



ROTARY HEAT EXCHANGERS PTY LTD

CAPABILITY
STATEMENT 2022

COMPANY OVERVIEW

Our company, Rotary Heat Exchangers Pty Ltd (RHE), started in 1968 after R&D research conducted by CSIRO and Monash University perfected an energy recycling system designed specifically for modern HVAC systems. The company has continued to improve its technology.

Our unique technology — Ecopower Rotary Heat Exchange — is designed to dramatically increase heat transfer performance in air conditioning and has now reached an unprecedented 90% level.

This next-generation technology is designed to reduce energy consumption and, ultimately, lower the carbon footprint of any building.

Our company is based in Victoria and our Director and CEO Bill Ellul, is a scientist and engineer, recognised globally as a climate change innovator and thermal energy expert.

Our areas of expertise include: energy efficacy, heat recovery, Rotary Heat Exchangers, indirect evaporation cooling and industrial waste heat recovery.

RHE is Australia's only manufacturer of Ecopower Rotary Heat Exchangers. Our technology is borne from Aussie R&D, which is Aussie engineered and made.

COMPANY DETAILS

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OUR PURPOSE

Our state-of-the-art technology recycles 90% of the thermal energy expelled from heating and cooling systems, in a way that improves the HVAC system's efficiency.

We see climate change as a global problem and our mission is to engineer HVAC technologies that serve our customers, our neighbours and our environment.

Our unique Australian Rotary Heat Exchangers recycle thermal energy so efficiently, our customers have discovered they tend to draw less power from the grid and use far less natural gas thus lowering the carbon footprint of their facilities.



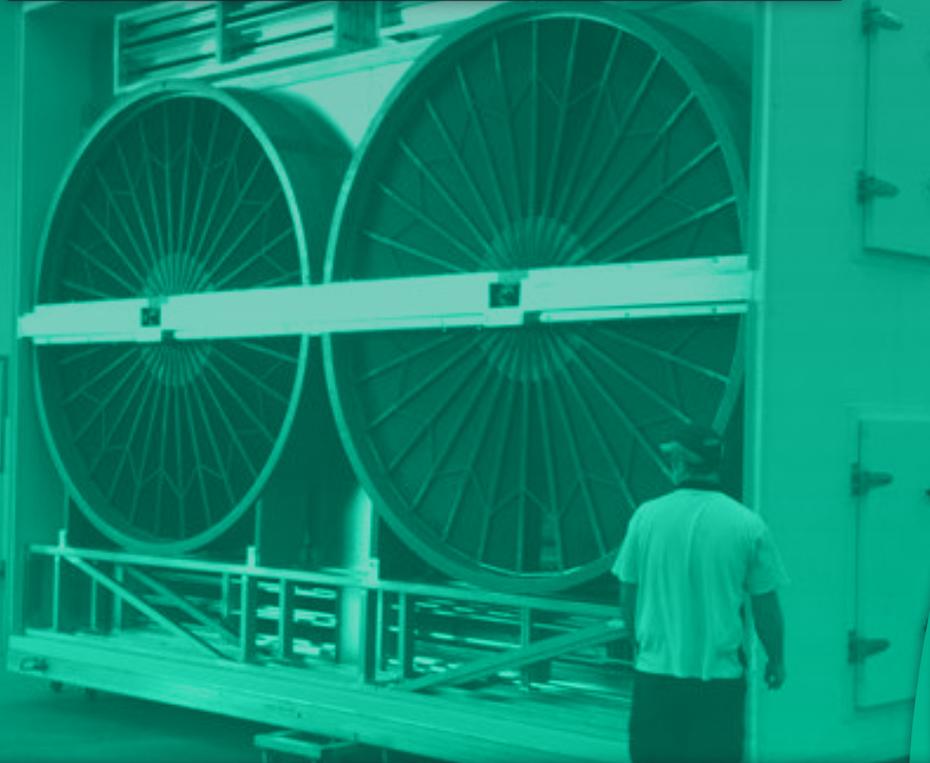
Our innovative and award-winning green technologies will reduce the carbon footprint of any facility.



Our technology is clean, green, efficient, sturdy and very cool.



Rotary Heat Exchangers Pty Ltd has won three Australian energy awards.



Ours is next-generation HVAC technology... and no modern system would be complete without it. Easily integrate our Ecopower Rotary Heat Exchangers into any heating and cooling system.

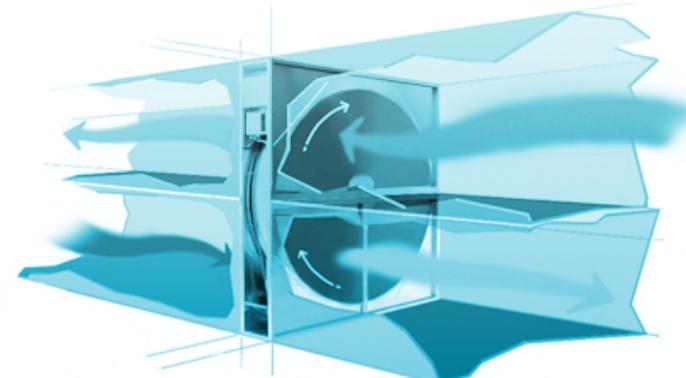
OUR TECHNOLOGY

The centre piece of our technology is the Ecopower Rotary Heat Exchanger, which uses an energy recovery wheel to capture and recirculate thermal energy extracted from air conditioning systems.

In this process, the Ecopower RHE recycles the energy taken from the HVAC exhaust to air condition the fresh air into the building.

Central to this process is a state-of-the-art material known as Mylar, which is a non-corrodible plastic. We use several kilometres of thin Mylar film as the main heat transfer medium inside the Ecopower RHE's rotor matrix.

What does the Ecopower RHE do? It recycles 90% of the thermal energy expelled from heating and cooling systems. This is done by rotating the Mylar rotor between the two air streams. Doing so, simultaneously heats and cools the HVAC matrix airflows, thus providing cleaner, cooler and drier fresh air.



OUR SERVICES

The Ecopower RHE engineering team has the proven expertise to help architects, service contractors, building and mechanical engineers design HVAC systems, which are more efficient and more environmentally sensitive.

We will show you how our Australian Rotary Heat Exchangers function, we will help you integrate our RHE technology into your HVAC system matrix and we will be there with counsel and maintenance advice during the lifecycle of your building and its cooling systems.



Our RHE technology is recognised globally for its efficiency and reliability. Why look beyond our shores when the world's most effective Ecopower Rotary Heat Exchanger systems are manufactured right here in Australia?

ENGINEERING

We designed these systems to be scalable, self-cleaning and modular. We'll help your team cross-integrate our technology into even the most sophisticated HVAC systems.

INSTALLATION

You will not be alone when the time comes to add Ecopower's RHE technology into your structure. Our dedication to the safety, security and precision of this process is assured.

SERVICE

We hate to brag, but the Ecopower RHE system has a long-proven history of outperforming and outlasting anything produced by our competition. Our technology is designed and built for the long haul and so are we.

CONSTRUCTION WITH CONFIDENCE

We installed our first Rotary Heat Exchange system at the Queen Elizabeth II Hospital in Western Australia in 1968. That successful system is still working today. Since then, variations of the Ecopower RHE system have been incorporated into HVAC systems across Australia.

Those buildings include the Australian Institute of Sport's National Sports Centre in Canberra; the Crown Casino in Melbourne; Federation Square, Alfred Hospital, the Burnet and Baker Institutes in Melbourne; and Parliament House in Canberra.

Our systems are also installed in 18 hospitals, 16 commercial and government buildings, 39 public aquatic centres, 7 commercial and private indoor pools, 21 academic pool centres, and two Australian Defence Force pools.

An Ecopower RHE cooling system has been cold filtering the hot air generated inside Parliament House since 2002.

Since 1999, visitors to Melbourne's Federation Square have been cooling off in a climate system engineered in part by Ecopower RHE. 5 cooling wheels were installed there on initial construction and continue to provide free air-conditioned fresh air.

In Canberra, many more rotary heat exchangers have been added to the existing HVAC system, which had been operating faithfully inside the Australian Institute of Sport since 1980.

We think ours is a technology you can't live without and chances are, we've been cooling you off for years without you knowing it.



WHAT DISTINGUISHES OUR PRODUCT FROM ALL THE OTHERS?

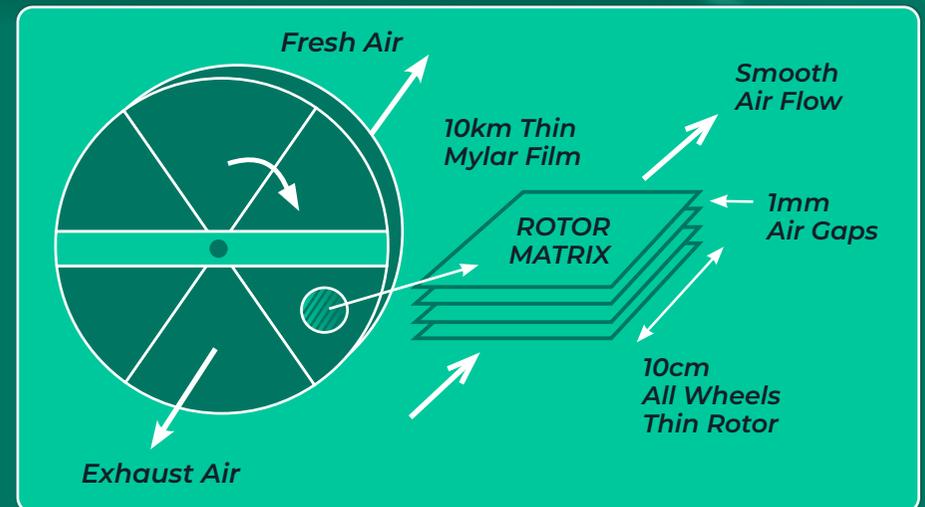
THE ECOPOWER ROTARY HEAT EXCHANGER

The 10cm narrow indestructible, non-corrodible rotors we installed at aquatic centres across Australia, have literally outlasted the structures themselves.

In the process, our RHEs produced huge-energy cost savings with substantial environmental benefits. In fact, we are so confident in the durability of our product, we offer a unique 10-year warranty on the Ecopower RHE matrix.

Unlike our competitors' products, our "wheels"— of diameters up to 3 meters — use the same narrow 10cm deep rotor matrix. This rotor is constructed with 10km of Mylar, an indestructible paper-thin P.E.T plastic film, which we wind tightly to maximise its efficiency.

We also add in spacers to separate each layer creating 1mm gaps and these gaps dramatically improve the unit's thermodynamic and air-flow efficiencies.. This design, which uses less energy but produces maximum heat transfer, is 90% efficient. That's why Ecopower RHEs are the most efficient RHEs in the world.





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