AKAI

SERVICE MANUAL

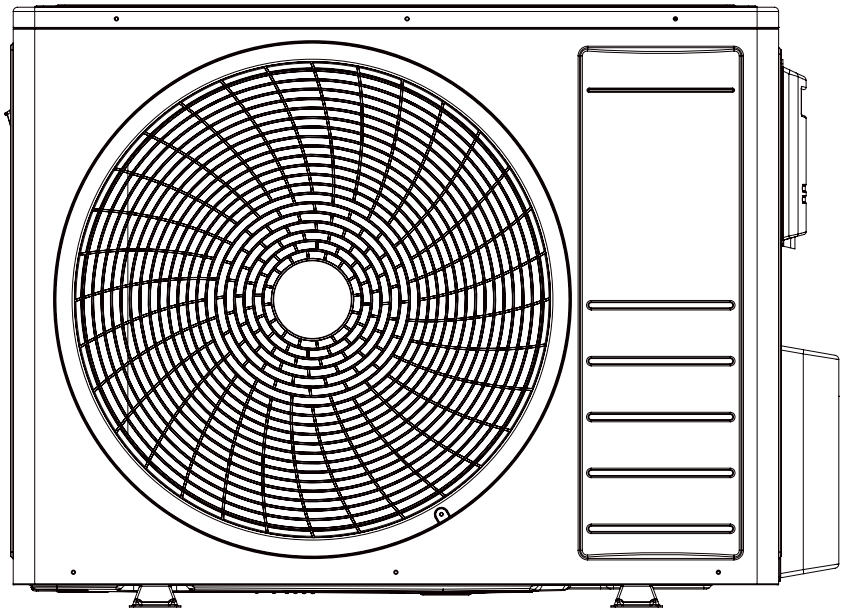
MODELS:
MISTRAL912Dual-R32-K
(Refrigerant R32)

CONTENT

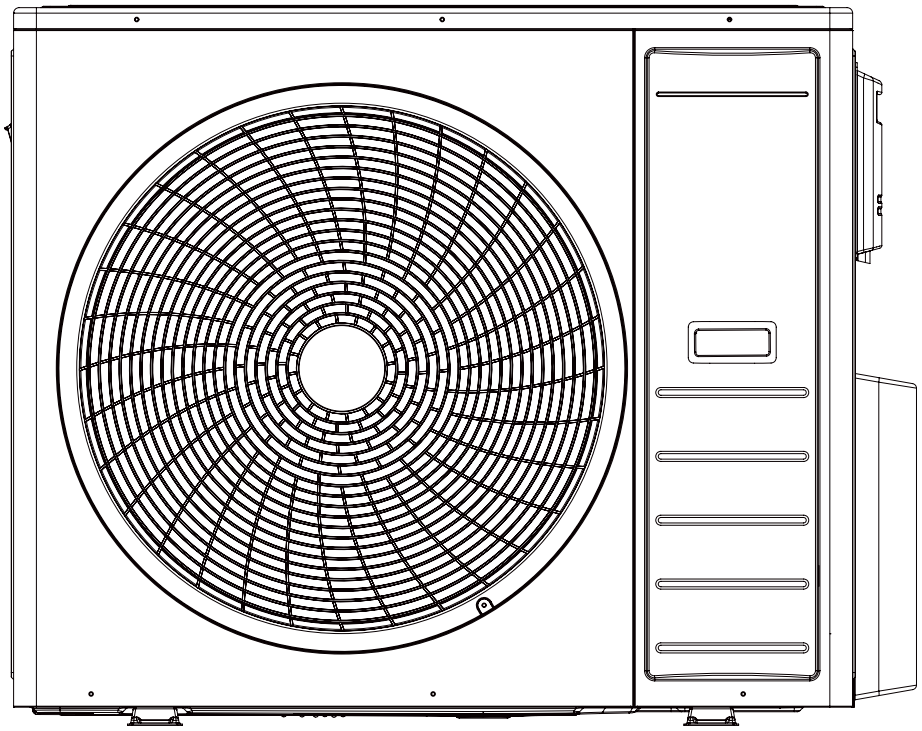
1. Summary and Features 1
2. Safety Precautions 2
3. Specifications 4
   3.1 Unit Specifications 4
   3.2 Operation Characteristic Curve 6
   3.3 Capacity Variation Ratio According to Temperature 6
   3.4 Noise Curve 7
4. Construction Views 8
   4.1 Outdoor Unit 8
5. Refrigerant System Diagram 10
6. Schematic Diagram 10
   6.1 Electrical Wiring 10
7. Installation Manual 12
   7.1 Standard Accessory Parts 12
   7.2 Safety operation of flammable refrigerant 13
   7.3 Installation Location and Matters Needing Attention 15
   7.4 Test operation 23
8. Exploded Views and Parts List 24
   8.1 Outdoor Unit 24
9. Troubleshooting 28
   9.1 PCB Printed Diagram 28
10. Removal Procedure 30
   10.1 Removal Procedure of Outdoor Unit(18K) 30
   10.2 Removal Procedure of Outdoor Unit(24K) 36

1. Summary and Features

Outdoor Unit



MISTRAL912Dual-R32-K



SUV3-H24/3CGA-N

2. Safety Precautions

Installing, starting up, and servicing air conditioner can behazardous due to system pressure, electrical components, and equipment location, etc.Only trained, qualified installers and service personnel areallowed to install, start-up, and service this equipment.Untrained personnel can perform basic maintenance fun-ctions such as cleaning coils. All other operations should be performed by trained service personnel.When handling the equipment, observe precautions in themanual and on tags, stickers, and labels attached to theequipment. Follow all safety codes. Wear safety glasses andwork gloves. Keep quenching cloth and fire extinguisher nearby when brazing.Read the instructions thoroughly and follow all warnings orcautions in literature and attached to the unit. Consult localbuilding codes and current editions of national as well as local electrical codes.

Recognize the following safety information:

⚠ Warning

Incorrect handling could result inpersonal injury or death.

⚠ Caution

Incorrect handling may result inminor injury,or damage to product or property.

- ◆ Make sure the outdoor unit is installed on a stable, level surface with no accumulation of snow, leaves, or trash beside.
- ◆ Make sure the ceiling/wall is strong enough to bear the weight of the unit.
- ◆ Make sure the noise of the outdoor unit does not disturb neighbors.
- ◆ Follow all the installation instructions to minimize the risk of damage from earth quakes, typhoons or strong winds.
- ◆ Avoid contact between refrigerant and fire as it generate spoisonous gas.
- ◆ Apply specified refrigerant only. Never have it mixed with any other refrigerant. Never have air remain in the refrigerant line as it may lead to rupture and other hazards.
- ◆ Make sure no refrigerant gas is leaking out when installation is completed.
- ◆ Should there be refrigerant leakage, the density of refrigerant in the air shall in no way exceed its limited value, or it may lead to explosion.
- ◆ Keep your fingers and clothing away from any moving parts.
- ◆ Clear the site after installation. Make sure no foreign objects are left in the unit.
- ◆ Always ensure effective grounding for the unit.

⚠ Warning

All electric work must be performed by a licensed technician according to local regulations and the instructions given in this manual.

Before installing, modifying, or servicing system, mainelectrical disconnect switch must be in the OFF position. There may be more than 1 disconnect switch. Lock out and tag switch with a suitable warning label.

Never supply power to the unit unless all wiring and tubing are completed, reconnected and checked.

This system adopts highly dangerous electrical voltage. Incorrect connection or inadequate grounding can cause personal injury or death. Stick to the wiring diagram and all the instructions when wiring.

Have the unit adequately grounded in accordance with local electrical codes.

Have all wiring connected tightly. Loose connection may lead to overheating and a possible fire hazard.

All installation or repair work shall be performed by your dealer or a specialized subcontractor as there is the risk of fire, electric shock, explosion or injury.

⚠ Caution

Never install the unit in a place where a combustible gas might leak, or it may lead to fire or explosion.

Make a proper provision against noise when the unit is installed at a telecommunication center or hospital.

Provide an electric leak breaker when it is installed in a watery place.

Never wash the unit with water.

Handle unit transportation with care. The unit should not be carried by only one person if it is more than 20kg.

Never touch the heat exchanger fins with bare hands.

Never touch the compressor or refrigerant piping without wearing glove.

Do not have the unit operate without air filter.

Should any emergency occur, stop the unit and disconnect the power immediately.

Properly insulate any tubing running inside the room to prevent the water from damaging the wall.

Please read this operating manual carefully before operating the unit

 Appliance filled with flammable gas R32.

 Before use the appliance,read the ower's manual first.

 Before install the appliance,read the installation manual first.

 Before repair the appliance,read the service manual first.

The figures in this manual may be diffrerent with the material objects, please refer to the material objects for reference .

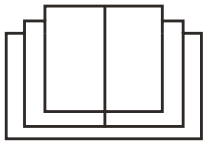
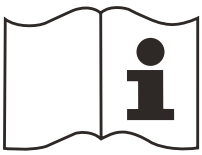
The Refrigerant

To realize the function of the air conditioner unit, a special refrigerant circulates in the system.The used refrigerant is the fluoride R32,which is specially cleaned.The refrigerant is flammable and inodorous. Furthermore,it can leads to explosion under certain condition.But the flammability of the refrigerant is very low. It can be ignited only by fire.

Compared to common refrigerants, R32 is a nonpolluting refrigerant with no harm to the ozonosphere.The influence upon the greenhouse effect is also lower. R32 has got very good thermodynamic features which leads to a really high energy efficiency. The units therefore need a less filling.

WARNING:

Do not use means to accelerate the defrosting process or to clean, other than those recommended by the manufacture.Should repair be necessary, contact your nearest authorized Service Center.
Any repair carried out by unqualified personnel may be dangerous.
The appliance shall be stored in a room without continuously operating ignition sources.
(For example: open flames, an operating gas or an operating electric heater.)
Do not pierce or burn.
Appliance shall be installed, operated and stored in a room with a floor area larger than "X"m^2(see table 2).(only applies to appliances that are not fixed applicences).
Appliance filled with flammable gas R32. For repairs, strictly follow manufacturer's instruntions only.
Be aware that refrigerants not contain odour.
Read specialist’s manual.


3. Specifications

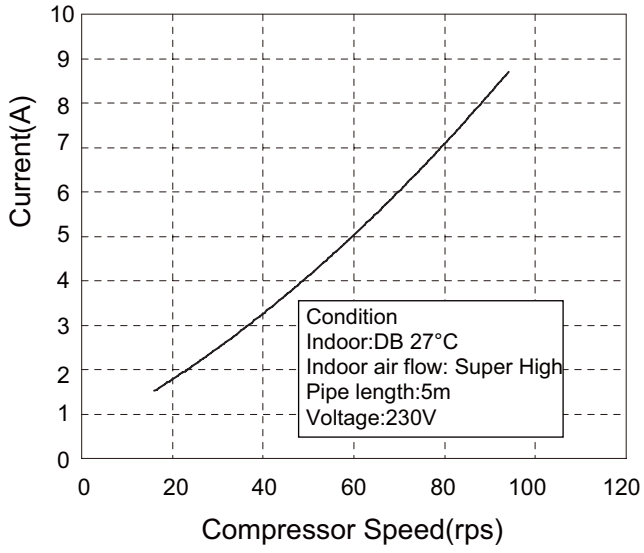
3.1 Unit Specifications

Model	—	**MISTRAL912Dual-R32-K**
Product Code	—	KEJ001W0170
Cooling Capacity	KW	5.20
Heating Capacity	KW	5.20
EER	W/W	3.71
COP	W/W	4.16
SEER	/	6.10
SCOP(Average)	/	4.00
Energy Class	/	A++/A+
Sound Pressure Level	dB(A)	54
Sound Power Level	dB(A)	62
Rated Voltage	V	220-240
Rated Frequency	Hz	50
Phases	/	1
Min/Max. Voltage	V~	184/264
Cross-sectional Area of Power Cable Conductor	mm^2	1.50
Recommended Power Cable(Core)	/	3
Fuse Current	A	16
Cooling Power Input	KW	1.40
Heating Power Input	KW	1.25
Cooling Rated Power Input	KW	2.50
Heating Rated Power Input	KW	2.25
Cooling Current Input	A	6.21
Heating Current Input	A	5.55
Cooling Rated Current Input	A	11.09
Heating Rated Current Input	A	9.98
Compressor Trademark	/	PANASONIC
Compressor Manufacturer	/	PANASONIC WANBAO APPLIANCES COMPRESSOR (GUANGZHOU) CO.,LTD.
Compressor Model	/	9RD132ZAA21
Compressor Type1	/	Inverter Rotary
Compressor Capacity	W	3615
Compressor Power Input	W	1330
Compressor Rated Load Amp (RLA)	A	6.7
Compressor Locked Rotor Amp (L.R.A)	A	23
Compressor Thermal Protector	/	KSD301-11.5/10BC22X2-S4
Compressor Crankcase	W	20
Chassis Electrical Heater Power Input	W	72
Chassis Electrical Heater Current	A	0.32

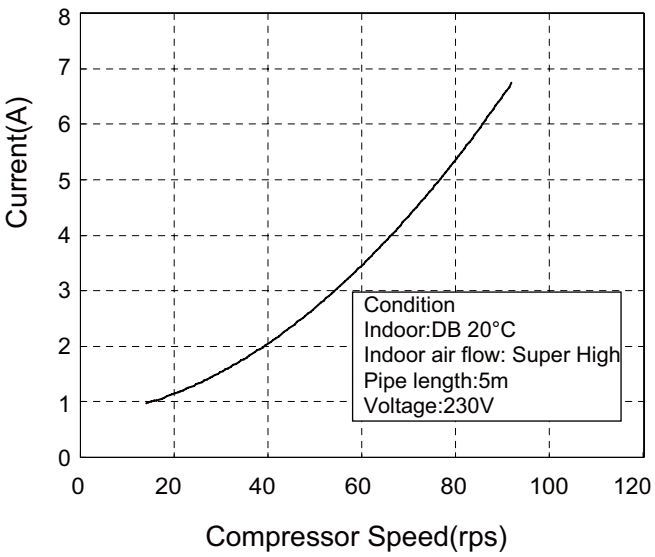
Model	-	**SUV2-H18/1CFA-N**	**SUV3-H24/3CGA-N**
Fan Type	/	**Axial-flow**	**Axial-flow**
Fan Diameter-height	mm	522-140	550-124
Fan Diameter-height	inch	20.6-5.5	21.6-4.9
Motor Model	/	SGW60M-ZL	SGW120M-ZL
Motor Type	/	DC motor	DC motor
Motor Insulation Class	/	E	E
Motor Safe Class	/	IP44	IP44
Motor Full Load Amp(FLA)	A	1.03	0.96
Fan Motor Type	/	DC motor	DC motor
Fan Motor Speed	rpm	750	750
Fan Motor Power Output	W	60	120
Fan Motor Power Input	W	85	165
Condenser Material	/	Aluminum Fin-copper Tube	Aluminum Fin-copper Tube
Condenser Face Area	m^2	0.55	0.73
Condenser Pipe Diameter	mm	φ7	φ7
Condenser Number of Rows	/	2	2
Condenser Tube Pitch(a)×Row Pitch(b)	mm	22×19.05	22×19.05
Condenser Fin Pitch	mm	1.4	1.4
Condenser Length(L) × Height(H) × Width(W)	mm	875×660×38.1	970×748×38.1
Permissible Excessive Operating Pressure for the Discharge Side	MPa	4.3	4.3
Permissible Excessive Operating Pressure for the Suction Side	MPa	2.5	2.5
Cooling Operation Ambient Temperature Range	℃	-15~55	-15~55
Heating Operation Ambient Temperature Range	℃	-20 ～ 30	-20~30
Maximum drive IDU NO.	unit	2	3
Defrosting Method	/	Automatic Defrosting	Automatic Defrosting
Isolation	/	I	I
Moisture Protection	/	IP24	IP24
Overload Protector	/	/	/
Climate Type	/	T1	T1
Refrigerant	/	R32	R32
Refrigerant Charge	kg	1.10	1.50
Throttling Method	/	Electron expansion valve	Electron expansion valve
Dimension of Outline(W)	mm	960	990
Dimension of Outline(D)	mm	396	426
Dimension of Outline(H)	mm	700	790
Connection Pipe Max. Height Distance (indoor and indoor)	m	5	5
Max. equivalent connection pipe length (outdoor to last indoor)	m	10	20
Connection Pipe Max. Length Distance (total lenght)	m	20	60

3.2 Operation Characteristic Curve

Cooling



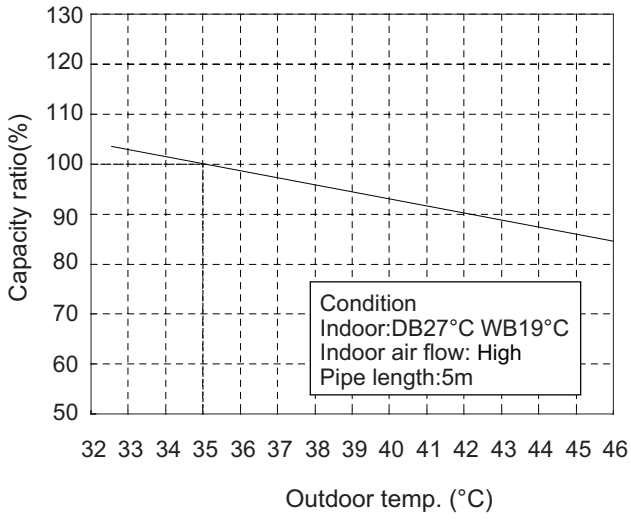
Heating



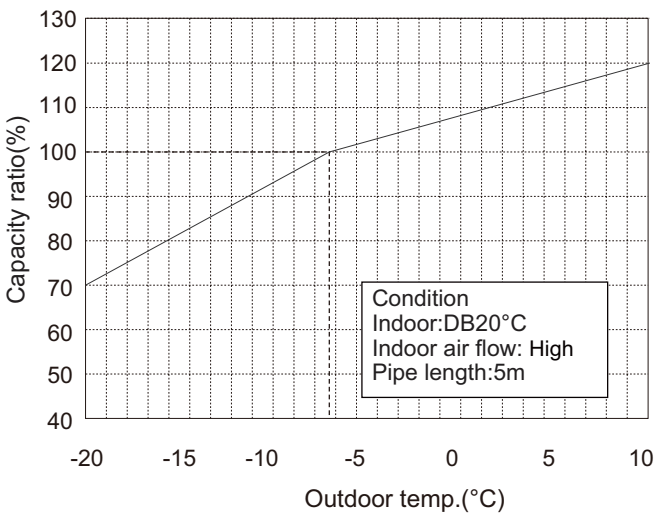
3.3 Capacity Variation Ratio According to Temperature

Heating operation ambient temperature range is -20ºC~24ºC

Cooling

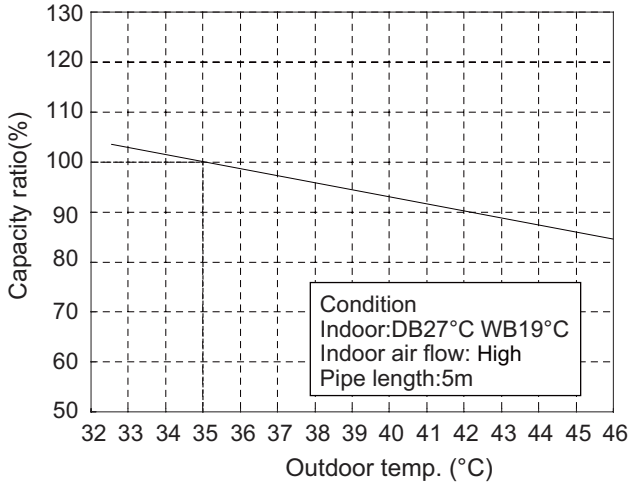


Heating

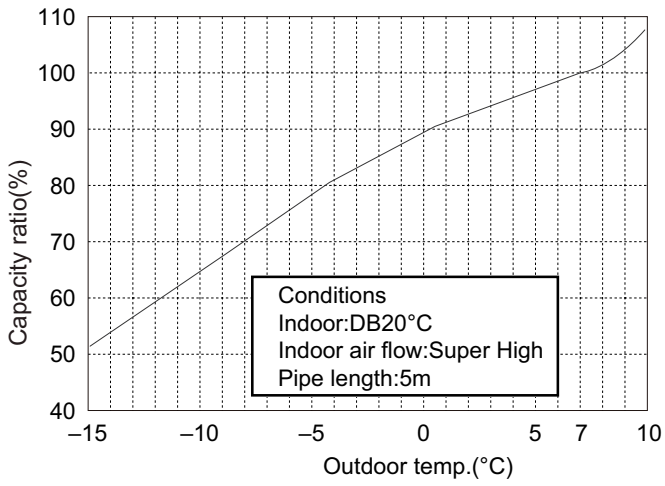


Heating operation ambient temperature range is -15ºC~24ºC

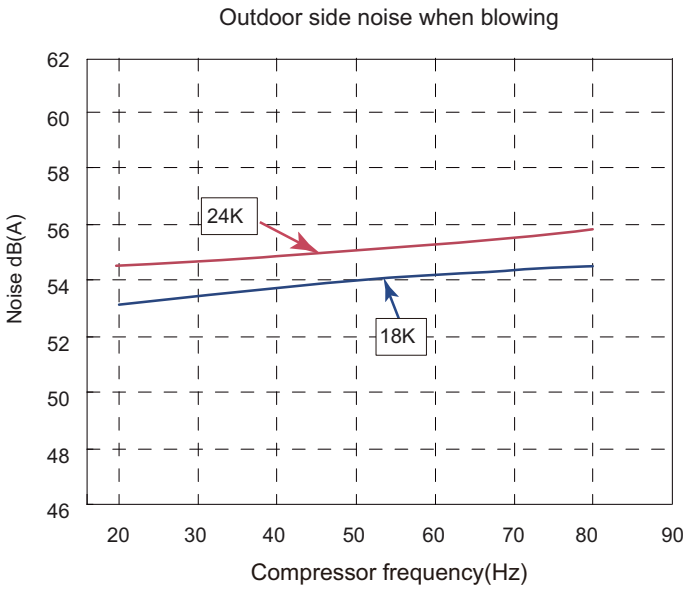
Cooling



Heating



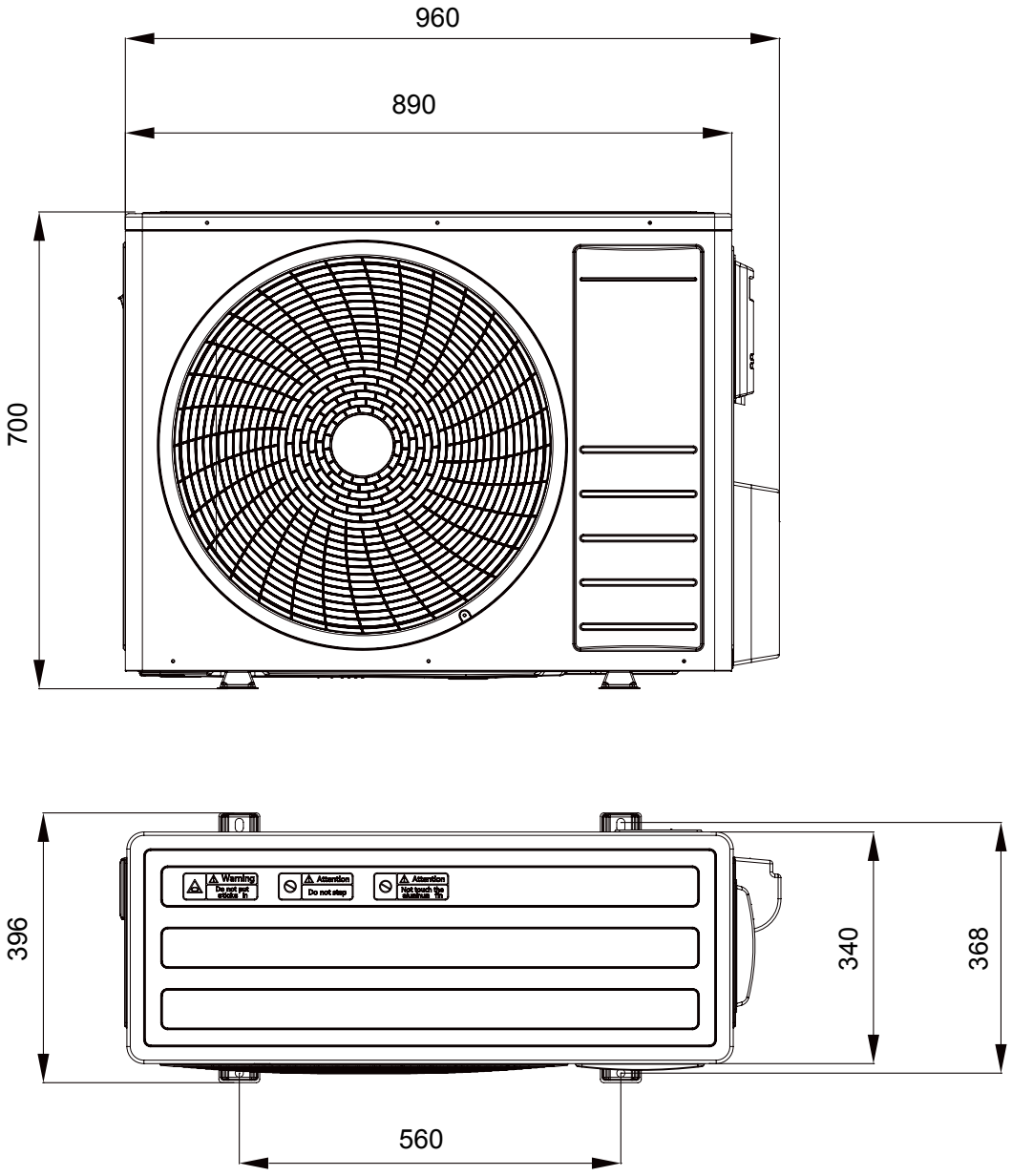
3.4 Noise Curve



4. Construction Views

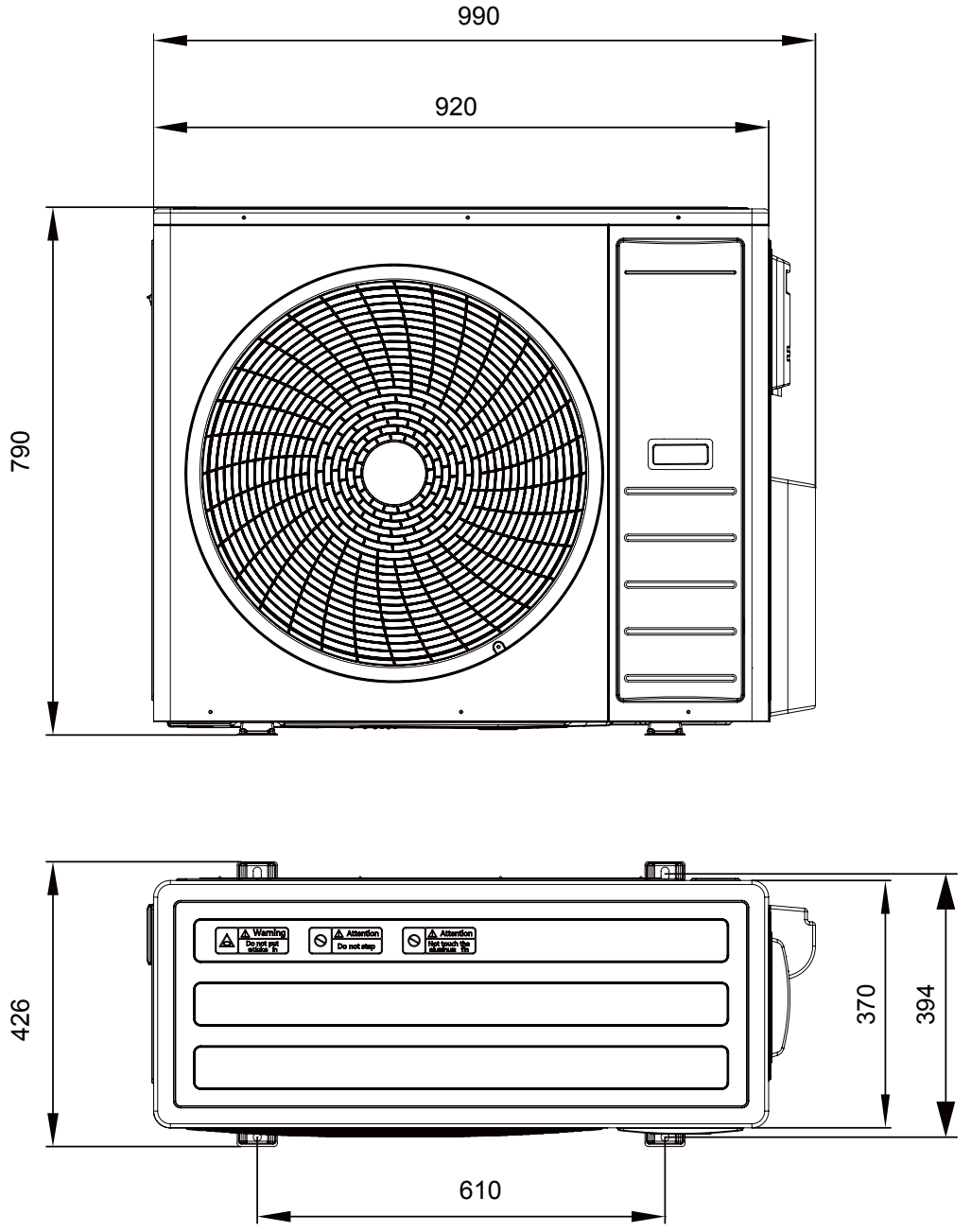
4.1 Outdoor Unit

MISTRAL912Dual-R32-K



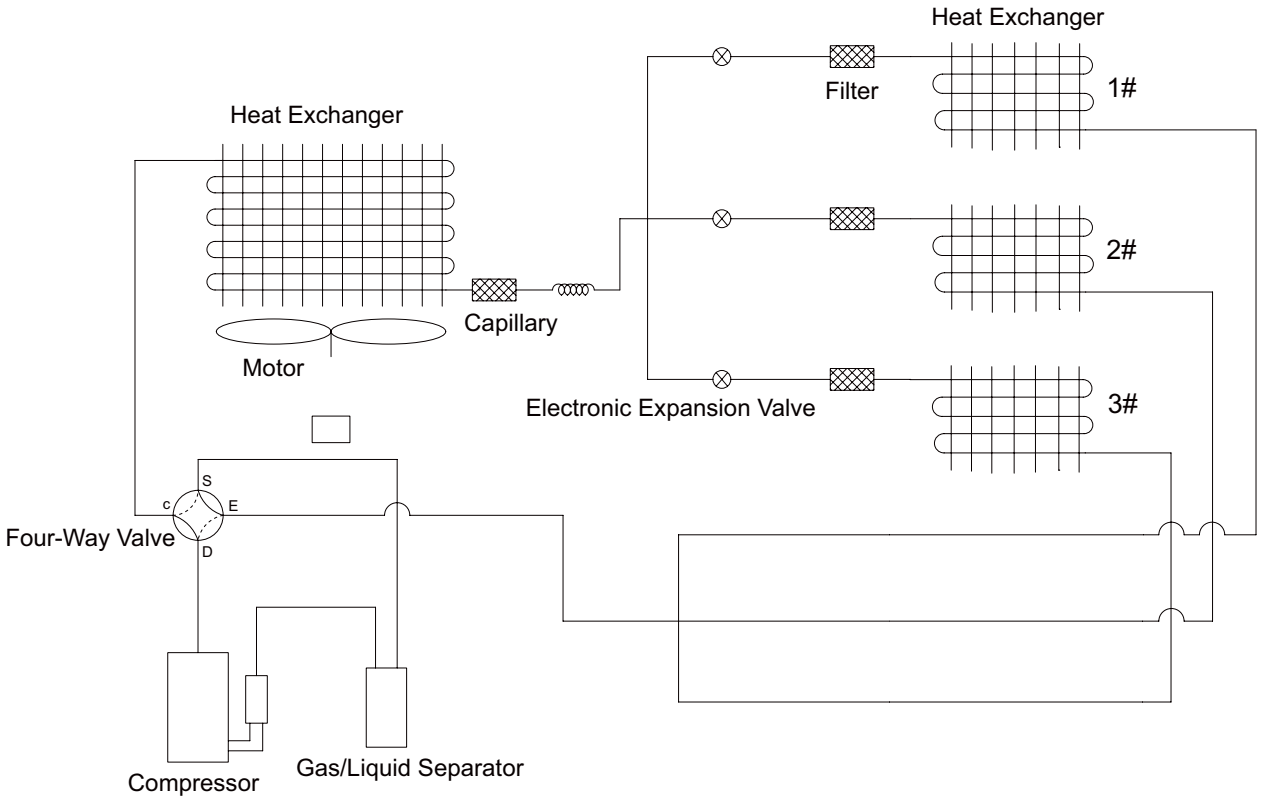
Unit:mm

SUV3-H24/3CGA-N



Unit:mm

5. Refrigerant System Diagram



The outdoor and indoor units start to work once the power is switched on. During the cooling operation, the low temperature, low pressure refrigerant gas from the heat exchanger of each indoor unit gets together and then is taken into the compressor to be compressed into high temperature, high pressure gas, which will soon go to the heat exchanger of the outdoor unit to exchange heat with the outdoor air and then is turned into refrigerant liquid. After passing through the throttling device, the temperature and pressure of the refrigerant liquid will further decrease and then go the main valve. After that, it will be divided and go to the heat exchanger of each indoor unit to exchange heat with the air which needs to be conditioned. Consequently, the refrigerant liquid become low temperature, low pressure refrigerant gas again. Such a refrigerant cycle goes round and round to achieve the desired cooling purpose. During the heating operation, the four-way valve is involved to make the refrigerant cycle reversely. The refrigerant radiates heat in the heat exchanger of the indoor unit(so do the electric heating devices)and absorb heat in the heat exchanger of the outdoor unit for a heat pump heating cycle so as to achieve the desired heating purpose.

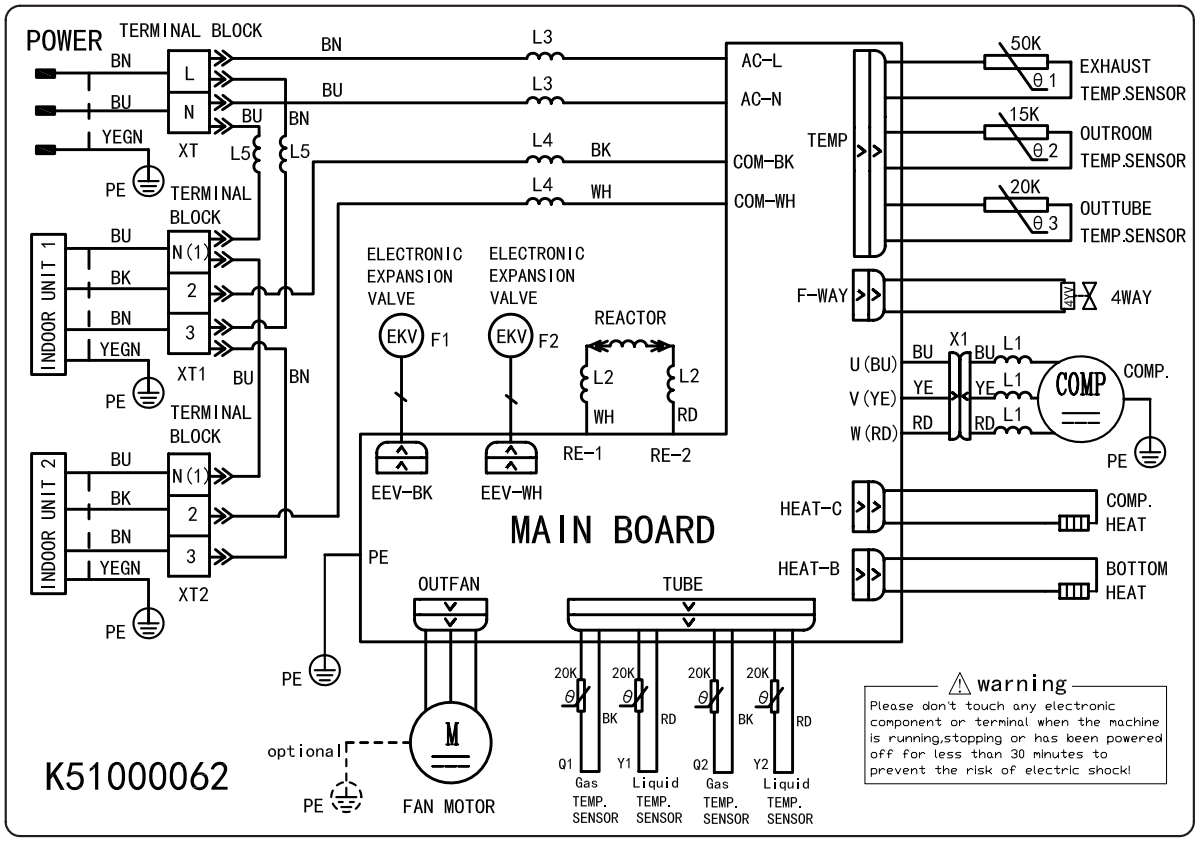
6. Schematic Diagram

6.1 Electrical Wiring

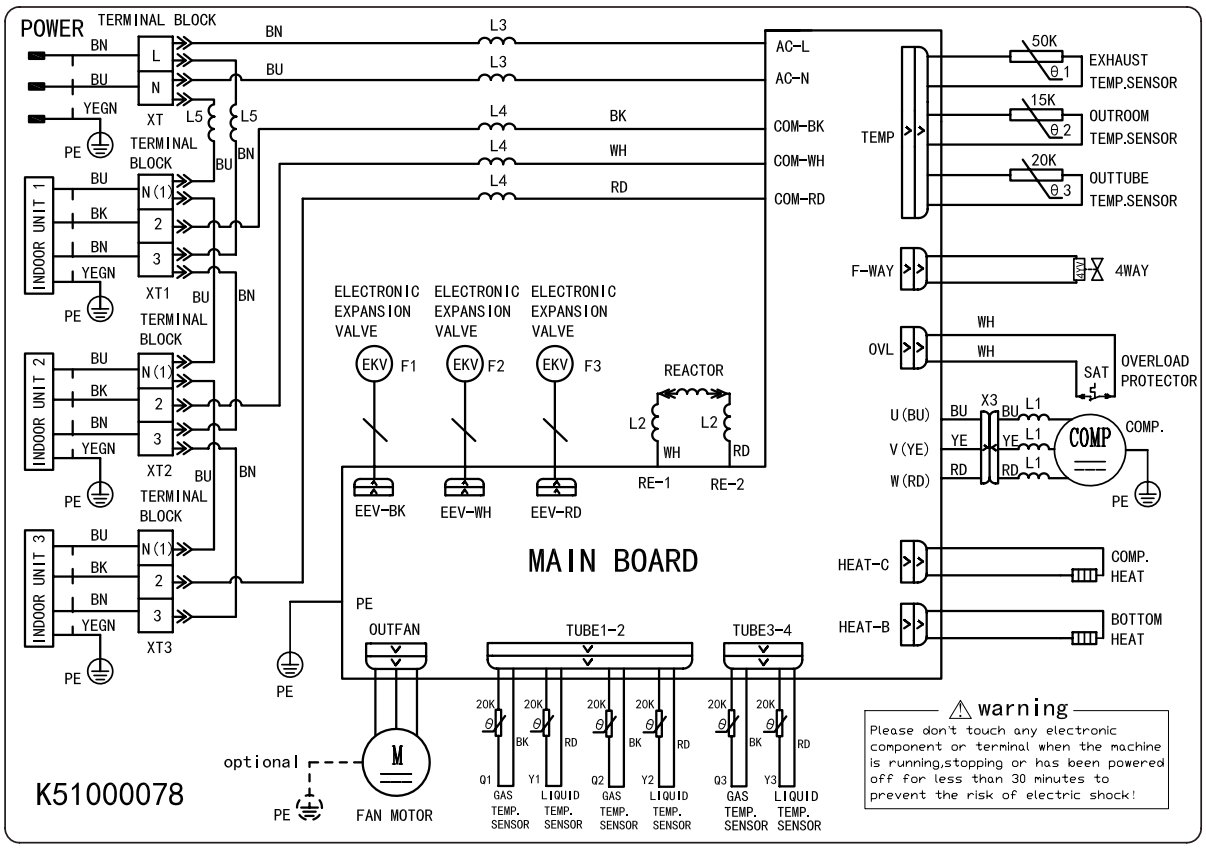
Meaning of marks

Symbol	OG	WH	YE	RD	YEGN	BN	BU	BK	VT
Color symbol	ORANGE	WHITE	YELLOW	RED	YELLOW GREEN	BROWN	BLUE	BLACK	VIOLET
Symbol	COMP		CT1,2		4V	XT		⏚	
Parts name	COMPRESSOR		OVERLOAD		4-WAY VALVE	TERMINAL BLOCK		PROTECTIVE EARTH	

MISTRAL912Dual-R32-K



SUV3-H24/3CGA-N



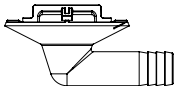
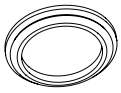
These circuit diagrams are subject to change without notice, please refer to the one supplied with the unit.

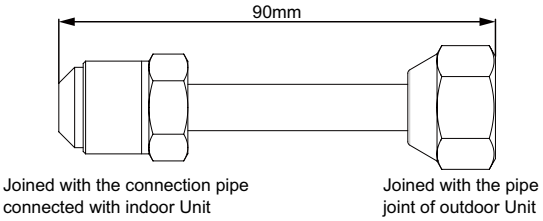
7. Installation Instructions

7.1 Standard Accessory Parts

The standard accessory parts listed below are furnished and should be used as required.

Table 1

Name	Appearance	Q'ty	Usage
Drainage Connecter		1	To connect with the hard PVC drain pipe
Drain Plug		3	To plug the unused drain hole
Pipe Joint Subassembly		1 or 2	One for 18K unit, Two for 24K unit,
Others	Instructions , bar code		



Pipe Joint Subassembly

Table 1

NO.	Joined with the connection pipe connected with indoor Unit	Joined with the pipe joint of outdoor Unit	Usage
1	Φ12.7	Φ9.52	one for 18K unit, two for 24K unit,

7.2 Safety operation of flammable refrigerant

Qualification requirement for installation and maintenance man

All the work men who are engaging in the refrigeration system should bear thevalid certification awarded by the authoritative organization and the qualification for dealing with the refrigeration system recognized by this industry. If it needs other technician to maintain and repair the appliance, they should be supervised by the person who bears the qualication for using the flammable refrigerant. It can only be repaired by the methood suggested by the equipment's manufacturer.

Installation notes

1.The air conditioner is not allowed to use in a room that has running fire(such as firesource, working coal gas ware, operating heater).
2.It is not allowed to drill hole or burn the connection pipe.
3.The air conditioner must be installed in a room that is larger than the minimum roomarea. The minimum room area is shown on the nameplate or following table 2.
4.Leak test is a must after installation.

Table 2: Minimum room area (m^2)

Minimum room area (m^2)	Charge amount (kg)	≤1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	2.2	2.3	2.4	2.5
	Floor location	/	14.5	16.8	19.3	22.0	24.8	27.8	31.0	34.4	37.8	41.5	45.4	49.4	53.6
	Window mounted	/	5.2	6.1	7.0	7.9	8.9	10.0	11.2	12.4	13.6	15.0	16.3	17.8	19.3
	Wall mounted	/	1.6	1.9	2.1	2.4	2.8	3.1	3.4	3.8	4.2	4.6	5.0	5.5	6.0
	Ceiling mounted	/	1.1	1.3	1.4	1.6	1.8	2.1	2.3	2.6	2.8	3.1	3.4	3.7	4.0

Maintnance notes

Check whether the maintenance area or the room area meet the requirement of the nameplate.
—It's only allowed to be operated in the rooms that meet the requirement of the nameplate.
Check whether the maintenance area is well-ventilated.
—The continuous ventilation status should be kept during the operation process.
Check whether there is fire source or potential fire source in the maintenance area.
—The naked flame is prohibited in the maintenance area; and the "no smoking" warning should be hanged.
Check whether the appliance mark is in good condition.
—Replace the vague or damaged warning mark.

Welding

If you should cut or weld the refrigerant system pipes in the process of maintaining, please follow the steps as below:
1.Shut down the unit and cut power supply.
2.Eliminate the refrigerant.
3.Vacuuming.
4.Clean it with N2 gas.
5.Cutting or welding.
6.Carry back to the service spot for welding.
The refrigerant should be recycled into the specialized storage tank. Make sure that there isn't any naked flame near the outlet of the vacuum pump and it's well-ventilated.

Filling the refrigerant

1.Use the refrigerant filling appliances specialized for R32. Make sure that different kinds of refrigerant won't contaminate with each other.
2.The refrigerant tank should be kept upright at the time of filling refrigerant.
3.Stick the label on the system after filling is finished(or haven't finished).
4.Don't overfilling.
5.After filling is finished, please do the leakage detection before test running;another time of leak dection should be done when it is removed.

Safety instructions for transportation and storage

1.Please use the flammable gas detector to check before unload and open the container .
2.No fire source and smoking.
3.According to the local rules and laws.

Installation prepare

To ensure the safety, please be mindful of the following precautions

WARNING

1. When installing or relocating the unit, be sure to keep the refrigerant circuit free from air or substances other than the specified refrigerant.

— Any presence of air or other foreign substance in the refrigerant circuit will cause system pressure rise or compressor rupture, resulting in injury.

2. When installing or moving this unit, do not charge the refrigerant which is not comply with that on the nameplate or unqualified refrigerant.

— Otherwise, it may cause abnormal operation, wrong action, mechanical malfunction or even series safety accident.

3. When refrigerant needs to be recovered during relocating or repairing the unit, be sure that the unit is running in cooling mode.Then, fully close the valve at high pressure side (liquid valve). About 30-40 seconds later,fully close the valve at low pressure side(gas valve), immediately stop the unit and disconnect power. Please note that the time for refrigerant recovery should not exceed 1 minute.

— If refrigerant recovery takes too much time, air may be sucked in and cause pressure rise or compressor rupture, resulting in injury.

4. During refrigerant recovery, make sure that liquid valve and gas valve are fully closed and power is disconnected before detaching the connection pipe.

— If compressor starts running when stop valve is open and connection pipe is not yet connected, air will be sucked in and cause pressure rise or compressor rupture, resulting in injury.

5. When installing the unit, make sure that connection pipe is securely connected before the compressor starts running.

— If compressor starts running when stop valve is open and connection pipe is not yet connected, air will be sucked in and cause pressure rise or compressor rupture, resulting in injury.

6. Prohibit installing the unit at the place where there may be leaked corrosive gas or flammable gas.

— If there leaked gas around the unit, it may cause explosion and other accidents.

7. Do not use extension cords for electrical connections. If the electric wire is not long enough, please contact a local service center authorized and ask for a proper electric wire.

— Poor connections may lead to electric shock or fire.

8. Use the specified types of wires for electrical connections between the indoor and outdoor units. Firmly clamp the wires so that their terminals receive no external stresses.

— Electric wires with insufficient capacity, wrong wire connections and insecure wire terminals may cause electric shock or fire.

Notice for installion

Caution

1. The unit should be installed only by authorized service center according to local or government regulations and in compliance with this manual.
2. Before installing, please contact with local authorized maintenance center. If the unit is not installed by the authorized service center, the malfunction may not be solved due to incovenient contact between the user and the service personnel.
3. When removing the unit to the other place, please firstly contact with the local authorized service center.
4. Warning: Before obtaining access to terminals, all supply circuits must be disconnected.
5. For appliances with type Y attachment, the instructions shall contain the substance of the following. If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.
6. The appliance must be positioned so that the plug is accessible.
7. The temperature of refrigerant line will be high; please keep the interconnection cable away from the copper tube.
8. The instructions shall state the substance of the following:This appliance is not intended for use by persons(including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.
9. Appliance shall be installed, operated and stored in a room with a floor area larger than "X" m^2(see table 2).

Please notice that the unit is filled with flammable gas R32. Inappropriate treatment of the unit involves the risk of severe damages of people and material. Details to this refrigerant are found in chapter "refrigerant".

7.3 Installation Location and Matters Needing Attention

The installation of the unit must comply with the national and local safety regulations. The installation quality directly affects the normal use, so the user should not carry out the installation personally, instead, the installation and debugging should be done by technician according to this manual. Only after that, can the unit be energized.

● How to select the installation location for the outdoor unit

1. The outdoor unit must be installed where the bearing surface is stable and secure enough.
2. The outdoor unit and indoor unit should be placed as close as possible to minimize the length and bends of the refrigerant pipe.
3. Do not install the outdoor unit under the window or between the buildings to prevent the normal running noise entering the room.
4. Where the flow of the air inlet/outlet is not blocked.
5. The outside unit should be installed where ventilation is in good condition so that the unit can take in and discharge enough air.
6. Do not install the unit where there are inflammable and explosive substances and where there is heavy dust、salt fog and other severely polluted air.

No air guiding pipe is allowed to be installed at the air inlet/outlet of the outdoor unit.
Under the heating mode, the condensate water would drip down from the base frame and would be frozen when the outdoor ambient temperature is lower than 0°C (32°F). Besides, the installation of the outdoor unit should not affect the heat radiation of the unit.

CAUTION!

The unit installed in the following places is likely to run abnormally. If unavoidable, please contact the professional personnel at the appointed service center.

- Where is full of oil.
- Alkaline soil off the sea.
- Where there is sulfur gas (like sulfur hot spring).
- Where there are devices with high frequency (like wireless devices, electric welding devices, or medical equipment).
- Special circumstances.

● Electric wiring

1. The installation must be done in accordance with the national wiring regulations.
2. Only the power cord with the rated voltage and exclusive circuit for the air conditioning can be used.
3. Do not pull power cord by force.
4. The electric installation should be carried out by the professional personnel as instructed by the local laws, regulations and also this manual.
5. The diameter of the power cord should be large enough and once it is damaged it must be replaced by dedicated one.
6. The earthing should be reliable and the earth wire should be connected to the dedicated device of the building by the professional personnel. Besides, the air switch coupled with the leakage current protection switch must be equipped, which is of enough capacity and of both magnetic and thermal tripping functions in case of the short circuit and overload.

Table 3

Models	Power Supply	Capacity of the Air Switch	Recommended Cord (pieces×sectional area)
MISTRAL912Dual-R32-K	220-240V~,50Hz	16A	3×1.5mm^2
SUV3-H24/3CGA-N	220-240V~,50Hz	25A	3×2.5mm^2

Notes:

1. The specifications of the breaker and power cable listed in the table above are determined based on the maximum power (maximum amps) of the unit.
2. The specifications of the power cable listed in the table above are applied to the conduit-guarded multi-wire copper cable (like, YJV copper cable, consisting of PE insulated wires and a PVC cable jacket) used at 40°C and resistible to 90°C (see IEC 60364-5-562). If the working condition changes, they should be modified according to the related national standard.
3. The specifications of the breaker listed in the table above are applied to the breaker with the working temperature at 40°C. If the working condition changes, they should be modified according to the related national standard.

● Earthing Requirements

1. The air conditioner is classified into the class I appliances, so its earthing must be reliable.
2. The yellow-green line of the air conditioner is the earth line and cannot be used for other purpose, cut off or fixed by the tapping screw, otherwise it would cause the hazard of the electric shock.
3. The reliable earth terminal should be provided and the earth wire cannot be connected to any of the following places.
   (1) Running water pipe
   (2) Coal gas pipe
   (3) Sewage pipe
   (4) Other places where the professional personnel think unreliable.

● Noise precautions

1. The air conditioning unit should be installed where ventilation is in good condition,otherwise the working capability of the unit would be reduced or working noise would be increased.
2. The air conditioning unit should be installed on the base frame which is stable and secure uncouth to withstand the weight of the unit, otherwise it would incur vibration and noise.
3. During the installation, a consideration should be taken that the produced hot air or noise should not affect neighbors or surroundings.
4. Do not stack obstacles near the air outlet of the outdoor unit, otherwise it would reduce the working capability of the unit or increase the working noise.
5. In the event of the occurrence of abnormal noise, please contact the sales agent as soon as possible.
6. Accessories for installation

Refer to the packing list for the accessories of the indoor and outdoor units respectively.

Installation of the Outdoor Unit

● Precautions for the installation of the outdoor unit

The following rules should be followed when the installation location is being considered so as to let the unit run well enough.

1. The discharged air from the outdoor unit won't return back and enough space should be left for maintenance around the unit.
2. The installation location should be in good condition so that the unit is able to take in and discharge enough air. Besides, make sure there is no obstacle at the air inlet/outlet of the unit. If there is, remove it.
3. The unit must be installed where it is secure enough to support the weight of the unit and capable of reducing to some extent noise and vibration to make sure they do not bother your neighbors.
4. The designated lifting hole must be used for lifting the unit and protect the unit carefully during lifting to prevent damaging the mental sheet which would result in rusting in future.
5. The unit should be installed where there is as little as direct sunlight.
6. The unit must be installed where the rain water and defrosting water can be drained.
7. The unit must be installed where the unit won't be covered by the snow and won't be affected by rubbish and oil fog.
8. Rubber or spring shock absorbers should be used during the installation of the outdoor unit to meet the noise and vibration requirements.
9. The installation dimensions should meet the requirement covered in this manual and the outdoor unit must be fixed securely.
10. The installation should be carried out by the professionally skilled personnel.

● Installation of the Outdoor Unit

1. During the transportation of the outdoor unit, two lifting ropes long enough must be used in four directions and the separation included angle must be less than 40° prevent the center of unit deviating.
2. During the installation, M10 screws should be used to fix the support leg and base frame of the unit.
3. The unit should be installed on a concrete base frame with a height of 10cm.
4. The installation space of the unit should be as required in Fig.1.

Installation Space Requirements of the Outdoor Unit:

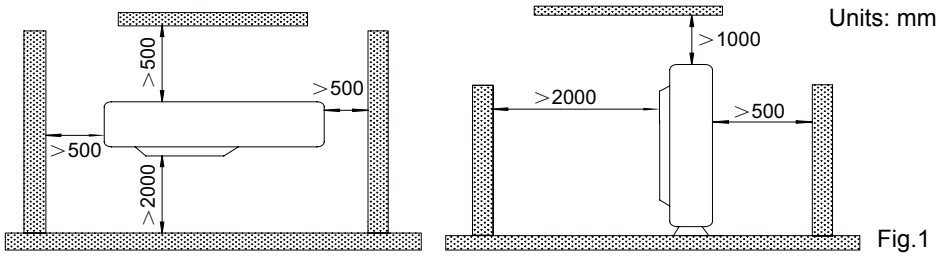


Fig.1

Connection between Indoor and Outdoor Units

● Energy level and Capacity Code of the Indoor and Outdoor Units

Table 4

	Energy Level	Capacity Code
Indoor Unit	07	23
	09	26
	12	35
	18	52
Outdoor Unit	18	52
	24	71

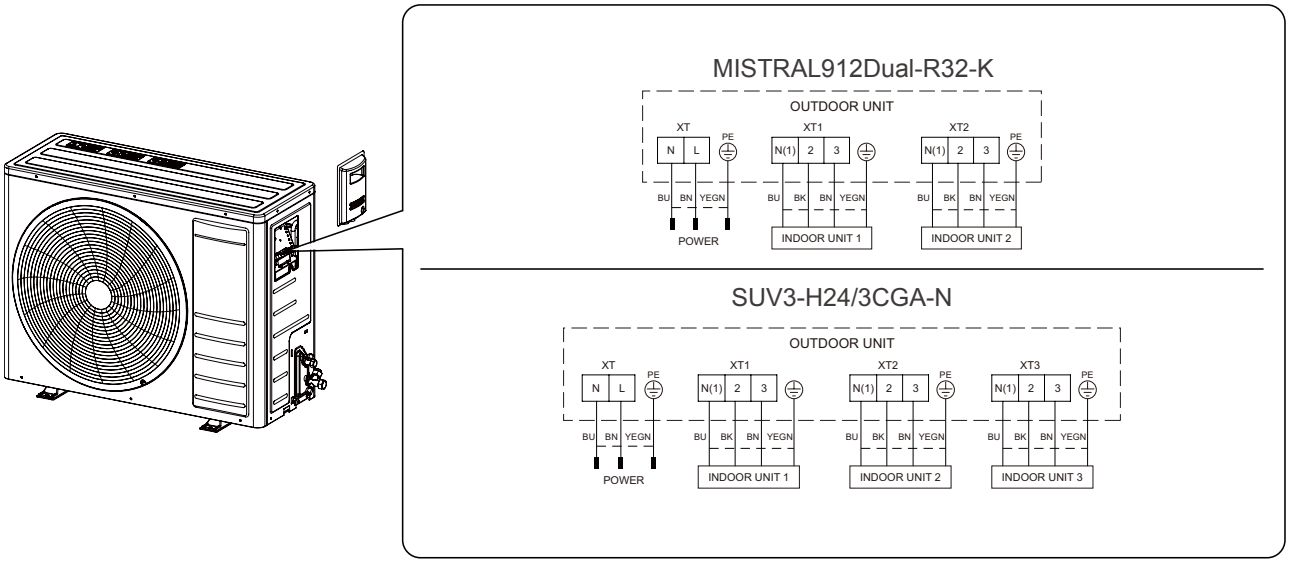
1. The outdoor unit with energy level 18 can drive up to two sets of indoor units, the outdoor unit 24 can drive up to three.
2. The sum of the capacity codes of the indoor units should be among 50%-150% of that of the outdoor unit.

● Wiring of the Power Cord

CAUTION!

A breaker must be installed, capable of cutting off the power supply for the whole system.

1. Remove the handle(front board) of the outdoor.
2. Remove the wire clip; connect the power connection wire and signal control wire (only for cooling and heating unit) to the wiring terminal according to the color,fix them with screws.
3. Fix the power connection wire and signal control wire with wire clip (only for cooling and heating unit).
4. Reinstall the handle(front board).



● Allowable Length and Height Fall of the Refrigerant Pipe

Table 5

		Allowable Length		Refrigerant Pipe	
		18K	24K	18K	24K
Totlal Length(m)		30	60	L1+L2	L1+L2+L3
Max. Length for Single Unit(m)		15	20	LX	
Max. installation altitude	Outdoor unit and indoor unit	5	10	H1	
	Indoor unit and indoor unit	5	5	H2	

Table 6 Dimension of the Refrigerant Pipe of the Indoor Unit

Capacity Level of the Indoor Unit	Gas Pipe (mm)	Liquid pipe (mm)
07、09、12	Φ9.52	Φ6.35
18	Φ12.7	Φ6.35

● Piping between the Indoor and Outdoor units

1. Refer to Table 7 for the moments of torque for tightening screws.
2. Let the flare end of the copper pipe point at the screw and then tighten the screw by hand.
3. After that, tighten the screw by the torque wrench unit it clatters (as shown in Fig.3).
4. The bending degree of the pipe cannot be too small, otherwise it will crack. And please use a pipe tube bender to bend the pipe.
5. Wrap the exposed refrigerant pipe and the joints by sponge and then tighten them with the plastic tape.

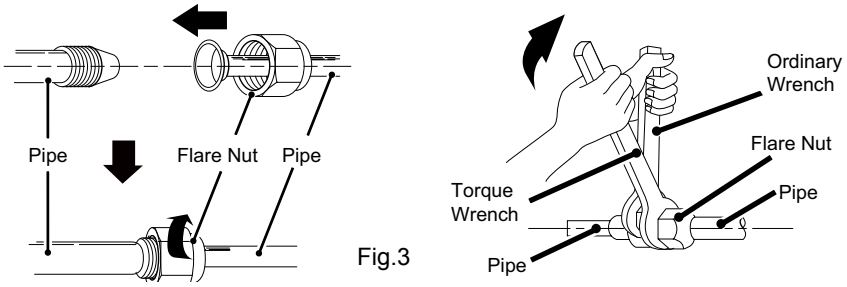


Fig.3

Table 7 Moments of Torque for Tightening Screws

Diameter (mm)	Wall Thickness (mm)	Moment of Torque (N·m)
Φ6.35	≥0.5	15-30
Φ9.52	≥0.71	30-40
Φ12.7	≥1	45-50
Φ15.9	≥1	60-65

CAUTION!

1. During the connection of the indoor unit and the refrigerant pipe, never pull any joints of the indoor unit by force, otherwise the capillary pipe or other pipe may crack, which then would result in leakage.
2. The refrigerant pipe should be supported by brackets, that is, don't let the unit withstand the weight of it.

CAUTION!

For the MULTI-S inverter air conditioner unit, each pipe should be labeled to tell which system it belongs to avoid mistaken inaccurate piping.

● Installation of the Protection Layer of the Refrigerant Pipe

1. The refrigerant pipe should be insulated by the insulating material and plastic tape in order to prevent condensation and water leakage.
2. The joints of the indoor unit should be wrapped with the insulating material and no gap is allowed on the joint of the indoor unit, as shown in Fig.4.

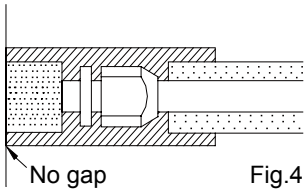


Fig.4

CAUTION!

After the pipe is protected well enough, never bend it to form a small angle, otherwise it would crack or break.

● Wrap the Pipe with Tape

1. Bundle the refrigerant pipe and electric wire together with tape, and separate them from the drain pipe to prevent the condensate water overflowing.
2. Wrap the pipe from the bottom of the outdoor unit to the top of the pipe where it enters the wall. During the wrapping, the later circle should cover half the former one.
3. Fix the wrapped pipe on the wall with clamps.

CAUTION!

1. Do not wrap the pipe too tightly, otherwise the insulation effect would be weakened. Additionally, make sure the drain hose is separated from the pipe.
2. After that, fill the hole on the wall with sealing material to prevent wind and rain coming into the room.

Refrigerant Charging and Trial Running

● Refrigerant Charging

1. The refrigerant has been charged into the outdoor unit before shipment, while additional refrigerant still need be charged into the refrigerant pipe during the field installation.
2. Check if the liquid valve and the gas valve of the outdoor unit are closed fully.
3. As shown in the following figure (Fig.5), expel the gas inside the indoor unit and refrigerant pipe out by the vacuum pump.
4. When the compressor is not running, charge the R32 refrigerant into the refrigerant pipe from the liquid valve of the outdoor unit (do not do it from the gas valve).

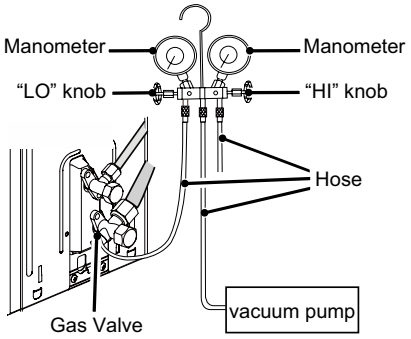


Fig.5

● Calculation of the Additional Refrigerant Charging

1. Refrigerant Charge in the Outdoor Unit before Shipment

Table 8

Model	Refrigerant Charge (kg)
MISTRAL912Dual-R32-K	1.10
SUV3-H24/3CGA-N	1.50

Notes:

(1). The refrigerant charge mentioned in the table above is not include those charged additionally in the indoor unit and the refrigerant pipe.

(2). The amount of the additional refrigerant charge is dependent on the diameter and length of the liquid refrigerant pipe which is decided by the actual yield installation requirement.

(3). Record the additional refrigerant charge for future maintenance.

2. Calculation of the Additional Refrigerant Charge

If the total refrigerant pipe length (liquid pipe) is smaller than listed in the table below, no additional refrigerant will be charged.

Table 9

Model	Total Liquid Pipe Length (a+b+c)
MISTRAL912Dual-R32-K	≤10m
SUV3-H24/3CGA-N	≤30m

Additional refrigerant charge= ∑ Extra Liquid Pipe Length×16g/m (liquid pipe Φ6.35mm)

Notes:

If the total refrigerant pipe length is larger than that listed in the table above, the additional refrigerant for the extra length of the pipe needs to be charged as per 16g/m.

3. Example: SUV3-H24/3CGA-N

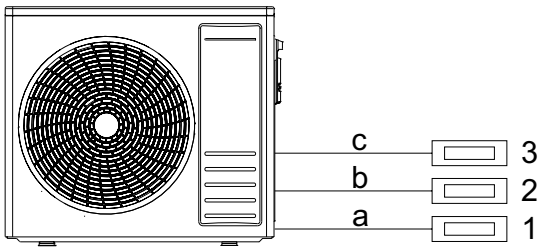


Fig.6

Table 10 Indoor Unit

Serial No.	Model
Indoor Unit 1	SMVH09B-2A2A3NG(I)
Indoor Unit 2	SMVH09B-2A2A3NG(I)
Indoor Unit 3	SMVH09B-2A2A3NG(I)

Table 11 Liquid Refrigerant Pipe

Serial No.	a	b	c
Diameter	Φ6.35	Φ6.35	Φ6.35
Length	20	15	15

The total length of each liquid refrigerant pipe is: a+b+c=20+15+15=50m
Thus, the minimum additional refrigerant charge=(50-30)×0.016=0.32kg
(Note: no additional refrigerant is needed for the liquid pipe within 30m)

4. Additional Refrigerant Charge Record

Table 12 Indoor Unit

No.	Indoor Unit Model	Additional Refrigerant Refrigerant (kg)
1		
2		
3		
.....		
N		
Total		

Table 13 Refrigerant Pipe

Diameter	Total Length (m)	Additional Refrigerant Refrigerant (kg)
Φ15.9		
Φ12.7		
Φ9.52		
Φ6.35		
Total		

● Items to be checked after the installation

Table 14

Items to be Checked	Possible Errors	Check Results
Has each part and component of the unit been installed securely?	The unit may fall off ,vibrate or generate noise.	
Has the gas leakage test been taken?	The cooling (heating) capacity may be poor.	
Is the thermal insulation sufficient?	Dews and water drops may be generated.	
Does the drainage go well?	Dews and water drops may be generated.	
Is the actual power voltage in line with the value marked on the nameplate?	The unit may break down or some components may be burnt out.	
Are the wiring and piping correct?	The unit may break down or some components may be burnt out.	
Has the unit been earthed reliably?	There may be a danger of electric shock.	
Does the wire meet the regulated requirement?	The unit may break down or the components may be burnt out.	
Is there any obstacle at the air inlet/outlet of the indoor/ outdoor unit?	The cooling (heating) capacity may be poor.	
Have the length of the refrigerant pipe and the refrigerant charge been recorded?	It may be hard to know the exact refrigerant charge.	

● Trial Running

1. Check before the Trial Running
   (1) Check if the appearance of the unit and the piping system are damaged during the transportation.
   (2) Check if the wiring terminals of the electronic component are secure.
   (3) Check if the rotation direction of the fan motor is right.
   (4) Check if all valves in the system are fully opened.

2. Trial Running
   (1) The trial running should be carried out by the professionally skilled personnel on the premise that all items above are in normal conditions.
   (2) Let the unit energized and switch the wired controller or the remoter controller to “ON”.
   (3) The fan motor and compressor of the outdoor unit will run automatically in one minute.
   (4) If there is some unusual sound after the compressor is started, turn off the unit for an immediate check.

7.4 Test operation

1. Preparation of test operation

- The client approves the air conditioner.
- Specify the important notes for air conditioner to the client.

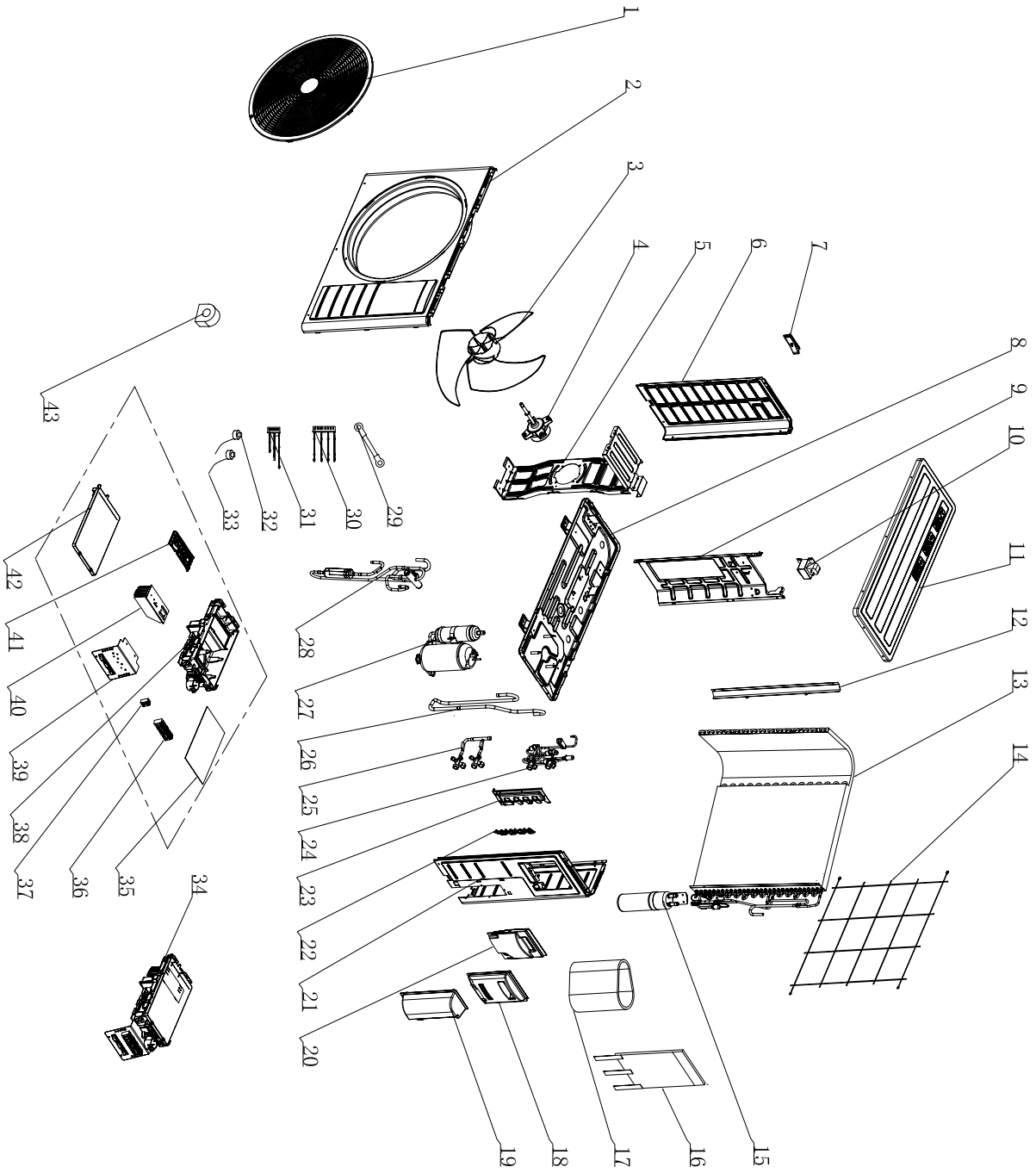
2. Method of test operation

- Put through the power, press ON/OFF button on the remote controller to start operation.
- Press MODE button to select AUTO, COOL, DRY, FAN and HEAT to check whether the operation is normal or not.
- If the ambient temperature is lower than 16℃ , the air conditioner can't start cooling.

8. Exploded Views and Parts List

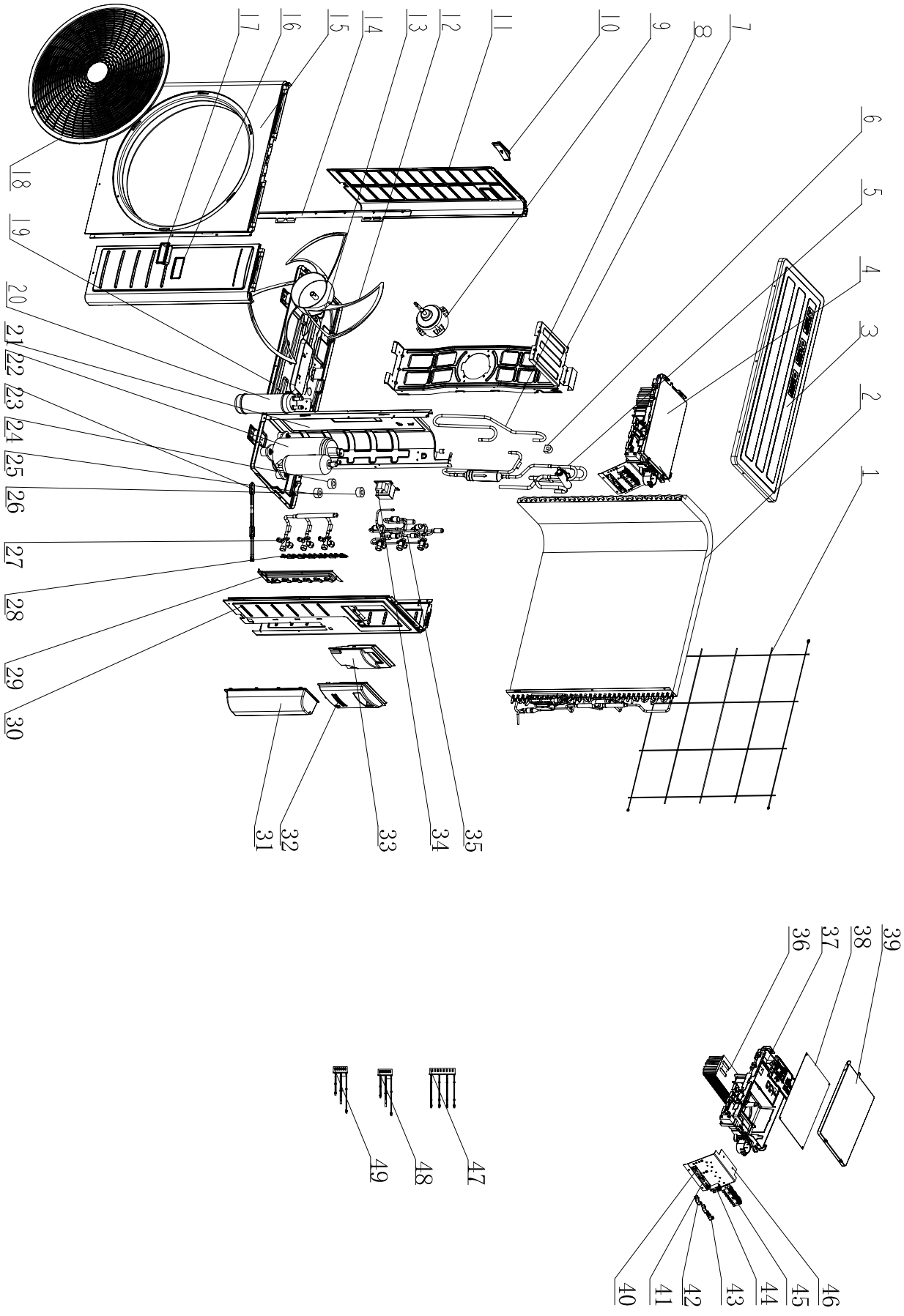
8.1 Outdoor Unit

Model: MISTRAL912Dual-R32-K



No.	Description	Part Code	Qty
		MISTRAL912Dual-R32-K	
	Product Code	KEJ001W0170	
1	Grill(apricot grey)	K21600002	1
2	Front panel(apricot grey)	K11010002P	1
3	Axial flow fan(original color)	K15010002	1
4	Fan motor	K16800015	1
5	Motor support assembly	K11200015	1
6	Left side panel(apricot grey)	K10600005P	1
7	Small handle	K22210004	1
8	Chassis subassembly(apricot grey)	K1040012102P	1
9	Partition board subassembly	K10440029	1
10	Reactor	K34020003	1
11	Top cover(apricot grey)	K10450010P	1
12	Support panel	K10620006	1
13	Condenser assembly	K20209100	1
14	Mesh enclosure(iresh)	K10860002	1
15	Gas-liquid separator	K14410110	1
16	Sound-absorbing sponge(inside)	K61410054	1
17	Sound-absorbing sponge(outside)	K61410062	1
18	Big handle	K22210007	1
19	Valve cover	K21420019	1
20	Big handle guard board	K10620004	1
21	Right side panel(apricot grey)	K10600036P	1
22	Vavle stopper	K21420020	4
23	Valve support subassembly(apricot grey)	K11200019P	1
24	Small valve assembly	K14200099	1
25	Big valve assembly	K14200065	1
26	Suction pipe	K20307062	1
27	Compressor and accessory	K10001003	1
28	Thermal package stents	K20305066	1
29	Wiring	K3320000909	1
30	Temp. sensor	K33000005	1
31	Temp. sensor	K3300000301	1
32	Electronic expansion valve coil	K3380001401	1
33	Electronic expansion valve coil	K3380001402	1
34	Electric box assembly	K39901152	1
35	Main board	K50102092	1
36	Wiring board(3 unit)	K33600008	2
37	Wiring board(2 unit)	K3360000701	1
38	Electric box	K20400028	1
39	Big handle guard board	K11230020	1
40	Radiator	K34810008	1
41	Module support	K22240002	1
42	Electric box cover	K20400029	1
43	Four way valve coil	K3380000501	1

Model: SUV3-H24/3CGA-N



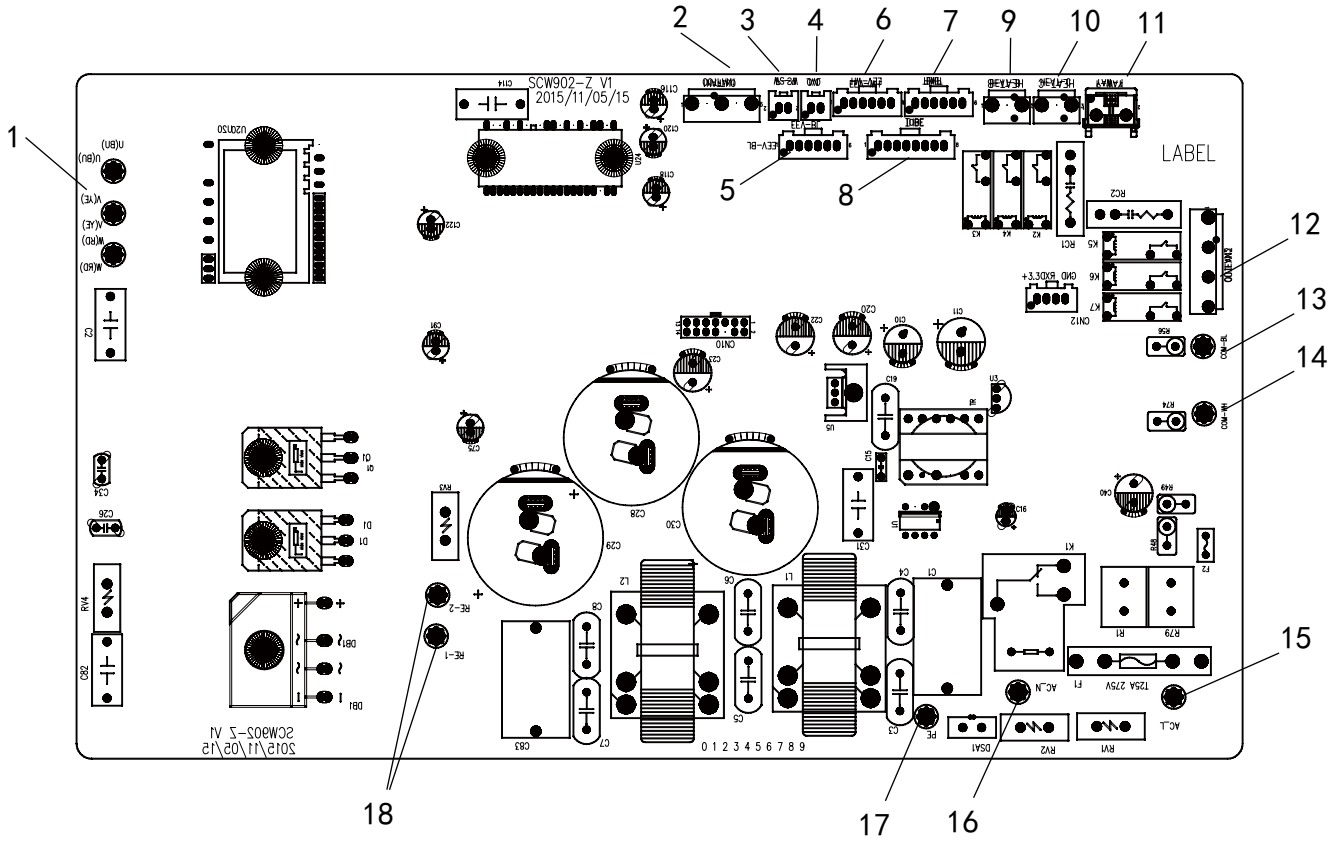
No.	Description	Part Code	Qty
		SUV3-H24/3CGA-N	
	Product Code	KEJ001W0180	
1	Mesh enclosure(iresh)	K10860013	1
2	Condenser assembly	K20209112	1
3	Top cover(apricot grey)	K10450023P	1
4	Electric box assembly	K39901161	1
5	Thermal package stents	K20305018	1
6	Four way valve coil	K3380000501	1
7	Motor support assembly	K11200024	1
8	Suction pipe	K20710111	1
9	Fan motor	K16800024	1
10	Small handle	K22210004	1
11	Left side panel(apricot grey)	K10600010P	1
12	Axial flow fan(original color)	K15010004	1
13	Electric heating belt(chassis)	K30800005	1
14	Support panel	K10620005	1
15	Front panel(apricot grey)	K20000025P	1
16	Front side panel(apricot grey)	K10600012P	1
17	Small handle	K22210006	1
18	Grill(apricot grey)	K21600004	1
19	Chassis subassembly(apricot grey)	K11034029P	1
20	Gas-liquid separator	K14410110	1
21	Partition board subassembly	K10440025	1
22	Compressor and accessory	K10001004	1
23	Electric heating belt(compressor)	K30800004	1
24	Electronic expansion valve coil	K3380001401	1
25	Electronic expansion valve coil	K3380001402	1
26	Electronic expansion valve coil	K3380001403	1
27	Big valve assembly	K14200041	1
28	Vavle stopper	K21420020	6
29	Valve support subassembly(apricot grey)	K11200022P	1
30	Right side panel(apricot grey)	K10600037P	1
31	Valve cover	K21420021	1
32	Big handle	K22210007	1
33	Big handle guard board	K10620004	1
34	Reactor	K34020004	1
35	Electronic expansion valve components	K20319035	1
36	Electric box cover	K20400035	1
37	Main board	K50102093	1
38	Electric box	K20400034	1
39	Radiator	K34810010	1
40	Insulation gasket(1 unit)	K60600004	1
41	Insulation gasket(2 unit)	K60600005	1
42	Wire clamp	K61000004	1
43	Wire clamp	K61000002	2
44	Wiring board(2 unit)	K3360000701	1
45	Wiring board(3 unit)	K33600008	3
46	Module support	K11230021	1
47	Temp. sensor	K3300000501	1
48	Temp. sensor	K3300000301	1
49	Temp. sensor	K33000004	1

9. Troubleshooting

9.1 PCB Printed Diagram

Outdoor Unit(18K)

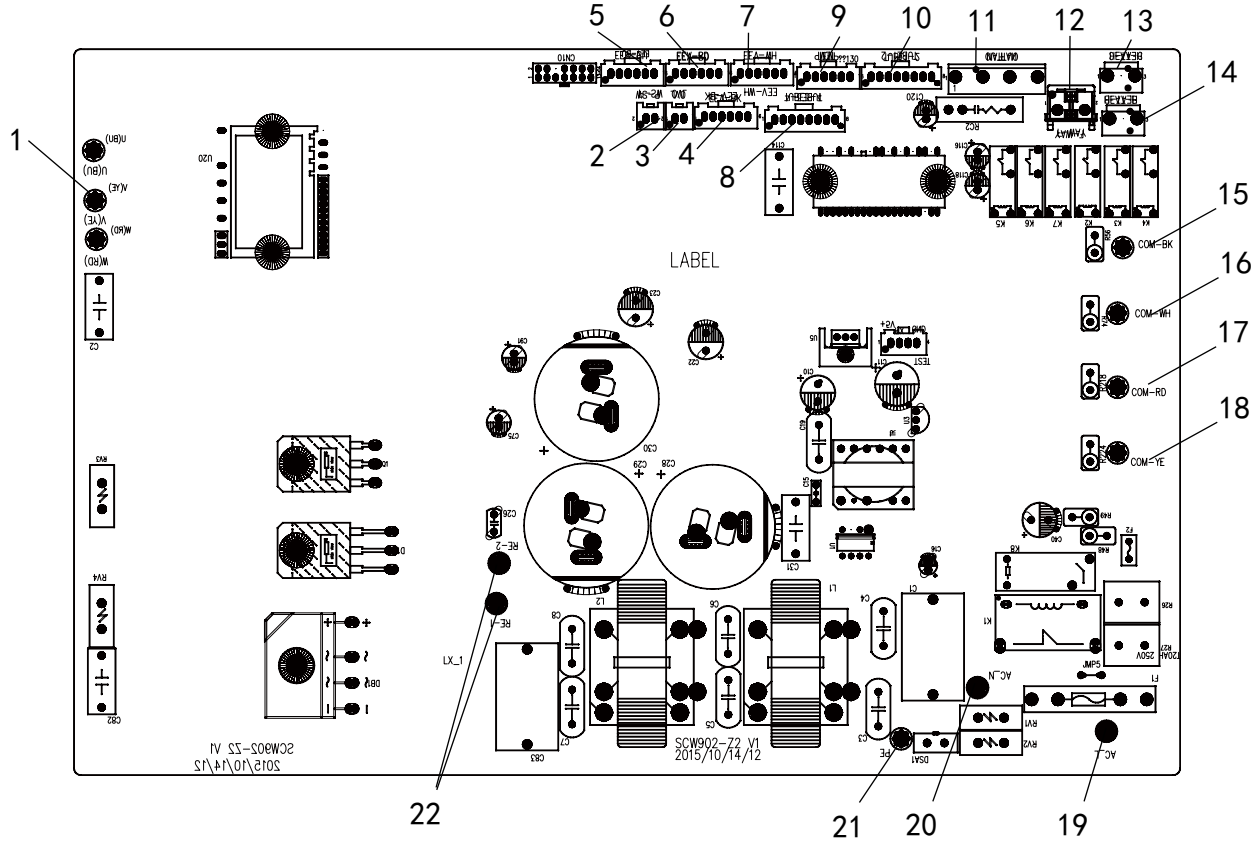
● Top View



No.	Silk scren name	Connector	Function note
1	U (BU) V (YE) W (RD)	Compressor power line interface	Connect compressorU(BU) connect blue V (YE) connect yellow W(RD) connect red
2	OUTFAN1	DC fan interface	Connect outdoor DC fan
3	P-SW	Pressure switch interface	Connect pressure switch (Reserve)
4	OVL	Overload interface	Connect compressor overload (Reserve)
5	EEV-BL	Electronic expansion valve interface	Connect No.1 electronic expansion valve black interface
6	EEV-WH	Electronic expansion valve interface	Connect No.2 electronic expansion valve white interface
7	TEMP	Temp testing interface	Connect temp sensor
8	TUBE	Pipe temp testing interface	Connect 1&2 pipe temp sensor
9	HEAT-B	Chassis electrical heater interface	Connect chassis electrical heater belt
10	HEAT-G	Compressor electrical heater interface	Connect compressor electrical heater belt
11	F-WAY	4-way-valve interface	Connect 4-way-valve
12	OUTFAN2	AC fan interface	Connect outdoor AC fan
13	COM-BL	Communication interface	No.1 communication interfaceblack
14	COM-WH	Communication interface	No.2 communication interfacewhite
15	AC-L	Power live wire interface	Connect power live wire
16	AC-N	Power naught wire interface	Connect power naught wire
17	PE	Earth wire interface	Connect earth wire
18	RE-1.RE-2	Reactor interface	Connect reactor

Outdoor Unit(24K)

● Top View

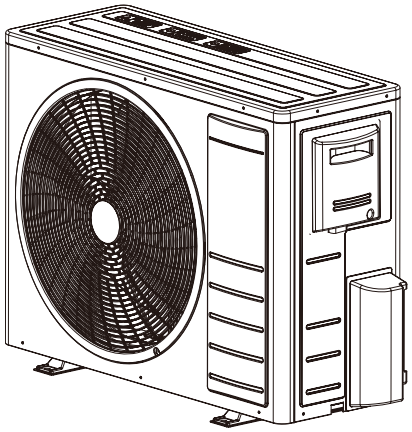
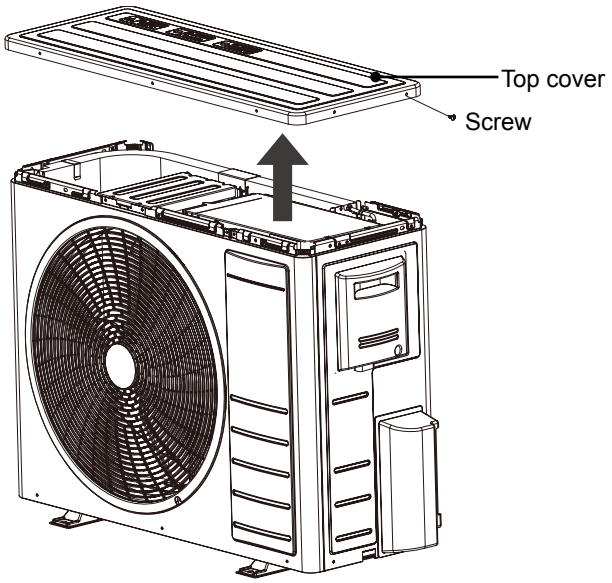
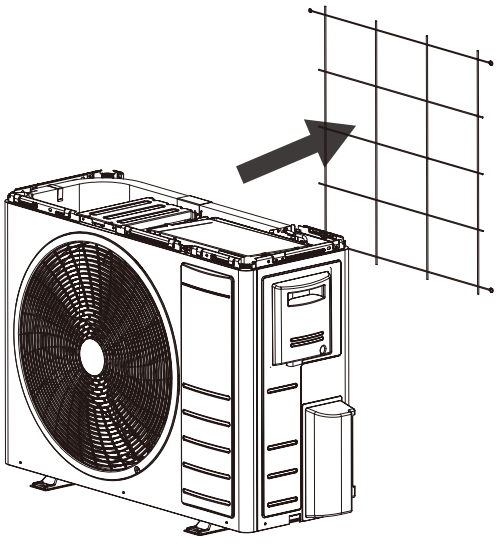


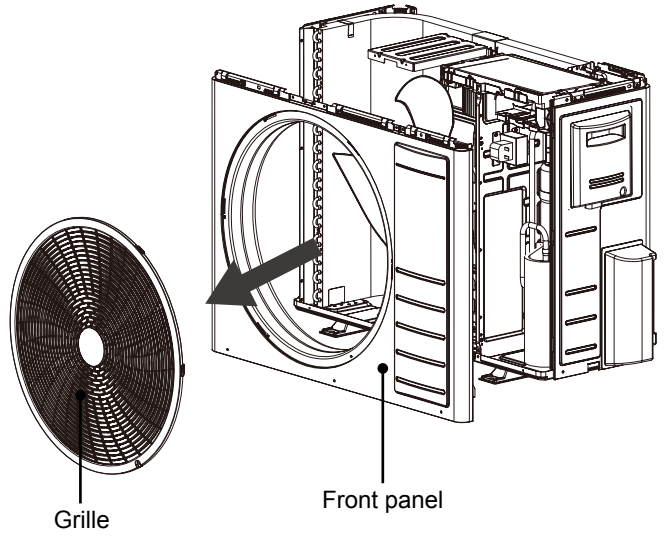
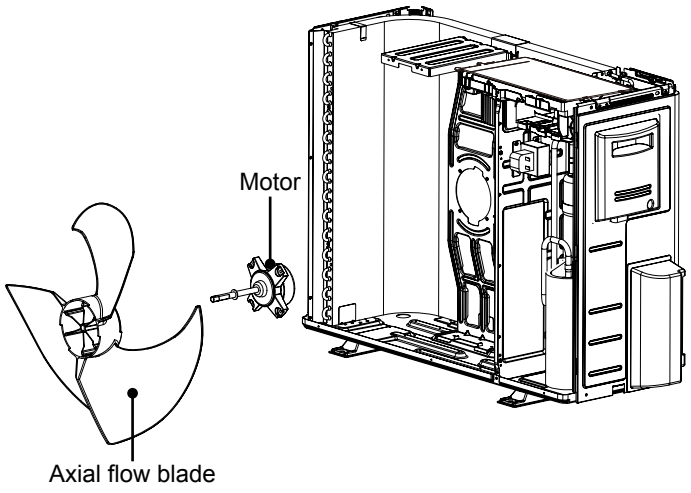
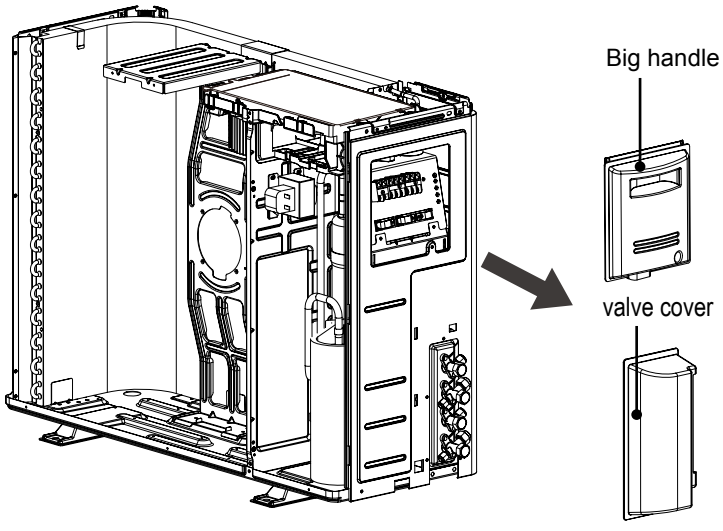
No.	Silk scren name	Connector	Function note
1	U (BU) V (YE) W (RD)	Compressor power line interface	Connect compressorU(BU) connect blue (YE) connect yellow W(RD) connect red
2	P-SW	Pressure switch interface	Connect pressure switch (Reserve)
3	OVL	Overload interface	Connect compressor overload (Reserve)
4	EEV-BK	Electronic expansion valve interface	Connect No.1 electronic expansion valve black interface
5	EEV-WH	Electronic expansion valve interface	Connect No.2 electronic expansion valve white interface
6	EEV-RD	Electronic expansion valve interface	Connect No.3 electronic expansion valve red interface
7	EEV-BU	Electronic expansion valve interface	Connect No.4 electronic expansion valve blue interface
8	TUBE3-4	Pipe temp testing interface	Connect No.3&4 pipe temp sensor
9	TEMP	Temp sensor interface	Connect temp sensor
10	TUBE1-2	Pipe temp testing interface	Connect No.1&2 pipe temp sensor
11	OUTFAN	Fan interface	Connect outdoor fan interface
12	F-WAY	4-way-valve interface	Connect 4-way-valve
13	HEAT-G	Compressor electrical heater interface	Connect compressor electrical heater belt
14	HEAT-B	Chassis electrical heater interface	Connect chassis electrical heater belt
15	COM-BL	Communication inteface	No.1 communication interface black
16	COM-WH	Communication inteface	No.2 communication interface white
17	COM-RD	Communication interface	No.3 communication interface red
18	COM-YE	Communication interface	No.4 communication interface yellow (Reserve)
19	AC-L	Power live wire	Connect power live wire
20	AC-N	Power naught wire	Connect power naught wire
21	PE	Earth wire interface	Connect earth wire
22	RE-1,RE-2	Reactor interface	Connect reactor

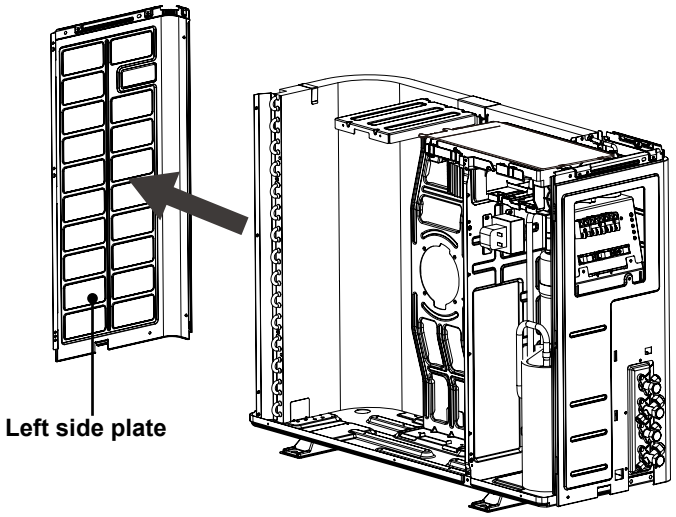
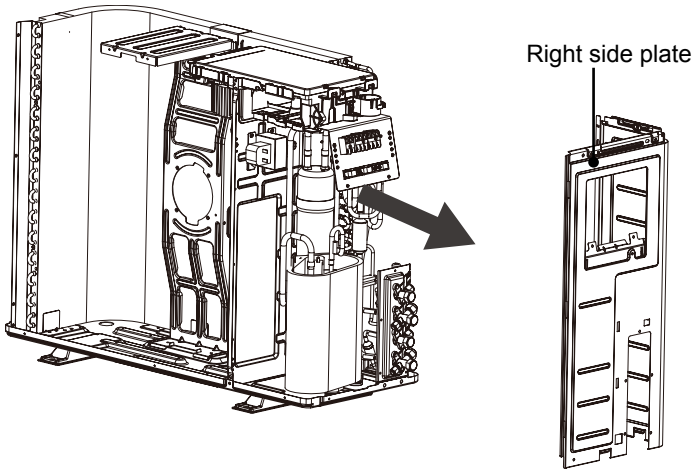
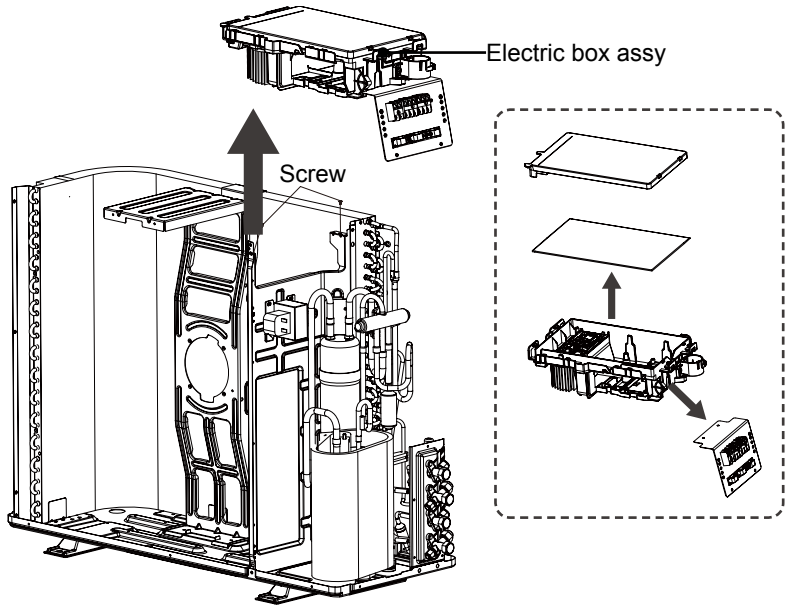
10. Removal Procedure

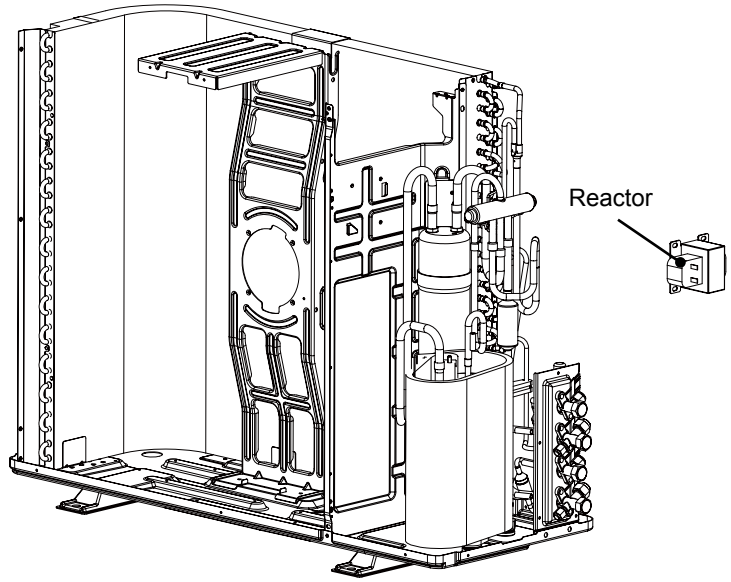
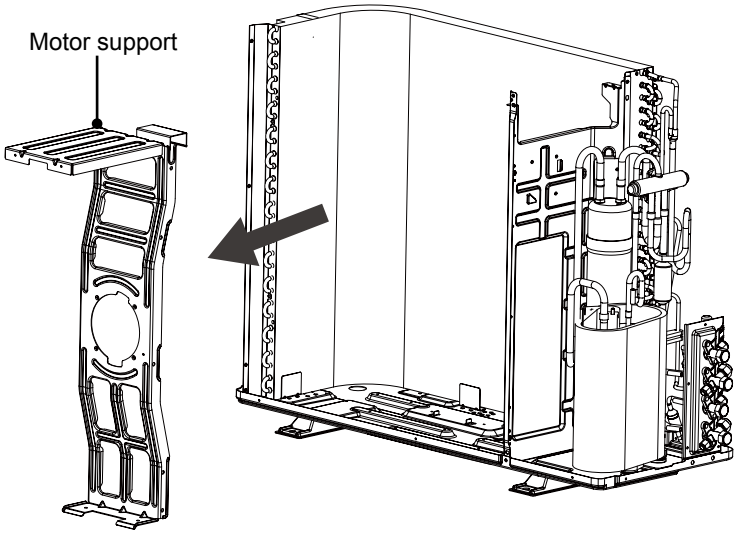
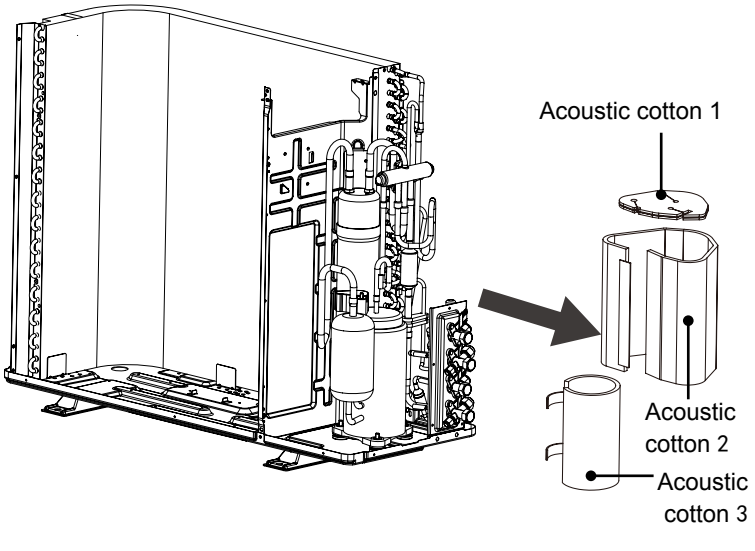
10.1 Removal Procedure of Outdoor Unit(18K)

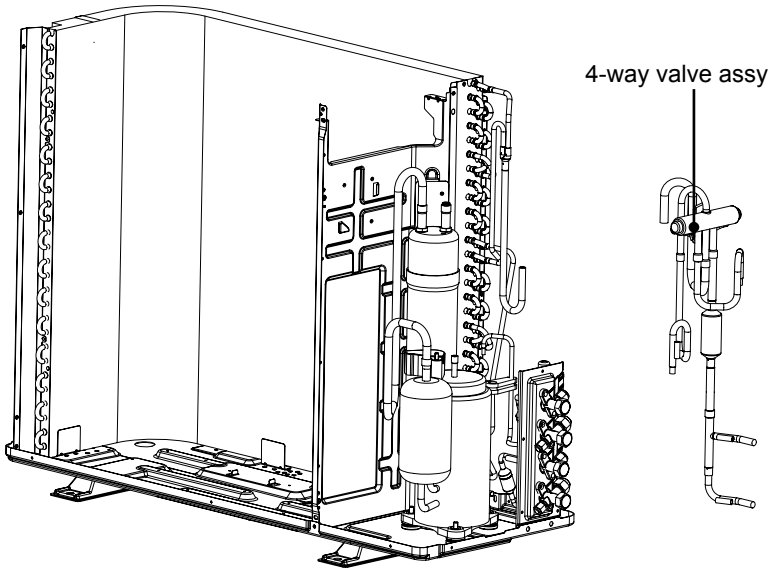
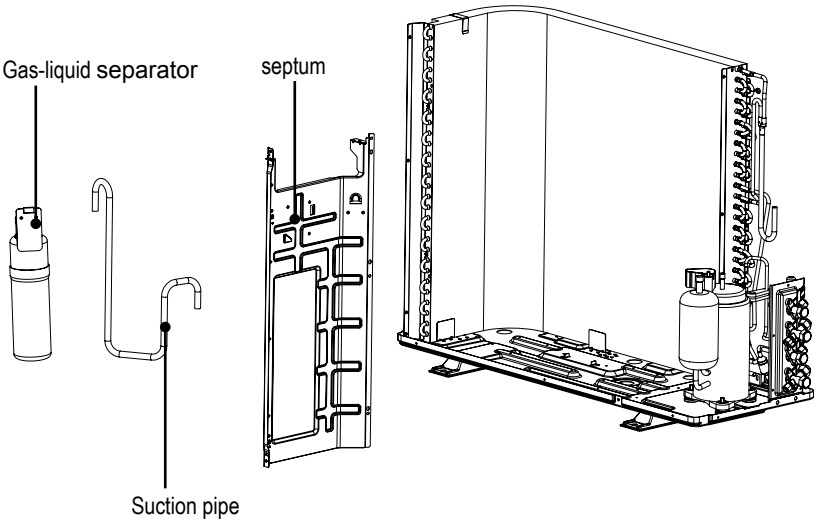
Warning **Be sure to wait for a minimum of 10 minutes after turning off all power supplies before disassembly.**

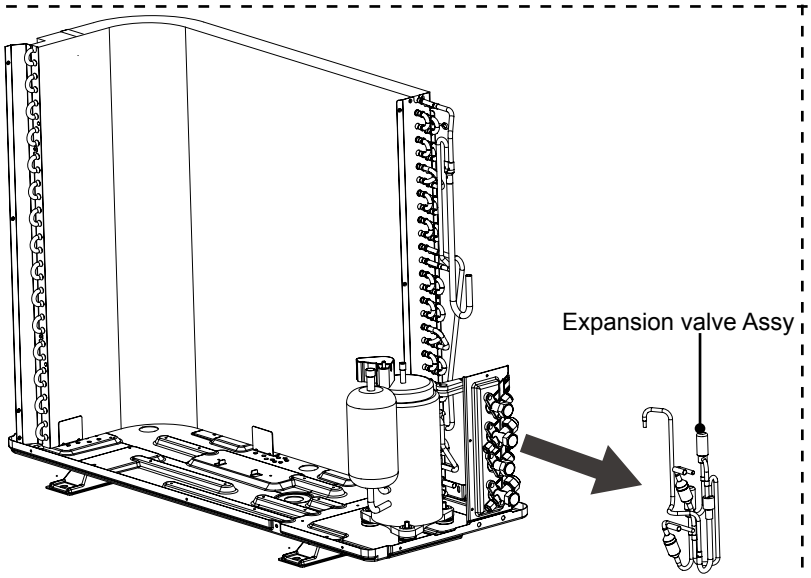
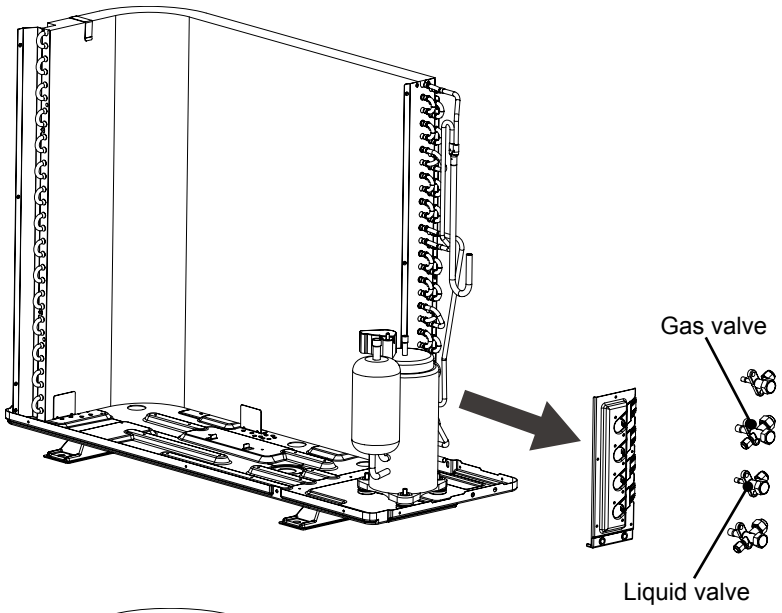
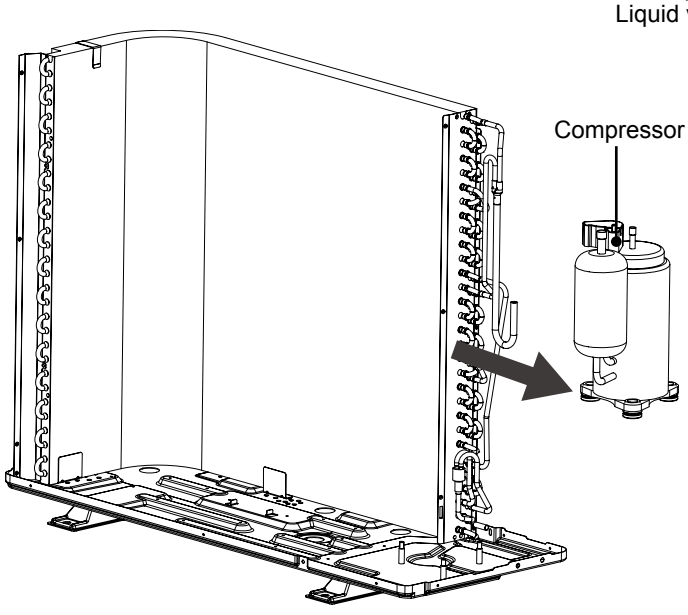
Procedure	Note
	**1.Before disassembly**
	**2. Remove top cover** Remove connection screws connecting the top cover plate with the front panel and the right side plate, and then remove the toppanel.
	**3. Remove protective grille** Remove the screws fixing protective grille and then remove the protective grille.

Procedure	Note
	**4.Remove grille and panel** A: Remove connection screws between the front grille and the front panel. Then remove the front grille. B: Remove connection screws connecting the front panel with the chassis and the motor support, and then remove the front panel.
	**5.Remove axial flow blad and Motor** Remove the nut fixing the blade and then remove the axial flow blade. Remove tapping screws fixing the motor anddisconnect the leading wire insert of the motor. Then remove the motor。
	**6.Remove big handle valve cover** Remove the connection screw fixing the big handle and then remove the handle. Use a screwdriver to fixed valve cover screwdrive,pull up to remove the valve cover.

Procedure	Note
	**7. Remove left side plate** Remove connection screws connecting the left side plate with the condenser assy. Then remove the left side plate.
	**8. Remove right side plate** Remove connection screws connecting the right side plate with the valve support and the electric box. Then remove the right side plate.
	**9. Remove electric box assy** Remove screws fixing the electric box assy; loosen the wire bundle and unplug the wiring terminals. Then lift the electric box to remove it.

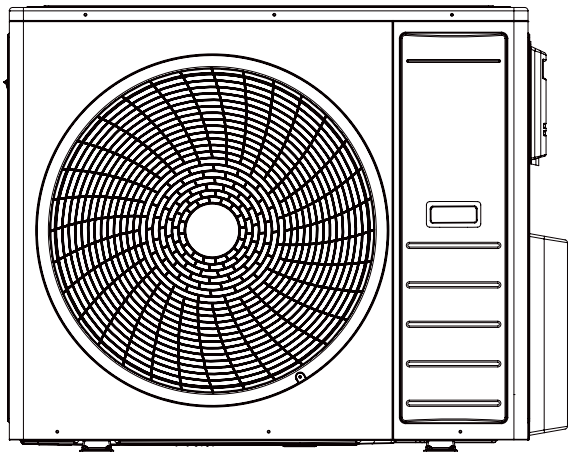
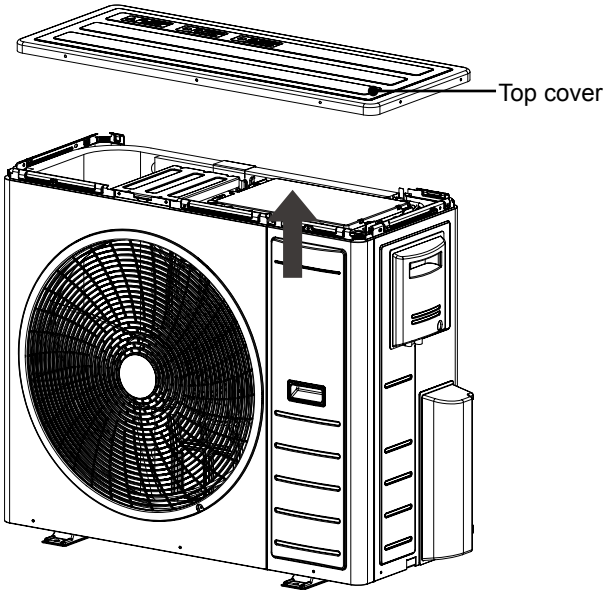
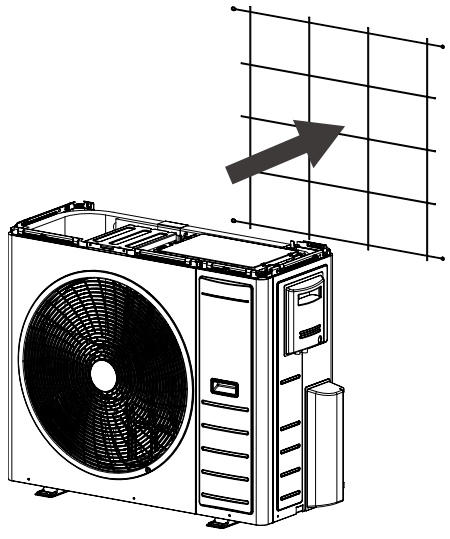
Procedure	Note
	**10.** Remove Reactor Take off the fixed scre,and you could take off the reactor.
	**11. Remove motor support** Unscrewed the chassis and the motor bracket fixed screw, motor bracket is desirable.
	**12. Remove acoustic cotton** Split the acoustic cotton lock,and take out 3 pcs slowly. NOTE: Do not damage the pipe.

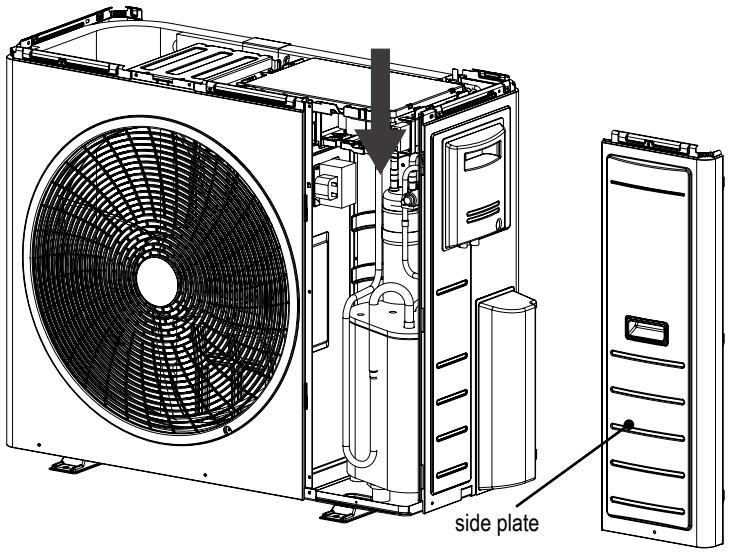
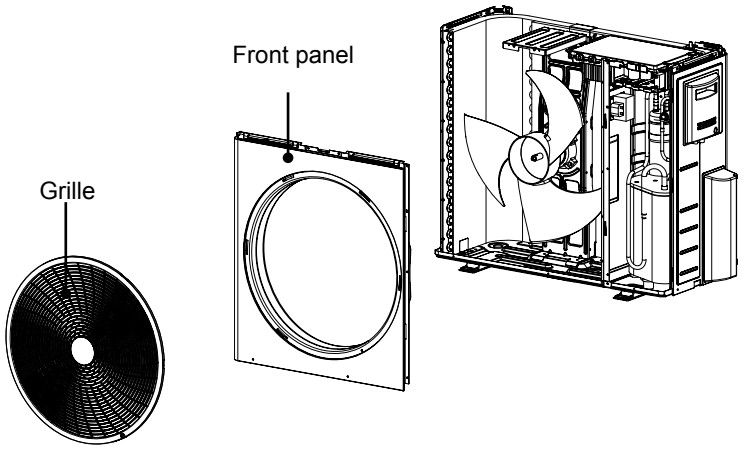
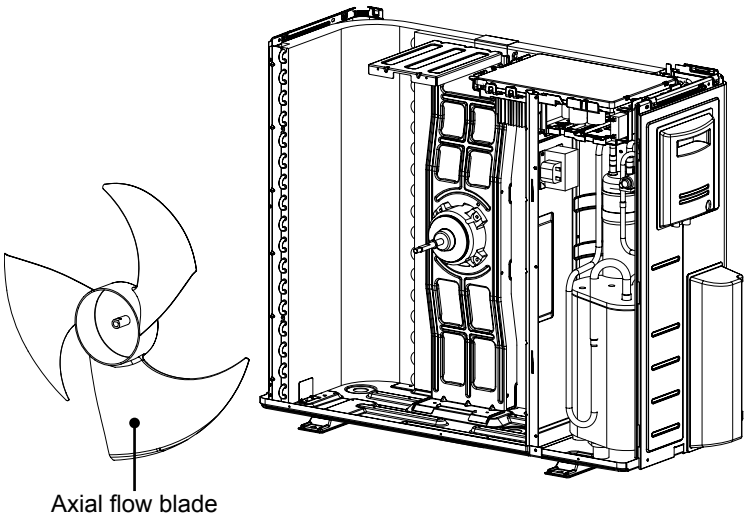
Procedure	Note
	**13. Remove 4-way valve assy** Unsolder the spot weld of 4-way valve assy, compressor and condenser, and then remove the 4-way valve assy . **Warning** Discharge the refrigerant completely before unsoldering,when unsoldering, wrap the gas valve with awet cloth completely to avoid damage to thevalve caused by high temperature. When unsoldering the spot weld, wrap the 4-way valve with wet cloth completely to avoid damaging the valve due to high temperature.
	**14. Gas liquid separator and diaphragm** Open the suction of spot welding, remove the suction pipe. Use a screwdriver unscrewed the fixed screw of gas-liquid separator, the upward gas-liquid separator, remove the gas-liquid separator . Use screw knife clapboard and chassis have fixed screw drive, remove the partition .

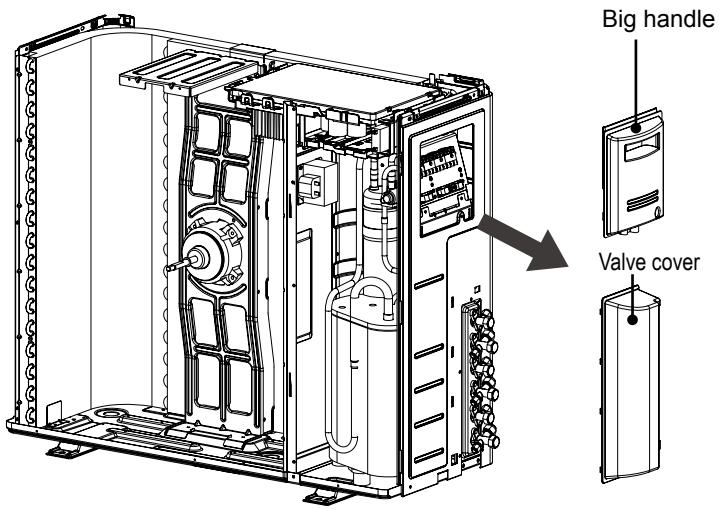
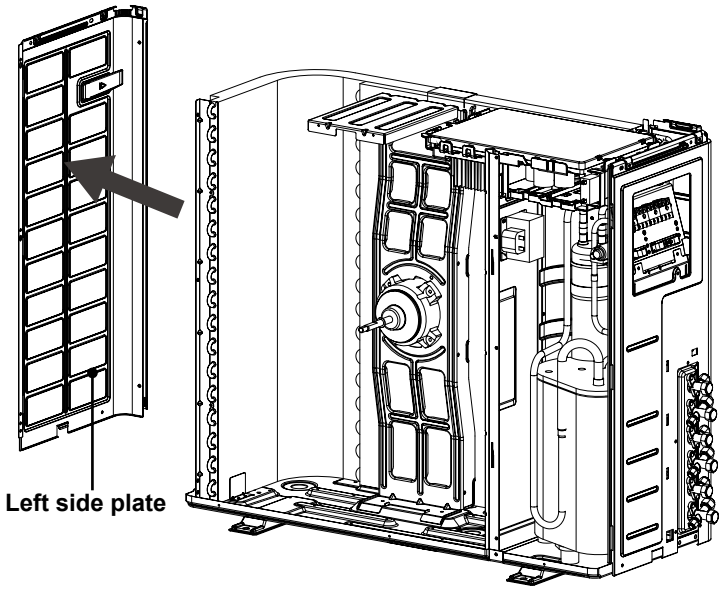
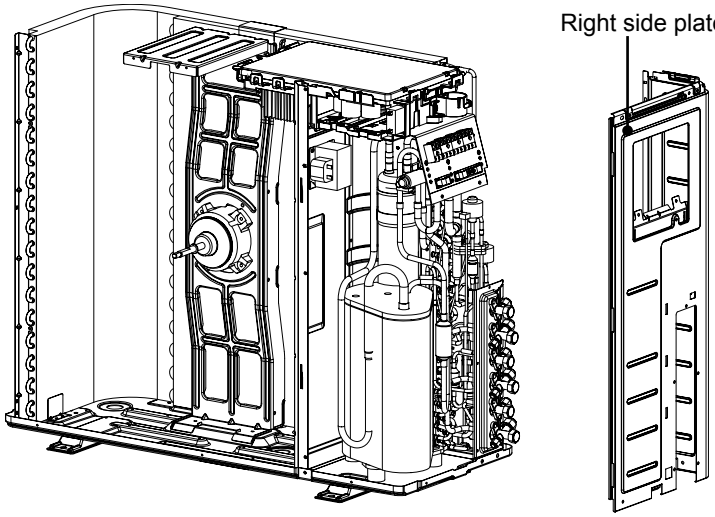
Procedure	Note
	**15. Remove Expansion valve Assy** Unsolder the spot weld of expansion valve assy, liquid valve and condenser, and then remove the expansion valve assy .
 	**16. Remove the compressor** A: Remove the 2 screws fixing the gas valve and unsolder the welding joint between the gas valve and the air-return pipe to remove the gas valve. B: Remove the foot nuts on the compressor and then remove the compressor.

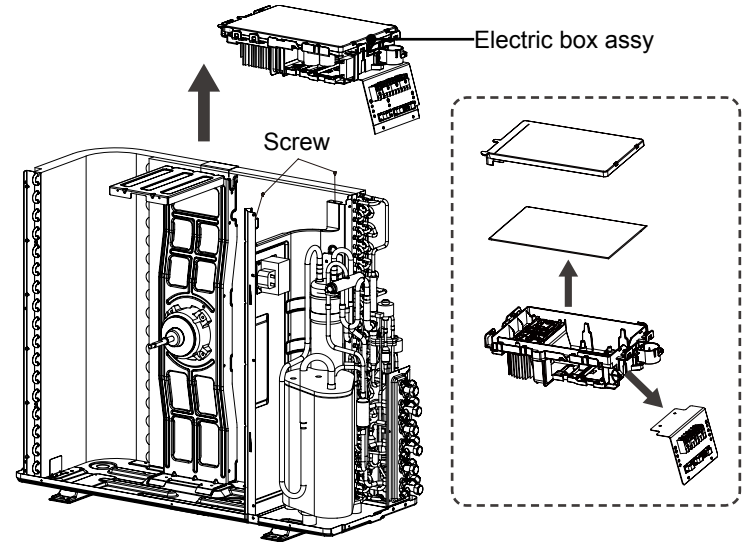
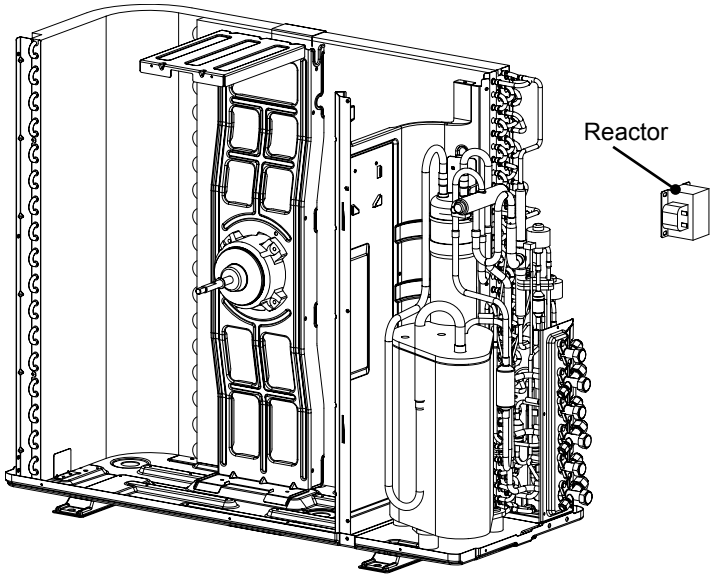
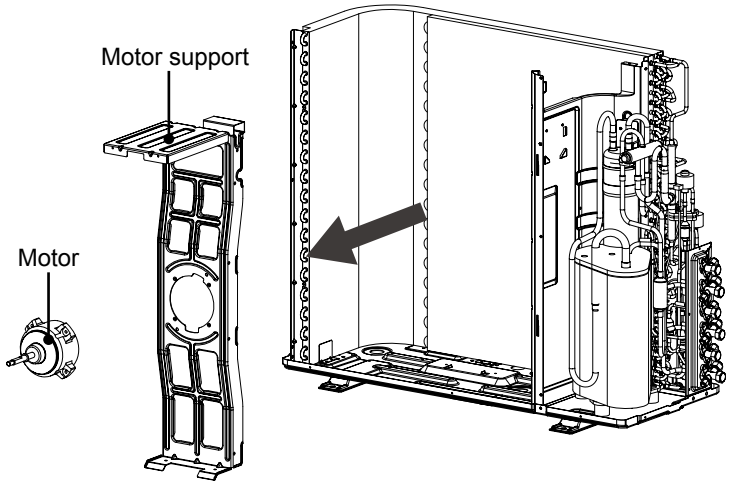
10.2 Removal Procedure of Outdoor Unit(24K)

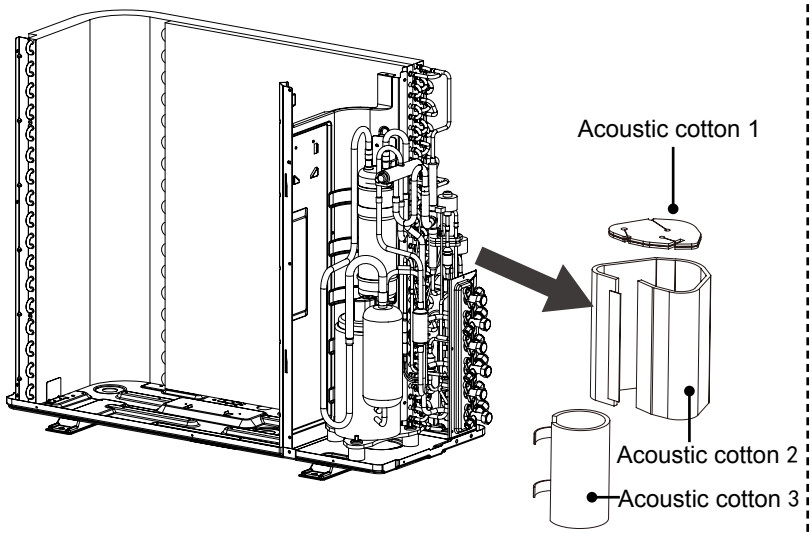
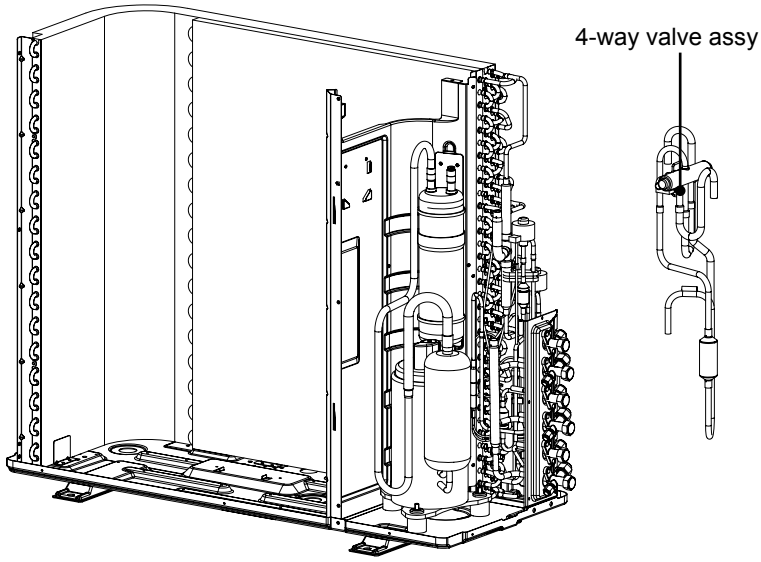
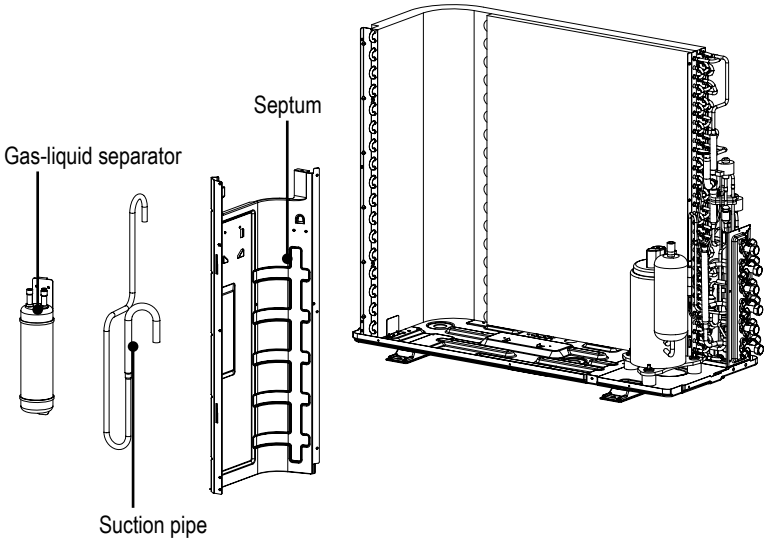
Warning **Be sure to wait for a minimum of 10 minutes after turning off all power supplies before disassembly.**

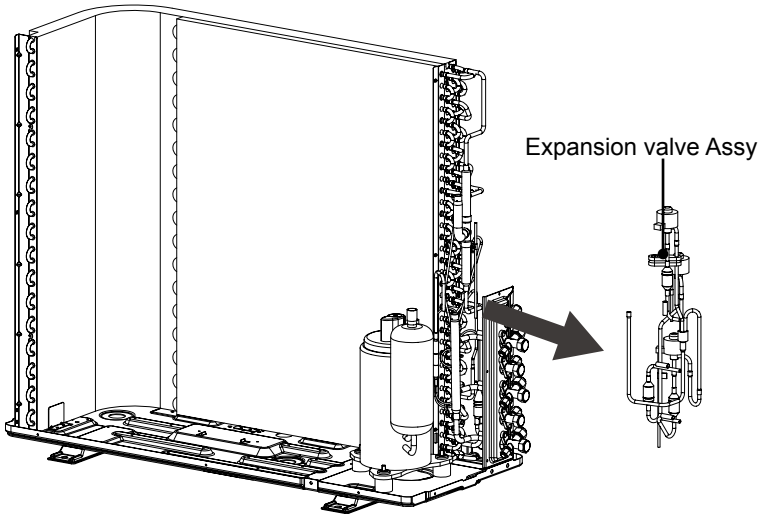
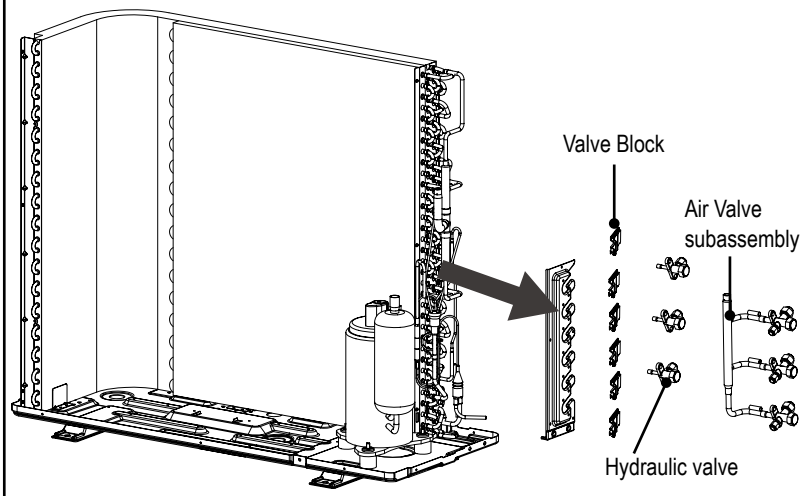
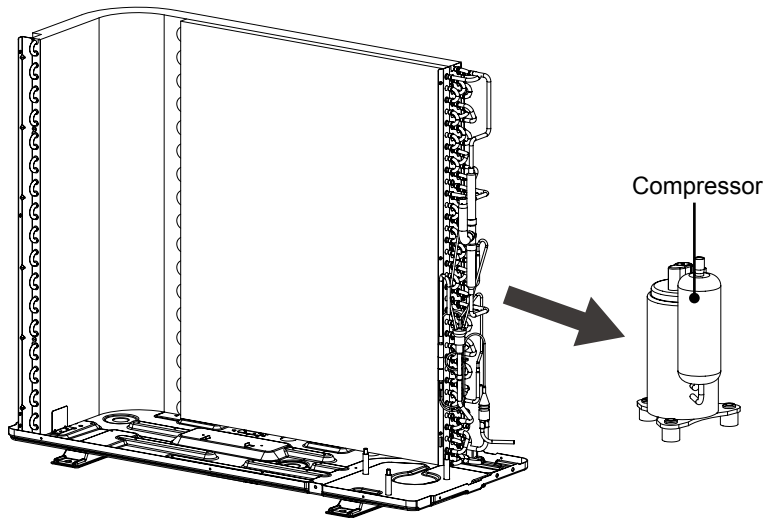
Procedure	Note
	**1.Before disassembly**
	**2. Remove top cover** Remove connection screws connecting the top cover plate with the front panel and the right side plate, and then remove the toppanel.
	**3. Remove protective grille** Remove the screws fixing protective grille and then remove the protective grille.

Procedure	Note
	**4.**Open the side plate Use screwdriver unscrewed the fixed screw of the side plate and the chassis, and then descend into the handle of the side plate hole by hand press, make the side plate and on the right side of card board, panel button out, again ask outside, can remove the side plate.
	**5.Remove grille and panel** A: Remove connection screws between the front grille and the front panel. Then remove the front grille. B: Remove connection screws connecting the front panel with the chassis and the motor support, and then remove the front panel.
	**6.Remove axial flow blad** Remove the nut fixing the blade and then remove the axial flow blade.

Procedure	Note
	**7.Remove big handle and valve cover** Remove the connection screw fixing the big handle and then remove the handle. Use a screwdriver to fixed valve cover screw drive, pull up to remove the valve cover.
	**8. Remove left side plate** Remove connection screws connecting the left side plate with the condenser assy. Then remove the left side plate.
	**9. Remove right side plate** Remove connection screws connecting the right side plate with the valve support and the electric box. Then remove the right side plate.

Procedure	Note
	**10. Remove electric box assy** Remove screws fixing the electric box assy; loosen the wire bundle and unplug the wiring terminals. Then lift the electric box to remove it.
	**11.** Remove Reactor Take off the fixed scre,and you could take off the reactor.
	**12. Remove motor and motor support** Remove tapping screws fixing the motor anddisconnect the leading wire insert of the motor. Then remove the motor. Remove tapping screws fixing the motor andlift the motor support to remove it.

Procedure	Note
	**13. Remove acoustic cotton** Split the acoustic cotton lock,and take out 3 pcs slowly. NOTE: Do not damage the pipe.
	**14. Remove 4-way valve assy** Unsolder the spot weld of 4-way valve assy, compressor and condenser, and then remove the 4-way valve assy . **Warning** Discharge the refrigerant completely before unsoldering,when unsoldering, wrap the gas valve with awet cloth completely to avoid damage to thevalve caused by high temperature. When unsoldering the spot weld, wrap the 4-way valve with wet cloth completely to avoid damaging the valve due to high temperature.
	**15. Gas liquid separator and diaphragm** Open the suction of spot welding, remove the suction pipe. Use screwdriver unscrewed the fixed screw of gas-liquid separator, the upward gas-liquid separator, gas-liquid separator is desirable. Use a screw knife clapboard and chassis have fixed screw drive, partition is desirable.

Procedure	Note
	**16. Remove Expansion valve Assy** Unsolder the spot weld of expansion valve assy, liquid valve and condenser, and then remove the expansion valve assy .
	**17. Split the valve and valve support** Pull out the valve block with the hands or tools. Screwdriver unscrew the valve and valve bracket set screw, remove the air valve subassembly and hydraulic valve. (open air valve subassembly of spot welding, take down the various valve) Screwdriver unscrew the valve bracket and the chassis of the fixed screw, take down the valve support.
	**18. Remove Compressor** Remove the foot nuts on the compressor and then remove the compressor.

AKAI

SERVICE MANUAL

Per favore leggere e conservare queste istruzioni

IMPORTER:BARNI CARLO S.P.A.
ADDRESS:VIA ARCONATE 63, 20020 BUSTO GAROLFO (MILANO), ITALY
www.akaielectronics.it