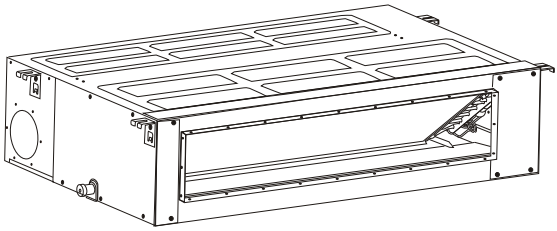
VRF DC INVERTER DUCT TYPE AIR

Installation and User's Manual



This instruction manual contains important information and recommendations that we would ask you to comply with to obtain best results from air conditioner.

Thank you once again.

PREFACE

Dear User:

Thank you for purchasing and using our product. Please read this manual thoroughly before installation,maintenance,or troubleshooting to ensure proper and comprehensive understanding and usage of the product.

This manual is applicable only to the listed indoor unit models. For information related to outdoor unit or anyother indoor units, please refer to the relevant installation and operation manuals.

For detailed operations of supplementary control devices such as wired controller, remote controller, and central controller, please refer to the respective manuals provided with those devices.

To ensure the correct installation and use of the product, please note the following:

- **Follow the instructions in this manual strictly to ensure safe and correct usage of the product.**
- **All illustrations and contents in this manual are for reference only. To adapt the products to the customers better, we will make continuous improvements and innovations without prior notice.**
- **Regular cleaning and maintenance of your product are necessary to enhance air conditioning efficiency and extend the unit's lifespan. Please contact your local service center before each air conditioning season for professional cleaning, maintenance, inspection, and/or repair services (charges apply).**
- **After reading this manual, please keep it in a safe place for future reference.**

[Prompt]

Panels, wired controllers, and remote controllers are available in multiple models. All optional or additional accessories should use our components.

All illustrations in this manual are for explanatory purposes only. The appearance and functions of your product may differ from the illustrations in this manual. Please refer to the actual model.

Contents

PRECAUTION

Inspection before using

- Check that the earth wire is reliably connected.
- Check that the air dust filter is installed.
- If the AC has not been used for a long time, make sure you clean the dust filter before switching on the AC. For details, please refer to the chapter " Repair and Maintenance".
- Make sure the air inlet or outlet of the indoor and outdoor units are not blocked.
- Make sure the refrigerant pipe and hot water pipe are connected and there are no leaks.

Optimal operation

- Pay attention to the following matters to ensure optimal operation of the system. For details on how to operate the system, see the corresponding section.
- Set the temp appropriately to obtain a comfortable environment; overheating or overcooling should be avoided.
- Please close doors and windows. If doors and windows are opened, indoor and outdoor air will form convection currents, making cooling or heating less effective.
- Please set the scheduled running time with the remote controller timer button.
- Do not place objects that block airflow close to the air inlet or outlet, as this will reduce the efficiency of the AC or even stop the system from operating.

Security rules

⚠Attention

- This unit must be installed by a professional technician, and the user must not install it by himself or herself, as this may cause problem or injury or damage to the AC and/or consumer.
- In order to use the unit properly, please use the unit in accordance with this manual, otherwise it may cause the internal protection of the unit or the occurrence of water drippingor a reduction in the cooling or heating effect.
- Please be careful to set the room temperature moderately, especially when elderly people, children or patients are in the room.
- Lightning, a nearby car or mobile phone may cause the air conditioner to malfunction, unplug it for a few seconds and then plug it back in, then restart the air conditioner.

⚠Warning

- The main power switch of the air-conditioner should be located in a position that is out of children's reach to prevent the danger of children playing with the main power switch.
- During a thunderstorm, disconnect the main power switch, otherwise lightning may damage the unit.
- Disconnect the main power switch before cleaning the unit or performing maintenance, otherwise accidents may occur.
- Indoor units cannot be disconnected individually unless all indoor units in the same system are disconnected at the same time.
- Broken power cords must not be used and should be replaced immediately if found to be broken and must be replaced by a professional in order to avoid danger.
- The appliance is not to be used 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.
- Children being supervised not to play with the appliance.
- The appliance shall be installed in accordance with national wiring regulations.
- This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved.
- Children shall not play with the appliance.
- Cleaning and user maintenance shall not be made by children without supervision.

PARTS AND FUNCTIONS

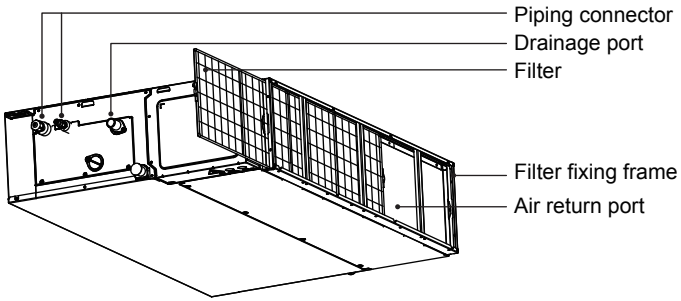
■ AC performance features

This AC is suitable for central air-conditioning system end device in hotel, commercial building, office building, house, laboratory, hospital, factory and other building end device of the AC system.Its main features are:

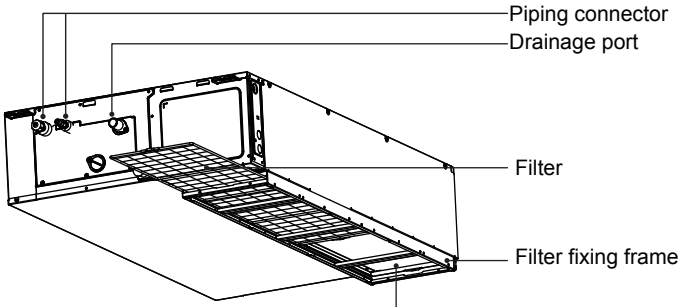
1. Appearance design with smooth flowing lines, beautiful and generous.
2. Indoor fan motor adopts low-noise motor, fan adopts high-efficiency small low-noise fan, heat exchanger selection of high-quality aluminium foil and internal threaded copper tube, so that the unit to achieve energy-saving, quiet effect.
3. Wireless remote control is fully functional and reliable:
   - —— Operation modes: cooling/air supply/heating
   - —— The microcomputerised temp controller accurately controls room temp to save energy and improve comfort.
   - —— When heating, the microcomputer automatically controls defrosting, so that the heating effect is greatly improved.
   - —— With timer on/off setting function.

■ Names of the various parts of the air conditioner and their functions

The indoor unit is available in both back and down air return, as shown below:



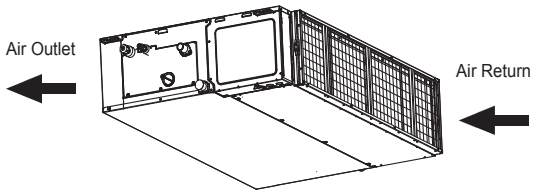
Rear return air



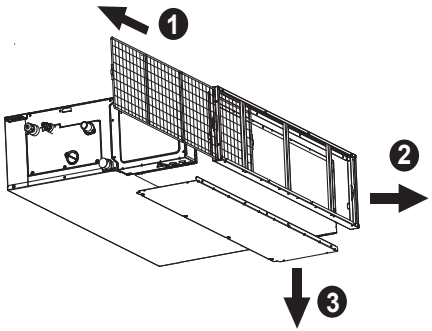
Lower return air

This duct fan is equipped with two return air modes: rear return air and lower return air (initially rear return air mode). If necessary, please follow steps (2-4) to change it to lower return air mode.

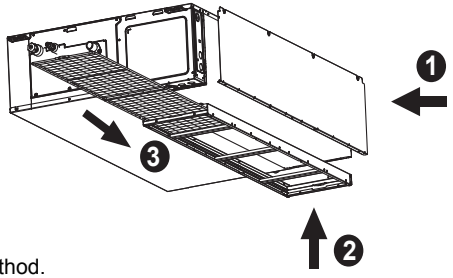
1. Rear return air method



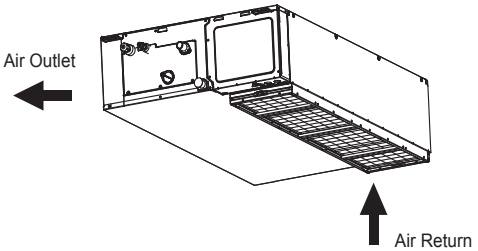
2. First loosen the fixing screws of the filter screen, pull out the filter screen from theleft or right, then loosen the fixing screws of the filter screen frame, remove theframe of the filter screen, and finally loosen the fixing screws of the return airbottom plate and remove the return air bottom plate.



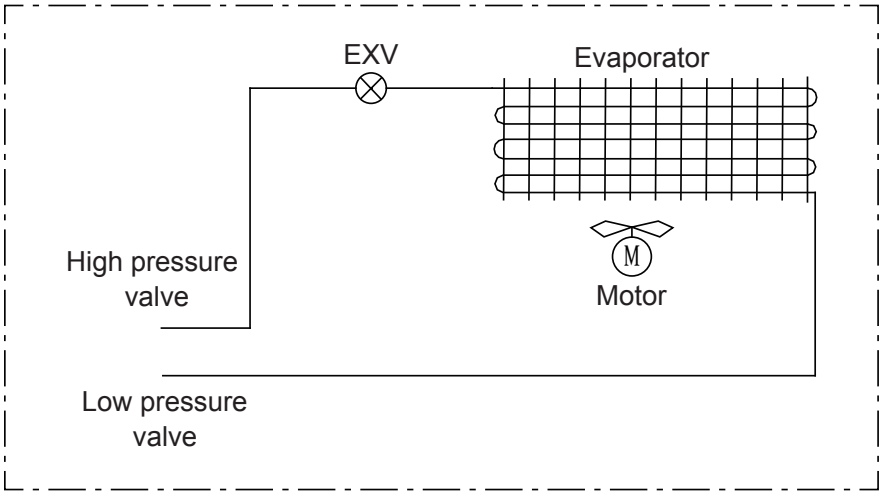
3. Now fix the return air bottom plate on the back of the machine, then fix the filterframe under the machine, and finally install the filter into the filter frame.



4. Lower return air method.



System schematic diagram



INSTALLATION

Attention before installation

- Please make sure that the installer has the relevant installation qualifications, improper installation by unqualified personnel may cause malfunction or safety hazards, and even affect the safety of persons and property.

Selection of installation sites

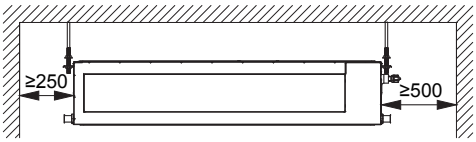
Avoid installation in these places

- Combustible gases are likely to leak.
- Areas with high salt content (coastal areas)
- Where corrosive gases such as sulphurous gases are present (copper pipes and soldered parts can be corroded and damaged, resulting in refrigerant leakage, etc.)
- Filled with mineral oil or where there are oil splashes and grease, such as in kitchens (deterioration of plastic parts, as well as parts falling off or leaking, etc., can occur)
- Against a door or window, in contact with high humidity air.
- Cannot bear the weight of the place.
- Machines with electromagnetic wave generation. (Interference with air-conditioner control systems)
- Insulate the metal parts of buildings and air-conditioners in accordance with national electrical standards.
- Install the indoor unit in a place where the air can circulate sufficiently.

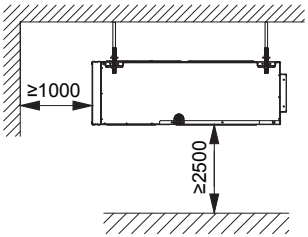
Selection of installation sites

Installation space

Ensure the necessary space for installation and maintenance.

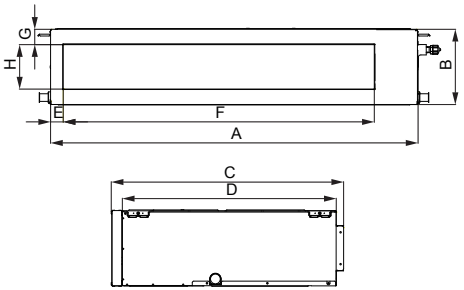


unit:mm

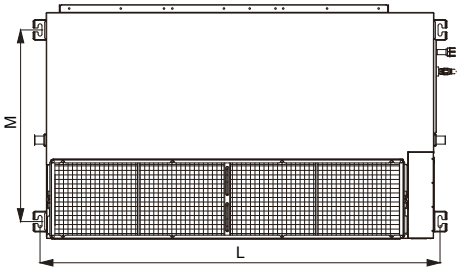


Indoor unit profile and installation dimensions

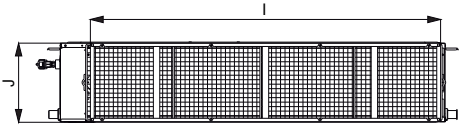
The positioning of celling hole,indoor unit and hanging screwbolts.



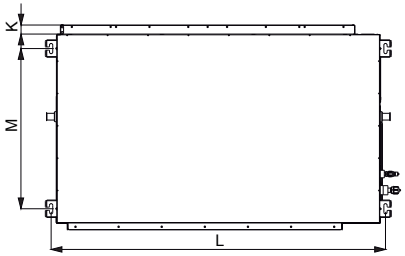
Position size of desecensional ventilation opening.



Air inlet size



Size of mounted hook



Dimension / Model	Outline dimension				Air outlet opening size				Air inlet size			Size of mounted hook	
	A	B	C	D	E	F	G	H	I	J	K	L	M
45-80	920	245	760	700	40	742	49	149	813	247	35	961	595
90-140	1200	245	760	700	40	1022	49	149	1093	247	35	1241	595

unit:mm

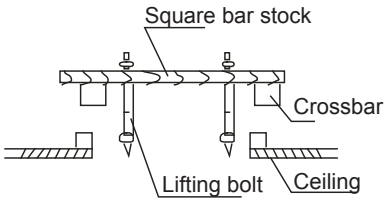
Installation of the main body

- Use φ10 lifting bolts.
- Removal of ceilings: Please consult with the building's interior decorator for specifics, as building structures vary.
  1) Treatment of ceilings: To ensure that the ceiling is level and to prevent it from vibrating, the ceiling substrate must be strengthened.
  2) Cut off and remove ceiling base frame.
- Reinforcement of the end surfaces left after the ceiling is removed, and further reinforcement of the base frame that holds the ends of the ceiling.
- The body is placed underneath, and piping and wiring connections are made within the ceiling. After the installation site is selected, pull the refrigerant piping, drain piping, and indoor/outdoor unit connecting wiring to the connected position before the unit is lowered.

Installation method for lifting bolts.

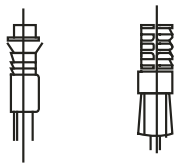
Ceiling is wooden case

Install the lifting bolts through the plankson the beams.



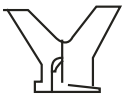
Constructed concrete slab

Use expansion screws or plug screws with internal holes.



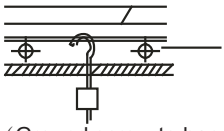
Unbuilt concrete slab

Install with inserts, ground bolts, etc.



Insertion device

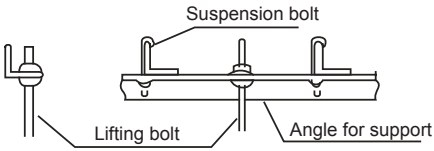
Sliding Inserts



（Ground screw to hang up the connecting tube）

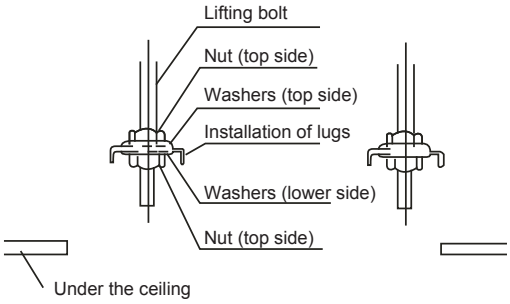
The ceilings are of sheet steel construction

Make use of the ceiling reinforcement, or install angles for support.

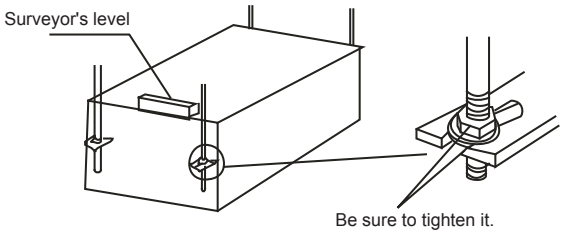


Indoor unit lifting

The position of the adjusting nut, the gap between the washer (lower side) and the ceiling is to be determined according to the actual construction.

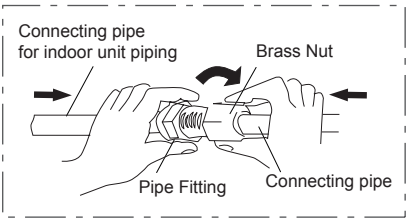


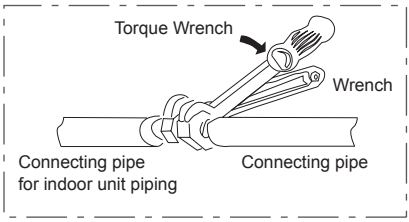
Hang the nut of the lifting bolt in the U-shaped slot of the mounting plate. Confirm the level of the body with a level. (Downward sloping to the non-drain side is strictly prohibited)



■ Connection of refrigerant pipes

1.Align the expansion of the copper pipe with the center of the threaded joint, and tighten the expansion nut fully as shown below:





2.Use two wrenches at the same time to secure and tighten the expansion nuts.

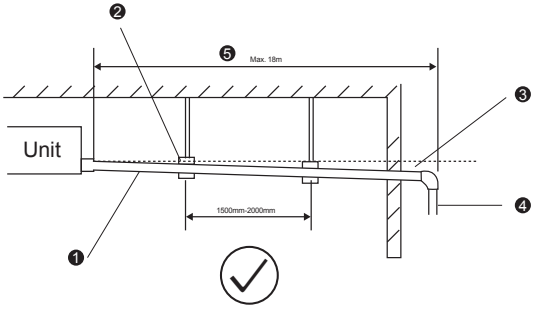
3.The Angle of pipe bending should not be too small, otherwise the pipe may break. When the installation personnel bend the pipe, please use a pipe bender.

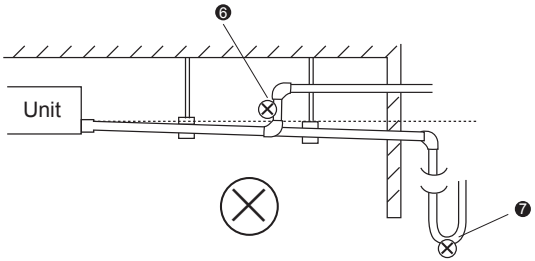
4.Wrap the pipes and connectors that are not insulated with sponge and wrap them tightly with plastic tape.

5.Corrugated pipes are recommended if the diameter of the gas pipe is ≥15.9mm to avoid problems.

Connection of drain pipe

1. Use PVC pipes for drainage piping layout and ensure that a downward slope of 2/100 or more is set.
2. Use bonding adhesive to connect drains and polyvinyl chloride family tape to connect pipe joints.
3. Check all aspects of pipework.
4. Use a connected drain hose to change the direction of pipe drainage.





❶ Insulation material (thickness 9mm or more)

❷ Drainage pipe support rods

❸ Minimum tilt angle (2/100)

❹ Drainage pipe

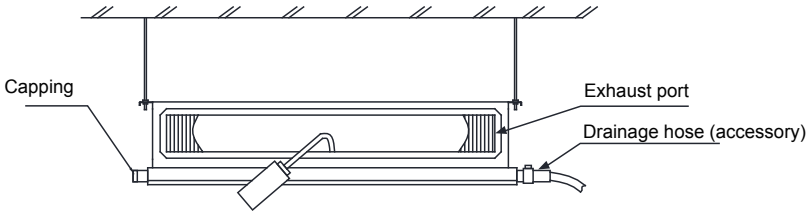
❺ Maximum drainage distance

❻ Elevated bending (must be avoided)

❼ Sewage accumulation (to be avoided)

Drainage test

- ◆ Before testing, ensure that the drain line is smooth and check that the connections are sealed properly.
- ◆ Newly constructed rooms should be tested for drainage prior to laying ceilings.
- ◆ Check the drainage by slowly injecting a certain amount of water through the exhaust port.



Note: After making sure that the drainage is smooth and there are no leaks, insulate the drain pipe with an insulating cotton sleeve; no insulation will result in condensation.

ELECTRICAL WIRING

Precautions for installing the power supply

The user's power lines, grounding and other safe use of electricity will be checked to ensure compliance with relevant national regulations and requirements for safe use of electricity. Air-conditioners must be powered by dedicated power branch lines to avoid overloading the lines leading to heat and short-circuit causing fire.

The model and rating of the fuse wire are subject to the silkscreen marking on the corresponding controller or fuse sleeve, and the external static pressure of the air conditioner at the test place is 0MPa

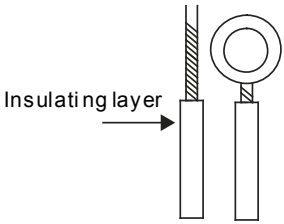
Cross-sectional area of conductors (wire diameter), switch (socket) and fuse specifications and load current comparison table

Air-conditioning special switchgear and wiring		
Maximum operating current of the air conditioner I (A)	Wire cross sectional area (mm^2)	Socket or switch nominal size (A)
I<16A	1.5	16
16≤I<25A	2.5	25
25≤I<32A	4.0	32
32≤I<40A	6.0	40

Note: The maximum operating current of the air-conditioner refers to the maximum input current value on the nameplate of the air-conditioner; the maximum operating current of the line refers to the sum of the maximum operating current of the air-conditioner plus the maximum operating current of the rest of the electrical appliances. According to the mandatory requirements of national standards, air conditioners with a maximum operating current >16A should use air switches with protection devices or leakage protection switch; air conditioners with a maximum operating current <16A, air conditioner power cord with a plug.

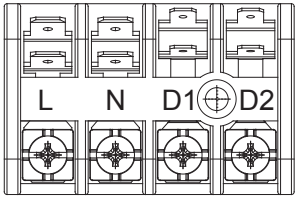
Connection between cable and terminal block

1. Single branch connection (as shown below):



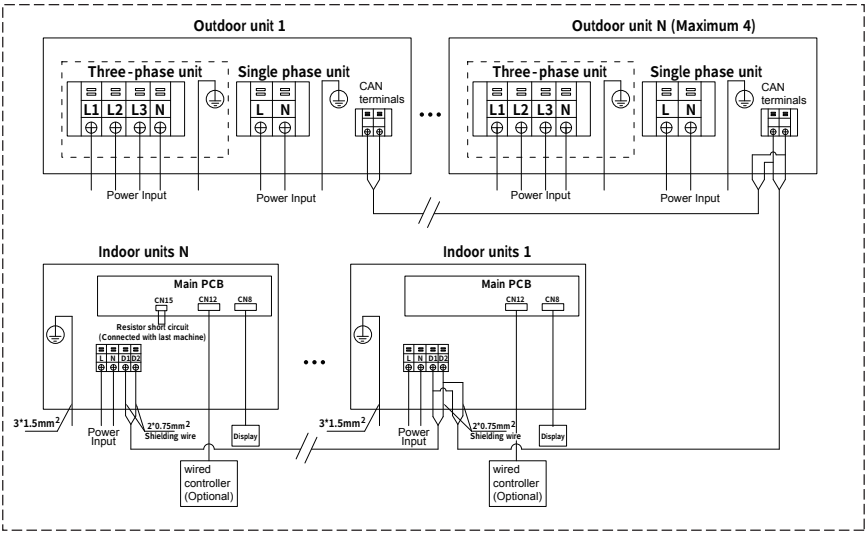
1) Use wire strippers to strip the end insulation layer of the single branch line about 25mm, exposing the single core wiring.
2) Remove the wiring screws from the wiring panel with a screwdriver.
3) Bend the core of the single branch line to the right with the pliers and wind it into a ring the size of the screw.
4) Screw through the ring wound by the wire core and screw it tightly to fix it on the terminal block.

2. Power cable connection



1) Open the cover of the outdoor unit electrical box.
2) Route the power cable through the cable clamp under the power terminal block.
3) Connect the ring formed by winding the power cable through the wire core to the Terminal L and Terminal N of the 4-bit terminal block of the indoor unit, as shown in the figure.

3. Schematic diagram of wiring for indoor and outdoor units



⚠ Notes:

(1) The indoor and outdoor units are powered separately. It is recommended to use a 3×1.5mm^2 power cord for the indoor unit and a 2×0.75mm^2 communication cable.

(2) The power cable must be made of copper conductors. It must comply with relevant local standards and meet the current-carrying capacity requirements of the equipment.

(3) The communication mode can only be a daisy-chain connection. The last indoor unit needs to be connected to the matching resistor shorting wire (please find the resistor in the outdoor unit accessory bag).

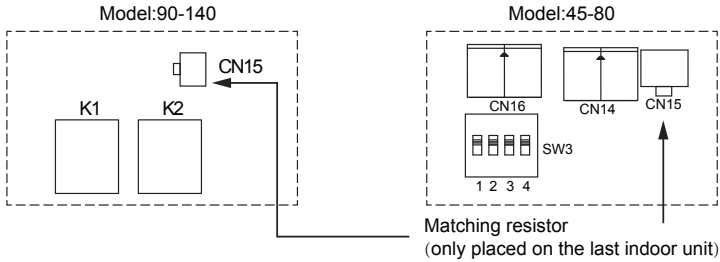
4. Connection of communication lines

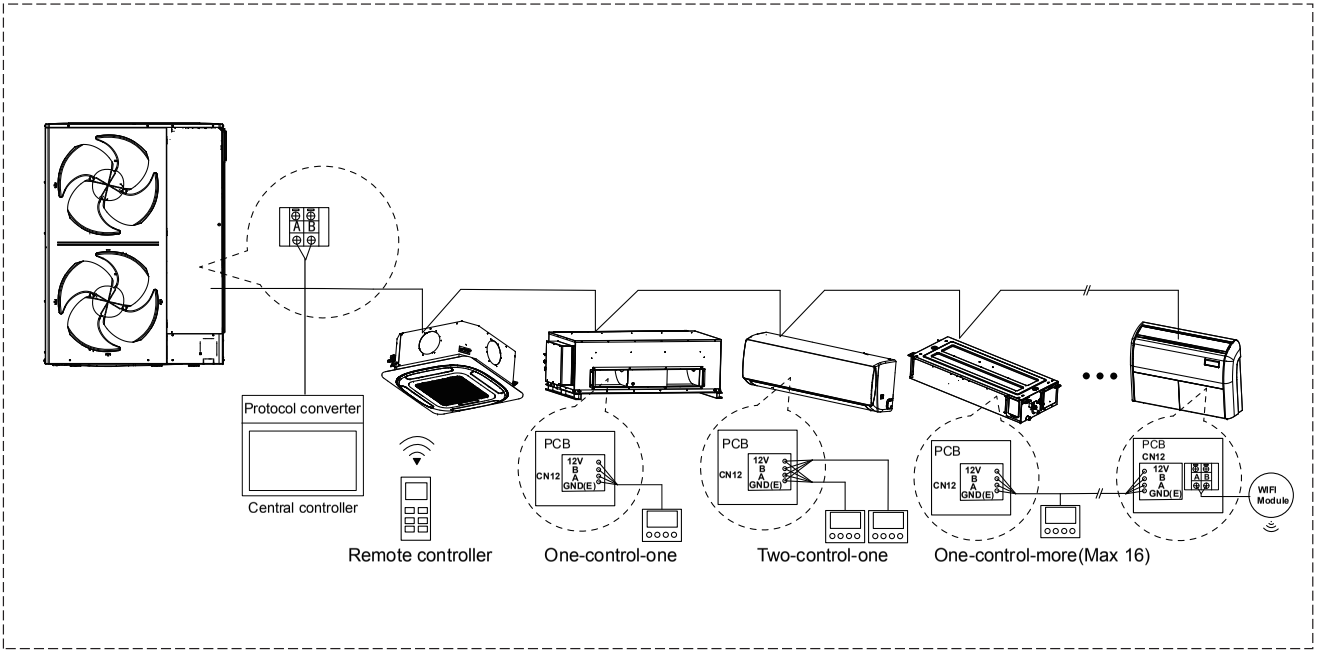
(1) Open the cover of the indoor unit electrical box.

(2) Pass the communication wire through the wire rubber ring.

(3) Connect the ring formed by winding the communication cable through the wire core to the terminal D1 and terminal D2 of the 4-bit terminal block of the indoor unit, as shown in the figure, regardless of polarity.

(4) Different indoor units communicate via CAN. The last connected indoor unit must have a matching resistor jumper wire installed on the mainboard.The connection position is indicated by the silkscreen marking CN15 on the mainboard, as shown in the diagram below.





Notes:

1. The communication cables must be routed separately from the power cables to avoid interference.
2. An appropriate length of communication cables must be selected, cables must be integrated with the joint and spliced cables are not allowed.
3. The communication mode can only be a daisy-chain connection. The last indoor unit needs to be connected to the matching resistor shorting wire (please find the resistor in the outdoor unit accessory bag).

APPLICATION CONTROL

⚠ Caution

Installation and maintenance personnel can contact the manufacturer's after-sales technical support personnel to obtain a complete fault code list, inspection sheet and operation specifications.

If the installation and maintenance personnel use the fault code sheet, inspection sheet and operation specification obtained by non-authorized way to install and maintain the machine, they shall bear the losses or customer complaints caused thereby.

■ Dip switch setting

- Set the PCB code of the indoor motor control box according to the purpose. Before setting the dial code, be sure to turn off the main power switch and turn it back on after setting. If the power is not turned off after setting, the setting function cannot be executed. " ■ " is the dialling code switch position, SW3 factory has been set according to the model before delivery, non-professionals please do not move.

Model:40-80

SW1 SW2 SW3 SW4

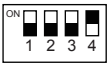
- Function dial definitions (SW1)

Function	Dial position	Description	Dial position	Description
Reserve		Reserve		Reserve
		Reserve		Reserve
Door detection		Valid		Null(default)

- Function dial definitions (SW3)

Dial definitions (SW3)				
SW3_1	SW3_2	SW3_3	SW3_4	Model
OFF	OFF	ON	ON	40/45
OFF	ON	OFF	OFF	50/56
OFF	ON	OFF	ON	63
OFF	ON	ON	OFF	71
OFF	ON	ON	ON	80

- Function dial definitions (SW2)

Model	Dial position
F2 Duct	

- Function dial definitions (SW4)

Function	Dial position	Description	Dial position	Description
Fresh air		Invalid		valid
Debug		Default		Debug

Model:90-140

● Function dial definitions (SW2)

Model	Dial position
F2 Duct	

● Function dial definitions (SW3)

Dial definitions (SW3)				
SW3_1	SW3_2	SW3_3	SW3_4	Model
ON	OFF	OFF	OFF	90
ON	OFF	OFF	ON	100
ON	OFF	ON	OFF	112
ON	OFF	ON	ON	125
ON	ON	OFF	OFF	140

● Function dial definitions (SW1)

Function	Dip position	Description	Dip position	Description
Reserve		Reserve		Reserve
		Reserve		Reserve
Door detection		valid		invalid
Fresh air		valid		invalid

External static pressure setting

1. Wired controller (86N3) setting and display:

● Enter parameter setting: In the ON state, press [Mode] + [▼] key for 5S, the buzzer will sound briefly, and enter the parameter setting interface. The time area will display the parameter code, and the parameter code will flash.

● Switch parameter code: At this time, press [▲] and [▼] keys to switch parameter code, and select [PL].

● Select parameter code: After switching the parameter code, press the [Function] key briefly. The parameter code will stop flashing and the corresponding parameter value [P00~P11] will flash.

● Change parameter value: After selecting the parameter code, press [▲] and [▼] to modify the size of the parameter value. Press [Function] briefly, save and return, and the parameter code starts to flash.

Parameter setting entry						
Parameter code			Set the current parameters		Scope of setting	remarks
Parameter code	Regional display	Parameter name	Setting values	Regional display	TP00~P11	Default P03
PL	Time zone hours	Indoor static pressure setting	P03	Temperature display area		

Note

Constant air volume static pressure settings (P00: Query mode; P01-P09: Manual static pressure settings 1-9; P10: Set automatic static pressure calibration for this indoor unit; P11: Set automatic static pressure calibration for all indoor units in the system). When powered on, this parameter defaults to synchronization with indoor units, using them as the reference.

Display in turn

2. Remote control button operation and display:

① Enter parameter setting: Press the [Wind speed + Mode] key for 5 seconds when the remote control is on, and the remote control digital display board shows [00].

② Switch parameter code: press [▼] (down key) to select [A0-A9, b0-b1] mode.

③ Select parameter code: Switch the parameter code, display [A0] on the remote control, press the [Mode] key to decode, and the value displayed immediately is the current static pressure value. Example: 02 represents 20Pa static pressure, 15 represents 150Pa static pressure.

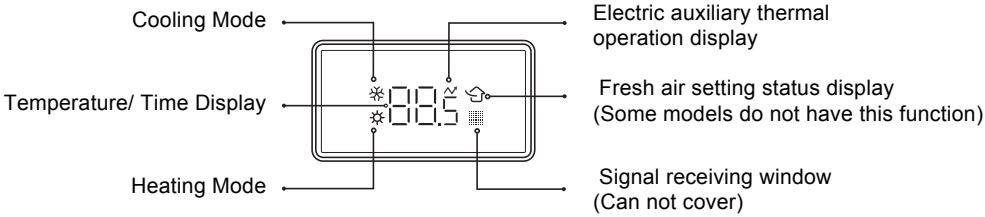
Note: Constant air volume static pressure setting (A0: query mode; A1-A9: manual static pressure mode 1-9; b0: set automatic static pressure calibration for this indoor unit; b1: set automatic static pressure calibration for all indoor units in the system)

Wired controller Setting	P00	P01	P02	P03	P04	P05	P06	P07	P08	P09	P10	P11
Remote controller Setting	A0	A1	A2	A3	A4	A5	A6	A7	A8	A9	b01	b02
Display code name	00	01	02	03	04	05	06	07	08	09	10	11
Set the definition	LCD display Current operating static pressure value	P1 gear	P2 gear	P3 gear	P4 gear	P5 gear	P6 gear	P7 gear	P8 gear	P9 gear	This indoor unit will Automaticaly calibrate the static pressure per fan motor current	All indoor duct unit of the system Automaticaly calibrate the static pressure per fan motor current
static pressure / Model capacity	/	Pa	Pa	Pa	Pa	Pa	Pa	Pa	Pa	Pa	/	/
45-80	/	00	20	40	60	80	100	120	140	160	/	/
90-140	/	00	25	50	75	100	125	150	175	200	/	/

ERROR CODE

LED display:

1.The run light blinks slowly during power-on reset;
2. All indicators light are off in standby;
3. Run light is on when switching on;
4. Frost/preheat light illuminates when preventing cold air or defrosting;
5. Timer lamp lights up when the timer function is on;
6. In case of malfunction, the malfunction lamp lights up and the running lamp goes out.



Digital tube fault display:

When the digital tube displays a fault, the first digit displays the letter **d** or **b**, and the second digit displays a number from 1-9 or the letter A.
（As d8 , for d8; b8, for b8; bA, for bA）

Error Code	Error Content	Error Code	Error Content
b1	Ambient temp sensor failure	d1	IDU fan protection (PG motor blockage protection, IDU fan overload protection, DC brushless current protection)
b2	Inlet pipe temp sensor failure		
b3	Middle temp sensor failure	d2	E-heater protection
b4	Outlet pipe temp sensor failure	d3	Full water protection
b5	Temp sensor failure	d4	Anti-freezing protection
b6	Water temp sensor failure	d5	Mode conflict
b7	Indoor EEPROM failure	d6	IDU IP address abnormal (not assigned to IP or IP address conflict)
b8	Swing motor failure		
b9	IDU MAC address failure	d7	Capacity dialling error
bA	Unit model dialling error	d8	Engineering code conflict

TEST RUN

⚠ Attention

1. Verify that all valves are open before commissioning.
2. Electrical safety check before commissioning.
3. Try not to carry out forced operation. (Otherwise the protective device may not operate, which is very dangerous.)

1. Test runs must be performed after all installations have been completed.
2. Please confirm the following before the test run.
- IDUs and ODUs are installed correctly.
- Piping and wiring are correct.
- Has the refrigerant piping system been leak tested.
- Is the drainage smooth.
- Whether the insulation has been perfected.
- Earth wire is properly connected or not
- Has the length of piping, refrigerant charge been recorded.
- Is the supply voltage equal to the rated voltage of the air conditioner.
- Whether there are obstacles in the air inlet and outlet of the IDUs and ODUs.
- Open the gas-side and liquid-side shut-off valves.
- Turn on the power and let the air conditioner warm up first.

3. According to the user's requirements, install the remote control mounting bracket for the user.
   The position of the mounting bracket must meet the requirement of enabling the remote control signal to be transmitted to the indoor unit smoothly.
4. test run
   Control the air conditioner with the remote control to do cooling operation, in accordance with the instruction manual to check the following items: (If there is a fault, please press the book " Repair and Maintenance " section to be eliminated.)

REPAIR AND MAINTENANCE

■ Types of faults and methods of handling them

Immediately stop operation of the air conditioner, disconnect the power supply and contact an engineer if any of the following conditions occur:

- The light on the display panel blinks.
- Fuses blow frequently or circuit breakers miss frequently.
- An outside substance or water enters the air conditioner.
- Remote control reception malfunction or abnormal switch operation.
- Other irregularities occur.

In the following cases, please check according to the following requirements, if the problem still can not be solved, please contact the engineer and inform the product model and details of the fault.

Failure	Reason	Method
Non-activation	Power outage	Waiting for power to be restored
	Power switch not on	Turn on the power switch
	Power switch fuse blown	Replacement of fuses
	The batteries in the controller out of power	Replace the battery
	Timer on not reached	Wait for or eliminating the original timer setting
There is air blow out, but the cooling/heating poor effect	Improper temp setting	Setting the temp properly, turning it down or up
	Air filter clogged with dust or dirt	Clean the air filter
	IDU or ODU air inlet or outlet is blocked	Clean the blockage
	Doors and windows open	Close the doors and windows
Air is blown out, but no cooling (heating) at all.	Objects blocking the air inlet or outlet of the indoor unit or outdoor unit.	First remove the blockage and then restart the operation
	Compressor 3min protection	Waiting
	Improper temp setting	Proper temp setting

⚠ **Note:** Do not replace the power cord by yourself to avoid danger; do not repair the air conditioner by yourself.

⚠ **Note:**Set the temp correctly, 2°C lower than desired for heating and 2°C higher for cooling to save energy.

⚠ **Note:** When using the air conditioner, avoid direct sunlight in the room: Do not open and close doors and windows frequently.

■ Non-air conditioning failure phenomena

The following phenomena are not indicative of an abnormality in the air conditioner.

1.Common protections for air conditioner

- Compressor protection function
  Compressor will not start within 3min of shutdown
- Anti-Cold Air Function (Heating & Cooling Type)
  In "Heating" mode, the indoor fan will not supply air if the indoor heat exchanger does not reach a certain temperature under the following two conditions to prevent cold air from blowing out.
  ① At the beginning of heating operation ② Defrost operation

● Defrost operation (heating&cooling type)

When the outdoor temp is low and the humidity is high, the heat exchanger of the outdoor unit may be frosted, which will reduce the heating capacity of the air conditioner, in this case, the air conditioner will suspend the heating operation into the automatic defrosting, and resume the heating operation after the defrosting is completed.

① When defrosting, the fans of both the indoor and outdoor units stop running.

② Depending on the outdoor temp and the degree of frost, the defrost running time varies, generally 4~10min.

③ In the defrosting process, ODU may emit steam, which is caused by rapid defrosting and is a normal phenomenon.

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2. Indoor unit emits white aerosol

- When "cooling" operation is carried out in an environment with high relative humidity in the room, white aerosol may be sent out due to the humidity and the temp difference between the air inlet and outlet.
- When the air conditioner is switched to "heating" operation after "defrosting" operation, the moisture generated by defrosting in the indoor unit is discharged as vapour.

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3. Lower noise level of air-conditioners

- When the compressor is running or has just stopped running, a low "hissing" sound may be heard, which is the sound made when the refrigerant flows or stops flowing.
- When the air conditioner is running or stop running for a period of time, you may hear a low "squeak"sound which is due to the natural expansion or contraction of the fins and copper tubes when the temp changes.

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4. Blowing out dust from the indoor unit

- Dust that has entered the interior of the indoor unit will be blown out when it has not been used for a long time and when it is used for the first time.

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5. The indoor unit emits a strange odour

- The IDU absorbs odours from the room, furniture or cigarettes, etc. and emits them during operation.

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6. "Cooling", "Heating" mode operation to only air supply mode:

- When all the running IDUs reach the set temperature, the air conditioning controller will automatically stop the compressor operation and switch to the air supply mode only, and when the room temperature rises ("Cooling" mode) or falls ("Heating" mode) to a certain extent, the compressor will be started again to resume the cooling or heating operation.

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7. In the more humid (relative humidity higher than 80%) when selecting the "cooling" operation, the surface of the indoor unit may occur condensation and dripping, wind speed selection "high wind", condensation phenomenon will be improved.

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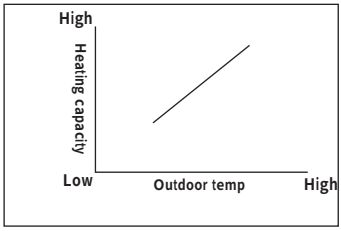
8. The system increases the oil return control programme, after the boot operation, not open the indoor machine every few hours will be opened 3min into the oil return control programme.

9. Heating operation (cooling and heating type)

- During the heating process, the air conditioner absorbs heat from the outdoor air and releases it indoor to heat the room air, which is the heat pump heating principle of the air conditioner.
- When the outdoor temp decreases, the air conditioner absorbs less heat, the heating capacity is reduced (see right), while the temperature difference between indoor and outdoor temp increases, the heating load of the room is also increased, if only the use of air-conditioners can not achieve satisfactory results, it is recommended to assist in the use of other heating devices together with the heating.



Clean

⚠ WARNING: For safety reasons, always switch off and disconnect the power when cleaning your air conditioner.

Dust filter cleaning

- The removed dust filter can be cleaned with a hoover or washed with water;
- If the dust filter is too dirty, it can be washed with a neutral detergent; it must not be washed in hot water (above about 50°C) to avoid deformation;
- After washing with water, put it in a cool and ventilated place to dry; do not expose it to the sun or dry it with fire to avoid deformation.

Repair and maintenance

1. When not in use for a long time, do the following work

- Turn on the fan set to run in air delivery mode for 3~4h to completely dry out the inside of the air conditioner;
- Even if it is not used for a long period of time, the indoor unit should not be disconnected from the power supply unless all indoor units in the same ODU system in which it is located are disconnected from the power supply at the same time.

2. After a long period of downtime and then start using it again

- Cleaning the dust filter and indoor body must be done with the machine stopped and disconnected from the power supply. Please use a soft cloth to wipe the indoor body. Never use petrol, benzene, diluted lye, abrasive powder, detergents, insecticides or other things that will damage the machine to clean the machine;
- Confirm that each air inlet and exhaust port of the indoor and outdoor units are not blocked by debris;
- Check that the earth wire is not loose or loosened, and turn on the power.

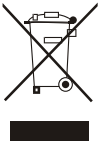
Appendix Parameter Table

Model	Cooling capacity (kW)	Heating capacity (kW)	Power supply	Cooling		Heating		standby power(W)
				Rated current(A)	Rated power(kW)	Rated current(A)	Rated power(kW)	
45	4.5	5.0	220-240V～50HZ	0.33	0.072	0.33	0.072	5
50	5.0	5.6	220-240V～50HZ	0.33	0.072	0.33	0.072	5
56	5.6	6.3	220-240V～50HZ	0.33	0.072	0.33	0.072	5
63	6.3	7.1	220-240V～50HZ	0.57	0.125	0.57	0.125	5
71	7.1	8.0	220-240V～50HZ	0.57	0.125	0.57	0.125	5
80	8.0	9.0	220-240V～50HZ	0.57	0.125	0.57	0.125	5
90	9.0	10.0	220-240V～50HZ	0.82	0.180	0.82	0.180	5
100	10.0	11.5	220-240V～50HZ	0.82	0.180	0.82	0.180	5
112	11.2	12.5	220-240V～50HZ	0.82	0.180	0.82	0.180	5
125	12.5	14.0	220-240V～50HZ	1.05	0.230	1.05	0.230	5
140	14.0	16.0	220-240V～50HZ	1.05	0.230	1.05	0.230	5

Model	Unit external dimension L×W×H(mm)	Outlet air port dimension L×W(mm)	Weight (kg)	Noise dB(A)	Standard air volume m³/h	Connection pipe		
						Liquid ϕ (mm)	Gas ϕ (mm)	Drainage ϕ (mm)
45	920×700×245	742×149	28.0	36	1000	6.35	12.70	25
50	920×700×245	742×149	28.0	36	1000	6.35	12.70	25
56	920×700×245	742×149	28.0	36	1000	6.35	12.70	25
63	920×700×245	742×149	29.0	40	1350	9.52	15.88	25
71	920×700×245	742×149	29.0	40	1350	9.52	15.88	25
80	920×700×245	742×149	29.0	40	1350	9.52	15.88	25
90	1200×700×245	1022×149	37.0	43	1900	9.52	15.88	25
100	1200×700×245	1022×149	37.0	43	1900	9.52	15.88	25
112	1200×700×245	1022×149	37.0	43	1900	9.52	15.88	25
125	1200×700×245	1022×149	38.0	44	2100	9.52	15.88	25
140	1200×700×245	1022×149	38.0	44	2100	9.52	15.88	25

⚠ NOTE

If the product specifications change due to improvements, the parameters on the nameplate shall prevail.



IMPORTANT INFORMATION FOR CORRECT DISPOSAL OF THE PRODUCT IN ACCORDANCEWITH EC DIRECTIVE 2002/96/EC.

At the end of its working life, the product must not be disposed of as urban waste.
It must be taken to a special local authority differentiated waste collection centre or to a dealer providing this service.
Disposing of a household appliance separately avoids possible negative consequences for the environment and health deriving from inappropriate disposal and enables the constituent materials to be recovered to obtain significant savings in energy and resources.As a reminder of the need to dispose of household appliances separately, the product is marked with a crossed-outwheeled dustbin.