



The new degree of comfort.®

Air  
**SAVR Series**

**VARIABLE  
REFRIGERANT FLOW SYSTEM  
Commercial Air Conditioner**

**SAVR Series**



**50Hz KUWAIT**



INTEGRATED AIR & WATER

SAVR-T3-50Hz-Kuwait-2023-Rev1



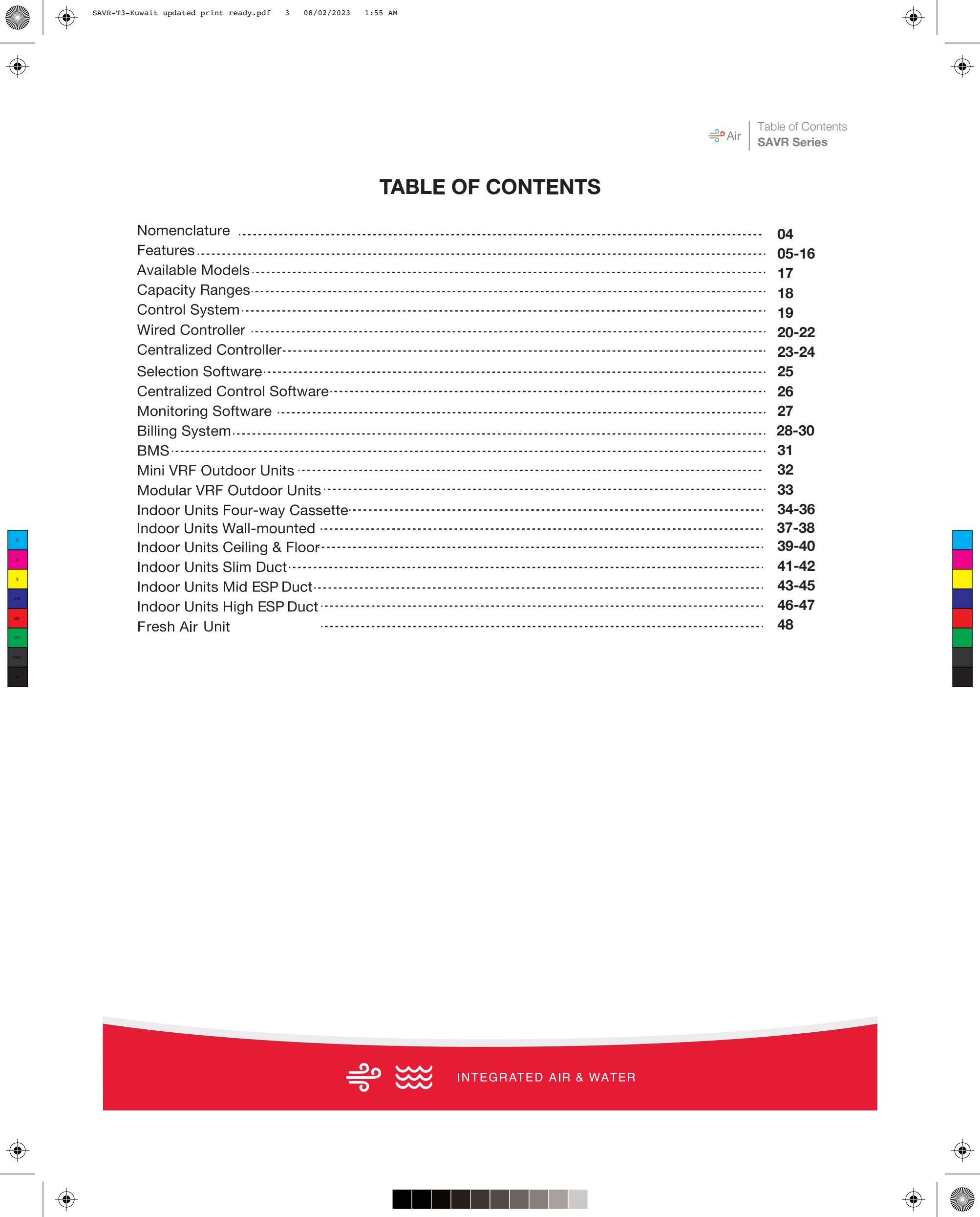
## Rheem History

Rheem Manufacturing company was established in the USA in the mid-1920s when brothers Richard and Donald Rheem acquired a galvanizing plant in San Francisco, California. In the 1930s, Rheem began manufacturing water heaters, and by 1936 had achieved coast-to-coast distribution. During the 1950s, Rheem sensed a growing demand for central heating and cooling systems, so the company began investing in its HVAC products, including air-conditioners and furnaces.

Today, Rheem is the only North American manufacturer delivering innovative, energy-efficient air and water solutions to homes and businesses in more than 70 countries worldwide. From its Atlanta, Ga. headquarters, three U.S. manufacturing facilities, state-of-the-art distribution center and Advanced Technology Integration (ATI) Lab, Rheem designs, builds and supplies some of the most reliable environmentally responsible and technologically advanced products in the industry. Under the “One Rheem Quality” promise, every Rheem product built anywhere in the world is held to the same high standards of excellence.



INTEGRATED AIR & WATER



# TABLE OF CONTENTS

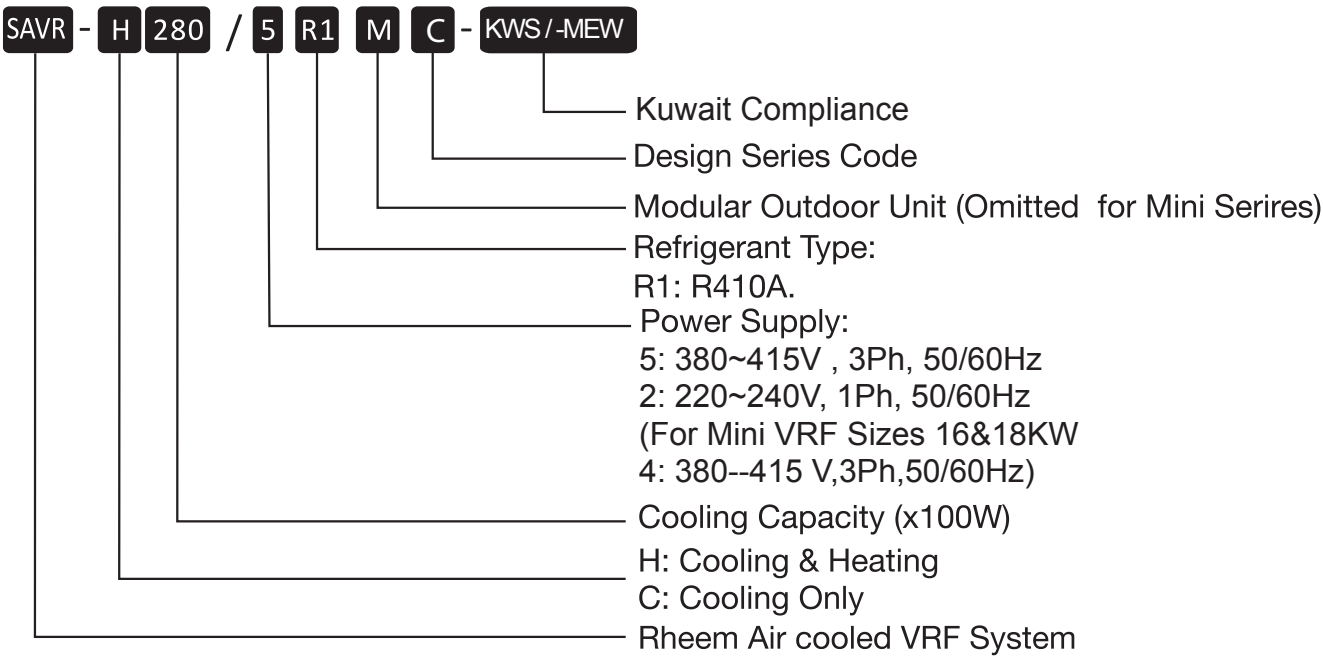
Nomenclature .....	04
Features .....	05-16
Available Models .....	17
Capacity Ranges .....	18
Control System .....	19
Wired Controller .....	20-22
Centralized Controller .....	23-24
Selection Software .....	25
Centralized Control Software .....	26
Monitoring Software .....	27
Billing System .....	28-30
BMS .....	31
Mini VRF Outdoor Units .....	32
Modular VRF Outdoor Units .....	33
Indoor Units Four-way Cassette .....	34-36
Indoor Units Wall-mounted .....	37-38
Indoor Units Ceiling & Floor .....	39-40
Indoor Units Slim Duct .....	41-42
Indoor Units Mid ESP Duct .....	43-45
Indoor Units High ESP Duct .....	46-47
Fresh Air Unit .....	48



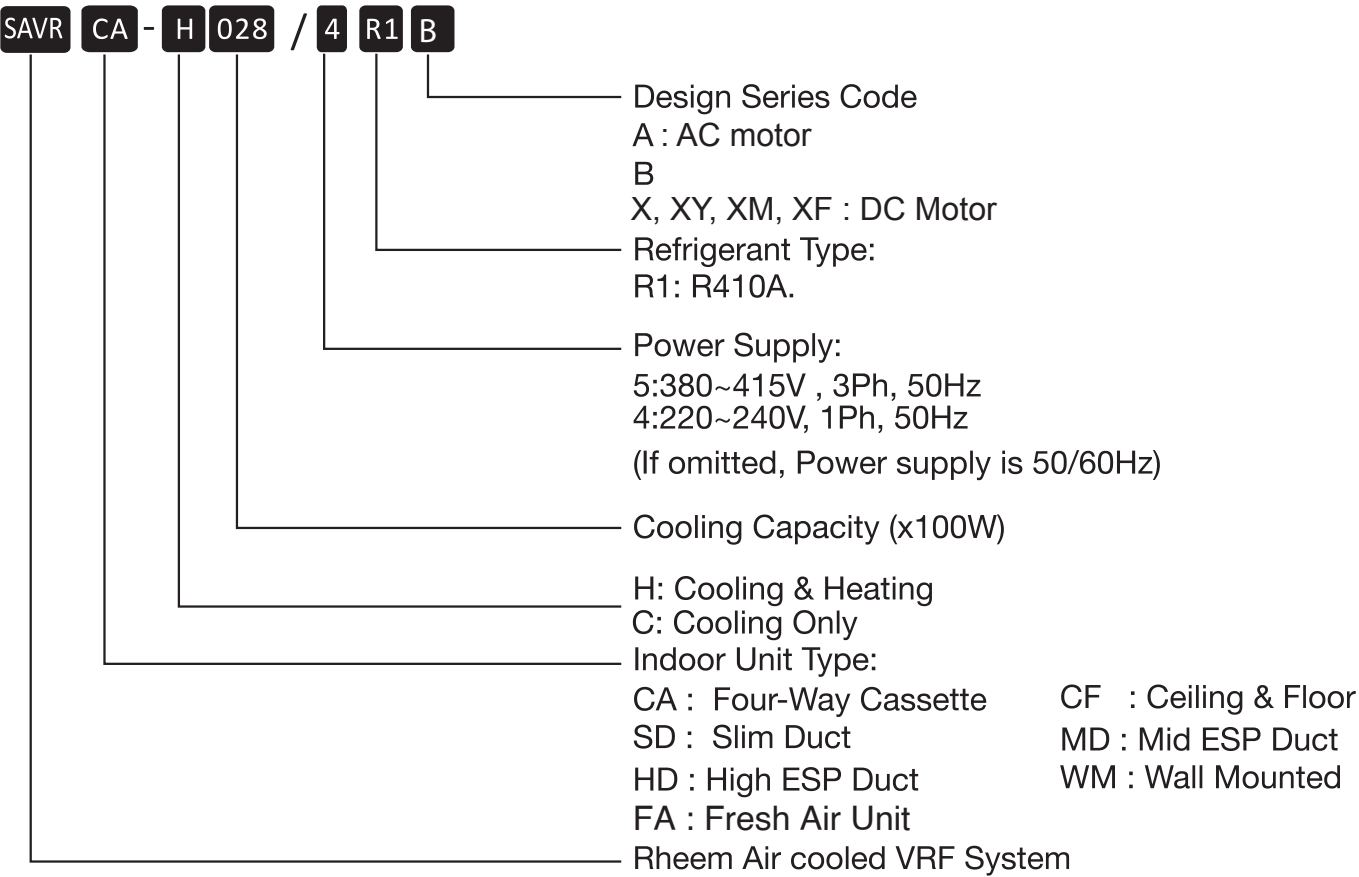
INTEGRATED AIR & WATER

# NOMENCLATURE

## Outdoor Unit:



## Indoor Unit:





# FEATURES

## Health



Fresh Air Intake

Air outside can be led into the room which keeps the indoor air fresh and healthy.



Long-term Filter

The latest long-term filter ensures better air quality. Meanwhile, the cleaning frequency has been decreased, and maintenance is also much easier.



Self-Cleaning

Indoor unit will continue running with special combined mode to blow and dry indoor evaporator after the unit switch off so as to keep clean and healthy.

## Comfort



Anti-Cold-Air

When starting the heating operation, the fan speed is regulated automatically from the lowest speed to the preset level. This function can prevent cold air from blowing out at the beginning of the operation, which avoids the discomfort to the user.



Follow Me

Temperature sensor built in the remote control will sense its surrounding temperature, so the unit can achieve accurate and comfortable temperature control just like the air conditioner is following you.



Fast Cooling /Heating

Startup at high frequency increases cooling/heating capacity and reduces time to reach set temperature, thus you can enjoy cooling and heating in seconds.



3D Air Flow

Combine vertical and horizontal auto swing to ensure an even distribution of air flow throughout the room.



Dimmer

Press this button to shut off the display light on the front panel.



Silent

Indoor fan will run at super breeze speed and indoor noise level can be extremely low when the unit enters silent mode operation.



Self-diagnosis Function

Once abnormal operation or parts failure happen, the unit will monitor the failures, the microcomputer of air conditioner will switch off and protect the system automatically when it happens. Meanwhile, the error or protection code will be displayed on the indoor unit.



Low Ambient Cooling

With special designed PCB, outdoor fan speed can be changed automatically according to condensation temperature. The air conditioner can run cooling operation even when the outdoor ambient temperature down to -15°C.



Intelligent Defrosting

Normal defrost function can only be operated in certain time, but Rheem commercial air conditioner's intelligent defrost can start automatically according to the surrounding condition.



Compressor Heating Belt

Auxiliary heating belt can increase compressor oil temperature in winter and prevent defrosting water accumulated, which improves heat transfer efficiency.



No Frosting Chassis

The unique pipeline design makes the temperature on chassis higher than normal units, and it prevents defrosting water accumulated, which improves heat transfer efficiency and solves the drainage problem.



Optional Golden Fin

Effectively prevent bacteria breeding and improve heat transfer efficiency. The unique anti-corrosive golden coating on the condenser can withstand the rain, salty air and other corrosive elements.



Fire-proof Electric Box

Electrical control box adopts new design, which can meet the higher fire safety requirement to prevent the internal fire due to the electric spark accident.



INTEGRATED AIR & WATER



Features  
SAVR Series

# FEATURES

## Energy Saving



180° Sine Wave Control

With considerable advantages, DC Inverter 180° sine wave driving technology has much wider range of frequency and voltage, higher energy efficiency, more smooth running and lower noise.



Sleep Mode

The function enables the air conditioner to automatically increase cooling or decrease heating 1°C per hour for the first 2 hours, then holds steady for the next 5 hours, after that it will switch off. This function maintains both energy saving and comfort in night.



Hydrophilic aluminum fin

The louvered hydrophilic aluminum fin has improved by more than 10%. There refrigerant inlet and outlet are separated, to ensure the sub-cooling and enhance the cooling capacity.



Full Process By DC Drive

DC control,DC Compressor,DC indoor motor, DC outdoor motor, and DC Electronic expansion valve make low noise and high efficiency.

## Convenience



24-hour Timer

Users can set the time to turn on or turn off the air conditioner at any time in 24 hours with remote controller or wireless controller.



Optional Built-in Drain Pump

The built-in pump can lift the condensing water 1200 mm upmost from the drainage pan.



Dual side Drainage

Both left and right sides of the indoor unit are possible for drainage hose connection, and it's easy for installation with this function.



Digital Tube Display

Easy for the running parameters check - ing and more convenient for troubleshoot - ing, digital tube displays work status such as indoor temperature, setting temperature, the mode of operation, etc.



Remote Control

Help users to control the air conditioner easily, you can design your most comfortable settings with this controller.



Wired Control

Help users to control the air conditioner easily, the wired controller can be fixed on the wall and avoid mislaying. It's mainly used for commercial zone and makes air conditioner control more convenient.



Central Control

With the control function of weekly timer, zone (or group) setting etc., the centralized controller can control 64 units with RS 485 wire connection and the central control adapter.



WIFI Control

With the WIFI control, you can easily turn off the air conditioner outside your house via smart device. Furthermore, you can turn it on before you come back.



Washable Filter

The indoor unit filter can be taken off to wash easily and it keeps cleaning air all the time.



Auto Restart Function

If the air conditioner breaks off unexpectedly due to the power cut, it will restart with the previous setting mode automatically when the power resume.



## 360° Performance™

### Variable Energy-efficiency Regulation

Evaporating and condensing temperature makes strong effect to the cooling and heating performance and energy-efficiency ratio of AC system.

Thanks to VER technology, SAVR series has various modes with different refrigerant temperature which lead the system to different performance and energy-efficiency ratio.

**Cooling:** 3 modes with different evaporating temperature.

**Heating:** 3 modes with different condensing temperature.

#### Turbo mode

High cooling and heating performance, cool down or warm up the room rapidly.

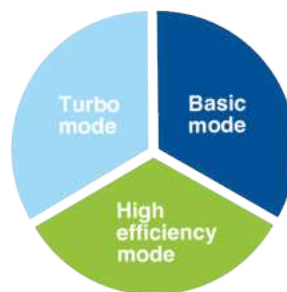
#### Basic mode

Default mode, balance the reaction speed and efficiency.

#### High efficiency mode

Satisfy the lowest capacity requirement and lower the energy consumption.

Users can choose a certain mode according to the actual need in different area and climate, so that the system can satisfy various requirement, and the seasonal efficiency can be optimized.



### All DC Inverter

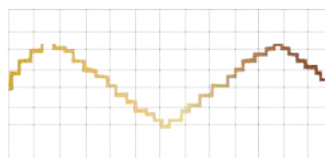
New generation DC inverter compressor, high efficiency, large capacity and wide operation range.

DC fan motor, optimized designed fan blade and wind scooper, enhance the air flow volume and reduce the noise.

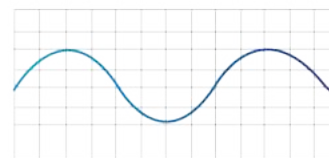


### 180° Sine Wave Control

DC inverter compressor users 180° sine wave vector control technique makes motor operate smooth and increases the efficiency significantly compared with traditional sawtooth wave. It also can lower the noise level.



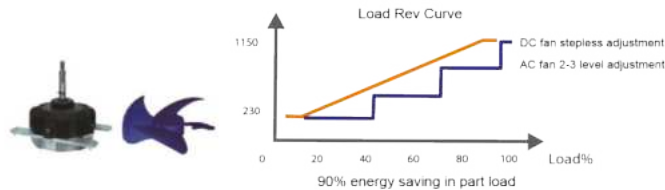
Traditional Control



180° Sine Wave DC Control

### DC Brushless Fan Motor

DC brushless motor adjusts the fan speed according to the system pressure, and running load to enhance the efficiency by 45%. The super aero fan provides a larger air volume and higher static pressure.



INTEGRATED AIR & WATER

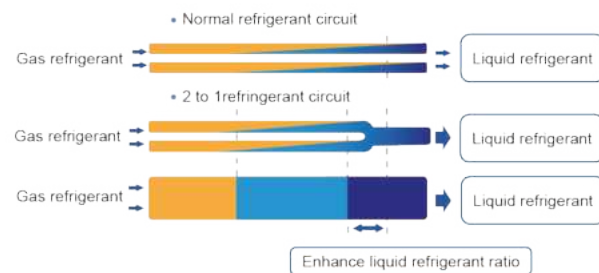


Features  
SAVR Series

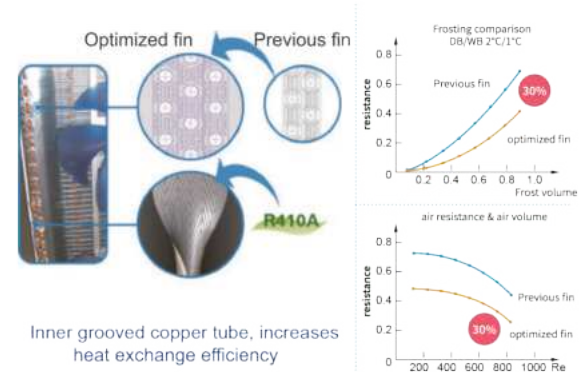
## 360° Performance™

### High Efficient Heat Exchanger

Optimized 2 to 1 refrigerant circuit design, increases the heat exchanging efficiency and enhance the ratio of liquid which flow to the evaporator.

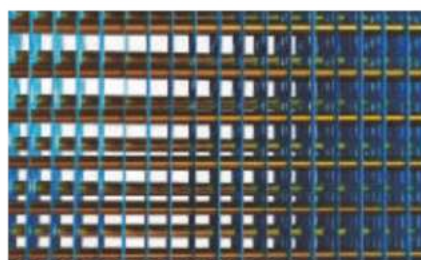
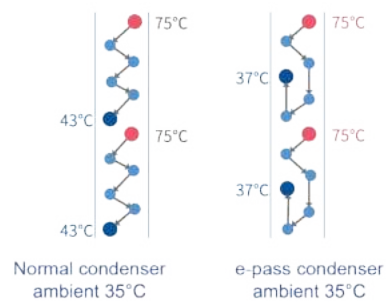


Optimized fin design, reduces the water resistance and wind resistance.



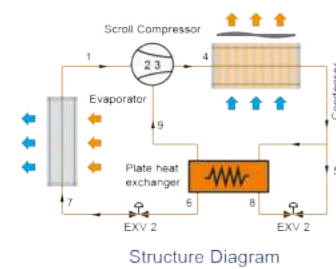
### 3-step Sub-cooling Technology

Optimizes the design of the condenser 12°C sub-cooling by optimizing refrigerant circuit and "Inverse fin type" window fin design.



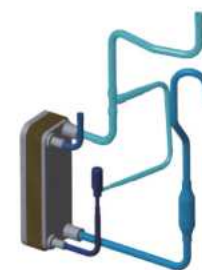
"Inverse fin type" window fin design

5.5°C sub-cooling by special plate heat exchanger further reduce the refrigerant temperature flowing into the indoor unit.



14.5°C sub-cooling by dual EXV with a special and effective plate heat exchanger.

- Low cold
- Mid cold
- High cold
- Super cold





## 360° Performance™

### 4-times Anticipation Energy-saving Control Technology

Module anticipation energy-saving control technology

In partial load, intelligent judgment single operation and the efficiency of the module keep the minimum power consumption.



Compressor anticipation energy-saving adjustment technology

Control compressors quantity and operating frequency, to get higher energy efficiency ratio in partial load. Compressor parallel technology.



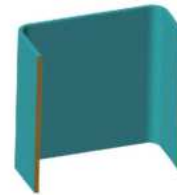
Fan anticipation energy-saving adjustment technology

Control running quantity and operating frequency, obtain higher energy efficiency ratio under partial load.



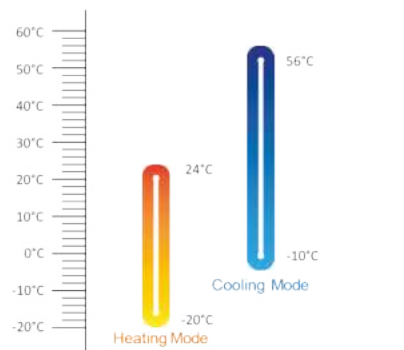
Refrigerant anticipation energy-saving technology adjustment

Adjust the opening of the electronic expansion valve, to improve the effect of condenser heat transfer, to get higher energy efficiency ratio under partial load.



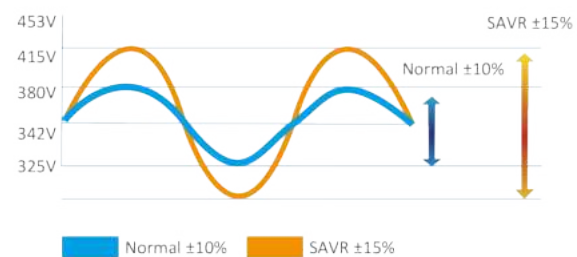
### Wide Operation Range

No matter in hot summer or cold winter, SAVR can supply comfortable environment for users.



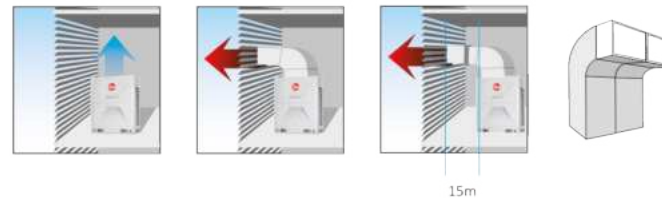
### Wide Voltage Design

In Country with unstable voltage, SAVR system could still run in stable manner.



### Changeable ESP

Optimized fan provide outdoor unit up to 80Pa static pressure. Outdoor units can be installed in the service floor or facility room.

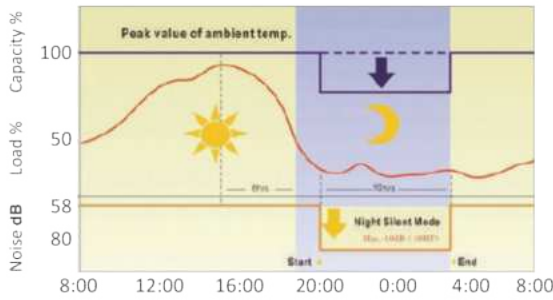


## 360° Performance™

### Silence Operation

#### Outdoor Unit Quiet Mode

By using optimized fan blades and the CFD(computational Fluid Dynamics) technology, the product is equipped with the night low-noise operation function. Provide more quiet operation during the night. Minimum operation noise only 45dB(A)



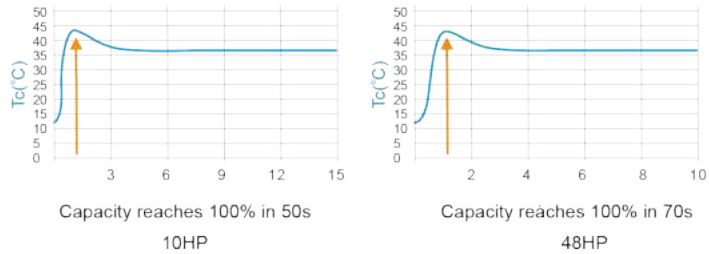
#### Indoor Unit Quiet Mode

Innovative centrifugal fan for large diameter and a new design of the spiral duct system equipped with high-quality motor at the same time, making the air supply more quietly and smoothly. The lowest noise is 18 db(A).



### Fast Warm Up And Cool Down

The DC Inverter Compressor system reaches full load rapidly providing less temperature fluctuation and an improved living environment, brings great user experience.

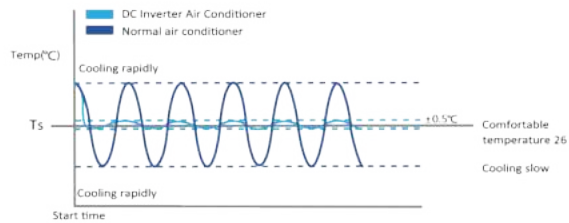


### Precise Temperature Control

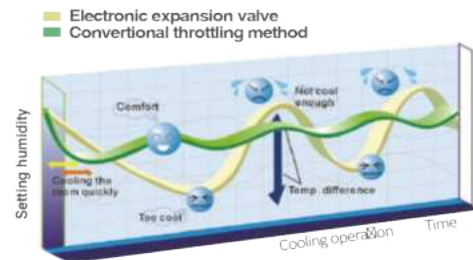
#### Double EXVs Control

Double EXVs in one system, each EXV part achieves 480 Plus rate to precisely adjust refrigerant flow.

Rheem composite temperature control technology, through the indoor/outdoor operation condition detection, adjust outdoor power output, optimize the indoor air distribution, achieve the high precision adjustment of 0.5°C.



The unit uses PI calculation principle to calculate the percentage of indoor capacity demand according to indoor temperature fluctuations, to perform real-time control to the compressor operating frequency and through the double EXV adjustment, precision up to level 1000, accurately controls the refrigerant flow, assures indoor comfort.



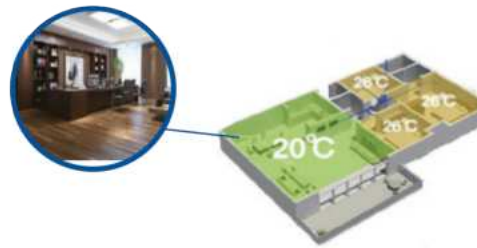


## 360° Performance™

### Humanization Design

#### VIP Function

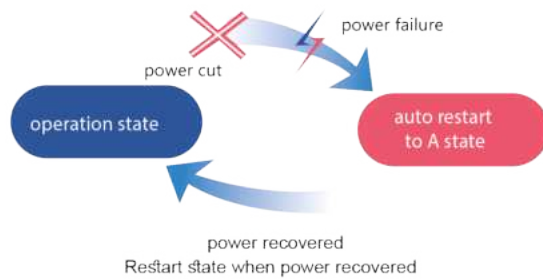
Special VIP control function, the VIP room will decide the whole system operation mode, prior to other mode or economic locking function, ensure the priority of the important room.



#### Auto Restart Function

The AC can automatically memorize the operation setting when power is cut off accidentally. It can return to previous setting when power resumes.

Recover the former operation state when power is restored, no need to restart the unit manually



#### Economic Locking Function

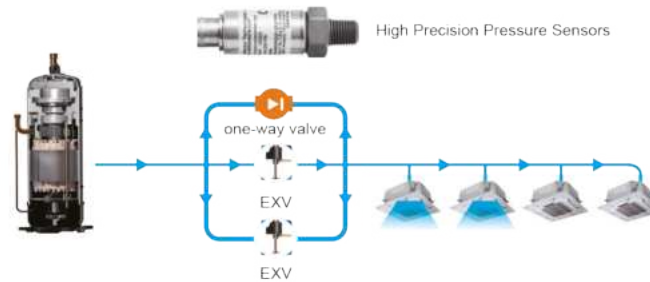
Special design economic locking function, through outdoor PCB switch setting. If unit is working in economic lock, AC will work in lowest cooling temperature (26°C) and highest heating temperature (20°C)



### Precise Refrigerant Control

Real-time monitoring of the discharge and suction pressure of the system.

The output of compressors and the EXV open degree can be regulated precisely to optimize the compression ratio. Ensuring the compression ratio always in safety zone.





Features  
SAVR Series



360° Performance™

## All-round Protection



## Oil Return Control Technology

### Dynamic Oil Return Control Technology

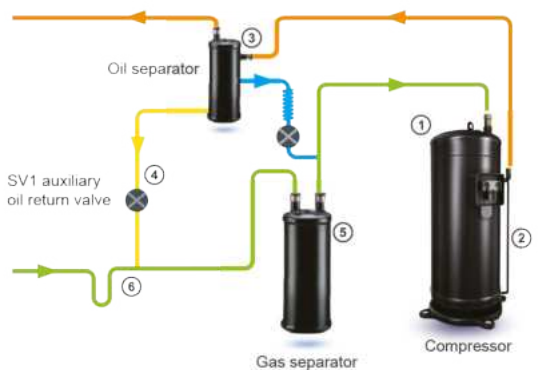
Monitors compressor running state and running time, computing system reasonable oil return time.

### 6-Step Oil Separating Technology

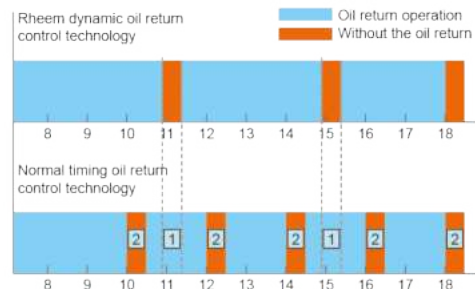
Completely solve the problem of oil, the system becomes more stable and reliable

### Compressor Throwing Oil Technology

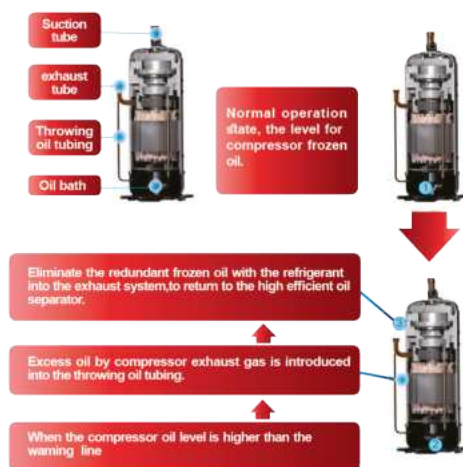
When the compressor oil level becomes higher than the warning line, system through tubing eliminate redundant frozen oil, keeping the oil balance between compressor.



- ① Compressor with oil mist separation
- ② Oil self balancing control design
- ③ High efficient oil separator
- ④ Emergency oil circuit design
- ⑤ Gas-liquid separator oil return
- ⑥ System with oil return design



- 1 Need oil return but there was no oil return operation, which can't guarantee the system stability and reliability.
- 2 Without oil return operation is to carry on the oil return operation, which cause unnecessary waste.



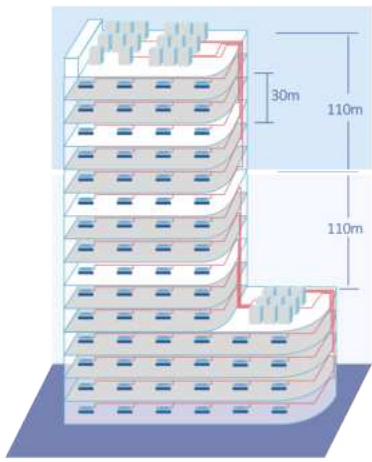
## 360° Installability™

### Long Piping Length

Thanks to the DC inverter control technology and sub-cooling circuit technology ,it is possible to design a system with longer piping and elevation difference which make it easier to design and installation.

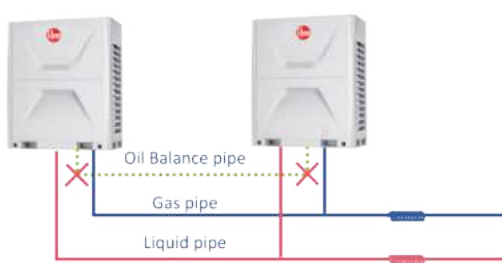
- Max. Total piping length — 1000m
- Max. Total Piping length (Actual/Equivalent): 200m/240m
- Max. piping length from 1st indoor branch to the farthest indoor unit — 40m/90m\*
- Max. Level difference between indoor units — 30m
- Max. Level difference between ODU and IDU units — 110m

\*The longest length after first branch is 40m as standard but can be extended to up to 90m under certain conditions.Please contact your local dealer for further information.



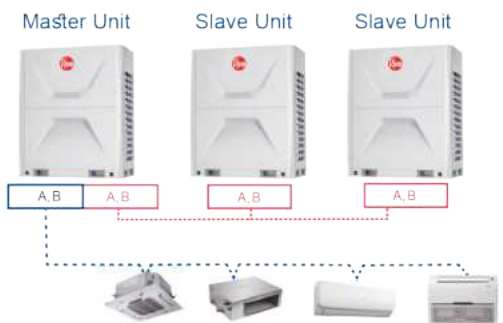
### No Oil Balance Pipe Between ODUS

High efficient oil/gas separating technology, make the system oil balance between compressors without oil balance pipe.



### Non-Polar Communication

No polar in communication wire ,easy installation and commissioning.





Features  
SAVR Series



## 360° Installability™

### Auto Commissioning

When commissioning, the outdoor mainboard can check the operation state and show the corresponding error code in engineering mode. Finds out the faults when commissioning, enhance the reliability of the system.

Connection ratio is OK?  
Num. of IDU is OK?

Stop valves  
opened normally?

Temperature  
sensor fault?

EXV fault?

Pressure  
sensor fault?

### Auto Refrigerant Recycling & Auto Refrigerant Charging

Refrigerant can be recycled to the outdoor units when maintenance is needed. The outdoor unit can adjust the refrigerant amount according to the operation parameters such as pressure and temperature, and remind the installation personnel to stop charging.



### 360° Pipe-connecting Mode

SAVR series can be on the front, left side or right side to choose pipe-connecting direction freely. It's easy to install.

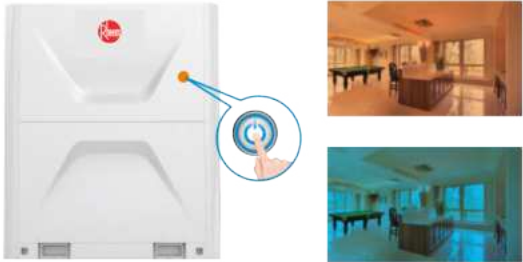




## 360° Serviceability™

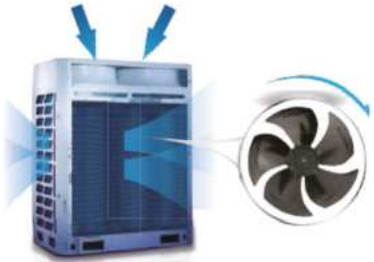
### One Button Test Run

Press the button lightly once in the motherboard outdoor to realize the cooling and heating test run, no need to open indoor machine one by one.



### Auto Dust Removal

Auto Dust Removal function is standard for SAVR Tropical series, the outdoor fan can rotate in opposite direction to remove the dust on heat exchanger to ensure the heat exchange performance, and the system can operate steadily in severe environment without manual cleaning.



### Black BOX Function

Using aviation grade Black BOX technique, memorizing operation parameters before the failure, and finding fault information efficient maintenance services to provide valuable information. Maintenance is more efficient and convenient.



INTEGRATED AIR & WATER

## 360° Serviceability™

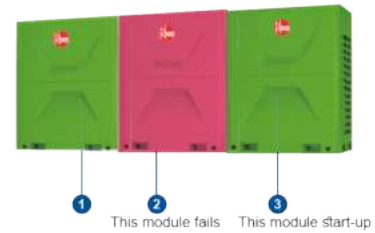
### Back-Up Operation Technology

#### Module Back-Up Technology

As one module breaks down, the rest of modules in the same refrigerant system start-up urgently.

#### Compressor Back-Up Technology

As one compressor breaks down, the rest of compressor in the outdoor unit start-up, ensure the outdoor unit is normal operation.



Running

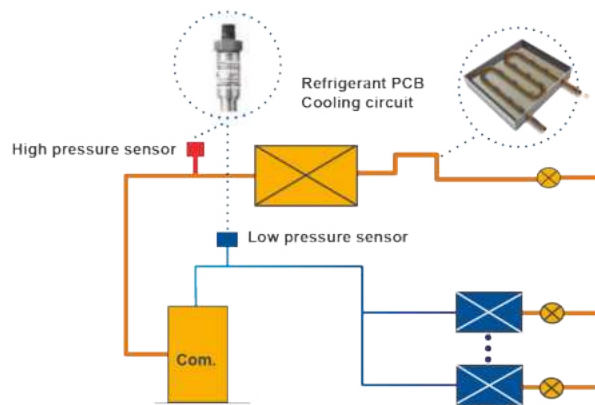


Failure or downtime Start-up

## 360° Durability™

### Refrigerant PCB Cooling System

The PCB is well cooled by the refrigerant, ensuring the system operate steadily even in tropical area. Frequency limit of inverter compressor can be relaxed, so that the output capacity of ODU can be higher than conventional products.



### Module Alternate Operation

In one combination system, any module could run as the master unit according to the running time balancing the life of the outdoor units in one system.





Air

Available Models  
SAVR Series

AVAILABLE MODELS

MINI VRF OUTDOOR UNITS

Capacity	10 kW	12 kW	14 kW	16 kW	18 kW
Side Discharge					

MODULAR VRF OUTDOOR UNITS

Capacity	25.2 kW	28.0 kW	33.5 kW	40.0 kW	45.0 kW
Top Discharge					

INDOOR UNITS

Unit Type	Power Type	Photo	2.2	2.8	3.6	4.5	5.6	7.1	8	9	10	11.2	12.5	14	15	22	28
Cassette	AC Type			★	★	★	★	★	★	★	★	★	★	★			
Cassette	DC Type			★	★	★	★	★	★	★	★	★	★	★			
Wall Mounted	DC Type		★	★	★	★	★	★									
Celing Floor	DC Type					★	★	★	★	★		★	★	★			
Slim Ducted	AC Type		★	★	★	★	★	★									
Slim Ducted	DC Type		★	★	★	★	★	★									
Mid ESP	AC Type					★	★	★	★	★	★	★	★	★	★		
Mid ESP	DC Type					★	★	★	★	★	★	★	★	★	★		
High ESP	AC Type											★	★	★	★		
High ESP	DC Type															★	★
FA Unit	DC Type															★	★

INTEGRATED AIR & WATER

17



Capacity Ranges  
SAVR Series

CAPACITY RANGES

10/8HP



One Module

16/14/12HP



One Module

18/20/22/24/26/28/30/32HP



Two Modules

34/36/38/40/42/44/46/48HP



Three Modules

50/52/54/56/58/60/62/64/



Four Modules

kW	HP	8HP	10HP	12HP	14HP	16HP
25.2	8	★				
28.0	10		★			
33.5	12			★		
40.0	14				★	
45.0	16					★
50.4	18	★	★			
56.0	20		★ ★			
61.5	22		★	★		
68.0	24			★ ★		
73.5	26		★			★
78.5	28			★		★
85.0	30				★	★
90.0	32					★ ★
96.0	34	★	★			★
101.0	36		★ ★			★
108.0	38		★	★		★
113.0	40			★ ★		★
120.0	42		★			★ ★
125.0	44			★		★ ★
130.0	46				★	★ ★
135.0	48					★ ★ ★
141.0	50	★	★			★ ★
146.0	52		★ ★			★ ★
151.5	54		★	★		★ ★
158.0	56			★ ★		★ ★
163.5	58		★			★ ★ ★
170.0	60			★		★ ★ ★
175.0	62				★	★ ★ ★
180.0	64					★ ★ ★ ★



## System overview



User can monitor the function of units through computer. This greatly improves convenience of daily management.  
Timely finds the fault and save the maintenance cost of air conditioner units, minimize losses.  
Timer function with multi-period week, fully automated schedule planning of unit.  
Each SAVR unit can access at most 64 indoor sets.  
Monitoring capability - 64 systems, 1024 indoor units.



Wired Controller  
SAVR Series

# Wired Controller



XK-05B

## Features

### Built-In Remote Signal Receiver

A signal receiver is built-in the remote controller. Signal from remote controller can be received by wired controller, so the system status could be adjusted using a remote controller.

Remote signal receiver  
Photosensitive sensor receiver



### Addresses Setting

The address setting function is coupled with easy installation and simple future maintenance. Service personnel can set the address for the indoor unit using XK-05B.

Address Setting mode



### Follow Me

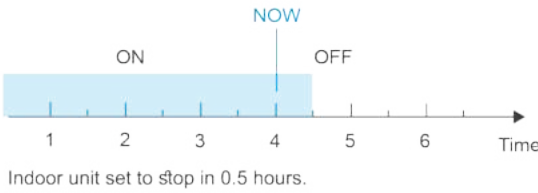
With the follow me function, the indoor unit responds to the temperature measured by the temperature sensor built-in the wired controller, rather than temperature sensor in the indoor unit itself, so the temperature is measured closer to the user, rather than at the ceiling or floor height.



### Built-in Timer

The built-in daily timer allows the systems automatically start and stop according to user-defined time setting.

Time Setting



User-Friendly & Elegant Design

The XK-05B is a hidden-mode controller specially designed for hotels, hospitals, schools and offices. Fitted with a background light as standard, it is easy to use in the dark.



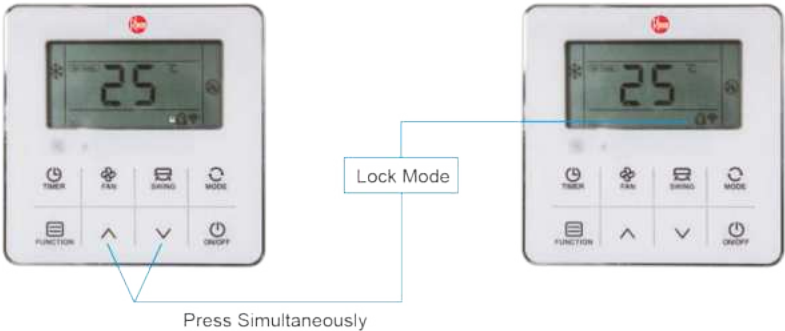
Error Reporting

If there is a malfunction, error codes are displayed in the temperature setting area of the controller's display screen.



Keyboard Locking

The locking function could prevent other people from changing the setting in public places.



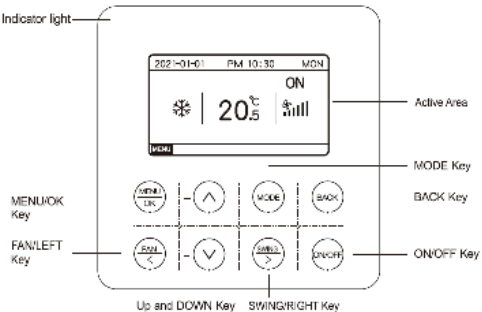
Features

Specifications

Model	XK-05B
Dimension (WxHxD) (mm)	120×120×18
Power Supply(V)	DC 12V by IDU



# Wired Controller XK06 (with schedule option)



Note: The product adopts touch buttons. To ensure the validity of operation, please touch the center of each icon.



## Technical Indicators:

Power voltage range:DC 12v;  
Mounting hole spacing:58-62mm  
Button: Touch button;  
Humidity: RH20%~RH90%;



















Max communication line length:1000m;  
Working ambient humidity:0°C~50°C;  
Dimension(WxHxD):120\*120\*20MM;  
Temperature setting: 16°C~32°C 60°F~90°F

Display the failure of main controller;

## Main Functions

8-key touch button input;  
LCD+ white backlight;

## Icon Explanation

Icon	Name	Icon	Name	Icon	Name
	Cooling		Fan speed		Filter
	Heating		Swing		Power limit
	Dry		Sleep		Timing
	Fan		Anti-mildew		WIFI
	Hot water heating		Clean		CHILD LOCK
	Auto		Energy saving		Fault





# Centralized Controllers and monitors

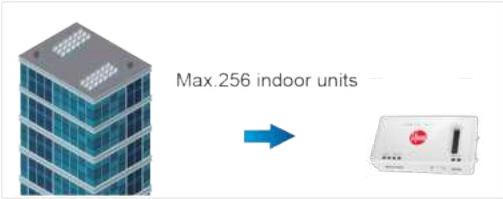
## Touch Screen Centralized Control

Rheem touch screen centralized controller is a multifunctional device that can control up to 256 indoor units within a maximum connection length of 1200meters. Users could enjoy the flexibility of either controlling multiple units as a group or controlling each unit individually.



## Multi-system Control

256 indoor units with no repeated address from different outdoor systems could be centralized controlled together. This greatly reduces system limitations.



## Multiple Lock function

The new centralized controller could not only lock their own keyboards, it could also enable the users lock each unit's setting mode or remote controller.



## Weekly Schedule Control

The CC-01 centralized controller's weekly schedule timer function allows users to set up to four scheduled periods per day, each with its own operation mode and temperature setting.



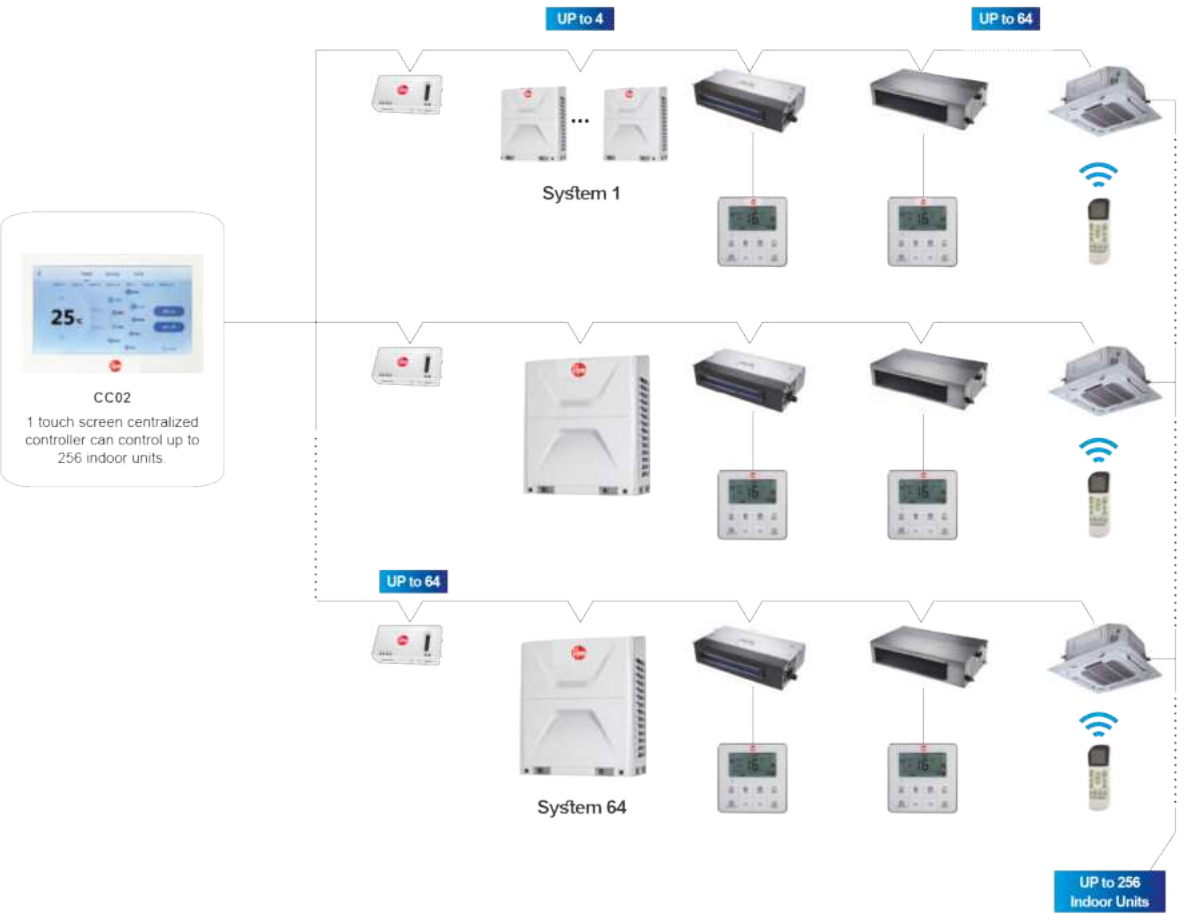
## Indoor Units Operation Status Display

Error and protection codes are shown directly on centralized controller's displays, no need to access outdoor unit's PCBs to obtain codes. The building management professionals could inquire a wide range of historical error and protection codes to get the system status information before contacting a service engineer.




Flexible Wiring

The centralized controllers could be connected directly to the master outdoor unit or any indoor unit of each system so it significantly simplifies wiring configuration.



Specifications

Model	CC-02
	
Dimension(W×H×D) (mm)	176x116x12 (Outside the wall) 120x60x25 (Inside the wall)
Power supply	AC 180-240V (50/60Hz)



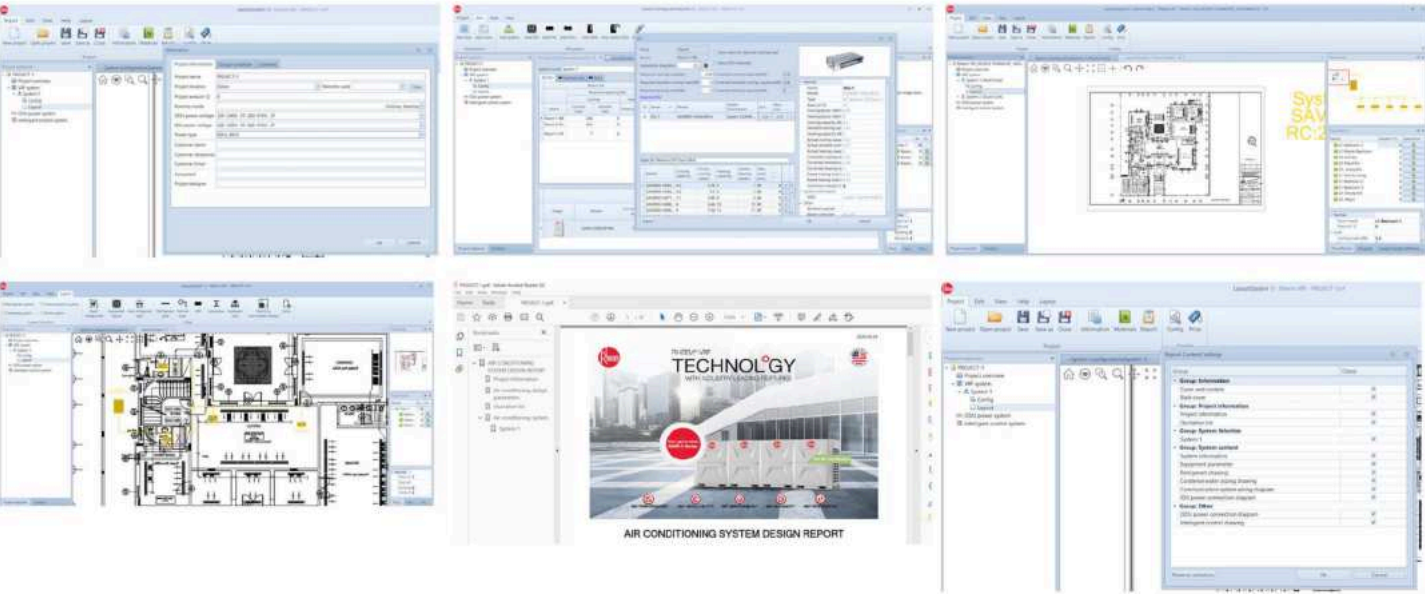
SELECTION SOFTWARE

To meet the customers’ requirements, Rheem has developed the advanced selection software. The software provides quick and convenient selectable options for users, greatly improves the selection and installation process.

Steps of the SAVR selection

No.	Steps	Instruction
1	Selecting indoor units	Selecting indoor unit for project according to the capacity, air flow volume and room information
2	Selecting outdoor units	Automatic selection of suitable outdoor unit for project according to the capacity of indoor units, the capacity ratio between indoor and outdoor unit, and the temperature of indoor and outdoor unit.
3	Drawing piping diagram	Every outdoor system can draw corresponding piping diagram. The system will auto select branch pipe, gas pipe and liquid pipe according to selected indoor and outdoor unit. The pipe length can be input according to the project diagram if the project need. Ability compensation also can be displayed for the software.
4	Drawing wiring diagram	Every outdoor system can draw wiring diagram. The wiring length can be input according to the project diagram if the project need. Wiring includes power cable, signal cable and so on. Remote controller and wired controller can be chosen according to the customer’s demands.
5	Selecting BMS or Centralized Controller	The software can be used with either BMS or centralized controller and draw connecting wiring diagram.
6	Output the Report	The report can be output in 3 kinds of forms, PDF, word and CAD.






Software: Various Screen & Results



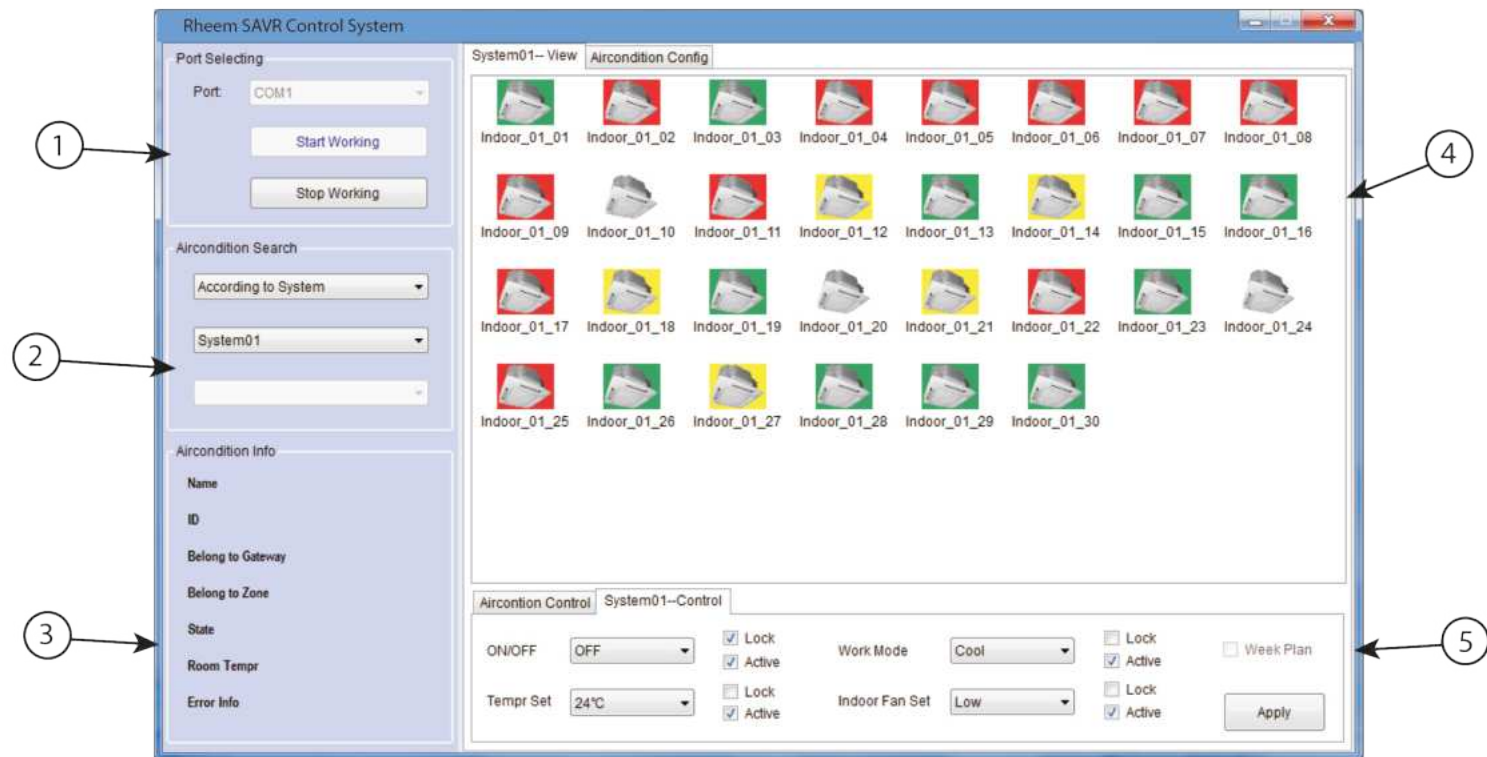


## CENTRALIZED CONTROL SOFTWARE

### Main Components Of Centralized Controller System

No	Main Components	Required
1	 Host Computer	Operation system: Windows XP SP2 and above, Windows 7
2	 Communications adapter plate	Computer and communication protocol and unit end communication protocol are incompatible with each other, must add communication adapter plate to make both communicate.
3	 RS-232 to RS-485/422 converter	The centralized control system RS485 network signal conversion for RS232 serial signal to achieve the interconnection of computers with centralized control system.
	 USB to RS-485/422 converter	The centralized control system RS485 network signal conversion for USB to achieve the interconnection of laptops with centralized control system.
4	 RS-485/422 Repeater	Extend the communication distance and increase the number of RS-485 bus network. The repeater is not required, only when there is more than 30 systems or communication distance is more than 800 meters.

### Software Main Interface



**Area 1** -- Serial setting area, choose the serial and press "Start working button, system will be operation, press "Stop Working" button, system will stop working.

**Area 2**-- The area for air conditioner unit, it can be divided into the system and user-defined group, the selected unit will be displayed in area 4.

**Area 3**-- Display area of single air conditioner indoor unit, select one of indoor units in area 4, then the area will display the name, ID (address of indoor unit) , system belonged, group belonged, current condition, the room temperature of indoor unit, failure etc.

**Area 4**-- Display area of air conditioner group, as shown in above picture, it displayed all the indoor units in the group System01.

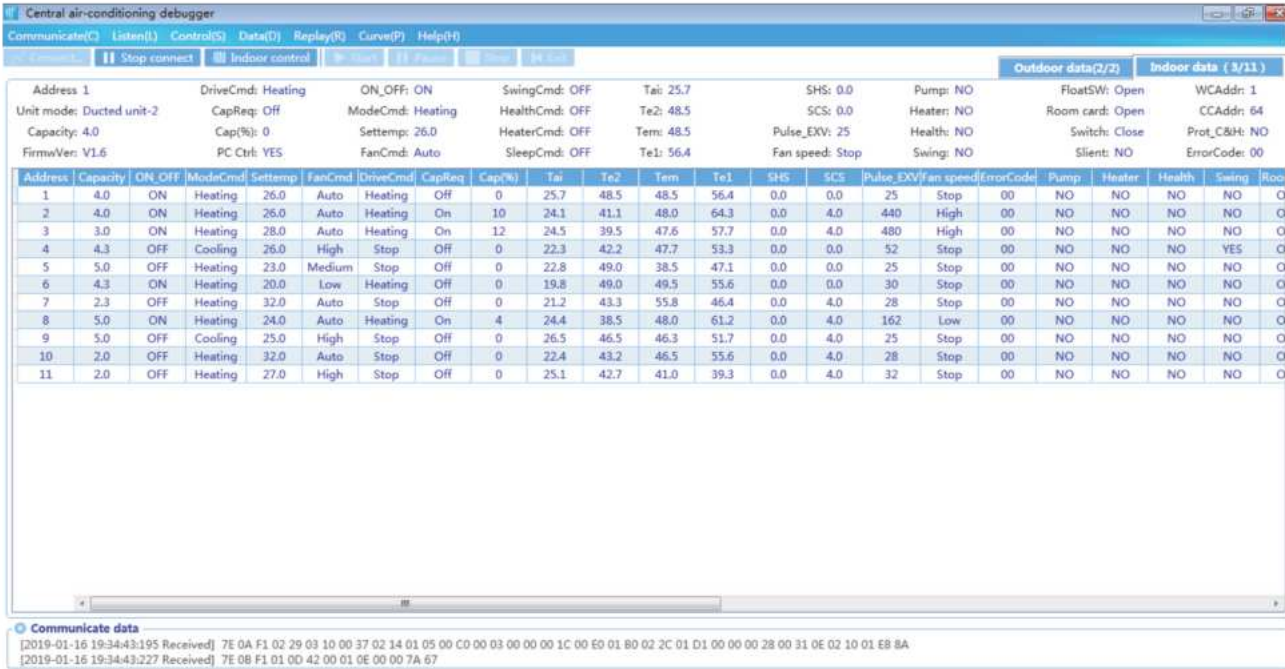
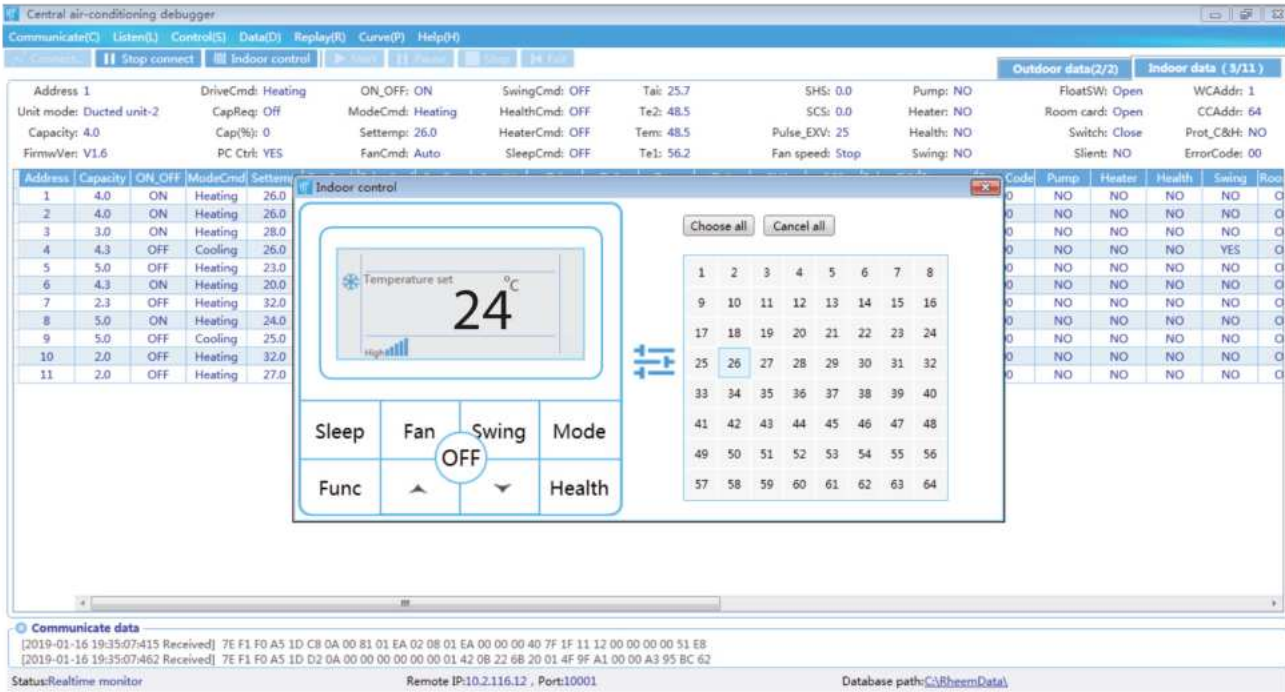
**Area 5** Control area of air conditioner, it can control one single air conditioner and some air conditioner group, this will be described in detail later.



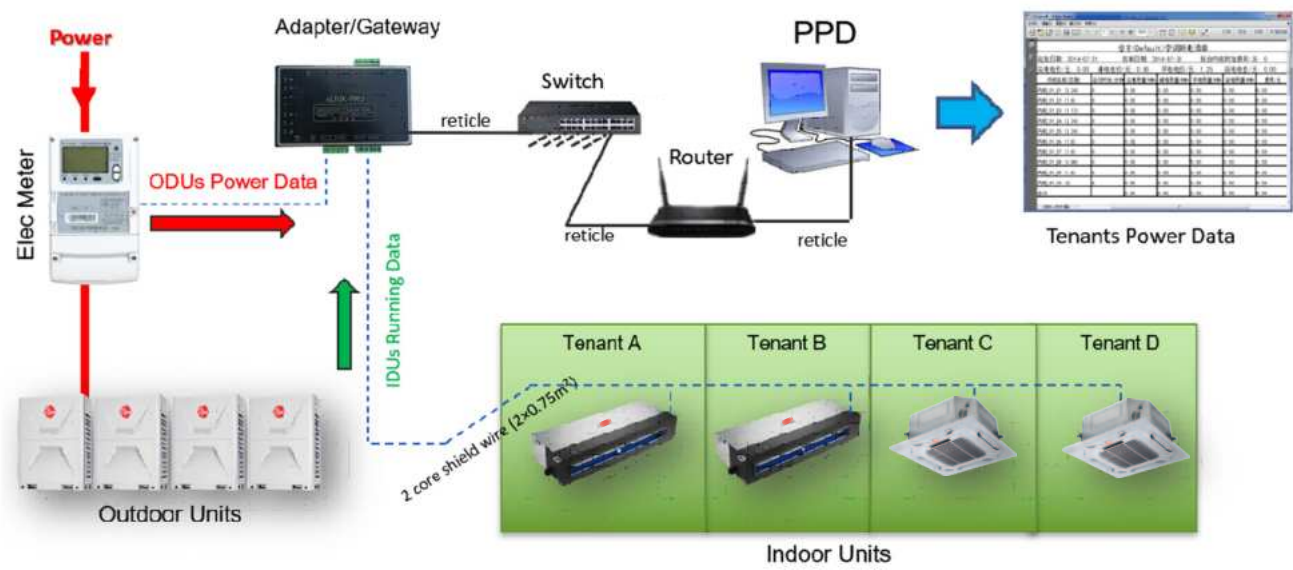
Monitoring Software  
SAVR Series


# MONITORING SOFTWARE

Self-diagnosis software can be used as remote controller, it is recommended for commissioning. It can monitor the running state of outdoor and indoor units real time and display the malfunctions. Convenient to do the commissioning and trouble-shooting work.



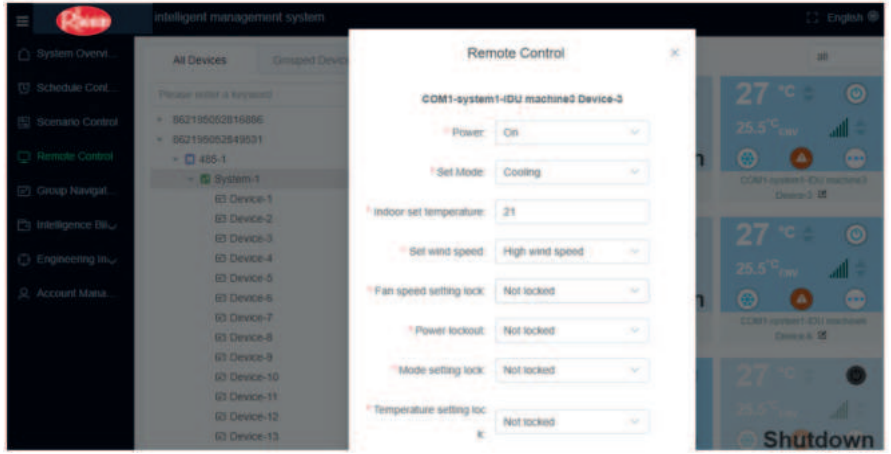
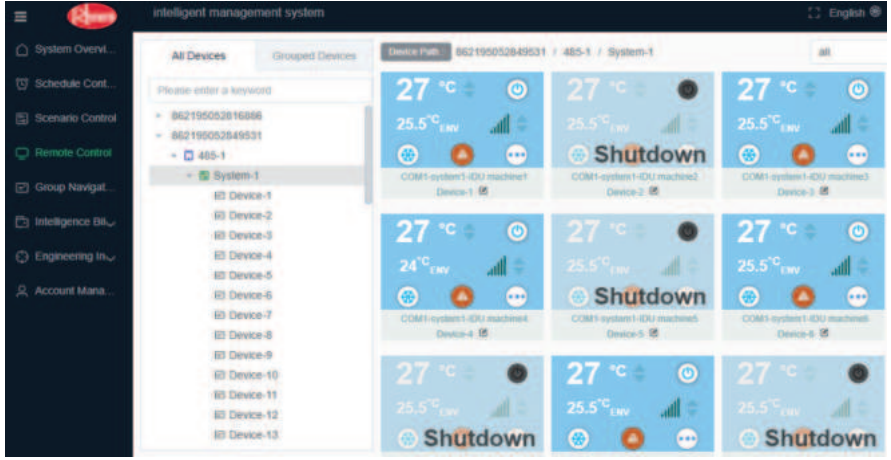
BILLING SYSTEM / PROPORTIONAL POWER DISTRIBUTION (PPD)



	Item	Rheem
Adapter	Adapter Photos	
	(mm)	178×115×32
	Power	DC12V(power adapter standard)
	Signal port	4*RS485
	Dip switch	Not required
	signal indicator	yes
	Computer port	1*LAN
	Qty of system	3 or 24
	Qty of IDUs	512
Software	Function	User management, IDU control, electricity bill query, control log Automatic scanning Adapter management Plane guide commissioning



Air Indoor Units Slim Duct  
SAVR Series






The screenshot displays the 'Electricity Inquiry' section of the intelligent management system. It includes a search bar for dates and a table of electricity usage data. The table has columns for prepaid account, user contact, user name, Number of IDU, Total power (kWh), and % Operation. The data is filtered by account and shows usage for three different accounts.

prepaid account	user contact	user name	Number of IDU	Total power (kWh)	% Operation
Auto	111	111	5	0.00	Use Record Export
Auto	111	111	7	0.00	Use Record Export
Auto	111	111	5	0.00	Use Record Export



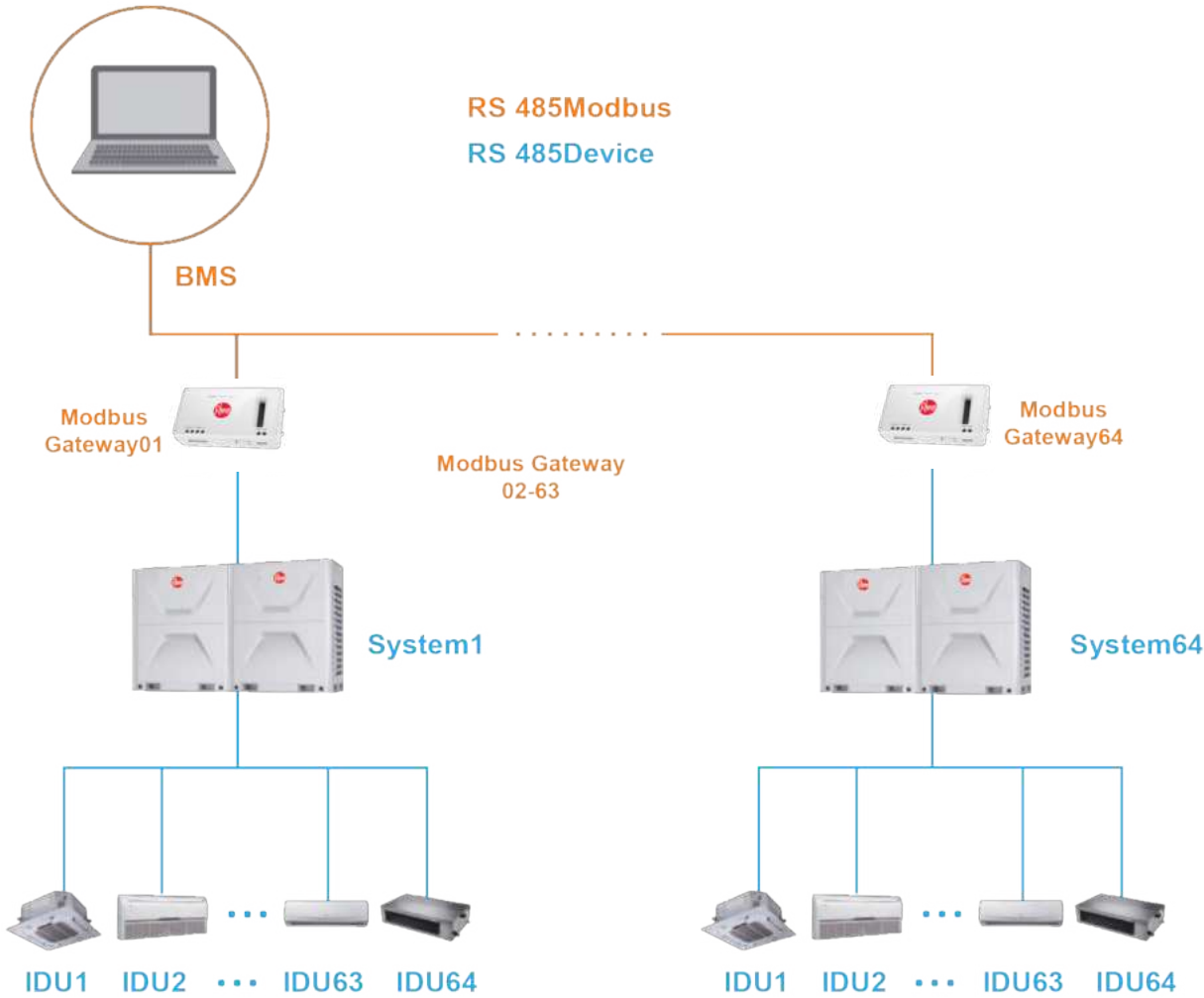
DETAILS ON BILLING SYSTEM ITEMS

Sno.	Item	Details	Reference picture	Qty	Scope
1	Adapter/Gateway	Code: 16348002000001 CM-PTD/A02		≥1/3×Qty of VRF systems	Rheem
2	Electrical Meter	1. Code: 16430043000001 DTZY188 2. Max current of the E-meter ≥ 1.1×the ARV system's maximum current 3. Communication : RS458 4. Protocol : DT/L 645-2007 5. Baud rate : 9600, 6. "even parity" by number of systems		Same as the Qty of VRF system	Rheem or Field Supplied
3	Electrical Meter	1. Model : S34U18 CT 2. Max current of the E-meter ≥ 1.1×the ARV system's maximum current 3. Communication : RS458 4. Protocol : DT/L 645-2007 5. Baud rate : 9600, 6. "even parity" by number of systems		Same as the Qty of VRF system	Rheem or Field Supplied
4	Current transformer	BH-0.66 300/5A		≥3×Qty of Electrical meter	Rheem or Field Supplied
5	PPD software	Code:16430026000019		1	Rheem
6	Computer	Windows 10 CPU: i5 or above Memory: 4G or above Hard disk: 120G or above key board/mouse with scroll wheel Network: 10BASE-T The screen resolution is greater than 1024*768 Screen size larger than 17 inches Recommended products such as IBM or Dell Lenovo		1	Field Supplied
7	Router	TPLINK		≥1	Field Supplied
8	Switch	TPLINK		According to demand	
9	Reticle	/		According to demand	
10	Registered jack	/		According to demand	
11	Power distribution cabinet	/		According to demand	Field Supplied
12	2 core shield wire	2×0.75mm²		According to demand	

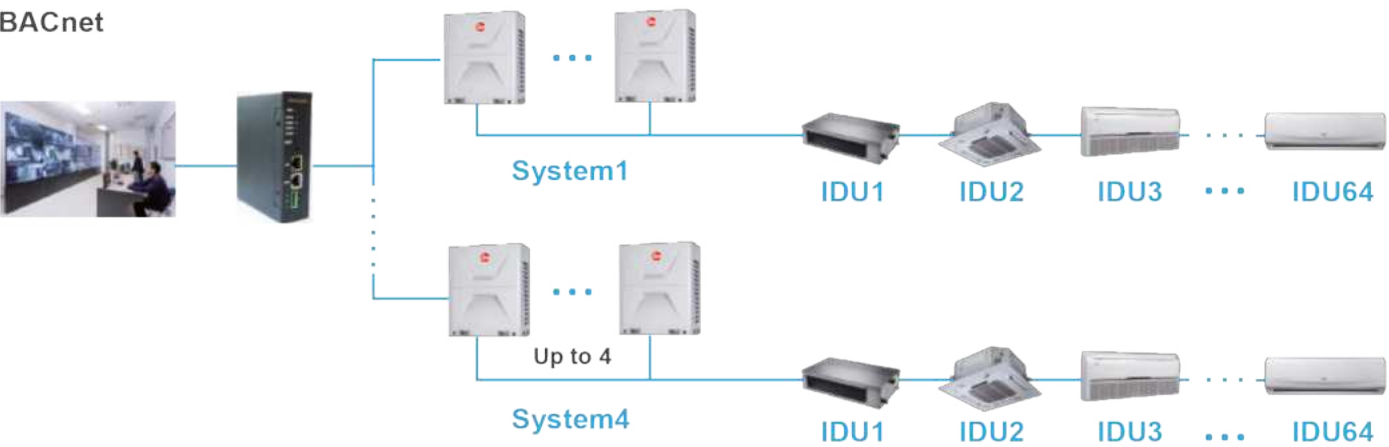


# BMS SYSTEM

## Modbus



## BACnet



MINI VRF OUTDOOR UNITS



Model	Outdoor		SAVR-H12E4R1C-KWS	SAVR-H12S4R1C-KWS	SAVR-H14S4R1C-KWS	SAVR-H16S4R1C-KWS	SAVR-H18S4R1C-KWS
Capacity	Cooling(T1/Tropical)	kW	10.2 /9.1	12.3 / 11.0	14.1 / 12.1	16.05/14.1	18.0 / 15.70
	Heating	kW	11.5	13.2	16.0	18.0	20.2
Electric Data	Power Supply	V~,Hz,Ph	220~240,50/60,1	220~240,50/60,1	220~240,50/60,1	380~415,50/60,3	380~415, 50/60,3
	Cooling Power Input(T1/Tropical)	kW	1.8/ / 2.35	2.30 / 3.0	2.70 / 3.4	3.25 / 3.90	3.80 / 4.40
	Heating Power Input	kW	2.85	3.41	3.98	5	5.98
	Cooling Current	A	7.98 / 10.42	10.2 / 13.30	11.97 / 15.07	4.8 / 5.76	5.62 / 6.50
	Heating Current	A	12.63	15.12	17.42	7.39	8.84
	EER(T1/Tropical)		19.00 / 13.25	17.8 / 12.55	17.8 / 12.15	16.90 / 12.35	16.20 / 12.20
	COP		4.04	3.87	4.07	3.60	3.38
	Max Input Power	kW	5.1	5.2	7.05	9.00	10.00
	Max Input Current	A	24	24	32	16.50	17.00
	Air Flow Volume	m³/h	7200	7200	7200	10500	10500
Performance	Noise Level	dB(A)	57	57	57	62	62
Piping Limits	Level difference between IDU and ODU	m	50	50	50	50	50
	Level difference between IDU and IDU	m	15	15	15	15	15
	Between the first branch and the farthest IDU	m	40	40	40	40	40
	Total Pipe length	m	150	150	150	250	250
Max. No. of Indoor Units		unit	5	7	8	9	10
Connection Ratio		%	50~130	50~130	50~130	50~130	50~130
Dimension (WxDxH)	Net	mm	940x340x1320	940x340x1320	940x340x1320	1120x400x1540	1120x400x1540
	Packing	mm	1080x430x1440	1080x430x1440	1080x430x1440	1270x560x1710	1270x560x1710
Weight	Net	kg	86	86	93	159	159
	Gross	kg	91	91	98	174	174
Refrigerant Type			R410a	R410a	R410a	R410a	R410a
Pipe Diameter	Liquid Side	mm(inch)	9.52(3/8)	9.52(3/8)	9.52(3/8)	9.52(3/8)	9.52(3/8)
	Gas Side	mm(inch)	15.88(5/8)	15.88(5/8)	19.05(3/4)	22.2(7/8)	22.2(7/8)
Operation Range	Cooling	°C	-15~55	-15~55	-15~55	-10~55	-10~55
	Heating	°C	-15~24	-15~24	-15~24	-15~24	-15~24
Stuffing Quantity	20/40/40H	unit	27/55/55	27/55/55	27/55/55	17/37/37	17/37/37

- Notes:
- 1. Cooling Capacity: Indoor temperature 27° CDB/19° CWB; Outdoor temperature:35° CDB/24° CWB.
  - 2. Cooling Capacity (Tropical): Indoor temperature 29° CDB/19° CWB; Outdoor temperature:46.1° CDB/24° CDB.
  - 3. Heating Capacity: Indoor temperature 20° CDB;Outdoor temperature:7° CDB/6° CWB.
  - 4. Piping Length: Equivalent piping length: 7.5m, level differernce :0m.
  - 5. Anechoic chamber conversion value, measured in test room. During actual operation.
- These values are normally somewhat higher as a result of ambient conditions
- 6. The above designs and specifications are subject to change of product improvement without prior notice.



# MODULAR VRF OUTDOOR UNITS

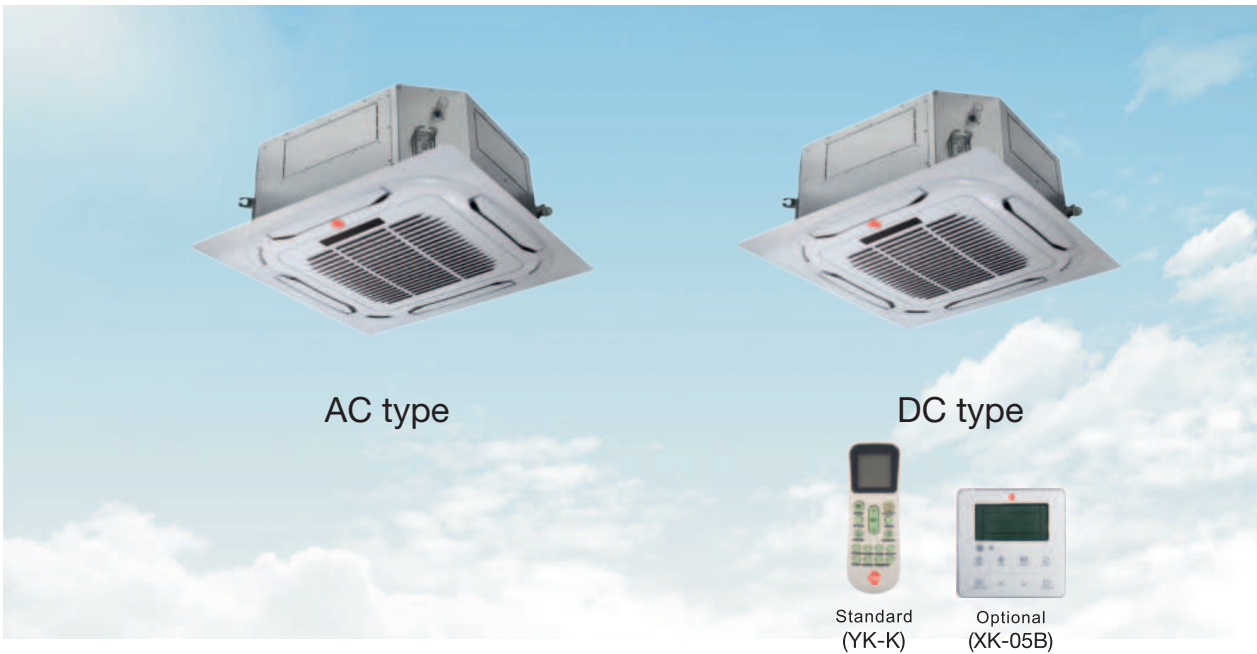


Model	Outdoor		SAVR-H250/SR1MC-MEW	SAVR-H280/SR1MC-MEW	SAVR-H330/SR1MC-MEW	SAVR-H400/SR1MC-MEW	SAVR-H450/SR1MC-MEW
Capacity	Cooling (T1 / T3)	kW	25.2/22.3	28.2/24.9	33.3/30.6	40.0/35.7	45.0/39.0
	Heating	kW	25.2	28.2	33.3	40.0	45.0
Electric Data	Power supply	V~,Hz,Ph	380~415, 50/60, 3	380~415, 50/60, 3	380~415, 50/60, 3	380~415, 50/60, 3	380~415, 50/60, 3
	Cooling input (T1/T3)	kW	5.64/6.47	7.01/7.9	8.31/9.65	9.70/13.17	11.23/15.30
	Heating input	kW	5.55	6.29	7.67	8.89	10.48
	EER (T1/T3)	(Btu/h)/W	15.25/11.75	13.70/10.75	13.72/10.8	14.02/9.25	13.71/8.70
	COP	W/W	4.54	4.45	4.34	4.50	4.31
Performance	Air Flow Volume	m³/h	12000	12000	14000	14000	16000
	Sound Pressure level	dB(A)	≤58	≤58	≤61	≤61	≤61
Compressor	Type		DC inverter	DC inverter	DC inverter	DC inverter	DC inverter
	Quantity		1	1	1	2	2
Fan motor	Type		DC motor	DC motor	DC motor	DC motor	DC motor
	Quantity		1	1	2	2	2
Max. No. of Indoor Units		unit	13	16	20	23	26
Connection Ratio		%	50~200	50~200	50~200	50~200	50~200
Dimension (WxDxH)	Net	mm	990×765×1635	990×765×1635	1340×765×1635	1340×765×1635	1340×765×1635
	Packing	mm	1030×825×1865	1030×825×1865	1395×815×1865	1395×815×1865	1395×815×1865
Weight	Net	kg	230	230	256	330	330
	Gross	kg	240	240	271	345	345
Pipe Diameter	Liquid Side	mm	12.7	12.7	15.88	15.88	15.88
	Gas Side	mm	22.2	22.2	28.6	28.6	28.6
Operation Range	Cooling	°C	-10~56	-10~56	-10~56	-10~56	-10~56
	Heating	°C	-20~24	-20~24	-20~24	-20~24	-20~24
Stuffing Quantity	20/40/40H	unit	14/28/28	14/28/28	11/22/22	11/22/22	11/22/22

- Notes:
1. Cooling Capacity: Indoor temperature 27° CDB/19° CWB; Outdoor temperature:35° CDB/24° CWB.
  2. Cooling Capacity\*: Indoor temperature 29° CDB/19° CWB; Outdoor temperature:46.1° CDB/24° CDB.
  3. Heating Capacity: Indoor temperature 20° CDB;Outdoor temperature:7° CDB/6° CWB.
  4. Piping Length: Equivalent piping length: 7.5m, level differernce :0m.
  5. We can guarantee the operation only within %130 combination. If you want to connect more than %130 combination, please contact us and discuss the requirement.
  6. Anechoic chamber conversion value, measured in test room. During actual operation.These values are normally somewhat higher as a result of ambient conditions.
  7. The above designs and specifications are subject to change of product improvement without prior notice. Final specifications please refer to technical specification provided by sales representative
  8. Sounds values are measured in a semi-anechoic room, at a position 1m in front of the unit and 1.3m above the floor.
  9. The above combined types are factory-recommended type. The combined type also can be combined at will.



## INDOOR UNITS FOUR-WAY CASSETTE



## FEATURES

### (1) Concealed design

- ★ Ceiling installation, saving room space, very suitable for family or office occasion.



### (2) With Setting or Auto two operation modes

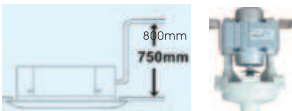
- ★ Four-way blowing, strong circulating wind, multi wind speed  
The cooling or heating capacity can reach to each corner of the room.

### (3) One-step formed shell by mold

The appearance is elegant

### (4) Special insulation design

- ★ achieves high heat insulation efficiency, and no condensation water on shell



### (5) Optional Built-in drain pump

- ★ Drain-head height is up to 1.2 meters, creating the ideal solution for perfect water drainage, also construction and installation is much easier and more convenient;

### (6) Long term air filter

- ★ Wash period is two times longer than normal filter, and maintenance is free



### (7) 7D helix air blade ensures the air flow sufficiently

- ★ reduces the unit thickness
- ★ reduces the operation noise greatly

### (8) Plastic drip tray adopts innovative foam combined with plastic technical

- ★ The thickness of plastic reaches 1mm, avoid any leakage;

### (9) 9 segments heat exchanger

- ★ Increase exchanging area
- ★ the efficiency of heat exchanging increased by 10%~15%



### (10) Ingenious hook design

- ★ the panel is convenient to install or remove

### (11) Fresh air intake design

- ★ Leading in fresh air to improve indoor air quality anytime



### (12) All the units have low ambient temperature cooling function

- ★ makes the unit can run normally on the condition that the ambient temperature falls down to -5°C



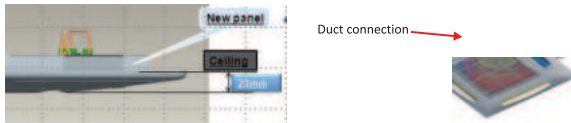
### (13) Failure automatic detection

- ★ The indicator will flash and the error code will display on the display board or remote controller, the failure code is easier to be found and make the malfunction checking easier.



### (14) Reserve spaces for air side-outlet

- ★ Air duct can be connected from the four sides to nearby rooms



### (15) Slimmer body

- ★ The exposed height only has 18mm for small panel



Specification-50Hz AC fan motor

Model	Details	Unit	SAVRCA-H028/4R1AY	SAVRCA-H036/4R1AY	SAVRCA-H045/4R1AY	SAVRCA-H056/4R1AY	SAVRCA-H071/4R1AY	SAVRCA-H080/4R1AY
Capacity	Cooling	kW	2.8	3.6	4.5	5.6	7.1	8
	Heating	kW	3.2	4.3	5	6.3	8	9
Electrical Data	Power Supply	V~,Hz,Ph	220~240,50,1	220~240,50,1	220~240,50,1	220~240,50,1	220~240,50,1	220~240,50,1
	Rated Power	W	80	80	80	80	100	100
Performance	Air Flow Volume(Hi/Mid/Low)	m <sup>3</sup> /h	900/850/750	900/850/750	900/850/750	950/850/750	1250/1040/910	1250/1040/910
	Noise Level(Hi/Mid/Low)	dB(A)	36/34/33	36/34/33	36/34/33	36/34/33	43/39/37	43/39/37
Dimension (WXDXH)	Net(Body)	mm	840x840x246	840x840x246	840x840x246	840x840x246	840x840x246	840x840x246
	Packing(Body)	mm	915x915x315	915x915x315	915x915x315	915x915x315	915x915x315	915x915x315
	Net(Panel)	mm	950x950x55	950x950x55	950x950x55	950x950x55	950x950x55	950x950x55
	Packing(Panel)	mm	1000x1000x100	1000x1000x100	1000x1000x100	1000x1000x100	1000x1000x100	1000x1000x100
Weight	Net(Body)	kg	24	24	24	24	25	25
	Gross(Body)	kg	28	28	28	28	29	29
	Net(Panel)	kg	5.7	5.7	5.7	5.7	5.7	5.7
	Gross(Panel)	kg	8.3	8.3	8.3	8.3	8.3	8.3
Refrigerant	Type		R410a	R410a	R410a	R410a	R410a	R410a
Pipe Diameter	Liquid Side	mm	6.35	6.35	6.35	6.35	9.52	9.52
	Gas Side	mm	12.7	12.7	12.7	12.7	15.88	15.88
	Drainage	mm	R3/4in(DN20)	R3/4in(DN20)	R3/4in(DN20)	R3/4in(DN20)	R3/4in(DN20)	R3/4in(DN20)

Specification-50Hz AC fan motor

Model	Details	Unit	SAVRCA-H090/4R1AY	SAVRCA-H100/4R1AY	SAVRCA-H112/4R1AY	SAVRCA-H125/4R1AY	SAVRCA-H140/4R1AY
Capacity	Cooling	kW	9	10	11.2	12.5	14
	Heating	kW	10	11.2	12.8	14	15
Electrical Data	Power Supply	V~,Hz,Ph	220~240,50,1	220~240,50,1	220~240,50,1	220~240,50,1	220~240,50,1
	Rated Power	W	100	190	190	190	190
Performance	Air Flow Volume(Hi/Mid/Low)	m <sup>3</sup> /h	1400/1200/1000	1850/1440/1260	1850/1440/1260	1850/1440/1260	1850/1440/1260
	Noise Level(Hi/Mid/Low)	dB(A)	43/39/37	45/40/39	45/40/39	45/40/39	46/41/39
Dimension (WXDXH)	Net(Body)	mm	840x840x246	840×840×288	840×840×288	840×840×288	840×840×288
	Packing(Body)	mm	915x915x315	915×915×355	915×915×355	915×915×355	915×915×355
	Net(Panel)	mm	950x950x55	950x950x55	950x950x55	950x950x55	950x950x55
	Packing(Panel)	mm	1000x1000x100	1000x1000x100	1000x1000x100	1000x1000x100	1000x1000x100
Weight	Net(Body)	kg	25	28.5	28.5	28.5	28.5
	Gross(Body)	kg	29	32.5	32.5	32.5	32.5
	Net(Panel)	kg	5.7	5.7	5.7	5.7	5.7
	Gross(Panel)	kg	8.3	8.3	8.3	8.3	8.3
Refrigerant	Type		R410a	R410a	R410a	R410a	R410a
Pipe Diameter	Liquid Side	mm	9.52	9.52	9.52	9.52	9.52
	Gas Side	mm	15.88	15.88	15.88	15.88	15.88
	Drainage	mm	R3/4in(DN20)	R3/4in(DN20)	R3/4in(DN20)	R3/4in(DN20)	R3/4in(DN20)

★ Remark: The above designs and specifications are subject to change of product improvement without prior notice.

- Notes:
- Cooling Capacity: Indoor temperature 27° CDB/19° CWB; Outdoor temperature:35° CDB/24° CWB.
  - Heating Capacity: Indoor temperature 20° CDB;Outdoor temperature:7° CDB/6° CWB.
  - Piping Length: Equivalent piping length: 7.5m, level difference :0m.
  - Noise Level: The above values are sound pressure levels, measured in semi-anechoic chamber, during actual operation.
  - Microphone position: 1.4 Meter below the unit along center line of unit.
  - The above designs and specifications are subject to change of product improvement without prior notice.







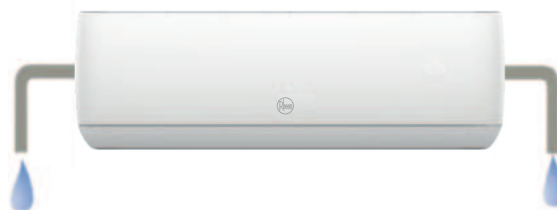
Indoor Units Wall-mounted  
**SAVR Series**

## INDOOR UNITS WALL-MOUNTED



### FEATURES:

- ★ It can be mounted on any location of indoor wall and will not occupy extra space, which makes it very suitable for family and public places.
- ★ Excellent quality: The units adopt superb components to ensure its quality. The strict test during manufacturing process.
- ★ Beautiful appearance and low noise: Resin type skin with thin and beautiful appearance; new turbine blade makes operation quiet.
- ★ Long-term air filter adopted, its cleaning period is 1/2 of the normal filter, which make maintenance easier;
- ★ Plastic drip tray, adopts innovative foam-PS combination technology, the plastic surface thickness reaches 1mm. These features make the drip tray structure firmer and avoid leakage;
- ★ The unit reserve central control function, which can combine several independent units into a central-controlled system by concentrator.
- ★ Auto Restart Function.
- ★ The unit adopts brand new diversified micro-pc control system, with remote controller;
- ★ The unit is equipped with failure auto-check function. If it gets failure, the light will blink and failure code will display on the wired controller, which makes troubleshooting easier. (Wired Controller optional)
- ★ Two Side drain arrangement.



Specification- 60/50Hz DC fan motor (J type)

Model	Details	Unit	SAVRWM-H022/R1X	SAVRWM-H028/R1X	SAVRWM-H036/R1X	SAVRWM-H045/R1X	SAVRWM-H056/R1X	SAVRWM-H071/R1X
Capacity	Cooling	kW	2.2	2.8	3.6	4.5	5.6	7.1
	Heating	kW	2.6	3.2	4	5	6.3	8
Electrical Data	Power Supply	V~,Hz,Ph	60,1/240,50~220	60,1/240,50~220	60,1/240,50~220	60,1/240,50~220	60,1/240,50~220	60,1/240,50~220
	Rated Power	W	20	20	20	30	30	40
Performance	Air Flow Volume(Hi/Mid/Low)	m³/h	400/460/520	400/460/520	400/460/520	660/750/850	660/750/850	800/900/1000
	Noise Level(Hi/Mid/Low)	dB(A)	27/33/38	27/33/38	27/33/38	34/38/42	34/38/42	37/40/44
Dimension (WxD)	Net	mm	881x294x194	881x294x194	881x294x194	997x316x227	997x316x227	1132x330x232
	Packing	mm	282x370x965	282x370x965	282x370x965	1067x385x312	1067x385x312	1205x400x317
Weight	Net	kg	10.5	10.5	10.5	13.5	13.5	15.5
	Gross	kg	13	13	13	16.5	16.5	19
Refrigerant	Type		R410a	R410a	R410a	R410a	R410a	R410a
Pipe Diameter	Liquid Side	mm	4/1)6.35)	4/1)6.35)	4/1)6.35)	4/1)6.35)	4/1)6.35)	4/1)6.35)
	Gas Side	mm	8/3)9.52)	8/3)9.52)	8/3)9.52)	2/1)12.7)	2/1)12.7)	8/5)15.88)
	Drainage	mm	R3/4in(DN20)	R3/4in(DN20)	R3/4in(DN20)	R3/4in(DN20)	R3/4in(DN20)	R3/4in(DN20)

★ Remark: The above designs and specifications are subject to change of product improvement without prior notice.

- Notes:
1. Cooling Capacity: Indoor temperature 27° CDB/19° CWB; Outdoor temperature:35° CDB/24° CWB.
  2. Heating Capacity: Indoor temperature 20° CDB;Outdoor temperature:7° CDB/6° CWB.
  3. Piping Length: Equivalent piping length: 7.5m, level differernce :0m.
  4. Noise Level: The above values are sound pressure levels, measured in semi-anechoic chamber, during actual operation.  
Microphone position: 0.8 Meter below and 1.0 Meter front from bottom of air outlet.
  5. The above designs and specifications are subject to change of product improvement without prior notice.



## INDOOR UNITS CEILING & FLOOR



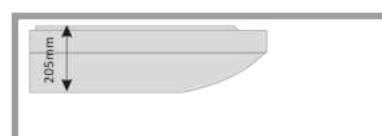
### 1. Dual-direction swing, wide swing angle

- \* Vertical and horizontal swing function make it possible to blow air to every corner of the room.



### 2. Ultra slim design

- \* Thinner. Lighter.



### 3. Flexible installation

- \* Can be vertically installed against the wall or horizontally installed under the ceiling.



### 4. Adjustable fan speed, Innovative centrifugal fan

- \* All units are equipped with 3 speed controlled fan mode, adjust the air flow rate in accordance with the ceiling height.
- \* Innovative centrifugal fan, have larger air volume and lower noise, making the supply air more quiet and smooth.





Indoor Units Ceiling & Floor  
SAVR Series

Specification-50/60Hz DC fan motor

Model	Details	Unit	SAVRCF-H045/R1XF	SAVRCF-H056/R1XF	SAVRCF-H071/R1XF	SAVRCF-H080/R1XF	SAVRCF-H090/R1XF
Capacity	Cooling	kW	4.5	5.6	7.1	8	9
	Heating	kW	5	6.3	8	9	11
Electrical Data	Power Supply	V~,Hz,Ph	220-240V,50/60,1	220-240V,50/60,1	220-240V,50/60,1	220-240V,50/60,1	220-240V,50/60,1
	Rated Power	W	40	40	40	70	70
Performance	Indoor Air Flow (Tu/Hi/Mi/Lo)	m <sup>3</sup> /h	940/895/700/650	940/895/700/650	940/895/700/650	1300/1245/1020/930	1300/1245/1020/930
	Noise Level(Hi/Mid/Low)	dB(A)	42/41/38/37	42/41/38/37	42/41/38/37	43/42/39/38	43/42/39/38
Dimension (W×D×H)	Net	mm	1000×690×235	1000×690×235	1000×690×235	1280×690×235	1280×690×235
	Packing	mm	1080×770×325	1080×770×325	1080×770×325	1360×770×325	1360×770×325
Weight	Net	kg	29	29	29	35.5	35.5
	Gross	kg	33.5	33.5	33.5	41	41
Refrigerant	Type		R410a	R410a	R410a	R410a	R410a
Pipe Diameter	Liquid Side	mm	6.35(1/4)	6.35(1/4)	6.35(1/4)	9.52(3/8)	9.52(3/8)
	Gas Side	mm	12.7(1/2)	12.7(1/2)	12.7(1/2)	15.88(5/8)	15.88(5/8)
	Drainage	mm	R3/4in(DN20)	R3/4in(DN20)	R3/4in(DN20)	R3/4in(DN20)	R3/4in(DN20)

Specification-50/60Hz DC fan motor

Model	Details	Unit	SAVRCF-H112/R1XF	SAVRCF-H125/R1XF	SAVRCF-H140/R1XF
Capacity	Cooling	kW	11.2	12.5	14
	Heating	kW	12.8	14	15
Electrical Data	Power Supply	V~,Hz,Ph	220-240V,50/60,1	220-240V,50/60,1	220-240V,50/60,1
	Rated Power	W	120	120	120
Performance	Indoor Air Flow (Tu/Hi/Mi/Lo)	m <sup>3</sup> /h	2040/1890/1740/1560	2040/1890/1740/1560	2040/1890/1740/1560
	Noise Level(Hi/Mid/Low)	dB(A)	50/49/45/43	50/49/45/43	50/49/45/43
Dimension (W×D×H)	Net	mm	1600×690×235	1600×690×235	1600×690×235
	Packing	mm	1680×770×325	1680×770×325	1680×770×325
Weight	Net	kg	42	42	42
	Gross	kg	49	49	49
Refrigerant	Type		R410a	R410a	R410a
Pipe Diameter	Liquid Side	mm	9.52(3/8)	9.52(3/8)	9.52(3/8)
	Gas Side	mm	15.88(5/8)	15.88(5/8)	15.88(5/8)
	Drainage	mm	R3/4in(DN20)	R3/4in(DN20)	R3/4in(DN20)

★ Remark: The above designs and specifications are subject to change of product improvement without prior notice.

Notes:

- 1. Cooling Capacity: Indoor temperature 27° CDB/19° CWB; Outdoor temperature:35° CDB/24° CWB.
- 2. Heating Capacity: Indoor temperature 20° CDB;Outdoor temperature:7° CDB/6° CWB.
- 3. Piping Length: Equivalent piping length: 7.5m, level difference :0m.
- 4. Noise Level: The above values are sound pressure levels, measured in semi-anechoic chamber, during actual operation.  
Microphone position: 1.0 Meter below and 1.0 Meter front from bottom of air outlet.
- 5. The above designs and specifications are subject to change of product improvement without prior notice.



INTEGRATED AIR & WATER



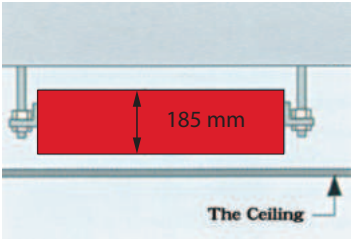


## INDOOR UNITS SLIM DUCT



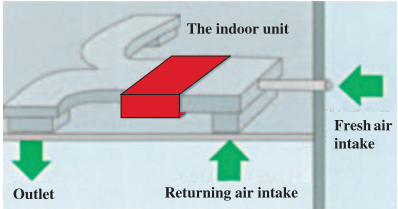
### 1. Ultra slim design

- ★ Thinner, lighter and save much more space.



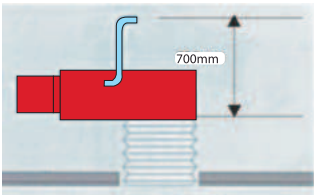
### 2. Fresh air intake

- ★ Reversed fresh air intake hole, it's convenient to connect with air duct.



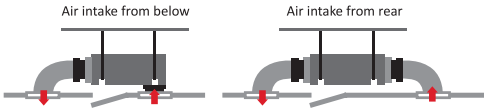
### 3. Built-in water drainage pump (Optional)

- ★ The built-in pump can lift condensing water up to 700mm high from the drainage pan.



### 4. Flexible air intake options

- ★ Air intake from rear as standard, from bottom as optional.
- ★ The size of the plate from bottom is the same as the flange from back, which makes it convenient to change installation style due to different decoration requirement.



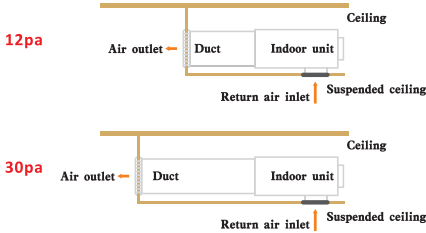
### 5. Standard accessories

- ★ For all models, return air filter is standard.



### 6. ESP adjustable, more comfortable

- ★ Unit has two adjustable ESP :10Pa and 30Pa, users are free to choose based on requirement.



Specification Y Type -50Hz AC fan motor

Model	Details	Unit	SAVRSD-H022/4R1AY	SAVRSD-H028/4R1AY	SAVRSD-H036/4R1AY	SAVRSD-H045/4R1AY	SAVRSD-H056/4R1AY	SAVRSD-H071/4R1AY
Capacity	Cooling	kW	2.2	2.8	3.6	4.5	5.6	7.1
	Heating	kW	2.6	3.2	4	5	6.3	8
Electrical Data	Power Supply	V~,Hz,Ph	220~240,50,1	220~240,50,1	220~240,50,1	220~240,50,1	220~240,50,1	220~240,50,1
	Rated Power	W	25	25	25	35	35	45
Performance	Air Flow Volume(Hi/Mid/Low)	m <sup>3</sup> /h	550/480/390/330	550/480/390/330	600/560/430/390	950/850/730/590	950/850/730/590	1150/1000/810/685
	Noise Level(Hi/Mid/Low)	dB(A)	31/27/25	31/27/25	33/30/27	34/30/28	34/30/28	34/31/30
	Extetal Static Pressure	Pa	30	30	30	30	30	30
Dimension (W×D×H)	Net	mm	700x470x200	700x470x200	700x470x200	1000x470x200	1000x470x200	1300x470x200
	Packing	mm	1005×580×275	1005×580×275	1005×580×275	1305x580x275	1305x580x275	1610x580x275
Weight	Net	kg	18.5	18.5	19	23.5	23.5	29
	Gross	kg	22	22	23	28	28	34
Refrigerant	Type		R410a	R410a	R410a	R410a	R410a	R410a
Pipe Diameter	Liquid Side	mm	6.35(1/4)	6.35(1/4)	6.35(1/4)	6.35(1/4)	6.35(1/4)	9.52(3/8)
	Gas Side	mm	9.52(3/8)	9.52(3/8)	12.7(1/2)	12.7(1/2)	12.7(1/2)	15.88(5/8)
	Drainage	mm	R3/4in(DN20)	R3/4in(DN20)	R3/4in(DN20)	R3/4in(DN20)	R3/4in(DN20)	R3/4in(DN20)

Specification Y Type -50/60Hz DC fan motor

Model	Details	Unit	SAVRSD-H022/R1XY	SAVRSD-H028/R1XY	SAVRSD-H036/R1XY	SAVRSD-H045/R1XY	SAVRSD-H056/R1XY	SAVRSD-H071/R1XY
Capacity	Cooling	kW	2.2	2.8	3.6	4.5	5.6	7.1
	Heating	kW	2.6	3.2	4	5	6.3	8
Electrical Data	Power Supply	V~,Hz,Ph	220~240,50/60,1	220~240,50/60,1	220~240,50/60,1	220~240,50/60,1	220~240,50/60,1	220~240,50/60,1
	Rated Power	W	40	40	40	90	90	110
Performance	Air Flow Volume(Hi/Mid/Low)	m <sup>3</sup> /h	550/480/390/330	550/480/390/330	600/560/430/390	950/850/730/590	950/850/730/590	1150/1000/810/685
	Noise Level(Hi/Mid/Low)	dB(A)	32	32	33	34	34	34
	Extetal Static Pressure	Pa	30	30	30	30	30	30
Dimension (W×D×H)	Net	mm	700x470x200	700x470x200	700x470x200	1000x470x200	1000x470x200	1300x470x200
	Packing	mm	1005×580×275	1005×580×275	1005×580×275	1305x580x275	1305x580x275	1610x580x275
Weight	Net	kg	18.5	18.5	19	23.5	23.5	28.5
	Gross	kg	22	22	22.5	28	28	33
Refrigerant	Type		R410a	R410a	R410a	R410a	R410a	R410a
Pipe Diameter	Liquid Side	mm	6.35(1/4)	6.35(1/4)	6.35(1/4)	6.35(1/4)	6.35(1/4)	9.52(3/8)
	Gas Side	mm	9.52(3/8)	9.52(3/8)	12.7(1/2)	12.7(1/2)	12.7(1/2)	15.88(5/8)
	Drainage	mm	R3/4in(DN20)	R3/4in(DN20)	R3/4in(DN20)	R3/4in(DN20)	R3/4in(DN20)	R3/4in(DN20)

★ Remark: The above designs and specifications are subject to change of product improvement without prior notice.

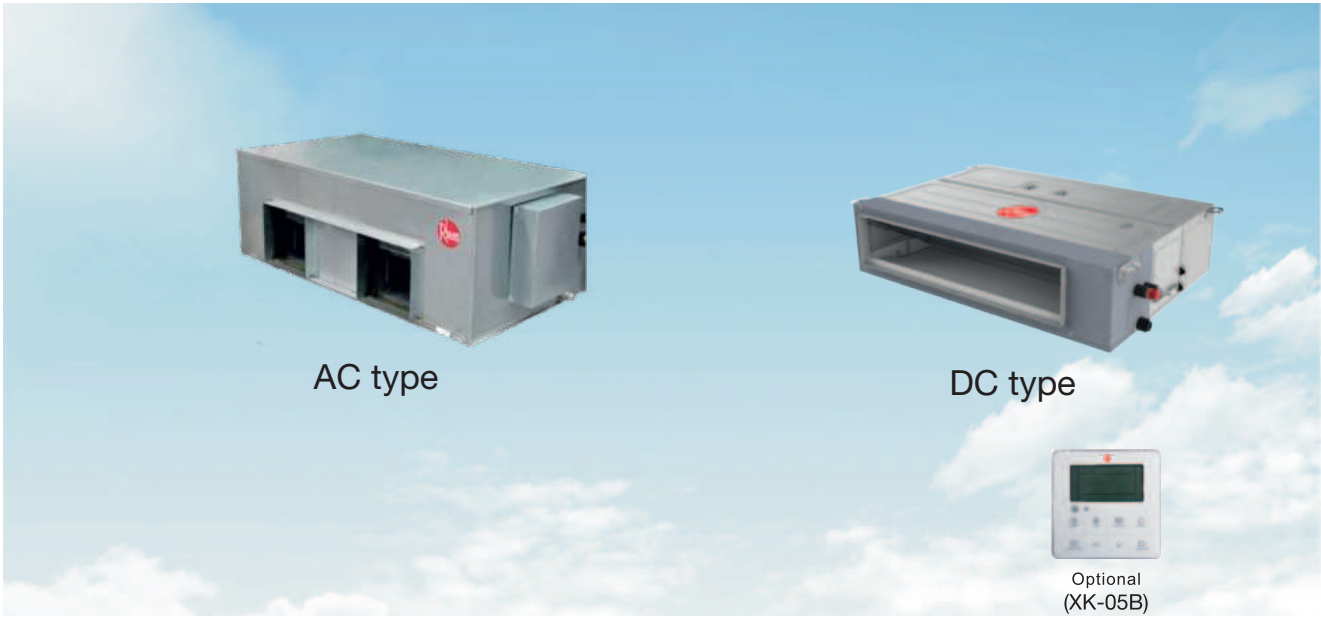
Notes:

1. Cooling Capacity: Indoor temperature 27° CDB/19° CWB; Outdoor temperature:35° CDB/24° CWB.
2. Heating Capacity: Indoor temperature 20° CDB;Outdoor temperature:7° CDB/6° CWB.
3. Piping Length: Equivalent piping length: 7.5m, level differnce :0m.
4. Noise Level: The above values are sound pressure levels, measured in semi-anechoic chamber, during actual operation.
- Microphone position: 1.4 Meter below the unit along center of unit with 2 meter supply and 2 meter return air duct and rated external static pressure adjusted.
5. The above designs and specifications are subject to change of product improvement without prior notice.
6. For SD units the default ESP is 30Pa



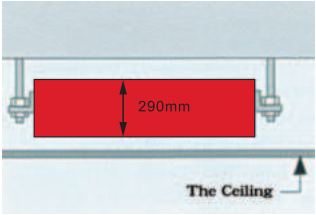
INTEGRATED AIR & WATER

# INDOOR UNIT MEDIUM ESP DUCT



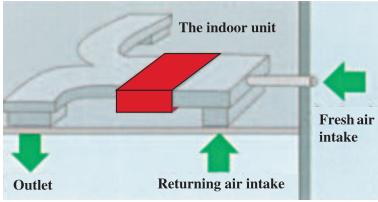
### 1. Ultra slim design

Thinner. Lighter.



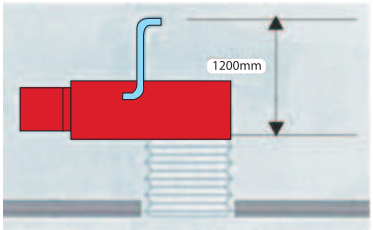
### 2. Fresh air intake

- ★ Reversed fresh air intake hole, it's convenient to connect with air duct.



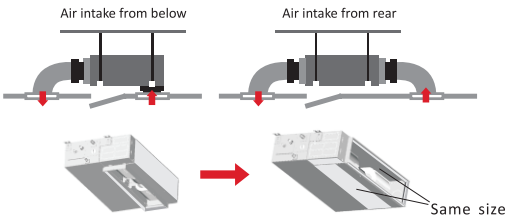
### 3. Built-in water drainage pump (Optional)

The built-in pump can lift condensing water up to 1200mm high from the drainage pan.



### 4. Flexible air intake options

- ★ Air intake from rear as standard, from bottom as optional.
- ★ The size of the plate from bottom is the same as the flange from back, which makes it convenient to change installation style due to different decoration requirement.



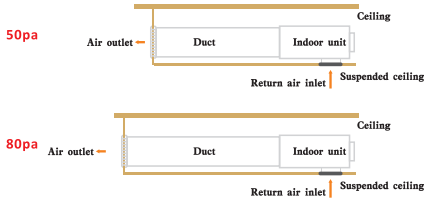
### 5. Standard accessories

- ★ For all models, return air filter is standard.



### 6. EPS adjustable. more comfortable

- ★ Unit has two adjustable ESP: 50Pa and 80Pa, users are free to choose based on requirement.





Specification-50Hz AC fan motor

Model	Details	Unit	SAVRMD-H045/4R1AM	SAVRMD-H056/4R1AM	SAVRMD-H071/4R1AM	SAVRMD-H080/4R1AM	SAVRMD-H090/4R1AM
Capacity	Cooling	kW	4.5	5.6	7.1	8	9
	Heating	kW	5.6	6.3	8	9.5	10
Electrical Data	Power Supply	V~,Hz,Ph	220~240,50,1	220~240,50,1	220~240,50,1	220~240,50,1	220~240,50,1
	Rated Power	W	215	215	215	215	220
Performance	Air Flow Volume(Hi/Mid/Low)	m <sup>3</sup> /h	1080/950/780/670	1080/950/780/670	13100/1200/1000/840	1580/1500/1200/1050	1580/1500/1200/1050
	Noise Level(Hi/Mid/Low)	dB(A)	42/39/36	42/39/36	43/40/37	43/40/37	44/41/38
	Extetal Static Pressure	Pa	80	80	80	80	80
Dimension (W×D×H)	Net	mm	1000x700x245	1000x700x245	1000x700x245	1000x700x245	1000x700x245
	Packing	mm	1230*830*300	1230*830*300	1230*830*300	1230*830*300	1230*830*300
Weight	Net	kg	30	30	30	30	32
	Gross	kg	36	36	36	36	38
Refrigerant	Type		R410a	R410a	R410a	R410a	R410a
Pipe Diameter	Liquid Side	mm	9.52	9.52	9.52	9.52	9.52
	Gas Side	mm	15.88	15.88	15.88	15.88	15.88
	Drainage	mm	R3/4in(DN20)	R3/4in(DN20)	R3/4in(DN20)	R3/4in(DN20)	R3/4in(DN20)

Specification-50Hz AC fan motor

Model	Details	Unit	SAVRMD-H100/4R1AM	SAVRMD-H112/4R1AM	SAVRMD-H125/4R1AM	SAVRMD-H140/4R1AM	SAVRMD-H150/4R1AM
Capacity	Cooling	kW	10	11.2	12.5	14	15
	Heating	kW	11.2	12.5	14	15.5	16.5
Electrical Data	Power Supply	V~,Hz,Ph	220~240,50,1	220~240,50,1	220~240,50,1	220~240,50,1	220~240,50,1
	Rated Power	W	220	310	310	310	310
Performance	Air Flow Volume(Hi/Mid/Low)	m <sup>3</sup> /h	1580/1500/1200/1050	2100/2000/1700/1500	2100/2000/1700/1500	2100/2000/1700/1500	2290/2000/1870/1660
	Noise Level(Hi/Mid/Low)	dB(A)	44/41/38	45/42/39	45/42/39	45/42/39	46/43/40
	Extetal Static Pressure	Pa	80	80	80	80	80
Dimension (W×D×H)	Net	mm	1000x700x245	1400×700×245	1400×700×245	1400×700×245	1400×700×245
	Packing	mm	1230*830*300	1630x830x300	1630x830x300	1630x830x300	1630x830x300
Weight	Net	kg	32	43	43	43	43
	Gross	kg	38	50	50	50	50
Refrigerant	Type		R410a	R410a	R410a	R410a	R410a
Pipe Diameter	Liquid Side	mm	9.52	9.52	9.52	9.52	9.52
	Gas Side	mm	15.88	15.88	15.88	15.88	15.88
	Drainage	mm	R3/4in(DN20)	R3/4in(DN20)	R3/4in(DN20)	R3/4in(DN20)	R3/4in(DN20)

★ Remark: The above designs and specifications are subject to change of product improvement without prior notice.

- Notes:
1. Cooling Capacity: Indoor temperature 27° CDB/19° CWB; Outdoor temperature:35° CDB/24° CWB.
  2. Heating Capacity: Indoor temperature 20° CDB;Outdoor temperature:7° CDB/6° CWB.
  3. Piping Length: Equivalent piping length: 7.5m, level differernce :0m.
  4. Noise Level: The above values are sound pressure levels, measured in semi-anechoic chamber, during actual operation.  
Microphone position: 1.4 Meter below the unit along center of unit with 2 meter supply and 2 meter return air duct and rated external static pressure adjusted.
  5. The above designs and specifications are subject to change of product improvement without prior notice.
  6. For MD units the default ESP is 50Pa







Specification-50/60Hz DC fan motor

Model	Details	Unit	SAVRMD-H045/R1XM	SAVRMD-H056/R1XM	SAVRMD-H071/R1XM	SAVRMD-H080/R1XM	SAVRMD-H090/R1XM
Capacity	Cooling	kW	4.5	5.6	7.1	8	9
	Heating	kW	5.6	6.3	8	9	10
Electrical Data	Power Supply	V~,Hz,Ph	220~240,50/60,1	220~240,50/60,1	220~240,50/60,1	220~240,50/60,1	220~240,50/60,1
	Rated Power	W	110	110	125	125	150
Performance	Air Flow Volume(Hi/Mid/Low)	m <sup>3</sup> /h	1000/950/850/700	1000/950/850/700	1680/1350/1100/950	1680/1350/1100/950	1710/1400/1120/950
	Noise Level(Hi/Mid/Low)	dB(A)	39/37/35	39/37/35	40/38/36	41/39/37	41/39/37
	Extetal Static Pressure	Pa	80	80	80	80	80
Dimension (WXDXH)	Net	mm	1000x700x245	1000x700x245	1000x700x245	1000x700x245	1000x700x245
	Packing	mm	1230*830*300	1230*830*300	1230*830*300	1230*830*300	1230*830*300
Weight	Net	kg	30	30	30	30	32
	Gross	kg	36	36	36	36	38
Refrigerant	Type		R410a	R410a	R410a	R410a	R410a
Pipe Diameter	Liquid Side	mm	9.52	9.52	9.52	9.52	9.52
	Gas Side	mm	15.88	15.88	15.88	15.88	15.88
	Drainage	mm	R3/4in(DN20)	R3/4in(DN20)	R3/4in(DN20)	R3/4in(DN20)	R3/4in(DN20)

Specification-50/60Hz DC fan motor

Model	Details	Unit	SAVRMD-H100/R1XM	SAVRMD-H112/R1XM	SAVRMD-H125/R1XM	SAVRMD-H140/R1XM	SAVRMD-H150/R1XM
Capacity	Cooling	kW	10	11.2	12.5	14	15
	Heating	kW	11.2	12.5	14	16	17
Electrical Data	Power Supply	V~,Hz,Ph	220~240,50/60,1	220~240,50/60,1	220~240,50/60,1	220~240,50/60,1	220~240,50/60,1
	Rated Power	W	150	230	230	230	250
Performance	Air Flow Volume(Hi/Mid/Low)	m <sup>3</sup> /h	1710/1400/1200/950	2200/2000/1700/1500	2200/2000/1700/1500	2400/2200/1900/1700	2400/2200/1900/1700
	Noise Level(Hi/Mid/Low)	dB(A)	42/40/38	44/42/40	44/42/40	44/42/40	45/43/41
	Extetal Static Pressure	Pa	80	80	80	80	80
Dimension (WXDXH)	Net	mm	1000x700x245	1400×700×245	1400×700×245	1400×700×245	1400×700×245
	Packing	mm	1230*830*300	1630x830x300	1630x830x300	1630x830x300	1630x830x300
Weight	Net	kg	32	41	41	41	41
	Gross	kg	38	48	48	48	48
Refrigerant	Type		R410a	R410a	R410a	R410a	R410a
Pipe Diameter	Liquid Side	mm	9.52	9.52	9.52	9.52	9.52
	Gas Side	mm	15.88	15.88	15.88	15.88	15.88
	Drainage	mm	R3/4in(DN20)	R3/4in(DN20)	R3/4in(DN20)	R3/4in(DN20)	R3/4in(DN20)

★ Remark: The above designs and specifications are subject to change of product improvement without prior notice.

Notes:

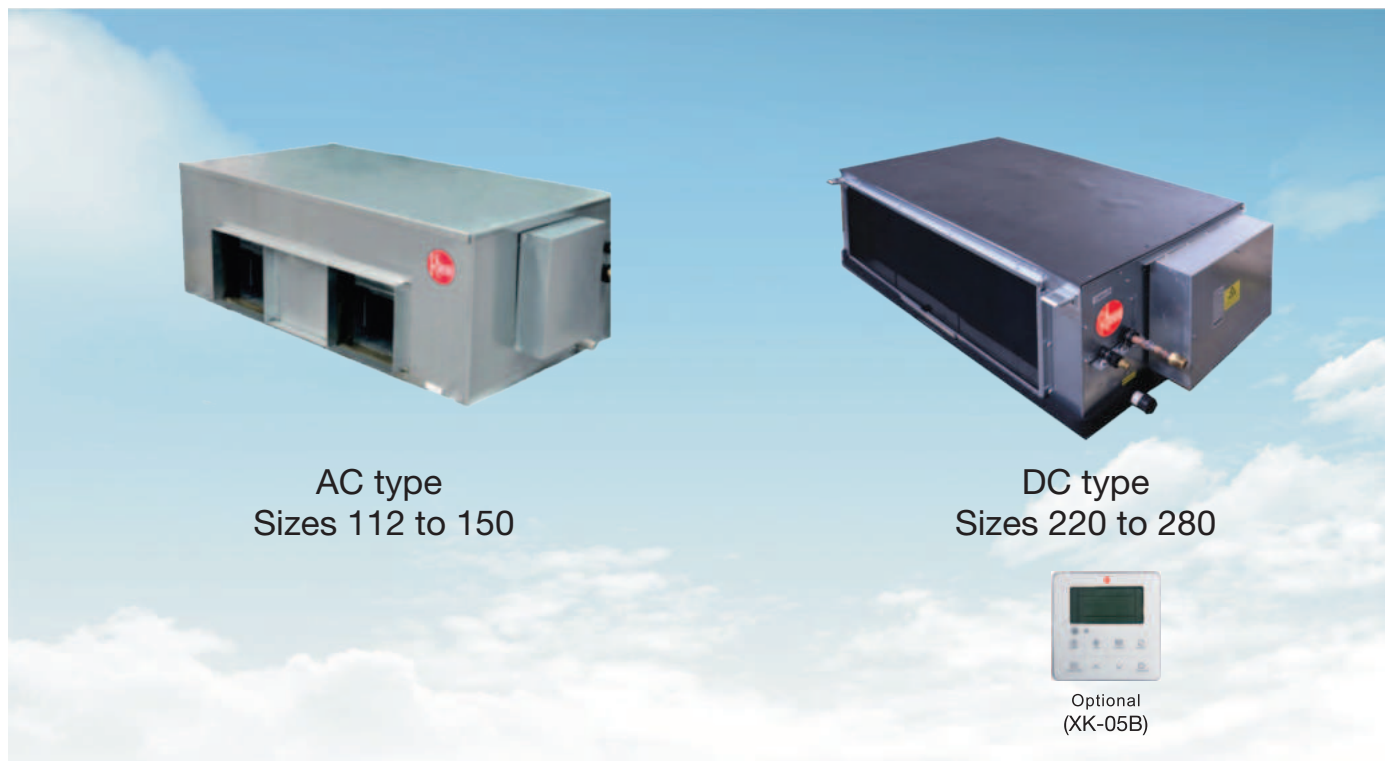
1. Cooling Capacity: Indoor temperature 27° CDB/19° CWB; Outdoor temperature:35° CDB/24° CWB.
2. Heating Capacity: Indoor temperature 20° CDB;Outdoor temperature:7° CDB/6° CWB.
3. Piping Length: Equivalent piping length: 7.5m, level differernce :0m.
4. Noise Level: The above values are sound pressure levels, measured in semi-anechoic chamber, during actual operation.

Microphone position: 1.4 Meter below the unit along center of unit with 2 meter supply and 2 meter return air duct and rated external static pressure adjusted.

5. The above designs and specifications are subject to change of product improvement without prior notice.
6. For MD units the default ESP is 50Pa



## INDOOR UNITS HIGH ESP DUCT

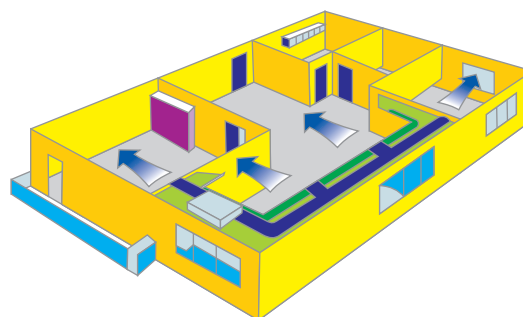
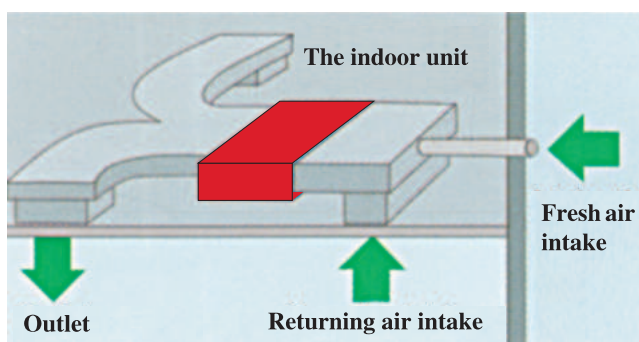


### 1. Fresh air intake

- ★ Reversed fresh air intake hole, it's convenient to connect with air duct.

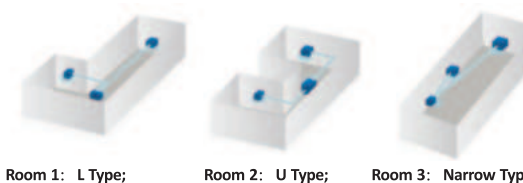
### 2. High ESP design, long distance air supply

- ★ High ESP makes the longest air supply distance reach 16m and the highest distance 6.5m.



### 3. Applicable to a variety of room type

- ★ Specific ESP design can be applied to various room type easily, like rooms with L type or U type; the air outlet can be set separately from the indoor unit, so the air flow can be equally distributed even the room is in irregular structure.



Specification-50Hz AC fan motor

Model	Details	Unit	SAVRHD-H112/4R1A	SAVRHD-H125/4R1A	SAVRHD-H140/4R1A	SAVRHD-H150/4R1A
Capacity	Cooling	kW	11.2	12.5	14	15
	Heating	kW	12.8	13.3	15	16
Electrical Data	Power Supply	V~,Hz,Ph	220~240,50,1	220~240,50,1	220~240,50,1	220~240,50,1
	Rated Power	W	600	600	600	600
Performance	Air Flow Volume(Hi/Mid/Low)	m <sup>3</sup> /h	20001400/1600/	20001400/1600/	20001400/1600/	20001400/1600/
	Noise Level(Hi/Mid/Low)	dB(A)	6051/57/	6051/57/	6051/57/	6051/57/
	External Static Pressure	Pa	196	196	196	196
Dimension (WxDXH)	Net	mm	1200x719x380	1200x719x380	1200x719x380	1200x719x380
	Packing	mm	1235x760x415	1235x760x415	1235x760x415	1235x760x415
Weight	Net	kg	56	56	56	56
	Gross	kg	59	59	59	59
Refrigerant	Type		R410a	R410a	R410a	R410a
Pipe Diameter	Liquid Side	mm	9.52	9.52	9.52	9.52
	Gas Side	mm	19.05	19.05	19.05	19.05
	Drainage	mm	R3/4in(DN20)	R3/4in(DN20)	R3/4in(DN20)	R3/4in(DN20)

Specification-50/60Hz DC fan motor

Model	Details	Unit	SAVRHD-H220/R1X	SAVRHD-H280/R1X
Capacity	Cooling	kW	22.4	28
	Heating	kW	25	31.5
Electrical Data	Power Supply	V~,Hz,Ph	60,1/240,50~220	60,1/240,50~220
	Rated Power	W	1200	1200
Performance	Air Flow Volume(Turbo/Hi/Mid/Low)	m <sup>3</sup> /h	3154/3621/4160/4400	3154/3621/4160/4400
	Noise Level(Hi/Mid/Low)	dB(A)	57	57
	External Static Pressure	Pa	250-30)170)	250-30)170)
Dimension (WxDXH)	Net	mm	1388x715x480	1388x715x480
	Packing	mm	1540x810x610	1540x810x610
Weight	Net	kg	99	99
	Gross	kg	120	120
Refrigerant	Type		R410a	R410a
Pipe Diameter	Liquid Side	mm	2/1)12.7)	2/1)12.7)
	Gas Side	mm	8/7)22.2)	8/7)22.2)
	Drainage	mm	OD33.5	OD33.5

★ Remark: The above designs and specifications are subject to change of product improvement without prior notice.

Notes:

1. Cooling Capacity: Indoor temperature 27° CDB/19° CWB; Outdoor temperature:35° CDB/24° CWB.

2. Heating Capacity: Indoor temperature 20° CDB;Outdoor temperature:7° CDB/6° CWB.

3. Piping Length: Equivalent piping length: 7.5m, level differernce :0m.

4. Noise Level: The above values are sound pressure levels, measured in semi-anechoic chamber, during actual operation.

Microphone position: 1.4 Meter below the unit along center of unit with 2 meter supply and 2 meter return air duct and rated external static pressure adjusted.

5. The above designs and specifications are subject to change of product improvement without prior notice.

6: For HD units 112 to 150 default ESP is 196

For HD units 280 & 220 default ESP is 170

FRESH AIR UNIT(FA)



Specification-50/60Hz DC fan motor

Model	Details	Unit	SAVRFA-H220/R1X	SAVRFA-H280/R1X
Capacity	Cooling	kW	22.4	28
	Heating	kW	18	22
Electrical Data	Power Supply	V~,Hz,Ph	220~240,5060,1/	220~240,5060,1/
	Rated Power	W	900	900
Performance	Air Flow Volume(Hi/Mid/Low)	m <sup>3</sup> /h	3200	3200
	Noise Level(Hi/Mid/Low)	dB(A)	55	55
	Extetal Static Pressure	Pa	220	220
Dimension (WDXH)	Net	mm	1388x715x480	1388x715x480
	Packing	mm	1540x810x610	1540x810x610
Weight	Net	kg	99	99
	Gross	kg	120	120
Refrigerant	Type		R410a	R410a
Pipe Diameter	Liquid Side	mm	12.7(12/)	12.7(12/)
	Gas Side	mm	22.2(78/)	22.2(78/)
	Drainage	mm	OD33.5	OD33.5

Remark: The above designs and specifications are subject to change of product improvement without prior notice.

- Notes:
1. Cooling Capacity: Indoor temperature 27° CDB/19° CWB; Outdoor temperature:35° CDB/24° CWB.
  2. Heating Capacity: Indoor temperature 20° CDB;Outdoor temperature:7° CDB/6° CWB.
  3. For FA units 280 & 220 default ESP is 220Pa





The new degree of comfort.®



*In keeping with its policy of continuous progress and product improvement, Rheem reserves the right to make changes without notice.*

**RMEA Manufacturing LLC**  
Onyx 2, Level P3, Offices 301-304  
The Greens, P.O. Box 371045, Dubai, UAE  
D: +97142305100 C: +971557544745



INTEGRATED AIR & WATER

SAVR-T3-50Hz-Kuwait-2023-Rev1

