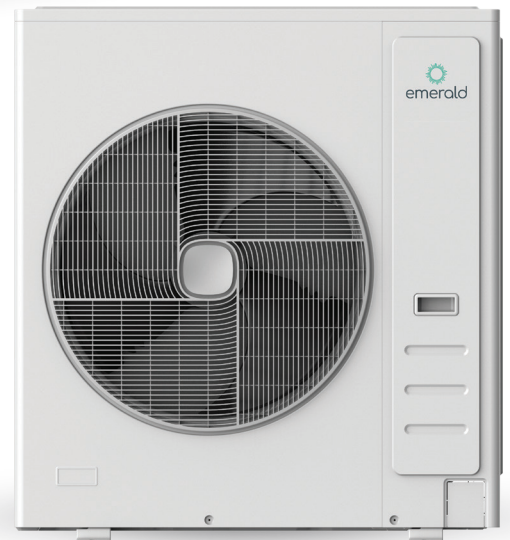


Air Conditioning

Ducted Ultra 16kW

Here's what you need to know to begin installing the Emerald Air Conditioning Ducted Ultra 16kW.

Designed to deliver outstanding performance in both residential homes and small commercial buildings, this system offers versatile climate control solutions. Follow this guide for a smooth and efficient installation process, ensuring optimal operation and comfort.



Model	Heating	Cooling	Dimensions (DxWxH)	Weight
Outdoor ACV180U	20.4kW	18.1kW	360x980x1080	97kg
Indoor ACV160D	18.5kW	16kW	800x1400x300	49kg

House sizing guide

System	Minimum room area (m ²)	Maximum room area (m ²)
ACV180U/ACV160D	70	170

This product uses VRF technology, which enhances efficiency and control, enabling the system to operate effectively at lower capacities. For optimal performance and longevity, Emerald recommends installing this product in houses larger than 70 square meters.

Air Conditioning

Ducted Ultra 16kW

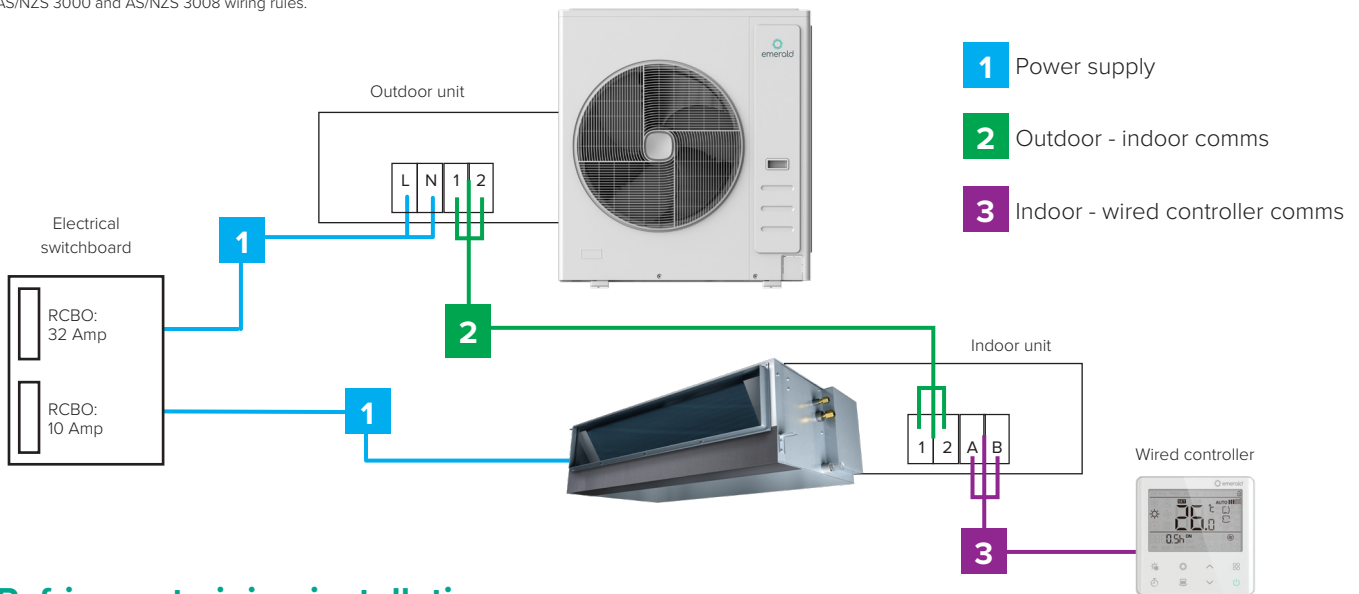
Electrical installation

Isolators and cables

Wired controller & comms cable	0.75mm ² 2 core shielded twisted pair
Outdoor unit rated current	22.3 A
Outdoor unit breaker size	32 A
Outdoor unit power cable	Site dependent

Indoor unit rated current	2.04 A
Indoor unit breaker size	10 A
Indoor unit power cable	1.5mm ² (power)

Cable sizing to be confirmed by a licensed electrician in accordance with AS/NZS 3000 and AS/NZS 3008 wiring rules.



Refrigerant piping installation

Required

- Vacuum process
- Refrigerant handling license

Recommended

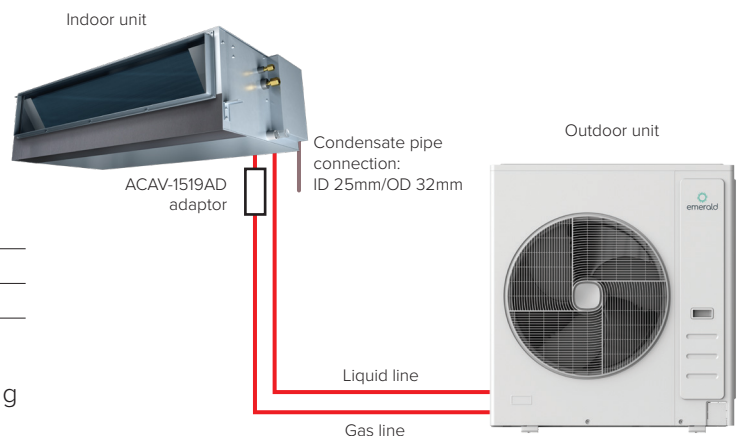
- Nitrogen test

Piping connection sizes

	Outdoor Unit	Indoor Unit
Liquid line	Ø9.53mm (3/8 Inch)	Ø9.53mm (3/8 Inch)
Gas line	Ø19.05mm (3/4 Inch)	Ø15.88mm (5/8 Inch)

Max height 30m. Max piping length 75m

All piping connections are flare connections, no welding or brazing required.



Additional refrigerant requirements

Pre-charge refrigerant (kg)	5m	10m	15m	20m	30m	40m	60m	75m
3.8	1.14	1.42	1.70	1.98	2.54	3.10	4.22	5.06

For precise refrigerant calculations based on actual piping length, visit <https://www.emerald.com.au/forbusiness/refrigerant-charge-calculator/>

Ducting installation

Return air connection size	259x1364mm
Supply air connection size	205x1348mm

Indoor unit has a built-in float switch. A secondary drip tray is not required.