AUX
Stable Solutions

# Technical Manual

## (DC Inverter Free Match R32)

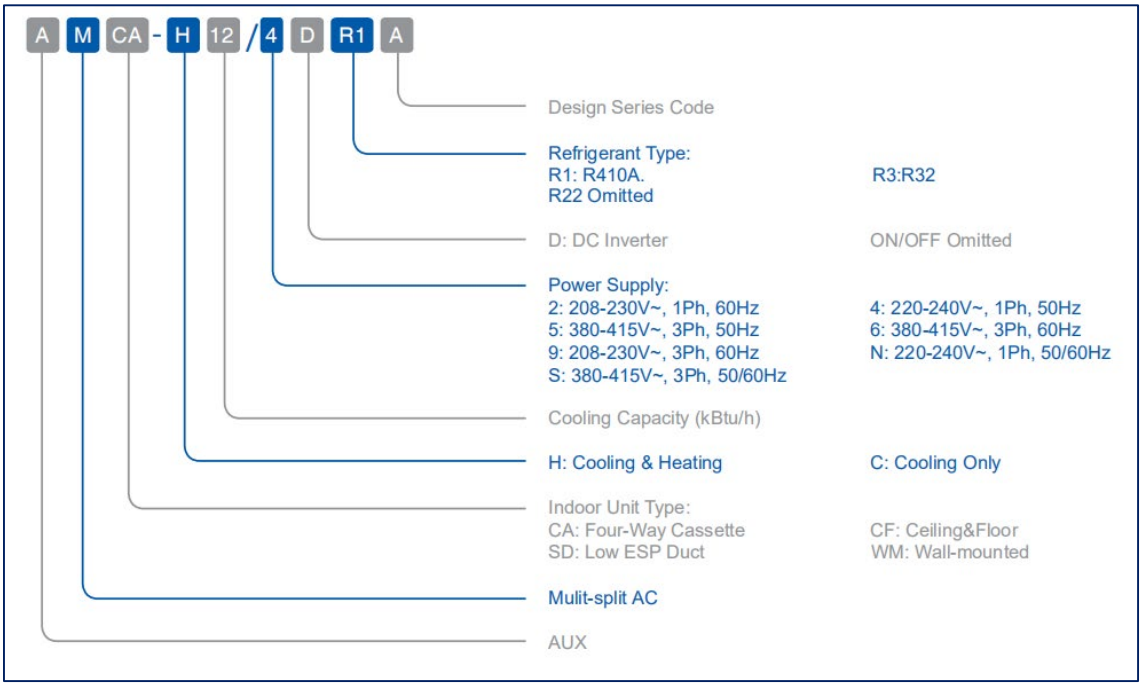
# 2019.07

# CONTENTS

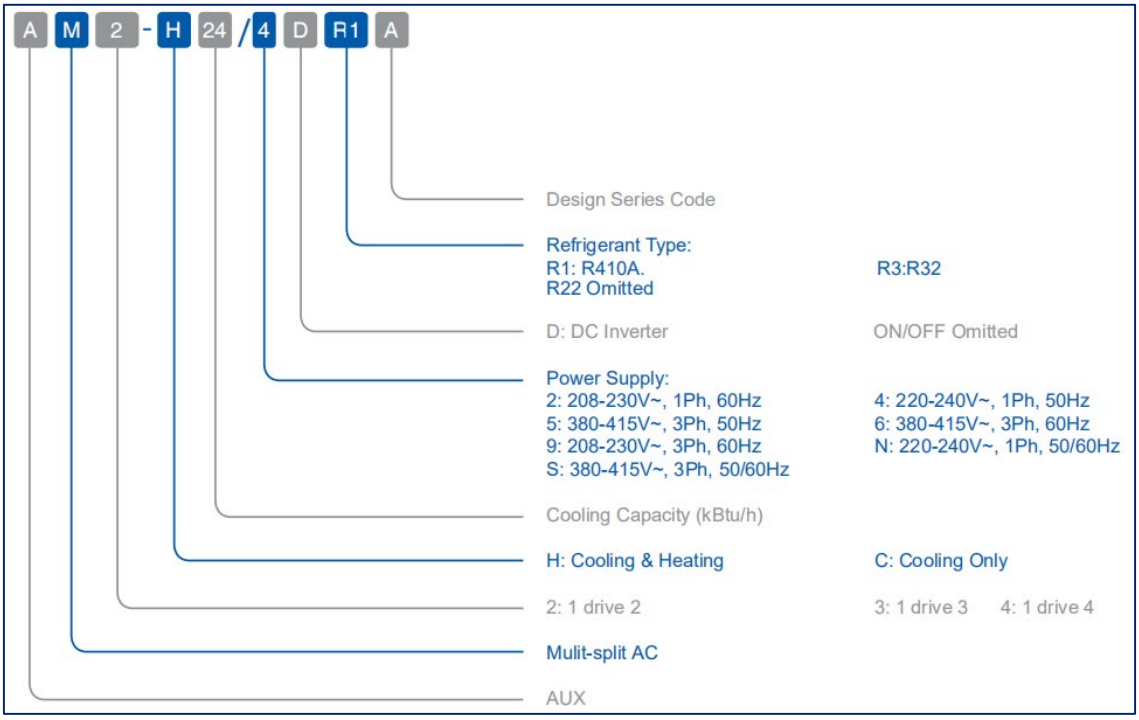
# Part1 General Information

## 1. Nomenclature

### Indoor Unit

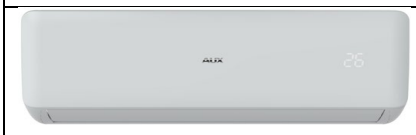
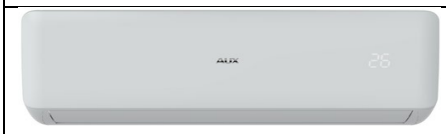


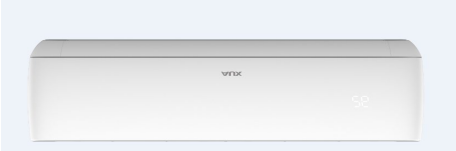

### Outdoor Unit



## 2. Unit appearance

### 2.1 Wall - Mounted

| / | Picture | Capacity Range / Mode | |
|---|---|---|---|
| L Series |  | 07 K Btu/h | AMWM-H07/4R3(L*) |
| | | 09 K Btu/h | AMWM-H09/4R3(L*) |
| | | 12 K Btu/h | AMWM-H12/4R3(L*) |
| |  | 18 K Btu/h | AMWM-H18/4R3(L*) |
| F Series |  | 07 K Btu/h | AMWM-H07/4R3(F*) |
| | | 09 K Btu/h | AMWM-H09/4R3(F*) |
| | | 12 K Btu/h | AMWM-H12/4R3(F*) |
| |  | 18 K Btu/h | AMWM-H18/4R3(F*) |
| |  | 24K Btu/h | AMWM-H24/4R3(F*) |
| J Series |  | 07 K Btu/h | AMWM-H07/4R3(J*) |
| | | 09 K Btu/h | AMWM-H09/4R3(J*) |
| | | 12 K Btu/h | AMWM-H12/4R3(J*) |
| |  | 18 K Btu/h | AMWM-H18/4R3(J*) |

| | | | |
|---|---|---|---|
| |  | 24K Btu/h | AMWM-H24/4R3(J*) |

## 2.2 Cassette

| / | Picture | Capacity Range / Mode | |
|---|---|---|---|
| Four-way cassette |  | 09 K Btu/h | AMCA-H09/4R3A |
| | | 12 K Btu/h | AMCA-H12/4R3A |
| | | 18 K Btu/h | AMCA-H18/4R3A |

| | | |
|---|---|---|
| Standard Panel | MB13A-I | MB13B-I |
| |  |  |
| Optional Panel | MB09A | MB09B |
| |  |  |

## 2.3 Ceiling Floor

| / | Picture | Capacity Range / Mode | |
|---|---|---|---|
| Ceiling Floor |  | 09 K Btu/h | AMCF-H09/4R3A |
| | | 12 K Btu/h | AMCF-H12/4R3A |
| | | 18 K Btu/h | AMCF-H18/4R3A |

## 2.4 Duct

| / | Picture | Capacity Range / Mode | |
|---|---|---|---|
| DUCT |  | 07 K Btu/h | AMSD-H07/4R3A |
| | | 09 K Btu/h | AMSD-H09/4R3A |
| | | 12 K Btu/h | AMSD-H12/4R3A |
| |  | 18 K Btu/h | AMSD-H18/4R3A |

## 2.5 Outdoor Unit

| | | |
|---|---|---|
| **Capacity(Btu)** | 1 drive 2　14k/18k | 1 drive 3　21k/27k |
| | （AM2-H14/4DR3）<br>（AM3-H21/4DR3） | （AM2-H18/4DR3）<br>（ AM3-H27/4DR3） |
| **Picture** |  |  |
| **Capacity(Btu)** | 1 drive 4　36k | 1 drive 5　42k |
| | （AM4-H36/4DR3） | （AM5-H42/4DR3） |
| **Picture** |  |  |

## 3. Combination Table

### 14K

| AM2-H14/4DR3 | Suggested Combination | | |
|---|---|---|---|
| 1 drive 2 | One Unit | Two Units | |
| | 7 | 7+7 | — |
| | 9 | 7+9 | — |
| | 12 | 9+9 | — |
| | 18 | — | — |

### 18K

| AM2-H18/4DR3 | Suggested Combination | | |
|---|---|---|---|
| 1 drive 2 | One Unit | Two Units | |
| | 9 | 7+7 | 9+9 |
| | 12 | 7+9 | 9+12 |
| | 18 | 7+12 | — |
| | | — | — |

### 21K

| AM3-H21/4DR3 | Suggested Combination | | | | |
|---|---|---|---|---|---|
| 1 drive 3 | One Unit | Two Units | | Three Units | |
| | — | 7+7 | 9+12 | 7+7+7 | |
| | — | 7+9 | 9+18 | 7+7+9 | — |
| | — | 7+12 | 12+12 | 7+7+12 | — |
| | 18 | 7+18 | — | 7+9+9 | — |
| | 24 | 9+9 | — | 9+9+9 | — |

### 27K

| AM3-H27/4DR3 | Suggested Combination |
|---|---|

| | One Unit | Two Units | | Three Units | |
|---|---|---|---|---|---|
| 1 drive 3 | 18 | 7+12 | 9+24 | 7+7+7 | 7+9+18 |
| | 24 | 7+18 | 12+12 | 7+7+9 | 7+12+12 |
| | — | 7+24 | 12+24 | 7+7+12 | 9+9+9 |
| | — | 9+9 | 18+18 | 7+7+18 | 9+9+12 |
| | — | 9+12 | 18+24 | 7+9+9 | 9+12+12 |
| | — | 9+18 | — | 7+9+12 | |

**36K**

| AM4-H36/4DR3 | Suggested Combination | | | | | |
|---|---|---|---|---|---|---|
| 1 drive4 | One Unit | Two Units | | Three Units | | |
| | 18 | 7+12 | 12+12 | 7+7+7 | 7+9+18 | 9+9+12 | 12+12+12 |
| | 24 | 7+18 | 12+18 | 7+7+9 | 7+9+24 | 9+9+18 | 12+12+18 |
| | — | 7+24 | 12+24 | 7+7+12 | 7+12+12 | 9+9+24 | |
| | — | 9+9 | 18+18 | 7+7+18 | 7+12+18 | 9+12+12 | |
| | | 9+12 | 18+24 | 7+7+24 | 7+12+24 | 9+12+18 | |
| | — | 9+18 | — | 7+9+9 | 7+18+18 | 9+12+24 | |
| | — | 9+24 | — | 7+9+12 | 9+9+9 | 9+18+18 | |

| AM4-H36/4DR3 | Suggested Combination | | |
|---|---|---|---|
| 1 drive4 | Four Units | | |
| | 7+7+7+7 | 7+7+9+18 | 7+9+12+18 |
| | 7+7+7+9 | 7+7+12+12 | 7+12+12+12 |
| | 7+7+7+12 | 7+7+12+18 | 9+9+9+9 |
| | 7+7+7+18 | 7+9+9+9 | 9+9+9+12 |
| | 7+7+7+24 | 7+9+9+12 | 9+9+9+18 |
| | 7+7+9+9 | 7+9+9+18 | 9+9+12+12 |

| | | | |
|---|---|---|---|
| | 7+7+9+12 | 7+9+12+12 | 9+12+12+12 |

**42K**

| AM5-H42/4DR3 | Suggested Combination | | |
|---|---|---|---|
| 1 drive5 | One Unit | Two Units | |
| | 18 | 7+18 | 18+18 |
| | 24 | 7+24 | 18+24 |
| | – | 9+12 | 24+24 |
| | – | 9+18 | – |
| | – | 9+24 | – |
| | – | 12+12 | – |
| | – | 12+18 | – |
| | – | 12+24 | – |

| AM5-H42/4DR3 | Suggested Combination | | | |
|---|---|---|---|---|
| 1 drive5 | Three Units | | | |
| | 7+7+7 | 7+9+24 | 9+9+18 | 12+12+18 |
| | 7+7+9 | 7+12+12 | 9+9+24 | 12+12+24 |
| | 7+7+12 | 7+12+18 | 9+12+12 | 12+18+18 |
| | 7+7+18 | 7+12+24 | 9+12+18 | 12+18+24 |
| | 7+7+24 | 7+18+18 | 9+12+24 | 18+18+18 |
| | 7+9+9 | 7+18+24 | 9+18+18 | — |

| | | | | |
|---|---|---|---|---|
| | 7+9+12 | 9+9+9 | 9+18+24 | — |
| | 7+9+18 | 9+9+12 | 12+12+12 | — |

| AM5-H42/4DR3 | Suggested Combination | | | |
|---|---|---|---|---|
| 1 drive5 | Four Units | | | |
| | 7+7+7+7 | 7+7+12+12 | 7+9+12+24 | 12+12+12+12 |
| | 7+7+7+9 | 7+7+12+18 | 7+12+12+12 | 12+12+12+18 |
| | 7+7+7+12 | 7+7+12+24 | 9+9+9+9 | — |
| | 7+7+7+18 | 7+9+9+9 | 9+9+9+12 | — |
| | 7+7+7+24 | 7+9+9+12 | 9+9+9+18 | — |
| | 7+7+9+9 | 7+9+9+18 | 9+9+12+12 | — |
| | 7+7+9+12 | 7+9+12+12 | 9+12+12+12 | — |
| | 7+7+9+18 | 7+9+12+18 | 9+12+12+18 | — |

| AM5-H42/4DR3 | Suggested Combination | | | |
|---|---|---|---|---|
| 1 drive5 | Five Units | | | |
| | 7+7+7+7+7 | 7+7+7+9+24 | 7+7+12+12+12 | 9+9+9+9+18 |
| | 7+7+7+7+9 | 7+7+7+12+12 | 7+9+9+9+9 | 9+9+9+12+12 |
| | 7+7+7+7+12 | 7+7+7+12+18 | 7+9+9+9+12 | 9+9+12+12+12 |
| | 7+7+7+7+18 | 7+7+9+9+9 | 7+9+9+9+18 | — |
| | 7+7+7+7+24 | 7+7+9+9+12 | 7+9+9+12+12 | — |
| | 7+7+7+9+9 | 7+7+9+9+18 | 7+9+12+12+12 | — |
| | 7+7+7+9+12 | 7+7+9+12+12 | 9+9+9+9+9 | — |

| | | | | |
|---|---|---|---|---|
| | 7+7+7+9+18 | 7+7+9+12+18 | 9+9+9+9+12 | — |

**Note**：

All of the above indoor unit can be freely matched and combined, but must be installed strictly according to the above table or the cooling capacity and stability would be decreased.

# 4. Accessories Included

## 4.1 Outdoor Units

| N° | Name | QUANTITY | | | | | |
|---|---|---|---|---|---|---|---|
| | | AM2-H14/ 4DR3 | AM2-H18/ 4DR3 | AM2-H21/ 4DR3 | AM3-H27/ 4DR3 | AM**4**-H36/ 4DR3 | AM**5**-H42/ 4DR3 |
| 1 | Installer manual | 1 | 1 | 1 | 1 | 1 | 1 |
| 2 | Drainage connector | 1 | 1 | 1 | 1 | 1 | 1 |
| 3 | Pipe adaptor | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | copper nuts | 8 | 8 | 12 | 12 | 16 | 20 |

## 4.2 Indoor Units

| N° | Name | QUANTITY | | | |
|---|---|---|---|---|---|
| | | Wall Mounted | Duct | Cassette | Ceiling & Floor |
| 1 | User manual | 1 | 1 | 1 | 1 |
| 2 | Remote control | 1 | 0 | 1 | 1 |
| 3 | Batteries for Remote Control | 2 | 0 | 2 | 2 |
| 4 | Touch screen wired Control | 0 | 1 | 0 | 0 |
| 5 | Panel screw | 0 | 0 | 4 | 0 |
| 6 | Drainage tube | 0 | 1 | 1 | 1 |
| 7 | Pipe adaptor | 0 | 1 | 1 | 1 |
| 8 | Thermal insulation pipe | 0 | 2 | 2 | 2 |

# Part2 Features

## 1. Outdoor Units

### Environmental-friendly Refrigerant R32

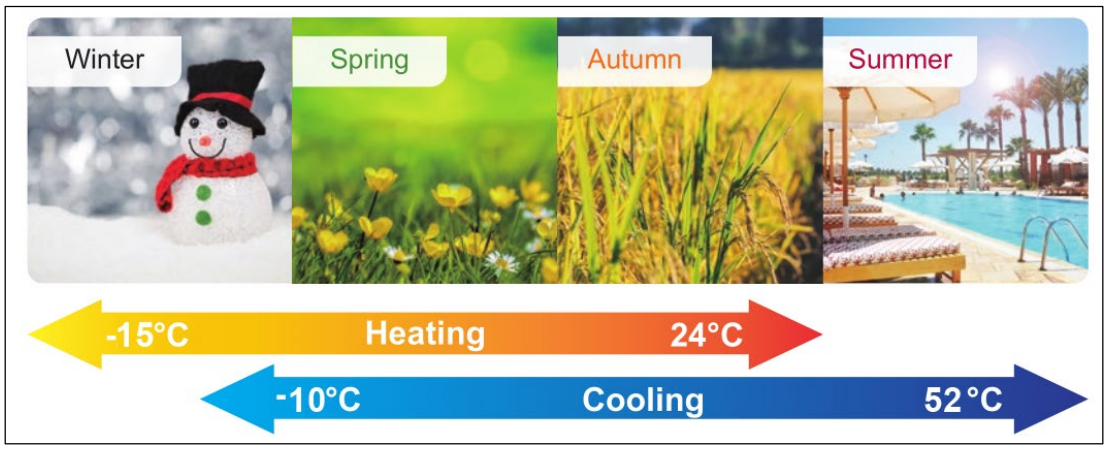
The GWP value of R32 is smaller, so the effect on the greenhouse effect is smaller. The ODP value of R32 is 0, so it's no harm to our planet's ozone layer.

### High Efficiency

Equipped with high efficiency DC Inverter compressor, adjustable fan motor and advanced 180° sine wave vector driver, the system can be higher than 6.1 in SEER and 4.0 in SCOP so as to meet the European and Australian new energy efficiency standards.

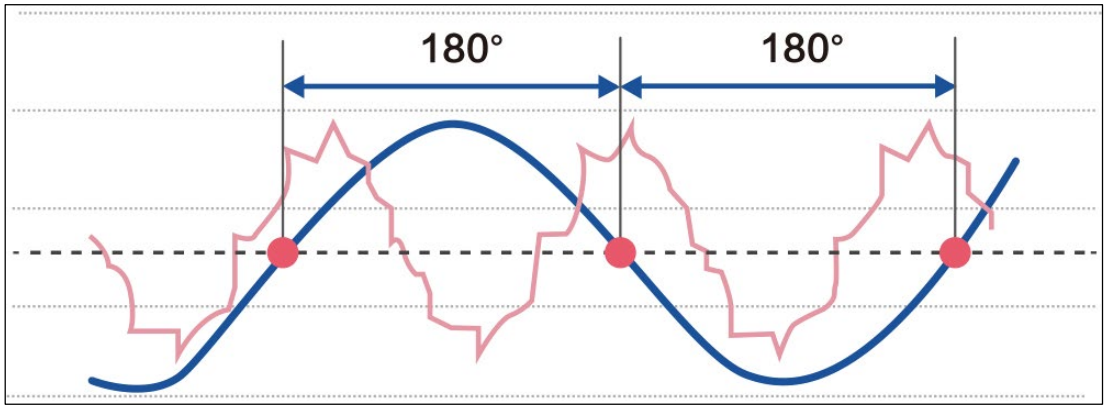
### Reliability

Stable cooling under -10° C and heating under -15° C outdoor environment temperature.



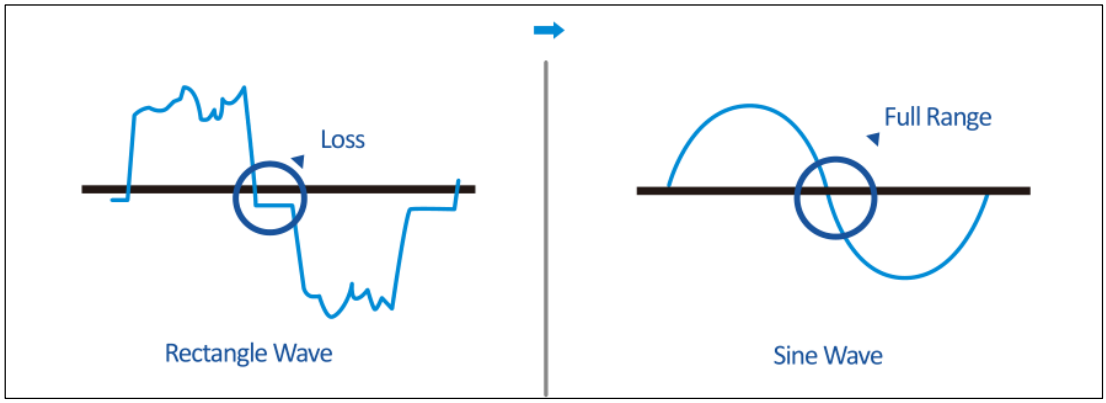

### 180° Sine Wave Control

DC inverter compressor uses 180° sine wave vector control technique, make compressor motor operates smoothly and efficiency increases significantly.



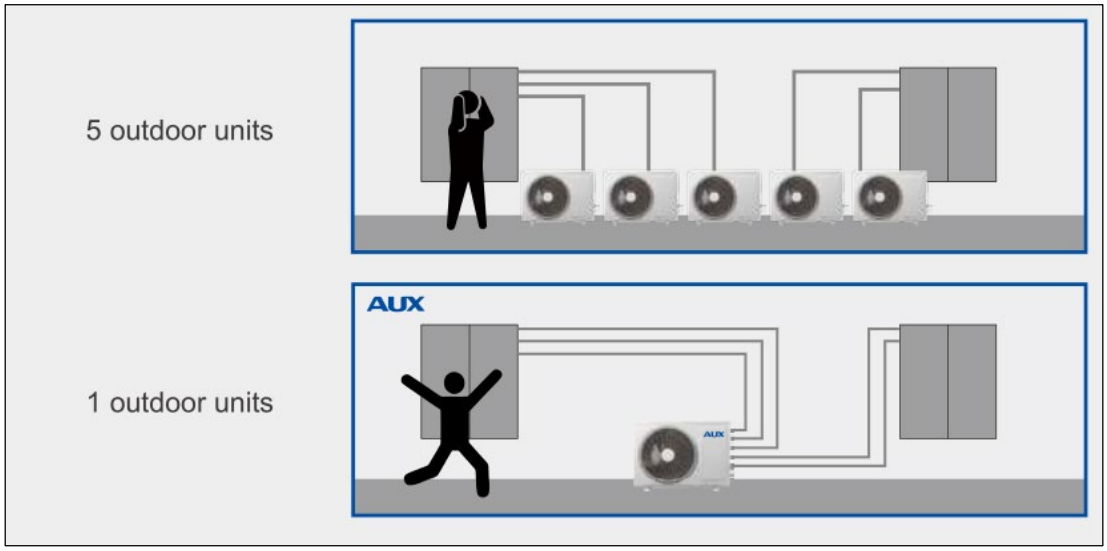

## Energy Saving

Cutting-edge DC inverter of sine wave control and active PFC technology realize low noise and economical operation.




## Space-Saving Installation

Up to 5 indoor units can be connected to a single outdoor unit, which reduces the number of outdoor units required so as to save installation space. Besides, each indoor unit can controlled individually and they even needn’ t to be installed at the same time.




## EXV Regulation

Each Indoor Unit adjusted by a EXV, whole unit could achieve quick cooling/heating, and decrease throttling noise in indoor units.

## Electrical heater （Optional）

**Heater code: 11330029000010 220V 50W**

The electrical heater is used to melt ice on the chassis, make sure good heat exchange performance for condenser, powerful heating performance in very cold condition and create comfortable environment.

## Heating only function（Optional）

Cooling & heating is standard， heating only is optional.Pls refer to **Part9 2.2 Parameter setting.**

**Note: Wall mounted unit no heating only function.**

## 2. Wall Mounted

Wall Mounted type A/C is installed by the wall, compared with Floor & Standing type A/C, it has following advantages: Wall mounting installation combining with the decoration, makes the room more elegant; Flexible installation in anywhere in the wall and swing blowing, makes you feel more comfortable.

### 2 Ways Draining Connection

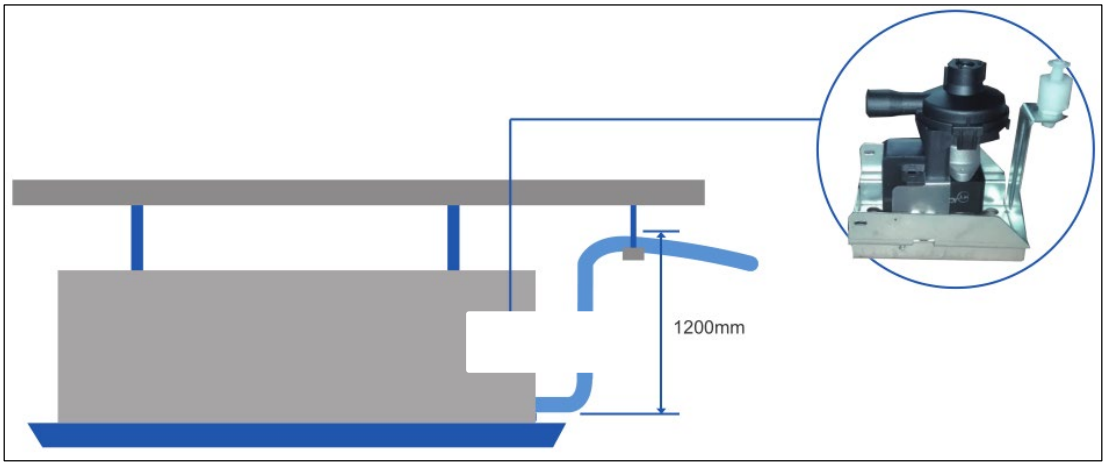
Both left and right sides of unit are possible for drainage pipe connection, easy for installation.

## 3. Four-way Cassette

Four-way cassette type A/C is installed under the ceiling, compared with Floor &Standing type A/C, it has following advantages: Ceiling installation combining with the decoration, makes the room more elegant; Flexible installation in anywhere in the ceiling and 4-direction blowing, makes you feel more comfortable.

### Built-in Drain Pump

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



## 4. Ceiling Floor

Ceiling& Floor type A/C can be installed under the ceiling and also on the floor. Compared with normal Floor &Standing type A/C, it can be hoisted under the ceiling, saving room space; it is also the updating Product for Floor & Standing type A/C.

**3D Air Swing**

Vertical and horizontal swing makes air below to every corner of the room.

**Innovative Centrifugal Fan**

Innovative centrifugal fan provides larger air volume but lower noise, making the air supply more quietly and smoothly.

**Flexible Installation**

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

## 5. Duct

Duct type A/C can be installed under the ceiling and also on the floor. Compared with normal Floor &Standing type A/C, it can be hoisted under the ceiling, saving room space, it is also the updating Product for Floor & Standing type A/C.

**Flexible Air Intake Options**

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

**Ultra Slim Design**

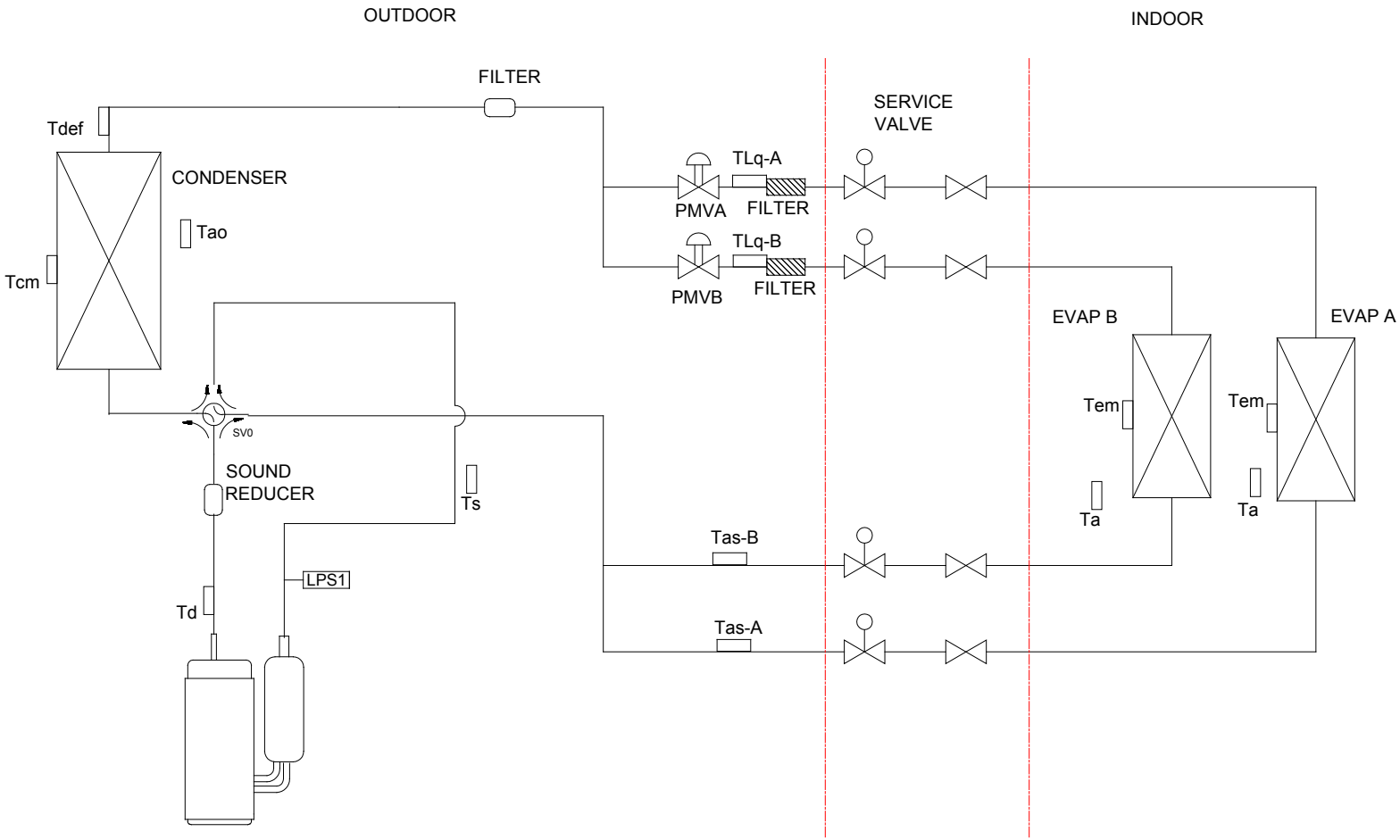
The thickness is only 200mm, save installation space.

## 6.WIFI Control

The optional WiFi modular makes it possible to monitor and control your AC while on the road through APP on your mobile phone or pad.

# Part3 Piping System

## 1. 14K, 18K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INDOOR
FILTER
SERVICE
VALVE
Tdef
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Tao
Tcm
TLq-A
PMVA
FILTER
TLq-B
PMVB
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EVAP B
EVAP A
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REDUCER
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LPS1
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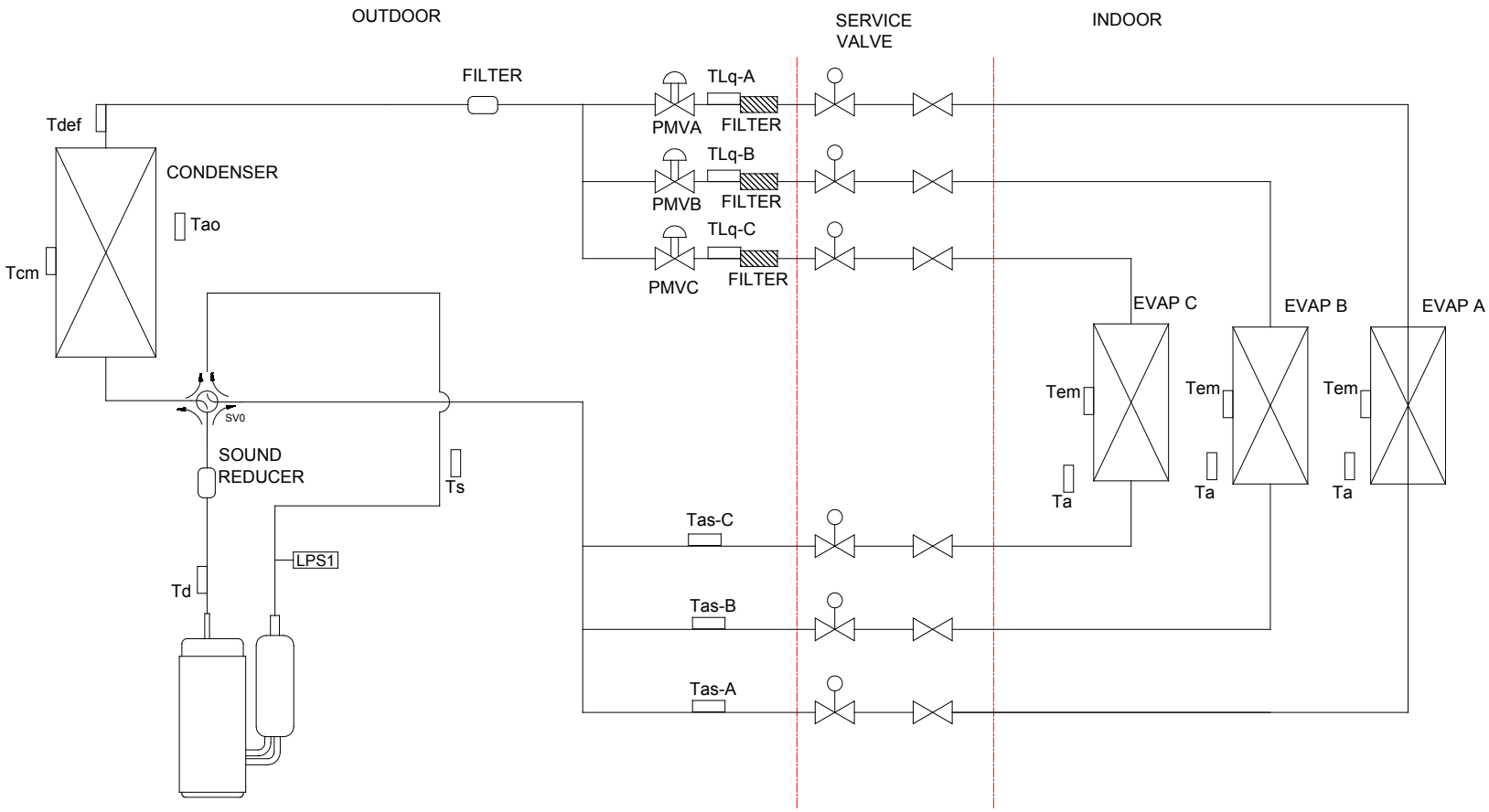
Tas-B
Tas-A

## 2. 21K, 27K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LPS1
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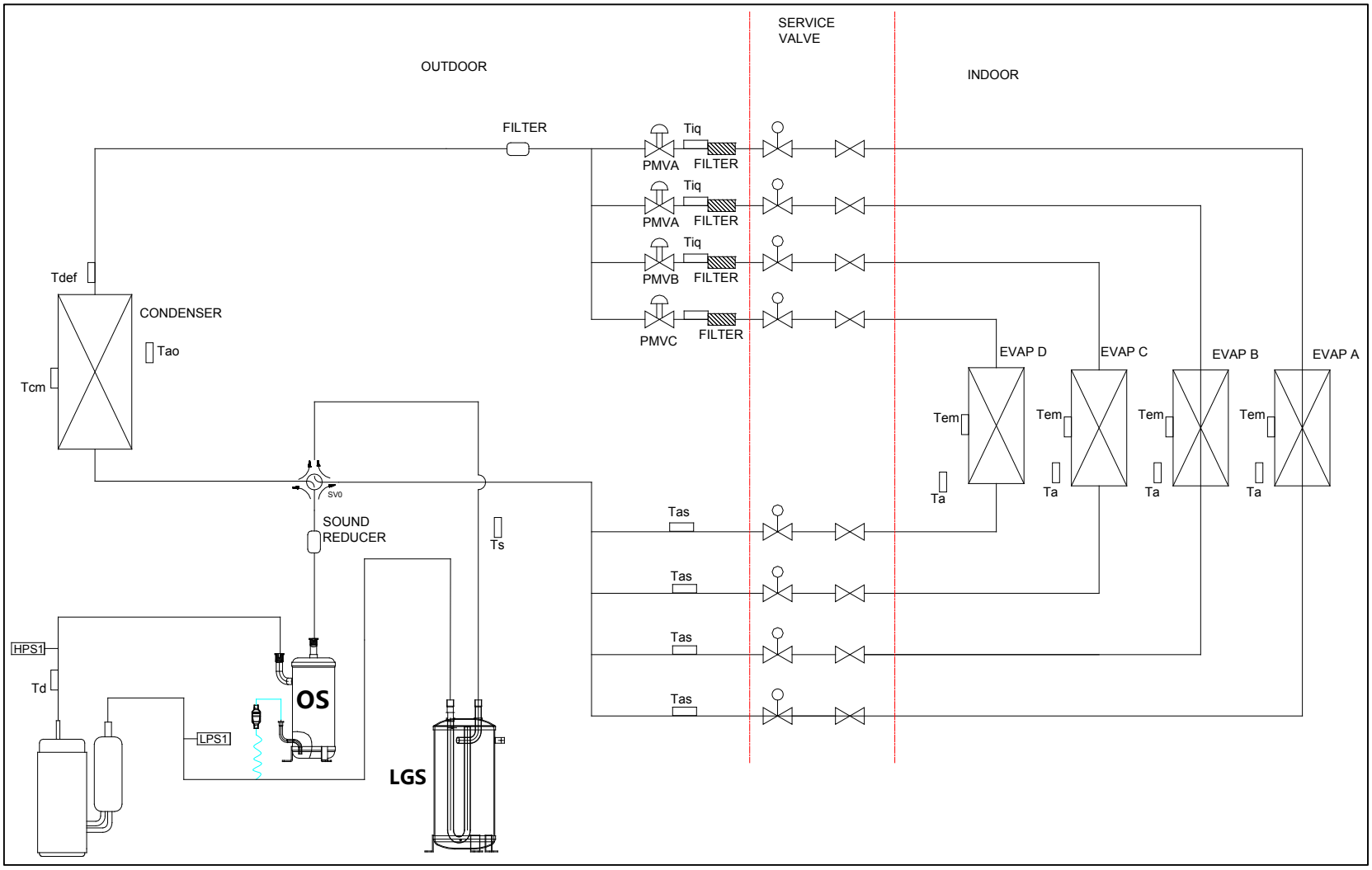
## 3. 36K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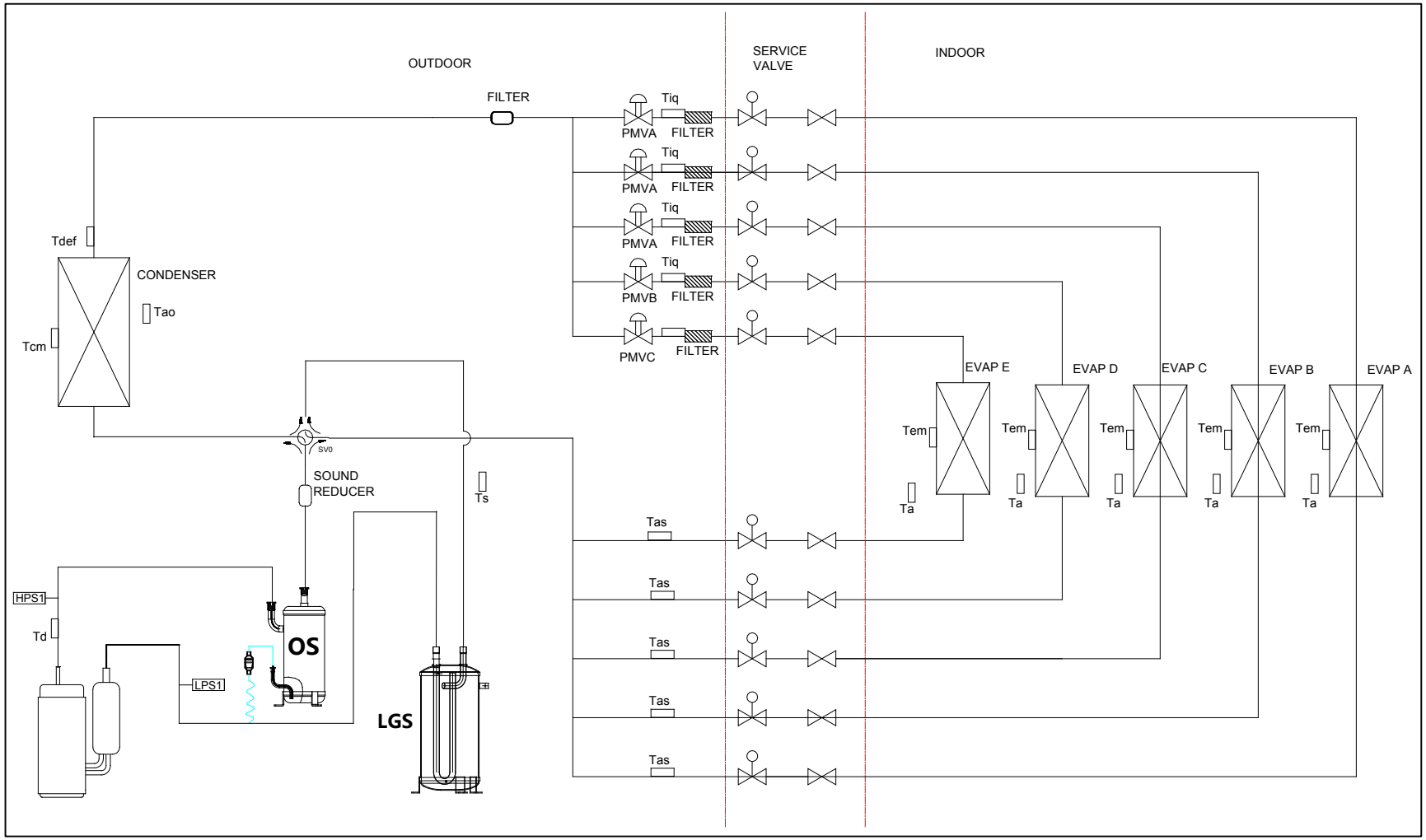
## 4. 42K


OUTDOOR
SERVICE VALVE
INDOOR
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PMVB
PMVC
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CONDENSER
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EVAP B
EVAP A
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Td
LPS1
OS
LGS

# Part4 Specification

## 1. Wall Mounted

### 1.1 L Series (07K, 09K)

| Model | Indoor | Unit | AMWM-H07/4R3(L*) | AMWM-H09/4R3(L*) |
|---|---|---|---|---|
| Capacity | Cooling | Btu/h | 7165(3855-9220) | 8701(3412~11260) |
| | | kW | 2.05(1.13-2.70) | 2.55(1.00~3.30) |
| | Heating | Btu/h | 7510(3340-8530) | 9042(3753~11260) |
| | | kW | 2.15(0.98-2.50) | 2.65(1.10~3.30) |
| Electric Data | Power Supply | V~,Hz,Ph | 220～240,50,1 | 220～240,50,1 |
| | Cooling Power | W | 40(12～68) | 40(12~68) |
| | Heating Power | W | 40(12～68) | 40(12~68) |
| Indoor Fan Motor | Model | / | YYK18-4B | YYK18-4B |
| | Output Power | W | 18 | 18 |
| | Speed (H/M/L) | r/min | 1250 | 1250 |
| Indoor Coil | Number Of Row | / | 2 | 2 |
| | Tube x Row Pitch | mm | 20.5x 12.7 | 20.5x 12.7 |
| | Fin Pitch | mm | 1.4 | 1.4 |
| | Fin Material | / | Hydrophilic aluminum fin | |
| | Tube Material | mm | φ7， Inner grooved | |
| Performance | Air Flow Volume | $m^3/h$ | 650 | 650 |
| | Sound Pressure | dB(A) | 51 | 54 |
| Dimension | Net Dim (W*D*H) | mm | 800*300*198 | 800*300*198 |
| | Pack Dim (W*D*H) | mm | 870*370*282 | 870*370*282 |
| Weight | Net | kg | 9 | 9 |
| | Gross | kg | 10.5 | 10.5 |

| | | | | |
|---|---|---|---|---|
| Refrigerant Type | | / | R32 | R32 |
| Pipe Dia. | Liquid Side | mm(inch) | 6.35(1/4) | 6.35(1/4) |
| | Gas Side | mm(inch) | 9.52(3/8) | 9.52(3/8) |
| | Drainage | mm | 16.5 | 16.5 |
| Loading Qty | 20/40/40H | unit | 320/680/765 | 320/680/765 |

## 2.2 L Series (12K, 18K)

| Model | Indoor | Unit | AMWM-H12/4R3(L*) | AMWM-H18/4R3(L*) |
|---|---|---|---|---|
| Capacity | Cooling | Btu/h | 12283(4094~12966) | 18083(6483~18766) |
| | | kW | 3.50(1.20~3.80) | 5.30(1.90~5.50) |
| | Heating | Btu/h | 12624(3412~12966) | 18425(4777~19107) |
| | | kW | 3.50(1.00~3.80) | 5.40(1.40~5.60) |
| Electric Data | Power Supply | V~,Hz,Ph | 220～240,50,1 | 220～240,50,1 |
| | Cooling Power | W | 40(12~68) | 63(16~88) |
| | Heating Power | W | 40(12~68) | 63(16~88) |
| Indoor Fan Motor | Model | / | YYK18-4B | D-310-30-8 |
| | Output Power | W | 18 | 30 |
| | Speed (H/M/L) | r/min | 1250 | 1330 |
| Indoor Coil | Number Of Row | / | 2 | 2 |
| | Tube x Row Pitch | mm | 20.5x 12.7 | 20.5x 12.7 |
| | Fin Pitch | mm | 1.4 | 1.4 |
| | Fin Material | / | Hydrophilic aluminum fin | |
| | Tube Material | mm | φ7， Inner grooved | |

**AUX DC Inverter Free Match 50HZ R32**

| | | | | |
|---|---|---|---|---|
| Performance | Air Flow Volume | $m^3/h$ | 650 | 1000 |
| | Sound Pressure | dB(A) | 42 | 48 |
| Dimension | Net Dim (W*D*H) | mm | 800*300*198 | 970*315*235 |
| | Pack Dim (W*D*H) | mm | 870*370*282 | 1047×385×317 |
| Weight | Net | kg | 9 | 12.5 |
| | Gross | kg | 10.5 | 14.5 |
| Refrigerant Type | | / | R32 | R32 |
| Pipe Dia. | Liquid Side | mm(inch) | 6.35(1/4) | 6.35(1/4) |
| | Gas Side | mm(inch) | 9.52(3/8) | 12.7(1/2) |
| | Drainage | mm | 16.5 | 16.5 |
| Loading Qty | 20/40/40H | unit | 320/680/765 | 224/476/544 |

## 2.3 F Series (07K, 09K)

| Model | Indoor | Unit | AMWM-H07/4R3(F*) | AMWM-H09/4R3(F*) |
|---|---|---|---|---|
| Capacity | Cooling | Btu/h | 7165(3855-9220) | 9000(4780-11260) |
| | | kW | 2.05(1.13-2.70) | 2.58(1.40-3.30) |
| | Heating | Btu/h | 7510(3340-8530) | 9215(4095-10240) |
| | | kW | 2.15(0.98-2.50) | 2.70(1.20-3.00) |
| Electric Data | Power Supply | V~,Hz, Ph | 220～240,50,1 | 220～240,50,1 |
| | Cooling Power Input | W | 40(12～68) | 40(12～68) |
| | Heating Power Input | W | 40(12～68) | 40(12～68) |
| Indoor Fan Motor | Model | / | YYK12-4B | YYK12-4B |
| | Output Power | W | 12 | 12 |
| | Speed (H/M/L) | r/min | 1150 | 1150 |
| Indoor Coil | a. Number Of Row | / | 2 | 2 |
| | b.Tube Pitch(a)x Row Pitch(b) | mm | 20.5x 12.7 | 20.5x 12.7 |
| | c.Fin Pitch | mm | 1.3 | 1.3 |
| | d.Fin Material | / | Hydrophilic aluminum fin | |
| | e.Tube Outside Dia.And Material | mm | φ7， Inner grooved | |
| Performance | Air Flow Volume | $m^3/h$ | 600 | 600 |
| | Sound Pressure Noise Level | dB(A) | 51 | 54 |
| Dimension | Net Dimension (W*D*H) | mm | 750×285×200 | 750×285×200 |
| | Packing Dimension (W*D*H) | mm | 820×347×277 | 820×347×277 |
| Weight | Net | kg | 7.5 | 7.5 |
| | Gross | kg | 9 | 9 |
| Refrigerant Type | | / | R32 | R32 |
| Pipe Diameter | Liquid Side | mm (inch) | 6.35(1/4) | 6.35(1/4) |

| | | | | |
|---|---|---|---|---|
| | Gas Side | mm (inch) | 9.52(3/8) | 9.52(3/8) |
| | Drainage | mm | 16.5 | 16.5 |
| Loading Qty | 20/40/40H | unit | 384/768/864 | 384/768/864 |

### 2.4 F Series (12K, 18K)

| Model | Indoor | Unit | AMWM-H12/4R3(F*) | AMWM-H18/4R3(F*) |
|---|---|---|---|---|
| Capacity | Cooling | Btu/h | 12285(5800-12625) | 17747(8530-19790) |
| | | kW | 3.50(1.70-3.70) | 5.27(2.50-5.80) |
| | Heating | Btu/h | 12625(5120-12625) | 18085(7680-19790) |
| | | kW | 3.50(1.50-3.70) | 5.37(2.25-5.80) |
| Electric Data | Power Supply | V~,Hz, Ph | 220～240,50,1 | 220～240,50,1 |
| | Cooling Power Input | W | 40(12～68) | 63(16～88) |
| | Heating Power Input | W | 40(12～68) | 63(16～88) |
| Indoor Fan Motor | Model | / | YYK12-4B | D-310-30-8 |
| | Output Power | W | 12 | 30 |
| | Speed (H/M/L) | r/min | 1150 | 1330 |
| Indoor Coil | a. Number Of Row | / | 2 | 2 |
| | b.Tube Pitch(a)x Row Pitch(b) | mm | 20.5x 12.7 | 20.5x 12.7 |
| | c.Fin Pitch | mm | 1.3 | 1.4 |
| | d.Fin Material | / | Hydrophilic aluminum fin | |

| | | | | |
|---|---|---|---|---|
| | e.Tube Outside Dia.And Material | mm | φ7， Inner grooved | |
| Performance | Air Flow Volume | m3/h | 600 | 850 |
| | Sound Pressure Noise Level | dB(A) | 42 | 45 |
| Dimension | Net Dimension (W*D*H) | mm | 750×285×200 | 900×310×225 |
| | Packing Dimension (W*D*H) | mm | 820×347×277 | 970×382×302 |
| Weight | Net | kg | 8 | 12 |
| | Gross | kg | 10 | 14 |
| Refrigerant Type | | / | R32 | R32 |
| Pipe Diameter | Liquid Side | mm (inch) | 6.35(1/4) | 6.35(1/4) |
| | Gas Side | mm (inch) | 9.52(3/8) | 12.7(1/2) |
| | Drainage | mm | 16.5 | 16.5 |
| Stuffing Quantity | 20/40/40H | unit | 384/768/864 | 252/518/592 |

## 2.5 F Series (24K)

| | | | |
|---|---|---|---|
| Model | Indoor | Unit | AMWM-H24/4R3(F*) |
| Capacity | Cooling | Btu/h | 23986(9895~24908) |
| | | kW | 7.03(2.90~7.30) |
| | Heating | Btu/h | 24054(7165~27296) |
| | | kW | 7.05(2.10~8.00) |
| Electric Data | Power Supply | V~,Hz,Ph | 220～240,50,1 |
| | Cooling Power Input | W | 63(16~88) |
| | Heating Power Input | W | 63(16~88) |
| Indoor Fan Motor | Model | / | YYK50-4 |
| | Output Power | W | 50 |
| | Speed (H/M/L) | r/min | 1230 |
| Indoor Coil | a.Number Of Row | / | 2 |
| | b.Tube Pitch(a)x Row Pitch(b) | mm | 20.5x 12.7 |
| | c.Fin Pitch | mm | 1.4 |
| | d.Fin Material | / | Hydrophilic aluminum fin |
| | e.Tube Outside Dia.And Material | mm | φ7， Inner grooved |
| | f.Coil Length x Height x Width | mm | 850*41*18 |
| Performance | Air Flow Volume | $m^3/h$ | 1150 |
| | Sound Pressure Noise Level | dB(A) | 49 |
| Dimension | Net Dimension (W*D*H) | mm | 1082*330*233 |
| | Packing Dimension (W*D*H) | mm | 1155×397×312 |
| Weight | Net | kg | 15 |
| | Gross | kg | 16.5 |
| Refrigerant Type | | / | R32 |
| Pipe Diameter | Liquid Side | mm (inch) | 6.35(1/4) |
| | Gas Side | mm (inch) | 15.88(5/8) |

| | | | |
|---|---|---|---|
| | Drainage | mm | 16.5 |
| Stuffing Quantity | 20/40/40H | unit | 203/427/488 |

## 2.6 J Series (07K, 09K)

| Model | Indoor | Unit | AMWM-H07/4R3(J*) | AMWM-H09/4R3(J*) |
|---|---|---|---|---|
| Capacity | Cooling | Btu/h | 7165(3855-9220) | 9000(4780-11260) |
| | | kW | 2.05(1.13-2.70) | 2.58(1.40-3.30) |
| | Heating | Btu/h | 7510(3340-8530) | 9215(4095-10240) |
| | | kW | 2.15(0.98-2.50) | 2.70(1.20-3.00) |
| Electric Data | Power Supply | V~,Hz, Ph | 220～240,50,1 | 220～240,50,1 |
| | Cooling Power Input | W | 40(12～68) | 40(12～68) |
| | Heating Power Input | W | 40(12～68) | 40(12～68) |
| Indoor Fan Motor | Model | / | YYK12-4B | YYK12-4B |
| | Output Power | W | 12 | 12 |
| | Speed (H/M/L) | r/min | 1150 | 1150 |
| Indoor Coil | a. Number Of Row | / | 2 | 2 |
| | b.Tube Pitch(a)x Row Pitch(b) | mm | 20.5x 12.7 | 20.5x 12.7 |
| | c.Fin Pitch | mm | 1.3 | 1.3 |
| | d.Fin Material | / | Hydrophilic aluminum fin | |
| | e.Tube Outside Dia.And Material | mm | φ7, Inner grooved | |

**AUX DC Inverter Free Match 50HZ R32**

| | | | | |
|---|---|---|---|---|
| Performance | Air Flow Volume | $m^3/h$ | 600 | 600 |
| | Sound Pressure Noise Level | dB(A) | 40/38/34 | 40/38/34 |
| | Sound Pressure Noise Level | dB(A) | 51 | 54 |
| Dimension | Net Dimension (W*D*H) | mm | 792*292*201 | 792*292*201 |
| | Packing Dimension (W*D*H) | mm | 888*370*290 | 888*370*290 |
| Weight | Net | kg | 8 | 8 |
| | Gross | kg | 10 | 10 |
| Refrigerant Type | | / | R32 | R32 |
| Pipe Diameter | Liquid Side | mm (inch) | 6.35(1/4) | 6.35(1/4) |
| | Gas Side | mm (inch) | 9.52(3/8) | 9.52(3/8) |
| | Drainage | mm | 16.5 | 16.5 |
| Stuffing Quantity | 20/40/40H | unit | 304/640/720 | 304/640/720 |

## 2.7 J Series (12K, 18K)

| Model | Indoor | Unit | AMWM-H12/4R3(J*) | AMWM-H18/4R3(J*) |
|---|---|---|---|---|
| Capacity | Cooling | Btu/h | 12285(5800-12625) | 17747(8530-19790) |
| | | kW | 3.50(1.70-3.70) | 5.27(2.50-5.80) |
| | Heating | Btu/h | 12625(5120-12625) | 18085(7680-19790) |
| | | kW | 3.50(1.50-3.70) | 5.37(2.25-5.80) |
| Electric Data | Power Supply | V~,Hz, Ph | 220～240,50,1 | 220～240,50,1 |
| | Cooling Power Input | W | 40(12～68) | 63(16～88) |
| | Heating Power Input | W | 40(12～68) | 63(16～88) |
| Indoor Fan Motor | Model | / | YYK12-4B | D-310-30-8 |
| | Output Power | W | 12 | 30 |
| | Speed (H/M/L) | r/min | 1150 | 1330 |
| Indoor Coil | a. Number Of Row | / | 2 | 2 |
| | b.Tube Pitch(a)x Row Pitch(b) | mm | 20.5x 12.7 | 20.5x 12.7 |
| | c.Fin Pitch | mm | 1.3 | 1.4 |
| | d.Fin Material | / | Hydrophilic aluminum fin | |
| | e.Tube Outside Dia.And Material | mm | φ7, Inner grooved | |
| Performance | Air Flow Volume | m3/h | 600 | 850 |
| | Sound Pressure Noise Level | dB(A) | 42/40/37 | 45/42/37 |
| | Sound Pressure Noise Level | dB(A) | 52 | 55 |
| Dimension | Net Dimension (W*D*H) | mm | 792*292*201 | 940*316*224 |
| | Packing Dimension (W*D*H) | mm | 888*370*290 | 1010*385*310 |
| Weight | Net | kg | 8.5 | 12 |
| | Gross | kg | 10.5 | 14 |
| Refrigerant Type | | / | R32 | R32 |

| | | | | |
|---|---|---|---|---|
| Pipe Dia. | Liquid Side | mm(inch) | 6.35(1/4) | 6.35(1/4) |
| | Gas Side | mm(inch) | 9.52(3/8) | 12.7(1/2) |
| | Drainage | mm | 16.5 | 16.5 |
| Loading Qty | 20/40/40H | unit | 304/640/720 | 238/490/560 |

## 2.8 J Series (24K)

| | | | |
|---|---|---|---|
| Model | Indoor | Unit | AMWM-H24/4R3(J*) |
| Capacity | Cooling | Btu/h | 23986(9895~24908) |
| | | kW | 7.03(2.90~7.30) |
| | Heating | Btu/h | 24054(7165~27296) |
| | | kW | 7.05(2.10~8.00) |
| Electric Data | Power Supply | V~,Hz,Ph | 220～240,50,1 |
| | Cooling Power Input | W | 63(16~88) |
| | Heating Power Input | W | 63(16~88) |
| Indoor Fan Motor | Model | / | YYK50-4 |
| | Output Power | W | 50 |
| | Speed (H/M/L) | r/min | 1230.0 |
| Indoor Coil | a.Number Of Row | / | 2 |
| | b.Tube Pitch(a)x Row Pitch(b) | mm | 20.5x 12.7 |
| | c.Fin Pitch | mm | 1.4 |
| | d.Fin Material | / | Hydrophilic aluminum fin |
| | e.Tube Outside Dia.And Material | mm | φ7, Inner grooved |

| | | | |
|---|---|---|---|
| | f.Coil Length x Height x Width | mm | 850*41*18 |
| Performance | Air Flow Volume | m3/h | 1150 |
| | Sound Pressure Noise Level | dB(A) | 49/43/37 |
| | Sound Pressure Noise Level | dB(A) | 59 |
| Dimension | Net Dimension (W*D*H) | mm | 1132*330*232 |
| | Packing Dimension (W*D*H) | mm | 1205*400*317 |
| Weight | Net | kg | 14 |
| | Gross | kg | 17 |
| Refrigerant Type | | / | R32 |
| Pipe Diameter | Liquid Side | 6.35(1/4) | 6.35(1/4) |
| | Gas Side | 9.52(3/8) | 15.88(5/8) |
| | Drainage | 16.5 | 16.5 |
| Stuffing Quantity | 20/40/40H | | 154/336/384 |

**Note:**

1. Cooling capacity test Condition:(27℃DB,19℃WB Indoor/35℃DB,24℃WB Outdoor);

Heating capacity test Condition:(20℃DB Indoor/7℃DB,6℃WB Outdoor);

Connecting pipe length: 7.5M.

2. Data may be changed with unit improvement. We keep the right to change the data or specifications without prior notice, please follow the data listed on the nameplate.

## 2. Cassette

### 2.1 09, 12K, 18K

| Model | Indoor | | AMCA-H09/4R3AA | AMCA-H12/4R3AA |
|---|---|---|---|---|
| Capacity | Cooling | Btu/h | 9560(5120-12115) | 12285(5800-12625) |
| | | kW | 2.80(1.50-3.55) | 3.60(1.70-3.70) |

| | | | | |
|---|---|---|---|---|
| | Heating | Btu/h | 10240(5460-13000) | 13306(6930-15080) |
| | | kW | 3.00(1.60-3.81) | 3.9(2.03-4.42) |
| Electric Data | Power Supply | V~,Hz,Ph | 220~240,50,1 | 220~240,50,1 |
| | Cooling Power Input | W | 70(17.5-109) | 70(17.5-109) |
| | Heating Power Input | W | 70(17.5-109) | 70(17.5-109) |
| Fan Motor | Model | | XD30B | XD30B |
| | Output Power | W | 30 | 30 |
| | Capacitor | uF | 2 | 2 |
| | Speed (Hi/Mi/Lo) | r/min | 810/750/660 | 810/750/660 |
| | Number Of Row | | 2 | 2 |
| | Tube Pitch x Row Pitch | mm | 20.5x 12.7 | 20.5x 12.7 |
| | Fin Pitch | mm | 1.5 | 1.5 |
| | Fin Material | | Hydrophilic aluminum fin | Hydrophilic aluminum fin |
| | Tube Outside Dia.&Material | mm | φ7， Inner grooved | φ7， Inner grooved |
| | Coil Length x Height x Width | mm | 1320x205x 25.4 | 1320x205x 25.4 |
| | Heat Exchanging Area | $m^2$ | 6.12 | 6.12 |
| Performance | Air Flow Volume | CFM | 412/353/312 | 412/353/312 |
| | | $m^3/h$ | 700/600/530 | 700/600/530 |
| | Sound Pressure Level | dB(A) | 45/41/35 | 45/41/35 |
| | Sound Power Level | dB(A) | 56 | 56 |
| Dimension | Net Dim (W*D*H) | mm | 570×570×260 | 570×570×260 |
| | Packing Dim (W*D*H) | mm | 655x655x295 | 655x655x295 |
| | Net(Panel) | mm | 650x650x55 | 650x650x55 |

| | | | | |
|---|---|---|---|---|
| | Packing(Panel) | mm | 710x710x80 | 710x710x80 |
| Weight | Net(Body) | kg | 18 | 18 |
| | Gross(Body) | kg | 21 | 21 |
| | Net(Panel) | kg | 2.2 | 2.2 |
| | Gross(Panel) | kg | 3.7 | 3.7 |
| Refrigerant Type | | | R32 | R32 |
| Pipe Dia | Liquid Side | mm(inch) | 6.35(1/4) | 6.35(1/4) |
| | Gas Side | mm(inch) | 12.7(1/2) | 12.7(1/2) |
| | Drainage | mm | 20 | 20 |
| Loading Qty | 20/40/40H | unit | 147/309/348 | 147/309/348 |

## 2.2 18K

| Model | Indoor | | AMCA-H18/4R3AA |
|---|---|---|---|
| Capacity | Cooling | Btu/h | 17060(8530-19107) |
| | | kW | 5.0(2.50-5.6) |
| | Heating | Btu/h | 19107(10340-24000) |
| | | kW | 5.6(3.03-7.03) |
| Electric Data | Power Supply | V~,Hz,Ph | 220~240,50,1 |
| | Cooling Power Input | W | 70(17.5-109) |
| | Heating Power Input | W | 70(17.5-109) |
| Fan Motor | Model | | XD30B |
| | Output Power | W | 30 |
| | Capacitor | uF | 2 |
| | Speed (Hi/Mi/Lo) | r/min | 810/750/660 |
| | Number Of Row | | 2 |
| | Tube Pitchx Row Pitch | mm | 20.5x 12.7 |
| | Fin Pitch | mm | 1.5 |
| | Fin Material | | Hydrophilic aluminum fin |
| | Tube Outside Dia.&Material | mm | φ7， Inner grooved |
| | Coil Length x Height x Width | mm | 1320x205x 25.4 |
| | Heat Exchanging Area | $m^2$ | 6.12 |
| Performance | Air Flow Volume | CFM | **412/353/312** |
| | | $m^3/h$ | 700/600/530 |
| | Sound Pressure Level | dB(A) | 45/41/35 |
| | Sound Power Level | dB(A) | 56 |
| Dimension | Net Dim (W*D*H) | mm | 570×570×260 |
| | Packing Dim (W*D*H) | mm | 655x655x295 |

| | | | |
|---|---|---|---|
| | Net(Panel) | mm | 650x650x55 |
| | Packing(Panel) | mm | 710x710x80 |
| Weight | Net(Body) | kg | 18 |
| | Gross(Body) | kg | 21 |
| | Net(Panel) | kg | 2.2 |
| | Gross(Panel) | kg | 3.7 |
| Refrigerant Type | | | R32 |
| Pipe Dia | Liquid Side | mm(inch) | 6.35(1/4) |
| | Gas Side | mm(inch) | 12.7(1/2) |
| | Drainage | mm | 20 |
| Loading Qty | 20/40/40H | unit | 147/309/348 |

## 3. Ceiling Floor

### 3.1 09, 12K

| Model | Indoor | | AMCF-H09/4R3A | AMCF-H12/4R3A |
|---|---|---|---|---|
| Capacity | Cooling | Btu/h | 9560(5120-12115) | 12285(5800-12625) |
| | | kW | 2.80(1.50-3.55) | 3.60(1.70-3.70) |
| | Heating | Btu/h | 10240(5460-13000) | 13306(6930-15080) |
| | | kW | 3.00(1.60-3.81) | 3.9(2.03-4.42) |
| Electric Data | Power Supply | V~ ,Hz, Ph | 220~240,50,1 | 220~240,50,1 |
| | Cooling Power Input | W | 80(20-125) | 80(20-125) |
| | Heating Power Input | W | 80(20-125) | 80(20-125) |
| Indoor Fan Motor | Model | | FP40A-ZL | FP40A-ZL |
| | Output Power | W | 40 | 40 |
| | Capacitor | uF | / | / |
| | Speed (Hi/Mi/Lo) | r/min | 1250/1050/950 | 1250/1050/950 |
| Indoor Coil | a. Number Of Row | | 3 | 3 |
| | b. Tube Pitch(a)x Row Pitch(b) | mm | 20.5x 12.7 | 20.5x 12.7 |
| | c. Fin Pitch | mm | 1.6 | 1.6 |
| | d. Fin Material | | Hydrophilic aluminum fin | Hydrophilic aluminum fin |
| | e. Tube Outside Dia .And Material | mm | φ7， Inner grooved | φ7， Inner grooved |
| | f. Coil Length x Height x Width | mm | 599x246x 38.1 | 599x246x 38.1 |
| | g. Heat Exchanging Area | $m^2$ | 6.32 | 6.32 |
| Performance | Air Flow Volume | CFM | 441/353/294 | 441/353/294 |
| | | $m^3/h$ | 750/600/500 | 750/600/500 |
| | Sound Pressure Noise Level | dB(A) | 39/36/30 | 39/36/30 |

## AUX DC Inverter Free Match 50HZ R32

| | | | | |
|---|---|---|---|---|
| | Sound Power Noise Level | dB(A) | 55 | 55 |
| Dimension | Net Dimension (W*D*H) | mm | 929×660×205 | 929×660×205 |
| | Packing Dimension (W*D*H) | mm | 1010×720×290 | 1010×720×290 |
| Weight | Net | kg | 26 | 26 |
| | Gross | kg | 31 | 31 |
| Refrigerant Type | | | R32 | R32 |
| Pipe Diameter | Liquid Side | mm(inch) | 6.35(1/4) | 6.35(1/4) |
| | Gas Side | mm(inch) | 12.7(1/2) | 12.7(1/2) |
| | Drainage | mm | 20 | 20 |
| Stuffing Quantity | 20/40/40H | unit | 136/280/315 | 136/280/315 |

### 3.2 18K

| Model | Indoor | | AMCF-H18/4R3A |
|---|---|---|---|
| Capacity | Cooling | Btu/h | 18080(8530-19107) |
| | | kW | 5.3(2.50-5.6) |
| | Heating | Btu/h | 19790(10340-24000) |
| | | kW | 5.8(3.03-7.03) |
| Electric Data | Power Supply | V~,Hz,Ph | 220~240,50,1 |
| | Cooling Power Input | W | 80(20-125) |
| | Heating Power Input | W | 80(20-125) |
| Indoor Fan Motor | Model | | FP40A-ZL |
| | Output Power | W | 40 |
| | Capacitor | uF | / |
| | Speed (Hi/Mi/Lo) | r/min | 1300/1100/1000 |
| Indoor Coil | a. Number Of Row | | 3 |
| | b. Tube Pitch(a)x Row Pitch(b) | mm | 20.5x 12.7 |
| | c. Fin Pitch | mm | 1.6 |
| | d. Fin Material | | Hydrophilic aluminum fin |
| | e. Tube Outside Dia.And Material | mm | φ7， Inner grooved |
| | f. Coil Length x Height x Width | mm | 599x246x38.1 |
| | g. Heat Exchanging Area | $m^2$ | 6.32 |
| Performance | Air Flow Volume | CFM | 500/412/353 |
| | | $m^3/h$ | 850/700/600 |
| | Sound Pressure Noise Level | dB(A) | 45/42/40 |
| | Sound Power Noise Level | dB(A) | 59 |
| Dimension | Net Dimension (W*D*H) | mm | 929×660×205 |
| | Packing Dimension (W*D*H) | mm | 1010×720×290 |

**AUX DC Inverter Free Match 50HZ R32**

| | | | |
|---|---|---|---|
| Weight | Net | kg | 26 |
| | Gross | kg | 31 |
| Refrigerant Type | | | R32 |
| Pipe Diameter | Liquid Side | mm(inch) | 6.35(1/4) |
| | Gas Side | mm(inch) | 12.7(1/2) |
| | Drainage | mm | 20 |
| Stuffing Quantity | 20/40/40H | unit | 136/280/315 |

# 4. Duct

## 4.1 07, 09K

| Model | Indoor | | AMSD-H07/4R3A | AMSD-H09/4R3A |
|---|---|---|---|---|
| Capacity | Cooling | Btu/h | 7506(3855-9220) | 8872(5120-12115) |
| | | kW | 2.20(1.13-2.70) | 2.60(1.50-3.55) |
| | Heating | Btu/h | 8530(4575-10820) | 9895(5800-12450) |
| | | kW | 2.50(1.34-3.17) | 2.90(1.70-3.65) |
| Electric Data | Power Supply | V~,Hz,Ph | 220~240,50,1 | 220~240,50,1 |
| | Cooling Power Input | W | 55 | 55 |
| | Heating Power Input | W | 55 | 55 |
| Fan Motor | Model | | FP40B-ZL | FP40B-ZL |
| | Output Power | W | 40 | 40 |
| | Capacitor | uF | / | / |
| | Speed (Hi/Mi/Lo) | r/min | 1020/870/780 | 1020/870/780 |
| Indoor Coil | Number Of Row | | 2 | 2 |
| | Tube x Row Pitch | mm | 20.5x 12.7 | 20.5x 12.7 |
| | Fin Pitch | mm | 1.4 | 1.4 |
| | Fin Material | | Hydrophilic aluminum | Hydrophilic aluminum |
| | Tube Dia.& Material | mm | φ7， Inner grooved | φ7， Inner grooved |
| | Coil L x H x W | mm | 541x255x 25.4 | 541x255x 25.4 |
| | Heat Exchange Area | $m^2$ | 5.01 | 5.01 |
| Performance | Air Flow Volume | CFM | 353/265/224 | 353/265/224 |
| | | $m^3/h$ | 600/450/380 | 600/450/380 |
| | Sound Pressure Noise Level | dB(A) | 35/31/28 | 35/31/28 |
| | Sound Power Noise | dB(A) | 53 | 53 |

| | | | | |
|---|---|---|---|---|
| | Level | | | |
| | ESP | Pa | 10 | 10 |
| Dimension | Net Dim (W*D*H) | mm | 700×470×200 | 700×470×200 |
| | Packing Dim(W*D*H) | mm | 1005×580×275 | 1005×580×275 |
| Weight | Net | kg | 18.5 | 18.5 |
| | Gross | kg | 22 | 22 |
| Refrigerant Type | | | R32 | R32 |
| Pipe Dia | Liquid Side | mm(inch) | 6.35(1/4) | 6.35(1/4) |
| | Gas Side | mm(inch) | 12.7(1/2) | 12.7(1/2) |
| | Drainage | mm | 16.5 | 16.5 |
| Loading Qty | 20/40/40H | unit | 176/368/414 | 176/368/414 |

**4.2 12，18K**

| Model | Indoor | | AMSD-H12/4R3A | AMSD-H18/4R3A |
|---|---|---|---|---|
| Capacity | Cooling | Btu/h | 12280(5835-13135) | 17400(8530-19790) |
| | | kW | 3.60(1.71-3.85) | 5.10(2.50-5.80) |
| | Heating | Btu/h | 13650(6480-13375) | 19790(9690-21835) |
| | | kW | 4.00(1.90-3.92) | 5.80(2.84-6.40) |
| Electric Data | Power Supply | V~,Hz,Ph | 220~240,50,1 | 220~240,50,1 |
| | Cooling Power Input | W | 55 | 75 |
| | Heating Power Input | W | 55 | 75 |
| Fan Motor | Model | | FP40B-ZL | FP90C-ZL |
| | Output Power | W | 40 | 90 |
| | Capacitor | uF | / | / |
| | Speed (Hi/Mi/Lo) | r/min | 1050/900/800 | 1020/870/800 |
| Indoor Coil | Number Of Row | | 2 | 2 |

| | | | | |
|---|---|---|---|---|
| | Tube x Row Pitch | mm | 20.5x 12.7 | 20.5x 12.7 |
| | Fin Pitch | mm | 1.4 | 1.4 |
| | Fin Material | | Hydrophilic aluminum | Hydrophilic aluminum |
| | Tube Dia.& Material | mm | φ7， Inner grooved | φ7， Inner grooved |
| | Coil L x H x W | mm | 541x255x 25.4 | 840x255x 25.4 |
| | Heat Exchange Area | $m^2$ | 5.01 | 7.78 |
| Performance | Air Flow Volume | CFM | 400/329/265 | 506/388/353 |
| | | $m^3/h$ | 680/560/450 | 860/660/600 |
| | Sound Pressure Noise Level | dB(A) | 38/34/31 | 42/38/36 |
| | Sound Power Noise Level | dB(A) | 53 | 55 |
| | ESP | Pa | 10 | 10 |
| Dimension | Net Dim (W*D*H) | mm | 700×470×200 | 1000×470×200 |
| | Packing Dim(W*D*H) | mm | 1005×580×275 | 1305×580×275 |
| Weight | Net | kg | 18.5 | 24 |
| | Gross | kg | 22 | 28 |
| Refrigerant Type | | | R32 | R32 |
| Pipe Dia | Liquid Side | mm(inch) | 6.35(1/4) | 6.35(1/4) |
| | Gas Side | mm(inch) | 12.7(1/2) | 12.7(1/2) |
| | Drainage | mm | 16.5 | 16.5 |
| Loading Qty | 20/40/40H | unit | 176/368/414 | 136/288/324 |

## 5. Outdoor Unit

### 5.1 14K, 18K

| | | | |
|---|---|---|---|
| DC INVERTER | Model | AM2-H14/4DR3 | AM2-H18/4DR3 |

**AUX DC Inverter Free Match 50HZ R32**

| System Format | | | 1 drive 2 | 1 drive 2 |
|---|---|---|---|---|
| Capacity | Cooling | Btu/h | 13989(6142-15388) | 18084(6824-19892) |
| | | kW | 4.1(1.8-4.51) | 5.3(2.0-5.83) |
| | Heating | Btu/h | 16378(6995-18015) | 19107(7541-21017) |
| | | kW | 4.8(2.05-5.28) | 5.6(2.21-6.16) |
| Electric Data | Power Supply | V~,Hz,Ph | 220~240,50,1 | 220~240,50,1 |
| | Cooling Power Input | W | 1240(198-2100) | 1750(280-2300) |
| | Heating Power Input | W | 1150(198-2100) | 1540(280-2300) |
| | Rated Current (cooling&heating) | A | 5.4/5 | 7.6/6.7 |
| | Max current | A | 10 | 11 |
| | Max power | KW | 2.1 | 2.3 |
| Performance | SEER/SCOP | W/W | 6.16/4.06（F） | 7.07/4.08（F） |
| | SEER/SCOP | W/W | 6.15/4.05（L） | 7.08/4.06（L） |
| | SEER/SCOP | W/W | 6.16/4.06(J) | 7.07/4.07(J) |
| | Energy Rate | | A++/A+ | A++/A+ |
| | EER/COP | W/W | 3.31/4.17 | 3.03/3.64 |
| DC Inv. Compressor | Model | | KSN108D22UFZ | KSM135D23UFZ |
| | Quantity | | 1 | 1 |
| | Type | | Rotary | Rotary |
| | Brand | | GMCC | GMCC |
| | Capacity | W | 3470 | 4245 |
| | Input | W | 890 | 1075 |
| | Power Supply | V~,Hz,Ph | 220~240,50,1 | 220~240,50,1 |
| | Rated Current | A | 6.05 | 7.1 |
| | Operating Frequency | Hz | 60 | 60 |
| | Frequency Range | | VG74/310ml | VG74/440ml |
| | Refrigerant Oil | ml | 10~120Hz | 10~120Hz |
| Outdoor DC | Model | | D-40-8 | D-40-8 |

## AUX DC Inverter Free Match 50HZ R32

| | | | | |
|---|---|---|---|---|
| Inverter Fan Motor | Type | | DC Inverter | DC Inverter |
| | Brand | | WELLING | WELLING |
| | Quantities | | 1 | 1 |
| | Insulation Class | | E | E |
| | Safe Class | | IP24 | IP24 |
| | Input Power | W | 60 | 60 |
| | Output Power | W | 40 | 40 |
| | Capacitor | uF | / | / |
| | Speed | r/min | 850-350 | 850-350 |
| Outdoor Fan | Material | | Plastic | Plastic |
| | Diameter | mm | Φ421×117 | Φ421×117 |
| | Fan Quantity | | 1 | 1 |
| Outdoor Coil | a. Number Of Row | | 2 | 2 |
| | b. Tube Pitch(a)x Row Pitch(b) | mm | 22x19.05 | 22x19.05 |
| | c. Fin Pitch | mm | 1.3 | 1.3 |
| | d. Fin Material | | Hydrophilic aluminum fin | |
| | e. Tube Outside Dia. And Material | mm | φ7, Inner grooved | |
| | f. Coil Length x Height x Width | mm | 757×506×38.1 | 757×506×38.1 |
| Air Flow Volume | | CFM | 1353 | 1353 |
| | | $m^3/h$ | 2300 | 2300 |
| Noise Level | Sound Pressure Noise Level | dB(A) | 54 | 55 |
| | Sound Power Noise Level | dB(A) | 61 | 62 |
| Dimension | Net Dimension (W*D*H) | mm | 800×315×545 | 800×315×545 |
| | Packing Dimension (W*D*H) | mm | 920×400×620 | 920×400×620 |
| Weight | Net | kg | 34 | 36 |

| | | | | |
|---|---|---|---|---|
| | Gross | kg | 37 | 39 |
| Refrigerant type/Quantity | Type | | R32 | R32 |
| | Charged Volume | kg | 1.07 | 1.1 |
| Piping | Liquid Side | mm(inch) | 2×6.35(1/4) | 2×6.35(1/4) |
| | Gas Side | mm(inch) | 2×9.52(3/8) | 2×9.52(3/8) |
| | Max. length for all rooms (m) | m | 40 | 40 |
| | Max. length for one IU (m) | m | 25 | 25 |
| | Max. height difference between IU and OU (m) | m | 15 | 15 |
| | Max. height difference between IUs (m) | m | 10 | 10 |
| Ambient Temp (Cooling/Heating) | | ℃ | -15~52℃/-15~24℃ | -15~52℃/-15~24℃ |
| Stuffing Quantity | 20/40/40H | unit | 102/219/292 | 102/219/292 |

**5.2 21K, 27K**

| DC INVERTER | Model | | AM2-H21/4DR3 | AM3-H27/4DR3 |
|---|---|---|---|---|
| System Format | | | 1 drive 3 | 1 drive 3 |
| Capacity | Cooling | Btu/h | 21154(7506~22895) | 26955(7848~29650) |
| | | kW | 6.2(2.2~6.71) | 7.9(2.3~8.69) |
| | Heating | Btu/h | 22519(8155~24771) | 27978(8359~30776) |
| | | kW | 6.6(2.39~7.26) | 8.2(2.45~9.02) |
| Electric Data | Power Supply | V~,Hz,Ph | 220~240,50,1 | 220~240,50,1 |
| | Cooling Power Input | W | 1920（350-2800） | 2460（560-3400） |
| | Heating Power | W | 1780（350-2800） | 2270（560-3400） |

| | | | | |
|---|---|---|---|---|
| | Input | | | |
| | Rated Current (cooling&heating) | A | 8.3/7.8 | 10.7/9.8 |
| | Max current | A | 13 | 16 |
| | Max power | KW | 2.8 | 3.4 |
| Performance | SEER/SCOP | W/W | 6.57/4.38（F） | 6.30/4.04（F） |
| | SEER/SCOP | W/W | 6.45/4.39（L） | 6.29/4.04（L） |
| | SEER/SCOP | W/W | 6.57/4.39(J) | 6.30/4.04(J) |
| | Energy Rate | | A++/A+ | A++/A+ |
| | EER/COP | W/W | 3.23/3.71 | 3.21/3.61 |
| DC Inv. Compressor | Model | | KTN150D30UFZ | KTM240D57UKP |
| | Quantity | | 1 | 1 |
| | Type | | Twin Rotary | Twin Rotary |
| | Brand | | GMCC | GMCC |
| | Capacity | W | 4690 | 7715 |
| | Input | W | 1250 | 2085 |
| | Power Supply | V~,Hz,Ph | 220~240,50,1 | 220~240,50,1 |
| | Rated Current | A | 7.1 | 9.5 |
| | Operating Frequency | Hz | 60 | 60 |
| | Frequency Range | | 8~120 Hz | 12~120Hz |
| | Refrigerant Oil | ml | VG74/450ml | VG74/670ml |
| Outdoor DC Inverter Fan Motor | Model | | D-65-8 | D-65-8 |
| | Type | | DC Inverter | DC Inverter |
| | Brand | | WOLONG | WOLONG |
| | Quantities | | 1 | 1 |
| | Insulation Class | | E | E |
| | Safe Class | | IP24 | IP24 |
| | Input Power | W | 85 | 85 |

| | | | | |
|---|---|---|---|---|
| | Output Power | W | 65 | 65 |
| | Capacitor | uF | / | / |
| | Speed | r/min | 870-350 | 870-350 |
| Outdoor Fan | Material | | Plastic | Plastic |
| | Diameter | mm | Φ470×140 | Φ470×140 |
| | Fan Quantity | | 1 | 1 |
| Outdoor Coil | a.Number Of Row | | 2 | 2 |
| | b.Tube Pitch(a)x Row Pitch(b) | mm | 22x19.05 | 22x19.05 |
| | c.Fin Pitch | mm | 1.5 | 1.5 |
| | d.Fin Material | | Hydrophilic aluminum fin | Hydrophilic aluminum fin |
| | e.Tube Outside Dia.And Material | mm | φ7, Inner grooved | φ7, Inner grooved |
| | f.Coil Length x Height x Width | mm | 757×616×38.1 | 757×616×38.1 |
| Air Flow Volume | | CFM | 1824 | 1824 |
| | | $m^3/h$ | 3100 | 3100 |
| Noise Level | Sound Pressure Noise Level | dB(A) | 56 | 58 |
| | Sound Power Noise Level | dB(A) | 65 | 65 |
| Dimension | Net Dimension (W*D*H) | mm | 834×328×655 | 834×328×655 |
| | Packing Dimension (W*D*H) | mm | 945×435×725 | 945×435×725 |
| Weight | Net | kg | 44 | 46 |
| | Gross | kg | 47 | 49 |
| Refrigerant type/Quantity | Type | | R32 | R32 |
| | Charged Volume | kg | 1.25 | 1.2 |
| Piping | Liquid Side | mm(inch) | 3×6.35(1/4) | 3×6.35(1/4) |

| | | | | |
|---|---|---|---|---|
| | Gas Side | mm(inch) | 3×9.52(3/8) | 3×9.52(3/8) |
| | Max. length for all rooms (m) | m | 60 | 60 |
| | Max. length for one IU (m) | m | 30 | 30 |
| | Max. height difference between IU and OU (m) | m | 15 | 15 |
| | Max. height difference between IUs (m) | m | 10 | 10 |
| Ambient Temp (Cooling/Heating) | | ℃ | -15~52℃/-15~24℃ | -15~52℃/-15~24℃ |
| Stuffing Quantity | 20/40/40H | unit | 96/198/198 | 96/198/198 |

**5.3 36K, 42K**

| DC INVERTER | Model | | AM4-H36/4DR3 | AM5-H42/4DR3 |
|---|---|---|---|---|
| System Format | | | 1 drive 4 | 1 drive 5 |
| Capacity | Cooling | Btu/h | 35826(8530~37532) | 40944(9451~43332) |
| | | kW | 10.50(2.5~11.0) | 12(2.77~12.7) |
| | Heating | Btu/h | 37532(9110~38214) | 44356(10100~44800) |
| | | kW | 11.00(2.67~11.2) | 13(2.96~13.1) |
| Electric Data | Power Supply | V~,Hz,Ph | 220~240,50,1 | 220~240,50,1 |
| | Cooling Power Input | W | 3950(680~4930) | 4450(750~5450) |
| | Heating Power Input | W | 3150(530~3850) | 3750(600~4350) |
| | Rated Current (cooling&heating) | A | 17.5/13.96 | 19.72/16.62 |
| | Max current | A | 23.5 | 24.5 |
| | Max power | KW | 5.3 | 5.6 |

| | | | | |
|---|---|---|---|---|
| Performance | SEER/SCOP | W/W | 6.10/4.00(F) | 6.10/4.10 ( F ) |
| | SEER/SCOP | W/W | 6.20/4.00(L) | 6.10/4.00(L) |
| | SEER/SCOP | W/W | 6.15/4.12 ( J ) | 6.14/4.14 ( J ) |
| | Energy Rate | | A++/A+ | A++/A+ |
| | EER/COP | W/W | 2.66/3.49 | 2.70/3.47 |
| | Model | | KTF310D43UMT | KTF310D43UMT |
| | Quantity | | 1 | 1 |
| | Type | | Rotary | Rotary |
| | Brand | | GMCC | GMCC |
| | Capacity | W | 10010 | 10010 |
| | Input | W | 2765 | 2765 |
| | Power Supply | V~,Hz,Ph | 220~240,50,1 | 220~240,50,1 |
| | Rated Current | A | 5.38 | 5.38 |
| | Operating Frequency | Hz | 60 | 60 |
| | Refrigerant Oil | ml | VG74/1000ml | VG74/1000ml |
| | Frequency Range | | 12~120 Hz | 12~120 Hz |
| Outdoor DC Inverter Fan Motor | Model | | D-310-120-8A | D-310-120-8A |
| | Type | | DC Inverter | DC Inverter |
| | Brand | | WOLONG | WOLONG |
| | Quantities | | 1 | 1 |
| | Insulation Class | | E | E |
| | Safe Class | | IP24 | IP24 |
| | Input Power | W | 150 | 150 |
| | Output Power | W | 120 | 120 |
| | Capacitor | uF | / | / |
| | Speed | r/min | 940 | 940 |

| | | | | |
|---|---|---|---|---|
| Outdoor Fan | Material | | Plastic | Plastic |
| | Diameter | mm | Φ550×125 | Φ550×125 |
| | Fan Quantity | | 1 | 1 |
| | a.Number Of Row | | 3 | 3 |
| | b.Tube Pitch(a)x Row Pitch(b) | mm | 20.5x19.05 | 20.5x19.05 |
| | c.Fin Pitch | mm | 1.5 | 1.5 |
| | d.Fin Material | | Hydrophilic aluminum fin | Hydrophilic aluminum fin |
| | e.Tube Outside Dia.And Material | mm | φ7， Inner grooved | φ7， Inner grooved |
| | f.Coil Length x Height x Width | mm | 1070x759x38.1 | 1070x759x38.1 |
| | g.Heat Exchanging Area | $m^2$ | 58.33 | 58.33 |
| Air Flow Volume | | CFM | 2353 | 2471 |
| | | $m^3/h$ | 4000 | 4200 |
| Noise Level | Sound Pressure Noise Level | dB(A) | 61 | 61 |
| | Sound Power Noise Level | dB(A) | 68 | 68 |
| Dimension | Net Dimension (W*D*H) | mm | 985×395×808 | 985×395×808 |
| | Packing Dimension (W*D*H) | mm | 1105×495×895 | 1105×495×895 |
| Weight | Net | kg | 74 | 75 |
| | Gross | kg | 78 | 79 |
| Refrigerant type/Quantity | Type | | R32 | R32 |
| | Charged Volume | kg | 2.3 | 2.3 |
| | Additional charge | (g/m) | 20 | 20 |

| | | | | |
|---|---|---|---|---|
| Piping | Liquid Side | mm(inch) | 4×6.35(1/4) | 5×6.35(1/4) |
| | Gas Side | mm(inch) | 4×9.52(3/8) | 5×9.52(3/8) |
| | Max. length for all rooms (m) | m | 80 | 80 |
| | Max. length for one IU (m) | m | 35 | 35 |
| | Max. height difference between IU and OU (m) | m | 15 | 15 |
| | Max. height difference between IUs (m) | m | 10 | 10 |
| Ambient Temp (Cooling/Heating) | | ℃ | -15~52/-15~24℃ | -15~52℃/-15~24℃ |
| Stuffing Quantity | 20/40/40H | unit | 44/96/144 | 44/96/144 |

**Note:**

1. Cooling capacity test Condition:(27℃DB,19℃WB Indoor/35℃DB,24℃WB Outdoor);

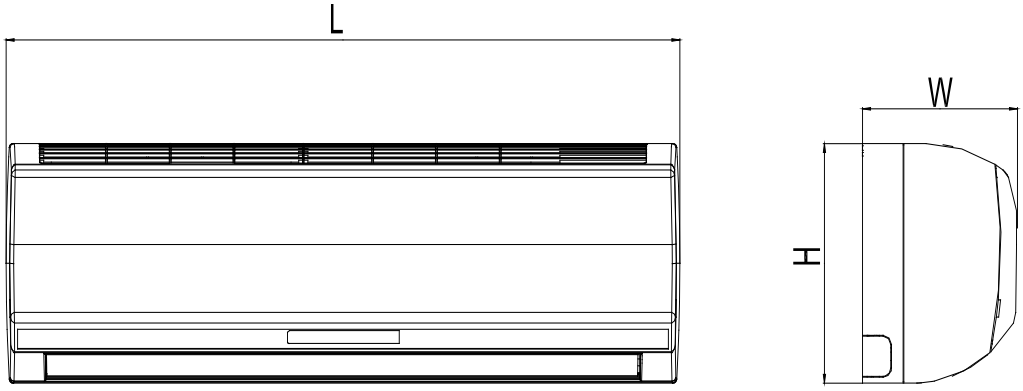
Heating capacity test Condition:(20℃DB Indoor/7℃DB,6℃WB Outdoor);

Connecting pipe length: 7.5M.

2. Data may be changed with unit improvement. We keep the right to change the data or specifications without prior notice, please follow the data listed on the nameplate.

# Part5 Dimension

## 1. Wall Mounted




| Physical Dimension | | AMWM-H07 /4R3(L*) | AMWM-H09 /4R3 (L*) | AMWM-H12 /4R3(L*) | AMWM-H18 /4R3(L*) |
|---|---|---|---|---|---|
| Length | mm | 800 | 800 | 800 | 970 |
| Height | mm | 300 | 300 | 300 | 315 |
| Width | mm | 198 | 198 | 198 | 235 |

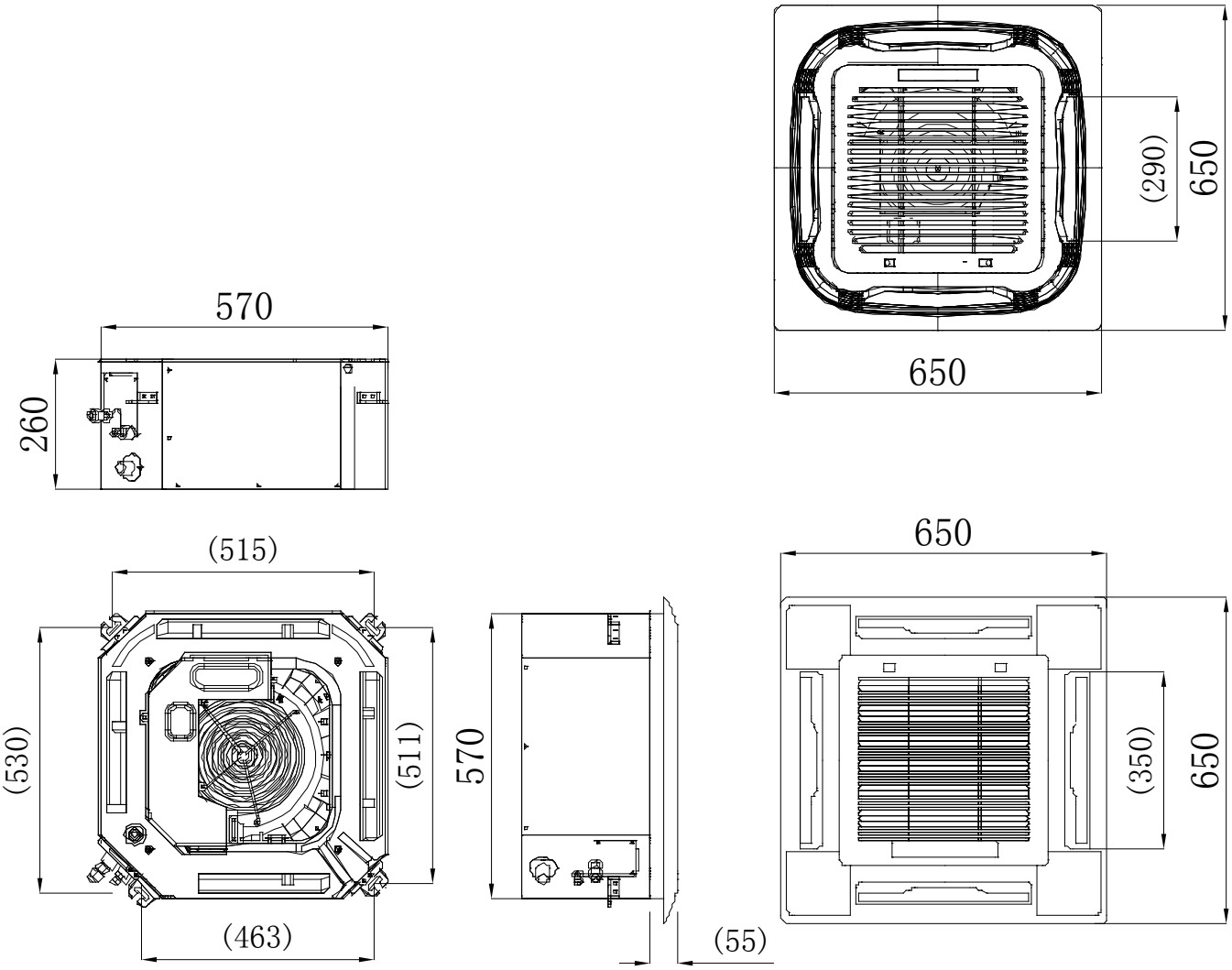
| Physical Dimension | | AMWM-H07 /4R3(F*) | AMWM-H09 /4R3(F*) | AMWM-H12 /4R3(F*) | AMWM-H18 /4R3(F*) | AMWM-H24 /4R3(F*) |
|---|---|---|---|---|---|---|
| Length | mm | 750 | 750 | 750 | 900 | 1082 |
| Height | mm | 285 | 285 | 285 | 310 | 330 |
| Width | mm | 200 | 200 | 200 | 225 | 233 |

| Physical Dimension | AMWM-H07 /4R3(J*) | AMWM-H09 /4R3(J*) | AMWM-H12 /4R3(J*) | AMWM-H18 /4R3(J*) | AMWM-H24 /4R3(J*) |
|---|---|---|---|---|---|

| | | | | | | |
|---|---|---|---|---|---|---|
| Length | mm | 792 | 792 | 792 | 940 | 1132 |
| Height | mm | 292 | 292 | 292 | 316 | 330 |
| Width | mm | 201 | 201 | 201 | 224 | 232 |

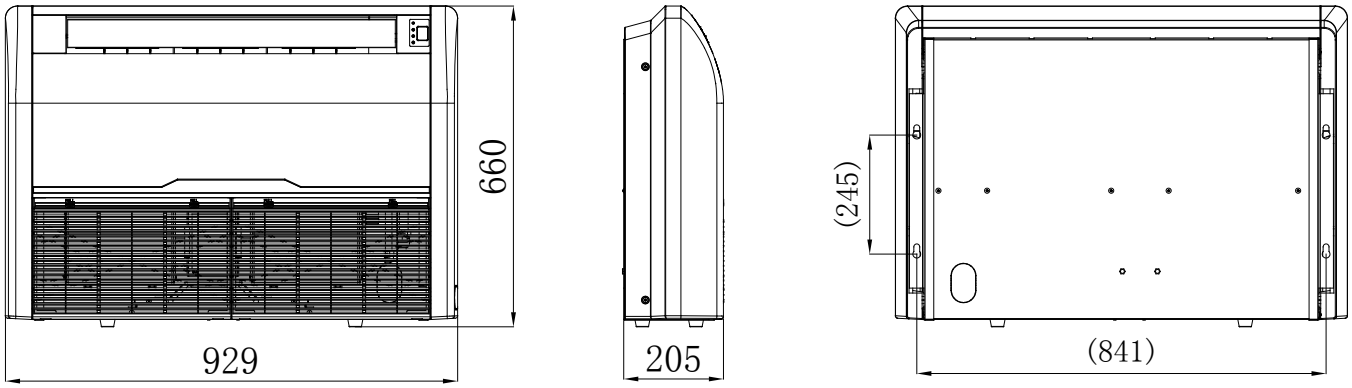
## 2. Cassette

### 09K,12K,18K



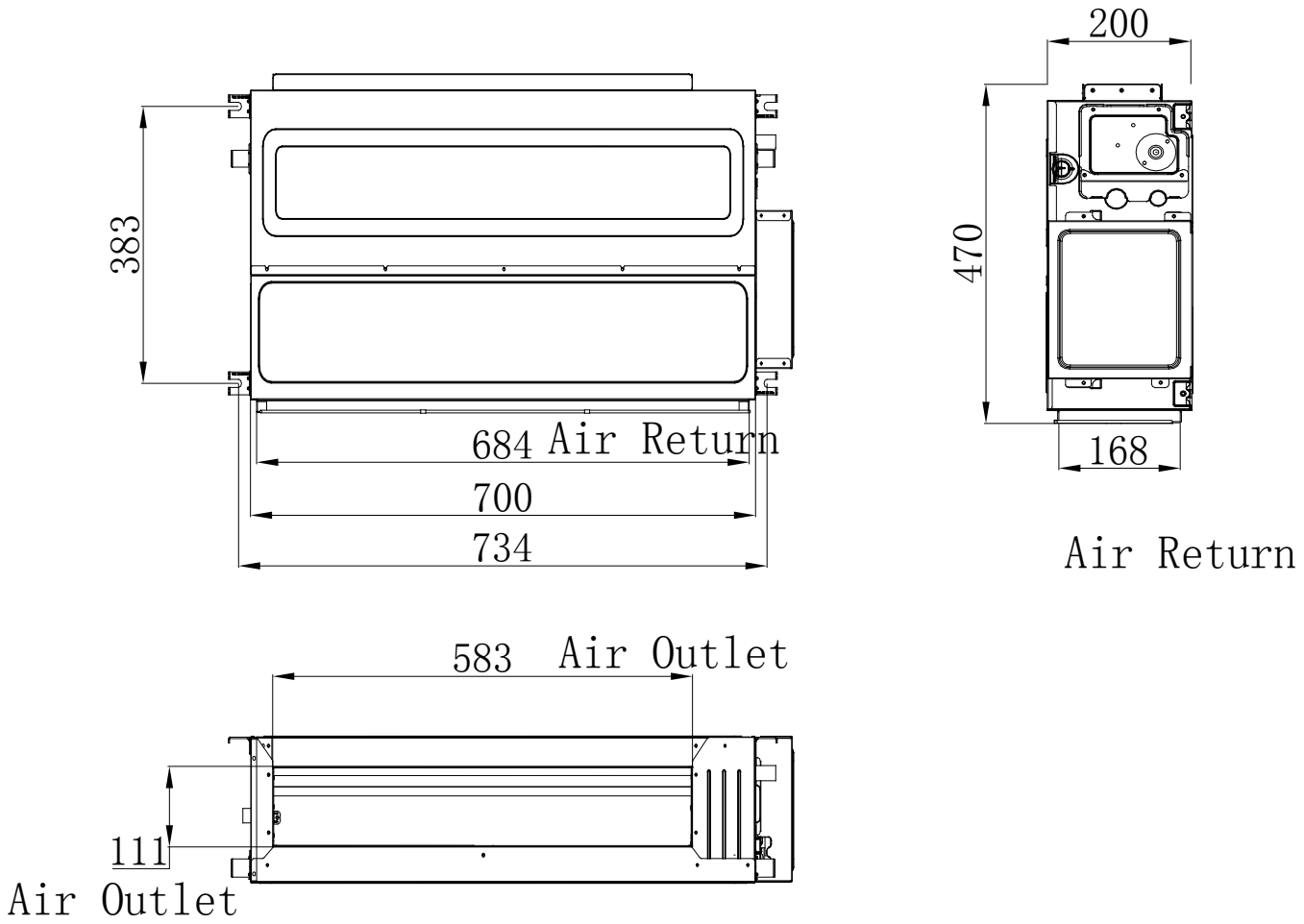
## 3. Ceiling Floor

### 09K, 12K, 18K

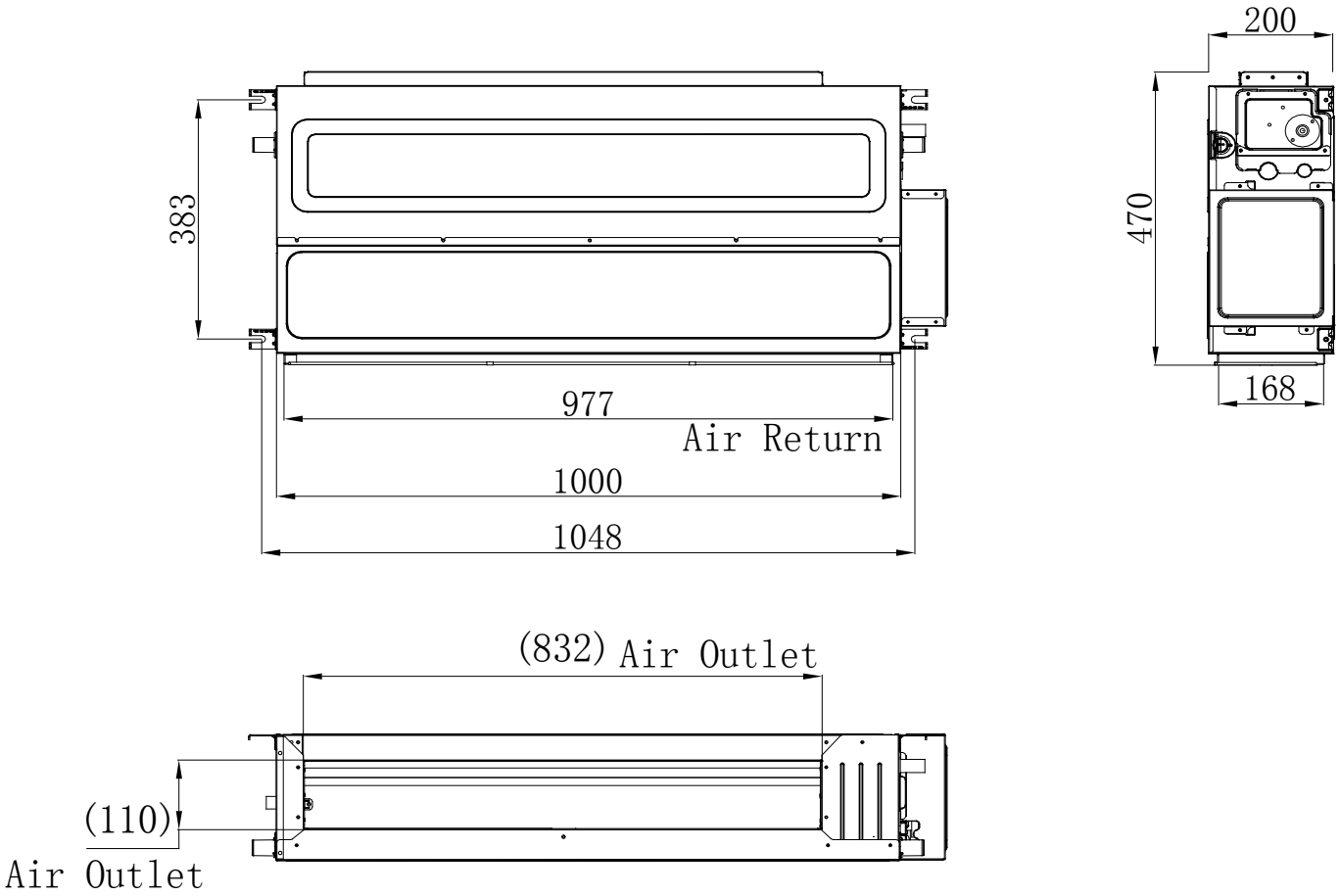


# 4. Duct

## 4.1 07K 09K 12K

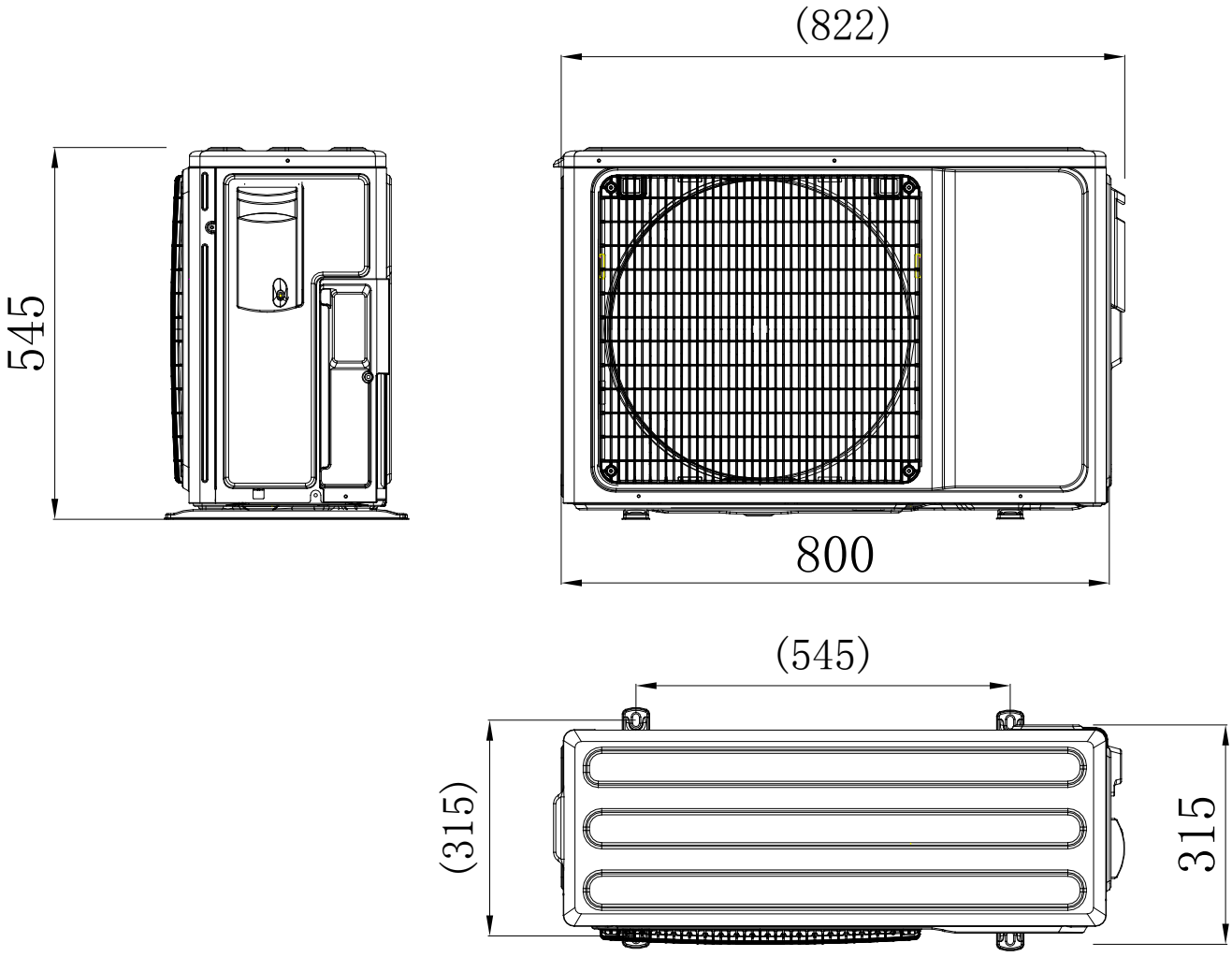


### 4.2 18K

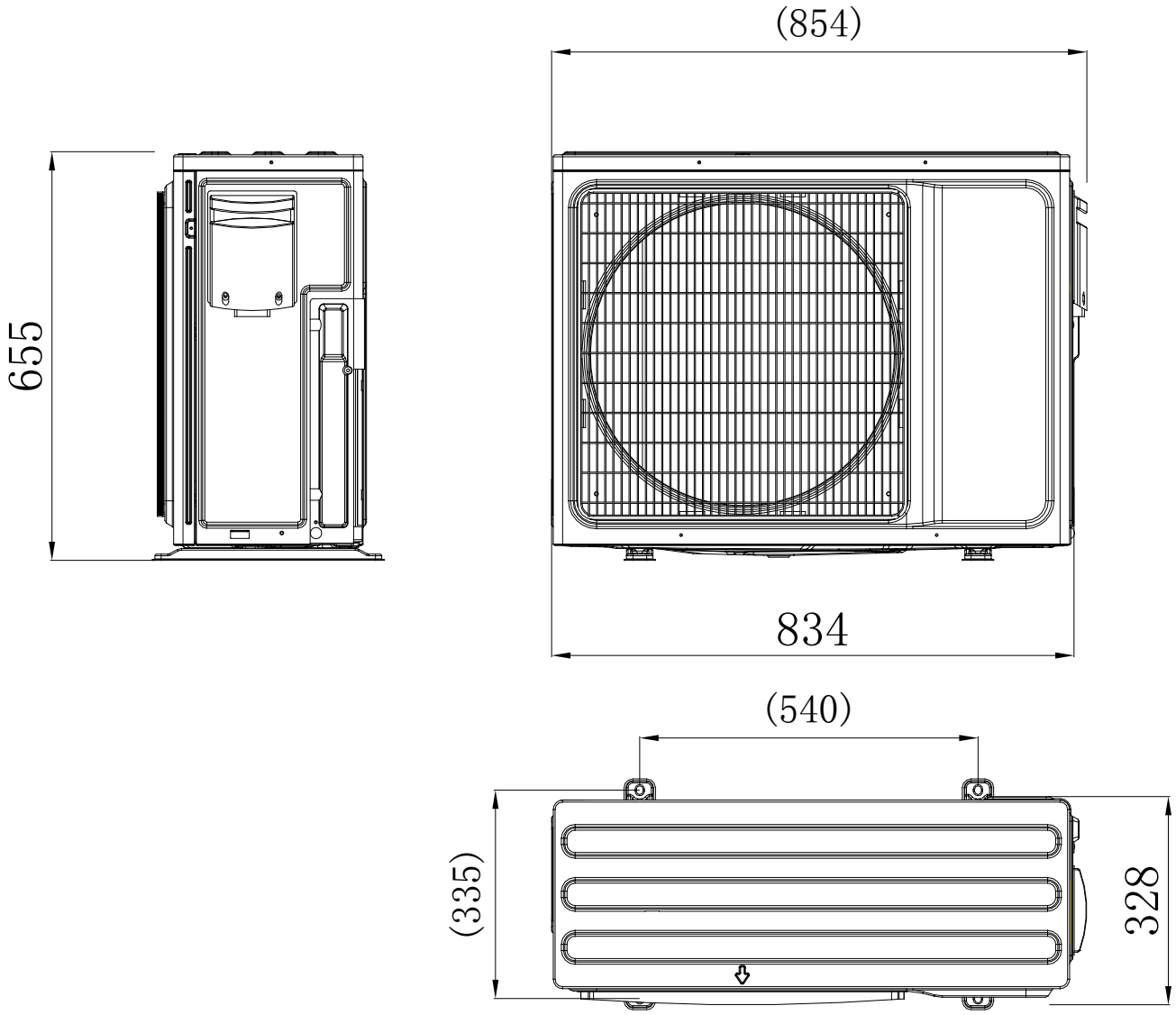

200
383
470
977
Air Return
1000
1048
168
(832) Air Outlet
(110)
Air Outlet

# 5. Outdoor Unit

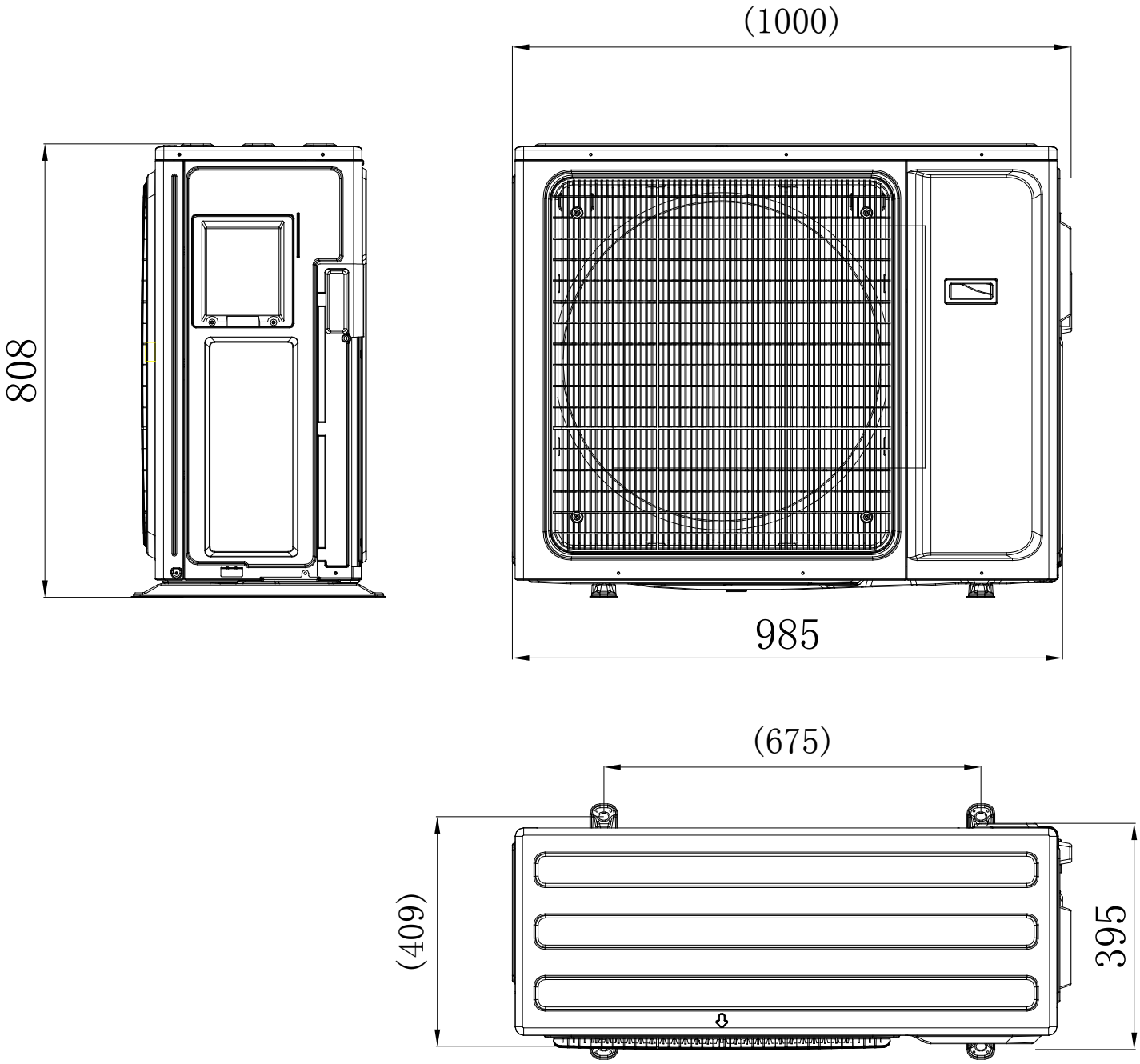
## 5.1 14K, 18K



### 5.2 21K, 27K



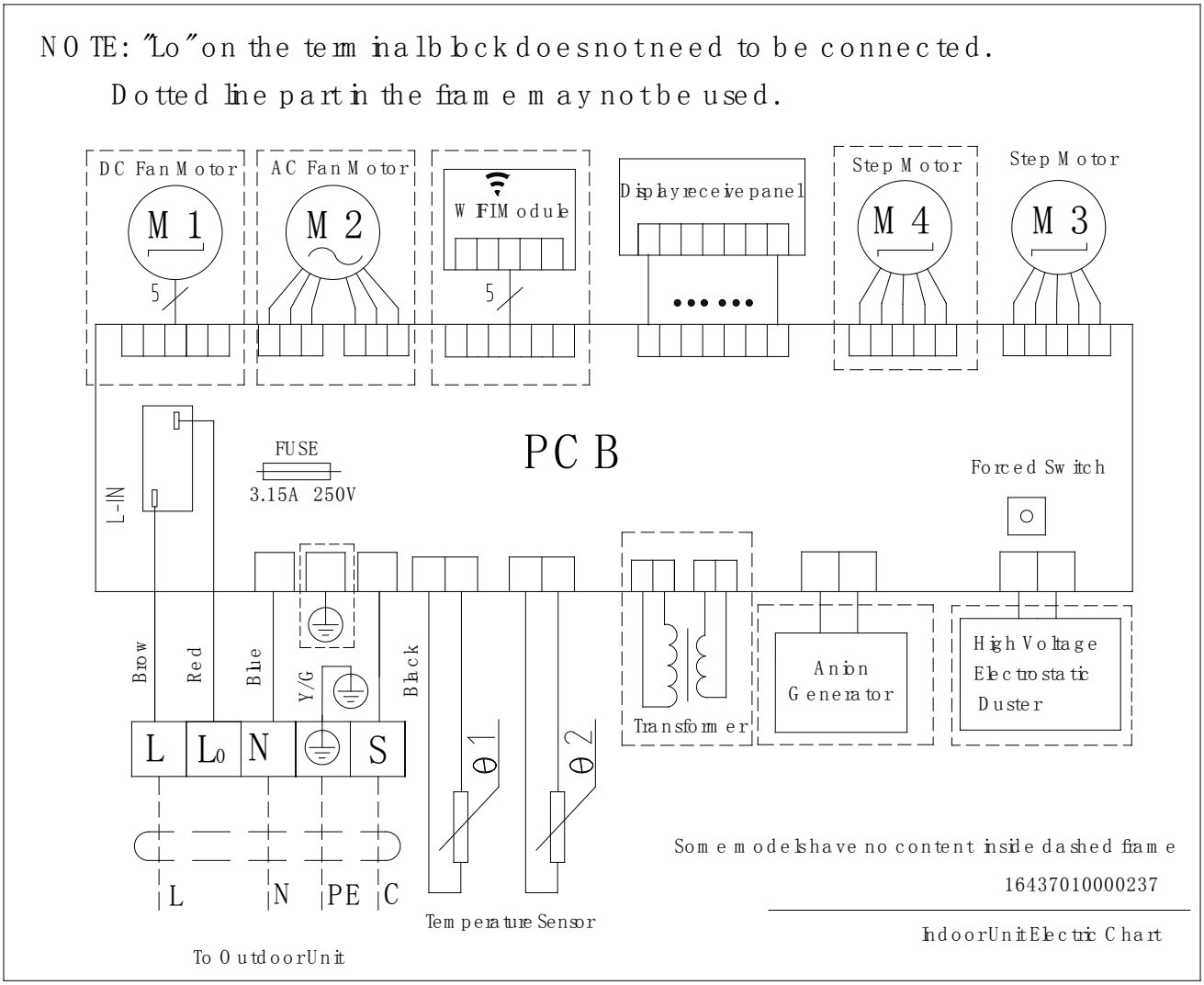
### 5.3 36K, 42K



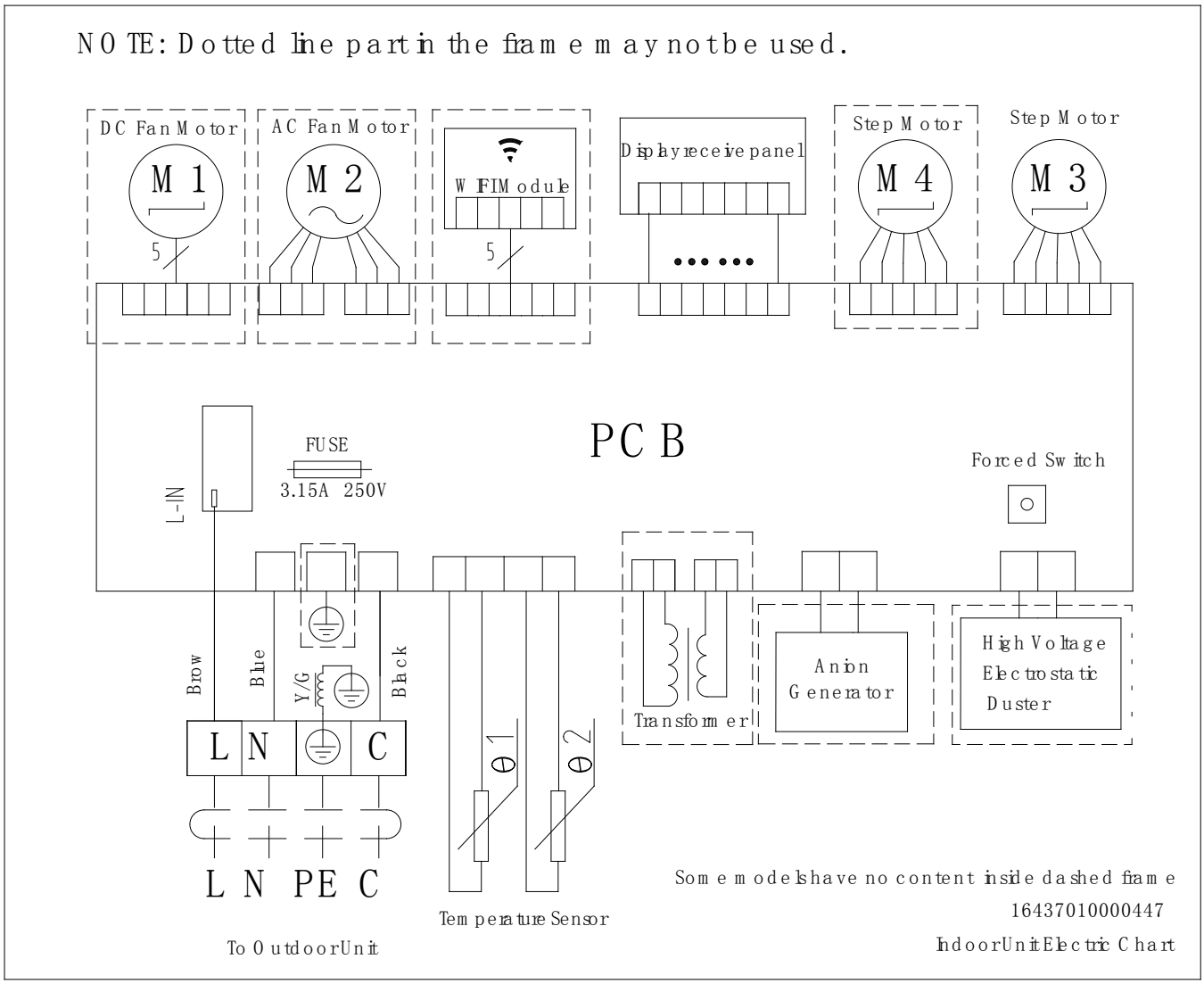
# Part6 Electrical Principle Diagram

## 1. Wall Mounted

### 1.1 L Type (07K, 09K, 12K, 18K)

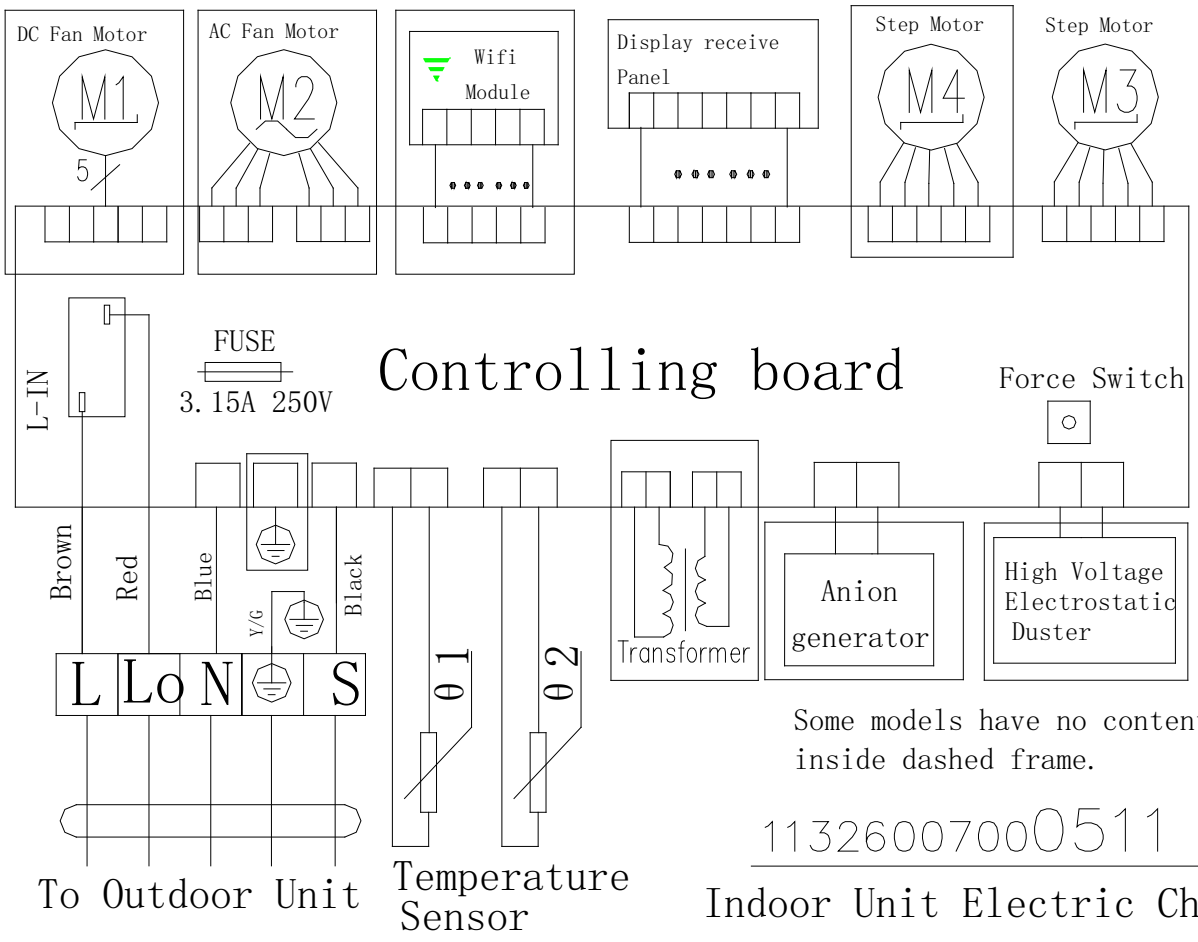


## 1.2 F Type (07K,09K,12K,18K,24K)



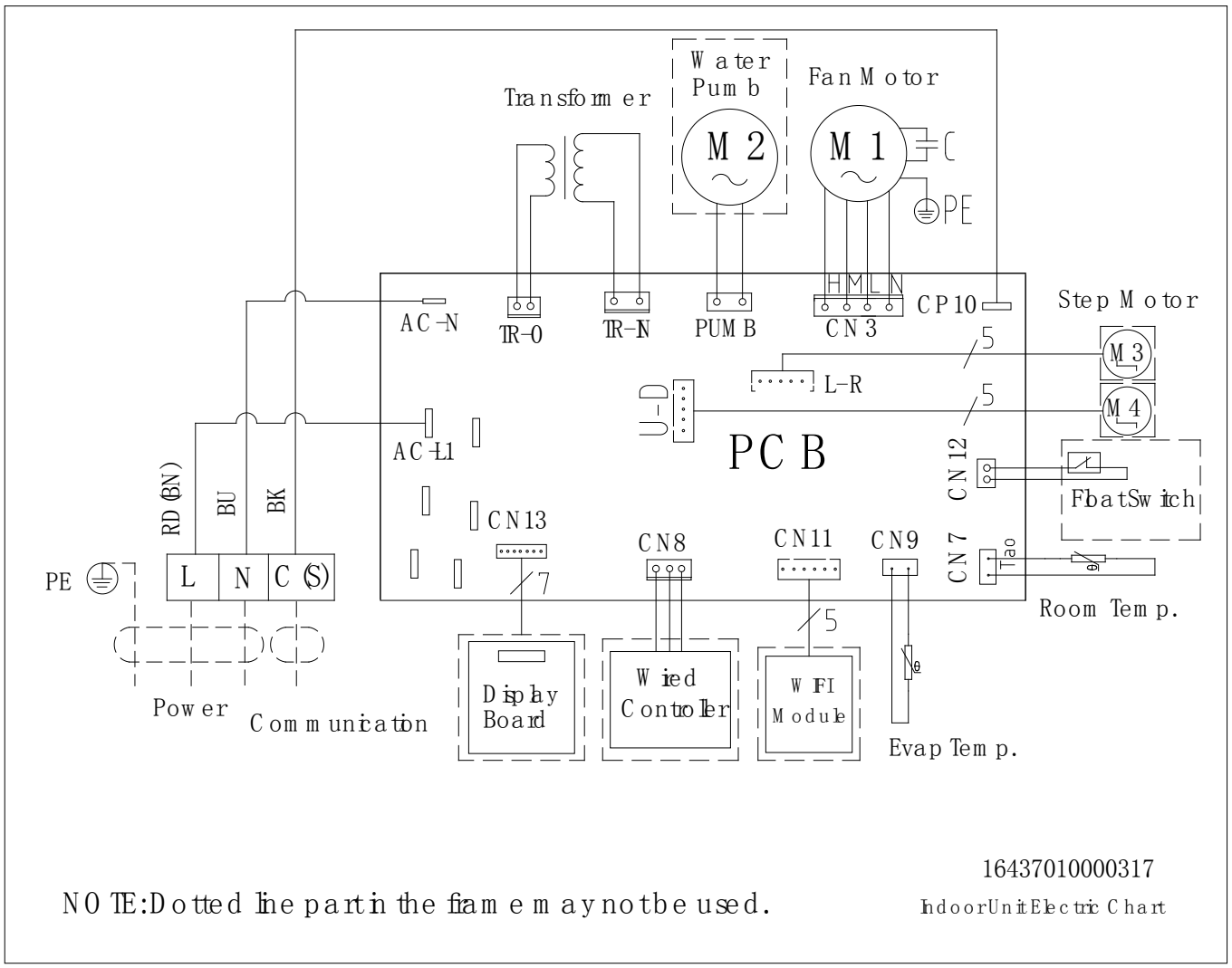
### 1.3 J Type (07K,09K,12K,18K,24K)

NOTE:if used as MONO unit, for the standby control needs, the cross section area of cable connected to L,Lo,N,S must be sufficient for the maximum system current. The maximum system current is equal to the sum of indoor unit and outdoor unit rated current if used as MULTI unit Lo on the terminal block does not need to be connected.



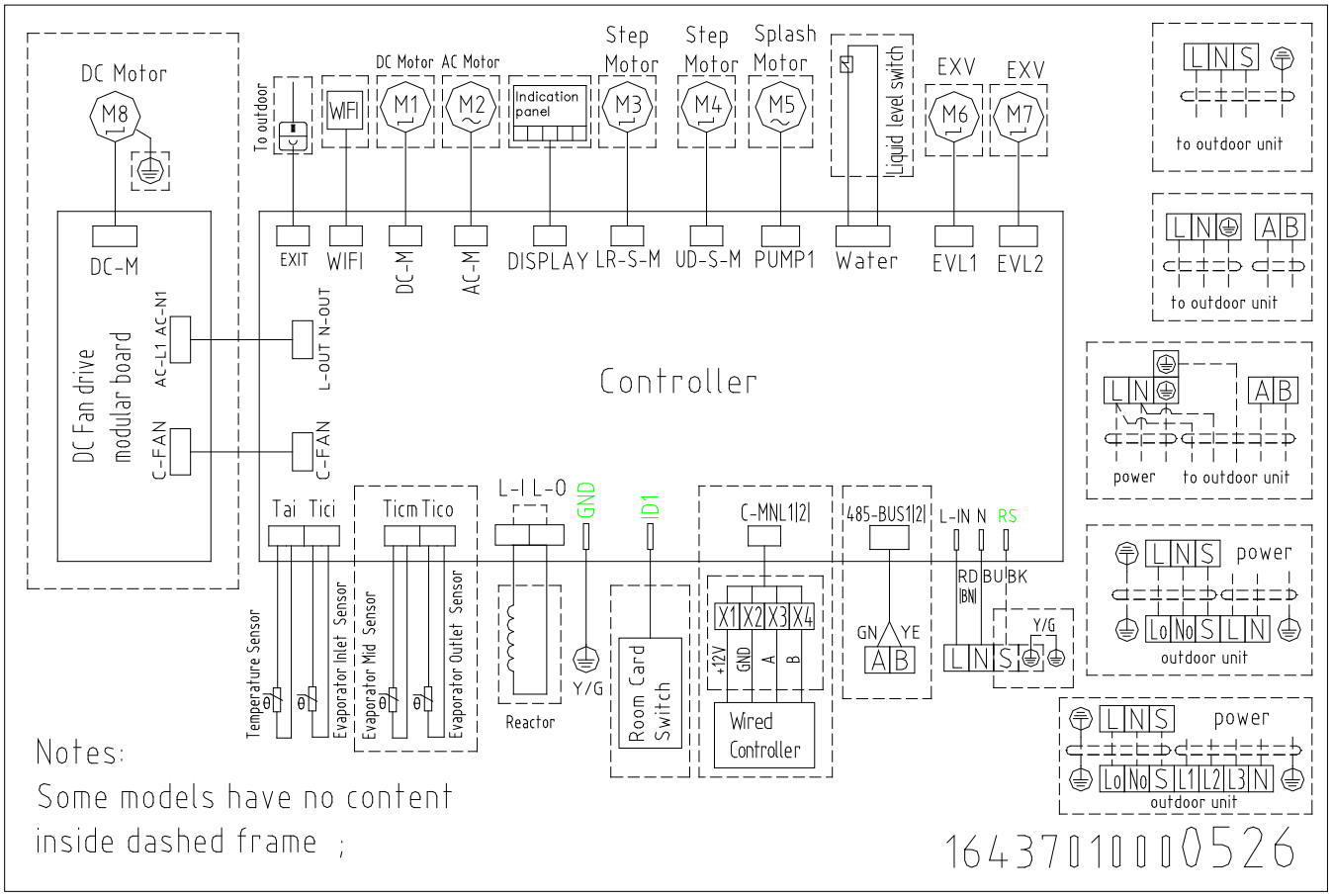
## 2. Cassette

### 09K,12K,18K



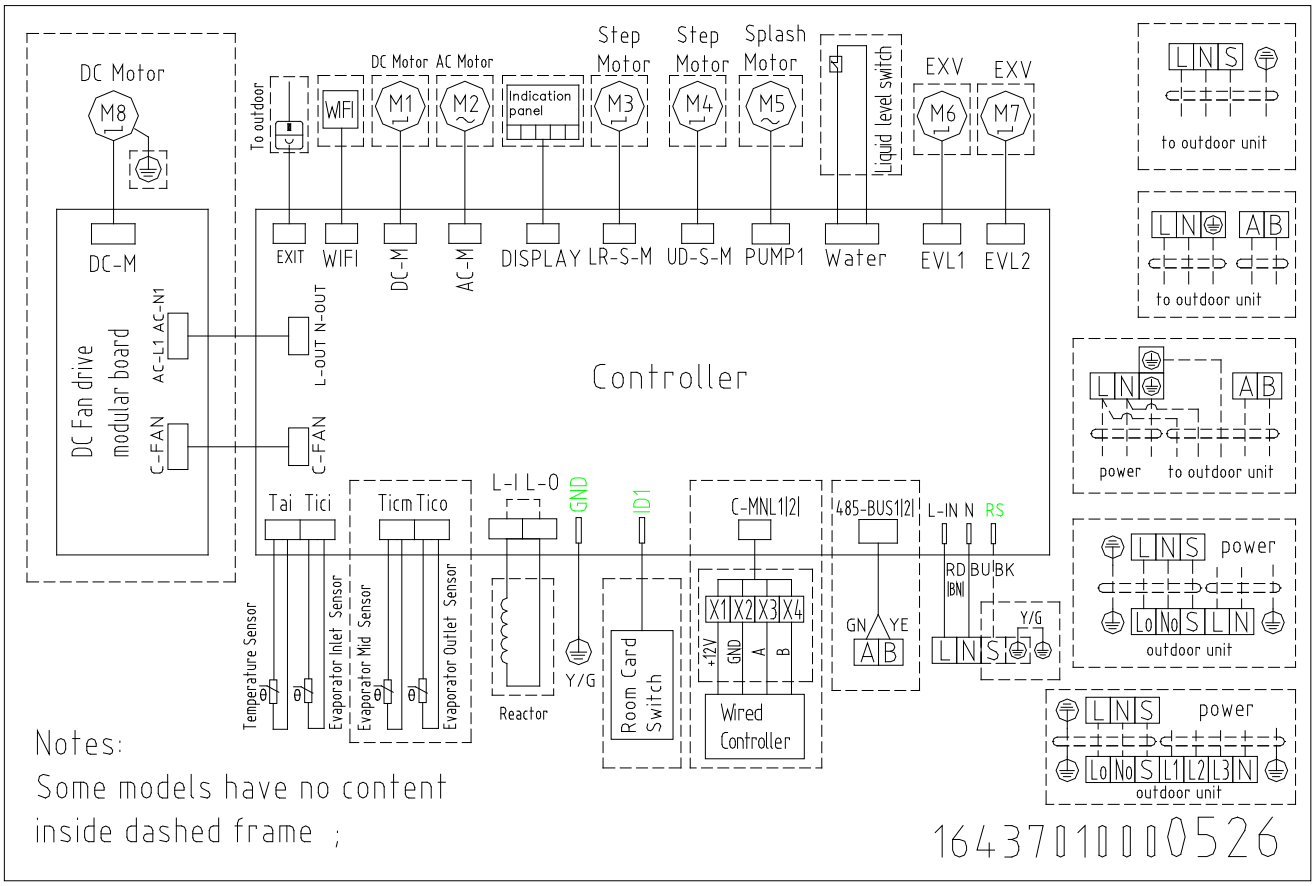
# 3. Ceiling Floor

## 09k, 12k, 18k



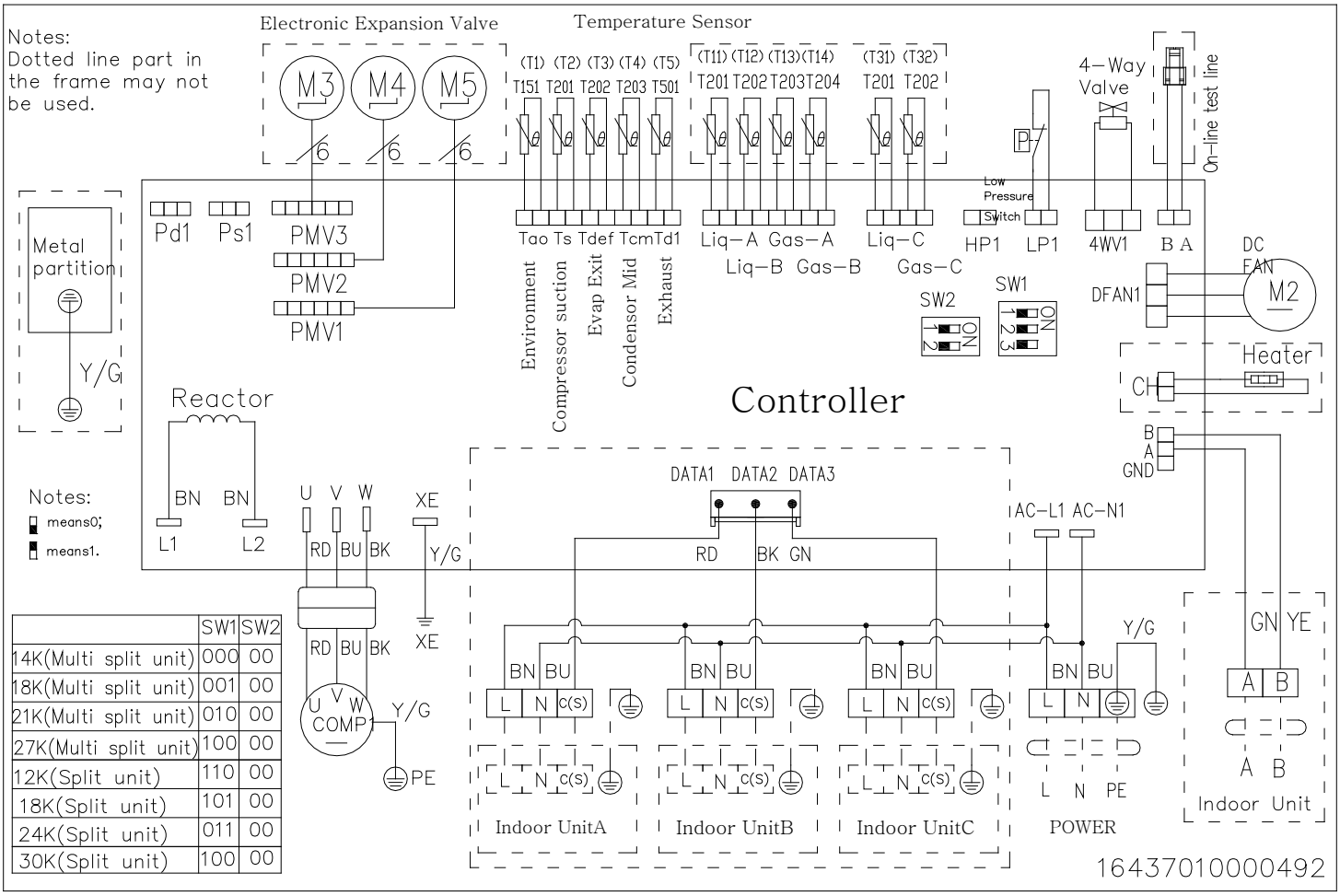
# 4. Duct

## 07K, 09K, 12K, 18K



# 5. Outdoor Unit

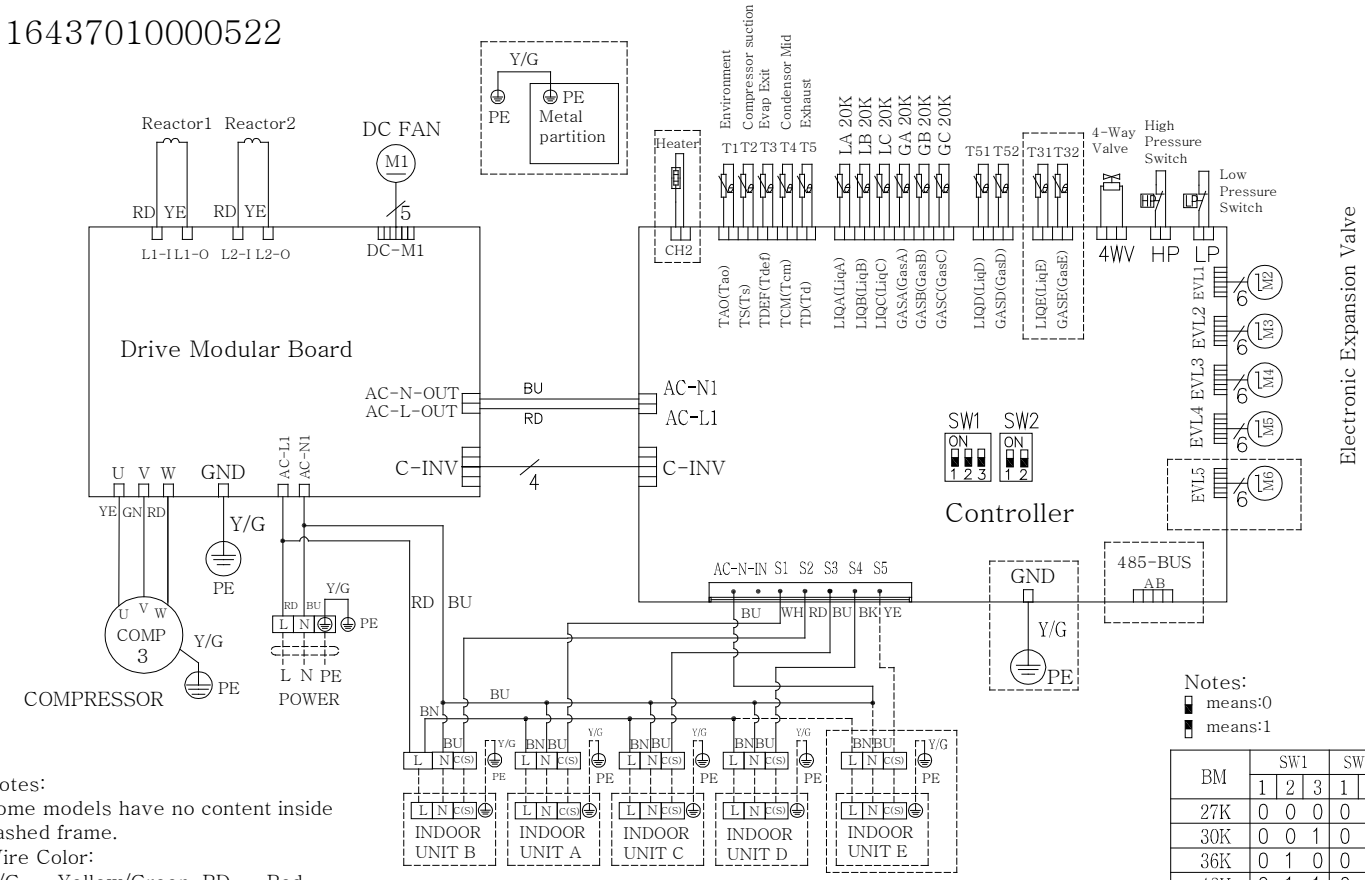
## 5.1 14K, 18K, 21K, 27K




| | SW1 | SW2 |
|---|---|---|
| 14K(Multi split unit) | 000 | 00 |
| 18K(Multi split unit) | 001 | 00 |
| 21K(Multi split unit) | 010 | 00 |
| 27K(Multi split unit) | 100 | 00 |
| 12K(Split unit) | 110 | 00 |
| 18K(Split unit) | 101 | 00 |
| 24K(Split unit) | 011 | 00 |
| 30K(Split unit) | 100 | 00 |

## 5.1 36K, 42K

16437010000522




Notes:
Some models have no content inside dashed frame.
Wire Color:
Y/G---Yellow/Green RD---Red
BU---Blue BK---Black
YE---Yellow
WH---White BN---Brown
GN--Green

Notes:
■ means:0
■ means:1

| BM | SW1 | | | SW2 | |
|---|---|---|---|---|---|
| | 1 | 2 | 3 | 1 | 2 |
| 27K | 0 | 0 | 0 | 0 | 0 |
| 30K | 0 | 0 | 1 | 0 | 0 |
| 36K | 0 | 1 | 0 | 0 | 0 |
| 42K | 0 | 1 | 1 | 0 | 0 |
| 48K | 1 | 0 | 0 | 0 | 0 |
| 60K | 1 | 0 | 1 | 0 | 0 |

# Part7 Capacity Amendment

## 1. Operation range

| Cooling capacity (KBtu/h) | | 12K | 18K | 24K | 30K | 36K | 42K |
|---|---|---|---|---|---|---|---|
| Power supply | | 220-240V~/50Hz | | | | | |
| Voltage | | 187~242V | | | | | |
| Ambient temperature | Cooling | -15~52℃ | | | | | |
| | Heating | -15~24℃ | | | | | |

## 2. Capacity amendment of different ambient temperature

2.1 Amendment coefficient of Cooling capacity under different indoor/outdoor DB/WB temperature **K1**

| IDU temp.℃ | | Outdoor air inlet DB temperature℃ | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DB | WB | -15 | -10 | 0 | 10 | 16 | 25 | 30 | 35 | 40 | 43 | 48 | 52 |
| 23 | 16 | 1.26 | 1.19 | 1.12 | 1.08 | 1.05 | 1 | 0.95 | 0.90 | 0.87 | 0.85 | 0.82 | 0.77 |
| 25 | 18 | 1.28 | 1.26 | 1.19 | 1.12 | 1.08 | 1.05 | 1 | 0.95 | 0.90 | 0.87 | 0.85 | 0.82 |
| 27 | 19 | 1.30 | 1.28 | 1.26 | 1.19 | 1.12 | 1.08 | 1.05 | 1 | 0.95 | 0.90 | 0.87 | 0.85 |
| 28 | 20 | 1.33 | 1.30 | 1.28 | 1.26 | 1.19 | 1.12 | 1.08 | 1.05 | 1 | 0.95 | 0.90 | 0.87 |
| 30 | 22 | 1.5 | 1.33 | 1.30 | 1.28 | 1.26 | 1.19 | 1.12 | 1.08 | 1.05 | 1 | 0.95 | 0.90 |
| 32 | 24 | 1.7 | 1.5 | 1.33 | 1.30 | 1.28 | 1.26 | 1.19 | 1.12 | 1.08 | 1.05 | 1 | 0.95 |

Actual cooling capacity calculation:

Actual cooling capacity=amendment coefficient of cooling capacity × nominal cooling capacity

——Rated cooling capacity could be found from【Part 4 Specification】

——Amendment coefficient of cooling capacity could be found from table above.

2.2 Amendment coefficient of heating capacity under different indoor/outdoor DB/WB temperature **K2**

| IDU temp.℃ | Outdoor air inlet DB temperature℃ | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **DB** | **-15** | **-10** | **-5** | **0** | **7** | **10** | **15** | **20** | **24** |
| **16** | 0.93 | 0.97 | 1 | 1.06 | 1.08 | 1.1 | 1.14 | 1.2 | 1.25 |
| **18** | 0.87 | 0.93 | 0.97 | 1 | 1.06 | 1.08 | 1.1 | 1.14 | 1.2 |
| **20** | 0.8 | 0.87 | 0.93 | 0.97 | 1 | 1.06 | 1.08 | 1.1 | 1.14 |
| **22** | 0.71 | 0.8 | 0.87 | 0.93 | 0.97 | 1 | 1.06 | 1.08 | 1.1 |
| **24** | 0.62 | 0.71 | 0.8 | 0.87 | 0.93 | 0.97 | 1 | 1.06 | 1.08 |

Actual heating capacity calculation:

Actual heating capacity=amendment coefficient of heating capacity × nominal heating capacity

——Rated heating capacity could be found from【Part 4 Specification】

——amendment coefficient of heating capacity could be found from table above.

## 3. Long piping length

| Cooling capacity (Btu/h) | | 14K | 18K | 21K | 27K | 36K | 42K |
|---|---|---|---|---|---|---|---|
| Connection Pipe(mm) | Liquid pipe | Φ6.35*2 | | Φ9.52*3 | | Φ9.52*4 | Φ9.52*5 |
| | Gas pipe | Φ9.52*2 | | Φ15.88*3 | | Φ15.88*4 | Φ15.88*5 |
| Max. length for all rooms (m) | | 40 | | 60 | | 80 | |
| Max. length for one IU (m) | | 25 | | 30 | | 35 | |
| Max. height difference between IU and OU (m) | | 15 | | | | | |
| Max. height difference between IUs (m) | | 10 | | | | | |

**Caution:**

1. The standard Pipe length is 7.5m, if the pipe length is less than this then no additional charging is necessary. If the pipe length is more than this then you should charge more refrigerant into the system according to the above Charging Data

2. The thickness of the pipe is 0.6-1.0, bearing pressure is 4.2MPa;

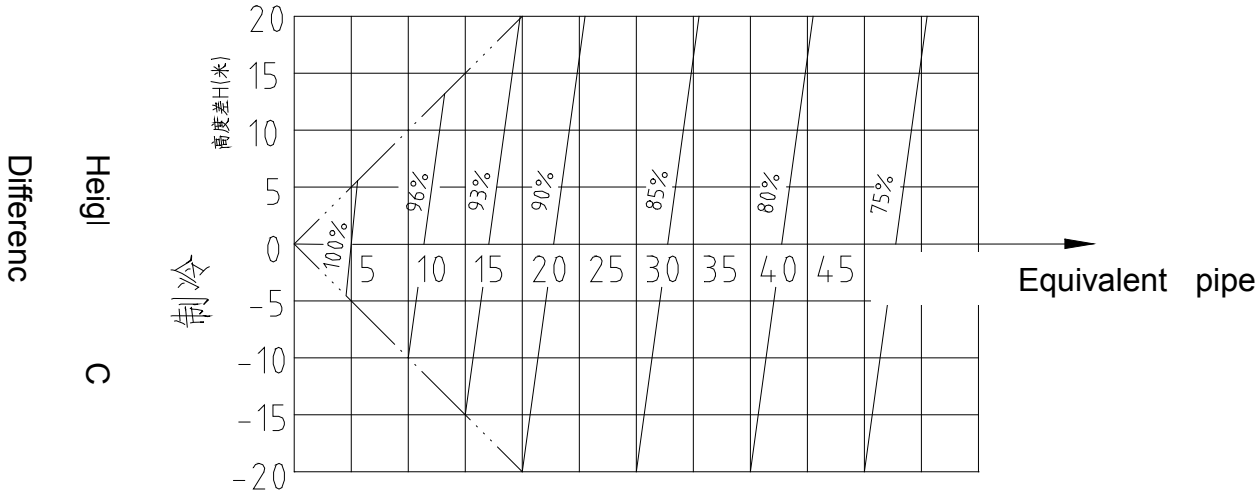
3. If the connection pipe is too long, the cooling capacity and stability would be decreased. And the more bend quantity, the resistance in the piping system would be bigger, then the cooling and heating capacity would be decreased even lead to compressor broken. We suggest you to use the shortest connection pipe according to the pipe length parameter in this manual. If the height difference between outdoor and indoor unit is more than 5m, an oil trap should be installed in the gas pipe for every 10 meters.

## 4. Capacity amendment of different piping length

4.1 Amendment coefficients of heating and cooling capacity under different height drop

**K3**

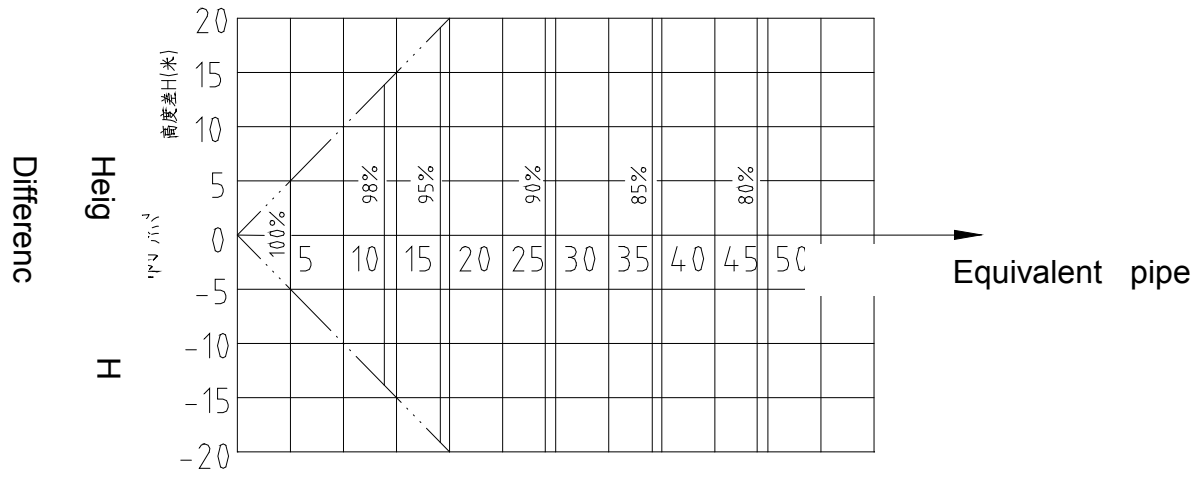
**Different Cooling Capacity modified coefficients at different height:**




**Note:**

H = Height of Outdoor Unit — Height of Indoor Unit

**Different Heating Capacity modified coefficients at different height:**



**Note:**

H = Height of Outdoor Unit － Height of Indoor Unit

**4.2 Correction capability**

Cooling capacity = Rated cooling capacity xK1xK3

Heating capacity = Rated heating capacity xK2xK3

## 5. Equivalent Pipe length conversion

Equivalent pipe length means converting pipe elbow to straight pipe length after considerate the pressure loss.

**Bend and Oil Loop Conversion tablet**

| Type / Pipe Dia.(mm) | Bend（m） | Oil Loop(m) |
|---|---|---|
| 6.35 | 0.10 | 0.7 |
| 9.52 | 0.18 | 1.3 |
| 12.70 | 0.20 | 1.5 |
| 15.88 | 0.25 | 2.0 |
| 19.05 | 0.35 | 2.4 |
| 22.02 | 0.40 | 3.0 |

Equivalent Pipe length L＝Actual Pipe length L+ Bend Qty× Equivalent pipe bend length+ Oil Loop Qty × Equivalent Oil Loop length

**Sample:**

ALCA-H42/5 Actual Pipe length is 25 meters, Gas pipe diameter is 15.88mm. If there's 5

bends and 2 oil loops during the installation, then the equivalent pipe length should be:

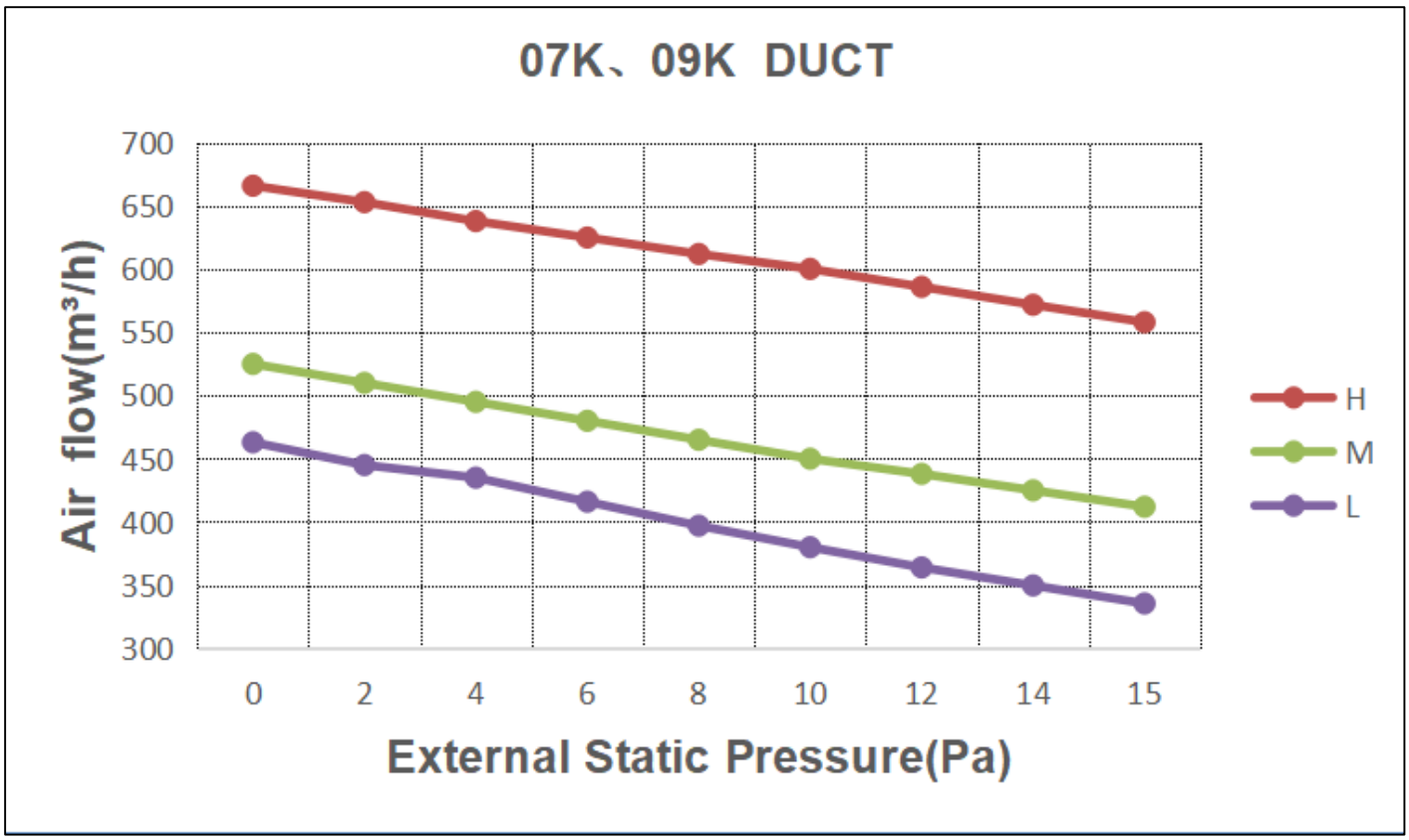
L=25+0.25×5+2.0×2=30.25(m)

**Note:**

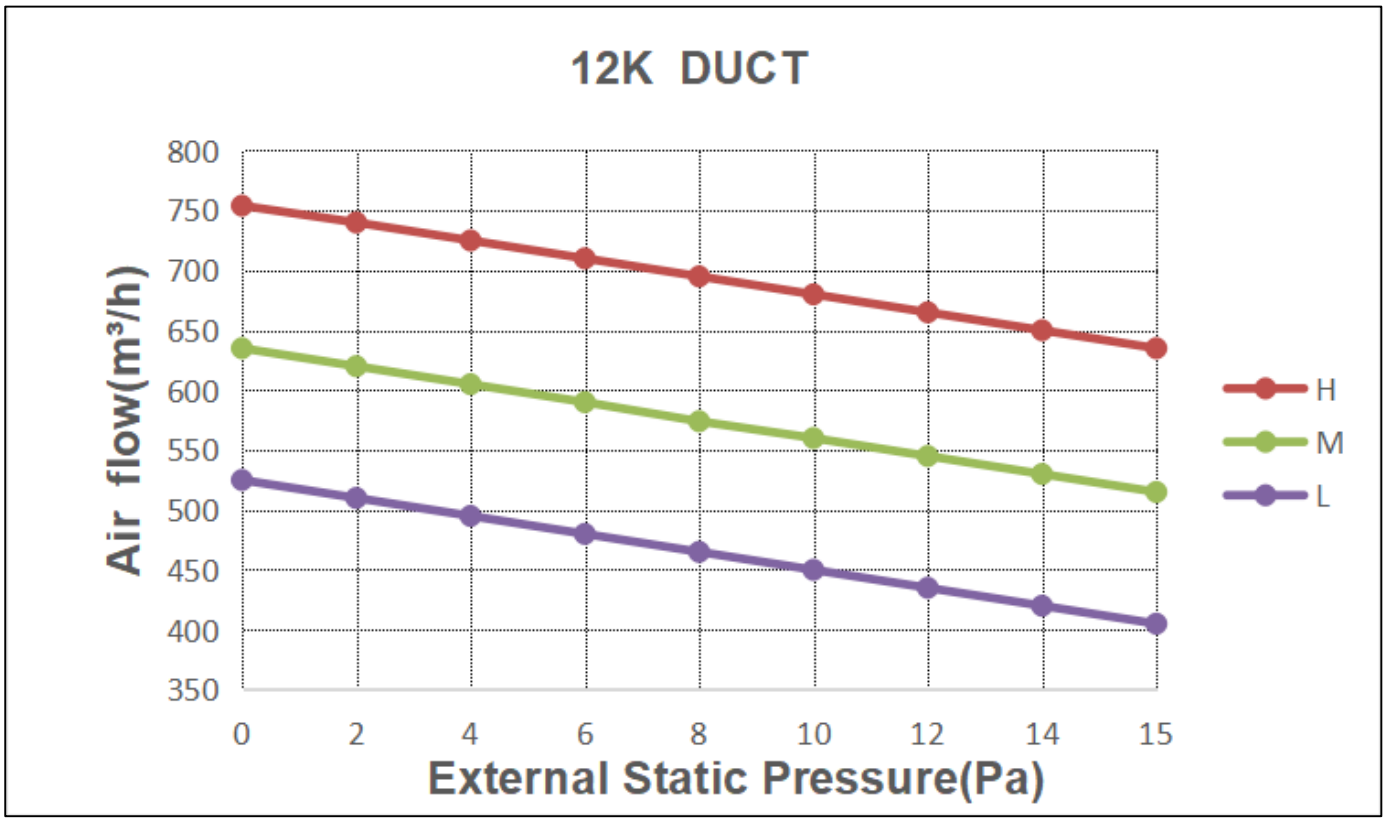
If there is relatively level difference of indoor and outdoor unit, S-shaped oil trap must be installed every 8~10m for vertical pipe.

# Part8 Static pressure curve

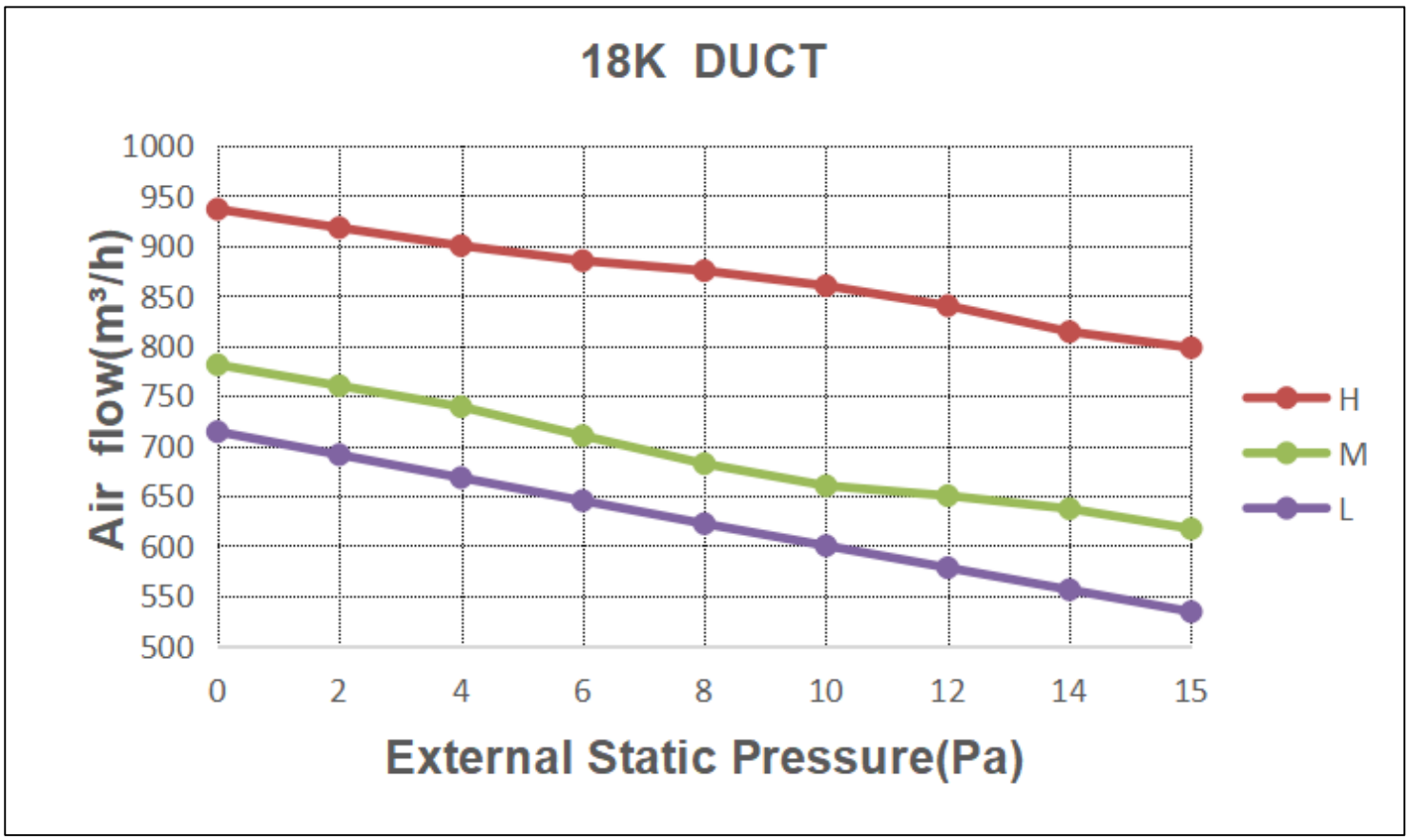
## 1. 07K、09K Duct



## 2. 12K Duct


12K DUCT
Air flow(m³/h)
800
750
700
650
600
550
500
450
400
350
0
2
4
6
8
10
12
14
15
External Static Pressure(Pa)
H
M
L

## 3. 18K Duct


18K DUCT
Air flow(m³/h)
1000
950
900
850
800
750
700
650
600
550
500
0
2
4
6
8
10
12
14
15
External Static Pressure(Pa)
H
M
L

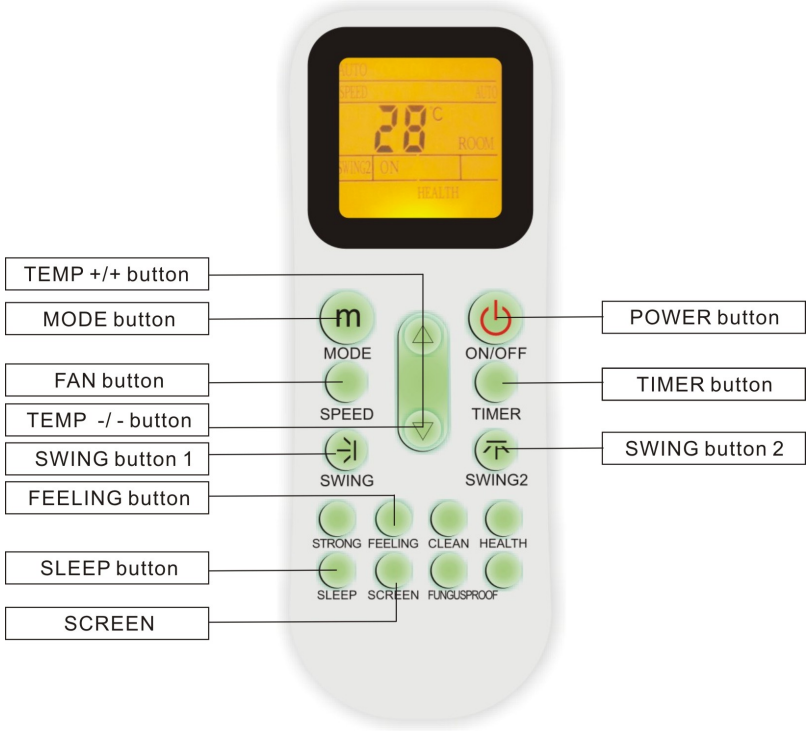
# Part9 Controller

## 1. Controller

| IDU type | Controller | |
|---|---|---|
| | Standard | Optional |
| Wall Mounted |  |  |
| | YK-H(**AUX**) | YK-K(**AUX**) |
| Cassette |  |  |
| | YK-K(**AUX**) | XK-04 |
| Ceiling & Floor |  |  |
| | YK-L(**AUX**) | XK-04 |
| Duct |  |  |

| | | |
|---|---|---|
| | XK05-DY(**AUX**)120 | XK-04 |

**1.1 K series**




**POWER button**: Switch the unit ON/OFF.

**MODE button**: Select mode, press the button one time, then the operation modes will change in turn as Auto-Cooling-Dehumidify-Heating

**TEMP + button** and **TEMP - button**: Temperature adjustment range: 16~32

**FAN button**: Change the fan speed; press the button one time then the fan speed will change in turn as: Low-Medium-High-Auto

**SWING button 1**: Press this button for the first time when operation, it will start the up and down swing function. Press the button for the second time, cancel the swing function.

**SWING button 2**: Press this button for the first time when operation, it will start the right and left swing function. Press the button for the second time, cancel the swing function.

**Feeing button:** Press this button for setting the feeling function. The LCD shows the actual room temperature when the function is set and it shows the setting temperature when the function is cancelled. The function is invalid in the fan mode.

**TIMER/CLOCK button**:

**Clock Setting:** Normally display the clock set currently (display 12:00 for the first electrifying or resetting). When press the button for 5 seconds, the time display zone will flicker, then press 【+】and【-】button to adjust hour that uses 12-hour clock including “A.M.” and “P.M.” time; press the button again to complete the setting.

**Timer setting:** Press the button to set TIMER ON/OFF, press the button then “ON” will flicker on the display screen. then press【+】 and 【-】 button to adjust timing time; Press the button again to complete the setting. The “OFF” setting is the same methods.

Remark: When setting functions such as mode, temperature, fan speed, display screen displays all presetting parameters and remains constant; after reaching presetting time, air conditioner will automatically start as per presetting state.

After setting timing ON and OFF function, pressing button of 【Timer/Clock】can cancel timing setting.

**SLEEP button**:

1. Press the button to the sleeping indicator light of indoor unit flashes on;

2. In sleeping mode, the cooling operation enables the set temperature to increase 1℃ after 1 hour and another 1℃ automatically after 1hour.

3. In sleeping mode, the heating operation enables the set temperature to drop 2℃ after 1 hour and another 2℃ automatically after 1hour.

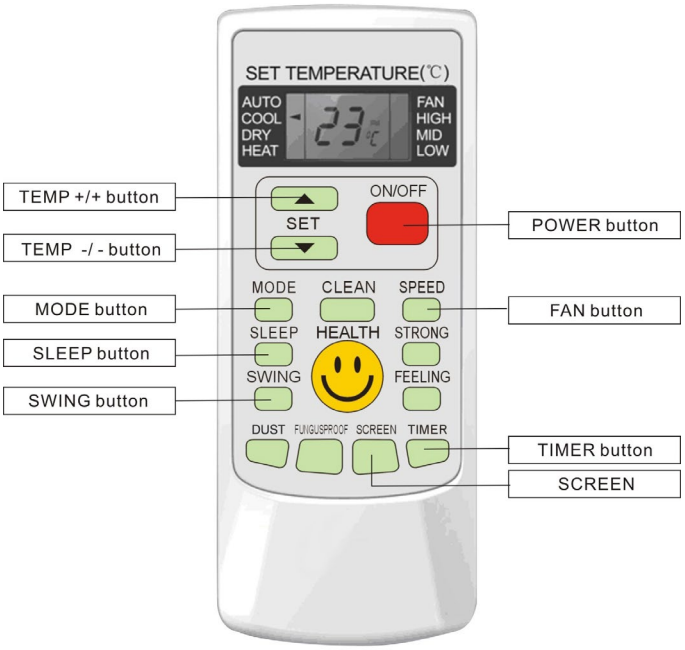
The air conditioner will cancel sleeping mode automatically after running in this mode for 7 hours.

4. **Remark:**

Press the mode or ON/OFF button, the remote controller will cancel sleeping mode.

**SCREEN button**: Press the button to let the LCD display working or not.

## 1.2 H series



**POWER button**: Switch the unit ON/OFF.

**MODE button**: Select mode, push the button one time, then the operation modes will change in turn as Auto-Cooling-Dehumidify-Heating 

**TEMP + button** and **TEMP - button**: Temperature adjustment range: 16~32

**FAN button**: Change the fan speed will change in turn as: Low-Medium-High-Auto

**SWING button**: Press this button for the first time when operation, it will start the swing function. Push the button for the second time, cancel the swing function. (The function is available matched with the concerned unit)

**TIMER/CLOCK button**:

**Clock Setting:** Normally display the clock set currently (display 12:00 for the first electrifying or resetting). When press the button for 5 seconds, the time display zone will flicker, then press 【+】 and 【-】 button and to adjust hour that uses 12-hour clock including “A.M.” and “P.M.” time; Press the button again to complete the setting.

**Timer setting:** Press the button to set TIMER ON/OFF, press the button then “ON” will flicker on the display screen. then press【+】 and 【-】 button and to adjust hour that uses 12-hour clock including “A.M.” and “P.M.” time; Press the button again to complete the setting. The “OFF” setting is the same methods.

Remark: When setting functions such as mode, temperature, air port and air velocity, display screen displays all presetting parameters and remains constant; after reaching presetting time, air conditioner will automatically start as per presetting state.

After setting timing ON and OFF function, pressing button of 【Timer/Clock】can cancel timing setting.

**SLEEP button**:

1. Press the button to the sleeping indicator light of indoor unit flashes on;

2. After the setting of sleeping mode, the cooling operation enables the set temperature to increase 1℃ after 1 hour and another 1℃ automatically after 1hour.

3. After the setting of sleeping mode, the heating operation enables the set temperature to drop 2℃ after 1 hour and another 2℃ automatically after 1hour.

4. The air condition runs in sleeping mode for 7hours and stops automatically.

**Remark:** Press the mode or ON/OFF button, the remote controller clears sleeping mode away.

**SCREEN button**: Press the button to let the LCD display working or not by pressing the button.

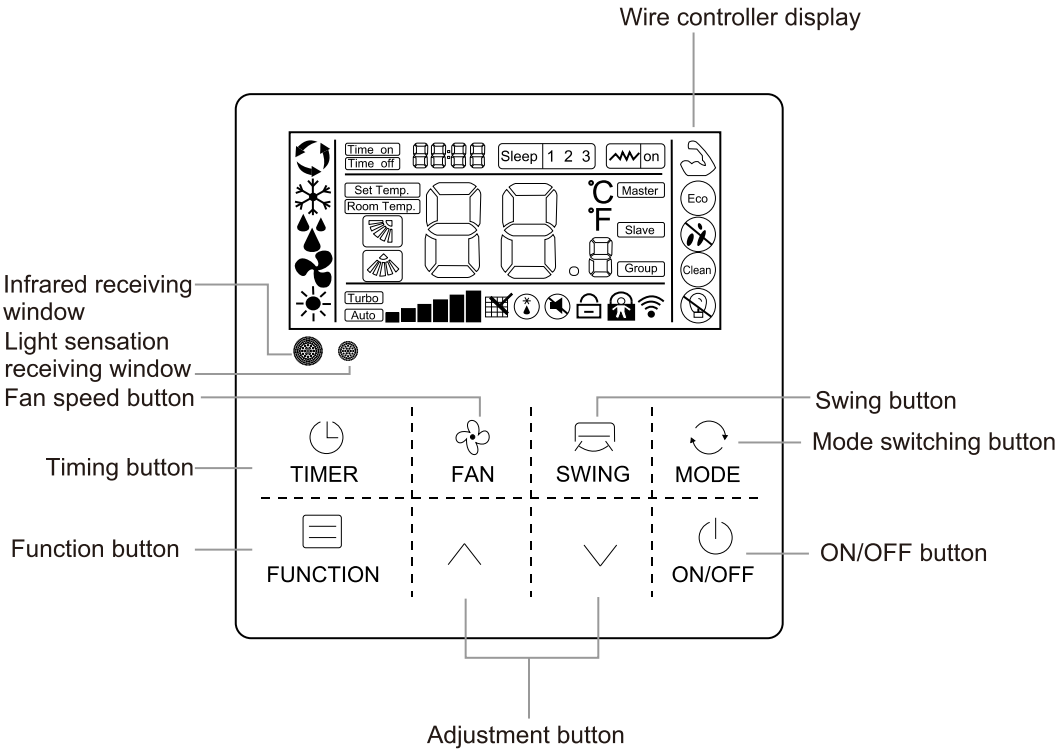
### 1.3 Wired Controller XK-05/XK-04

| XK-05 | Features |
|---|---|
|  | **Technical indicator**<br>1. Power source: voltage DC 12V;<br>2. Work temperature range of PCB:(-10~+70)℃;<br>3. Work humidity range of PCB:RH20%~RH90%;<br>4. Button: Touch button<br>5. Dimensions(W*H*D):120*120*20mm |
| | Main functions<br>1. 8-keytouch button input<br>2. Buzzer prompt tone function<br>3. LCD+ white backlight<br>4. Display the failure of main controller<br>5. Ambient temperature detection sensor<br>6.Receive the signal of wireless remote controller |

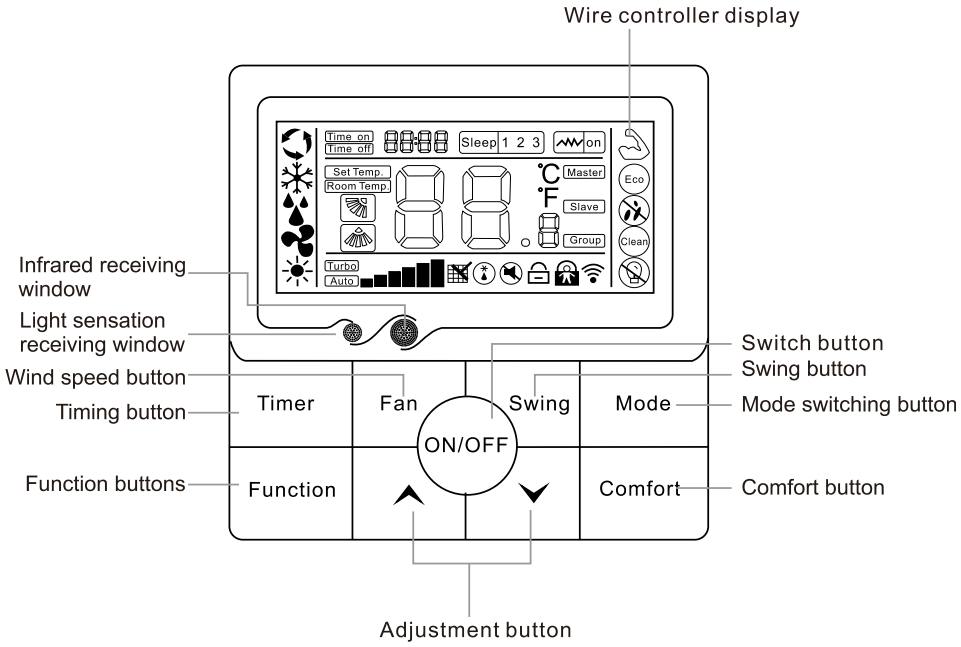
| XK-04 | Features |
|---|---|
|  | **Technical indicator**<br>1. Power source: voltage DC 12V;<br>2. Work temperature range of PCB:(0~50)℃;<br>3. Work humidity range of PCB:RH20%~RH90%;<br>4. Button: Touch button<br>5. Dimensions(W*H*D):86*86*10.8mm |

| | |
|---|---|
| | Main functions<br>1. 9-keytouch button input<br>2. Buzzer prompt tone function<br>3.Comfort one-button setting<br>4. LCD+ white backlight<br>5. Display the failure of main controller<br>6. Ambient temperature detection sensor<br>7.Connect to indoor unit via 3-core shielded cable<br>8. Receive the signal of wireless remote control |

**XK-05**



## XK-04



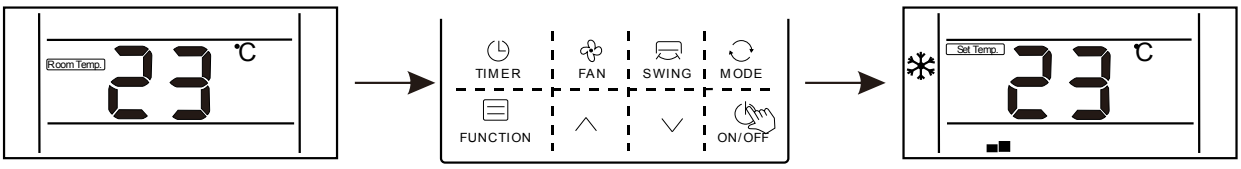

Detailed operation instructions (6)

### 1.【ON/OFF button】

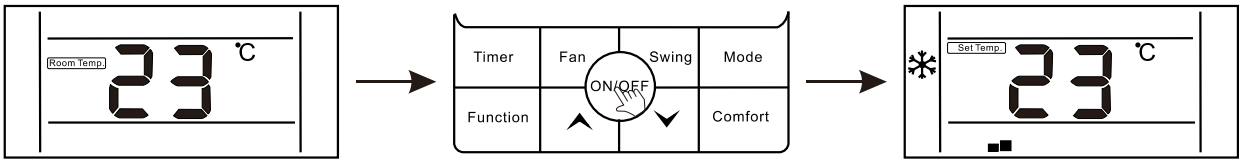
Press- "ON / OFF" button to start or shutdown the unit.

1.1.When the unit is running, users can regulate the operation mode, fan speed, setting temperature, special functions and other parameters on the wired controller

XK-05

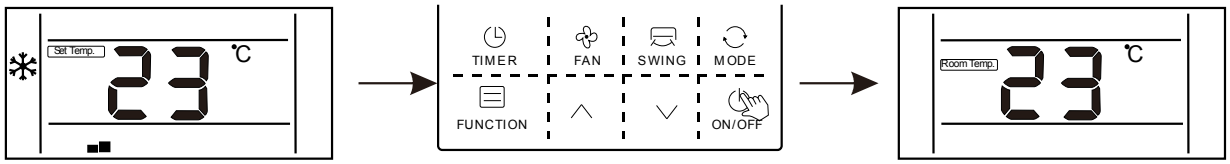



XK-04

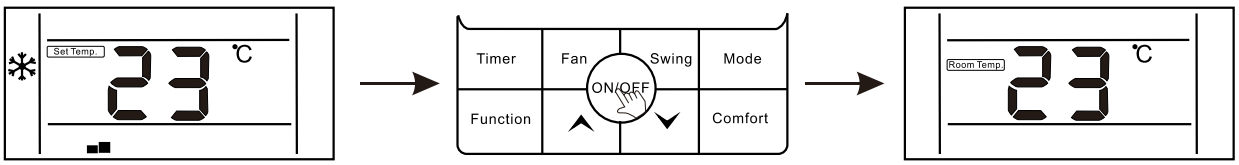



2.When the unit is standby, the wire controller displays indoor ambient temperature (Room temp.), the other content are not displayed.

XK-05



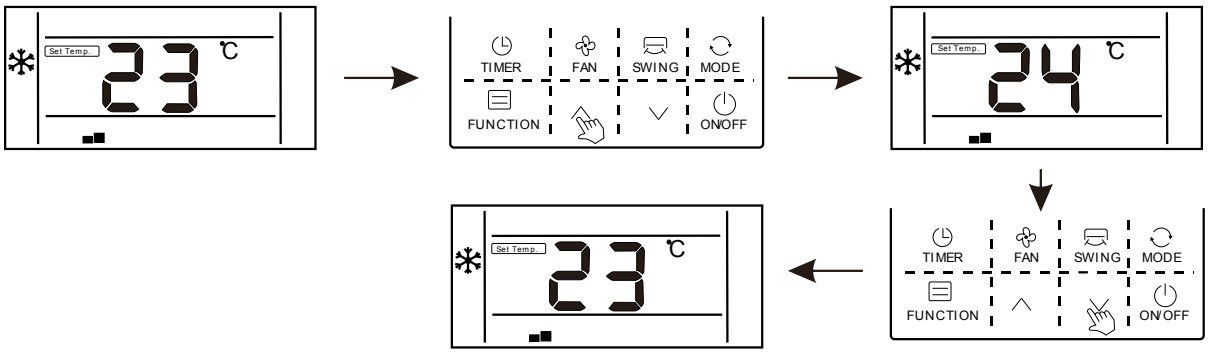

XK-04



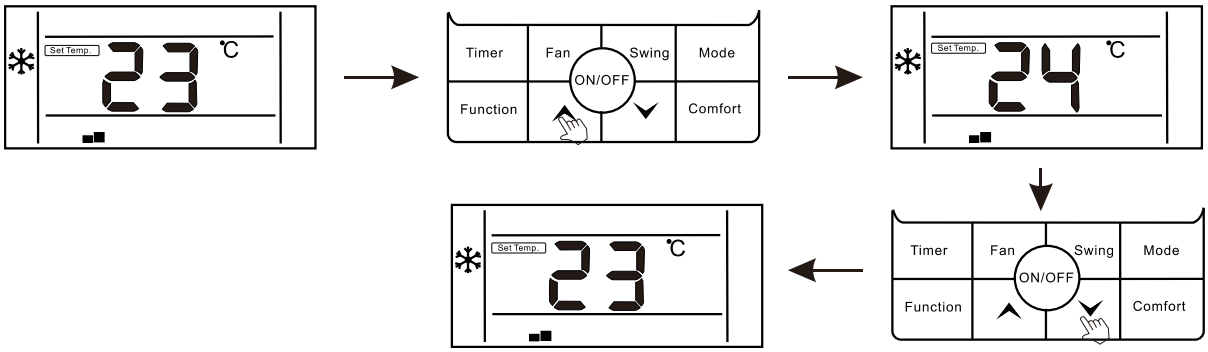

### 2.【∧ / ∨ button】

2.1.When the unit is running, press" ∧ " or " ∨ "button to increase or decrease the setting temperature by 1℃. Under COOL, DRY, and HEAT modes, the setting temperature range is 16 ℃ ~ 32 ℃; The controller will display" Set temp." to show the setting temperature;

XK-05




XK-04

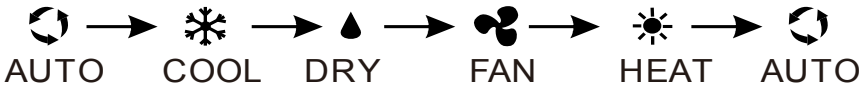



2.2. Under the function selection mode, press "∧ " or " ∨" button to select a function;

2.3.Under the timing mode, press " ∧ " or " ∧ "button to setting time.

**3.【Mode button】**

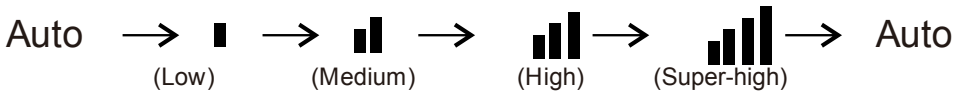
When the unit is running, press "MODE" button, the running mode will switch according to the following order.



The initial setting temperature for each mode is 24 ° C, and there is no temperature setting and automatic wind under FAN mode.

**4.【"Fan"buttom】**

When the unit is running, press "Fan" button to switch fan speed in the following order:


**5.【"Swing" button】**

5.1. For the unit only has the function of up and down swing:

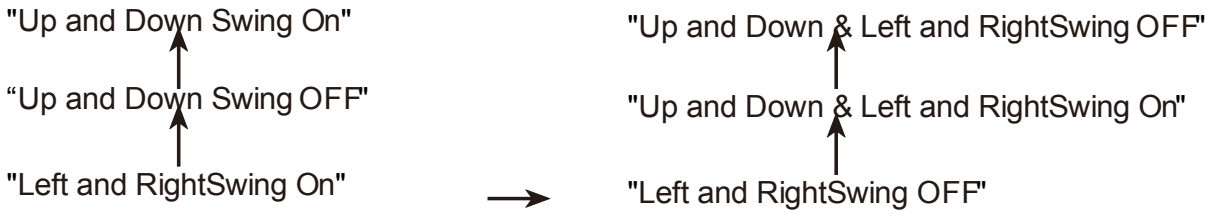
When the unit is running, press "Swing" button to enter or cancel up and down swing. At the time of opening up and down swing," " is lighting. At the time of closed, swing icon will disappear.If the unit has positioning swing function, press "Swing" button to regulate the swing angle in the order


5.2.For the unit only has the function of left and right swing:

when the unit is running, press "Swing" button to enter or cancel left and right swing. At the time of opening left and right swing," " is lighting. At the time of closed, swing icon will disappear. If the unit has positioning swing function, press "Swing" button to regulate the swing angle in the order


5.3.For the unit has the functions of left and right swing and up and down swing:

Press "Swing" button, the swing mode will switch in the following cycle order:

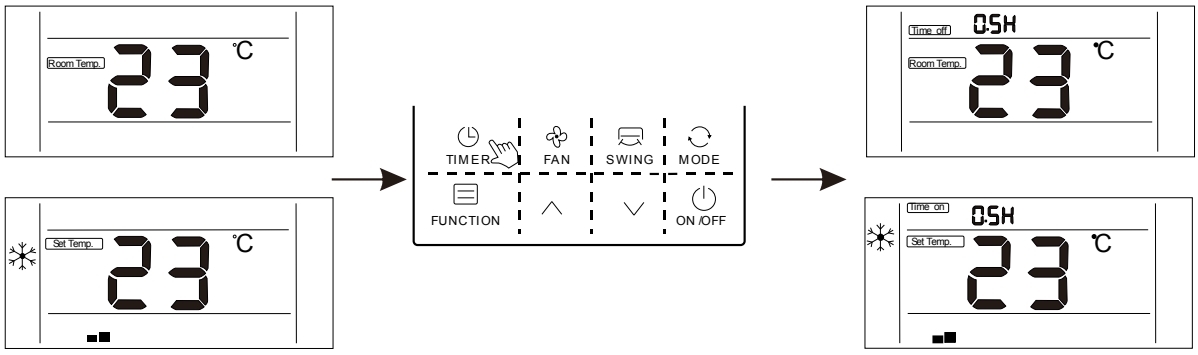



## 6.【"Timing"button】

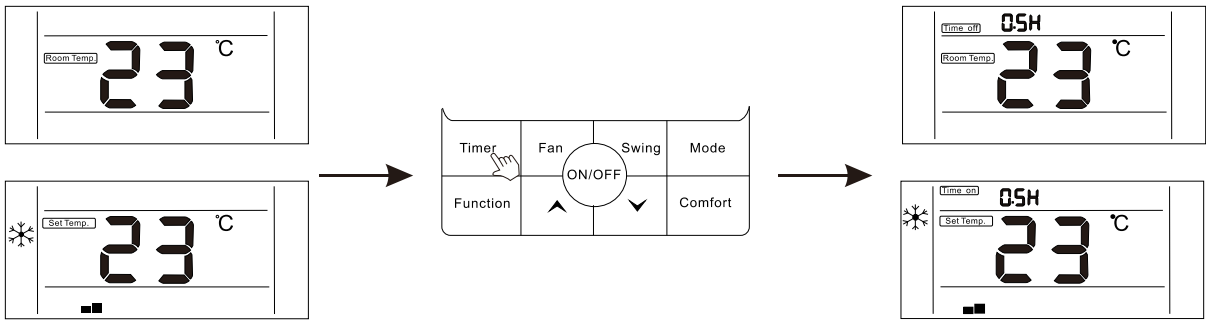
Users can set shutdown timing time when the unit is running, and set starting-uptimingtime when the unit is standby.

6.1.Press Timer button when the unit is running, the wired controller will display "Time off " and users can set the shutdown timing time; when the unit is standby, the wired controller will display" Time on " , and users can set the starting-up timing time

XK-05

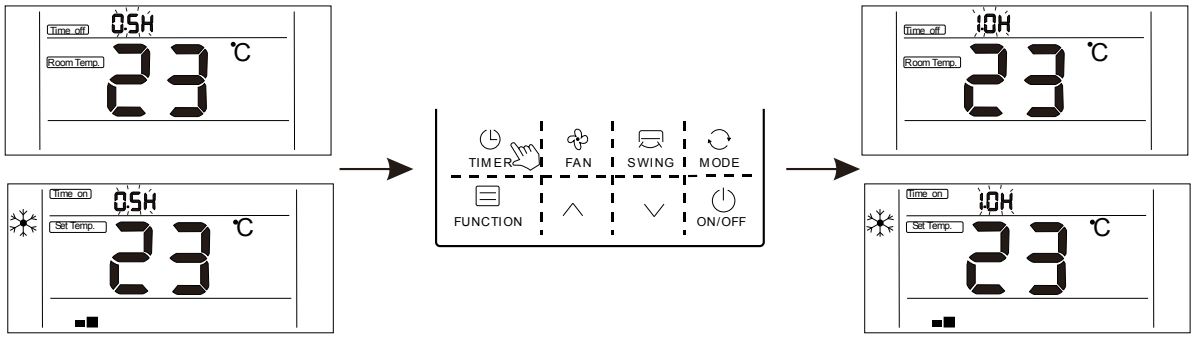



XK-04

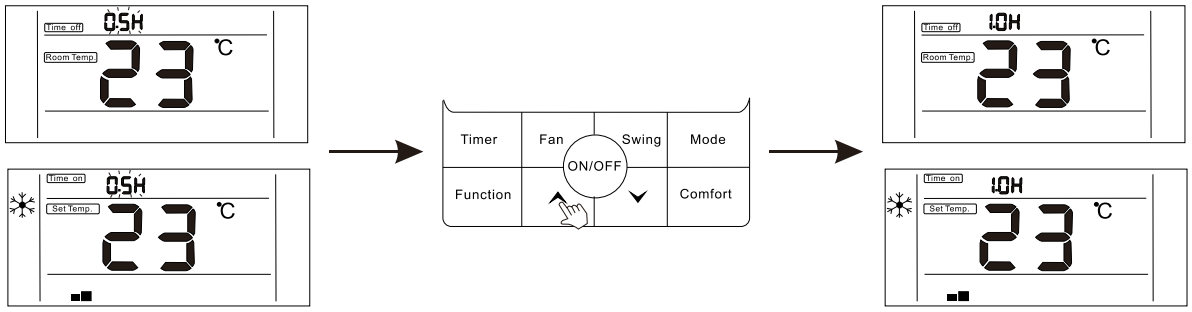



6.2.After entering timing time setting interface, the default timing time is 0.5H, at this moment, press" ∧ " or " ∧ "button to regulate the timing time. If the button is not pressed for 10 seconds, the timing setting will be canceled, and then return to the state of non-timing.

XK-05

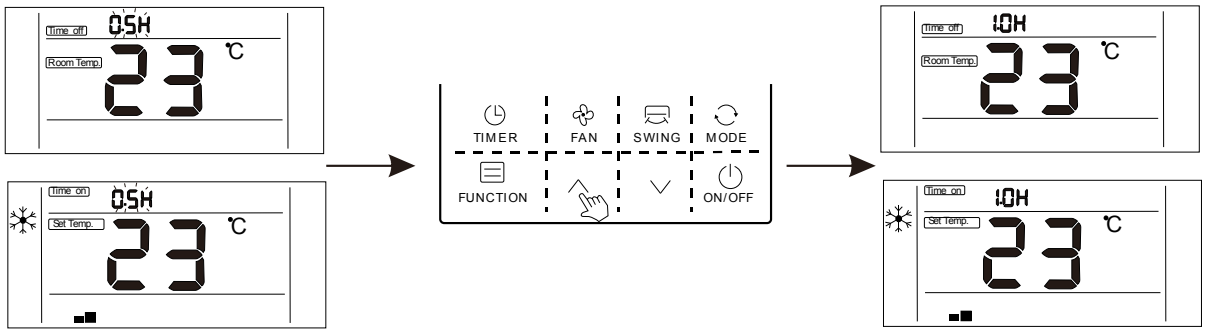



XK-04

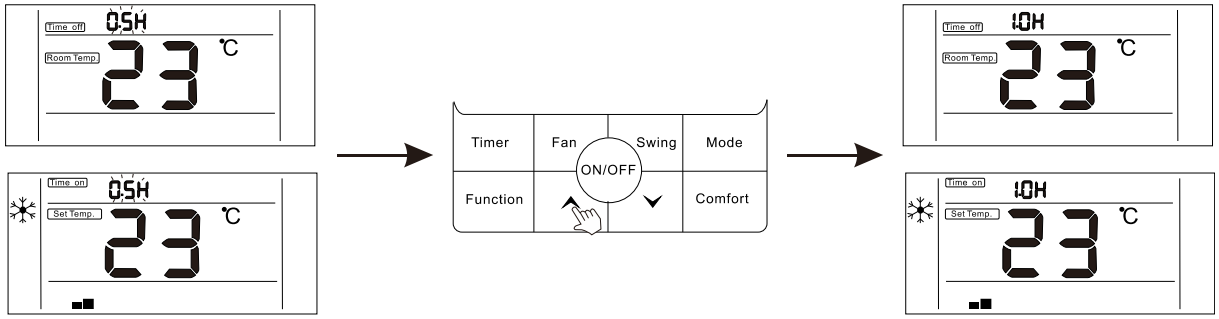



6.3.After the setting of timing, press "Timer" button again to confirm. The timing setting is successful and the time bar will stop blinking.

XK-05

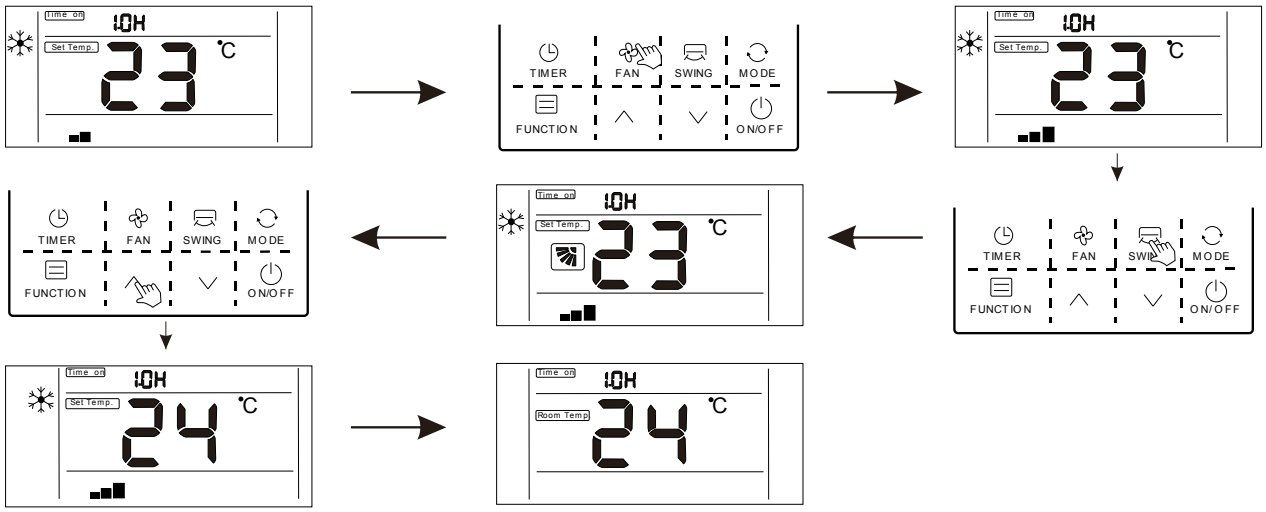



XK-04

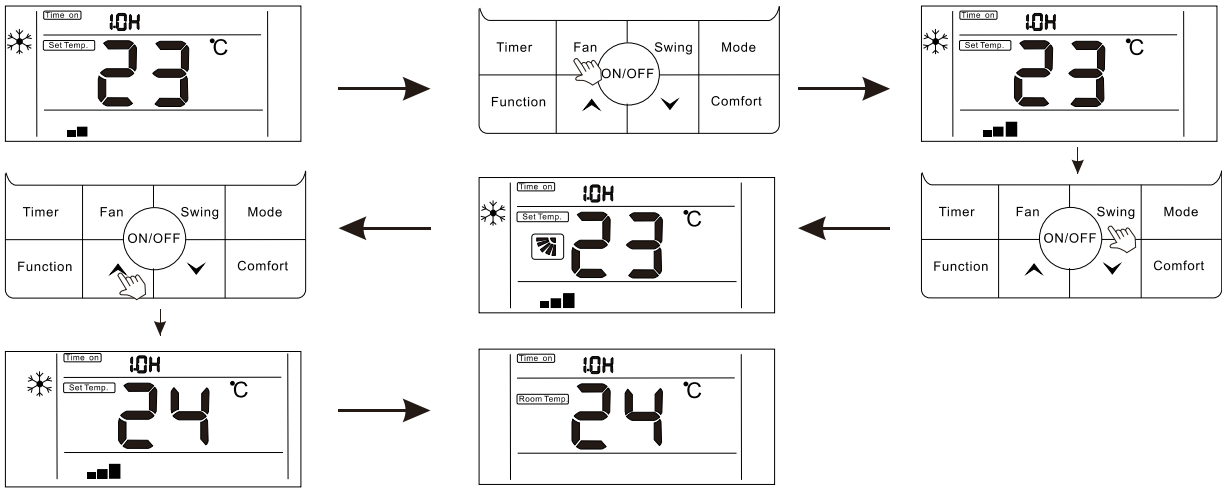



6.4.After the setting "Timer On"function, you can adjust the fan speed, running mode, set temperature, and swing angle. If there is no operation for 10 seconds, standby screen will be displayed.

XK-05


Time on
10H
Set Temp.
23
℃
TIMER
FAN
SWING
MODE
FUNCTION
ON/OFF
24
Room Temp.

XK-04




6.5.Timing range: 0.5～24 hours.

press " ∧ " or " ∧ "button once, the timing time will increase or decrease by 0.5 hours.When the timing time is more than 10 hours, press " ∧ " or " ∧ " button once, the timing time will increase or decrease by1 hour.

6.6.Press "Timer" button or "ON / OFF" button to exit Timer ON or Timer OFF.

## Function description (6)

The wire controller is for the general-purpose, specific functions fo the controller are subject to the functions of your air conditioning unit.

**Note:** In the interface of function setting, press any button such as Timer, Fan, Swing, Mode, ON/OFF, and Comfort to exit the interface and conventional operation interface will display. If there is no operation for 10S, you can exit the interface.

**Enter function:** Press function button to enter function selection interface , press " ∧ " or " ∧ "button to select a function, and the corresponding icon will lash, press “function” button again to confirm the function.

**Cancel function:** Press function button to enter function selection interface, press " ∧ " or " ∧ "button to select a function, and the corresponding icon will lash, press “function” button again to cancel the function.

## 1.【"Turbo"】

Turbo function: The fan speed will be ultra-high in turbo mode and users can achieve rapid cooling or heating effect.

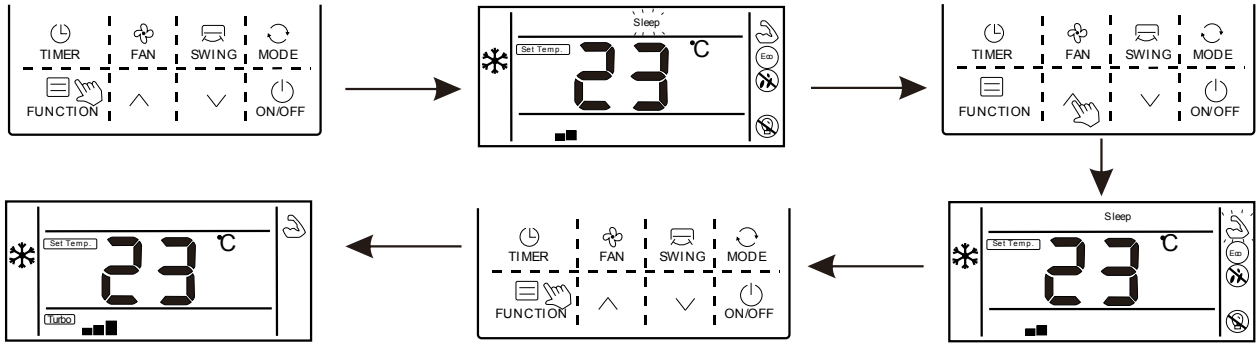
**Enter turbo function:**

1.When the unit is running in cooling or heating mode, press "Function" key to enter the interface of function selection.

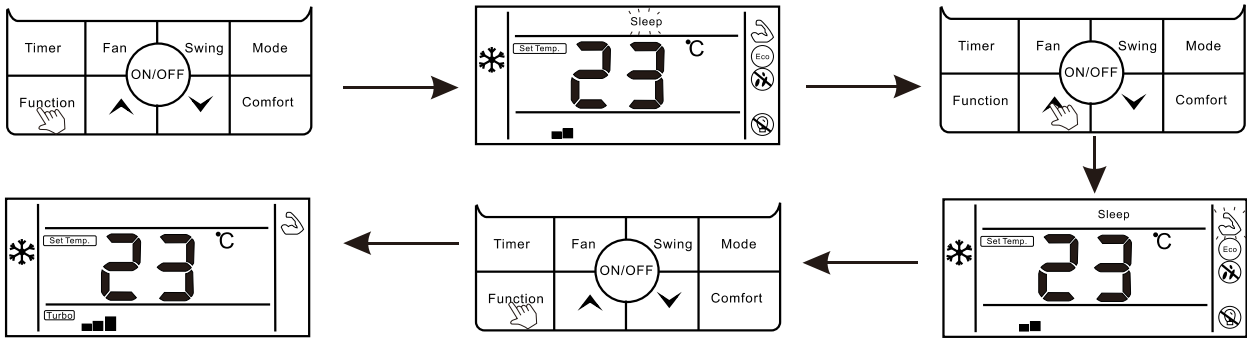
2.Press " ∧ " or " ∧ "button to switch to turbo function, at this moment, " " icon is flashing.

3.Press Function button to confirm turbo function, at this moment, icon " " fan speed display is (Turbo and highest fan speed icon).

XK-05




XK-04

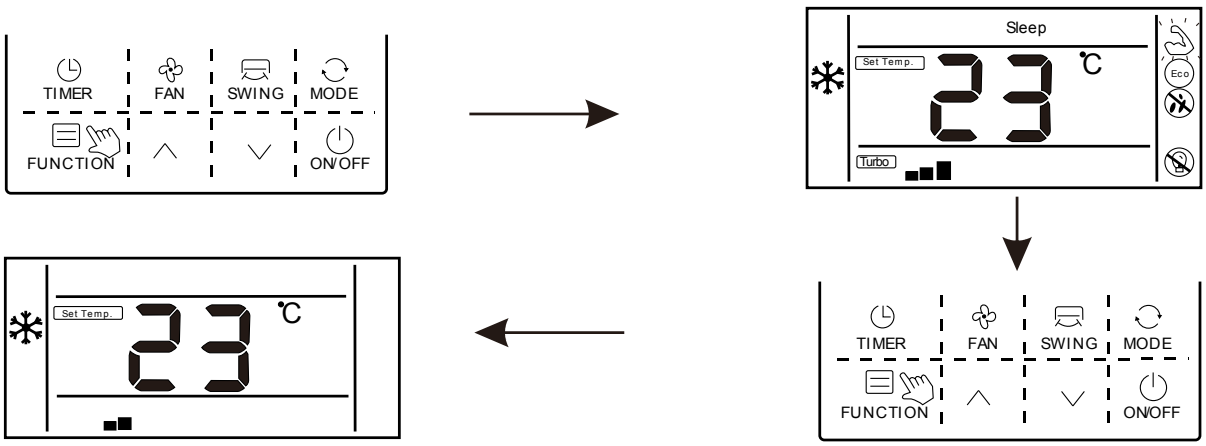



**Cancel turbo function:**

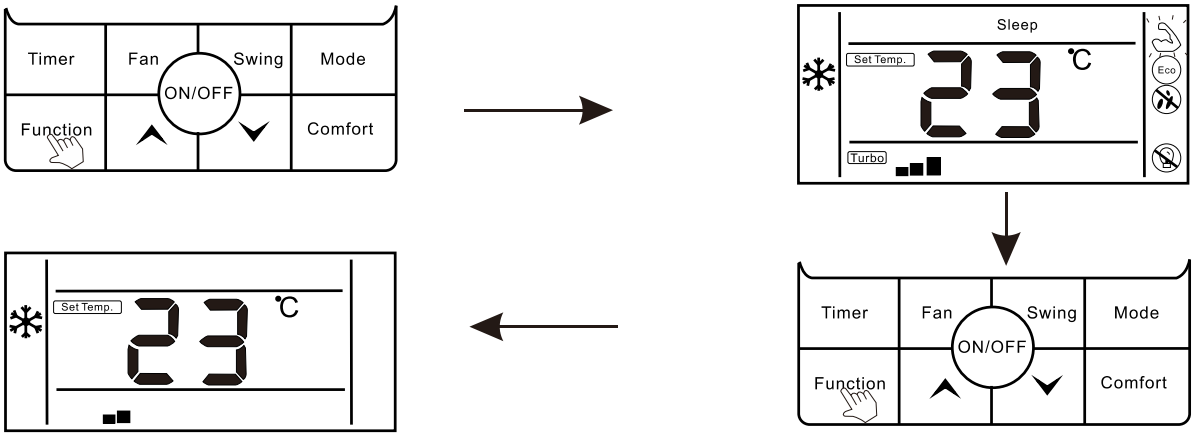
1. When turbo function is opened, press "Function" button to enter the interface of function selection.

2. Press " ∧ " or " ∧ "button to switch to strong function, at this moment, icon" " is flashing, press Function button to cancel strong function, and strong icon would not display

XK-05




XK-04




**Note:** The unit without turbo function can also set turbo function on the wired controller, the

performance is high fan speed, but "Turbo " icon and " " icon do will not display.

**2.【"Sleep"】**

**Sleep function:** Make indoor unit will run according to pre-set sleep temperature curve, which creates a comfortable sleep environment and improves sleep quality

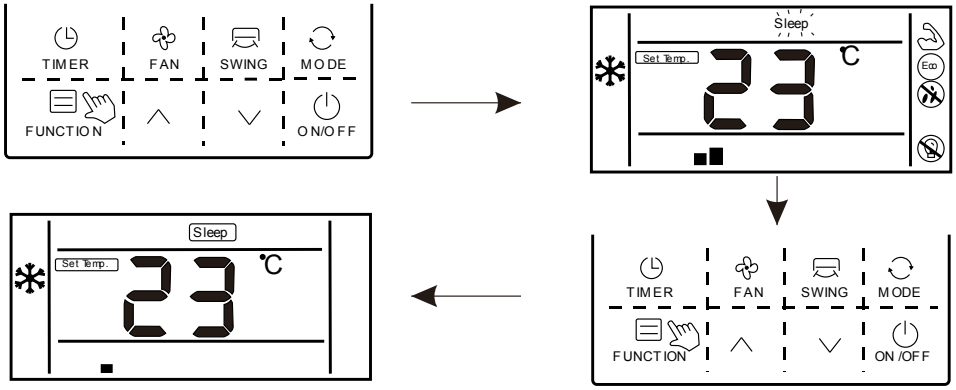
**Enter sleep function:**

1. In the state of running, press "Function" button to enter the interface of function selection.

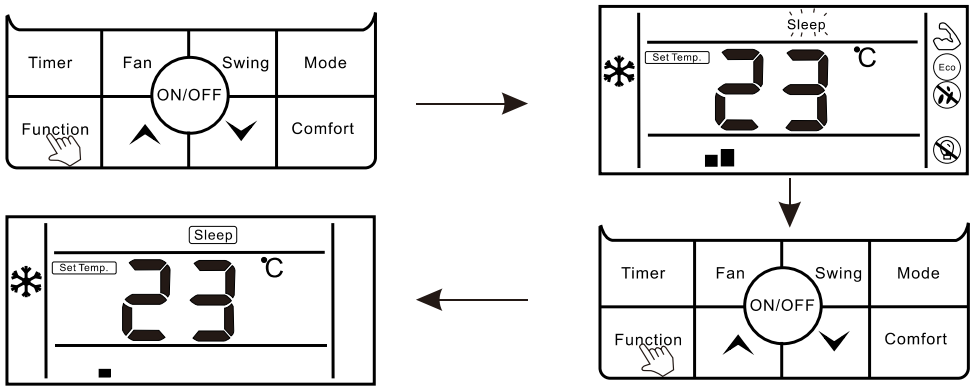
2. Press " ∧ " or " ∧ "button to switch to sleep function, " Sleep "icon is flashing at this moment

3.Press " Function " button to open sleep function, at this moment, icon " Sleep " is lighting

XK-05




XK-04



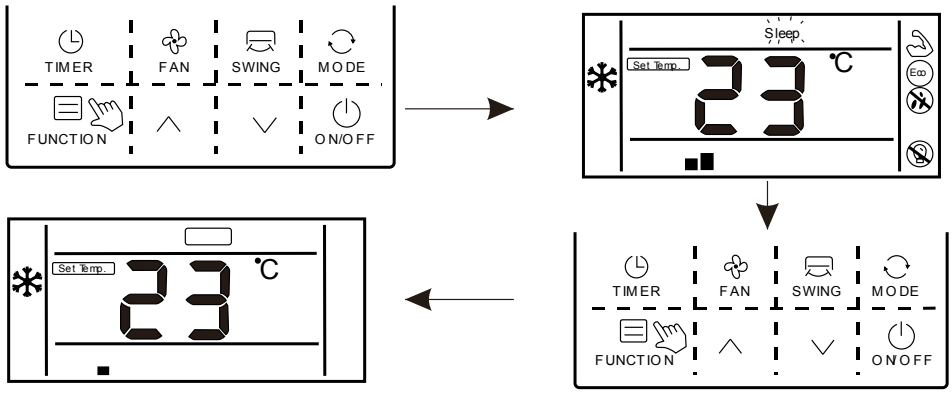

**Cancel "sleep" function:**

1. In the state of running, press "Function" button to enter the interface of function selection.

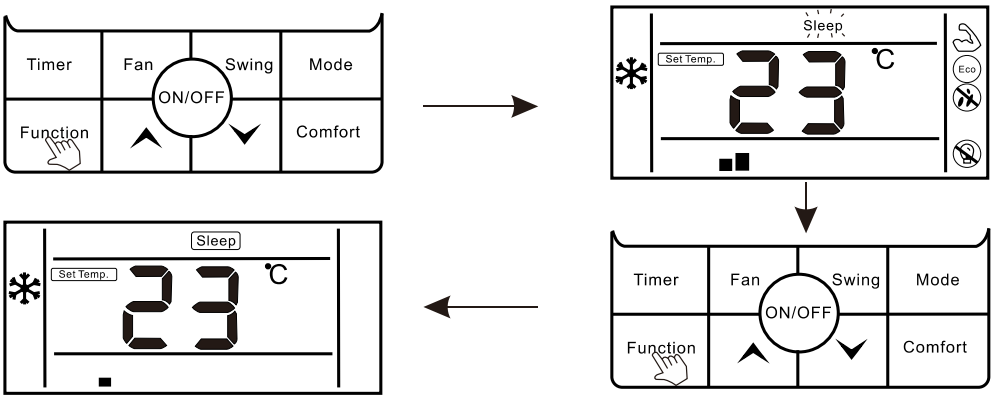
2. Press " ∧ " or " ∧ "button to switch to sleep function, " Sleep "icon is flashing

3.Press " Function " button again to cancel sleep function

XK-05




XK-04




### 3.【"ECO"】

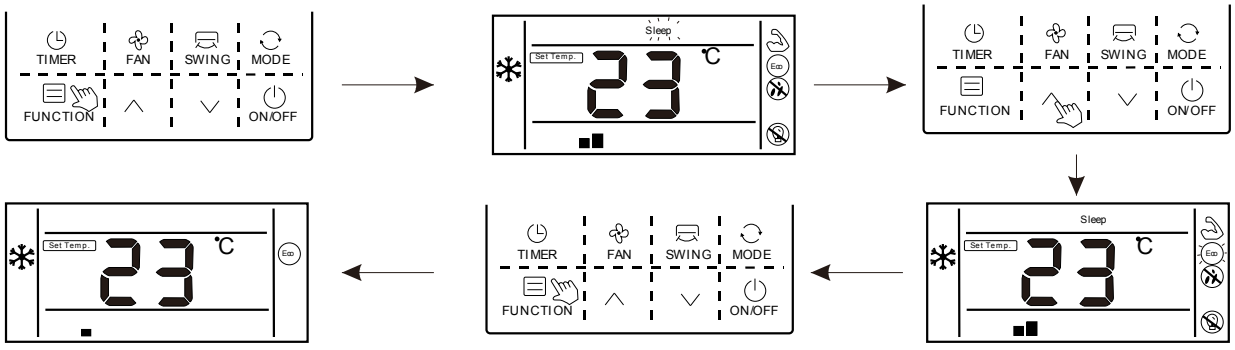
**Enter ECO function:**

1. Press "Function" button to enter the interface of function selection.

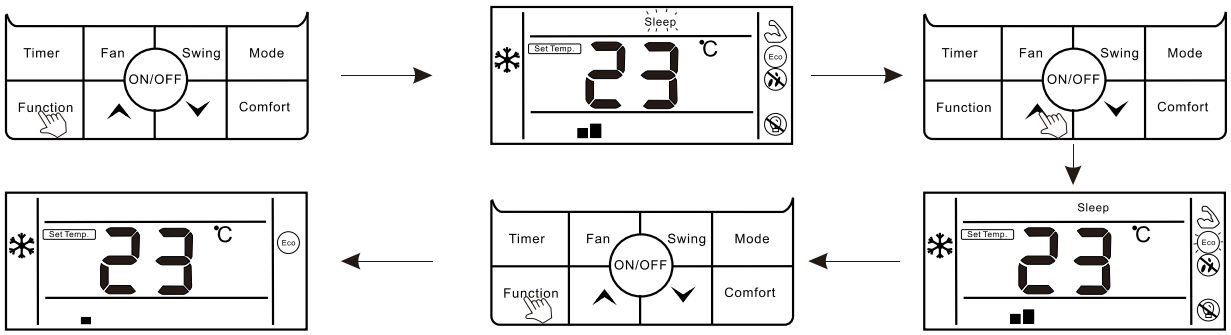
2. Press " ∧ " or " ∧ "button to switch to ECO function, at this moment " Eco "icon is flashing

3.Press "Function" button again to confirm ECO function, at this moment, " Eco "icon is lighting

XK-05




XK-04



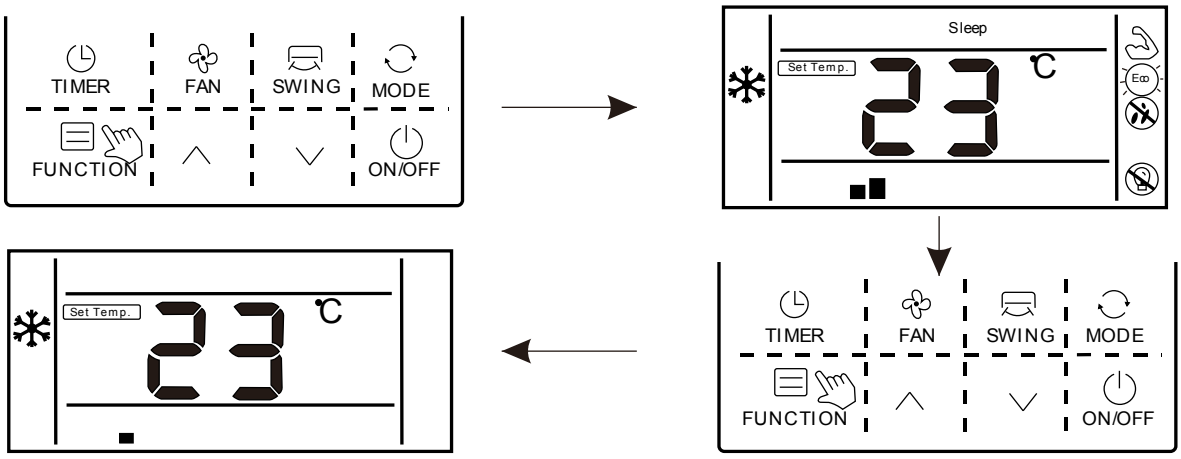

**Cancel ECO function:**

1. Press "Function" button to enter the interface of function selection.

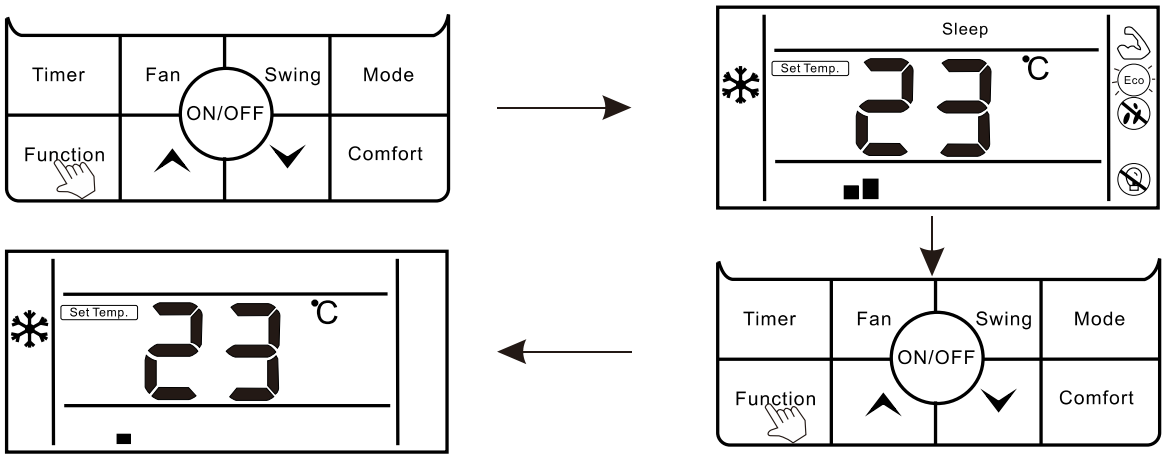
2. Press " ∧ " or " ∧ "button to switch to ECO function, at this moment " Eco "icon is flashing

3.Press "Function" button again to cancel ECO function

XK-05




XK-04




## 4. 【"Mildew-proof"】

**Mildew-proof function:** After shutdown, the air conditioner would automatically dry the moisture in the evaporator of indoor unit, so as to avoid mildewing.

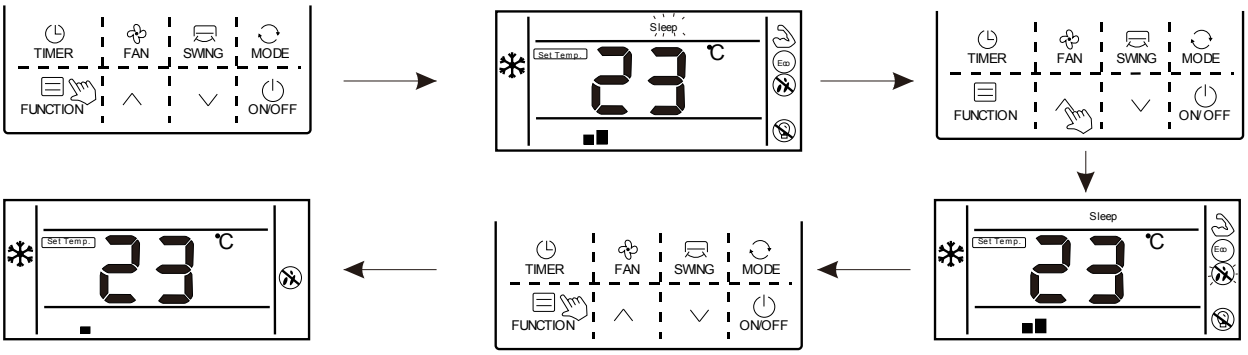
**Enter mildew-proof function:**

1.Under COOL and DRY mode, press "Function" button to enter the interface of function selection

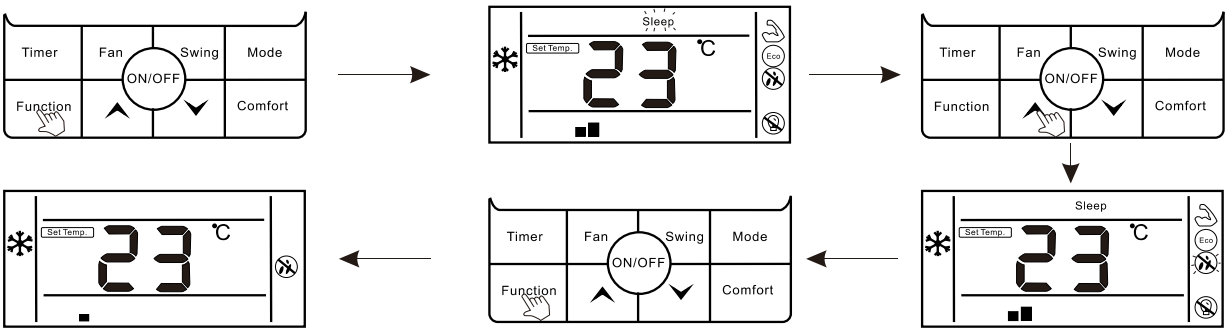
2.Press " ∧ " or " ∧ " button to switch to the mildew-proof function setting interface,at this moment, icon " " is flashing;

3.Press “Function” button again to enter mildew-proof function, icon" "is lighting.

XK-05




XK-04



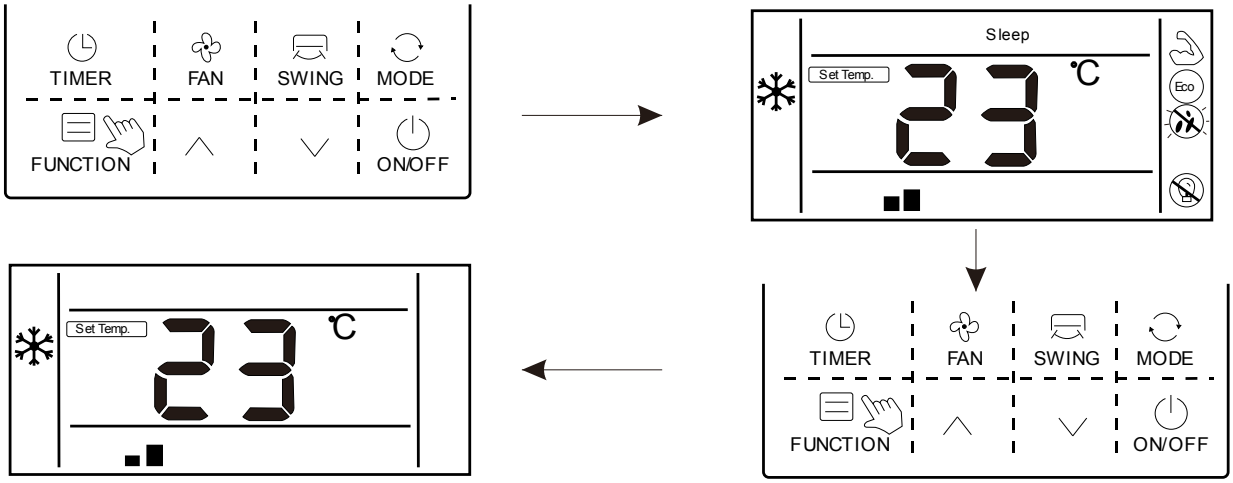

**Cancel fungus-proof function:**

1.When mildew proof function is ON, press "Function" button to enter the interface of function selection

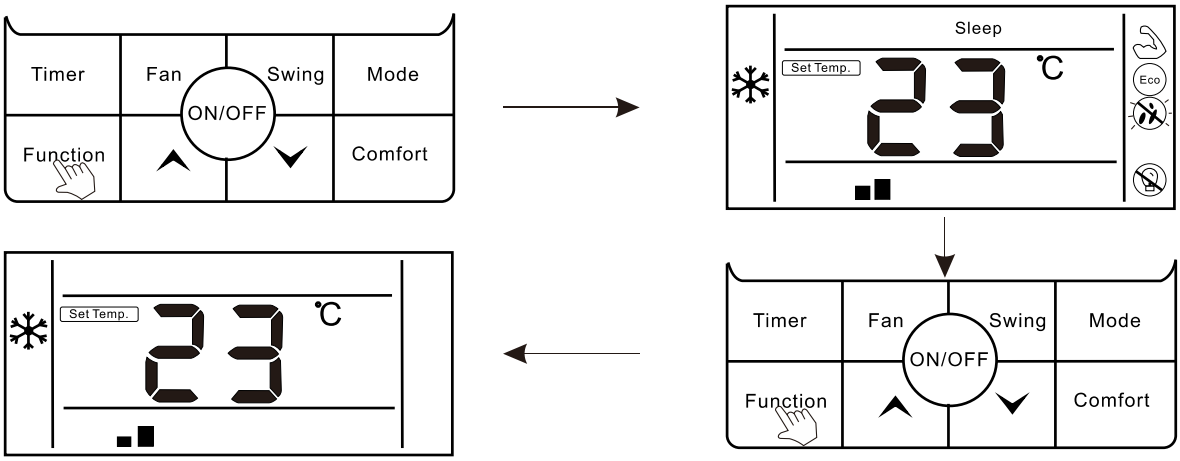
2.Press " ∧ " or " ∧ " button to mildew-proof function icon " " is flashing;

3.Press “Function” button again to cancel mildew proof function,icon will " " disapper

XK-05




XK-04




## 5.【"Light Sensation"】

**Light sensation function:** Detect the On and Off of indoor lamplight and switch o low fan speed when the lamplight is off, which can reduce the noise and create a comfortable sleep environment for users

**Enter light sensation function:**

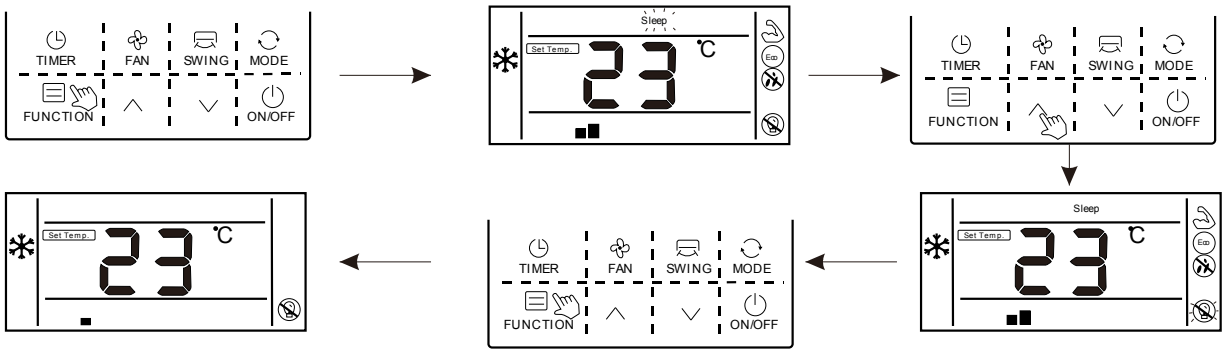
1.In the state of running, press "Function" button to enter the interface of function selection.

2.Press " ∧ " or " ∧ " button to light sensation function icon " " is flashing;

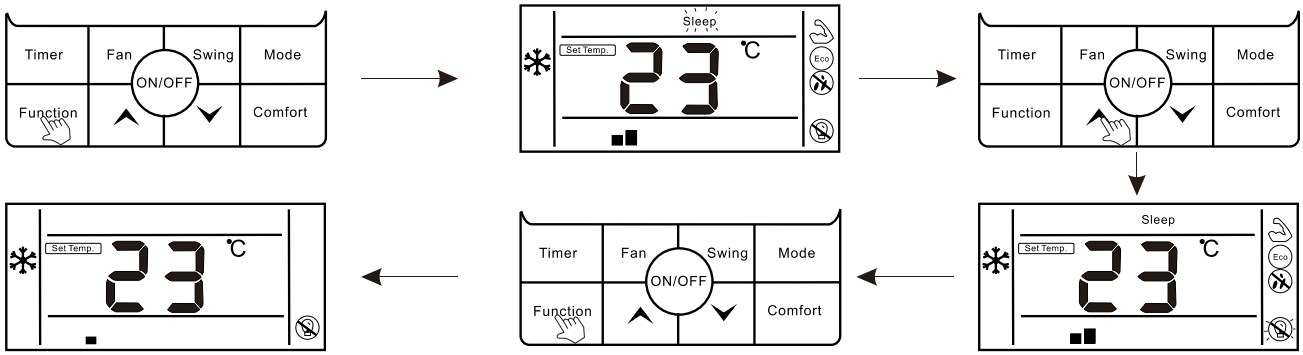
3.Press Function button again to enter light sensation function, at this moment, icon" " is lighting.

4.When light sensation function is on, if the indoor lamplight is OFF and lasts for 20minutes, the unit will automatically enter sleep mode. If the indoor lamplight is ON, and lasts for 20 minutes, the unit will cancel sleep mode and run according to the setting fan speed.

XK-05




XK-04



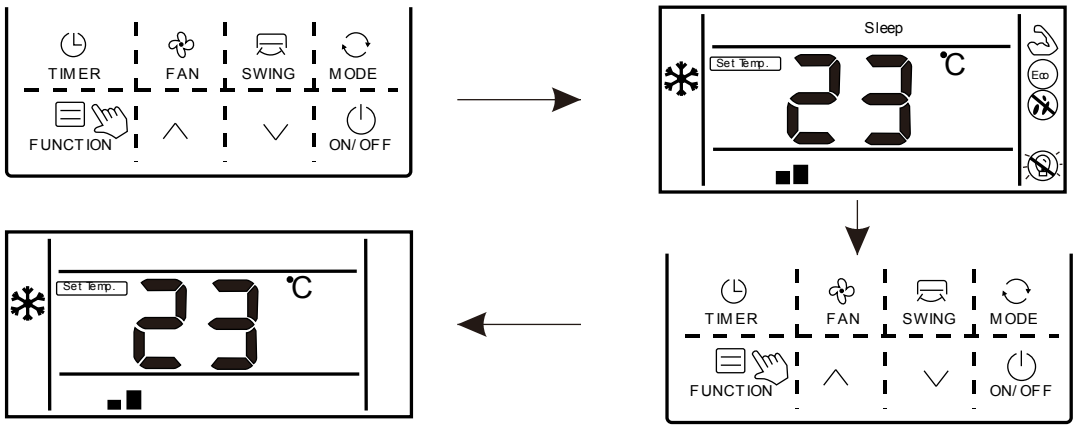

**Cancel light sensation :**

1.When light sensation function is on, press "Function" button to enter the interface of function selection.

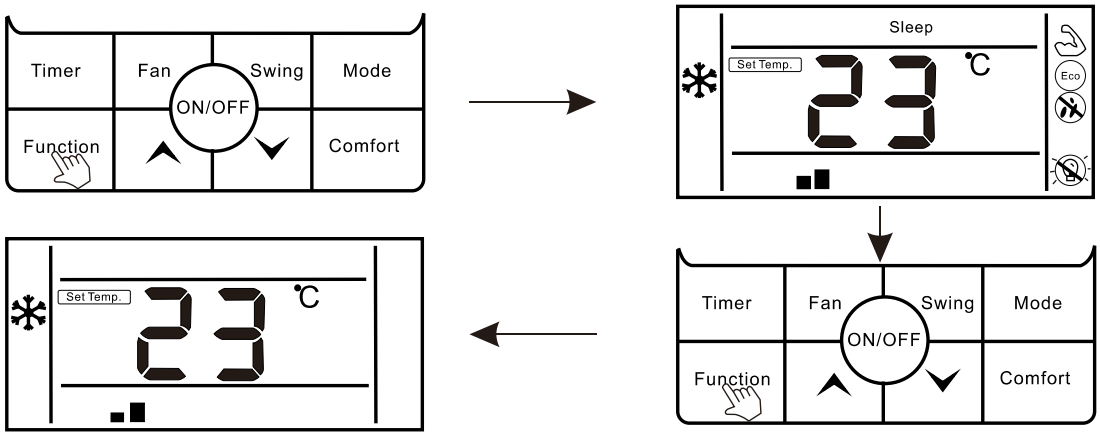
2.Press " ∧ " or " ∧ " button to light sensation function icon " " is flashing;

3.Press Function button again to cancel light sensation function, icon " "will disappear

XK-05




XK-04




## 6.【Clean】

**Clean function:** The air conditioner can clean the evaporator automatically, which can not only keep air fresh, but also reduce the recession of cooling effect.

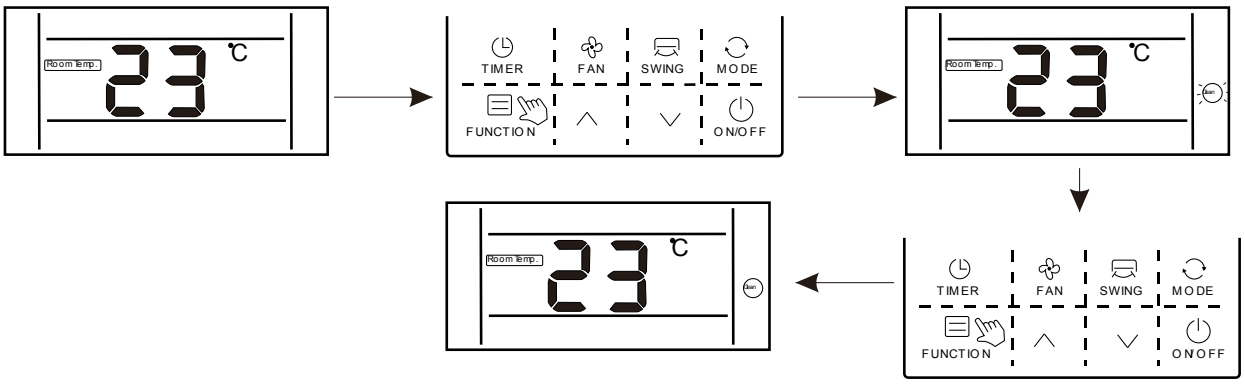
**Enter clean function :**

1.In the state of standby, press "Function" button to enter the interface of function selection

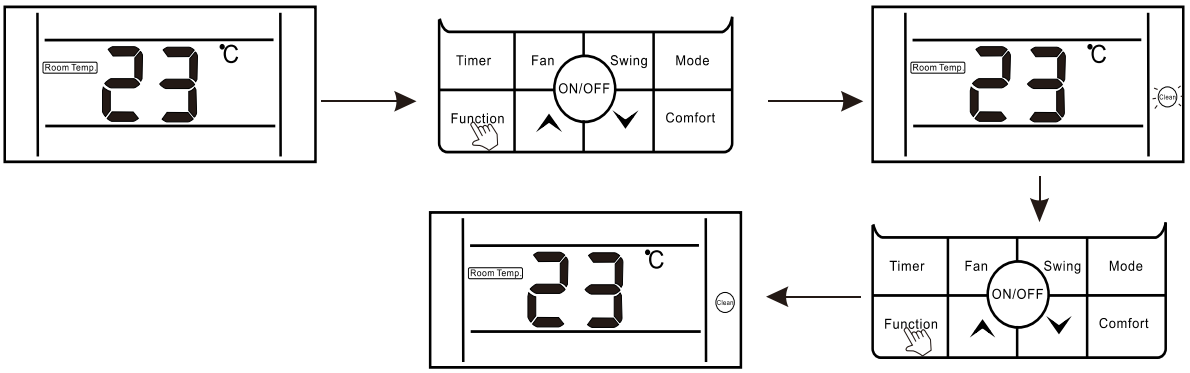
2.Press Function button again to confirm clean function, at this moment, icon " Clean "is lighting

3.When the unit is performing clean function, the wire controller will keep displaying icon" Clean ",until it is finished

XK-05




XK-04




## Display prompt function ( 10 )

### 1.【"WIFI"】 function display

If the unit is equipped with a WIFI function module, the icon " " is lighting

If the unit is not equipped with a WIFI function module, the icon " " does not display

**2.【"Shielding"】function display**

When unit is locked by centralized control, the wired controller will display

**3.【"Mute"】 function display**

When the unit enter silent function, display " " icon, when silent function is cancelled,the icon does not display.

**Note:** The unit without silent function can also set silent through wired controller, but it shows in the way of low wind grade, but " " does not display.

**4.【"Oil Return / Defrost" 】function display**

When the unit is running in the state of Oil Return or Defrost, " " icon is lighting on wire controller.

When the unit has finished Oil Return or Defrost process, " " icon does not display.

**5.【"Filter Screen Clean"】function display**

**Filter screen cleaning reminder function:** The unit can record its running time, when reaching the time set by the user, it will remind the user to clean the filter screen, so as to avoid prolonged cleaning and filter screen blockage, which can result in poor heating/cooling effect, abnormal protection, bacterial breeding, and other problems.

When the running time reaches the filter screen cleaning reminder time set by a user, the unit will give out a reminder of filter screen cleaning, wired controller displays" " icon, reminding the user to clean filter screen. At this moment, long press "Timer" button for 5S to cancel the reminder, then the icon does not display. A filter screen cleaning reset signal is sent to the unit.

**6.【Celsius and Fahrenheit switching】display**

When users set Celsius to be valid, the wired controller will display Celsius temperature.

When users set Fahrenheit to be valid, the wired controller will display corresponding Fahrenheit temperature synchronously.

**7.【"Child Lock" function display】**

Press both" ∧ " or " ∧ " buttons for more than 5S to enter locking, the controller will display "🔒" . In the state of locking, operations on the wired controller are disabled (but remote control receiving is valid).

**The method of unlocking:** Press both" ∧ " or " ∧ " buttons for more than 5S or power off the unit to release the locking ("🔒" does not display).

**8.【Remote control 】function**

The wired controller can receive remote control commands and update the current status

Start-up the unit with remote controller, wired controller work in accordance with the state set on the remote controller and displays corresponding working mode;

**9. Room temperature sensor equipped on the wired controller**

When the wire controller is equipped with a room temperature sensor and the sensor is not damaged, it is default that the ambient temperature detected by the sensoron the controller and the temperature value will be sent to the main PCB of the unit.

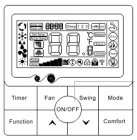
If the wire controller is not equipped with a room temperature sensor or the sensor is damaged, the room temperature will be detected by the temperature sensor of the unit itself.

**10.Fault display**

When the unit has fault, the time bar will directly display the fault code and flash, the display mode is Er: MM (MM is the fault code, please read the corresponding roduct manual).

**Basic condition of wired controller**

| Name | Figure | Basic condition for operation |
|---|---|---|

| | | |
|---|---|---|
| Wired controller |  | 1. Power supply: voltage DC 12V;<br>2. Work temperature range of PCB:(-10~+70)℃;<br>3. Work humidity range of PCB:RH20%~RH90%; |

## 2. Parameters Setting

Indoor unit's parameters can be set by remote controller (YK-L) and wired remote controller—for after-sales (In indoor side, after a new PCB was replaced, indoor parameters set is necessary).

### 2.1 Parameter setting table (General parameter)

| Serial Number / Parameter | 【04】 | 【05】 | 【15】 |
|---|---|---|---|
| | Model of IDU | Capacity of IDU | Selection of room sensor |
| DUCT | | | |
| AMSD-H07/4R3A | 02 | 07 | 01 |
| AMSD-H09/4R3A | 02 | 09 | 01 |
| AMSD-H12/4R3A | 02 | 12 | 01 |
| AMSD-H18/4R3A | 02 | 18 | 01 |
| Ceilling & Floor | | | |
| AMCF-H09/4R3A | 13 | 09 | 01 |
| AMCF-H12/4R3A | 13 | 12 | 01 |
| AMCF-H18/4R3A | 13 | 18 | 01 |

**Note:**

**【04】**：Model of IDU

**【05】**：Capacity of IDU，

**【15】**：Selection of air return temperature sensor; 00 – sensor in indoor unit, 01—Sensor in wired controller

### 2.2 Working mode parameter (Heating only function)

Under heating only mode, IDU cannot receive signal of other working mode besides “OFF” signal.

Once change the parameter, need to power on again to activate the function.

| Series No | Value | Meaning | Available mode |
|---|---|---|---|
| 11 | 0 | All mode | Cooling. Dehumidification. Swing. Heating. Auto |
| | 1 | No “Auto” mode | Cooling. Dehumidification. Swing. Heating |
| | 2 | Cooling | Cooling. Dehumidification. Swing |
| | 3 | Heating | Heating only |

**Note: The duct type & ceiling floor indoor unit produced before 2019.3 needs to update program for IDU PCB so that achieves heating only.**

### 2.3 Parameter Setting by YK-L

***Enter the setting interface***

① Make sure the remote controller is ***off***

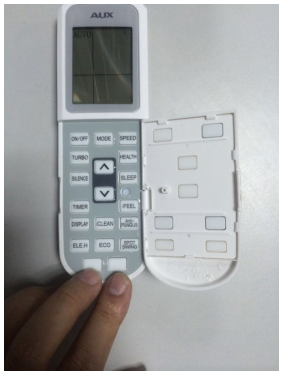
② Press the ***two white button*** at the down side simultaneously ***more than 10s*** to enter the address setting mode.

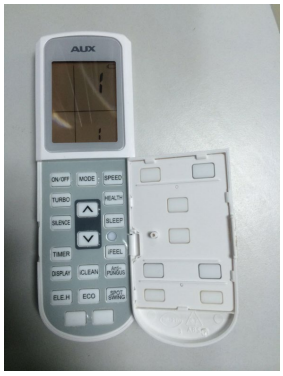
***Parameter Setting***

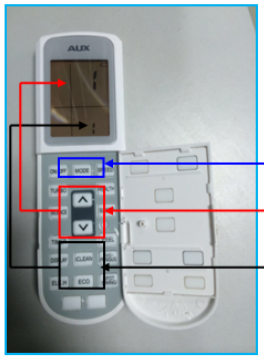
③ Press the **[∧]** or **[∨]** button to change the parameter series number

④ Press the **[IClean]** or **[ECO]** button to change the parameter correspondence

⑤ Press the **[MODE]** button to send order (Sent signal to display panels or receivers), Then can hearing buzzer once

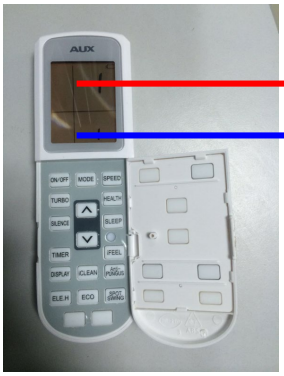







**For example:**

If you changed a new PCB to 18K cassette indoor unit , then you should set the type of the unit , check the above【**Parameter Setting Items table**】--- Mode of IDU is 【04】, 18K cassette parameter is 【37】




### 2.3 Parameter Setting by XK-04/ XK-05

**Parameter checking**

Press the "FUNCTION" button for 5 seconds; enter into the parameter checking interface. the wired controller's address will be displayed in the temperature zone of LED screen (press "FUNCTON" button, the wired controller's address will flash, the wired controller's address can be changed through press the "∧" or "∨" , then press "FUNCTION" button to confirm);

In the timing setting zone: HH means series NO. **MM** means parameter value. After entering into IDU parameter checking , via pressing the "∧" or "∨" button ,you can check the parameter value of series NO.【04】【05】【1】.


**HH:** means seires NO.

**MM:** means parameter value.

2. Press "∧"or"∨ , change the parameter value of seires NO.

1. Press **"FUNCTION"** for 5S, enter parameter checking

**Parameter setting**

**Only in parameter checking model, press** the "FUNCTION" button for 5 seconds,

Enter into parameter setting model.

The corresponding parameter valve **"MM"** began to flash, changing it through pressing

the "∧" or "∨" burton, after finished ,press the "FUNCTION" button to confirm. When finishing parameter setting, it will automatically go back to parameter checking model.


2. Press "∧"or"∨ , change the parameter value.

1. Only in checking model, Press **"FUNCTION"** for 5S , enter parameter checking model

**For example:**

If you want to change the PCB from cassette type to mid duct type for 42k unit , you should set the type of the unit , check the above【**Parameter Setting Items table**】--- Mode of IDU is 【04】, 42K cassette parameter is 【11】, 42K mid duct parameter is 【39】

【0411】change to 【0439】（step1）


③ Press **"FUNCTION"** for 5S again, enter parameter setting model;

② Press the"∧"or"∨"button to get "**04 11**"

① Press **"FUNCTION"** for 5S,enter parameter check model;

【0411】change to 【0439】（step2）


④ Press the“ ”or“ ”button to get “**04 39**”

⑤ After finishing setting , press “**FUNCTION** “to confirm

# 3. Room Card Function

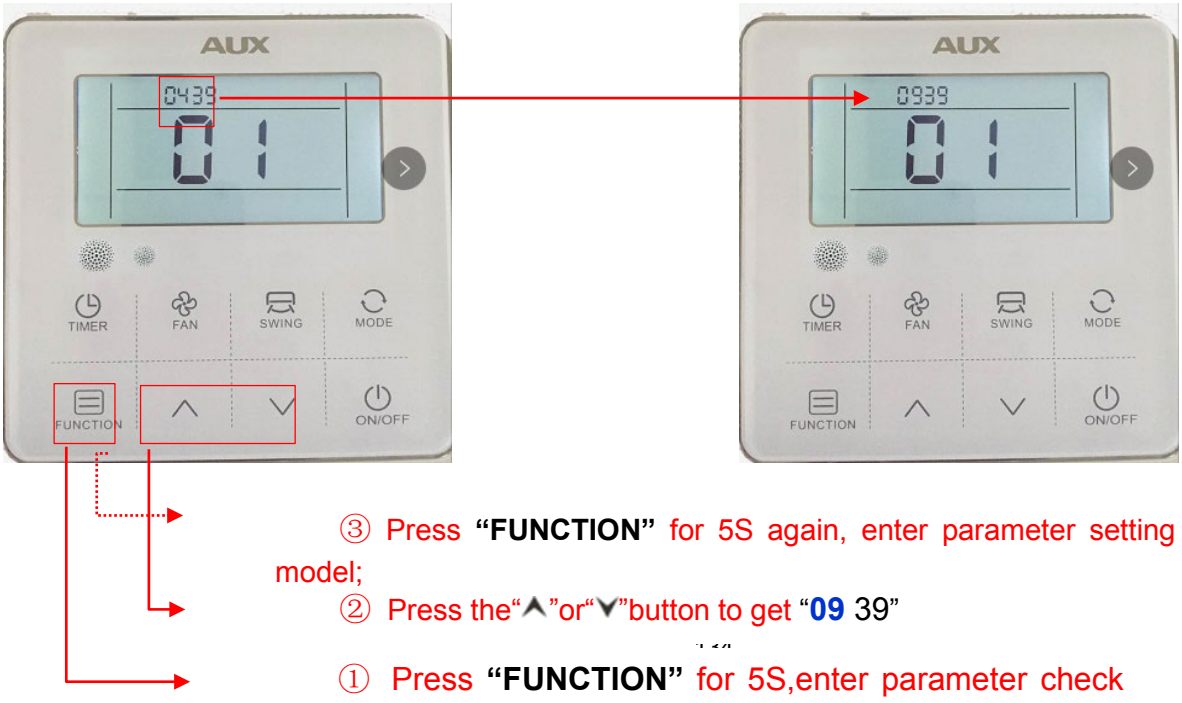
## 3.1 Function setting

| Parameter setting | Model | Contact State | Operation model specification |
|---|---|---|---|
| 0900 | No ( default) | | Stand |
| 0901 | Room Card (optional) |  | The IDU Will be into standby mode, can be controlled by controller |
| | |  | The IDU Will be into standby mode, can't be controlled by controller |

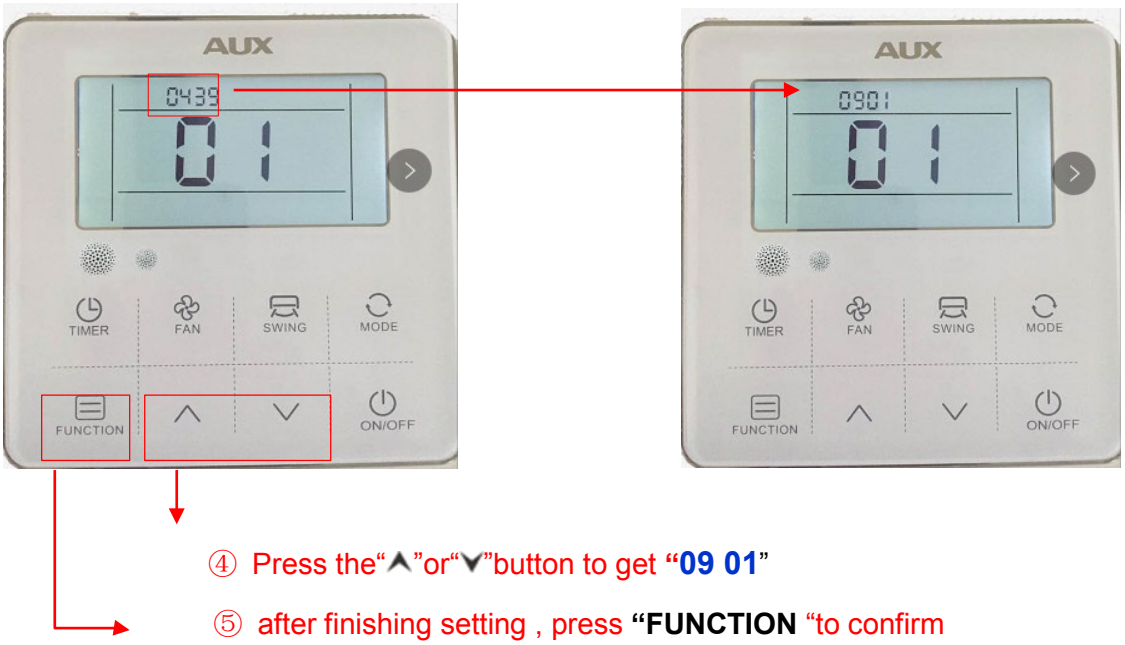
※ How to set the room card function ( Set method same as the above【Part 9 →2.2Parameter Setting by YK-L **or** 2.3 Parameter Setting by XK-04/XK-05 】

**For example (XK-05)**

**Step 1**



**Step 2**



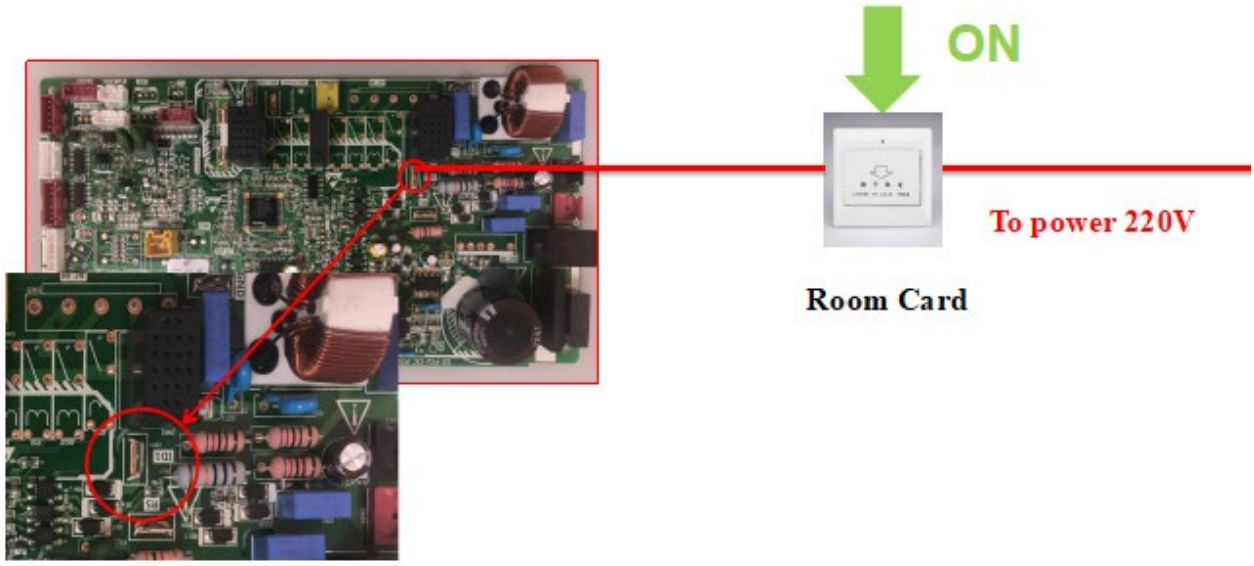

④ Press the“ ^ ”or“ v ”button to get **“09 01”**

⑤ after finishing setting , press **“FUNCTION** “to confirm

### 3.2 Wiring diagram

When the room card is inserted, the air conditioning can be controlled; when you leave the room, the AC will standby, can’t be controlled.

【DUCT TYPE】and【Ceiling & Floor】



# 4. Wifi Module

## 4.1 Wi-Fi Module Configuration

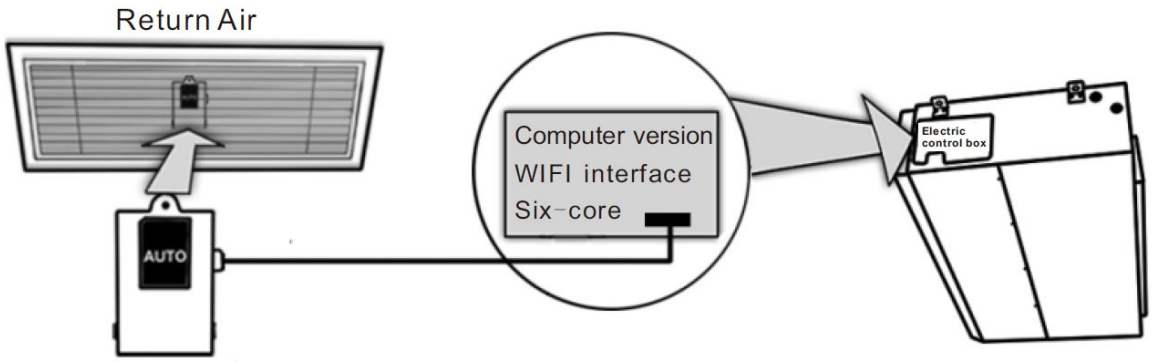
### ① APP Download

Mobile terminal scan the following dimensional code to download APP, or search “AC Freedom” in APPSTORE and Google store

.

### ② Light Commercial WIFI Module Installation

Connect the WIFI module communication wire to WIFI interfaces of main PCB, as shown below:



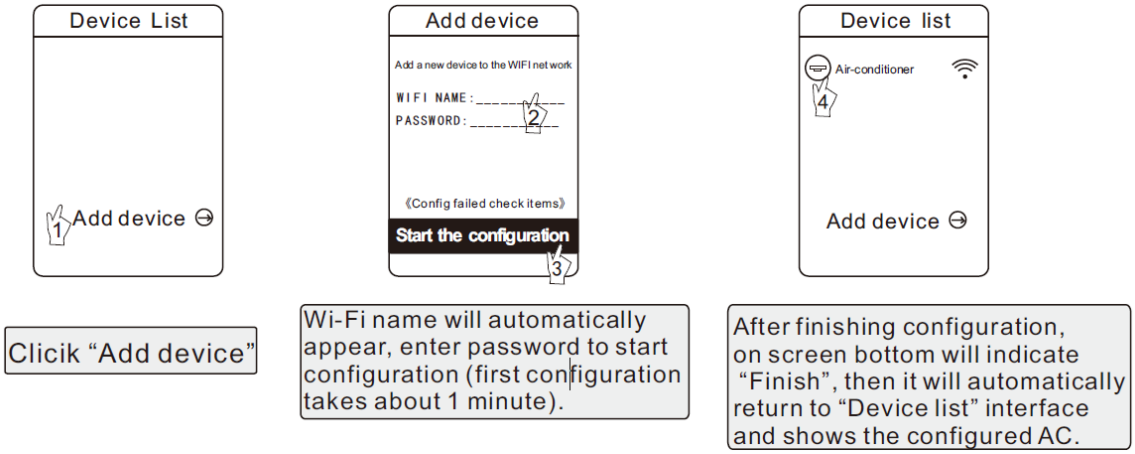

The WIFI module should be placed in the return air or some other place in WIFI area. (Customers buy the wireless router)

### ③ APP Configuration

- Press "healthy" button 8 times consecutive, and buzzer even ring two sound then into

the configuration

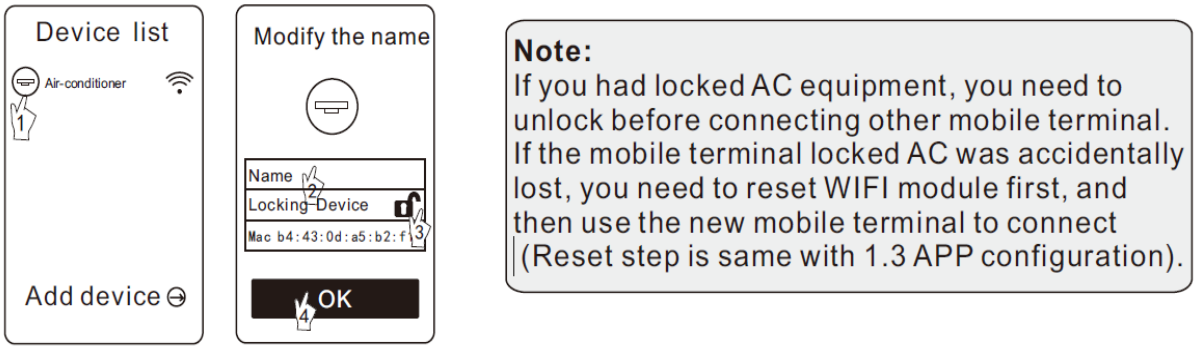
- Connect mobile terminals to WIFI, open APP “AC Freedom”, and then operate following the steps below:




**Note:** If the configuration fails or you change the password of wireless router, you need to reset the WIFI module to reconnect: Turn on the power of the module, then repeat the steps above for APP configuration.

### 4.2 AC management

**① Modify AC name and locking function**




**② For other instructions, please refer to "HELP" in APP.**

**③ Remote-control device**

Connect the wireless router to internet, and then open the GPRS. It means the remote control device, voice control function only effective after connected to the Internet

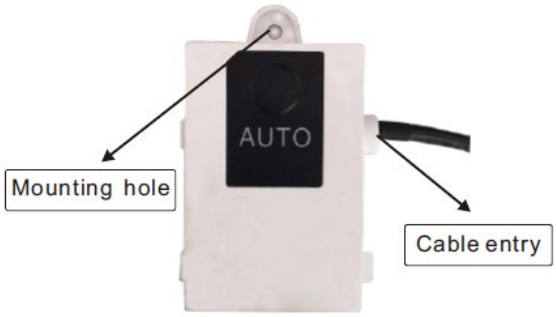
### 4.3 Trouble Shooting

**If unable to properly configured or connect the WIFI box:**

- Make sure the WIFI box for wiring is properly connected.
- Long press WIFI box 8 seconds to reconfigure the positive button. If the problem can't be solved, please contact after sales person.

### 4.4 Technical Parameters

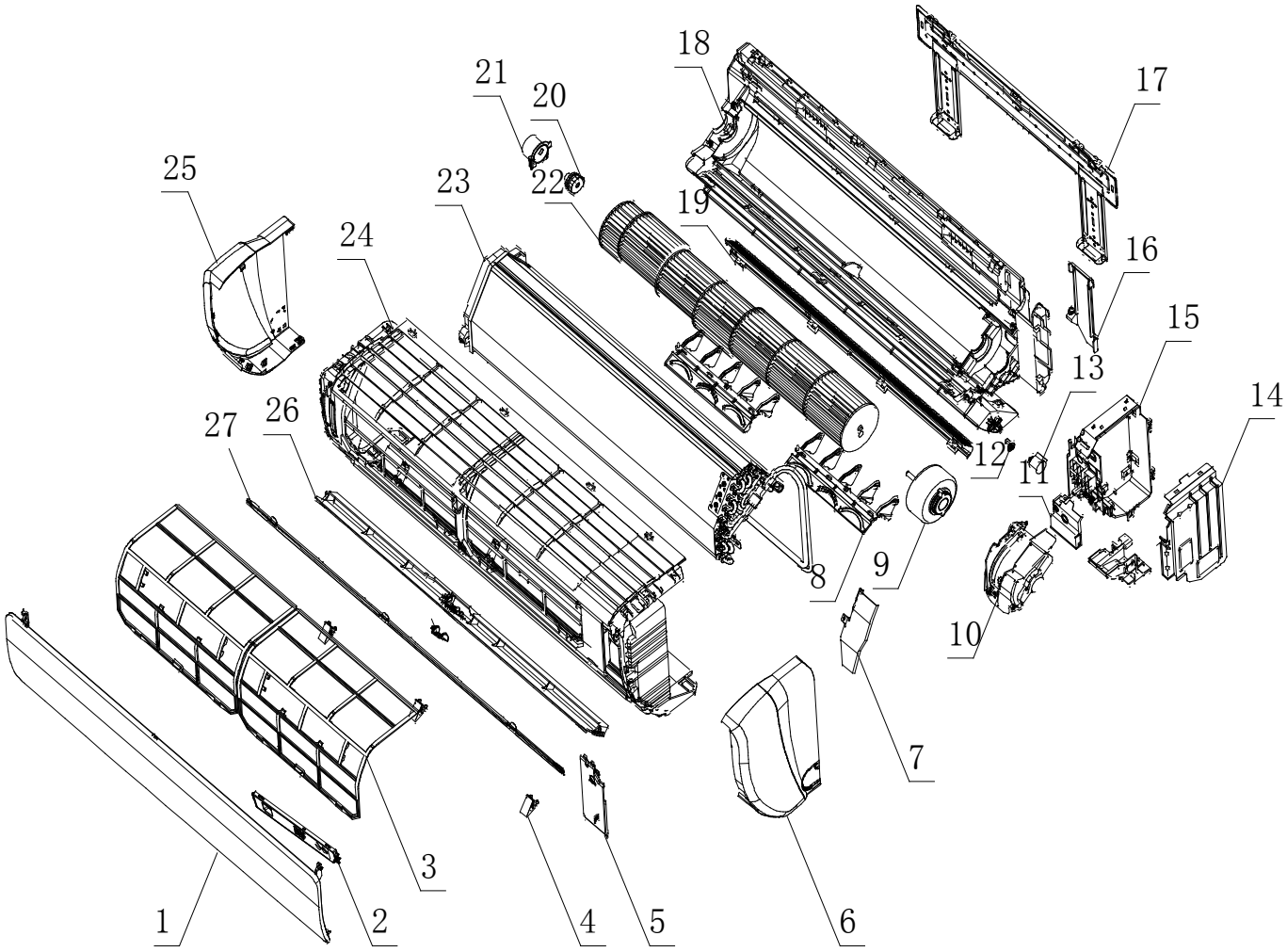
- Working temperature：0~50℃；
- Working environment humidity：20~90%RH；
- Dimensions：78 X 52 X 15.5
- Configuration cable wire length：1500mm



# Part10 Explosive View

## 1. Wall Mounted

### 1.1 L Type (07K, 09K, 12K)

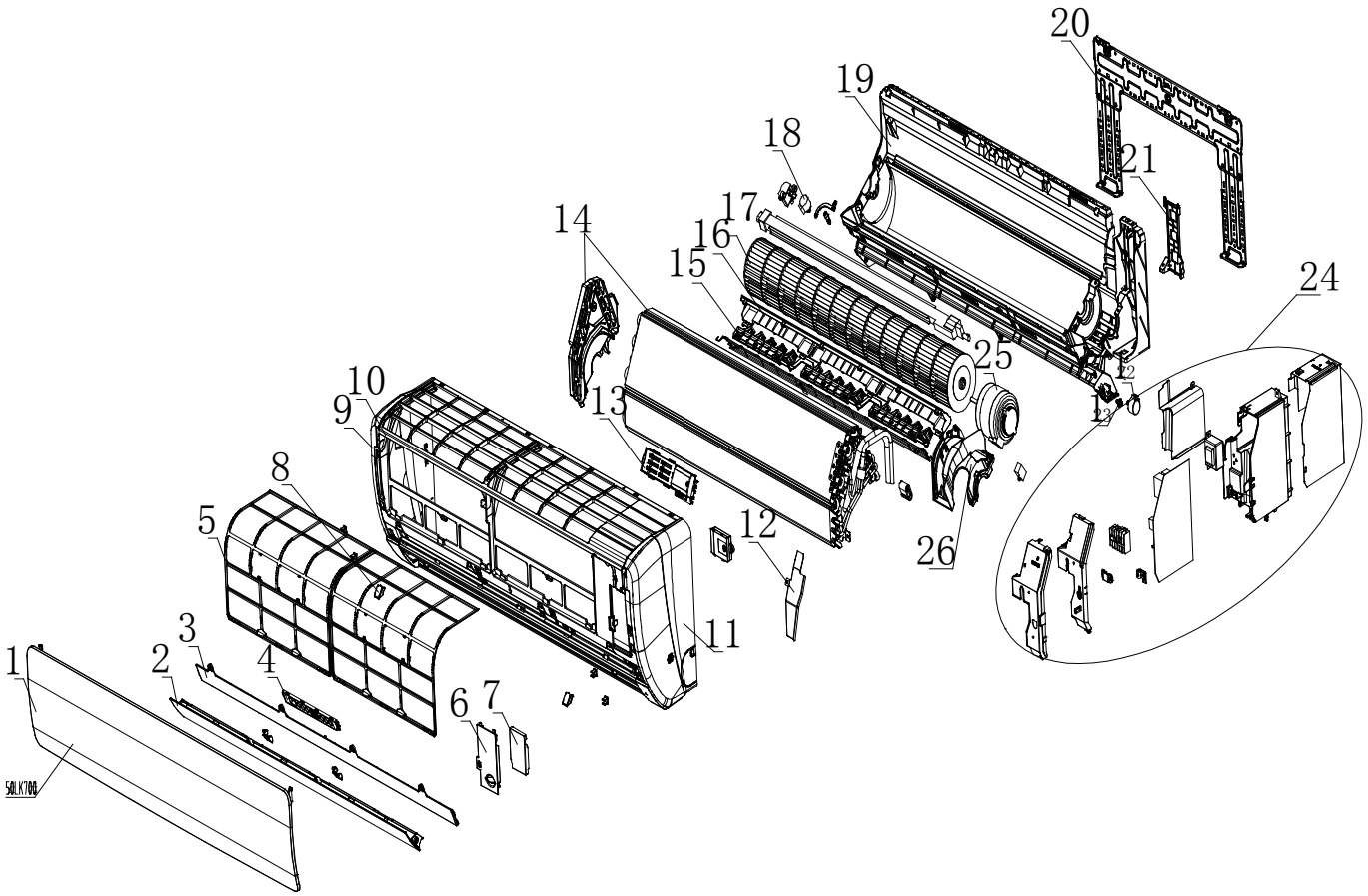


## AUX DC Inverter Free Match 50HZ R32

| NO. | Material code | Part name | Qty |
|---|---|---|---|
| 1 | 11220502004504 | Panel | 1 |
| 2 | 11222014000521 | Display board assembly | 1 |
| 3 | 11220508000142 | Filter | 2 |
| 4 | 11320096000105 | Screw cover | 3 |
| 5 | 11220509000062 | Medium frame wiring cover | 1 |
| 6 | 11320078000196 | Right-side cover | 1 |
| 7 | 11320065000028 | Breakwater | 1 |
| 8 | 11220513000067 | Air blade | 2 |
| 9 | 11230003000127 | Indoor motor | 1 |
| 10 | 11320052000032 | Motor cover | 1 |
| 11 | 11221526000003 | Cover of electric controller box | 1 |
| 12 | 11320079000013 | Step motor shaft sleeve | 1 |
| 13 | 11230002000058 | Step motor | 1 |
| 14 | 11321012000005 | Controller box sheet-metal A | 1 |
| 15 | 11222003002779 | Main PCB | 1 |
| 16 | 11320084000015 | Pipe clamp | 1 |
| 17 | 11321003000028 | Mounting plate assembly | 1 |
| 18 | 11320001000216 | Chassis | 1 |
| 19 | 11320005000386 | Volute | 1 |
| 20 | 11220551000003 | Cross flow fan rubber bearing | 1 |
| 21 | 11320080000007 | Phubber bearing fixing peg | 1 |
| 22 | 11220513000067 | Cross flow fan assembly | 1 |
| 23 | 11224003000659 | Evaporator assembly（07/09） | 1 |
| | 11224003000547 | Evaporator assembly（12） | |
| 24 | 11320002000310 | Medium frame | 1 |
| 25 | 11320078000197 | Left-side cover | 1 |
| 26 | 11320135000015 | Air louver | 1 |

| | | | |
|---|---|---|---|
| 27 | 11320061000275 | Decoration board | 1 |

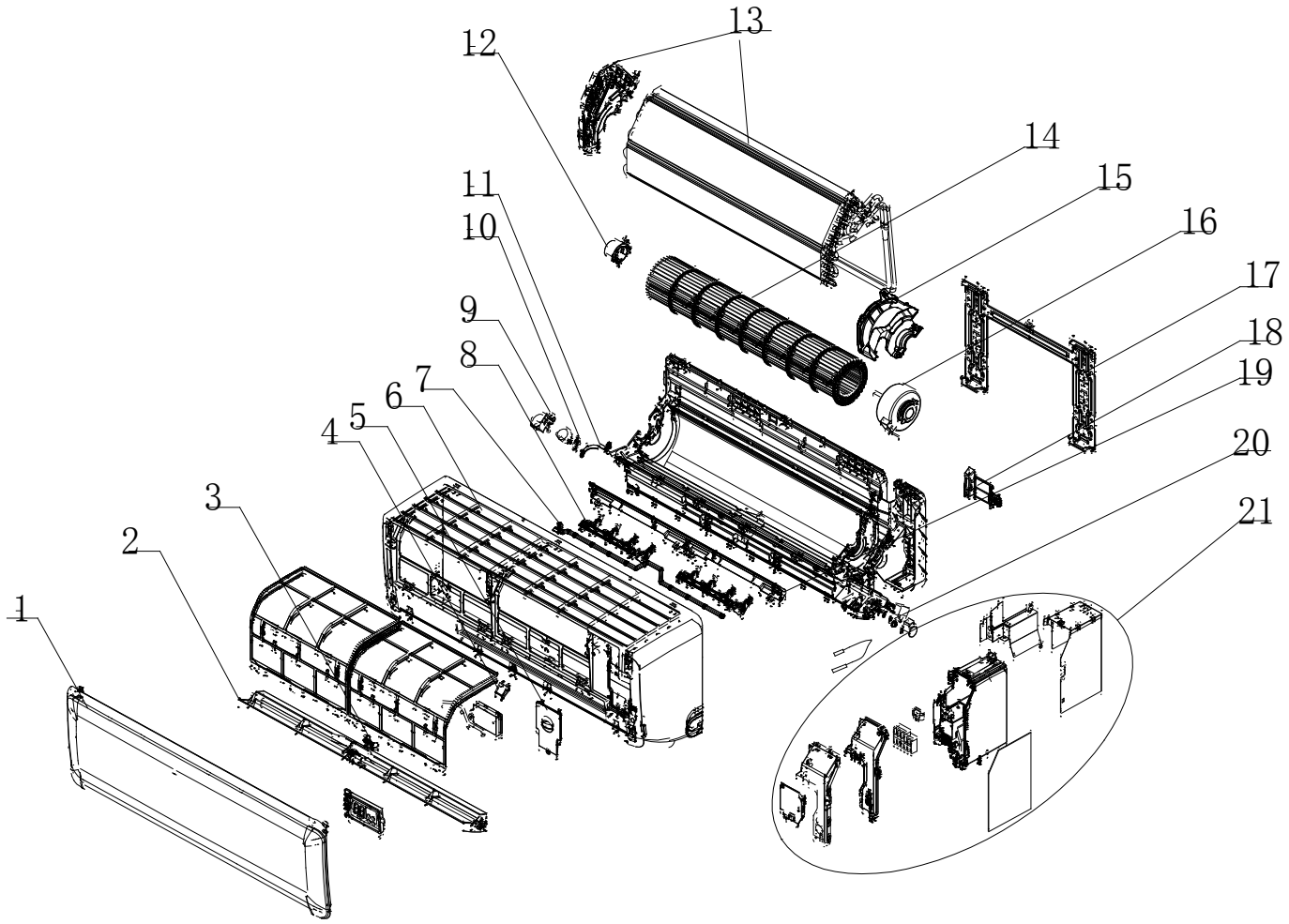
### 1.2 L Type (18K)



## AUX DC Inverter Free Match 50HZ R32

| NO | Material code | Part Name | Qty |
|---|---|---|---|
| 1 | 11320003003301 | Panel | 1 |
| 2 | 11320005000388 | air louver（Horizontal） | 1 |
| 3 | 11320094000054 | Decoration board | 1 |
| 4 | 11222014000522 | Display board assembly | 1 |
| 5 | 11220508000144 | Filter | 2 |
| 6 | 11320076000057 | Medium frame wiring cover | 1 |
| 7 | 11321071000006 | Medium frame wiring cover scale board | 1 |
| 8 | 11320096000104 | Screw cover | 2 |
| 9 | 11320078000207 | Left-side cover | 1 |
| 10 | 11320002000311 | Medium frame | 1 |
| 11 | 11320078000206 | Right-side cover | 1 |
| 12 | 11320065000028 | Breakwater | 1 |
| 13 | 11222001000112 | Remote control | 1 |
| 14 | 11224003000602 | Evaporator assembly | 1 |
| 15 | 11320017000107 | Air blade | 3 |
| 16 | 11320135000007 | Volute | 1 |
| 17 | 11220513000058 | Cross flow fan assembly | 1 |
| 18 | 11230002000071 | Step motor | 1 |
| 19 | 11320001000191 | Chassis | 1 |
| 20 | 11221500000028 | Mounting plate assembly | 1 |
| 21 | 11320084000015 | Pipe clamp | 1 |
| 22 | 11230002000071 | Step motor | 1 |
| 23 | 11320079000016 | Step motor shaft sleeve | 1 |
| 24 | 11222003002753 | Main control assembly | 1 |
| 25 | 11230005000013 | Indoor motor | 1 |
| 26 | 11320052000034 | Motor cover | 1 |

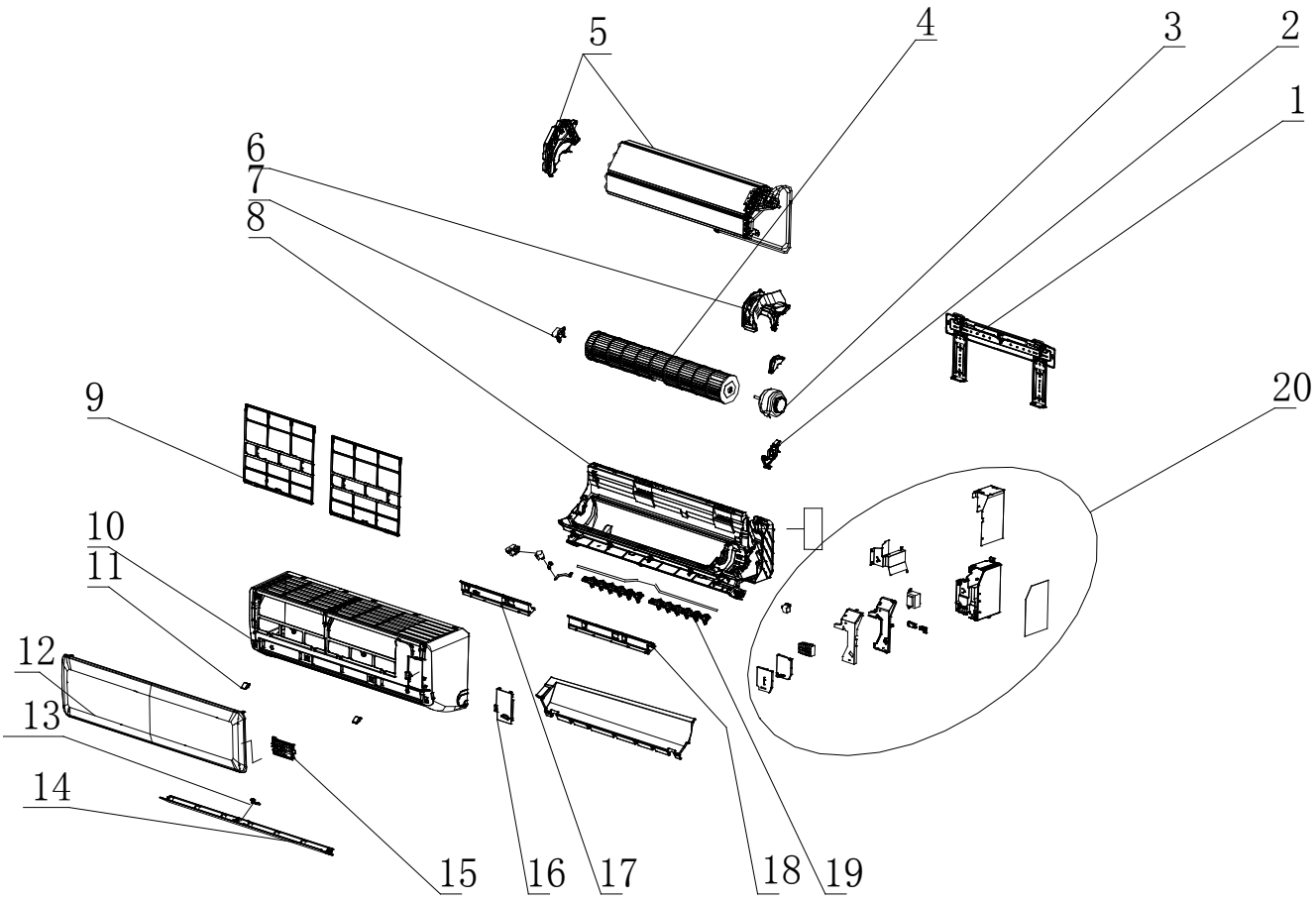
### 1.3 F Type (07K, 09K, 12K)



## AUX DC Inverter Free Match 50HZ R32

| NO. | Material code | Part name | Qty |
|---|---|---|---|
| 1 | 11220502004342 | Decro panel | 1 |
| 2 | 11320135000018 | Air louver（Horizontal） | 1 |
| 3 | 11220508000139 | Filter | 2 |
| 4 | 11320096000104 | Screw cover | 1 |
| 5 | 11320076000084 | Medium frame wiring cover | 1 |
| 6 | 11320002000305 | Medium frame | 1 |
| 7 | 11320085000094 | Guide vane linkage | 1 |
| 8 | 11320017000125 | Left-right swing blade | 2 |
| 9 | 11320127000007 | Step motor bracket | 1 |
| 10 | 11320091000014 | Crank link | 1 |
| 11 | 11320085000081 | Guide vane linkage B | 1 |
| 12 | 11320062000028 | Bearing fixing bracket | 1 |
| 13 | 11224003000649 | Evaporator assembly（07/09） | 1 |
|  | 11224003000764 | Evaporator assembly（12） |  |
| 14 | 11220513000065 | Scroll fan | 1 |
| 15 | 11320052000044 | Fan motor cover | 1 |
| 16 | 11230002000068 | IDU fan motor | 1 |
| 17 | 11221500000034 | Mounting plate assembly | 1 |
| 18 | 11320084000013 | Pipe clamp | 1 |
| 19 | 11320005000381 | Horizontal louver | 1 |
| 20 | 11320079000016 | Step motor shaft sleeve | 1 |
| 21 | 11222003002805 | Main control assembly | 1 |

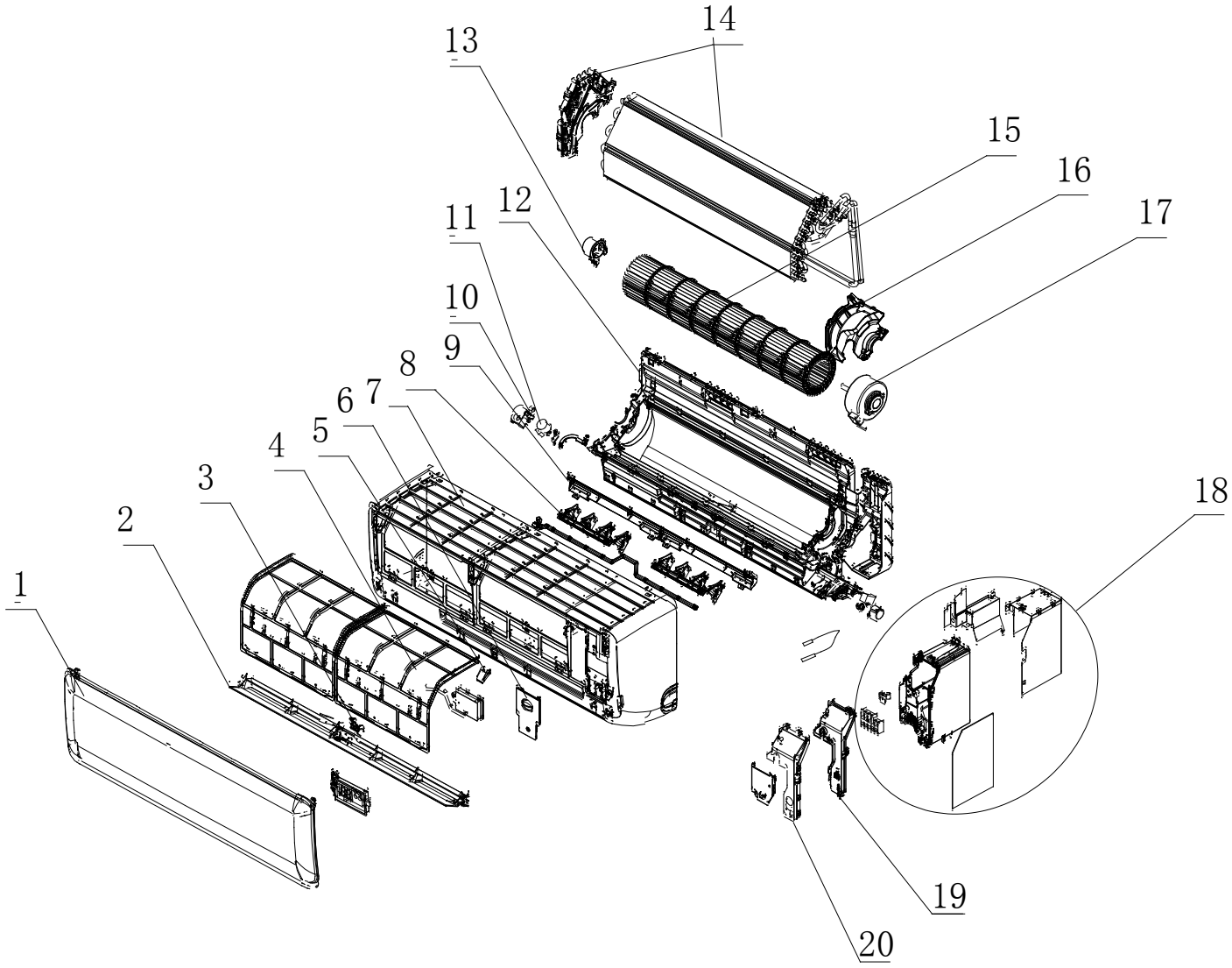
### 1.4 F Type (18K)



## AUX DC Inverter Free Match 50HZ R32

| NO. | Material code | Part name | Qty |
|---|---|---|---|
| 1 | 11321003000028 | Mounting plate assembly | 1 |
| 2 | 11320084000014 | Pipe clamp | 1 |
| 3 | 11230005000013 | IDU fan motor | 1 |
| 4 | 11220513000066 | Scroll fan | 1 |
| 5 | 11224003000695 | Evap asm | 1 |
| 6 | 11320052000043 | Fan motor cover | 1 |
| 7 | 11220551000003 | bearing assembly | 1 |
| 8 | 11220500000213 | Chassis assembly | 1 |
| 9 | 11220508000140 | Filter | 2 |
| 10 | 11320002000303 | Medium frame | 1 |
| 11 | 11320096000104 | Screw cover | 1 |
| 12 | 11320003002947 | Decorate panel | 1 |
| 13 | 11320080000007 | Air guiding door fixing pin | 1 |
| 14 | 11320005000379 | Air louver（Horizontal） | 1 |
| 15 | 11222014000608 | Display board | 1 |
| 16 | 11320076000057 | Medium frame wiring cover | 1 |
| 17 | 11328001000350 | Base EPS B | 1 |
| 18 | 11328001000351 | Base EPS D | 1 |
| 19 | 11320017000125 | Left-right swing blade | 2 |
| 20 | 11222003002796 | Main control assembly | 1 |

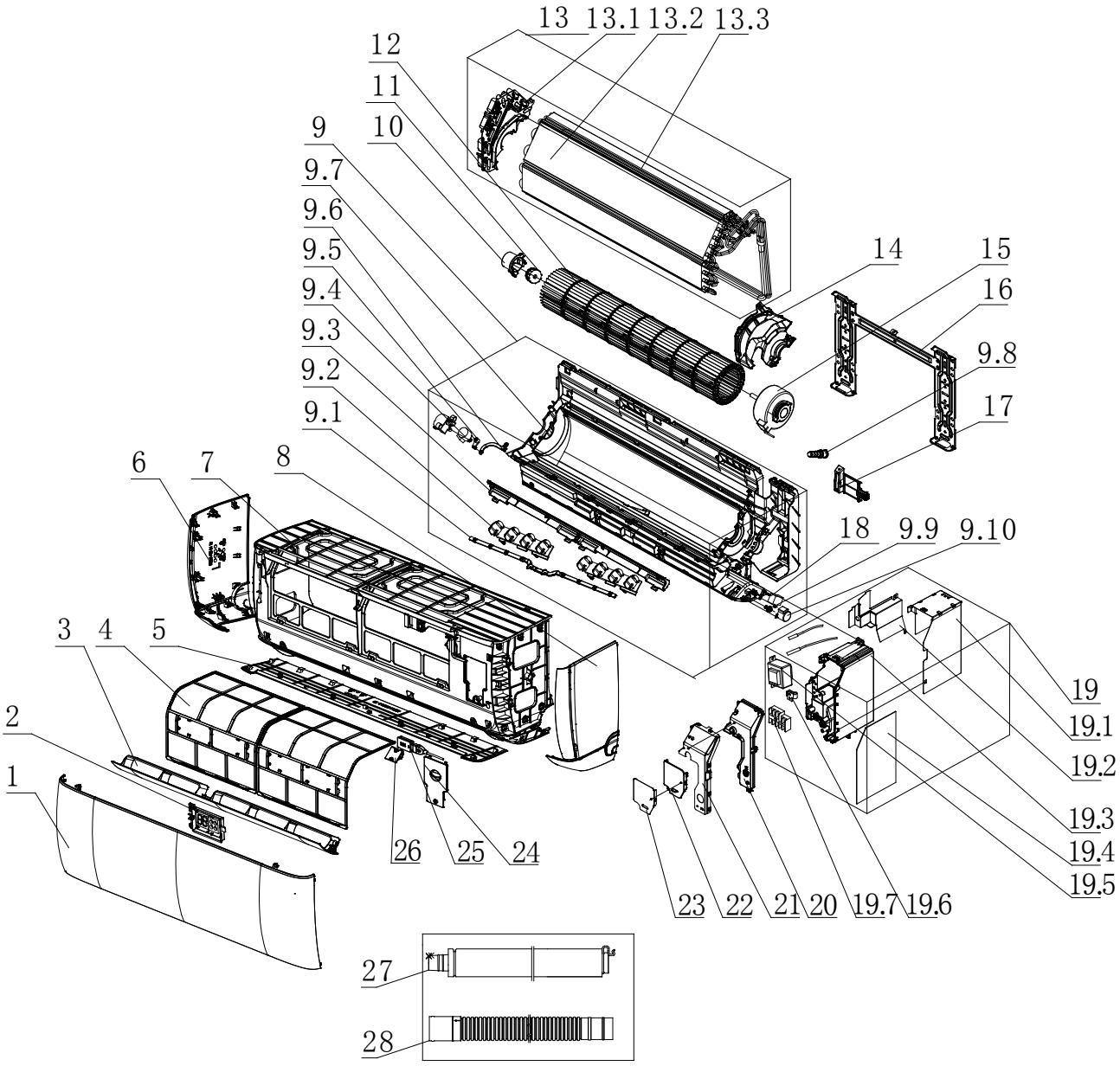
### 1.5 F Type (24K)



## AUX DC Inverter Free Match 50HZ R32

| No. | BOM Code | Part Name | Quantity |
|---|---|---|---|
| 1 | 11320003002072 | panel | 1 |
| 2 | 11320005000288 | air louver（Horizontal） | 1 |
| 3 | 11222014000608 | display board | 1 |
| 4 | 11220508000138 | filter | 2 |
| 5 | 11320096000075 | Screw cover | 3 |
| 6 | 11320076000057 | medium frame wiring cover | 1 |
| 7 | 11320002000233 | medium frame | 1 |
| 8 | 11320017000110 | left-right swing blade | 3 |
| 9 | 11320135000008 | air louver | 1 |
| 10 | 11320079000016 | step motor shaft sleeve | 1 |
| 11 | 11230002000071 | air louver step motor | 1 |
| 12 | 11320001000194 | chassis | 1 |
| 13 | 11220551000003 | bearing assembly | 1 |
| 14 | 11224003000820 | Evaporator assembly | 1 |
| 15 | 11220513000059 | cross flow fan | 1 |
| 16 | 11320052000035 | motor cover | 1 |
| 17 | 11230003000136 | IDU fan motor | 1 |
| 18 | 11222003002794 | Main controller | 1 |
| 19 | 11320058000055 | control box cover | 1 |
| 20 | 11321020000029 | controller box metal plate | 1 |

### 1.6 J Type ( 07K, 09K, 12K)

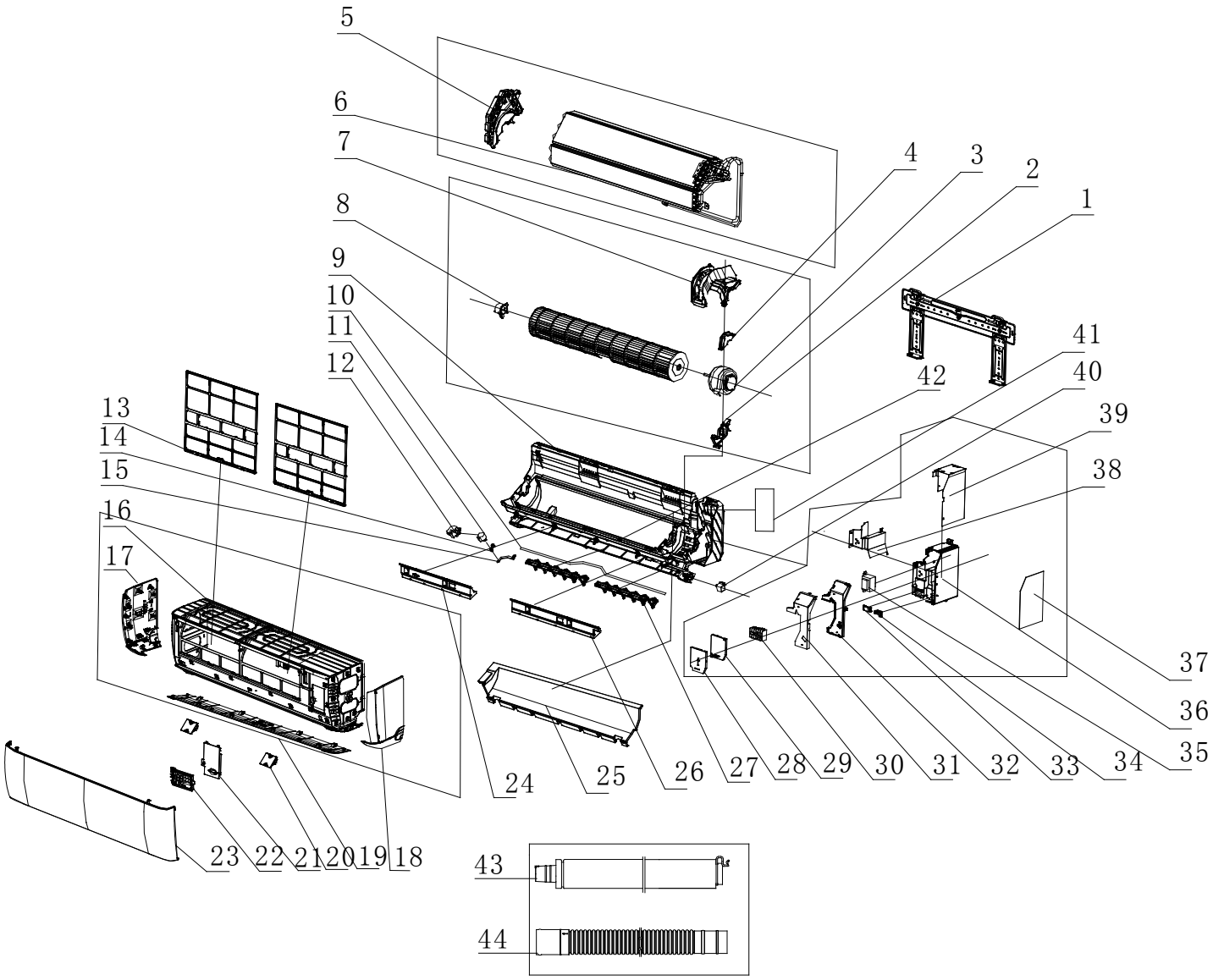


## AUX DC Inverter Free Match 50HZ R32

| No. | Chinese Name | Part Name | Part Code | Quantity |
|---|---|---|---|---|
| 1 | 面板 | Panel | 11320003002875 | 1 |
| 2 | 显示灯板组件 | Display board assembly | 11222014000608 | 1 |
| 3 | 导风门 | Air louver（Horizontal） | 11320005000359 | 1 |
| 4 | 过滤网组件 | Screen assembly | 11220508000146 | 2 |
| 5 | 中框装饰板 | Medium frame panel | 11320088000038 | 1 |
| 6 | 左端盖 | Left cover | 11320078000159 | 1 |
| 7 | 中框 | Medium frame | 11320002000292 | 1 |
| 8 | 右端盖 | Right cover | 11320078000160 | 1 |
| 9 | 底座组件 | Chassis assembly | 11220500000285 | 1 |
| 9.1 | 导风叶片连杆 | Guide blade connecting rod | 11320085000105 | 1 |
| 9.2 | 导风叶片 | Air blade（Vertical） | 11320017000154 | 2 |
| 9.3 | 蜗舌 | Volute throat gap | 11320135000025 | 1 |
| 9.4 | 左右扫风步进电机 | Left and right sweep stepper motor | 11320079000016 | 1 |
| 9.5 | 曲柄 | Crank | 11320091000014 | 1 |
| 9.6 | 导风连杆 B | Connecting rod B | 11320085000081 | 1 |
| 9.7 | 底座 | Chassis | 11320001000268 | 1 |
| 9.8 | 橡皮水塞 | Drain jam | 11333003000009 | 1 |
| 9.9 | 轴套 | Axle sleeve | 11320079000016 | 1 |
| 9.10 | 步进电机 | Step motor | 11230002000086 | 1 |
| 10 | 轴承组合件 | Bearing assembly | 11220551000003 | 1 |
| 11 | 轴承固定座 | Bearing mounting block | 11320062000028 | 1 |
| 12 | 贯流风叶组件 | Streamer blade assembly | 11220513000065 | 1 |
| 13 | 蒸发器总成 | Evaporator assembly | 11224003000764 | 1 |
| 13.1 | 蒸发器左支架 | Left stand of evaporator | 11320015000139 | 1 |
| 13.2 | 蒸发器部件 A | Evaporator component A | 11224009000315 | 1 |
| 13.3 | 蒸发器部件 B | Evaporator component B | 11224009000314 | 1 |

| | | | | |
|---|---|---|---|---|
| 14 | 电机压盖 | Motor cover | 11320052000044 | 1 |
| 15 | 内电机 | Inside the motor | 11230003000125 | 1 |
| 16 | 挂板组件 | Hanging panel | 11221500000034 | 1 |
| 17 | 管路压攀 | Line pressure climbing | 11320084000013 | 1 |
| 18 | 负离子发生器 | Negative ion generator | 11330016000018 | 1 |
| 19 | 主控制器 | Main controller | 11222003002899 | 1 |
| 19.1 | 电控盒屏蔽盒 A | Electric control box shielding box A | 11321020000033 | 1 |
| 19.2 | 电控盒屏蔽盒 B | Electric control box shielding box B | 11321020000034 | 1 |
| 19.3 | 电控盒 | Control box | 11320057000082 | 1 |
| 19.4 | 主控板 | Main control board | 11222009003550 | 1 |
| 19.5 | 变压器 | Transformer | 11329009000014 | 1 |
| 19.6 | 电源线抱攀 | Hold the power cord | 11320049000007 | 1 |
| 19.7 | 端子板 | Terminal board | 11330037000136 | 1 |
| 20 | 电控盒盖 | Control box cover | 11320058000067 | 1 |
| 21 | 电控盒盖屏蔽盖 | Electrical control box cover shield cover | 11321020000035 | 1 |
| 22 | 电控盒护板 | Electric control box protector | 11320111000005 | 1 |
| 23 | 电控盒护盖 | Electric control box cover | 11321020000036 | 1 |
| 24 | 中框接线盖 | Medium frame wiring cover | 11320076000103 | 1 |
| 25 | USB-WiFi | USB-WiFi | 11222062000021 | 1 |
| 26 | 螺钉盖 | Screw cover | 11320096000101 | 1 |
| 27 | 出水管组件 | Outlet pipe assembly | 11220506000002 | 1 |
| 28 | 排水管 | Drain-pipe | 11320020000008 | 1 |

## 1.7 J Type (18K)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| No. | Chinese Name | Part Name | Part Code | Qty |
|---|---|---|---|---|
| 1 | 挂板组件 | Mounting plate assembly | 11321003000028 | 1 |
| 2 | 电机支撑板 | Motor support plate | 11320074000004 | 1 |
| 3 | 室内电机 | Indoor fan motor | 11230005000013 | 1 |
| 4 | 电机压板 | The motor holder | 11320087000030 | 1 |
| 4 | 电机压板 | The motor holder | 11320087000031 | 1 |
| 5 | 蒸发器左支架 | Evaporator left side carriage | 11320015000138 | 1 |
| 6 | 蒸发器总成 | Evaporator assembly | 11224003000695 | 1 |
| 7 | 电机压盖 | Motor cover | 11320052000043 | 1 |
| 8 | 轴承组合件 | Bearing assembly | 11220551000003 | 1 |
| 9 | 底座 | Chassis | 11320001000267 | 1 |
| 10 | 导风叶片连杆 | Airflow vanes connecting pole | 11320085000104 | 1 |
| 11 | 上下摆风步进电机 | Swing up and down wind step motor | 11320079000016 | |
| 12 | 左右摆风电机座 | Swing the wind turbine seat left and right | 11320127000007 | 1 |
| 13 | 过滤网 | Filter | 11220508000147 | 2 |
| 14 | 曲柄 | Crank | 11320091000014 | 1 |
| 15 | 导风连杆 | Ventilation connecting rod | 11320085000081 | 1 |
| 16 | 中框 | Medium frame | 11320002000291 | 1 |
| 17 | 左端盖 | Left cover | 11320078000157 | 1 |
| 18 | 右端盖 | Right cover | 11320078000158 | 1 |
| 19 | 中框装饰板 | Medium frame panel | 11320088000037 | 1 |
| 20 | 螺钉盖 | Screw cover | 11320096000101 | 2 |
| 21 | 中框接线盖 | Medium frame wiring cover | 11320076000105 | 1 |
| 22 | 显示灯板组件 | Display board assembly | 11222014000608 | 1 |

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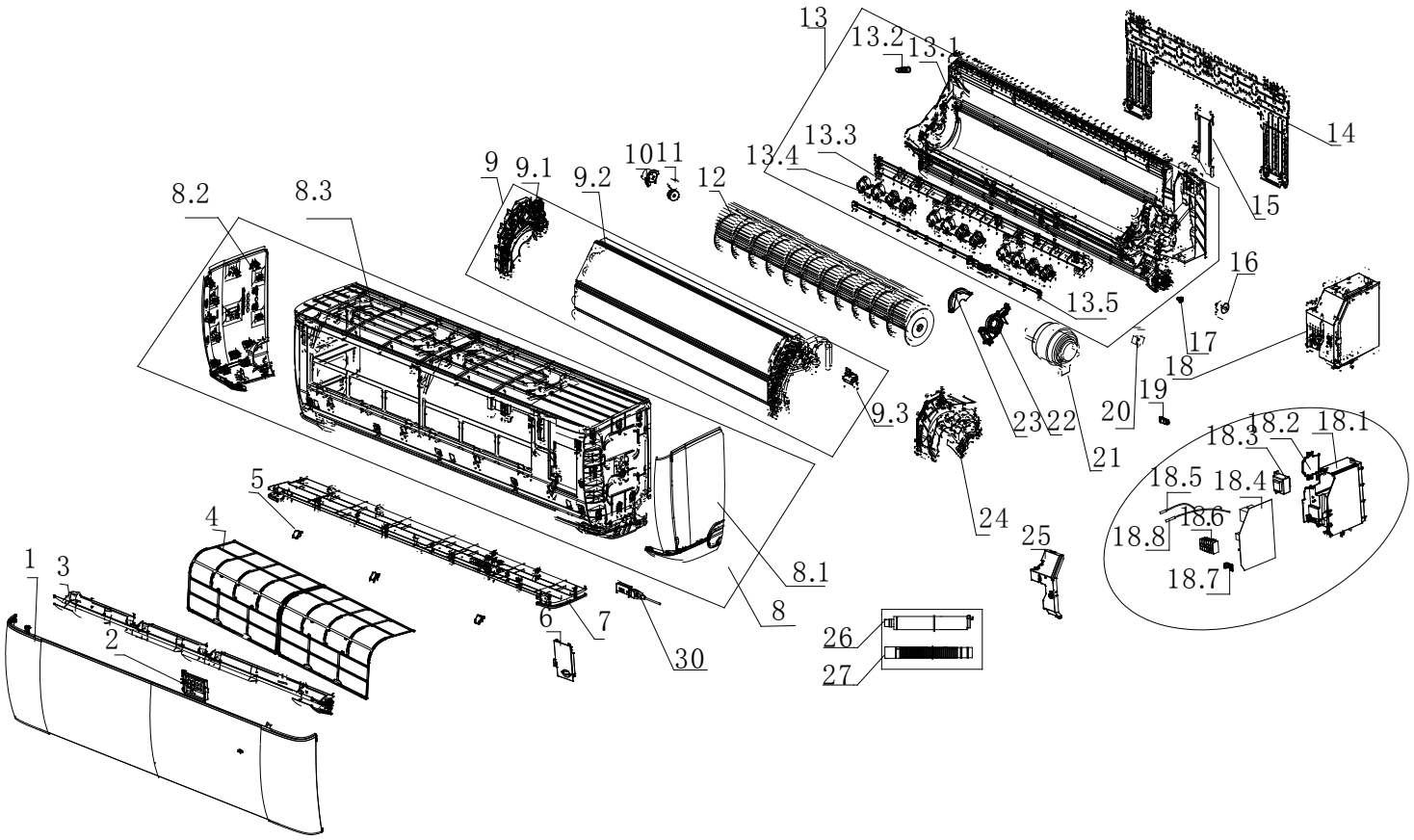
|---|---|---|---|---|
| 23 | 面板 | Panle | 11320003002874 | 1 |
| 24 | 底座保温泡沫 B | Chassis foam B | 11328030000012 | 1 |
| 25 | 底座保温泡沫 A | Chassis foam A | 11328030000013 | 1 |
| 26 | 底座保温泡沫 D | Chassis foam D | 11328030000014 | 1 |
| 27 | 自动导风叶片 | Left-right swing blade | 11320017000153 | 2 |
| 28 | 电控盒护盖屏蔽板 | Electric control box cover shield plate | 11321020000038 | 1 |
| 29 | 电控盒盖 | Cover of electric controller box | 11320058000068 | 1 |
| 30 | 端子板 | Terminal board | 11330037000136 | 1 |
| 31 | 电控盒盖屏蔽板 | Cover of electric controller box sheet-metal | 11321020000038 | 1 |
| 32 | 电控盒护盖 | Electric control box cover | 11320058000069 | 1 |
| 33 | 压线板 | Wire clamp | 11320010000045 | 1 |
| 34 | 抱攀 | Hold climbing | 11320049000007 | 1 |
| 35 | 变压器 | Transformer | 11329009000022 | 1 |
| 36 | 电控盒 | Controller box | 11320057000083 | 1 |
| 37 | 主控板 | Main PCB | 11222009003609 | 1 |
| 38 | 电控盒屏蔽板 A | Electric control box shielding panel A | 11321020000040 | 1 |
| 39 | 电控盒屏蔽板 B | Electric control box shielding panel B | 11321020000041 | 1 |
| 40 | 步进电机 | Step motor | 11230002000152 | 1 |
| 41 | 管路压攀 | Pipe clamp | 11320084000014 | 1 |
| 42 | 蜗舌 | Volute | 11320135000024 | 1 |
| 43 | 出水管组件 | Outlet pipe assembly | 11220506000009 | 1 |
| 44 | 排水管 | Drain-pipe | 11320020000008 | 1 |

## 1.8 J Type (24K)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| No. | Chinese Name | Part Name | Part Code | Qty |
|---|---|---|---|---|
| 1 | 面板 | Panel | 11320003002880 | 1 |
| 2 | 显示灯板 | Display board | 11222014000608 | 1 |
| 3 | 导风门 | Air louver（Horizontal） | 11320005000360 | 1 |
| 4 | 过滤网 | Filter | 11220508000145 | 2 |
| 5 | 螺钉盖 | Screw cover | 11320096000102 | 3 |
| 6 | 中框接线盖 | Medium frame wiring cover | 11320076000105 | 1 |
| 7 | 中框装饰板 | Medium frame decorating plate | 11320088000039 | 1 |
| 8 | 中框组件 | Medium frame assembly | 11220501000778 | 1 |
| 8.1 | 左端盖 | Left panel | 11320078000161 | 1 |
| 8.2 | 中框 | Medium frame | 11320002000293 | 1 |
| 8.3 | 右端盖 | Right panel | 11320078000162 | 1 |
| 9 | 蒸发器总成 | Evaporator assembly | 11224003000820 | 1 |
| 9.1 | 蒸发器左支架 | Evaporator left side carriage | 11320015000123 | 1 |
| 9.2 | 蒸发器部件 | Evaporator assembly | 11224009000214 | 1 |
| 9.2 | 蒸发器部件 | Evaporator assembly | 11224009000213 | 1 |
| 9.3 | 蒸发器护套 | Evaporator protecting bush | 11320101000018 | 1 |
| 10 | 轴承固定座 | Bearing fixed chassis | 11320062000026 | 1 |
| 11 | 轴承组合件 | Bearing assembly | 11220551000003 | 1 |
| 12 | 贯流风叶 | Cross flow fan | 11220513000059 | 1 |
| 13 | 底座组件 | Chassis assembly | 11220500000289 | 1 |

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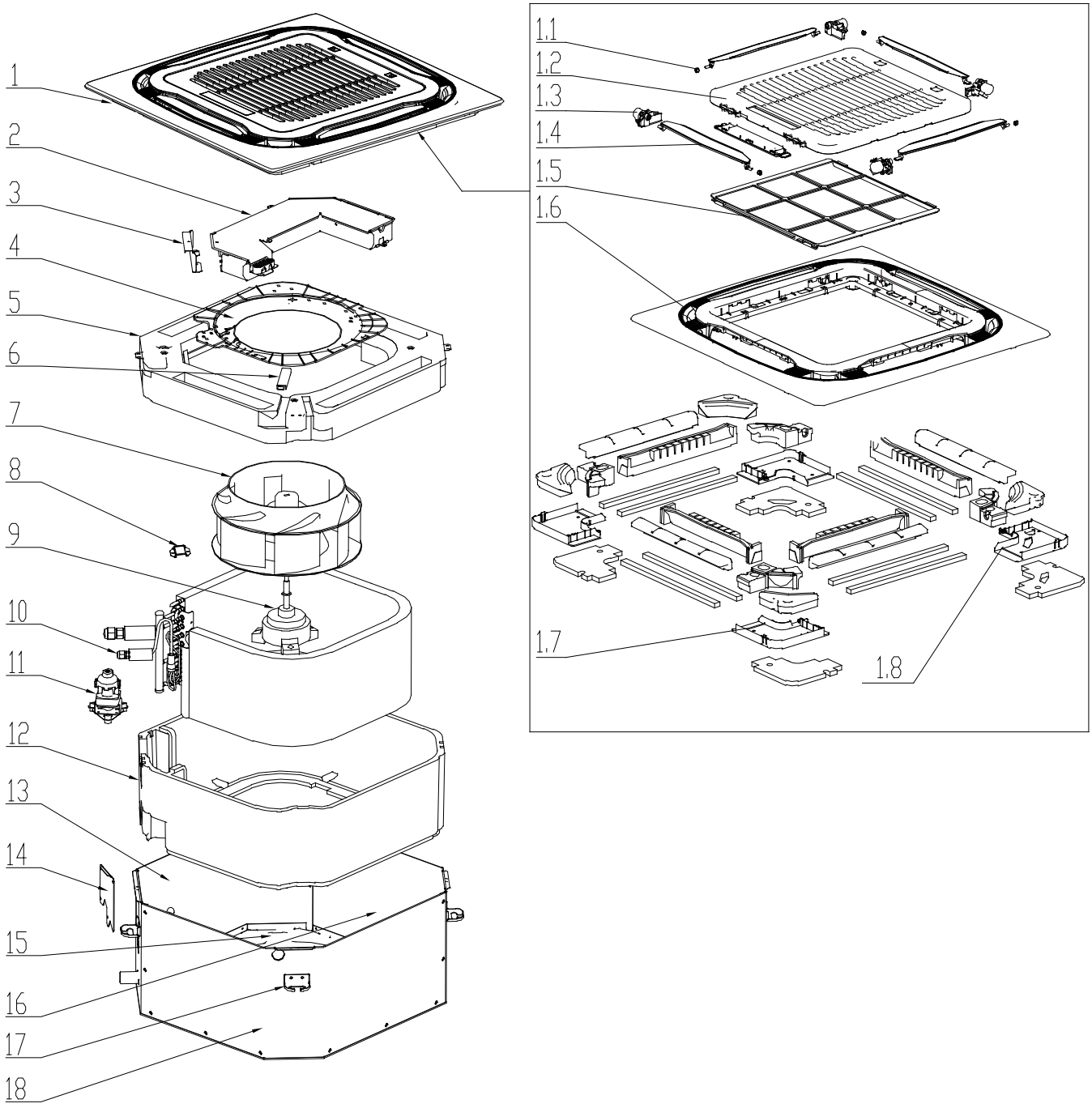
|---|---|---|---|---|
| 13.1 | 底座 | Chassis | 11320001000269 | 1 |
| 13.2 | 水塞 | Stopple | 11333003000009 | 1 |
| 13.3 | 蜗舌 | Air louver | 11320135000026 | 1 |
| 13.4 | 左右扫风叶片 | Left-right swing blade | 11320017000155 | 3 |
| 13.5 | 手动导风连杆 | Manual air guide link | 11320085000106 | 1 |
| 14 | 挂板组件 | Mounting plate assembly | 11221500000029 | 1 |
| 15 | 管路压攀 | Pipe clamp | 11320084000014 | 1 |
| 16 | 导风门步进电机 | Air louver step motor | 11230002000152 | 1 |
| 17 | 步进电机轴套 | Step motor shaft sleeve | 11320079000016 | 1 |
| 18 | 主控制器 | Main controller | 11222003002918 | 1 |
| 18.1 | 电控盒 | Control box | 11320057000066 | 1 |
| 18.2 | 电控盒盖 1 | Cover of electric control box | 11321020000029 | 1 |
| 18.3 | 变压器 | Transformer | 11329009000014 | 1 |
| 18.4 | 主控板 | Main control board | 11222009003568 | 1 |
| 18.5 | 温度传感器 | Temperature sensor | 11329013000103 | 1 |
| 18.6 | 端子板 | Terminal board | 11330037000136 | 1 |
| 18.7 | 电源线抱攀 | Hold the power cord | 11320049000007 | 1 |
| 18.8 | 温度传感器 | Temperature sensor | 11329013000103 | 1 |
| 19 | 电源连接线压线板 | Power wire cable clamp | 11320010000045 | 1 |
| 20 | 负离子发生器 | Negative ion generator | 11330016000018 | 1 |
| 21 | 室内电机 | IDU fan motor | 11230003000136 | 1 |
| 22 | 电机座 | Motor base | 11320127000009 | 1 |
| 23 | 电机压板 | Motor holder | 11320087000030 | 1 |
| 24 | 电机压盖 | Motor cover | 11320052000035 | 1 |
| 25 | 电控盒盖 | Control box cover | 11320058000055 | 1 |
| 26 | 出水管组件 | Outlet pipe assembly | 11220506000009 | 1 |
| 27 | 排水管 | Drain-pipe | 11320020000008 | 1 |

## 2. Cassette

### 09K,12K,18K



| No. | Chinese Name | Part Name | BOM Code | Qty |
|---|---|---|---|---|
| 1 | 面板 | panel | 16108022000017 | 1 |
| 1.1 | 导风门轴套 | Shaft bushing of damper | 16420009000009 | 1 |
| 1.2 | 回风格栅 | air return grille | 16420010000033 | 1 |
| 1.3 | 步进电机 | Motor Assembly | 16320005000042 | 4 |
| 1.4 | 导风条 | Guide the wind vane | 16420007000035 | 4 |
| 1.5 | 过滤网 | Filter net | 16420012000012 | 1 |
| 1.6 | 围框 | panel frame | 16420013000072 | 1 |
| 1.7 | 电机盖板 | Electric cover plate（no air outlet） | 16420014000041 | 2 |
| 1.8 | 电机盖板 | Electric cover plate | 16420014000040 | 2 |
| 2 | 电控总成 | Electric board Assembly | 16321005000024 | 1 |
| 3 | 电控盒 | electric control box C | 16421038000328 | 1 |
| 4 | 导风圈 | Guide solar or lunar halo ABS-FR | 16420004000008 | 1 |
| 5 | 接水盘 | drain pan | 16320005000039 | 1 |
| 6 | 过线夹 | clamp | 16420021000010 | 1 |
| 7 | 风轮 | wind wheel | 16444001000037 | 1 |
| 8 | 压线板 | pressing line plate | 16421008000022 | 1 |
| 9 | 电机 | Fan motor | 16430001000638 | 1 |
| 10 | 蒸发器总成 | Evaporator assembly（09/12） | 16324005000087 | 1 |
| | 蒸发器总成 | Evaporator assembly（18） | 16324005000081 | 1 |
| 11 | 排水泵 | draining pump | 16440001000020 | 1 |
| 12 | 地盘泡沫组件 | Chassis foam unit | 16320005000038 | 1 |
| 13 | 围板 B | Coaming B | 16421010000072 | 1 |

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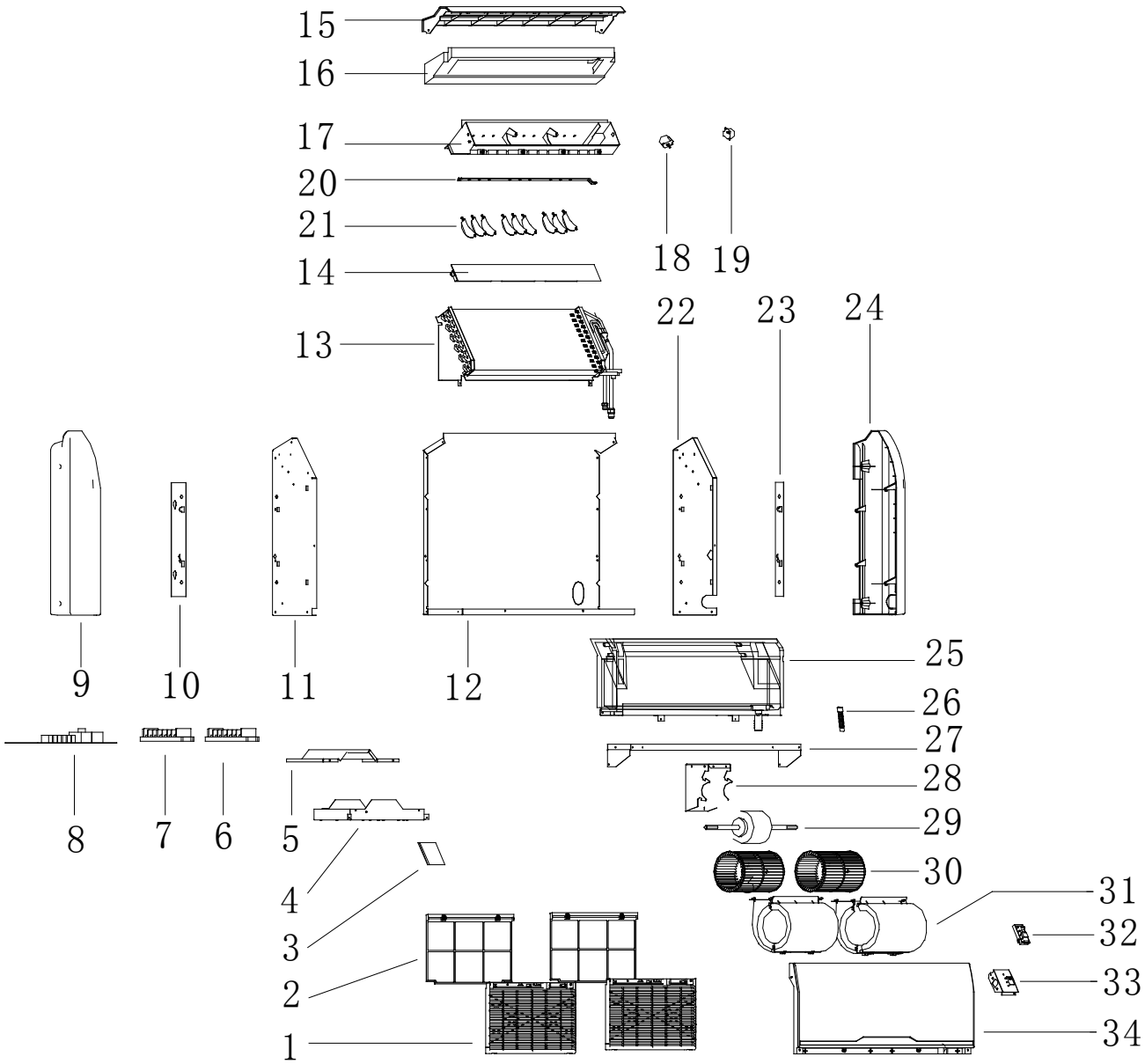
|---|---|---|---|---|
| 14 | 阀板 | Outlet valve plate | 16421014000089 | 1 |
| 15 | 底盘组件 | chassis assembly | 16321001000071 | 1 |
| 16 | 围板 C | coaming C | 16421010000073 | 1 |
| 17 | 挂耳 | Hangers | 16421040000042 | 4 |
| 18 | 围板 A | Coaming A | 16421010000071 | 1 |

## 3. Ceiling Floor

### 09K,12K,18K



## AUX DC Inverter Free Match 50HZ R32

| No. | Chinese Name | Part Name | BOM Code | Qty |
|---|---|---|---|---|
| 1 | 格栅 | air return grille | 16420012000002 | 2 |
| 2 | 滤网 | Filter net | 16420010000002 | 2 |
| 3 | 左装饰板 | Adornment board | 16420015000002 | 1 |
| 4 | 电器盒 | electric control box | 16421038000364 | 1 |
| 5 | 电控盒盖 | Electric cover plate | 16421005000205 | 1 |
| 6 | 端子板 | Terminal plate | 16427001000087 | 1 |
| 7 | 端子板 | Terminal plate | 16427001000064 | 1 |
| 8 | 控制板 | PCB | 11222541000051 | |
| 9 | 左盖板 | Left cover plate | 16420014000007 | 1 |
| 10 | 左挂架 | Left pylons | 16421001000029 | 1 |
| 11 | 左侧板组件 | Left side plate assembly | 16321006000005 | 1 |
| 12 | 背板组件 | chassis assembly | 16421018000004 | 1 |
| 13 | 蒸发器总成 | Evaporator assembly | 16324018000015 | 1 |
| 14 | 导风门 | Guide the wind vane | 16420005000005 | 1 |
| 15 | 顶盖板 | Top cover plate | 16420014000016 | 1 |
| 16 | 顶泡沫 | Top Foam | 16428001000088 | 1 |
| 17 | 导风架 | Holder support | 16420006000007 | 1 |
| 18 | 步进电机 | Motor Assembly | 16430001000604 | 1 |
| 19 | 步进电机 | Motor Assembly | 16430031000001 | 1 |
| 20 | 垂直叶片连杆 A | Vertical vame connecting rod | 16420008000003 | 1 |
| 21 | 垂直叶片 | Vertical blade | 16420007000008 | 9 |
| 22 | 右侧板组件 | Right side plate assembly | 16321006000006 | 1 |
| 23 | 右挂架 | Right pylons | 16421001000030 | 1 |
| 24 | 右盖板 | Right cover plate | 16420014000008 | 1 |
| 25 | 集水盘组件 | Drain pan | 16421002000503 | 1 |

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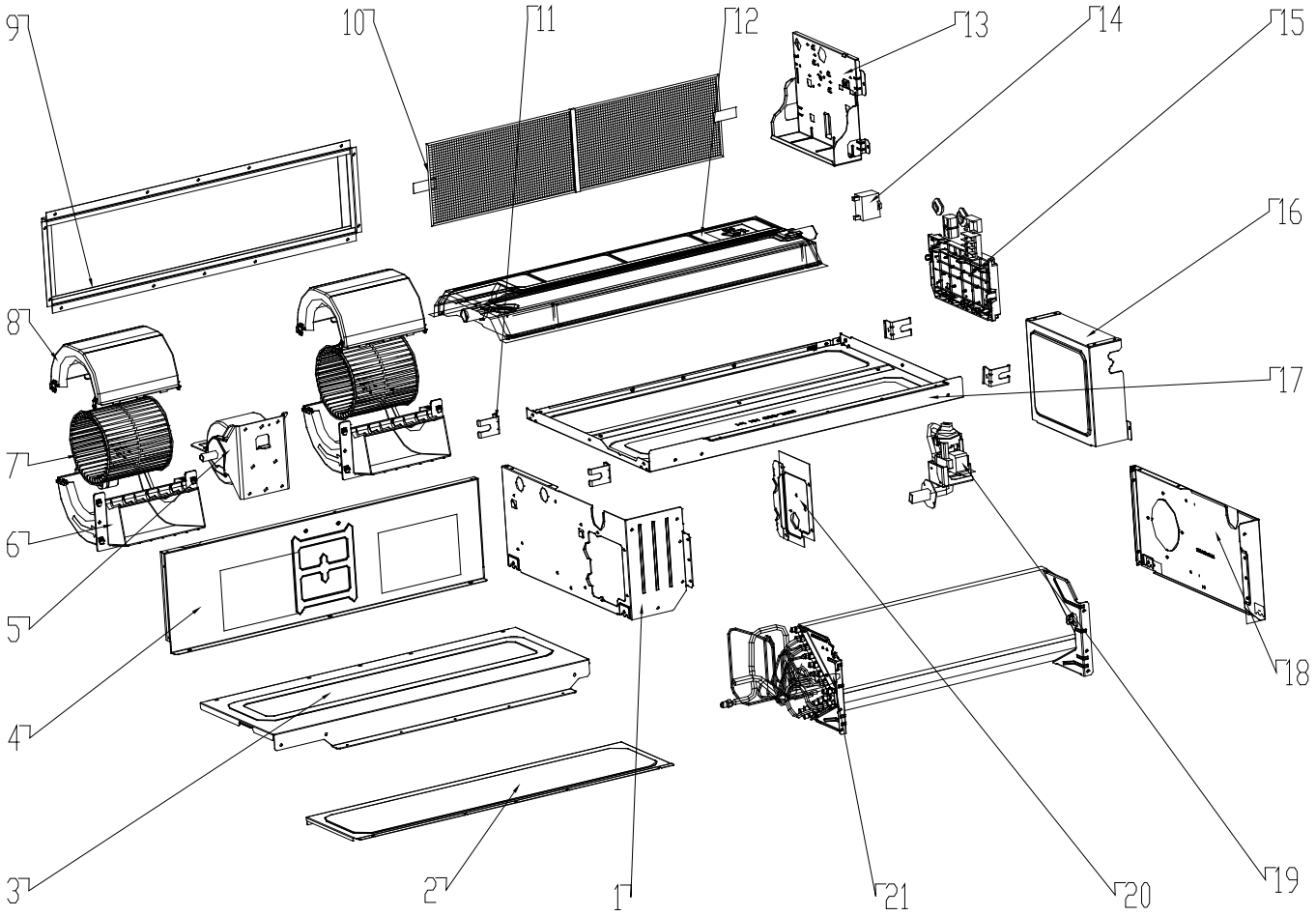
|---|---|---|---|---|
| 26 | 塑料排水软管 | Drain pipe | 16432019000021 | 1 |
| 27 | 电机固定板 | Motor fixing plate | 16421002000190 | 1 |
| 28 | 直流电机架 | Motor support | 16421035000057 | 1 |
| 29 | 直流电机 | Motor | 16430001000504 | 1 |
| 30 | 风轮 | Wind wheel | 16444001000013 | 2 |
| 31 | 上蜗壳 | Upper spiral case | 16444002000014 | 2 |
| | 下蜗壳 | Lower spiral case | 16444002000015 | 2 |
| 32 | R 显示灯板 | Display lamp board | 11222023000333 | 1 |
| 33 | 显示盒 | Display box | 16420017000002 | 1 |
| 34 | 面板 | panel | 16420013000019 | 1 |

## 4. Duct

### 4.1 07K,09K,12K

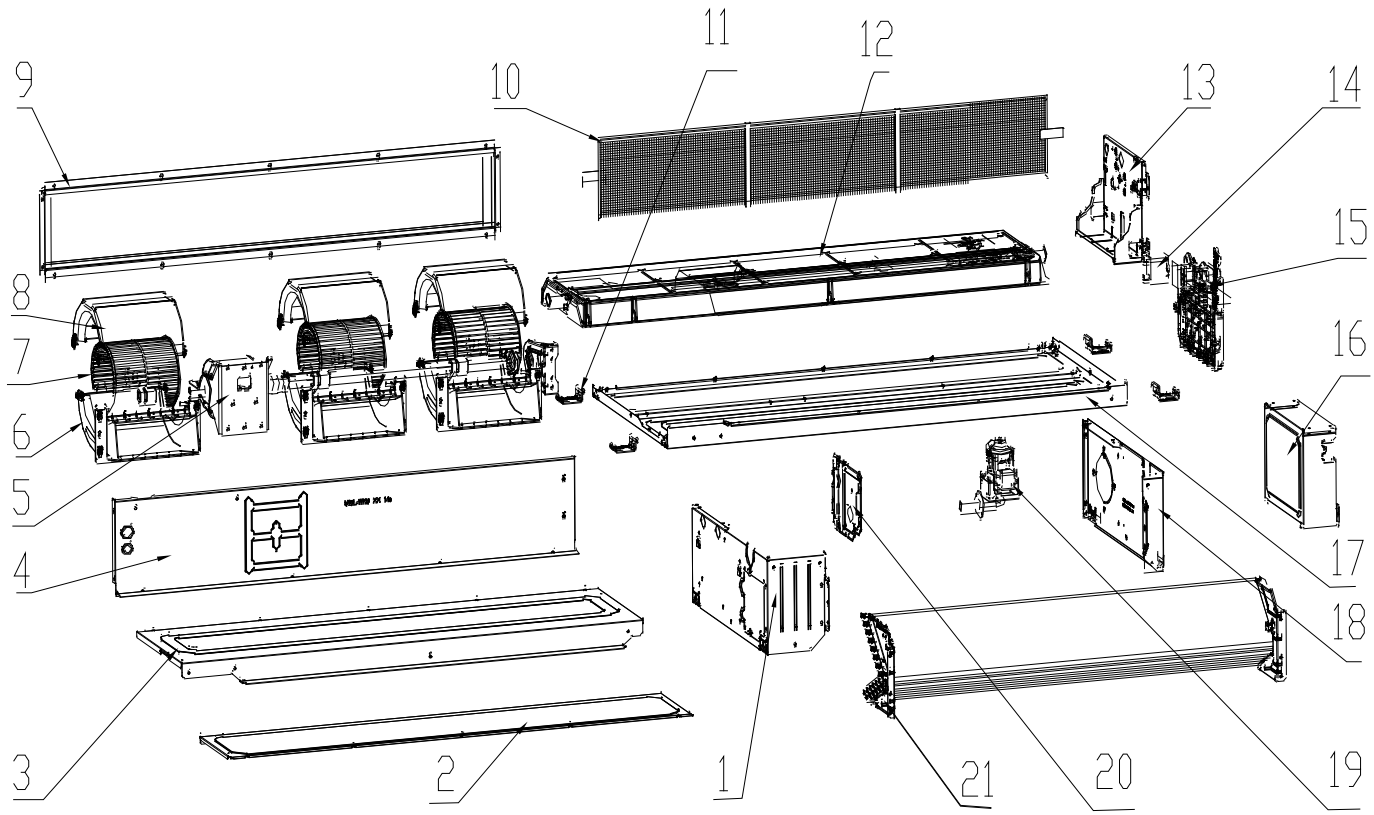
## AUX DC Inverter Free Match 50HZ R32



## AUX DC Inverter Free Match 50HZ R32

| No. | Chinese Name | Part Name | BOM Code | Qty |
|---|---|---|---|---|
| 1 | 右侧板 | Right plate | 16421001000768 | 1 |
| 2 | 底盘 A | Chassis A | 16421005000622 | 1 |
| 3 | 底盘 B | Chassis B | 16421005000619 | 1 |
| 4 | 蜗壳固定板 | Volute mounting plate | 16421002000492 | 1 |
| 5 | 电机支架组件 | Motor support | 16430001000599 | 1 |
| 6 | 下蜗壳 | Lower spiral case | 16444002000023 | 2 |
| 7 | 风轮 | Wind wheel | 16444001000038 | 2 |
| 8 | 上蜗壳 | Upper spiral case | 16444002000022 | 2 |
| 9 | 过滤网框架 | Filter framework | 16444013000125 | 1 |
| 10 | 过滤网 | Filter net | 16444013000125 | 1 |
| 11 | 挂耳 | hangers | 16421040000058 | 4 |
| 12 | 接水盘组件 | Drain pan | 16320009000026 | 1 |
| 13 | 电控盒 | electric control box | 16421038000358 | 1 |
| 14 | R 电解电容 | Capacitor | 11329003000022 | 1 |
| 15 | 控制板 | PCB | 11222541000051 | 1 |
| 16 | 电控盒盖 | Electric cover plate | 16421042000006 | 1 |
| 17 | 顶盖板 | Top cover plate | 16421005000616 | 1 |
| 18 | 左侧板 | Left side plate assembly | 16421001000767 | 1 |
| 19 | 排水泵 | Drain pump | \ | 0 |
| 20 | 阀板 | Outlet valve plate | 16421014000116 | 1 |
| 21 | 蒸发器总成 | Evaporator assembly | 16324018000009 | 1 |

### 4.2 18K

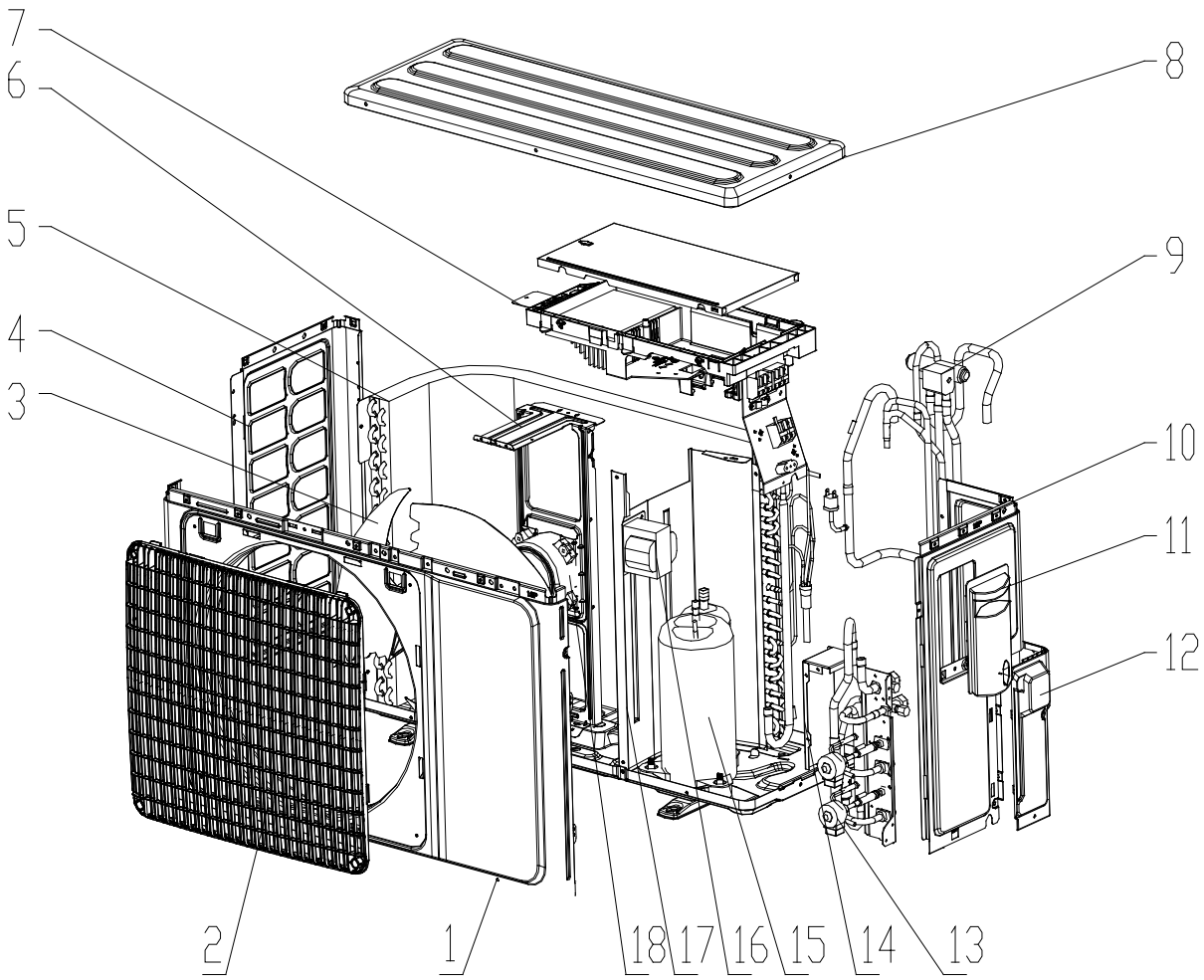


## AUX DC Inverter Free Match 50HZ R32

| No. | Chinese Name | Part Name | BOM Code | Qty |
|---|---|---|---|---|
| 1 | 右侧板 | Right plate | 16421001000768 | 1 |
| 2 | 底盘 A | Chassis A | 16421005000620 | 1 |
| 3 | 底盘 B | Chassis B | 16421005000623 | 1 |
| 4 | 蜗壳固定板 | Volute mounting plate | 16421002000493 | 1 |
| 5 | 电机及支架组件 | Motor support | 16430034000007 | 1 |
| 6 | 下蜗壳 | Lower spiral case | 16444002000023 | 3 |
| 7 | 风轮 | Wind wheel | 16444001000038 | 3 |
| 8 | 上蜗壳 | Upper spiral case | 16444002000022 | 3 |
| 9 | 过滤网框架 | Filter framework | 16321009000335 | 2 |
| 10 | 过滤网 | Filter net | 16444013000126 | 1 |
| 11 | 挂耳 | hangers | 16421040000058 | 4 |
| 12 | 接水盘组件 | Drain pan | 16320009000028 | 1 |
| 13 | 电控盒 | electric control box | 16421038000358 | 1 |
| 14 | R 电解电容 | Capacitor | 11329003000022 | 1 |
| 15 | 控制板 | PCB | 11222541000051 | 1 |
| 16 | 电控盒盖 | Electric cover plate | 16421042000006 | 1 |
| 17 | 顶盖板 | Top cover plate | 16421005000617 | 1 |
| 18 | 左侧板 | Left side plate assembly | 16421001000767 | 1 |
| 19 | 排水泵 | Drain pump | \ | 0 |
| 20 | 阀板 | Outlet valve plate | 16421014000116 | 1 |
| 21 | 蒸发器总成 | Evaporator assembly | 16324018000010 | 1 |

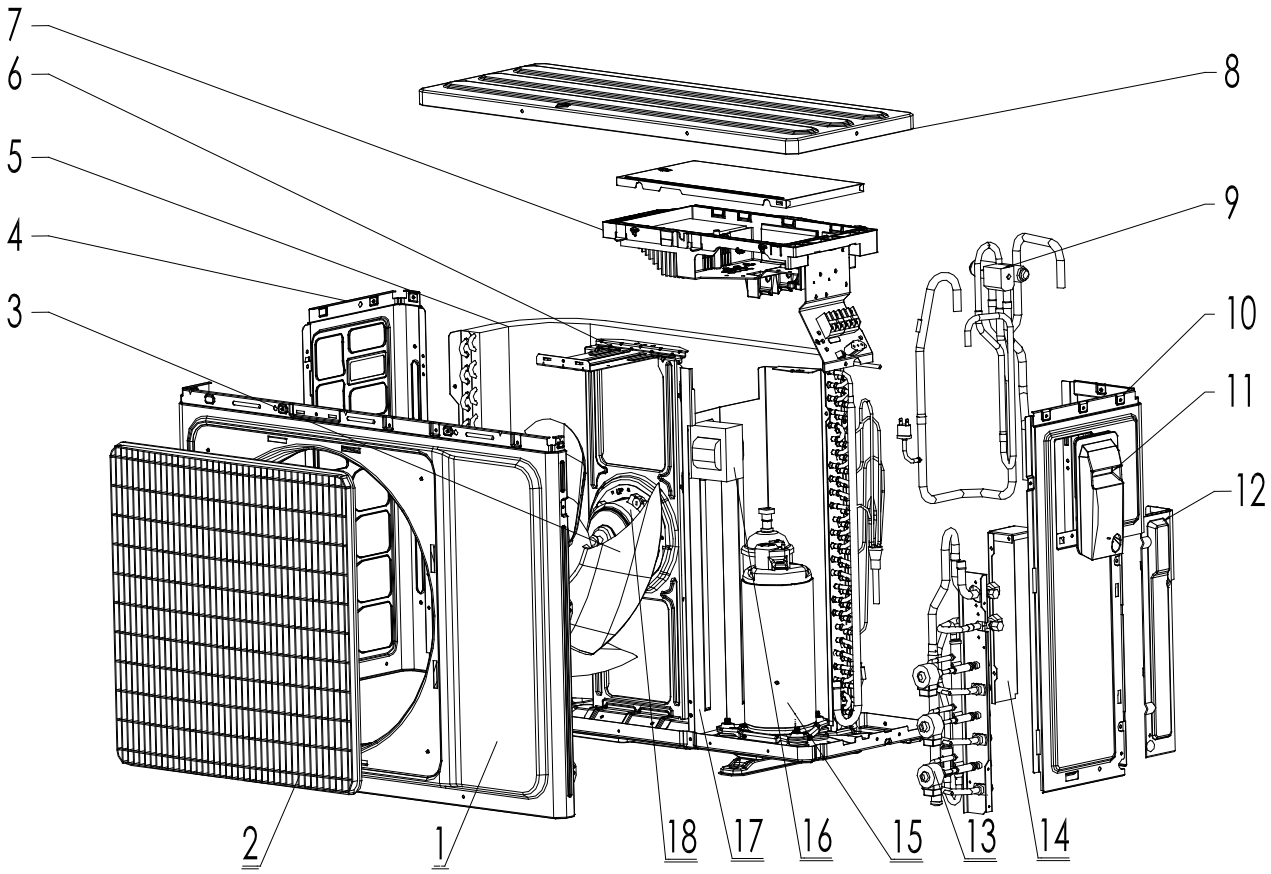
# 5. Outdoor Unit

## 5.1 14K, 18K



| No. | Chinese Name | Part name | Part code | Qty/Per |
|---|---|---|---|---|
| 1 | 前面板 | Front panel | 11321005000107 | 1 |
| 2 | 出风网罩 | Plastic grille | 11320026000061 | 1 |
| 3 | 风叶 | Fan blade | 11320009000063 | 1 |
| 4 | 左侧板 | Left side panel | 16421001000729 | 1 |
| 5 | 冷凝器 | Condenser asm | 16324002000103 | 1 |
| 6 | 电机支架 | Motor bracket | 11321002000040 | 1 |
| 7 | 电控总成 | Electric board asm | 11222550000016 | 1 |
| 8 | 顶盖板 | Top cover | 11321009000057 | 1 |
| 9 | 四通阀 | 4-way valve asm（14） | 16325002000669 | 1 |
| | | 4-way valve asm（18） | 16325002000665 | 1 |
| 10 | 右侧板 | Right side panel | 16421001000757 | 1 |
| 11 | 端子盖 | Electrical cover | 11320068000009 | 1 |
| 12 | 阀盖板 | Check valve cover | 16420014000039 | 1 |
| 13 | 电子膨胀阀 | E-expensivevalve body | 16441014000030 | 2 |
| 14 | 背侧板 | Back side panel | 16421001000758 | 1 |
| 15 | 压缩机 | Compressor（14） | 16438004000119 | 1 |
| | | Compressor（18） | 11223003000331 | 1 |
| 16 | 电抗器 | Resistor | 11330034000020 | 1 |
| 17 | 截止阀盖板 | Mid-bulkhead | 16420014000039 | 1 |
| 18 | 电机 | Fan motor | 11230005000012 | 1 |

## 5.2 21K, 27K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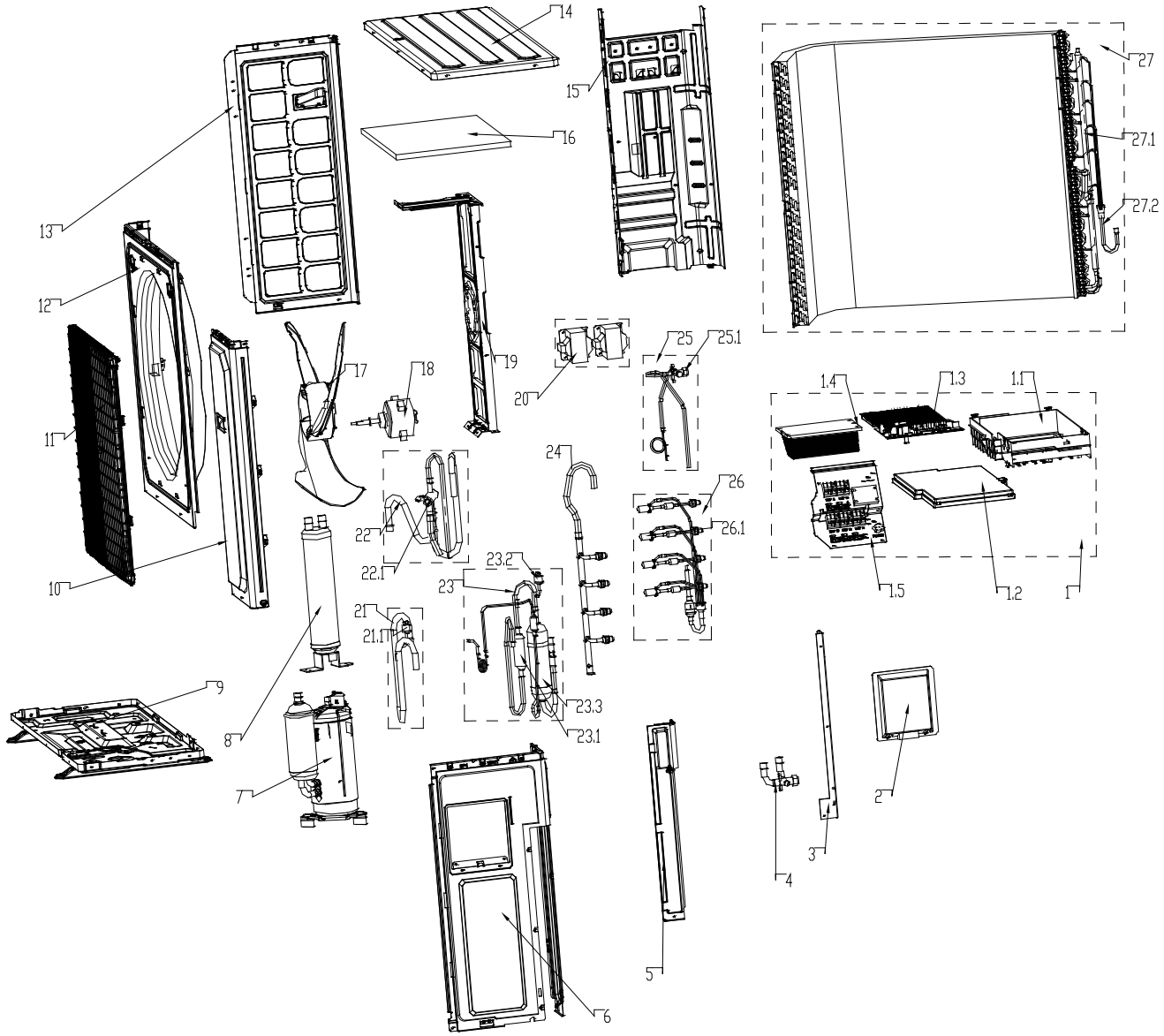
## AUX DC Inverter Free Match 50HZ R32

| No. | Chinese Name | Part name | Part code | Qty/Per |
|---|---|---|---|---|
| 1 | 前面板 | Front panel | 16421004000355 | 1 |
| 2 | 出风网罩 | Plastic grille | 11320026000052 | 1 |
| 3 | 风叶 | Fan blade | 11320009000064 | 1 |
| 4 | 左侧板 | Left side panel | 16421001000736 | 1 |
| 5 | 冷凝器 | Condenser asm | 16324002000102 | 1 |
| 6 | 电机支架 | Motor bracket | 11321002000036 | 1 |
| 7 | 电控总成 | Electric board asm | 11222550000017 | 1 |
| 8 | 顶盖板 | Top cover | 11321009000052 | 1 |
| 9 | 四通阀 | 4-way valve asm（21） | 16325020000020 | 1 |
| | | 4-way valve asm（27） | 16325002000663 | 1 |
| 10 | 右侧板 | Right side panel | 16421001000739 | 1 |
| 11 | 端子盖 | Electrical cover | 11320068000006 | 1 |
| 12 | 阀盖板 | Check valve cover | 16420014000034 | 1 |
| 13 | 电子膨胀阀 | E-expensive valve body | 16441014000030 | 3 |
| 14 | 后背板 | Back side panel | 16421001000753 | 1 |
| 15 | 压缩机 | Compressor（21） | 16438004000120 | 1 |
| | | Compressor（27） | 16438003000044 | 1 |
| 16 | 电抗器 | Reactor（21） | 11330034000012 | 1 |
| | | Reactor（27） | 11330034000016 | 1 |
| 17 | 截止阀盖板 | Mid-bulkhead | 16421016000087 | 1 |
| 18 | 电机 | Fan motor | 11230005000046 | 1 |

## 5.3 36K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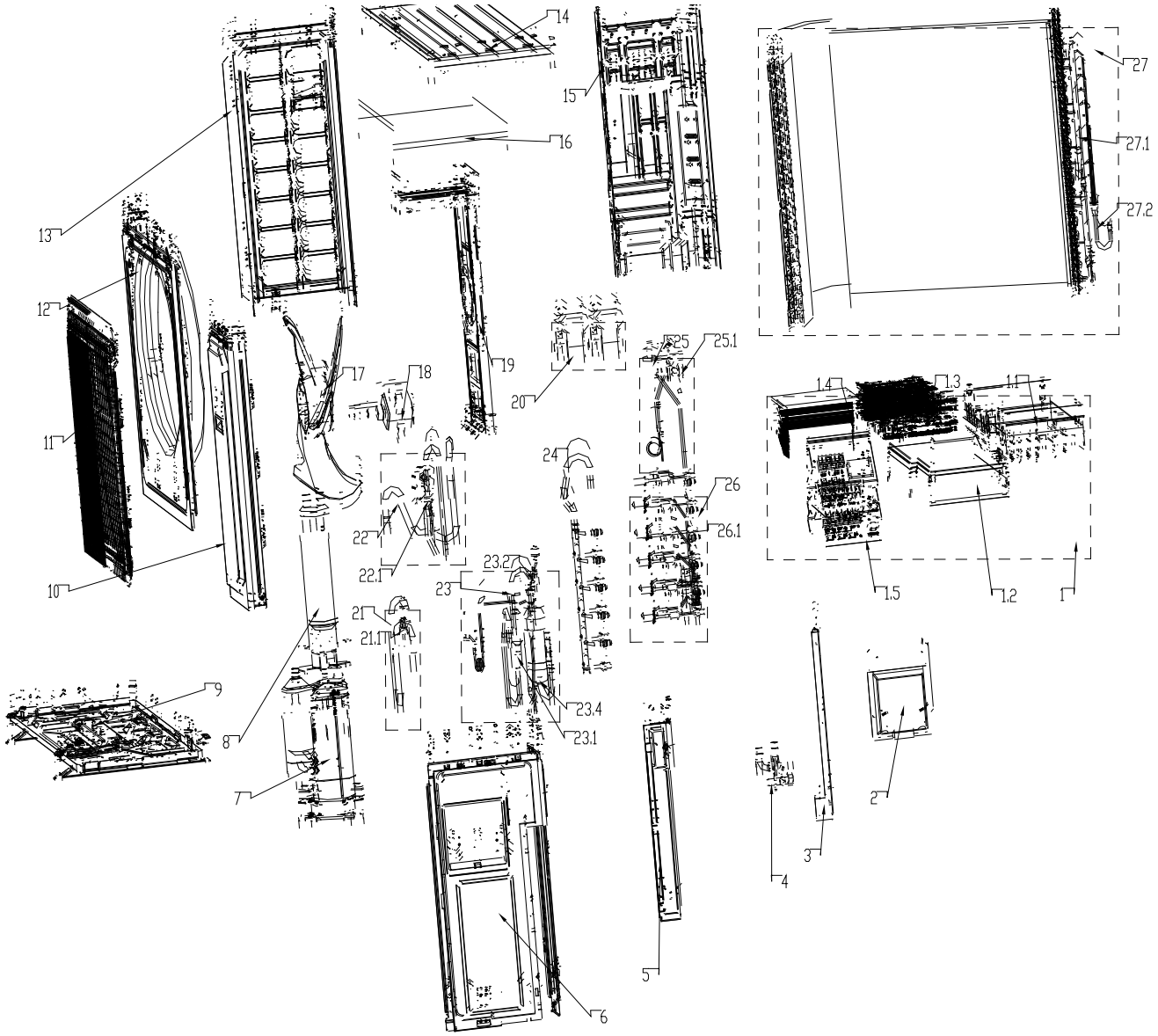
## AUX DC Inverter Free Match 50HZ R32

| No. | Chinese Name | Part name | Part code | Qty/Per |
|---|---|---|---|---|
| 1 | 控制器总成 | Electric board asm | 11222550000021 | 1 |
| 1.1 | 电控盒 | Electric Box | 11320057000110 | 1 |
| 1.2 | 电控盒盖 | Electric Box cover | 11320058000088 | 1 |
| 1.3 | 控制板 | PCB | 11222542000106 | 1 |
| 1.4 | 散热器 | Radiator | 11329031000064 | 1 |
| 2 | 电器盖板 | Electrical cover | 11320068000006 | 1 |
| 3 | 阀板 | valve cover | 16421014000090 | 1 |
| 4 | 截止阀 | Stop Valve | 16441004000088 | 1 |
| 5 | 截止阀护套 | Valve protector | 11320101000044 | 1 |
| 6 | 右侧板 | Right side panel | 11321157000040 | 1 |
| 7 | 压缩机及其附件 | Compressor | 16438004000118 | 1 |
| 8 | 气液分离器 | Liquid Gas Separator | 16442023000051 | 1 |
| 9 | 底盘组件 | Chassis | 16321018000008 | 1 |
| 10 | 小面板 | Small Front panel | 11321005000100 | 1 |
| 11 | 面板网罩 | Plastic grille | 11320026000057 | 1 |
| 12 | 大面板 | Big Front panel | 11321005000099 | 1 |
| 13 | 左侧板 | Left side panel | 11321156000010 | 1 |
| 14 | 顶盖板 | Top cover | 11321009000054 | 1 |
| 15 | 隔风立板 | Separate panel | 11321025000074 | 1 |
| 16 | 顶盖板海绵 | sponge | 11327014000063 | 1 |
| 17 | 轴流风叶 | Fan blade | 11320009000061 | 1 |
| 18 | 直流电机 | Fan motor | 16430033000043 | 1 |
| 19 | 电机架 | Motor bracket | 11321002000038 | 1 |
| 20 | 电抗器 | Reactor | 11330034000012 | 2 |
| 21 | 回气管组件 | Gas pipe | 16325018000028 | 1 |

| | | | | |
|---|---|---|---|---|
| 21.1 | 低压开关 | Low pressure switch | 16442024000005 | 1 |
| 22 | 四通阀组件 | Four way valve | 16325020000032 | 1 |
| 23 | 排气管组件 | Exhaust pipe | 16325017000028 | 1 |
| 23.1 | 消音器 | Silencer | 11325512000011 | 1 |
| 23.2 | 高压开关 | High pressure switch | 16442024000006 | 1 |
| 23.3 | 油分离器 | Oil separator | 16442021000020 | 1 |
| 25 | 截止阀 | Stop valve | 16325033000002 | 1 |
| 26.1 | 电子膨胀阀 | E-expensive valve body | 16441014000030 | 4 |
| 27 | 冷凝器总成 | Condenser asm | 16324020000053 | 1 |

## 5.4 42K


14
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1.1
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1.2
1
9
8
7
23.4
23.1
6
5
4
3
2

## AUX DC Inverter Free Match 50HZ R32

| No. | Chinese Name | Part name | Part code | Qty/Per |
|---|---|---|---|---|
| 1 | 控制器总成 | Electric board asm | 11222550000021 | 1 |
| 1.1 | 电控盒 | Electric Box | 11320057000110 | 1 |
| 1.2 | 电控盒盖 | Electric Box cover | 11320058000088 | 1 |
| 1.3 | 控制板 | PCB | 11222542000106 | 1 |
| 1.4 | 散热器 | Radiator | 11329031000064 | 1 |
| 2 | 电器盖板 | Electrical cover | 11320068000006 | 1 |
| 3 | 阀板 | valve cover | 16421014000090 | 1 |
| 4 | 截止阀 | Stop Valve | 16441004000088 | 1 |
| 5 | 截止阀护套 | Valve protector | 11320101000044 | 1 |
| 6 | 右侧板 | Right side panel | 11321157000040 | 1 |
| 7 | 压缩机及其附件 | Compressor | 16438004000118 | 1 |
| 8 | 气液分离器 | Liquid Gas Separator | 16442023000051 | 1 |
| 9 | 底盘组件 | Chassis | 16321018000008 | 1 |
| 10 | 小面板 | Small Front panel | 11321005000100 | 1 |
| 11 | 面板网罩 | Plastic grille | 11320026000057 | 1 |
| 12 | 大面板 | Big Front panel | 11321005000099 | 1 |
| 13 | 左侧板 | Left side panel | 11321156000010 | 1 |
| 14 | 顶盖板 | Top cover | 11321009000054 | 1 |
| 15 | 隔风立板 | Separate panel | 11321025000074 | 1 |
| 16 | 顶盖板海绵 | Sponge | 11327014000063 | 1 |
| 17 | 轴流风叶 | Fan blade | 11320009000061 | 1 |
| 18 | 直流电机 | Fan motor | 16430033000043 | 1 |
| 19 | 电机架 | Motor bracket | 11321002000038 | 1 |
| 20 | 电抗器 | Reactor | 11330034000012 | 2 |
| 21 | 回气管组件 | Gas pipe asm | 16325018000028 | 1 |

| | | | | |
|---|---|---|---|---|
| 21.1 | 低压开关 | Low pressure switch | 16442024000005 | 1 |
| 22 | 四通阀组件 | Four way valve | 16325020000032 | 1 |
| 23 | 排气管组件 | Exhaust pipe | 16325017000028 | 1 |
| 23.1 | 消音器 | Silencer | 11325512000011 | 1 |
| 23.2 | 高压开关 | High pressure switch | 16442024000006 | 1 |
| 23.3 | 油分离器 | Oil separator | 16442021000020 | 1 |
| 25 | 截止阀接管组件 | Stop valve | 16325033000002 | 1 |
| 26.1 | 电子膨胀阀 | E-expensive valve body | 16441014000030 | 5 |
| 27 | 冷凝器总成 | Condenser asm | 16324020000053 | 1 |

# Part11 Installation

## 1. Preparation

Please buy following spare parts from your local market before installation

| |
|---|
| Hung bolts M12, 4 pcs |
| Drainage pipe PVC |
| Copper connecting pipe |
| Adhesive belt (big size) 5 pcs, (small size) 5 pcs |
| Heat insulation material used to connect copper pipe (PE foam material, its thickness is more than 8mm) |
| Power cable, electrical wire between indoor and outdoor unit(Must be in accordance with the wire diameter in the wiring diagram) |
| Acetylene cylinders, oxygen cylinders (when longer pipe used it should be welded) |
| One set pipe cut machine. (cut copper pipe) |
| Refrigerant cans, electronic balance (when longer pipe used additional gas should be charged) |
| Pressure gauges, pipe clamp, welding torch, 2B silver electrode |
| Wrench 2 pcs, one of them is with adjustable torque wrench<br>(42N.m,65N.m,100N.mm) |
| Nitrogen cylinder (in order to prevent oxidation when welding, using Nitrogen to replace the air) |

## 2. Precaution

◇ Hanging location should be able to support the unit's weight, there should be no increase in noise and vibration. If the hanging location needs reinforcement, it should be reinforced before installation;

◇ Choose the space above the ceiling that can put the indoor unit inside;

◇ The location should be easy for drainage;

◇ The unit should not be installed in the heat source, steam or oil mist source (such as machine room, kitchen, laundry room, mechanical workshop, etc.);

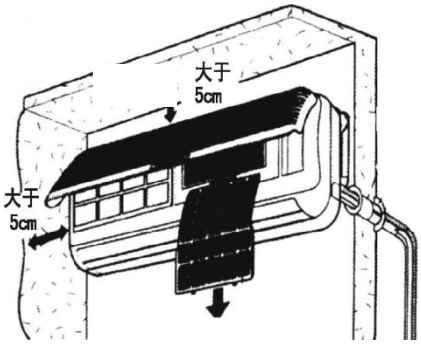
◇ Choose the location at least 1 meter away from TV and radio, in order to avoid interference to them

◇ There should be certain distance between indoor unit and obstacles for maintence;

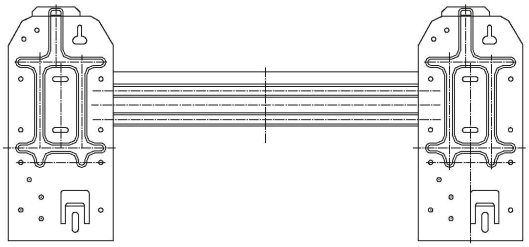
◇ In case of leakage of refrigerant, units should immediately stop running, and contact with maintenance personnel in time. There must be no fire at the site, because the refrigerant will turn to harmful gas when get to the fire.

# 3. Wall Mounted

## 3.1 Spacing Reserved




## 3.2 Hoisting of Indoor Unit



◇ The wall for installing indoor unit should be firm to prevent vibration. Horizontally install hanging plate on the wall with four cruciform *screws* to keep laterally horizontal and longitudinally vertical.

◇ Drill a Φ70 Auxiliary pipeline hole on lower left side or lower right side of hanging plate. The position of hole should slightly incline downwards.

◇ Hang indoor unit on hanging plate and move the unit to left or right to ensure hanging hook is correctly positioned on the hanging plate.

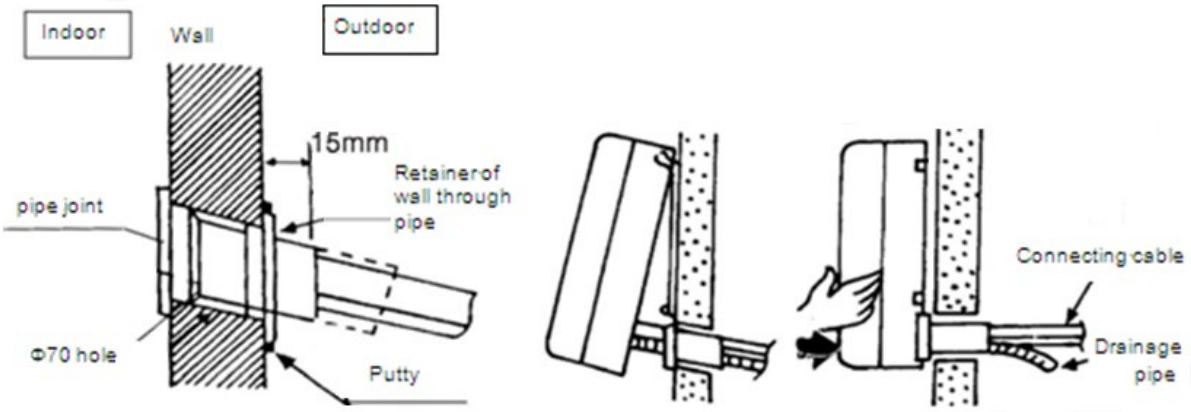
## 3.3 Installation of Sterilization Net

◇ Uplift panel of indoor unit, pull out the bulge in the middle of air filter downwards after uplifting;

◇ Completely snap sterilization net inside accessory bag into sterilization mounting support on air filter;

◇ Put back air filter in the original way, close the panel of indoor unit and tightly clamp;

◇ Push the lower left side and lower right side of indoor unit towards hanging plate until hanging hook inserts into groove and sends click sound.




### 3.4 Drainage Checking

In case of maintenance, remove grille from casing of the unit according to the following procedures:

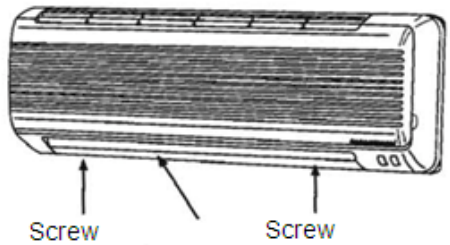
◇ As shown in right diagram, remove two screw caps on both sides of the front grille and then screw down two fixing screws.

◇ Pull the lower end of grille cover towards oneself to remove it.

◇ Reinstall grille cover, then install the grille cover to proper position according to the reverse sequence of the above.

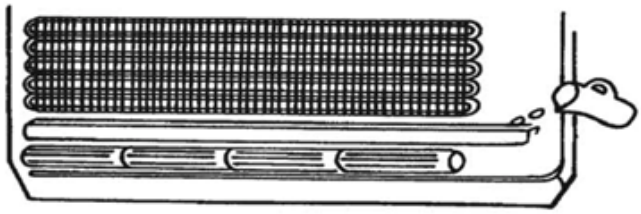
◇ Pour a glass of water into plastic drainage groove;

◇ Confirm if the water flows through the drainage outlet of indoor unit.





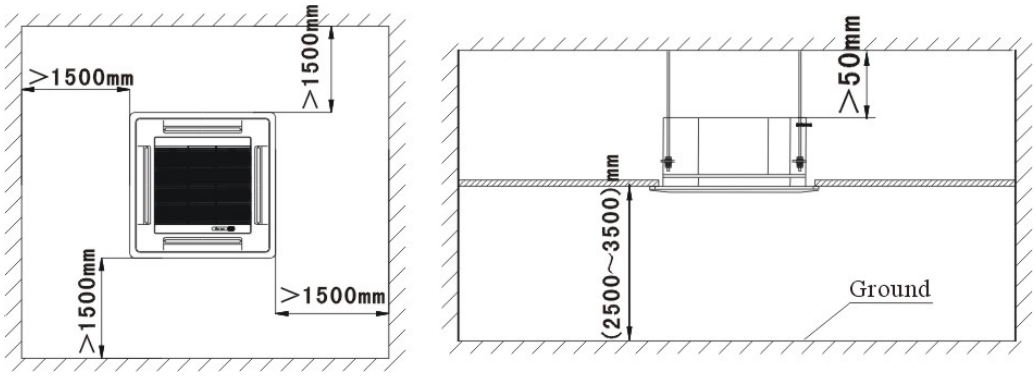
Pull the lower end of front grille towards oneself to remove the front grille

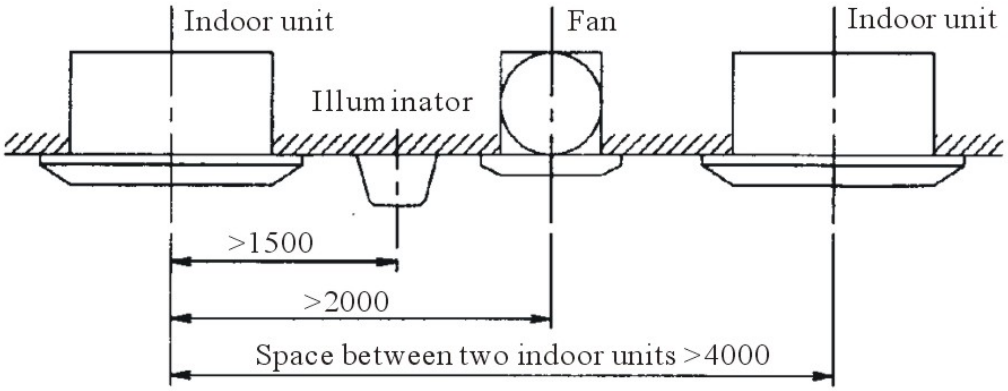


# 4. Cassette

## 4.1 Installation drawing

## 4.2 The distance between indoor unit and obstacle






### 4.3 Indoor unit suspension

◇ Select the suspension foundation:

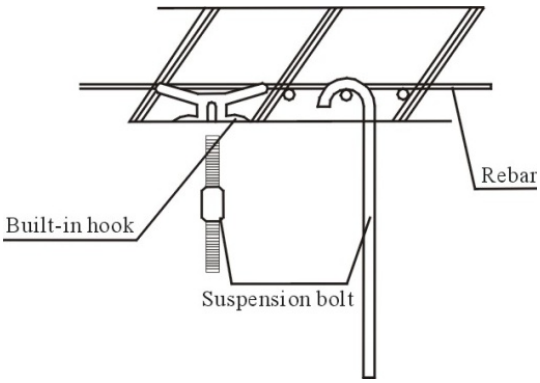
The suspension foundation is a structure of either wooden frame or reinforced concrete. It must be

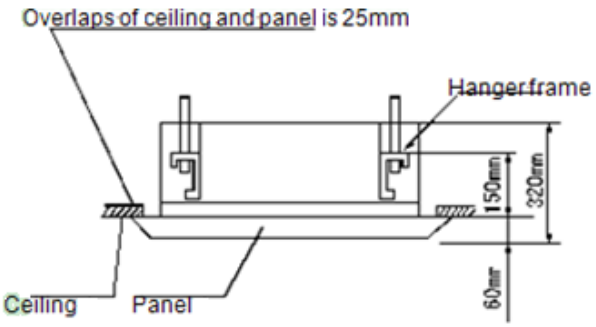
firm and reliable to bear at least 4 times weight of itself and capable of bearing vibration for long

periods.

◇ Fixing of suspension foundation:

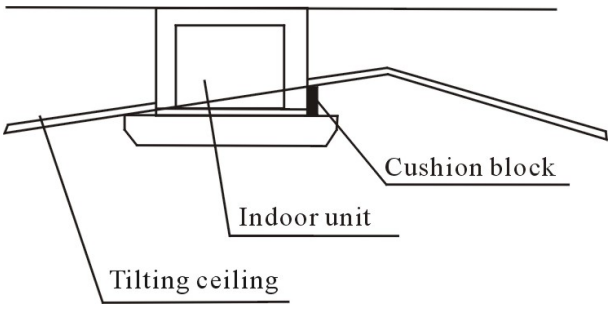
◇ Fix the suspension bolts either as shown in the picture or by a steel or wooden bracket.




◇ If this unit is installed on a sloping ceiling, a cushion block should be installed between the ceiling and the air outlet panel, in order to ensure that the unit is installed on a level surface.

This is as shown in the drawing as follows:

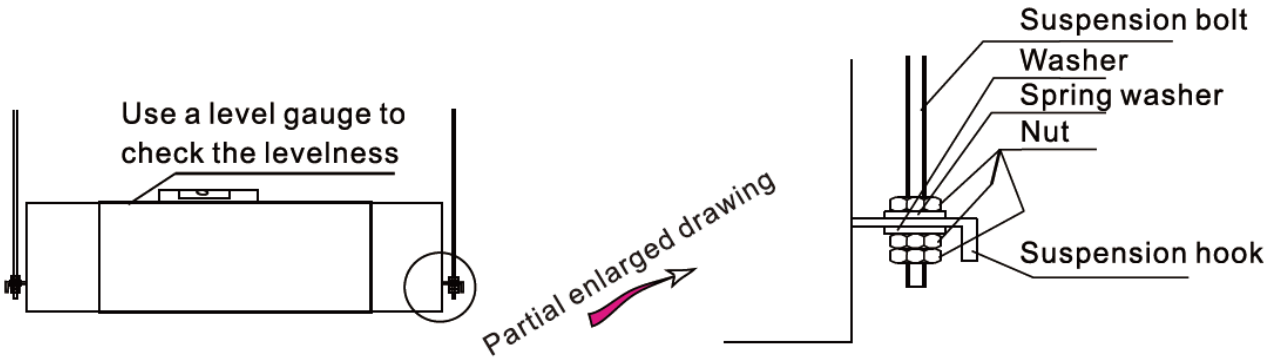



◇ Adjust the relative position of the suspension hook on the suspension bolt so that the unit can be in level position in all directions. Check with a level gauge after installation to ensure that the indoor unit is horizontal, otherwise it will cause water leakage, air leakage etc.

◇ Tighten the bolt and ensure that four hooks are in close contact with the nuts and washers, to fix the indoor unit under the ceiling.

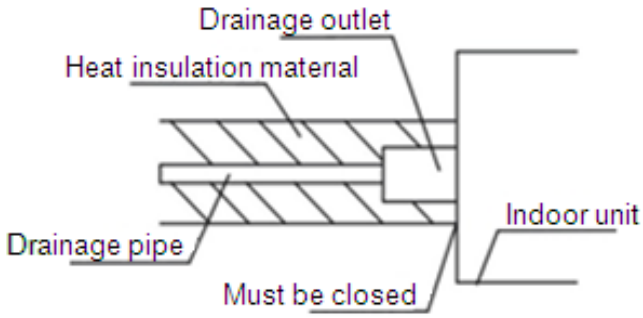
◇ After the unit is installed ensure it is secure and does not shake or sway.

◇ Ensure that the center of the indoor unit is in alignment with the center of the opening in the ceiling.

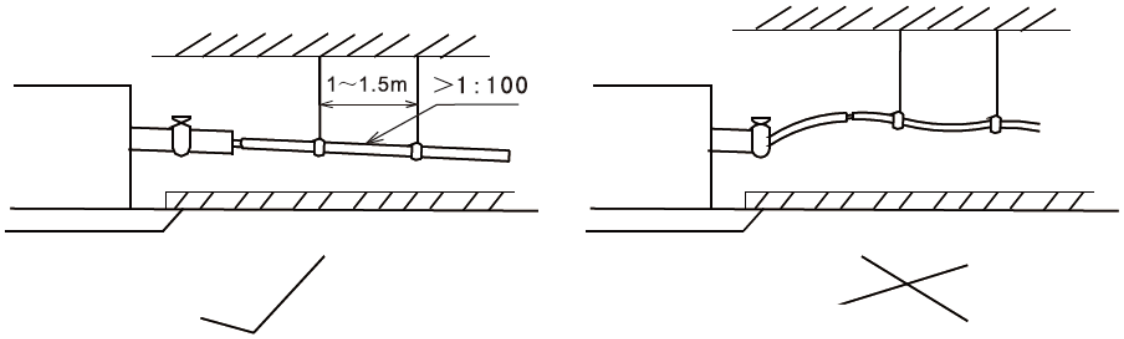



### 4.4 Drainage pipe installation

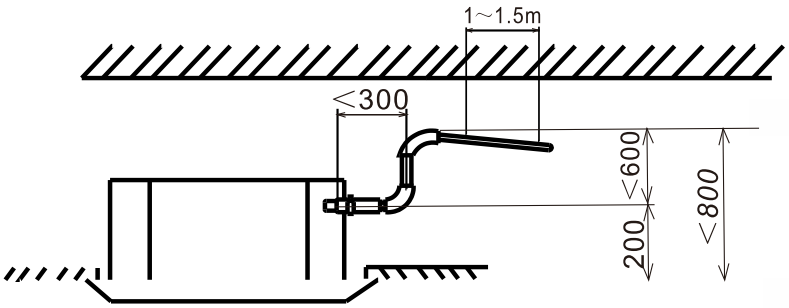
The drainage pipe should be properly insulated to prevent the generation of condensation. Heat insulation material: the thickness of rubber insulation pipe should be more than 8mm




◇ Drainage pipe must have a downward gradient (1 / 50 1 / 100) to avoid water backflow or leakage etc.

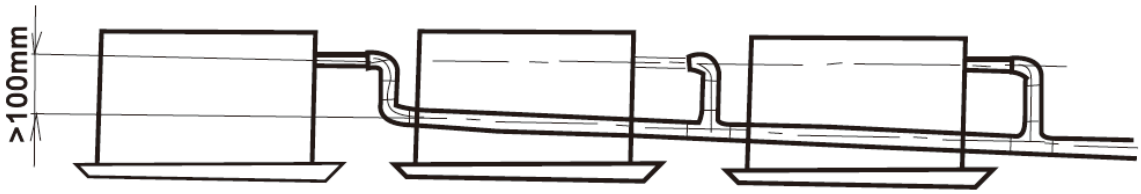



◇ The unit has a drain pump which will lift up to 700 mm. However after the pump stops the water left in the pipe will drain back and may overflow the drain tray causing water leakage. For this reason please install the drain pipe as shown




Unit: mm

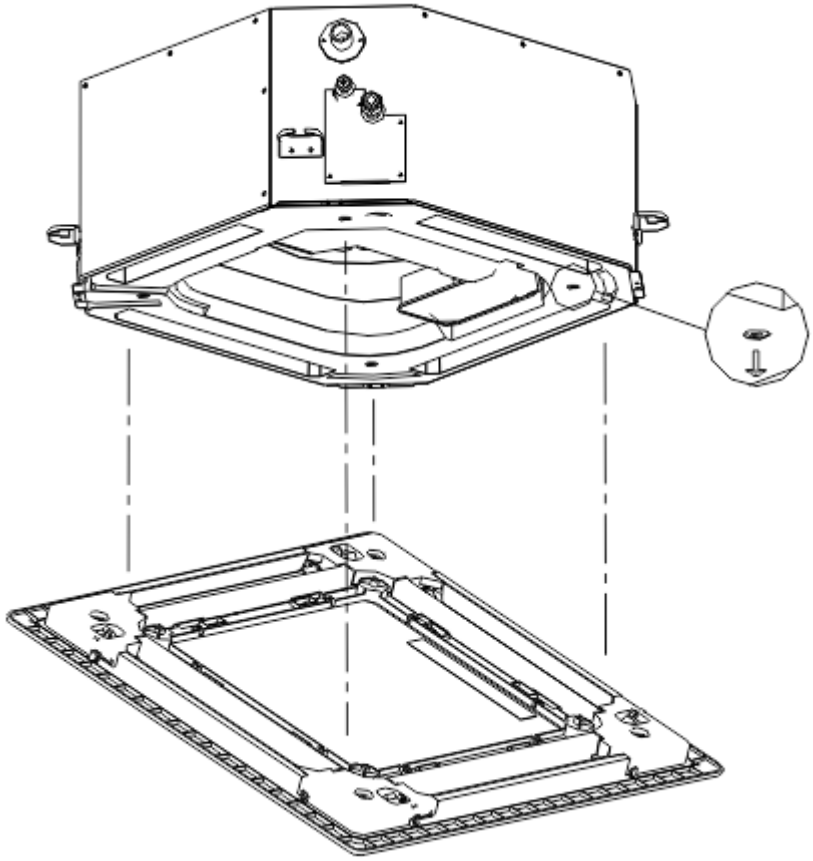
◇ When draining multiple units into a common drain line, this common drain should be installed about 100mm below each units drain outlet, as shown in the drawing.




◇ When finish installation please carry out the drainage test to ensure that the water flow through the pipeline fluently, and carefully observe the junction to ensure that there is no water leakage. If the unit is installed in the newly built house, strongly recommend that this test taken before the ceiling installation. Even it is the heating only unit, this test is unavoidable.

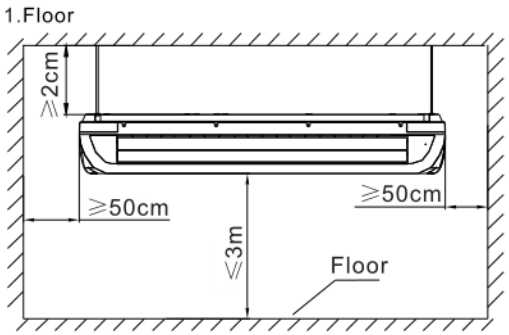
### 4.5 Panel installation

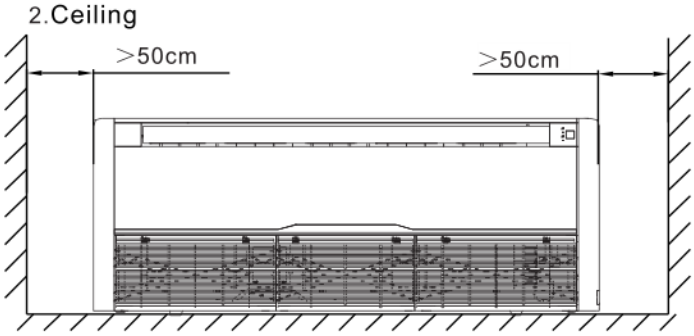
As to the MB13 panel please refer to the following picture, the panel has four hooks which attach to corresponding hangers on the unit and the panel should be positioned using these first. The panel is then fixed into position by four bolts which are accessed through the four corner panels on the grille.



# 5. Ceiling Floor

## 5.1 Installation spacing



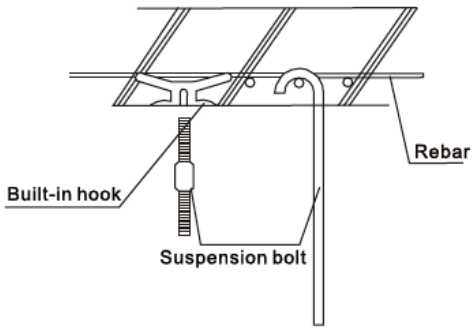

## 5.2 Indoor unit suspension

◇ Select the suspension foundation

◇ The suspension foundation is a structure of either wooden frame or reinforced concrete. It must be firm and reliable to bear at least 4 times weight of itself and capable of bearing vibration for long periods;

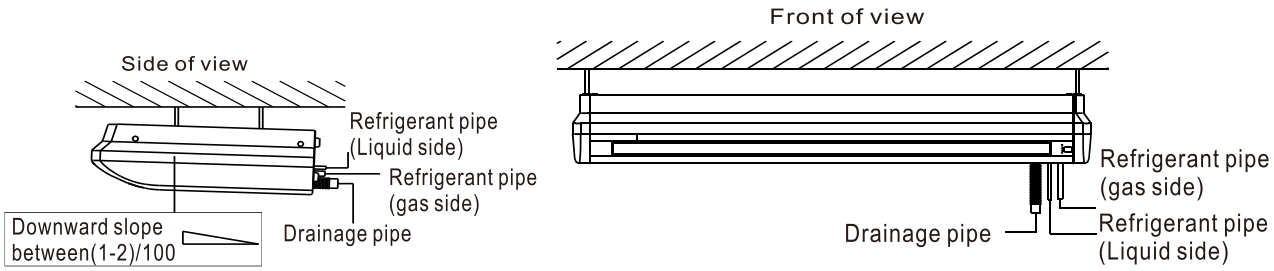
Fixing of suspension foundation

◇ Fix the suspension bolts either as shown in the picture or by a steel or wooden bracket;




◇ Adjust the relative position of the suspension hook on the suspension bolt so that the unit can be in level position in all directions. Check with a level gauge after the installation is complete in order to ensure that the indoor unit is horizontal, otherwise it will cause water leakage, air leakage

etc.



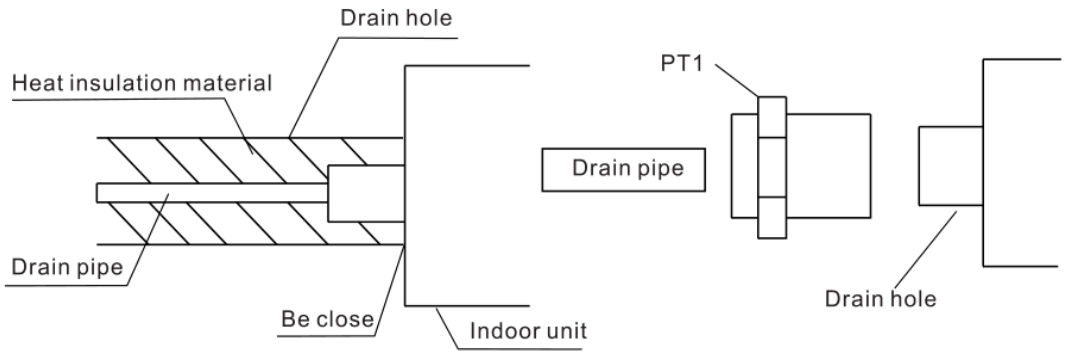

◇ Tighten the bolt and ensure that four hooks are in close contact with the nuts and washers, and the

unit is suspended firmly and reliably onto the hooks.

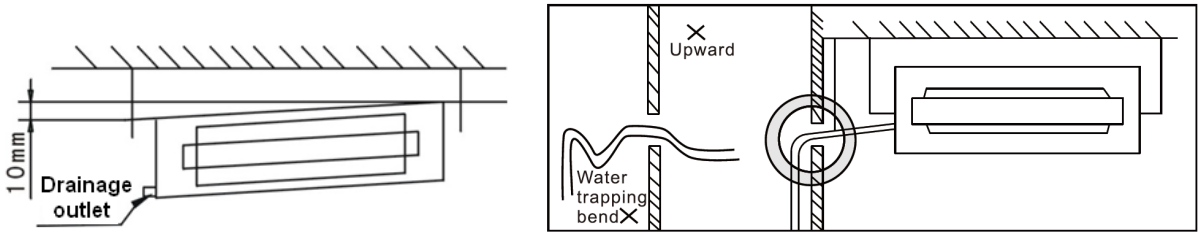
◇ After the unit is installed ensure it is secure and does not shake or sway.

### 5.3 Drainage pipe

The drainage pipe should be properly insulated to prevent the generation of condensation. Heat insulation material: the thickness of rubber insulation pipe should be more than 8mm



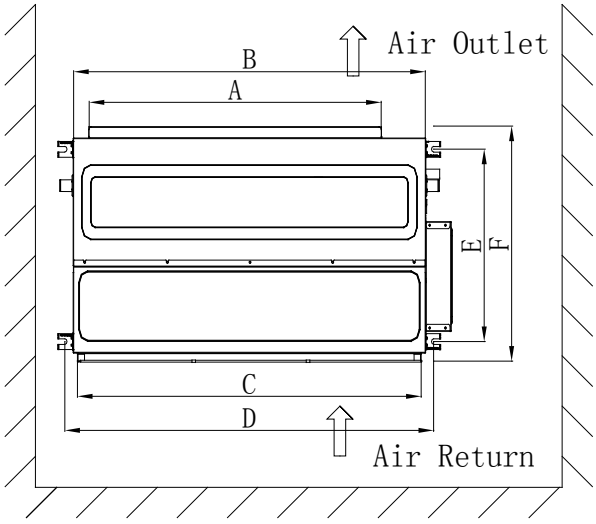

◇Drainage pipe must have a downward gradient (1 / 50 1 / 100).T avoid water backflow or leakage etc.

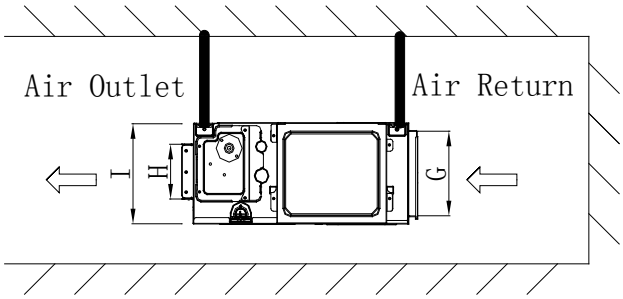


◇When finish installation please carry out the drainage test to ensure that the water flow through the pipeline fluently, and carefully observe the junction to ensure that there is no water leakage at the junction. If the unit is installed in the newly built house, strongly recommend that this test taken before the CFiling installation. Even it is the heating only unit, this test is unavoidable.

# 6. Duct

## 6.1 Installation spacing



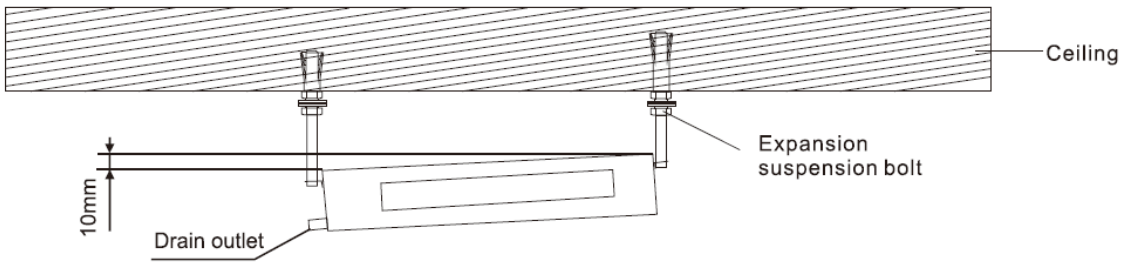

| Model | A( mm ) | B ( mm ) | C ( mm ) | D ( mm ) | E ( mm ) | F ( mm ) | G( mm ) | H( mm ) | I ( mm ) |
|---|---|---|---|---|---|---|---|---|---|
| 07K<br>09K<br>12K | 583 | 700 | 684 | 734 | 383 | 470 | 168 | 110 | 200 |
| 18K | 832 | 1000 | 977 | 1048 | 383 | 470 | 168 | 110- | 200 |

## 6.2 Indoor unit suspension

**Warning :**

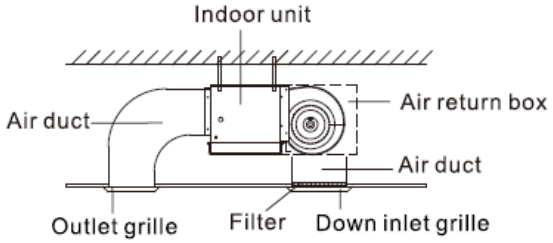
Must seriously fasten bolts and nuts. The loosening would lead to air conditioner falling and so on.

As shown, the indoor unit should be leaning to the drain hole to be convenient for drainage.

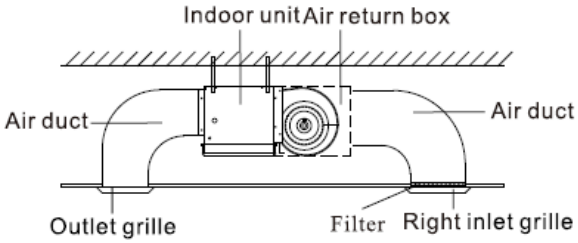



### 6.3 Installation of duct

There are two installation methods of duct ,as follow.




A




B

### 6.4 Drainage pipe

- The drainage pipes should have good insulation measures. The specific steps are as follows:

a) The drainage hoses should be tightly clambed with the inner water outlet and the drainage pipe respectively, then fix with a hoop , as shown in Fig1

b) Wrap the heat insulation cotton on the drain insulation pipe and the hoop , as shown in Fig 2

c) Tighten the sponge with a bandage , as shown in Fig3

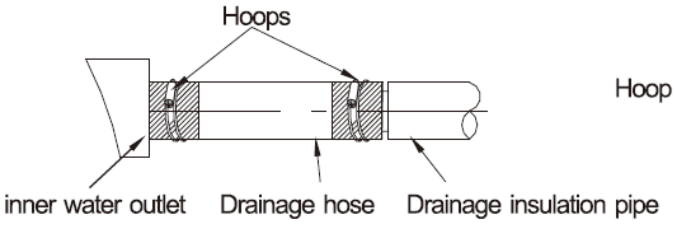



Fig ①

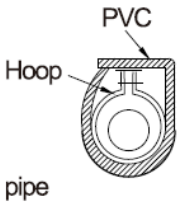



Fig ②

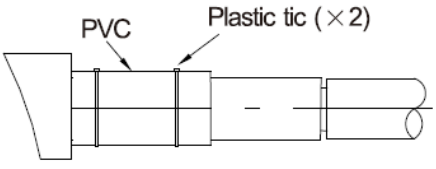


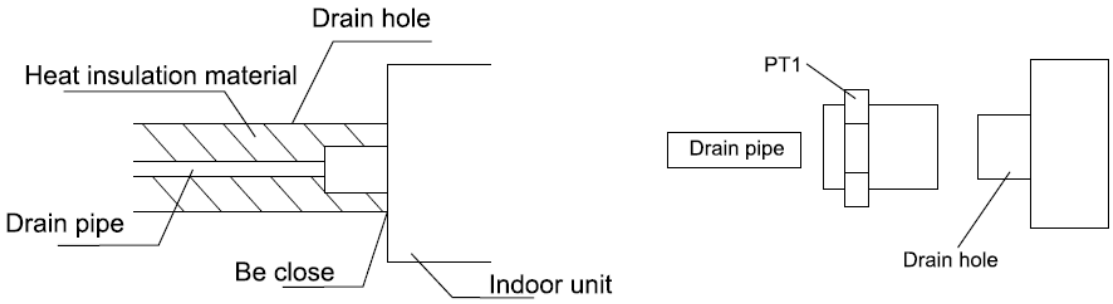

Fig ③

The drain pipe must have a downward gradient(1/50-1/100).

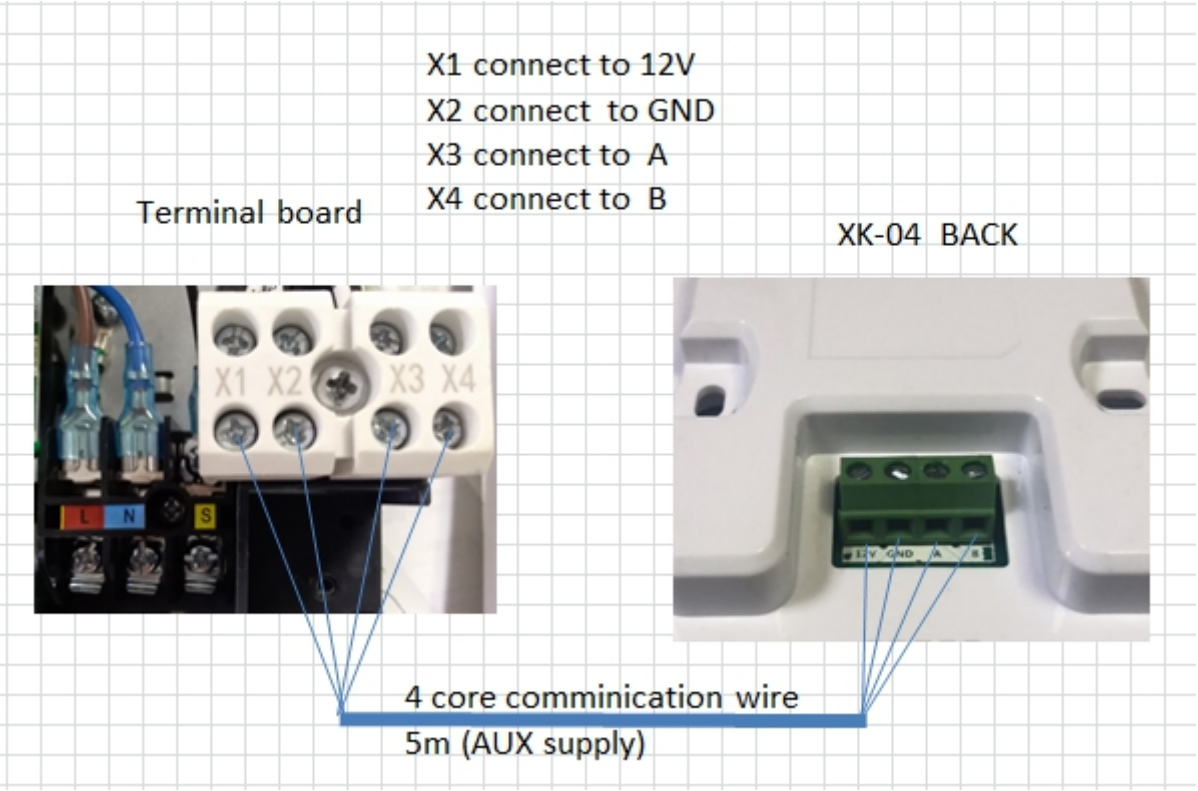
- If the drain pipe is installed ups and downs or upward,it will lead to water back flow or leakage etc.
- During pipe connection, do not use too much force to the drain joint of indoor unit.
- The joint is PT1.
- There is a drain hole on each side of indoor unit;unused drain pipe must be closed.

**Note :** The drain pipe must be wrapped heat insulation material, otherwise it will cause condensation or water drops.

Heat insulation material: rubber insulation pipe with thickness more than 8mm.




## 6.5 wired control connection


X1 connect to 12V
X2 connect to GND
X3 connect to A
X4 connect to B
Terminal board
XK-04 BACK
X1 X2 X3 X4
L N S
4 core comminication wire
5m (AUX supply)

# 7. Outdoor Unit

## 7.1 Installation location

◇The site shall be strong enough to bear its weight, prevent noise and vibration.

◇The site shall be ensured to avoid direct sunshine, if necessary set a Havelock above the outdoor unit.

◇The site shall be easy to drainage the rain water and the frost water.

◇The site shall be ensured that the outdoor unit will not be covered by snow LD ring the winter season.

◇The site shall be ensured that the outlet is not facing the strong wind.

◇The site shall be ensured that outlet air and operation noise will not affect the neighbors' daily life.

◇The site shall be ensured that the outdoor unit will not be affected by the garbage and oil mist.

**Warning:**

If outdoor unit working under such environment which contains oil (including machine oil) salt(marine areas), sulfide gas (hot springs and oil refinery areas), those substance may lead to the failure work of the outdoor unit.

## 7.2 Maintenance and ventilation space

◇The site shall be easy for ventilation then the outdoor unit can inhale and discharge air easily. What's more please reserve enough space for maintenance.

**Note: Require A＞300mm; B＞1500mm; C＞300mm; D＞500mm;**

### 7.3 Installation Foundation

◇Use size M10 bolt and nut to fasten the outdoor unit tightly on the bracket, keep it in the horizontal level. The suitable length for bolt shall 20mm over the base level, in order to minimize vibration please do set a rubber shock absorber.


◇If the outdoor unit is mounted on the wall or on the rooftop, in order to prevent earthquake and strong wind please fasten it as tightly as possible.

◇Set a drainage channel to ensure the condensing water can drain out smoothly.

◇Avoid that only four angles metal sheet to support the outdoor unit.

**Transport**

When the outdoor unit is to be lifted, please use two slings longer than 8m and insert cushioning material between the slings and outdoor unit to avoid damaging the casing.

## 8. Connection piping installation

### 8.1 Piping installation precaution

Please choose copper pipe as the piping.

◇If the piping installation needs welding:

Please welding before fasten the nut, when welding using nitrogen gas to replace the air in the pipe in order to prevent oxidation.

◇If there are many points to be welded ,please set a filter in the pipe(buy from local market)

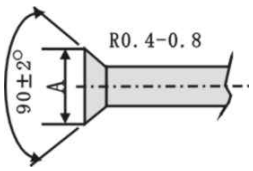
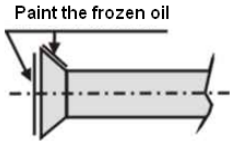
◇Please use nitrogen gas or air to remove the dust and water in the pipe,

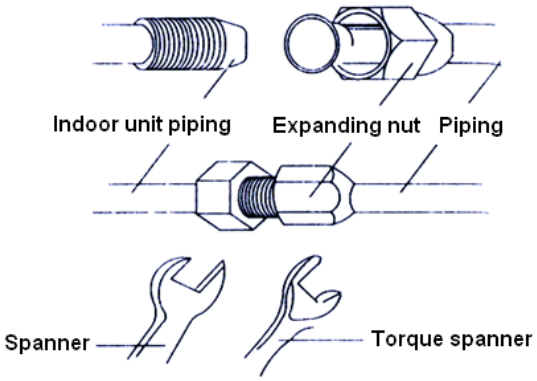
◇Please lay out the piping according to the trend towards of the piping, but it is not allowed more than 3 times curved at the same point of the pipe(if do like this the pipe will become rigid)

◇When using pipe bending machine, the curvature shall not be too small or it will affect the refrigerant flow.

### 8.2 Piping specification selection

As to the detail selection please take reference to the cooling capacity adjust index figure during different installation situations.

| Piping diameter | Tighten torque | Expanding size (A) | Expanding shape | Paint the frozen oil |
|---|---|---|---|---|
| 1/4in(φ6.35mm) | 15-19(N·m) | 8.3-8.7mm |  |  |
| 3/8in(φ9.52mm) | 35-40(N·m) | 12.0-12.4mm | | |
| 1/2in(φ12.7mm) | 50-60(N·m) | 15.4-15.8mm | | |
| 5/8in(φ15.88mm) | 62-76(N·m) | 18.6-19.0mm | | |
| 3/4in(φ19.05mm) | 70-75(N·m) | 22.9-23.3mm | | |




### 8.3 Piping connection

◇Using expanding machine to expand accessories, the size of horn shown in the above figure:

◇Paint a thin layer of frozen oil at both inside and outside part of the expanding.

◇Make the expanding right to the screw thread shape connection of the indoor unit, using hands to tighten the nut then using a wrench to tighten the nut again.

◇Take out the cover of the indoor unit gas valve and liquid valve, make the expanding right to the stop valve of outdoor unit, using hands to tighten the nut then using a wrench to tighten the nut again.

**Equivalent pipe length conversion**

Equivalent pipe length means converting pipe elbow to straight pipe length after considerate the pressure loss.

Elbow and Oil loop conversion tablet

| Type / Pipe Dia.(mm) | Bend | Oil Loop |
|---|---|---|
| 6.35 | 0.10 | 0.7 |
| 9.52 | 0.18 | 1.3 |
| 12.70 | 0.20 | 1.5 |
| 15.88 | 0.25 | 2.0 |
| 19.05 | 0.35 | 2.4 |
| 22.02 | 0.40 | 3.0 |

Equivalent pipe length L＝Actual Pipe length L+ Bend Qty× Equivalent pipe bend length+ Oil Loop Qty× Equivalent Oil Loop length

**Sample:**

AMCA-H09/4R3AActual Pipe length is 25 meters, Gas pipe diameter is 9.52mm. If there's 5 bends and 2 oil loops during the installation, then the equivalent pipe length should be:

L=25+0.18×5+1.3×2=28.5(m)

## 9. Emptying or vacuum

Before charging the refrigerant to the system, to ensure that there is no impurities, water or non-condensable gas. So, emptying and vacuum operation should be carried out.

◇Vacuum: When process this operation please makes sure that the connection pipe is tightened up.

1. Screw off the cover of maintenance valve connection, connect the pressure gauge to the connection of maintenance valve

2. Connect the vacuum pump to the pressure gauge; turn on the vacuum pump and pressure gauge to process the vacuum operation toward the indoor unit and piping, while to ensure that the

absolute pressure is no less than 50Pa after this operation.

3. Turn off the pressure gauge and vacuum pump to keep the pressure in the same level in 20 minutes.

◇Emptying: When process this operation, please disconnect the high pressure valve with liquid valve.

1. Connect the gas valve of the stop valve to the thimble side of the rubber hoses, the other side of rubber hoses should be connected to the refrigerant tank.

2. Open the refrigerant tank valve, using the refrigerant inside the tank with high speed to empty the air in the indoor unit and the connection piping. When the outlet air becomes mist (it feels cold by touching it), then the air is emptied.

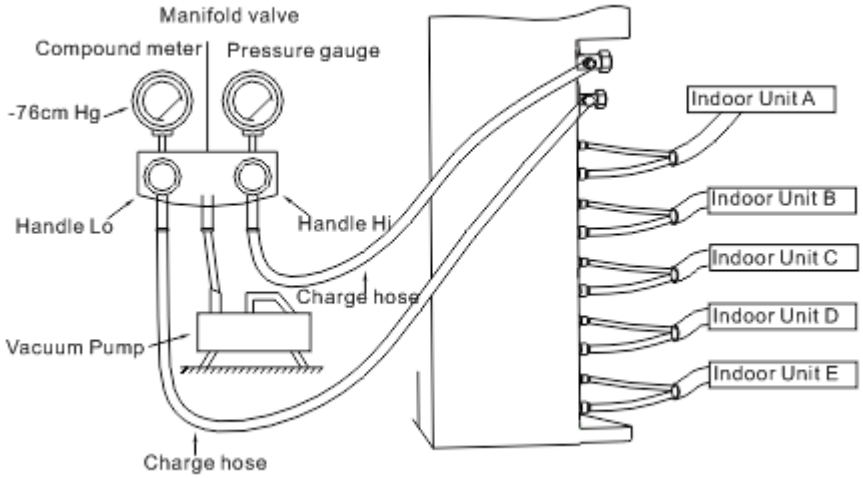
3. When ensure that the air is emptied, connect and tighten the high pressure valve of outdoor unit stop valve and liquid side connection pipe, keep this state more than 10 seconds.

4. Use soapy what to test each connection junctions (including lengthen piping welding junction)

5. Confirmed that there is no leakage, turn off the valve of refrigerant tank, take down the rubber hose as well.

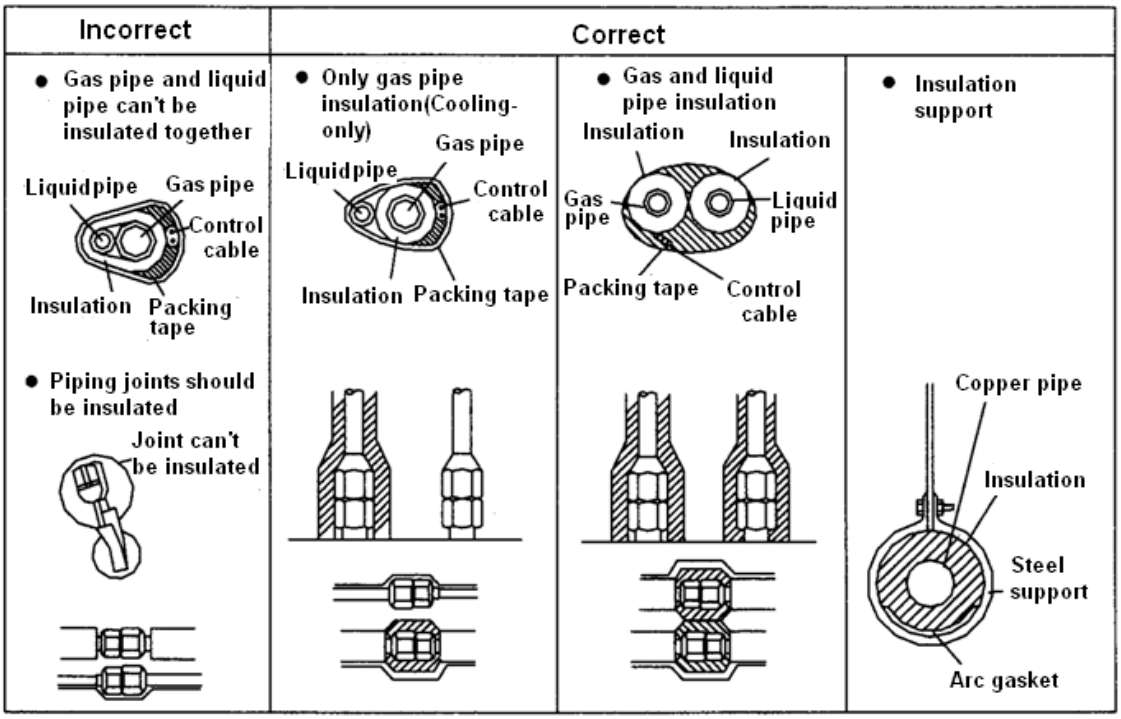
◇Turn on the high-low pressure valve of the outdoor unit.

After vacuum and emptying, screw back the cover of the maintenance valve of outdoor unit low pressure valve, screw off the high-low pressure valve of the outdoor unit (note: shall totally turned off ). Connect the refrigerant to the system.




## 10. Insulation

◇ Use heat insulation material with good insulation performance to wrap the pipe.



**Notes**

Drainage pipe and connection piping should be wrapped by heat insulation material respectively lift the air conditioner is proved my dew conditioner experiment. But if it keeps on working in high humidity (the dew temperature is more than23℃) environment which may lead to water leakage, please use following additional insulation material:

◇Glass fiber insulation material with the thickness between 10~20mm can be used.

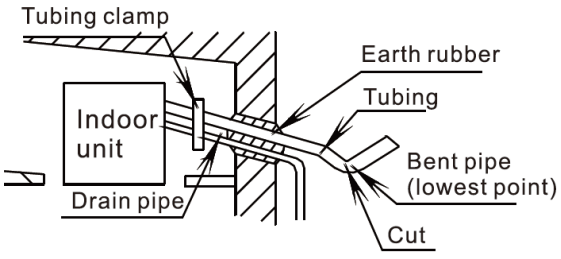
◇The part of indoor unit which get in touch with the back side of ceiling should pasted with insulation material.

◇Besides the previous more than 8mm thick insulation material, connection piping (both gas pipe and liquid pipe), drainage pipe should be wrapped by additional 10~30 mm thick insulation material.

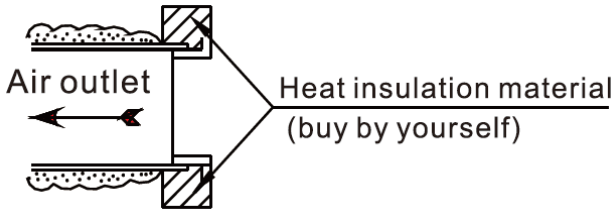
**Seal the hole on the wall.**

◇To prevent rainwater or other foreign bodies from entering the room and air-conditioner, the gap between wall hole and tubing, drain pipe and electric wire should be sealed with mastic, sealant rubber or putty.

◇If the outdoor unit is higher than indoor unit, tubing should be bent to ensure that the lowest point of the tubing is lower than the wall hole to prevent rainwater entering the room or air-conditioner along the piping system.



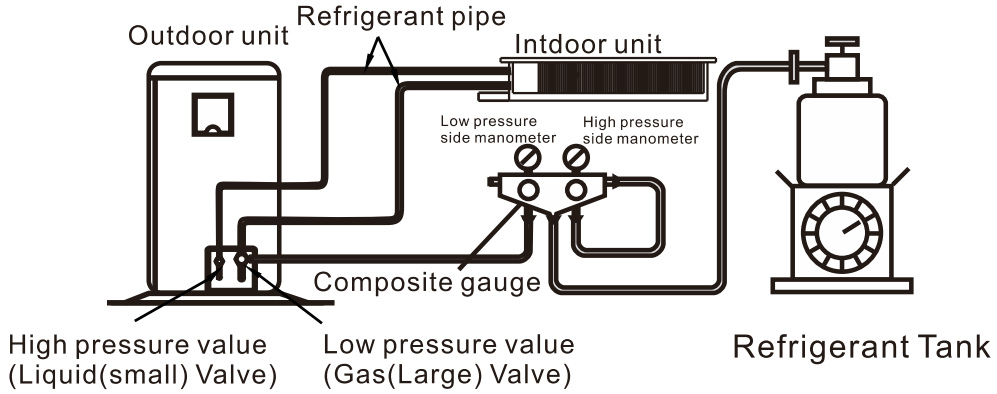

Make a cut in the heat insulation materials of bent pipe (for drainage)



## 11. Additional refrigerant charge

When pipe length exceeds 7.5m, please add refrigerant according to the table below:

| Connection piping | Piping size) | | Additional refrigerant charge amount (kg/m) |
|---|---|---|---|
| | Gas pipe | Liquid pipe | |
| Piping between indoor and outdoor unit | φ9.52×0.75mm | φ6.35×0.75mm | 0.02 |
| | φ12.7×1mm | φ6.35×0.75mm | 0.02 |
| | φ15.88×1mm | φ9.52×0.75mm | 0.050 |
| | φ19.05×1mm | φ9.52×0.75mm | 0.070 |
| | φ19.05×1mm | φ12.7×1mm | 0.090 |




**Note:**

This chart is for explanation purposes. An actual installation will differ from this according to the site conditions. When making an oil loop the radius of the bend should be between 1.5 and 2 times the pipe diameter.

# 12. Electrical connection

## 12.1Electrical connection precaution

| | |
|---|---|
| Warning | Installation of electric items must be carried out by qualified, professional technicians. |
| | An isolated circuitry should be fixed with whole-pole disconnection devices, which is with at least 3mm gap of touch point Power supply and indoor to outdoor connection wire should use special cable. |
| | Providing the necessity of installation or replacement, the professional technician of service store appointed by manufacturer must be required, while self-operation by users is prohibited. |
| | In case of any electric shock accident, the creep age protection devices /power supply on-off switch and breaker must be required with. |
| | The specification of fuse for single phase control board is F5AL 250V, while for 3 phase control board, both indoor and outdoor unit, it is F3.15AL 250V。 |
| | Machine must be earthed surely. Or it'll be probably cause creep age. |
| Notice | The earth line is neither allowed to connect to gas pipe, water pipe circuitry of telephone or lighting rod, nor to the earth line of other devices. |
| Others | Please fix power supply cord and connection wires of indoor and outdoor, in accordance with circuit diagram<br>Fix the cords into terminal boards properly and safely with cable fixation tools to avoid any danger caused by the power cord under outside forces.<br>After fixation, use bind tape (affixed) to bind wires avoiding any collision with other components like compressor, copper pipes…etc. |

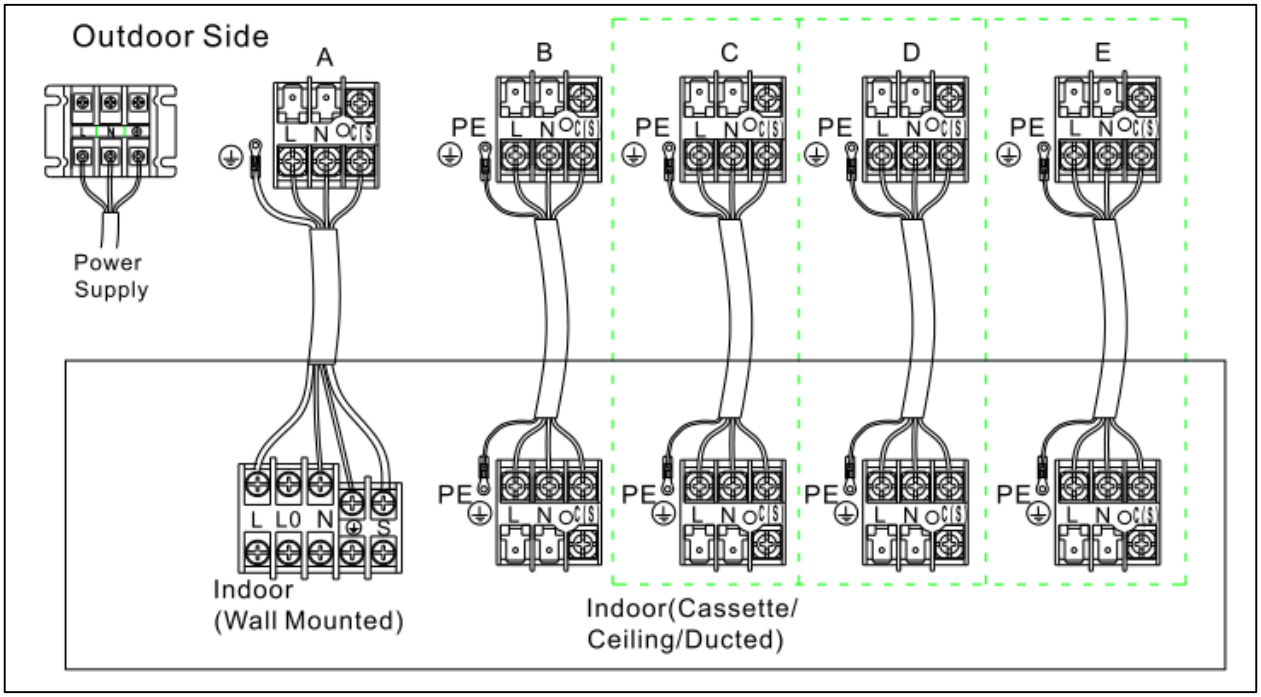
### 12.2 Specification of wire

Wiring Diagram of Indoor Unit and Outdoor Unit

Power line must be properly fixed; Outdoor unit must be grounded;

Each indoor unit must be grounded; Power wire must be thickened when it is overlong.

**Wiring Diagram of Modular Outdoor Unit**




**The wiring cable specification that is needed in the installation**

| Wire Type | ODU | Power supply | Indoor power cable |
|---|---|---|---|
| Power line (3 core line) | 14k,18k,21k,27k | 220-240V~50Hz | 3× 2.5mm$^2$ |
| | 36k,42k | | 3× 4mm$^2$ |
| Connection wire （4 core line） | All IDU | | 4×1.5mm$^2$ |

Notice:

Above mentioned power supply cord is the cables which connect air on-off of indoor to indoor/outdoor unit. Power supply cord of indoor/outdoor unit is the power supply cable connecting indoor and outdoor unit

The section area of power supply cord core is minimized one. To avoid voltage pressure dropped down, while longer power supply cord needed, the section area should be enlarged for one gauge.

The connection wires to indoor unit is the cable of 27IEC53(RVV) type, 300/500V; while the connection wires to outdoor unit and the connection wires from outdoor to indoor unit is the multi-end of cable (neoprene)of 245IEC57(YZW)type,300/500V. if the single core with double skin type of cable is chosen for installation,, please choose 1# gauge of section area and wrapped with special jacket for electrician.

All of the ceiling/floor type unit is without accessorial electric heating

**Commissioning**

★ The system should be power on for 8 hours for preheat before the first time startup.

★ During winter, while after 8 hours power off, the performance test should be 2 and half hours power on later:

◇ Power on the system and start up, r cooling mode.

◇ After 3 minutes compressor protection, check whether there is normal cooling air come from indoor unit and if there is abnormal noise come from indoor/outdoor units

◇ Configure the mode with “fan” and check whether there is high air come from indoor unit.

◇ Operate “swing” mode, check whether the louver is properly swaying.

◇ Press the other buttons on the remote controller and check whether the complete unit is on proper working condition

◇ Keep on running for 1 hour with “cooling” mode and check if the drainage system is on proper condition

◇ Switch the mode for “heating” and check whether there is warm air flow come from indoor unit, whether there is abnormal noise come from indoor/outdoor units

◇ After confirmation of normal working condition, press the “on-off” button to stop the system.

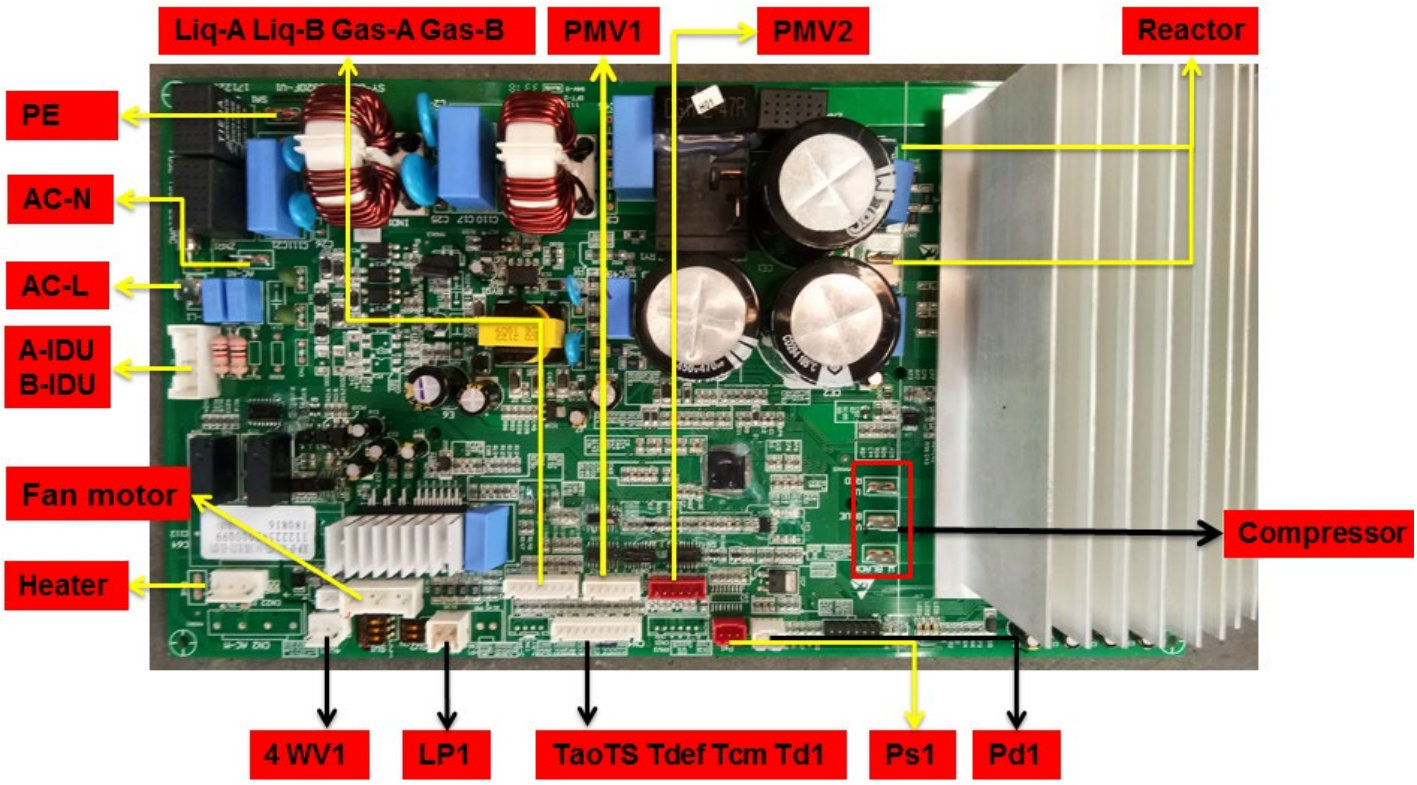
◇ At last, train the end users with operation, maintaining and special notice.

# Part12 PCB Instruction

## 1. Outdoor Unit PCB

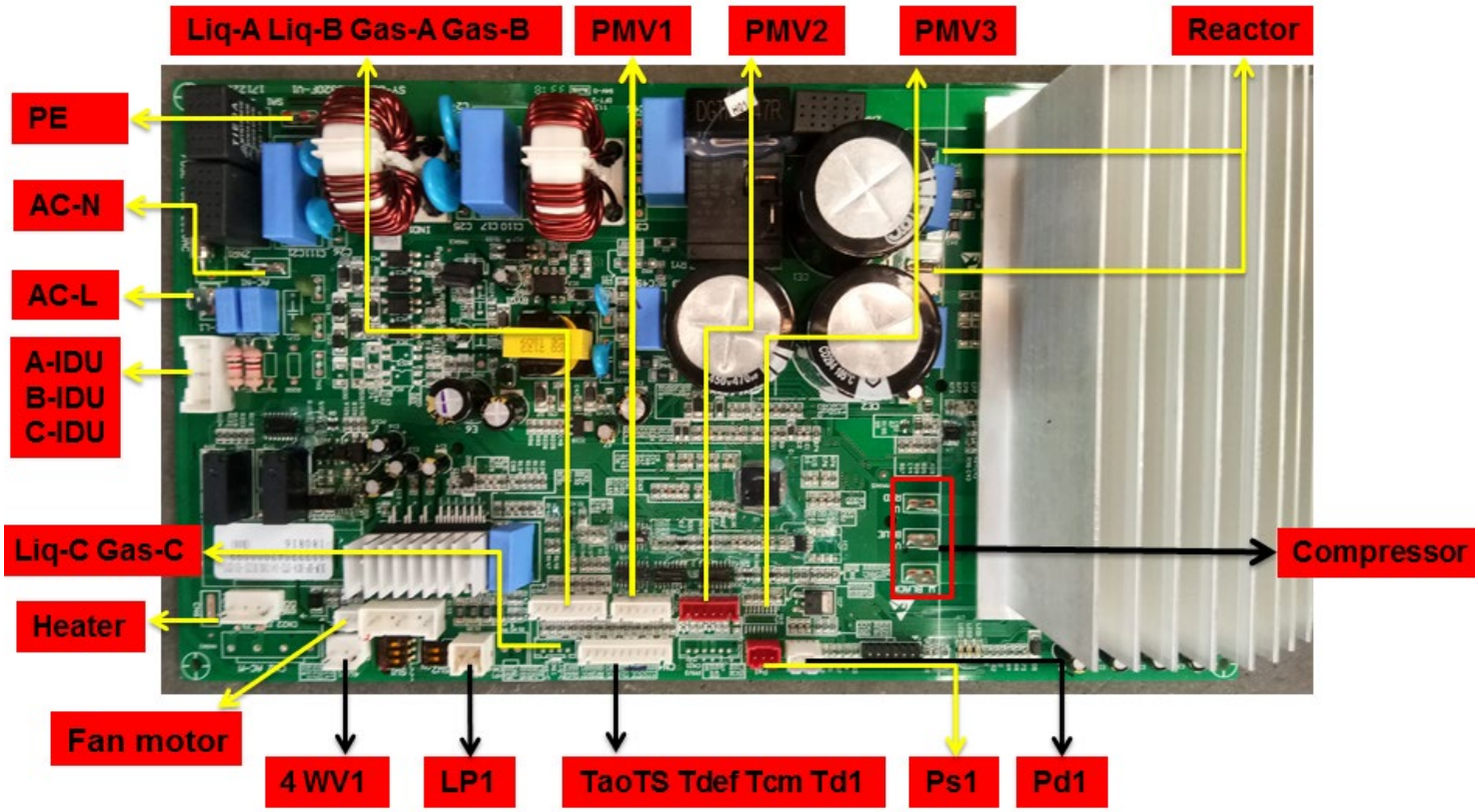
### 1.1 14K,18K

**Main PCB and Driver modular**



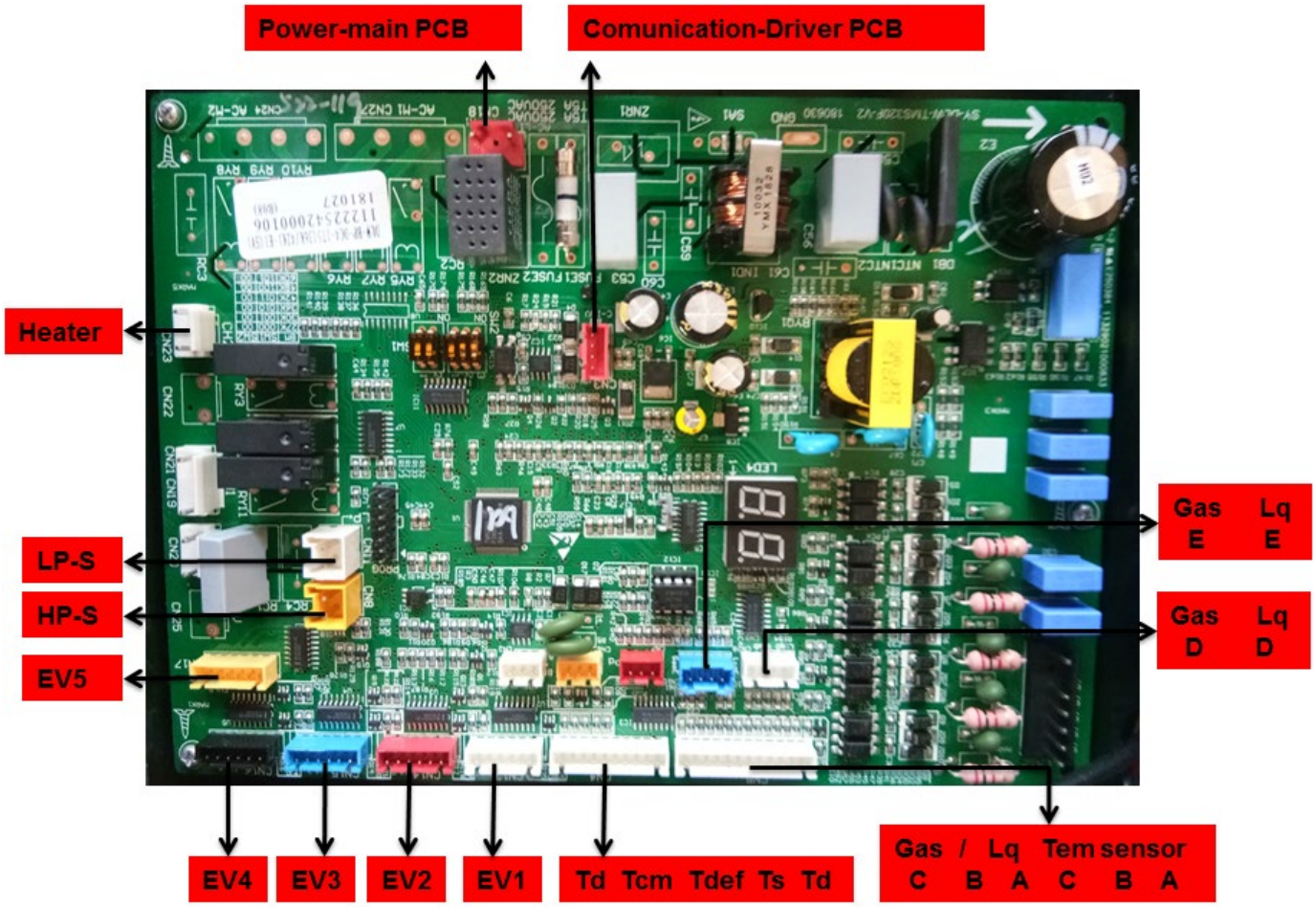
## 1.2 21K,27K

### Main PCB and Driver modular

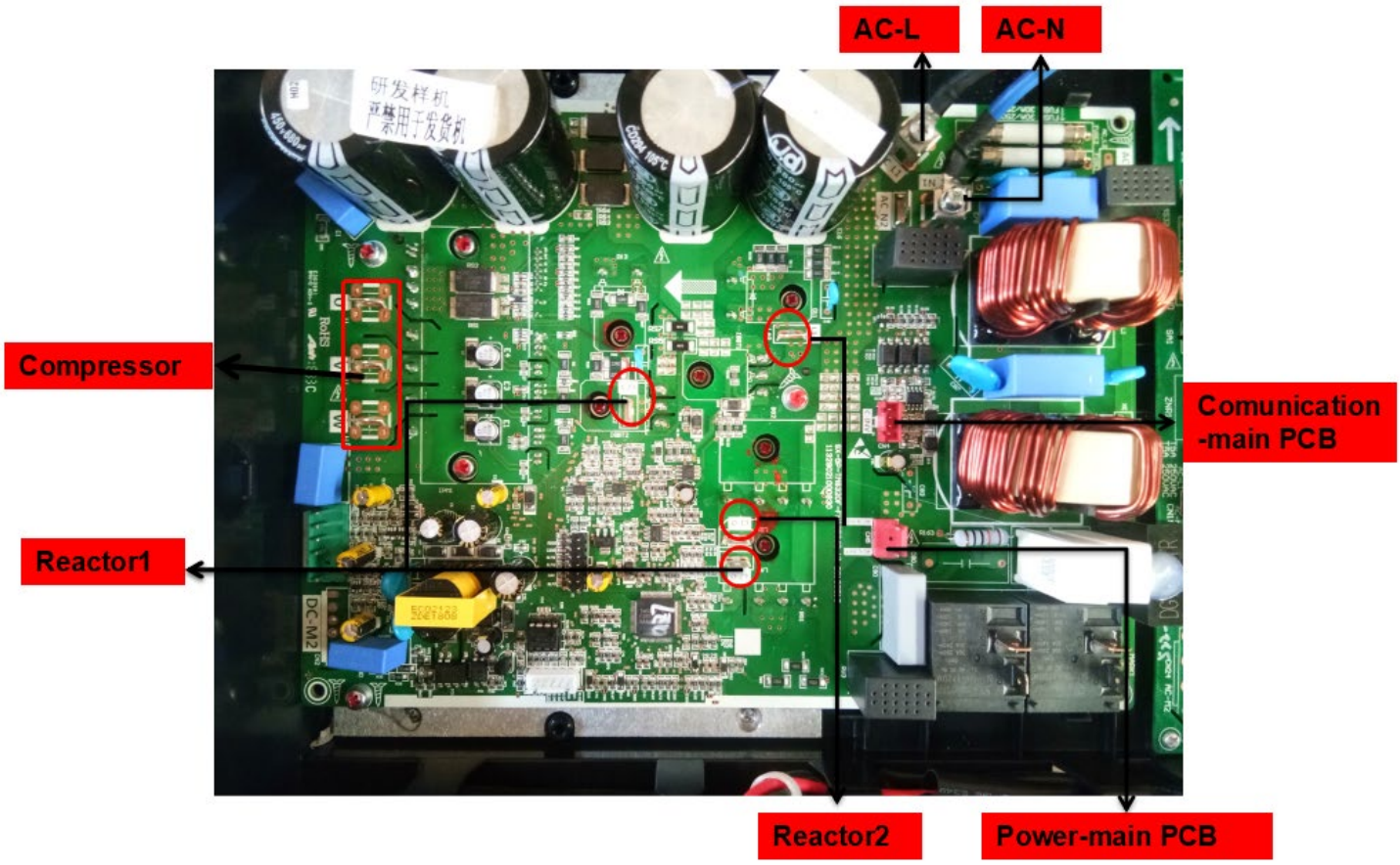


## 1.3 36K,42K

### Main PCB

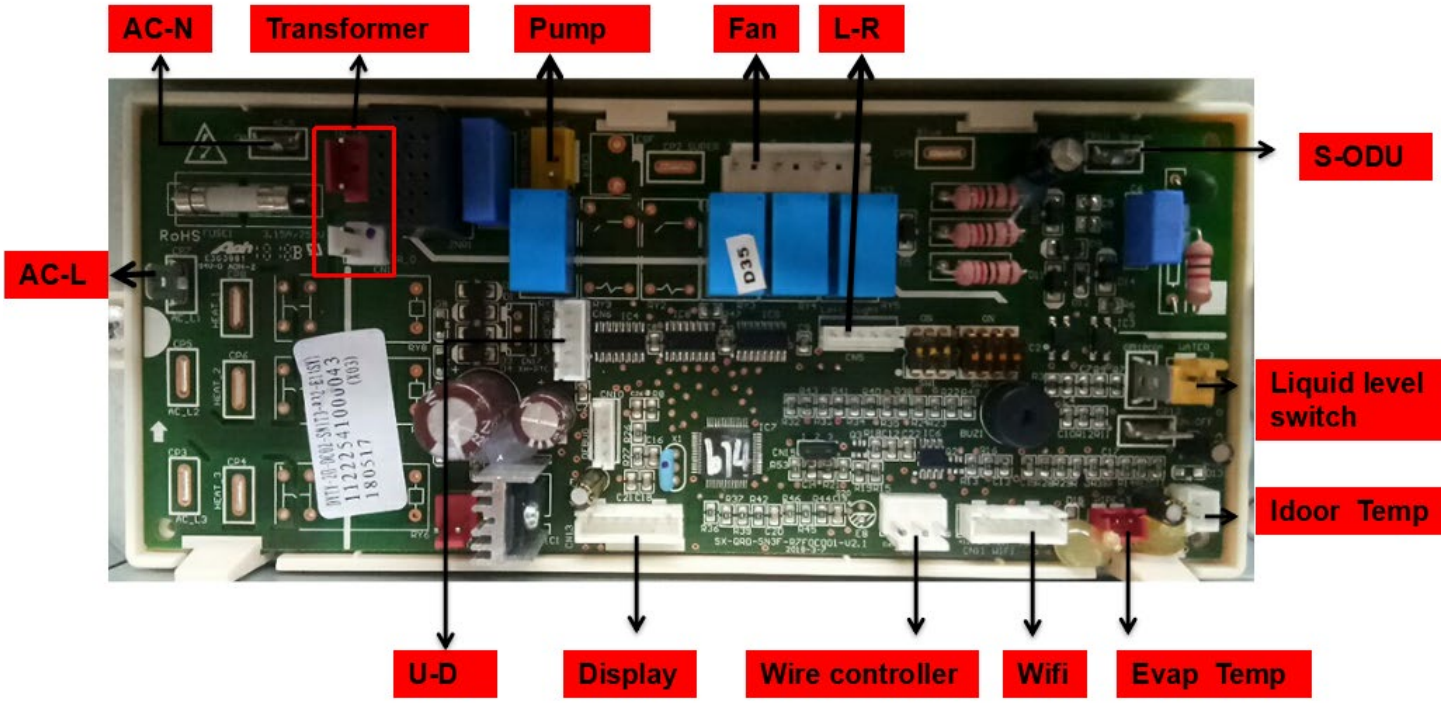


## Drive Modular Board

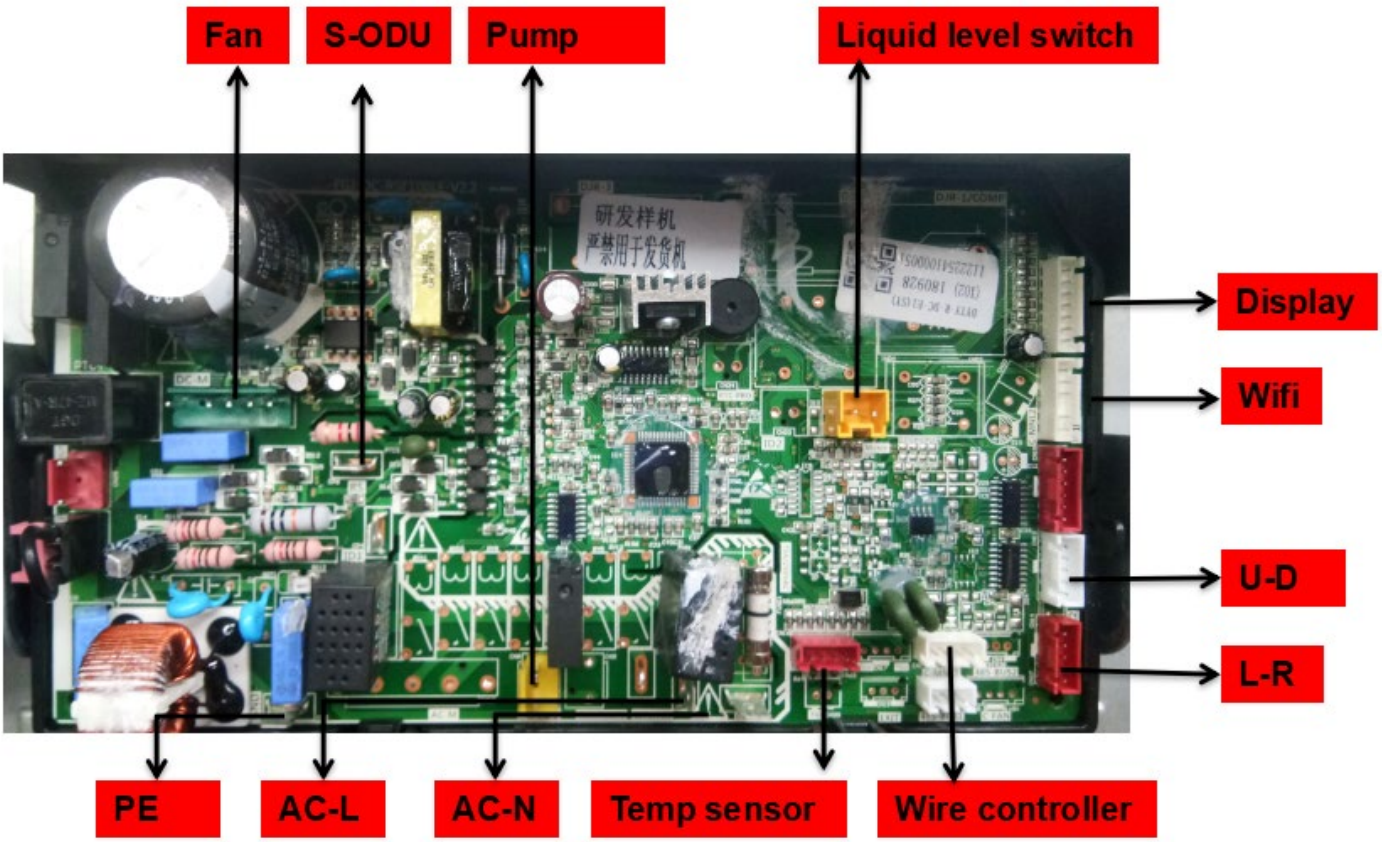


## 2. Indoor Unit PCB

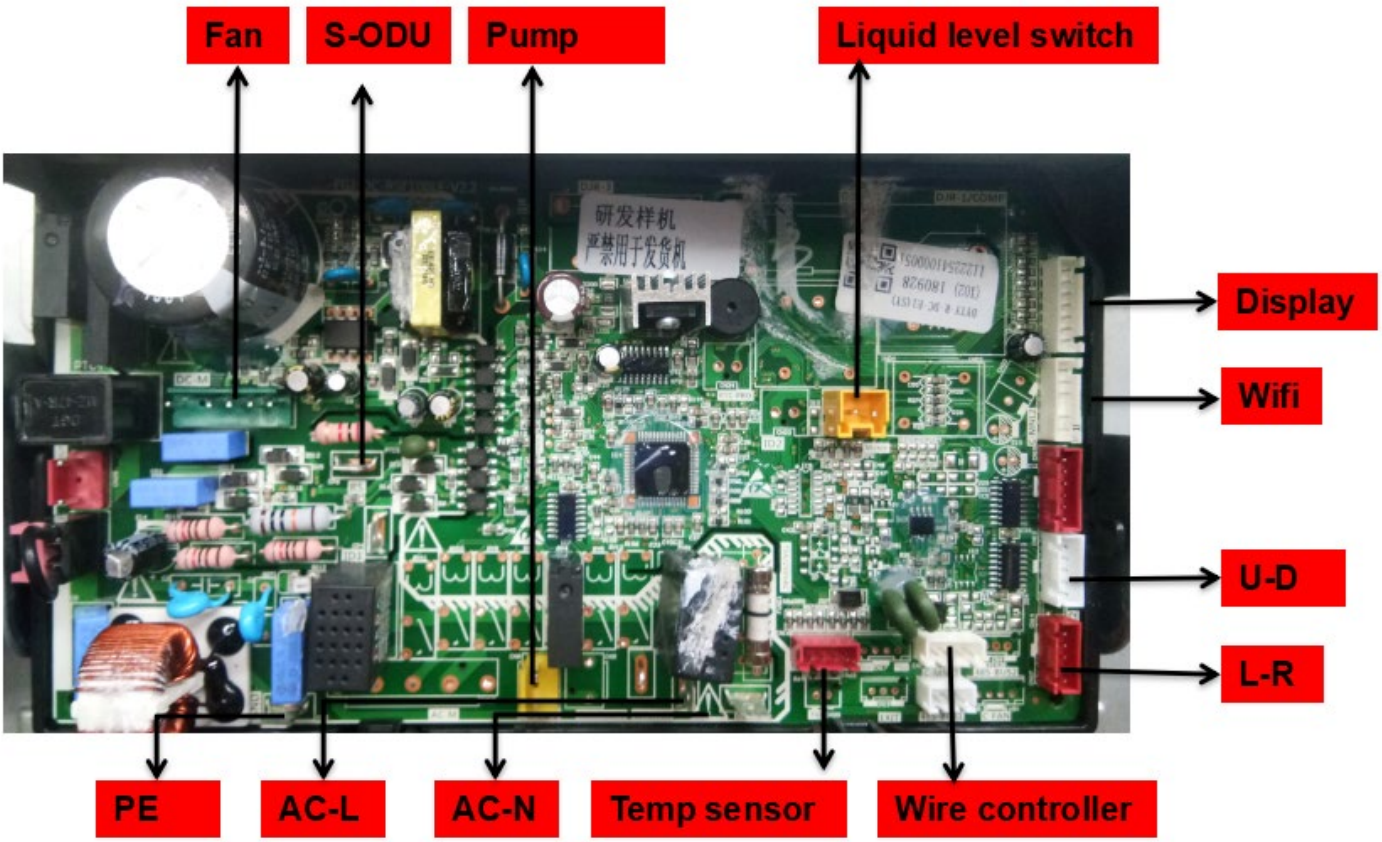
### 2.1 09K,12K,18K(Cassette)



## 2.2 09K,12K,18K(Ceilling&Floor)



## 2.3 07k,09K,12K,18K(Duct)



# Part13 Trouble Shooting

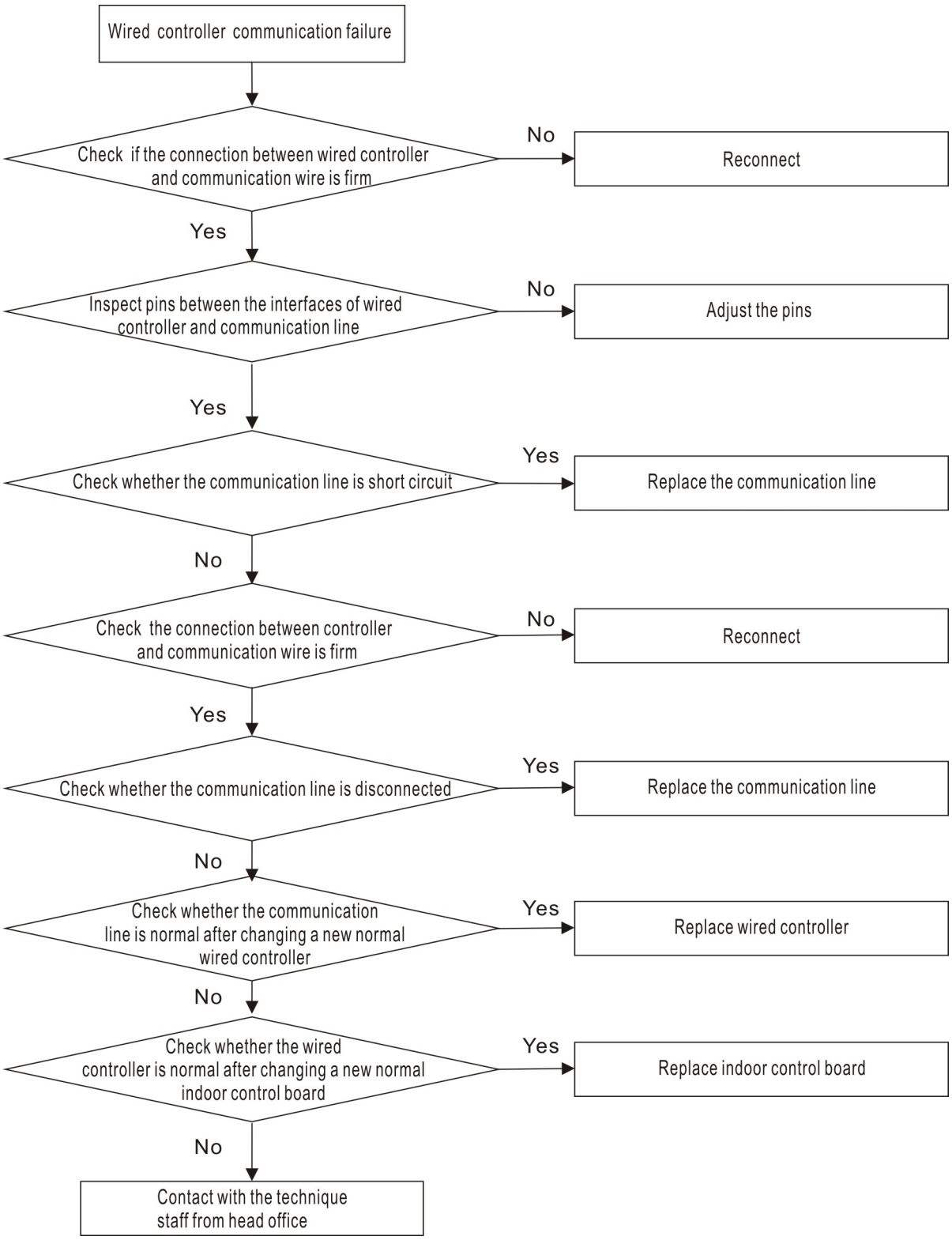
## 1. Failure code display

| NO | ERROR CODE (display board) | ERRO CODE (wired controller) | DESCRIPTION |
|---|---|---|---|
| 1 | L1 | C1 | Fault with the over-electric current protection |
| 2 | L3 | C3 | Fault with the Compressor Power supply Phase deficiency protection |
| 3 | L4 | C4 | Fault with the inverter module protection(IPM) |
| 4 | E1 | E1 | Fault with the room temperature sensor(Tico) on the indoor unit |
| 5 | E2 | E2 | Fault with the temperature sensor(Tcm) on the outdoor unit |
| 6 | E3 | E3 | Fault with the temperature sensor(Ticm) on the indoor unit |
| 7 | E4 | E4 | Fault with the Fan motor of indoor unit |
| 8 | E5 | E5 | Communication error between the outdoor unit and the indoor unit |
| 9 | E8 | E8 | Communication error between the display board and PCB of the indoor unit |
| 10 | F0 | F0 | Fault with the Fan motor of outdoor unit |
| 11 | F1 | F1 | Fault with the inverter module protection on the outdoor unit |
| 12 | F3 | F3 | Fault with the compressor start |
| 13 | F4 | F4 | fault with the discharge temperature sensor |
| 14 | F6 | F6 | Fault with the Envirol temperature sensor(Tao) on the outdoor unit |
| 15 | F7 | F7 | Fault with the over-voltage or low voltage protection |
| 16 | F8 | F8 | Communication error between the driver PCB and main PCB of the outdoor unit |
| 17 | F9 | F9 | Fault with the outdoor unit EPROM |

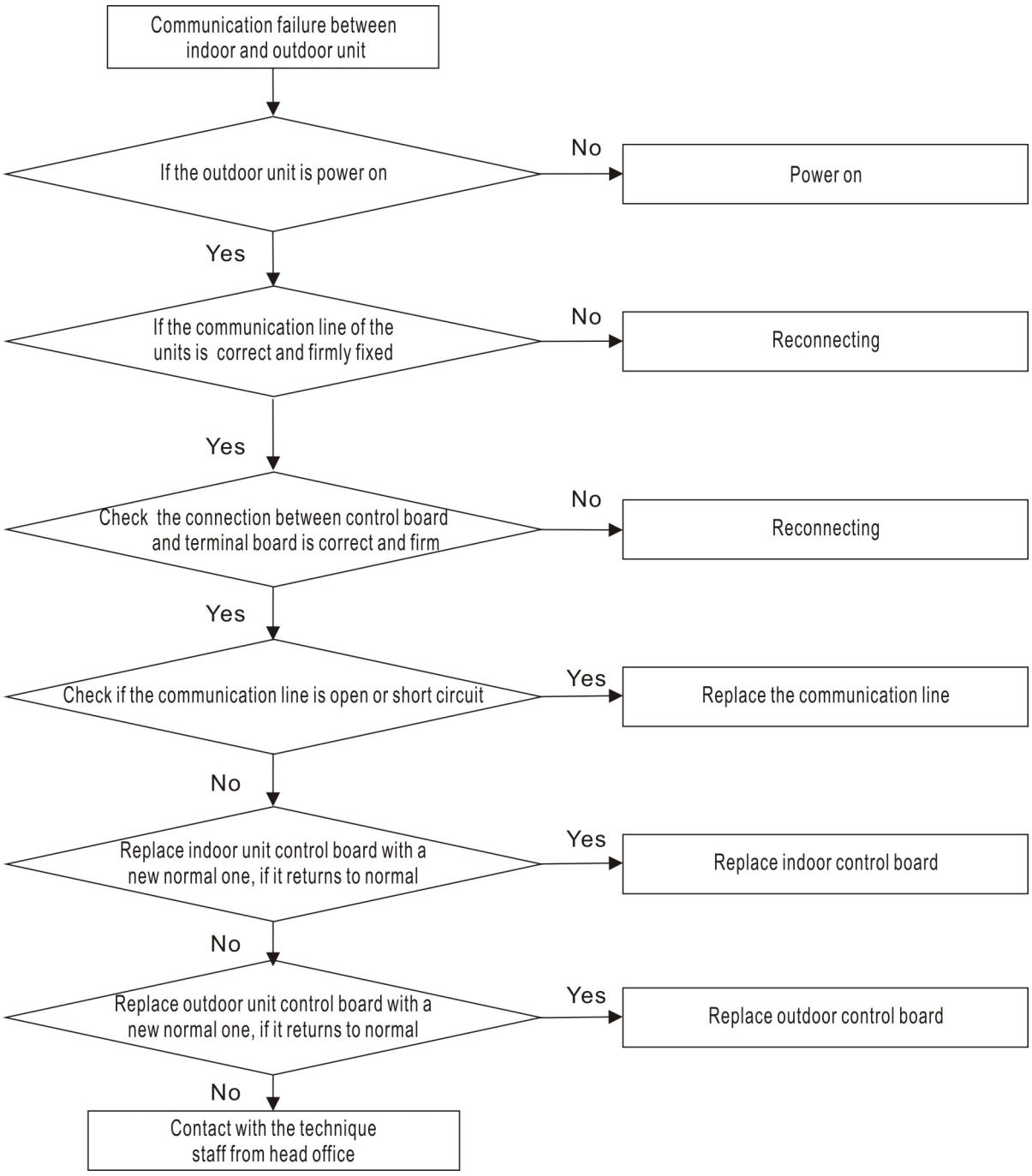
| | | | |
|---|---|---|---|
| 18 | H1 | H1 | Fault with the drainage |
| 19 | H2 | H2 | Communication error between the wired controller and main PCB of the indoor unit |
| 20 | H5 | H5 | fault with the low temperature discharge temperature sensor |
| 21 | H6 | H6 | fault with the low pressure switch |
| 22 | H7 | H7 | fault with the low pressure |
| 23 | H8 | H8 | fault of four way valve |
| 24 | P2 | J2 | fault with the High pressure switch |
| 25 | P5 | J5 | Protection high temperature discharge |
| 26 | P6 | J6 | Fault with anti-high temperature protection of indoor unit in heating model |
| 27 | P7 | J7 | Fault with anti-Frozen protection of indoor unit in heating model |

# 2. Failure analysis

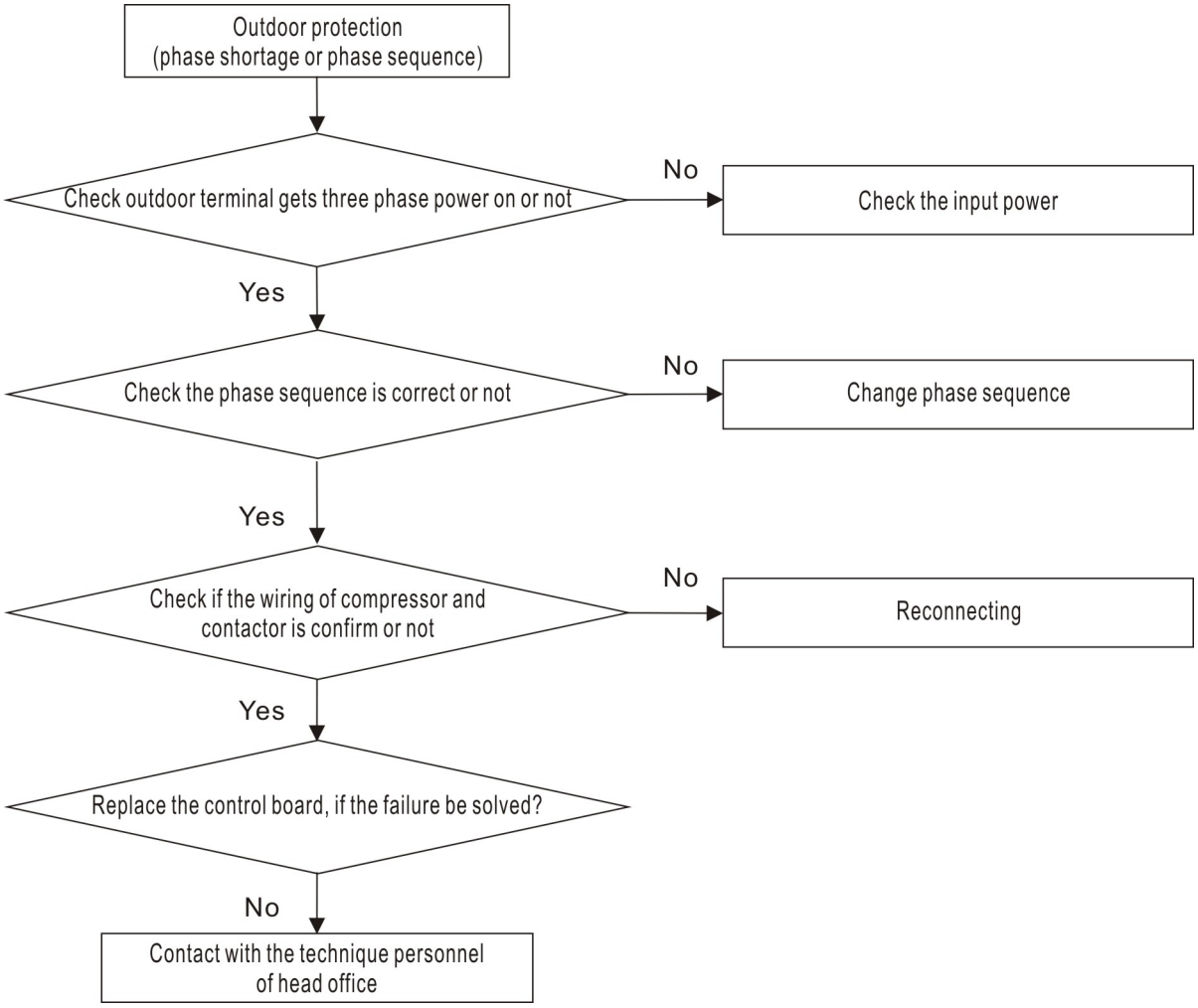
## 2.1【H2】Wired controller communication failure


Wired controller communication failure
Check if the connection between wired controller and communication wire is firm
No
Reconnect
Yes
Inspect pins between the interfaces of wired controller and communication line
No
Adjust the pins
Yes
Check whether the communication line is short circuit
Yes
Replace the communication line
No
Check the connection between controller and communication wire is firm
No
Reconnect
Yes
Check whether the communication line is disconnected
Yes
Replace the communication line
No
Check whether the communication line is normal after changing a new normal wired controller
Yes
Replace wired controller
No
Check whether the wired controller is normal after changing a new normal indoor control board
Yes
Replace indoor control board
No
Contact with the technique staff from head office

## 2.2【E5】Communication failure between indoor and outdoor unit

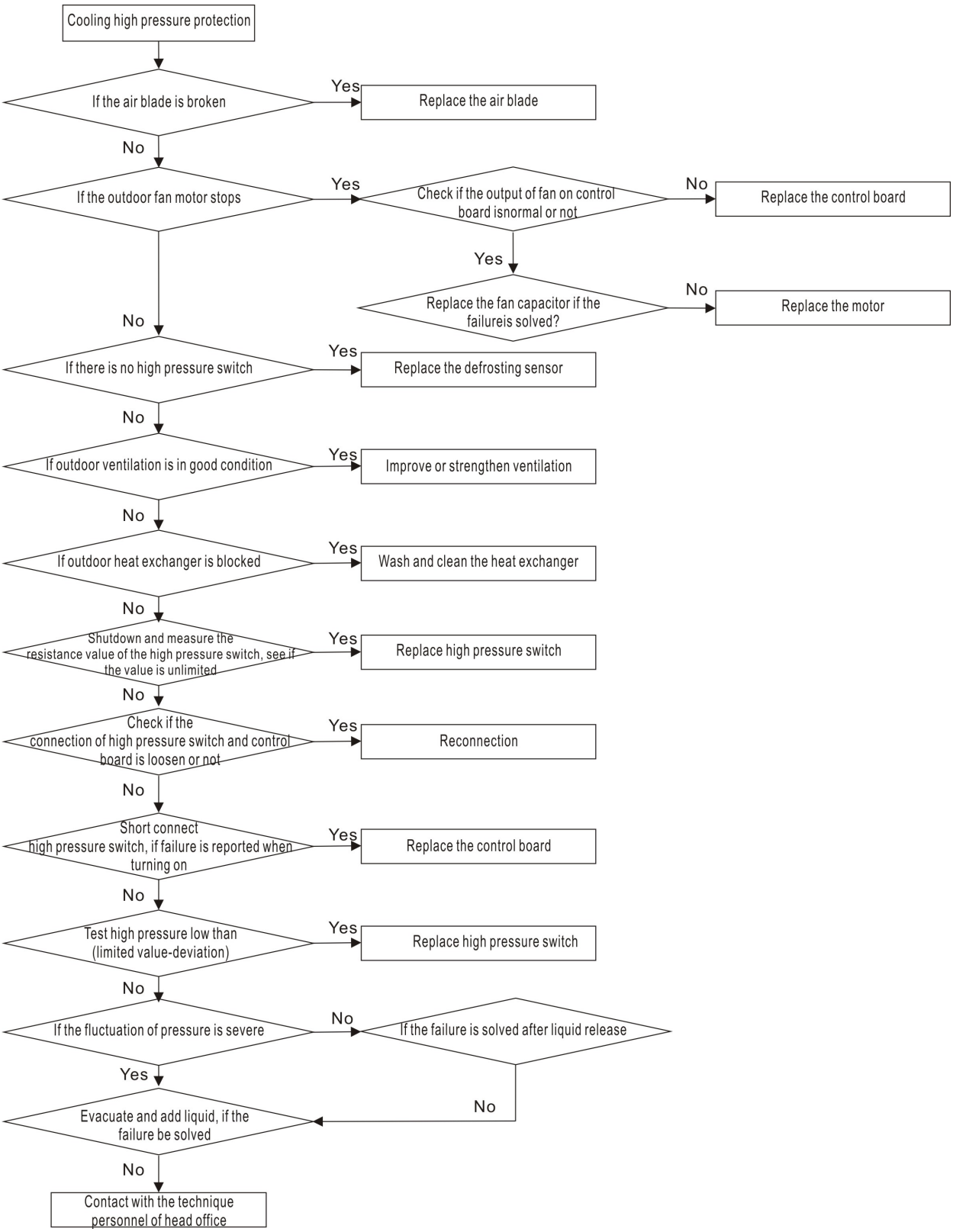


## Outdoor protection(phase sequence)

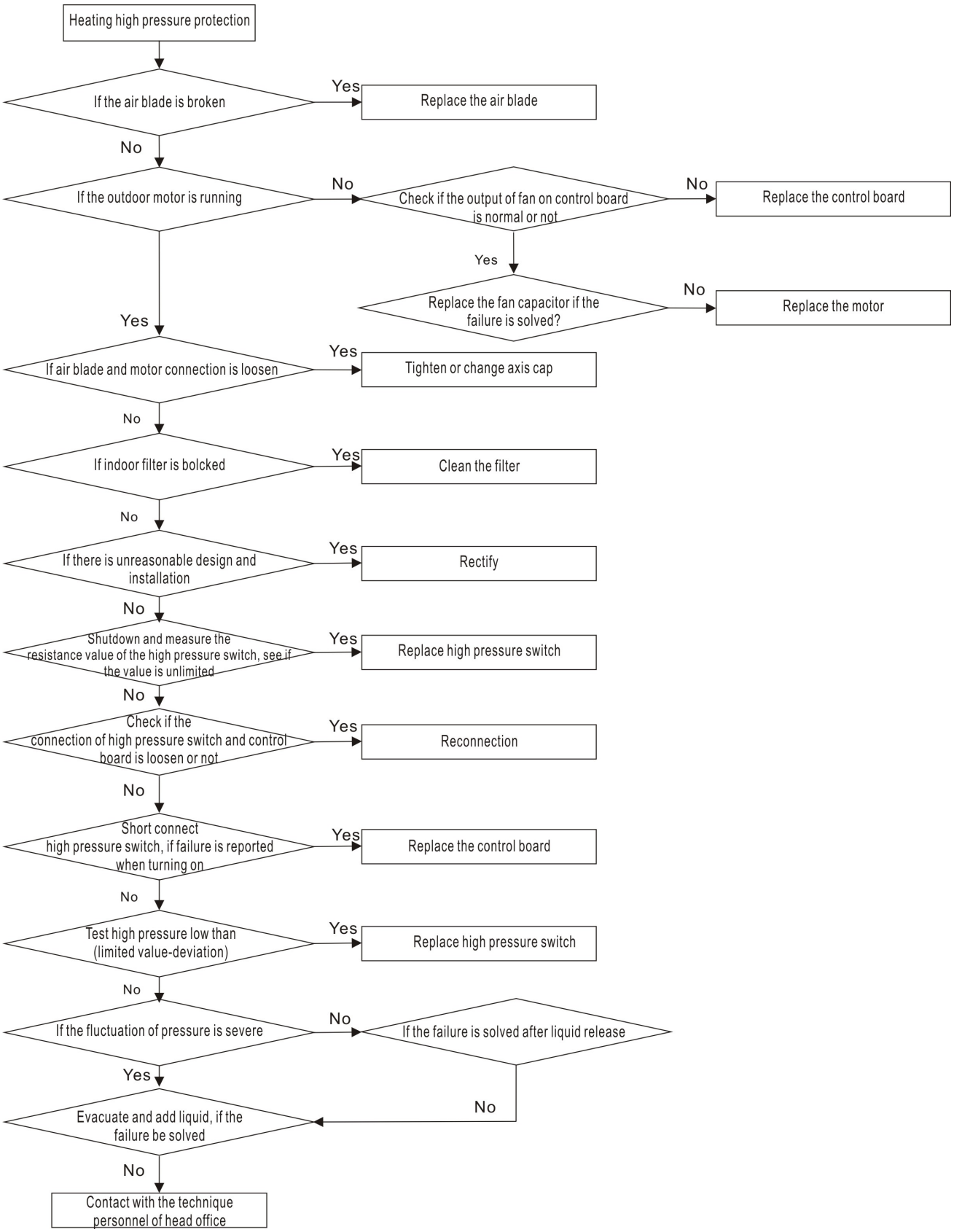


## 2.3【P2】high pressure protection

**Cooling high pressure protection**

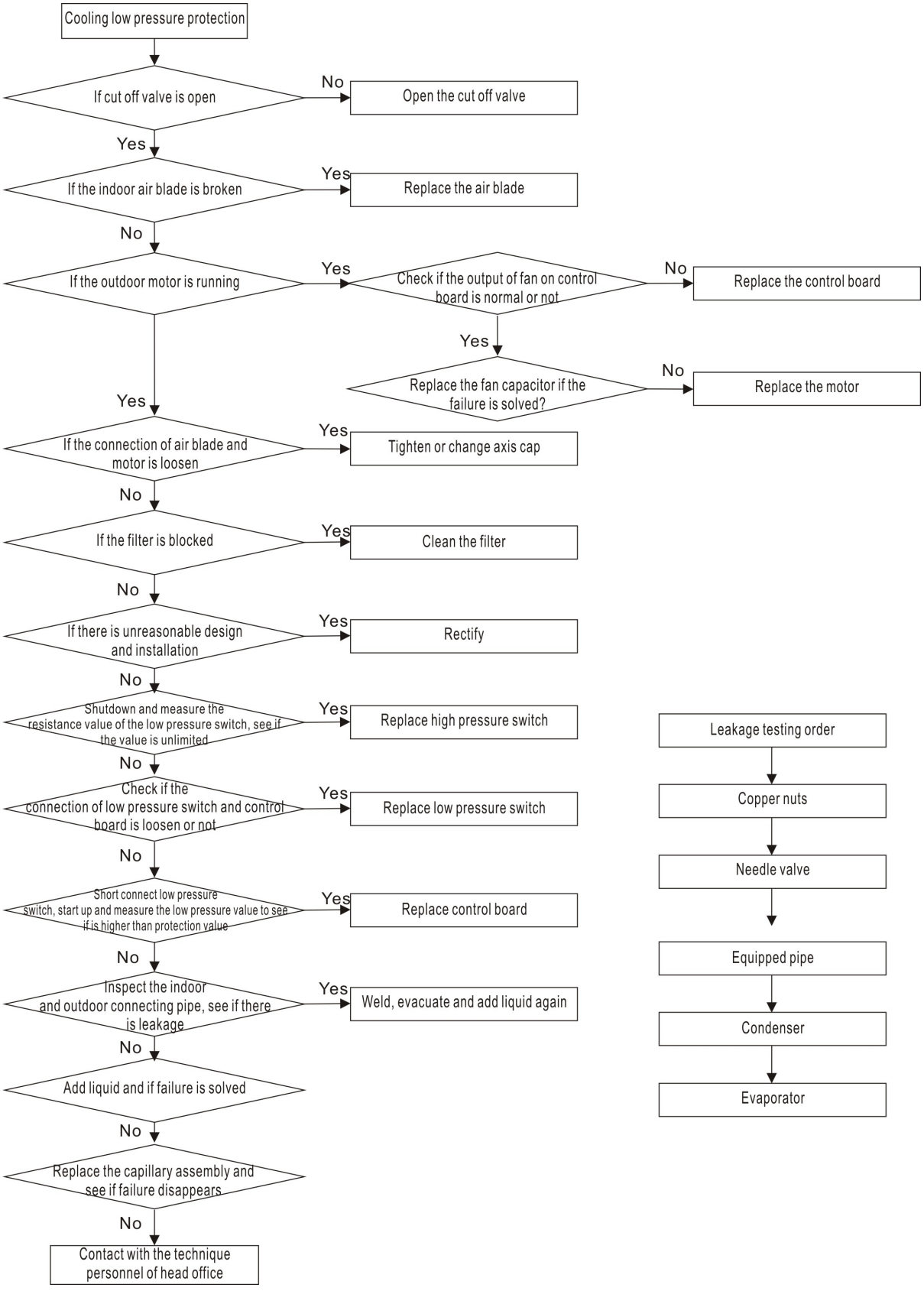



## Heating high pressure protection




## 2.4【H6】low pressure protection

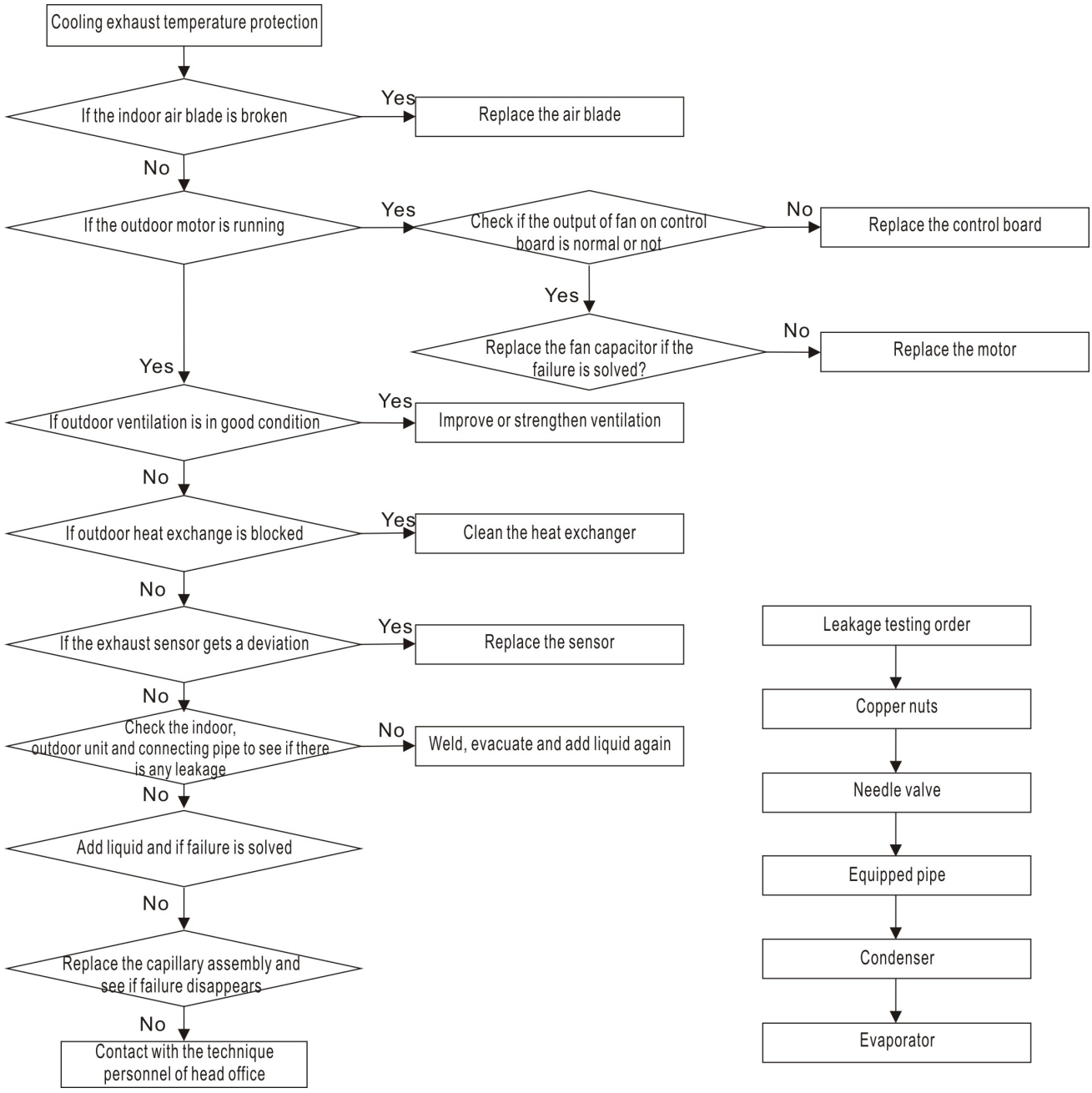
## Cooling low pressure protection



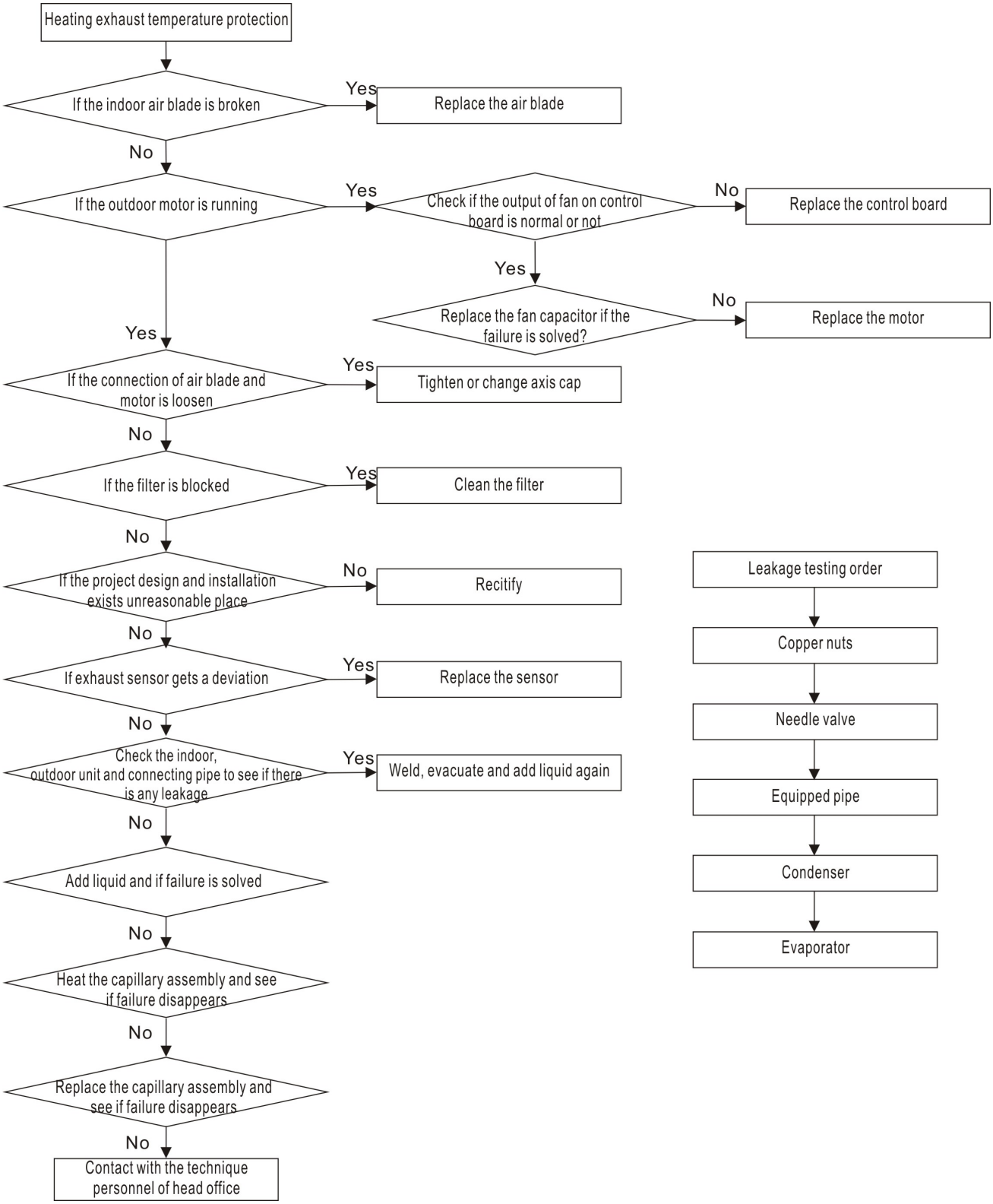
## Heating low pressure protection

## 2.5【P5】High exhaust temperature protection

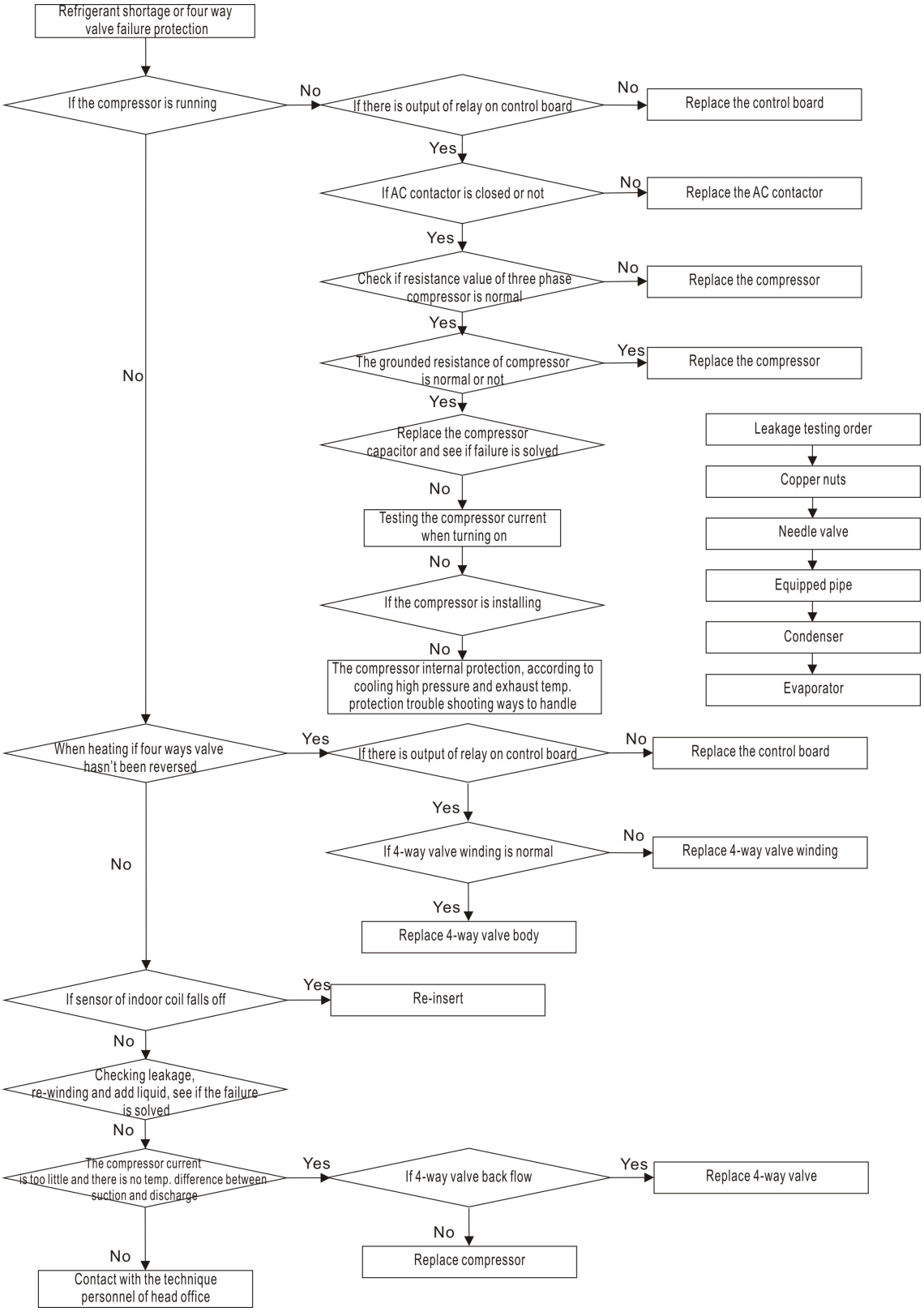
### Cooling exhaust temperature protection



## Heating exhaust temperature protection



## 2.6【H8】four way valve failure protection



## 2.7 Sensor failure protection