VARIABLE REFRIGERANT FLOW (VRF)

Air Conditioner

AVR Carefree Series

AVR ECO plus

AVR ECO PRO

ACSON International

Air Conditioners

ACSON

Provides The Best Cooling Experience Since 1984

Acson Malaysia is a home-grown air conditioning company that has been established since 1984. Over the three decades, we have been providing best cooling experience from normal household to far reaching sky scraper.

Customer needs and comforts have been our priorities ever since our inception. At Acson, we focus on delivering healthier lifestyles and happiest moments to our customers without causing harm to the environment.

As we move towards vision 2020, the demographic for Malaysia residential is moving towards building that are much compact than ever before. We, Acson are proud to present to you our latest Variable Refrigerant Flow (VRF) system. It is suitable for both residential and commercial with our wide range of capacity.

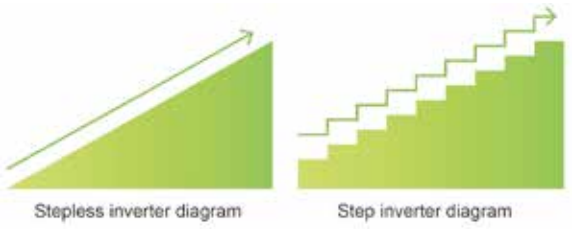
Contents

Common Features

Acson Carefree, EcoPlus & EcoPro have a lot of unique features but it also share a lot of similarities. Here are some of them:

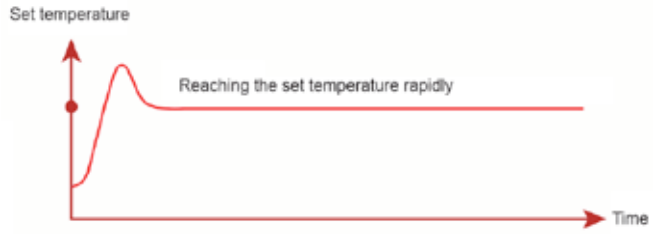
Stepless Inverter Technology

Each of the series be it Carefree, EcoPlus or EcoPro could provide a degree of stepless capacity loading. Making our Variable Refrigerant Flow (VRF) lineup is versatile and have wide capacity range.



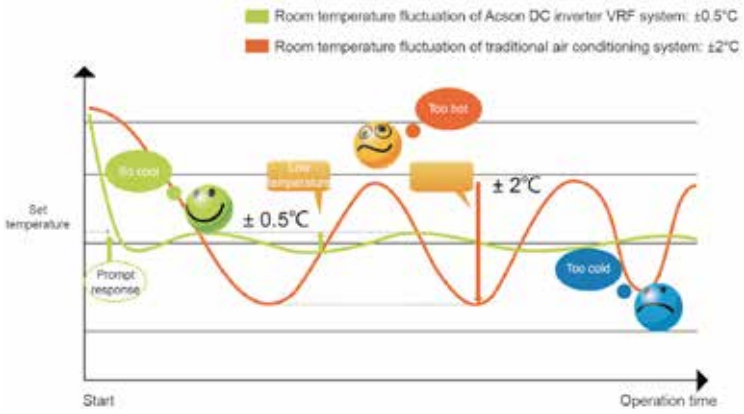
Fast Cooling

Inverter have the capabilities to perform higher than normal condition. Making it faster to reach our set temperature compare to conventional system.



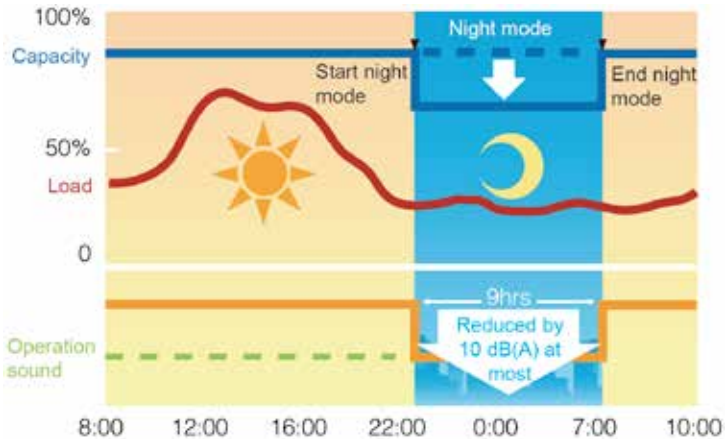
Greater Comfort, Better Accuracy and Stable System

Another special characteristic for inverter system, they are more stable when it comes to temperature control compare to non-inverter system. This minimal temperature fluctuation is vital in providing room comfort.



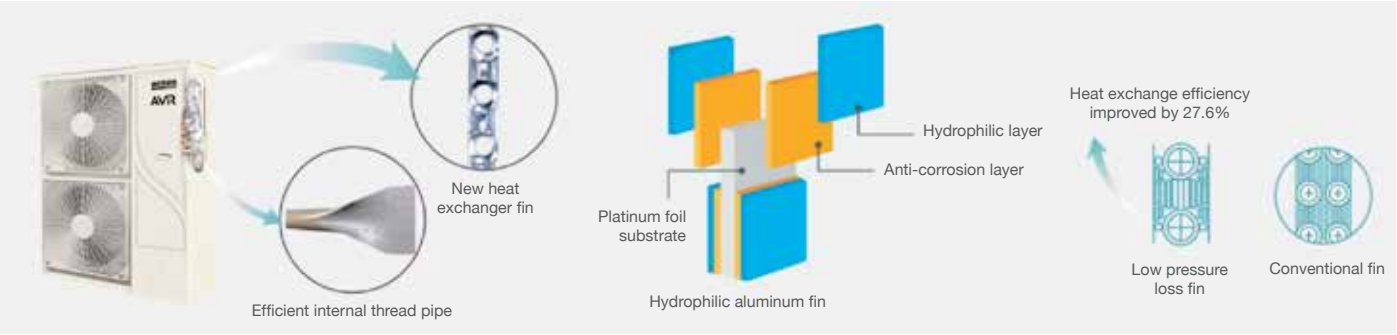
Snooze Mode for Outdoor Unit.

Our ambient temperature for day and night fluctuates drastically. Luckily, our A5VR series will adjust to these changes subtly. As the temperature drops, the system can work in a slower pace. Lowering the sound pressure level at the same time to ensure you have a good and peaceful night.



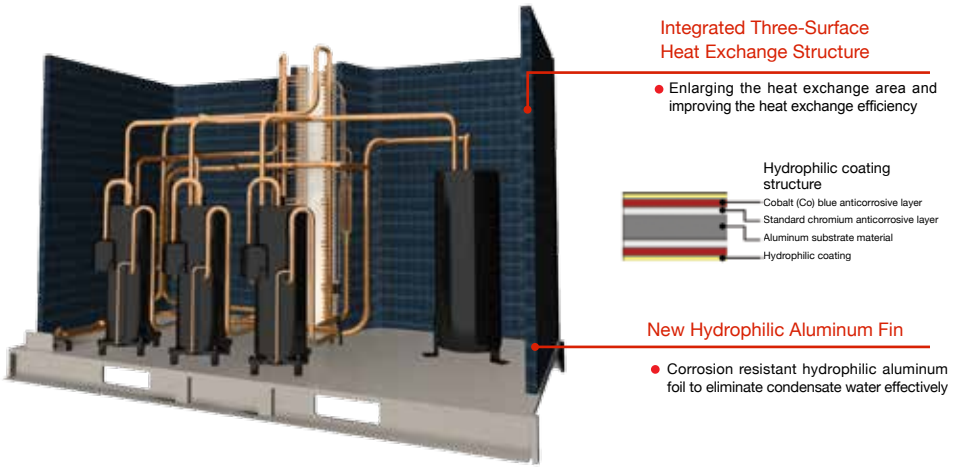
High Efficiency Heat Exchanger

One of the major component of any direct expansion system is the heat exchanger, the performance of a said system depends on it. Here is the closer look of our variable refrigerant flow heat exchanger:



Integrated Three-Surface Heat Exchanger

- The reasonable integrated three-surface heat exchanger structure can fully use the unit space and expand the heat exchange area to improve the heat exchange efficiency significantly.
- The reasonable and compact integrated three-surface heat exchanger structure shows high strength and facilitates installation and overhauling. It is more safe and reliable because less solder joints are required.
- The copper tube adopts small diameter design to implement a higher refrigerant flow rate and more thorough heat exchange.
- The hydrophilic aluminum fin containing anticorrosive coating is adopted to prevent corrosion in the site with high temperature, high humidity and high salt content and improve the cooling/heating performance of unit.

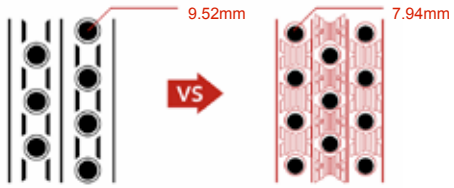


Common bare pipe

The inner surface of common bare pipe is smooth, so the contact area with refrigerant is small and the heat exchange efficiency is relatively low.

Inner-grooved copper tube

Acson adopts the highly efficient inner-grooved copper tube with a large surface area and efficient heat exchange performance.



Common fin

9.52 mm pipe diameter and common aluminum fin with a small opening area; lower heat exchange efficiency under the same heat exchange area

Efficient low pressure loss fin

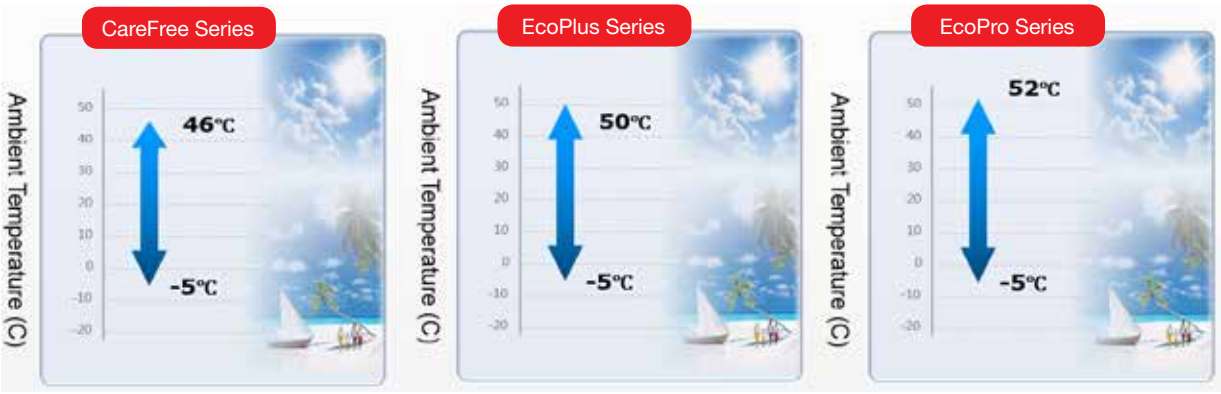
7.94 mm pipe diameter to yield a higher flow rate; louvered hydrophilic aluminum fin to realize more thorough heat exchange under the same heat exchange area and increase the heat exchange efficiency by 27%

Ecosystem Friendly

Similar to our Ecocool lineup, our AVR series use R410A refrigerant. Which at the moment the most probable line-up as R22 refrigerant line-up. It does not deplete the ozone and pose any hazardous threat that most non-ODP refrigerant do. As a responsible corporate, our line-up is also RoHs compliance.

Wide Temperature Range

Each of the system have a unique operating range:

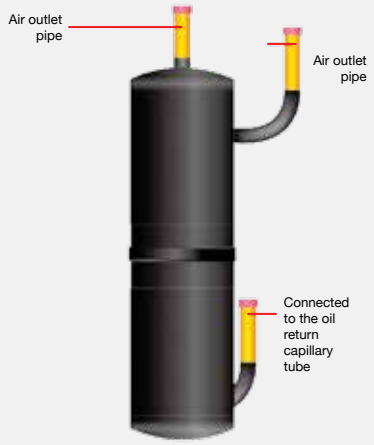


Patented Oil Return Technologies

One of the core design that was input to the design of the system is the oil return. It is vital because the compressor need sufficient oil for it to function effectively. Our system is so efficient that not it does not require oil balancing pipe. From the software, we have a smart oil distributing to hardware, we have a highly efficient oil separator.

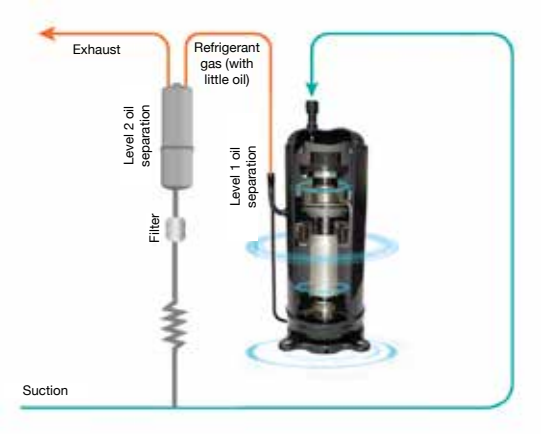
Efficient Oil Sperator

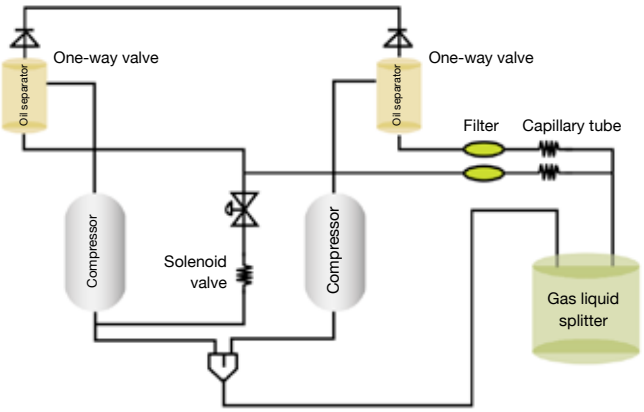
The oil separator adopts the efficient centrifugal rotating guide design. After entering the oil separator, the high pressure gas emitted from the compressor forms a high speed rotating air flow. Due to functions of the centrifugal force and gravity, the mixed gas of high pressure refrigerant and oil separates the relatively heavy lubricating oil from the refrigerant gas, and makes it flow to the oil separator device along the inner wall of cylinder. In this way, oil is separated efficiently.



Efficient large capacity oil separator

Patented Two Stages Smart Oil Return Technologies





Level 1 Oil Separation & Recovery

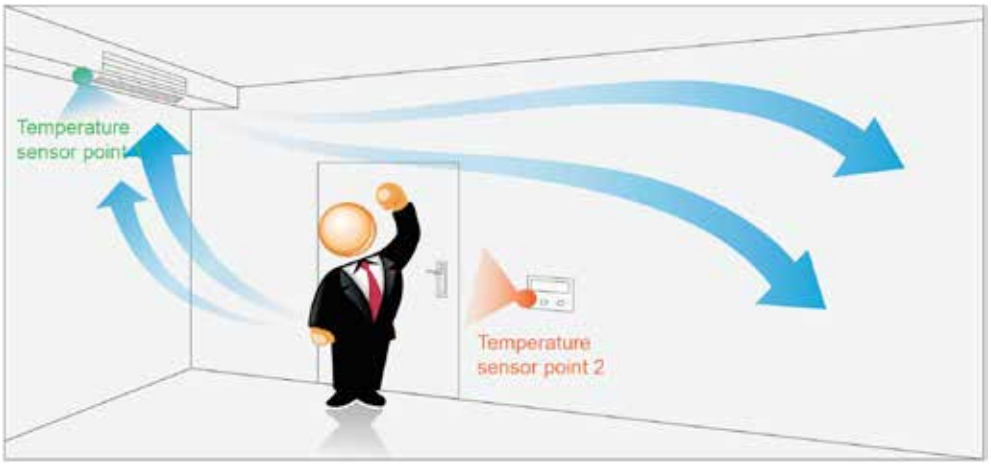
The first stage of oil separation occur within the compressor itself using the oil and gas separator and oil return pipe. Almost all of the oil is recycle back into the compressor after it left the compressor, by doing so we can ensure the oil remain in the compressor.

Level 2 Oil Separation & Recovery

After leaving the compressor, there is residue of the oil that left together with the refrigerant. It is still vital to recover the oil back because as time goes. These oil will eventually trapped within the pipe rather than within the compressor where it is needed. Thus, an external oil separator is used to further recover this residue of oil. Maximizing both the service life and efficiency of the unit.

Two Sensor Point

By default, the sensing point for the unit is built in within the unit. However, the comfort level perceived by the occupants in the system might be different. Therefore, we have a built in function that can allow us to choose the location of sensing. Enabling the system to be able to provide a more accurate and comfort environment to the occupants.



Smart Room

Be it hotel operators or smart home aspirant, our AVR system is capable to perform such function. With a simple card detector or a sensory device such as infrared or sound sensor. We can design the air conditioning system to be operating as if it is self-conscious.

Mode 1

When the user enters the room, the air conditioner with the inserted card is in the standby status. The user can use the controller to start the air conditioner; the user unplugs the card when leaving the room and the air conditioning unit is powered off automatically, which avoids unwanted electricity waste when the user forgets to power off the unit before leaving.

Mode 2

When entering the room, the user inserts the card to directly power on the air conditioning unit for operation. When leaving, the user unplugs the room card, and then the air conditioning unit powers off automatically.

Mode 3

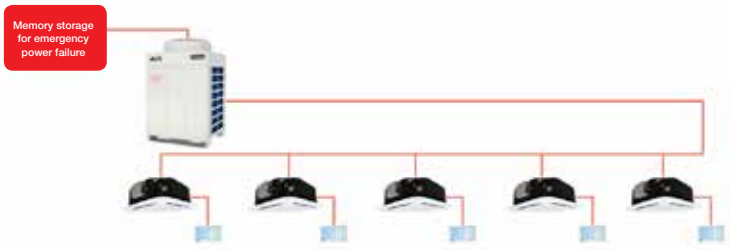
The smart room card interface can also implement multiple power-on/off functions, e.g., the external module can be used to power on/off the air conditioner through modes such as sound control or infrared sensing.

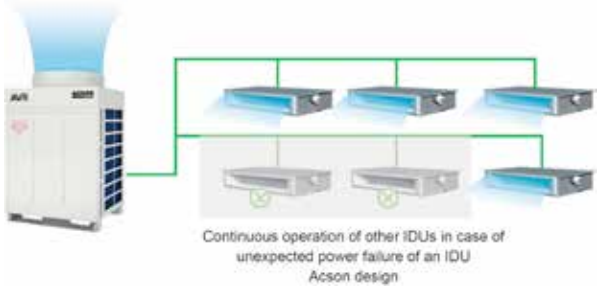
Recovery of Refrigerant

When the IDU, ODU or connection pipeline needs to be maintained, refrigerant is recovered through operation of the unit to reduce the waste of refrigerant and lower the maintenance cost.

System Restore

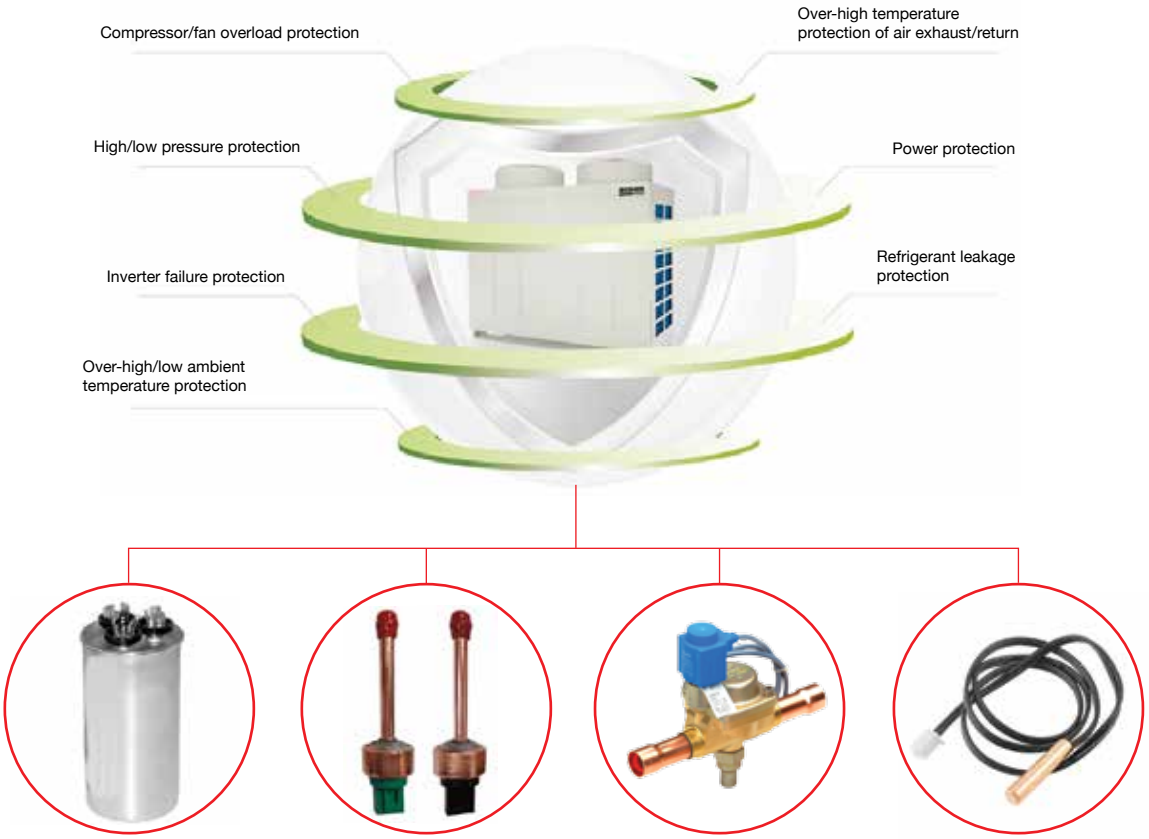
Should one of the indoor unit experience power failure, our system will bypass it and continue to operate. Once the power resume, the unit resume operation of prior setting just before the power failure.





System Redundancy

Our AVR system uses a lot of sensors, switches, program logics and so on to provide a reliable system redundancy. This make our unit more resilient, a single component failure might not cause total failure. This enable user able to operate the system albeit not in full capacity while wait for the system to be rectified.



• Compressor Backup Operation

For ODU with multiple compressor, the compressor can be operated separately. When any compressor fails, the other will still operate like normal.

• Inter-module Redundancy Feature

For EcoPlus and EcoPro series, it is possible for a system to have multiple outdoor units (ODUs). When a module failed, the other module will still operate.

• Fan Redundancy Feature

While for models with dual fan, either fan that are in operation is suffice for the system to continue its operation.

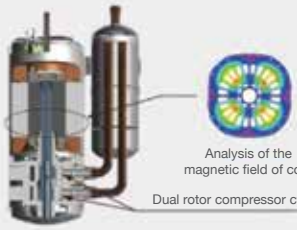
AVR - Carefree Unique Features

Although the three line-up have a lot in common, Carefree series excel in other way. It is one of the favourite for applications such as high rise condominium and luxurious residential.

High Efficiency Rotary Compressor

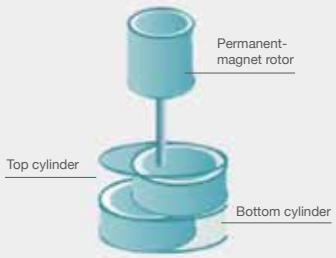
One of the major differences between Carefree and EcoPlus and EcoPro is Carefree series lineup uses only rotary compressor. It has a couple of features built into it such as the crankshaft is mutually form 180˚ to offset vibration. During Operation , they always remain in symmetric and balanced status to reduce vibration and enhance more stable and quiet operation. In order to further minimize the noise, the rotor operation and high/low pressure seal of the cylinder uses a rolling plus sliding design to reduce wear. All in all, we have an economical yet efficiency compressor built into our Carefree series.

High-efficiency DC inverter compressor



Sectional view of the compressor

180° symmetric



2 Supercool Stages

Each of the series have 2 supercool stages, the only difference is Carefree series uses only a simple reservoir compare to the latter. By doing so, we could maximize the performance in an economical and efficient way.

Compact Design

One of the reason why Carefree series is a preferred choice when it comes to residential application is the compact design of it. With the ever stringent rule of high building, space has become a rare commodities. The compact design of Carefree fit in just right.

Note: The size of 4/5/6HP unit is taken as an example.

Noise Reducing Agent

New Vortex Fan Blade

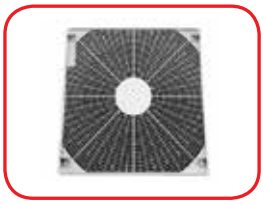
The fan blade edge is optimized and designed in the scroll streamline type to effectively resist the vibration caused by the air flow and reduces the pressure loss.

Symmetric And Balanced Design

The compressor adopts the dual rotor balance design to always remain in the symmetric and balanced status during low and high speed operation and reduce vibration and noises efficiently.

Optimized Pipeline

The entire pipeline system is optimized to avoid the pipeline vibration and resonance generated during operation of the air conditioner and decrease the vibration and noises of pipeline.



New Air Outlet Grille

The special annular wind guide grille reduces the turbulent flow of air suction and discharge to promote discharge of the heat exchange air flow and reduce noises of the air flow.

Multi-Layer Sound Insulation Design For The Compressor

Each compressor is covered with five layers of sound-absorbing materials to reduce noises generated during operation of the compressor.

Surround Sound Absorption Design

The ODU sheet metal shell adopts the reinforcing rib design to increase the strength of sheet metal, and the sound absorbing material 10 mm thick is attached around the internal sheet metal to absorb internal noises of the unit effectively.

AVR - EcoPlus/EcoPro Unique Features

Both EcoPlus and EcoPro share a lot of similarities in term of functionality, with a coupled of additional feature only available for EcoPro. For commercial applications, Acson EcoPlus and EcoPro is at your disposal. It have a lot of features that was designed for commercial applications.

High Efficiency Scroll Compressor*

The compressor is the core part of central air conditioner which closely related to the overall performance of air conditioner. Based on our years of experience in air conditioning industry, Acson explored and responded to market demands by carrying out numerous experiments to find the best compressor that fit into our system.

Acson DC Inverter Variable Refrigerant Central Air Conditioner adopts high pressure chamber compressor with high performance yet low in sound level. In comparison to conventional low pressure chamber scroll compressor, high chamber scroll compressor uses the asymmetric scroll design. Our compressor also possess intelligent oil control technology with most oil stay inside the compressor rather than being distributed throughout the system.

Asymmetric scroll of high efficiency

The scroll compressor of high pressure chamber adopts the asymmetric scroll design to realize good stability and high efficiency.

Differential pressure oil film lubrication technology

A stable oil film is generated between the fixed scroll and movable scroll contact surfaces to reduce the friction loss effectively.

Big silencing cavity to reduce noises

The whole high pressure chamber is equivalent to a large sound attenuator, so the compressor noise is low.

Oil surface stability control mechanism

Making sure that the oil amount is in the proper range to achieve oil balance of all the compressors.

Sine wave DC inverter technology

Outputting 180° smooth sine wave to ensure stable operation of the compressor driver and reduce the compressor vibration and noise effectively.

High rigidity shell

Good sound insulation effect, sturdy and durable.

Anti-over-compression structure

Efficiently preventing the power consumption increase problem arising from condensation pressure too high, saving more operation energy of the compressor and making the cooling system more stable and reliable.

Internal oil separation mechanism

Keeping the most compressor lubricating oil in the compressor through the patented design of oil mist separator and internal return oil pipe design.

Highly efficient brushless DC motor

Adopt the stator winding of high quality together with the neodymium magnet rotor to generate a powerful magnetic field and enhance the compressor torque.

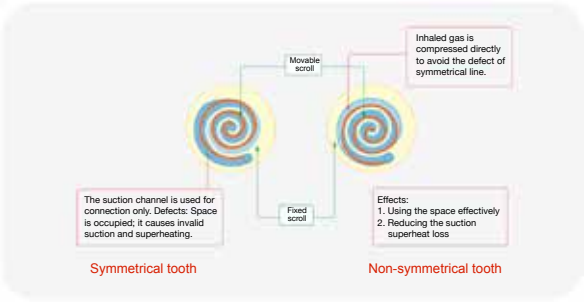
Solid base

The bearing part has special functions to support operation of the compressor at high frequency.

*Note: A5VR 080/100DR use rotary compressor.

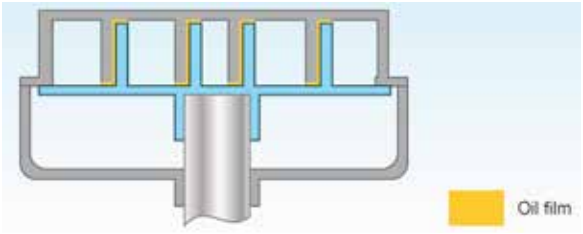
Asymmetric Scroll Design

The asymmetric scroll design implements dynamic continuous compression of refrigerant, efficiently reducing the leakage loss during compression and improving the operating efficiency and reliability of compressor.



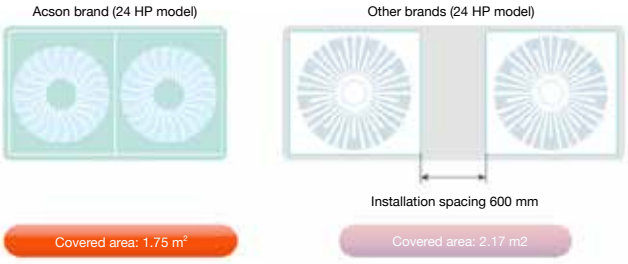
Thin Oil Film Lubrication Technology

The pressure differential between the dynamic and fixed scrolls is used to generate an oil film on contact surface, which reduces friction, operation noise, and mechnical loss. This in turn ensure better efficiency, stable operation and service life of the unit.



Compact Design

For modular design, Acson AVR require lesser foot print compare to most of the modular currently available. Making it an ideal choice for retrofit, replacement or applications that have minimal space for outdoor unit.

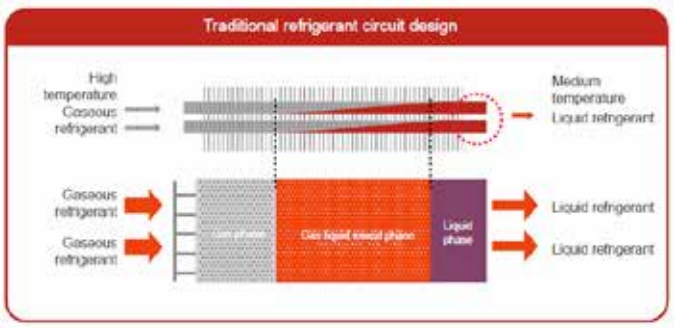


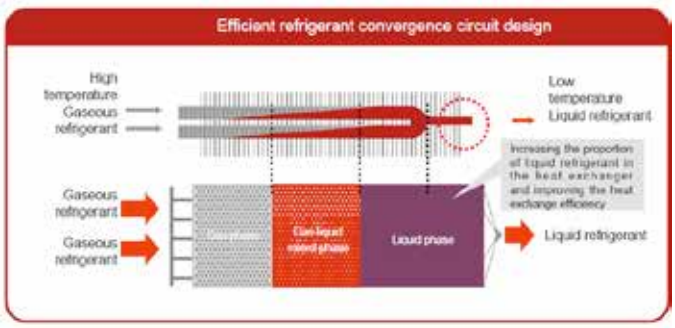
Outdoor Unit with Multiple Static

To further enhance its versatility, EcoPlus and EcoPro lineup can be fitted with different fan motor (0/30/50/85 Pa). For tight spaces, the ODU discharge air can be directed to have a better ventilation and heat dissipation.

Efficient and Effective Refrigerant Path Design

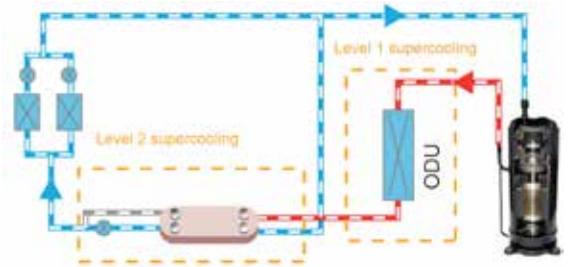
The heat exchanger design is differ than conventional design, so that it able to cool the high temperature faster and more liquid refrigerant is distributed throughout the system.





2 Supercool Stages

Similar to Carefree Series, there is two supercool stages. However, the equipment used in both EcoPlus and EcoPro is more sophisticated due to the scale of cooling capacity of the unit.



Schematic diagram of two-level supercooling

The stainless steel brazed plate heat exchanger has a small volume, and the internal heat exchange groove can strengthen the turbulent flow of heat exchange greatly and ensure small heat loss of heat exchange and higher heat exchange efficiency under the same area.

Acson two-level supercooling part

System Rotation & Redundancy

One of the advantages of having multiple module is it is possible for the system to rotate between each module and compressor. By operating the least operating unit, we can extend the service life of the entire system and enhancing the reliability of the system.

Emergency Stop

One of the criteria that need to be put into consideration during a building design is its emergency operations or procedure. Our unit have a dry contact for any emergency system to halt the operations of the unit in the event of emergency and avoid catastrophic losses.

Noise Reducing Agent

AVR - EcoPro Unique Features

EcoPro shared a lot of technological similarities with EcoPlus. However, being a more advance model. EcoPro have few technological enhancement compare to its peers. Here are the few:

Smart Control Board

Few technological advancement made by our R&D team is the latest model utilize the new AIT intelligent control board. It incorporates circuit optimization, control logic updates, VRF unit control, fault display, debugging, anti-surge protection and much more.

Load Setting

It is now possible to operate the unit at a said capacity ranging from 60 ~ 100 (5 steps). Should the unit, draw more energy than the setting. The unit will trip in full-load operation, and effectively affecting the operation of the whole system.

Control System

One of the advantages of Acson AVR line-up is it use common control system. Thus, this make the system is more user friendly especially for future upgrades.

Independent Controller

Acson provides a big variety of independent controllers, including fashionable touch-screen wired controllers and practical and nice-looking wireless remote controllers. All of them can help you easily control the air conditioning unit and bring you more convenient and comfortable life with easy operations.

AC 321

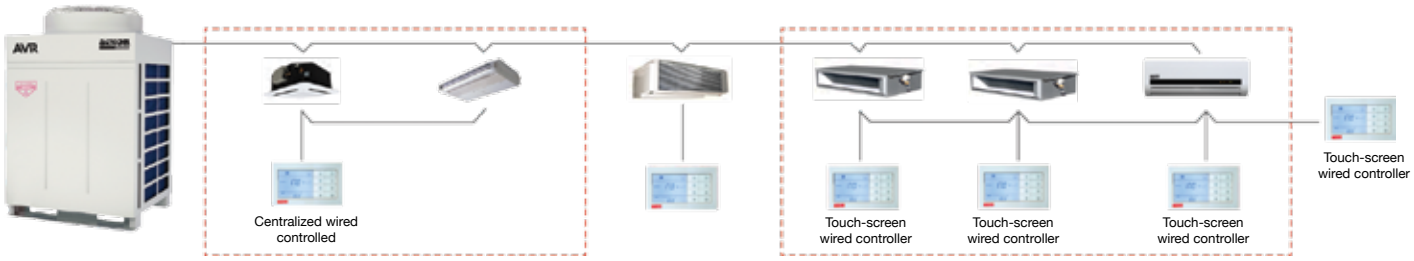
GS01 Remote Controller

Wired Controller AC321 feature:

1. Temperature settings
2. Mode settings
3. Sleep mode
4. Failure code display
5. Keyboard locking and unlocking
6. Fan speed settings
7. IDU address display
8. Indoor temperature display
9. Timed power-on/off
10. Filter cleaning reminder
11. Control function of auxiliary heater
12. °C/°F temperature settings
13. Real-time clock settings
14. Setting automatic startup after power restoration
15. Weekly timed operation

Centralized Controller AC-HMI323A

The centralized wired controller collects advantages of the convenient independent controller and the group-controlled centralized control system to perform centralized control on a single or multiple units. With rich functions and flexible applications, the centralized wired controller can widely apply to small- and medium-sized offices and business spaces.

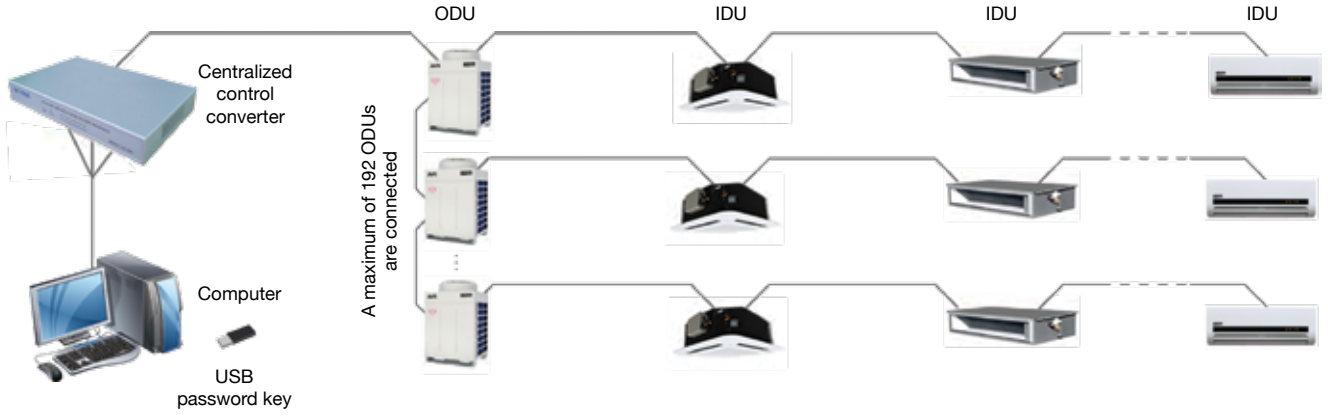


Control over a maximum of 64 IDUs

1. Single control or group control (power-on/off, mode settings, parameter settings)
2. Indoor temperature query
3. IDU locking
4. Grouping
5. Temperature unit settings
6. Upper and lower room temperature limit query
7. Filter cleaning reminder
8. Timed power-on/off
9. Circulating display
10. Real-time clock
11. Sleep mode
12. Weekly timed operation

Intelligent Monitoring System AC-CCS101A

Acson intelligent monitoring system can perform intelligent monitoring on multiple units with powerful functions. Featuring attractive monitoring interface and convenient control, the system can help proprietors to easily improve management efficiency. It is the first choice for large-sized and high-end offices and business places.



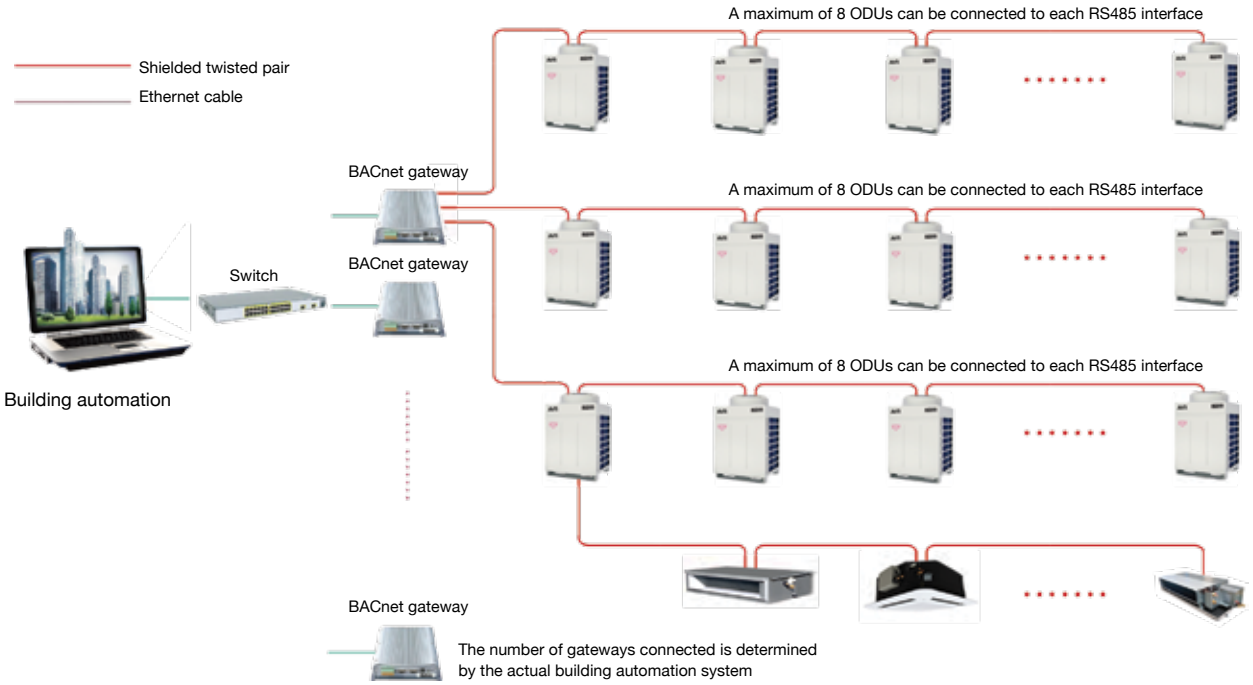
The system can perform centralized monitoring on multiple IDUs and ODUs from a remote end. A computer can be connected with a centralized control converter to perform network control on up to 192 ODUs and 3072 IDUs.

1. Sets the IDU mode and wind speed, auxiliary settings, temperature and power on/off (multiple units or machines in multiple units can be selected to perform operations at the same time)
2. IDU and ODU group settings; group settings can be customized
3. Centralized power-on/off (group control and control of a single IDU can be implemented)
4. Local wired controller can be locked
5. Week or date settings
6. Monitoring data can be connected to the building system directly so that the unit status can be checked
7. The historical operating status and operating parameters of multiple IDUs or ODUs and the unit operating data in the historical time segment can be queried, and the operating record report can be exported

Building Automation System

Acson provides flexible building system control solutions:
The unit can be directly connected to the ModBus-based building automation system through the standard ModBus communication interface configured for the unit, implementing intelligent monitoring without accessing the conversion equipment.

The unit can be connected to the BACnet based building automation system through the BACnet gateway. A maximum of 24 ODUs can be connected to a BACnet gateway and up to 1536 IDUs can be connected at one time.



Model:
A5VWM022W~
A5VWM071W

Nominal Cooling Capacity:
2.2 kW - 7.1 kW
7,500 BTU/h ~
24,200 BTU/h

Wall Mounted IDU A5VWM-W

Ultra-Thin Body Design

The ultra-thin unit is only 205 mm in thickness. The beautiful appearance of the unit improves the indoor decorative style.

Swing Design

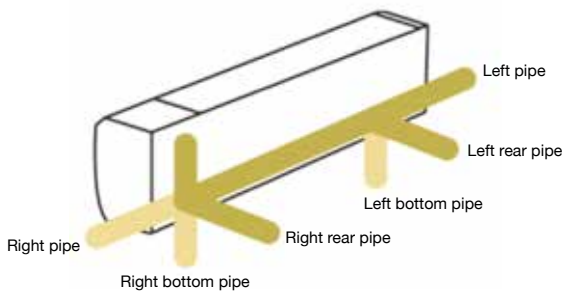
Guide blades can automatically swing up and down to achieve the good air supply status. The peak air supply mode can also be set by remote control to supply comfortable air everywhere in the room.

Super Silent Design

The low-noise motor enables the unit to run stably. The silent tubular fans give you a silent environment.

Simple and Flexible Installation

The unit can be easily installed with built-in electronic expansion valves. The connection direction of refrigerant pipes can be flexibly selected as actually required.



Long Acting Filter Screen Of Standard

The unit is configured with the long acting filter screen to maintain the good air quality indoors; all the maintenance operations can be performed in the front, and the horizontal baffle can be removed and cleaned easily.

AVR Wall Mounted A5VWM-V Series

SPECIFICATIONS

Model			A5VWM022W	A5VWM028W	A5VWM036W	A5VWM045W	A5VWM056W	A5VWM071W
Nominal	Cooling Capacity	BTU/h	7,500	9,600	12,300	15,400	19,100	24,200
		kW	2.20	2.80	3.60	4.50	5.60	7.10
	Input Power	kW	0.033	0.033	0.034	0.034	0.035	0.055
	Operating Current	A	0.16	0.16	0.17	0.17	0.17	0.26
Control	Operation		WIRELESS CONTROLLER (WIRED: OPTIONAL)					
	Air Discharge		AUTOMATIC LOUVER (UP AND DOWN)					
Power Source		V/Ph/Hz	220 ~ 240V/~/50Hz					
Refrigerant Control			BUILT - IN ELECTRONIC EXPANSION VALVE					
Air Flow Rate	Low	m^3/h / CFM	310 / 182	320 / 188	400 / 235	450 / 265	520 / 306	720 / 424
	Medium	m^3/h / CFM	380 / 224	400 / 235	470 / 277	500 / 294	680 / 400	840 / 494
	High	m^3/h / CFM	450 / 265	480 / 283	540 / 318	600 / 353	800 / 471	920 / 541
Sound Pressure Level		dB(A)	30 / 33 / 35		31 / 34 / 37	33 / 36 / 40	35 / 39 / 43	41 / 44 / 46
Unit Dimension	Height	mm(in)	282 (11.1)				304 (11.97)	
	Width	mm(in)	900 (35.43)				1,080 (42.52)	
	Depth	mm(in)	205 (8.07)				221 (8.7)	
Unit Weight		kg / lb	12 / 26				16 / 35	
Drainage Pipe Size		mm(in)	20 (4/5")					
Piping	Discharge	mm(in)	6.35 (1/4")					9.52 (3/8")
	Suction	mm(in)	9.52 (3/8")		12.7 (1/2")			15.88 (5/8")

Notes:
1. Nominal cooling capacity are based on the conditions below:

Cooling	
Indoor	27°C DB / 19° C WB
Outdoor	35°C DB / 24° C WB

2. Sound pressure level is measured in a semi-anechoic chamber. Actual noise level might be higher due to external influence.
3. All specifications are subjected to change by the manufacturer without prior notice.

Ceiling Cassette IDU A5VCK-V

Milky White Panel and Streamlined Design

This IDU adopts the milky white panel and streamlined design to guarantee that the ceiling around the unit is clean.

Fresh Air Design

The standard configuration of the unit provides the long acting dust filter screen. Meanwhile, the fresh activated-carbon filter assembly is optional to filter dust particles from the air efficiently and remove the peculiar smell and odor. The filter screen can be removed and cleaned conveniently to keep the indoor air clean.

*Booster fan is required for fresh air specification. Please contact us for more information.

Wider Air Supply Range For More Even

The brand-new surrounding air supply design can greatly expand the air supply range and supply soft air everywhere in the room.

Air outlet size of the original model

Air outlet size of the optimized model

Smooth Drainage

The standard unit is configured with the condensate water lifting pump with the head being 700 mm to facilitate setting of drain pipes greatly.

Note: The 1200 mm condensate water pump is optional.

Introduction of Fresh Air

The unit is configured with a reserved fresh air inlet hole to introduce outdoor fresh air to the room and ensure a natural environment for the user.

AVR Ceiling Cassette A5VCK-V Series

SPECIFICATIONS

Model			A5VCK028V	A5VCK032V	A5VCK036V	A5VCK040V	A5VCK045V	A5VCK050V	A5VCK056V
Nominal	Cooling Capacity	BTU/h	9,600	10,900	12,300	13,600	15,400	17,100	19,100
		kW	2.80	3.20	3.60	4.00	4.50	5.00	5.60
	Input Power	kW	0.055			0.072		0.092	
	Operating Current	A	0.27			0.33		0.42	
Control	Operation		WIRELESS CONTROLLER (WIRED: OPTIONAL)						
	Air Discharge		AUTOMATIC LOUVER (UP AND DOWN)						
Power Source		V/Ph/Hz	220 ~ 240V/~/50Hz						
Refrigerant Control			BUILT - IN ELECTRONIC EXPANSION VALVE						
Air Flow Rate	Low	m³/h / CFM	420 / 247	440 / 259		540 / 318		680 / 400	
	Medium	m³/h / CFM	490 / 288	540 / 318		630 / 371		800 / 471	
	High	m³/h / CFM	600 / 353	640 / 377		800 / 471		1,000 / 589	
Sound Pressure Level		dB(A)	26 / 28 / 30	27 / 29 / 31		28 / 31 / 24		33 / 36 / 39	
Unit Dimension (With Panel*)	Height	mm(in)	265(10.43) / 340 (13.39)*						
	Width	mm(in)	893 (35.16) / 990(38.98)*						
	Depth	mm(in)	820 (32.28) / 990(38.98)*						
Packing Dimension	Height	mm(in)	513 (20.20)						
	Width	mm(in)	948 (37.32)						
	Depth	mm(in)	918 (36.14)						
Unit Weight		kg / lb	26 / 57			30 / 66			
Panel Weight		kg / lb	4.4 / 9.7						
Drainage Pipe Size		mm(in)	20.5(4/5")						
Piping	Discharge	mm(in)	6.35(1/4")						
	Suction	mm(in)	9.52(3/8")	12.7(4/8")					

Model			A5VCK063V	A5VCK071V	A5VCK080V	A5VCK090V	A5VCK100V	A5VCK112V	A5VCK125V	A5VCK140V
Nominal	Cooling Capacity	BTU/h	21,500	24,200	27,300	30,700	34,100	38,200	42,700	47,800
		kW	6.30	7.10	8.00	9.00	10.00	11.20	12.50	14.00
	Input Power	kW	0.102		0.142		0.144	0.155	0.171	0.204
	Operating Current	A	0.47		0.82		0.85	0.91	1.05	1.23
Control	Operation		WIRELESS CONTROLLER (WIRED: OPTIONAL)							
	Air Discharge		AUTOMATIC LOUVER (UP AND DOWN)							
Power Source		V/Ph/Hz	220 ~ 240VV/~/50Hz							
Refrigerant Control			BUILT - IN ELECTRONIC EXPANSION VALVE							
Air Flow Rate	Low	m³/h / CFM	810 / 477		880 / 518		920 / 541	1,040 / 612	1,090 / 642	1,230 / 724
	Medium	m³/h / CFM	980 / 577		1,060 / 624		1,160 / 683	1,250 / 736	1,310 / 771	1,480 / 871
	High	m³/h / CFM	1,200 / 706		1,300 / 765		1,360 / 800	1,530 / 901	1,600 / 942	1,800 / 1,059
Sound Pressure Level		dB(A)	40		42	42	43	45	48	50
Unit Dimension (With Panel)	Height	mm(in)	265(10.43) / 340 (13.39)		315(12.4) / 390(15.35)					
	Width	mm(in)	893 (35.16), (990 (38.98))							
	Depth	mm(in)	820 (32.28), (990 (38.98))							
Packing Dimension	Height	mm(in)	513 (20.20)		555 (21.85)					
	Width	mm(in)	948 (37.32)							
	Depth	mm(in)	918 (36.14)							
Unit Weight		kg / lb	31 / 68		35 / 77			36 / 79		
Panel Weight		kg / lb	4.4 / 9.7							
Drainage Pipe Size		mm(in)	20.5 (4/5")							
Piping	Discharge	mm(in)	9.52(3/8")							
	Suction	mm(in)	15.88(5/8")							

Notes:
1. Nominal cooling capacity are based on the conditions below:

Cooling	
Indoor	27°C DB / 19° C WB
Outdoor	35°C DB / 24° C WB

2. Sound pressure level is measured in a semi-anechoic chamber. Actual noise level might be higher due to external influence.
3. All specifications are subjected to change by the manufacturer without prior notice.

Ceiling Mounted IDU A5VCM-V

Beautiful Appearance

The latest design of ultra-thin and beautiful appearance can match various decoration styles, making your decoration more elegant.

Ceiling/Floor Mounting

The unit can be mounted on the ceiling or on the floor, without the need of special decoration. It applies to project reconstruction or the room without a suspended ceiling.

Manual/Automatic Control of Air Supply Direction

Guide blades can automatically swing up and down to achieve good air supply status. You can also manually select an air supply direction.

Easy Maintenance/Control

The delicate remote controller can accurately implement mode setting and fan speed regulation.

Creative Dual Air Outlet Design

The unit supplies air with a wide air supply angle horizontally or from the bottom, making temperature/air distribution more even.

Anti-Mildew And Washable Filter Screen

The filter screen can be cleaned easily and conveniently to keep the indoor air clean.

AVR Ceiling Mounted A5VCM-V Series

SPECIFICATIONS

Model			A5VCM056V	A5VCM071V	A5VCM112V	A5VCM125V
Nominal	Cooling Capacity	BTU/h	19,100	24,200	38,200	42,700
		kW	5.60	7.10	11.20	12.50
	Input Power	kW	0.081	0.116	0.161	
	Operating Current	A	0.4	0.55	0.7	0.7
Control	Operation		WIRELESS CONTROLLER (WIRED: OPTIONAL)			
	Air Discharge		AUTOMATIC LOUVER (UP AND DOWN)			
Power Source		V/Ph/Hz	220 ~ 240V/~/50Hz			
Refrigerant Control			BUILT - IN ELECTRONIC EXPANSION VALVE			
Air Flow Rate	Low	m³/h / CFM	750 / 441	870 / 512	1,200 / 706	1,200 / 706
	Medium	m³/h / CFM	970 / 571	1,100 / 647	1,550 / 912	1,550 / 912
	High	m³/h / CFM	1,100 / 647	1,300 / 765	1,850 / 1,089	1,850 / 1,089
Sound Pressure Level		dB(A)	42 / 45 / 48	43 / 46 / 50	44 / 48 / 52	
Unit Dimension	Height	mm(in)	214 (8.43)	249 (9.80)		
	Width	mm(in)	1,214 (47.80)		1,714 (67.48)	
	Depth	mm(in)	670 (26.38)			
Packing Dimension	Height	mm(in)	291 (11.46)	350 (13.78)		
	Width	mm(in)	1,284 (50.55)	1,360 (53.54)	1,860 (73.23)	
	Depth	mm(in)	735 (28.94)	760 (29.92)		
Unit Weight		kg / lb	39 / 86	44 / 97	64 / 141	
Drainage Pipe Size		mm(in)	20.5 (4/5")			
Piping	Discharge	mm(in)	6.35 (1/4")	9.52 (3/8")		
	Suction	mm(in)	12.7 (1/2")	15.88(5/8")		

Notes:
1. Nominal cooling capacity are based on the conditions below:

Cooling	
Indoor	27°C DB / 19° C WB
Outdoor	35°C DB / 24° C WB

2. Sound pressure level is measured in a semi-anechoic chamber. Actual noise level might be higher due to external influence.
3. All specifications are subjected to change by the manufacturer without prior notice.

Model:
A5VCC022V~
A5VCC071V

Nominal Cooling Capacity:
2.2kW ~ 7.1kW
7,500 BTU/h~
24,200 BTU/h

Standard Ceiling Concealed IDU A5VCC-V

Standard Concealed Design

With a thickness of 199 mm only, the unit can flexibly apply to the narrow and small installation environment, thus creating more comfortable spaces.

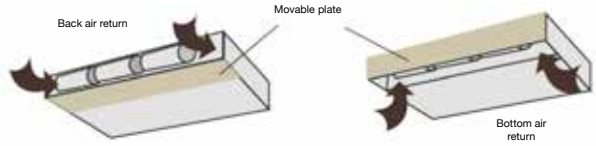
Integrated Design

The unit provides the built-in electronic expansion valve and the condensate water lifting pump with the lift being 700 mm to save more ceiling height and enable smoother drainage.

Note: The 1200 mm condensate water pump is optional.

Flexible Air Return Mode

The standard unit adopts the back air return mode, which can be converted to bottom air return by moving a movable plate on the installation site. The back air return mode is superior to the bottom air return mode in noises.



Note: The noise of bottom air return is about 5 dB(A) higher than that of the back air return mode.

AVR Ceiling Concealed A5VCC-V (Standard) Series

SPECIFICATIONS

Model			A5VCC022V	A5VCC025V	A5VCC028V	A5VCC032V	A5VCC036V	A5VCC040V
Nominal	Cooling Capacity	BTU/h	7,500	8,500	9,600	10,900	12,300	13,600
		kW	2.20	2.50	2.80	3.20	3.60	4.00
	Input Power	kW	0.043	0.047		0.057		0.062
	Operating Current	A	0.2	0.23		0.26		0.29
Control	Operation		WIRED CONTROLLER (WIRELESS: OPTIONAL)					
Power Source		V/Ph/Hz	220 ~ 240V/~/50Hz					
Refrigerant Control			BUILT - IN ELECTRONIC EXPANSION VALVE					
Air Flow Rate	Low	m³/h / CFM	260 / 153	350 / 206				480 / 283
	Medium	m³/h / CFM	350 / 206	480 / 283		500 / 294		600 / 353
	High	m³/h / CFM	430 / 253	600 / 353		630 / 371		730 / 430
External Static Pressure		Pa	10 (0/30)					
		in.wg	0.04 (0/0.12)					
Sound Pressure Level		dB(A)	26 / 27 / 29	25 / 28 / 31		25 / 29 / 32		27 / 30 / 34
Unit Dimension	Height	mm(in)	199 (7.83)					
	Width	mm(in)	900 (35.43)					
	Depth	mm(in)	599 (23.58)					
Packing Dimension	Height	mm(in)	215 (8.46)					
	Width	mm(in)	1,037 (40.83)					
	Depth	mm(in)	650 (25.59)					
Unit Weight		kg / lb	26 / 57			27 / 60		28 / 62
Drainage Pipe Size		mm(in)	20.5 (4/5")					
Piping	Discharge	mm(in)	6.35 (1/4")					
	Suction	mm(in)	9.52 (3/8")			12.7 (1/2")		

Model			A5VCC045V	A5VCC050V	A5VCC056V	A5VCC063V	A5VCC071V
Nominal	Cooling Capacity	BTU/h	15,400	17,100	19,100	21,500	24,200
		kW	4.50	5.00	5.60	6.30	7.10
	Input Power	kW	0.062	0.096		0.098	0.138
	Operating Current	A	0.29	0.44		0.45	0.63
Control	Operation		WIRELESS CONTROLLER (WIRED: OPTIONAL)				
Power Source		V/Ph/Hz	220 ~ 240V/~/50Hz				
Refrigerant Control			BUILT - IN ELECTRONIC EXPANSION VALVE				
Air Flow Rate	Low	m³/h / CFM	480 / 283	600 / 353		550 / 324	830 / 489
	Medium	m³/h / CFM	600 / 353	750 / 441		800 / 471	980 / 577
	High	m³/h / CFM	730 / 430	900 / 530		1,050 / 618	1,200 / 706
External Static Pressure		Pa	10 (0/30)				
		in.wg	0.04 (0/0.12)				
Sound Pressure Level		dB(A)	27 / 30 / 34	32 / 35 / 37	32 / 35 / 37	28 / 33 / 37	35 / 37 / 40
Unit Dimension	Height	mm(in)	199 (7.83)				
	Width	mm(in)	900 (35.43)			1,100 (43.31)	
	Depth	mm(in)	599 (23.58)				
Packing Dimension	Height	mm(in)	215 (8.46)				
	Width	mm(in)	1,037 (40.83)			1,237 (48.7)	
	Depth	mm(in)	650 (25.59)				
Unit Weight		kg / lb	28 / 62			33 / 73	
Drainage Pipe Size		mm(in)	20.5 (4/5")				
Piping	Discharge	mm(in)	6.35 (1/4")			9.52 (3/8")	
	Suction	mm(in)	12.7 (1/2")			15.88(5/8")	

Notes:
1. Nominal cooling capacity are based on the conditions below:

Cooling	
Indoor	27°C DB / 19° C WB
Outdoor	35°C DB / 24° C WB

2. Sound pressure level is measured in a semi-anechoic chamber. Actual noise level might be higher due to external influence.
3. Unit in parentheses is available external static pressure. Please contact us for more details.
4. All specifications are subjected to change by the manufacturer without prior notice.

Model:
A5VCC080V~
A5VCC160V

Nominal Cooling Capacity:
8.0kW ~ 16.0kW
27,300BTU/h~
54,600BTU/h

Compact Ceiling Concealed IDU A5VCC-V

Silence and Low Noise

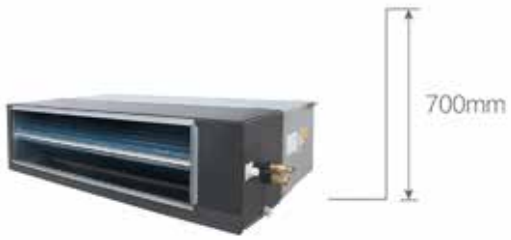
The IDU adopts the centrifugal double-suction fan featuring high-efficiency wide-impeller and forward-curved multi-blade to implement low speed, large air volume and low noise.

Onsite Regulation For Multiple Static

The IDU is configured with multiple external static pressures such as 15/30/50Pa based on cooling capacity to flexibly set air ducts at different air supply distances. Static pressures can be converted by changing motor wire connection to easily meet air supply requirements in different situations.

High-Lift Condensate Water Lifting Pump As Option

The unit can be configured with the condensate water lifting pump with a high lift to facilitate field installation and effectively drain off the condensate water from the air conditioning system.



Note: The 1200mm condensate water pump is optional.

AVR Ceiling Concealed A5VCC-V (Compact) Series

SPECIFICATIONS

Model			A5VCC080V	A5VCC090V	A5VCC100V	A5VCC112V	A5VCC125V	A5VCC140V	A5VCC160V
Nominal	Cooling Capacity	BTU/h	27,300	30,700	34,100	38,200	42,700	47,800	54,600
		kW	8.00	9.00	10.00	11.20	12.50	14.00	16.00
	Input Power	kW	0.184	0.235	0.295	0.295	0.322	0.39	0.41
	Operating Current	A	0.86	1.13	1.4	1.4	1.55	1.85	1.95
Control	Operation		WIRED CONTROLLER (WIRELESS: OPTIONAL)						
Power Source		V/Ph/Hz	220 ~ 240V/~/50Hz						
Refrigerant Control			BUILT - IN ELECTRONIC EXPANSION VALVE						
Air Flow Rate	Low	m³/h / CFM	840 / 494	980 / 577	1,100 / 647	1,130 / 665	1,290 / 759	1,520 / 895	1,540 / 906
	Medium	m³/h / CFM	950 / 559	1,200 / 706	1,370 / 806	1,380 / 812	1,530 / 901	1,830 / 1,077	1,900 / 1,118
	High	m³/h / CFM	1,200 / 706	1,400 / 824	1,680 / 989	1,700 / 1,001	1,900 / 1,118	2,200 / 1,295	2,300 / 1,354
External Static Pressure		Pa	50 (30/80)						
		in.wg	0.2 (0.12/0.32)						
Sound Pressure Level		dB(A)	36 / 37 / 40	38 / 40 / 41	41 / 40 / 38	42 / 38 / 36	43 / 40 / 38	45 / 44 / 40	45 / 44 / 41
Unit Dimension	Height	mm(in)	300 (11.81)						
	Width	mm(in)	1,150 (45.28)			1,450 (57.09)			
	Depth	mm(in)	600 (23.62)						
Packing Dimension	Height	mm(in)	320 (12.6)						
	Width	mm(in)	1,320 (51.97)			1,620 (63.78)			
	Depth	mm(in)	670 (23.38)						
Unit Weight		kg / lb	38 / 84			48 / 106			
Drainage Pipe Size		mm(in)	19.05 (R3/4)						
Piping	Discharge	mm(in)	9.52 (3/8")						
	Suction	mm(in)	15.88(5/8")						

Notes:
1. Nominal cooling capacity are based on the conditions below:

Cooling	
Indoor	27°C DB / 19° C WB
Outdoor	35°C DB / 24° C WB

2. Sound pressure level is measured in a semi-anechoic chamber. Actual noise level might be higher due to external influence.
3. Unit in parentheses is available external static pressure. Please contact us for more details.
4. All specifications are subjected to change by the manufacturer without prior notice.

High Static Ducted Blower IDU A5VDB-V

Particular Design

The air outlet flange is close to the bottom of the unit, which facilitates pipeline connection and decreases the requirement for room height.

Slim Design

With the ultra-thin body design, the unit can be mounted on the ceiling to save the construction space and cost.

Elegant Decoration

The IDU and air duct are installed inside the ceiling like the large-scale central air conditioning system. After installation, the air outlets are well integrated with the indoor decoration.

Comfortable Air Supply

The unit supplies cold to each area through air ducts. The air outlet can flexibly adopt side air supply or bottom air supply according to actual situations to supply even and comfortable air flow.

Free Placement Of Air Ducts

With the standard high static pressure of air supply, air ducts can be made more flexibly to match various air outlets and meet requirements in different types of rooms.

L-shaped room U-shaped room Narrow and long room

AVR Ducted Blower DB-V Series

SPECIFICATIONS

Model			A5VDB125V	A5VDB140V	A5VDB224V	A5VDB280V
Nominal	Cooling Capacity	BTU/h	42,700	47,800	76,400	95,500
		kW	12.50	14.00	22.40	28.00
	Input Power	kW	0.481	0.620	0.910	1.020
	Operating Current	A	2.1	2.5	2.08	2.25
Control	Operation		WIRED CONTROLLER / WIRELESS CONTROLLER			
Power Source		V/Ph/Hz	220 ~ 240V/~/50Hz		380 - 415V/3N/50Hz	
Refrigerant Control			BUILT - IN ELECTRONIC EXPANSION VALVE			
Air Flow Rate	Low	m³/h / CFM	1,564 / 921	1,870 / 1,100	N/A	N/A
	Medium	m³/h / CFM	1,886 / 1,110	2,255 / 1,327	N/A	N/A
	High	m³/h / CFM	2,300 / 1,354	2,750 / 1,619	4,100 / 2,413	4,320 / 2,543
External Static Pressure		Pa	100 (0.4)		200 (0.8)	
Sound Pressure Level		dB(A)	42 / 44 / 46	46 / 48 / 50	54	57
Unit Dimension	Height	mm(in)	350 (13.78)		515 (20.28)	
	Width	mm(in)	1,227 (48.31)	1,427 (56.18)	1,760 (29.29)	
	Depth	mm(in)	830 (32.68)		958 (37.72)	
Packing Dimension	Height	mm(in)	520 (20.47)		670 (26.38)	
	Width	mm(in)	1,380 (54.33)		1,845 (72.64)	
	Depth	mm(in)	950 (37.40)		1,005 (39.57)	
Unit Weight		kg / lb	60 (132)	69 (152)	131 (289)	133 (293)
Drainage Pipe Size		mm(in)	19.05 (R3/4)		25.4 (R1)	
Piping	Discharge	mm(in)	9.52 (3/8")			12.7 (1/2")
	Suction	mm(in)	15.88 (5/8")		22.23 (7/8")	

Notes:
1. Nominal cooling capacity are based on the conditions below:

Cooling	
Indoor	27°C DB / 19° C WB
Outdoor	35°C DB / 24° C WB

2. Sound pressure level is measured in a semi-anechoic chamber. Actual noise level might be higher due to external influence.
3. Unit in parentheses is available external static pressure. Please contact us for more details.
4. All specifications are subjected to change by the manufacturer without prior notice.

Introducing Outdoor Fresh Air To Ensure Fresh And Natural Air Indoors

Along with rapid economic development, people's requirements for the life quality also increase day by day. In addition to the indoor cooling demands, they strongly appeal for good indoor air quality. However, since the building concentration is becoming denser, the problems like the indoor air quality have become increasingly prominent. Therefore, people hope to improve the indoor air quality constantly by introducing fresh air and ensure fresh air indoors.

Fresh air system solution 1: Fresh Air Ducted Blower

Acson A5VDBX-V all fresh air handling unit can introduce 100% outdoor fresh air. It can improve the indoor air quality efficiently and bring fresh and natural enjoyment to your life. The maximum air flow of Acson all fresh air handling unit reaches 6000 m3/h and the maximum external static pressure reaches 300 Pa, so it can deal with more large space sites easily.

Shopping Mall

Large Meeting Room

Large Exhibition Hall

Meeting The Indoor Fresh Air Requirement

The A5VDBX-V all fresh air handling unit adopt the new design to satisfy the indoor fresh air demand. With the air flow in the range of 1100 to 6000 m3/h, static pressure in the range of 150 to 300 Pa and the cooling capacity in the range of 14 to 58 kW, it can deal with various occasions ideally, meet different fresh air flow requirements, and make you enjoy outdoor fresh air without leaving the room.

Energy Saving Operation and Wide Applicable Environments

The standard type is in the operating range of -5 to 46 , and the unit also has the automatic control function. Under the condition of ensuring the indoor fresh air demand and stable air supply humidity, the operating mode is switched automatically according to the outdoor ambient temperature.

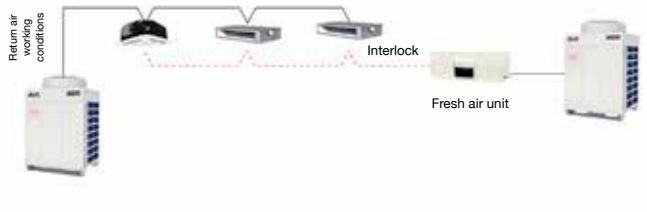
The Super-Long Connecting Pipe Design Applies To Various Installation Conditions

The fresh air system can implement the 150 m long connecting pipe and 50 m high drop design to facilitate the IDU and ODU design and installation.

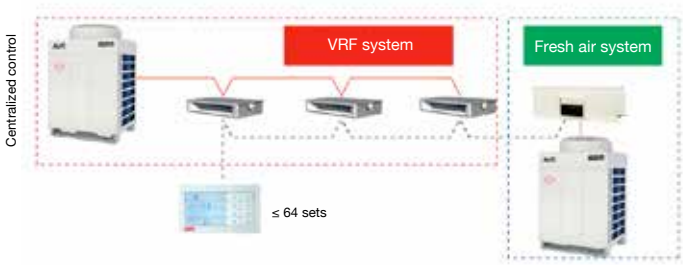
Interlock Control/Control by Area To Make Operation More Intelligent

The fresh air unit can implement interlock control with the IDU and realize tacit coordination between systems. When the air conditioning system starts, the fresh air unit is interlocked and started automatically.

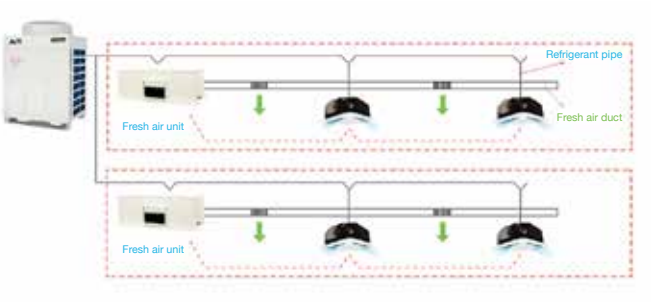
Interlock control



Besides, the fresh air unit can implement multiple control modes such as centralized control and building automation.



Fresh air units implement automatic control by area. They are connected to the system in a mixed way and can be distributed on different floors to introduce outdoor fresh air by floor. When the IDU of one floor starts, the fresh air unit on the corresponding floor will be interlocked and started automatically, making interlock control easier.

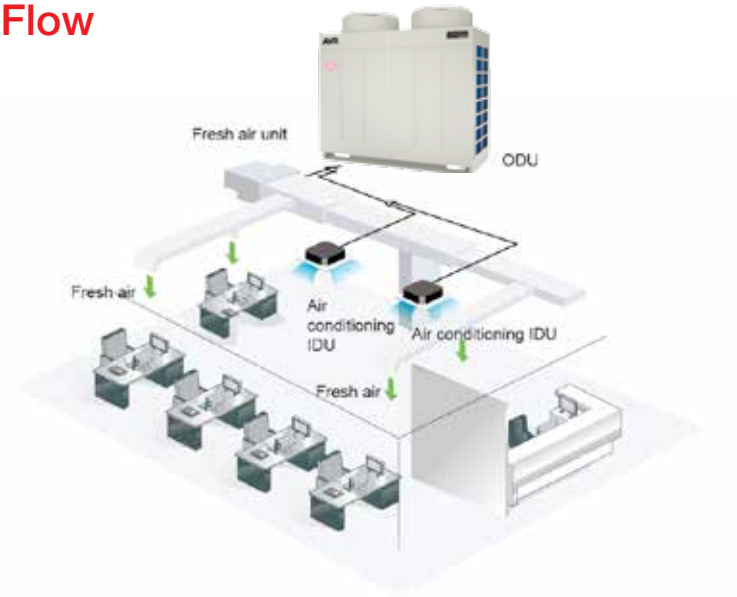


IDU and fresh air unit interlocked and started automatically

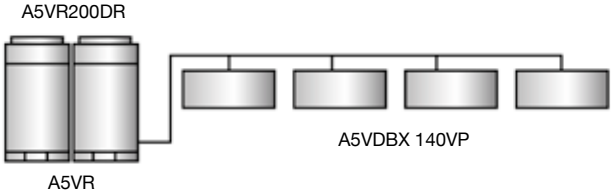
Fresh Air Indoor Unit of Small Air Flow (1100 to 2100 m³/h)

Acson Fresh Air Unit of Small Air Flow

Multiple fresh air units of small air flow can be connected to the same ODU at the same time to meet the fresh air handling demand of multiple areas.



One-to-many Connection Diagram



Use Conditions

One EcoPlus module can be connected to multiple fresh air units. However, the total capacity of the fresh air unit must be within 50% ~ 100% of the outdoor unit.

AVR Fresh Air Ducted Blower A5VDBX-V Series

SPECIFICATIONS

Model	Indoor		A5VDBX140V		A5VDBX224V		A5VDBX280V		
	Outdoor		A5VR050DRM(3)		A5VR080DR		A5VR100DR		
Nominal	Cooling Capacity	BTU/h	47,800		76,400		95,500		
		kW	14.00		22.40		28.00		
	Input Power	kW	0.230	0.270	0.380	0.450	0.680	0.700	0.720
	Operating Current	A	1.10	1.30	1.80	2.10	3.20	3.30	3.40
Control	Operation		WIRED CONTROLLER (WIRELESS: OPTIONAL)						
Power Source		V/Ph/Hz	220 ~ 240V/~/50Hz						
Refrigerant Control			BUILT - IN ELECTRONIC EXPANSION VALVE						
Air Flow Rate	High	m³/h / CFM	1,100 / 647		1,680 / 989		2,100 / 1,236		
External Static Pressure		Pa(in)	150 (0.6)	200 (0.8)	150 (0.6)	220 (0.88)	150 (0.6)	220 (0.88)	300 (1.2)
Sound Pressure Level		dB(A)	44	46	47	48	51	51	51
Unit Dimension	Height	mm(in)	460 (18.11)		510 (20.09)		460 (18.11)		
	Width	mm(in)	1,040 (40.94)		1,380 (54.33)				
	Depth	mm(in)	1,130 (44.49)		1,090 (42.91)				
Packing Dimension	Height	mm(in)	610 (24.02)		660 (25.98)				
	Width	mm(in)	1,110 (43.7)		1,570 (61.81)				
	Depth	mm(in)	1,200 (47.24		1,150 (45.28)				
Unit Weight		kg / lb	62 / 137		100 / 220		104 / 229		
Drainage Pipe Size		mm(in)	25.4 (R1)						
Piping	Discharge	mm(in)	9.52 (3/8")				12.7 (1/2")		
	Suction	mm(in)	15.88(5/8")		22.23 (7/8")				

Model	Indoor		A5VDBX335V			A5VDBX450V		A5VDBX560V		A5VDBX580V	
	Outdoor		A5VR120DR			A5VR160DR		A5VR180DR		A5VR200DR	
Nominal	Cooling Capacity	BTU/h	114,300			153,500		191,100		197,900	
		kW	33.50			45.00		56.00		58.00	
	Input Power	kW	1.030	1.060	1.150	0.820	1.150	1.200	1.500	1.500	1.800
	Operating Current	A	4.89	5.09	5.40	2.00	2.40	2.80	3.20	3.20	3.70
Control	Operation		WIRED CONTROLLER (WIRELESS: OPTIONAL)								
Power Source		V/Ph/Hz	220 ~ 240V/~/ 50Hz			380 - 415V / 3 / 50Hz					
Refrigerant Control			BUILT - IN ELECTRONIC EXPANSION VALVE								
Air Flow Rate	High	m³/h / CFM	3,000 / 1,766			4,000 / 2,354		5,000 / 2,943		6,000 / 3,531	
External Static Pressure		Pa(in)	150 (0.6)	200 (0.8)	300 (1.2)	200 (0.8)	300 (1.2)	200 (0.8)	300 (1.2)	200 (0.8)	300 (1.2)
Sound Pressure Level		dB(A)	55	55	55	55	58	58	59	59	59
Unit Dimension	Height	mm(in)	460 (18.11)			520 (20.47)					
	Width	mm(in)	1,380 (54.33)			1,580 (62.2)					
	Depth	mm(in)	1,090 (42.91)			1,020 (40.16)					
Packing Dimension	Height	mm(in)	660 (25.98)			690 (27.17)					
	Width	mm(in)	1,570 (61.81)			1,800 (70.87)					
	Depth	mm(in)	1,150 (45.28)			1,080 (42.52)					
Unit Weight		kg / lb	120 / 265			150 / 331					
Drainage Pipe Size		mm(in)	25.4 (R1)								
Piping	Discharge	mm(in)	12.7 (1/2")					15.88 (5/8")		15.88 (5/8")	
	Suction	mm(in)	22.23 (7/8")			28.6 (1 - 1/8")				28.6 (1 - 1/8")	

Notes:
1. Nominal cooling capacity are based on the conditions below:

Cooling	
Indoor	27°C DB / 19° C WB
Outdoor	35°C DB / 24° C WB

2. Sound pressure level is measured in a semi-anechoic chamber. Actual noise level might be higher due to external influence.
3. Should the application require one to one or one to many coupling. The fresh air unit need to be A5DBX140/224/280V.
4. Should the system require both fresh air and normal indoor unit (Mixed System). The IDU total cooling capacity must be 50% ~ 100% of the ODU total cooling capacity.
5. The fresh air unit for mixed system cooling capacity must not exceed 30% of the ODU cooling capacity.
6. All specifications are subjected to change by the manufacturer without prior notice.

Outdoor Unit Line-up

A5VR DRM Carefree Series

SPECIFICATIONS

Model			A5VR 030DRM	A5VR 035DRM	A5VR 040DRM	A5VR 050DRM	A5VR 050DRM(3)	A5VR 060DRM	A5VR 060DRM(3)	A5VR 065DRM	A5VR 070DRM	A5VR 080DRM
Cooling Capacity		kW	8.00	10.00	11.20	14.00	14.00	15.50	16.00	18.00	20.00	22.40
		BTU/H	27,300	34,100	38,200	47,800	47,800	52,900	54,600	61,400	68,200	76,400
Nominal Input Power		kW	2.34	3.12	3.20	4.24	3.70	4.69	4.40	5.29	5.40	6.59
Nominal Operating Current		A	11.90	15.20	15.30	20.30	7.40	23.00	8.00	27.00	9.60	11.90
Efficiency	COP	W/W	3.42	3.21	3.50	3.30	3.78	3.30	3.64	3.40	3.70	3.40
Integrated Part Load Value			4.75	4.7	4.45	4.75	4.55	4.75	4.85	4.75	4.8	4.8
Power Source		V/Ph/Hz	220 ~ 240V/~/ 50Hz				380 ~ 415V/ 3 / 50Hz	220 ~ 240V/ ~/ 50Hz	380 ~ 415V/ 3 / 50Hz	220 ~ 240V/ ~/ 50Hz	380 ~ 415V/ 3 / 50Hz	
Air Flow Rate		m^3/h / CFM	3,200/ 1,883	3,400/ 2,001	5,500/ 3,237	6,500 / 3,826					8,200 / 4,826	
Noise		dB(A)	54	55	55	57	57	59		59	62	
Unit Dimension	Height	mm(in)	782 (30.79)		1,222 (48.11)					1,354 (53.31)		
	Width	mm(in)	900 (35.43)									
	Depth	mm(in)	320 (12.6)									
Packing Dimension	Height	mm(in)	942 (37.09)		1,382 (54.41)					1,514 (59.61)		
	Width	mm(in)	950 (37.40)									
	Depth	mm(in)	440 (17.32)									
Unit Weight		kg / lb	71 / 157	76 / 168	102 / 225	110 / 243	107 / 236	110 / 243	107 / 236	120 / 265	128 / 282	
Maximum Indoor Unit		pcs	5	6	6	8		9		11	11	13
Refrigerant	Type		R410A									
	Charge	kg / lb	3.5	3.9	4.5	4.5	3.5	4.7	3.7	5.9	5.2	5.95
Connection Pipe	Discharge	mm(in)	9.52(3/8")									
	Suction	mm(in)	15.88(5/8")							19.05(3/4")		

Notes:
1. Nominal cooling capacity are based on the conditions below:

Cooling		
Indoor	27°C DB / 19° C WB	
Outdoor	35°C DB / 24° C WB	
Pipe	Length	5m
	Height	0m (On Ground)

2. Sound pressure level is measured in a semi-anechoic chamber. Actual noise level might be higher due to external influence.
3. All specifications are subjected to change by the manufacturer without prior notice.

A5VR DR EcoPlus Series

SPECIFICATIONS

Model			A5VR080DR	A5VR100DR	A5VR120DR	A5VR140DR	A5VR160DR	A5VR180DR	A5VR200DR	A5VR220DR	A5VR240DR
Cooling Capacity		kW	24.50	28.00	33.60	40.00	45.00	50.40	56.00	61.60	68.00
		BTU/h	83,600	95,500	114,600	136,500	153,500	172,000	191,100	210,200	232,000
Nominal Input Power		kW	6.00	7.36	8.84	10.52	12.50	14.70	15.20	16.62	20.00
Nominal Operating Current		A	12.2	14.3	15.4	18.3	21.8	26.4	27.5	30.4	35.2
Efficiency	COP	W/W	4.08	3.80	3.80	3.80	3.60	3.43	3.68	3.71	3.40
Integrated Part Load Value			7.2	7.0	6.8	6.5	6.3	6.0	6.6	6.3	6.0
Power Source		V/Ph/Hz	380 ~ 415V/3N~/50Hz								
Air Flow Rate		m³/h / CFM	13,000 / 7,652	14,500 / 8,534					24,800 / 14,597		
Noise		dB(A)	58	59	60		61		62		
Unit Dimension (Individual)	Height	mm(in)	1,515 (59.65)		1,780 (70.78)						
	Width	mm(in)	990 (38.98)			1,350 (53.15)			1,990 (78.35)		
	Depth	mm(in)	840 (33.07)								
Packing Dimension (Individual)	Height	mm(in)	1,700 (66.93)		1,970 (77.56)						
	Width	mm(in)	1,080 (42.52)			1,440 (56.69)			2,090 (82.28)		
	Depth	mm(in)	890 (35.04)								
Unit Weight		kg / lb	181 / 399	182 / 401	213 / 470	290 / 639	314 / 692	320 / 705	448 / 988	473 / 1,043	480 / 1,058
Maximum Indoor Unit		pcs	13	16		20	20	24		28	
Refrigerant	Type		R410A								
	Charge	kg / lb	7.3 / 16.09	8.4 / 18.52	9.6 / 21.16	11.4 / 25.13	13.9 / 30.64	14.6 / 32.19	16.5 / 36.38	20.2 / 44.53	23.4 / 51.59
Connection Pipe	Discharge	mm(in)	9.52(3/8")	12.7 (1/2")					15.88(5/8")		
	Suction	mm(in)	22.23(7/8")			28.6(9/8")					

Model			A5VR260DR	A5VR280DR	A5VR300DR	A5VR320DR	A5VR340DR	A5VR360DR	A5VR380DR2	A5VR380DR3	A5VR400DR2
Combination			A5VR120DR	A5VR120DR	A5VR140DR	A5VR160DR	A5VR160DR	A5VR180DR	A5VR160DR	A5VR120DR	A5VR160DR
			A5VR140DR	A5VR160DR	A5VR160DR	A5VR160DR	A5VR180DR	A5VR180DR	A5VR220DR	A5VR120DR	A5VR240DR
										A5VR140DR	
Cooling Capacity		kW	73.60	78.60	85.00	90.00	95.40	100.80	106.60	107.20	113.00
		BTU/h	251,100	268,200	290,000	307,100	325,500	343,900	363,700	365,800	385,600
Nominal Input Power		kW	19.36	21.34	23.02	25.00	27.20	29.40	29.12	28.20	32.50
Nominal Operating Current		A	33.7	37.2	40.1	43.6	48.2	52.8	52.2	49.1	57.0
Efficiency	COP	W/W	3.80	3.68	3.69	3.60	3.51	3.43	3.66	3.80	3.48
Integrated Part Load Value			6.8 + 6.5	6.8 + 6.3	6.5 + 6.3	6.3 + 6.3	6.3 + 6	6 + 6	6.3 + 6.3	6.8 + 6.8 + 6.5	6.3 + 6
Power Source		V/Ph/Hz	380 ~ 415V/3N~/50Hz								
Air Flow Rate		m³/h / CFM	29,000 / 17,069						39,300 / 23,131	43,500 / 25,603	39,300 / 23,131
Noise		dB(A)	64	64	64	64	65	65	65	65	66
Unit Dimension (Individual)	Height	mm(in)	1,780 (70.78) x 2							1,780 (70.78) x 3	1,780 (70.78) x 2
	Width	mm(in)	990 (38.98) + 1,350 (53.15)		1,350 (53.15) x 2				1,350 (53.15) + 1,990 (78.35)	990 (38.98) x 2 + 1,350 (53.15)	1,350 (53.15) + 1,990 (78.35)
	Depth	mm(in)	840 (33.07) x 2							840 (33.07) x 3	840 (33.07) x 2
Packing Dimension (Individual)	Height	mm(in)	1,970 (77.56) x 2							1,970 (77.56) x 3	1,970 (77.56) x 2
	Width	mm(in)	1,080 (42.52) + 1,440 (56.69)		1,440 (56.69) x 2				1,440 (56.69) + 2,090 (82.28)	1,080 (42.52) + 1,440 (56.69) x 2	1,440 (56.69) + 2,090 (82.28)
	Depth	mm(in)	890 (35.04) x 2							890 (35.04) x 3	890 (35.04) x 2
Unit Weight		kg / lb	503 / 1,109	527 / 1,162	604 / 1,332	628 / 1,385	634 / 1,398	640 / 1,411	787 / 1,735	716 / 1,579	794 / 1,750
Maximum Indoor Unit		pcs	32		36		40		44		
Refrigerant	Type		R410A								
	Charge	kg / lb	21 / 46.30	23.5 / 51.81	25.3 / 55.78	27.8 / 61.29	28.5 / 62.83	29.2 / 64.37	34.1 / 75.18	30.6 / 67.46	37.3 / 82.23
Connection Pipe	Discharge	mm(in)	19.05 (3/4")								
	Suction	mm(in)	34.9 (1 - 3/8")					41.3 (1 - 5/8")			

A5VR DR EcoPlus Series

SPECIFICATIONS

Model			A5VR400DR3	A5VR420DR	A5VR440DR	A5VR460DR	A5VR480DR	A5VR500DR	A5VR520DR	A5VR540DR
Combination			A5VR120DR	A5VR120DR	A5VR140DR	A5VR140DR	A5VR160DR	A5VR160DR	A5VR160DR	A5VR180DR
			A5VR120DR	A5VR140DR	A5VR140DR	A5VR160DR	A5VR160DR	A5VR160DR	A5VR180DR	A5VR180DR
			A5VR160DR	A5VR 160DR	A5VR 160DR	A5VR160DR	A5VR160DR	A5VR180DR	A5VR180DR	A5VR180DR
Cooling Capacity		kW	112.20	118.60	125.00	130.00	135.00	140.40	145.80	151.20
		BTU/h	382,800	404,700	426,500	443,600	460,600	479,000	497,500	515,900
Nominal Input Power		kW	30.18	31.86	33.54	35.52	37.50	39.70	41.90	44.10
Nominal Operating Current		A	52.6	55.5	58.4	61.9	65.4	70.0	74.6	79.2
Efficiency	COP	W/W	3.72	3.72	3.73	3.66	3.60	3.54	3.48	3.43
Integrated Part Load Value			6.8 + 6.8 + 6.3	6.8 + 6.5 + 6.3	6.5 + 6.5 + 6.3	6.5 + 6.3 + 6.3	6.3 + 6.3 + 6.3	6.3 + 6.3 + 6	6.3 + 6 + 6	6 + 6 + 6
Power Source		V/Ph/Hz	380 ~ 415V/3N~/50Hz							
Air Flow Rate		m^3/h / CFM	43,500 / 25,603							
Noise		dB(A)	66			67				
Unit Dimension (Individual)	Height	mm(in)	1,780 (70.78) x 3							
	Width	mm(in)	990 (38.98) x 2 + 1,350 (53.15)	990 (38.98) + 1,350 (53.15) x 2	1,350 (53.15) x 3					
	Depth	mm(in)	840 (33.07) x 3							
Packing Dimension (Individual)	Height	mm(in)	1,970 (77.56) x 3							
	Width	mm(in)	1,080 (42.52) x 2 + 1,440 (56.69)	1,080 (42.52) + 1,440 (56.69) x 2	1,440 (56.69) x 3					
	Depth	mm(in)	890 (35.04) x 3							
Unit Weight		kg / lb	740 / 1,631	817 / 1,801	894 / 1,971	918 / 2,024	942 / 2,077	948 / 2,090	954 / 2,103	960 / 2,116
Maximum Indoor Unit		pcs	44	48		52		54		56
Refrigerant	Type		R410A							
	Charge	kg / lb	33.1 / 72.97	34.9 / 76.94	36.7 / 80.91	39.2 / 86.42	41.7 / 91.93	42.4 / 93.48	43.1 / 95.01	43.8 / 96.56
Connection Pipe	Discharge	mm(in)	19.05 (3/4")							
	Suction	mm(in)	41.3 (1 - 5/8")							

Notes:
1. Nominal cooling capacity are based on the conditions below:

Cooling		
Indoor	27°C DB / 19° C WB	
Outdoor	35°C DB / 24° C WB	
Pipe	Length	5m
	Height	0m (On Ground)

2. Sound pressure level is measured in a semi-anechoic chamber.
   Actual noise level might be higher due to external influence.
3. All unit are being tested and comply to GB/T 18837-2015.
4. Multiple module installation will require additional accessory.
5. All specifications are subjected to change by the manufacturer without prior notice.

A5VRY ER EcoPro Series

SPECIFICATIONS

Model			A5VRY080ER	A5VRY100ER	A5VRY120ER	A5VRY140ER	A5VRY160ER	A5VRY180ER	A5VRY200ER	A5VRY220ER	A5VRY240ER
Cooling Capacity		kW	25.00	28.00	33.60	40.00	45.00	50.50	56.00	61.60	68.00
		BTU/Hr	85,300	95,500	114,600	136,500	153,500	172,300	191,100	210,200	232,000
Nominal Input Power		kW	5.66	6.48	8.85	10.25	11.85	14.75	15.28	17.43	19.52
Nominal Operating Current		A	10.7	12.8	15.9	18.3	21.8	26.2	27.5	29.3	33.3
Efficiency	COP	W/W	4.42	4.32	3.8	3.9	3.8	3.42	3.66	3.53	3.48
Integrated Part Load Value			8.75	7.80	7.35	8.15	7.80	7.50	7.90	7.60	7.40
Power Source		V/Ph/Hz	380 ~ 415V/3N~/50Hz								
Air Flow Rate		m³/h / CFM	14,500 / 8,534						24,800 / 14,597		
Noise		dB(A)	58	59	60		61		62		
Unit Dimension (Individual)	Height	mm(in)	1,780 (70.78)								
	Width	mm(in)	990 (38.98)		1,350 (53.15)				1,990 (78.35)		
	Depth	mm(in)	840 (33.07)								
Packing Dimension (Individual)	Height	mm(in)	1,970 (77.56)								
	Width	mm(in)	1,080 (42.52)		1,440 (56.69)				2,090 (82.28)		
	Depth	mm(in)	890 (35.04)								
Unit Weight		kg / lb	208 / 459	209 / 461	242 / 534	304 / 670	327 / 721	329 / 725	414 / 913	439 / 968	442 / 974
Maximum Indoor Unit		pcs	13	16		20		24		28	
Refrigerant	Type		R410A								
	Charge	kg / lb	8.5 / 18. 74	9.5 / 20.94	10.5 / 23.15	11.5 / 25.35	13.0 / 28.66	14.5 / 31.97	16.5 / 36.38	19.5 / 42.99	22.5 / 49.6
Connection Pipe	Discharge	mm(in)	9.52 (3/8)	12.7 (1/2)					15.88 (5/8)		
	Suction	mm(in)	22.23 (7/8)			28.6 (1-1/8)					

Model			A5VRY260ER	A5VRY280ER	A5VRY300ER	A5VRY320ER	A5VRY340ER	A5VRY360ER	A5VRY380ER	A5VRY400ER
Combination			A5VRY120ER	A5VRY120ER	A5VRY120ER	A5VRY140ER	A5VRY160ER	A5VRY180ER	A5VRY120ER	A5VRY120ER
			A5VRY140ER	A5VRY160ER	A5VRY180ER	A5VRY180ER	A5VRY180ER	A5VRY180ER	A5VRY120ER	A5VRY120ER
									A5VRY140ER	A5VRY160ER
Cooling Capacity		kW	73.60	78.60	84.10	90.50	95.50	101.00	107.20	112.20
		BTU/h	251,100	268,200	286,900	308,800	325,800	344,600	365,800	382,800
Nominal Input Power		kW	19.10	20.70	23.60	25.00	26.60	29.50	27.95	29.55
Nominal Operating Current		A	34.2	37.7	42.1	44.5	48	52.4	50.1	53.6
Efficiency	COP	W/W	3.85	3.8	3.56	3.62	3.59	3.42	3.84	3.8
Integrated Part Load Value			7.35 + 8.15	7.35 + 7.8	7.35 + 7.5	8.15 + 7.5	7.8 + 7.5	7.5 + 7.5	7.35 + 7.35 + 8.15	7.35 + 7.35 + 7.8
Power Source		V/Ph/Hz	380 ~ 415V/3N~/50Hz							
Air Flow Rate		m³/h / CFM	29,000 / 17,069						43,500 / 25,603	
Noise		dB(A)	63			64				65
Unit Dimension (Individual)	Height	mm(in)	1,780 (70.78) x 2						1,780 (70.78) x 3	
	Width	mm(in)	1,350 (53.15) x 2						1,350 (53.15) x 3	
	Depth	mm(in)	840 (33.07) x 2						840 (33.07) x 3	
Packing Dimension (Individual)	Height	mm(in)	1,970 (77.56) x 2						1,970 (77.56) x 3	
	Width	mm(in)	1,440 (56.69) x 2						1,440 (56.69) x 3	
	Depth	mm(in)	890 (35.04) x 2						890 (35.04) x 3	
Unit Weight		kg / lb	546 / 1,204	569 / 1,254	571 / 1,259	633 / 1,396	656 / 1,446	658 / 1,451	788 / 1,737	811 / 1,788
Maximum Indoor Unit		pcs	32		36		40		44	48
Refrigerant	Type		R410A							
	Charge	kg / lb	10.5 + 11.5 / 23.15 + 25.35	10.5 + 13.0 / 23.15 + 28.66	10.5 + 14.5 / 23.15 + 31.97	11.5 + 14.5 / 25.35 + 31.97	13.0 + 14.5 / 28.66 + 31.97	14.5 x 2 / 31.97 x 2	10.5 x 2 + 11.5 / 23.15 x 2 + 25.35	10.5 x 2 + 13.0 / 23.15 x 2 + 28.66
Connection Pipe	Discharge	mm(in)	19.05 (3/4")							
	Suction	mm(in)	31.8 (1-1/4")			34.9 (1-3/8")		38.1 (1-1/2")		

Model			A5VRY420ER	A5VRY440ER	A5VRY460ER	A5VRY480ER	A5VRY500ER	A5VRY520ER	A5VRY540ER	A5VRY560ER
Combination			A5VRY120ER	A5VRY120ER	A5VRY120ER	A5VRY120ER	A5VRY140ER	A5VRY160ER	A5VRY180ER	A5VRY180ER
			A5VRY120ER	A5VRY140ER	A5VRY160ER	A5VRY180ER	A5VRY180ER	A5VRY180ER	A5VRY180ER	A5VRY180ER
			A5VRY180ER	A5VRY180ER	A5VRY180ER	A5VRY180ER	A5VRY180ER	A5VRY180ER	A5VRY180ER	A5VRY200ER
Cooling Capacity		kW	117.70	124.10	129.10	134.60	141.00	146.00	151.50	157.00
		BTU/h	401,600	423,400	440,500	459,300	481,100	498,200	516,900	535,700
Nominal Input Power		kW	32.45	33.85	35.45	38.35	39.75	41.35	44.25	44.78
Nominal Operating Current		A	58	60.4	63.9	68.3	70.7	74.2	78.6	79.9
Efficiency	COP	W/W	3.63	3.67	3.64	3.51	3.55	3.53	3.42	3.51
Integrated Part Load Value			7.35 + 7.35 + 7.5	7.35 + 8.15 + 7.5	7.35 + 7.8 + 7.5	7.35 + 7.5 + 7.5	8.15 + 7.5 + 7.5	7.8 + 7.5 + 7.5	7.5 + 7.5 + 7.5	7.5 + 7.5 + 7.9
Power Source		V/Ph/Hz	380 ~ 415V/3N~/50Hz							
Air Flow Rate		m³/h / CFM	43,500 / 25,603							53,800 / 31,665
Noise		dB(A)	65				66			
Unit Dimension (Individual)	Height	mm(in)	1,780 (70.78) x 3							
	Width	mm(in)	1,350 (53.15) x 3							1,350 (53.15) x 2 + 1,990 (78.35)
	Depth	mm(in)	840 (33.07) x 3							
Packing Dimension (Individual)	Height	mm(in)	1,970 (77.56) x 3							
	Width	mm(in)	1,440 (56.69) x 3						1,440 (56.69) x 2 + 2,090 (82.28)	
	Depth	mm(in)	890 (35.04) x 3							
Unit Weight		kg / lb	813 / 1,792	875 / 1,929	898 / 1,980	900 / 1,984	962 / 2,121	985 / 2,172	987 / 2,176	1,072 / 2,363
Maximum Indoor Unit		pcs	48		52		54		56	
Refrigerant	Type		R410A							
	Charge	kg / lb	10.5 x 2 + 14.5 / 23.15 x 2 + 31.97	10.5 + 11.5 + 14.5 / 23.15 + 25.35 + 31.97	10.5 + 13.0 + 14.5 / 23.15 + 28.66 + 31.97	10.5 + 14.5 x 2 / 23.15 + 31.97 x 2	11.5 + 14.5 x 2 / 25.35 + 31.97 x 2	13 + 14.5 x 2 / 28.66 + 31.97 x 2	14.5 x 3 / 31.97 x 3	14.5 x 2 + 16.5 / 31.97 x 2 + 36.38
Connection Pipe	Discharge	mm(in)	19.05 (3/4")							22.23 (7/8")
	Suction	mm(in)	38.1 (1-1/2")							44.5 (1-3/4")

Model			A5VRY580ER	A5VRY600ER	A5VRY620ER	A5VRY640ER	A5VRY660ER	A5VRY680ER	A5VRY700ER	A5VRY720ER
Combination			A5VR180ER	A5VR180ER	A5VR180ER	A5VR200ER	A5VRY220ER	A5VRY220ER	A5VRY220ER	A5VRY240ER
			A5VR180ER	A5VR200ER	A5VRY220ER	A5VRY220ER	A5VRY220ER	A5VRY220ER	A5VRY240ER	A5VRY240ER
			A5VRY220ER	A5VRY220ER	A5VRY220ER	A5VRY220ER	A5VRY220ER	A5VRY240ER	A5VRY240ER	A5VRY240ER
Cooling Capacity		kW	162.60	168.10	173.70	179.20	184.80	191.20	197.60	204.00
		BTU/h	554,800	573,600	592,700	611,400	630,500	652,400	674,200	696,000
Nominal Input Power		kW	46.93	47.46	49.61	50.14	52.29	54.38	56.47	58.56
Nominal Operating Current		A	81.7	83	84.8	86.1	88.0	91.9	95.9	99.8
Efficiency	COP	W/W	3.46	3.54	3.5	3.57	3.53	3.52	3.5	3.48
Integrated Part Load Value			7.5 + 7.5 + 7.6	7.5 + 7.9 + 7.6	7.5 + 7.6 + 7.6	7.9 + 7.6 + 7.6	7.6 + 7.6 + 7.6	7.6 + 7.6 + 7.4	7.6 + 7.4 + 7.4	7.4 + 7.4 + 7.4
Power Source		V/Ph/Hz	380 ~ 415V/3N~/50Hz							
Air Flow Rate		m³/h / CFM	53,800 / 31,665	64,100 / 37,728		74,400 / 43,790				
Noise		dB(A)	66			67				
Unit Dimension (Individual)	Height	mm(in)	1,780 (70.78) x 3							
	Width	mm(in)	1,350 (53.15) x 2 + 1,990 (78.35)	1,350 (53.15) + 1,990 (78.35) x 2		1,990 (78.35) x 3				
	Depth	mm(in)	840 (33.07) x 3							
Packing Dimension (Individual)	Height	mm(in)	1,970 (77.56) x3							
	Width	mm(in)	1,440 (56.69) x 2 + 2,090 (82.28)	1,440 (56.69) + 2,090 (82.28) x 2		2,090 (82.28) x 3				
	Depth	mm(in)	890 (35.04) x 3							
Unit Weight		kg / lb	1,097 / 2,418	1,1182 / 2,606	1,207 / 2,661	1,292 / 2,484	1,317 / 2,903	1,320 / 2,910	1,323 / 2,917	1,326 / 2,923
Maximum Indoor Unit		pcs	58		60					
Refrigerant	Type		R410A							
	Charge	kg / lb	14.5 x 2 + 19.5 / 31.97 x 2 + 42.99	14.5 + 16.5 + 19.5 / 31.97 + 36.38 + 42.99	14.5 + 19.5 x 2 / 31.97 + 42.99 x 2	16.5 + 19.5 x 2 / 36.38 + 42.99 x 2	19.5 x 3 / 42.99 x 3	19.5 x 2 + 22.5 / 42.99 x 2 + 49.6	19.5 + 22.5 x 2 / 42.99 + 49.6 x 2	22.5 x 3 / 49.6 x 3
Connection Pipe	Discharge	mm(in)	22.23 (7/8")							
	Suction	mm(in)	44.5 (1-3/4")							

Notes:
1. Nominal cooling capacity are based on the conditions below:

Cooling		
Indoor	27°C DB / 19° C WB	
Outdoor	35°C DB / 24° C WB	
Pipe	Length	5m
	Height	0m (On Ground)

2. Sound pressure level is measured in a semi-anechoic chamber. Actual noise level might be higher due to external influence.
3. Multiple module installation will require additional accessory.
4. All specifications are subjected to change by the manufacturer without prior notice.

Accessories Kit

Indoor Unit

LCD Wired Controller	LCD Wireless Controller	Condensate Water Lifting Pump
		 700 mm lift available

Outdoor Unit - Y joint 

No.	Installation Accessory Name	Accessory Content	Applicable Model
1	AVR-A-A1E	Right angle elbow, variable diameter tube, Y-type triplet	A5VR260DR - A5VR400DR A5VRY260ER - A5VRY360ER
2	AVR-A-A2E	Right angle elbow, variable diameter tube, Y-type triplet	A5VR380/400DR3 A5VR420DR - A5VR500DR A5VRY380ER - A5VRY500ER
3	AVR-A-A3E	Right angle elbow, variable diameter tube, Y-type triplet	A5VR520DR - A5VR540DR A5VRY520ER - A5VRY540ER
4	AVR-A-A6E	Right angle elbow, variable diameter tube, Y-type triplet	A5VRY560ER - A5VRY720ER

Note: In the case of installation of combined modular units, please buy the above corresponding installation accessories.

Controller

Optional Accessories for Separate Controllers

No.	Order Code	Name	Model	Applicable Model
1	AC-HMI321AE-(1/10/50)A	Wired Controller	AC 321A	All IDUs and Fresh air IDU
2	AC-HMIGS01CE-(1/10/50)A	Wireless remote controller (including remote receiver)	AC S01	All IDUs and Fresh air IDU
3	AC-HMIGS01DE-(1/10/50)A	Wireless remote controller (excluding remote receiver)	AC S01	A5VWM/A5VCM/A5VCK

Note: * (1/10/50) indicates the number of controllers accommodated in single package box.
* A/B/C indicates white, blue, and gold respectively.
For details, see the order naming list.

System Control - Centralized Management System

Control mode	Centralized wired controller	Centralized monitoring system	Household-based billing system	Building automation
Ordered parts	AC-HMI323A	AC-CCS101A (centralized monitoring software) AC-GTW001A (1-channel conversion interface) AC-GTW001 B (4-channel conversion interface)	AC-CCS102A (software system) AC-GTW002A (power divider) AC-GTW002B (data backup device)	Does not need to order ModBus gateway (Built-In) AC-GTW003A (BACNET protocol gateway)

Summary-Indoor/Outdoor Unit Line-up

Indoor Unit Line-up

Model		Capacity range (kW)	2.2	2.5	2.8	2.2	3.6	4.0	4.5	5.0	5.6	6.3	7.1	8.0	9.0	10.0	11.2	12.5	14.0	16.0	22.4	28
IDU	Ceiling concealed (Standard) A5VCC-V		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓									
	Ceiling concealed (compact) A5VCC-V													✓	✓	✓	✓	✓	✓	✓		
	Four-direction air outlet ceiling cassette A5VCK-V				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
	High static ducted blower A5VDB-V																	✓	✓		✓	✓
	Ceiling mounted A5VCM-V										✓		✓				✓	✓				
	Wall mounted A5VWM-W		✓		✓		✓		✓		✓		✓									
	Fresh Air Ducted Blower A5VDBX-V		14~58kW (fresh air flow: 1100~6000m³/h)																			

Note:
1. The lineup is for indicative purposes, actual coupling will still depends on the outdoor unit. Please consult us should you need further assistance.
2. Fresh air ducted blower only available for EcoPro Series.

Outdoor Unit Line-up

Model		Cooling Capacity (MBH)	30	35	40	50	60	65	70	80
ODU	A5VR DRM Carefree Series		✓	✓	✓	✓	✓	✓	✓	✓
Maximum Number of IDU			5	6	6	8	9	11	11	13

Outdoor Units & Indoor Units

A5VR DR EcoPlus Series

80 - 180 MBH

200 - 240 MBH

260 - 360 MBH

Cooling Capacity (MBH)	Model	A5VR080DR	A5VR100DR	A5VR120DR	A5VR140DR
80	A5VR080DR	✓			
100	A5VR100DR		✓		
120	A5VR120DR			✓	
140	A5VR140DR				✓
160	A5VR160DR				
180	A5VR180DR				
200	A5VR200DR				
220	A5VR220DR				
240	A5VR240DR				
260	A5VR260DR			✓	✓
280	A5VR280DR			✓	
300	A5VR300DR				✓
320	A5VR320DR				
340	A5VR340DR				
360	A5VR360DR				
380	A5VR380DR2				
380	A5VR380DR3			✓ ✓	✓
400	A5VR400DR2				
400	A5VR400DR3			✓ ✓	
420	A5VR420DR			✓	✓
440	A5VR440DR				✓ ✓
460	A5VR460DR				✓
480	A5VR480DR				
500	A5VR500DR				
520	A5VR520DR				
540	A5VR540DR				

Note: 1 MBH is equivalent to 1,000 BTU/h.

380 - 400 MBH

380 - 540 MBH

A5VR160DR	A5VR180DR	A5VR200DR	A5VR220DR	A5VR240DR	Maximum Number of IDU
					13
					16
					16
					20
✓					20
	✓				24
		✓			24
			✓		28
				✓	28
					32
✓					32
✓					36
✓ ✓					36
✓	✓				40
	✓ ✓				40
✓			✓		44
					44
✓				✓	44
✓					48
✓					48
✓					48
✓ ✓					52
✓ ✓ ✓					52
✓ ✓					54
✓	✓ ✓				54
	✓ ✓ ✓				56

Outdoor Units & Indoor Units

A5VRY ER EcoPro Series

80 - 180 MBH

200 - 240 MBH

260 - 540 MBH

560 - 580 MBH

Cooling Capacity (MBH)	Model	A5VRY080ER	A5VRYY100ER	A5VRY120ER	A5VRY140ER
80	A5VRY080ER	✓			
100	A5VRY100ER		✓		
120	A5VRY120ER			✓	
140	A5VRY140ER				✓
160	A5VRY160ER				
180	A5VRY180ER				
200	A5VRY200ER				
220	A5VRY220ER				
240	A5VRY240ER				
260	A5VRY260ER			✓	✓
280	A5VRY280ER			✓	
300	A5VRY300ER			✓	
320	A5VRY320ER				✓
340	A5VRY340ER				
360	A5VRY360ER				
380	A5VRY380ER			✓ ✓	
400	A5VRY400ER			✓ ✓	
420	A5VRY420ER			✓ ✓	
440	A5VRY440ER			✓	✓
460	A5VRY460ER			✓	
480	A5VRY480ER			✓	
500	A5VRY500ER				✓
520	A5VRY520ER				
540	A5VRY540ER				
560	A5VRY560ER				
580	A5VRY580ER				
600	A5VRY600ER				
640	A5VRY620ER				
640	A5VRY640ER				
660	A5VRY660ER				
680	A5VRY680ER				
700	A5VRY700ER				
720	A5VRY720ER				

Note: 1 MBH is equivalent to 1,000 BTU/h.

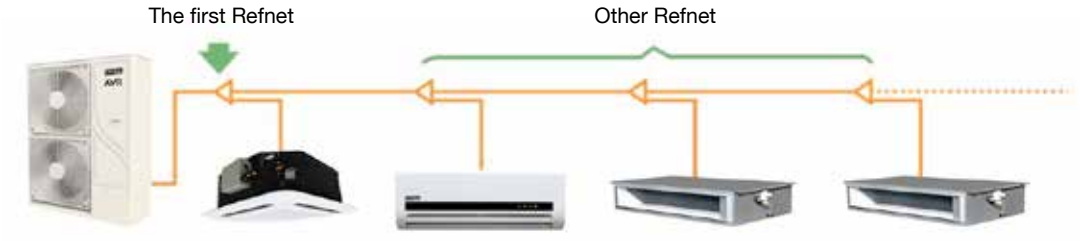
600 - 620 MBH

640 - 720 MBH

A5VRY160ER	A5VRY180ER	A5VRY200ER	A5VRY220ER	A5VRY240ER	Maximum Number of IDU
					13
					16
					16
					20
✓					20
	✓				24
		✓			24
			✓		28
				✓	28
					32
✓					32
	✓				36
	✓				36
✓	✓				40
	✓ ✓				40
					44
✓					44
	✓				48
	✓				48
✓	✓				52
	✓ ✓				52
	✓ ✓				54
✓	✓ ✓				54
	✓ ✓ ✓				56
	✓ ✓	✓			56
	✓ ✓		✓		58
	✓	✓	✓		58
	✓		✓ ✓		60
		✓	✓ ✓		60
			✓ ✓ ✓		60
			✓ ✓	✓	60
			✓	✓ ✓	60
				✓ ✓ ✓	60

A5VR - DRM Carefree

Selection of Pipes and Refnet



ODU Capacity	Pipe	Cooling Capacity (MBH)		Specification diameter (mm)	The first branch pipe	Other branch pipe models
30/35/40/50/ 60/65/70/80HP	Liquid pipe	–		Φ 9.52	Y2	Y2
	Air pipe	Total capacity X of IDUs connected to the pipe	X < 19.1	Φ 12.70	Y2	Y2
			17.1 ≤ X < 57.3	Φ 15.88	Y3	Y3
			57.3 ≤ X < 85.3	Φ 19.05	Y4	Y4

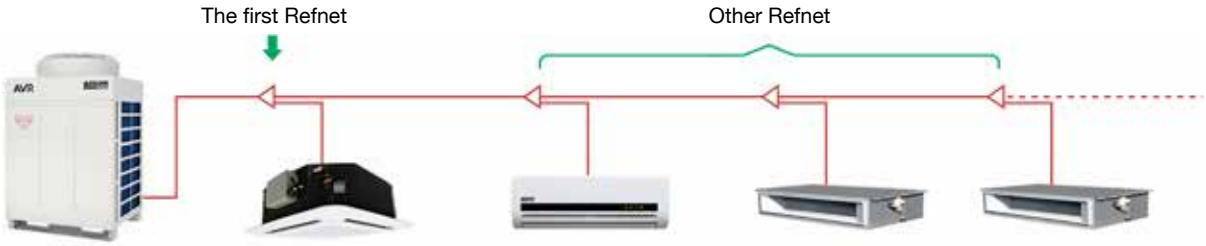
Note:
1. 1MBH is equivalent to 1,000 BTU/h.
2. X is the cooling capacity of the system.

The total pipe length for the IDU and ODU is 120 m.
The maximum height difference between IDU and ODU is 20 m.
The maximum equivalent pipe length between the IDU and ODU is 85 m.
The maximum height difference between IDUs is 15 m.

Note: When the maximum pipe length of A5VR050/060DR model is greater than 50 m,
the air pipe used between the ODU and the first branch connector should be 19.05.

A5VR - DR EcoPlus

Selection of pipes and refnet



ODU Model			A5VR080DR	A5VR100-120DR	A5VR140-180DR	A5VR200-240DR	A5VR260-360DR	A5VR380-540DR
Between the ODU and the first refnet								
Liquid pipe			Φ 9.52	Φ 12.7		Φ 15.88	Φ 19.05	
Air pipe			Φ 22.23		Φ 28.6		Φ 34.9	Φ 41.3
Cooling Capacity		Unit	Between the Refnet					
Liquid pipe	X < 85.3	MBH	Φ 9.52					
	85.3 ≤ X < 174		Φ 12.7					
	174 ≤ X < 249.1		Φ 15.88					
	249.1		Φ 19.05					
Gas pipe	X < 54.6		Φ 15.88					
	54.6 ≤ X < 81.9		Φ 19.05					
	81.9 ≤ X < 116		Φ 22.23					
	116 ≤ X < 249.1		Φ 28.6					
	249.1 ≤ X < 348		Φ 34.9					
	CX		Φ 41.3					
Cooling Capacity		Unit	Between Refnet and IDU					
Liquid pipe	X ≤ 19.1	MBH	Φ 6.35					
	21.5 ≤ X 47.8		Φ 9.52					
Gas pipe	X ≤ 9.6		Φ 9.52					
	10.9 ≤ X ≤ 19.1		Φ 12.7					
	21.5 ≤ X ≤ 47.8		Φ 15.88					

Note:
1. 1MBH is equivalent to 1,000 BTU/h.
2. X is the cooling capacity of the system.

Piping Overview

IDU/ODU capacity ratio coefficient: 50% to 130%

Long Pipe Design

The total pipe length for the IDUs and ODUs ≤ 1000 m

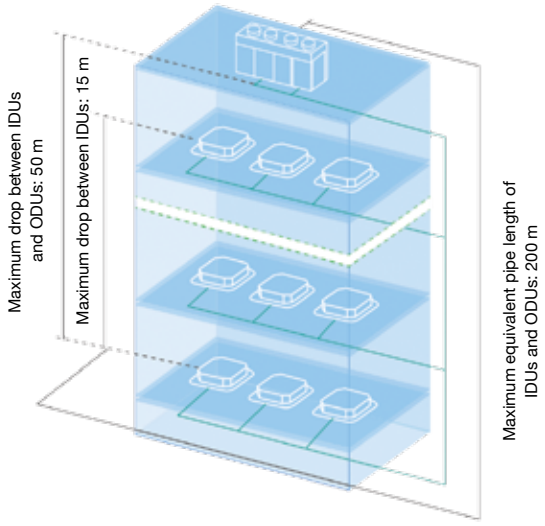
Maximum equivalent piping length of IDUs and ODUs ≤ 200 m

Maximum drop between IDUs and ODUs ≤ 50 m

Maximum drop between IDUs ≤ 15 m

Equivalent pipe length from the first branch pipe to the farthest pipe ≤ 90 ※ m

Note: "※" indicates correspondence. Please consult the technician.



Total pipe length of IDUs and ODUs: 1000 m; maximum drop between IDUs and ODUs: 50 m

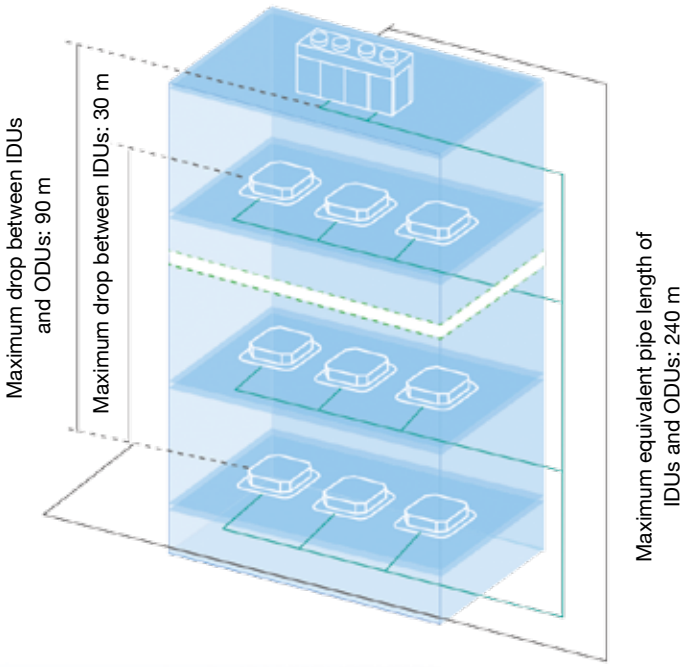
A5VRY - ER EcoPro

Model				A5VRY 080ER	A5VRY 100~120ER	A5VRY 140~180ER	A5VRY 200~240ER	A5VRY 260~300ER	A5VRY 320~340ER	A5VRY 360~540ER	A5VRY 560~720ER
Between the outdoor unit and the first refnet											
Liquid pipe				Φ 9.52	Φ 12.7		Φ15.88	Φ 19.05			Φ 22.3
Gas pipe				Φ 22.23		Φ 28.6		Φ 31.8	Φ 34.9	Φ 38.1	Φ 44.5
Cooling Capacity			Unit	Between the Refnet							
Liquid pipe	X is the total capacity of the indoor unit connected to the piping	X < 85.3	MBH	Φ 9.52							
		85.3 ≤ X < 174		Φ 12.7							
		174 ≤ X < 249.1		Φ 15.88							
		249.1 ≤ X < 532.3		Φ 19.05							
		532.3 ≤ X		Φ 22.23							
Gas pipe	X is the total capacity of the indoor unit connected to the piping	X < 85.3		Φ 15.88							
		54.6 ≤ X < 81.9		Φ 19.05							
		81.9 ≤ X < 116		Φ 22.23							
		116 ≤ X < 249.1		Φ 28.6							
		249.1 ≤ X < 300.3		Φ 31.8							
		300.3 ≤ X < 348		Φ 34.9							
		348 ≤ X < 532.3		Φ 38.1							
		532.3 ≤ X		Φ 44.5							
Between the branch connector and the indoor unit											
Liquid pipe	The indoor unit connected to the piping			Conform to the interface of the indoor unit							
Gas pipe	The indoor unit connected to the piping			Conform to the interface of the indoor unit							

Note:
1. 1MBH is equivalent to 1,000 BTU/h.
2. X is the cooling capacity of the system.

Piping Overview

The ECO PRO series VRF units optimize the supercooling design and refrigerant control technologies and break through limitations in the pipe connection, which give larger product design and construction space and allow for more flexible deployment of ODUs.



Maximum equivalent single pipe length:
240m

Total pipe length:
1,000m

Maximum height difference between IDUs:
30m

Maximum height difference between IDUs and ODUs when ODUs are installed above IDUs:
90m

Maximum distance between the first refnet and furthest IDU:
90m*

For items marked with *, consult technicians for details.

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