



## ESP SERIES

CHANGING THE GAME  
FOR DUCTED AIR CONDITIONING



**ActronAir®**  
Australian for air conditioning™

# Energy Smart Performance for energy conscious times.



ActronAir has been designing and building air conditioning systems, for Australia's unique and demanding conditions, since 1984.

The company's technological advancements have led to development of some of the most energy efficient systems in the world.

For virtually any application, there is simply no better solution than an ActronAir air conditioning system.

## ESP. Energy Smart Performance

ActronAir invented Energy Smart Performance (ESP), an energy smart ducted system that utilises digital technology to deliver improved comfort whilst minimising running costs.

ESP has led to the development of the award winning ESP Plus and a world leading innovation ESP Ultima.



ESP Plus uses Energy Smart Zoning to deliver better energy efficiency and enhanced comfort levels.



ESP Ultima combines Energy Smart Zoning with the ability to control different temperatures in different zones all at the same time, providing the ultimate in comfort levels and improving energy efficiency even further.

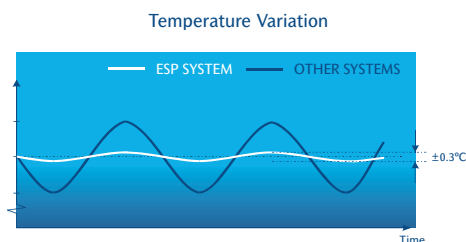
# Engineered to perform in one of the harshest climates on Earth.

Choosing a new air conditioner isn't a decision to be taken lightly. Things like effectiveness and running costs have to be carefully considered.

ActronAir's Energy Smart Performance™ incorporates the latest in Digital Scroll technology to deliver improved energy efficiency and cost savings.

Delivering faster heating and cooling while using just the right amount of power needed, this is far beyond the performance of Conventional Inverter systems that have to "step and rest", and take considerably longer to reach maximum capacity.

But what's even smarter about the ActronAir performance is how it maintains the temperature you choose once it has been reached. Other air conditioning systems generally overshoot a target temperature and then switch off, letting the temperature rise or fall. When the temperature changes the system restarts only to have to repeat the cycle all over again – resulting in large temperature swings.



Engineered to deliver the optimum balance in temperature stability, the ESP Series reaches an ideal comfort level quickly and maintains it intuitively. In fact, precise temperature of within  $\pm 0.3^\circ$  of the set point can be achieved at the sensor location.

Digital Scroll technology is a variable capacity system that can instantly adjust the heating and cooling output anywhere within its 10-100% capacity range. (Conventional Inverters will only operate down to 40-50% capacity, resulting in greater temperature fluctuations and more energy use).

Most Inverters use step, rest and stop cycles during the heating cycle, leading to larger temperature fluctuations and much higher energy usage.

Digital Scroll technology delivers the ideal amount of heating and cooling in your home or office while offering incomparable temperature control – a feature that not only maintains better comfort levels, but can also reduce energy costs at the same time.



## Minimise cool drafts in winter.

ActronAir systems have an inbuilt Preheat Delay function. This preheats the indoor coil before the fan starts - ensuring drafts are minimised on start-up during heating cycle.

## Fastest heating and cooling.

From the moment it switches on, ESP Plus uses Digital Scroll technology to deliver maximum capacity, ensuring the fastest cooling and heating. This is far beyond the performance of less advanced Inverter systems that have to "step and rest", and take considerably longer to reach maximum capacity.

## Quieter Operation.

A Sound Reduction System (SRS) reduces sound levels from the Outdoor Unit.

Indoor sound levels are reduced with the use of quieter EC indoor fan technology. In addition, as zones are switched off, airflow is automatically adjusted to minimise sound levels.

## Superior operating range.

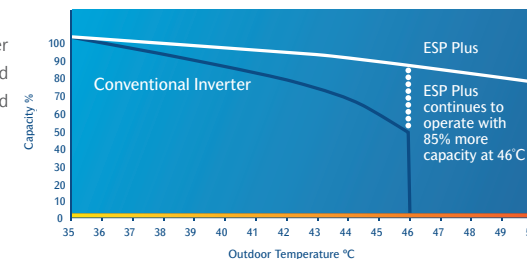


ActronAir understands the requirements of the harsh Australian climate, and that's why all its systems are engineered to operate in harsh conditions.

For example, heatwave conditions are unpredictable and may last several days or even weeks during summer. But even while air temperature may be  $43^\circ\text{C}$ , your air conditioner could be in a position where the temperature reaches as high as  $50^\circ\text{C}$ .

Most systems are only designed to a maximum operating range of  $43\text{--}46^\circ\text{C}$ , and have inbuilt safety mechanisms that reduce output in extreme conditions. Discovering that your system has effectively stopped working during a heatwave would be an unpleasant surprise to say the least!

### Powerful Cooling When You Need It Most





## Up to 60% energy savings with Energy Smart Zoning.

ESP Plus is up to 60% more efficient than conventional fixed speed technology, and 40% more efficient than a conventional inverter.

Typically, Australian homes have large individual living areas. When air conditioning is installed, these areas are split into 'zones' that can be switched off when unoccupied.

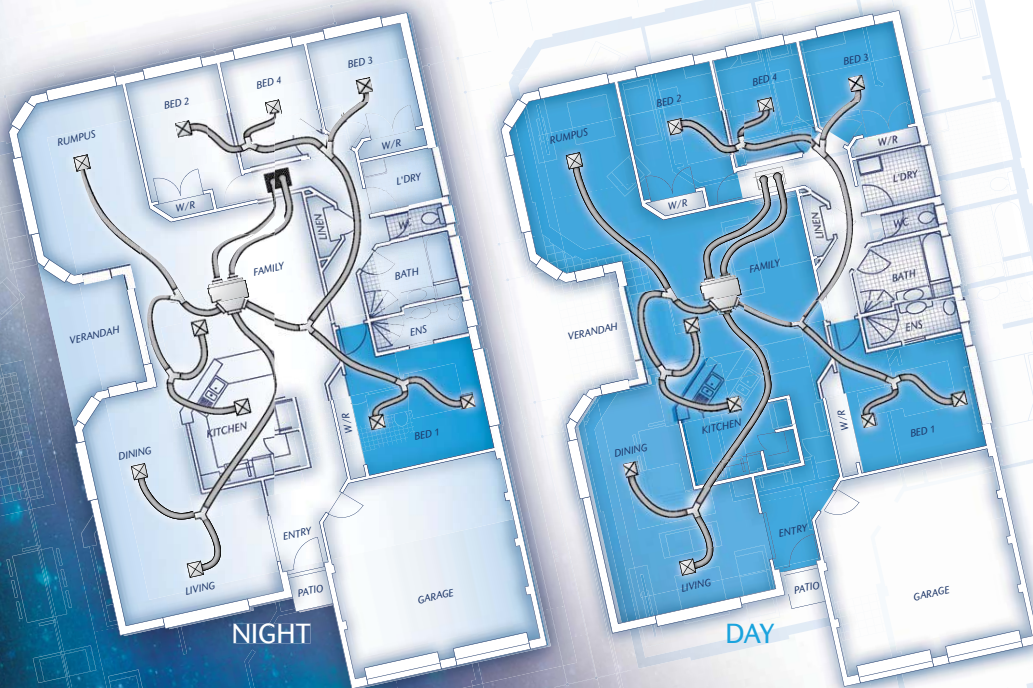
On the surface, this sounds like a sensible energy saving feature. But while traditional systems may be able to shut down a zone, most don't automatically adjust their airflow. In other words, the zone may be turned off, but the

system's fan continues at the same speed, wasting energy and producing excess noise as a by-product.

That's why ESP Plus has Energy Smart Zoning. It enables the system to adjust airflow and system capacity, intuitively. The Variable Fan Technology (VFT) delivers exactly the right amount of conditioned air to the zones that are on, decreases excess air velocity and associated noise, and significantly reduces energy usage.

Which is perfect for those hot summer nights when you want just enough air conditioning to keep bedrooms cool and quiet, without wasting energy.

*Energy efficient right down to one zone.*

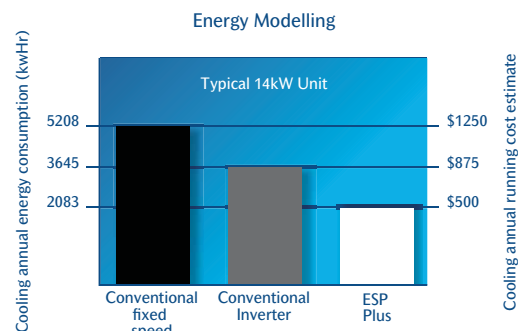


### Energy Efficiency puts ESP Plus in front.

Energy modelling of a typical 4-bedroom home in Sydney's west was conducted for 3 technologies:

- Conventional fixed speed
- Conventional Inverter
- ESP Plus with Digital Scroll technology and Energy Smart Zoning

Cooling energy consumption was calculated for each of the technologies.



Over a 5 year period, you could save up to \$3500\* on your cooling electricity costs vs. other commercially available technology.

Based on electricity price of 24c per kW/H and the cooling energy consumption, this translates to a saving of up to \$700\* per annum compared to conventional fixed speed systems.

\*This is based on laboratory testing and energy modelling for cooling. When taking into account heating operation, this result may improve even further.

## Different temperatures in different zones all at the same time.

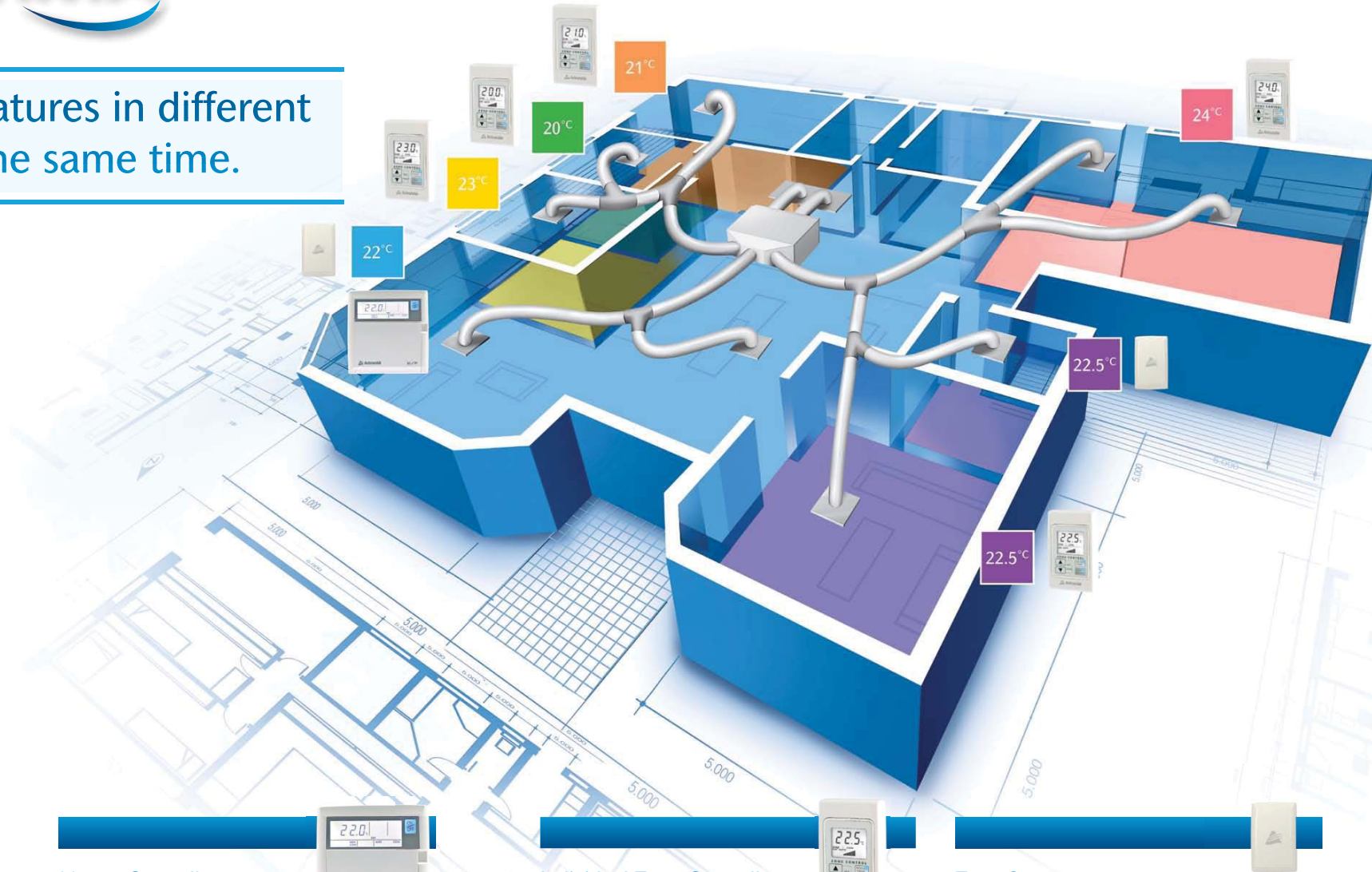
With ESP Ultima, you now have the ability to set different temperatures in different zones.

So while a baby sleeps comfortably in a bedroom at one temperature, a lounge room full of guests can have a different temperature and a games room for the kids can have a different temperature again.

Up to 8 individual zone controllers or sensors can run off the system, so you can create the ideal environment in virtually any area of your home or office.

In fact, ESP Ultima is the most comfortable year-round air conditioning available. Different areas of the home or office have different temperature loads at different times throughout the day, not to mention the different seasons.

That's why, depending on the location of the sun in the sky, a room may be cooler in the morning and warmer in the afternoon. However, having a sensor within the room ensures the set temperature is maintained at all times and rooms do not get over conditioned, further minimising energy usage.



### Master Controller

The slimline Master Controller features a backlit display and easy to use 8-zone integrated touch pad. This sets the Master temperature for the areas with Zone Sensors and can control system operation including fan speeds and timers.



### Individual Zone Controller

The Zone Controller can adjust the comfort settings for each zone. This allows you to adjust the temperature of the zone, or turn the zone on or off.



### Zone Sensor

The Zone Sensor can be used in areas where you want the Master Controller to control the temperature of that zone. This is a simple alternative to the Zone Controller. Ideal for kids' rooms where you don't want little fingers making any adjustments.

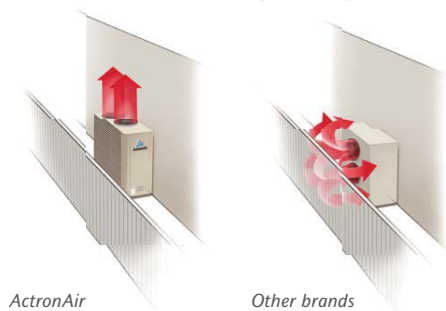




# ActronAir introduces world-leading innovations.

## Vertical Discharge

ActronAir Vertical Discharge units release hot air upwards for improved air circulation around the outdoor unit, resulting in improved performance, especially on hot days.



ActronAir

Other brands

## High efficiency Inverter fan technology

Fitted standard in the ActronAir ESP range, the fans' Electronically Commutated Motor (ECM) delivers superior performance coupled with considerable energy savings.

The ESP range EC fan features include:

- Variable fan automatically adjusts to deliver just the right amount of airflow to zones
- Significantly reduces energy consumption
- 20% more efficient than a DC motor
- Low noise



Indoor Unit

## High performance heat exchangers

- Optimised refrigeration circuit
- Enhanced rifle bore tube
- Blue fin epoxy coated coil protection

## Superior operating range

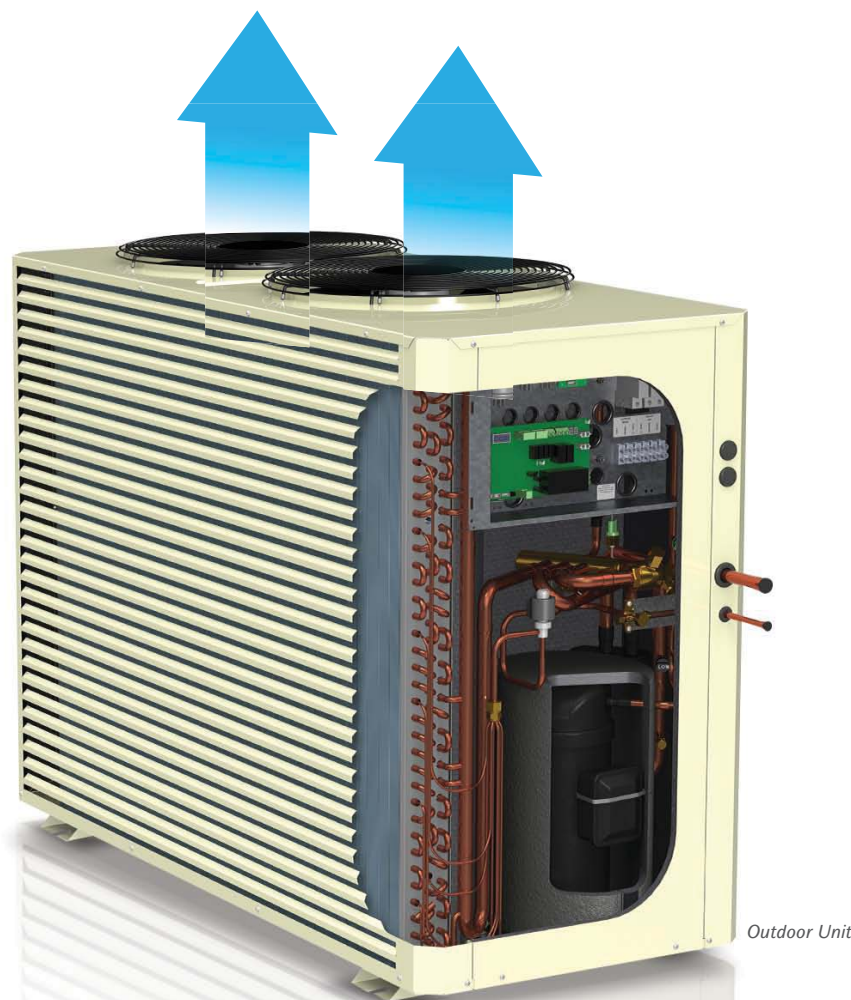
- Engineered to operate from -10°C to 50°C
- Tested to exceed Australian standards T3 AS/NZS3823 for 52°C conditions



## Built to last

The ActronAir designed louvre grille guard is engineered for better airflow around the heat exchanger, and protects it from different weather conditions and other elements.

The outdoor unit is powder coated and engineered to withstand 1000 hours salt spray exposure as per AS/NZS4506: 2005



Outdoor Unit

## ActronConnect (optional)

You can wirelessly control your ducted air conditioner whether at home or away using your mobile phone or PC.

ActronConnect features include:

- Turn your air conditioner on or off
- Turn Zones on or off
- Adjust temperatures and fan speeds
- Mimic logic



## High efficiency outdoor fans

- Superior performance
- Reduced noise

## Digital Scroll Compressor

ActronAir with Energy Smart Performance™ incorporates the latest in Digital Scroll technology to deliver improved energy efficiency and cost savings.

- Delivers fastest heating & cooling
- Variable capacity 10-100%
- Powerful heating and cooling when you need it most



## Sound Reduction System (SRS)

- Quieter operation
- Compressor sound jackets and sound enclosure

## Advanced controls

ActronAir designs and manufactures the system in Australia, including the electronic controls. The fully integrated electronics and controls platform ensures the entire system works together seamlessly

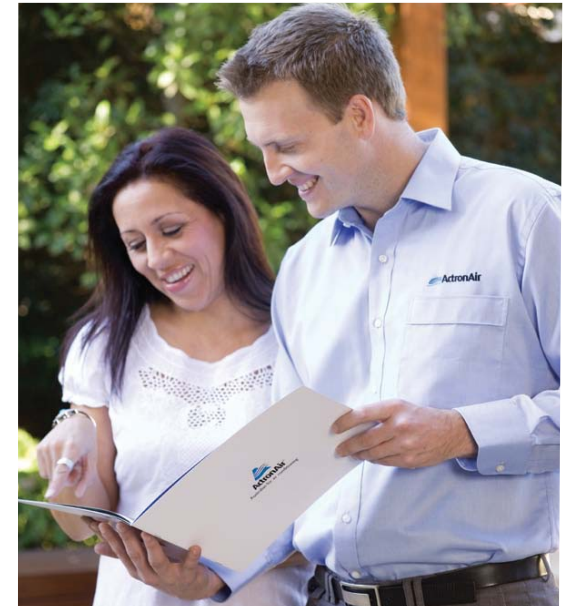
In other words, when you touch the slimline keypad there is no disconnection between your instructions and the technology that air conditions your home. It's completely seamless.

Standard Master Controller features include:

- Easy to use 8-zone integrated touch pad
- Slimline design to suit most interiors
- Auto/Heat/Cool changeover
- On board temperature sensor
- 0.5°C temperature increments
- 3 speed fan and ESP mode
- 7 Day programmable time clocks
- 24 Hour programmable timer
- Smart defrost function
- Preheat Delay function
- Cool white backlight
- Compatible with home automation for remote on/off control
- Optional secondary controller with mimic logic
- Optional secondary temperature sensor



# Comfort you can depend on.



ActronAir is an Australian owned and managed company. So you'll never have to look far for spare parts or product support.

Furthermore, the ActronAir National Service Network is always available to provide quick and reliable service where and when it's needed.

A substantial 5-year residential warranty provides even more peace of mind.

## **Environmental/Innovative Product of the Year Winner**

ActronAir's obsession with innovation and quality has led to the development of many energy saving solutions. In fact, ActronAir was recognised by the air conditioning industry with the inaugural Coolworld award. This acknowledged technology that significantly and measurably reduces the impact of air conditioning on the environment.



## **Insist on an ActronAir Specialist.**

Every home is different and your ActronAir specialist will advise you on the best configuration to suit your lifestyle.

An ActronAir specialist is also qualified to install your air conditioning system quickly and safely, and provide the best ongoing service should you need maintenance, spare parts or advice.

## **Insist on ActronAir Genuine Parts.**

Your ActronAir Specialist can provide you with genuine ActronAir parts and accessories for peace of mind and years of trouble free operations.





## ESP Plus Split Ducted Variable Capacity (Single/Three Phase)

		Technical Information					
		Single Phase			Three Phase		
OUTDOOR MODEL		SRD131C	SRD151C	SRD191C	SRD173C	SRD233C	
INDOOR MODEL		SRV131E	SRV151E	SRV191E	SRV171E	SRV231E	
Nett (Rated) Capacity (kW) (AS/NZS3823.1.2)	Cooling (min - max)	12.27 (1.23-12.27)	14.37 (1.44-14.37)	18.64 (1.86-18.64)	16.88 (1.69-16.88)	19.32 (1.93-19.32)	23.00 (2.30-23.00)
	Heating (min - max)	12.16 (2.31-12.16)	15.00 (2.85-15.00)	18.52 (3.52-18.52)	17.93 (3.41-17.93)	20.09 (3.82-20.9)	23.50 (4.47-23.50)
Input Power (kW) (AS/NZS3823.1.2)	Cooling	3.68	4.29	5.73	5.02	5.78	6.76
	Heating	3.30	4.49	5.33	4.81	5.24	6.91
<sup>2</sup> EER Rated (AS/NZS3823.1.2)	Cooling	3.33	3.35	3.25	3.36	3.34	3.40
	<sup>3</sup> COP Rated (AS/NZS3823.1.2)	3.68	3.34	3.47	3.73	3.83	3.40
Power Supply (V / Ph / Hz)	Outdoor	230V / 1Ph + N / 50Hz			400V / 3Ph + N / 50Hz		
	Indoor	230V / 1Ph + N / 50Hz					
Rated Load Amps (AS/NZS3823.1.2)	Outdoor / Indoor / Total	13.5 / 3.6 / 17.1	17.5 / 2.3 / 19.8	20.8 / 5.1 / 25.9	8.7 / 4.1 / 12.8	9.2 / 5.4 / 14.6	14.0 / 4.0 / 18.0
Full Load Amps (AS/NZS3823.1.2)	Outdoor / Indoor / Total	23.6 / 4.3 / 27.9	27.1 / 4.3 / 31.4	32.5 / 5.4 / 37.9	12.3 / 4.3 / 16.6	13.5 / 5.9 / 19.4	16.2 / 4.9 / 21.1
<sup>4</sup> Circuit Breaker Amps (Suggested)		32.0	32.0	40.0	20.0	20.0	25.0
IP Rating	Outdoor	IP44					
	Indoor	IP20					
Compressor	Type / No. per Unit	Digital Scroll / 1					
	Starting Method	Soft Starter			D.O.L.		
No. of refrigeration Circuits/No of 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 x 2					
	Indoor	Twin Deck Centrifugal / ECM Direct Drive x 1					
Airflow Range Indoor (l/s)	Maximum	780	880	1180	900	1200	1440
	Nominal	650	770	980	850	1000	1200
	Minimum	130	155	195	170	200	240
External Static Pressure (Pa) at:	Maximum Airflow	120	120	128	116	120	80
	Nominal Airflow	225	218	192	164	188	170
Outdoor Dimensions (mm)	Depth	580	580	580	580	580	685
	Height	990	990	1045	1045	1045	1105
	Width	1320	1320	1460	1460	1460	1685
Indoor Dimensions (mm)	Depth	615	615	680	615	680	695
	Height	412	412	435	412	435	485
	Width	1090	1290	1420	1290	1420	1470
<sup>5</sup> Nominal Weight (kgs)	Outdoor	135	136	190	176	185	220
	Indoor	58	61	76	62	76	90
Field Pipe Size	Liquid Pipe - mm (inch)	9.52 (3/8)	9.52 (3/8)	9.52 (3/8)	9.52 (3/8)	<sup>1</sup> 12.70 (1/2)	12.70 (1/2)
	Gas Pipe - mm (inch)	19.05 (3/4)	19.05 (3/4)	19.05 (3/4)	19.05 (3/4)	<sup>1</sup> 22.22 (7/8)	25.40 (1)
<sup>6</sup> Sound Pressure Level (dBA)	Outdoor (low/high fan)	47 / 50	50 / 52	52 / 54	52 / 54	52 / 54	54 / 59
<sup>7</sup> Sound Power Level (dBA)	Outdoor (low/high fan)	64 / 67	67 / 69	69 / 71	69 / 71	69 / 71	70 / 75
MEPS Certified		Yes	Yes	Yes	Yes	Yes	Yes

Control Features						
LM7-D Wall Controller (8 Zone)	Included	Included	Included	Included	Included	Included
LM24W Wall Controller (8 Zone) - Secondary Master Controller	Optional	Optional	Optional	Optional	Optional	Optional
Remote Temperature Sensor	Optional	Optional	Optional	Optional	Optional	Optional
Home Automation / Remote ON / OFF Capability	Yes	Yes	Yes	Yes	Yes	Yes
Maximum Number of Zones	8	8	8	8	8	8
ActronConnect module for wireless control	Optional	Optional	Optional	Optional	Optional	Optional

### Foot Notes

- For pipe runs 0-20m smaller pipe sizes can be used. Refer to catalogue for more details.
- EER Rated = Energy Efficiency Ratio (Rated Capacity Cooling / Rated Input Cooling).
- COP Rated = Coefficient of Performance (Rated Capacity Heating / Rated Input Heating).
- Recommended circuit breaker size. This should be used as a guide only. 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.



## ESP Ultima Split Ducted Variable Capacity (Single/Three Phase)

		Technical Information				
		Single Phase		Three Phase		
OUTDOOR MODEL		SRD151C	SRD191C	SRD173C	SRD203C	SRD233C
INDOOR MODEL		SRM151E	SRM191E	SRM171E	SRM201E	SRM231E
Nett (Rated) Capacity (kW) (AS/NZS3823.1.2)	Cooling (min - max)	14.37 (1.44-14.37)	18.64 (1.86-18.64)	16.88 (1.69-16.88)	19.32 (1.93-19.32)	23.00 (2.30-23.00)
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	Heating	3.34	3.47	3.73	3.83	3.40
Power Supply (V / Ph / Hz)	Outdoor	230V / 1Ph + N / 50Hz		400V / 3Ph + N / 50Hz		
	Indoor	230V / 1Ph + N / 50Hz				
Rated Load Amps (AS/NZS3823.1.2)	Outdoor / Indoor / Total	17.5 / 2.3 / 19.8	20.8 / 5.1 / 25.9	8.7 / 4.1 / 12.8	9.2 / 5.4 / 14.6	14.0 / 4.0 / 18.0
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<sup>4</sup> Circuit Breaker Amps (Suggested)		32.0	40.0	20.0	20.0	25.0
IP Rating	Outdoor	IP44				
	Indoor	IP20				
Compressor	Type / No. per Unit	Digital Scroll / 1				
	Starting Method	Soft Starter		D.O.L.		
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 x 2				
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Airflow Range Indoor (l/s)	Maximum	880	1180	900	1200	1440
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<sup>6</sup> Sound Pressure Level (dBA)	Outdoor (low/high fan)	50 / 52	52 / 54	52 / 54	52 / 54	54 / 59
<sup>7</sup> Sound Power Level (dBA)	Outdoor (low/high fan)	67 / 69	69 / 71	69 / 71	69 / 71	70 / 75
MEPS Certified		Yes	Yes	Yes	Yes	Yes

Control Features					
LM7-D Wall Controller (8 Zone)	Included	Included	Included	Included	Included
LM24W Wall Controller (8 Zone) - Secondary Master Controller	Optional	Optional	Optional	Optional	Optional
AM-ZC Zone Controller	Optional	Optional	Optional	Optional	Optional
AM-ZS Zone Sensor	Optional	Optional	Optional	Optional	Optional
Home Automation / Remote ON / OFF Capability	Yes	Yes	Yes	Yes	Yes
Maximum Number of Zones	8	8	8	8	8
ActronConnect module for wireless control	Optional	Optional	Optional	Optional	Optional

### 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

### Ducted System Operating Range:

Cooling: 15°C DB to 50°C DB Outdoor / Air Entering Indoor 29°C DB  
Heating: -10°C DB to 21°C DB Outdoor / Air Entering Indoor 21°C DB

### Warranty:

For full terms and conditions of ActronAir warranty, please refer to warranty terms document - [www.actronair.com.au](http://www.actronair.com.au)







**ActronAir<sup>®</sup>**

Australian for air conditioning<sup>™</sup>

General Enquiries

**[www.actronair.com.au](http://www.actronair.com.au)**

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