

AIR CONDITIONER

REFRIGERANT **R32**  
INVERTER

Wall mounted type

# SERVICE MANUAL

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## INDOOR



ASKA09KPBA  
ASKA12KPBA



ASKA18KPBA



ASKA24KPBA



ASKA30KPBA  
ASKA36KPBA

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## OUTDOOR



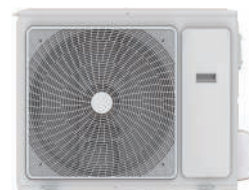
AOKA09KPBA  
AOKA12KPBA



AOKA18KPBA



AOKA24KPBA



AOKA30KPBA  
AOKA36KPBA

**Notices:**

- Product specifications and design are subject to change without notice for future improvement
- For further details, please check with our authorized dealer

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**Please Read Before Starting**

This air conditioning system meets strict safety and operating standards. As the installer or service person, it is an important part of your job to install or service the system, so it operates safely and efficiently.

**For safe installation and trouble-free operation, you must:**

- Carefully read this instruction booklet before beginning.
- Follow each installation or repair step exactly as shown.
- Observe all local, state, and national electrical codes.
- Pay close attention to all warning and caution notices given in this manual.

**WARNING**

This symbol refers to a hazard or unsafe practice which can result in severe personal injury or death.

**CAUTION**

This symbol refers to a hazard or unsafe practice which can result in personal injury or product or property damage.

**If Necessary, Get Help**

These instructions are all you need for most installation sites and maintenance conditions. If you require help for a special problem, contact our sales/service outlet or your certified dealer for additional instructions.

**In Case of Improper Installation**

The manufacturer shall in no way be responsible for improper installation or maintenance service, including failure to follow the instructions in this document.

**SPECIAL PRECAUTIONS****When Wiring****WARNING**

**ELECTRICAL SHOCK CAN CAUSE SEVERE PERSONAL INJURY OR DEATH. ONLY A QUALIFIED, EXPERIENCED ELECTRICIAN SHOULD ATTEMPT TO WIRE THIS SYSTEM.**

- Do not supply power to the unit until all wiring and tubing are completed or reconnected and checked.
- Highly dangerous electrical voltages are used in this system. Carefully refer to the wiring diagram and these instructions when wiring. Improper connections and inadequate grounding can cause accidental injury or death.
- Ground the unit following local electrical codes.
- Connect all wiring tightly. Loose wiring may cause overheating at connection points and a possible fire hazard.

**When Transporting**

Be careful when picking up and moving the indoor and outdoor units. Get a partner to help, and bend your knees when lifting to reduce strain on your back. Sharp edges or thin aluminum fins on the air conditioner can cut your fingers.

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## **When Installing**

### **• In a Ceiling or Wall**

Make sure the ceiling/wall is strong enough to hold the unit's weight. It may be necessary to construct a strong wood or metal frame to provide added support.

### **• In a Room**

Properly insulate any tubing run inside a room to prevent "sweating" that can cause dripping and water damage to walls and floors.

### **• In Moist or Uneven Locations**

Use a raised concrete pad or concrete blocks to provide a solid, level foundation for the outdoor unit. This prevents water damage and abnormal vibration.

### **• In an Area with High Winds**

Securely anchor the outdoor unit down with bolts and a metal frame. Provide a suitable air baffle.

### **• In a Snowy Area (for Heat Pump-type Systems)**

Install the outdoor unit on a raised platform that is higher than drifting snow. Provide snow vents.

## **When Connecting Refrigerant Tubing**

△ Use the flare method for connecting tubing.

△ Apply refrigerant lubricant to the matching surfaces of the flare and union tubes before connecting them, then tighten the nut with a torque wrench for a leak free connection.

△ Check carefully for leaks before starting the test run.

## **When Servicing**

△ Turn the power OFF at the main power box (mains) before opening the unit to check or repair electrical parts and wiring.

△ Keep your fingers and clothing away from any moving parts.

△ Clean up the site after you finish, remembering to check that no metal scraps or bits of wiring have been left inside the unit being serviced.

## **Others**



△ Ventilate any enclosed areas when installing or testing the refrigeration system. Escaped refrigerant gas, on contact with fire or heat, can produce dangerously toxic gas.

△ Confirm upon completing installation that no refrigerant gas is leaking. If escaped gas comes in contact with a stove, gas water heater, electric room heater or other heat source, it can produce dangerously toxic gas.

## **NOTE:**

The figure, size and parameter of the product may not be identical with the service manual, please take the actual product as the standard.

## **Precautions for using R32 refrigerant**

The basic installation work procedures are the same as the conventional refrigerant (R22 or R410A). However, pay attention to the following points:

1. Transport of equipment containing flammable refrigerants Compliance with the transport regulations
2. Marking of equipment using signs Compliance with local regulations
3. Disposal of equipment using flammable refrigerants Compliance with national regulations
4. Storage of equipment/appliances The storage of equipment should be in accordance with the manufacturer's instructions.
5. Storage of packed (unsold) equipment Storage package protection should be constructed such that mechanical damage to the equipment inside the package will not cause a leak of the refrigerant charge.

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The maximum number of pieces of equipment permitted to be stored together will be determined by local regulations.

## 6. Information on servicing

### 6-1 Checks to the area

Prior to beginning work on systems containing flammable refrigerants, safety checks are necessary to ensure that the risk of ignition is minimized. For repair to the refrigerating system, the following precautions shall be complied with prior to conducting work on the system.

### 6-2 Work procedure

Work shall be undertaken under a controlled procedure so as to minimize the risk of flammable gas or vapour being present while the work is being performed.

### 6-3 General work area

All maintenance staff and others working in the local area shall be instructed on the nature of work being carried out. Work in confined spaces shall be avoided.

The area around the workspace shall be sectioned off. Ensure that the conditions within the area have been made safe by control of flammable material.

### 6-4 Checking for presence of refrigerant

The area shall be checked with an appropriate refrigerant detector prior to and during work, to ensure the technician is aware of potentially flammable atmospheres.

Ensure that the leak detection equipment being used is suitable for use with flammable refrigerants, i.e. non-sparking, adequately sealed or intrinsically safe.

### 6-5 Presence of fire extinguisher

If any hot work is to be conducted on the refrigeration equipment or any associated parts, appropriate fire extinguishing equipment shall be available to hand.

Have a dry powder or CO<sub>2</sub> fire extinguisher adjacent to the charging area.

### 6-6 No ignition sources

No person carrying out work in relation to a refrigeration system which involves exposing any pipe work that contains or has contained flammable refrigerant shall use any sources of ignition in such a manner that it may lead to the risk of fire or explosion.

All possible ignition sources, including cigarette smoking, should be kept sufficiently far away from the site of installation, repairing, removing and disposal, during which flammable refrigerant can possibly be released to the surrounding space.

Prior to work taking place, the area around the equipment is to be surveyed to make sure that there are no flammable hazards or ignition risks. "No Smoking" signs shall be displayed.

### 6-7 Ventilated area

Ensure that the area is in the open or that it is adequately ventilated before breaking into the system or conducting any hot work.

A degree of ventilation shall continue during the period that the work is carried out.

The ventilation should safely disperse any released refrigerant and preferably expel it externally into the atmosphere.

### 6-8 Checks to the refrigeration equipment

Where electrical components are being changed, they shall be fit for the purpose and to the correct specification. At all times the manufacturer's maintenance and service guidelines shall be followed. If in doubt consult the manufacturer's technical department for assistance.

The following checks shall be applied to installations using flammable refrigerants:

- The charge size is in accordance with the room size within which the refrigerant containing parts are installed;
- The ventilation machinery and outlets are operating adequately and are not obstructed;
- If an indirect refrigerating circuit is being used, the secondary circuit shall be checked for the presence of refrigerant;



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- Marking to the equipment continues to be visible and legible. Markings and signs that are illegible shall be corrected;
  - Refrigeration pipe or components are installed in a position where they are unlikely to be exposed to any substance which may corrode refrigerant containing components, unless the components are constructed of materials which are inherently resistant to being corroded or are suitably protected against being so corroded.

#### 6-9 Checks to electrical devices

Repair and maintenance to electrical components shall include initial safety checks and component inspection procedures.

If a fault exists that could compromise safety, then no electrical supply shall be connected to the circuit until it is satisfactorily dealt with.

If the fault cannot be corrected immediately but it is necessary to continue operation, an adequate temporary solution shall be used.

This shall be reported to the owner of the equipment so all parties are advised. Initial safety checks shall include:

- That capacitors are discharged: this shall be done in a safe manner to avoid possibility of sparking;
- That there no live electrical components and wiring are exposed while charging, recovering or purging the system;
- That there is continuity of earth bonding.

#### 7. Repairs to sealed components

During repairs to sealed components, all electrical supplies shall be disconnected from the equipment being worked upon prior to any removal of sealed covers, etc.

If it is absolutely necessary to have an electrical supply to equipment during servicing, then a permanently operating form of leak detection shall be located at the most critical point to warn of a potentially hazardous situation.

Particular attention shall be paid to the following to ensure that by working on electrical components, the casing is not altered in such a way that the level of protection is affected.

This shall include damage to cables, excessive number of connections, terminals not made to original specification, damage to seals, incorrect fitting of glands, etc.

Ensure that apparatus is mounted securely.

Ensure that seals or sealing materials have not degraded such that they no longer serve the purpose of preventing the ingress of flammable atmospheres.

Replacement parts shall be in accordance with the manufacturer's specifications.

#### **NOTE:**

The use of silicon sealant may inhibit the effectiveness of some types of leak detection equipment. Intrinsically safe components do not have to be isolated prior to working on them.

#### 8. Repair to intrinsically safe components

Do not apply any permanent inductive or capacitance loads to the circuit without ensuring that this will not exceed the permissible voltage and current permitted for the equipment in use.

Intrinsically safe components are the only types that can be worked on while live in the presence of a flammable atmosphere. The test apparatus shall be at the correct rating.

Replace components only with parts specified by the manufacturer.

Other parts may result in the ignition of refrigerant in the atmosphere from a leak.

#### 9. Cabling

Check that cabling will not be subject to wear, corrosion, excessive pressure, vibration, sharp edges or any other adverse environmental effects.

The check shall also take into account the effects of aging or continual vibration from sources such as compressors or fans.

#### 10. Detection of flammable refrigerants

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Under no circumstances shall potential sources of ignition be used in the searching for or detection of refrigerant leaks.

A halide torch (or any other detector using a naked flame) shall not be used.

#### 11. Leak detection methods

The following leak detection methods are deemed acceptable for systems containing flammable refrigerants:

- Electronic leak detectors shall be used to detect flammable refrigerants, but the sensitivity may not be adequate, or may need re-calibration. (Detection equipment shall be calibrated in a refrigerant-free area.)
- Ensure that the detector is not a potential source of ignition and is suitable for the refrigerant used.
- Leak detection equipment shall be set at a percentage of the LFL of the refrigerant and shall be calibrated to the refrigerant employed and the appropriate percentage of gas (25 % maximum) is confirmed.
- Leak detection fluids are suitable for use with most refrigerants but the use of detergents containing chlorine shall be avoided as the chlorine may react with the refrigerant and corrode the copper pipe-work.
- If a leak is suspected, all naked flames shall be removed/ extinguished.
- If a leakage of refrigerant is found which requires brazing, all of the refrigerant shall be recovered from the system, or isolated (by means of shut off valves) in a part of the system remote from the leak.
- Oxygen free nitrogen (OFN) shall then be purged through the system both before and during the brazing process.

#### 12. Removal and evacuation

When breaking into the refrigerant circuit to make repairs – or for any other purpose – conventional procedures shall be used.

However, it is important that best practice is followed since flammability is a consideration.

The following procedure shall be adhered to:

- Remove refrigerant;
- Purge the circuit with inert gas;
- Evacuate;
- Purge again with inert gas;
- Open the circuit by cutting or brazing.

The refrigerant charge shall be recovered into the correct recovery cylinders.

The system shall be “flushed” with OFN to render the unit safe.

This process may need to be repeated several times.

Compressed air or oxygen shall not be used for this task.

Flushing shall be achieved by breaking the vacuum in the system with OFN and continuing to fill until the working pressure is achieved, then venting to atmosphere, and finally pulling down to a vacuum.

This process shall be repeated until no refrigerant is within the system. When the final OFN charge is used, the system shall be vented down to atmospheric pressure to enable work to take place.

This operation is absolutely vital if brazing operations on the pipe-work are to take place.

Ensure that the outlet for the vacuum pump is not close to any ignition sources and there is ventilation available.

#### 13. Charging procedures

In addition to conventional charging procedures, the following requirements shall be followed:

- Ensure that contamination of different refrigerants does not occur when using charging equipment.
- Hoses or lines shall be as short as possible to minimise the amount of refrigerant contained in them.
- Cylinders shall be kept upright.
- Ensure that the refrigeration system is earthed prior to charging the system with refrigerant.
- Label the system when charging is complete (if not already).
- Extreme care shall be taken not to overfill the refrigeration system.

Prior to recharging the system it shall be pressure tested with OFN.

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The system shall be leak tested on completion of charging but prior to commissioning.

A follow up leak test shall be carried out prior to leaving the site.

#### 14.Decommissioning

Before carrying out this procedure, it is essential that the technician is completely familiar with the equipment and all its detail.

It is recommended good practice that all refrigerants are recovered safely.

Prior to the task being carried out, an oil and refrigerant sample shall be taken in case analysis is required prior to re-use of reclaimed refrigerant. It is essential that electrical power is available before the task is commenced.

a) Become familiar with the equipment and its operation.

b) Isolate system electrically.

c) Before attempting the procedure ensure that:

- Mechanical handling equipment is available, if required, for handling refrigerant cylinders;
- All personal protective equipment is available and being used correctly;
- The recovery process is supervised at all times by a competent person;
- Recovery equipment and cylinders conform to the appropriate standards.

d) Pump down refrigerant system, if possible.

e) If a vacuum is not possible, make a manifold so that refrigerant can be removed from various parts of the system.

f) Make sure that cylinder is situated on the scales before recovery takes place.

g) Start the recovery machine and operate in accordance with manufacturer's instructions.

h) Do not overfill cylinders. (No more than 80 % volume liquid charge). I ) Do not exceed the maximum working pressure of the cylinder, even temporarily.

j ) When the cylinders have been filled correctly and the process completed, make sure that the cylinders and the equipment are removed from site promptly and all isolation valves on the equipment are closed off.

k) Recovered refrigerant shall not be charged into another refrigeration system unless it has been cleaned and checked.

#### 15.Labelling

Equipment shall be labelled stating that it has been de-commissioned and emptied of refrigerant.

The label shall be dated and signed.

Ensure that there are labels on the equipment stating the equipment contains flammable refrigerant.

#### 16.Recovery

When removing refrigerant from a system, either for servicing or decommissioning, it is recommended good practice that all refrigerants are removed safely.

When transferring refrigerant into cylinders, ensure that only appropriate refrigerant recovery cylinders are employed.

Ensure that the correct number of cylinders for holding the total system charge is available.

All cylinders to be used are designated for the recovered refrigerant and labelled for that refrigerant (i.e. special cylinders for the recovery of refrigerant).

Cylinders shall be complete with pressure relief valve and associated shut-off valves in good working order.

Empty recovery cylinders are evacuated and, if possible, cooled before recovery occurs.

The recovery equipment shall be in good working order with a set of instructions concerning the equipment that is at hand and shall be suitable for the recovery of flammable refrigerants.

In addition, a set of calibrated weighing scales shall be available and in good working order.

Hoses shall be complete with leak-free disconnect couplings and in good condition.

Before using the recovery machine, check that it is in satisfactory working order, has been properly maintained and that any associated electrical components are sealed to prevent ignition in the event of a refrigerant release.

Consult manufacturer if in doubt.

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The recovered refrigerant shall be returned to the refrigerant supplier in the correct recovery cylinder, and the relevant Waste Transfer Note arranged.

Do not mix refrigerants in recovery units and especially not in cylinders.

If compressors or compressor oils are to be removed, ensure that they have been evacuated to an acceptable level to make certain that flammable refrigerant does not remain within the lubricant.

The evacuation process shall be carried out prior to returning the compressor to the suppliers.

Only electric heating to the compressor body shall be employed to accelerate this process.

When oil is drained from a system, it shall be carried out safely.

When moving or relocating the air conditioner, consult experienced service technicians for disconnection and reinstallation of the unit.

Do not place any other electrical products or household belongings under indoor unit or outdoor unit.

Condensation dripping from the unit might get them wet, and may cause damage or malfunction of your property.

Do not use means to accelerate the defrosting process or to clean, other than those recommended by the manufacturer.

The appliance shall be stored in a room without continuously operating ignition sources (for example, open flames, an operating gas appliance or an operating electric heater).

Do not pierce or burn.

Be aware that refrigerants may not contain an odor.

To keep ventilation openings clear of obstruction.

The appliance shall be stored in a well-ventilated area where the room size corresponds to the room area as specified for operation.

The appliance shall be stored in a room without continuously operating open flames (for example an operating gas appliance) and ignition sources (for example an operating electric heater).

Any person who is involved with working on or breaking into a refrigerant circuit should hold a current valid certificate from an industry-accredited assessment authority, which authorized their competence to handle refrigerants safely in accordance with an industry recognized assessment specification.

Servicing shall only be performed as recommended by the equipment manufacturer.

Maintenance and repair requiring the assistance of other skilled personnel shall be carried out under the supervision of the person competent in the use of flammable refrigerants.

Do not use means to accelerate the defrosting process or to clean, other than those recommended by the manufacturer.

Appliance shall be installed, operated and stored in a room with a floor area larger than 10 m<sup>2</sup>.

The installation of pipe-work shall be kept to a room with a floor area larger than 10 m<sup>2</sup>.

The pipe-work shall be compliance with national gas regulations. The maximum refrigerant charge amount is 2.5 kg.

Mechanical connectors used indoors shall comply with ISO 14903. When mechanical connectors are reused indoors, sealing parts shall be renewed.

When flared joints are reused indoors, the flare part shall be re-fabricated.

The installation of pipe-work shall be kept to a minimum.

Mechanical connections shall be accessible for maintenance purposes.

The indoor unit shall only be connected to outdoor units suitable for the same refrigerant.

The unit is a partial unit air conditioner, complying with partial unit requirements of the International Standard, and must only be connected to other units that have been confirmed as complying to corresponding partial unit requirements.

# Specifications (Indoor unit)

Type				Wall mounted				
				Inverter, Heat pump				
Model name				ASKA09KPBA	ASKA12KPBA			
Power supply intake				Outdoor unit				
System power supply		Voltage		220				
		Frequency		60				
		Available voltage range		198—242				
Indoor unit power supply (from outdoor unit)			V	220				
Capacity	Cooling	Rated	kW	2.637	3.517			
			Btu/h	9,000	12,000			
		Min.—Max.	kW	1.82—2.95	2.10—3.91			
			Btu/h	6,210—10,065	7,165—13,341			
	Heating	Rated	kW	2.637	3.517			
			Btu/h	9,000	12,000			
		Min.—Max.	kW	1.85—2.97	2.20—3.98			
			Btu/h	6,312—10,134	7,506—13,580			
Input power	Cooling	Rated	kW	0.83	1.10			
		Min.—Max.		0.39—1.08	0.58—1.52			
	Heating	Rated		0.72	0.97			
		Min.—Max.		0.38—0.97	0.45—1.33			
Current	Cooling	Rated	A	3.9	5.2			
	Heating			3.4	4.6			
EER	Cooling		kW/kW	2.90	3.00			
COP	Heating			3.66	3.62			
Sensible capacity	Cooling		kW	TBD	TBD			
Power factor	Cooling		%	95				
	Heating			95				
Moisture removal			L/h (pints/h)	0.6 (1.1)	1.1 (1.9)			
Maximum operating current*1			A	5.0	7.0			
				5.0	7.0			
Fan	Airflow rate	Cooling	Higher	m³/h	590			
			High		550			
			Medium		480			
			Low		380			
			Lower		350			
		Heating	Higher		600			
			High		560			
			Medium		490			
			Low		390			
			Lower		360			
			Type × Qty			Crossflow fan × 1		
			Motor output			W		
		Sound pressure level*2	Cooling		Higher	dB (A)	14	25
	High			42	43			
Medium	39			40				
Low	36			37				
Lower	34			35				
Lower	31			33				
Heating	Higher		42	43				
	High		39	40				
	Medium		36	37				
	Low		34	35				
	Lower		31	33				
	Heat exchanger		Dimensions (H × W × D)		mm		266 × 550 × 27.2	294 × 550 × 27.2
Fin pitch		1.2	1.4					
Rows × Stages			2 × 14					
Pipe type			Copper tube					
Fin type			Aluminum					
Enclosure	Material			Polystyrene				
	Color			White				
Dimensions (H × W × D)	Net		mm	270 × 796 × 213				
	Gross			335 × 870 × 265				
Weight	Net		kg	7.5	8.0			
	Gross			9.5	10.0			
Connection pipe	Size	Liquid	mm (in)	Ø6.35 (Ø1/4)				
		Gas		Ø9.52 (Ø3/8)				
	Method			Flare				
Drain hose	Material			Polyethylene				
	Tip diameter			Ø15.4 (I.D.), Ø17.6 to Ø30.0 (O.D.)				
Operation range	Cooling			16 to 30				
				%RH 80 or less				
	Heating			16 to 30				
				Wireless				
Remote controller type								

## NOTES:

- Specifications are based on the following conditions:
  - Cooling: Indoor temperature of 27°CDB/19°CWB, and outdoor temperature of 35°CDB/24°CWB.
  - Heating: Indoor temperature of 21°CDB/15°CWB, and outdoor temperature of 7°CDB/6°CWB.
  - Pipe length: 5 m, Height difference: 0 m. (Between outdoor unit and indoor unit.)
- Protective function might work when using it outside the operation range.
- \*1: Maximum operating current is the total current of the indoor unit and the outdoor unit.
- \*2: Sound pressure level:
  - Measured values in manufacturer's anechoic chamber.
  - Because of the surrounding sound environment, the sound levels measured in actual installation conditions might be higher than the specified values here.

Type				Wall mounted				
				Inverter, Heat pump				
Model name				ASKA18KPBA	ASKA24KPBA			
Power supply intake				Outdoor unit				
System power supply		Voltage		220				
		Frequency		60				
		Available voltage range		198—242				
Indoor unit power supply (from outdoor unit)			V	220				
Capacity	Cooling	Rated	kW	5.274	7.032			
			Btu/h	18,000	24,000			
		Min.—Max.	kW	3.51—5.61	3.91—7.39			
			Btu/h	11,976—19,141	13,341—25,215			
	Heating	Rated	kW	5.400	7.032			
			Btu/h	18,430	24,000			
		Min.—Max.	kW	3.52—5.62	3.80—7.80			
			Btu/h	12,010—19,175	12,966—26,614			
Input power	Cooling	kW	Rated	1.625	2.250			
			Min.—Max.	0.75—1.93	1.29—2.67			
	Heating		Rated	1.480	1.950			
			Min.—Max.	0.73—1.91	1.18—2.56			
Current	Cooling	Rated	A	7.6	10.2			
Heating	6.9			8.9				
EER	Cooling		kW/kW	3.20	3.02			
COP	Heating			3.64	3.61			
Sensible capacity	Cooling		kW	TBD	TBD			
Power factor	Cooling		%	97	96			
	Heating			97	96			
Moisture removal			L/h (pints/h)	1.8 (3.2)	2.2 (3.9)			
Maximum operating current*1		Cooling		A	12.7	14.5		
		Heating			12.7	13.6		
Fan	Airflow rate	Cooling	Higher	m³/h	1,000	1,200		
			High		950	1,150		
			Medium		850	1,000		
			Low		780	920		
			Lower		660	850		
		Heating	Higher		1,100	1,200		
			High		980	1,150		
			Medium		900	1,000		
			Low		800	920		
			Lower		680	850		
		Type × Qty			Crossflow fan × 1			
		Motor output			W	35	50	
		Sound pressure level*2	Cooling		Higher	dB (A)	46	50
					High		44	48
Medium	41			47				
Low	39			45				
Lower	36			41				
Higher	46			50				
Heating	High		44	47				
	Medium		41	45				
	Low		39	42				
	Lower		35	39				
	Dimensions (H × W × D)			378 × 705 × 27.2	378 × 842 × 27.2			
	Fin pitch		mm	1.4				
Rows × Stages			2 × 18					
Pipe type			Copper tube					
Fin type			Aluminum					
Enclosure	Material		Polystyrene					
	Color		White					
Dimensions (H × W × D)	Net		mm	310 × 968 × 235	315 × 1,140 × 235			
	Gross			380 × 1,022 × 310	380 × 1,195 × 310			
Weight	Net		kg	12.0	14.0			
	Gross			14.0	16.0			
Connection pipe	Size	Liquid	mm (in)	Ø6.35 (Ø1/4)				
		Gas		Ø12.70 (Ø1/2) Ø15.88 (Ø5/8)				
	Method			Flare				
Drain hose	Material		Polyethylene					
	Tip diameter		mm	Ø15.4 (I.D.), Ø17.6 to Ø30.0 (O.D.)				
Operation range	Cooling			°C	16 to 30			
				%RH	80 or less			
	Heating			°C	16 to 30			
Remote controller type				Wireless				

#### NOTES:

- Specifications are based on the following conditions:
  - Cooling: Indoor temperature of 27°CDB/19°CWB, and outdoor temperature of 35°CDB/24°CWB.
  - Heating: Indoor temperature of 21°CDB/15°CWB, and outdoor temperature of 7°CDB/6°CWB.
  - Pipe length: 5 m, Height difference: 0 m. (Between outdoor unit and indoor unit.)
- Protective function might work when using it outside the operation range.
- \*1: Maximum operating current is the total current of the indoor unit and the outdoor unit.
- \*2: Sound pressure level:
  - Measured values in manufacturer's anechoic chamber.
  - Because of the surrounding sound environment, the sound levels measured in actual installation conditions might be higher than the specified values here.

Type				Wall mounted			
				Inverter, Heat pump			
Model name				ASKA30KPBA		ASKA36KPBA	
Power supply intake				Outdoor unit			
System power supply		Voltage		220			
		Frequency		60			
		Available voltage range		198—242			
Indoor unit power supply (from outdoor unit)				220			
Capacity	Cooling	Rated	kW	8.790	10.548		
			Btu/h	30,000	36,000		
		Min.—Max.	kW	4.66—9.18	4.53—10.70		
			Btu/h	15,900—31,322	15,456—36,508		
	Heating	Rated	kW	8.79	10.548		
			Btu/h	30,000	36,000		
		Min.—Max.	kW	4.39—10.20	4.98—11.12		
			Btu/h	14,979—34,802	16,992—37,941		
Input power	Cooling	Rated	kW	2.60	3.38		
		Min.—Max.		1.51—2.91	1.64—3.91		
	Heating	Rated		2.44	3.26		
		Min.—Max.		1.48—2.88	1.58—3.80		
Current	Cooling	Rated	A	12.2	15.8		
	Heating			11.5	15.3		
EER	Cooling		kW/kW	3.40	3.05		
COP	Heating			3.60	3.24		
Sensible capacity	Cooling		kW	TBD	TBD		
Power factor	Cooling		%	96			
	Heating			97			
Moisture removal			L/h (pints/h)	2.6 (4.6)	3.0 (5.3)		
Maximum operating current*1		Cooling		A	15.0	18.2	
		Heating			15.5	17.7	
Fan	Airflow rate	Cooling	Higher	m³/h	1,800		
			High		1,700		
			Medium		1,550		
			Low		1,380		
			Lower		1,100		
		Heating	Higher		1,850	1,860	
			High		1,700	1,750	
			Medium		1,500	1,550	
			Low		1,400	1,450	
			Lower		1,150	1,200	
	Type × Qty			Crossflow fan × 1			
	Motor output			W	70		
	Sound pressure level*2	Cooling	Higher	dB (A)	53		
			High		51		
Medium			50				
Low			48				
Lower			44				
Heating		Higher	53		51		
		High	51		50		
		Medium	50		48		
		Low	48		44		
		Lower	44				
Heat exchanger	Dimensions (H × W × D)		mm	420 × 985 × 27.2	Main: 420 × 985 × 27.2 Sub: 168 × 985 × 13.6		
	Fin pitch			1.4	Main: 1.4 Sub: 1.4		
	Rows × Stages			2 × 20	Main: 2 × 20 Sub: 1 × 8		
	Pipe type			Copper tube			
	Fin type			Aluminum			
Enclosure	Material			Polystyrene			
	Color			White			
Dimensions (H × W × D)	Net		mm	345 × 1,297 × 256			
	Gross			435 × 1,385 × 325			
Weight	Net		kg	18.0			
	Gross			21.5	22.0		
Connection pipe	Size	Liquid	mm (in)	Ø9.52 (Ø3/8)			
		Gas		Ø15.88 (Ø5/8)			
	Method			Flare			
Drain hose	Material			Polyethylene			
	Tip diameter		mm	Ø15.4 (I.D.), Ø17.6 to Ø30.0 (O.D.)			
Operation range	Cooling			°C	16 to 30		
				%RH	80 or less		
	Heating			°C	16 to 30		
Remote controller type				Wireless			
NOTES:							
<ul style="list-style-type: none"><li>Specifications are based on the following conditions:<ul style="list-style-type: none"><li>Cooling: Indoor temperature of 27°CDB/19°CWB, and outdoor temperature of 35°CDB/24°CWB.</li><li>Heating: Indoor temperature of 21°CDB/15°CWB, and outdoor temperature of 7°CDB/6°CWB.</li><li>Pipe length: 5 m, Height difference: 0 m. (Between outdoor unit and indoor unit.)</li></ul></li><li>Protective function might work when using it outside the operation range.</li><li>*1: Maximum operating current is the total current of the indoor unit and the outdoor unit.</li><li>*2: Sound pressure level:<ul style="list-style-type: none"><li>Measured values in manufacturer's anechoic chamber.</li><li>Because of the surrounding sound environment, the sound levels measured in actual installation conditions might be higher than the specified values here.</li></ul></li></ul>							

# Specifications (Outdoor unit)

Type				Inverter, Heat pump		
Model name				AOKA09KPBA	AOKA12KPBA	
Power supply				220 V~ 60 Hz		
Power supply intake				Outdoor unit		
Available voltage range				198—242 V		
Starting current			A	0.9	1.1	
Fan	Airflow rate	Cooling	m³/h	1,800		
		Heating		1,800		
	Type × Qty		Propeller fan × 1			
	Motor output		W	36	20	
Sound pressure level*1		Cooling	dB (A)	51	52	
		Heating		51	52	
Heat exchanger type		Dimensions (H × W × D)	mm	462 × 603 × 18.19	464 × 687 × 21.65	
		Fin pitch		1.4		
		Rows × Stages		1 × 22	1 × 27	
		Pipe type		Copper tube		
		Fin type		Type (Material)	Aluminum	
				Hydrophily		
Compressor	Type			DC rotary		
	Motor output		W	925	915	
Refrigerant		Type		R32		
		Charge	g	480	630	
Refrigerant oil		Type		Polyolester		
		Amount	cm³	240		
Enclosure		Material		Steel sheet		
		Color		Gray-white		
Dimensions (H × W × D)	Net		mm	482 × 660 × 240		
	Gross			530 × 780 × 315		
Weight	Net		kg	19.0	21.5	
	Gross			22.0	24.5	
Connection pipe	Size	Liquid	mm (in)	Ø6.35 (Ø1/4)		
		Gas		Ø9.52 (Ø3/8)		
	Method		Flare			
	Pre-charge length		m	5		
	Max. length			15		
	Max. height difference			5		
	Additional charge			20		
			g/m			
Operation range*2		Cooling	°C	16 to 46*3		
		Heating		-15 to 24		
NOTES:						
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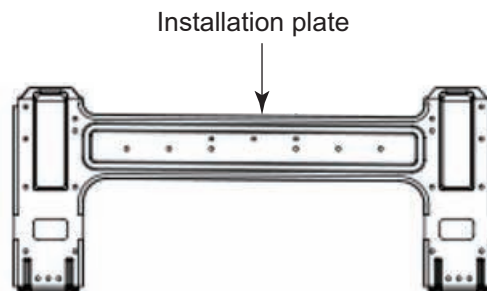
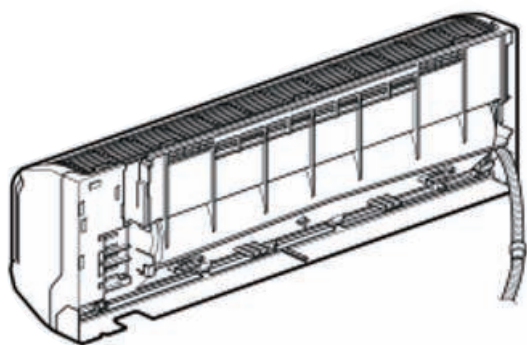
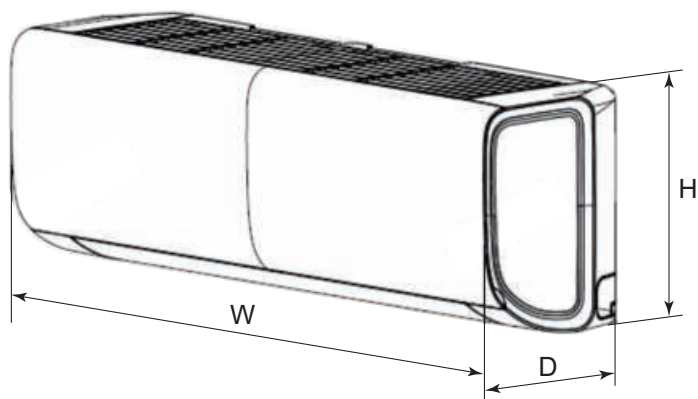


Type			Inverter, Heat pump		
Model name			AOKA18KPBA		AOKA24KPBA
Power supply			220 V~ 60 Hz		
Power supply intake			Outdoor unit		
Available voltage range			198—242 V		
Starting current			A	1.9	2.4
Fan	Airflow rate	Cooling	m³/h	2,200	3,500
		Heating		2,200	3,500
	Type × Qty		Propeller fan × 1		
	Motor output		W	36	60
Sound pressure level*1		Cooling	dB (A)	55	56
		Heating		55	56
Heat exchanger type		Dimensions (H × W × D)	mm	Main 1: 504 × 795 × 18.19 Main 2: 504 × 766 × 18.19	636 × 899 × 21.65
		Fin pitch		Main 1: 1.4 Main 2: 1.4	1.3
		Rows × Stages		Main 1: 1 × 24 Main 2: 1 × 24	1 × 37
		Pipe type		Copper tube	
		Fin type	Type (Material)	Aluminum	
			Surface treatment	Hydrophily	
Compressor	Type		DC rotary		
	Motor output		W	1,035	1,320
Refrigerant		Type	R32		
		Charge	g	1,050	1,320
Refrigerant oil		Type	Polyolester		
		Amount	cm³	360	630
Enclosure		Material		Steel sheet	
		Color		Gray-white	
Dimensions (H × W × D)	Net		mm	540 × 780 × 260	650 × 860 × 310
	Gross			600 × 910 × 360	720 × 995 × 420
Weight	Net		kg	29.0	39.0
	Gross			32.0	46.0
Connection pipe	Size	Liquid	mm (in)	Ø6.35 (Ø1/4)	
		Gas		Ø12.70 (Ø1/2)	
	Method		Flare		
	Pre-charge length		m	5	
	Max. length			15	
	Max. height difference			5	
	Additional charge		g/m	20	30
	Operation range*2		Cooling	°C	16 to 46*3
Heating			-15 to 24		
NOTES:					
<ul style="list-style-type: none"><li>Specifications are based on the following conditions:<ul style="list-style-type: none"><li>Cooling: Indoor temperature of 27 °CDB/19 °CWB, and outdoor temperature of 35 °CDB/24 °CWB.</li><li>Heating: Indoor temperature of 21°CDB/15°CWB, and outdoor temperature of 7°CDB/6°CWB.</li><li>Pipe length: 5 m, Height difference: 0 m.</li></ul></li><li>Protective function might work when using it outside the operation range.</li><li>*1: Sound pressure level<ul style="list-style-type: none"><li>Measured values in manufacturer's anechoic chamber.</li><li>Because of the surrounding sound environment, the sound levels measured in actual installation conditions might be higher than the specified values here.</li></ul></li><li>*2: The protection circuits might activate to stop the unit's operation outside the temperature range.</li><li>*3: Suction temperature of the outdoor unit.</li></ul>					

Type				Inverter, Heat pump		
Model name				AOKA30KPBA	AOKA36KPBA	
Power supply				220 V~ 60 Hz		
Power supply intake				Outdoor unit		
Available voltage range				198—242 V		
Starting current			A	3.1	4.0	
Fan	Airflow rate	Cooling	m³/h	3,800		
		Heating		3,800		
	Type × Qty			Propeller fan × 1		
	Motor output		W	102		
Sound pressure level*1		Cooling	dB (A)	60		
		Heating		60		
Heat exchanger type		Dimensions (H × W × D)	mm	Main 1: 714 × 970 × 18.19 Main 2: 714 × 942 × 18.19	Main 1: 714 × 962 × 18.19 Main 2: 714 × 934 × 18.19 Main 3: 714 × 550 × 18.19	
		Fin pitch		Main 1: 1.6 Main 2: 1.6	Main 1: 1.6 Main 2: 1.6 Main 3: 1.6	
		Rows × Stages		Main 1: 1 × 34 Main 2: 1 × 34	Main 1: 1 × 34 Main 2: 1 × 34 Main 3: 1 × 34	
		Pipe type		Copper tube		
		Fin type	Type (Material)	Aluminum		
			Surface treatment	Hydrophily		
Compressor	Type			DC rotary		
	Motor output		W	2,055	2,765	
Refrigerant		Type		R32		
		Charge	g	1,620	2,480	
Refrigerant oil		Type		Polyolester		
		Amount	cm³	620	1,000	
Enclosure		Material		Steel sheet		
		Color		Gray-white		
Dimensions (H × W × D)	Net		mm	750 × 900 × 340		
	Gross			820 × 1,060 × 450		
Weight	Net		kg	49.0	58.5	
	Gross			53.0	62.0	
Connection pipe	Size	Liquid	mm (in)	Ø9.52 (Ø3/8)		
		Gas		Ø15.88 (Ø5/8)		
	Method		Flare			
	Pre-charge length		m	5		
	Max. length			15		
	Max. height difference			5		
	Additional charge		g/m	40		
Operation range*2		Cooling	°C	16 to 46*3		
		Heating		-15 to 24		
NOTES:						
<div><div><div>• Specifications are based on the following conditions:</div><div><div>– Cooling: Indoor temperature of 27 °CDB/19 °CWB, and outdoor temperature of 35 °CDB/24 °CWB.</div><div>– Heating: Indoor temperature of 21°CDB/15°CWB, and outdoor temperature of 7°CDB/6°CWB.</div><div>– Pipe length: 5 m, Height difference: 0 m.</div></div></div><div><div>• Protective function might work when using it outside the operation range.</div><div>• *1: Sound pressure level</div><div><div>– Measured values in manufacturer's anechoic chamber.</div><div>– Because of the surrounding sound environment, the sound levels measured in actual installation conditions might be higher than the specified values here.</div></div><div>• *2: The protection circuits might activate to stop the unit's operation outside the temperature range.</div><div>• *3: Suction temperature of the outdoor unit.</div></div></div>						

## Dimensions

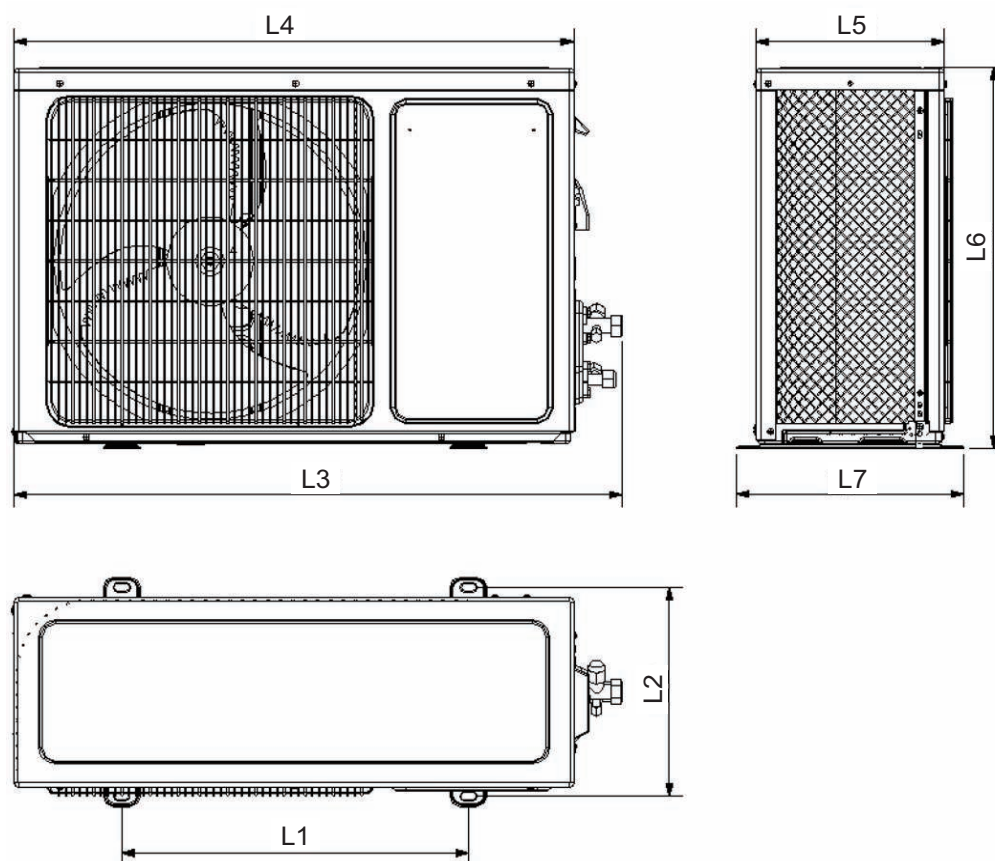
**Models: ASKA09KPBA, ASKA12KPBA, ASKA18KPBA, ASKA24KPBA, ASKA30KPBA, and ASKA36KPBA**



Model name	W	H	D
	(Unit: mm)		
ASKA09KPBA	796	270	213
ASKA12KPBA	796	270	213
ASKA18KPBA	968	310	235
ASKA24KPBA	1140	315	235
ASKA30KPBA	1297	345	256
ASKA36KPBA	1297	345	256

**NOTE:** The detailed shape of the indoor unit may vary by the model.

**Models: AOKA09KPBA, AOKA12KPBA, AOKA18KPBA, AOKA24KPBA, AOKA30KPBA, and AOKA36KPBA**



Model name	L1	L2	L3	L4	L5	L6	L7
	(mm)						
AOKA09KPBA	450	264	713	660	241	491	290
AOKA12KPBA	450	264	713	660	241	491	290
AOKA18KPBA	530	290	856	780	260	538	317
AOKA24KPBA	542	341	935	878	310	667	368
AOKA30KPBA	608	368	974	919	340	750	398
AOKA36KPBA	608	368	974	919	340	750	398

**NOTE:** The detailed shape of the outdoor unit may vary by the model.

# Installation space requirements



## WARNING

To prevent abnormal heat generation and the possibility of fire, do not place obstacles, enclosures and grilles in front of or surrounding the air conditioner in a way that may block air flow. And, more than 1 meter away from any antenna or power lines or connecting wires used for TV, radio, telephone, security system, or intercom. Electrical noise from any of these sources may affect operation.

## Installation Place and Condition

### Indoor unit

#### Avoid:

- △ direct sunlight.
- △ nearby heat sources that may affect performance of the unit.
- △ areas where leakage of flammable gas may be expected.
- △ places where large amounts of oil mist exist.

#### Do:

- △ Select an appropriate position from which every corner of the room can be uniformly cooled.
- △ Select a location that will hold the weight of the unit.
- △ Select a location where tubing and drain hose have the shortest run to the outside. (See a)
- △ Allow room for operation and maintenance as well as unrestricted air flow around the unit. (See b)
- △ Install the unit within the maximum elevation difference (H) above or below the outdoor unit and within a total tubing length (L) from the outdoor unit as detailed (See table 1 and c)

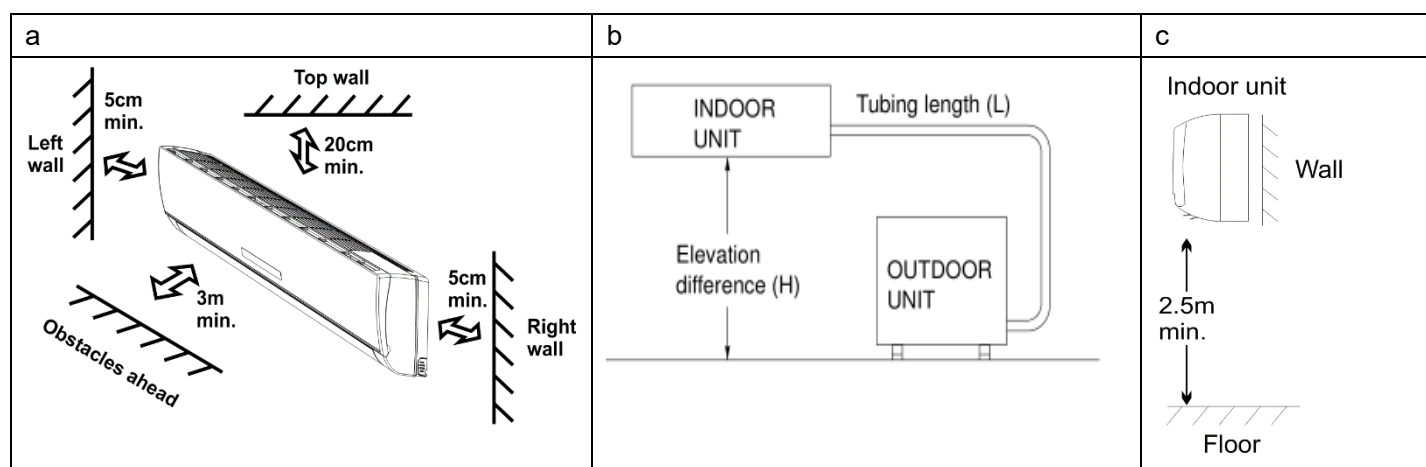


table 1

Capacity (Btu/h)	Pipe Size		Standard Length (m)	Max. Elevation B (m)	Max.Length A (m)	Additional Refrigerant (g/m)
	GAS	LIQUID				
5k~14k	3/8"(Ø9.52)	1/4"(Ø6.35)	5	5	15	20
	1/2"(Ø12.7)	1/4"(Ø6.35)	5	5	15	20
18k~28k	1/2"(Ø12.7)	1/4"(Ø6.35)	5	5	30	20
	5/8"(Ø15.88)	1/4"(Ø6.35)	5	5	30	20
	5/8"(Ø15.88)	3/8"(Ø9.52)	5	5	30	30
30k~38k	5/8"(Ø15.88)	3/8"(Ø9.52)	5	5	30	30
	3/4"(Ø19.05)	3/8"(Ø9.52)	5	5	30	40

\* If total tubing length becomes 5 to 15 m (max.), charge additional refrigerant as the table1 for reference. And no additional compressor oil is necessary.

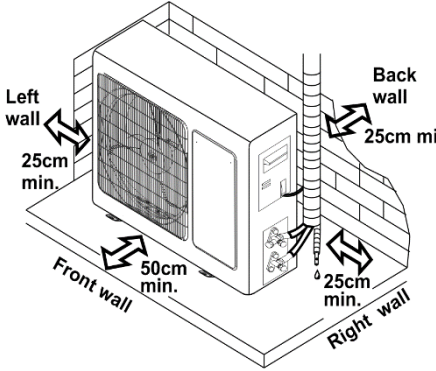
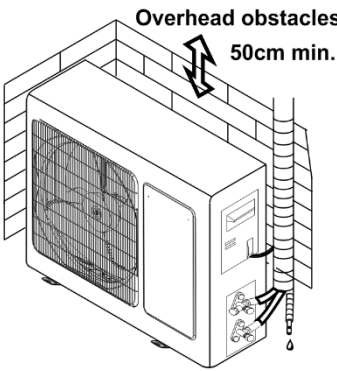
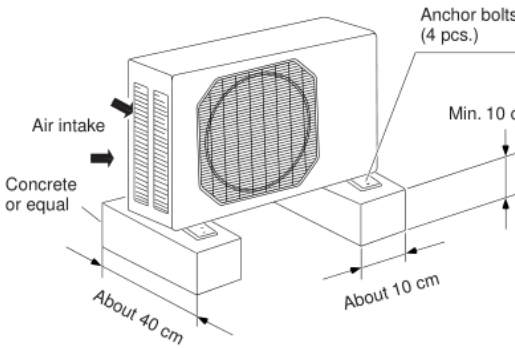
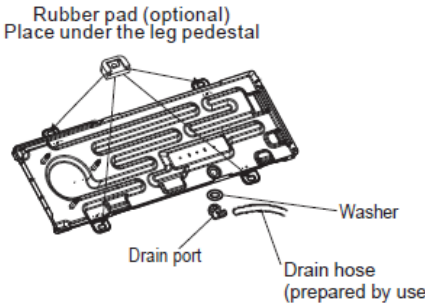
## Outdoor unit

### Avoid:

- △ Heat sources, exhaust fans, etc.
- △ Damp, humid or uneven locations.

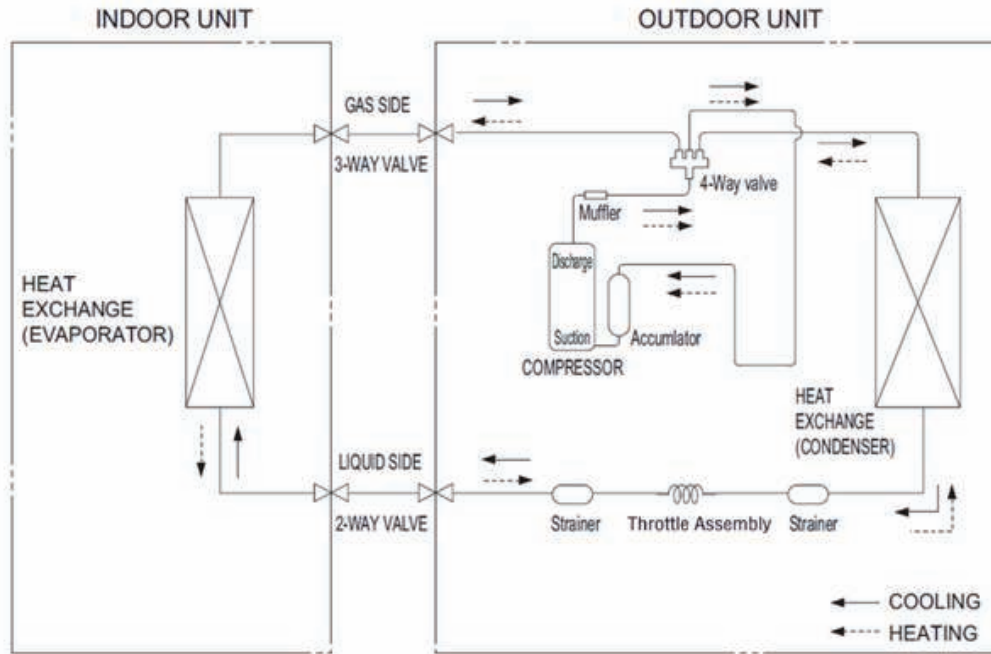
### DO:

- △ Choose a place as cool as possible.
- △ Choose a place that is well ventilated.
- △ Allow enough room around the unit for air intake or exhaust and possible maintenance. (see a1, b1 & c1)
- △ Provide a solid base (level concrete pad, concrete block, 10 × 40 cm beams or equal), a minimum of 10 cm above ground level to reduce humidity and protect the unit against possible water damage and decreased service life.
- △ If the installation bag has rubber pads, it is strongly recommended for use to reduce vibration and noise.
- △ Use lug bolts or equal to bolt down unit, reducing vibration and noise.

a1	b1	c1
		
		

## Refrigerant circuit

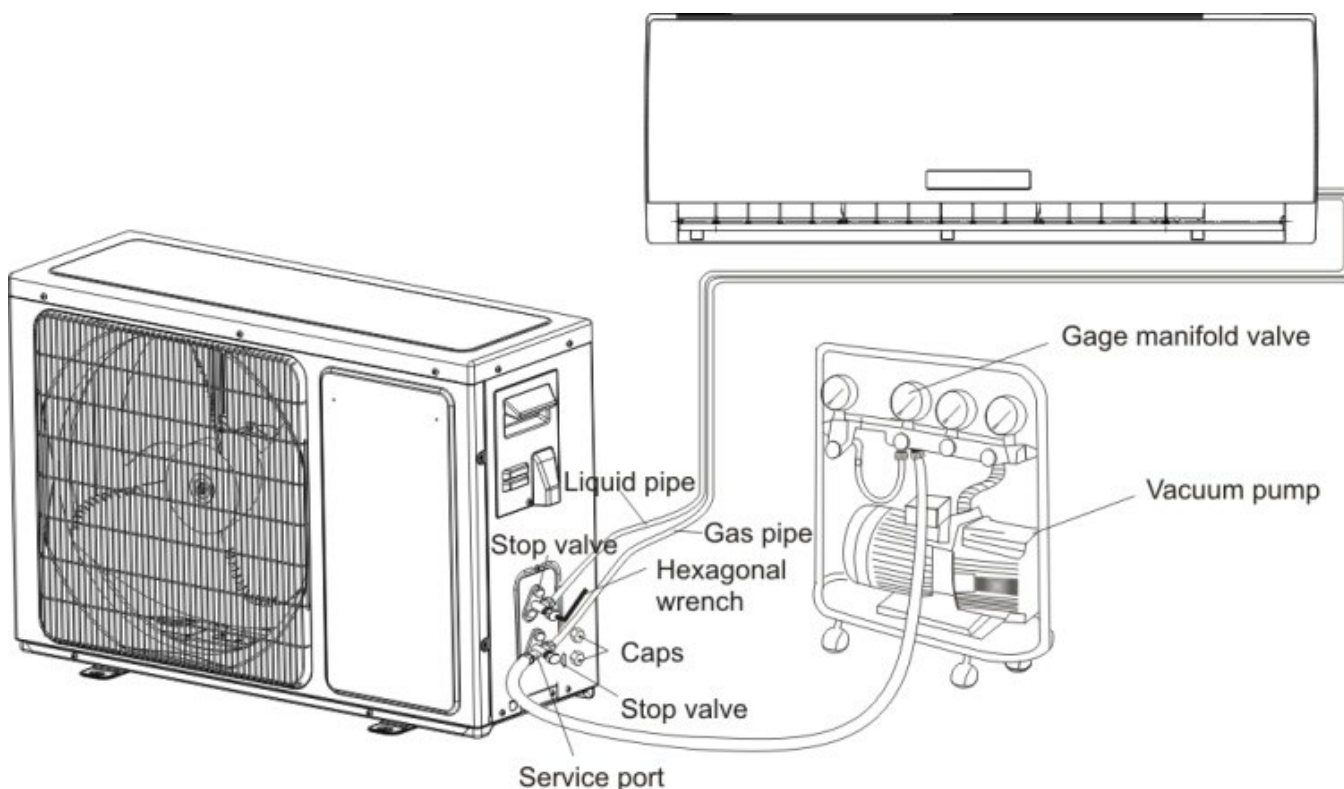
**Models: AOKA09KPBA, AOKA12KPBA, AOKA18KPBA, AOKA24KPBA, AOKA30KPBA, and AOKA36KPBA**



**NOTE:** The Throttle assembly may be a Capillary or an Electronic expansion valve in different models.

## Air purging and leakage test

1. Connect charging hose of manifold valve to charge end of low pressure valve (both high/low pressure valves must be tightly shut).
  2. Connect joint of charging hose to vacuum pump.
  3. Fully open the handle of Lo manifold valve.
  4. Open the vacuum pump to evacuate. At the beginning, slightly loosen joint nut of low pressure valve to check if there is air coming inside. (If noise of vacuum pump has been changed, the reading of multimeter is 0) Then tighten the nut.
  5. Keep evacuating for more than 15mins and make sure the reading of multi-meter is  $-1.0 \times 10^5$  pa (-76cmHg).
  6. Check the vacuum with the gage manifold valve, then close the gage manifold valve, and stop the vacuum pump.
  7. Leave it for one or two minutes. Make sure the pointer of the gage manifold valve remains in the same position.
  8. Remove the gage manifold valve quickly from the service port of the stop valve.
- After refrigerant pipes are connected and evacuated, fully open all stop valves on gas and liquid pipe sides.
9. Opening without fully opening lowers the performance and cause dangerous.
  10. Tighten the cap to the service port to obtain the initial status.
  11. Retighten the cap
  12. Leak test





# Test running

## △ Check after Installation

Items to be checked	Possible malfunction
Has it been fixed firmly?	The unit may drop, shake or emit noise.
Have you done the refrigerant leakage test?	It may cause insufficient cooling(heating)capacity
Is heat insulation sufficient?	It may cause condensation and dripping.
Is water drainage satisfactory?	It may cause condensation and dripping.
Is the voltage in accordance with the rated voltage marked on the nameplate?	It may cause electric malfunction or damage the product.
Is the electric wiring and piping connection installed correctly and securely?	It may cause electric malfunction or damage the part.
Has the unit been connected to a secure earth connection?	It may cause electrical leakage.
Is the power cord specified?	It may cause electric malfunction or damage the part.
Are the inlet and outlet openings blocked?	It may cause insufficient cooling(heating)capacity.
Is the length of connection pipes and refrigerant capacity been recorded?	The refrigerant capacity is not accurate.

## △Operation Test

### 1. Before Operation Test

- (1)Do not switch on power before installation is finished completely.
- (2)Electric wiring must be connected correctly and securely.
- (3)Cut-off valves of the connection pipes should be opened.
- (4)All the impurities such as scraps and thrums must be cleared from the unit.

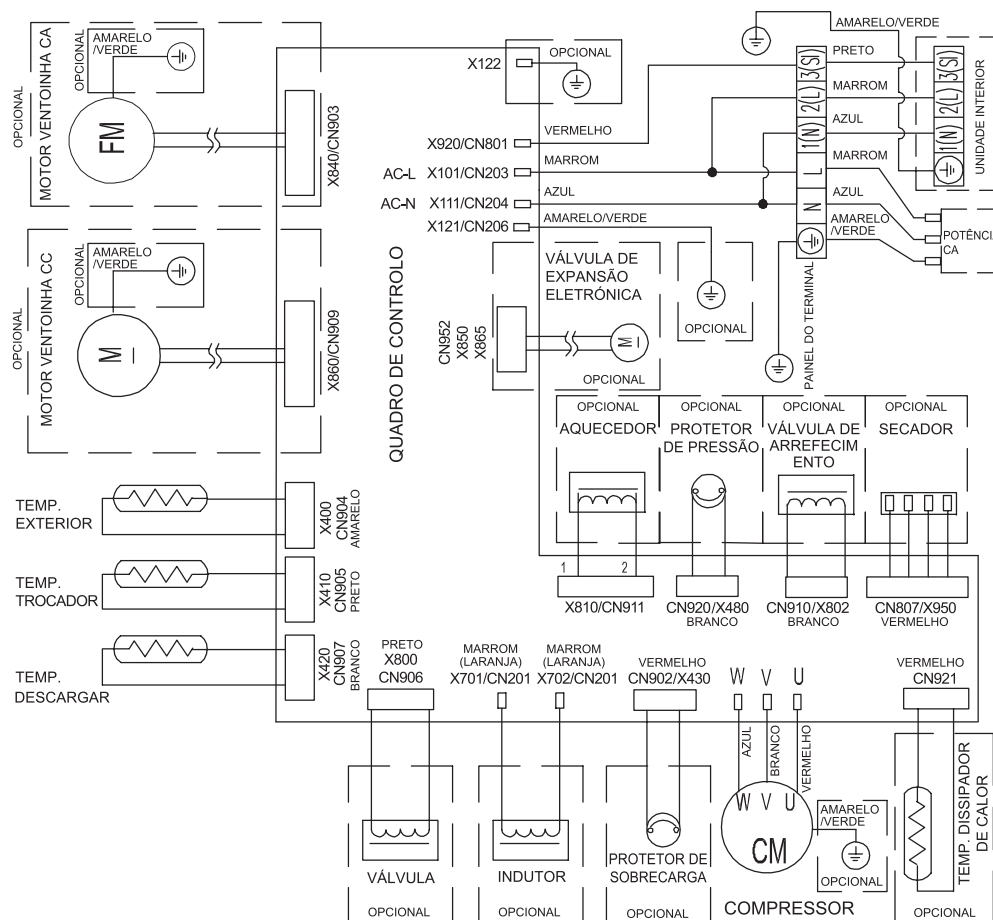
### 2. Operation Test Method

- (1)Switch on power and press “ON/OFF” button on the remote controller to start the operation.
- (2)Press MODE button to select the COOL, HEAT (Cooling only unit is not available), FAN to check whether the operation is normal or not.

**Models: ASKA09KPBA, ASKA12KPBA, ASKA18KPBA, and ASKA24KPBA**



# Models: AOKA09KPBA, AOKA12KPBA, AOKA18KPBA, AOKA24KPBA, AOKA30KPBA, and AOKA36KPBA



# Troubleshooting

## Error Code Table

### 1. Indication on the outdoor unit:

When the unit has the following trouble and the compressor stops running, The LED of outdoor control board will show the error sequence automatically:

**NOTE:** ★: LIGHT    O: FLASH    ×: OFF

Error code	Outdoor Failure Description	LED1	LED2	LED3	the root cause may be one of the following
<b>Mark description: the lights flash every second for the following faults</b>					
	Normal	×	×	×	
	Outdoor coil temperature sensor in trouble	★	×	★	<b>a.</b> the outdoor coil sensor connect loose; <b>b.</b> the outdoor coil temperature sensor is failure; <b>c.</b> the outdoor control board is failure
	Compressor exhaust temperature sensor in trouble	★	×	×	<b>a.</b> the compressor exhaust temperature sensor connect loose; <b>b.</b> the compressor exhaust temperature sensor is failure; <b>c.</b> the outdoor control board is failure
	Communication failure between the indoor unit and outdoor unit	×	×	O	<b>a.</b> the communication cable connect loose; <b>b.</b> the communication cable is failure; <b>c.</b> the connection between the filter board and the outdoor control board is incorrect or loose; <b>d.</b> the connection between the filter board and the terminal is incorrect or loose; <b>e.</b> the indoor control board is failure; <b>f.</b> the PFC board is failure; <b>g.</b> the power board is failure; <b>h.</b> the outdoor control board is failure.
	Current overload protection	★	O	×	<b>a.</b> the fan motor run abnormally; <b>b.</b> the condenser or and evaporator is dirty; <b>c.</b> the air inlet and outlet is abnormally
	Maximum current protection	★	O	★	<b>a.</b> the outdoor control board is short circuit; <b>b.</b> the drive board is short circuit; <b>c.</b> the other components is short circuit
	Communication trouble between outdoor unit and driver	×	★	★	<b>a.</b> the connection wires connect loose <b>b.</b> the outdoor board or drive board is failure;
	Outdoor EEPROM in trouble	★	★	★	<b>a.</b> the EEPROM chip is loose; <b>b.</b> the EEPROM chip inserted with opposite direction; <b>c.</b> the EEPROM chip is failure

	Compressor exhaust temperature too high protection	×	O	★	<b>a.</b> the compressor exhaust temperature sensor is failure; <b>b.</b> the refrigerant of the unit is not enough
	Outdoor ambient temperature sensor in trouble	★	★	×	<b>a.</b> the outdoor ambient temperature sensor connect loose; <b>b.</b> the outdoor ambient temperature sensor is failure; <b>c.</b> the outdoor control board is failure
	Compressor shell temperature too high protection	×	★	O	<b>a.</b> the compressor exhaust temperature sensor connect loose <b>b.</b> the refrigerant of the unit is not enough
	Anti-freeze protection with cooling or overload protection with heating in indoor unit	×	O	O	<b>a.</b> the indoor coil temperature sensor connect loose; <b>b.</b> the indoor coil temperature sensor is failure; <b>c.</b> the indoor control board is failure <b>d.</b> the refrigerant system is abnormal.
	Compressor drive in trouble	O	×	O	<b>a.</b> the outdoor drive board is failure; <b>b.</b> the compressor is failure <b>c.</b> the outdoor control board is failure
	Outdoor fan motor locked rotor protection	O	O	★	<b>a.</b> the connection of the outdoor fan motor is loose; <b>b.</b> there are something block the outdoor fan; <b>c.</b> the fan motor is failure; <b>d.</b> the outdoor control board is failure
	Outdoor coil anti-overload protection with cooling	×	★	×	<b>a.</b> the refrigerant is too much; <b>b.</b> the outdoor fan motor is failure; <b>c.</b> the outdoor fan is broken; <b>d.</b> the condenser is dirty; <b>e.</b> the air inlet and air outlet of the indoor unit and the outdoor unit is not normally
	IPM module protection	×	O	×	<b>a.</b> The IPM board is failure; <b>b.</b> The outdoor fan is broken; <b>c.</b> The outdoor fan motor is failure; <b>d.</b> The outdoor fan has been blocked ; <b>e.</b> The condenser is dirty; <b>f.</b> The outdoor unit has been installed without standard.
	PFC protection	O	×	×	<b>a.</b> the PFC is failure; <b>b.</b> the outdoor drive board is failure
	Compressor pre heating process	O	★	O	it is normal mode in cold weather
	Chip in outdoor board in trouble	★	×	O	<b>a.</b> Using the wrong drive board; <b>b.</b> Using the wrong compressor.

	AC voltage higher or lower protection	★	★	O	a. the supply voltage is higher or lower than normal; b. the inner supply voltage of the unit is higher or lower than normal
	DC compressor start failure	O	O	×	a. the outdoor drive board is failure; b. the compressor is failure
	Outdoor ambient temperature too low protection	★	O	O	a. Outdoor ambient temperature too low
	There is a leak in the product (Just suitable for some products only)	O	★	★	a. There is a leak in the indoor b. There is a leak in the outdoor c. There is a leak in the connecting pipe
<b>Mark description: the lights flash every two seconds for the following faults</b>					
	Protection against overheated outdoor radiator	O	×	×	a. Radiator sensors fail b. Detection circuit of the sensor on the control panel fails
	Protection of the system against too high pressure	O	O	×	a. The pressure switch fails b. The pressure detection switch on the control panel fails c. The measured value of the system pressure exceeds the limit
	protection of the system abnormal	×	O	★	a. Check whether the outdoor valves are opened.
	protection of the AU PeakSmart function (Just suitable for AU products only)	O	×	★	a. Check whether the Dred sing required by AU grid PeakSmart function was triggered by mistake.

**When the compressor is in operation:**

Mark description: ★: LightO: Flash ×: Off; the flash cycle is 1S				
No.	LED1	LED2	LED3	Reasons for the current operating frequency of the compressor is limited
1	O	O	O	Normal frequency rising and decreasing, no limitation
2	×	×	★	Frequency decreasing or prohibition of frequency rising caused by over-current
3	×	★	★	Frequency decreasing or prohibition of frequency rising caused by anti-freezing of refrigeration or anti-overload in heating
4	★	×	★	Frequency decreasing or prohibition of frequency rising caused by too high compressor discharge temperature

5	★	★	★	Operation at fixed frequency (in the case of capability measuring or compulsory operation at fixed frequency)
6	O	×	×	Protective frequency decreasing against outdoor overload (overpower, over frequency conversion rate, over torque, detection of DC under-voltage)
7	★	×	×	Frequency decreasing caused by indoor and outdoor communication fault
8	×	★	O	Frequency decreasing or prohibition of frequency rising protection against overload of outdoor coiled pipe
9	×	★	×	Frequency decreasing or prohibition of frequency rising for power-saving when it is being used simultaneously with other appliances

## 2. Indication by the indoor unit:

2.1. The 7-segment tube of the indoor display board will show the error code automatically when the unit has the following trouble:

Error code	Content	The root cause is may be one of the following
EA	the error code will display when the communication between display board and control board have in trouble	a. The connection between the display board and control board is loose; b. The indoor control board is failure. c. The wiring of the display board is failure.

2.2. When the unit has the following trouble and the compressor stops running, press the sleep button on the remote controller for 4 times in ten seconds and the 7-segment tube of the display board will show the error code as the following, if two malfunction happened at the same time, it need press the sleep button for 4 times again, the LED will show the other error code.

Refer to the remote controller which the sleep key can set into 4 different combination ways (Hisense's new design remote controller), when using to check the error codes only takes effect for pressing the sleep key 10 times in ten seconds instead of 4 times.

Error code	Content	The root cause is may be one of the following
0	Normal	
1	The failure for temperature sensor of outdoor coil	<b>a.</b> The outdoor temperature sensor loose; <b>b.</b> the outdoor temperature sensor is failure; <b>c.</b> The indoor control board is failure
2	Compressor exhaust temperature sensor in trouble	<b>a.</b> the compressor exhaust temperature sensor connect loose; <b>b.</b> the compressor exhaust temperature sensor is failure; <b>c.</b> the outdoor control board is failure

5	IPM module protection	<b>a.</b> The IPM board is failure; <b>b.</b> The outdoor fan is broken; <b>c.</b> The outdoor fan motor is failure; <b>d.</b> The outdoor fan has been blocked ; <b>e.</b> The condenser is dirty; <b>f.</b> The outdoor unit has been installed without standard.
6	AC voltage higher or lower protection	<b>a.</b> the supply voltage is higher or lower than normal; <b>b.</b> the inner supply voltage of the unit is higher or lower than normal
7	Communication failure between the indoor unit and outdoor unit	<b>a.</b> the communication cable connect loose; <b>b.</b> the communication cable is failure; <b>c.</b> the connection between the filter board and the outdoor control board is incorrect or loose; <b>d.</b> the connection between the filter board and the terminal is incorrect or loose; <b>e.</b> the indoor control board is failure; <b>f.</b> the PFC board is failure; <b>g.</b> the power board is failure; <b>h.</b> the outdoor control board is failure.
8	Current overload protection	<b>a.</b> the fan motor run abnormally; <b>b.</b> the condenser and evaporator is dirty; <b>c.</b> the air inlet and outlet is abnormally
9	Maximum current protection	<b>a.</b> the outdoor control board is short circuit; <b>b.</b> the drive board is short circuit; <b>c.</b> the other components is short circuit
10	Communication trouble between outdoor unit and driver	<b>a.</b> the connection wires connect loose <b>b.</b> the outdoor board or drive board is failure;
11	Outdoor EEPROM in trouble	<b>a.</b> the EEPROM chip is loose; <b>b.</b> the EEPROM chip inserted with opposite direction; <b>c.</b> the EEPROM chip is failure
12	Outdoor ambient temperature too low or too high protection	Outdoor ambient temperature too low or too high
13	Compressor exhaust temperature too high protection	<b>a.</b> the compressor exhaust temperature sensor is failure; <b>b.</b> the refrigerant of the unit is not enough
14	Outdoor ambient temperature sensor in trouble	<b>a.</b> the outdoor ambient temperature sensor connect loose; <b>b.</b> the outdoor ambient temperature sensor is failure; <b>c.</b> the outdoor control board is failure
15	Compressor shell temperature too high protection	<b>a.</b> the compressor exhaust temperature sensor connect loose <b>b.</b> the refrigerant of the unit is not enough
16	Anti-freeze protection with cooling or overload protection with heating in	<b>a.</b> the indoor coil temperature sensor connect loose; <b>b.</b> the indoor coil temperature sensor is failure; <b>c.</b> the indoor control board is failure <b>d.</b> the refrigerant system is abnormal.



17	PFC protection	<b>a.</b> the PFC is failure; <b>b.</b> the outdoor drive board is failure
18	DC compressor start failure	<b>a.</b> the outdoor drive board is failure; <b>b.</b> the compressor is failure
19	Compressor drive in trouble	<b>a.</b> the outdoor drive board is failure; <b>b.</b> the compressor is failure <b>c.</b> the outdoor control board is failure
20	Outdoor fan motor locked rotor protection	<b>a.</b> the connection of the outdoor fan motor is loose; <b>b.</b> there are something block the outdoor fan; <b>c.</b> the fan motor is failure; <b>d.</b> the outdoor control board is failure
21	Outdoor coil anti-overload protection with cooling	<b>a.</b> the refrigerant is too much; <b>b.</b> the outdoor fan motor is failure; <b>c.</b> the outdoor fan is broken; <b>d.</b> the condenser is dirty; <b>e.</b> the air inlet and air outlet of the indoor unit and the outdoor unit is not normally
22	Compressor pre heating process	it is normal mode in cold weather
23	There is a leak in the product	<b>a.</b> There is a leak in the indoor <b>b.</b> There is a leak in the outdoor <b>c.</b> There is a leak in the connecting pipe
24	Chip in outdoor board in trouble	<b>a.</b> Using the wrong drive board; <b>b.</b> Using the wrong compressor.
26	Overheated outdoor radiator	<b>a.</b> Radiator sensor fails <b>b.</b> Detection circuit of the sensor on the control panel fails
27	Protection against too high system pressure	<b>a.</b> The pressure switch fails <b>b.</b> The pressure detection switch on the control panel fails <b>c.</b> The measured value of system pressure exceeds the limit
33	The failure for temperature sensor of indoor room	<b>a.</b> The indoor room temperature sensor loose; <b>b.</b> The indoor room temperature sensor is failure; <b>c.</b> The indoor control board is failure.
34	The failure for temperature sensor of indoor coil temperature	<b>a.</b> The indoor coil temperature sensor loose; <b>b.</b> The indoor coil temperature sensor is failure; <b>c.</b> The indoor control board is failure.
36	Communication failure between the indoor unit and outdoor unit	<b>a.</b> the communication cable connect loose; <b>b.</b> the communication cable is failure; <b>c.</b> the connection between the filter board and the outdoor control board is incorrect or loose; <b>d.</b> the connection between the filter board and the terminal is incorrect or loose;

		<b>e.</b> the indoor control board is failure; <b>f.</b> the PFC board is failure; <b>g.</b> the power board is failure; <b>h.</b> the outdoor control board is failure.
38	Indoor EEPROM failure	<b>a.</b> The EEPROM chip loose; <b>b.</b> The indoor control board is failure
39	Indoor fan motor run abnormally	<b>a.</b> There are something block the indoor fan motor; <b>b.</b> The fan motor cord connect loose; <b>c.</b> The fan motor is failure; <b>d.</b> The indoor control board is failure
41	The failure for Indoor grounding protective	The indoor control board is failure

The failure is detected when the room temperature sensor broken or shorted over 5 sec.

The failure is detected when the temperature sensor of heater exchange broken or shorted over 5 sec.

The failure is detected when each setting data is not match after the EEPROM self-check two times.

The failure is occur when the grounding signal is not detected after the appliance power ON.

## Test the jumper terminals

### Note:

When the whole machine is powered up, if the external unit does not work, to rule out the communications failures, adopt screening method such as short circuit on the jumper terminals to see if the external unit can be started normally or similar method.



There are two blue terminals on the outdoor control panel, as shown above.

Application: Short out the terminals, and power up the outdoor unit, then the outdoor unit may run independently. It can be determined that there is no internal and external communication faults.

When the environment temperature is lower than 18°C, you can't run the unit under the cool mode, but if you need run the unit at this moment ,such as add the gas or do more test, at this moment you can use this function,

Under this function, the outdoor motor and compressor will be forced to run until reaching a fixed frequency (general is 50~55Hz).

## Trouble Diagnosis of Protection

### Protection diagnosis of the complete machine (all types of protection during operation, i.e. under-voltage, over-voltage and overcurrent protection)

**Note:** List all types of protection that may occur to the complete machine and describe the conditions and signs of the start, course and end of such protection.

#### Voltage protection

##### Protection against AC input over-voltage/under-voltage

##### 1.Conditions for protection against AC input over-voltage/under-voltage:

If the input AC voltage is greater than “protective over-voltage value” or less than “protective under-voltage value” for five seconds, over-voltage/under-voltage protection tarts.

##### 2.Protection actions against AC input over-voltage/under-voltage

The system stops operation.

##### 3. Conditions for ending AC input over-voltage/under-voltage:

If the input AC voltage is lower than “the protective over-voltage value” -10V, or higher than “the protective under-voltage value” +10V, the over-voltage/under-voltage protection will be released.

#### Current protection:

##### 1.Protection against over-current

Conditions for over-current protection: if the current is equal to or greater than “current value for starting the refrigeration current protection (E2 value)” for six seconds, over-current protection starts.

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Protection actions against over-current: indoor display screen and outdoor indicator give indications, the compressor and outdoor fan stop, but indoor fan runs normally.

Condition for ending over-current protection: when the current drops below “current value for releasing the refrigeration current protection (E2 value)”, over-current protection will be released.

## **2.Frequency decreasing for over-current**

Conditions for over-current **frequency decreasing**: if the current is equal to or greater than “current value for starting the refrigeration current protective frequency decreasing (E2 value)”, over-current **frequency decreasing** starts.

Over-current **frequency decreasing** actions: the compressor will decrease frequency at rate of (E2 value)Hz/S. The indoor and outdoor fans run.

Conditions for ending over-current **frequency decreasing**: when the current drops below “current value for starting the refrigeration current protective prohibition of frequency rising (E2 value)”, over-current under-clocking will be released.

## **3.Prohibition of frequency increasing of compressor exhausting**

Conditions for prohibition of frequency rising of compressor discharge

Condition 1: in the case of frequency decreasing of compressor discharge, the discharge temperature of the compressor drops below X4°C.

Condition 2: in normal operation, the discharge temperature of compressor reaches X5°C.

Either of the above two conditions is met, prohibition of frequency rising of compressor discharge begins.

Actions relates to prohibition of frequency rising of compressor discharge: the frequency of compressor maintains at the current level, which may decrease as the case requires while cannot rise. The indoor and outdoor fans run.

Condition for ending prohibition of frequency rising of compressor discharge: if the temperature of compressor discharge drops below X6°C, prohibition of frequency rising of compressor discharge will be released.

## **4. Prohibition of frequency for anti-overload of outdoor coiled pipe**

Condition for anti-overload prohibition of frequency of outdoor coiled pipe: in the case of anti-overload frequency decreasing of outdoor coiled pipe, anti-overload prohibition of frequency of the unit begins when the temperature of outdoor coiled pipe drops below “the anti-overload frequency decreasing temperature of outdoor coiled pipe”.

Actions relates to anti-overload prohibition of frequency of outdoor coiled pipe: the frequency of compressor maintains at the current level, which may decrease as the case requires while cannot rise. The indoor and outdoor fans run.

Condition for ending anti-overload prohibition of frequency of outdoor coiled pipe: if the temperature of outdoor coiled pipe drops below “temperature to release the anti-overload state of outdoor coiled pipe”, anti-overload prohibition of frequency of outdoor coiled pipe will be released.

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## **Trouble Diagnosis of Compressor**

Judging the connecting terminals of inverter compressor:

It is impossible to identify terminals U, V and W of inverter compressor with multi-meter. Just connect the terminals in the same way as the original unit when replacing the compressor. A wrong connection will lead to reverse and loud noise of the compressor.

Resistance of compressor coil:

Measure the resistance between any two terminals, which are about a few Ohms, three phases having the same resistance.

## **Trouble Diagnosis of Electric Filter Board**

Visual examination: as the circuit is simple, the connection may be checked visually to see whether any loose or poor connection.

Voltage test: the voltage at the input end shall be the same as the voltage at the output end.

## **Trouble Diagnosis of Electric Communication**

Step one: to determine whether the connecting cables and tether cables of indoor/outdoor units are correctly wired. If not, change wiring order and test connection.

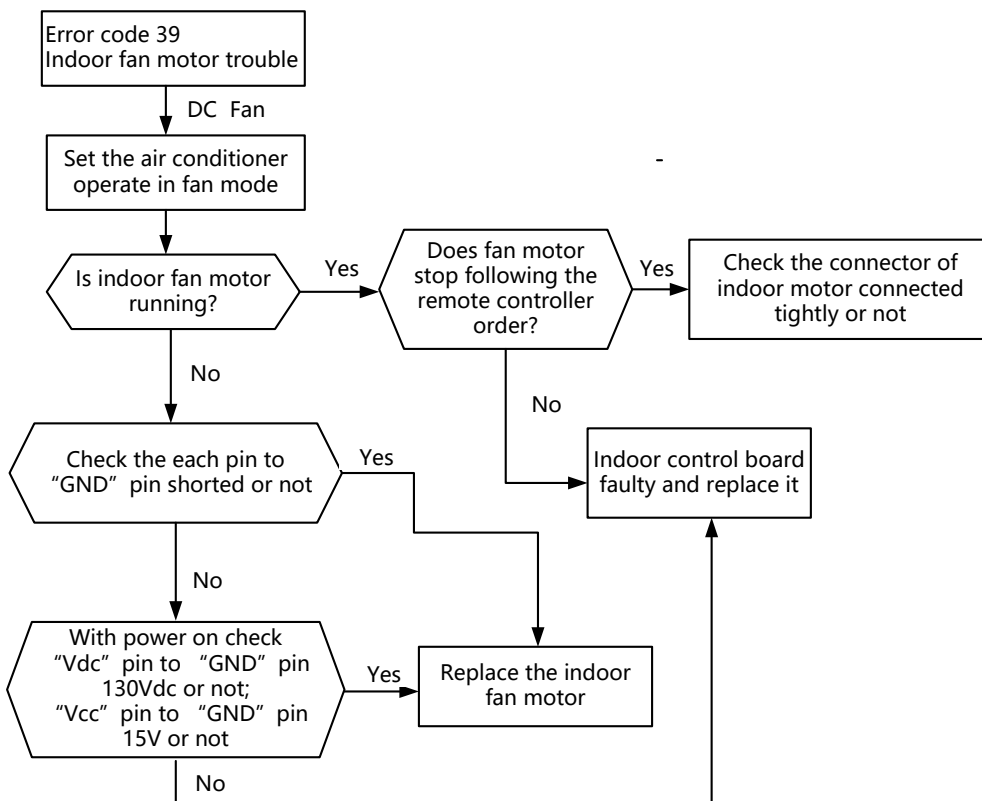
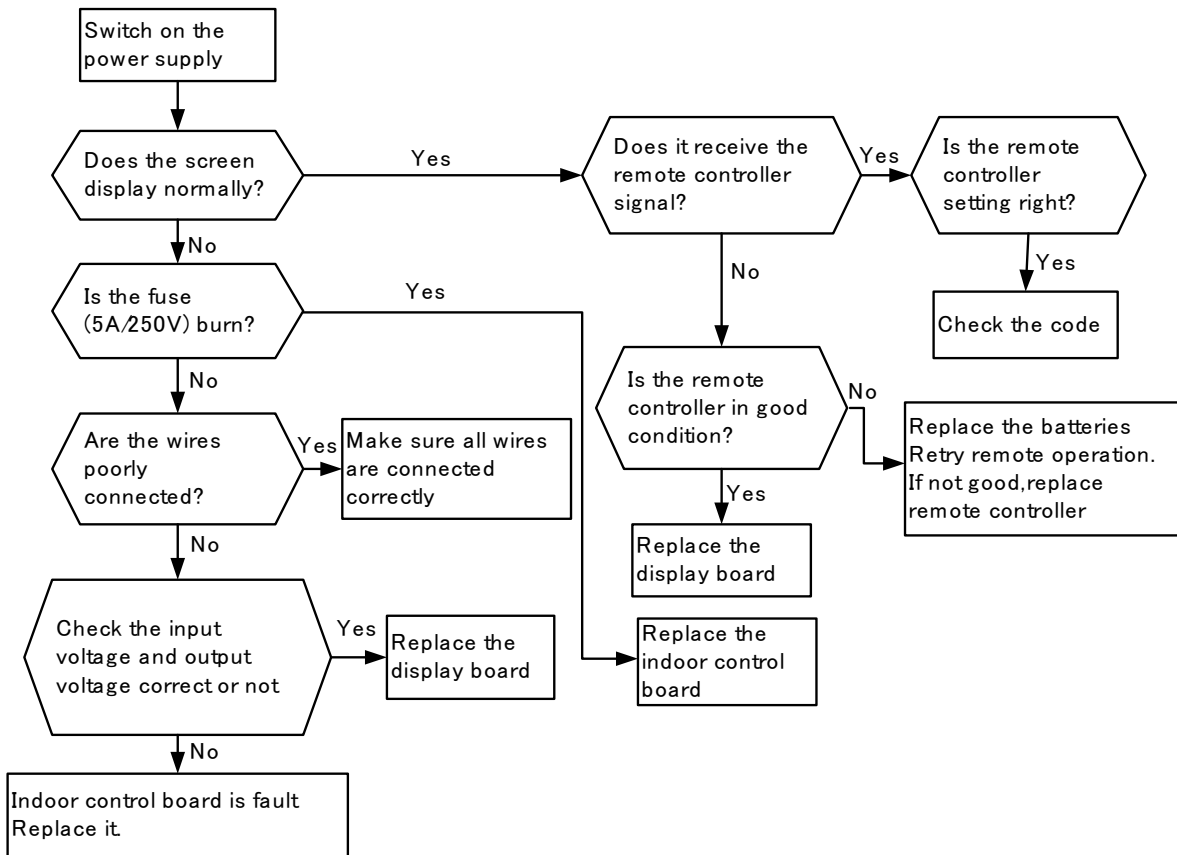
Step two: to determine whether there is loose connection.

Fasten the connection in the case of loose connection and then conduct verification.

Step three: measure the voltage between SI and N with multi-meter and see whether the voltage fluctuates between 0V and 24V. Please directly replace indoor and outdoor control boards if there are not voltage fluctuations.

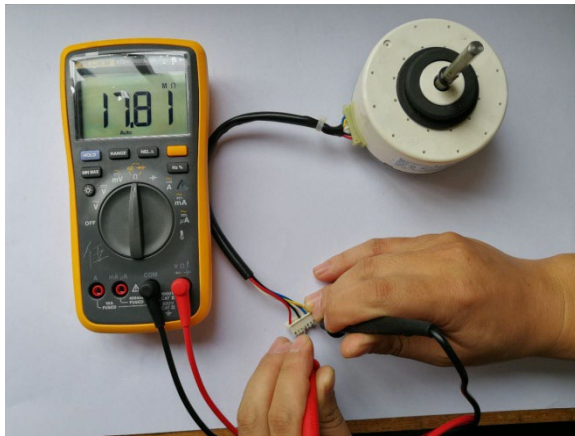
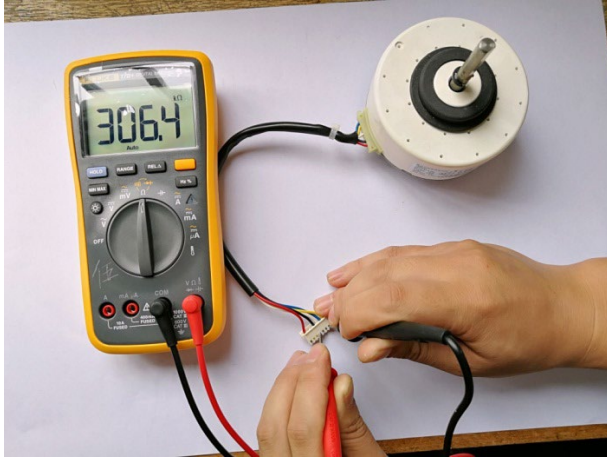
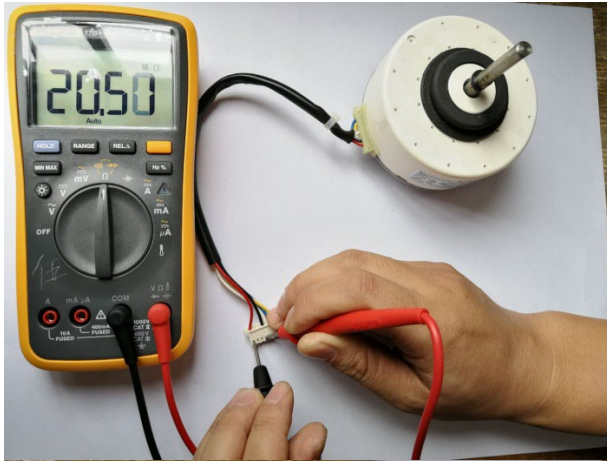
# Diagnosis and Solution

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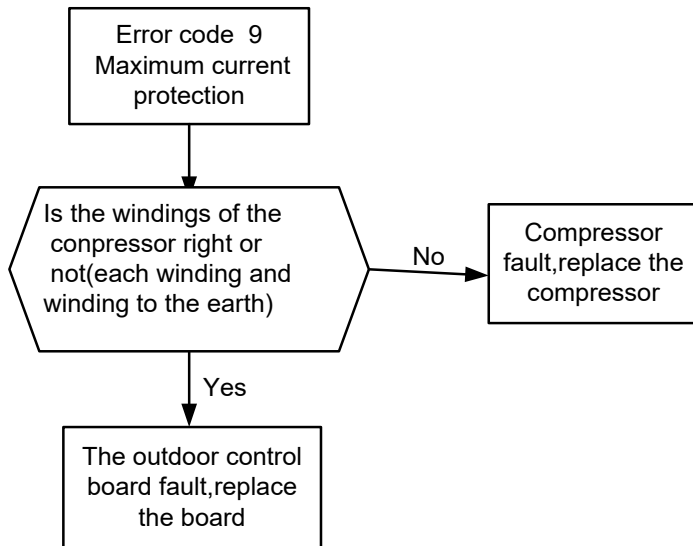
## 2.

DC Fan test point:



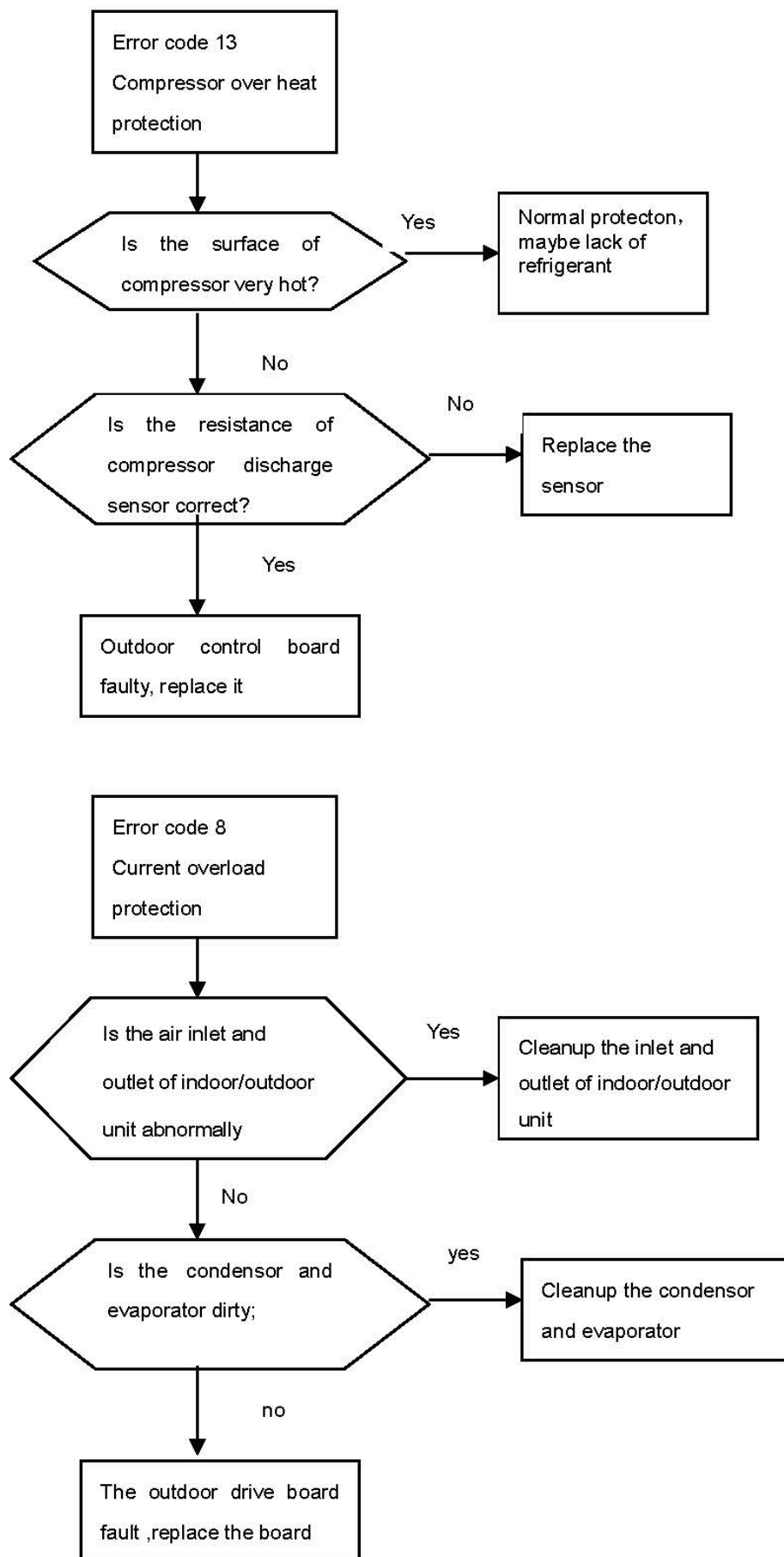
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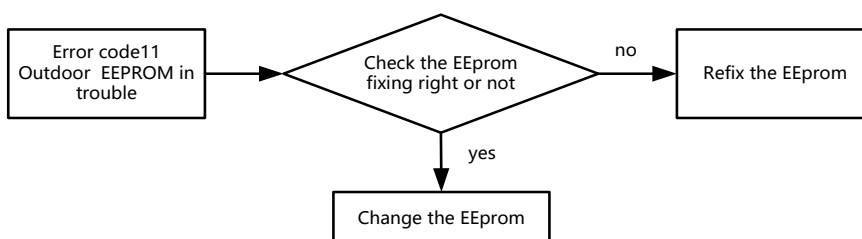
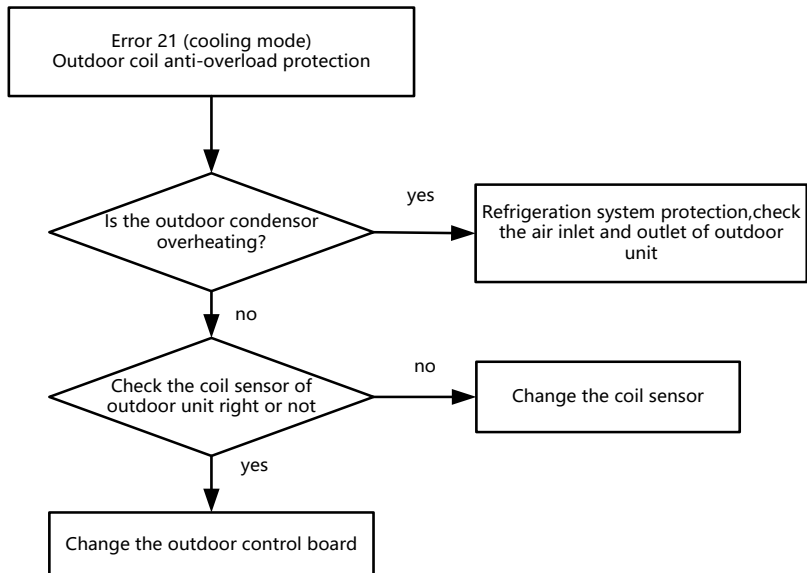
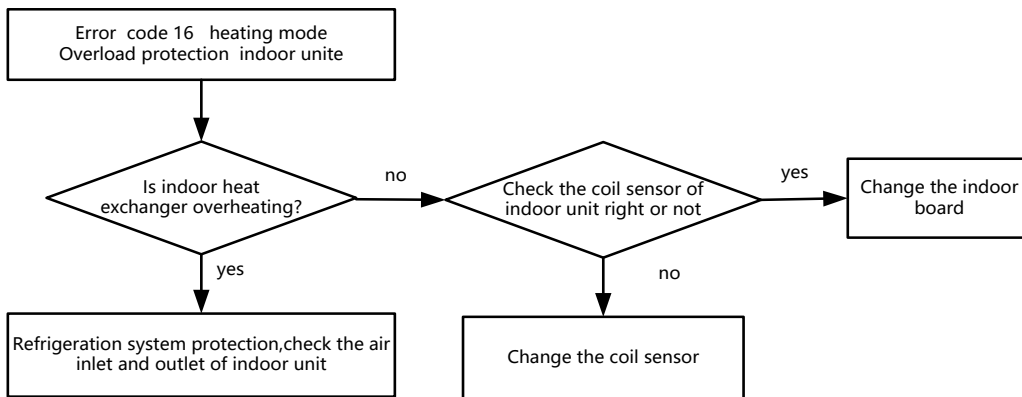
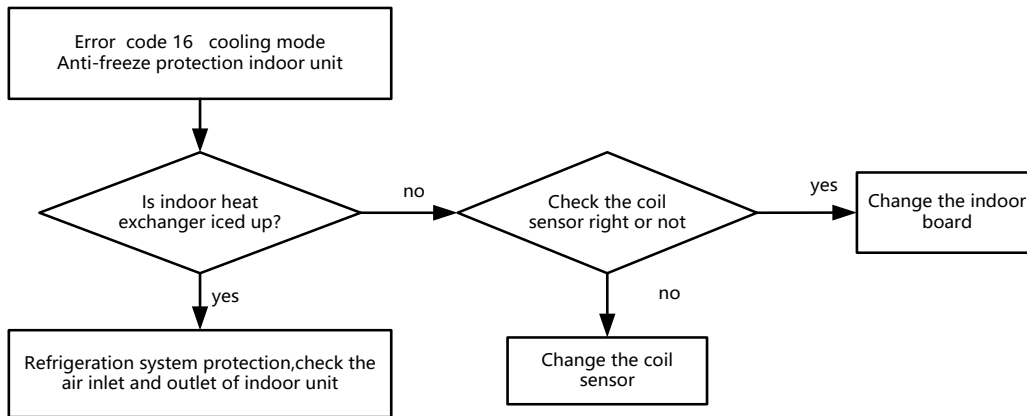


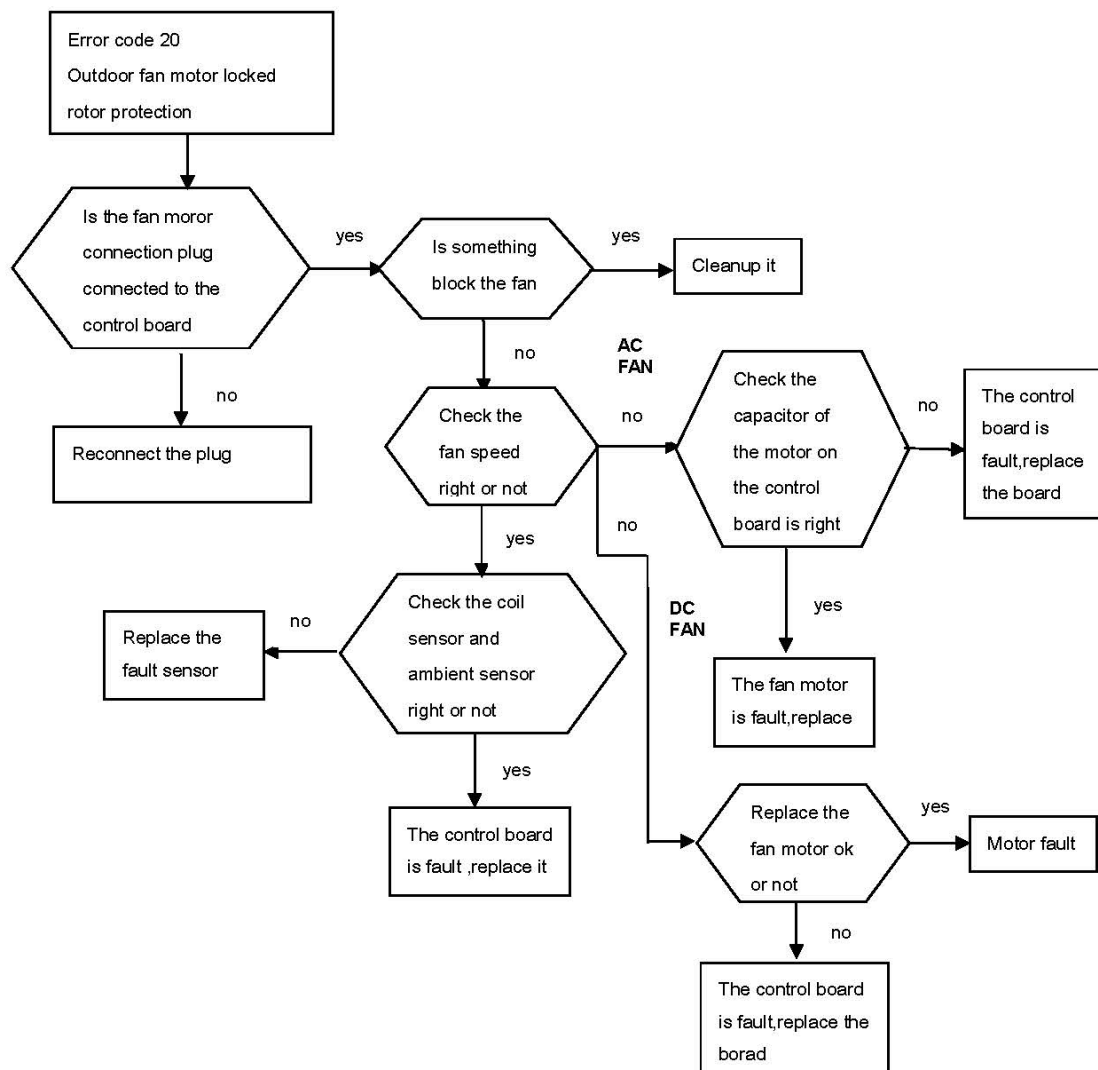


4.

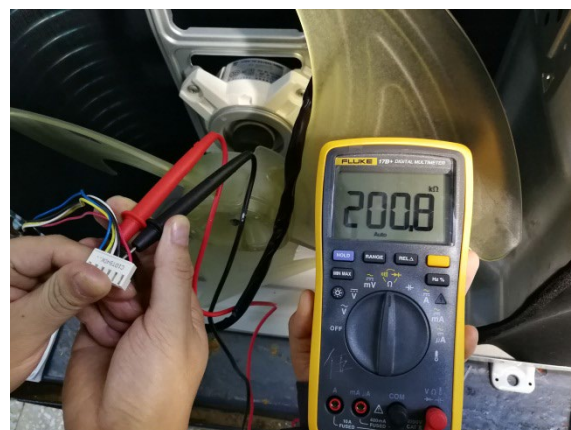


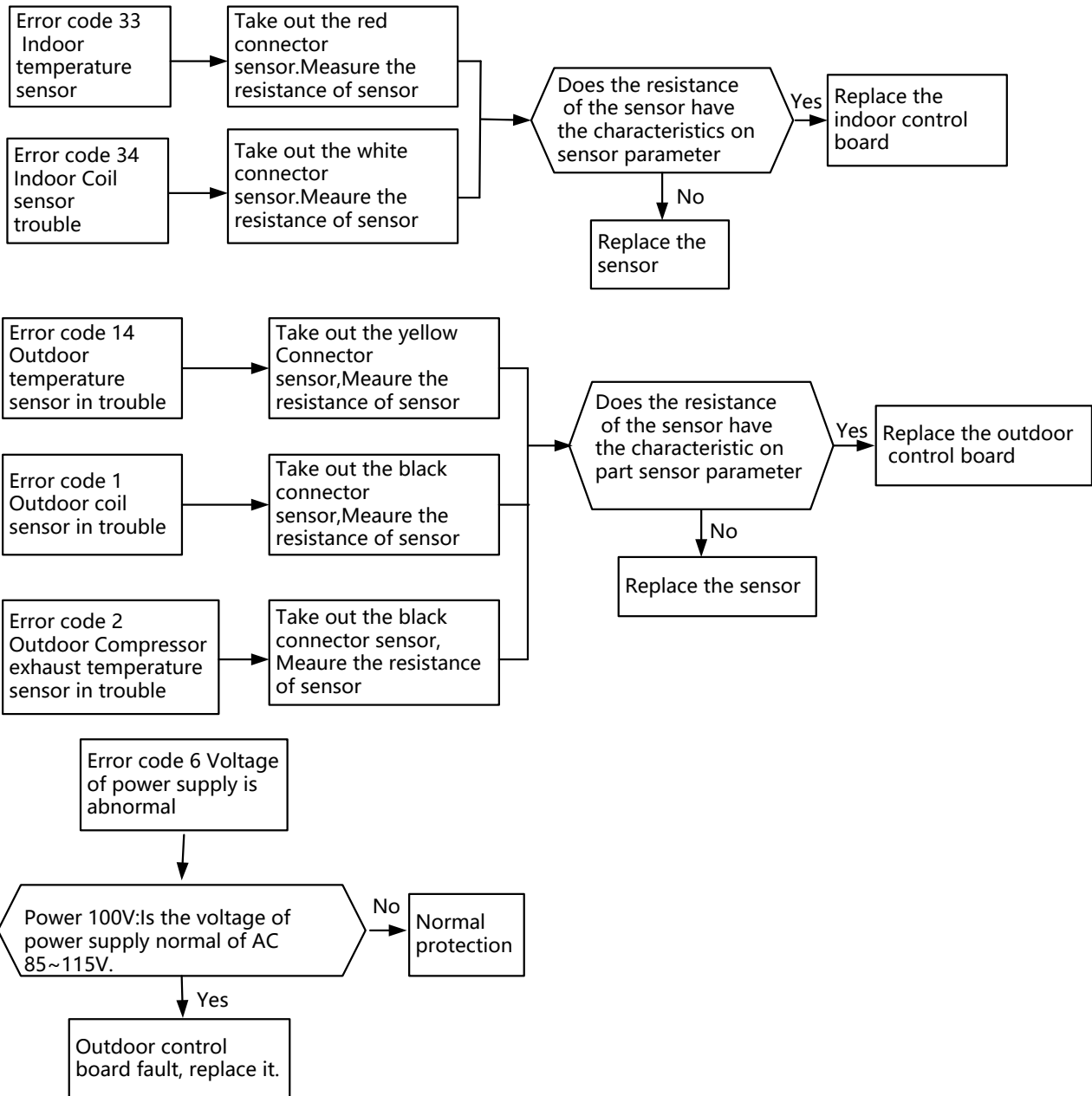
## 5.





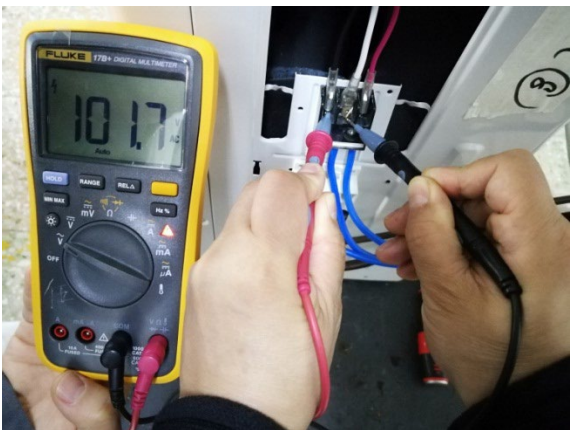
DC fan motor test point:





The Voltage protection values is different according to the model

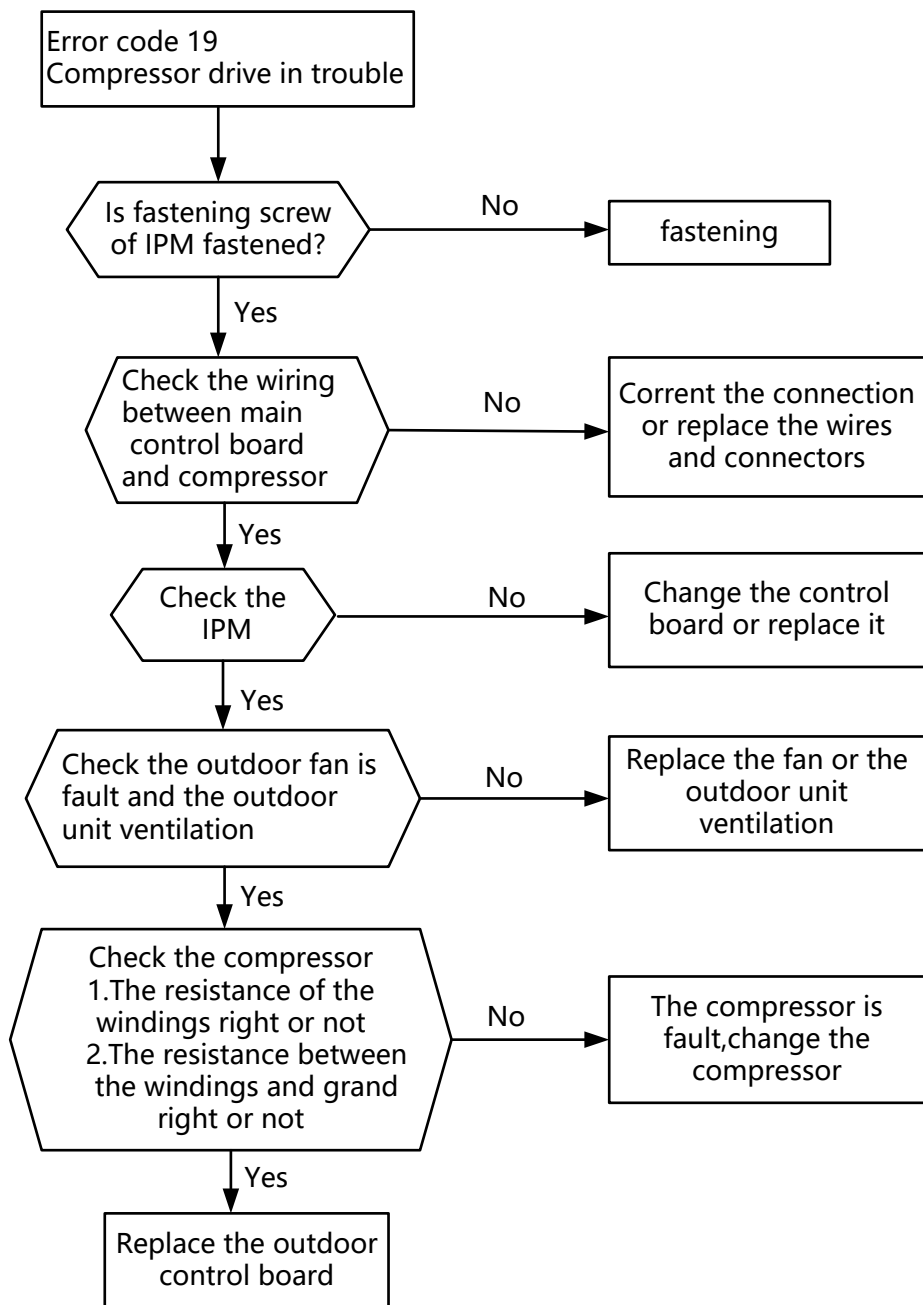
AC voltage test point:



Sensor test point:

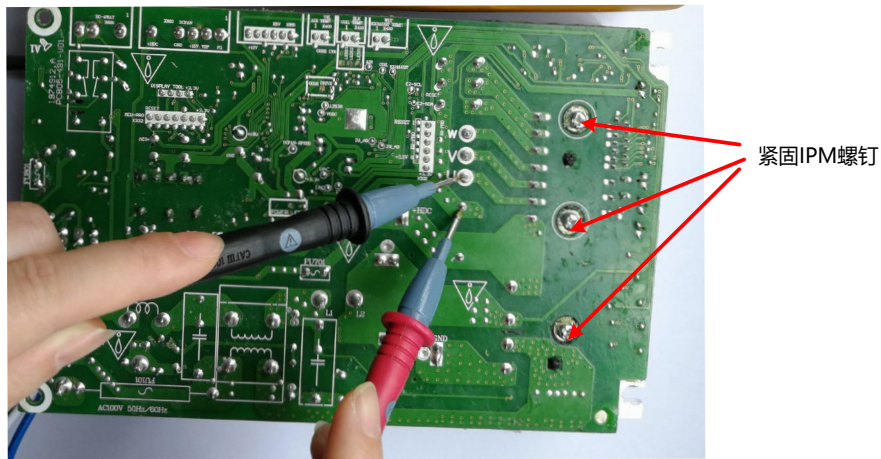


## 6.



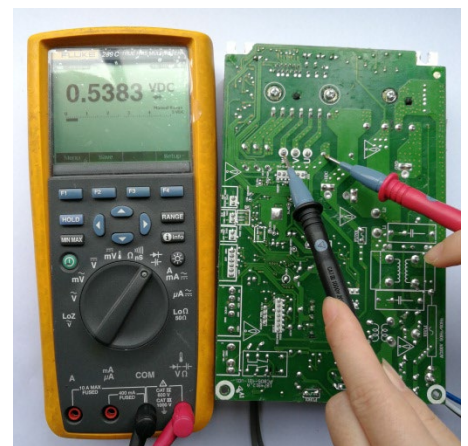


Check the screw of IPM fastening:

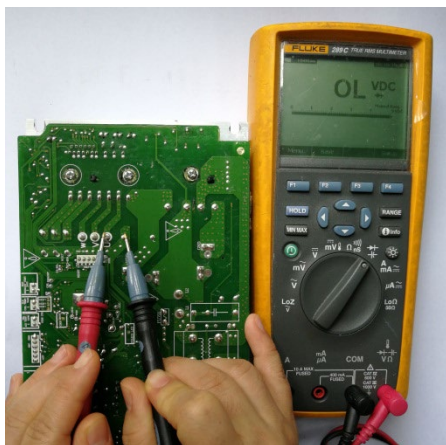


test point:

Forward of IPM P-U/P-V/P-W test :

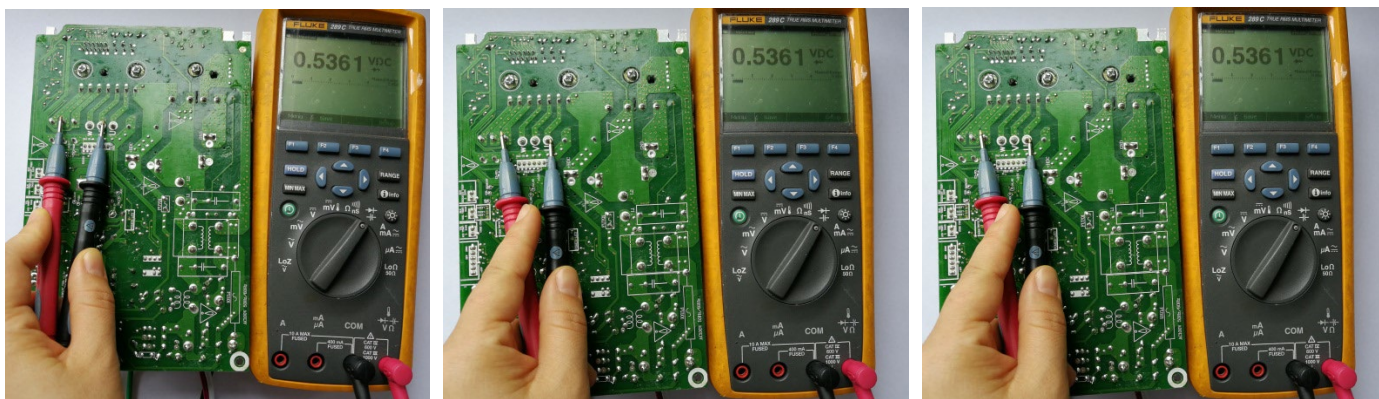


Reverse of IPM P-U/P-V/P-W test:

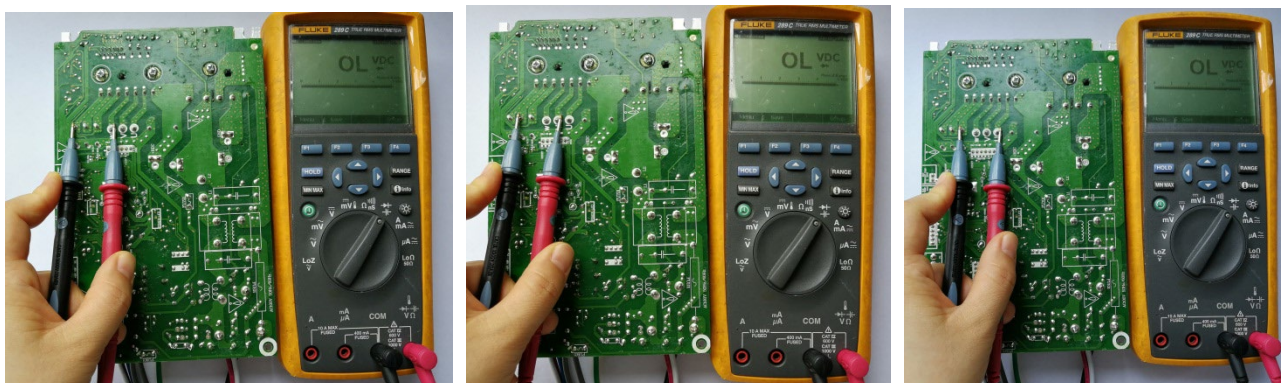


Forward of IPM N-U/N-V/N-W test :





Reverse of IPM N-U/N-V/N-W test :

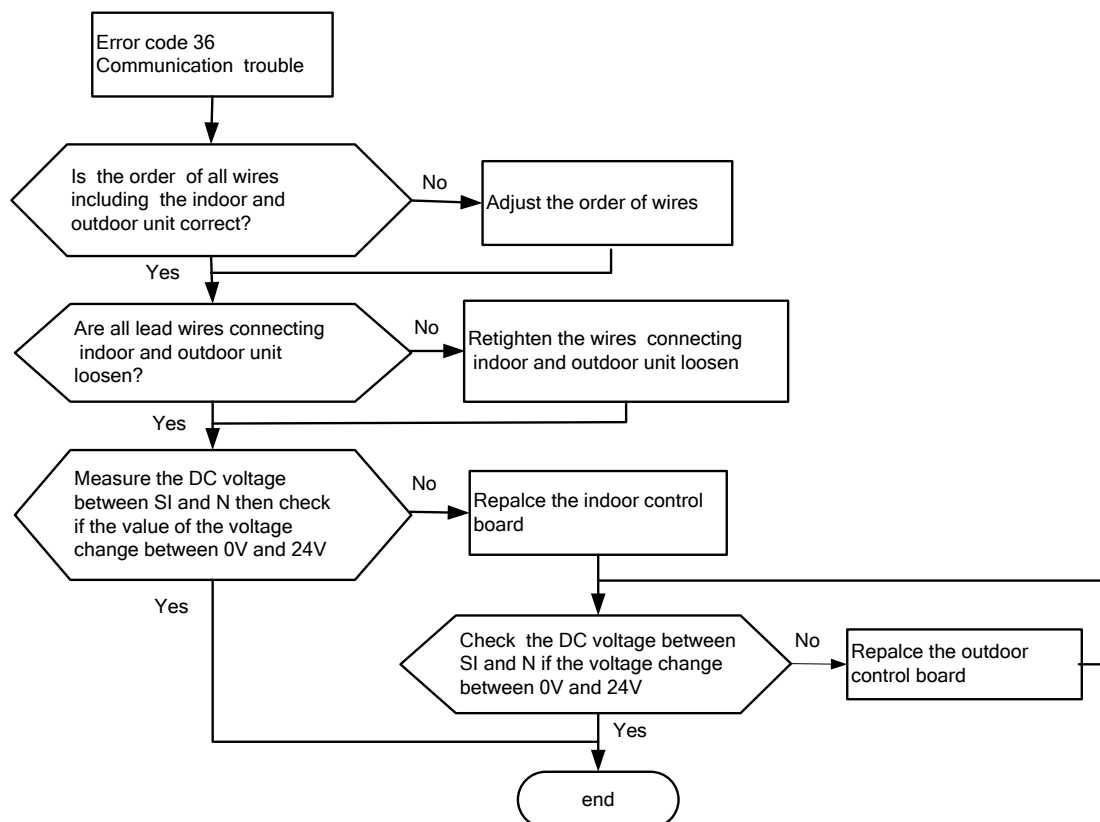


test point:

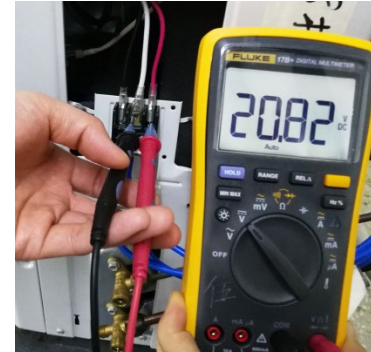
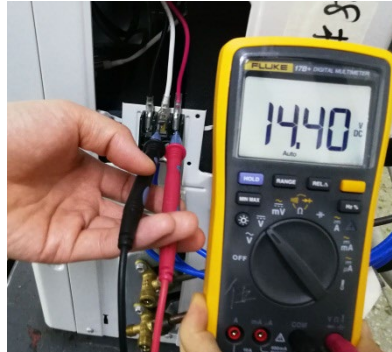
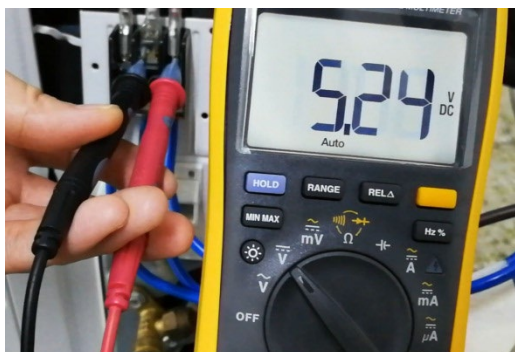
The resistance of the compressor U-W/V-W



## 7.



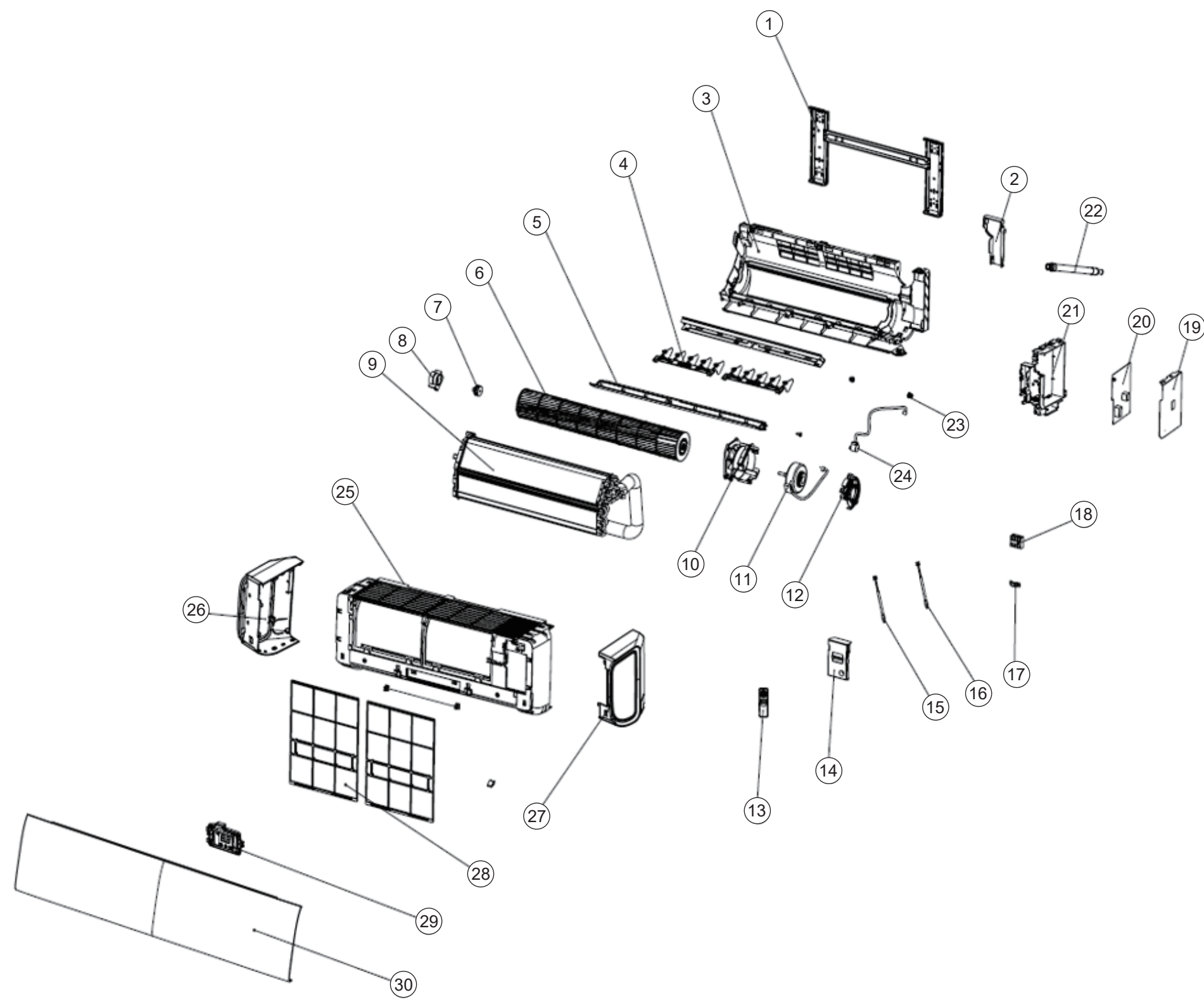
SI and N test point:





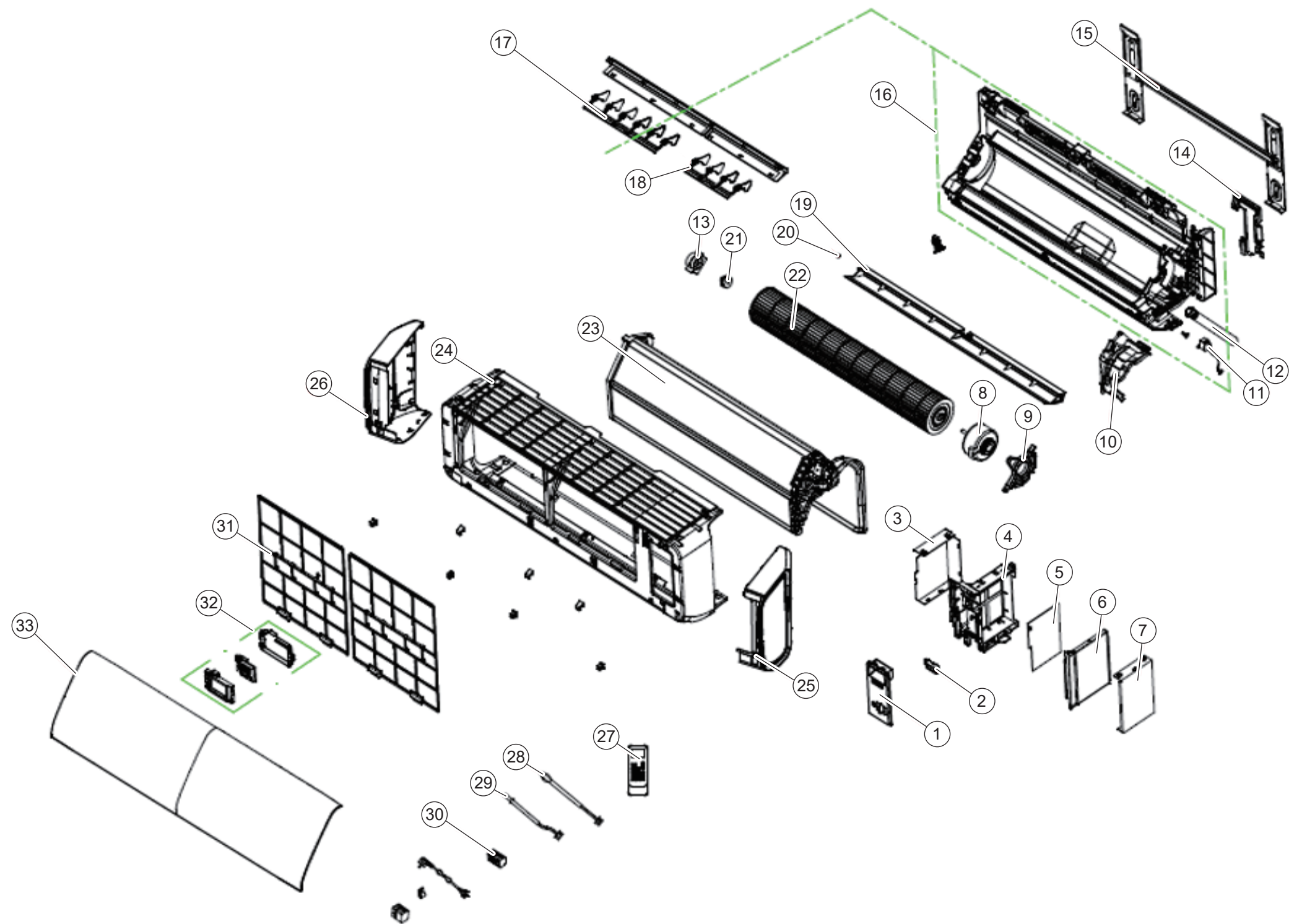
Parts

INDOOR UNIT  
ASKA09KPBA  
ASKA12KPBA



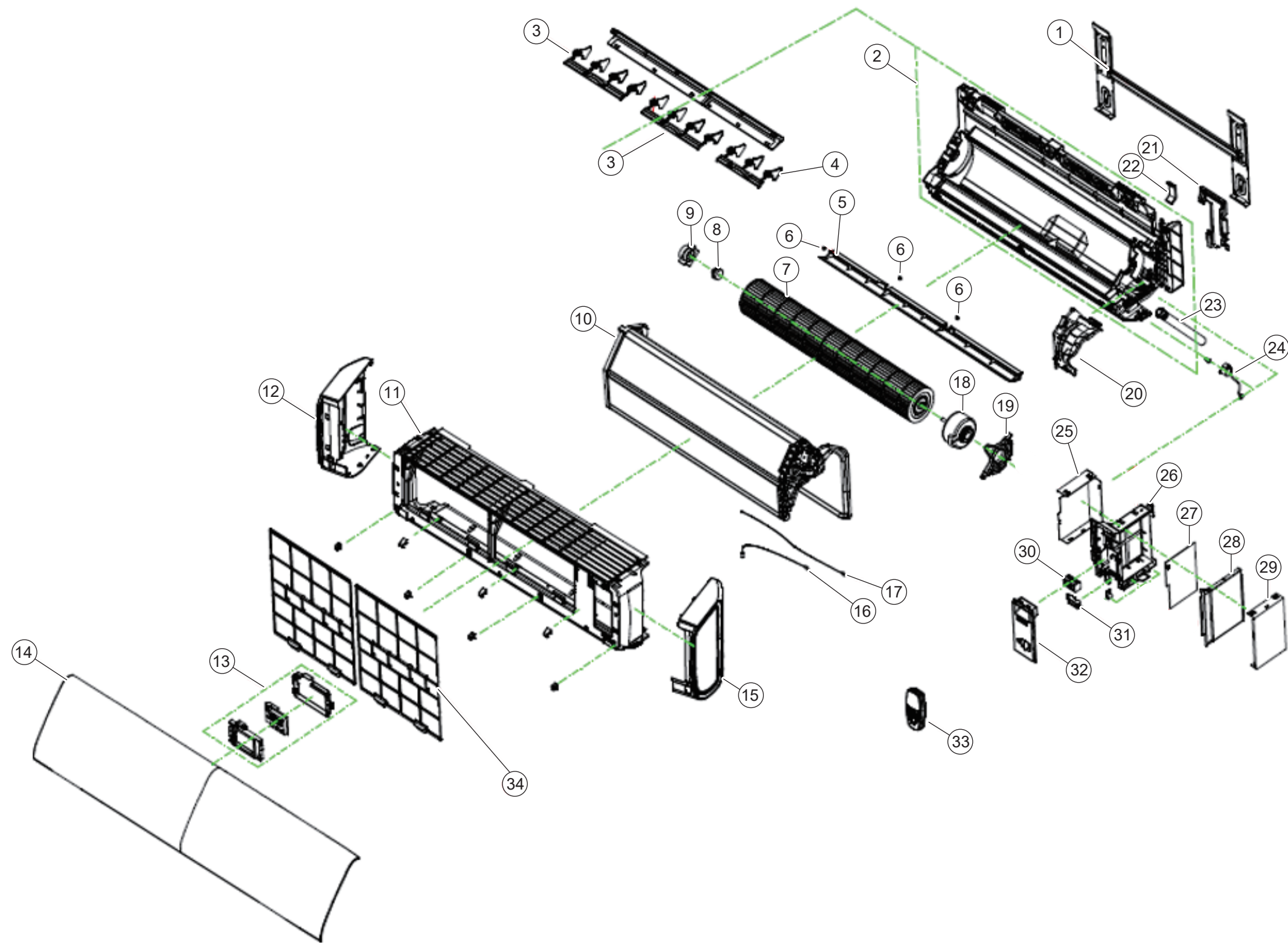
No.	Description	Part number	
		ASKA09KPBA	ASKA12KPBA
1	Bracket wall	1465588	←
2	Baffle	1984201	←
3	Casing assembly	1802213	←
4	Vertical louver	1465662	←
5	Louver	1555320	←
6	Crossflow fan assy	1466013	←
7	Bearing	1223739	←
8	Baffle	1465670	←
9	Evaporator	1817600	1510291
10	Guard motor	2026728	2091423
11	Motor fan	1505210	1838324
12	Cover motor	2091436	←
13	Remote control	4275737	←
14	Cover wire	2228774	←
15	Thermistor room	1383891	←
16	Thermistor pipe	1387643	←
17	Clamp cord	1456755	←
18	Terminal	1262152	←
19	Cover wire	2235674	←
20	Controller PCB	2291143	2291146
21	Electric box	2238742	←
22	Drain hose	1470426	←
23	Plug	1222824	←
24	Step motor	1260259	←
25	Front panel	2007191	←
26	Ornamental part	2033912	←
27	Ornamental part	2033913	←
28	Air filter	1505714	←
29	Display assembly	2008408	←
30	Intake grille	4276938	←

INDOOR UNIT  
ASKA18KPBA



No.	Description	Part number
1	Cover display	1541379
2	Clamp cord	1840141
3	Electric box cover	1541500
4	Electric box	1840138
5	Controller PCB	2290592
6	Cover wire	1541378
7	Cover wire	1541507
8	AC motor	1552298
9	Cover motor	1541374
10	Guard motor	1541369
11	Step motor	1819726
12	Drain hose	1470426
13	Baffle	1465670
14	Baffle	1541361
15	Bracket wall	1444531
16	Base assembly	1953464
17	Vertical louver	1541365
18	Vertical louver	1550294
19	Louver	1541362
20	Plug	1222824
21	Bearing	1223738
22	Crossflow fan assy	1541622
23	Evaporator	1896836
24	Front panel	1541381
25	Ornamental part	2033905
26	Ornamental part	2033906
27	Remote control	4275737
28	Thermistor pipe	1837499
29	Thermistor room	1896665
30	Terminal	1262152
31	Air filter	1541386
32	Display assembly	2017652
33	Intake grille	4275472

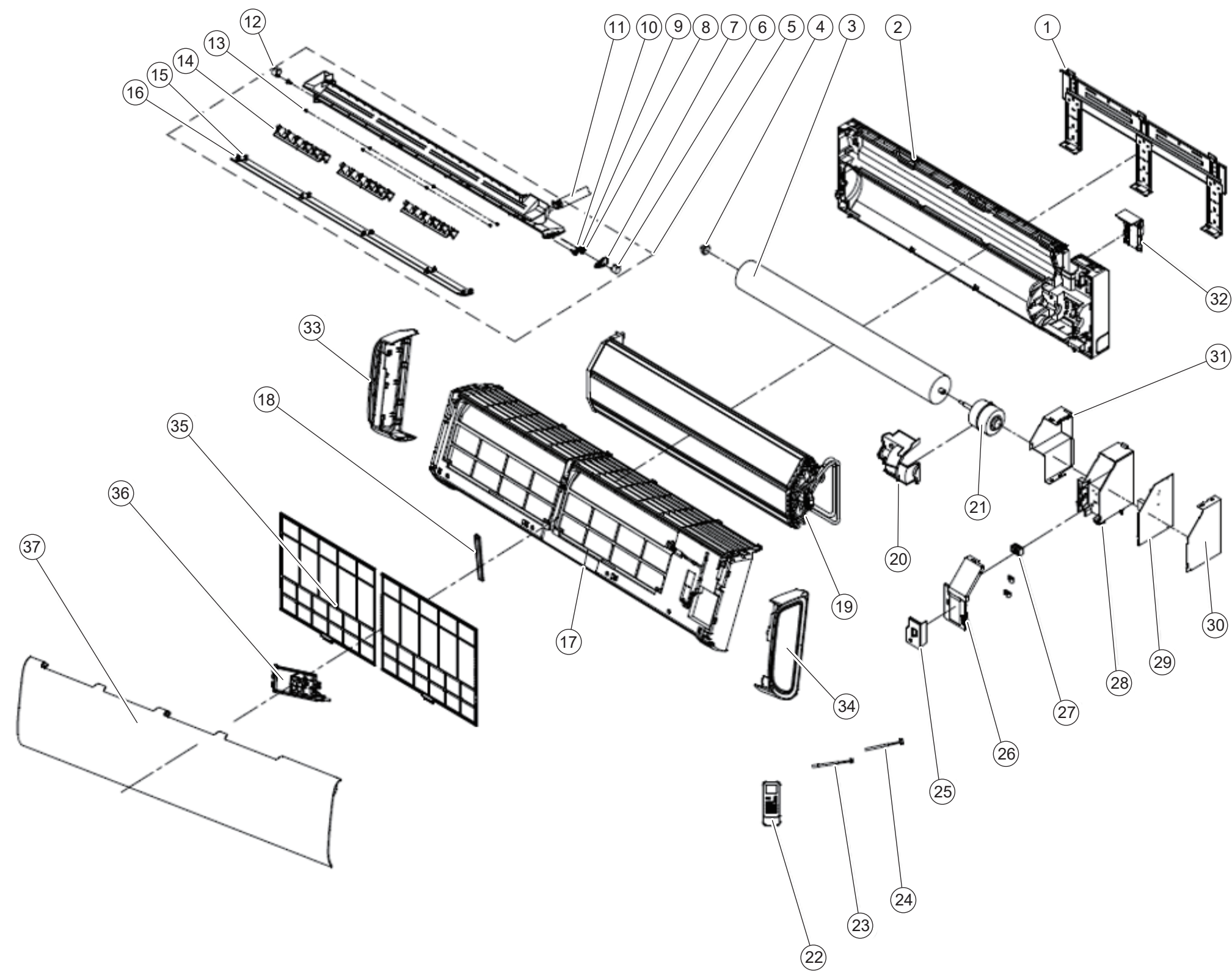
INDOOR UNIT  
ASKA24KPBA



No.	Description	Part number
1	Bracket wall	1444531
2	Base assembly	1953058
3	Vertical louver	1550294
4	Vertical louver	1541457
5	Louver	1541363
6	Plug	1222824
7	Crossflow fan assy	1541633
8	Bearing	1223738
9	Baffle	1465670
10	Evaporator	2294534
11	Front panel	1541382
12	Ornamental part	2033906
13	Display assembly	2017652
14	Intake grille	4275481
15	Ornamental part	2033905
16	Thermistor pipe	1383891
17	Thermistor room	1387643
18	Motor fan	1561456
19	Cover motor	1541374
20	Guard motor	1541373
21	Baffle	1541361
22	Baffle	1541370
23	Drain hose	1470426
24	Step motor	1819726
25	Elec box cover plate	1541500
26	Electric box	1840138
27	Controller PCB	2292446
28	Electric box cover	1541378
29	Electric box cover	1541507
30	Terminal	1262152
31	Clamp cord	1840141
32	Cover display	1541379
33	Remote control	4275737
34	Air filter	1541387

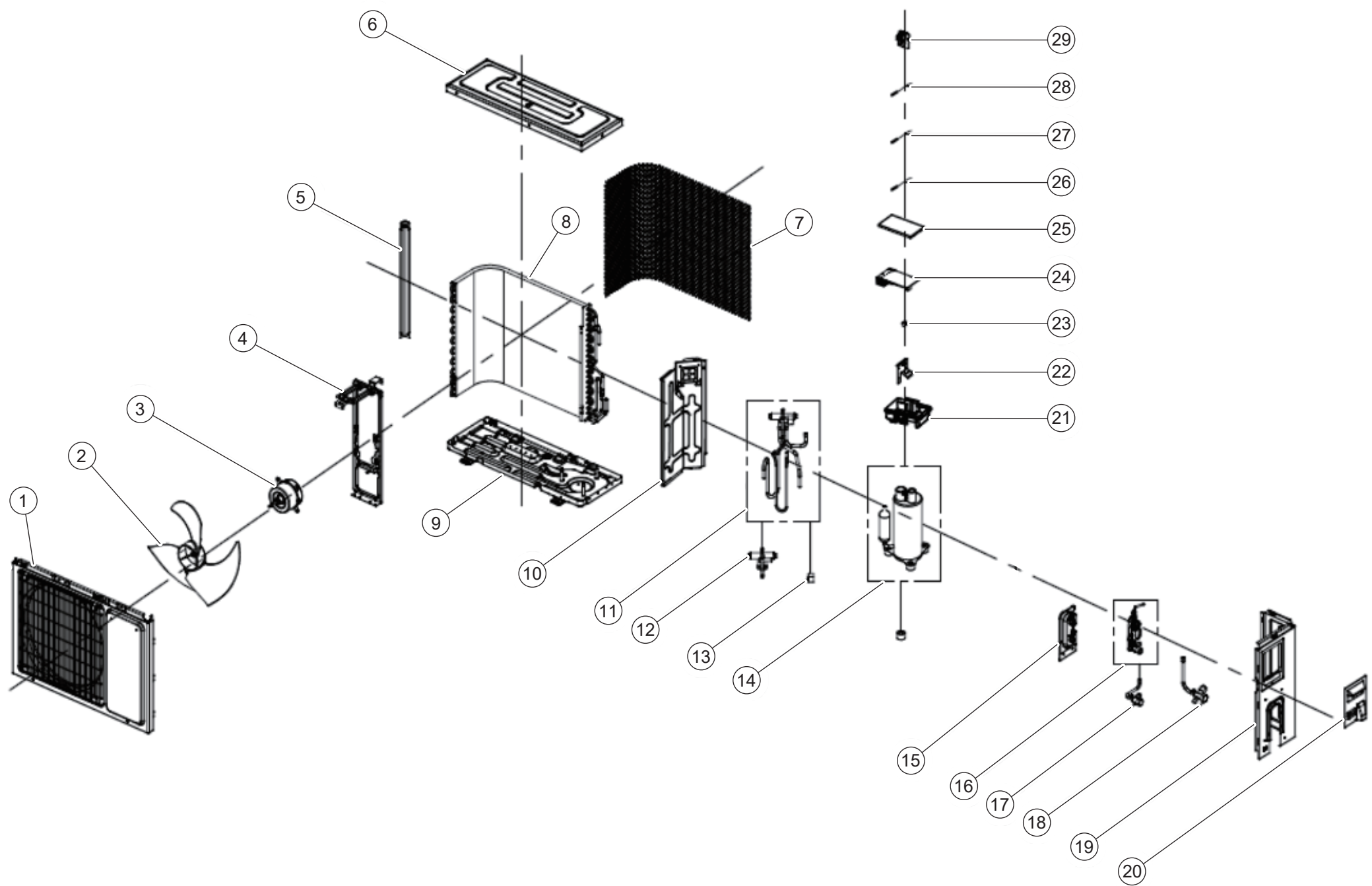


INDOOR UNIT  
ASKA30KPBA  
ASKA36KPBA



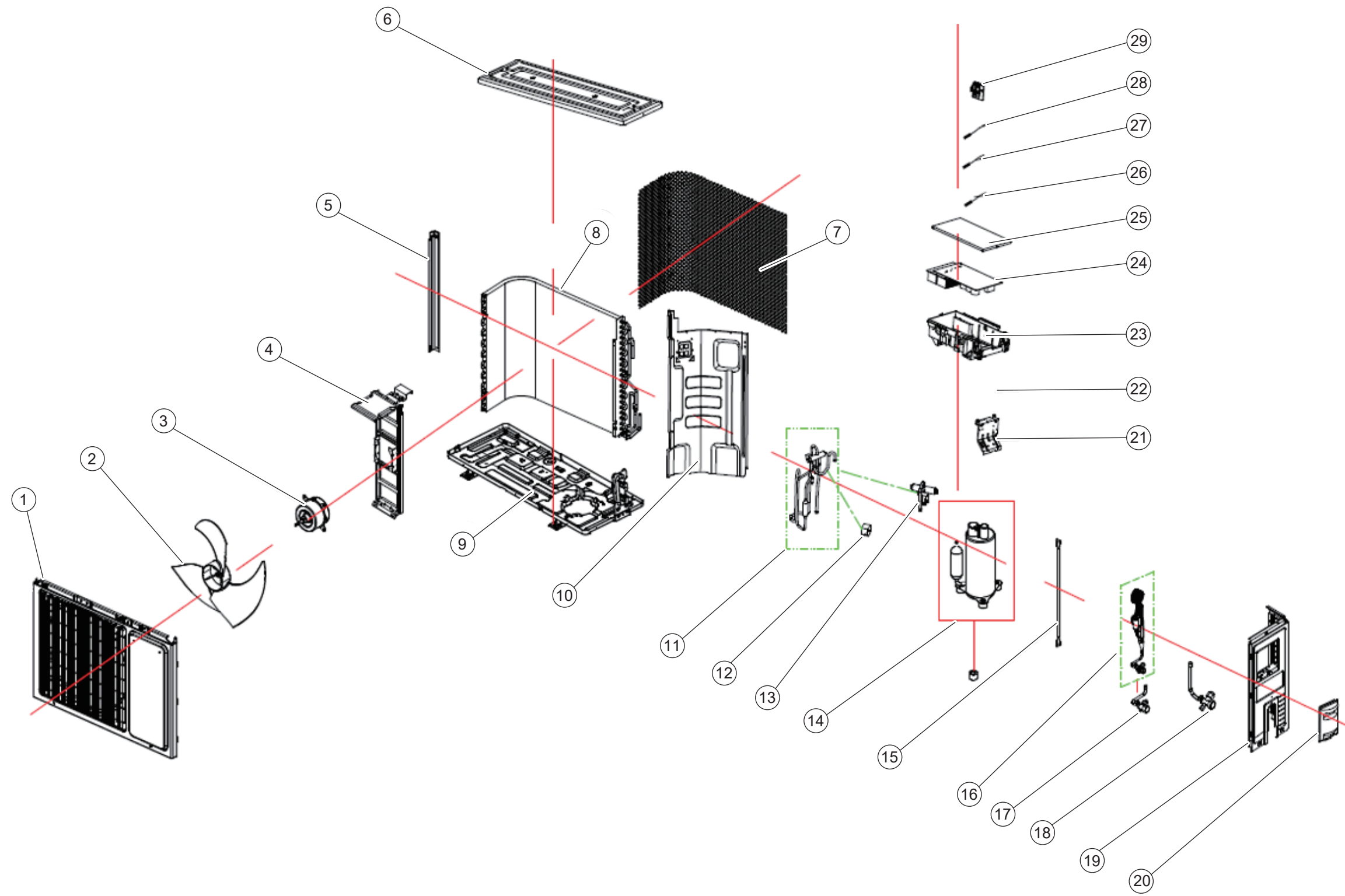
No.	Description	Part number	
		ASKA30KPBA	ASKA36KPBA
1	Bracket wall	1896952	←
2	Casing assembly	1508990	←
3	Crossflow fan assy	1511626	←
4	Bearing	1248742	←
5	Air outlet parts	1868554	7603958
6	Step motor	1225096	←
7	Mounting plate	1512013	←
8	Axes	1508998	1509000
9	Center holder	1509001	←
10	Axes	1509000	1508998
11	Drain hose	1470426	←
12	Step motor	1516166	←
13	Plug	1222824	←
14	Vertical louver	1508997	←
15	Louver	1508995	1508996
16	Louver	1508996	1508995
17	Front panel	2081031	←
18	Mounting plate	1510158	←
19	Evaporator	1823315	1904474
20	Guard motor	1510271	←
21	DC motor	1837643	←
22	Remote control	4275737	←
23	Thermistor pipe	1383891	←
24	Thermistor room	1473879	←
25	Cover display	1510281	←
26	Cover wire	1845473	1510280
27	Terminal	1262152	←
28	Electric box	1840140	←
29	Controller PCB	2287349	2326247
30	Electric box plate	1510290	←
31	Electric box plate	1510284	←
32	Baffle	1509002	←
33	Ornamental part	2081027	←
34	Ornamental part	2081028	←
35	Air filter	1880986	←
36	Display assembly	2085854	←
37	Intake grille	4275483	←

OUTDOOR UNIT  
AOKA09KPBA  
AOKA12KPBA



No.	Description	Part number	
		AOKA09KPBA	AOKA12KPBA
1	Front panel w/ grille	2283383	←
2	Propeller fan blade	2280352	←
3	Fan motor	1995048	1848432
4	Motor bracket	2283384	←
5	Mounting plate	2274940	←
6	Top panel	2283382	←
7	Protective net back	2295633	2294548
8	Condenser assembly	2298233	2297029
9	Base assembly	2290157	←
10	Separate wall	2296571	2283387
11	Valve 4 way TA	2298232	2297781
12	Valve 4 way	1258654	←
13	Solenoid	1837551	←
14	Compressor	2291729	2291727
15	Bracket valve	1840379	←
16	Capillary assembly	2315789	2315792
17	Valve 2 way 1/4	1405371	←
18	Valve 3 way 3/8	1335015	←
19	Cabinet right	2295926	2283385
20	Wiring cover	2277856	←
21	Electric box	2145950	←
22	Connecting board	2274946	←
23	Terminal	2089796	←
24	Inverter control PCB	2296718	2296849
25	Electric box cover	2135236	←
26	Thermistor outdoor	1562104	←
27	Thermistor pipe	1822633	←
28	Thermistor discharge	1822634	←
29	Sensor mount plate	1937184	←

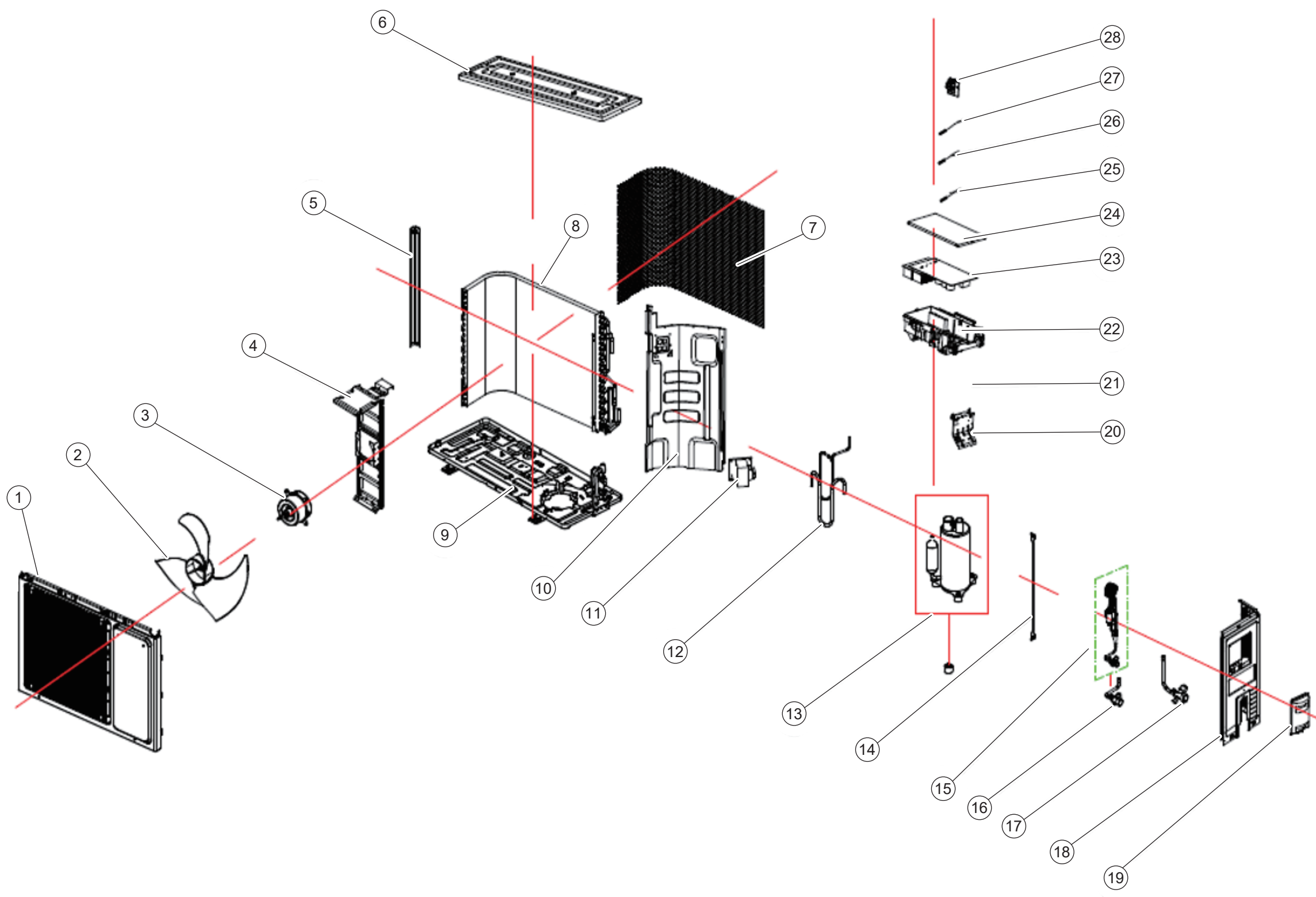
OUTDOOR UNIT  
AOKA18KPBA



No.	Description	Part number
1	Front panel w/ grille	1959556
2	Propeller fan blade	2125621
3	Fan motor	2023374
4	Motor bracket	2239729
5	Mounting plate	1937150
6	Top panel	1946094
7	Protective net back	1941332
8	Condenser assembly	1997057
9	Base assembly	1947755
10	Separate wall	1941316
11	Valve 4 way TA	2307352
12	Solenoid	1511783
13	Valve 4 way	1977445
14	Compressor	2223579
15	Wire compressor	1938339
16	Capillary assembly	2231389
17	Valve 2 way 1/4	1405371
18	Valve 3 way 1/2	1868013
19	Cabinet right	1941287
20	Wiring cover	1546714
21	Connecting board	2193162
22	Terminal	2089796
23	Electric box	2193159
24	Inverter control PCB	2290465
25	Electric box cover	2193160
26	Thermistor pipe	1822633
27	Thermistor discharge	1822634
28	Thermistor outdoor	1562104
29	Sensor mount plate	1937184

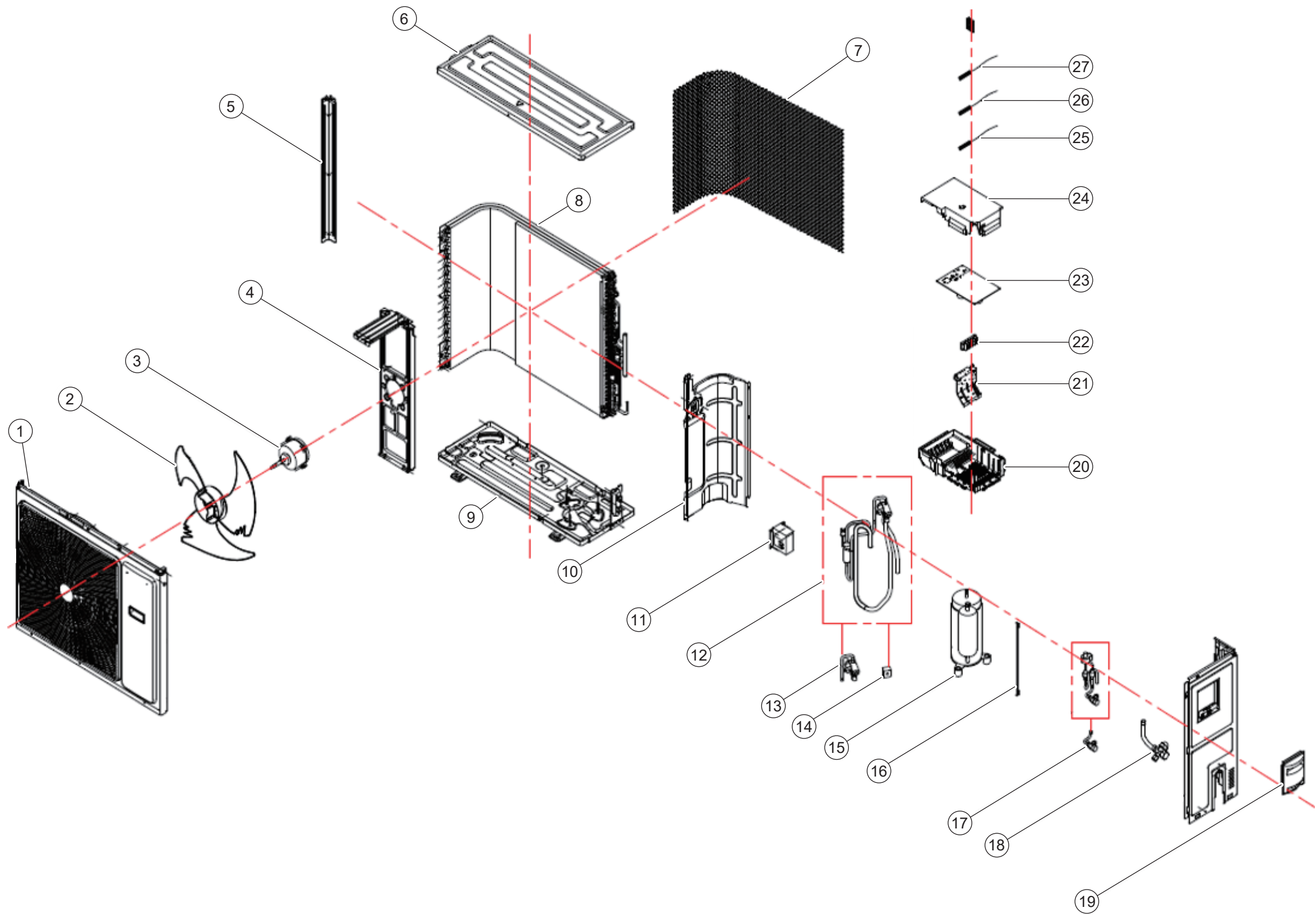


OUTDOOR UNIT  
AOKA24KPBA



No.	Description	Part number
1	Front panel w/ grille	1935850
2	Propeller fan blade	1841783
3	Fan motor	1892229
4	Motor bracket	1875044
5	Mounting plate	1841772
6	Top panel	1841779
7	Protective net back	1847186
8	Condenser assembly	1988480
9	Base assembly	1859054
10	Separate wall	1841986
11	Choke coil	1205797
12	S tube	2292798
12	D tube	2276419
12	C tube	2292799
13	Compressor	2163834
14	Wire compressor	1938339
15	Capillary assembly	2293677
16	Valve 2 way 1/4	1405371
17	Valve 3 way 5/8	1977802
18	Cabinet right	1841776
19	Wiring cover	1546714
20	Connecting board	1842392
21	Terminal	1852125
22	Electric box	2099254
23	Inverter control PCB	2293387
24	Electric box cover	2175783
25	Thermistor outdoor	1562104
26	Thermistor pipe	1822633
27	Thermistor discharge	1822634
28	Sensor mount plate	1937184

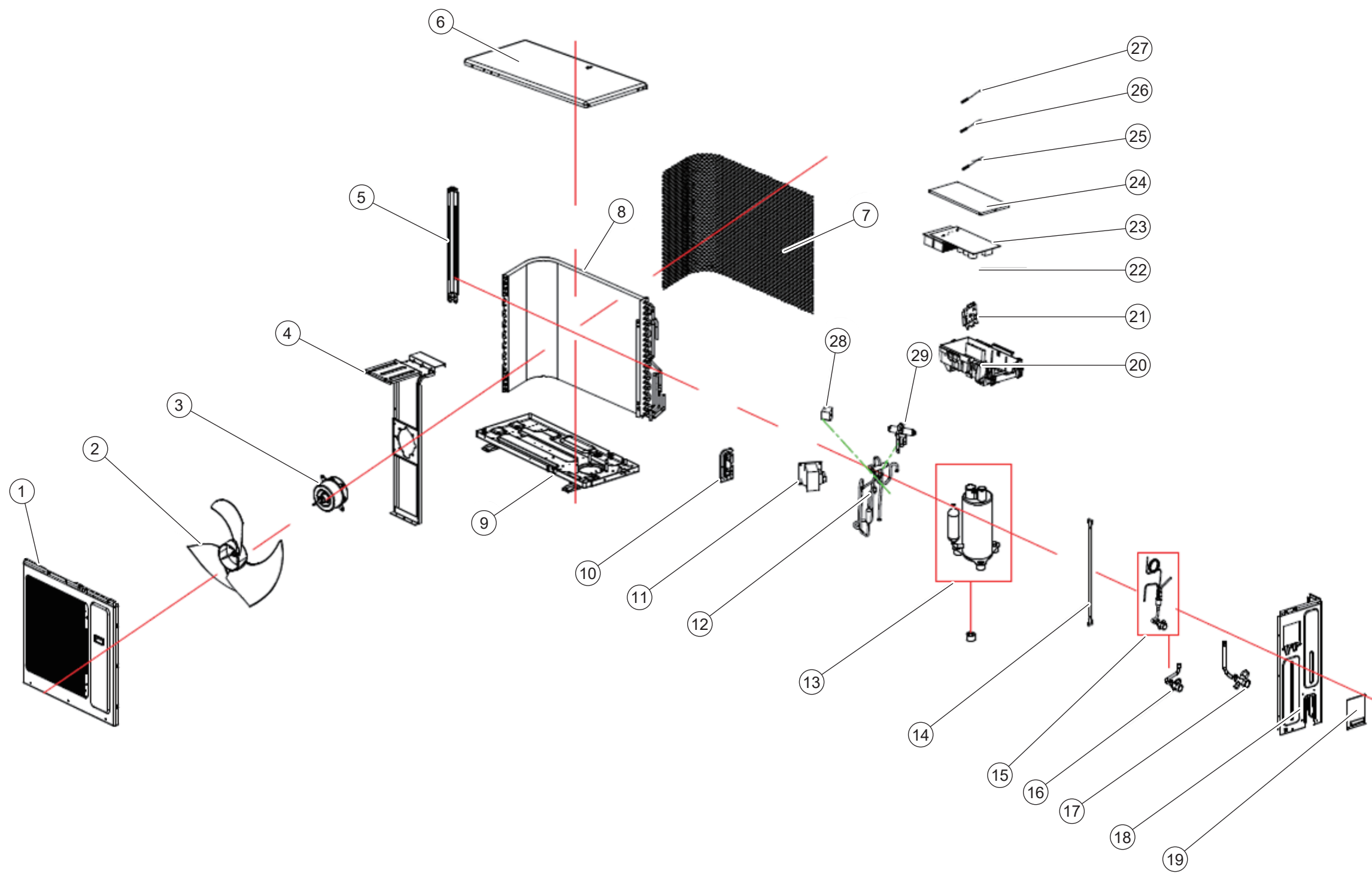
OUTDOOR UNIT  
AOKA30KPBA



No.	Description	Part number
1	Front panel w/ grille	2122560
2	Propeller fan blade	2087635
3	Fan motor	2086565
4	Motor bracket	2084833
5	Mounting plate	2084821
6	Top panel	2084803
7	Protective net back	2095857
8	Condenser assembly	2254849
9	Base assembly	2166350
10	Separate wall assy	2164185
10	Separate wall	2089997
11	Choke coil	1302261
12	Valve 4 way TA	4000001
13	Valve 4 way	1258444
14	Solenoid	1511783
15	Compressor	2085180
16	Wire compressor	1938339
17	Valve 2 way 3/8	2213197
18	Valve 3 way 5/8	1977802
19	Wiring cover	1546714
20	Electric box	2084826
21	Connecting board	1842392
22	Terminal	1852125
23	Inverter control PCB	2287973
24	Electric box cover	2125885
25	Thermistor pipe	1822633
26	Thermistor discharge	1822634
27	Thermistor outdoor	1562104














OUTDOOR UNIT  
AOKA36KPBA




No.	Description	Part number
1	Front panel w/ grille	2122560
2	Propeller fan blade	2087635
3	Fan motor	2086565
4	Motor bracket	2123858
5	Mounting plate	2084821
6	Top panel	2101114
7	Protective net back	2095857
8	Condenser assembly	2099829
9	Base assembly	2099845
10	Valve seat	1840379
11	Choke coil	1302261
12	Valve 4 way TA	2303899
13	Compressor	1987814
14	Wire compressor	1938339
15	Throttle assembly	2300130
16	Valve 2 way 3/8	2213197
17	Valve 3 way 5/8	1977802
18	Cabinet right	2084811
19	Wiring cover	1546714
20	Electric box	2084826
21	Connecting board	1842392
22	Terminal	2089796
23	Inverter control PCB	2299202
24	Electric box cover	2125885
25	Thermistor pipe	1822633
26	Thermistor discharge	1822634
27	Thermistor outdoor	1831029
28	Solenoid	1511783
29	Valve 4 way	1258444

## Accessories

**Models: ASKA09KPBA, ASKA12KPBA, ASKA18KPBA, ASKA24KPBA, ASKA30KPBA, and ASKA36KPBA**

Part name	Exterior	Qty	Part name	Exterior	Qty
Use and installation instructions		1	Flare nut • For gas pipe × 2 • For liquid pipe × 2		4
Remote controller instructions		1	Screw for installations • Anchor × 6 • Screw × 6		1
Warranty card		1	Screw cap of front panel		1 (09 and 12 models)
Remote controller		1			3 (18 and 24 models)
Remote controller holder		1			4 (30 and 36 models)
Foam insulation		1	Drain joint		1
			Drain joint rubber seal		1

**Models: AOKA09KPBA, AOKA12KPBA, AOKA18KPBA, AOKA24KPBA, AOKA30KPBA, and AOKA36KPBA**

Part name	Exterior	Qty	Part name	Exterior	Qty
Rubber pad		4	—	—	—