Product specifications

emerald

Air Conditioning

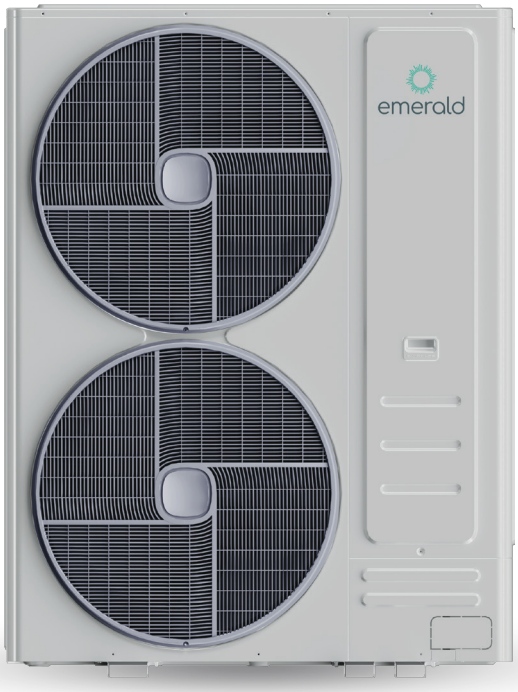
Ducted Ultra 20kW (VRF)

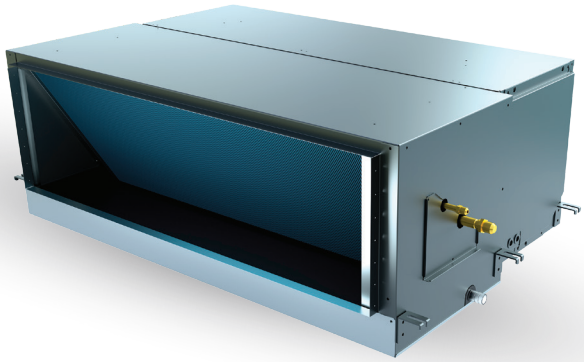
emerald.com.au

Engineered for effortless efficiency

Engineered by Emerald, proudly Australian since 2006, the air conditioning ducted 20kW (VRF) system is designed for efficiency and reliability in a range of climates.

Emerald ducted VRF stands out for its energy efficiency, using advanced refrigerant cycling and DC inverter technology to deliver significant energy savings without compromising performance. Its continuous refrigerant adjustment allows precise temperature control, adapting smoothly to changing cooling and heating demands—ideal for consistent comfort in more demanding applications.





Features

- VRF system for precise temperature control.
- High static pressure for stronger airflow.
- Smart automatic temperature control for comfort.
- Wide temperature range to suit Australia's extreme climate zones.
- Indoor unit designed to split for easy installation.
- High efficiency DC inverter technology.
- Golden Fin for twice the anti-corrosion capability.
- This product is Demand Response compliant (DRM1, DRM3 & DRM3).

> At Emerald, we want our customers to gain the most out of technology. We focus our energies on creating products that are technologically superior, last longer and perform better.

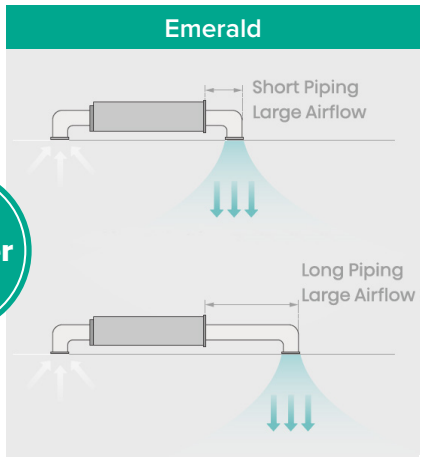
Stuart Edgley Emerald Managing Director

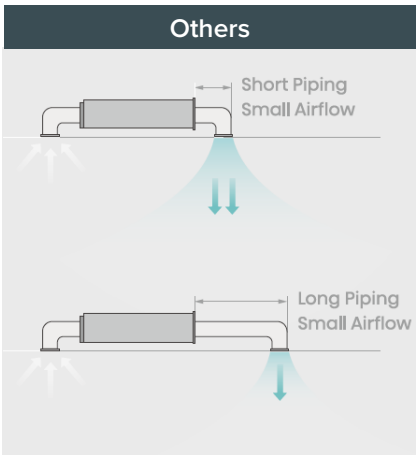
Greater temperature control for enhanced comfort

High static pressure flow

Emerald's high-efficiency DC fan motor creates high static pressure which allows for up to 33% stronger airflow, even in longer ductwork.

33% Stronger air flow





Superior heating

The outdoor unit's heat exchanger features an 8-inch diameter, which is larger than the 7-inch models of competitors. This larger heat exchange area reduces pressure loss and significantly increases both heating capacity and COP (Coefficient of Performance).

VRF technology

Variable refrigerant flow (VRF) systems provide precise temperature control by continuously adjusting refrigerant flow, creating a tailored, comfortable indoor environment—perfect for spaces needing consistent comfort and efficiency.

Wide temperature range

Reliable cooling and heating in extreme Australian temperatures, from -20°C to 50°C, providing consistent comfort. A strategically designed air guidance system ensures even air distribution, while the multi-row heat exchanger boosts heating performance and efficiency by reducing pressure loss.

Adapts to demand with modulating compressor

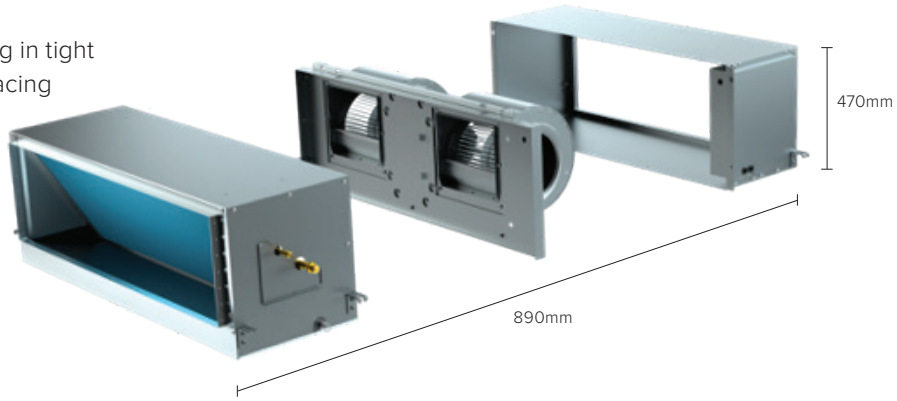
Precise, demand-driven control with a modulating compressor that adjusts capacity from 20% - 100%.
Benefits include:

- Reduced compressor cycling.
- Improved part-load efficiency.
- Better humidity control at lighter loads.

Flexible installation plus efficient, reliable performance

Easy installation - perfect for both retrofits and new builds

The split-type indoor unit can be separated into three smaller parts, simplifying installation in confined roof spaces.
Its compact design is ideal for maneuvering in tight areas, making it a practical choice for replacing old gas systems.

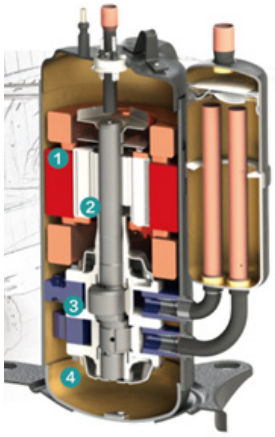


1 High-efficiency motor
Optimised motor design to improve compressor performance.

2 Optimised rotor design
Lower centre of gravity to reduce the compressor noise and vibration.

3 Flat mechanism design
Improves the volumetric efficiency and overall performance.

4 Screw interactive fastening
Improves fastening effect and reduces deformation of the core.



Highly efficient DC inverter technology

Featuring advanced direct current (DC) fan motor and inverter technology the outdoor unit is engineered to maximise energy efficiency.

Unlike traditional compressors that cycle on and off, our compressor continuously adjusts its speed based on the room temperature and the users set preferences. This approach provides consistent comfort while lowering energy use, which ultimately reduces operational costs.

Anti-Corrosion Golden Fin

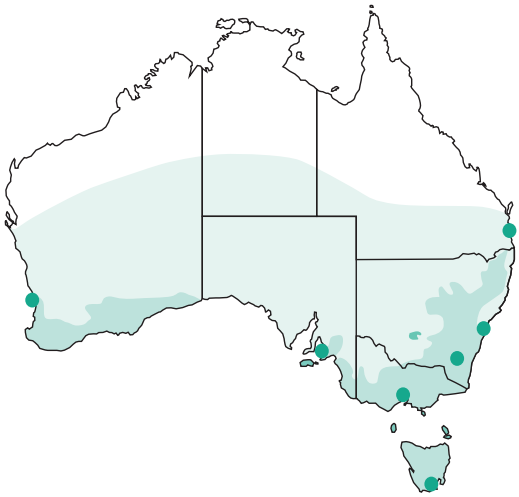
Emerald Anti-Corrosive Golden Fin is built to endure harsh weather, including salty air, rain, and other corrosive conditions.

Designed for Australia's demanding outdoor environments, it has passed a rigorous 1000-hour anti-salt spray test. With twice the anti-corrosion durability of the standard blue fin, it offers long-lasting protection, even in coastal areas.

Generous Government energy efficiency rebates

Australian federal, state and territory governments have established energy efficiency schemes and programs to incentivise the adoption new technology solutions, to help reduce energy usage and the carbon footprint of businesses and households across the country.

Emerald products are rewarded with a significant amount of government energy-saving scheme certificates due to their exceptional energy efficiency. This makes our products more affordable and energy efficient compared to many others on the market. They are approved under various Australian energy efficiency schemes, including VEU, ESS, and REPS.



VEEC RESIDENTIAL · VEEC COMMERCIAL · ESC RESIDENTIAL · ESC COMMERCIAL · PRC ENTITLEMENT

Model	ACV200U/ACV200D
Cold Zone 5 VEECs	115
Cold Zone 4 VEECs	105

Certificate values 6(VII) Ducted gas heater only (no refrigerative air conditioner) which is the main form of heating any premises.

Certificates have been calculated for the dates between 1st of Feb 2025 onwards.

Specifications

Outdoor unit			
Emerald model			**ACV200U**
Power supply			230V/1Ph/50Hz
Cooling operation	Nominal capacity	kW	20.0
	Power consumption	kW	3.90
	Rated current	A	16.96
	EER	W/W	4.76
Heating operation	Nominal capacity	kW	26.0
	Power consumption	kW	5.69
	Rated current	A	24.74
	COP	W/W	4.34
AEER			4.53
ACOP			4.09
HSPF res cold			4.22
TCSPF res cold			5.90
Sound pressure level	Normal mode	dB(A)	58
Outer dimensions	Height	mm	1650
	Width	mm	1250
	Depth	mm	440
Packing dimensions	Height	mm	1818
	Width	mm	1302
	Depth	mm	546
Net weight		kg	165
Piping design	Total piping length	m	120
	Height difference between ODU and IDU	m	30
Operation range	Cooling	DB(°C)	10~50
	Heating	DB(°C)	-20~26

Indoor unit			
Emerald model			**ACV200D**
Power supply			230V/1Ph/50Hz
Nominal cooling capacity		kW	20.0
Cooling power consumption		kW	1.21
Rated current		A	5.24
Nominal heating capacity		kW	26.0
Heating power consumption		kW	1.21
Rated current		A	5.24
Sound pressure level (overall A scale)		dB	55
Outer dimensions	Height	mm	470
	Width	mm	1300
	Depth	mm	890
Net weight		kg	84.5
Refrigerant		Type	R410A
Indoor fan air flow rate (@200 Pa)		L/S	1306
External static pressure range		Pa	50~250
Piping connection		—	Flare connection
Liquid line		mm	Ø9.53mm (3/8 Inch)
Gas line		mm	Ø19.05mm (3/4 Inch)
Packing dimensions	Height	mm	546
	Width	mm	1440
	Depth	mm	1038

1. Cooling operation conditions: Indoor air inlet temperature: 27°C DB/19.0°C WB, outdoor air inlet temperature: 35°C DB
   Heating operation conditions: Indoor air inlet temperature: 20°C DB, outdoor air inlet temperature: 27°C DB/19.0°C WB
   Piping length: 7.5 meters. Piping lift: 0 meter
2. The sound power level is tested based on the En 12102-1:2022 standard this value is tested under a static pressure of 200Pa.
3. The external static pressure setting of the machine at the factory is 200Pa.
4. The above air flow rate and noise level are tested with AC 220V power supply and without filter.

2025.08