TOSOT

# SERVICE MANUAL

**MODELS:**

TW09HXP2A1A

TW12HXP2A1A

TW09HXP2A1D

TW12HXP2A1D

TW18HXP2A1D

TW24HXP2A1D

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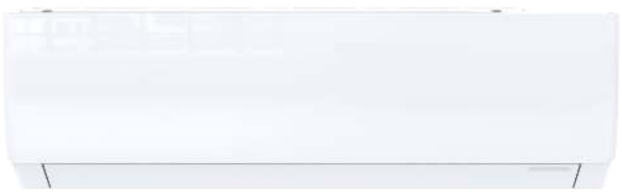
# 1. Summary

**Indoor Unit:**

A1 panel

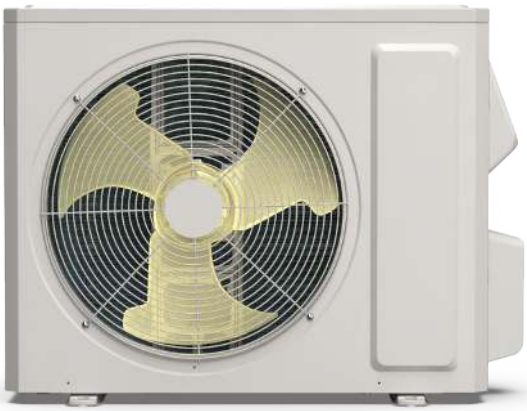


A4 panel



**Outdoor Unit:**

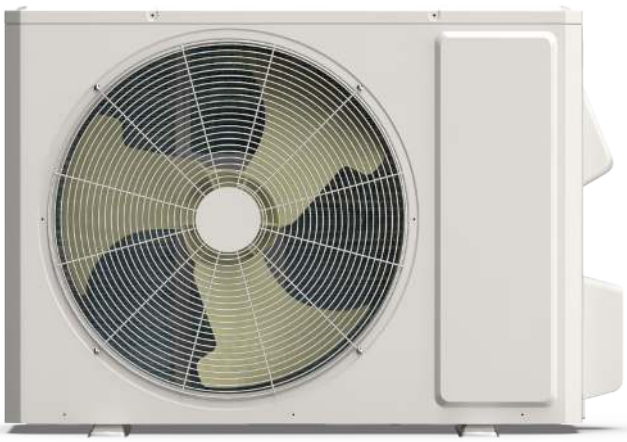
GWC09AGCXB-D3DNA1A/O



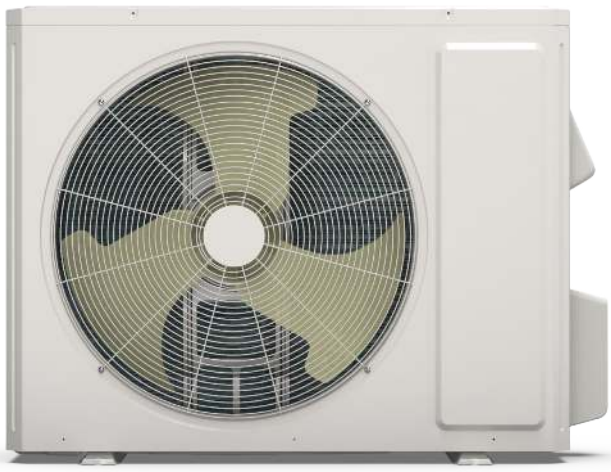
TW09HXP2A1AO TW09HXP2A1DO
TW12HXP2A1DO TW12HXP2A1AO



TW18HXP2A1DO



TW24HXP2A1DO



**Remote Controller:**

YAP1F7F(WiFi)



# 1. Summary

**Model list**:

| No. | Model | Product code | Indoor model | Indoor product code | Outdoor model | Outdoor product code | Remote Controller |
|---|---|---|---|---|---|---|---|
| 1 | GWC09AGCXD-A3DNA1A | CB385015400 | GWC09AGCXD-A3DNA1A/I | CB385N15400 | GWC09AGCXD-A3DNA1A/O | CB385W15400 | YAP1F7F (WiFi) |
| 2 | GWH09AGCXD-A3DNA1A | CB385015300 | TW09HXP2A1AI | CB385N15300 | TW09HXP2A1AO | CB385W15300 | |
| 3 | GWH09AGCXD-A3DNA4A | CB558009200 | GWH09AGCXD-A3DNA4A/I | CB558N09200 | | | |
| 4 | GWC09AGCXB-D3DNA1A | CB385015500 | GWC09AGCXB-D3DNA1A/I | CB385N15500 | GWC09AGCXB-D3DNA1A/O | CB385W15500 | |
| 5 | GWH09AGCXD-D3DNA1A | CB385015600 | TW09HXP2A1DI | CB385N15600 | TW09HXP2A1DO | CB385W15600 | |
| 6 | GWH09AGCXD-D3DNA4A | CB558009400 | GWH09AGCXD-D3DNA4A/I | CB558N09400 | | | |
| 7 | GWC12AGCXD-D3DNA1A | CB385016800 | GWC12AGCXD-D3DNA1A/I | CB385N16800 | GWC12AGCXD-D3DNA1A/O | CB385W16800 | |
| 8 | GWH12AGCXD-D3DNA1A | CB385016600 | TW12HXP2A1DI | CB385N16600 | TW12HXP2A1DO | CB385W16600 | |
| 9 | GWH12AGCXD-D3DNA4A | CB558009300 | GWH12AGCXD-D3DNA4A/I | CB558N09300 | | | |
| 10 | GWC12AGCXD-A3DNA1A | CB385016500 | GWC12AGCXD-A3DNA1A/I | CB385N16500 | GWC12AGCXD-A3DNA1A/O | CB385W16500 | |
| 11 | GWH12AGCXD-A3DNA1A | CB385016700 | TW12HXP2A1AI | CB385N16700 | TW12HXP2A1AO | CB385W16700 | |
| 12 | GWH12AGCXD-A3DNA4A | CB558009100 | GWH12AGCXD-A3DNA4A/I | CB558N09100 | | | |
| 13 | GWC18AGDXF-D3DNA1A | CB385016900 | GWC18AGDXF-D3DNA1A/I | CB385N16900 | GWC18AGDXF-D3DNA1A/O | CB385W16900 | |
| 14 | GWH18AGDXF-D3DNA1A | CB385017000 | TW18HXP2A1DI | CB385N17000 | TW18HXP2A1DO | CB385W17000 | |
| 15 | GWH18AGDXF-D3DNA4A | CB558008900 | GWH18AGDXF-D3DNA4A/I | CB558N08900 | | | |
| 16 | GWC24AGEXH-D3DNA1A | CB385016400 | GWC24AGEXH-D3DNA1A/I | CB385N16400 | GWC24AGEXH-D3DNA1A/O | CB385W16400 | |
| 17 | GWH24AGEXH-D3DNA1A | CB385016300 | TW24HXP2A1DI | CB385N16300 | TW24HXP2A1DO | CB385W16300 | |
| 18 | GWH24AGEXH-D3DNA4A | CB558009000 | GWH24AGEXH-D3DNA4A/I | CB558N09000 | | | |

# 2. Specifications

## 2.1 Specification Sheet

| Model | | | GWC09AGCXD-A3DNA1A | GWH09AGCXD-A3DNA1A<br>GWH09AGCXD-A3DNA4A |
|---|---|---|---|---|
| Product Code | | | CB385015400 | CB385015300<br>CB558009200 |
| Power Supply | Rated Voltage | V~ | 115 | 115 |
| | Rated Frequency | Hz | 60 | 60 |
| | Phases | | 1 | 1 |
| Power Supply Mode | | | Outdoor | Outdoor |
| Cooling Capacity | | Btu/h | 9100 | 9100 |
| Heating Capacity | | Btu/h | / | 10000 |
| Cooling Power Input | | W | 623 | 626 |
| Heating Power Input | | W | / | 698 |
| Cooling Power Current | | A | 6.72 | 7.03 |
| Heating Power Current | | A | / | 7.68 |
| Rated Input | | W | 1100 | 1580 |
| Rated Cooling Current | | A | 13.9 | 12.28 |
| Rated Heating Current | | A | / | 16.59 |
| Air Flow Volume | | CFM | 371/324/294/265/241/224/194/129 | 353/324/294/265/235/206/194/129 |
| Dehumidifying Volume | | Pint/h | 1.69 | 1.69 |
| EER | | (Btu/h)/W | 14.6 | 14.55 |
| COP | | (Btu/h)/W | / | 14.3 |
| SEER | | | 26.5 | 27 |
| HSPF | | | / | 11.8 |
| Application Area | | $yd^2$ | 53-57 | 53-57 |
| Indoor Unit | Model of indoor unit | | GWC09AGCXD-A3DNA1A/I | TW09HXP2A1AI<br>GWH09AGCXD-A3DNA4A/I |
| | Indoor Unit Product Code | | CB385N15400 | CB385N15300<br>CB558N09200 |
| | Fan Type | | Cross-flow | Cross-flow |
| | Fan Diameter Length(DXL) | mm | Φ98×630 | Φ98×630 |
| | Cooling Speed | r/min | 1350/1200/1100/1000/920/850/750/500 | 1300/1200/1100/1000/900/800/750/500 |
| | Heating Speed | r/min | / | 1300/1200/1100/1000/900/850/800 |
| | Fan Motor Power Output | W | 15 | 15 |
| | Fan Motor RLA | A | 0.3 | 0.3 |
| | Fan Motor Capacitor | μF | / | / |
| | Evaporator Form | | Aluminum Fin-copper Tube | Aluminum Fin-copper Tube |
| | Evaporator Pipe Diameter | mm | Φ5 | Φ5 |
| | Evaporator Row-fin Gap | mm | 2-1.4 | 2-1.4 |
| | Evaporator Coil Length (LXDXW) | mm | 634×22.8×304.8 | 634×22.8×304.8 |
| | Swing Motor Model | | MP24HF / MP24AK / MP24BA | MP24HF / MP24AK / MP24BA |
| | Swing Motor Power Output | W | 1.5 / 1.5 / 1.5 | 1.5 / 1.5 / 1.5 |
| | Fuse Current | A | 3.15 | 3.15 |
| | Sound Pressure Level | dB (A) | 41/37/34/31/29/27/24/22 | Cooling: 40/37/34/31/29/26/24/22<br>Heating: 41/38/35/31/29/26/25 |
| | Sound Power Level | dB (A) | 51/47/44/41/39/37/34/32 | Cooling: 50/47/44/41/39/36/34/32<br>Heating: 51/48/45/41/39/36/35 |
| | Dimension (WXHXD) | inch | 32 31/64 × 11 17/32 × 7 23/32 | 32 31/64 × 11 17/32 × 7 23/32 |
| | Dimension of Carton Box (LXWXH) | inch | 34 1/4 × 13 47/64 × 10 1/8 | 34 1/4 × 13 47/64 × 10 1/8 |
| | Dimension of Package (LXWXH) | inch | 34 29/64 × 14 3/8 × 10 35/64 | 34 29/64 × 14 3/8 × 10 35/64 |
| | Net Weight | lb | 20.9 | 20.9 |
| | Gross Weight | lb | 25.4 | 25.4 |

# 2. Specifications

| | | | | |
|---|---|---|---|---|
| Outdoor Unit | Outdoor Unit Model | | GWC09AGCXD-A3DNA1A/O | TW09HXP2A1AO |
| | Outdoor Unit Product Code | | CB385W15400 | CB385W15300 |
| | Compressor Manufacturer | | ZHUHAI LANDA COMPRESSOR CO., LTD | ZHUHAI LANDA COMPRESSOR CO., LTD |
| | Compressor Model | | QXF-B103zH170E | QXF-B103zH170E |
| | Compressor Oil | | RB68EP | RB68EP |
| | Compressor Type | | Rotary | Rotary |
| | Compressor LRA. | A | 25 | / |
| | Compressor RLA | A | 12.5 | 12.5 |
| | Compressor Power Input | W | 800 | 800 |
| | Compressor Overload Protector | | / | / |
| | Throttling Method | | Electron expansion valve | Electron expansion valve |
| | Set Temperature Range | ºF | 61~86 | 61~86 |
| | Cooling Operation Ambient Temperature Range | ºF | -4~122 | -4~122 |
| | Heating Operation Ambient Temperature Range | ºF | / | -22~86 |
| | Condenser Form | | Aluminum Fin-copper Tube | Aluminum Fin-copper Tube |
| | Condenser Pipe Diameter | mm | Φ5 | Φ7 |
| | Condenser Rows-fin Gap | mm | 2-1.4 | 2-1.4 |
| | Condenser Coil Length (LXDXW) | mm | 816×22.8×514 | 802×38.1×528 |
| | Fan Motor Speed | rpm | 900 | 900 |
| | Fan Motor Power Output | W | 30 | 30 |
| | Fan Motor RLA | A | 0.4 | 0.4 |
| | Fan Motor Capacitor | μF | / | / |
| | Outdoor Unit Air Flow Volume | CFM | 1295 | 1295 |
| | Fan Type | | Axial-flow | Axial-flow |
| | Fan Diameter | mm | Φ420 | Φ420 |
| | Defrosting Method | | / | Automatic Defrosting |
| | Climate Type | | T1 | T1 |
| | Isolation | | I | I |
| | Moisture Protection | | IPX4 | IPX4 |
| | Permissible Excessive Operating Pressure for the Discharge Side | MPa | 4.3 | 4.3 |
| | Permissible Excessive Operating Pressure for the Suction Side | MPa | 2.5 | 2.5 |
| | Sound Pressure Level | dB (A) | 51 | 52 |
| | Sound Power Level | dB (A) | 61 | 62 |
| | Dimension (WXHXD) | inch | 31 37/64 × 21 27/32 × 13 25/32 | 31 37/64 × 21 27/32 × 13 25/32 |
| | Dimension of Carton Box (LXWXH) | inch | 34 7/32 × 15 35/64 × 23 25/64 | 34 7/32 × 15 35/64 × 23 25/64 |
| | Dimension of Package (LXWXH) | inch | 34 21/64 × 15 43/64 × 24 13/32 | 34 21/64 × 15 43/64 × 24 13/32 |
| | Net Weight | lb | 65 | 72.8 |
| | Gross Weight | lb | 70.6 | 78.3 |
| | Refrigerant | | R410A | R410A |
| | Refrigerant Charge | oz | 30 | 35.3 |
| Connection Pipe | Connection Pipe Length | ft | 24.6 | 24.6 |
| | Connection Pipe Gas Additional Charge | oz/ft | 0.2 | 0.2 |
| | Outer Diameter Liquid Pipe | inch | 1/4 | 1/4 |
| | Outer Diameter Gas Pipe | inch | 3/8 | 3/8 |
| | Max Distance Height | ft | 32.8 | 32.8 |
| | Max Distance Length | ft | 49.2 | 49.2 |
| | Note: The connection pipe applies metric diameter. | | | |

The above data is subject to change without notice. Please refer to the nameplate of the unit.

# 2. Specifications

| Model | | | GWC09AGCXB-D3DNA1A | GWH09AGCXD-D3DNA1A<br>GWH09AGCXD-D3DNA4A |
|---|---|---|---|---|
| Product Code | | | CB385015500 | CB385015600<br>CB558009400 |
| Power Supply | Rated Voltage | V~ | 208/230 | 208/230 |
| | Rated Frequency | Hz | 60 | 60 |
| | Phases | | 1 | 1 |
| Power Supply Mode | | | Outdoor | Outdoor |
| Cooling Capacity | | Btu/h | 9000 | 9100 |
| Heating Capacity | | Btu/h | / | 10500 |
| Cooling Power Input | | W | 643 | 618 |
| Heating Power Input | | W | / | 848 |
| Cooling Power Current | | A | 3.45 | 3 |
| Heating Power Current | | A | / | 3.95 |
| Rated Input | | W | 1350 | 1343 |
| Rated Cooling Current | | A | 6.5 | 4.73 |
| Rated Heating Current | | A | / | 6 |
| Air Flow Volume | | CFM | 353/324/294/265/235/206/194/129 | 353/324/294/265/235/177/159/106 |
| Dehumidifying Volume | | Pint/h | 1.69 | 1.69 |
| EER | | (Btu/h)/W | 14 | 14.72 |
| COP | | (Btu/h)/W | / | 12.38 |
| SEER | | | 25 | 25.5 |
| HSPF | | | / | 12 |
| Application Area | | $yd^2$ | 53-16 | 53-57 |
| Indoor Unit | Model of indoor unit | | GWC09AGCXB-D3DNA1A/I | TW09HXP2A1DI<br>GWH09AGCXD-D3DNA4A/I |
| | Indoor Unit Product Code | | CB385N15500 | CB385N15600<br>CB558N09400 |
| | Fan Type | | Cross-flow | Cross-flow |
| | Fan Diameter Length(DXL) | mm | Φ98×630 | Φ98×630 |
| | Cooling Speed | r/min | 1300/1200/1100/1000/900/800/750/500 | 1300/1200/1100/1000/900/800/750/500 |
| | Heating Speed | r/min | / | 1300/1200/1100/1000/900/850/800 |
| | Fan Motor Power Output | W | 20 | 20 |
| | Fan Motor RLA | A | 0.22 | 0.22 |
| | Fan Motor Capacitor | μF | / | / |
| | Evaporator Form | | Aluminum Fin-copper Tube | Aluminum Fin-copper Tube |
| | Evaporator Pipe Diameter | mm | Φ5 | Φ5 |
| | Evaporator Row-fin Gap | mm | 2-1.4 | 2-1.4 |
| | Evaporator Coil Length (LXDXW) | mm | 634×22.8×304.8 | 634×22.8×304.8 |
| | Swing Motor Model | | MP24HF / MP24AK / MP24BA | MP24HF / MP24AK / MP24BA |
| | Swing Motor Power Output | W | 1.5 / 1.5 / 1.5 | 1.5 / 1.5 / 1.5 |
| | Fuse Current | A | 3.15 | 3.15 |
| | Sound Pressure Level | dB (A) | 41/39/32/26/25 | Cooling: 40/37/35/32/29/26/25/22<br>Heating: 41/38/36/33/29/27/25 |
| | Sound Power Level | dB (A) | 51/49/42/36/35 | Cooling: 50/47/45/42/39/36/35/32<br>Heating: 51/48/46/43/39/37/35 |
| | Dimension (WXHXD) | inch | 32 31/64 × 11 17/32 × 7 23/32 | 32 31/64 × 11 17/32 × 7 23/32 |
| | Dimension of Carton Box (LXWXH) | inch | 34 1/4 × 13 47/64 × 10 1/8 | 34 1/4 × 13 47/64 × 10 1/8 |
| | Dimension of Package (LXWXH) | inch | 34 29/64 × 14 3/8 × 10 35/64 | 34 29/64 × 14 3/8 × 10 35/64 |
| | Net Weight | lb | 20.9 | 20.9 |
| | Gross Weight | lb | 25.4 | 25.4 |

# 2. Specifications

| | | | | |
|---|---|---|---|---|
| Outdoor Unit | Outdoor Unit Model | | GWC09AGCXB-D3DNA1A/O | TW09HXP2A1DO |
| | Outdoor Unit Product Code | | CB385W15500 | CB385W15600 |
| | Compressor Manufacturer | | ZHUHAI LANDA COMPRESSOR CO.,LTD | ZHUHAI LANDA COMPRESSOR CO., LTD |
| | Compressor Model | | QXF-A082zC170 | QXF-B103zH170E |
| | Compressor Oil | | ZE-G;ES RB68GX or equivalent | FW68DA |
| | Compressor Type | | Rotary | Rotary |
| | Compressor LRA. | A | 15 | / |
| | Compressor RLA | A | 4.6 | 6.5 |
| | Compressor Power Input | W | 756.6 | 800 |
| | Compressor Overload Protector | | / | / |
| | Throttling Method | | Electron expansion valve | Electron expansion valve |
| | Set Temperature Range | ºF | 61~86 | 61~86 |
| | Cooling Operation Ambient Temperature Range | ºF | 0~115 | -20~122 |
| | Heating Operation Ambient Temperature Range | ºF | / | -22~86 |
| | Condenser Form | | Aluminum Fin-copper Tube | Aluminum Fin-copper Tube |
| | Condenser Pipe Diameter | mm | Φ7 | Φ7 |
| | Condenser Rows-fin Gap | mm | 2-1.4 | 2-1.4 |
| | Condenser Coil Length (LXDXW) | mm | 700×38.1×528 | 761.5×38.1×528 |
| | Fan Motor Speed | rpm | 850 | 850 |
| | Fan Motor Power Output | W | 30 | 30 |
| | Fan Motor RLA | A | 0.4 | 0.4 |
| | Fan Motor Capacitor | μF | / | / |
| | Outdoor Unit Air Flow Volume | CFM | 1148 | 1295 |
| | Fan Type | | Axial-flow | Axial-flow |
| | Fan Diameter | mm | Φ400 | Φ420 |
| | Defrosting Method | | / | Automatic Defrosting |
| | Climate Type | | T1 | T1 |
| | Isolation | | I | I |
| | Moisture Protection | | IPX4 | IPX4 |
| | Permissible Excessive Operating Pressure for the Discharge Side | MPa | 4.3 | 4.3 |
| | Permissible Excessive Operating Pressure for the Suction Side | MPa | 2.5 | 2.5 |
| | Sound Pressure Level | dB (A) | 49 | 52 |
| | Sound Power Level | dB (A) | 59 | 63 |
| | Dimension (WXHXD) | inch | 28 13/16 × 21 27/32 × 12 63/64 | 31 37/64 × 21 27/32 × 13 25/32 |
| | Dimension of Carton Box (LXWXH) | inch | 31 9/64 × 14 11/16 × 23 15/64 | 34 7/32 × 15 35/64 × 23 25/64 |
| | Dimension of Package (LXWXH) | inch | 31 17/64 × 14 51/64 × 24 7/32 | 34 21/64 × 15 43/64 × 24 13/32 |
| | Net Weight | lb | 57.3 | 70.6 |
| | Gross Weight | lb | 62.8 | 76.1 |
| | Refrigerant | | R410A | R410A |
| | Refrigerant Charge | oz | 30 | 35.3 |
| Connection Pipe | Connection Pipe Length | ft | 24.6 | 24.6 |
| | Connection Pipe Gas Additional Charge | oz/ft | 0.2 | 0.2 |
| | Outer Diameter Liquid Pipe | inch | 1/4 | 1/4 |
| | Outer Diameter Gas Pipe | inch | 3/8 | 3/8 |
| | Max Distance Height | ft | 39.4 | 32.8 |
| | Max Distance Length | ft | 65.6 | 49.2 |
| | Note: The connection pipe applies metric diameter. | | | |

The above data is subject to change without notice. Please refer to the nameplate of the unit.

# 2. Specifications

| Model | | | GWC12AGCXD-D3DNA1A | GWH12AGCXD-D3DNA1A<br>GWH12AGCXD-D3DNA4A |
|---|---|---|---|---|
| Product Code | | | CB385016800 | CB385016600<br>CB558009300 |
| Power Supply | Rated Voltage | V~ | 208/230 | 208/230 |
| | Rated Frequency | Hz | 60 | 60 |
| | Phases | | 1 | 1 |
| Power Supply Mode | | | Outdoor | Outdoor |
| Cooling Capacity | | Btu/h | 12000 | 12000 |
| Heating Capacity | | Btu/h | / | 12000 |
| Cooling Power Input | | W | 961 | 961 |
| Heating Power Input | | W | / | 923 |
| Cooling Power Current | | A | 4.3 | 4.3 |
| Heating Power Current | | A | / | 4.1 |
| Rated Input | | W | 1400 | 1500 |
| Rated Cooling Current | | A | 6.3 | 6.3 |
| Rated Heating Current | | A | / | 6.7 |
| Air Flow Volume | | CFM | 400/365/330/288/265/247/230/212 | 400/365/330/288/265/247/230/212 |
| Dehumidifying Volume | | Pint/h | 2.96 | 2.96 |
| EER | | (Btu/h)/W | 12.5 | 12.5 |
| COP | | (Btu/h)/W | / | 13 |
| SEER | | | 24 | 24 |
| HSPF | | | / | 11 |
| Application Area | | $yd^2$ | 19-29 | 19-29 |
| Indoor Unit | Model of indoor unit | | GWC12AGCXD-D3DNA1A/I | TW12HXP2A1DI<br>GWH12AGCXD-D3DNA4A/I |
| | Indoor Unit Product Code | | CB385N16800 | CB385N16600<br>CB558N09300 |
| | Fan Type | | Cross-flow | Cross-flow |
| | Fan Diameter Length(DXL) | mm | Φ98×630 | Φ98×630 |
| | Cooling Speed | r/min | 1450/1200/1120/1050/980/920/750/500 | 1450/1200/1120/1050/980/920/750/500 |
| | Heating Speed | r/min | / | 1450/1200/1140/1080/1020/960/900 |
| | Fan Motor Power Output | W | 15 | 15 |
| | Fan Motor RLA | A | 0.2 | 0.2 |
| | Fan Motor Capacitor | μF | / | / |
| | Evaporator Form | | Aluminum Fin-copper Tube | Aluminum Fin-copper Tube |
| | Evaporator Pipe Diameter | mm | Φ5 | Φ5 |
| | Evaporator Row-fin Gap | mm | 2-1.4 | 2-1.4 |
| | Evaporator Coil Length (LXDXW) | mm | 634×22.8×304.8 | 634×22.8×304.8 |
| | Swing Motor Model | | MP24HF / MP24AK / MP24BA | MP24HF / MP24AK / MP24BA |
| | Swing Motor Power Output | W | 1.5 / 1.5 / 1.5 | 1.5 / 1.5 / 1.5 |
| | Fuse Current | A | 15 | 15 |
| | Sound Pressure Level | dB (A) | 43/38/36/34/32/30/27 | Cooling: 43/38/36/34/32/30/27<br>Heating: 44/38/36/34/32/30/28 |
| | Sound Power Level | dB (A) | 53/48/46/44/42/40/37 | Cooling: 53/48/46/44/42/40/37<br>Heating: 54/48/46/44/42/40/38 |
| | Dimension (WXHXD) | inch | 32 31/64 × 11 17/32 × 7 23/32 | 32 31/64 × 11 17/32 × 7 23/32 |
| | Dimension of Carton Box (LXWXH) | inch | 34 1/4 × 13 47/64 × 10 1/8 | 34 1/4 × 13 47/64 × 10 1/8 |
| | Dimension of Package (LXWXH) | inch | 34 29/64 × 14 3/8 × 10 35/64 | 34 29/64 × 14 3/8 × 10 35/64 |
| | Net Weight | lb | 20.9 | 20.9 |
| | Gross Weight | lb | 25.4 | 25.4 |

# 2. Specifications

| | | | | |
|---|---|---|---|---|
| Outdoor Unit | Outdoor Unit Model | | GWC12AGCXD-D3DNA1A/O | TW12HXP2A1DO |
| | Outdoor Unit Product Code | | CB385W16800 | CB385W16600 |
| | Compressor Manufacturer | | Shanghai Highly Electrical Appliances Co.,Ltd. | Shanghai Highly Electrical Appliances Co.,Ltd. |
| | Compressor Model | | GSD098XKUA7JL6B | GSD098XKUA7JL6B |
| | Compressor Oil | | ACS-68R or equiva le nt 320±20ml | ACS-68R or equiva le nt 320±20ml |
| | Compressor Type | | Rotary | Rotary |
| | Compressor LRA. | A | / | / |
| | Compressor RLA | A | 6.8 | 6.8 |
| | Compressor Power Input | W | 784 | 784 |
| | Compressor Overload Protector | | / | / |
| | Throttling Method | | Electron expansion valve | Electron expansion valve |
| | Set Temperature Range | ºF | 61~86 | 61~86 |
| | Cooling Operation Ambient Temperature Range | ºF | -20~122 | -20~122 |
| | Heating Operation Ambient Temperature Range | ºF | / | -22~86 |
| | Condenser Form | | Aluminum Fin-copper Tube | Aluminum Fin-copper Tube |
| | Condenser Pipe Diameter | mm | Φ7.94 | Φ7.94 |
| | Condenser Rows-fin Gap | mm | 2-1.4 | 2-1.4 |
| | Condenser Coil Length (LXDXW) | mm | 761.5×38.1×528 | 761.5×38.1×528 |
| | Fan Motor Speed | rpm | 900 | 900 |
| | Fan Motor Power Output | W | 30 | 30 |
| | Fan Motor RLA | A | 0.4 | 0.4 |
| | Fan Motor Capacitor | μF | / | / |
| | Outdoor Unit Air Flow Volume | CFM | 1294.7 | 1294.7 |
| | Fan Type | | Cross-flow | Cross-flow |
| | Fan Diameter | mm | Φ420 | Φ420 |
| | Defrosting Method | | / | Automatic Defrosting |
| | Climate Type | | T1 | T1 |
| | Isolation | | I | I |
| | Moisture Protection | | IPX4 | IPX4 |
| | Permissible Excessive Operating Pressure for the Discharge Side | MPa | 4.3 | 4.3 |
| | Permissible Excessive Operating Pressure for the Suction Side | MPa | 2.5 | 2.5 |
| | Sound Pressure Level | dB (A) | 52 | 52 |
| | Sound Power Level | dB (A) | 62 | 62 |
| | Dimension (WXHXD) | inch | 31 37/64 × 21 27/32 × 13 25/32 | 31 37/64 × 21 27/32 × 13 25/32 |
| | Dimension of Carton Box (LXWXH) | inch | 34 7/32 × 15 35/64 × 23 25/64 | 34 7/32 × 15 35/64 × 23 25/64 |
| | Dimension of Package (LXWXH) | inch | 34 21/64 × 15 43/64 × 24 13/32 | 34 21/64 × 15 43/64 × 24 13/32 |
| | Net Weight | lb | 68.4 | 70.6 |
| | Gross Weight | lb | 73.9 | 76.1 |
| | Refrigerant | | R410A | R410A |
| | Refrigerant Charge | oz | 42.3 | 42.3 |
| Connection Pipe | Connection Pipe Length | ft | 16.4 | 16.4 |
| | Connection Pipe Gas Additional Charge | oz/ft | 0.161 | 0.215 |
| | Outer Diameter Liquid Pipe | inch | 1/4 | 1/4 |
| | Outer Diameter Gas Pipe | inch | 1/2 | 1/2 |
| | Max Distance Height | ft | 32.8 | 32.8 |
| | Max Distance Length | ft | 65.6 | 65.6 |
| | Note: The connection pipe applies metric diameter. | | | |

The above data is subject to change without notice. Please refer to the nameplate of the unit.

# 2. Specifications

| Model | | | GWC12AGCXD-A3DNA1A | GWH12AGCXD-A3DNA1A<br>GWH12AGCXD-A3DNA4A |
|---|---|---|---|---|
| Product Code | | | CB385016500 | CB385016700<br>CB558009100 |
| Power Supply | Rated Voltage | V~ | 115 | 115 |
| | Rated Frequency | Hz | 60 | 60 |
| | Phases | | 1 | 1 |
| Power Supply Mode | | | Outdoor | Outdoor |
| Cooling Capacity | | Btu/h | 12000 | 12000 |
| Heating Capacity | | Btu/h | / | 12000 |
| Cooling Power Input | | W | 961 | 961 |
| Heating Power Input | | W | / | 923 |
| Cooling Power Current | | A | 10.4 | 10.4 |
| Heating Power Current | | A | / | 10 |
| Rated Input | | W | 1400 | 1500 |
| Rated Cooling Current | | A | 15.2 | 15.2 |
| Rated Heating Current | | A | / | 16.3 |
| Air Flow Volume | | CFM | 400/365/330/288/265/247/230/212 | 400/365/330/288/265/247/230/212 |
| Dehumidifying Volume | | Pint/h | 2.96 | 2.96 |
| EER | | (Btu/h)/W | 12.5 | 12.5 |
| COP | | (Btu/h)/W | / | 13 |
| SEER | | | 24 | 24 |
| HSPF | | | / | 11 |
| Application Area | | $yd^2$ | 19-29 | 19-29 |
| Indoor Unit | Model of indoor unit | | GWC12AGCXD-A3DNA1A/I | TW12HXP2A1AI<br>GWH12AGCXD-A3DNA4A/I |
| | Indoor Unit Product Code | | CB385N16500 | CB385N16700<br>CB558N09100 |
| | Fan Type | | Cross-flow | Cross-flow |
| | Fan Diameter Length(DXL) | mm | Φ98×630 | Φ98×630 |
| | Cooling Speed | r/min | 1450/1200/1120/1050/980/920/750/500 | 1450/1200/1120/1050/980/920/750/500 |
| | Heating Speed | r/min | / | 1450/1200/1140/1080/1020/960/900 |
| | Fan Motor Power Output | W | 15 | 15 |
| | Fan Motor RLA | A | 0.3 | 0.3 |
| | Fan Motor Capacitor | μF | / | / |
| | Evaporator Form | | Aluminum Fin-copper Tube | Aluminum Fin-copper Tube |
| | Evaporator Pipe Diameter | mm | Φ5 | Φ5 |
| | Evaporator Row-fin Gap | mm | 2-1.4 | 2-1.4 |
| | Evaporator Coil Length (LXDXW) | mm | 634×22.8×304.8 | 634×22.8×304.8 |
| | Swing Motor Model | | MP24HF / MP24AK / MP24BA | MP24HF / MP24AK / MP24BA |
| | Swing Motor Power Output | W | 1.5 / 1.5 / 1.5 | 1.5 / 1.5 / 1.5 |
| | Fuse Current | A | 30 | 30 |
| | Sound Pressure Level | dB (A) | 43/38/36/34/32/30/27 | Cooling: 43/38/36/34/32/30/27<br>Heating: 44/38/36/34/32/30/28 |
| | Sound Power Level | dB (A) | 53/48/46/44/42/40/37 | Cooling: 53/48/46/44/42/40/37<br>Heating: 54/48/46/44/42/40/38 |
| | Dimension (WXHXD) | inch | 32 31/64 × 11 17/32 × 7 23/32 | 32 31/64 × 11 17/32 × 7 23/32 |
| | Dimension of Carton Box (LXWXH) | inch | 34 1/4 × 13 47/64 × 10 1/8 | 34 1/4 × 13 47/64 × 10 1/8 |
| | Dimension of Package (LXWXH) | inch | 34 29/64 × 14 3/8 × 10 35/64 | 34 29/64 × 14 3/8 × 10 35/64 |
| | Net Weight | lb | 20.9 | 20.9 |
| | Gross Weight | lb | 25.4 | 25.4 |

# 2. Specifications

| | | | | |
|---|---|---|---|---|
| Outdoor Unit | Outdoor Unit Model | | GWC12AGCXD-A3DNA1A/O | TW12HXP2A1AO |
| | Outdoor Unit Product Code | | CB385W16500 | CB385W16700 |
| | Compressor Manufacturer | | Shanghai Highly Electrical Appliances Co.,Ltd. | Shanghai Highly Electrical Appliances Co.,Ltd. |
| | Compressor Model | | GSD098XKUA7JL6B | GSD098XKUA7JL6B |
| | Compressor Oil | | ACS-68R or equiva le nt 320±20ml | ACS-68R or equiva le nt 320±20ml |
| | Compressor Type | | Rotary | Rotary |
| | Compressor LRA. | A | / | / |
| | Compressor RLA | A | 15 | 15 |
| | Compressor Power Input | W | 784 | 784 |
| | Compressor Overload Protector | | / | / |
| | Throttling Method | | Electron expansion valve | Electron expansion valve |
| | Set Temperature Range | ºF | 61~86 | 61~86 |
| | Cooling Operation Ambient Temperature Range | ºF | -4~122 | -4~122 |
| | Heating Operation Ambient Temperature Range | ºF | / | -22~86 |
| | Condenser Form | | Aluminum Fin-copper Tube | Aluminum Fin-copper Tube |
| | Condenser Pipe Diameter | mm | Φ7.94 | Φ7.94 |
| | Condenser Rows-fin Gap | mm | 2-1.4 | 2-1.4 |
| | Condenser Coil Length (LXDXW) | mm | 761.5×38.1×528 | 761.5×38.1×528 |
| | Fan Motor Speed | rpm | 900 | 900 |
| | Fan Motor Power Output | W | 30 | 30 |
| | Fan Motor RLA | A | 0.4 | 0.4 |
| | Fan Motor Capacitor | μF | / | / |
| | Outdoor Unit Air Flow Volume | CFM | 1294.7 | 1294.7 |
| | Fan Type | | Cross-flow | Cross-flow |
| | Fan Diameter | mm | Φ420 | Φ420 |
| | Defrosting Method | | / | Automatic Defrosting |
| | Climate Type | | T1 | T1 |
| | Isolation | | I | I |
| | Moisture Protection | | IPX4 | IPX4 |
| | Permissible Excessive Operating Pressure for the Discharge Side | MPa | 4.3 | 4.3 |
| | Permissible Excessive Operating Pressure for the Suction Side | MPa | 2.5 | 2.5 |
| | Sound Pressure Level | dB (A) | 52 | 52 |
| | Sound Power Level | dB (A) | 62 | 62 |
| | Dimension (WXHXD) | inch | 31 37/64 × 21 27/32 × 13 25/32 | 31 37/64 × 21 27/32 × 13 25/32 |
| | Dimension of Carton Box (LXWXH) | inch | 34 7/32 × 15 35/64 × 23 25/64 | 34 7/32 × 15 35/64 × 23 25/64 |
| | Dimension of Package (LXWXH) | inch | 34 21/64 × 15 43/64 × 24 13/32 | 34 21/64 × 15 43/64 × 24 13/32 |
| | Net Weight | lb | 70.6 | 73.9 |
| | Gross Weight | lb | 76.1 | 79.4 |
| | Refrigerant | | R410A | R410A |
| | Refrigerant Charge | oz | 42.3 | 42.3 |
| Connection Pipe | Connection Pipe Length | ft | 16.4 | 16.4 |
| | Connection Pipe Gas Additional Charge | oz/ft | 0.161 | 0.215 |
| | Outer Diameter Liquid Pipe | inch | 1/4 | 1/4 |
| | Outer Diameter Gas Pipe | inch | 1/2 | 1/2 |
| | Max Distance Height | ft | 32.8 | 32.8 |
| | Max Distance Length | ft | 65.6 | 65.6 |
| | Note: The connection pipe applies metric diameter. | | | |

The above data is subject to change without notice. Please refer to the nameplate of the unit.

# 2. Specifications

| Model | | | GWC18AGDXF-D3DNA1A | GWH18AGDXF-D3DNA1A<br>GWH18AGDXF-D3DNA4A |
|---|---|---|---|---|
| Product Code | | | CB385016900 | CB385017000<br>CB558008900 |
| Power Supply | Rated Voltage | V~ | 208/230 | 208/230 |
| | Rated Frequency | Hz | 60 | 60 |
| | Phases | | 1 | 1 |
| Power Supply Mode | | | Outdoor | Outdoor |
| Cooling Capacity | | Btu/h | 18000 | 18000 |
| Heating Capacity | | Btu/h | / | 18000 |
| Cooling Power Input | | W | 1384 | 1384 |
| Heating Power Input | | W | / | 1384 |
| Cooling Power Current | | A | 6.7 | 6.3 |
| Heating Power Current | | A | / | 6.3 |
| Rated Input | | W | 2300 | 2350 |
| Rated Cooling Current | | A | 11.5 | 11.5 |
| Rated Heating Current | | A | / | 11.5 |
| Air Flow Volume | | CFM | 589/500/441/412/383/353/324 | 589/500/441/412/383/353/324 |
| Dehumidifying Volume | | Pint/h | 3.8 | 3.8 |
| EER | | (Btu/h)/W | 13 | 13 |
| COP | | (Btu/h)/W | / | 13 |
| SEER | | | 23 | 23 |
| HSPF | | | / | / |
| Application Area | | $yd^2$ | 28-41 | 28-41 |
| Indoor Unit | Model of indoor unit | | GWC18AGDXF-D3DNA1A/I | TW18HXP2A1DI<br>GWH18AGDXF-D3DNA4A/I |
| | Indoor Unit Product Code | | CB385N16900 | CB385N17000<br>CB558N08900 |
| | Fan Type | | Cross-flow | Cross-flow |
| | Fan Diameter Length(DXL) | mm | Φ106×739 | Φ106×739 |
| | Cooling Speed | r/min | 1400/1200/1120/1050/980/860/750 | 1400/1200/1120/1050/980/860/750 |
| | Heating Speed | r/min | / | 1400/1200/1120/1050/950/850/750 |
| | Fan Motor Power Output | W | 45 | 45 |
| | Fan Motor RLA | A | 0.25 | 0.35 |
| | Fan Motor Capacitor | μF | / | / |
| | Evaporator Form | | Aluminum Fin-copper Tube | Aluminum Fin-copper Tube |
| | Evaporator Pipe Diameter | mm | Φ7 | Φ7 |
| | Evaporator Row-fin Gap | mm | 2-1.4 | 2-1.4 |
| | Evaporator Coil Length (LXDXW) | mm | 745×22.8×342.9 | 745×25.4×342.9 |
| | Swing Motor Model | | MP24HF/MP24AK/MP24BA | MP24HF/MP24AK/MP24BA |
| | Swing Motor Power Output | W | 1.5/1.5/1.5 | 1.5/1.5/1.5 |
| | Fuse Current | A | 3.15A | 3.15A |
| | Sound Pressure Level | dB (A) | 48/43/41/40/38/34/31 | Cooling: 49/43/41/40/37/33/29<br>Heating: 49/43/41/39/36/32/28 |
| | Sound Power Level | dB (A) | 58/53/51/50/48/44/41 | Cooling: 49/43/51/50/47/43/39<br>Heating: 59/53/51/49/46/42/38 |
| | Dimension (WXHXD) | inch | 38 21/32 × 12 1/4 × 8 45/64 | 38 21/32 × 12 1/4 × 8 45/64 |
| | Dimension of Carton Box (LXWXH) | inch | 40 29/32 × 14 27/32 × 11 19/64 | 40 29/32 × 14 27/32 × 11 19/64 |
| | Dimension of Package (LXWXH) | inch | 41 7/64 × 15 5/32 × 11 11/16 | 41 7/64 × 15 5/32 × 11 11/16 |
| | Net Weight | lb | 28.7 | 28.7 |
| | Gross Weight | lb | 35.3 | 35.3 |

# 2. Specifications

| | | | | |
|---|---|---|---|---|
| Outdoor Unit | Outdoor Unit Model | | GWC18AGDXF-D3DNA1A/O | TW18HXP2A1DO |
| | Outdoor Unit Product Code | | CB385W16900 | CB385W17000 |
| | Compressor Manufacturer | | ZHUHAI LANDA COMPRESSOR CO. LTD. | ZHUHAI LANDA COMPRESSOR CO. LTD. |
| | Compressor Model | | QXF-M130zF170 | QXF-M130zF170 |
| | Compressor Oil | | FW68DA or equivalent | FW68DA or equivalent |
| | Compressor Type | | Rotary | Rotary |
| | Compressor LRA. | A | / | / |
| | Compressor RLA | A | 9.25 | 9.6 |
| | Compressor Power Input | W | 1196 | 1196 |
| | Compressor Overload Protector | | / | / |
| | Throttling Method | | Electron expansion valve | Electron expansion valve |
| | Set Temperature Range | ºF | 61~86 | 61~86 |
| | Cooling Operation Ambient Temperature Range | ºF | 0~115 | -20~122 |
| | Heating Operation Ambient Temperature Range | ºF | / | -22~86 |
| | Condenser Form | | Aluminum Fin-copper Tube | Aluminum Fin-copper Tube |
| | Condenser Pipe Diameter | mm | Φ7 | Φ7 |
| | Condenser Rows-fin Gap | mm | 2-1.4 | 2-1.4 |
| | Condenser Coil Length (LXDXW) | mm | 890×38.1×616 | 890×38.1×616 |
| | Fan Motor Speed | rpm | 850 | 850 |
| | Fan Motor Power Output | W | 60 | 60 |
| | Fan Motor RLA | A | 0.5 | 1.25 |
| | Fan Motor Capacitor | μF | / | / |
| | Outdoor Unit Air Flow Volume | CFM | 2119 | 2119 |
| | Fan Type | | Axial-flow | Axial-flow |
| | Fan Diameter | mm | Φ520 | Φ520 |
| | Defrosting Method | | / | Automatic Defrosting |
| | Climate Type | | T1 | T1 |
| | Isolation | | I | I |
| | Moisture Protection | | IPX4 | IPX4 |
| | Permissible Excessive Operating Pressure for the Discharge Side | MPa | 4.3 | 4.3 |
| | Permissible Excessive Operating Pressure for the Suction Side | MPa | 2.5 | 2.5 |
| | Sound Pressure Level | dB (A) | 57 | 59 |
| | Sound Power Level | dB (A) | 67 | 69 |
| | Dimension (WXHXD) | inch | 37 23/32 × 25 63/64 × 15 53/64 | 37 23/32 × 25 63/64 × 15 53/64 |
| | Dimension of Carton Box (LXWXH) | inch | 40 33/64 × 17 53/64 × 28 5/32 | 40 33/64 × 17 53/64 × 28 5/32 |
| | Dimension of Package (LXWXH) | inch | 40 5/8 × 17 61/64 × 29 1/64 | 40 5/8 × 17 61/64 × 29 1/64 |
| | Net Weight | lb | 94.8 | 98.1 |
| | Gross Weight | lb | 104.738 | 106.943 |
| | Refrigerant | | R410A | R410A |
| | Refrigerant Charge | oz | 53 | 53 |
| Connection Pipe | Connection Pipe Length | ft | 24.6 | 24.6 |
| | Connection Pipe Gas Additional Charge | oz/ft | 0.125 | 0.125 |
| | Outer Diameter Liquid Pipe | inch | 1/4 | 1/4 |
| | Outer Diameter Gas Pipe | inch | 5/8 | 5/8 |
| | Max Distance Height | ft | 32.8 | 32.8 |
| | Max Distance Length | ft | 82 | 82 |
| | Note: The connection pipe applies metric diameter. | | | |

The above data is subject to change without notice. Please refer to the nameplate of the unit.

# 2. Specifications

| Model | | | GWC24AGEXH-D3DNA1A | GWH24AGEXH-D3DNA1A<br>GWH24AGEXH-D3DNA4A |
|---|---|---|---|---|
| Product Code | | | CB385016400 | CB385016300<br>CB558009000 |
| Power Supply | Rated Voltage | V~ | 208/230 | 208/230 |
| | Rated Frequency | Hz | 60 | 60 |
| | Phases | | 1 | 1 |
| Power Supply Mode | | | Outdoor | Outdoor |
| Cooling Capacity | | Btu/h | 22000 | 22000 |
| Heating Capacity | | Btu/h | / | 24000 |
| Cooling Power Input | | W | 1679 | 1679 |
| Heating Power Input | | W | / | 1870 |
| Cooling Power Current | | A | 8.1 | 8.1 |
| Heating Power Current | | A | / | 8.8 |
| Rated Input | | W | 2600 | 3100 |
| Rated Cooling Current | | A | 15.3 | 15.3 |
| Rated Heating Current | | A | / | 13.5 |
| Air Flow Volume | | CFM | 736/589/530/471/441/412/383 | 736/589/530/471/441/412/383 |
| Dehumidifying Volume | | Pint/h | 5.07 | 5.072 |
| EER | | (Btu/h)/W | 13.1 | 13.1 |
| COP | | (Btu/h)/W | / | 12.8 |
| SEER | | | 24 | 24 |
| HSPF | | | / | 11 |
| Application Area | | $yd^2$ | 32-50 | 32-50 |
| Indoor Unit | Model of indoor unit | | GWC24AGEXH-D3DNA1A/I | TW24HXP2A1DI<br>GWH24AGEXH-D3DNA4A/I |
| | Indoor Unit Product Code | | CB385N16400 | CB385N16300<br>CB558N09000 |
| | Fan Type | | Cross-flow | Cross-flow |
| | Fan Diameter Length(DXL) | mm | Φ108×830 | Φ108×830 |
| | Cooling Speed | r/min | 1500/1150/1100/1000/950/900/850 | 1500/1150/1100/1000/950/900/850 |
| | Heating Speed | r/min | / | 1500/1200/1100/1050/1000/950/900 |
| | Fan Motor Power Output | W | 60 | 60 |
| | Fan Motor RLA | A | 0.3 | 0.3 |
| | Fan Motor Capacitor | μF | / | / |
| | Evaporator Form | | Aluminum Fin-copper Tube | Aluminum Fin-copper Tube |
| | Evaporator Pipe Diameter | mm | Φ7 | Φ7 |
| | Evaporator Row-fin Gap | mm | 2-1.4 | 2-1.4 |
| | Evaporator Coil Length (LXDXW) | mm | 845×25.4×342.9 | 845×25.4×342.9 |
| | Swing Motor Model | | MP24AK/MP24HF/MP24HF | MP24AK/MP24HF/MP24HF |
| | Swing Motor Power Output | W | 1.5/1.5/1.5 | 1.5/1.5/1.5 |
| | Fuse Current | A | 3.15 | 3.15 |
| | Sound Pressure Level | dB (A) | 52/44/42/39/38/36/34 | Cooling: 52/44/42/39/38/36/34<br>Heating: 52/44/42/39/38/36/34 |
| | Sound Power Level | dB (A) | 62/54/52/49/48/46/44 | Cooling: 62/54/52/49/48/46/44<br>Heating: 62/54/52/49/48/46/44 |
| | Dimension (WXHXD) | inch | 42 21/64 × 13 7/64 × 9 11/16 | 42 21/64 × 13 7/64 × 9 11/16 |
| | Dimension of Carton Box (LXWXH) | inch | 44 13/32 × 15 63/64 × 12 23/32 | 44 13/32 × 15 63/64 × 12 23/32 |
| | Dimension of Package (LXWXH) | inch | 44 39/64 × 16 19/64 × 13 7/64 | 44 39/64 × 16 19/64 × 13 7/64 |
| | Net Weight | lb | 35.3 | 35.3 |
| | Gross Weight | lb | 41.9 | 41.9 |

# 2. Specifications

| | | | | |
|---|---|---|---|---|
| Outdoor Unit | Outdoor Unit Model | | GWC24AGEXH-D3DNA1A/O | TW24HXP2A1DO |
| | Outdoor Unit Product Code | | CB385W16400 | CB385W16300 |
| | Compressor Manufacturer | | ZHUHAI LANDA COMPRESSOR CO., LTD | ZHUHAI LANDA COMPRESSOR CO., LTD |
| | Compressor Model | | QXFS-M180zX170 | QXFS-M180zX170 |
| | Compressor Oil | | / | / |
| | Compressor Type | | Rotary | Rotary |
| | Compressor LRA. | A | 24 | 24 |
| | Compressor RLA | A | 11 | 11 |
| | Compressor Power Input | W | 1350 | 1350 |
| | Compressor Overload Protector | | HPC 115/95U1 KSD115°C | HPC 115/95U1 KSD115°C |
| | Throttling Method | | Electron expansion valve | Electron expansion valve |
| | Set Temperature Range | ºF | 61~86 | 61~86 |
| | Cooling Operation Ambient Temperature Range | ºF | 0~122 | -20~122 |
| | Heating Operation Ambient Temperature Range | ºF | / | -22~86 |
| | Condenser Form | | Aluminum Fin-copper Tube | Aluminum Fin-copper Tube |
| | Condenser Pipe Diameter | mm | Φ7 | Φ7 |
| | Condenser Rows-fin Gap | mm | 2-1.4 | 2-1.4 |
| | Condenser Coil Length (LXDXW) | mm | 955×38.1×704 | 955×38.1×704 |
| | Fan Motor Speed | rpm | 850 | 850 |
| | Fan Motor Power Output | W | 90 | 90 |
| | Fan Motor RLA | A | 0.6 | 0.6 |
| | Fan Motor Capacitor | μF | / | / |
| | Outdoor Unit Air Flow Volume | CFM | 2648 | 2648 |
| | Fan Type | | Axial-flow | Axial-flow |
| | Fan Diameter | mm | Φ570 | Φ570 |
| | Defrosting Method | | / | Automatic Defrosting |
| | Climate Type | | T1 | T1 |
| | Isolation | | I | I |
| | Moisture Protection | | IPX4 | IPX4 |
| | Permissible Excessive Operating Pressure for the Discharge Side | MPa | 4.3 | 4.3 |
| | Permissible Excessive Operating Pressure for the Suction Side | MPa | 2.5 | 2.5 |
| | Sound Pressure Level | dB (A) | 62 | 62 |
| | Sound Power Level | dB (A) | 72 | 72 |
| | Dimension (WXHXD) | inch | 39 3/8 × 29 3/8 × 16 13/16 | 39 3/8 × 29 3/8 × 16 13/16 |
| | Dimension of Carton Box (LXWXH) | inch | 42 13/32 × 18 57/64 × 30 29/32 | 42 13/32 × 18 57/64 × 30 29/32 |
| | Dimension of Package (LXWXH) | inch | 42 33/64 × 19 1/64 × 31 57/64 | 42 33/64 × 19 1/64 × 31 57/64 |
| | Net Weight | lb | 125.7 | 125.7 |
| | Gross Weight | lb | 136.7 | 136.7 |
| | Refrigerant | | R410A | R410A |
| | Refrigerant Charge | oz | 60 | 60 |
| Connection Pipe | Connection Pipe Length | ft | 24.6 | 24.6 |
| | Connection Pipe Gas Additional Charge | oz/ft | 0.2 | 0.5 |
| | Outer Diameter Liquid Pipe | inch | 1/4 | 1/4 |
| | Outer Diameter Gas Pipe | inch | 5/8 | 5/8 |
| | Max Distance Height | ft | 82 | 82 |
| | Max Distance Length | ft | 131.2 | 131.2 |
| | Note: The connection pipe applies metric diameter. | | | |

The above data is subject to change without notice. Please refer to the nameplate of the unit.

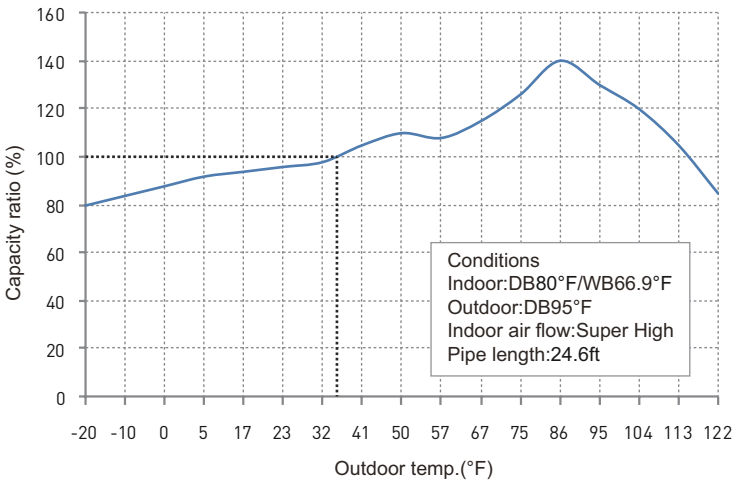
# 2. Specifications

## 2.2 Capacity Variation Ratio According to Temperature

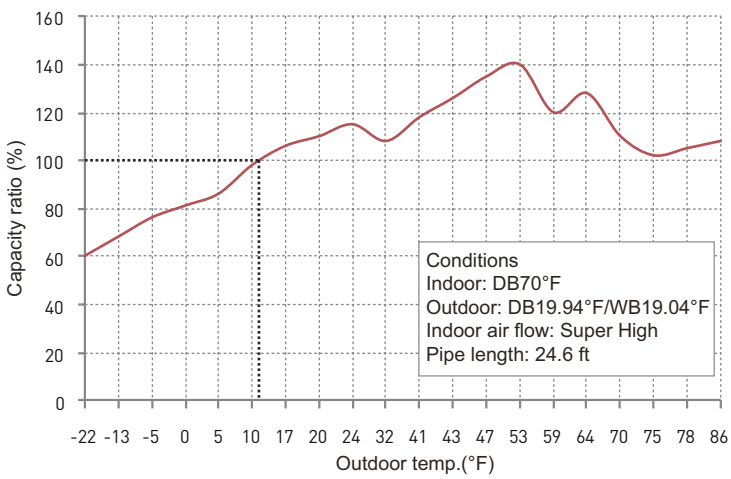
09K(115V~) / GWH09AGCXD-D3DNA1A / GWH09AGCXD-D3DNA4A / GWH18AGDXF-D3DNA1A

09K(115V~) of cooling operation ambient temperature range is -4°F~122°F.

Cooling:

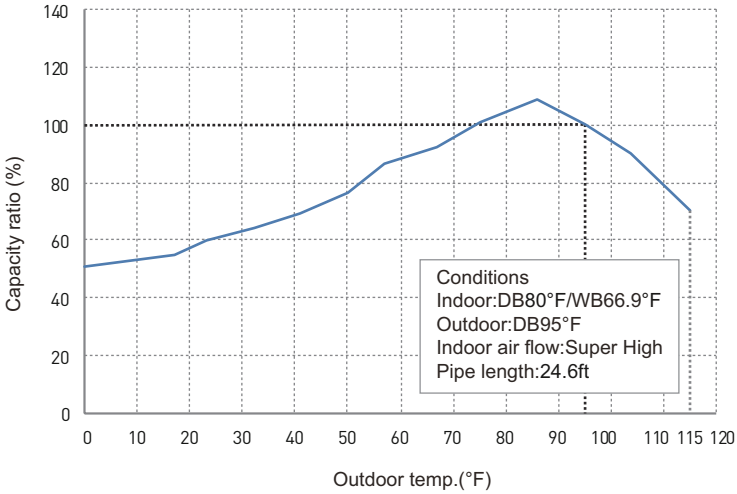



Heating:




GWC09AGCXB-D3DNA1A / GWC18AGDXF-D3DNA1A

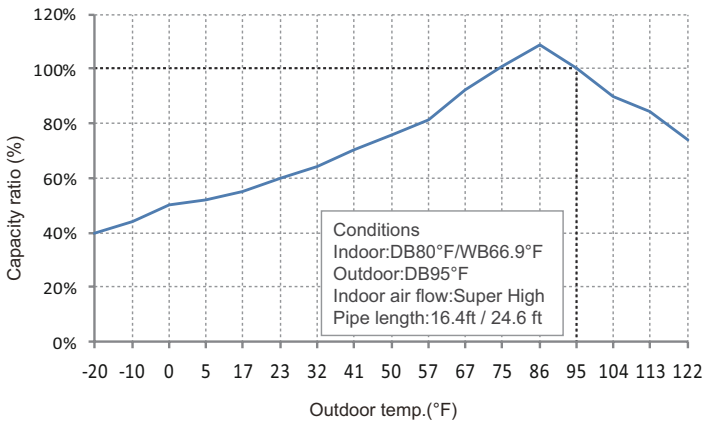
Cooling:



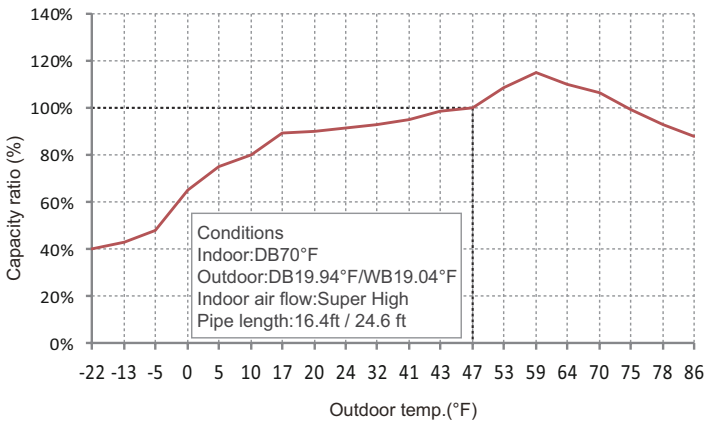

12K

12K(115V~) of cooling operation ambient temperature range is -4°F~122°F.

Cooling:




Heating:

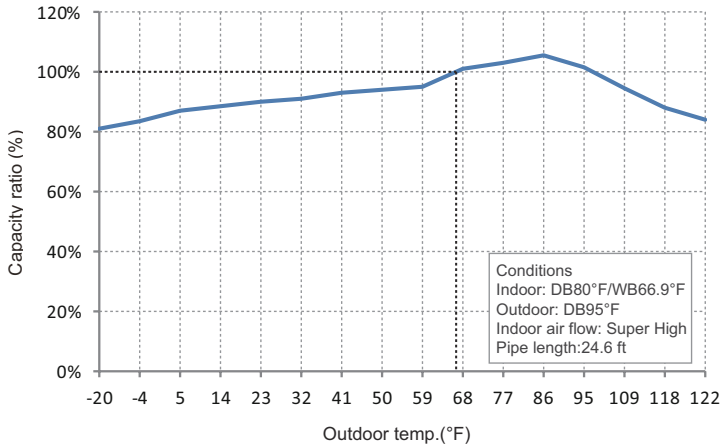


# 2. Specifications

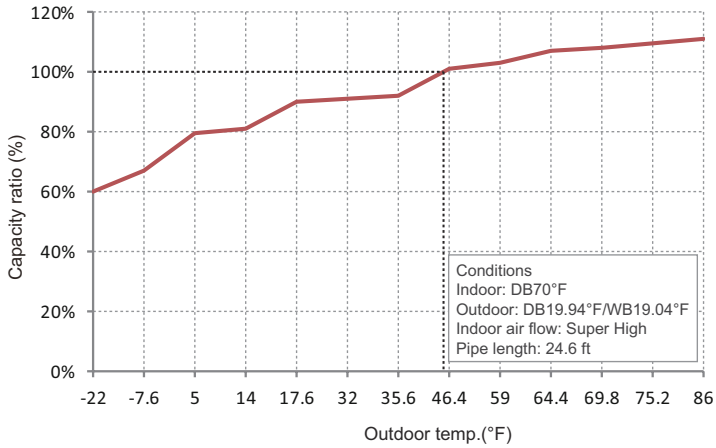
24K

GWC24AGEXH-D3DNA1A of cooling operation ambient temperature range is 0°F~122°F.

Cooling:




Heating:




## 2.3 Cooling and Heating Data Sheet in Rated Frequency

Cooling:

| Rated cooling condition(°F) (DB/WB) | | Model | Pressure of gas pipe connecting indoor and outdoor unit | Inlet and outlet pipe temperature of heat exchanger | | Fan speed of indoor unit | Fan speed of outdoor unit |
|---|---|---|---|---|---|---|---|
| Indoor | Outdoor | | P (MPa) | T1 (°F) | T2 (°F) | | |
| 80/66.9 | 95/- | 09K / 12K | 0.9~1.1 | 53.6 to 57.2 | 158 to 104 | Super High | High |
| 80/66.9 | 95/- | 18K | 0.9~1.1 | 53.6 to 57.2 | 176 to 104 | Super High | High |
| 80/66.9 | 95/- | 24K | 0.9~1.1 | 53.6 to 57.2 | 176 to 104 | Super High | High |

Heating:

| Rated heating condition(°F) (DB/WB) | | Model | Pressure of gas pipe connecting indoor and outdoor unit | Inlet and outlet pipe temperature of heat exchanger | | Fan speed of indoor unit | Fan speed of outdoor unit |
|---|---|---|---|---|---|---|---|
| Indoor | Outdoor | | P (MPa) | T1 (°F) | T2 (°F) | | |
| 70/- | 19.94/19.04 | 09K / 12K | 2.2~2.4 | 158 to 95 | 35.6 to 39.2 | Super High | High |
| 70/- | 19.94/19.04 | 18K | 2.2~2.4 | 158 to 95 | 33.8 to 41.0 | Super High | High |
| 70/- | 19.94/19.04 | 24K | 2.5~2.7 | 158 to 104 | 33.8 to 41.0 | Super High | High |

**Instruction:**

T1: Inlet and outlet pipe temperature of evaporator

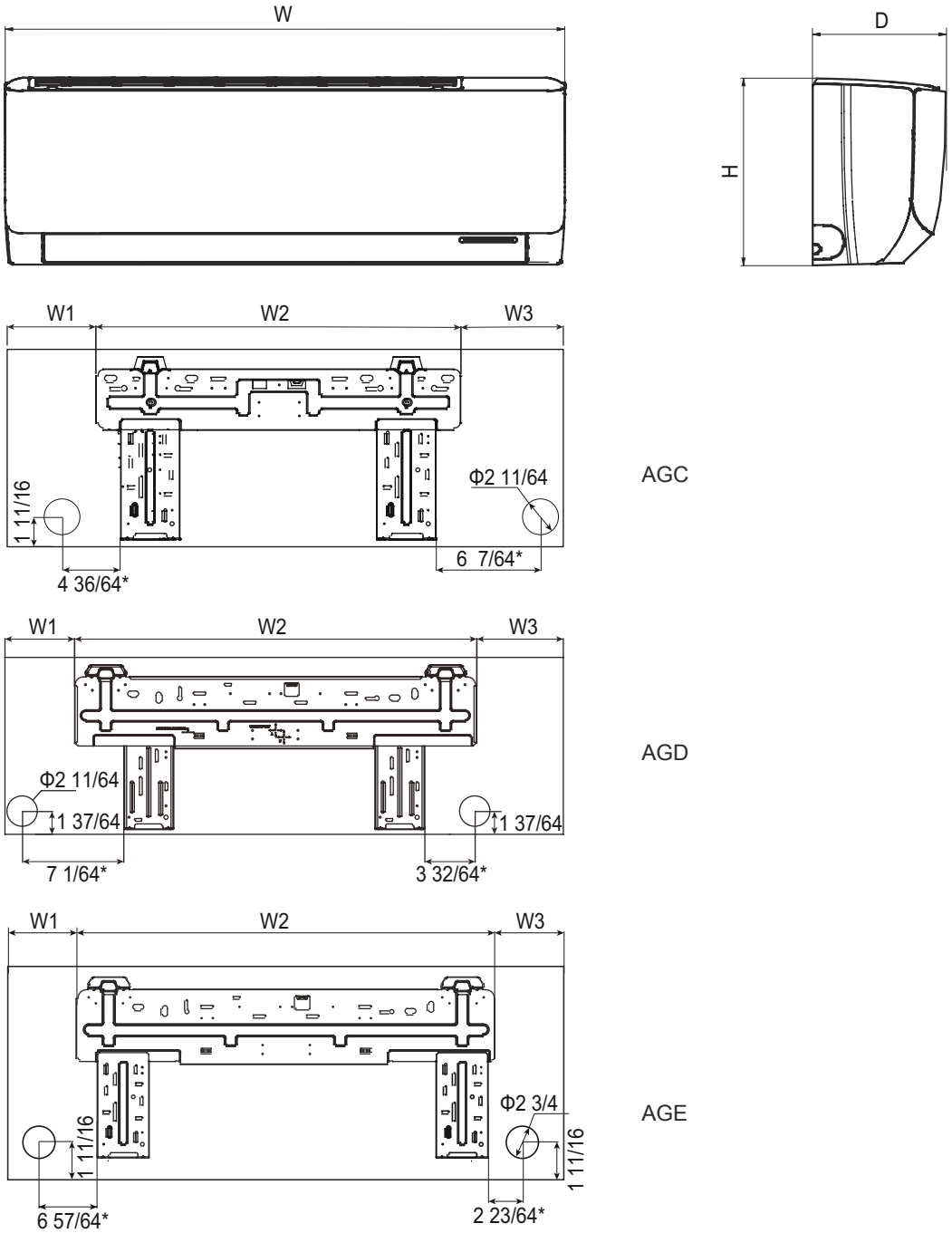
T2: Inlet and outlet pipe temperature of condenser

P: Pressure at the side of big valve

Connection pipe length: 16.4ft / 24.6ft.

# 3. Outline Dimension Diagram

## 3.1 Indoor Unit




Unit:inch

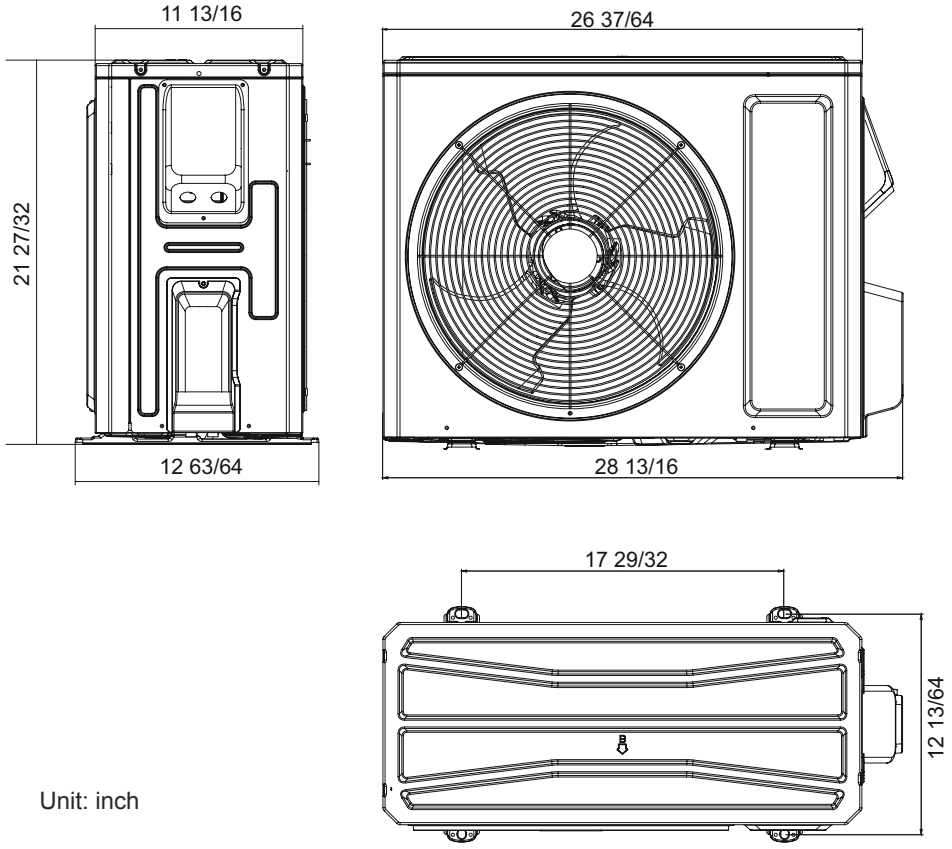
| Model | W | H | D | W1 | W2 | W3 |
|---|---|---|---|---|---|---|
| AGC | 32 31/64 | 11 17/32 | 7 23/32 | 4 29/64 | 21 11/32 | 6 11/16 |
| AGD | 38 21/32 | 12 1/4 | 8 45/64 | 4 53/64 | 27 55/64 | 5 63/64 |
| AGE | 42 21/64 | 13 7/64 | 9 11/16 | 7 7/32 | 27 55/64 | 7 1/4 |

* Recommending distances

# 3. Outline Dimension Diagram

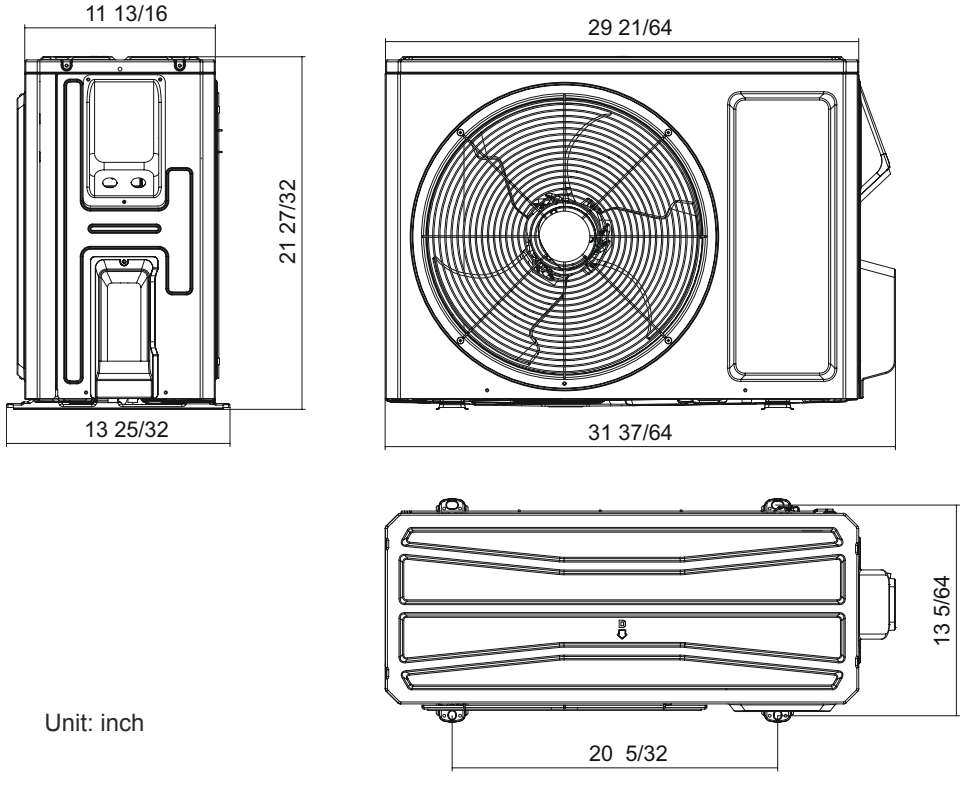
## 3.2 Outdoor Unit

GWC09AGCXB-D3DNA1A/O




Unit: inch

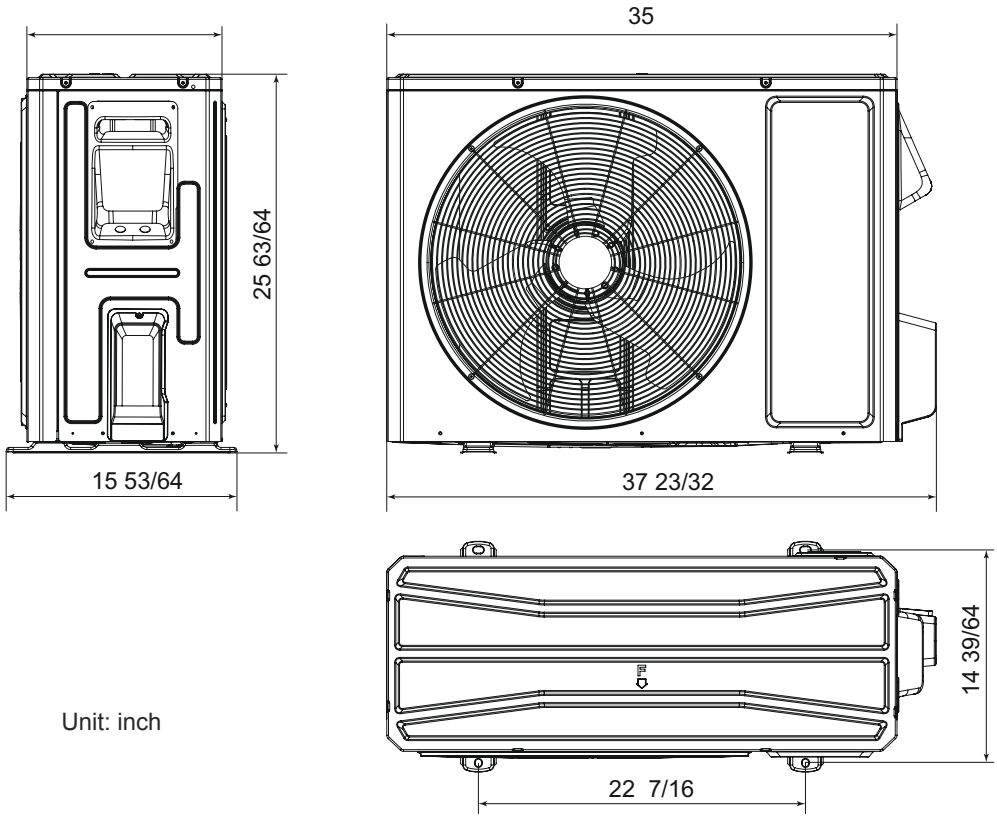
GWC09AGCXD-A3DNA1A/O TW09HXP2A1AO TW09HXP2A1DO GWC12AGCXD-D3DNA1A/O GWH12AGCXD-D3DNA1A/O GWC12AGCXD-A3DNA1A/O TW12HXP2A1AO




Unit: inch

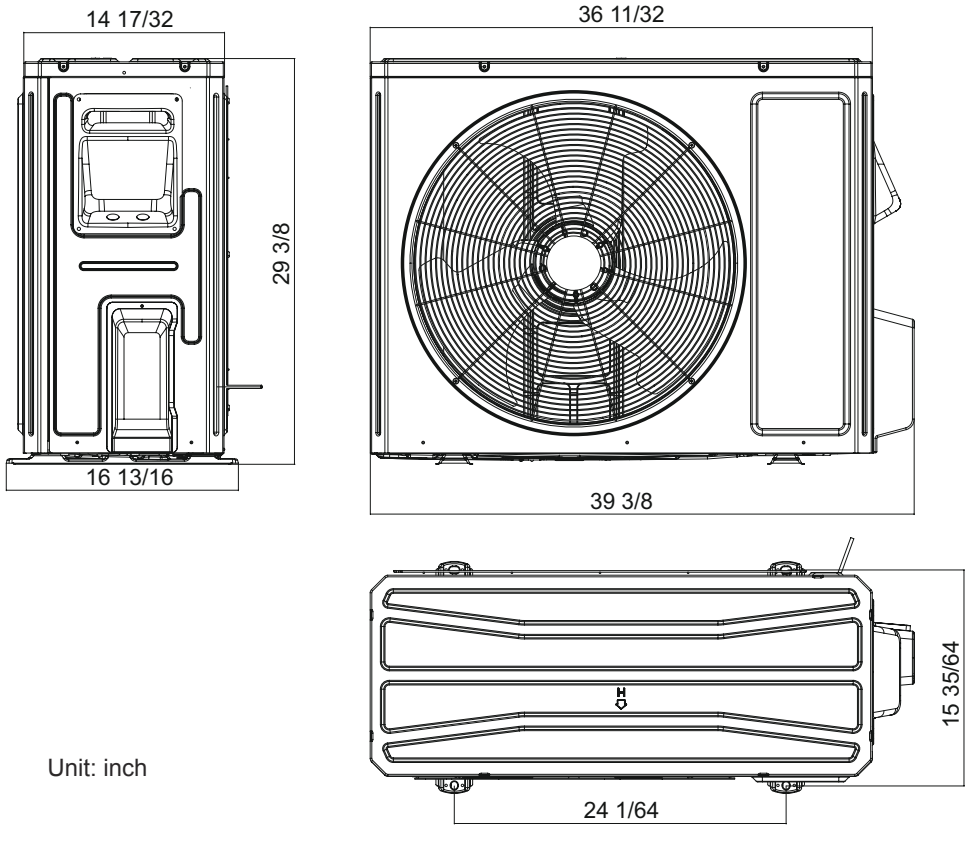
# 3. Outline Dimension Diagram

GWC18AGDXF-D3DNA1A/O TW18HXP2A1DO 13 25/64




Unit: inch

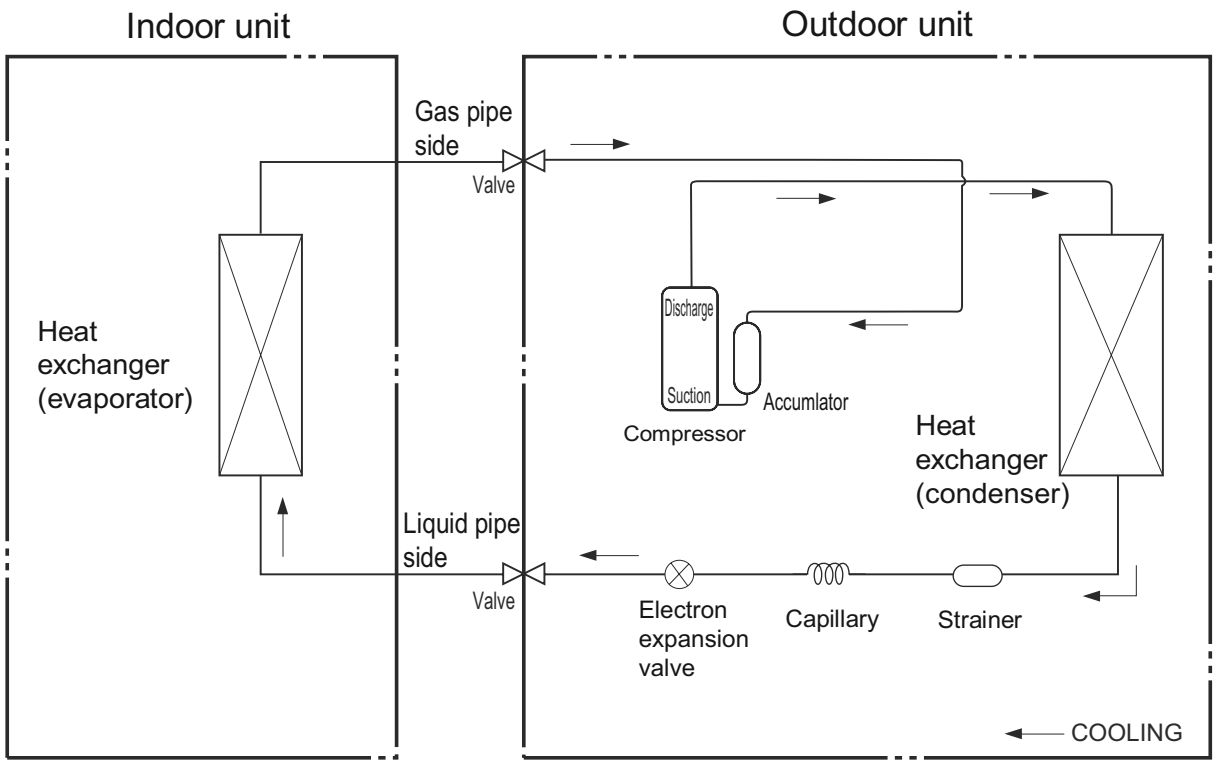
GWC24AGEXH-D3DNA1A/O TW24HXP2A1DO



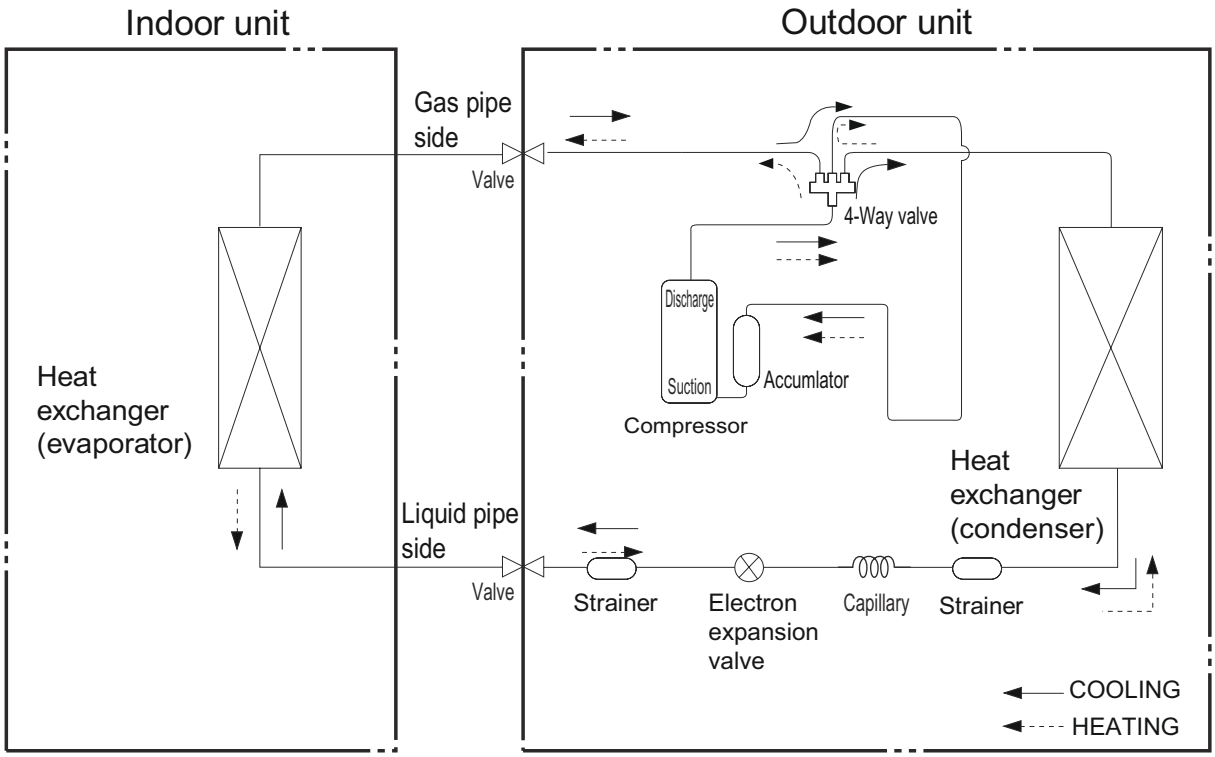

Unit: inch

# 4. Refrigerant System Diagram

**Cooling model**




**Cooling and heating model**




Connection pipe specification:
Liquid pipe: 1/4"
Gas pipe: 3/8" for 09K
1/2" for 12K
5/8" for 18K / 24K

# 5. Electrical Part

## 5.1 Wiring Diagram

### ●Instruction

| Symbol | Symbol Color |
|---|---|
| WH | White |
| YE | Yellow |
| RD | Red |
| YEGN | Yellow/Green |
| VT | Violet |

| Symbol | Symbol Color |
|---|---|
| GN | Green |
| BN | Brown |
| BU | Blue |
| BK | Black |
| OG | Orange |

| Symbol | Name |
|---|---|
| CAP | Jumper cap |
| COMP | Compressor |
| ⏚ | Grounding wire |
| / | / |
| / | / |

Note: Jumper cap is used to determine fan speed and the swing angle of horizontal lover for this model.

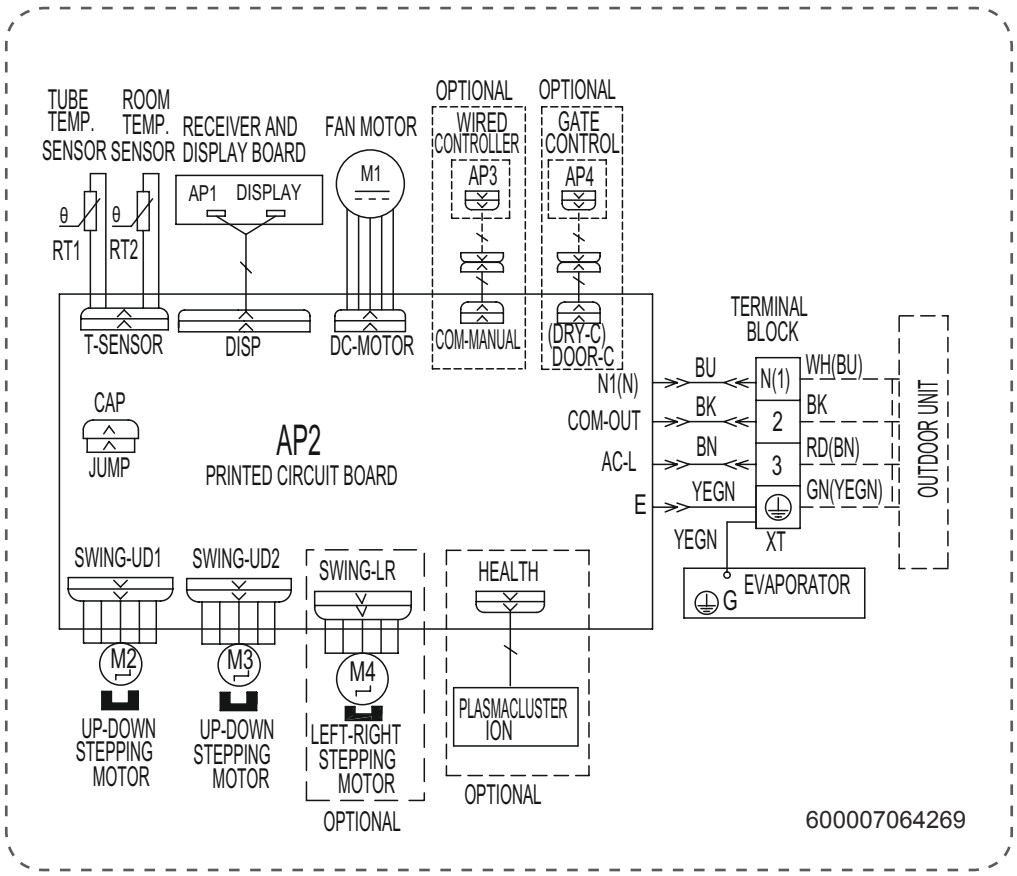
### ● Indoor Unit

GWC09AGCXD-A3DNA1A/I
TW09HXP2A1DI
GWC12AGCXD-A3DNA1A/I

GWC09AGCXB-D3DNA1A/I
GWH09AGCXD-D3DNA4A/I
TW12HXP2A1AI

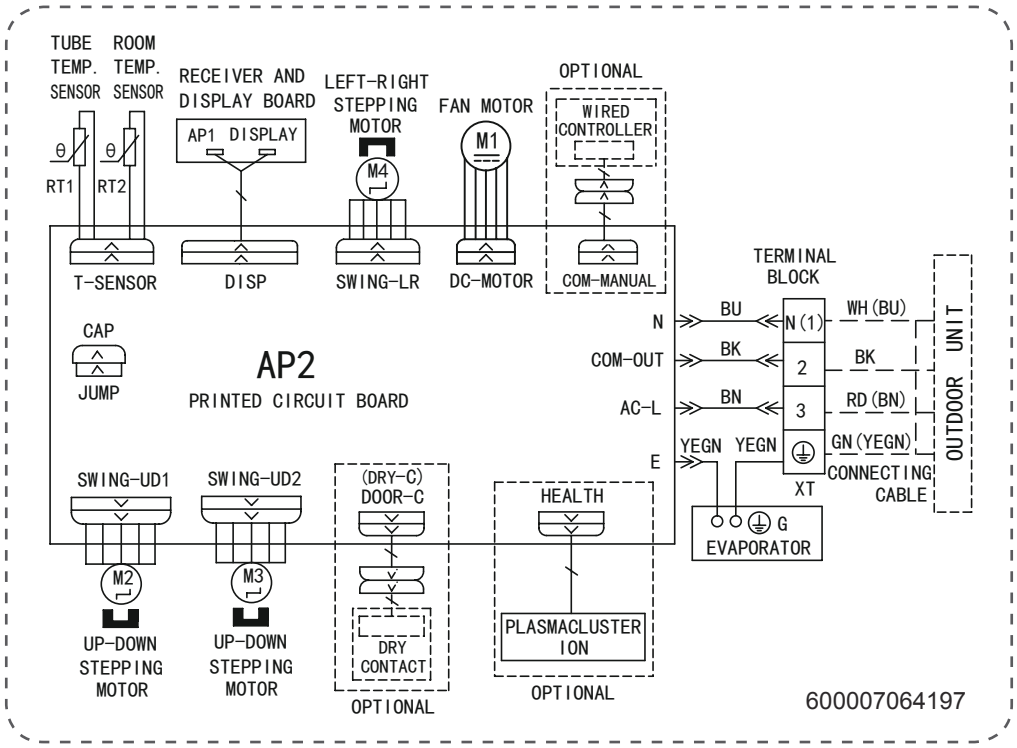
TW09HXP2A1AI
GWC12AGCXD-D3DNA1A/I

GWH09AGCXD-A3DNA4A/I
TW12HXP2A1DI



# 5. Electrical Part

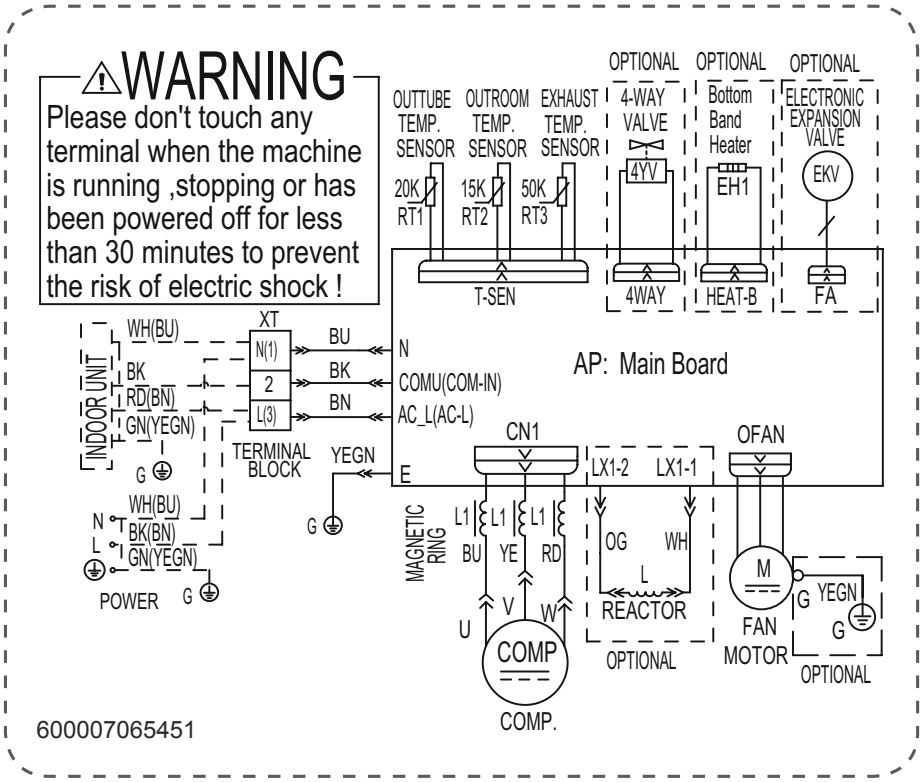
GWC18AGDXF-D3DNA1A/I TW18HXP2A1DI GWH18AGDXF-D3DNA4A/I GWC24AGEXH-D3DNA1A/I
TW24HXP2A1DI GWH24AGEXH-D3DNA4A/I



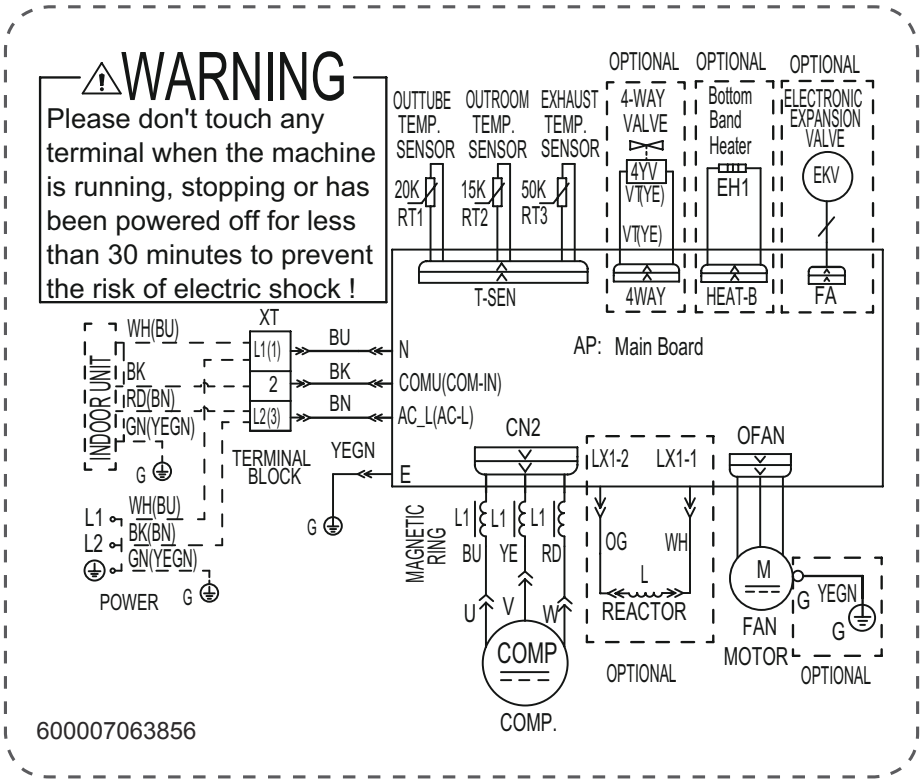
# 5. Electrical Part

## ● Outdoor Unit

GWC09AGCXD-A3DNA1A/O TW09HXP2A1AO GWC12AGCXD-A3DNA1A/O TW12HXP2A1AO

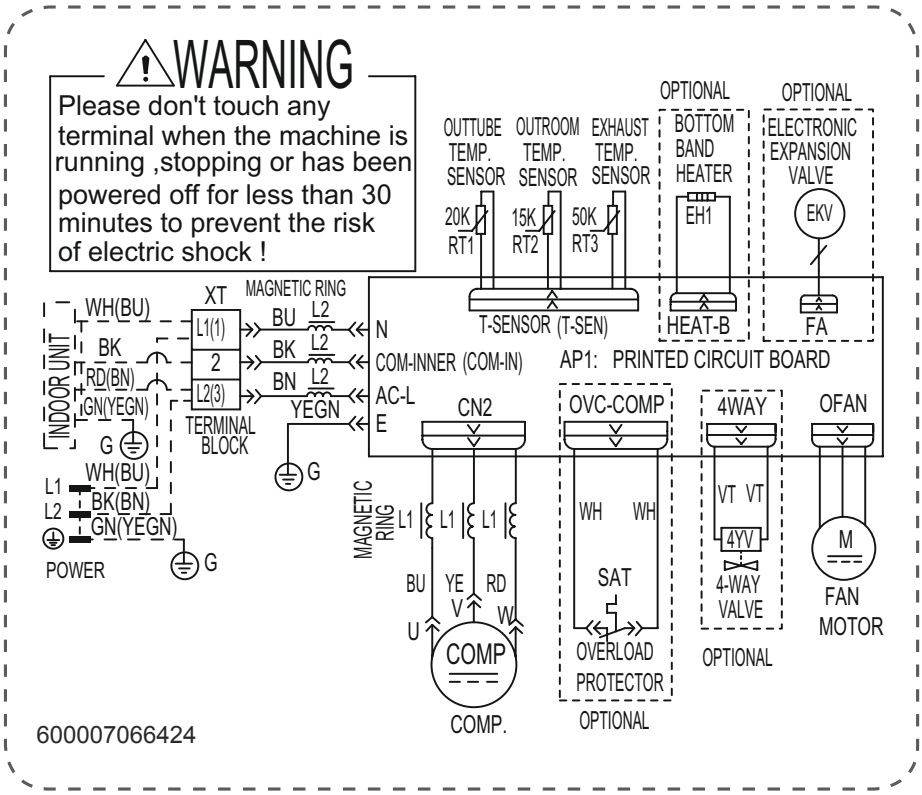



GWC09AGCXB-D3DNA1A/O TW09HXP2A1DO GWC12AGCXD-D3DNA1A/O TW12HXP2A1DO



# 5. Electrical Part

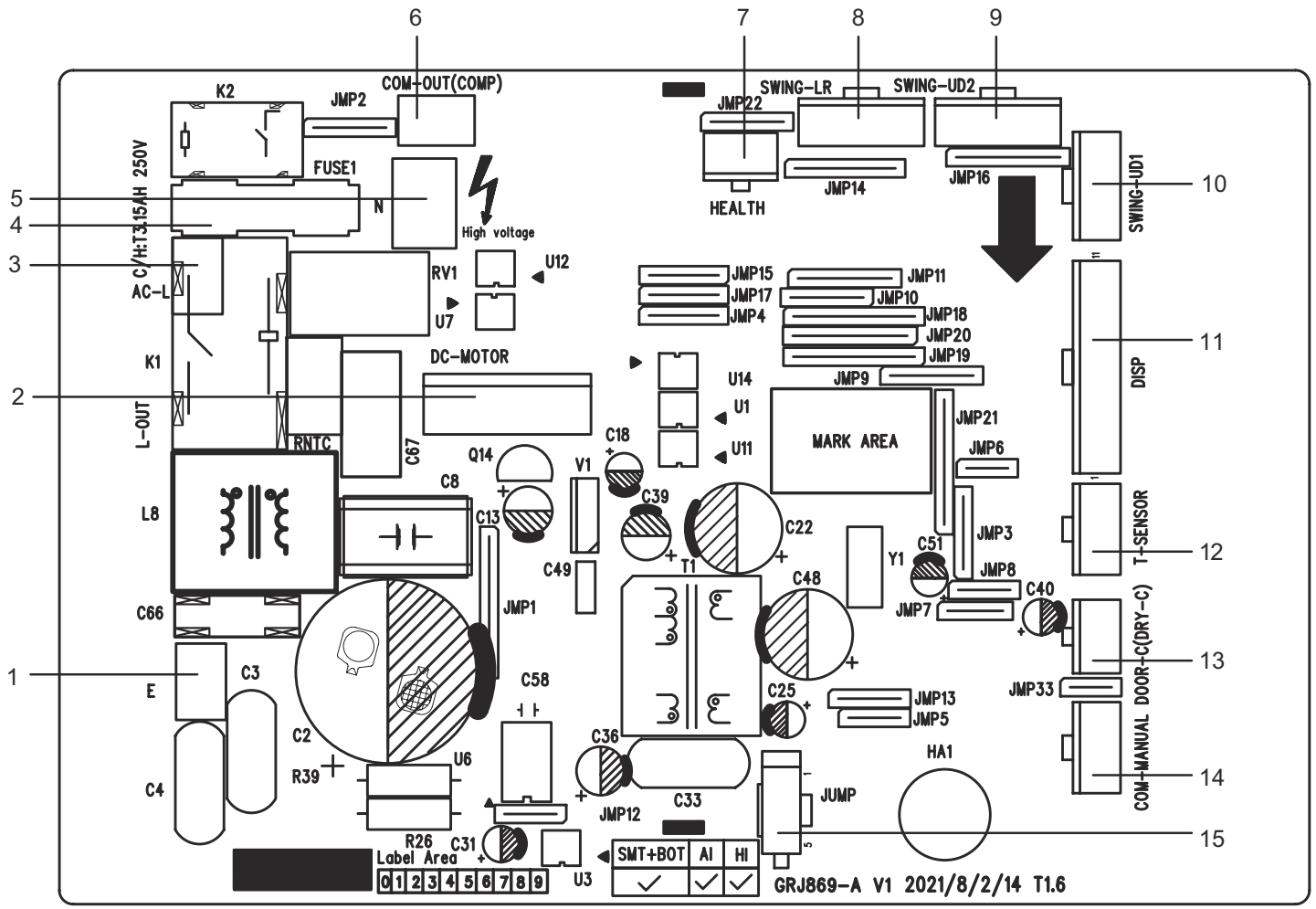
GWC18AGDXF-D3DNA1A/O TW18HXP2A1DO GWC24AGEXH-D3DNA1A/O TW24HXP2A1DO




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

## 5.2 PCB Printed Diagram

### Indoor Unit

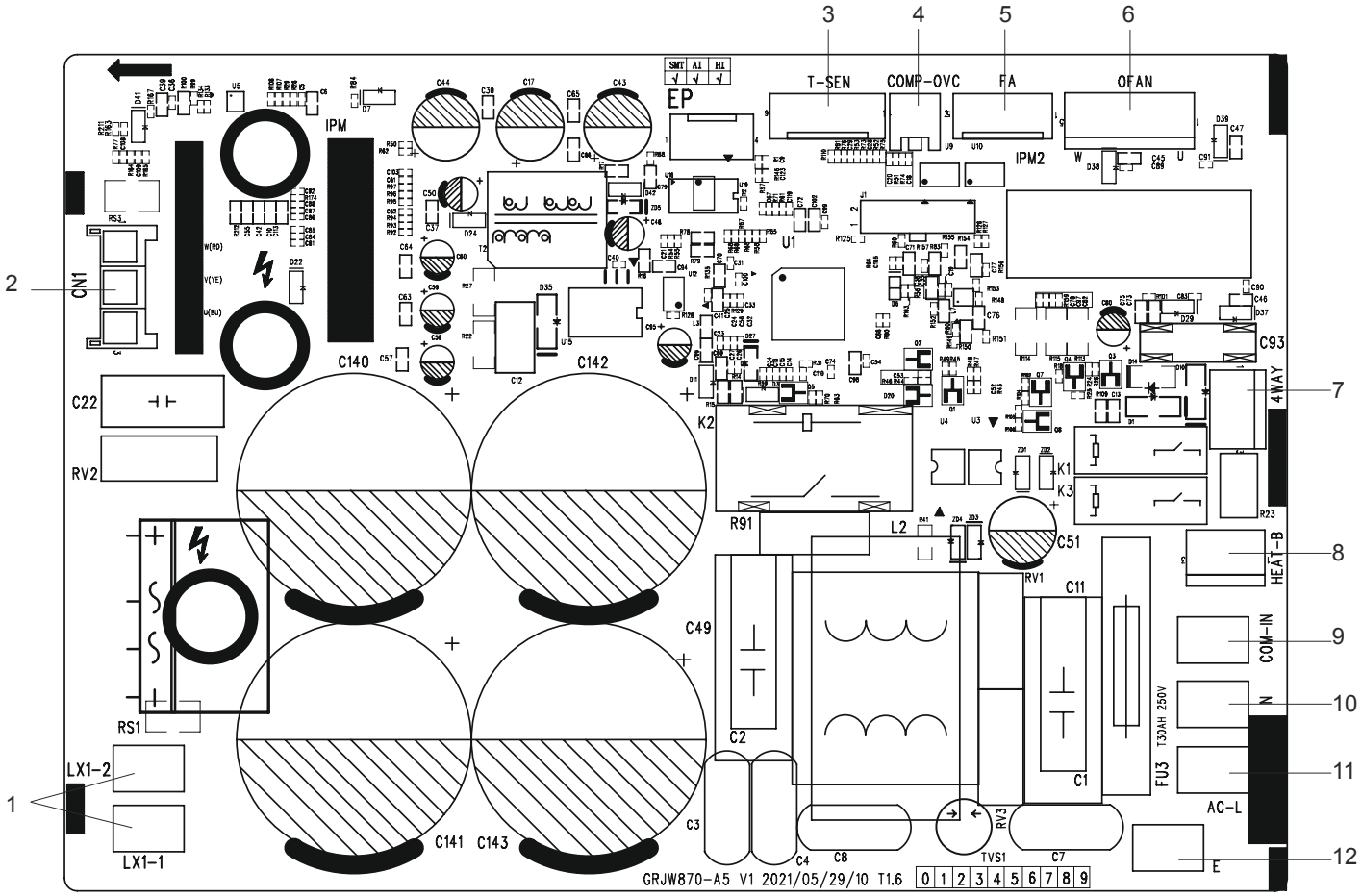



| No. | Name | No. | Name |
|---|---|---|---|
| 1 | Earthing wire | 9 | Up & down swing 2 |
| 2 | DC fan | 10 | Up & down swing 1 |
| 3 | Live wire | 11 | Display board / WiFi |
| 4 | Fuse | 12 | Temperature sensor |
| 5 | Neutral wire | 13 | Door control / Dry contact |
| 6 | Communication wire | 14 | Wired controller |
| 7 | Cold plasma | 15 | Jumper cap |
| 8 | Left & right swing | | |

# 5. Electrical Part

## Outdoor Unit

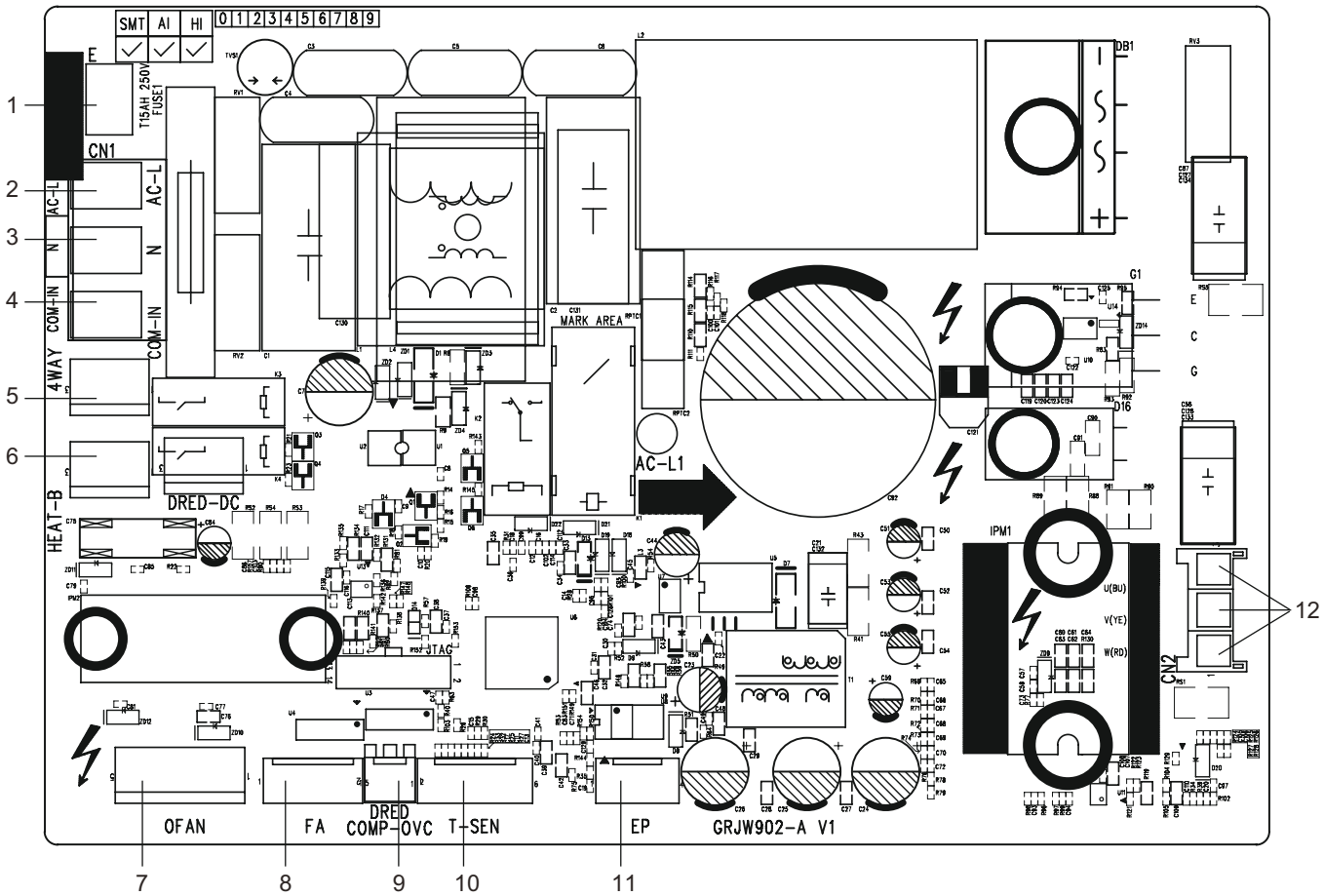
GWC09AGCXD-A3DNA1A/O TW09HXP2A1AO GWC12AGCXD-A3DNA1A/O TW12HXP2A1AO




| No. | Name | No. | Name |
|---|---|---|---|
| 1 | Reactor wiring terminal | 7 | 4-way valve |
| 2 | Three-phase terminal of compressor | 8 | Electric heating belt of chasssis |
| 3 | Temperature sensor | 9 | Terminal of indoor unit and outdoor unit communication |
| 4 | Overload | 10 | Terminal of power supply neutral wire |
| 5 | Electronic expansion valve | 11 | Terminal of power supply live wire |
| 6 | Outdoor fan | 12 | Earthing wire |

# 5. Electrical Part

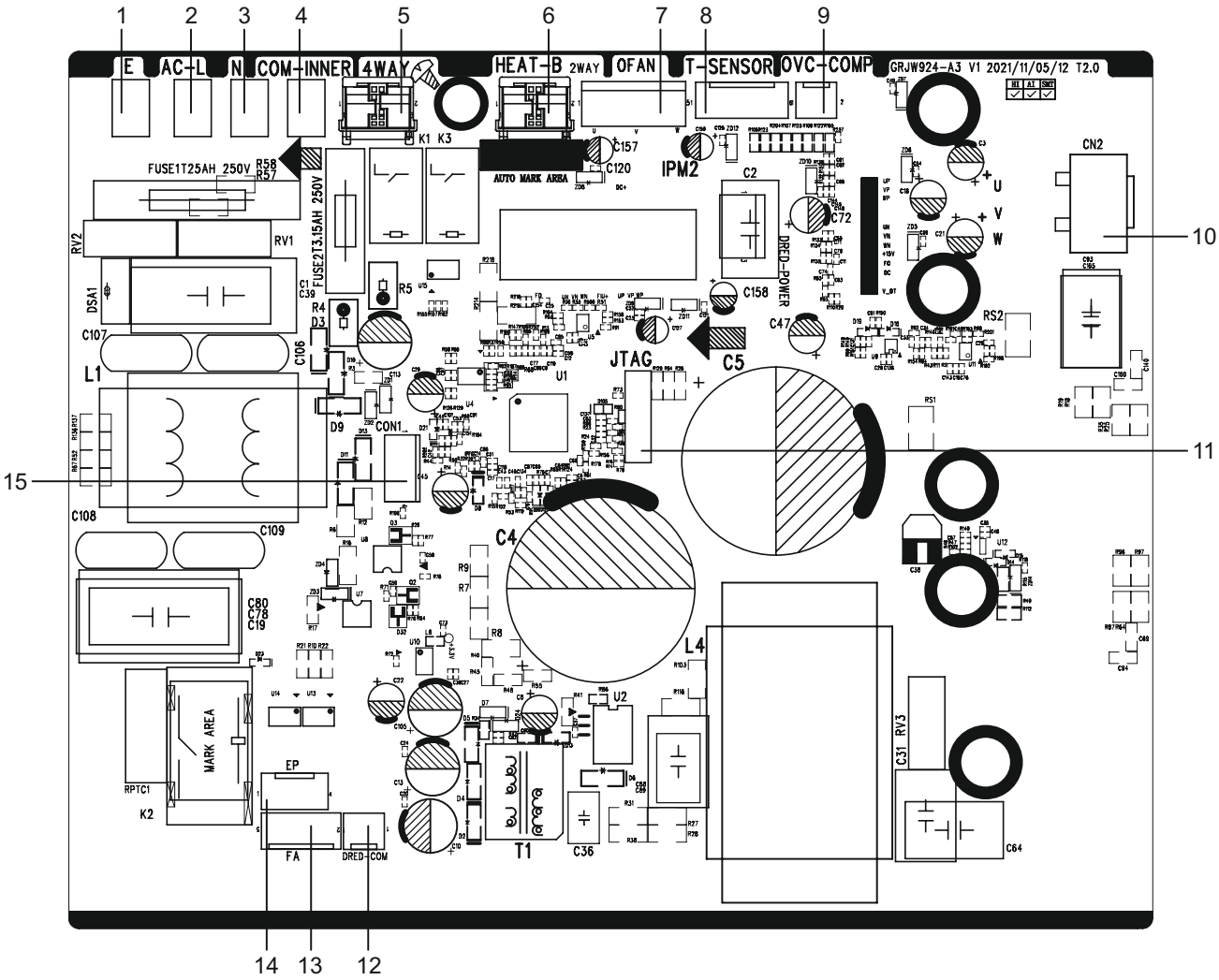
GWC09AGCXB-D3DNA1A/O TW09HXP2A1DO GWC12AGCXD-D3DNA1A/O TW12HXP2A1DO




| No. | Name | No. | Name |
|---|---|---|---|
| 1 | Earthing wire terminal | 7 | Fan motor terminal |
| 2 | Live wire terminal | 8 | Electron expansion valve terminal |
| 3 | Neutral wire terminal | 9 | Compressor overload terminal |
| 4 | Communication terminal | 10 | Temperature sensor terminal |
| 5 | 4-way valve terminal | 11 | E store terminal |
| 6 | Electric heating terminal of chassis | 12 | Compressor terminal |

# 5. Electrical Part

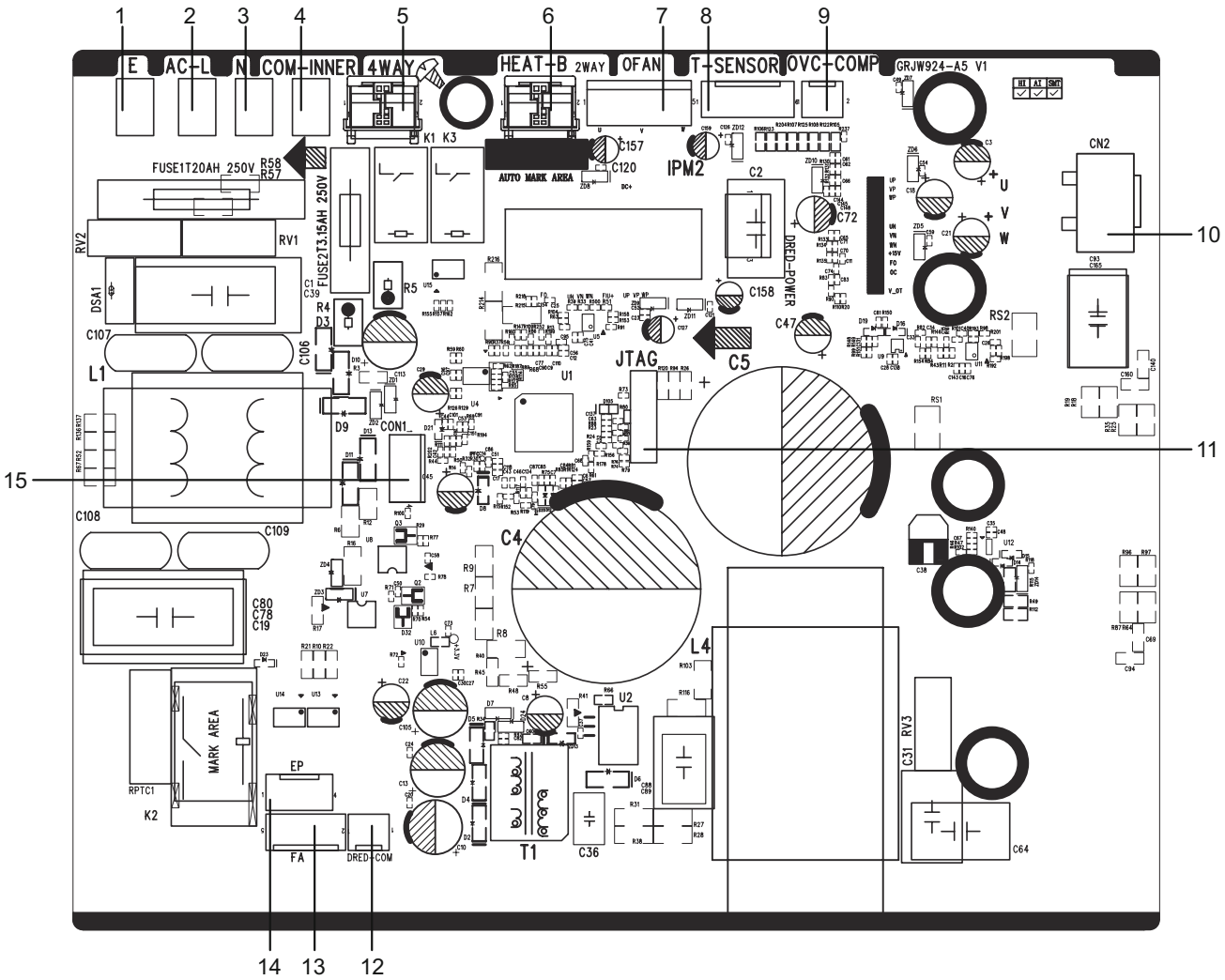
GWC18AGDXF-D3DNA1A/O




| No. | Name | No. | Name |
|---|---|---|---|
| 1 | Eathing wire | 9 | Overload interface of compressor |
| 2 | Live wire | 10 | Terminal of compressor |
| 3 | Neutral wire | 11 | Interface of program debugs |
| 4 | Communication cable | 12 | DRED interface |
| 5 | 4-way valve | 13 | Terminal of electronic expansion valve |
| 6 | Electric heating belt of chassis / 2-way valve | 14 | EE flash drive |
| 7 | DC motor | 15 | Computer monitoring interface |
| 8 | Temperature sensor | | |

# 5. Electrical Part

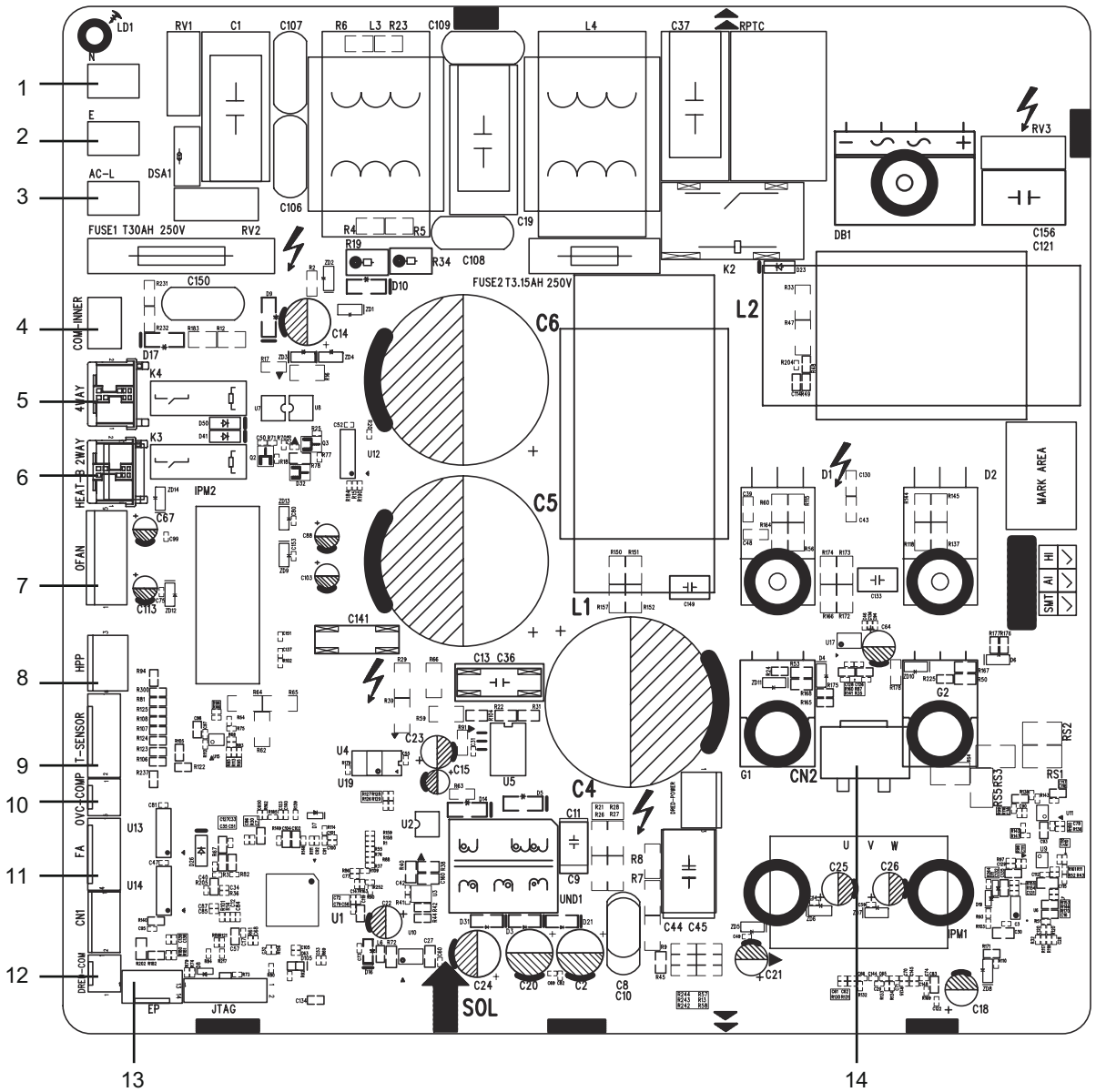
TW18HXP2A1DO




| No. | Name | No. | Name |
|---|---|---|---|
| 1 | Eathing wire | 9 | Overload interface of compressor |
| 2 | Live wire | 10 | Terminal of compressor |
| 3 | Neutral wire | 11 | Interface of program debugs |
| 4 | Communication cable | 12 | DRED interface |
| 5 | 4-way valve | 13 | Terminal of electronic expansion valve |
| 6 | Electric heating belt of chassis / 2-way valve | 14 | EE flash drive |
| 7 | DC motor | 15 | Computer monitoring interface |
| 8 | Temperature sensor | | |

# 5. Electrical Part

GWC24AGEXH-D3DNA1A/O TW24HXP2A1DO




| No. | Name | No. | Name |
|---|---|---|---|
| 1 | Neutral wire | 8 | Terminal of high pressure protection |
| 2 | Grounding wire | 9 | Temperature sensor |
| 3 | Live wire | 10 | Overload interface of compressor |
| 4 | Communication wire | 11 | Terminal of electronic expansion valve |
| 5 | 4-way valve | 12 | Terminal of DRED |
| 6 | Electric heating belt of chassis | 13 | E disk(Reserved) |
| 7 | Outdoor fan | 14 | Terminal of compressor wire |

# 6. Function and Control

## 6.1 Remote Controller Introduction of YAP1F7F(WiFi)

### Buttons on remote controller




### Introduction for icons on display screen

| | | |
|---|---|---|
| | | I feel |
| FAN AUTO | | Set fan speed |
| | | Turbo mode |
| | | Send signal |
| Operation mode | | Auto mode |
| | | Cool mode |
| | | Dry mode |
| | | Fan mode |
| | | Heat mode |
| | | Sleep mode |
| | | 8℃ heating function |
| | | Power limiting operation |
| | | Health mode |
| | | Scavenging function |
| | | X-FAN function |
| Temp. display type | | Set temp. |
| | | Indoor ambient temp. |
| | | Outdoor ambient temp. |
| | | Clock |
| 88 | | Set temperature |
| WIFI | | WiFi function |
| 88:88 | | Set time |
| ONOFF | | TIMER ON / TIMER OFF |
| | | Left & right swing |
| | | Up & down swing |
| | | Child lock |
| | | Quiet |

**NOTE:**

● This is a general use remote controller. It could be used for the air conditioner with multifunction. For the functions which the model doesn't have, if press the corresponding button on the remote controller, the unit will keep the original running status.

● After putting through the power, the air conditioner will give out a sound. Power indicator " ⏻ " is ON. After that, you can operate the air conditioner by using remote controller.

● Under on status, pressing the button on the remote controller, the signal icon " " on the display of remote controller will blink once and the air conditioner will give out a "di" sound, which means the signa has been sent to the air conditioner.

● As for the models with functions of WiFi or wired controller, the indoor unit must has been controlled by standard remote controller under auto mode first, and then the function of adjustable temperature under auto mode can be realized by APP or the wired controller.

● This remote controller can adjust the temperature under auto mode. When matching with the unit which is without the function of adjustable temperature under auto mode, the set temperature under auto mode may be invalid, or the displayed set temperature on the unit is not same as that on the remote controller under auto mode.

**1. ON/OFF button**

Press this button to turn on the unit. Press this button again to turn off the unit.

**2. MODE button**

Press this button to select your required operation mode.

AUTO → COOL → DRY → FAN → HEAT

● When selecting auto mode, air conditioner will operate automatically according to ex-factory setting. Press "FAN" button can adjust fan speed. Press " " / " " button can adjust fan

blowing angle.

● After selecting cool mode, air conditioner will operate under cool mode. Press "△" or "▽" button to adjust set temperature. Press "FAN" button to adjust fan speed. Press " " / " " button to adjust fan blowing angle.

● When selecting dry mode, the air conditioner operates at low speed under dry mode. Under dry mode, fan speed can' t be adjusted. Press " " / " " button to adjust fan blowing angle.

● When selecting fan mode, the air conditioner will only blow fan, no cooling and no heating. All indicators are OFF. Press "FAN" button to adjust fan speed. Press " " / " " button to adjust fan blowing angle.

● When selecting heating mode, the air condition-er operates under heat mode. Press "△" or "▽" button to adjust set temperature. Press "FAN" button to adjust fan speed. Press " " / " " button to adjust fan blowing angle. (Cooling only unit won't receive heating mode signal. If setting heat mode with remote controller, press ON/OFF button can't start up the unit).

**NOTE:**

● For preventing cold air, after starting up heating mode, indoor unit will delay 1~5 minutes to blow air (actual delay time is depend on indoor ambient temperature).

● Set temperature range from remote controller: 16~30°C (61~86°F);

● Under auto mode, temperature can be displayed; Under auto mode, set temperature can be adjusted. This mode indicator is not available for some models.

**3. FAN button**

This button is used for setting Fan Speed in the sequence that goes from AUTO, , , , , , to , then back to Auto.

**NOTE:**

● Under AUTO speed, air conditioner will select proper fan speed automatically according to factory default setting.

It's low fan speed under dry mode.

● X-FAN function: Holding fan speed button for 2s in cool or dry mode, the icon " " is displayed and the indoor fan will continue operation for a few minutes in order to dry the indoor unit even though you have turned off the unit. After energization, X-FAN OFF is defaulted. X-FAN is not available in auto, fan or heat mode.

● This function indicates that moisture on evaporator of indoor unit will be blowed after the unit is stopped to avoid mould.

● Having set X-FAN function on: After turning off the unit by pressing ON/OFF button, indoor fan will continue running for a few minutes at low speed. In this period, hold fan speed button for 2s to stop indoor fan directly.

Having set X-FAN function off: After turning off the unit by pressing ON/OFF button, the complete unit will be off directly.

**4. TURBO button**

Under COOL or HEAT mode, press this button to turn to quick COOL or quick HEAT mode. " " icon is displayed on remote controller. Press this button again to exit turbo function and " " icon will disappear. If start this function, the unit will run at super-high fan speed to cool or heat quickly so that the ambient temperature approaches the preset temperature as soon as possible.

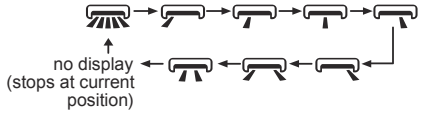
**5. △ / ▽ button**

● Press "△" or "▽" button once increase or decrease set temperature 1°C (°F). Holding "△" or "▽" button, 2s later, set temperature on remote controller will change quickly. On releasing button after setting is finished, temperature indicator on indoor unit will change accordingly.

● When setting T-ON, T-OFF or CLOCK, press "△" or "▽" button to adjust time. (Refer to CLOCK, T-ON, T-OFF buttons)

**6. button**

Press this button can select left & right swing angle. Fan blow angle can be selected circularly as below:




**NOTE:**

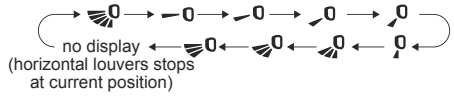
● Press this button continuously more than 2s, the main unit will swing back and forth from left to right, and then loosen the button, the unit will stop swinging and present position of guide louver will be kept immediately.

● Under left and right swing mode, when the status is switched from off to , if press this button again 2s later, status will switch to off status directly; if press this button again within 2s, the change of swing status will also depend on the circulation sequence stated above.

● The function is only available for some models.

**7. button**

Press this button can select up & down swing angle. Fan blow angle can be selected circularly as below:




● When selecting " ", air conditioner is blowing fan automatically. Horizontal louver will automatically swing up & down at maximum angle.

● When selecting " , , , , ", air conditioner is blowing fan at fixed position. Horizontal louver will stop at the fixed position.

● When selecting " , , ", air conditioner is blowing fan at

fixed angle.

● Hold " " button above 2s to set your required swing angle. When reaching your required angle, release the button.

**NOTE:**

● " , , " may not be available. When air conditioner receives this signal, the air conditioner will blow fan automatically.

● Press this button continuously more than 2s, the main unit will swing back and forth from up to down, and then loosen the button, the unit will stop swinging and present position of guide louver will be kept immediately.

● Under swing up and down mode, when the status is switched from off to , if press this button again 2s later, status will switch to off status directly; if press this button again within 2s, the change of swing status will also depend on the circulation sequence stated above.

**8. T-ON / T-OFF button**

● T-ON button

"T-ON" button can set the time for timer on. After pressing this button, " ◷ " icon disappears and the word "ON" on remote controller blinks. Press "△" or "▽" button to adjust T-ON setting. After each pressing "△" or "▽" button, T-ON setting will increase or decrease 1min. Hold "△" or "▽" button, 2s later, the time will change quickly until reaching your required time. Press "T-ON" to confirm it. The word "ON" will stop blinking." ◷ " icon resumes displaying. Cancel T-ON: Under the condition that T-ON is started up, press "T-ON" button to cancel it.

● T-OFF button

"T-OFF" button can set the time for timer off. After pressing this button, " ◷ " icon disappears and the word "OFF" on remote controller blinks. Press "△" or "▽" button to adjust T-OFF setting. After each pressing "△" or "▽" button, T-OFF setting will increase or decrease 1min. Hold "△" or "▽" button, 2s later, the time will change quickly until reaching your required time. Press "T-OFF" word "OFF" will stop blinking. " ◷ " icon resumes displaying. Cancel T-OFF: Under the condition that T-OFF is started up, press "T-OFF" button to cancel it.

**NOTE:**

● Under on and off status, you can set T-OFF or T-ON simultaneously.

● Before setting T-ON or T-OFF, please adjust the clock time.

● After starting up T-ON or T-OFF, set the constant circulating valid.

● After that, air conditioner will be turned on or turned off according to setting time. ON/OFF button has no effect on setting. If you don't need this function, please use remote controller to cancel it.

**9. I FEEL button**

Press this button to start I FEEL function and " " will be displayed on the remote controller. After this function is set, the remote controller will send the detected ambient temperature to the controller and the unit will automatically adjust the indoor temperature according to the detected temperature. Press this button again to cancel I FEEL function and " " will disappear.

● Please put the remote controller near user when this function is set. Do not put the remote contro ller near the object of high temperature or low temperature in order to avoid detecting inaccurate amb ient temperature. When I FEEL function is turned on, the remote controller should be put within the area where indoor unit can receive the signal sent by the remote controller.

**10. CLOCK button**

Press this button to set clock time. " ◷ " icon on remote controller will blink. Press "▲" or " ▼ " button within 5s to set clock time. Each pressing of "▲" or " ▼ " button, clock time will increase or decrease 1 minute. If hold "▲" or " ▼ " button, 2s later, time will change quickly. Release this button when reaching your required time. Press "CLOCK" button to confirm the time. " ◷ " icon stops blinking.

**NOTE:**

● Clock time adopts 24-hour mode.

● The interval between two operations can't exceed 5s. Otherwise, remote controller will quit setting status. Operation for T-ON/T-OFF is the same.

**11. SLEEP button**

● Press this button, can select Sleep 1 ( 1), Sleep 2 ( 2), Sleep 3 ( 3) and cancel the Sleep, circulate between these, after electrified, Sleep Cancel is defaulted.

● Sleep 1 is Sleep mode 1, in Cool modes; sleep status after run for one hour, the main unit setting temperature will increase 1 , two hours, setting temperature increased 2°C, then the unit will run at this setting temperature; In Heat mode: sleep status after run for one hour, the setting temperature will decrease 1 , two hours, setting temperature will decrease 2 , then the unit will run at this setting temperature.

● Sleep 2 is sleep mode 2, that is air conditioner will run according to the presetting a group of sleep temperature curve.

● Sleep 3-the sleep curve setting under Sleep mode by DIY;

(1) Under Sleep 3 mode, press "Turbo" button for a long time, remote controller enters into user individuation sleep setting status, at this time, the time of remote controller will display "1hour", the setting temperature "88" will display the corresponding temperature of last setting sleep curve and blink (The first entering will display according to the initial curve setting value of original factory);

(2) Adjust "+" and "-" button, could change the corresponding setting temperature, after adjusted, press "Turbo" button for confirmation;

(3) At this time, 1hour will be automatically increased at the timer position on the remote control, (that are "2hours" or "3hours" or "8hours"), the place of setting temperature "88" will display the corresponding temperature of last setting sleep
curve and blink;
(4) Repeat the above step (2)~(3) operation, until 8 hours temperature setting finished, sleep,curve setting finished, at this time, the remote controller will resume the original timer display; temperature display will resume to original setting temperature.
● Sleep3- the sleep curve setting under Sleep mode by DIY could be inquired:
The user could accord to sleep curve setting method to inquire the presetting sleep curve, enter into user individuation sleep setting status, but do not change the temperature, press "Turbo" button directly for confirmation. Note: In the above presetting or enquiry procedure, if continuously within 10s, there is no button pressed, the sleep curve setting within 10s, there is no button pressed, the sleep curve setting status will be automatically quit and resume to display the original displaying. In the presetting or enquiry procedure, press "ON/OFF" button, "Mode" button, "Sleep" button, the sleep curve setting or enquiry status will quit similarly.

**12. WiFi button**

Press " WiFi " button to turn on WiFi function, "WiFi " icon will be displayed on the remote controller; Hold " WiFi " button for 5s to turn off WiFi function and " WiFi " icon will disappear.

Under off status, press "MODE" and " WiFi " buttons simultaneously for 1s, WiFi module will restore factory settings.

**NOTE:**

● This function is only available for some models.

**13. / button**

Press this button to achieve the on and off of health and scavenging functions in operation station. Press this button for the first time to start scavenging function; LCD displays " ". Press the button for the second time to start health and scavenging functions simultaneously; LCD displays " " and " ". Press this button for the third time to quit health and scavenging functions simultaneously. Press the button for the fourth time to start health function; LCD display " ". Press this button again to repeat the operation above.

**NOTE:**

● This function is applicable to partial of models.

**14. LIGHT button**

Press this button to turn on or turn off the display light on the indoor unit.

The display light is defaulted on after energization.

**15. TEMP button**

Press this button, you can see indoor set temperature, indoor ambient temperature on indoor unit's display. The setting on remote controller is selected circularly as below:




## Function introduction for combination buttons

**1. Energy-saving function**

Under cooling mode, press "TEMP" and "CLOCK" buttons simultaneously to start up or turn off energysaving function. When energy-saving function is started up, "SE" will be shown on remote controller, and air conditioner will adjust the set temperature automatically according to ex-factorysetting to reach to the best energy-saving effect. Press "TEMP" and "CLOCK" buttons simultaneously again to exit energy-saving function.

**NOTE:**

● Under energy-saving function, fan speed is defaulted at auto speed and it can't be adjusted.

● Under energy-saving function, set temperature can't be adjusted. Press "TURBO" button and the remote controller won't send signal.

● Sleep function and energy-saving function can't operate at the same time. If energy-saving function has been set under cool mode, press sleep button will cancel energy-saving function. If sleep function has been set under cool mode, start up the energy-saving function will cancel sleep function.

**2. 8°C heating function**

Under heat mode, press "TEMP" and "CLOCK" buttons simultaneously to start up or turn off 8°C heating function. When this function is started up, " ⑧ " and "8°C" will be shown on remote controller, and the air conditioner keep the heating status at 8°C.

Press "TEMP" and "CLOCK" buttons simultaneously again to exit 8°C heating function.

**NOTE:**

● Under 8°C heating function, fan speed is defaulted at auto speed and it can't be adjusted.

● Under 8°C heating function, set temperature can't be adjusted. Press "TURBO" button and the remote controller won't send signal.

● Sleep function and 8°C heating function can't operate at the same time. If 8°C heating function has been set under heat mode, press sleep button will cancel 8°C heating function. If sleep function has been set under heat mode, start up the 8°C heating function will cancel sleep function.

● Under °F temperature display, the remote controller will display 46°F heating.

**3. Child lock function**

Press "▲" and "▼" simultaneously to turn on or turn off child lock

function. When child lock function is on, " 🔒 " icon is displayed on remote controller. If you operate the remote controller, the " 🔒 " icon will blink three times without sending signal to the unit.

**4. Temperature display switchover function**

Under OFF status, press "▽" and "MODE" buttons simultaneously to switch temperature display between °C and °F.

**5. Auto clean function**

Under unit off status, hold "MODE" and "FAN" buttons simultaneously for 5s to turn on or turn off the auto clean function. When the auto clean function is turned on, indoor unit displays "CL" . During the auto clean process of evaporator, the unit will perform fast cooling or fast heating. There may be some noise, which is the sound of flowing liquid or thermal expansion or cold shrinkage. The air conditioner may blow cool or warm air, which is a normal phenomenon. During cleaning process, please make sure the room is well ventilated to avoid affecting the comfort.

**NOTE:**

● The auto clean function can only work under normal ambient temperature. If the room is dusty, clean it once a month; if not, clean it once every three months. After the auto clean function is turned on, you can leave the room. When auto clean is finished, the air conditioner will enter standby status.

● This function is only available for some models.

**6. P function**

Press "MODE" and "SLEEP" buttons simultaneously to start P function.

P function is for limiting power of the whole unit. Press this button, the remote controller will circularly display as the following:




● Maximum power limited under the P mode is lower than that of P mode.

● If you want to cancel the power limiting function, press the button P till the icon in remote controller is not displayed.

● When the remote controller is turned off, power limiting function is cancelled. If you want to activate the function, please repress this button.

● If the current power is lower than the maximum power of P mode, then the power will not be limited after entering into such mode.

● For the model with one outdoor unit and two indoor units, if any one of indoor units enters into power limiting function, the outdoor unit will enter into the set limiting power mode of indoor unit; when two indoor units enter into power limiting mode, then the power of outdoor unit will be limited according to the lower power of the two indoor units.

**NOTE:**

● This function is only available for some models.

## Replacement of batteries in remote controller

1. Lift the cover along the direction of arrow (as shown in Fig 1 ① ).

2. Take out the original batteries (as shown in Fig 1 ② ).

3. Place two 7# (AAA 1.5V) dry batteries, and make sure the position of " + " polar and " - " polar is correct (as shown in Fig 2 ③ ).

4. Reinstall the cover (as shown in Fig 2 ④ ).

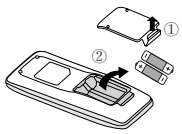


Fig.1

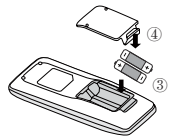


Fig.2

**NOTICE:**

● During operation, point the remote control signal sender at the receiving window on indoor unit.

● The distance between signal sender and receiving window should be no more than 8m, and there should be no obstacles between them.

● Signal may be interfered easily in the room where there is fluorescent lamp or wireless telephone; remote controller should be close to indoor unit during operation.

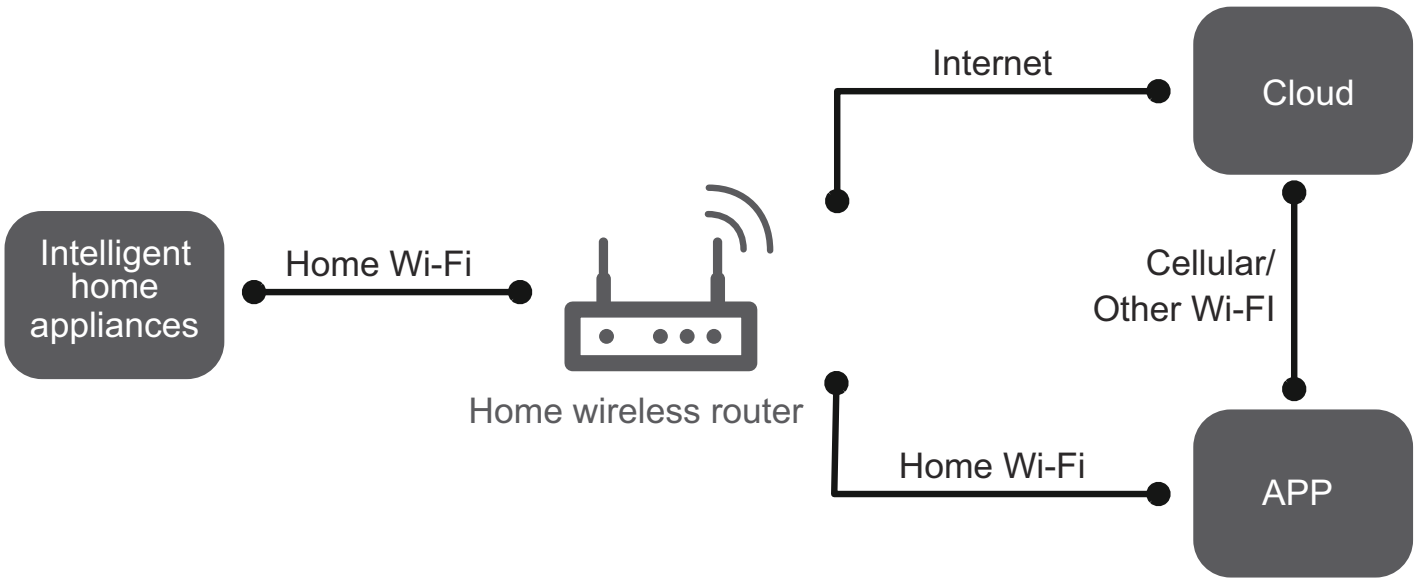
● Replace new batteries of the same model when replacement is required.

● When you don't use remote controller for a long time, please take out the batteries.

● If the display on remote controller is fuzzy or there's no display, please replace batteries.

## 6.3 Ewpe Smart App Operation Manual

### Control Flow Chart




### Operating Systems

Requirement for User's smart phone:

iOS system
Support iOS7.0 and above version

Android system
Support Android 4.4 and above version

### Download and installation

App Download Linkage

Scan the QR code or search "Ewpe Smart" in the application market to download and install it. When "Ewpe Smart" App is installed, register the account and add the device to achieve long-distance control and LAN control of smart home appliances.
For more information, please refer to "Help" in App.

## 6.4 Brief Description of Modes and Functions

### 1. Basic function of system

#### (1) Cooling mode

(1) Under this mode, fan and swing operates at setting status. Temperature setting range is 16~30$^{O}$C.

(2) During malfunction of outdoor unit or the unit is stopped because of protection, indoor unit keeps original operation status.

#### (2) Drying mode

(1) Under this mode, fan operates at low speed and swing operates at setting status. Temperature setting range is 16~30$^{O}$C.

(2) During malfunction of outdoor unit or the unit is stopped because of protection, indoor unit keeps original operation status.

(3) Protection status is same as that under cooling mode.

(4) Sleep function is not available for drying mode.

#### (3) Heating mode

(1) Under this mode, Temperature setting range is 16~30$^{O}$C.

(2) Working condition and process for heating mode:

When turn on the unit under heating mode, indoor unit enters into cold air prevention status. When the unit is stopped or at OFF status, and indoor unit has been started up just now, the unit enters into residual heat-blowing status.

#### (4) Working method for AUTO mode:

1. Working condition and process for AUTO mode:

a. Under auto mode set temperature can be adjusted.The unit switch mode automatically according to ambient temperature.

2. Protection function

a. During cooling operation, protection function is same as that under cooling mode.

b. During heating operation, protection function is same as that under heating mode.

3. Display: Set temperature is the set value under each condition. Ambient temperature is (Tamb.-Tcompensation) for heat pump unit and Tamb. for cooling only unit.

4. If there's I feel function, Tcompensation is 0. Others are same as above.

#### (5) Fan mode

Under this mode, indoor fan operates at set fan speed. Compressor, outdoor fan, 4-way valve and electric heating tube stop operation. Indoor fan can select to operate at high, medium, low or auto fan speed. Temperature setting range is 16~30$^{O}$C.

### 2. Other control

#### (1) Buzzer

Upon energization or availably operating the unit or remote controller, the buzzer will give out a beep.

#### (2) Auto button

If press this auto button when turning off the unit, the complete unit will operate at auto mode. Indoor fan operates at auto fan speed and swing function is turned on. Press this auto button at ON status to turn off the unit.

#### (3) Auto fan

Heating mode: During auto heating mode or normal heating ode, auto fan speed will adjust the fan speed automatically according to ambient temperature and set temperature.

#### (4) Sleep

After setting sleep function for a period of time, system will adjust set temperature automatically.

#### (5) Timer function:

General timer and clock timer functions are compatible by equipping remote controller with different functions.

#### (6) Memory function

Memorize compensation temperature, off-peak energization value.Memory content: mode, up&down swing, light, set temperature, set fan speed, general timer (clock timer can't be memorized). After power recovery, the unit will be turned on automatically according to memory content.

#### (7) Health function

During operation of indoor fan, set health function by remote controller. Turn off the unit will also turn off health function.

Turn on the unit by pressing auto button, and the health is defaulted ON.

#### (8) I feel control mode

After controller received I feel control signal and ambient temperature sent by remote controller, controller will work according to the ambient temperature sent by remote controller.

#### (9) Compulsory defrosting function

a. Start up compulsory defrosting function

Under ON status, set heating mode with remote controller and adjust the temperature to 16$^{O}$C. Press “+, -, +, -, +,-” button successively within 5s and the complete unit will enter into compulsory defrosting status. Meanwhile, heating indicator on indoor unit will ON 10s and OFF 0.5s successively. (Note: If complete unit has malfunction or stops operation due to protection, compulsory defrosting function can be started up after malfunction or protection is resumed.

b. Exit compulsory defrosting mode

After compulsory defrosting is started up, the complete unit will exit defrosting operation according to the actual defrosting result, and the complete unit will resume normal heating operation.

#### (10) Refrigerant recovery function:

a. Enter refrigerant recycling function

Within 5min after energizing (unit ON or OFF status is ok), continuously press LIGHT button for 3 times within 3s to enter refrigerant recycling mode; Fo is displayed and refrigerant recycling function is started. At this moment, the maintenance people closes liquid valve. After 5min, stick the thimble of maintenance valve with a tool. If there is no refrigerant spraying out, close the gas valve immediately and then turn off the unit to remove the connection pipe.

b. Exit refrigerant recycling function

After entering refrigerant recycling mode, when receive any remote control signal or enter refrigerant recycling mode for 25min, the unit will exit refrigerant recycling mode automatically If the unit is in standby mode before refrigerant recycling, it will be still in standby mode after finishing refrigerant recycling; if the unit is in ON status before refrigerant recycling, it will still run in original operation mode.

### (11) Ambient temperature display control mode

a. When user set the remote controller to display set temperature (corresponding remote control code: 01), current set temperature will be displayed.

b. Only when remote control signal is switched to indoor ambient temperature display status (corresponding remote control code: 10) from other display status (corresponding remote control code: 00, 01,11),controller will display indoor ambient temperature for 3s and then turn back to display set temperature.

Under this mode, indoor fan operates at set fan speed. Compressor, outdoor fan, 4-way valve and electric heating tube stop operation. Indoor fan can select to operate at high, medium, low or auto fan speed. Temperature setting range is 16~30$^{O}$C.

### (12) Off-peak energization function:

Adjust compressors minimum stop time. The original minimum stop time is 180s and then we change to:

The time interval between two start-ups of compressor can't be less than 180+T s(0≤T≤15). T is the variable of controller. Thats to say the minimum stop time of compressor is 180s~195s. Read-in T into memory chip when refurbish the memory chip each time. After power recovery, compressor can only be started up after 180+T s at least.

### (13) SE control mode

The unit operates at SE status.

### (14) X-fan mode

When X-fan function is turned on, after turn off the unit, indoor fan will still operate at low speed for 2min and then the complete unit will be turned off. When x-fan function is turned off, after turn off the unit, the complete unit will be turned off directly.

### (15) 8ºC heating function

Under heating mode, you can set 8ºC heating function by remote controller. The system will operate at 8ºC set temperature.

### (16) Turbo fan control function

Set turbo function under cooling or heating mode to enter into turbo fan speed. Press fan speed button to cancel turbo wind.

No turbo function under auto, dry or fan mode.

# 6. Function and Control

## Outdoor Units

**1. Cooling mode**

Working condition and process of cooling mode:

(1) When $T_{\text{indoor ambient temperature}} \geq T_{\text{preset}}$, unit enters into cooling mode. Indoor fan, outdoor fan and compressor start operation.

Indoor fan operates according to set fan speed.

(2) When $T_{\text{indoor ambient temperature}} \leq T_{\text{preset}}-2^{\circ}C$ , compressor stops operation and outdoor fan will stop 30s later. Indoor fan operates according to set fan speed.

(3) When $T_{\text{preset}}-2^{\circ}C < T_{\text{indoor ambient temperature}} < T_{\text{preset}}$, unit operates according to the previous status.

Under cooling mode, 4-way valve is not energized. Temperature setting range is 16~30°C . If compressor stops because of malfunction in cooling mode, indoor fan and swing motor will work according to the original status.

**2. Drying mode**

(1) Working condition and process of drying mode

a. When $T_{\text{indoor ambient temperature}} > T_{\text{preset}}$ , unit will be in drying mode. Outdoor fan and compressor start operation while indoor fan will operate at low fan speed.

b. When Tpreset-2°C ≤Tindoor ambient temperature≤Tpreset, unit operates according to the previous status.

c. When Tindoor ambient temperature < Tpreset-2°C , compressor stops operation and outdoor fan will stop 30s later.

(2) Under drying mode, 4-way valve is not energized. Temperature setting range is 16~30°C.

(3) Protection function: same as in cooling mode.

**3. Fan mode**

(1) Under this mode, indoor fan can select different fan speed (except Turbo) or auto fan speed. Compressor, outdoor fan and 4-way valve all stop operation.

(2) In fan mode, temperature setting range is 16~30°C .

**4. Heating mode**

Working condition and process of heating mode:

(1) When $T_{\text{preset}}-(T_{\text{indoor ambient temperature}}-T_{\text{compensation}}) \geq 1^{\circ}C$ , unit enters into heating mode. Compressor, outdoor fan and 4-way valve start operation.

(2)When $-2^{\circ}C < T_{\text{preset}}-(T_{\text{indoor ambient temperature}}-T_{\text{compensation}}) < 1^{\circ}C$ , unit operates according to the previous status.

(3)When $T_{\text{preset}}-(T_{\text{indoor ambient temperature}}-T_{\text{compensation}}) \leq -2^{\circ}C$ , compressor stops operation and outdoor fan will stop 30s later. Indoor fan will be in residual-heat blowing status.

(4) When unit is turned off under heating mode or changed to other modes from heating mode, 4-way valve will be power-off 2min after compressor stops working (compressor is in operation status under heating mode).

(5) When $T_{\text{outdoor ambient temperature}} > 30^{\circ}C$ , compressor stops operation immediately. Outdoor fan will stop 30s later.

(6) Under the condition that compressor is turned on, when unit is changed to heating mode from cooling or drying mode, 4-way valve will be energized in 2~3mins delay.

Note: Tcompensation is determined by IDU and ODU. If IDU controls the compensation temperature, then Tcompensation is determined according to the value sent by IDU to ODU; If IDU does not control the compensation temperature, then Tcompensation will default to 3°C by the ODU.

**5. Freon recovery mode**

After the Freon recovery signal from IDU is received, cooling at rated frequency will be forcibly turned on to recover Freon.

Indoor unit will display Fo. If any signal from remote controller is received, unit will exit from Freon recovery mode and indoor unit stops displaying Fo.

**6. Compulsory defrosting**

If unit is turned on under heating mode and set temperature is 16°C (by remote controller), press “+, -, +, -, +, -” within 5s, unit will enter into compulsory defrosting mode and send the signal to ODU. When the compulsory defrosting signal from ODU is received, IDU will exit from the compulsory defrosting mode and stop sending the signal to ODU. After ODU receives the compulsory defrosting code, it will start compulsory defrosting. Defrosting frequency and opening angle will be the same as in normal defrosting mode. When compulsory defrosting is finished, the complete unit resumes original status.

**7. Auto mode**

Auto mode is determined by controller of IDU. See IDU logic for details.

**8. 8°C heating**

Set temperature is 8°C. Display board of IDU displays 8°C. Under this mode, “Cold air prevention” function is shielded.

If compressor is operating under this mode, fan speed will adjust according to auto fan speed; if compressor stops operation under this mode, indoor fan will be in residual-heat blowing status.

**When power on, communication light will be blinking in a normal way (after receiving a group of correct signals, blinking stops for 0.2s~0.3s). If There's no communication, communication light will be always on. If other ODU has malfunction, communication light will be on for 1s and off for 1s in a circular way.**

# 7. Notes for Installation and Maintenance

## Safety Precautions: Important!

**Please read the safety precautions carefully before installation and maintenance.**

**The following contents are very important for installation and maintenance.**

**Please follow the instructions below.**

**●The installation or maintenance must accord with the instructions.**

**●Comply with all national electrical codes and local electrical codes.**

**●Pay attention to the warnings and cautions in this manual.**

**●All installation and maintenance shall be performed by distributor or qualified person.**

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

**●Be caution during installation and maintenance. Prohibit incorrect operation to prevent electric shock, casualty and other accidents.**

## ⚠ WARNINGS

**Electrical Safety Precautions:**

**1. Cut off the power supply of air conditioner before checking and maintenance.**

**2. The air condition must apply specialized circuit and prohibit share the same circuit with other appliances.**

**3. The air conditioner should be installed in suitable location and ensure the power plug is touchable.**

**4. Make sure each wiring terminal is connected firmly during installation and maintenance.**

**5. Have the unit adequately grounded. The grounding wire can't be used for other purposes.**

**6. Must apply protective accessories such as protective boards, cable-cross loop and wire clip.**

**7. The live wire, neutral wire and grounding wire of power supply must be corresponding to the live wire, neutral wire and grounding wire of the air conditioner.**

**8. The power cord and power connection wires can't be pressed by hard objects.**

**9. If power cord or connection wire is broken, it must be replaced by a qualified person.**

**10. If the power cord or connection wire is not long enough, please get the specialized power cord or connection wire from the manufacture or distributor. Prohibit prolong the wire by yourself.**

**11. For the air conditioner without plug, an air switch must be installed in the circuit. The air switch should be all-pole parting and the contact parting distance should be more than 3mm.**

**12. Make sure all wires and pipes are connected properly and the valves are opened before energizing.**

**13. Check if there is electric leakage on the unit body. If yes, please eliminate the electric leakage.**

**14. Replace the fuse with a new one of the same specification if it is burnt down; Don't replace it with a cooper wire or conducting wire.**

**15. If the unit is to be installed in a humid place, the circuit breaker must be installed.**

**Installation Safety Precautions:**

**1. Select the installation location according to the requirement of this manual.(See the requirements in installation part)**

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

**3. When installing the indoor unit and outdoor unit, a sufficient fixing bolt must be installed; make sure the installation support is firm.**

**4. Ware safety belt if the height of working is above 2m.**

**5. Use equipped components or appointed components during installation.**

**6. Make sure no foreign objects are left in the unit after finishing installation.**

**Refrigerant Safety Precautions:**

**1. When refrigerant leaks or requires discharge during installation, maintenance, or disassembly, it should be handled by certified professionals or otherwise in compliance with local laws and regulations.**

**2. Avoid contact between refrigerant and fire as it generates poisonous gas; Prohibit prolong the connection pipe by welding.**

**3. Apply specified refrigerant only. Never have it mixed with any other refrigerant. Never have air remain in the refrigerant line as it may lead to rupture or other hazards.**

**4. Make sure no refrigerant gas is leaking out when installation is completed.**

**5. If there is refrigerant leakage, please take sufficient measure to minimize the density of refrigerant.**

**6. Never touch the refrigerant piping or compressor without wearing glove to avoid scald or frostbite.**

**Improper installation may lead to fire hazard, explosion, electric shock or injury.**

# 7. Notes for Installation and Maintenance

## Safety Precautions for Installing and Relocating the Unit:

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

### ⚠ WARNINGS

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

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

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

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

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

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

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

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

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

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

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

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

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

Poor connections may lead to electric shock or fire.

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

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

# 7. Notes for Installation and Maintenance

## Main Tools for Installation and Maintenance



Level meter



Measuring tape



Screw driver



Impact drill



Drill head



Electric drill



Electroprobe



Universal meter



Torque wrench



Open-end wrench



Inner hexagon spanner



Electronic leakage detector



Vacuum pump



Pressure meter



Pipe pliers



Pipe pliers



Pipe cutter



Pipe expander



Pipe bender



Soldering appliance



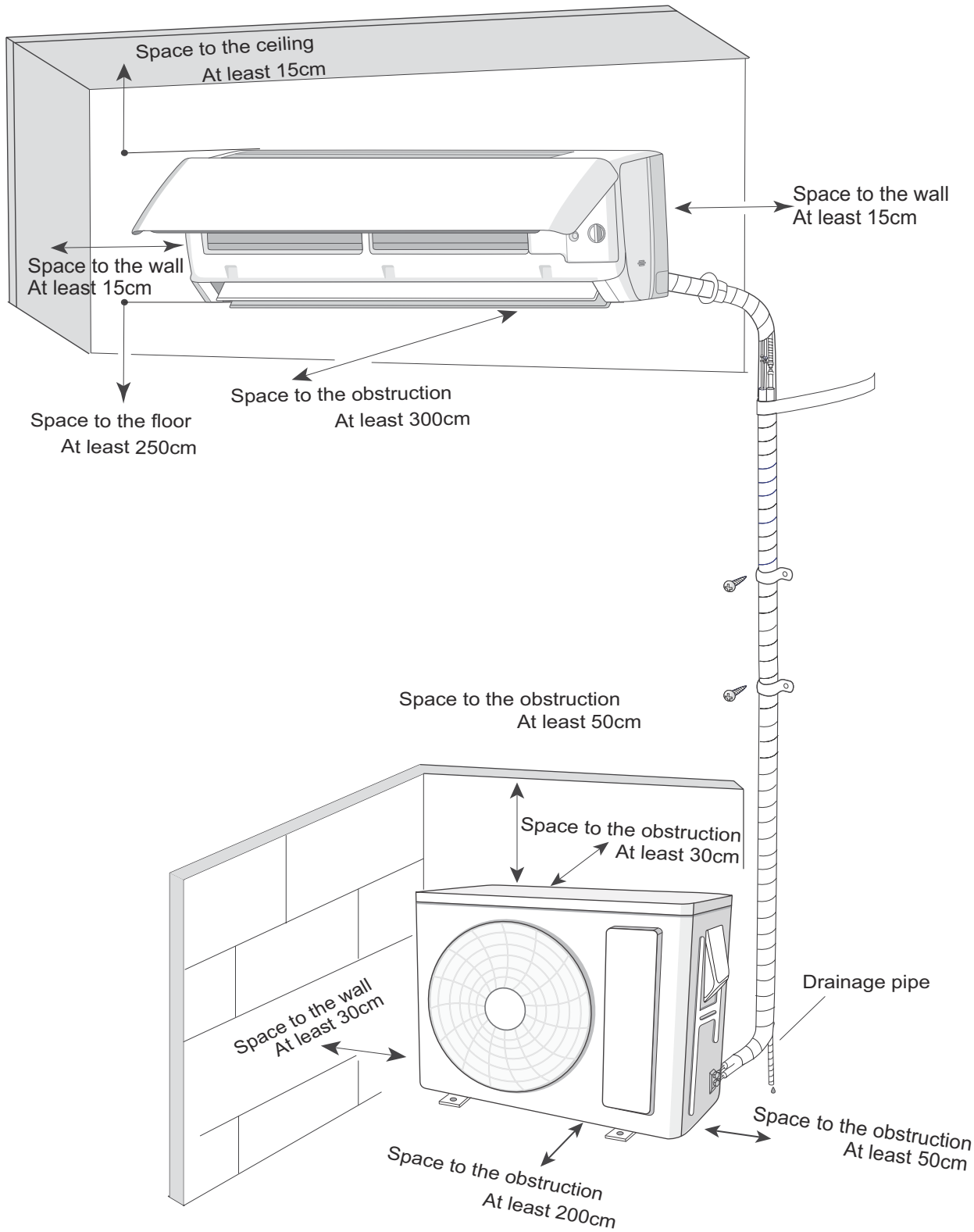
Refrigerant container



Electronic scale

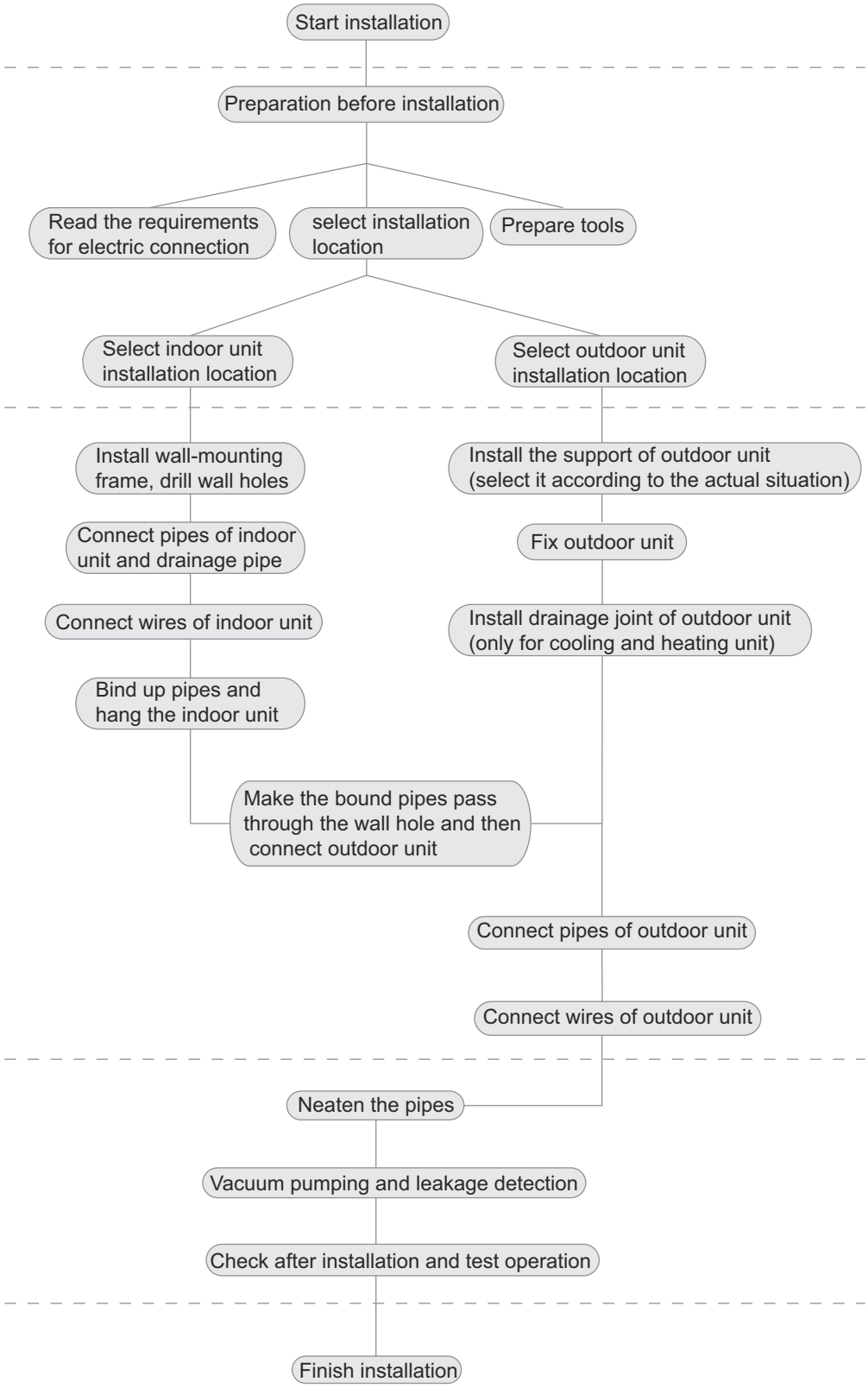
# 8. Installation

## 8.1 Installation Dimension Diagram



# 8. Installation

## Installation Procedures




Note: this flow is only for reference; please find the more detailed installation steps in this section.

# 8. Installation

## 8.2 Installation Parts-checking

| No. | Name |
|---|---|
| 1 | Indoor unit |
| 2 | Outdoor unit |
| 3 | Connection pipe |
| 4 | Drainage pipe |
| 5 | Wall-mounting frame |
| 6 | Connecting cable(power cord) |
| 7 | Wall pipe |
| 8 | Sealing gum |
| 9 | Wrapping tape |
| 10 | Support of outdoor unit |
| 11 | Fixing screw |
| 12 | Drainage plug(cooling and heating unit) |
| 13 | Owners manual, remote controller |

⚠ **Note:**
1.Please contact the local agent for installation.
2.Don't use unqualified power cord.

## 8.3 Selection of Installation Location

**1. Basic Requirement:**

Installing the unit in the following places may cause malfunction. If it is unavoidable, please consult the local dealer:

(1) The place with strong heat sources, vapors, flammable or explosive gas, or volatile objects spread in the air.

(2) The place with high-frequency devices (such as welding machine, medical equipment).

(3) The place near coast area.

(4) The place with oil or fumes in the air.

(5) The place with sulfureted gas.

(6) Other places with special circumstances.

(7) The appliance shall nost be installed in the laundry.

(8) It's not allowed to be installed on the unstable or motive base structure (such as truck) or in the corrosive environment (such as chemical factory).

**2. Indoor Unit:**

(1) There should be no obstruction near air inlet and air outlet.

(2) Select a location where the condensation water can be dispersed easily andwon't affect other people.

(3) Select a location which is convenient to connect the outdoor unit and near the power socket.

(4) Select a location which is out of reach for children.

(5) The location should be able to withstand the weight of indoor unit and won't increase noise and vibration.

(6) The appliance must be installed 2.5m above floor.

(7) Don't install the indoor unit right above the electric appliance.

(8) Please try your best to keep way from fluorescent lamp.

**3. Outdoor Unit:**

(1) Select a location where the noise and outflow air emitted by the outdoor unit will not affect neighborhood.

(2) The location should be well ventilated and dry, in which the outdoor unit won't be exposed directly to sunlight or strong wind.

(3) The location should be able to withstand the weight of outdoor unit.

(4) Make sure that the installation follows the requirement of installation dimension diagram.

(5) Select a location which is out of reach for children and far away from animals or plants.If it is unavoidable, please add fence for safety purpose.

## 8.4 Electric Connection Requirement

**1. Safety Precaution**

(1) Must follow the electric safety regulations when installing the unit.

(2) According to the local safety regulations, use qualified power supply circuit and air switch.

(3) Make sure the power supply matches with the requirement of air conditioner. Unstable power supply or incorrect wiring may result in electric shock, fire hazard or malfunction. Please install proper power supply cables before using the air conditioner.

(4) Properly connect the live wire, neutral wire and grounding wire of power socket.

(5) Be sure to cut off the power supply before proceeding any work related to electricity and safety.

(6) Do not put through the power before finishing installation.

(7) The temperature of refrigerant circuit will be high, please keep the interconnection cable away from the copper tube.

(8) The appliance shall be installed in accordance with national wiring regulations.

**2. Grounding Requirement:**

(1) The air conditioner is Ⅰ class electric appliance. It must be properly grounding with specialized grounding device by a professional. Please make sure it is always grounded effectively, otherwise it may cause electric shock.

(2) The yellow-green wire in air conditioner is grounding wire, which can't be used for other purposes.

(3) The grounding resistance should comply with national electric safety regulations.

(4) The appliance must be positioned so that the plug is accessible.

(5) An all-pole disconnection switch having a contact separation of at least 3mm in all poles should be connected in fixed wiring.

(6) Including an air switch with suitable capacity, please note the following table. Air switch should be included magnet buckle and heating buckle function, it can protect the circuit-short and overload. (Caution: please do not use the fuse only for protect the circuit)

## 8.5 Installation of Indoor Unit

**1. Choosing Installation location**

Recommend the installation location to the client and then confirm it with the client.

**2. Install Wall-mounting Frame**

(1) Hang the wall-mounting frame on the wall; adjust it in horizontal position with the level meter and then point out the screw fixing holes on the wall.

(2) Drill the screw fixing holes on the wall with impact drill (the specification of drill head should be the same as the plastic expansion particle) and then fill the plastic expansion particles in

the holes.

(3) Fix the wall-mounting frame on the wall with tapping screws and then check if the frame is firmly installed by pulling the frame. If the plastic expansion particle is loose, please drill another fixing hole nearby.

**3. Install Wall-mounting Frame**

(1) Choose the position of piping hole according to the direction of outlet pipe. The position of piping hole should be a little lower than the wall-mounted frame.(As show in Fig.1)

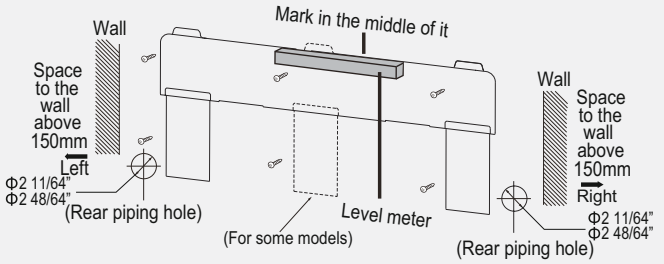



Fig.1

(2) Open a piping hole with the diameter of Φ55/70mm on the selected outlet pipe position.In order to drain smoothly, slant the piping hole on the wall slightly downward to the outdoor side with the gradient of 5-10°. (As show in Fig.2)

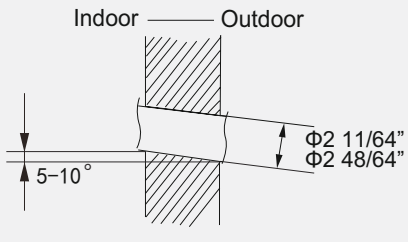



Fig.2

⚠ **Note:**

Pay attention to dust prevention and take relevant safety measures when opening the hole.

**4. Outlet Pipe**

(1) The pipe can be led out in the direction of right, rear right, left or rear left. (As show in Fig.3)

(2) When selecting leading out the pipe from left or right, please cut off the corresponding hole on the bottom case. (As show in Fig.4)

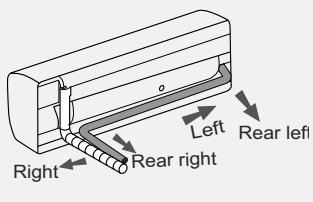



Fig.3

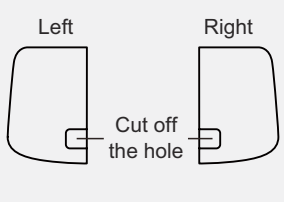



Fig.4

**5. Connect the Pipe of Indoor Unit**

(1) Aim the pipe joint at the corresponding bellmouth. (As show in Fig.5)

(2) Pretightening the union nut with hand.

(3) Adjust the torque force by referring to the following sheet. Place the open-end wrench on the pipe joint and place the torque wrench on the union nut. Tighten the union nut with torque wrench. (As show in Fig.6)

(4) Wrap the indoor pipe and joint of connection pipe with insulating pipe, and then wrap it with tape. (As show in Fig.7)

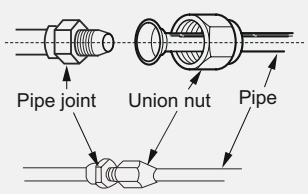



Fig.5

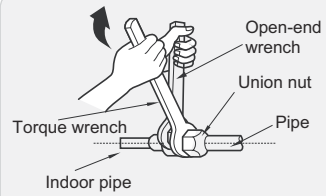



Fig.6

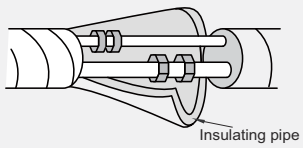



Fig.7

Refer to the following table for wrench moment of force:

| Piping size (inch) | Tightening torque (N·m) |
|---|---|
| 1/4 | 15~20 |
| 3/8 | 30~40 |
| 1/2 | 45~55 |
| 5/8 | 60~65 |
| 3/4 | 70~75 |

**6. Install Drain Hose**

(1) Connect the drain hose to the outlet pipe of indoor unit. (As show in Fig.8)

(2) Bind the joint with tape. (As show in Fig.9)

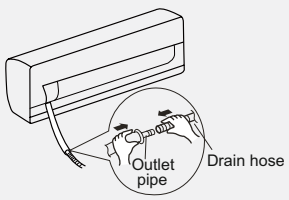



Fig.8

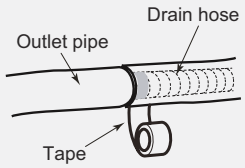



Fig.9

⚠ **Note:**

(1) Add insulating pipe in the indoor drain hose in order to prevent condensation.

(2) The plastic expansion particles are not provided.

(As show in Fig.10)

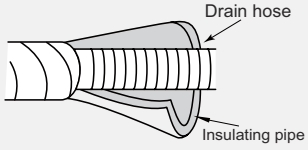



Fig.10

**7. Connect Wire of Indoor Unit**

(1) Open the panel, remove the screw on the wiring cover and then take down the cover. (As show in Fig.11)

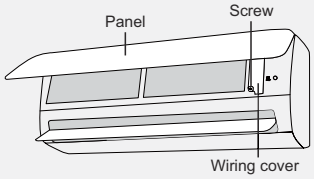



Fig.11

(2) Make the power connection wire go through the cable-cross hole at the back of indoor unit and then pull it out from the front side. (As show in Fig.12)

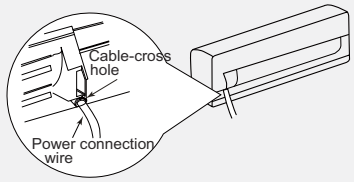
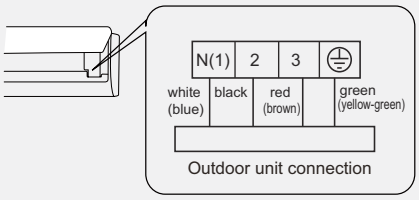



Fig.12

(3) Remove the wire clip; connect the power connection wiresignal control wire (only for cooling and heating unit) to the wiring terminal according to the color; tighten the screw and then fix the power connection wire with wire clip. (As show in Fig.13)




Note: The wiring connect is for reference only, please refer to the actual one.

Fig.13

(4) Put wiring cover back and then tighten the screw.

(5) Close the panel.

⚠ **Note:**

(1) All wires of indoor unit and outdoor unit should be connected by a professional.

(2) If the length of power connection wire is insufficient, please contact the supplier for a new one. Avoid extending the wire by yourself.

(3) For the air conditioner with plug, the plug should be reachable after finishing installation.

(4) For the air conditioner without plug, an air switch must be installed in the line. The air switch should be all-pole parting and the contact parting distance should be more than 3mm.

**8. Bind up Pipe**

(1) Bind up the connection pipe, power cord and drain hose with the band. (As show in Fig.14)

(2) Reserve a certain length of drain hose and power cord for installation when binding them. When binding to a certain degree, separate the indoor power and then separate the drain hose. (As show in Fig.15)

(3) Bind them evenly.

(4) The liquid pipe and gas pipe should be bound separately at the end.

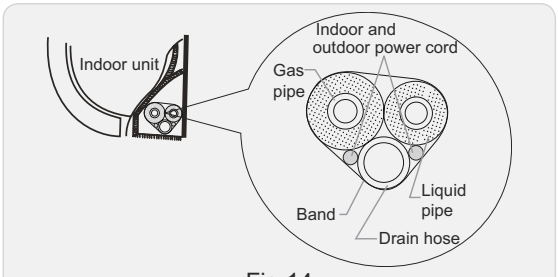



Fig.14

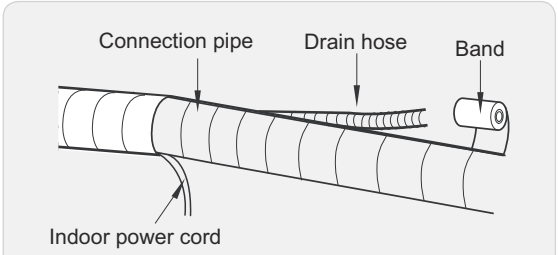



Fig.15

⚠ **Note:**

(1) The power cord and control wire can't be crossed or winding.

(2) The drain hose should be bound at the bottom.

**9. Hang the Indoor Unit**

(1) Put the bound pipes in the wall pipe and then make them pass through the wall hole.

(2) Hang the indoor unit on the wall-mounting frame.

(3) Stuff the gap between pipes and wall hole with sealing gum.

(4) Fix the wall pipe. (As show in Fig.16)

(5) Check if the indoor unit is installed firmly and closed to the wall. (As show in Fig.17)

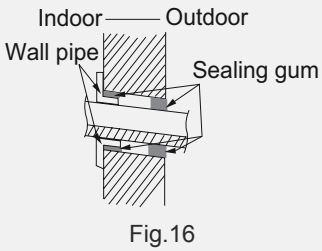



Fig.16

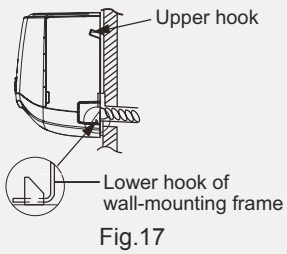



Fig.17

⚠ **Note:**

Do not bend the drain hose too excessively in order to prevent blocking.

## 8.6 Installation of Outdoor unit

**1. Fix the Support of Outdoor Unit(Select it according to the actual installation situation)**

(1) Select installation location according to the house structure.

(2) Fix the support of outdoor unit on the selected location with expansion screws.

⚠ **Note:**

(1) Take sufficient protective measures when installing the outdoor unit.

(2) Make sure the support can withstand at least four times the unit weight.

(3) The outdoor unit should be installed at least 3cm above the floor in order to install drain joint.(As show in Fig.18)

# 8. Installation

(4) For the unit with cooling capacity of 2300W~5000W, 6 expansion screws are needed; for the unit with cooling capacity of 6000W~8000W, 8 expansion screws are needed; for the unit with cooling capacity of 10000W~16000W, 10 expansion screws are needed.

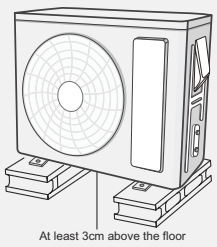


Fig.18

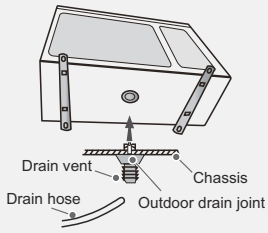


Fig.19

**2. Install Drain Joint(Only for cooling and heating unit)**

(1) Connect the outdoor drain joint into the hole on the chassis.

(2) Connect the drain hose into the drain vent.(As show in Fig.19)

**3. Fix Outdoor Unit**

(1) Place the outdoor unit on the support.

(2) Fix the foot holes of outdoor unit with bolts.(As show in Fig.20)

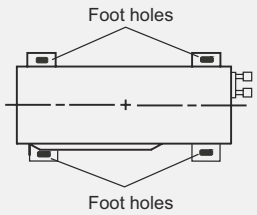
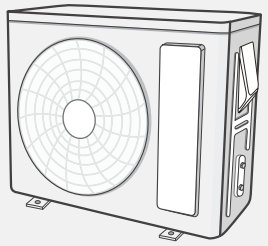


Fig.20


Fig.21

**4. Connect Indoor and Outdoor Pipes**

(1) Remove the screw on the right handle of outdoor unit and then remove the handle. (As show in Fig.21)

(2) Remove the screw cap of valve and aim the pipe joint at the bellmouth of pipe. (As show in Fig.22)

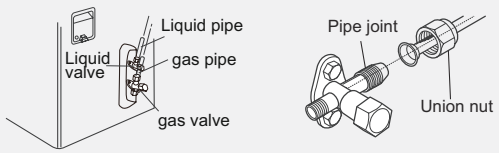


Fig.22

(3) Pretightening the union nut with hand.

(4) Tighten the union nut with torque wrench .

Refer to the following table for wrench moment of force:

| Piping size (inch) | Tightening torque (N·m) |
|---|---|
| 1/4 | 15~20 |
| 3/8 | 30~40 |
| 1/2 | 45~55 |
| 5/8 | 60~65 |
| 3/4 | 70~75 |

**5. Connect Outdoor Electric Wire**

(1) Remove the wire clip; connect the power connection wire and signal control wire (only for cooling and heating unit) to the wiring terminal according to the color; fix them with screws. (As show in Fig.23)

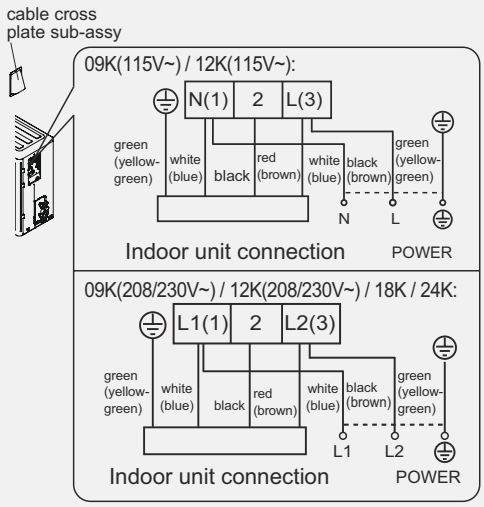


Fig.23

Note: the wiring connect is for reference only,please refer to the actual one.

**⚠ Note:**

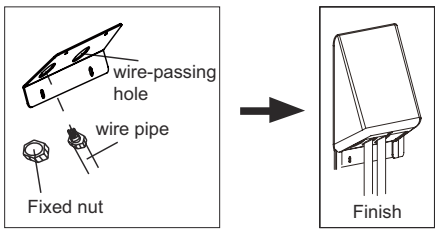
(1) After tightening the screw, pull the power cord slightly to check if it is firm.

(2) Never cut the power connection wire to prolong or shorten the distance.

(3) The connecting wire and connection pipe cannnot touch each other.

(4) Top cover of outdoor unit and electric box assembly should be fixec by the screw. Otherwise, it can cause a fire, or short circuit caused by water or dust.

**Install the over line pipe**




**6. Neaten the Pipes**

(1) The pipes should be placed along the wall, bent reasonably and hidden possibly. Min. semidiameter of bending the pipe is 10cm.

(2) If the outdoor unit is higher than the wall hole, you must set a U-shaped curve in the pipe before pipe goes into the room, in order to prevent rain from getting into the room. (As show in Fig.24)

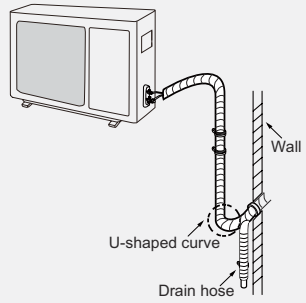


Fig.24

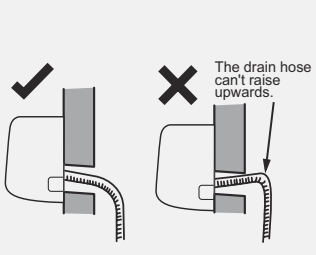


Fig.25

# 8. Installation

⚠ **Note:**
(1) The through-wall height of drain hose shouldnt be higher than the outlet pipe hole of indoor unit.(As show in Fig.25)
(2) Slant the drain hose slightly downwards. The drain hose can't be curved, raised and fluctuant, etc.(As show in Fig.26)
(3) The water outlet can't be placed in water in order to drain smoothly.(As show in Fig.27)

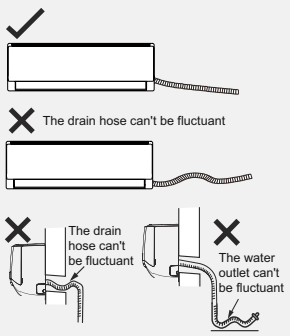


Fig.26

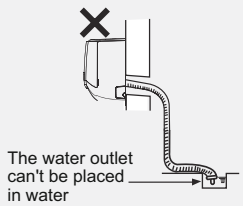


Fig.27

## 8.7 Vacuum Pumping and Leak Detection

**1. Use Vacuum Pump**
(1) Remove the valve caps on the liquid valve and gas valve and the nut of refrigerant charging vent.
(2) Connect the charging hose of piezometer to the refrigerant charging vent of gas valve and then connect the other charging hose to the vacuum pump.
(3) Open the piezometer completely and operate for 10-15min to check if the pressure of piezometer remains in -0.1MPa.
(4) Close the vacuum pump and maintain this status for 1-2min to check if the pressure of piezometer remains in -0.1MPa. If the pressure decreases, there may be leakage.
(5) Remove the piezometer, open the valve core of liquid valve and gas valve completely with inner hexagon spanner.
(6) Tighten the screw caps of valves and refrigerant charging vent.(As show in Fig.28)

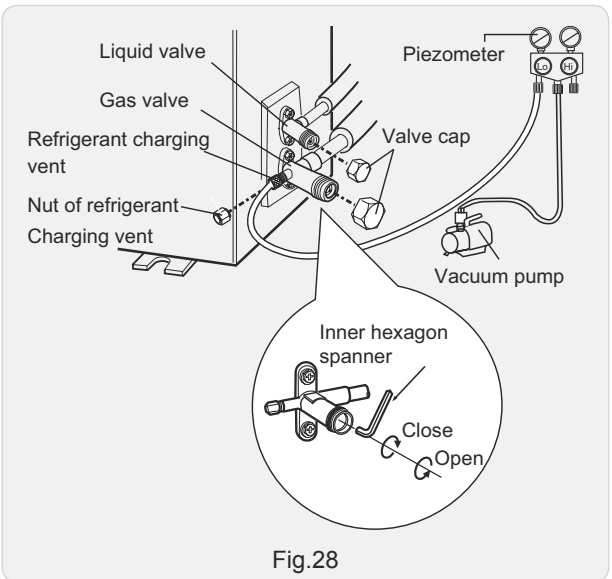


Fig.28

**2. Leakage Detection**
(1) With leakage detector:
Check if there is leakage with leakage detector.
(2) With soap water:
If leakage detector is not available, please use soap water for leakage detection. Apply soap water at the suspected position and keep the soap water for more than 3min. If there are air bubbles coming out of this position, There's a leakage.

## 8.8 Check after Installation and Test operation

**1. Check after Installation**
Check according to the following requirement after finishing installation.

| NO. | Items to be checked | Possible malfunction |
|---|---|---|
| 1 | Has the unit been installed firmly? | The unit may drop, shake or emit noise. |
| 2 | Have you done the refrigerant leakage test? | It may cause insufficient cooling (heating) capacity. |
| 3 | Is heat insulation of pipeline sufficient? | It may cause condensation and water dripping. |
| 4 | Is water drained well? | It may cause condensation and water dripping. |
| 5 | Is the voltage of power supply according to the voltage marked on the nameplate? | It may cause malfunction or damage the parts. |
| 6 | Is electric wiring and pipeline installed correctly? | It may cause malfunction or damage the parts. |
| 7 | Is the unit grounded securely? | It may cause electric leakage. |
| 8 | Does the power cord follow the specification? | It may cause malfunction or damage the parts. |
| 9 | Is there any obstruction in air inlet and air outlet? | It may cause insufficient cooling (heating) capacity. |
| 10 | The dust and sundries caused during installation are removed? | It may cause malfunction or damaging the parts. |
| 11 | The gas valve and liquid valve of connection pipe are open completely? | It may cause insufficient cooling (heating) capacity. |
| 12 | Is the inlet and outlet of piping hole been covered? | It may cause insufficient cooling(heating) capacity or waster eletricity. |

**2. Test Operation**
(1) Preparation of test operation
● The client approves the air conditioner installation.
● Specify the important notes for air conditioner to the client.
(2) Method of test operation
● Put through the power, press ON/OFF button on the remote controller to start operation.
● Press MODE button to select AUTO, COOL, DRY, FAN and HEAT to check whether the operation is normal or not.
● If the ambient temperature is lower than 16℃ , the air conditioner can't start cooling.

# 9. Maintenance

## 9.1 Error Code List

| No. | Malfunction Name | Display Method of Indoor Unit<br>Dual-8 Code Display | A/C status | Possible Causes |
|---|---|---|---|---|
| 1 | High pressure protection of system | E1 | During cooling and drying operation, except indoor fan operates, all loads stop operation.<br>During heating operation, the complete unit stops. | Possible reasons:<br>1. Refrigerant was superabundant;<br>2. Poor heat exchange (including filth blockage of heat exchanger and bad radiating environment );<br>Ambient temperature is too high. |
| 2 | Low pressure protection of system | E3 | The Dual-8 Code Display will show E3 until the low pressure switch stop operation. | 1.Low-pressure protection<br>2.Low-pressure protection of system<br>3.Low-pressure protection of compressor |
| 3 | High discharge temperature protection of compressor | E4 | During cooling and drying operation, compressor and outdoor fan stop while indoor fan operates.<br>During heating operation, all loads stop. | Please refer to the malfunction analysis (discharge protection, overload). |
| 4 | Overcurrent protection | E5 | During cooling and drying operation, compressor and outdoor fan stop while indoor fan operates.<br>During heating operation, all loads stop. | 1. Supply voltage is unstable;<br>2. Supply voltage is too low and load is too high;<br>3. Evaporator is dirty. |
| 5 | Communication Malfunction | E6 | During cooling operation, compressor stops while indoor fan motor operates. During heating operation, the complete unit stops. | Refer to the corresponding malfunction analysis. |
| 6 | High temperature resistant protection | E8 | During cooling operation:<br>compressor will stop while indoor fan will operate.<br>During heating operation, the complete unit stops. | Refer to the malfunction analysis (overload, high temperature resistant). |
| 7 | EEPROM malfunction | EE | During cooling and drying operation, compressor will stop while indoor fan will operate;<br>During heating operation, the complete unit will stop | Replace outdoor control panel AP1 |
| 8 | Limit/decrease frequency due to high temperature of module | EU | All loads operate normally, while operation frequency for compressor is decreased | Discharging after the complete unit is de-energized for 20mins, check whether the thermal grease on<br>IPM Module of outdoor control panel AP1 is sufficient and whether the radiator is inserted tightly.<br>If it's no use, please replace control panel AP1. |
| 9 | Malfunction protection of jumper cap | C5 | Wireless remote receiver and button are effective, but can not dispose the related command | 1. No jumper cap insert on mainboard.<br>2. Incorrect insert of jumper cap.<br>3. Jumper cap damaged.<br>4. Abnormal detecting circuit of mainboard. |
| 10 | Gathering refrigerant | Fo | When the outdoor unit receive signal of Gathering refrigerant ,the system will be forced to run under cooling mode for gathering refrigerant | Nominal cooling mode |

# 9. Maintenance

| No. | Malfunction Name | Display Method of Indoor Unit<br>Dual-8 Code Display | A/C status | Possible Causes |
|---|---|---|---|---|
| 11 | Indoor ambient temperature sensor is open/short circuited | F1 | During cooling and drying operation, indoor unit operates while other loads will stop; during heating operation, the complete unit will stop operation. | 1. Loosening or bad contact of indoor ambient temp. sensor and mainboard terminal.<br>2. Components in mainboard fell down leads short circuit.<br>3. Indoor ambient temp. sensor damaged.(check with sensor resistance value chart)<br>4. Mainboard damaged. |
| 12 | Indoor evaporator temperature sensor is open/short circuited | F2 | AC stops operation once reaches the setting temperature. Cooling, drying: internal fan motor stops operation while other loads stop operation; heating: AC stop operation | 1. Loosening or bad contact of Indoor evaporator temp. sensor and mainboard terminal.<br>2. Components on the mainboard fall down leads short circuit.<br>3. Indoor evaporator temp. sensor damaged. (check temp. sensor value chart for testing)<br>4. Mainboard damaged. |
| 13 | Outdoor ambient temperature sensor is open/short circuited | F3 | During cooling and drying operating, compressor stops while indoor fan operates; During heating operation, the complete unit will stop operation | Outdoor temperature sensor hasn't been connected well or is damaged. Please check it by referring to the resistance table for temperature sensor) |
| 14 | Outdoor condenser temperature sensor is open/short circuited | F4 | During cooling and drying operation, compressor stops while indoor fan will operate; During heating operation, the complete unit will stop operation. | Outdoor temperature sensor hasn't been connected well or is damaged. Please check it by referring to the resistance table for temperature sensor) |
| 16 | Outdoor discharge temperature sensor is open/short circuited | F5 | During cooling and drying operation, compressor will sop after operating for about 3 mins, while indoor fan will operate;<br>During heating operation, the complete unit will stop after operating for about 3 mins. | 1.Outdoor temperature sensor hasn't been connected well or is damaged. Please check it by referring to the resistance table for temperature sensor)<br>2.The head of temperature sensor hasn't been inserted into the copper tube |
| 17 | Limit/decrease frequency due to overload | F6 | All loads operate normally, while operation frequency for compressor is decreased | Refer to the malfunction analysis (overload, high temperature resistant) |
| 18 | Decrease frequency due to overcurrent | F8 | All loads operate normally, while operation frequency for compressor is decreased | The input supply voltage is too low;<br>System pressure is too high and overload |
| 19 | Decrease frequency due to high air discharge | F9 | All loads operate normally, while operation frequency for compressor is decreased | Overload or temperature is too high;<br>Refrigerant is insufficient;<br>Malfunction of electric expansion valve (EKV) |
| 20 | Limit/decrease frequency due to antifreezing | FH | All loads operate normally, while operation frequency for compressor is decreased | Poor air-return in indoor unit or fan speed is too low |

| No. | Malfunction Name | Display Method of Indoor Unit<br>Dual-8 Code Display | A/C status | Possible Causes |
|---|---|---|---|---|
| 21 | Voltage for DC bus-bar is too high | PH | During cooling and drying operation, compressor will stop while indoor fan will operate;<br>During heating operation, the complete unit will stop operation. | 1. Measure the voltage of position L and N on wiring board (XT), if the voltage is higher than 265VAC, turn on the unit after the supply voltage is increased to the normal range.<br>2.If the AC input is normal, measure the voltage of electrolytic capacitor C on control panel (AP1), if it's normal, There's malfunction for the circuit, please replace the control panel (AP1) |
| 22 | Voltage of DC bus-bar is too low | PL | During cooling and drying operation, compressor will stop<br>while indoor fan will operate;<br>During heating operation, the complete unit will stop | 1. Measure the voltage of position L and N on wiring board (XT), if the voltage is higher than 150VAC,<br>turn on the unit after the supply voltage is increased to the normal range.<br>2.If the AC input is normal, measure the voltage of electrolytic capacitor C on control panel (AP1), if it's normal, There's malfunction for the circuit, please replace the control panel (AP1) |
| 23 | Compressor Min frequence in test state | P0 | | Showing during min. cooling or min. heating test |
| 24 | Compressor rated frequence in test state | P1 | | Showing during nominal cooling or nominal heating test |
| 25 | Compressor maximum frequence in test state | P2 | | Showing during max. cooling or max. heating test |
| 26 | Compressor intermediate frequence in test state | P3 | | Showing during middle cooling or middle heating test |
| 27 | Overcurrent protection of phase current for compressor | P5 | During cooling and drying operation, compressor will stop while indoor fan will operate;<br>During heating operation, the complete unit will stop operation. | Refer to the malfunction analysis (IPM protection, loss of synchronism protection and overcurrent protection of phase current for compressor. |

# 9. Maintenance

| No. | Malfunction Name | Display Method of Indoor Unit<br>Dual-8 Code Display | A/C status | Possible Causes |
|---|---|---|---|---|
| 28 | Charging malfunction of capacitor | PU | During cooling and drying operation, compressor will stop while indoor fan will operate;<br>During heating operation, the complete unit will stop | Refer to the part three—charging malfunction analysis of capacitor |
| 29 | Malfunction of module temperature sensor circuit | P7 | During cooling and drying operation, compressor will stop while indoor fan will operate;<br>During heating operation, the complete unit will stop | Replace outdoor control panel AP1 |
| 30 | Module high temperature protection | P8 | During cooling operation, compressor will stop while indoor fan will operate; During heating operation, the complete unit will stop | After the complete unit is de-energized for 20mins, check whether the thermal grease on IPM Module of outdoor control panel AP1 is sufficient and whether the radiator is inserted tightly. If it's no use, please replace control panel AP1. |
| 31 | Overload protection for compressor | H3 | During cooling and drying operation, compressor will stop while indoor fan will operate;<br>During heating operation, the complete unit will stop operation. | 1. Wiring terminal OVC-COMP is loosened. In normal state, the resistance for this terminal should<br>be less than 1ohm.<br>2.Refer to the malfunction analysis ( discharge protection, overload) |
| 32 | IPM protection | H5 | During cooling and drying operation, compressor will stop while indoor fan will operate;<br>During heating operation, the complete unit will stop operation. | Refer to the malfunction analysis (IPM protection, loss of synchronism protection and overcurrent protection of phase current for compressor. |
| 33 | Module temperature is too high | P8 | During cooling and drying operation, compressor and outdoor fan stop while indoor fan operates.<br>During heating operation, all loads stop. | Radiating grease on IPM module of outdoor unit main board is not enough;<br>screws have not been fixed tightly;<br>Hardware malfunction of outdoor unit main board; |
| 34 | Internal motor (fan motor) do not operate | H6 | Internal fan motor, external fan motor, compressor and electric heater stop operation,guide louver stops at present location. | 1. Bad contact of DC motor feedback terminal.<br>2. Bad contact of DC motor control end.<br>3. Fan motor is stalling.<br>4. Motor malfunction.<br>5. Malfunction of mainboard revdetecting circuit. |
| 35 | Desynchro-nizing of compressor | H7 | During cooling and drying operation, compressor will stop while indoor fan will operate;<br>During heating operation, the complete unit will stop operation. | Refer to the malfunction analysis (IPM protection, loss of synchronism protection and overcurrent protection of phase current for compressor. |
| 36 | Outdoor DC fan motor malfunction | L3 | Outdoor DC fan motor malfunction lead to compressor stop operation, | DC fan motor malfunction or system blocked or the connector loosed |

| No. | Malfunction Name | Display Method of Indoor Unit<br>Dual-8 Code Display | A/C status | Possible Causes |
|---|---|---|---|---|
| 37 | power protection | L9 | compressor stop operation and Outdoor fan motor will stop 30s latter , 3 minutes latter fan motor and compressor will restart | To protect the electronical components when detect high power |
| 38 | Indoor unit and outdoor unit doesn't match | LP | compressor and Outdoor fan motor can't work | Indoor unit and outdoor unit doesn't match |
| 39 | Failure start-up | LC | During cooling and drying operation, compressor will stop while indoor fan will operate;<br>During heating operation, the complete unit will stop operation. | Refer to the malfunction analysis |
| 40 | Cold air prevention protection | E9 | | Not the error code. It's the status code for the operation. |
| 41 | Anti-freezing rotection for evaporator | E2 | | Not the error code. It's the status code for the operation. |
| 42 | Malfunction of phase current detection circuit for compressor | U1 | During cooling and drying operation, compressor will stop while indoor fan will operate;<br>During heating operation, the complete unit will stop | Replace outdoor control panel AP1 |
| 43 | Malfunction of voltage dropping for DC bus-bar | U3 | During cooling and drying operation, compressor will stop while indoor fan will operate;<br>During heating operation, the complete unit will stop | Supply voltage is unstable |
| 44 | Malfunction of complete unit's current detection | U5 | During cooling and drying operation, the compressor will stop while indoor fan will operate;<br>During heating operating, the complete unit will stop operation. | There's circuit malfunction on outdoor unit control panel AP1, please replace the outdoor unit control panel AP1. |
| 45 | The four-way valve is abnormal | U7 | If this malfunction occurs during heating operation, the complete unit will stop operation. | 1.Supply voltage is lower than AC175V;<br>2.Wiring terminal 4V is loosened or broken;<br>3.4V is damaged, please replace 4V. |
| 46 | Malfunction of zero-cross detection circuit | U8 | The complete unit stops | 1.Power supply is abnormal;<br>2.Detection circuit of indoor control mainboard is abnormal. |

| No. | Malfunction Name | Display Method of Indoor Unit<br>Dual-8 Code Display | A/C status | Possible Causes |
|---|---|---|---|---|
| 47 | Malfunction of detecting plate(WIFI ) | JF | Loads operate normally, while the unit can't be normally controlled by APP. | 1. Main board of indoor unit is damaged;<br>2. Detection board is damaged;<br>3. The connection between indoor unit and detection board is not good; |
| 48 | Refrigerant recovery mode | Fo | | Refrigerant recovery. The Serviceman operates it for maintenance. |
| 49 | Undefined outdoor unit error | oE | Cool: compressor and outdoor fan stops operation, while indoor fan operates; Heat: compressor, outdoor fan and indoor fan stop operation. | 1. Outdoor ambient temperature exceeds the operation range of unit (eg: less than-20°C or more than 60°C for cooling; more than 30°C for heating);<br>2. Failure startup of compressor?<br>3. Are wires of compressor not connected tightly?<br>4. Is compressor damaged?<br>5. Is main board damaged? |

# 9. Maintenance

**Analysis or processing of some of the malfunction display:**

### 1. Compressor discharge protection

Possible causes: shortage of refrigerant; blockage of air filter; poor ventilation or air flow short pass for condenser; the system has noncondensing gas (such as air, water etc.); blockage of capillary assy (including filter); leakage inside four-way valve causes incorrect operation; malfunction of compressor; malfunction of protection relay; malfunction of discharge sensor; outdoor temperature too high.

Processing method: refer to the malfunction analysis in the above section.

### 2. Low voltage overcurrent protection

Possi ble cause: Sudden drop of supply voltage.

### 3. Communication malfunction

Processing method: Check if communication signal cable is connected reliably.

### 4. Sensor open or short circuit

Processing method: Check whether sensor is normal, connected with the corre sponding position on the controller and if damage of lead wire is found.

### 5. Compressor over load protection

Possible causes: insufficient or too much refrigrant; blockage of capillary and increase of suction temp.; improper running of compressor, burning in or stuck of bearing, damage of discharge valve; malfunction of protector.

Processing method: adjust refrigerant amount; replace the capillary; replace the compressor; use universal meter to check if the contactor of compress or is fine when it is not overheated, if not replace the protector.

### 6. System malfunction

ieoverload protection.When tube temperature (Check the temperature of outdoor heat exchanger when cooling and check the temperature of indoor heat exchanger when heating) is too high, protectionwill beactivated.

Possi ble causes: Outdoor temperature is too high when cooling; insufficient outdoor air circulation; refrigerant flow malfunction.

please refer to the malfunction analysis in the previous section for handling method .

### 7. IPM module protection

Processing method:Once the module malfunction happens,if it persists for a long time and can not be selfcanceled, cut off the power and turn off the unit, and then re-energize the unit again after about 10 min.After repeating the procedure for sever times, if the malfunction still exists,replace the module.

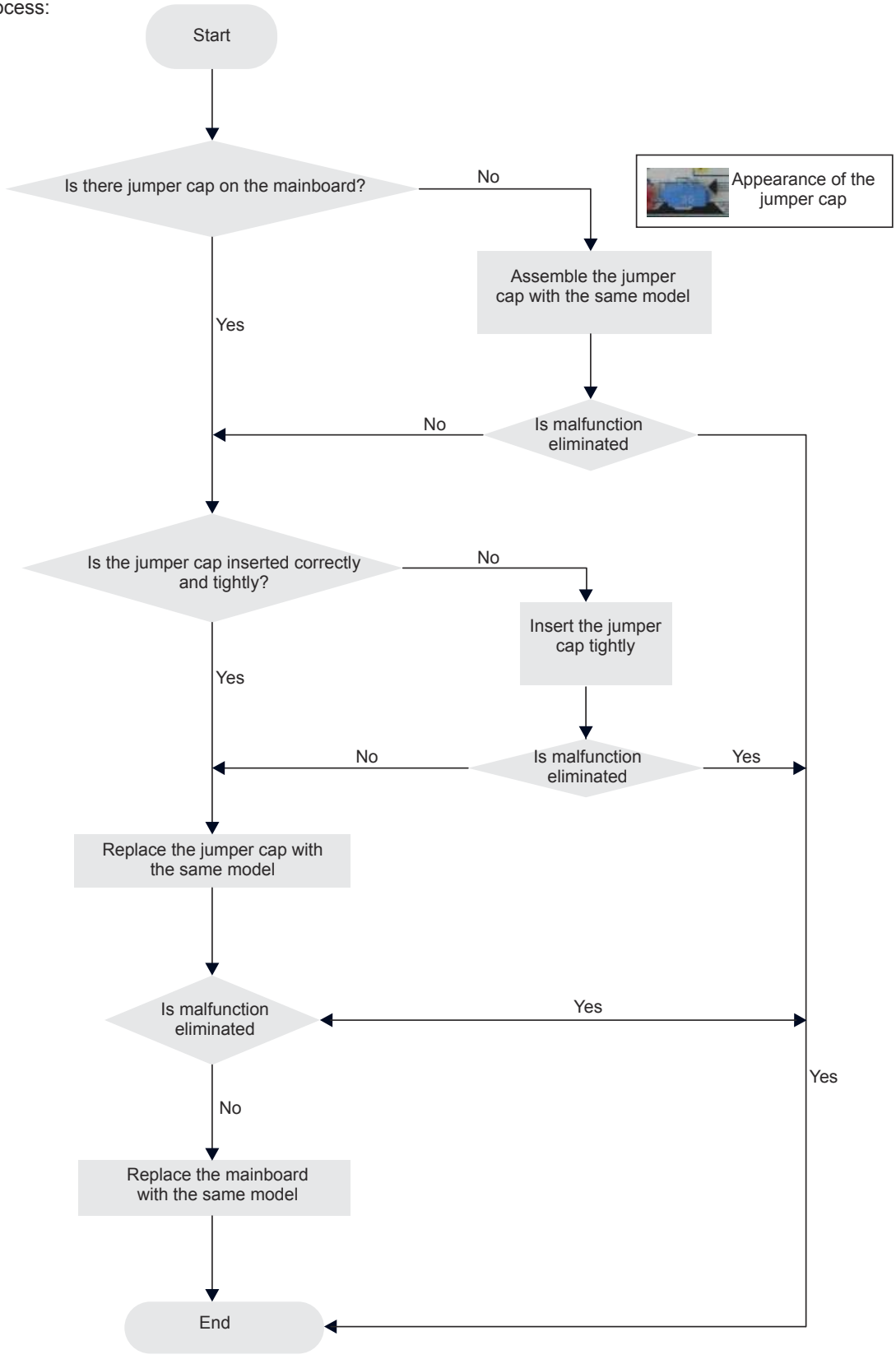
## 9.2 Procedure of Troubleshooting

**1. Malfunction of Protection of Jumper Cap C5**

Main detection points:

- Is there jumper cap on the mainboard?
- Is the jumper cap inserted correctly and tightly?
- The jumper is broken?
- The motor is broken?
- Detection circuit of the mainboard is defined abnormal?

Malfunction diagnosis process:



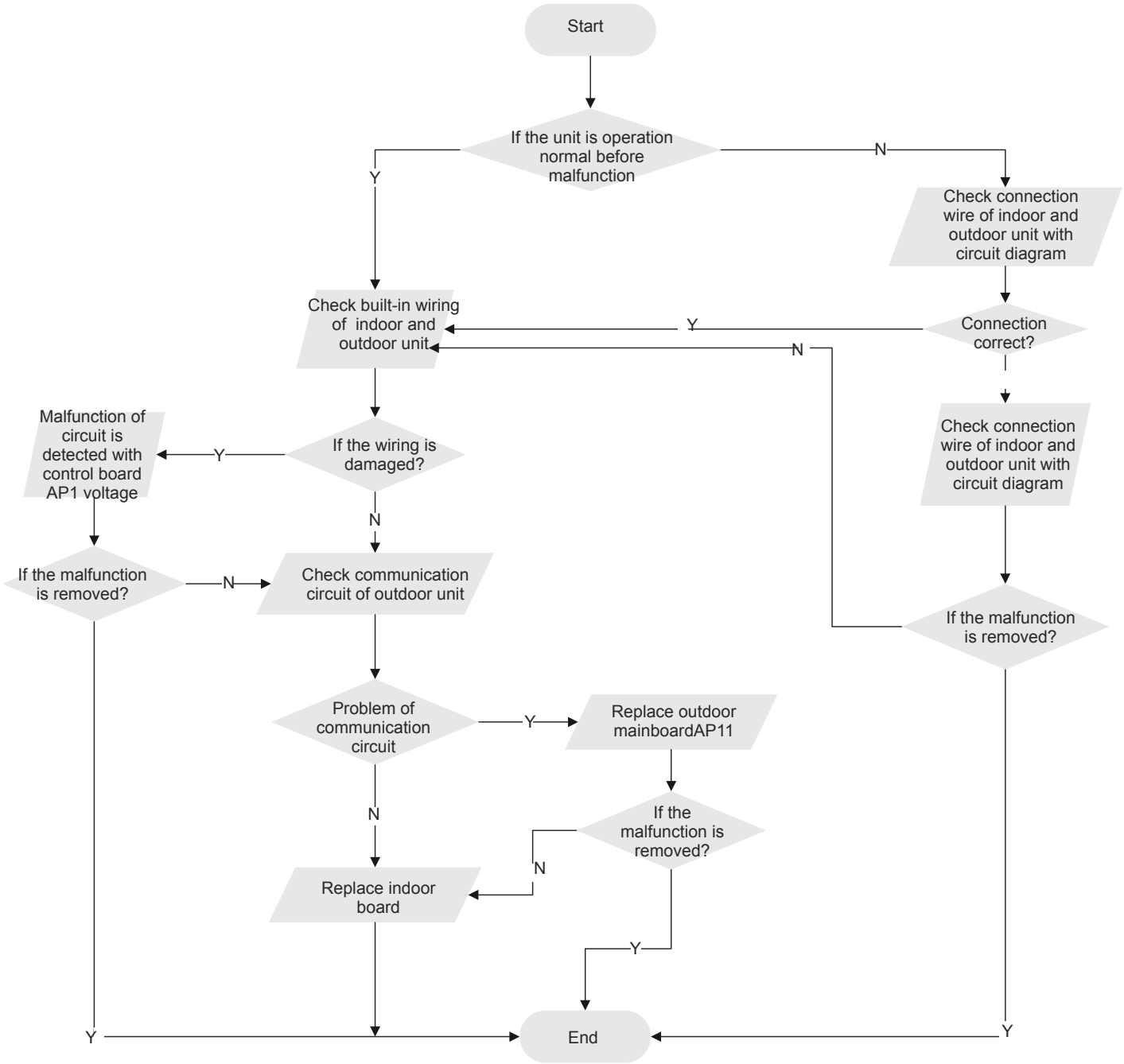
**2. Communication malfunction E6**

Main detection points:

● Check if the connection wire and the built-in wiring of indoor and outdoor unit are connected well and without damage;

● If the communication circuit of indoor mainboard is damaged? If the communication circuit of outdoor mainboard (AP1) is damaged?

Malfunction diagnosis process:




Note: method for checking the communication circuit of outdoor unit: cut off the communication wires of indoor/outdoor unit, and then measure the voltage between COM and N of the control board of outdoor unit (DC notch, about 56V)

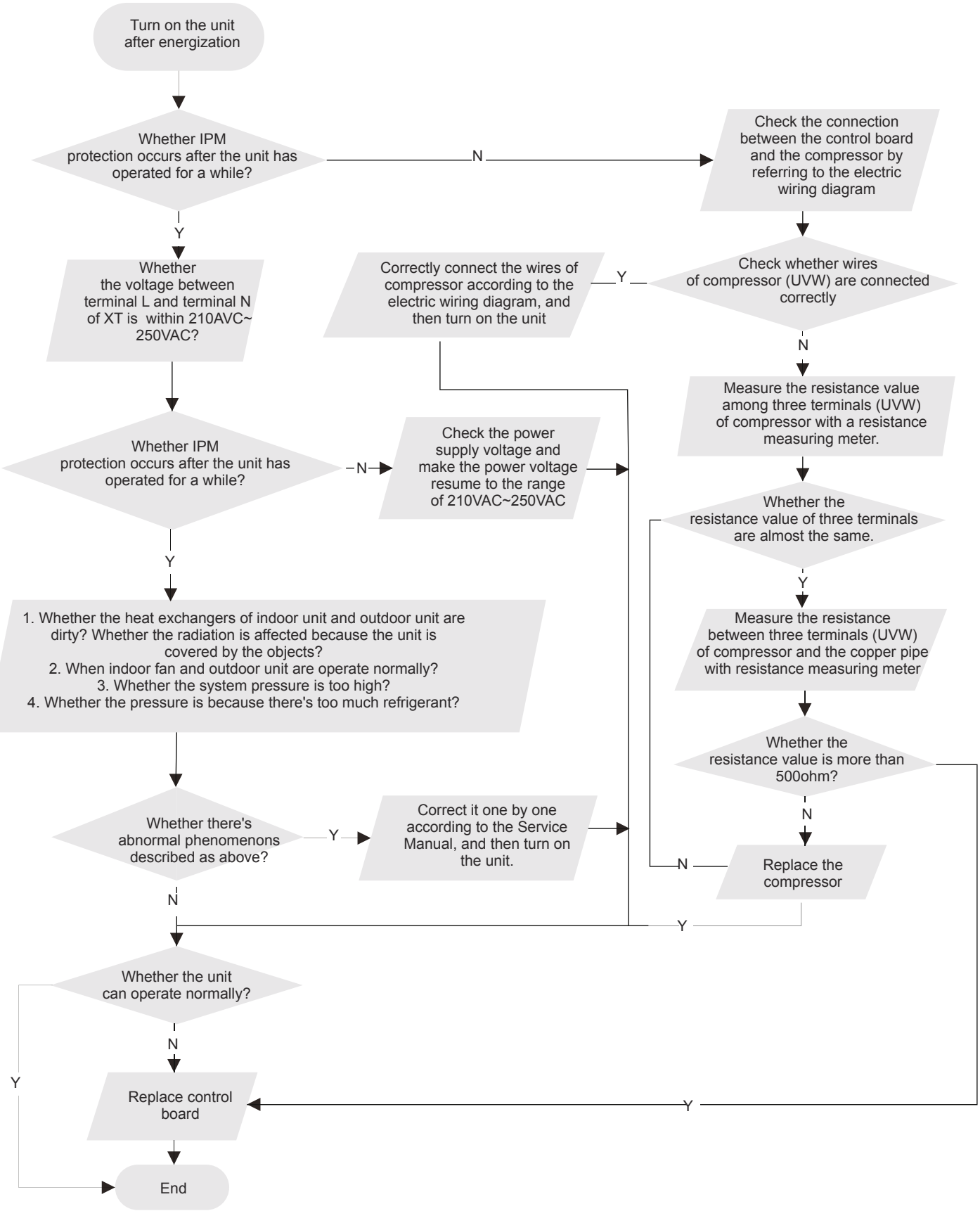
**3. IPM protection H5 , over-phase current of compressor P5**

**(AP1 hereinafter refers to the control board of the outdoor unit)**

Main detection points:

(1) compressor COMP terminal (2) power supply voltage (3) compressor (4) charging amount of refrigerant (5) air inlet and air outlet of indoor/outdoor unit

Malfunction diagnosis process:

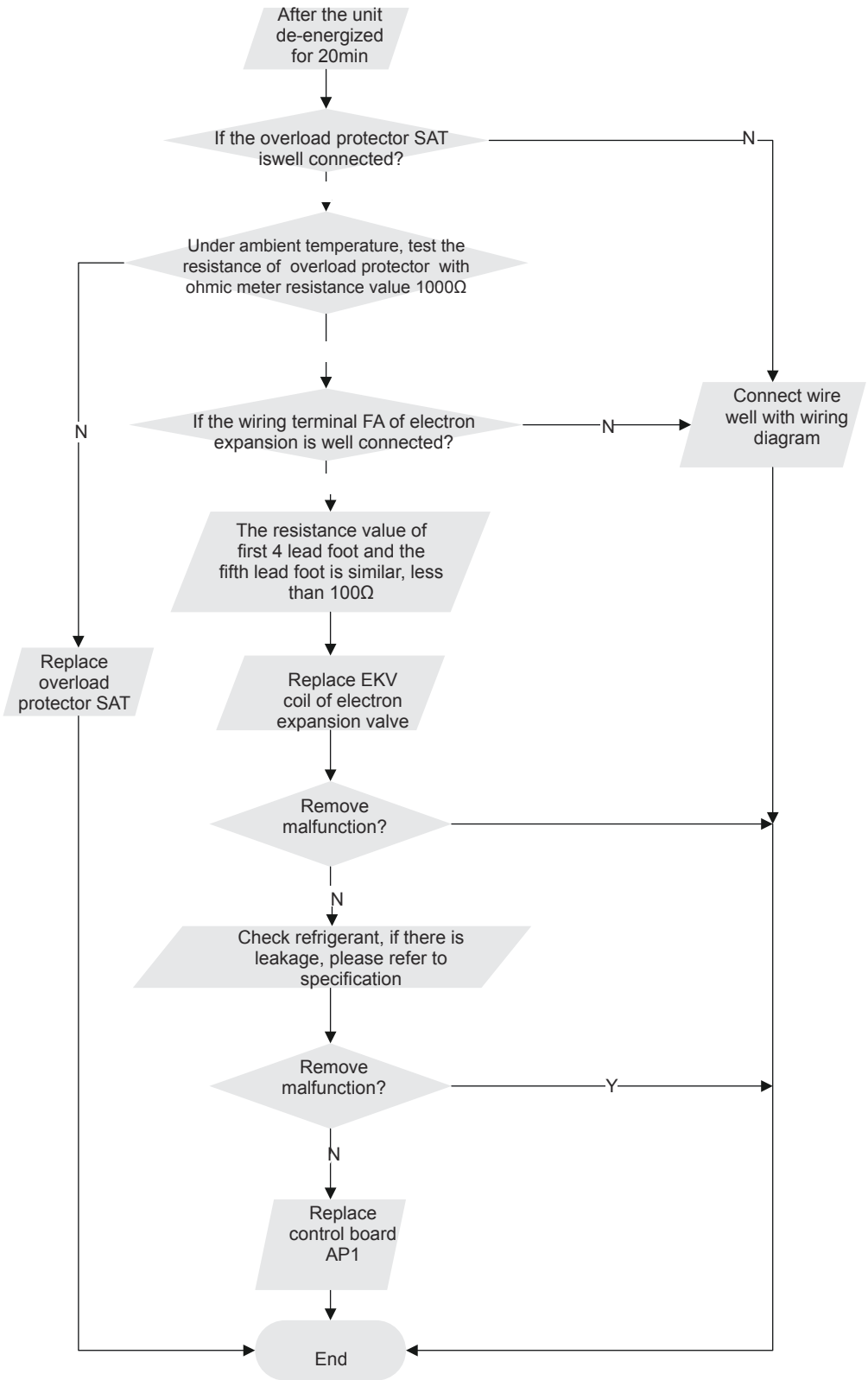


**4. Overload protection of compressor H3, high discharge temperature protection of compressor E4**
**(AP1 hereinafter refers to the control board of the outdoor unit)**

Main detection points:

(1) electronic expansion valve (2) expansion valve terminal (3) charging amount of refrigerant (4) overload protector

Malfunction diagnosis process:

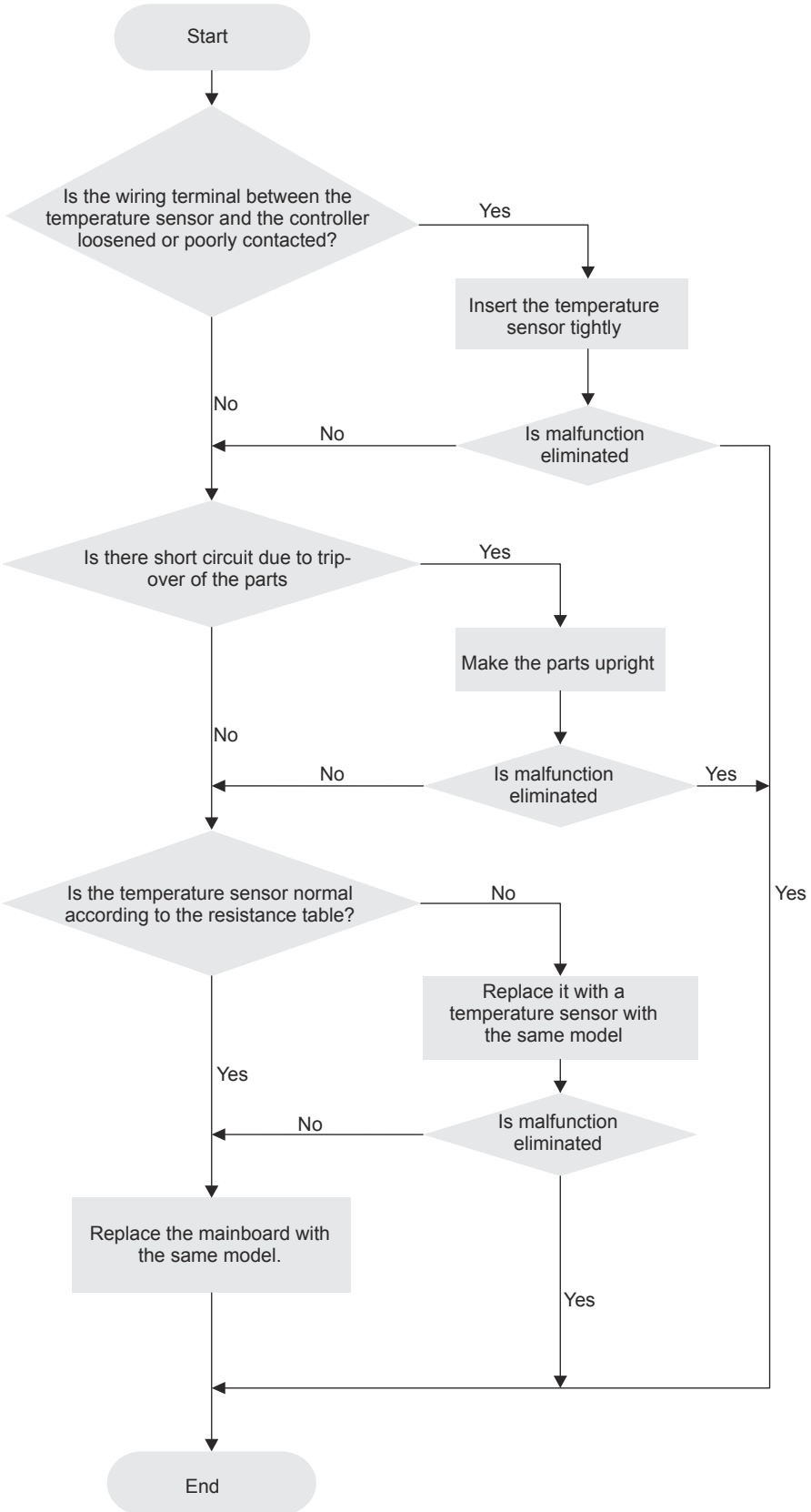


**5. Malfunction of Temperature Sensor F1, F2**

Main detection points:

(1) connection terminal (2) temperature sensor (3) main board

Malfunction diagnosis process:

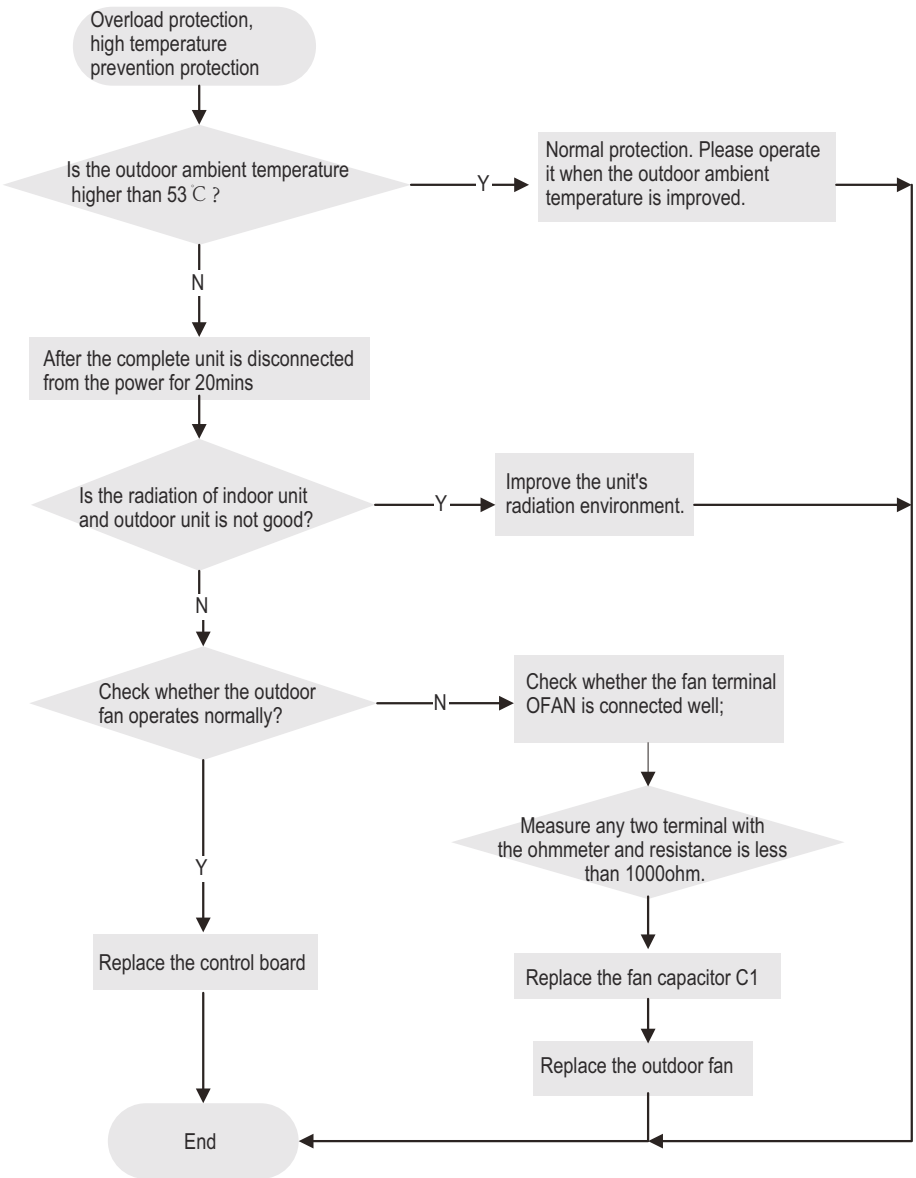


**6. High temperature and overload protection (E8)(AP1 below means control board of outdoor unit)**

Main detection points:

(1) outdoor temperature (2) fan (3)air inlet and air outlet of indoor/outdoor unit

Malfunction diagnosis process:

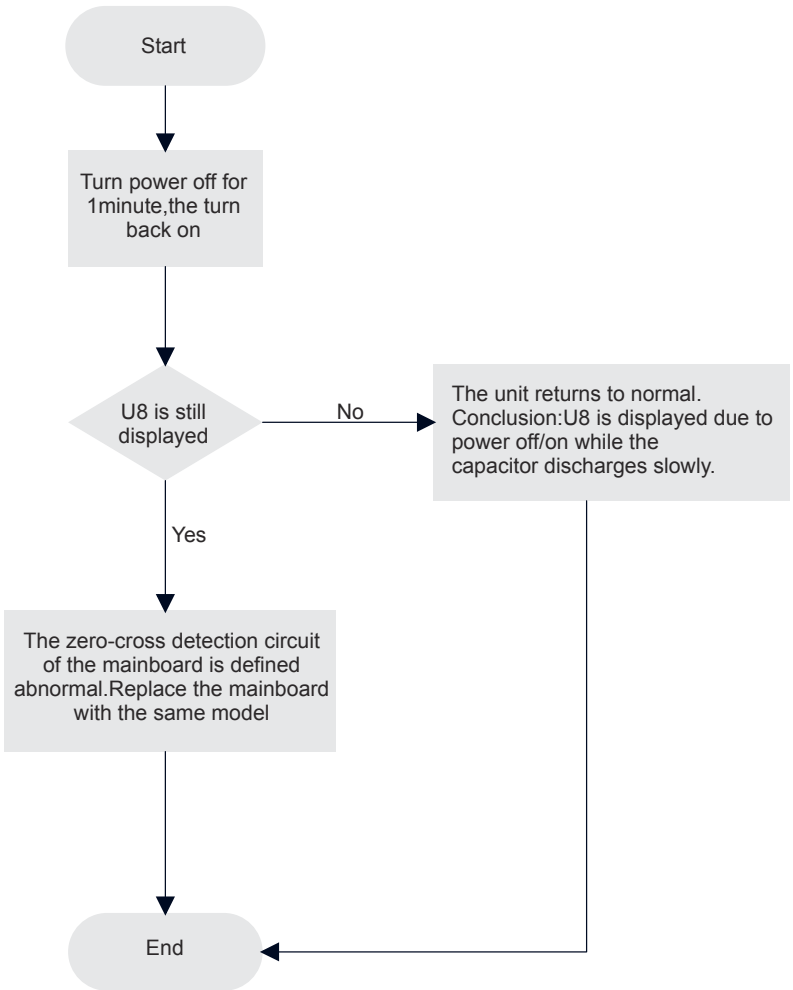


**7. Malfunction of Zero-crossing Inspection Circuit Malfunction of the IDU Fan Motor U8**

Main detection points:

- Instant energization afte de-energization while the capacitordischarges slowly?
- The zero-cross detectioncircuit of the mainboard is defined abnormal?

Malfunction diagnosis process:

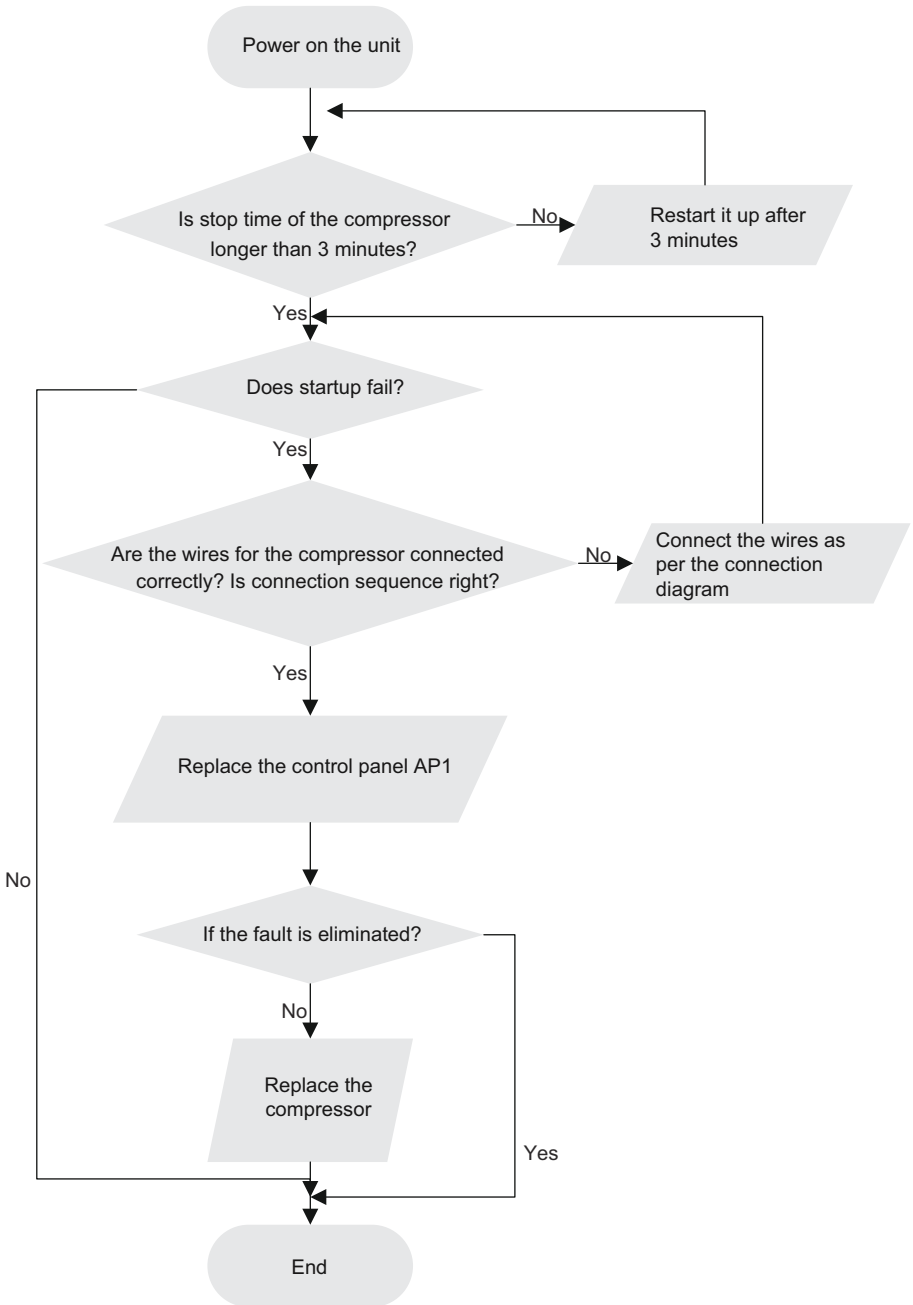


**8. Start-up failure LC (following AP1 for outdoor unit control board)**

Main detection points:

(1) compressor wire (2) compressor (3) charging amount of refrigerant

Malfunction diagnosis process:



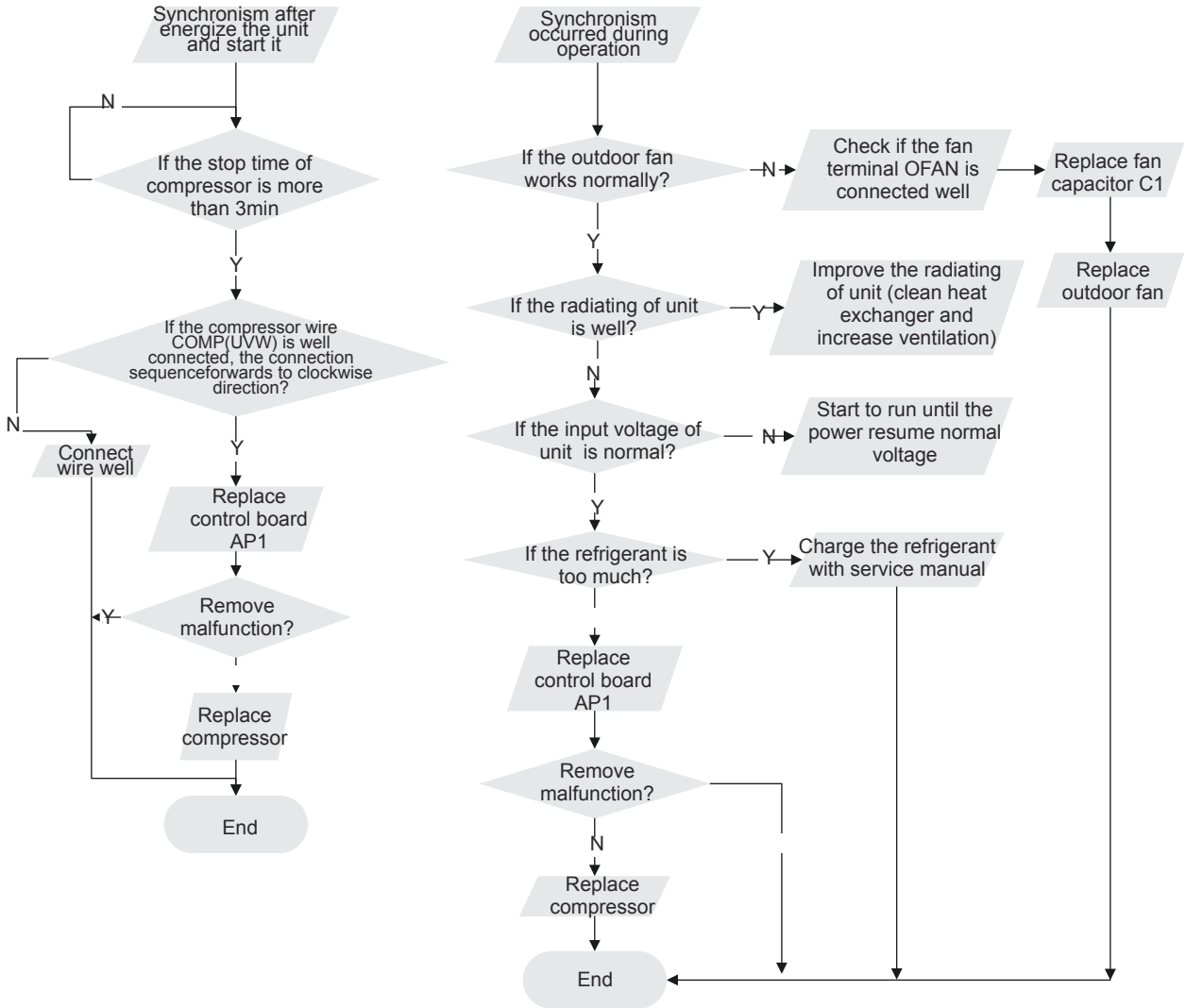
**9. Desynchronization diagnosis for compressor H7**

**(AP1 hereinafter refers to the control board of the outdoor unit)**

Main detection points:

(1) system pressure (2) power supply voltage

Malfunction diagnosis process:

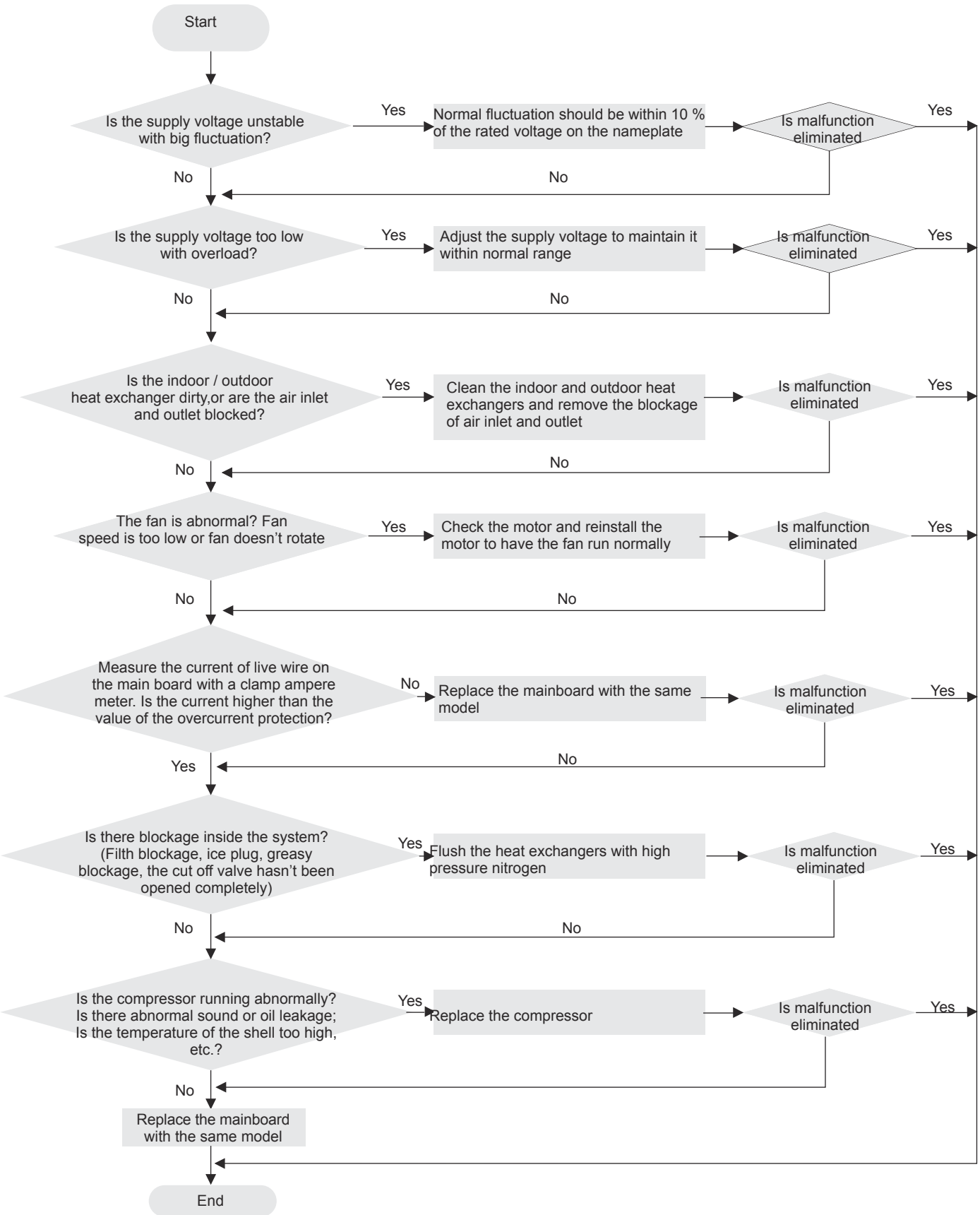


**10. Malfunction of Overcurrent Protection E5**

Main detection points:

- Is the supply voltage unstable with big fluctuation?
- Is the supply voltage too low with overload?
- Hardware trouble?

Malfunction diagnosis process:

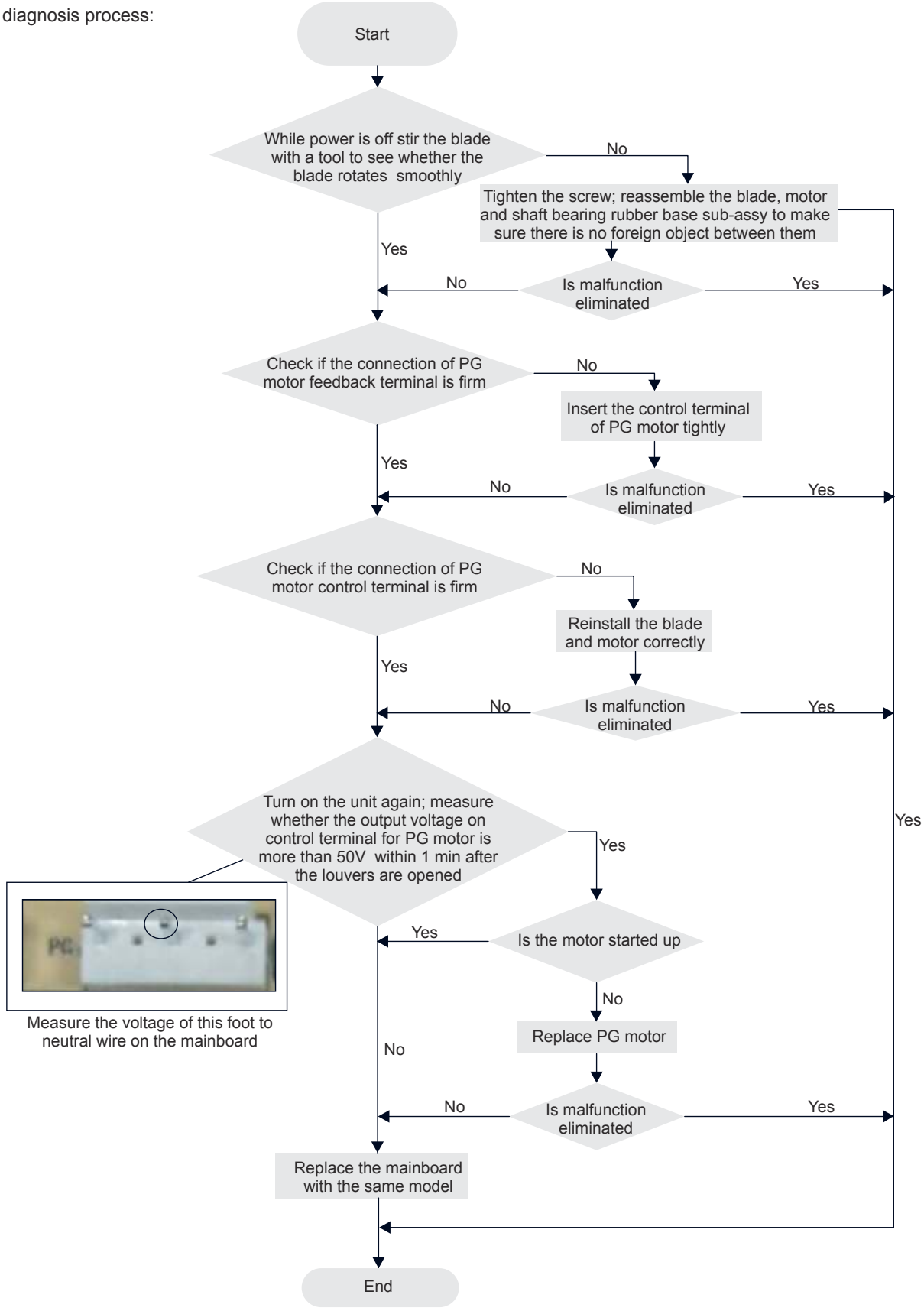


**11. Malfunction of Blocked Protection of IDU Fan Motor H6**

Main detection points:

- SmoothlyIs the control terminal of PG motor connected tightly?
- SmoothlyIs the feedback interface of PG motor connected tightly?
- The fan motor can't operate?
- The motor is broken?
- Detectioncircuit of the mainboard is defined abnormal?

Malfunction diagnosis process:

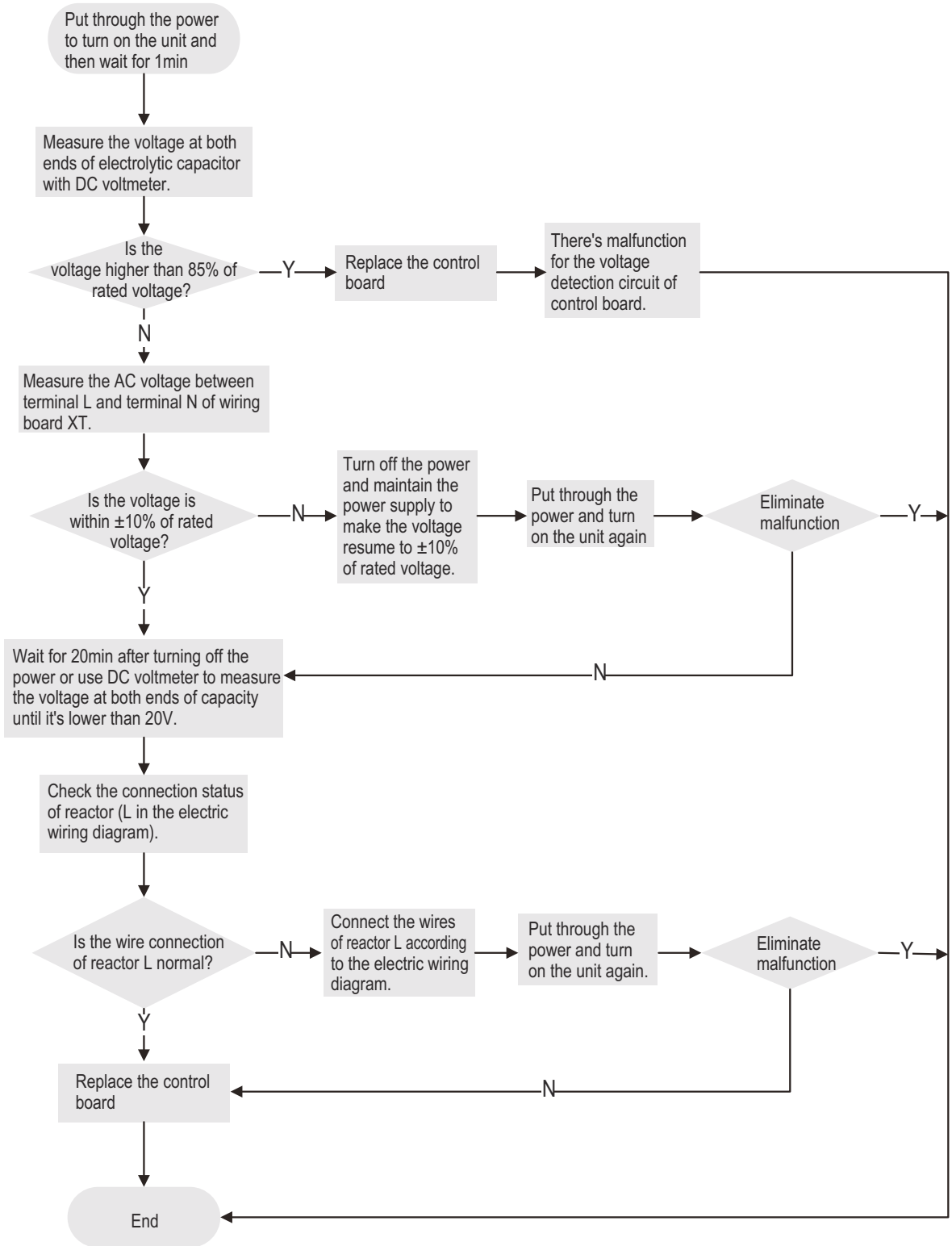


**12. Capacity charging malfunction PU**

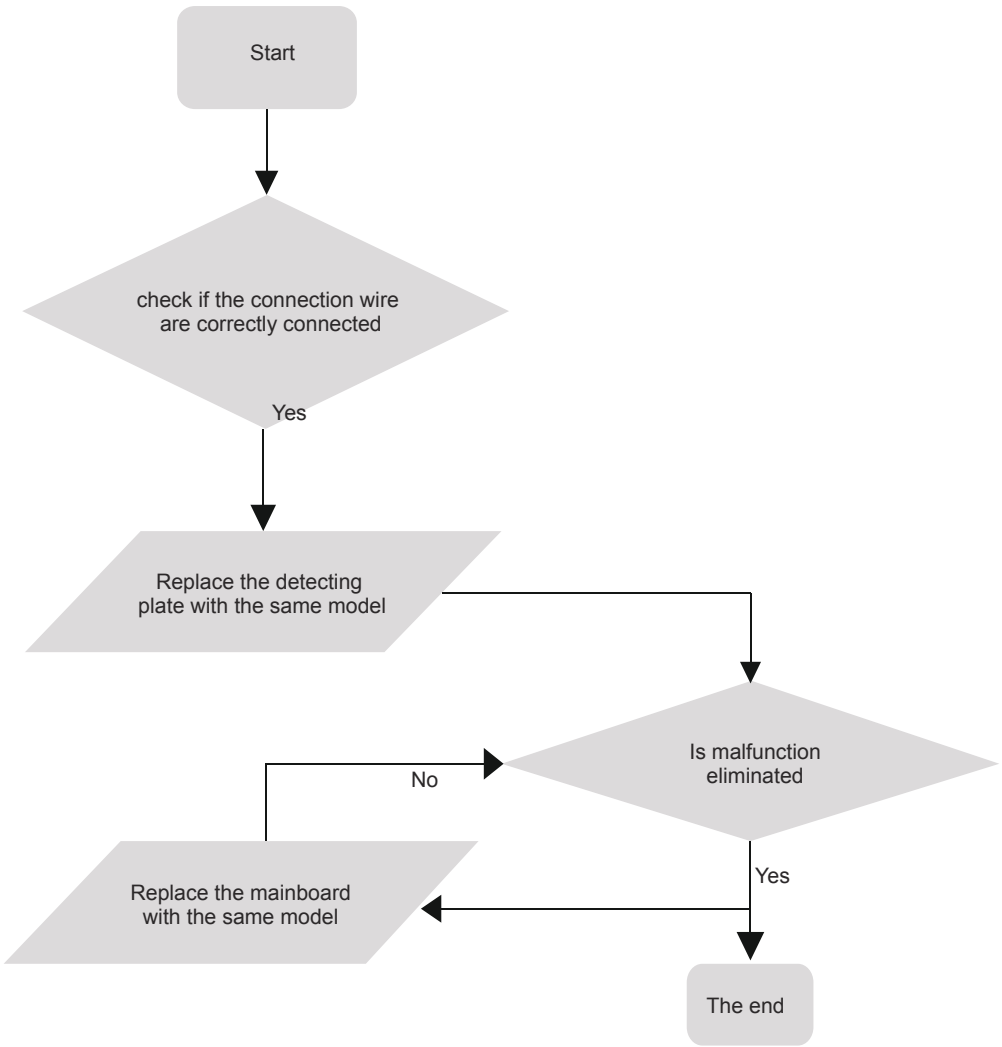
**(AP1 below means control board of outdoor unit)**Main detection points:

Main detection points:

(1) wiring board XT (2) reactor Malfunction diagnosis process:



### 13. Malfunction of detecting plate(WIFI) JF



## 9.3 Troubleshooting for Normal Malfunction

**1. Air Conditioner can't be Started Up**

| Possible Causes | Discriminating Method (Air conditioner Status) | Troubleshooting |
|---|---|---|
| No power supply, or poor connection for power plug | After energization, operation indicator isnt bright and the buzzer can't give out sound | Confirm whether it's due to power failure. If yes, wait for power recovery. If not, check power supply circuit and make sure the power plug is connected well. |
| Wrong wire connection between indoor unit and outdoor unit, or poor connection for wiring terminals | Under normal power supply circumstances, operation indicator isnt bright after energization | Check the circuit according to circuit diagram and connect wires correctly. Make sure all wiring terminals are connected firmly |
| Electric leakage for air conditioner | After energization, room circuit breaker trips off at once | Make sure the air conditioner is grounded reliably<br>Make sure wires of air conditioner is connected correctly<br>Check the wiring inside air conditioner. Check whether the insulation layer of power cord is damaged; if yes, place the power cord. |
| Model selection for air switch is improper | After energization, air switch trips off | Select proper air switch |
| Malfunction of remote controller | After energization, operation indicator is bright, while no display on remote controller or buttons have no action. | Replace batteries for remote controller<br>Repair or replace remote controller |

**2. Poor Cooling (Heating) for Air Conditioner**

| Possible Causes | Discriminating Method (Air conditioner Status) | Troubleshooting |
|---|---|---|
| Set temperature is improper | Observe the set temperature on remote controller | Adjust the set temperature |
| Rotation speed of the IDU fan motor is set too low | Small wind blow | Set the fan speed at high or medium |
| Filter of indoor unit is blocked | Check the filter to see it's blocked | Clean the filter |
| Installation position for indoor unit and outdoor unit is improper | Check whether the installation postion is proper according to installation requirement for air conditioner | Adjust the installation position, and install the rainproof and sunproof for outdoor unit |
| Refrigerant is leaking | Discharged air temperature during cooling is higher than normal discharged wind temperature; Discharged air temperature during heating is lower than normal discharged wind temperature; Units pressure is much lower than regulated range | Find out the leakage causes and deal with it. Add refrigerant. |
| Malfunction of 4-way valve | Blow cold wind during heating | Replace the 4-way valve |
| Malfunction of capillary | Discharged air temperature during cooling is higher than normal discharged wind temperature; Discharged air temperature during heating is lower than normal discharged wind temperature; Unitt pressure is much lower than regulated range. If refrigerant isnt leaking, part of capillary is blocked | Replace the capillary |
| Flow volume of valve is insufficient | The pressure of valves is much lower than that stated in the specification | Open the valve completely |
| Malfunction of horizontal louver | Horizontal louver can't swing | Refer to point 3 of maintenance method for details |
| Malfunction of the IDU fan motor | The IDU fan motor can't operate | Refer to troubleshooting for H6 for maintenance method in details |
| Malfunction of the ODU fan motor | The ODU fan motor can't operate | Refer to point 4 of maintenance method for details |
| Malfunction of compressor | Compressor can't operate | Refer to point 5 of maintenance method for details |

**3. Horizontal Louver can't Swing**

| Possible Causes | Discriminating Method (Air conditioner Status) | Troubleshooting |
|---|---|---|
| Wrong wire connection, or poor connection | Check the wiring status according to circuit diagram | Connect wires according to wiring diagram to make sure all wiring terminals are connected firmly |
| Stepping motor is damaged | Stepping motor can't operate | Repair or replace stepping motor |
| Main board is damaged | Others are all normal, while horizontal louver can't operate | Replace the main board with the same model |

**4. ODU Fan Motor can't Operate**

| Possible causes | Discriminating method (air conditioner status) | Troubleshooting |
|---|---|---|
| Wrong wire connection, or poor connection | Check the wiring status according to circuit diagram | Connect wires according to wiring diagram to make sure all wiring terminals are connected firmly |
| Capacity of the ODU fan motor is damaged | Measure the capacity of fan capacitor with an universal meter and find that the capacity is out of the deviation range indicated on the nameplate of fan capacitor. | Replace the capacity of fan |
| Power voltage is a little low or high | Use universal meter to measure the power supply voltage. The voltage is a little high or low | Suggest to equip with voltage regulator |
| Motor of outdoor unit is damaged | When unit is on, cooling/heating performance is bad and ODU compressor generates a lot of noise and heat. | Change compressor oil and refrigerant. If no better, replace the compressor with a new one |

**5. Compressor can't Operate**

| Possible causes | Discriminating method (air conditioner status) | Troubleshooting |
|---|---|---|
| Wrong wire connection, or poor connection | Check the wiring status according to circuit diagram | Connect wires according to wiring diagram to make sure all wiring terminals are connected firmly |
| Capacity of compressor is damaged | Measure the capacity o f fan capacitor with an universal meter and find that the capacity is out of the deviation range indicated on the nameplate of fan capacitor. | Replace the compressor capacitor |
| Power voltage is a little low or high | Use universal meter to measure the power supply voltage. The voltage is a little high or low | Suggest to equip with voltage regulator |
| Coil of compressor is burnt out | Use universal meter to measure the resistance between compressor terminals and it's 0 | Repair or replace compressor |
| Cylinder of compressor is blocked | Compressor can't operate | Repair or replace compressor |

**6. Air Conditioner is Leaking**

| Possible causes | Discriminating method (air conditioner status) | Troubleshooting |
|---|---|---|
| Drain pipe is blocked | Water leaking from indoor unit | Eliminate the foreign objects inside the drain pipe |
| Drain pipe is broken | Water leaking from drain pipe | Replace drain pipe |
| Wrapping is not tight | Water leaking from the pipe connection place of indoor unit | Wrap it again and bundle it tightly |

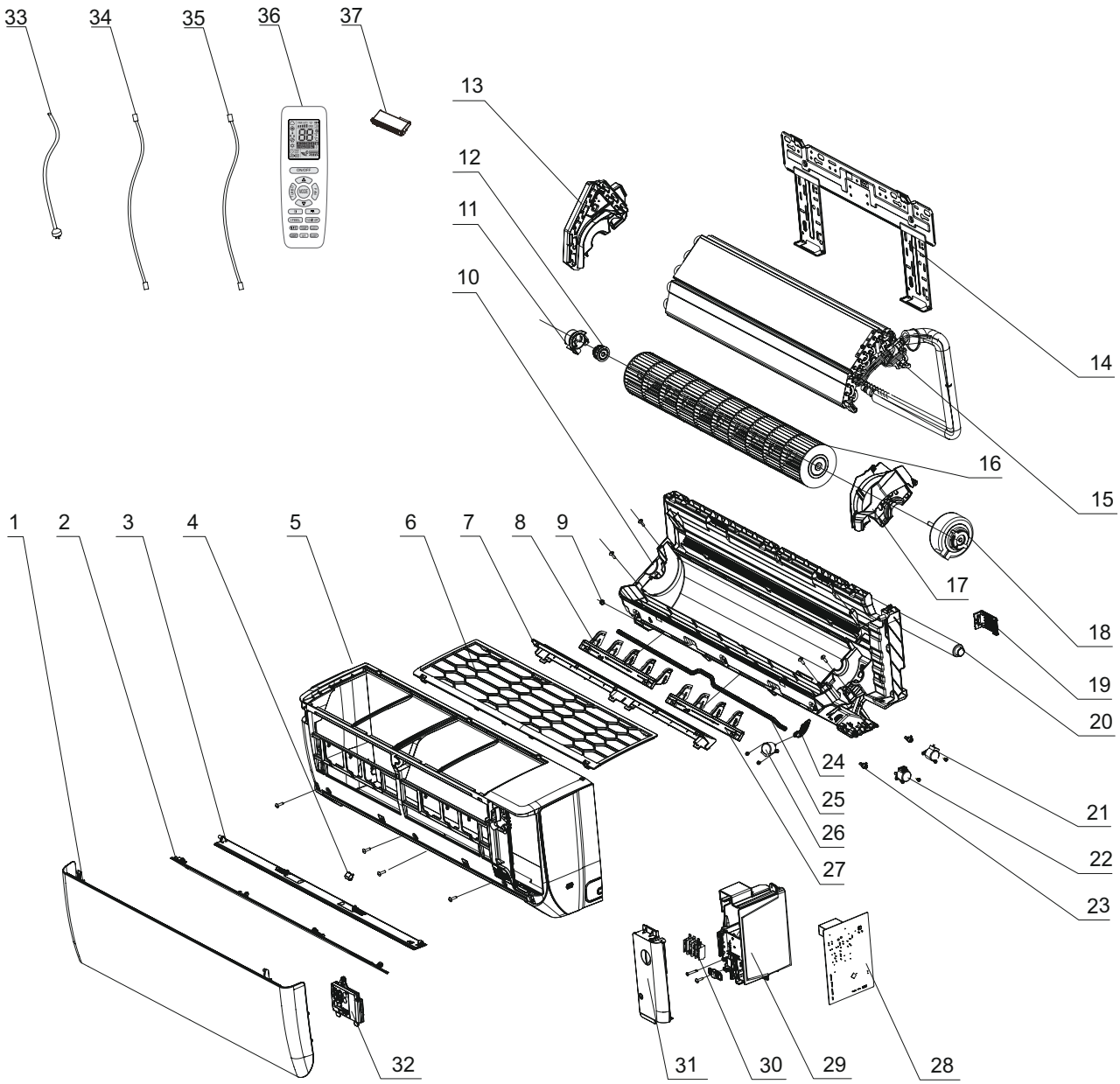
**7. Abnormal Sound and Vibration**

| Possible causes | Discriminating method (air conditioner status) | Troubleshooting |
|---|---|---|
| When turn on or turn off the unit, the panel and other parts will expand and There's abnormal sound | There's the sound of "PAPA" | Normal phenomenon. Abnormal sound will disappear after a few minutes. |
| When turn on or turn off the unit, There's abnormal sound due to flow of refrigerant inside air conditioner | Water-running sound can be heard | Normal phenomenon. Abnormal sound will disappear after a few minutes. |
| Foreign objects inside the indoor unit or therere parts touching together inside the indoor unit | There's abnormal sound fro indoor unit | Remove foreign objects. Adjust all parts position of indoor unit, tighten screws and stick damping plaster between connected parts |
| Foreign objects inside the outdoor unit or therere parts touching together inside the outdoor unit | There's abnormal sound fro outdoor unit | Remove foreign objects. Adjust all parts position of outdoor unit, tighten screws and stick damping plaster between connected parts |
| Short circuit inside the magnetic coil | During heating, the way valve has abnormal electromagnetic sound | Replace magnetic coil |
| Abnormal shake of compressor | Outdoor unit gives out abnormal sound | Adjust the support foot mat of compressor, tighten the bolts |
| Abnormal sound inside the compressor | Abnormal sound inside the compressor | If add too much refrigerant during maintenance, please reduce refrigerant properly. Replace compressor for other circumstances. |

# 10. Exploded View and Parts List

## 10.1 Indoor Unit

AGC




The component picture is only for reference; please refer to the actual product.

# 10. Exploded View and Parts List

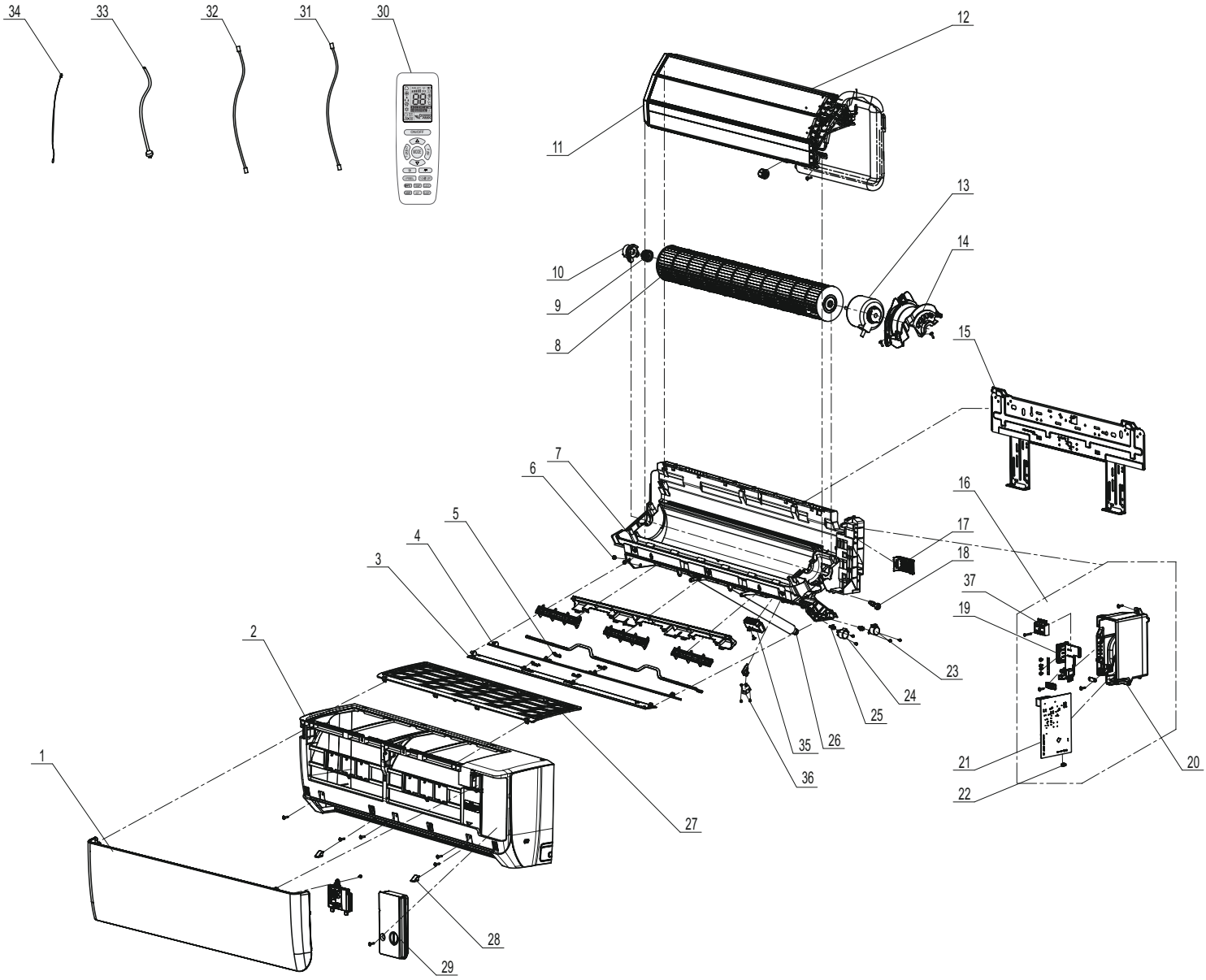
| NO. | Description |
|---|---|
| 1 | Front Panel |
| 2 | Guide Louver (upper) |
| 3 | Guide Louver (lower) |
| 4 | Screw Cover |
| 5 | Front Case |
| 6 | Filter Sub-Assy |
| 7 | Helicoid Tongue |
| 8 | Air Louver(left) |
| 9 | Left Axile Bush |
| 10 | Rear Case assy |
| 11 | Ring of Bearing |
| 12 | O-Gasket sub-assy of Bearing |
| 13 | Evaporator Support |
| 14 | Wall Mounting Frame |
| 15 | Evaporator Assy |
| 16 | Cross Flow Fan |
| 17 | Motor Press Plate |
| 18 | Fan Motor |
| 19 | Connecting pipe clamp |

| NO. | Description |
|---|---|
| 20 | Drainage Hose |
| 21 | Stepping Motor |
| 22 | Stepping Motor |
| 23 | Crank |
| 24 | Air Louver(auto) |
| 25 | Sweeping connecting rod |
| 26 | Stepping Motor |
| 27 | Air Louver(right) |
| 28 | Main Board |
| 29 | Electric Box Assy |
| 30 | Terminal Board |
| 31 | Electric Box Cover |
| 32 | Display Board |
| 33 | Power Cord |
| 34 | Connecting Cable |
| 35 | Connecting Cable |
| 36 | Remote Controller |
| 37 | Detecting plate (WiFi) |

Some models may not contain some parts, please refer to the actual product.

# 10. Exploded View and Parts List

AGD



# 10. Exploded View and Parts List

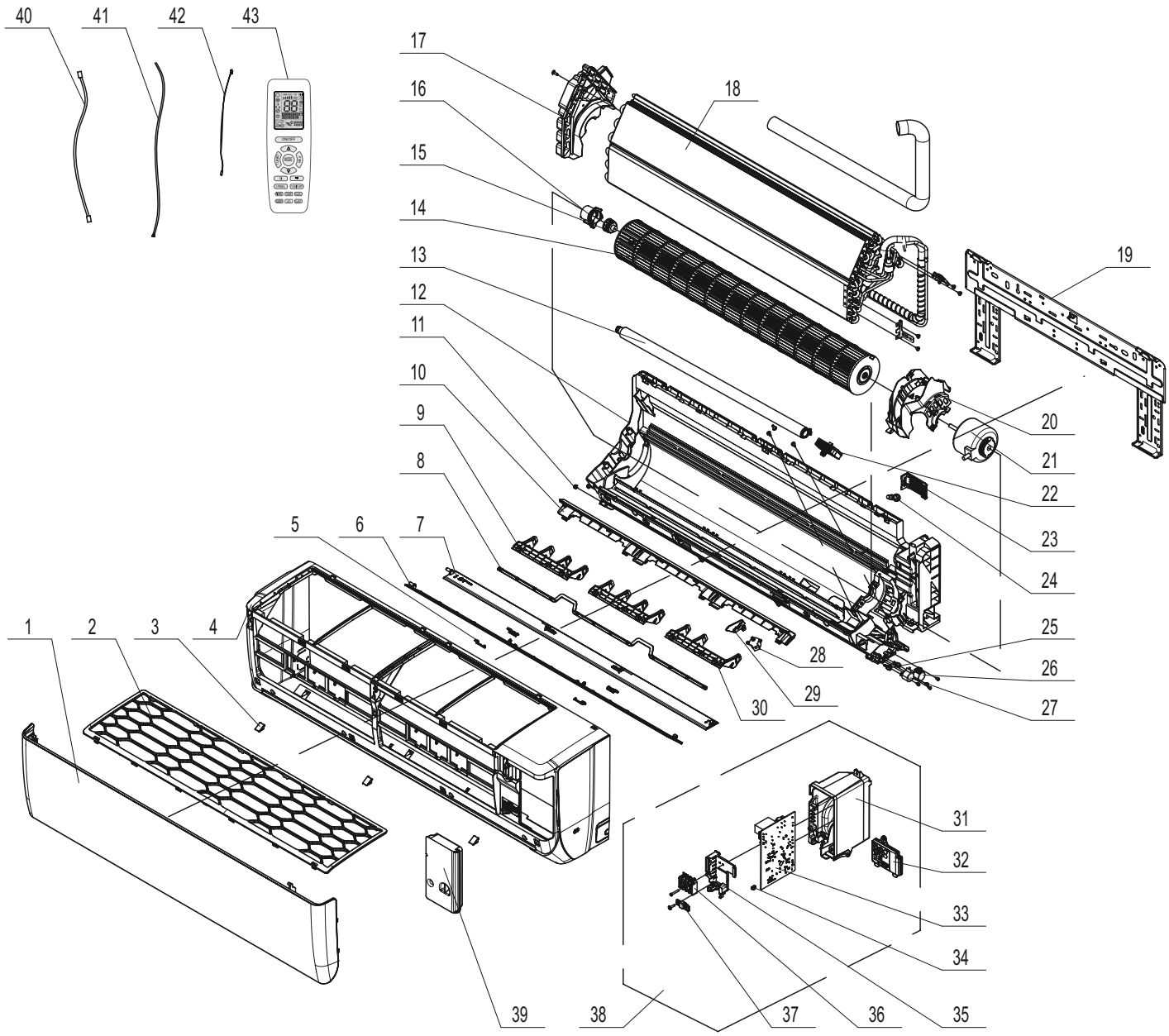
| NO. | Description |
|---|---|
| 1 | Front Panel |
| 2 | Front Case Assy |
| 3 | Guide Louver Sub-assy 1 |
| 4 | Guide Louver Sub-assy 2 |
| 5 | Plug Pin |
| 6 | Left Axile Bush |
| 7 | Rear Case |
| 8 | Cross Flow Fan |
| 9 | Ring of Bearing |
| 10 | O-Gasket sub-assy of Bearing |
| 11 | Evaporator Support |
| 12 | Evaporator Assy |
| 13 | Fan Motor |
| 14 | Motor Press Plate |
| 15 | Wall Mounting Frame Sub-assy |
| 16 | Electric Box Assy |
| 17 | Connecting pipe clamp |
| 18 | Rubber Plug (Water Tray) |
| 19 | Supporter |

| NO. | Description |
|---|---|
| 20 | Electric Box |
| 21 | Main Board |
| 22 | Jumper |
| 23 | Stepping Motor |
| 24 | Stepping Motor |
| 25 | Crank |
| 26 | Drainage Hose |
| 27 | Filter Sub-Assy |
| 28 | Screw Cover |
| 29 | Electric Box Cover |
| 30 | Remote Controller |
| 31 | Connecting Cable |
| 32 | Connecting Cable |
| 33 | Power Cord |
| 34 | Temperature Sensor |
| 35 | Plasmacluster Ion |
| 36 | Stepping Motor |
| 37 | Terminal board |

Some models may not contain some parts,  please refer to the actual product.

# 10. Exploded View and Parts List

AGE




The component picture is only for reference; please refer to the actual product.

# 10. Exploded View and Parts List

| NO. | Description |
|---|---|
| 1 | Front Panel |
| 2 | Front Case Assy |
| 3 | Screw Cover |
| 4 | Front Case |
| 5 | Plug Pin |
| 6 | Guide Louver Sub-assy 1 |
| 7 | Guide Louver Sub-assy 2 |
| 8 | Sweeping Connecting Rod |
| 9 | Air Louver(Automatic) |
| 10 | Helicoid Tongue |
| 11 | Left Axile Bush |
| 12 | Rear Case |
| 13 | Drainage Hose |
| 14 | Cross Flow Fan |
| 15 | O-Gasket sub-assy of Bearing |
| 16 | Ring of Bearing |
| 17 | Evaporator Support |
| 18 | Evaporator Assy |
| 19 | Wall Mounting Frame |
| 20 | Motor Press Plate |
| 21 | Fan Motor |
| 22 | Plasmacluster Ion |

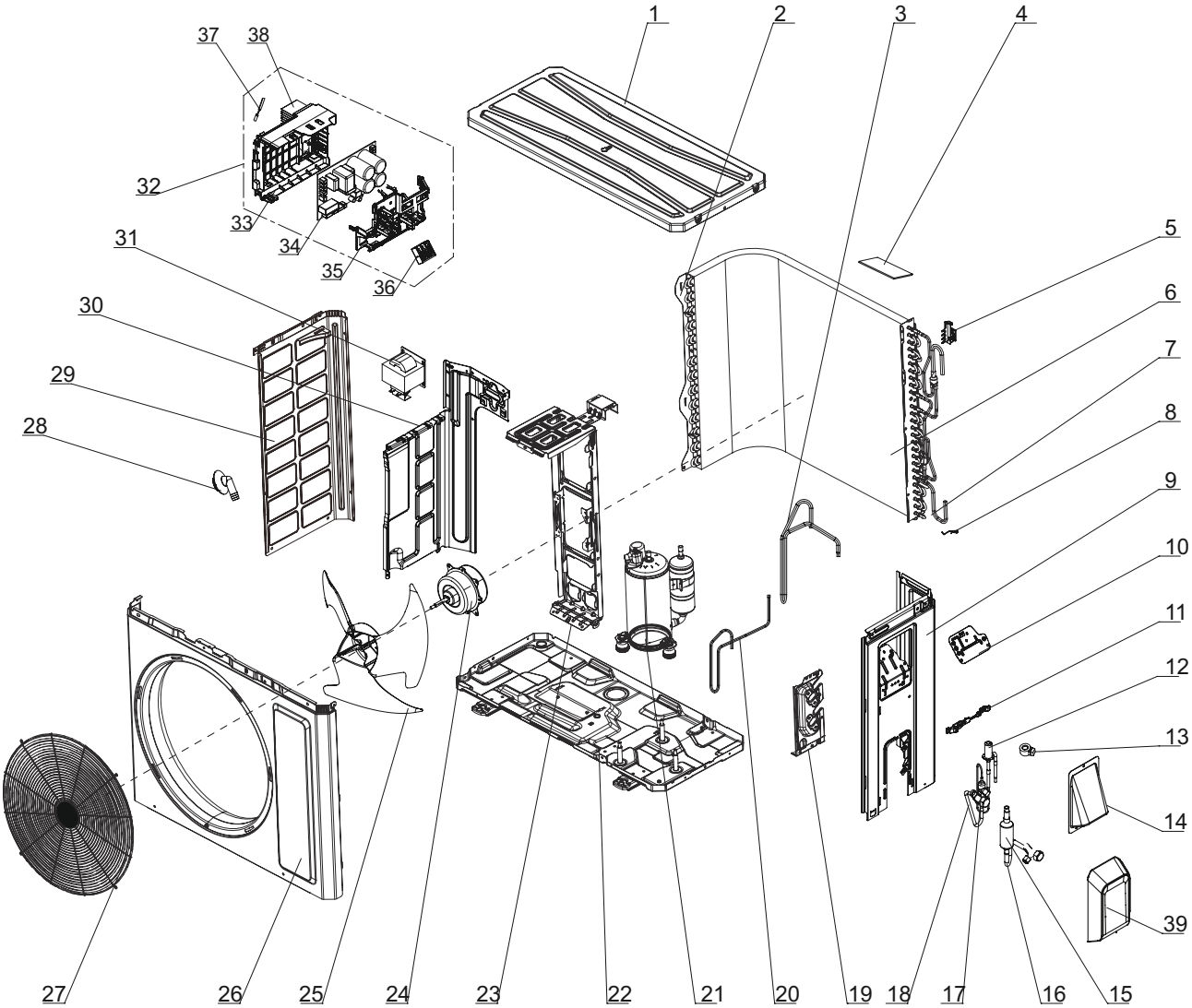
| NO. | Description |
|---|---|
| 23 | Connecting pipe clamp |
| 24 | Rubber Plug (Water Tray) |
| 25 | Crank |
| 26 | Stepping Motor |
| 27 | Stepping Motor |
| 28 | Stepping Motor |
| 29 | Sweep Blade |
| 30 | Air Louver(Automatic) |
| 31 | Electric Box |
| 32 | Display Board |
| 33 | Main Board |
| 34 | Jumper |
| 35 | Supporter |
| 36 | Terminal Board |
| 37 | Cable Clamp |
| 38 | Electric Box Assy |
| 39 | Electric Box Cover |
| 40 | Connecting Cable |
| 41 | Power Cord |
| 42 | Temperature Sensor |
| 43 | Remote Controller |

Some models may not contain some parts, please refer to the actual product.

# 10. Exploded View and Parts List

## 10.2 Outdoor Unit

GWC09AGCXB-D3DNA1A/O




The component picture is only for reference; please refer to the actual product.

# 10. Exploded View and Parts List

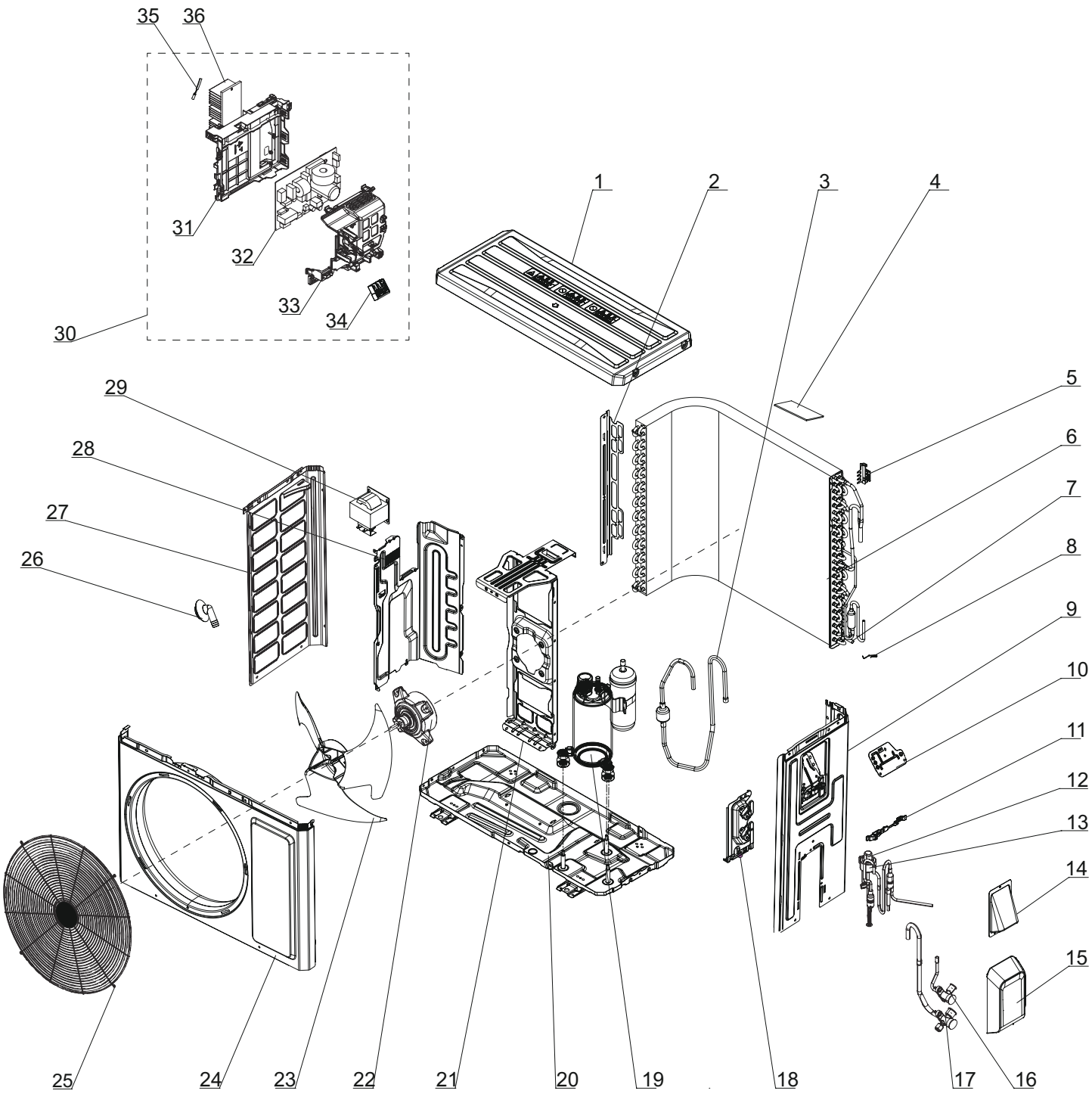
| NO. | Description |
|---|---|
| 1 | Coping |
| 2 | Condenser Left Border Plate |
| 3 | Inhalation Tube |
| 4 | Sponge (Condenser) |
| 5 | Tempreture Sensor Support |
| 6 | Condenser Assy |
| 7 | Tempreture Sensor Sleeving |
| 8 | Sensor Insert B |
| 9 | Right Side Plate Assy |
| 10 | Earthing Plate Sub-assy |
| 11 | Wire Clamp |
| 12 | Electric Expansion Valve Sub-Assy |
| 13 | Electric Expand Valve Fitting |
| 14 | Handle |
| 15 | Silencer |
| 16 | Cut-off valve 3/8(N) or 1/2(N) |
| 17 | Furcate Filter |
| 18 | Cut-off valve 1/4(N) |
| 19 | Valve Support |
| 20 | Discharge Tube |

| NO. | Description |
|---|---|
| 21 | Compressor and Fittings |
| 22 | Chassis Sub-assy |
| 23 | Motor Support |
| 24 | Brushless DC Motor |
| 25 | Axial Flow Fan |
| 26 | Cabinet |
| 27 | Front Grill |
| 28 | Drainage Joint (ODU) |
| 29 | Left Side Plate Assy |
| 30 | Clapboard |
| 31 | Reactor |
| 32 | Electric Box Assy |
| 33 | Electric Box |
| 34 | Main Board |
| 35 | Electric Box Cover |
| 36 | Terminal Board |
| 37 | Temperature Sensor |
| 38 | Raidator |
| 39 | Valve Cover |

Some models may not contain some parts, please refer to the actual product.

# 10. Exploded View and Parts List

GWC09AGCXD-A3DNA1A/O GWC12AGCXD-A3DNA1A/O GWC12AGCXD-D3DNA1A/O




The component picture is only for reference; please refer to the actual product.

# 10. Exploded View and Parts List

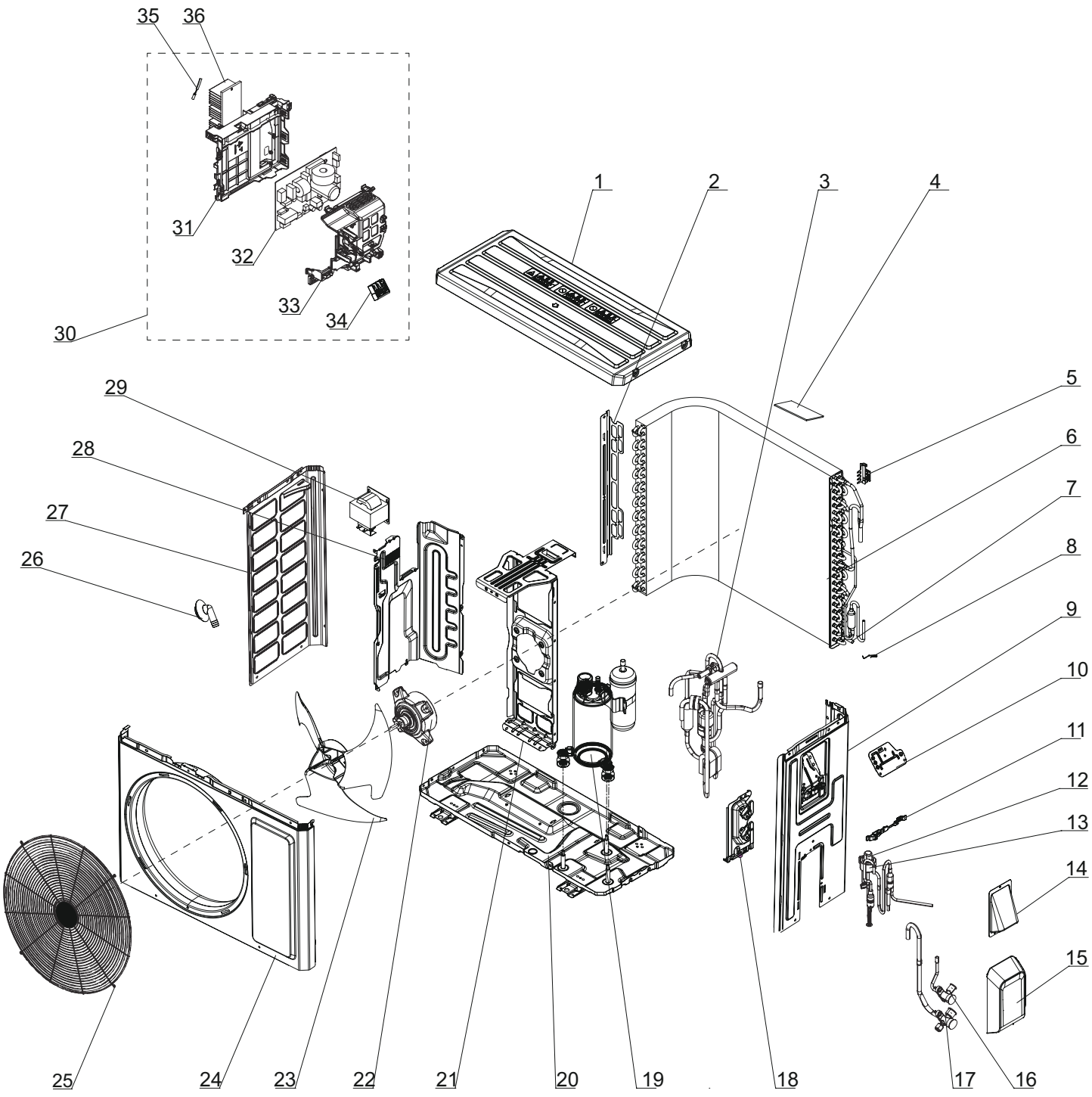
| NO. | Description |
|---|---|
| 1 | Top Cover Assy |
| 2 | Support Board(Condenser) |
| 3 | Inhalation Tube Sub-assy |
| 4 | Sponge(Condenser) |
| 5 | Temperature Sensor Support |
| 6 | Condenser Assy |
| 7 | Temp Sensor Sleeving |
| 8 | Sensor Insert |
| 9 | Right Side Plate |
| 10 | Earthing Plate Sub-Assy |
| 11 | Wire Clamp |
| 12 | Electric Expansion Valve Sub-Assy |
| 13 | Electric Expand Valve Fitting |
| 14 | Cable Cross Plate |
| 15 | Valve Cover |
| 16 | Cut off Valve Sub-Assy |
| 17 | Cut off Valve Sub-Assy |
| 18 | Valve Support |

| NO. | Description |
|---|---|
| 19 | Compressor and Fittings |
| 20 | Chassis Sub-assy |
| 21 | Motor Support |
| 22 | Brushless DC Motor |
| 23 | Axial Flow Fan |
| 24 | Cabinet |
| 25 | Front Grill |
| 26 | Drainage Joint(ODU) |
| 27 | Left Side Plate |
| 28 | Clapboard |
| 29 | Reactor |
| 30 | Electric Box Assy |
| 31 | Electric Box |
| 32 | Main Board |
| 33 | Electric Box Cover |
| 34 | Terminal Board |
| 35 | Temperature Sensor |
| 36 | Raidator |

Some models may not contain some parts, please refer to the actual product.

# 10. Exploded View and Parts List

TW09HXP2A1AO TW09HXP2A1DO TW12HXP2A1AO TW12HXP2A1DO




The component picture is only for reference; please refer to the actual product.

# 10. Exploded View and Parts List

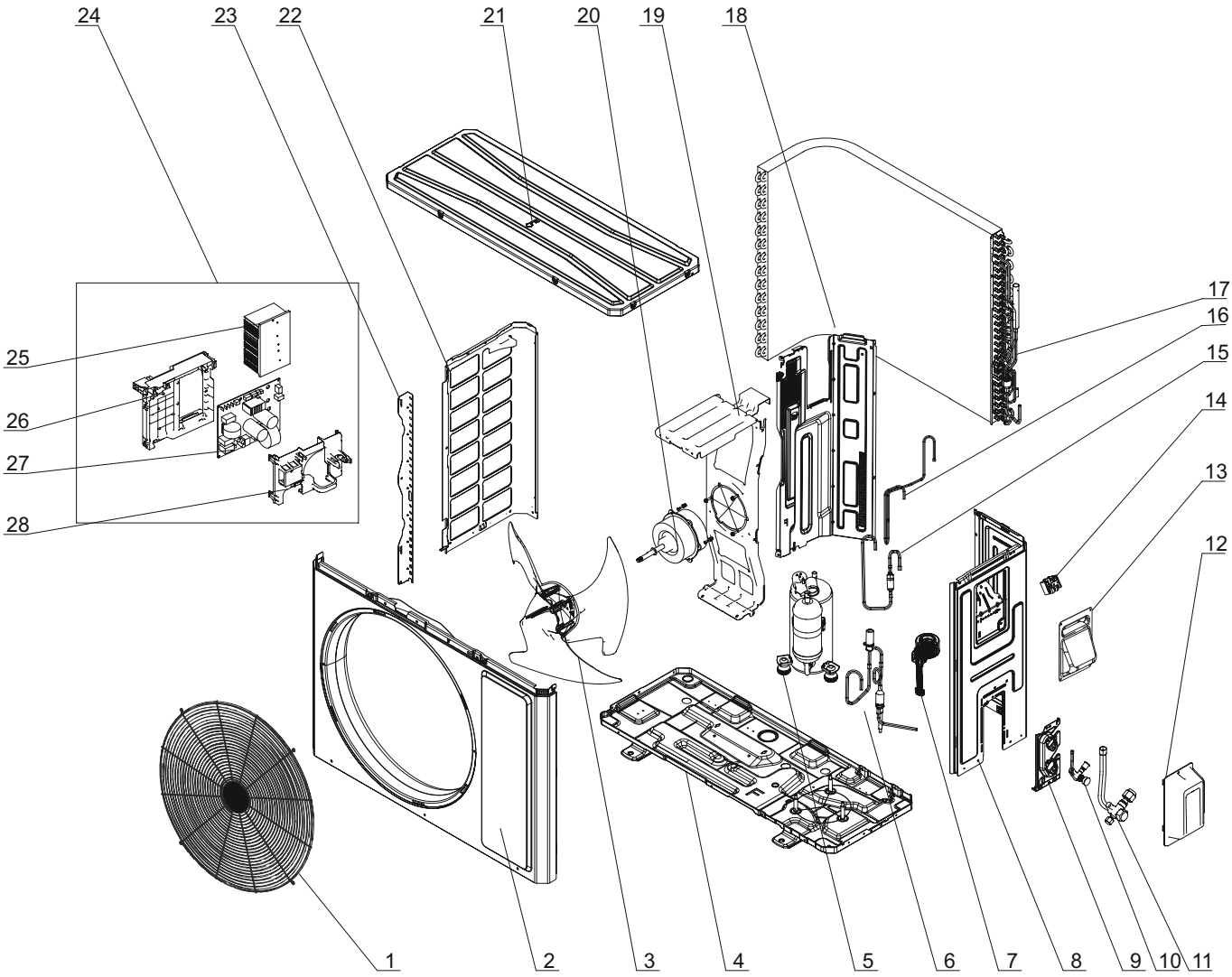
| NO. | Description |
|---|---|
| 1 | Top Cover Assy |
| 2 | Support Board(Condenser) |
| 3 | 4-way valve Sub-assy |
| 4 | Sponge(Condenser) |
| 5 | Temperature Sensor Support |
| 6 | Condenser Assy |
| 7 | Temp Sensor Sleeving |
| 8 | Sensor Insert |
| 9 | Right Side Plate |
| 10 | Earthing Plate Sub-Assy |
| 11 | Wire Clamp |
| 12 | Electric Expansion Valve Sub-Assy |
| 13 | Electric Expand Valve Fitting |
| 14 | Cable Cross Plate |
| 15 | Valve Cover |
| 16 | Cut off Valve Sub-Assy |
| 17 | Cut off Valve Sub-Assy |
| 18 | Valve Support |

| NO. | Description |
|---|---|
| 19 | Compressor and Fittings |
| 20 | Chassis Sub-assy |
| 21 | Motor Support |
| 22 | Brushless DC Motor |
| 23 | Axial Flow Fan |
| 24 | Cabinet |
| 25 | Front Grill |
| 26 | Drainage Joint(ODU) |
| 27 | Left Side Plate |
| 28 | Clapboard |
| 29 | Reactor |
| 30 | Electric Box Assy |
| 31 | Electric Box |
| 32 | Main Board |
| 33 | Electric Box Cover |
| 34 | Terminal Board |
| 35 | Temperature Sensor |
| 36 | Raidator |

Some models may not contain some parts, please refer to the actual product.

# 10. Exploded View and Parts List

GWC18AGDXF-D3DNA1A/O




The component is only for rererence;please refer to the actual product

# 10. Exploded View and Parts List

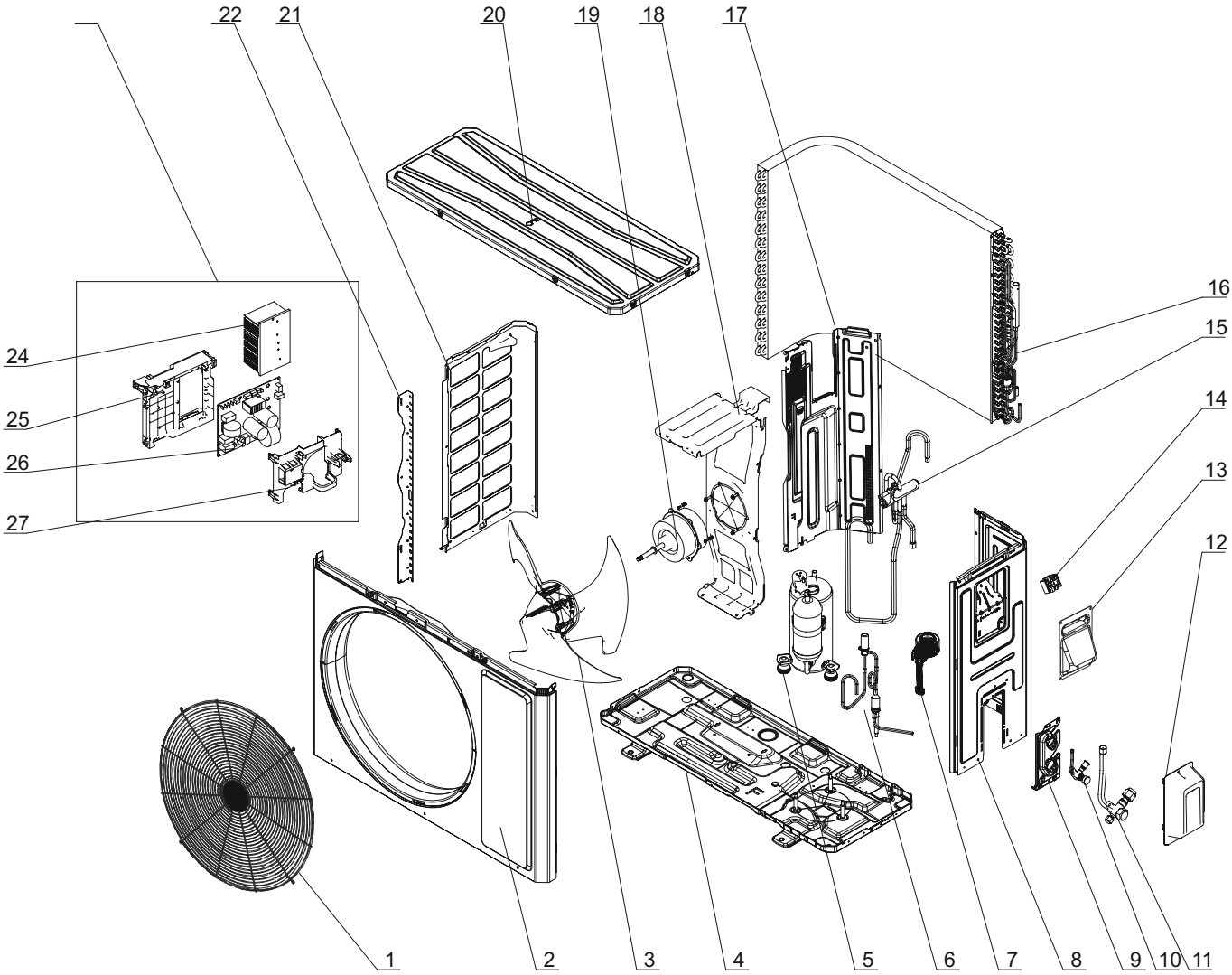
| NO. | Description |
|---|---|
| 1 | Front Grill |
| 2 | Cabinet |
| 3 | Axial Flow Fan |
| 4 | Chassis Sub-assy |
| 5 | Compressor and fittings |
| 6 | Electron expansion valve |
| 7 | Electric Expand Valve Fitting |
| 8 | Right Side Plate Assy |
| 9 | Valve Support Sub-Assy |
| 10 | Cut-off Valve |
| 11 | Cut-off Valve |
| 12 | Valve Cover |
| 13 | Handle |
| 14 | Terminal Board |

| NO. | Description |
|---|---|
| 15 | Inhalation Tube Sub-assy |
| 16 | Discharge Tube Sub-assy |
| 17 | Condenser Assy |
| 18 | Clapboard Assy |
| 19 | Motor Support Sub-Assy |
| 20 | Brushless DC Motor |
| 21 | Top Cover Assy |
| 22 | Left Side Plate |
| 23 | Condenser Left Border Plate |
| 24 | Electric Box Assy |
| 25 | Radiator |
| 26 | Electric Box |
| 27 | Main Board |
| 28 | Electric Box Cover |

Some models may not contain some parts, please refer to the actual product.

# 10. Exploded View and Parts List

TW18HXP2A1DO 23




The component is only for rererence;please refer to the actual product

# 10. Exploded View and Parts List

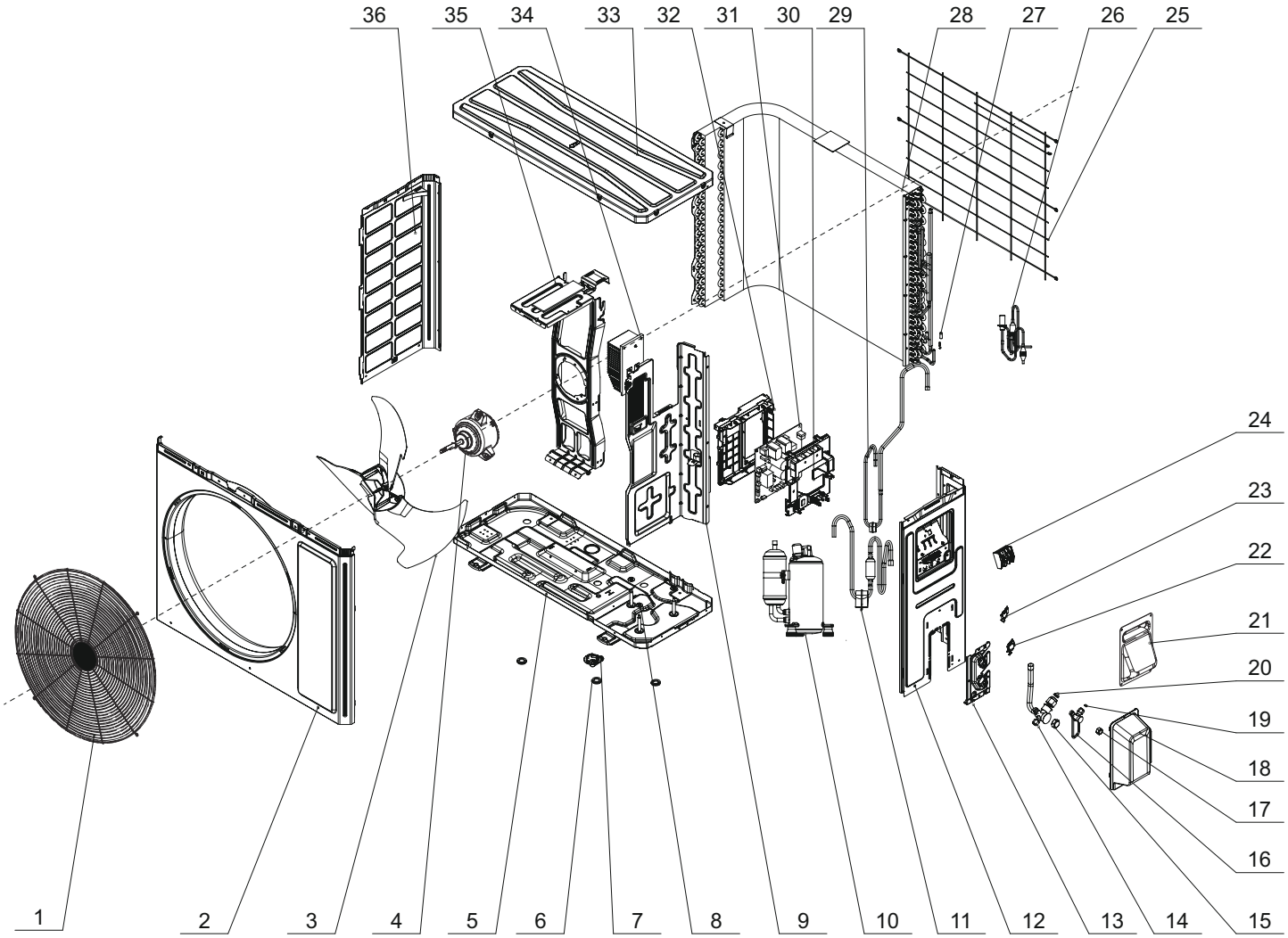
| NO. | Description |
|---|---|
| 1 | Front Grill |
| 2 | Cabinet |
| 3 | Axial Flow Fan |
| 4 | Chassis Sub-assy |
| 5 | Compressor and fittings |
| 6 | Electron expansion valve |
| 7 | Electric Expand Valve Fitting |
| 8 | Right Side Plate Assy |
| 9 | Valve Support Sub-Assy |
| 10 | Cut-off Valve |
| 11 | Cut-off Valve |
| 12 | Valve Cover |
| 13 | Handle |
| 14 | Terminal Board |

| NO. | Description |
|---|---|
| 15 | 4-way valve Assy |
| 16 | Condenser Assy |
| 17 | Clapboard Assy |
| 18 | Motor Support Sub-Assy |
| 19 | Brushless DC Motor |
| 20 | Top Cover Assy |
| 21 | Left Side Plate |
| 22 | Condenser Left Border Plate |
| 23 | Electric Box Assy |
| 24 | Radiator |
| 25 | Electric Box |
| 26 | Main Board |
| 27 | Electric Box Cover |
| | |

Some models may not contain some parts, please refer to the actual product.

# 10. Exploded View and Parts List

GWC24AGEXH-D3DNA1A/O




The component picture is only for reference; please refer to the actual product.

# 10. Exploded View and Parts List

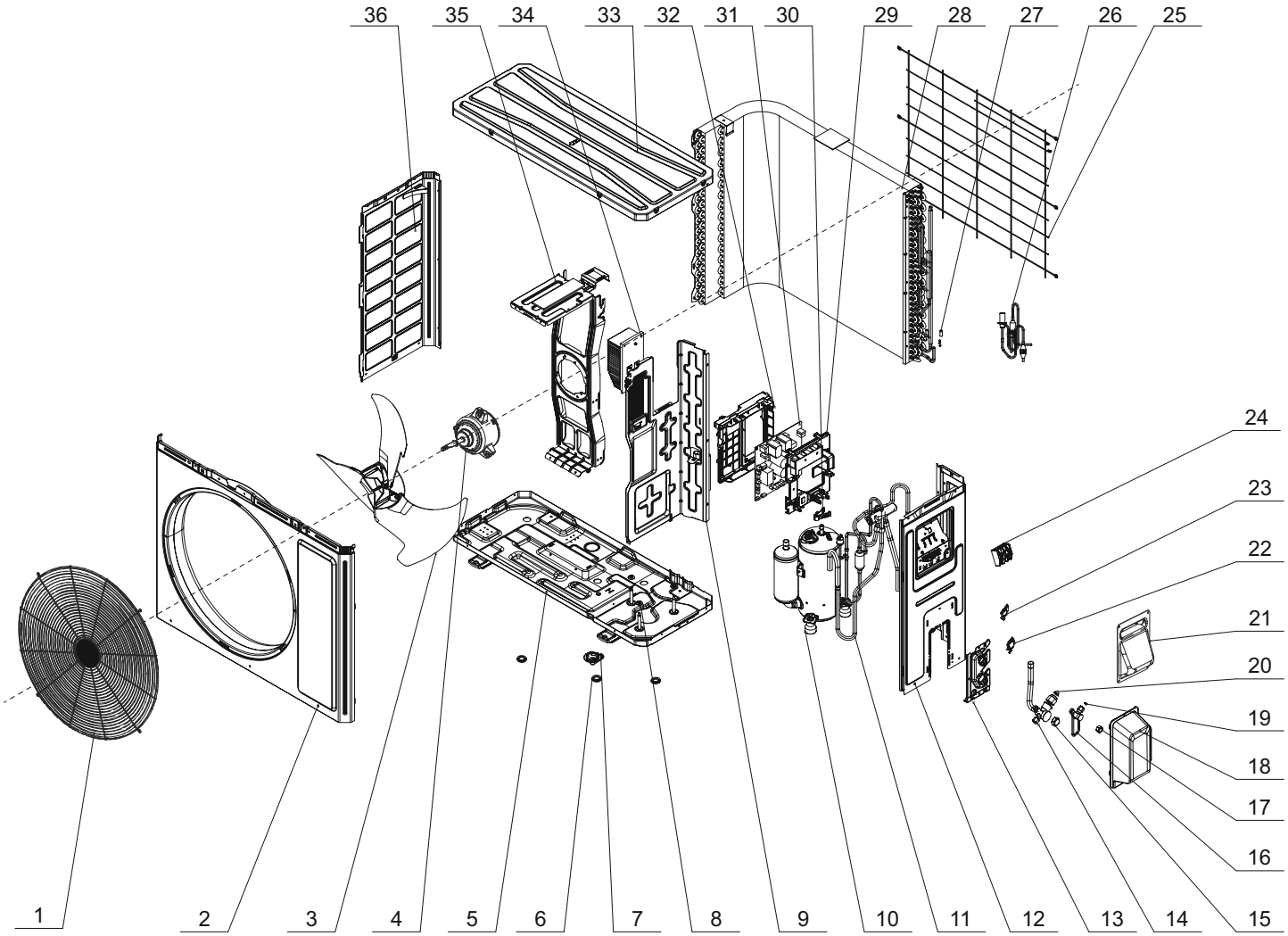
| NO. | Description |
|---|---|
| 1 | Front Grill |
| 2 | Cabinet |
| 3 | Axial Flow Fan |
| 4 | Brushless DC Motor |
| 5 | Chassis Sub-assy |
| 6 | Drainage Plug |
| 7 | Drainage Connecter |
| 8 | Cushioned Nut |
| 9 | Clap Board Assy |
| 10 | Compressor and fittings |
| 11 | Inhalation Tube Sub-assy |
| 12 | Right Side Plate Assy |
| 13 | Valve Support Sub |
| 14 | Cut-off Valve |
| 15 | Back Cover Nut |
| 16 | Cut-off Valve |
| 17 | Back Cover Nut |
| 18 | Valve Cover |

| NO. | Description |
|---|---|
| 19 | Union Nut |
| 20 | Union Nut |
| 21 | Handle |
| 22 | Support |
| 23 | Valve Support Baffle |
| 24 | Terminal Board |
| 25 | Rear Grill |
| 26 | Electronic Expansion Valve assy |
| 27 | Temperature Sensor |
| 28 | Condenser Assy |
| 29 | Discharge Tube Sub-assy |
| 30 | Electric Box Cover |
| 31 | Main Board |
| 32 | Electric box |
| 33 | Top Cover-assy |
| 34 | Motherboard radiator |
| 35 | Motor Support Sub-Assy |
| 36 | Left Side Plate |

Some models may not contain some parts, please refer to the actual product.

# 10. Exploded View and Parts List

TW24HXP2A1DO




The component picture is only for reference; please refer to the actual product.

# 10. Exploded View and Parts List

| NO. | Description |
|---|---|
| 1 | Front Grill |
| 2 | Cabinet |
| 3 | Axial Flow Fan |
| 4 | Brushless DC Motor |
| 5 | Chassis Sub-assy |
| 6 | Drainage Plug |
| 7 | Drainage Connecter |
| 8 | Cushioned Nut |
| 9 | Clap Board Assy |
| 10 | Compressor and fittings |
| 11 | 4-way Valve Assy |
| 12 | Right Side Plate Assy |
| 13 | Valve Support Sub |
| 14 | Cut-off Valve |
| 15 | Back Cover Nut |
| 16 | Cut-off Valve |
| 17 | Back Cover Nut |
| 18 | Valve Cover |

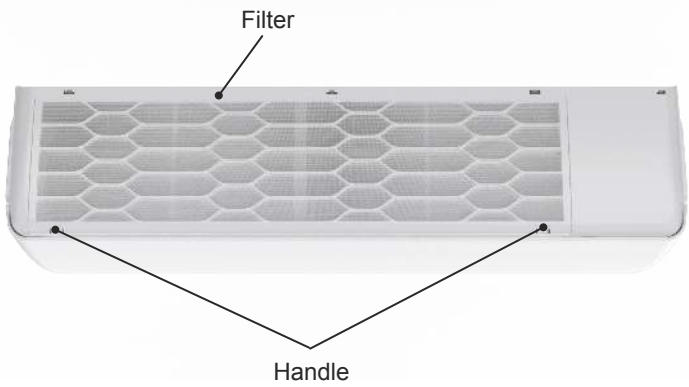
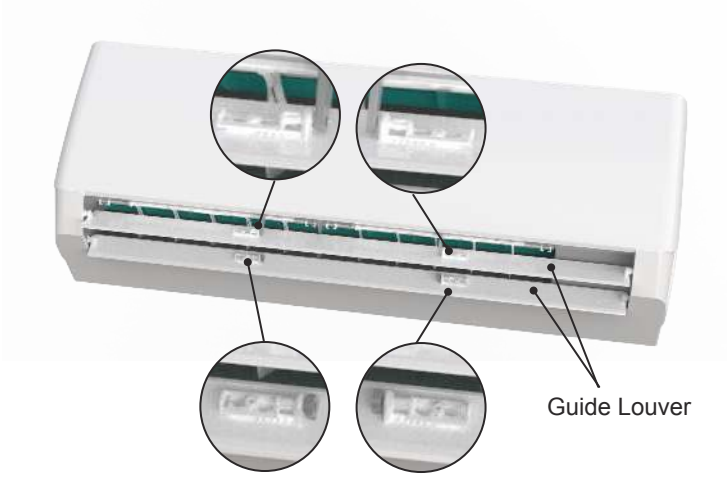
| NO. | Description |
|---|---|
| 19 | Union Nut |
| 20 | Union Nut |
| 21 | Handle |
| 22 | Support |
| 23 | Valve Support Baffle |
| 24 | Terminal Board |
| 25 | Rear Grill |
| 26 | Electronic Expansion Valve assy |
| 27 | Temperature Sensor |
| 28 | Condenser Assy |
| 29 | Electric Box  Cover |
| 30 | Pipe Clamp |
| 31 | Main Board |
| 32 | Electric box |
| 33 | Top Cover-assy |
| 34 | Motherboard radiator |
| 35 | Motor Support Sub-Assy |
| 36 | Left Side Plate |

Some models may not contain some parts, please refer to the actual product.

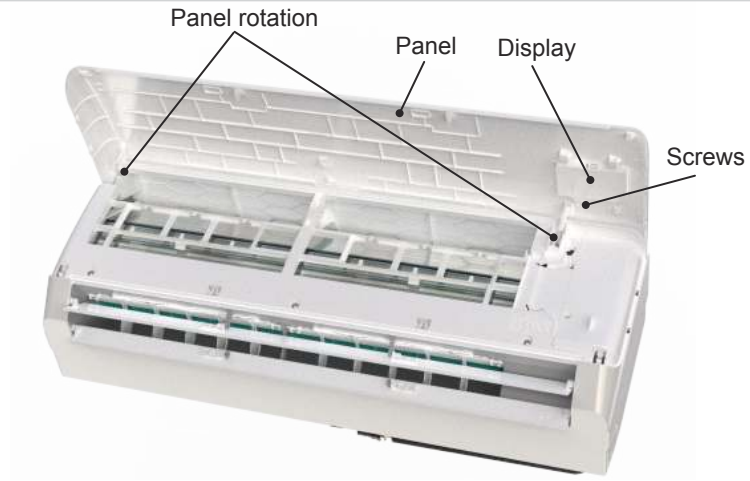
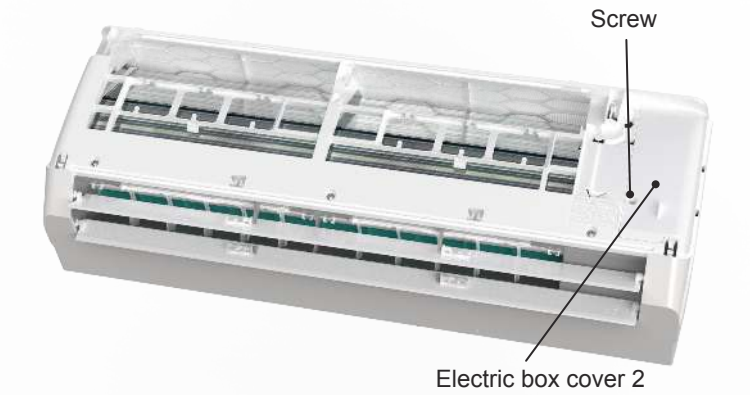
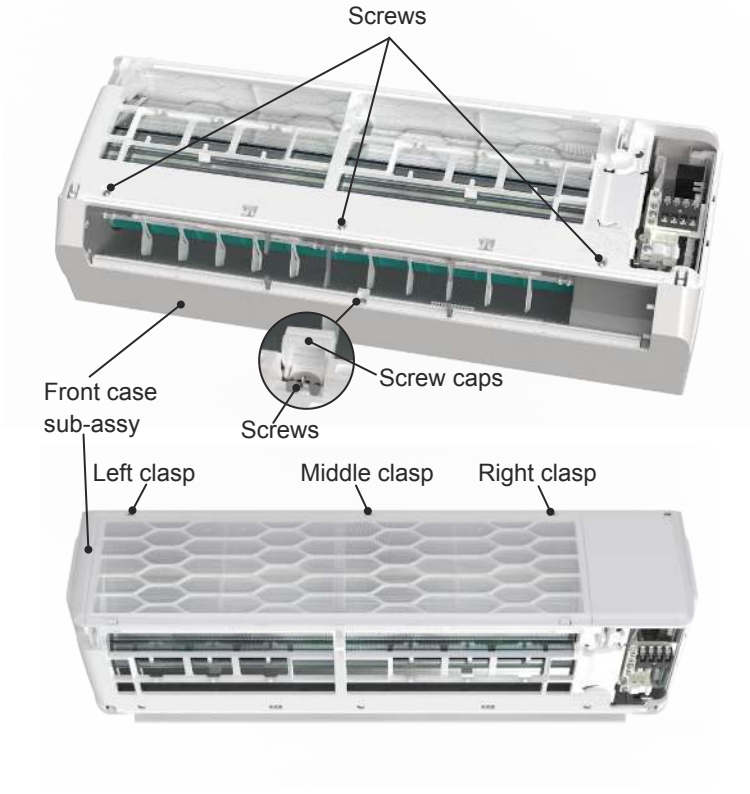
# 11. Removal Procedure

## 11.1 Removal Procedure of Indoor Unit

⚠ **Caution: discharge the refrigerant completely before removal.**

| Step | Procedure |
|---|---|
| **Before disassemble** | |
| | Turn off the air conditioner and disconnect the power before disassemble the air conditioner. |
| |  |
| **1. Remove filter** | |
| | Hold the handle on the filter, pull it upwards to let the clasp at the top part of the filter loose, push it forwards and then the filter can be pulled out. |
| |  |
| **2. Remove upper and lower guide louver** | |
| | Push out the plug pin on upper and lower guide louver, Bend the guide louver with hand and then separate the guide louver from the crank shaft of step motor to remove it. |
| |  |

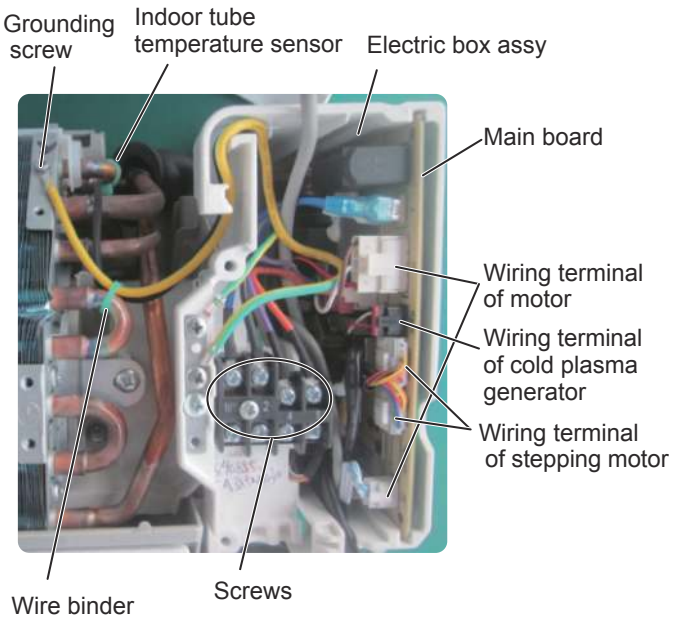
# 11. Removal Procedure

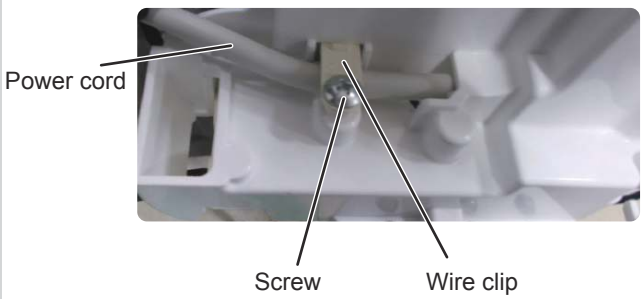
| Step | Procedure |
|---|---|
| **3. Remove panel** |  |
| | Open the front panel; separate the panel rotation shaft from the groove fixing the front panel and then removes the front panel.<br><br>Note:<br>The display of some models is fixed on the panel; unscrew the screws fixing the display on the panel before removing the panel. |
| **4. Remove electric box cover 2** |  |
| | Remove the screws on the electric box cover 2 to remove the electric box cover 2. |
| **5. Remove front case sub-assy** |  |
| a | Remove the screws fixing front case.<br><br>Note:<br>(1) Open the screw caps before removing the screws around the air outlet.<br>(2) The quantity of screws fixing the front case sub-assy is different for different models. |
| b | Loosen the clasps at left, middle and right sides of front case. Life the front case sub-assy upwards to remove it. |

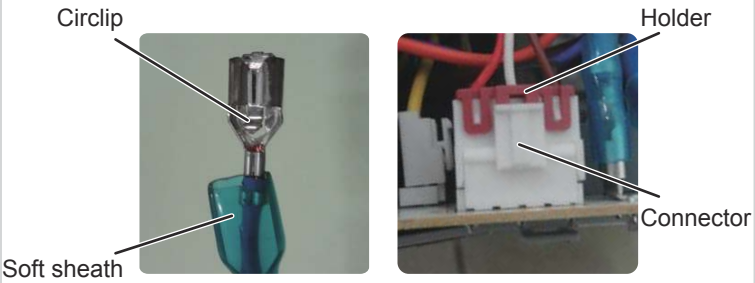
# 11. Removal Procedure

| Step | Procedure |
|---|---|
| **6. Remove electric box assy** | |
| a | Remove the screw fixing electric box assy. |
| b | ① Cut off the wire binder and pull out the indoor tube temperature sensor.<br>② Screw off one grounding screw.<br>③ Remove the wiring terminals of motor, cold plasma generator and stepping motor.<br>④ Remove the electric box assy.<br>⑤ Screw off the screws that are locking each. |
| C | Rotate the electric box assy. Twist off the screws that are locking the wire clip and loosen the power cord. Remove the wiring terminal of power cord. Lift up the main board and take it off.<br><br>Instruction:Some wiring terminal of this products is with lock catch and other devices.The pulling method is as below:<br>1.Remove the soft sheath for some terminals at first, hold the circlip and then pull out the terminals,<br>2.Pull out the holder for some terminals at first(holder is not available for some wiring terminal).hold the connector and then pull the terminal. |



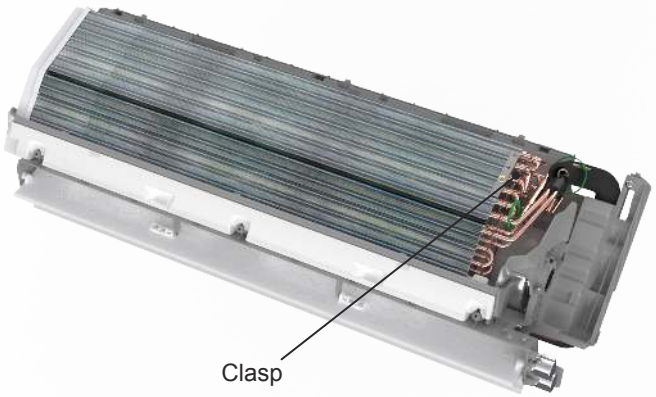



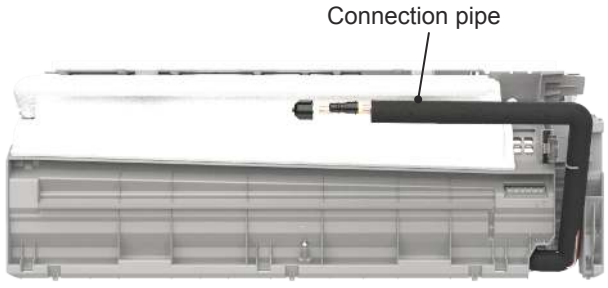
# 11. Removal Procedure

| Step | Procedure |
|---|---|
| **7. Remove panel** | |
| a | Remove 3 screws fixing evaporator assy. |
| b | At the back of the unit, Loosen the clasp of the connection pipe clamp and then remove the connection pipe clamp. |
| c | First remove the left side of evaporator from the groove of bottom shell and then remove the right side from the clasp on the bottom shell. |
| d | Adjust the position of connection pipe on evaporator slightly and then lift the evaporator upwards to remove it. |

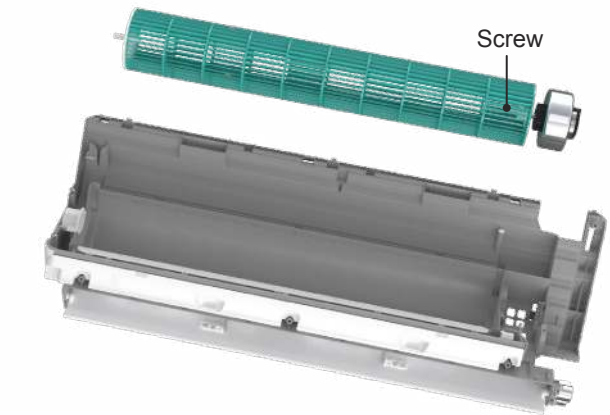
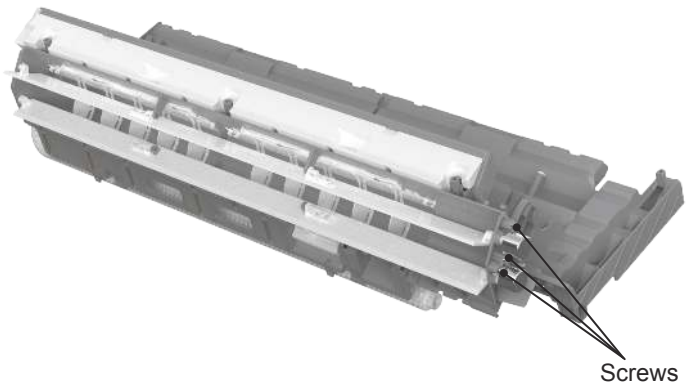






# 11. Removal Procedure

| Step | Procedure | |
|---|---|---|
| **8. Remove motor and cross flow fan** | | |
| a | Remove 3 screws fixing motor clamp and then remove the motor clamp. |  |
| b | Loose the screws (2-3 circles) used for fixing the cross flow fan, pull right to pull out the motor. |  |
| **9. Remove swing motor** | | |
| | Screw off the screws that are locking the swing motor and take the motor off. |  |

# 11. Removal Procedure

## 11.2 Removal Procedure of Outdoor Unit

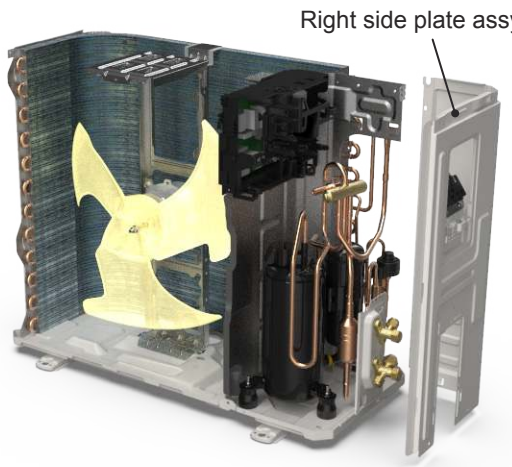
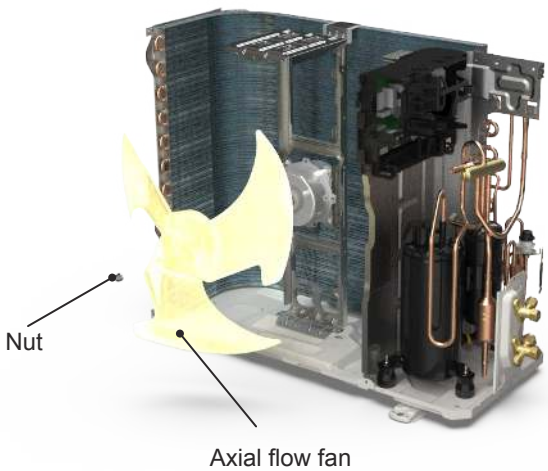
GWC09AGCXB-D3DNA1A/O

⚠ **Caution: discharge the refrigerant completely before removal.**

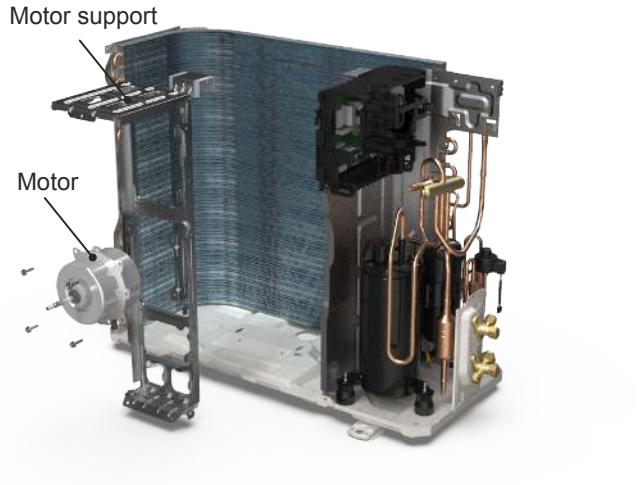
Note: Take heat pump model for example.

| Step | Procedure |
|---|---|
| **1. Before disassembly** |  |
| **2. Remove big handle and valve cover**<br>Remove the screws fixing big handle, valve cover and then remove them. |  |
| **3. Remove top cover**<br>Remove the screws fixing top panel and then remove the top panel. |  |

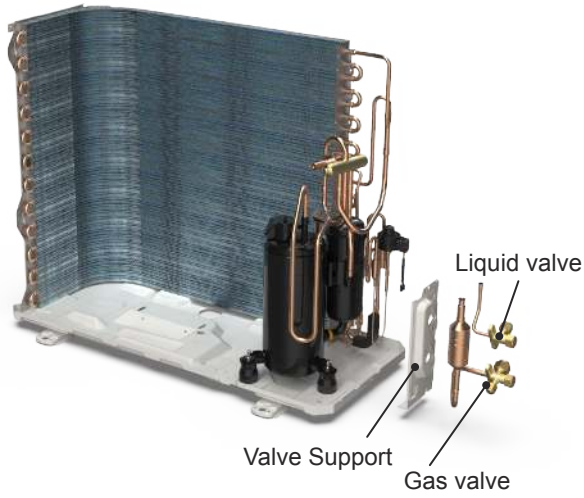
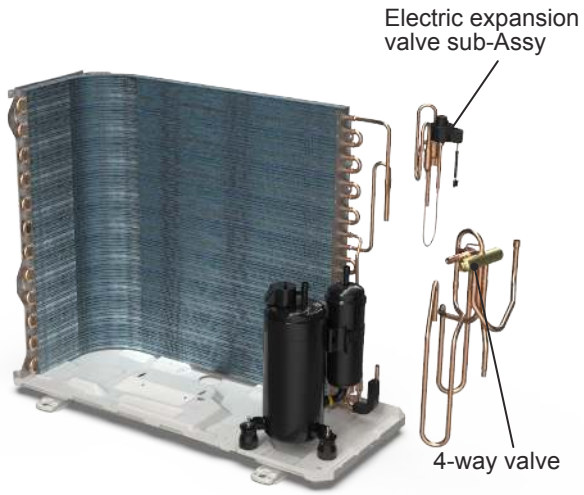
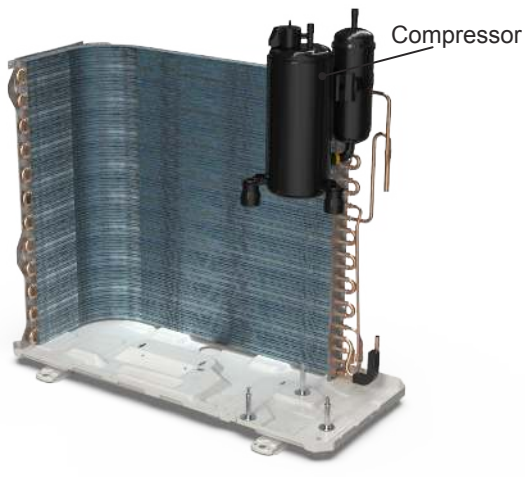
# 11. Removal Procedure

| Step | Procedure |
|---|---|
| **4. Remove front panel assy** | |
| | Remove connection screws connecting the front panel assy with the chassis and the motor support, and then remove the front panel assy. |
| |  |
| **5. Remove right side plate assy** | |
| | Rescrew the ground screws, remove the ground wires, loosen the screws fixing terminal board, remove the terminal board, rescrew the screws fixing the right plate, and remove the right side plate assy. |
| |  |
| **6. Remove axial flow fan** | |
| | Remove the nut on the fan and then remove the axial flow fan. |
| |  |

# 11. Removal Procedure

| Step | Procedure |
|---|---|
| **7. Remove motor support and motor** | |
| | Remove the screws fixing the motor support and lift the motor support to remove it.<br>Remove the screws fixing the motor and then remove the motor. |
| |  |
| **8. Remove electric box assy** | |
| | Remove the terminals, lift up and rotate the electrical box assy to the right so that the snaps on the clapboard are removed and the electrical box assy are removed. |
| |  |
| **9. Remove clapboard assy** | |
| | Remove the screws fixing the clapboard assy and then remove the clapboard assy. |
| |  |

# 11. Removal Procedure

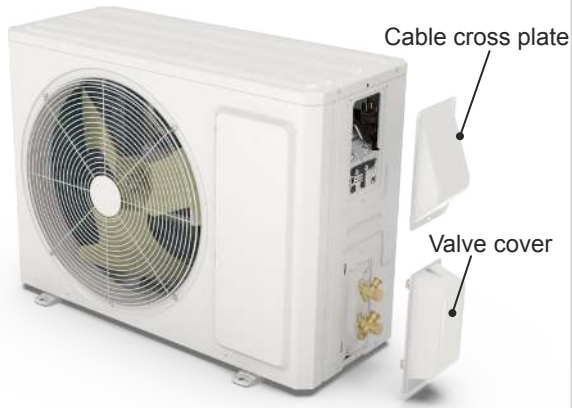
| Step | Procedure |
|---|---|
| **10. Remove gas valve and liquid valve** |  |
| Remove the valve support bolck, remove the screws fixing the gas valve and the liquid valve,unsolder the welding joint connecting the gas valve and the liquid valve, remove them.<br>Note:<br>Discharge the refrigerant completely befor unsoldering; when unsoldering, wrap the gas valve with a wet cloth completely to avoid damage to the valve caused by high temperature. | |
| **11. Remove 4-way valve and electric expansion valve sub-Assy** |  |
| Unsolder the welding joints connecting the 4-way valve assy, remove the 4-way valve.<br>Unsolder the spot weld of electric expansion valve sub-Assy and condenser, and then remove the electric expansion valve sub-Assy.<br>Note:<br>Before unsoldering the welding joint, wrap the 4-way valve with a wet cloth completely to avoid damage to the valve caused by high temperature.<br>When unsoldering the spot weld, wrap the electric expansion valve sub-Assy with wet cloth completely to avoid damaging the valve due to high temperature. | |
| **12. Remove compressor** |  |
| Remove the 3 foot nuts on the compressor and then remove the compressor. | |

# 11. Removal Procedure

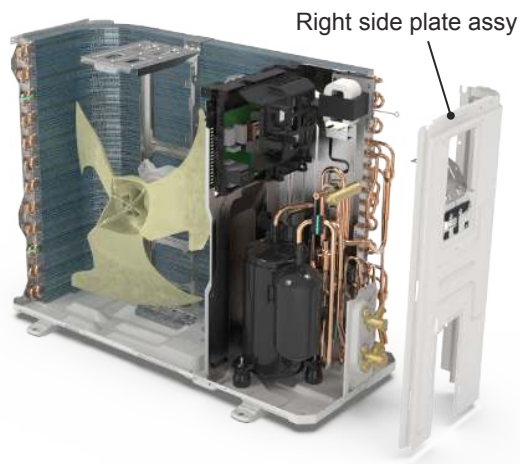
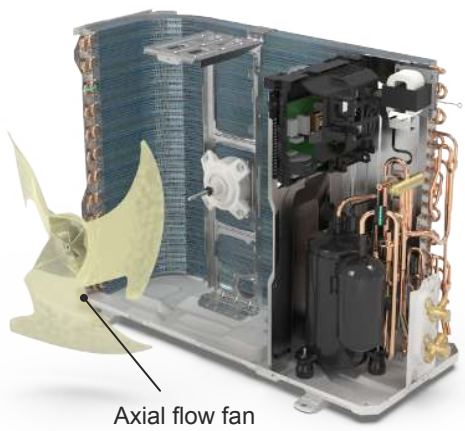
GWC09AGCXD-A3DNA1A/O TW09HXP2A1AO TW09HXP2A1DO GWC12AGCXD-A3DNA1A/O TW12HXP2A1AO GWC12AGCXD-D3DNA1A/O GWH12AGCXD-D3DNA1A/O

**⚠ Caution: discharge the refrigerant completely before removal.**

Note: Take heat pump model for example.

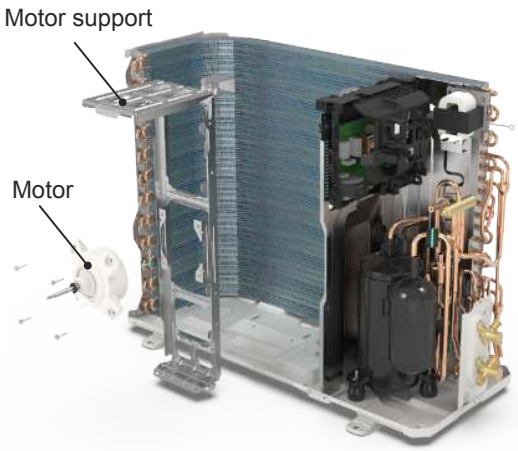
| Step | Procedure |
|---|---|
| **1. Before disassembly** |  |
| **2. Remove cable cross plate and valve cover**<br>Remove the screws fixing cable cross plate, valve cover and then remove them. |  |
| **3. Remove top cover**<br>Remove the screws fixing top panel and then remove the top panel. |  |

# 11. Removal Procedure

| Step | Procedure |
|---|---|
| **4. Remove front panel assy** | |
| | Remove connection screws connecting the front panel assy with the chassis and the motor support, and then remove the front panel assy. |
| |  |
| **5. Remove right side plate assy** | |
| | Rescrew the ground screws, remove the ground wires, loosen the screws fixing terminal board, remove the terminal board, rescrew the screws fixing the right plate, and remove the right side plate assy. |
| |  |
| **6. Remove axial flow fan** | |
| | Remove the nut on the fan and then remove the axial flow fan. |
| |  |

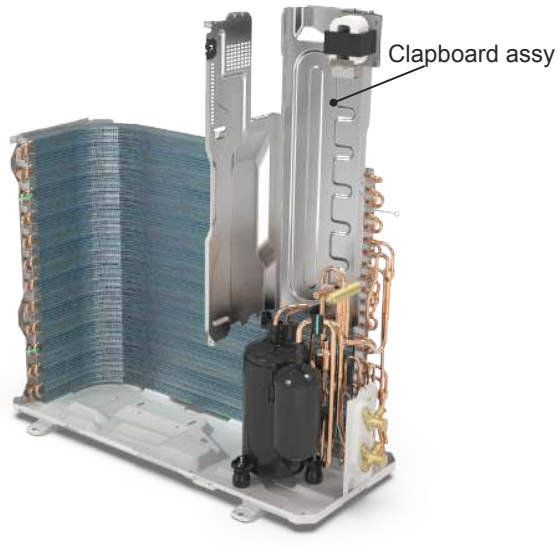
# 11. Removal Procedure

| Step | Procedure |
|---|---|
| **7. Remove motor support and motor** | Remove the screws fixing the motor support and lift the motor support to remove it.<br>Remove the screws fixing the motor and then remove the motor. |
| **8. Remove electric box assy** | Remove the terminals, lift up and rotate the electrical box assy to the right so that the snaps on the clapboard are removed and the electrical box assy are removed. |
| **9. Remove clapboard assy** | Remove the screws fixing the clapboard assy and then remove the clapboard assy. |

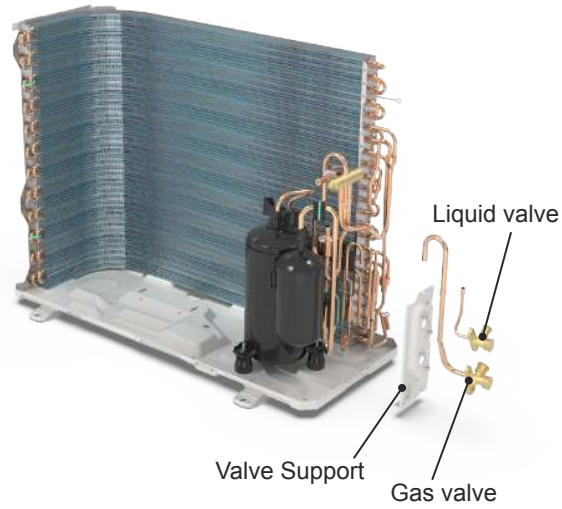
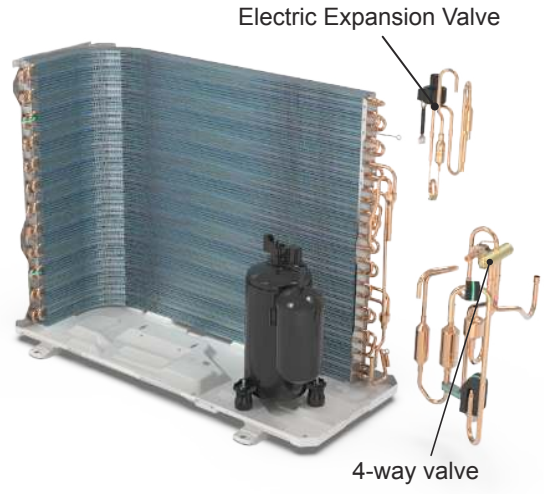
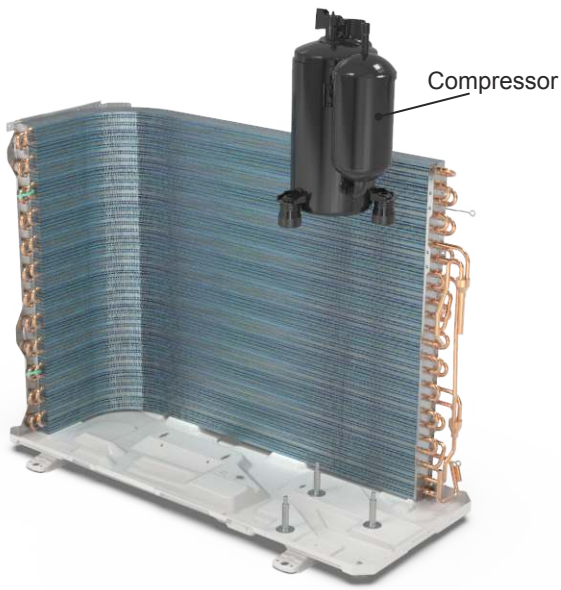








# 11. Removal Procedure

| Step | Procedure |
|---|---|
| **10. Remove gas valve and liquid valve** |  |
| Remove the valve support bolck, remove the screws fixing the gas valve and the liquid valve,unsolder the welding joint connecting the gas valve and the liquid valve, remove them.<br>Note:<br>Discharge the refrigerant completely befor unsoldering; when unsoldering, wrap the gas valve with a wet cloth completely to avoid damage to the valve caused by high temperature. | |
| **11. Remove 4-way valve and electric expansion valve** |  |
| Unsolder the welding joints connecting the 4-way valve and electric expansion valve, and then remove them. | |
| **12. Remove compressor** |  |
| Remove the 3 foot nuts on the compressor and then remove the compressor. | |

# 11. Removal Procedure

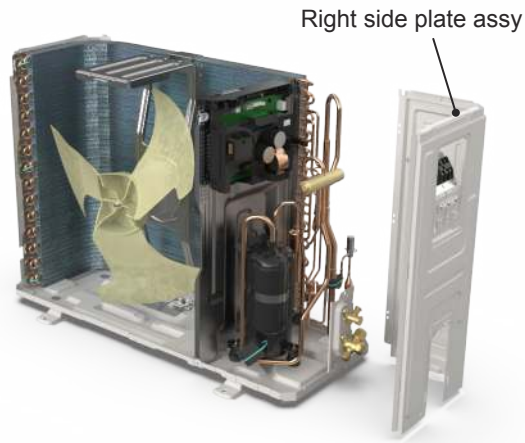
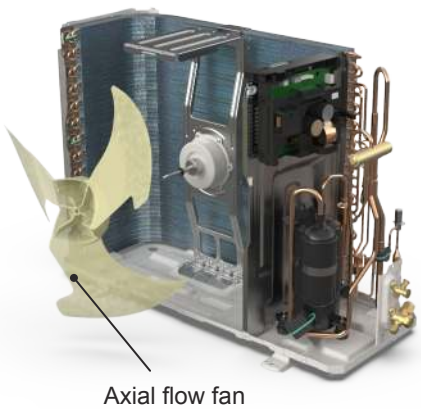
GWC18AGDXF-D3DNA1A/O TW18HXP2A1DO

**Caution: discharge the refrigerant completely before removal.**

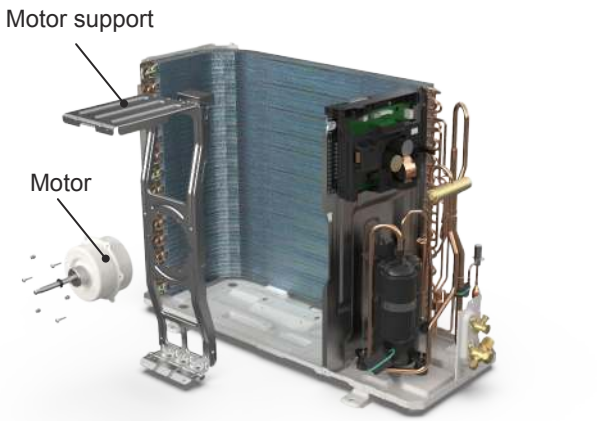
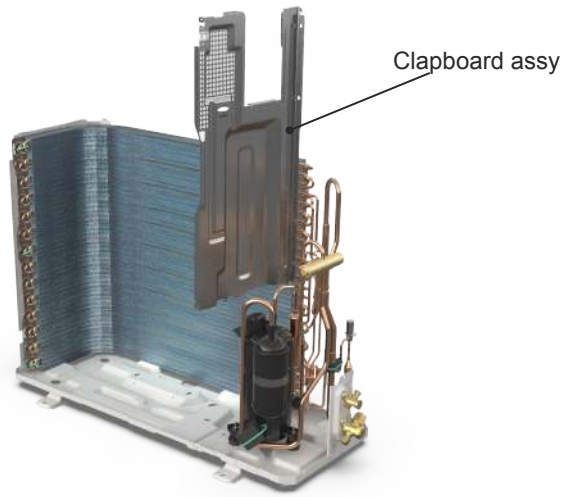
Note: Take heat pump model for example.

| Step | Procedure |
|---|---|
| **1. Before disassembly** |  |
| **2. Remove big handle and valve cover**<br>Remove the screws fixing big handle, valve cover and then remove them. |  |
| **3. Remove top cover**<br>Remove the screws fixing top panel and then remove the top panel. |  |

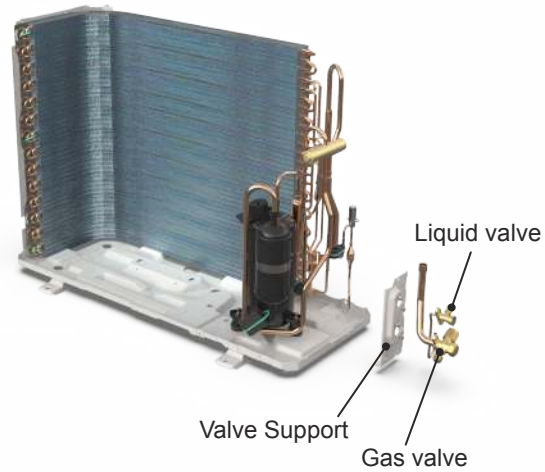
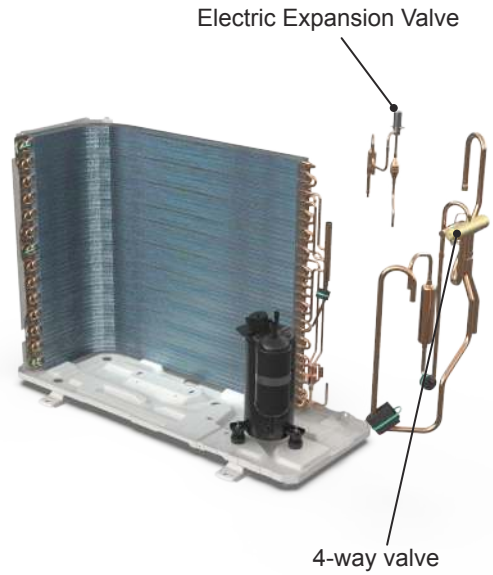
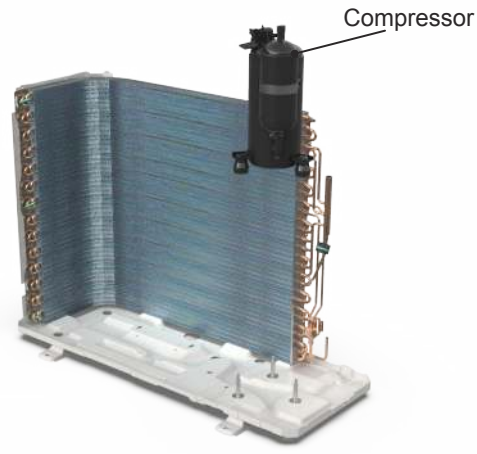
# 11. Removal Procedure

| Step | Procedure |
|---|---|
| **4. Remove front panel assy** | |
| Remove connection screws connecting the front panel assy with the chassis and the motor support, and then remove the front panel assy. |  |
| **5. Remove right side plate assy** | |
| Rescrew the ground screws, remove the ground wires, loosen the screws fixing terminal board, remove the terminal board, rescrew the screws fixing the right plate, and remove the right side plate assy. |  |
| **6. Remove axial flow fan** | |
| Remove the nut on the fan and then remove the axial flow fan. |  |

# 11. Removal Procedure

| Step | Procedure |
|---|---|
| **7. Remove motor support and motor** | |
| | Remove the screws fixing the motor support and lift the motor support to remove it.<br>Remove the screws fixing the motor and then remove the motor. |
| |  |
| **8. Remove electric box assy** | |
| | Remove the terminals, lift up and rotate the electrical box assy to the right so that the snaps on the clapboard are removed and the electrical box assy are removed. |
| |  |
| **9. Remove clapboard assy** | |
| | Remove the screws fixing the clapboard assy and then remove the clapboard assy. |
| |  |

# 11. Removal Procedure

| Step | Procedure |
|---|---|
| **10. Remove gas valve and liquid valve** | |
| | Remove the valve support bolck, remove the screws fixing the gas valve and the liquid valve,unsolder the welding joint connecting the gas valve and the liquid valve, remove them.<br>Note:<br>Discharge the refrigerant completely befor unsoldering; when unsoldering, wrap the gas valve with a wet cloth completely to avoid damage to the valve caused by high temperature. |
| |  |
| **11. Remove 4-way valve and electric expansion valve** | |
| | Unsolder the welding joints connecting the 4-way valve and electric expansion valve, and then remove them. |
| |  |
| **12. Remove compressor** | |
| | Remove the 3 foot nuts on the compressor and then remove the compressor. |
| |  |

# 11. Removal Procedure

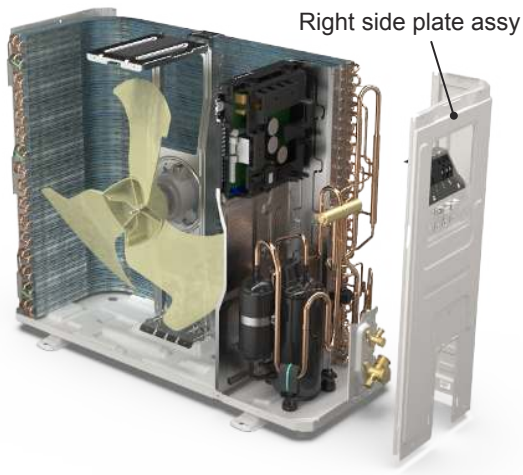
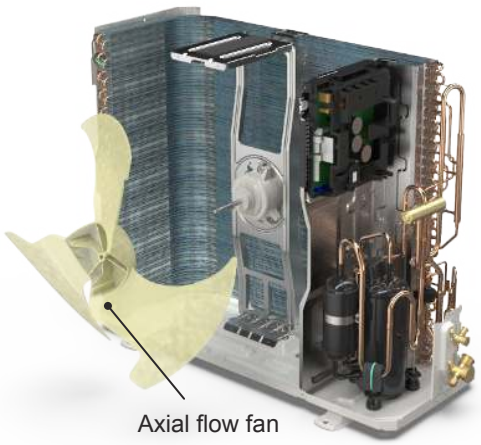
GWC24AGEXH-D3DNA1A/O TW24HXP2A1DO

⚠ **Caution: discharge the refrigerant completely before removal.**

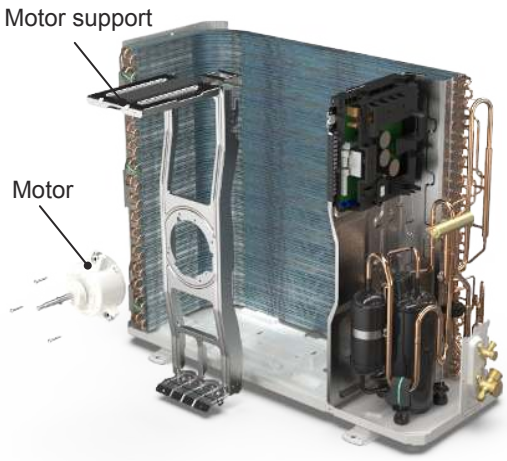
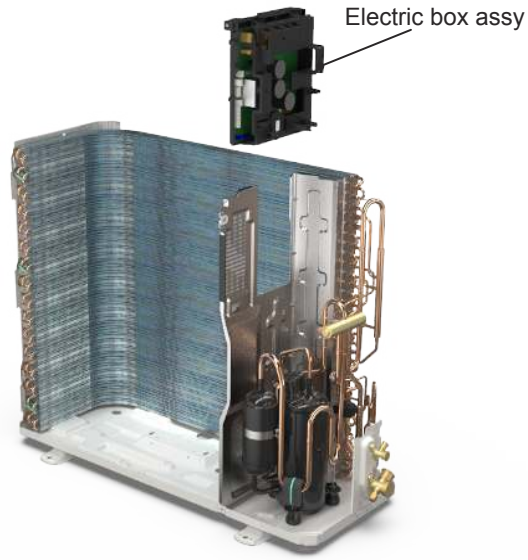
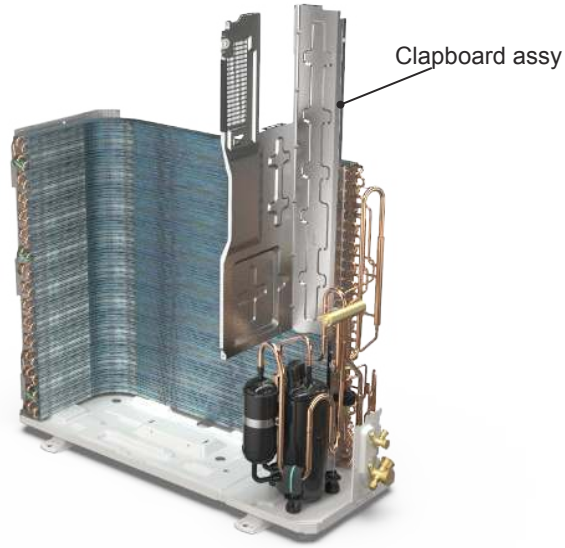
Note: Take heat pump model for example.

| Step | Procedure |
|---|---|
| **1. Before disassembly** |  |
| **2. Remove big handle and valve cover**<br>Remove the screws fixing big handle, valve cover and then remove them. |  |
| **3. Remove top cover**<br>Remove the screws fixing top panel and then remove the top panel. |  |

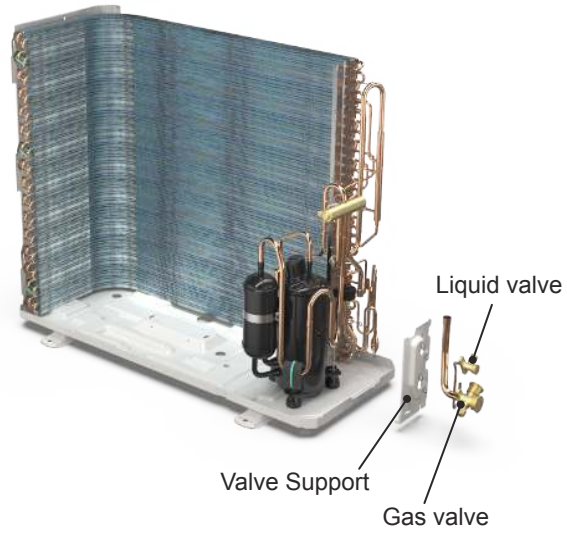
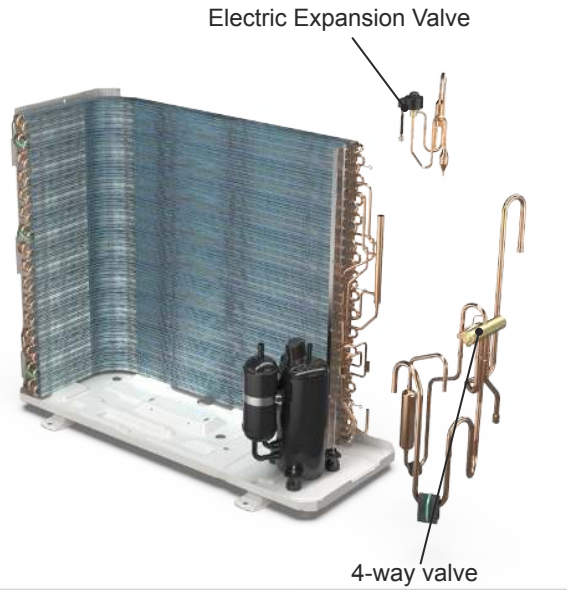
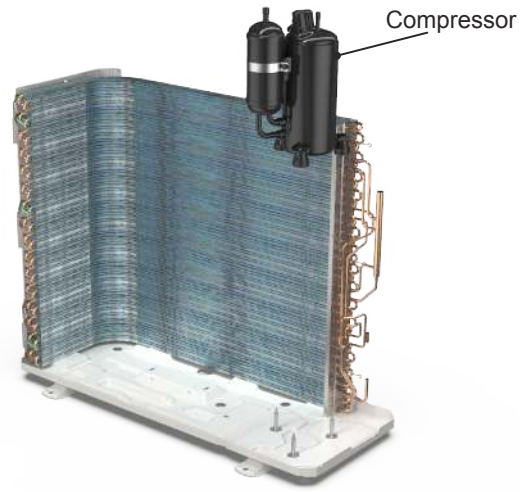
# 11. Removal Procedure

| Step | Procedure |
|---|---|
| **4. Remove front panel assy** | |
| | Remove connection screws connecting the front panel assy with the chassis and the motor support, and then remove the front panel assy. |
| |  |
| **5. Remove right side plate assy** | |
| | Rescrew the ground screws, remove the ground wires, loosen the screws fixing terminal board, remove the terminal board, rescrew the screws fixing the right plate, and remove the right side plate assy. |
| |  |
| **6. Remove axial flow fan** | |
| | Remove the nut on the fan and then remove the axial flow fan. |
| |  |

# 11. Removal Procedure

| Step | Procedure |
|---|---|
| **7. Remove motor support and motor** |  |
| Remove the screws fixing the motor support and lift the motor support to remove it.<br>Remove the screws fixing the motor and then remove the motor. | |
| **8. Remove electric box assy** |  |
| Remove the terminals, lift up and rotate the electrical box assy to the right so that the snaps on the clapboard are removed and the electrical box assy are removed. | |
| **9. Remove clapboard assy** |  |
| Remove the screws fixing the clapboard assy and then remove the clapboard assy. | |

# 11. Removal Procedure

| Step | Procedure |
|---|---|
| **10. Remove gas valve and liquid valve** |  |
| Remove the valve support bolck, remove the screws fixing the gas valve and the liquid valve,unsolder the welding joint connecting the gas valve and the liquid valve, remove them.<br>Note:<br>Discharge the refrigerant completely befor unsoldering; when unsoldering, wrap the gas valve with a wet cloth completely to avoid damage to the valve caused by high temperature. | |
| **11. Remove 4-way valve and electric expansion valve** |  |
| Unsolder the welding joints connecting the 4-way valve and electric expansion valve, and then remove them. | |
| **12. Remove compressor** |  |
| Remove the 3 foot nuts on the compressor and then remove the compressor. | |

# Appendix:

## Appendix 1: Reference Sheet of Celsius and Fahrenheit

**Conversion formula for Fahrenheit degree and Celsius degree: Tf=Tcx1.8+32**

**Set temperature**

| Fahrenheit display temperature（˚F） | Fahrenheit（˚F） | Celsius（℃） | Fahrenheit display temperature（˚F） | Fahrenheit（˚F） | Celsius（℃） | Fahrenheit display temperature（˚F） | Fahrenheit（˚F） | Celsius（℃） |
|---|---|---|---|---|---|---|---|---|
| 61 | 60.8 | 16 | 69/70 | 69.8 | 21 | 78/79 | 78.8 | 26 |
| 62/63 | 62.6 | 17 | 71/72 | 71.6 | 22 | 80/81 | 80.6 | 27 |
| 64/65 | 64.4 | 18 | 73/74 | 73.4 | 23 | 82/83 | 82.4 | 28 |
| 66/67 | 66.2 | 19 | 75/76 | 75.2 | 24 | 84/85 | 84.2 | 29 |
| 68 | 68 | 20 | 77 | 77 | 25 | 86 | 86 | 30 |

**Ambient temperature**

| Fahrenheit display temperature（˚F） | Fahrenheit（˚F） | Celsius（℃） | Fahrenheit display temperature（˚F） | Fahrenheit（˚F） | Celsius（℃） | Fahrenheit display temperature（˚F） | Fahrenheit（˚F） | Celsius（℃） |
|---|---|---|---|---|---|---|---|---|
| 32/33 | 32 | 0 | 55/56 | 55.4 | 13 | 79/80 | 78.8 | 26 |
| 34/35 | 33.8 | 1 | 57/58 | 57.2 | 14 | 81 | 80.6 | 27 |
| 36 | 35.6 | 2 | 59/60 | 59 | 15 | 82/83 | 82.4 | 28 |
| 37/38 | 37.4 | 3 | 61/62 | 60.8 | 16 | 84/85 | 84.2 | 29 |
| 39/40 | 39.2 | 4 | 63 | 62.6 | 17 | 86/87 | 86 | 30 |
| 41/42 | 41 | 5 | 64/65 | 64.4 | 18 | 88/89 | 87.8 | 31 |
| 43/44 | 42.8 | 6 | 66/67 | 66.2 | 19 | 90 | 89.6 | 32 |
| 45 | 44.6 | 7 | 68/69 | 68 | 20 | 91/92 | 91.4 | 33 |
| 46/47 | 46.4 | 8 | 70/71 | 69.8 | 21 | 93/94 | 93.2 | 34 |
| 48/49 | 48.2 | 9 | 72 | 71.6 | 22 | 95/96 | 95 | 35 |
| 50/51 | 50 | 10 | 73/74 | 73.4 | 23 | 97/98 | 96.8 | 36 |
| 52/53 | 51.8 | 11 | 75/76 | 75.2 | 24 | 99 | 98.6 | 37 |
| 54 | 53.6 | 12 | 77/78 | 77 | 25 | | | |

## Appendix 2: Configuration of Connection Pipe

1. Standard length of connection pipe (More details please refer to the specifications.)
2. Min. length of connection pipe for the unit with standard connection pipe of 5m, there is no limitation for the min. length of connection pipe. For the unit with standard connection pipe of 7.5m and 8m, the min. length of connection pipe is 3m.
3. Max. length of connection pipe and max. high difference.(More details please refer to the specifications.)
4. The additional refrigerant oil and refrigerant charging required after prolonging connection pipe

● After the length of connection pipe is prolonged for 10m at the basis of standard length, you should add 5ml of refrigerant oil for each additional 5m of connection pipe.

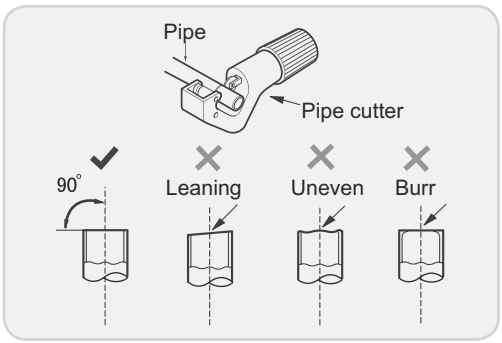
● The calculation method of additional refrigerant charging amount (on the basis of liquid pipe):

● Basing on the length of standard pipe, add refrigerant according to the requirement as shown in the table. The additional refrigerant charging amount per meter is different according to the diameter of liquid pipe. See the following sheet.

● Additional refrigerant charging amount = prolonged length of liquid pipe X additional refrigerant charging amount per meter.

| Additional refrigerant charging amount for R22, R407C, R410A and R134a | | | |
|---|---|---|---|
| Diameter of connection pipe | | Outdoor unit throttle | |
| Liquid pipe | Gas pipe | Cooling only(g/m) | Cooling and heating(g/m) |
| 1/4” | 3/8” or 1/2” | 15 | 20 |
| 1/4” or 3/8” | 5/8” or 3/4” | 15 | 50 |
| 1/2” | 3/4” or 7/8” | 30 | 120 |
| 5/8” | 1" or 1 1/4” | 60 | 120 |

## Appendix 3: Pipe Expanding Method

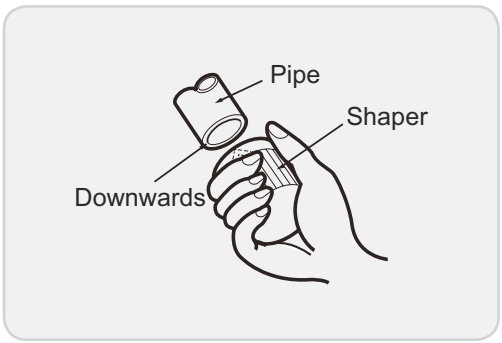



⚠ **Note:**

Improper pipe expanding is the main cause of refrigerant leakage.Please expand the pipe according to the following steps:

A:Cut the pip

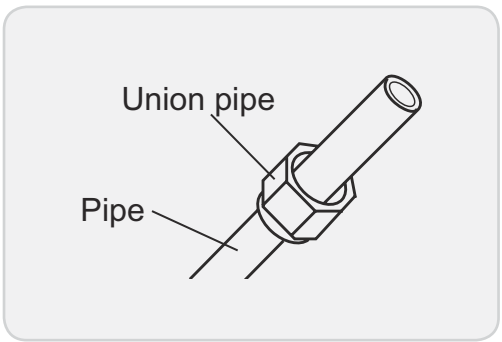
- Confirm the pipe length according to the distance of indoor unit and outdoor unit.
- Cut the required pipe with pipe cutter.




B:Remove the burrs

- Remove the burrs with shaper and prevent the burrs from getting into the pipe.

C:Put on suitable insulating pipe.




D:Put on the union nut

- Remove the union nut on the indoor connection pipe and outdoor valve; install the union nut on the pipe.

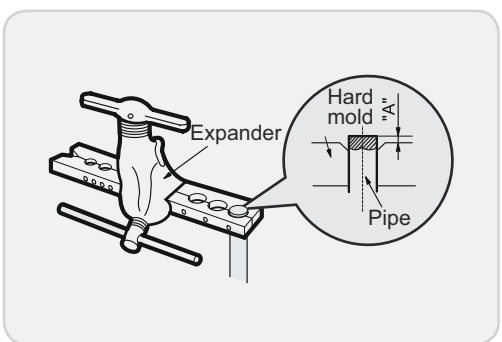
E:Expand the port

- Expand the port with expander.

⚠ **Note:**

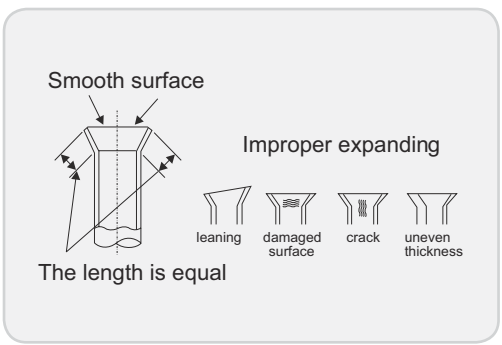
- "A" is different according to the diameter, please refer to the sheet below:

| Outer diameter(mm) | A(mm) | |
|---|---|---|
| | Max | Min |
| Φ6 - 6.35 (1/4") | 1.3 | 0.7 |
| Φ9.52 (3/8") | 1.6 | 1.0 |
| Φ12 - 12.70 (1/2") | 1.8 | 1.0 |
| Φ16 - 15.88 (5/8") | 2.4 | 2.2 |




F:Inspection

- Check the quality of expanding port. If there is any blemish, expand the port again according to the steps above.



## Appendix 4: List of Resistance for Temperature Sensor

### Resistance Table of Ambient Temperature Sensor for Indoor and Outdoor Units(15K)

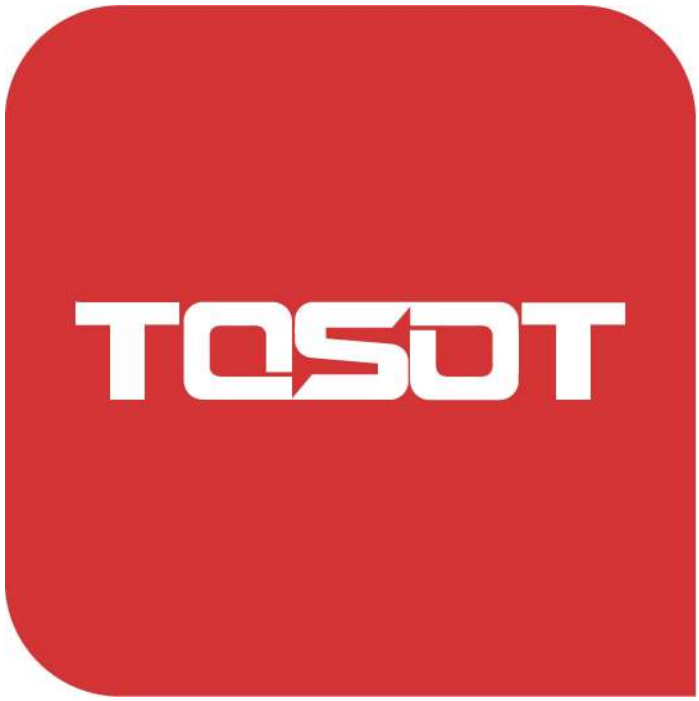
| Temp(°C) | Resistance(kΩ) | Temp(°C) | Resistance(kΩ) | Temp(°C) | Resistance(kΩ) | Temp(°C) | Resistance(kΩ) |
|---|---|---|---|---|---|---|---|
| -19 | 138.10 | 0 | 49.02 | 20 | 18.75 | 40 | 7.97 |
| -18 | 128.60 | 2 | 44.31 | 22 | 17.14 | 42 | 7.35 |
| -16 | 115.00 | 4 | 40.09 | 24 | 15.68 | 44 | 6.79 |
| -14 | 102.90 | 6 | 36.32 | 26 | 14.36 | 46 | 6.28 |
| -12 | 92.22 | 8 | 32.94 | 28 | 13.16 | 48 | 5.81 |
| -10 | 82.75 | 10 | 29.90 | 30 | 12.07 | 50 | 5.38 |
| -8 | 74.35 | 12 | 27.18 | 32 | 11.09 | 52 | 4.99 |
| -6 | 66.88 | 14 | 24.73 | 34 | 10.20 | 54 | 4.63 |
| -4 | 60.23 | 16 | 22.53 | 36 | 9.38 | 56 | 4.29 |
| -2 | 54.31 | 18 | 20.54 | 38 | 8.64 | 58 | 3.99 |

### Resistance Table of Tube Temperature Sensors for Indoor and Outdoor (20K)

| Temp(°C) | Resistance(kΩ) | Temp(°C) | Resistance(kΩ) | Temp(°C) | Resistance(kΩ) | Temp(°C) | Resistance(kΩ) |
|---|---|---|---|---|---|---|---|
| -19 | 181.40 | 20 | 25.01 | 60 | 4.95 | 100 | 1.35 |
| -15 | 145.00 | 25 | 20.00 | 65 | 4.14 | 105 | 1.16 |
| -10 | 110.30 | 30 | 16.10 | 70 | 3.48 | 110 | 1.01 |
| -5 | 84.61 | 35 | 13.04 | 75 | 2.94 | 115 | 0.88 |
| 0 | 65.37 | 40 | 10.62 | 80 | 2.50 | 120 | 0.77 |
| 5 | 50.87 | 45 | 8.71 | 85 | 2.13 | 125 | 0.67 |
| 10 | 39.87 | 50 | 7.17 | 90 | 1.82 | 130 | 0.59 |
| 15 | 31.47 | 55 | 5.94 | 95 | 1.56 | 135 | 0.52 |

### Resistance Table of Discharge Temperature Sensor for Outdoor(50K)

| Temp(°C) | Resistance(kΩ) | Temp(°C) | Resistance(kΩ) | Temp(°C) | Resistance(kΩ) | Temp(°C) | Resistance(kΩ) |
|---|---|---|---|---|---|---|---|
| -30 | 911.400 | 10 | 98 | 50 | 17.65 | 90 | 4.469 |
| -25 | 660.8 | 15 | 77.35 | 55 | 14.62 | 95 | 3.841 |
| -20 | 486.5 | 20 | 61.48 | 60 | 12.17 | 100 | 3.315 |
| -15 | 362.9 | 25 | 49.19 | 65 | 10.18 | 105 | 2.872 |
| -10 | 274 | 30 | 39.61 | 70 | 8.555 | 110 | 2.498 |
| -5 | 209 | 35 | 32.09 | 75 | 7.224 | 115 | 2.182 |
| 0 | 161 | 40 | 26.15 | 80 | 6.129 | 120 | 1.912 |
| 5 | 125.1 | 45 | 21.43 | 85 | 5.222 | 125 | 1.682 |




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