



Commercial

PMD

Engineering for the extremes.



That's better. That's Actron.



ActronAir. Because Australia needs Australian air conditioning.

The year 1984 saw Advanced Australia Fair become our National Anthem, the 1 dollar coin come into circulation and a small family air conditioning business open its doors. Today, ActronAir is a proud Australian company recognised for making world-class air conditioners. Well, it stands to reason. The team at ActronAir experience our harsh Australian conditions first hand, and our climate places demands on air conditioning not found in other parts of the world.

And that's why ActronAir's engineers have developed the most advanced air conditioning systems specifically for the unique and harsh Australian environment.

Made with a superior operating range of -10°C to 52°C, ActronAir's PMD Vertical Packaged Unit is engineered specifically to withstand the most extreme conditions Australia can throw at it. Where other air conditioners struggle and shut down, the PMD will be there for you when you need it most.




More than a quarter of a million Aussies take comfort in ActronAir

Space saving. Space age.

With its small footprint and superior operating range, the PMD Vertical Packaged Unit is ideal for harsh locations such as mining communities and similar isolated operations. As hard working as it is compact, PMD features a digital compressor that has a lot of advantages over conventional inverter systems.



A superior operating range made for Australia

Most overseas air conditioners are only designed with a maximum temperature range of 43°C to 46°C. Made for Australian extremes the PMD operates up to 52°C. Big deal? Yes.

The temperature around the outdoor unit can reach far higher than what they're saying on the weather report due to direct sun or heat radiating off the ground. They're often located against a wall or fence where there's low air circulation.

That's why the PMD Vertical Packaged Unit has very generous sized heat exchanger coils, to not only keep the system working in extremes, but also assist with energy savings. The PMD not only operates at higher temperatures, it also performs at a higher capacity leading up to that peak temperature.

“ Nothing beats performing under extremes. Engineered for Australia, you can trust ActronAir to be there when you need it most. ”

Mark 'Frosty' Winterbottom
2015 V8 Supercars Champion

Better Features

Aussie tough

Louvered grille

The powder coated louvered grille guard allows for better airflow and protection in Australia's extreme weather conditions. It's mighty tough – engineered to withstand over 1,000 hours of salt spray exposure under stringent Australian testing standards.

Soft start. Hard benefits.

Start-up and ongoing safeguards

- Reduces the start-up load on the power grid
- Continuously safeguards the compressor against:
 - Phase failure
 - Incorrect phase rotation
 - Voltage and current fluctuations
- Reduces start and inrush current to help comply with local authority requirements
- Quieter compressor start-up

Here for the long haul

Coated coil protection

ActronAir uses blue fin epoxy coated protection on the indoor and outdoor coils of PMD. It reduces corrosion from the harsh Australian conditions, as well as assisting the defrosting process, thus improving heat efficiency.



Blackout proof

Auto-restart

Blackout? No problem. Our PMD restarts automatically in its last programmed setting once the power is restored, which means you don't have to take the time to reprogram your system.

Exact efficiency

High efficiency EC indoor fan

The Electronically Commutated (EC) indoor fan is highly efficient and delivers the right airflow for every installation, whilst the default high/mid/low speed settings can be adjusted to compensate for different duct designs.

Ticks all the boxes

Other features

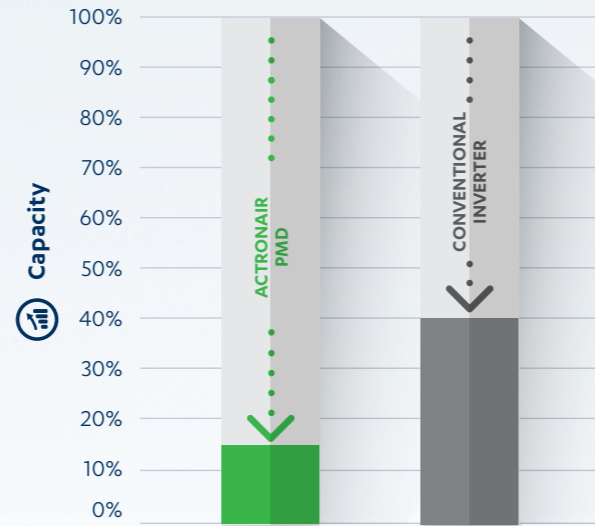
- Three Phase
- Low noise fan
- Digital compressor
- Variable capacity
- Security lock access panels

Better Energy Efficiency

Why a Digital Compressor?

A digital system has a lot of advantages over a conventional inverter system.

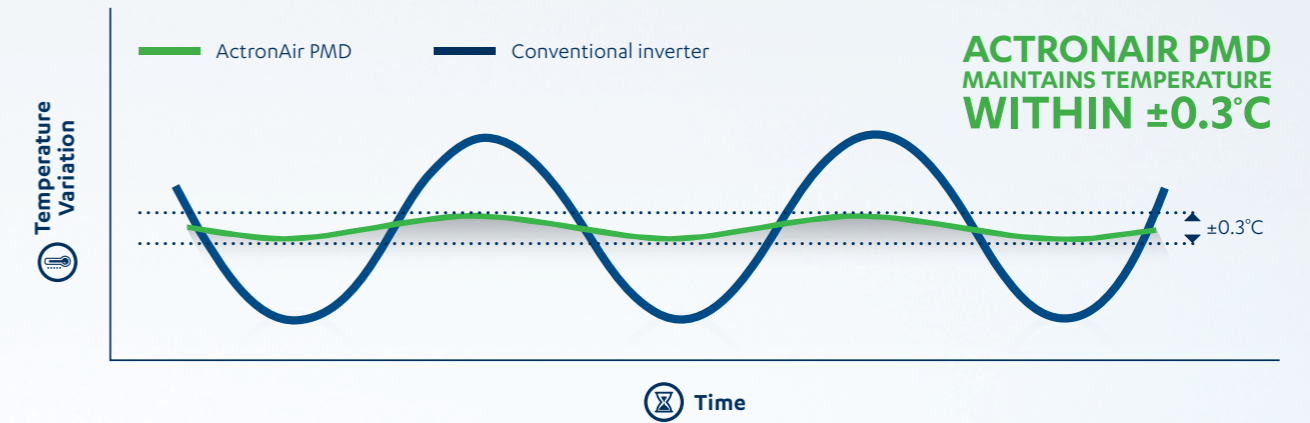
PMD's digital compressor can operate right down to 15% of its total capacity, whereas most conventional inverters can only get down to 40%. That's a big deal because it means you only use the amount of energy you need.



Stopping the stop-start, stop-start

Generally conventional inverters don't work below 40% of capacity, they simply turn on, then off, then on again as they struggle to keep a set temperature.

Our PMD is a lot more precise. Working right down to 15% of capacity, it not only gets to your perfect temperature faster, it operates more smoothly, and maintains the temperature to within $\pm 0.3^{\circ}\text{C}$ at the sensor location.

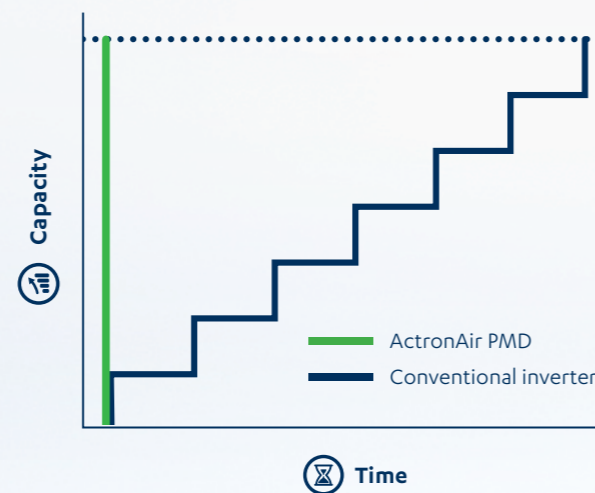


From zero to comfort – quickly

Our digital compressor also gets up to speed much faster. It's perfect for when you arrive home on a sizzling summer's day, or freezing winter's night, and need to get comfy fast.

A conventional inverter uses 'step, rest and stop' cycles, so the temperature 'jumps' up and down with each step. That's a power drainer. Not only that, it can take between 5 and 10 minutes to get up to full capacity before it gets to work cooling or heating your space, whereas PMD can get up to maximum capacity almost immediately.

It does all of this happily too. Our testing shows that digital compressors seem to wear in, not out, meaning you'll have a system that keeps working hard, long into the future.



Engineered for Better Performance

Value that goes a long way

Value means a lot more than a bottom line price. It's about service, flexibility, running efficiency and especially performance under demanding Australian conditions. Built-in durability and protection are value adds that pay off over the long term, making for lower lifecycle costs.

Above and beyond Australian Standards

Our PMD Vertical Packaged Unit is engineered to not just comply with, but exceed Australian MEPS (Minimum Energy Performance Standards). This approach is a source of company pride from the smallest single-room split systems to our commercial systems the size of shipping containers.

Better Control

User-friendly functionality

To ensure seamless operation ActronAir builds its own controls in Australia. Importantly, the slimline controller is logical and user-friendly, with controls in 'plain English'. And for precise comfort control, our controller allows you to set your temperature in 0.5°C increments.

And while control of comfort and performance is available at the touch of a button, there's more it can do with the following features:

- Home/away mode
- Filter clean indicator
- Fault diagnostics
- 24 hour on/off countdown timer
- Set temperature limit adjustment
- Remote temperature sensors
- Secondary wall controller with mimic logic available



AM24-HH Interface

Better Service

Local service you can count on

PMD is designed and manufactured in Australia. So you'll never have to call far or wait long for service and support.

Our National Service Network has service staff on the ground and parts on the shelves. They're friendly, reliable and prompt. Furthermore, ActronAir's two year warranty will keep you comfortable with absolute peace of mind.



Technical Specifications

Vertical Package Unit Variable Capacity 12-19kW (Three Phase)

Technical Information							
PACKAGE MODEL		PMD120HR	PMD120HX	PMD160HR	PMD160HX	PMD190HR	PMD190HX
¹ Total (Gross) Capacity (kW) (AS/NZS3823.1.2)	Cooling	12.29	12.29	15.75	15.75	19.11	19.11
	Heating	12.22	12.22	16.26	16.26	16.16	19.16
Nett (Rated) Capacity (kW) (AS/NZS3823.1.2)	Cooling	12.00	12.00	15.50	15.50	18.50	18.50
	Heating	12.50	12.50	16.50	16.50	19.75	19.75
Input Power (kW) (AS/NZS3823.1.2)	Cooling	3.40	3.40	4.77	4.77	5.74	5.74
	Heating	3.19	3.19	4.73	4.73	5.80	5.80
² EER Rated (AS/NZS3823.1.2)	Cooling	3.53	3.53	3.25	3.25	3.22	3.22
³ COP Rated (AS/NZS3823.1.2)	Heating	3.92	3.92	3.49	3.49	3.40	3.40
Power Supply - (V / Ph / Hz)		400V / 3Ph + N / 50Hz					
Rated Amps (AS/NZS3823.1.2)		9.4	9.4	10.9	10.9	14.8	14.8
Full Load Amps (AS/ NZS3823.1.2)		13.8	13.8	17.2	17.2	19.6	19.6
⁴ Circuit Breaker Amps		16.0	16.0	20.0	20.0	20.0	20.0
IP Rating		IP55					
Compressor	Type / No. per Unit	Digital Scroll / 1					
	Starting Method	3-Phase Soft Starter					
No. Refrigeration Circuits/No. Capacity Stages (Capacity range)		1/ Variable (10-100% capacity)					
Refrigerant		R410a					
Fans (Type x Number per unit)	Outdoor	Axial / 6 Pole External Rotor / Direct Drive x1					
	Indoor	ECM High Efficiency / Variable Speed / Single Deck Centrifugal / Direct Drive x1					
Airflow Range Indoor (l/s)	Maximum	663	663	815	815	1000	1000
	Nominal	578	578	755	755	900	900
	Minimum	490	490	530	530	720	720
External Static Pressure (Pa) @	Maximum Airflow	150	150	-	-	255	255
	Nominal Airflow	300	300	90	90	310	310
Unit Dimensions (mm)	Depth	870		870		1078	
	Height	1960	1580	1960	1580	2207	1750
	Width	1400		1400		1600	
⁵ Nominal Weight (kgs)		357	312	365	320	426	410
⁶ Sound Pressure Level (dBA)	Outdoor (low/high fan)	38.2 / 52.5		44.9 / 56.8		44.8 / 53.5	
	Indoor (low/high fan)	55.2 / 69.9		61.9 / 73.8		61.8 / 70.5	
MEPS Compliant		Yes	Yes	Yes	Yes	Yes	Yes

Foot Notes 1-7

- Based on unit rating excluding indoor fan kW.
- EER Rated = Energy Efficiency Ratio (Rated Capacity Cooling / Rated Input Cooling).
- COP Rated = Coefficient of Performance (Rated Capacity Heating / Rated Input Heating).
- Refer to AS/NZS 3000 "Australian/New Zealand Wiring Rules" for more details.
- Refer to Catalogue Unit Weight Distribution Guide section for details of weight points.
- Sound Pressure Level at 3m distance is determined as the measured sound pressure at 3m perpendicular to the coil side of the condenser.
- Determination of Sound Power Levels of Noise Sources, AS1217.2 - Precision Methods for Broad-Band Sources in Reverberation Rooms.

Important Notes:

- The Local Electricity Supply Authority may require limits on - starting current, running current and voltage drop, please check prior to purchase.
- When the outdoor temperature exceeds the rated conditions, the cooling/heating capacities may decrease the rated nett values.
- Specifications subject to change without notice.

Rated Conditions:

Cooling: 35°C DB Outdoor / Air Entering Indoor 27°C DB, 19°C WB
 Heating: 7°C DB, 6°C WB Outdoor / Air Entering Indoor 20°C DB

Warranty:

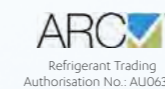
For full terms and conditions of ActronAir warranty, please refer to warranty terms document - www.actronair.com.au

Control Features						
PACKAGE MODEL	PMD120HR	PMD120HX	PMD160HR	PMD160HX	PMD190HR	PMD190HX
AM24-HH Wall Controller 24 Hour Timer	Included	Included	Included	Included	Included	Included
Secondary Master Controller	Optional	Optional	Optional	Optional	Optional	Optional
Remote Temperature Sensor	Optional	Optional	Optional	Optional	Optional	Optional
Home Automation ON/OFF Capability	Optional	Optional	Optional	Optional	Optional	Optional
Adaptive Demand Defrost	Standard	Standard	Standard	Standard	Standard	Standard
Manual Inputs Capable for Third Party Control	Optional	Optional	Optional	Optional	Optional	Optional

Variations						
	PMD120HR	PMD120HX	PMD160HR	PMD160HX	PMD190HR	PMD190HX
K - Additional Coil Protection (Outdoor Coil)	Optional	Optional	Optional	Optional	Optional	Optional
P - Coil Protection (Indoor Coil)	Optional	Optional	Optional	Optional	Optional	Optional
R - Demand Response Capability	Optional	Optional	Optional	Optional	Optional	Optional
W - Phase Protection Sequence Relay	Standard	Standard	Standard	Standard	Standard	Standard
Z - Compressor 3-Phase Soft Starter	Standard	Standard	Standard	Standard	Standard	Standard

Air Handling Options						
	PMD120HR	PMD120HX	PMD160HR	PMD160HX	PMD190HR	PMD190HX
A - Top Discharge Left Hand Supply Air Right Hand Return Air - Rear Location	Optional	Optional	Optional	Optional	Optional	Optional
B - Top Discharge Left Hand Return Air Right Hand Supply Air - Rear Location	Optional	Optional	Optional	Optional	Optional	Optional
C - Top Discharge Left Hand Supply Air Right Hand Return Air - Mid Location	Optional	Optional	Optional	Optional	Optional	Optional
D - Top Discharge Left Hand Return Air Right Hand Supply Air - Mid Location	Optional	Optional	Optional	Optional	Optional	Optional
E - Top Discharge Right Hand Supply Air Rear Left Hand Return Air	Optional	Optional	Optional	Optional	Optional	Optional
F - Top Discharge Left Hand Supply Air Rear Right Hand Return Air	Optional	Optional	Optional	Optional	Optional	Optional

Installation Information						
	PMD120HR	PMD120HX	PMD160HR	PMD160HX	PMD190HR	PMD190HX
Refrigerant Factory Charge - (g)	5250	5250	5250	5250	7300	7300
Condensate Drain Connection - Size	20 mm Ø ID					
Air Duct	Supply Duct H x W - (mm)	400 x 375			400 x 445	
	Return Duct H x W - (mm)	455 x 525				





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