



Commercial

TRI-CAPACITY

Performance and efficiencies
through smart engineering.



That's better. That's Actron.



ActronAir

ActronAir. Because Australia needs Australian air conditioning.

TRI-CAPACITY

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 up to 50°C, and a host of innovative features, ActronAir's Tri-Capacity system is engineered to withstand the hottest and coldest conditions Australia can throw at it.

We know that particularly in the commercial world, things need to happen fast. You need service fast. You need parts fast. You need a solution fast. That's why when you call ActronAir, we'll be there for you there and then.




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

Better energy efficiency, better performance, better reliability

ActronAir's unique Tri-Capacity technology, is designed and engineered in-house in our Sydney headquarters specifically for Australian conditions. Ideal for medium to large sized applications such as restaurants, banks, conference spaces, two-storey offices and cinemas, our Tri-Capacity delivers demonstrable benefits in energy efficiency, performance and ease of installation.



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. The made-for-Australia Tri-Capacity operates up to 50°C. Big deal? Yes.

Given that commercial units are typically found on the roof in the direct sun, this is important. In the Australian sun, where other air conditioners can struggle and even shut down, it's better for business to have a system you can rely on.

Tri-Capacity 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. ”

A handwritten signature in black ink, reading 'Mark Frosty #1'.

Mark 'Frosty' Winterbottom
2015 V8 Supercars Champion

A quiet achiever



HyBlade® outdoor fans

- User friendly wiring layout
- Two speed operation

Three stages for more savings



Unique compressor operation

- Designed for improved seasonal energy efficiency vs. traditional compressor configurations
- Tri-Capacity delivers 3 steps of cooling/heating (~33%, ~67% and 100% capacity)
- Designed for maximum durability and lower lifecycle operating costs
- Compliant scroll compressors

Stay in control



Controls

- In-built controls solution
- BMS connectivity using the BACNET/MODBUS option
- Dual control capability for enhanced user access
- Enhanced service and maintenance features
 - Event alarm notification
 - Monitor system operation parameters
- Program control feature for set airflow requirements



Built to perform



Large outdoor heat exchangers

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

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.

Better choice



Low Profile



Split Ducted



Packaged

Big on choice



Other features

- Lockable three phase load break isolation switch
- Various return and supply air options available
- Optional economy kit with outside air and return air dampers and motors

We've got you covered



Electrical control board

- User friendly wiring layout
- Standard inclusions
 - Individual motor protection
 - Circuit breaker and thermal overload
 - Lockable isolation switch
 - DRED enabled (AS4755)



Filter forethought



Filter cavity with in-built filter slides

- To suit 96mm wide pleated filters

Exact efficiency



High efficiency EC plug fans

- High static up to 500Pa
- Eliminates belt and pulley drive losses and maintenance
- Backward curve non overloading for maximum durability
- Program control feature for setting airflow requirements

Big thinking indoors



Large indoor heat exchangers

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

Ticks all the boxes



Other features

- Low ambient cooling option to below 15°C
- TX valves for improved efficiency
- 25mm foil face polyethylene insulation
- Two speed condenser fans
- In-built evaporator safety tray for EVY and ELY indoor units

Engineering better outcomes

ActronAir's Tri-Capacity unit is designed and manufactured in Australia, for Australia.

That's important. Australia's climate puts demands on air conditioning not found in other parts of the world, particularly in summer. And that has meant our engineers have made design decisions accordingly.

For example, Tri-Capacity features high efficiency EC electronically commutated motors that don't generate as much heat and therefore don't have to force the system to work as hard to cool. It also helps Tri-Capacity be more reliable and less prone to breakdown.

From the componentry, to the magnets, coils and high performance outdoor fans, the material choice is high quality, reliable and made to last for the long term. That's better for business – yours and ours.

Above and beyond Australian Standards

Tri-Capacity is engineered to not just comply with, but exceed Australian MEPS (Minimum Energy Performance Standards).

In fact, this approach is a source of company pride from the smallest single-room split systems to commercial systems the size of shipping containers. It's about doing the right thing by our customers and the environment, and we take that responsibility very seriously.



High efficiency EC fan technology

EC plug fans deliver exact airflow requirements while minimising power usage, and are up to 50% more efficient versus traditional forward curve belt and pulley systems. This provides enhanced comfort and improved maintenance of system performance.

- Key benefits include:
- Variable airflow range for improved efficiency and comfort
 - Programmable control feature for setting airflow
 - High static easily achieved (up to 500Pa)
 - Significant time saved for on-site commissioning
 - Eliminates belt dust and belt adjustment, providing a cleaner environment, and lowers operational maintenance cost
 - Improved occupant comfort



Better Comfort

Comfort by degrees

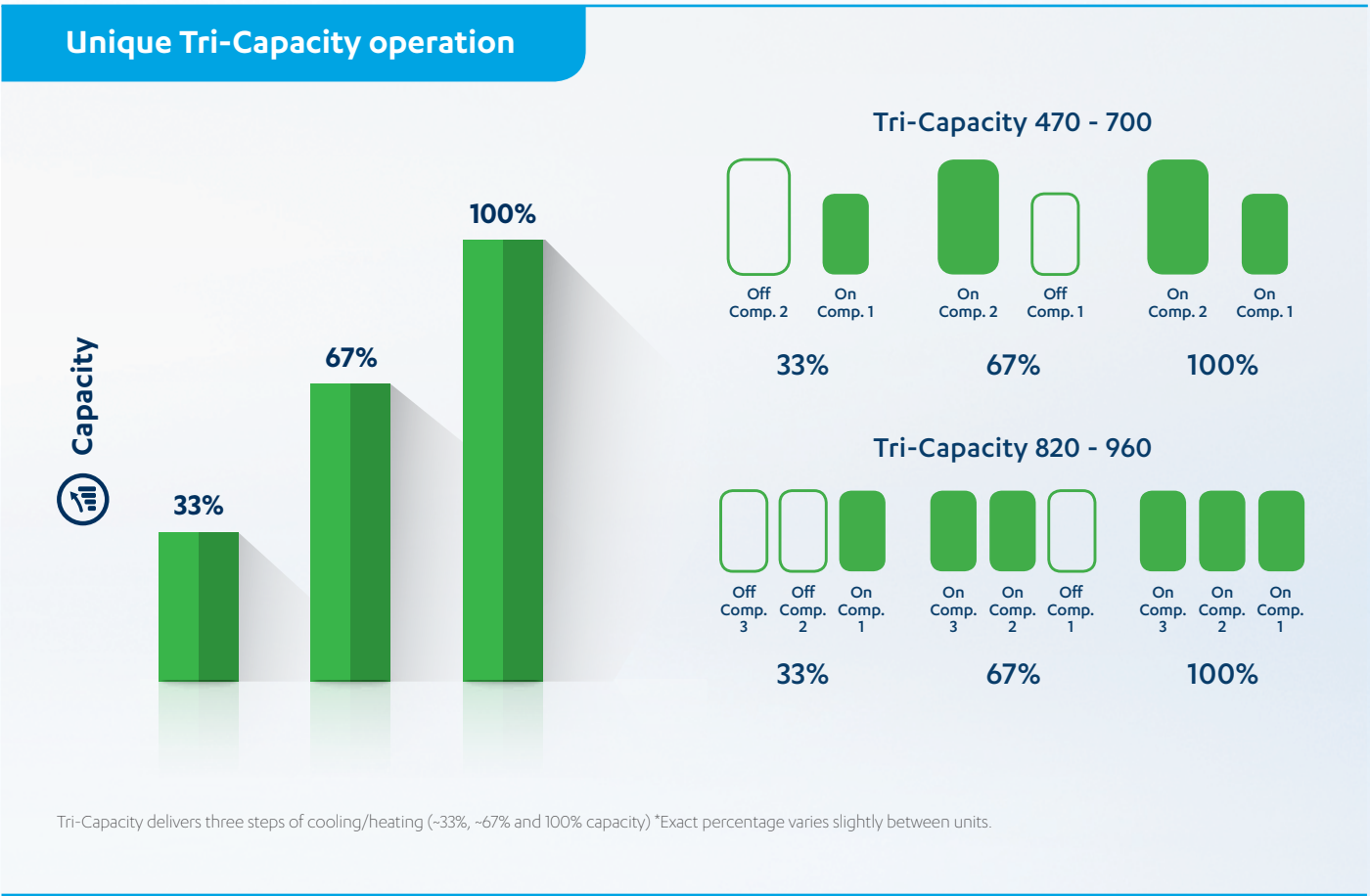
Tri-Capacity offers superior comfort, a crucial factor for the success of businesses keen to draw customers in through the doors.

Tri-Capacity better matches the thermal load of a building, which research shows rarely reaches 100%. In fact, commercial buildings typically operate between 60% and 75% capacity for most of the time, and Tri-Capacity is simply better suited to conditioning these types of environments.

Unique compressor technology

As its name indicates, Tri-Capacity offers a unique three step capacity configuration of 33%, 67% and 100%.

Tri-Capacity's unique compressor configuration also delivers improved seasonal energy efficiency through fewer adjustments, and also results in less cyclic degradation and more finely tuned occupant comfort.



Better Control

Power and control is all yours

ActronAir is renowned for its controls, logic and electronics, and a lot of thought has gone into making controlling the Tri-Capacity flexible, comprehensive and user friendly. The system features fully integrated factory-fitted controls, eliminating the need for the added complexity of third party controls.

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

- Configurable temperature sensors
- BMS compatibility to integrate with most MODBUS and BACNET operating systems
- 3rd party web browsing with BACNET and MODBUS
- Fault diagnostics
- User friendly factory fitted LCD interface
- Maintenance and service activities are enhanced with a 100-event register
- Dedicated input for remote stop/start and fire alarms
- 7/365 day time clock scheduler with programmable operating times (two on/off cycles per day)
- 12 special event days
- Secondary optional remote LCD user interface
- Discharge line temperature safety
- HP & LP safety
- Password protected service manager
- Automatic daylight savings change over
- Non-volatile memory



CP05 interface



CM100 control



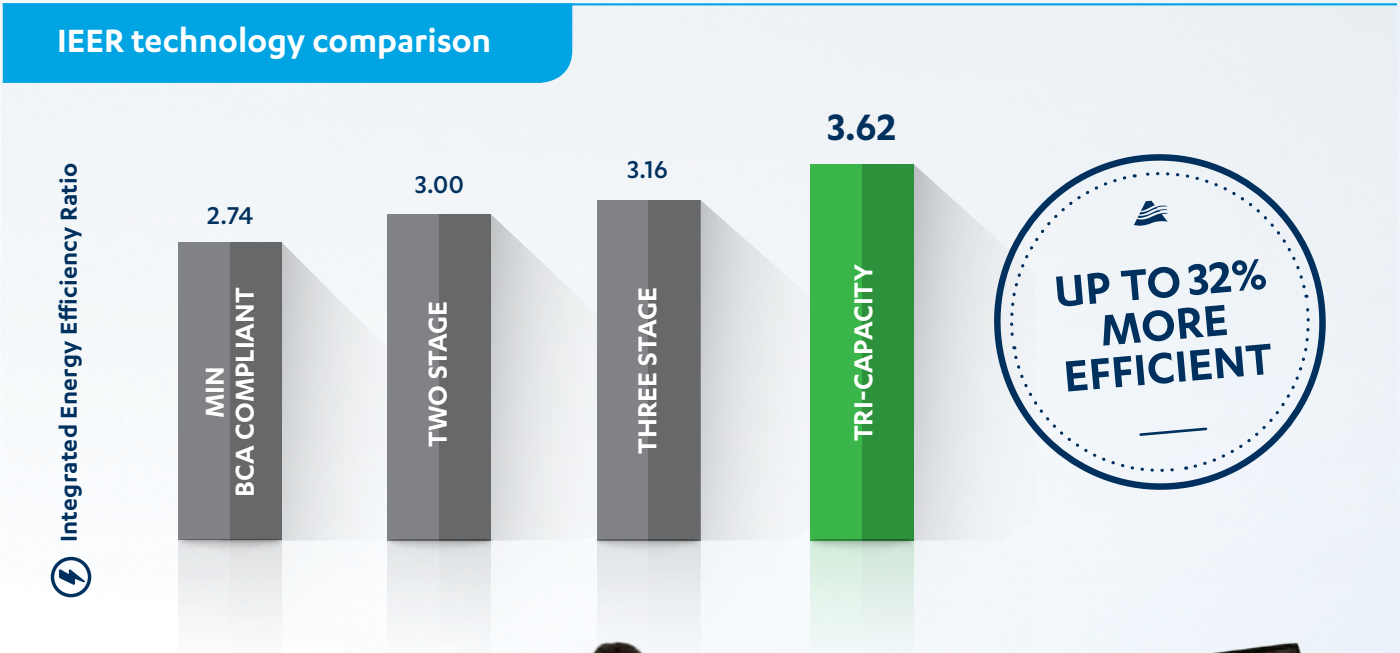
Optional CL01 interface

TRI-CAPACITY

Better Energy Efficiency

Significant energy efficiency for a more comfortable bottom line

Tri-Capacity delivers superb energy efficiency with an IEER, or **Integrated Energy Efficiency Ratio**, of **3.62*** – up to 32% more efficient than the minimum BCA compliant system. It also surpasses ASHRAE 90.1, one of the most recognised standards for building energy efficiency in the USA. That can make a huge difference to long term energy costs as the following real life examples demonstrate.



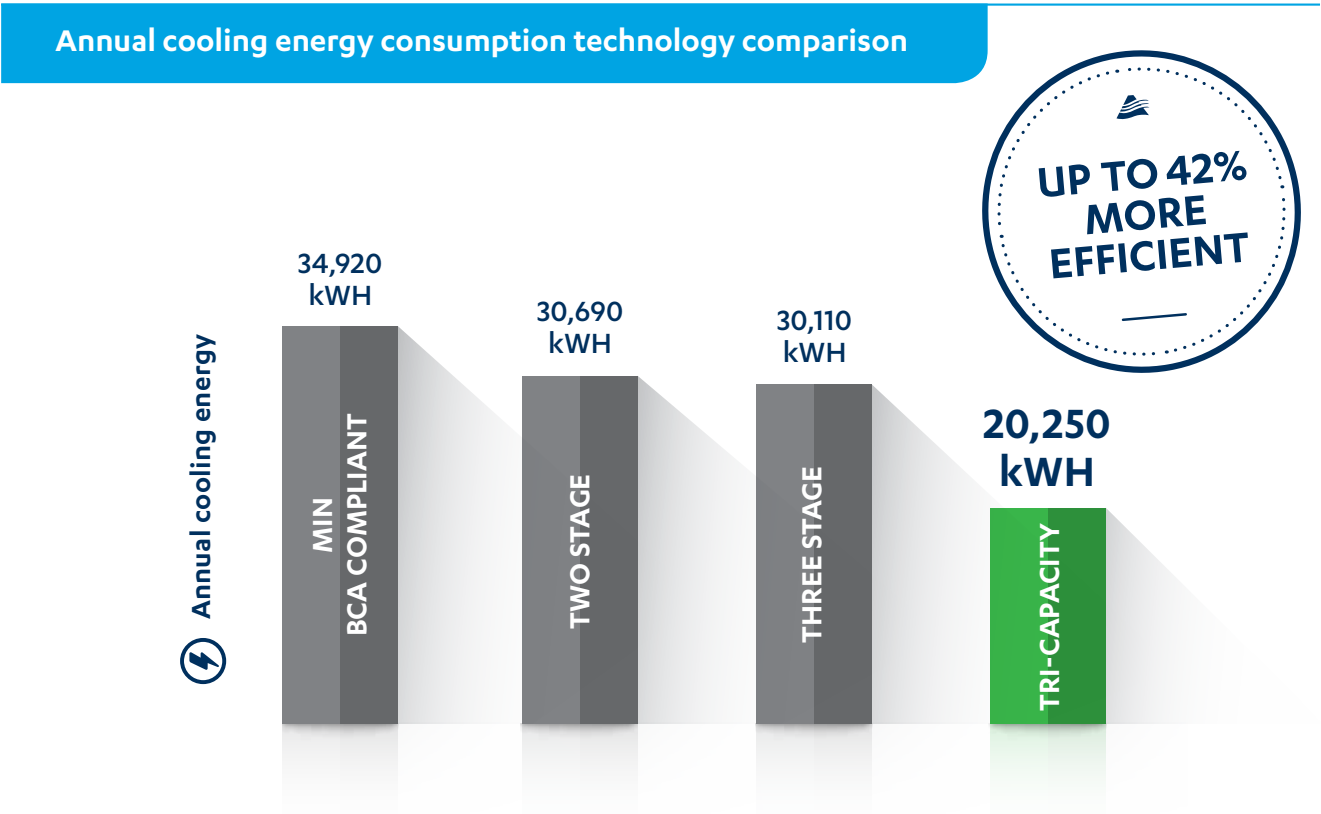
*IEER of 3.62 achieved on PKY620T. *IEER based on AHRI 340/360 clause 6.2.2.

Case Study 1: Commercial premises, Richmond NSW

Energy modelling was conducted from 6am to 9pm for seven days in a commercial premises in Richmond, on the outer fringes of Sydney. The technologies compared were:

- Minimum BCA Section J5.4 Compliant – 1 stage fixed speed AC belt drive
- Two stage fixed speed with AC fan motor and belt drive
- Three stage fixed speed with AC fan motor and belt drive
- Tri-Capacity – Three stage fixed speed with EC Plug Fan

Over a one year period, modelling for energy consumption was calculated for each system. Tri-Capacity was found to be **up to 42% more efficient** than minimum BCA requirements. Based on an electricity price of 15c per kW/h and the cooling energy consumption, this translates to **a saving of \$2,200 per year** compared to the BCA minimum requirement, and **\$1,566 per year** compared to two stage fixed speed AC fan motor and belt drive technology.



Case Study 2: Retail big box store, Brisbane QLD

In 2014, independent field testing and energy analysis was conducted in two ‘big box’ retail stores in Rocklea and Browns Plains, located 12 km apart. The testing compared each store’s packaged unit technologies:

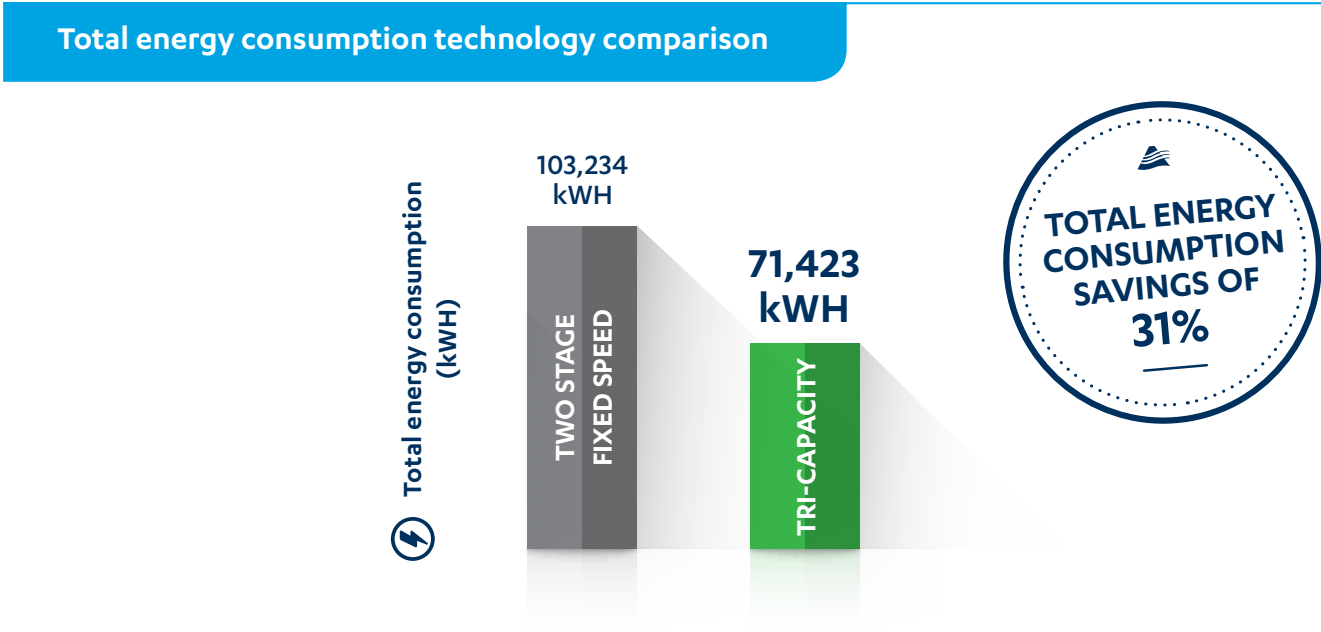
- Tri-Capacity technology
- Two stage fixed speed AC fan motor and belt drive technology

Over a 43 day period, total energy consumption savings of 31% was observed for Tri-Capacity. On a daily basis, energy consumption savings of 10% to 50% were achieved.

Using regression analysis and weather data for the region, Ecosave, an independent energy company, projected annual energy consumption savings of up to 37% versus conventional two stage fixed speed AC fan motor and belt drive technology.

Over a 15 year lifecycle this equates to a projected saving of \$407,891, based on \$0.15/kWh.

	Browns Plain Store	Rocklea Store
Technology	Two stage fixed speed AC technology	Tri-Capacity
Floor area m²	7,515	8,459
Number of units	10	11
Floor area per unit (m² unit)	752	769



Better Support

Flexibility and tailored thinking for your unique project

Tri-Capacity technology has a great degree of flexibility. Our engineers are based here in Australia, so we can often apply some lateral thinking to achieve great results under challenging circumstances. We're committed to working together with businesses so please talk to us about your particular project requirements.

Better Installation

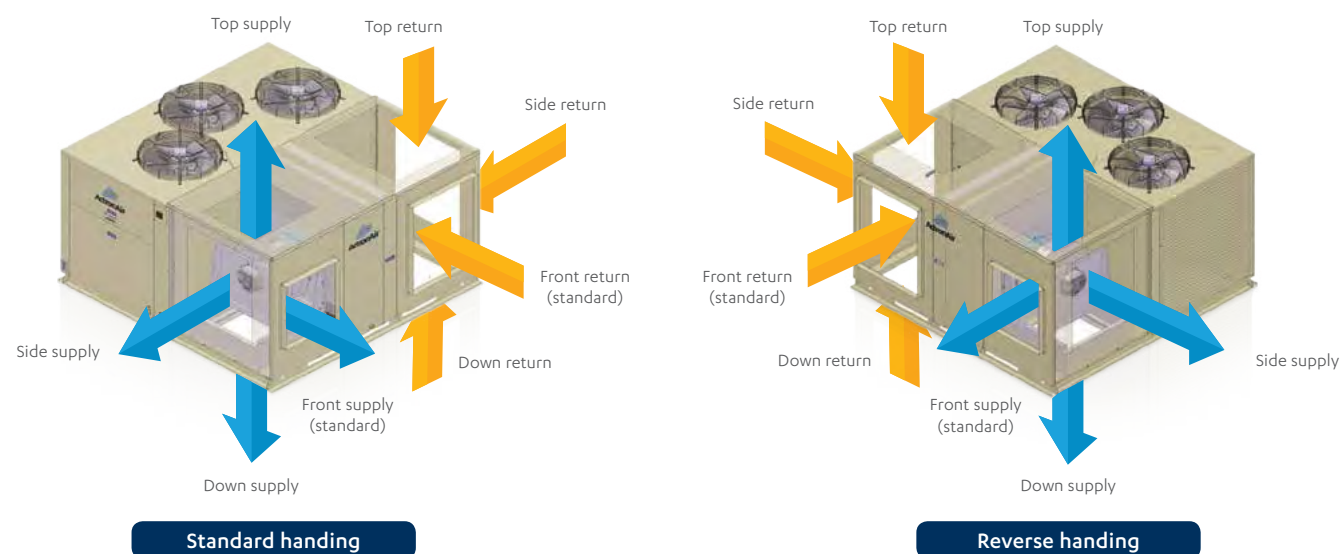


Installation & configuration benefits

Flexible and configurable, Tri-Capacity is superbly installation-friendly. With up to 32 combinations of supply and return air connections, the Tri-Capacity series has the flexibility to accommodate most site ductwork requirements.

Other benefits include:

- Multiple handing options to suit most applications.
- Outside air can be introduced manually or automatically with optional dampers, to comply with the Building Code of Australia (BCA).
- A factory fitted lockable three phase load break isolation switch, which reduces installer cost and time on-site.



Better Service

Service and parts, where you need it, when you need it

A great benefit of ActronAir, right across our range, is that parts are available off the shelf, here in Australia.

We know that waiting for weeks for a part to come from overseas is simply bad for business, let alone having to talk to someone overseas to order it. Being locally based and proudly service oriented, we've always gone that extra mile to provide prompt and friendly service to our customers all over Australia.

Technicians will think it's their birthday, and so will you

The Tri-Capacity control interface makes it easy to access system status information such as discharge line and set point temperature.

Tri-Capacity also eliminates the maintenance and service associated with belt and pulley driven systems. This results in improved airflow accuracy and reduced maintenance costs on-site.

So instead of a maintenance job that could take all day, adjusting the airflow can take mere minutes.



Don't just take our word for it

When we design our products, we don't do it with the goal of receiving awards in mind. Instead we choose to focus on producing the best products possible, designed to suit our unique conditions while delivering reliable, energy efficient performance.

However, we are always pleased when any of our products achieve industry recognition. We believe in our products and the performance they provide, but it's always nice when those who know our industry best agree with us. And it's no different with Tri-Capacity, which over time has attracted its fair share of recognition from the HVAC industry, in particular for its strong Innovation and Sustainability credentials.



2012 AIRAH Awards
Excellence in Innovation
Finalist



2013 AIRAH Awards
Excellence in Sustainability
Finalist

Technical Specifications

TRI-CAPACITY

Split Ducted Tri-Capacity 47-71kW (Three Phase)

Technical Information									
OUTDOOR MODEL		CAY470T-6Q2	CAY470T-6Q2	CAY540T-6Q2	CAY540T-6Q2	CAY620T-6Q2	CAY620T-6Q2	CAY700T-6Q2	CAY700T-6Q2
INDOOR MODEL		EVY470T-6Q2	ELY470T-6Q2	EVY540T-6Q2	ELY540T-6Q2	EVY620T-6Q2	ELY620T-6Q2	EVY700T-6Q2	ELY700T-6Q2
		Std Profile	Low Profile	Std Profile	Low Profile	Std Profile	Low Profile	Std Profile	Low Profile
¹ Total (Gross) Capacity (kW) (AS/NZS3823.1.2)	Cooling	47.00	47.00	53.50	53.50	63.00	63.00	71.00	71.00
	Heating	46.00	46.00	51.50	51.50	60.00	60.00	67.00	67.00
Nett (Rated) Capacity (kW) (AS/NZS3823.1.2)	Cooling	45.77	46.00	51.85	52.20	60.80	61.00	68.17	68.30
	Heating	47.37	47.20	53.20	52.96	62.47	62.30	70.20	70.00
Input Power (kW) (AS/NZS3823.1.2)	Cooling	15.40	15.42	17.57	17.57	20.50	20.35	24.12	23.94
	Heating	14.16	14.02	16.20	16.03	20.15	19.98	22.32	22.12
² EER Rated (AS/NZS3823.1.2)	Cooling	2.97	2.98	2.95	2.97	2.97	3.00	2.83	2.85
³ COP Rated (AS/NZS3823.1.2)	Heating	3.35	3.37	3.28	3.30	3.10	3.12	3.15	3.16
Power Supply (V / Ph / Hz)	Outdoor	415V / 3Ph + N / 50Hz 415V / 3Ph + N / 50Hz							
	Indoor								
Rated Load Amps (AS/NZS3823.1.2)	Outdoor / Indoor / Total	25.9 / 2.1 / 28.0	25.9 / 1.7 / 27.6	28.3 / 2.7 / 31.0	28.3 / 2.2 / 30.5	35.7 / 3.5 / 39.2	35.7 / 3.2 / 38.9	40.6 / 4.5 / 45.1	40.6 / 4.2 / 44.8
Full Load Amps (AS/NZS3823.1.2)	Outdoor / Indoor / Total	35.5 / 4.8 / 40.3	35.5 / 4.6 / 40.1	38.0 / 4.8 / 42.8	38.0 / 4.6 / 42.6	46.4 / 6.4 / 52.8	46.4 / 6.2 / 52.6	52.8 / 6.4 / 59.2	52.8 / 6.2 / 59.0
⁴ Circuit Breaker Amps		50.0				63.0		80.0	
IP Rating	Outdoor	IP44 IP20							
	Indoor								
Compressor	Type / No. per Unit	Compliant Scroll / 2							
	Starting Method								
		D.O.L.							
No. Refrigeration Circuits/No. Capacity Stages (Capacity range)		2 / Tri-Capacity (~33% 66% 100%)							
Refrigerant		R410a							
Fans (Type x Number per unit)	Outdoor	Axial Low Noise / 6 Pole External Rotor / Direct Drive x 3 Variable Speed EC Motor Direct Drive Backward Curve Plug Fan x 1 (EVY Models), 2 (ELY Models)							
	Indoor								
Airflow Range Indoor (l/s)	Maximum	2900		3300		3900		4100	
	Nominal	2400		2700		3200		3600	
	Minimum	1900		2100		2500		2800	
External Static Pressure (Pa) at:	Maximum Airflow	305	325	125	75	155	175	75	
	Nominal Airflow	500		390		410		500	270
Nominal Outdoor Dimensions (mm)	Depth	1195				1195			
	Height	1465				1695			
	Width	2305				2305			
Nominal Indoor Dimensions (mm)	Depth	1450	1160	1450	1160	1450	1160	1450	1160
	Height	1280	770	1280	770	1510	895	1510	895
	Width	1590	2410	1590	2410	1590	2410	1590	2410
⁵ Nominal Weight (kgs)	Outdoor	532		542		577		604	
	Indoor	292	231	298	239	340	274	340	274
⁶ Sound Pressure Level (dBA)	Outdoor (low/high fan)	58 / 63				59 / 64			
⁷ Sound Power Level (dBA)	Outdoor (low/high fan)	75 / 80				76 / 81			
MEPS Compliant		Yes	Yes	Yes	Yes	Yes	Yes	BCA Compliant	

Unit Features and Options								
Tri-Capacity 33% 66% 100% Capacity Stages	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
Pre-Charged with R10A Refrigerant	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
Louvred Outdoor Coil Guard	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
External Stainless Steel Screws (Outdoor Unit Only)	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
Blue Epoxy Coated Coil Fin Protection (Indoor & Outdoor Coils)	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
25mm Foil Faced Polyethylene insulation (Indoor Unit)	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
Indoor Unit Integral Fan Coil Safety Tray (Included)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Lockable Three Phase Load Break Isolator	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
Low Ambient / High Static EC Outdoor Fans (V-Option)	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional

Air Handling								
F - Front Discharge (EVY & ELY Models Only)	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
T - Top Discharge (CAY Models Only)	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
T- Top Discharge (EVY Models Only)	Optional	-	Optional	-	Optional	-	Optional	-

Foot Notes 1-8

- 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, AS1272 - Precision Methods for Broad-Band Sources in Reverberation Rooms.
- When Demand Response capability is chosen, the air conditioner will fully comply with AS4755.3 in the following modes: DRM 1, 2, 3.

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 Options and Features

OUTDOOR MODEL	CAY470T-6Q2	CAY470T-6Q2	CAY540T-6Q2	CAY540T-6Q2	CAY620T-6Q2	CAY620T-6Q2	CAY700T-6Q2	CAY700T-6Q2
INDOOR MODEL	EVY470T-6Q2	ELY470T-6Q2	EVY540T-6Q2	ELY540T-6Q2	EVY620T-6Q2	ELY620T-6Q2	EVY700T-6Q2	ELY700T-6Q2
	Std Profile	Low Profile	Std Profile	Low Profile	Std Profile	Low Profile	Std Profile	Low Profile
CP05 Control Interface with LCD Display for System Operation	Included	Included	Included	Included	Included	Included	Included	Included
Automatic / Manual Operation	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
7 Day Programmable Time-Clock	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
365 Day Time-Clock With 12 Special Days	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
Compressor Discharge Temperature Control	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
Adjustable Indoor Fan Airflow Setpoint	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
Indoor Coil Anti-Freeze Protection	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
Return Air Offset	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
High and Low Pressure Protection	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
Alarm Fault Data Logger	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
⁸ Demand Response Capability (AS4755.3)	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
BMS Compatibility	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional
CP05 / CPI0 Control Interface (Available as Dual Option)	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional
CL01 7-Day Programmable Control Interface (BCA Compliant)	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional

Options & Accessories

Low Ambient / High Static Outdoor Fans	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional
Indoor Unit Integral Fan Coil Safety Tray - Included	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Variations

OUTDOOR MODEL	F - Economy Control Access 3rd Party Controls	Optional	Optional	Optional	Optional	Optional	Optional	Optional
	K - Additional Full Coil Coat Protection	Optional	Optional	Optional	Optional	Optional	Optional	Optional
	U - Low Ambient +5°C	Optional	Optional	Optional	Optional	Optional	Optional	Optional
	W - Three-Phase Sequence Protection Relay	Optional	Optional	Optional	Optional	Optional	Optional	Optional
	TV/SV - EC Motor High Static Condenser Fan (Up to 150Pa)	Optional	Optional	Optional	Optional	Optional	Optional	Optional
INDOOR MODEL	Z - Compressor 3-Phase Soft Starter	Optional	Optional	Optional	Optional	Optional	Optional	Optional
	L - Additional Full Coil Coat Protection	Optional	Optional	Optional	Optional	Optional	Optional	Optional
	T - Vertical Discharge (EVY Models Only)	Optional	-	Optional	-	Optional	-	Optional
	Y - Powder Coating	Optional	Optional	Optional	Optional	Optional	Optional	Optional

Field Piping and Connections

Refrigerant Charge (Crt #1 & Crt #2)	Factory Charge - (g)	5200 & 10,900		7100 & 13,600		7900 & 15,400		9200 & 15,500	
	Pre-Charge Length - (m)	5		5		5		5	
	Additional Refrigerant Charge - (g/m)	50 & 165		50 & 165		100 & 165		100 & 165	
Maximum Field Pipe Length Range - (m)		75							
Maximum Vertical Height Differential - (m) included in max length		20							
Field Pipe Size (Crt #1 & Crt #2)	Liquid Pipe - mm (inch)	9.52 (3/8) & 15.90 (5/8)		9.52 (3/8) & 15.90 (5/8)		12.70 (1/2) & 15.90 (5/8)		12.70 (1/2) & 15.90 (5/8)	
	Gas Pipe - mm (inch)	19.05 (3/4) & 28.6 (1-1/8)		22.22 (7/8) & 28.6 (1-1/8)		25.40 (1) & 28.6 (1-1/8)		25.40 (1) & 28.6 (1-1/8)	
Outdoor Unit Connection (Crt #1 & Crt #2)	Liquid Pipe - mm (inch)	9.52 (3/8) & 15.90 (5/8)		9.52 (3/8) & 15.90 (5/8)		12.70 (1/2) & 15.90 (5/8)		12.70 (1/2) & 15.90 (5/8)	
	Gas Pipe - mm (inch)	19.05 (3/4) & 28.6 (1-1/8)		22.22 (7/8) & 28.6 (1-1/8)		25.40 (1) & 28.6 (1-1/8)		25.40 (1) & 28.6 (1-1/8)	
Indoor Unit Connection (Crt #1 & Crt #2)	Liquid Pipe - mm (inch)	9.52 (3/8) & 15.90 (5/8)		9.52 (3/8) & 15.90 (5/8)		12.70 (1/2) & 15.90 (5/8)		12.70 (1/2) & 15.90 (5/8)	
	Gas Pipe - mm (inch)	19.05 (3/4) & 28.6 (1-1/8)		22.22 (7/8) & 28.6 (1-1/8)		25.40 (1) & 28.6 (1-1/8)		25.40 (1) & 28.6 (1-1/8)	
Condensate Drain Connection - (Size /Type)		25.4 mm (1") Ø/BSP Female Thread							
Safety Tray Connection - Size/Type		25.4 mm (1") Ø/BSP Socket							
Air Duct	Supply Duct H x W - (mm)	580 x 650	380 x 1000	580 x 650	380 x 1000	580 x 650	380 x 1000	580 x 650	380 x 1000
	Return Duct H x W - (mm)	1130 x 1135	620 x 2000	1130 x 1135	620 x 2000	1360 x 1135	745 x 2000	1360 x 1135	745 x 2000



Technical Specifications

Package Unit Tri-Capacity 47-96kW (Three Phase)

Technical Information							
PACKAGE MODEL		PKY470T-6Q2	PKY540T-6Q2	PKY620T-6Q2	PKY700T-6Q2	PKY820T-3Q2	PKY960T-3Q2
¹ Total (Gross) Capacity (kW) (AS/NZS3823.1.2)	Cooling	47.00	53.50	63.00	71.00	82.50	96.00
	Heating	46.00	51.50	60.00	67.00	80.00	92.00
Nett (Rated) Capacity (kW) (AS/NZS3823.1.2)	Cooling	45.77	51.85	60.80	68.17	80.04	92.96
	Heating	47.37	53.20	62.47	70.20	82.75	95.40
Input Power (kW) (AS/NZS3823.1.2)	Cooling	15.40	17.57	20.50	24.12	27.21	32.54
	Heating	14.16	16.20	20.15	22.32	24.55	27.20
² EER Rated (AS/NZS3823.1.2)	Cooling	2.97	2.95	2.97	2.83	2.94	2.86
³ COP Rated (AS/NZS3823.1.2)	Heating	3.35	3.28	3.10	3.15	3.37	3.51
Power Supply (V / Ph / Hz)		400 - 415V / 3Ph + N / 50Hz					
Rated Load Amps (AS/NZS3823.1.2)		28.0	31.0	39.2	45.1	50.6	60.0
Full Load Amps (AS/ NZS3823.1.2)		40.3	42.8	52.8	59.2	81.7	82.7
⁴ Circuit Breaker Amps		50.0	50.0	63.0	80.0	100.0	100.0
IP Rating		IP44					
Compressor	Type / No. per Unit	Compliant Scroll / 2 (470-700 Models), 3 (820-960 Models)					
	Starting Method	D.O.L.					
No. Refrigeration Circuits/No. Capacity Stages (Capacity range)		2 (470-700 Models), 3 (820-960 Models) / Tri-Capacity (~33% 66% 100%) All Models					
Refrigerant		R410a					
Fans (Type x Number per unit)	Outdoor	Axial Low Noise / 6 Pole External Rotor / Direct Drive x 3					
	Indoor	Variable Speed ECM Direct Drive Backward Curve Plug Fan x 1 (6Q2 Models), 2 (3Q2 Models)					
Airflow Range Indoor (l/s)	Maximum	2900	3300	3900	4100	4800	6000
	Nominal	2400	2700	3200	3600	4000	5000
	Minimum	1900	2100	2500	2800	3200	4000
External Static Pressure (Pa) at:	Maximum Airflow	305	125	155	75	410	100
	Nominal Airflow	500	390	410	270	500	365
Nominal Unit Dimensions (mm)	Depth	2305				2250	
	Height	1465		1695		2155	
	Width	2365				2920	
⁵ Nominal Weight (kgs)		836	853	937	964	1263	1350
⁶ Sound Pressure Level (dBA)	Outdoor (low/high fan)	59 / 64		60 / 65		61 / 66	
⁷ Sound Power Level (dBA)	Outdoor (low/high fan)	76 / 81		77 / 82		78 / 83	
MEPS Compliant		Yes	Yes	Yes	BCA Compliant	BCA Compliant	BCA Compliant

Unit Features and Options							
Tri-Capacity 33% 66% 100% Capacity	Standard	Standard	Standard	Standard	Standard	Standard	Standard
Full Factory Charged with R410A Refrigerant	Standard	Standard	Standard	Standard	Standard	Standard	Standard
Louvered Outdoor Coil Guard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
External Stainless Steel Screws (Outdoor Unit Only)	Standard	Standard	Standard	Standard	Standard	Standard	Standard
Blue Epoxy Coated Coil Fin Protection (Indoor & Outdoor Coils)	Standard	Standard	Standard	Standard	Standard	Standard	Standard
25mm Foil Faced Polyethylene Insulation (Indoor Unit)	Standard	Standard	Standard	Standard	Standard	Standard	Standard
Lockable Three Phase Load Break Isolator	Standard	Standard	Standard	Standard	Standard	Standard	Standard
Return Air Filter Rails Fitted	Standard	Standard	Standard	Standard	Standard	Standard	Standard
Low Ambient / high Static EC Outdoor Fans (V-Option)	Optional	Optional	Optional	Optional	Optional	Optional	Optional

Air Handling Configurations							
F- Front Discharge	Standard	Standard	Standard	Standard	Standard	Standard	Standard
T- Top Discharge	Optional	Optional	Optional	Optional	Optional	Optional	Optional
S- Side Discharge	Optional	Optional	Optional	Optional	Optional	Optional	Optional
D- Down Discharge	Optional	Optional	Optional	Optional	Optional	Optional	Optional
Reverse Air Handling	Optional	Optional	Optional	Optional	Optional	Optional	Optional

Foot Notes 1-9

- 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.
- Return air sensor needs to be relocated by installer. Specific to site requirements.
- When Demand Response capability is chosen, the air conditioner will fully comply with AS4755.3 in the following modes: DRM 1, 2, 3.

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 Options and Features							
PACKAGE MODEL	PKY470T-6Q2	PKY540T-6Q2	PKY620T-6Q2	PKY700T-6Q2	PKY820T-3Q2	PKY960T-3Q2	
CP05 Control Interface with LCD Display for System Operation	Included	Included	Included	Included	Included	Included	
Automatic / Manual Operation	Yes	Yes	Yes	Yes	Yes	Yes	
7 Day Programmable Time-Clock	Standard	Standard	Standard	Standard	Standard	Standard	
365 Day Time-Clock With 12 Special Days	Standard	Standard	Standard	Standard	Standard	Standard	
Compressor Discharge Temperature Control	Standard	Standard	Standard	Standard	Standard	Standard	
Adjustable Indoor Fan Airflow Setpoint	Standard	Standard	Standard	Standard	Standard	Standard	
Indoor Coil Anti-Freeze Protection	Standard	Standard	Standard	Standard	Standard	Standard	
Return Air Offset	Standard	Standard	Standard	Standard	Standard	Standard	
High and Low Pressure Protection	Standard	Standard	Standard	Standard	Standard	Standard	
Alarm Fault Data Logger	Standard	Standard	Standard	Standard	Standard	Standard	
BMS Compatibility	Optional	Optional	Optional	Optional	Optional	Optional	
CP05/CP10 Control Interface (Available as Dual Control Option)	Optional	Optional	Optional	Optional	Optional	Optional	
CL01 7-Day Programmable Control Interface (BCA Compliant)	Optional	Optional	Optional	Optional	Optional	Optional	

Variations							
E- ⁸ Economy Starter Kit*	Optional	Optional	Optional	Optional	Optional	Optional	Optional
G- ⁸ Auto Outside Air Kit	Optional	Optional	Optional	Optional	Optional	Optional	Optional
H- ⁸ Manual Outside Air Kit	Optional	Optional	Optional	Optional	Optional	Optional	Optional
K- Additional Full Coil Coat Protection (Outdoor Coil)	Optional	Optional	Optional	Optional	Optional	Optional	Optional
L- Additional Full Coil Coat Protection (Indoor Coil)	Optional	Optional	Optional	Optional	Optional	Optional	Optional
R- ⁹ Demand Response Capability (AS4755.3)	Standard	Standard	Standard	Standard	Standard	Standard	Standard
U- Low Ambient +5°C	Optional	Optional	Optional	Optional	Optional	Optional	Optional
V- EC Motor High Static Condenser Fan - Up to 150Pa	Optional	Optional	Optional	Optional	Optional	Optional	Optional
W- Three-Phase Sequence Protection Relay	Optional	Optional	Optional	Optional	Optional	Optional	Optional
Z- Compressor 3-Phase Soft Starter (Outdoor Unit Only)	Optional	Optional	Optional	Optional	Optional	Optional	Optional

Field Information							
Refrigerant Factory Charge -(g) For 6Q1 Models - (Crt #1 & Crt #2), For 3Q1 Models (each Compressor)		4600 & 8800	5800 & 12,000	7200 & 12,700	8300 & 12,800	8,300 (each)	11,000 (each)
Condensate Drain Connection - Size/Type	Indoor Section	25.4 mm (1") Ø BSP Female Thread				31.8 mm (1-1/4") Ø BSP Female Thread	
	Outdoor Section	25.4 mm (1") Ø BSP Socket				31.8 mm (1-1/4") Ø BSP Socket	
Air Duct	Supply Duct H x W - (mm)	650 x 580				1200 x 600	
	Return Duct H x W - (mm)	900 x 700				1200 x 600	

* Outside Air Damper available on the LHS or RHS only. Return Air Damper available on the front LHS or RHS only.





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