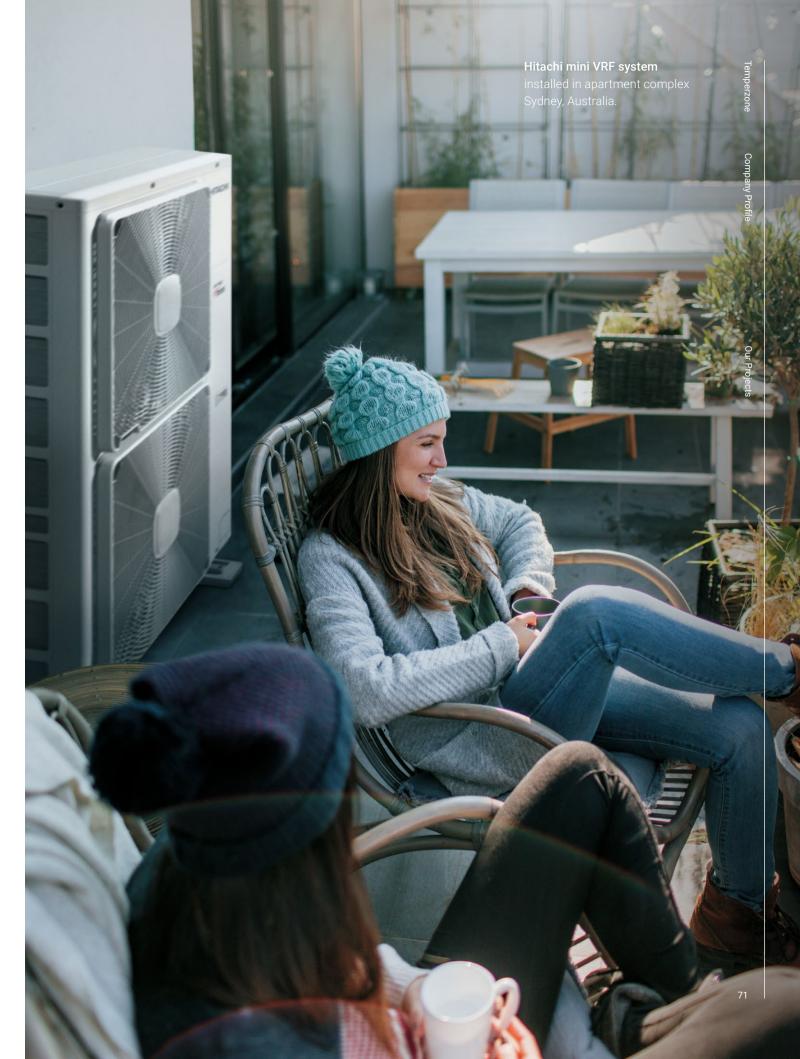
ERA Apartments Chatswood, NSW, AUS 200+ Water Cooled (HWP)



Pinnacle Apartments Rhodes, NSW, AUS 200+ Water Cooled (HWP)



Gloucester Street
The Rocks, NSW, AUS
200+ WCS Water Cooled units













# temperzone climate innovations

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