

INSTALLATION AND OWNER'S MANUAL



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YFFE24BXEXBH-RX
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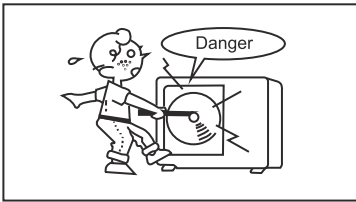


YFFE55BYOXBHS-X

Read this manual before installation and operation
Make sure that it is kept for future reference

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Important Safety Information

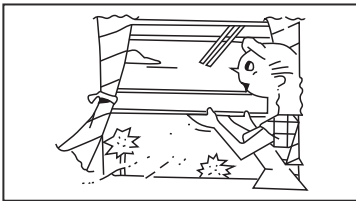


⚠ CAUTION

Do not attempt to install this unit by yourself. This unit requires installation by qualified persons.

⚠ DANGER

Do not attempt to service the unit yourself. This unit has no user serviceable components. Opening or removing the cover will expose you to dangerous voltage. Turning off the power supply will not prevent potential electric shock.



⚠ DANGER

Never put hands or objects into the Air Outlet of indoor or outdoor units. These units are installed with a fan running at high speed. To touch the moving fan will cause serious injury.

⚠ DANGER

To avoid the risk of serious electrical shock, Never sprinkle or spill water or liquid on unit.

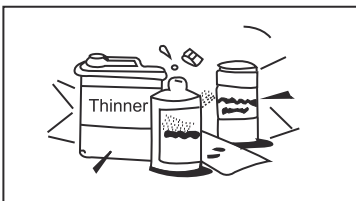


⚠ WARNING

Ventilate the room regularly while the air conditioner is in use, especially if there is also a gas appliance in use in this room. Failure to follow these directions may result in a loss of oxygen in the room.

⚠ WARNING

To prevent electric shock, turn off the power or disconnect the power supply plug before beginning any cleaning or other routine maintenance. Follow the directions for cleaning in the Owner's Manual.

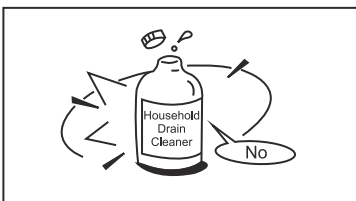


⚠ WARNING

Do not use liquid cleaners or aerosol cleaners, use a soft and dry cloth for cleaning the unit. To avoid electric shock, never attempt to clean the units by sprinkling water.

⚠ CAUTION

Do not use caustic household drain cleaners in the unit. Drain cleaners can quickly destroy the unit components (drain pan and heat exchanger coil, etc.).



⚠ NOTE

For proper performance, operate the unit in temperature and humidity ranges indicated in this owner's manual. If the unit is operated beyond these conditions, it may cause malfunctions of the unit or dew dripping from the unit.

Important!

Please read before starting

The 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:

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

Symbols alert



Electrical



Safety / Alert

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 outline 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 the document.

SPECIAL PRECAUTIONS WHEN WIRING

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 electrical codes .
- Connect all wiring tightly. Loose wiring may cause overheating at connection points and a possible fire hazard.
- This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
- Plug used should be in accordance with the electrical regulation/wiring rules of the country where the unit is installed and should comply with IEC 60083 and/or with plug configuration being adapted by countries where the appliance is put into operation.
- A disconnection provision from the supply mains must be incorporated in the fixed wiring.

Air Conditioner Operating Conditions

For proper performance, run the air conditioner under the following temperature conditions:

Cooling operation	Outdoor temperature: 18 to 43°C
	Room temperature: 16 to 30°C
	CAUTION Room relative humidity less than 80%. If the air conditioner operates in excess of this figure, the surface of the air conditioner may attract condensation.
Dry operation	Outdoor temperature: 18 to 43°C
	Room temperature: 16 to 30°C

If air conditioner is used beyond the above conditions, safety protection features may come into operation.

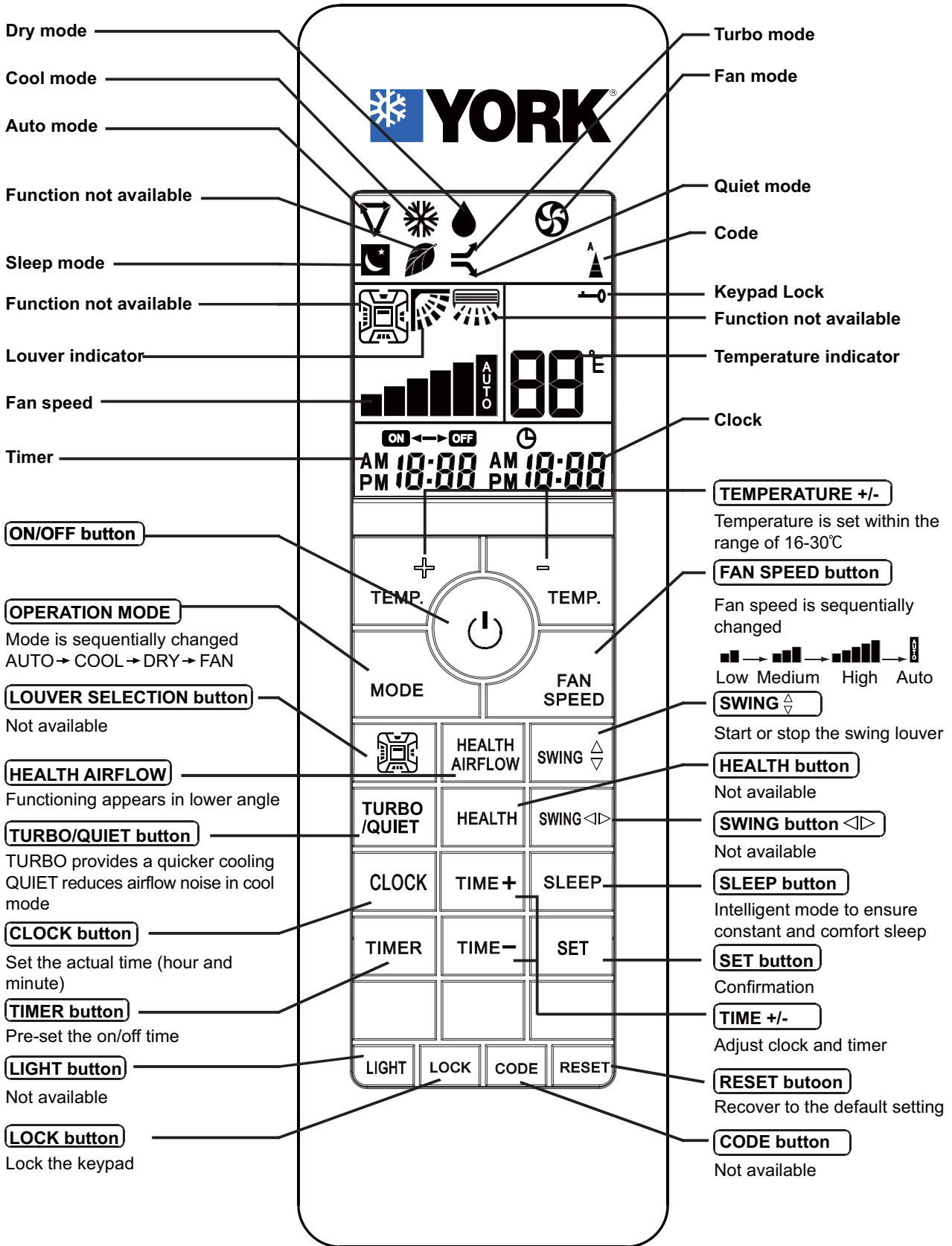
Remote Control Operation

PRECAUTIONS

- Curtain, door or the like objects will prevent the remote signal from being received by air conditioner.
- Do not get the interior of remote controller wet. It is forbidden to expose to direct sunlight or locate it in the place with high temp.
- Malfunction may occur if infrared signal receiver on air conditioner is exposed to sunlight, please shelter the signal receiver from sunlight with curtain.
- Please remove the nearby electronic device for they may affect the performance of remote controller. If necessary, contact the local authorized service centre or technical support centre.
- Do not put the used or different batteries into the remote controller, otherwise remote controller will fail to send signal.
- Please remove the batteries before long period unused, otherwise the remote controller may be damaged.
- If display disappeared while pressing the button of remote controller which indicates low battery, please replace the batteries.
- If no receiving sound is heard from indoor unit or remote controller does not flash, please replace the batteries.
- Effective transmitting distance of remote controller is 7m, please aim the signal sending part to the receiver on air conditioner.

Remote Controller

Appearance and LCD Screen Display



Key Functions

1. Auto Mode:

Press the MODE button when ▽ indicates. The mode of operation, COOL or FAN, will be automatically determined by room temperature.

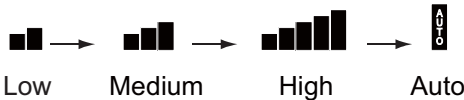
2. Cool Mode:

The air conditioner is designed for cooling when ambient temperature is 18-43°C.

Press the MODE button when * indicates. Set the desired temperature with the TEMP+/- . AUTO FAN SPEED is automatically determined HIGH, MEDIUM or LOW speed according to the difference between room and pre-set temperature.

3. FAN SPEED Mode:

(1) In modes other than Fan, the air speed can be adjusted in order: Low, Medium, High and Auto.



(2) In FAN mode, the "Auto" is disabled.

4. Dry Mode:

Press the MODE button when ♀ indicates. The Fan speed is pre-set at auto speed.

5. Louver indicator



6. TURBO/QUIET

(1) Press "TURBO/QUIET", the LCD displays 🏎️ TURBO Mode is set. Press "TURBO/QUIET" again, the controller LCD displays 🌬️ the Quiet Mode is set. Press "TURBO/QUIET" again to exit the setting of TURBO/QUIET. Resume set air speed.
 (2) This function is only enabled in Cool mode.

7. TIMER

Timer	Timer On	Press TIMER , the ON blinking. Press TIME + / TIME - to select the desirable time. Press SET to confirm.
	Timer Off	Press TIMER , the OFF blinking. Press TIME + / TIME - to select the desirable time. Press SET to confirm.
	Timer On→Off On←Off	Intelligent TIMER for setting both ON-OFF times at one time. Press TIMER , the ON blinking. Press TIME + / TIME - to select the desirable start time. Press TIMER , the OFF blinking. Press TIME + / TIME - to select the desirable stop time. Press SET to confirm.
	EXIT	Press TIMER button again to cancel timer setting and exit.

Installation Notice

Location:

- During cooling operation, the air conditioner will dry the room air, so please fix a pipe to drain all the water away from the air conditioner.
- Please let the indoor unit more than one metre away from the TV set and the radio in order to avoid the picture and noise interference.
- Powerful radio transmitters or any other devices radiating high frequency radio waves can cause the air conditioner to malfunction. Please consult the dealer where you purchased the air conditioner before installing it.
- Don't fix the unit in the dangerous region with combustible gas or volatile matter.
- If the air conditioner operates in an atmosphere containing oils (machine oil), salt (near a coastal area), sulfide gas (near a hot spring), etc., such substances may lead to failure of the air conditioner.

Be careful of noise or vibrations

- Please fix the unit in the stable place to avoid the noise or vibrations.
- The noise near the air outlet of the outdoor unit may enter the air exit.
- Locate the outdoor unit where noise emitted by it or hot air from its air outlet will not cause nuisance to your neighbours.
- If the air conditioner sounds abnormal during operation, contact the dealer where you purchased the air conditioner.

Wire

- To avoid the electric shock, please link the air conditioner with the ground. The plug in the air conditioner has joined the ground wiring, please don't simply change it.
- The power socket is used as the air conditioner specifically.
- Don't pull the power wiring hard.
- When linking the air conditioner with the ground, observe the local rules.
- If necessary use the power fuse or the circuit, breaker or the corresponding scale ampere. If you want to change the power wiring, please contact the centre service of the local MD electric appliance.

Relocation

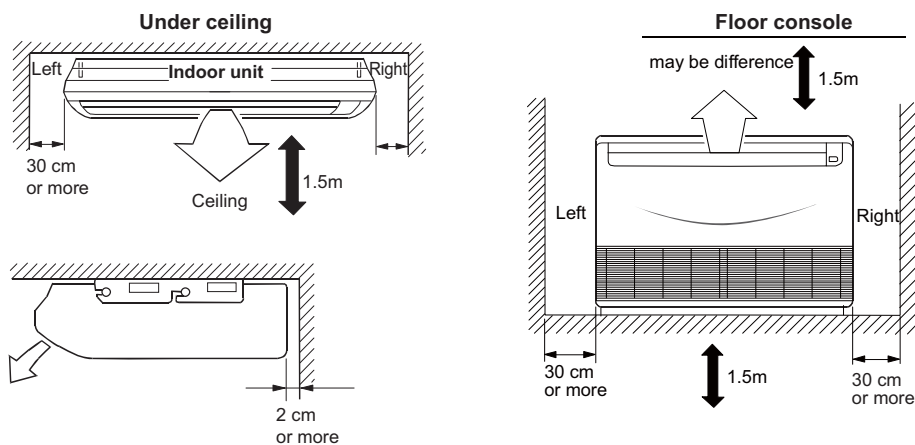
If you move out or if it is desired to relocate the air conditioner, consult your dealer, because special skills to withdraw refrigerant, purge air and perform other operations are required.

Installation Place

■ The Indoor Unit

Decide the mounting position with the customer as follows.

- (1) Install the indoor unit level on a strong wall, floor, ceiling which is not subject to vibration.
- (2) The inlet and outlet ports should not be obstructed. The air should be able to blow all over the room.
- (3) Install the unit near an electric outlet or special branch circuit.
- (4) Do not install the unit where it will be exposed to direct sunlight.
- (5) Install the unit where connection to the outdoor unit is easy.
- (6) Install the unit where the drain pipe can be easily installed.
- (7) Take servicing etc. into consideration and leave the spaces shown in the figure below. Also install the unit where the filter can be removed.



■ The Outdoor Unit

Select the place of installation satisfying the following conditions and, at the same time, obtain a consent from the client or user.

- (1) Place where air circulates.
- (2) Place free from heat radiation from other heat sources.
- (3) Place where drain water may be discharged.
- (4) Place where noise and hot air may not disturb the neighborhood.
- (5) Place where there is not heavy snowfall in the winter time.
- (6) Place where obstacles do not exist near the air inlet and air outlet .
- (7) Place where the air outlet may not be exposed to a strong wind.
- (8) Place surrounded at four sides are not suitable for installation. A 1m or more of overhead space is needed for the unit.
- (9) Mount guide-louvers to place where short-circuit is a possibility.
- (10) When installing several units, secure sufficient suction space to avoid short circuiting.

Installation Place

▲ Cautions

Location in the following places may cause malfunction of the machine. (If unavoidable, please consult your local dealer.)

- There exists petrolatum.
- There is salty air surrounding (near the coast).
- There is caustic gas (the sulfide, for example) existing in the air (near a hot spring).
- The bolt vibrates violently (in the factories).
- In cabinets.
- In kitchen where it is full of oily gas.
- There is strong electromagnetic wave existing.
- There are inflammable materials or gas.
- There is acid or alkaline liquid evaporating.
- Other special conditions.

■ Notes Before Installation

1. Select the correct carry - in path.
2. Move this unit as originally packaged as possible.
3. If the air conditioner is installed on a metal part of the building, it must be electrically insulated according to the relevant standards to electrical appliances.

General Installation Guideline

No.	Installation works	Descriptions
1	Preparation of tools and installation parts	Preparation of installation
2	Flaring the pipes	To insert the flare nuts, mounted on the connection parts of both indoor and outdoor unit, onto the copper pipes
3	Pipe bending	
4	Connection of installation parts (elbows, socket etc)	Connection of long piping
5	Tighten the flare nut (outdoor)	Connecting the pipings of the outdoor unit
6	Purge the pipings	To remove dust and scale in working
7	Tighten the flare nut (indoor)	Connecting the pipings of the indoor unit
8	Check a gas-leakage of the connecting part of the pipings	
9	Air purging and vacuuming of the piping and indoor unit	The air which contains moisture and which remains in the refrigeration cycle may cause a malfunction on the compressor
10	Open the liquid side and gas side valves	
11	Form the pipings	To prevent heat loss and sweat
12	Checking the drainage (indoor unit)	To ensure if water can flow through drain hose of indoor unit
13	Connecting the cable between outdoor and indoor unit	Preparation for operation
14	Connecting the main cable to indoor unit	
15	Cooling operation (Use the remote controller or display of the indoor unit)	

Preparation of Installing Parts and Tools

No.	Installation Parts, Tools	Use
1	Flaring tool (Φ6.35 - Φ19.05)	Flaring the pipes
2	Reamer	Remove burrs from cut edges of pipes
3	Pipe cutter (MAX 35mm Copper pipe)	Cutting the pipings
4	Allen Key (H5 - 1/4", 1/2", 5/8" & H8 - 3/4")	To open the service valve
5	Pipe bender	Bending the pipings
6	Leak detector	Check a gas-leakage of connecting part of the pipings
7	Manifold gauge	To measure the pressure, to charge the refrigerant
8	Charge nipple	To connect the Refrigerant Vessel
9	Vacuum pump	To remove the air in the pipe
10	Charge cylinder balance	To measure the refrigerant amount
11	Refrigerant Vessel (Refrigerant R22 or R410A)	Gas charge Air purge Cleaning the pipe
12	Spanner	To tighten the connecting parts of the pipings
13	Monkey spanner	
14	Driver (⊕, ⊖)	
15	Pliers (150mm)	Cutting the wires
16	Tapeline	To measure the length
17	Core drill	To make holes through the concrete wall and blocks
18	Voltmeter, Ammeter, Clampmeter	To measure the current and voltage
19	Insulation resistance tester	To measure the insulation resistance
20	Glass thermometer	To measure the intake and outlet air temperature of the indoor unit
21	Copper tubes	To use the connecting pipings
22	Insulation material	To cover the connecting pipings
23	Tape	To finish the connecting pipings
24	Electrical leakage breaker	To shut off the main power
25	Cable	To connect the cable from outdoor unit to indoor unit
26	Drain hose sockets, elbows	To remove the condensing water

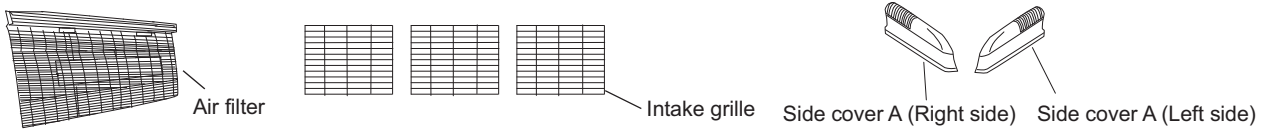
Installation procedure

⚠ WARNING

- Install the air conditioner in a location which can withstand a load at least five times the weight of air conditioner and which will not amplify sound or vibration. If the installation location is not strong enough, the indoor unit may fall and cause injuries.
- If the job is done with the panel frame only, there is risk that the unit will come loose. Please take care.

PREPARING INDOOR UNIT INSTALLATION

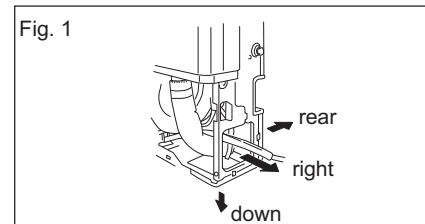
- (1) Remove the air filters.
- (2) Remove the intake grilles.
- (3) Find the side covers (right and left side) in the box placed on the foam block for YCE3F10/15/20AAS-W, remove the Side cover (Right and left side) for YCE3F25/30/35/40/50AAS-W



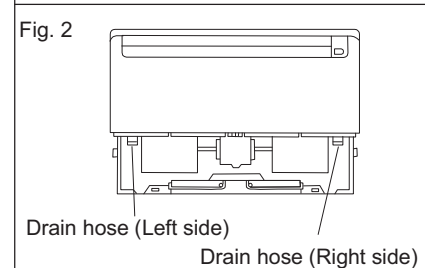
A.FLOOR CONSOLE TYPE

1. Drilling for piping

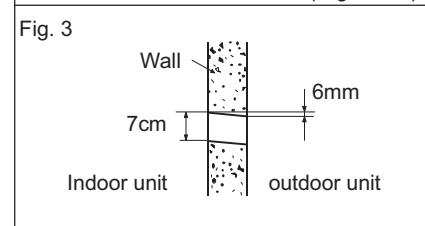
Select piping and drain directions. The piping and drain can be made in three directions as shown in the Fig.1.



The drain hose can be connected to either the left or right side. (Fig.2)

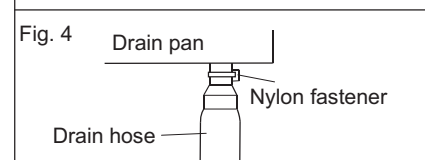


When the directions are selected, drill a 7 cm dia. hole on the wall so that the hole is tilted downward toward the outdoor for smooth water flow. When the pipe is led out from the rear, make a hole at the position shown in Fig.3.

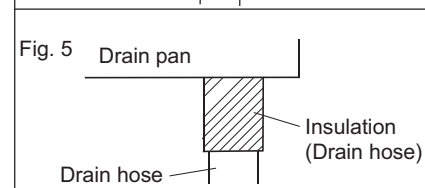


2. Installing drain hose

Select whether the drain hose will be connected to the left or right side (Fig.2). Insert the drain hose into the drain pan, then secure the drain hose with a nylon fastener (Fig.4).

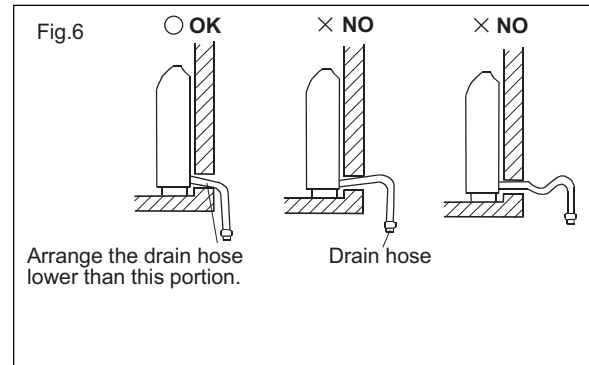


Wrap the insulation (drain hose) around the drain hose connection. (Fig.5)

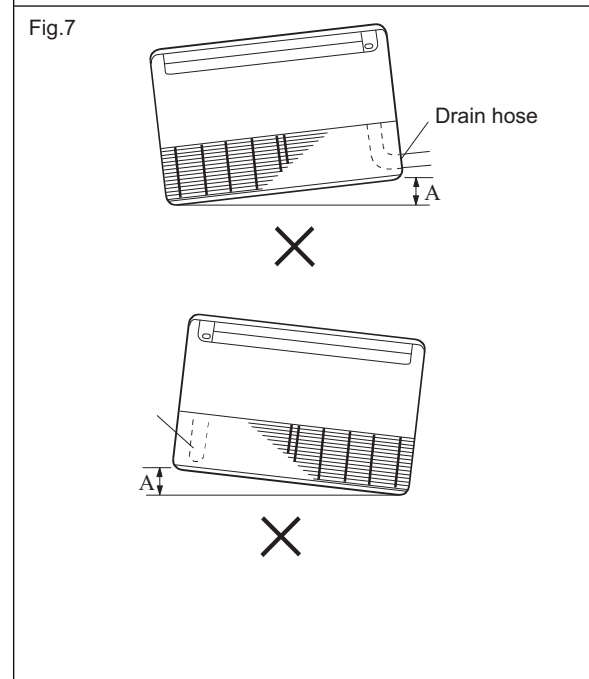


Installation procedure

Be sure to arrange the drain hose correctly so that it is leveled lower than the drain hose connecting port of the indoor unit. (Fig.6)



⚠ CAUTION:
Do not install the unit drain hose side is too high. Height A should be less than 5mm. (Fig.7)

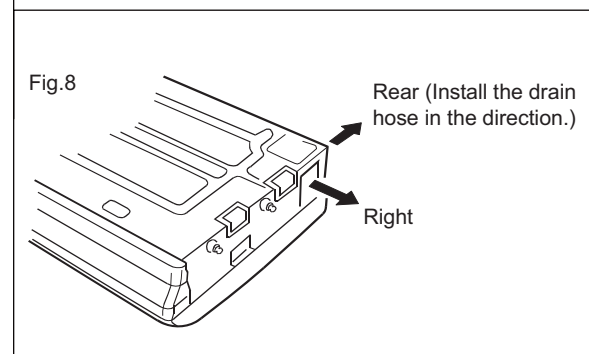


B. UNDER CEILING TYPE

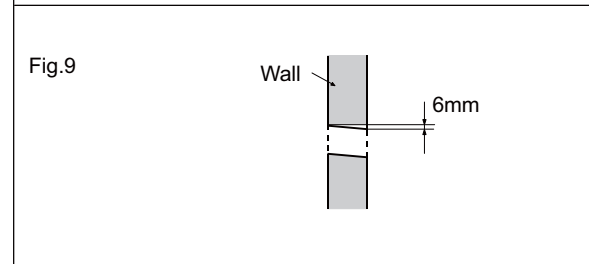
1. Drilling for piping

Select piping and drain directions. (Fig.8)

⚠ CAUTION:
Install the drain hose at the rear. It should not be installed on the top or right side.



When the directions are selected, drill a 8cm dia. hole on the wall so that the hole is tilted downward toward the outdoor for smooth water flow. (Fig.9)



Installation procedure

2. Drilling holes for anchor bolts and installing the anchor bolts

With a concrete drill, drill four 12.7 mm dia. Holes. (Fig.10)

Insert the anchor bolts into the drilled holes, and drive the pins completely into the anchor bolts with a hammer. (Fig.11)

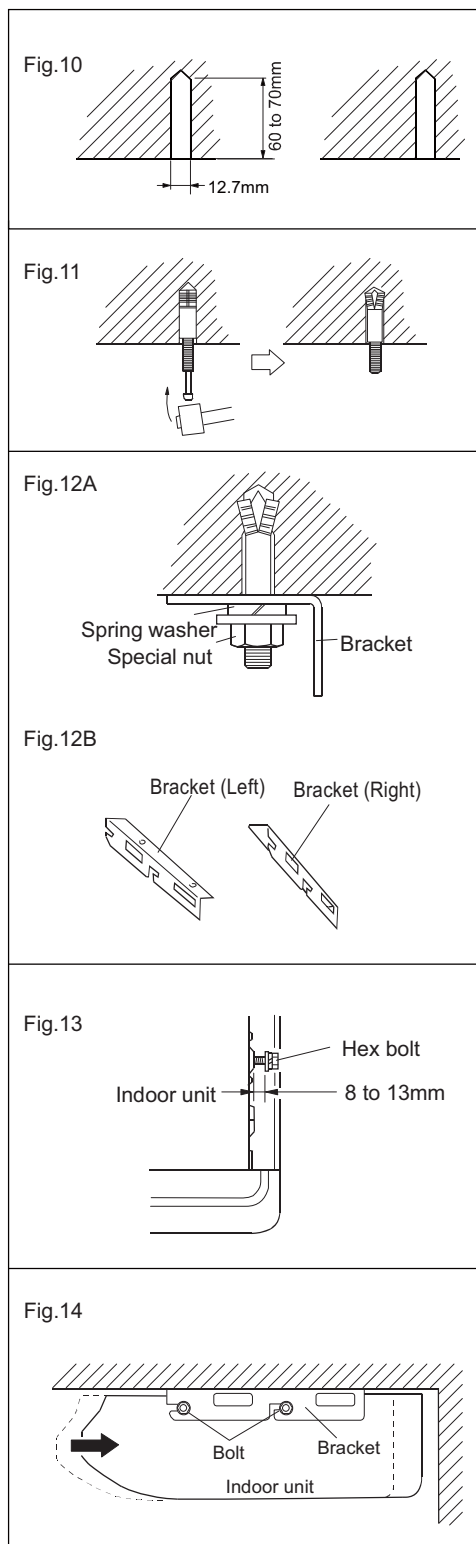
3. Installing brackets

Install the brackets with nuts, washers and spring washers. (Fig.12)

4. Installing indoor unit

Reset the hex bolts as shown in Fig.13.

Apply the indoor unit to the brackets. (Fig.14)
Now, securely tighten the hex bolts in both sides.



Installation procedure

5. Installing the drain hose

Select whether the drain hose will be connected to the left or right side.(Fig.2)

Insert the drain hose into the drain pan, then secure the drain hose with a nylon fastener.(Fig.4)

Wrap the insulation (drain hose) around the drain hose connection. (Fig.5)

Be sure to arrange the drain hose correctly so that it is leveled lower than the drain hose connecting port of the indoor unit. (Fig.11)

When drain hose is arranged backward. Secure the drain hose with the VT wire. (Fig.16)

Fig.15

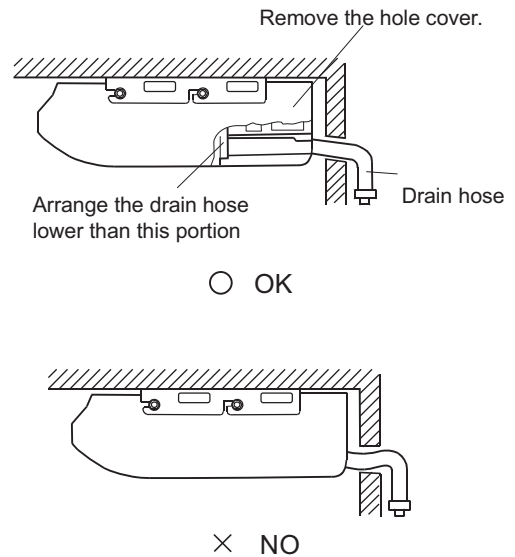
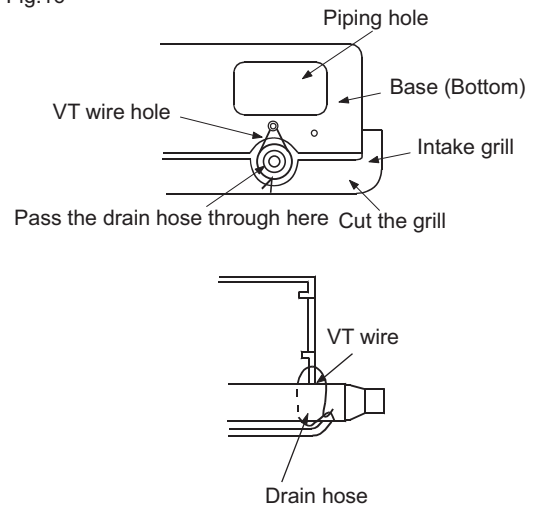


Fig.16



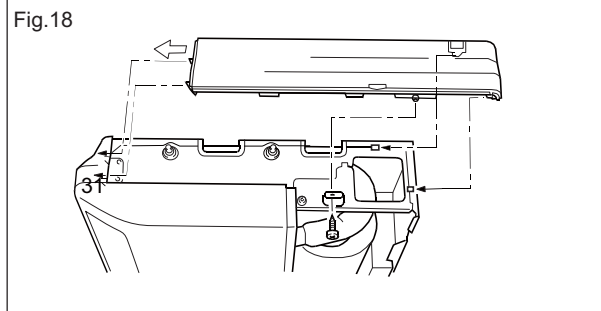
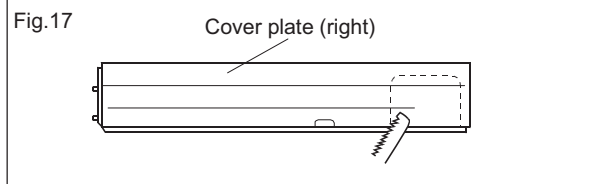
Installation procedure

MOUNT THE COVER PLATE AND THE INTAKE GRILL

1. Mount the cover plate (right)

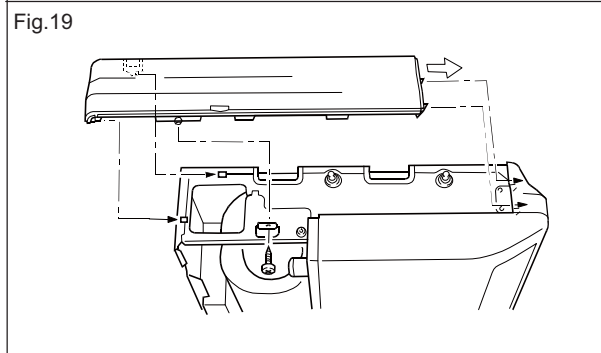
(1) Cut a pipe exit hole in the right plate. This is only when the pipe exits from the right side. This operation is not required when the protrusion is on the top or rear.

(2) Join the cover plate (right) and mount with screws.



2. Mount the cover plate (left)

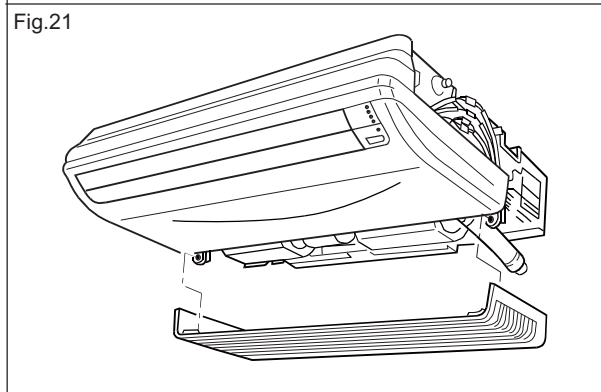
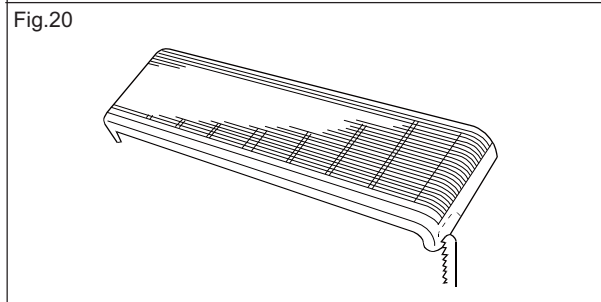
Join the cover plate (left) and mount with screws.



3. Mount the intake grill.

(1) Cut the right side of the intake grill. This is only when the pipe exits from the right side

(2) Insert the hinges on the bottom of the intake grill into the holes in the base assembly. Then mount the arms to the three areas on the top of the intake grill.



Piping Procedure

1. Preparation of piping

(1) Cut the pipes and the cable .

- Use the accessory piping kit or the pipes purchased locally, conforming to refrigeration grade.
- Measure the distance between the indoor and the outdoor unit.
- Cut the pipes a little longer than measured distance.
- Cut the cable 1.5m longer than the pipe length.

(2) Remove burrs.

- Remove burrs from cut edges of pipes.
- Turn the pipe end down to avoid the metal powder entering the pipe.

Caution:

If burrs are not removed, they may cause a gas leakage.

(3) Flaring the pipes.

- Insert the flare nuts, mounted on the connection ports of both indoor and outdoor unit, onto the copper pipes. Some refrigerant gas may leak, when the flare nuts are removed from the indoor unit, as some gas is charged to prevent the inside of the pipe from rusting.
- Fit the copper pipe end into the Bar of flare tool about 0~0.5mm higher. (See illustration)
- Flare the pipe ends.

(4) Tape the flaring part to protect it from dust or damages.

Fig.22

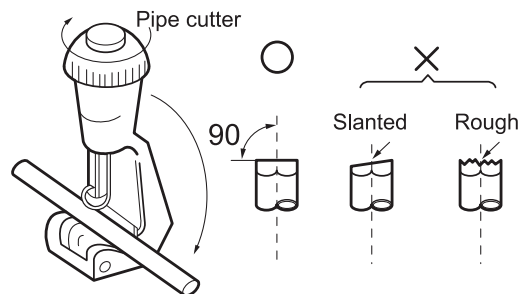


Fig.23

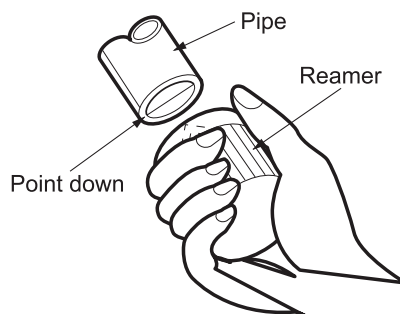


Fig.24

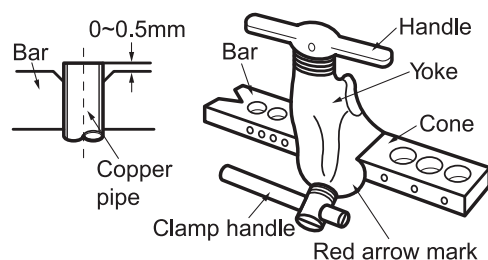
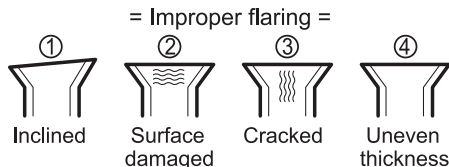


Fig.25



Piping Procedure

2. Form the Piping

- (1) **Wrap the connecting port of indoor unit with the insulation material and secure it with two Plastic Bands (for the right Piping).**
 - If you connect an additional drain hose, the end of the drain - outlet should be in water, and fix it on the wall to avoid swinging in the wind.

In case the outdoor unit is installed below position of the indoor unit.

- (1) **Tape the piping and connecting cable, from down to up.**
- (2) **Form the piping gathered by taping along the exterior wall and fix it on the wall by saddle or equivalent.**

In case the outdoor unit is installed upper position of the indoor unit.

- (1) **Tape the piping and connecting cable from down to up.**
- (2) **In order to prevent water from entering the room, tape the piping from a trap.**
- (3) **Fix the piping onto the wall with saddle or bracket.**

Fig.26

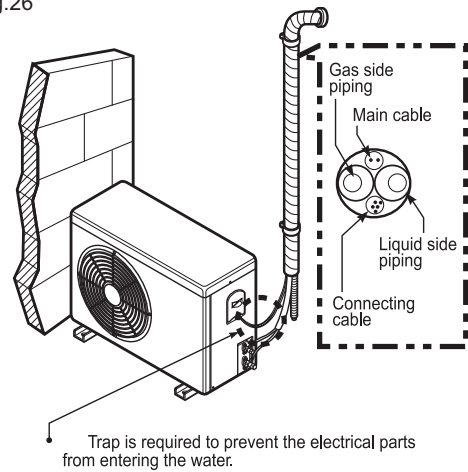
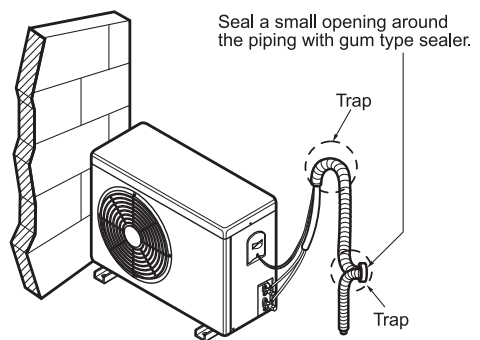


Fig.27



Piping Procedure

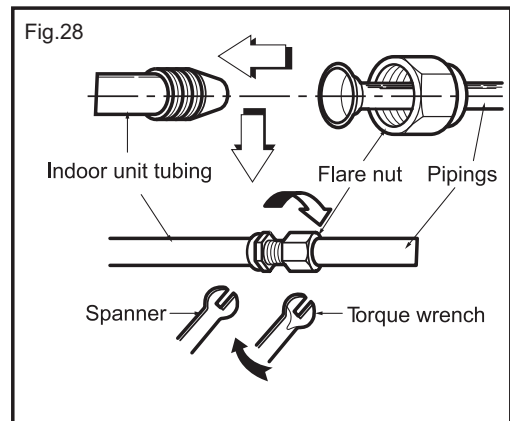
3. Connection of piping

- (1) **Move the indoor tubing and drain hose to the hole.**
 - Remove tubing holder and pull the tubing out of the chassis.
- (2) **Replace the tubing holder into original position .**
- (3) **Route the tubing and the drain hose straight backwards.**
- (4) **Insert the connecting cable into the indoor unit through the hole.**
 - Do not connect the cable to the indoor unit.
 - Make a small loop with the cable for easy connection later.
- (5) **Tape the tubing and the connecting cable.**
- (6) **Indoor unit installation.**
- (7) **Connecting the pipings to the indoor unit.**

- Align the center of the pipings and sufficiently tighten the flare nut with fingers.

Finally, tighten the flare nut with torque wrench until the wrench clicks.

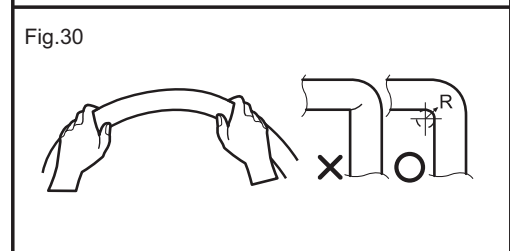
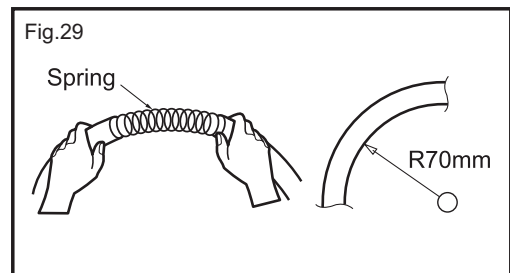
- When tightening the flare nut with torque wrench, ensure the direction for tightening follows the arrow on the wrench.



Pipe size	Tighten torque	A(mm)	Flare shape
φ 6.35	1420~1720N.cm (144~176kgf.cm)	8.3~8.7	
φ 9.52	3270~3990N.cm (333~407kgf.cm)	12.0~12.4	
φ 12.7	4950~6030N.cm (490~500kgf.cm)	12.4~16.6	
φ 15.88	6180~7540N.cm (630~770kgf.cm)	18.6~19.0	
φ 19.05	9720~11860 N.cm (990~1210 kgf.cm)	22.9~23.3	

4. Precautions in bending

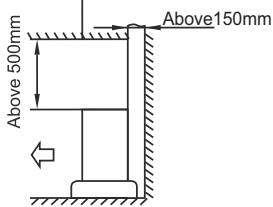
- (1) **If it is necessary (locally purchased) to bend or stretch the tubing, use the spring which is attached to the tubing instead of pipe bender.**
 - Please make a careful notice to make a smooth line.
 - Hold the tubing with your two hands closely and then bend or stretch it slowly not to make any crack.
 - Remember that the radius (R) should exceed 70mm. (Refer to Fig. 17)
- (2) **Do not repeat the bending process to prevent the tubing from cracking or crushing.**
- (3) **Keep in mind that the bending part should not be cracked and make the radius (R) as long as possible. (Refer to Fig.18)**



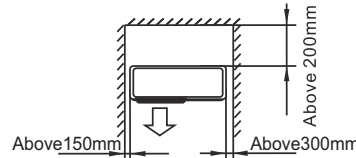
Installation of the Outdoor Unit

1. Single unit mounting

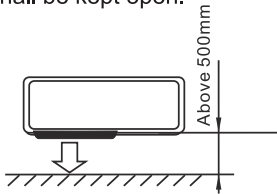
1 When there is obstruction above the unit, if we can keep the space as shown in the figure, this position is still feasible.



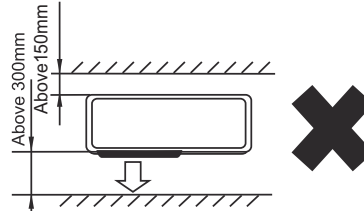
2 When the front side (air outlet) is open and obstruction is lower than unit, if we can keep the space as shown in the figure, this position is still feasible even if there is obstruction in other three sides. (The top side is open)



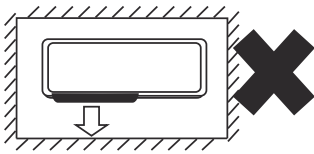
3 If there is obstruction at front side and obstruction is lower than unit, the backside, top side and flank sides shall be kept open.



4 When there is obstruction at both front side and backside, please don't choose the following location.



5 When there is obstruction in all four directions. Even if the top side is open, the unit can not be installed there.



6 While installing the outdoor unit, enough maintenance space shall be prepared, as shown in the following figure:

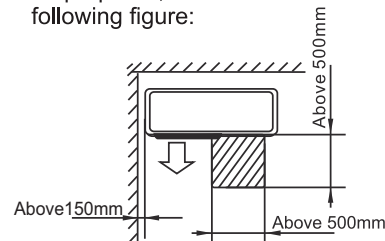
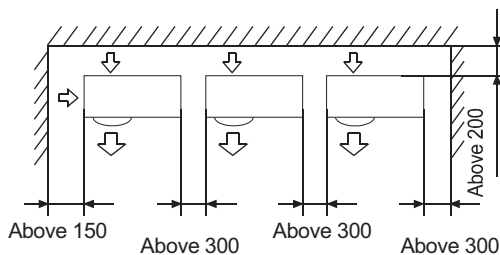


Fig.31

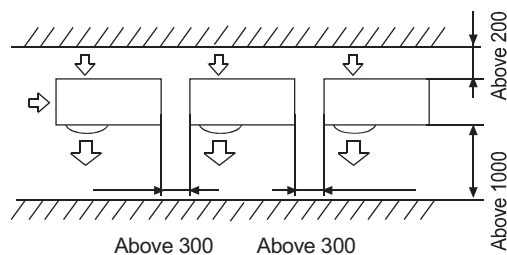
2. Multi-unit installation (unit: mm)

Fig.32

Back and side



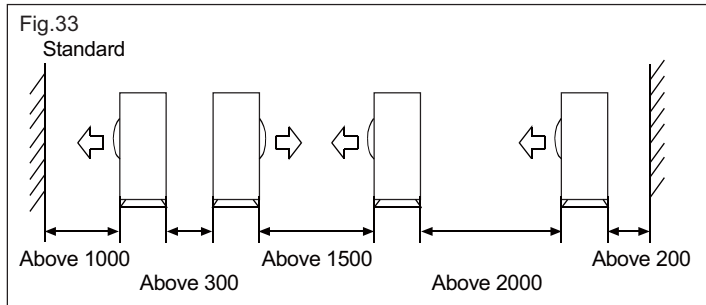
Front and back



Height of barriers is below that of outdoor unit.

Installation of the Outdoor Unit

3. Multi-unit installation in front and back (unit: mm)



The top and two side surfaces must be exposed to open space, and barriers on at least one side of the front and back shall be lower than the outdoor unit.

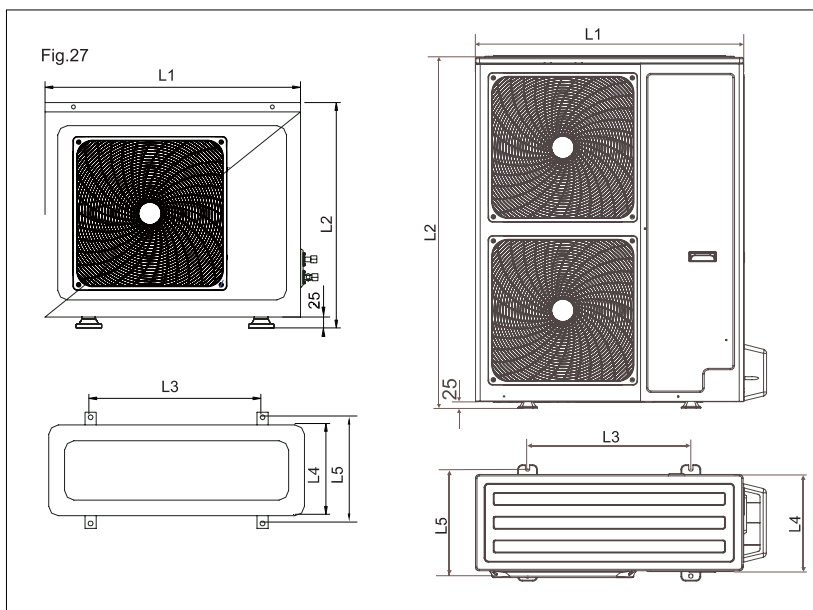
4. Connection pipe requirement

Table 1

Model	Diameter		Maximum length	Maximum height (between indoor and outdoor)	Additional weight
	Liquid side	Gas side			
YEFE18BYEXBHO-X	6.35 mm	15.88mm	20 m	5 m	30 g/m
YEFE24BYEXBHO-X YEFE36BYEXBHO-X	9.52 mm	15.88mm	30 m	10 m	50 g/m
YEFE36BYOXBHO-X YEFE48BYOXBHS-X YEFE55BYOXBHS-X	9.52 mm	19.05mm	50 m	20 m	50 g/m

When connecting pipes are longer than 5m, it is needed to charge additional refrigerant as Table1. The min. length of connecting pipe is 3m.

5. Installation sketch of outdoor unit (unit: mm)



	L1	L2	L3	L4	L5
YEFE18BYEXBHO-X YFFE24BYEXBHO-X	810	680	580	325	320
YEFE36BYEXBHO-X	950	840	580	375	383
YEFE36BYOXBHO-X YEFE48BYOXBHS-X	1008	834	645	440	445
YEFE55BYOXBHS-X	948	1250	580	340	380

Install Outdoor Pipes and Cables

Minimum 0.8 mm wall thickness interconnecting pipe to be used for R410A refrigerant type.

CAUTION

- Bend the tubing in proper way. Don't harm them.
- Daub the surfaces of the flare pipe and the joint nuts with frozen oil, and wrench it for 3~4 rounds with hands before fasten the flare nuts.
- Be sure to use two wrenches simultaneously when you connect or disconnect the pipes.
- Do not let air, dust, or other impurities fall in the pipe system during the time of installation.
- The connecting pipe should not be installed until the indoor and outdoor units have been fixed already.
- Keep the connecting pipe dry, and do not let moisture in during installation.

The Procedure of Connecting Pipes

Measure the necessary length of the connecting pipe, and make it by the following way.

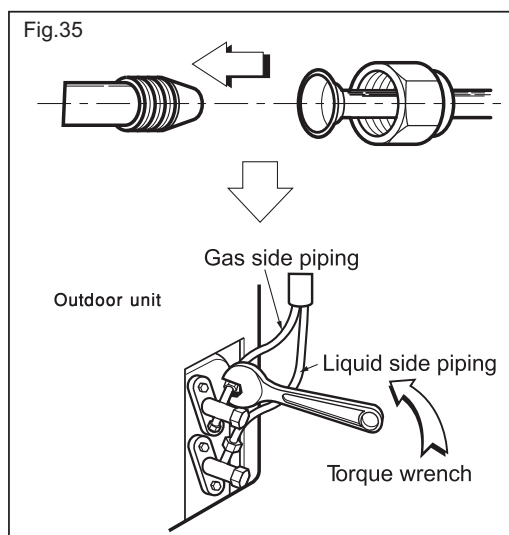
1. Connect the indoor unit at first, then the outdoor unit.
2. The stop valve of the outdoor unit should be closed absolutely (as original state). Every time you connect it, first loosen the nuts at the part of stop valve, then connect the flare pipe immediately (in 5 minutes). If the nuts have been loosened for a long time, dusts and other impurities may enter the pipe system and may cause malfunction later. So please expel the air out of the pipe with refrigerant before connection.
3. The connecting pipe must followed up PIPING PROCEDURE.

Connection of Outdoor Pipes and Cables

1. Connecting piping to outdoor unit

- (1) **Align the center of the pipings and sufficiently tighten the flare nut with fingers.**
- (2) **Finally tighten the flare nut with torque wrench until the wrench clicks.**
 - When tightening the flare nut with torque wrench, ensure the direction for tightening follows the arrow on the wrench.

Model	Pipe	Diameter of pipe
YEFE18BYEXBHO-X	Liquid pipe	Ø 6.35mm (1/4")
	Gas pipe	Ø 15.88mm (5/8")
YEFE24BYEXBHO-X YEFE36BYEXBHO-X	Liquid pipe	Ø 9.52mm (3/8")
	Gas pipe	Ø 15.88mm (5/8")
YEFE36BYOXBHO-X YEFE48BYOXBHS-X YEFE55BYOXBHS-X	Liquid pipe	Ø 9.52mm (3/8")
	Gas pipe	Ø 19.05mm (3/4")



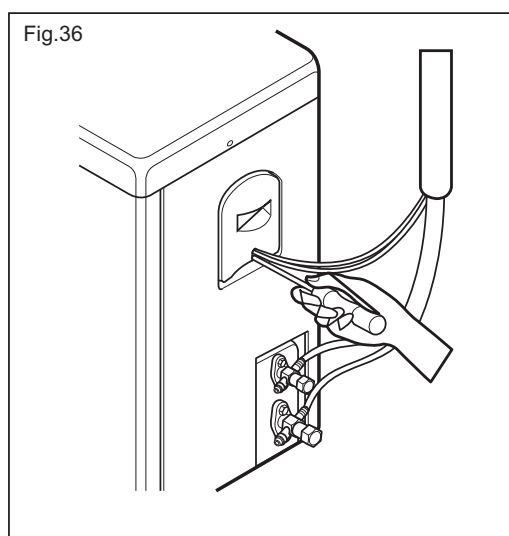
2. Connecting cable to outdoor unit

- (1) **Open the control board cover from the outdoor unit by removing the screws.**
- (2) **Connect wires to the terminals on the control board individually and secure the cables onto the control board with clamp.**

CAUTION

Perform grounding

- This product should be grounded.
- Defective grounding could cause an electric shock.



Electrical Wiring

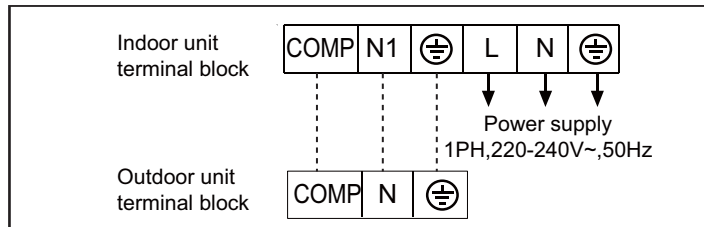
Important Notes:

1. The air conditioner should use separate power supply with rated voltage.
2. The external power supply to the air conditioner should have grounded wiring, which is linked to the ground wiring of the indoor and outdoor unit.
3. Qualified persons should do the wiring work according to circuit drawing.
4. Do not turn on the power until a proper check is made after wiring.
5. The integrity of all electrical connections should be verified at least twice during the first year of operation.
6. When replacing any components such as fuses, contactors, cables or relays, use only the exact type, size, voltage and current rating of the component as furnished from the factory.
7. While removing/fixing supply cord, loosen the top clamp of cord anchorage, route the cord and fix the top clamp again. Length of the earth conductor should be more than supply conductor for safety in case of cord slippage.

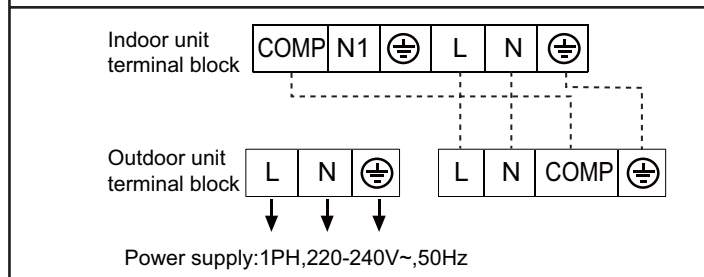
Field Wiring Diagrams

Note: ----- Local wiring

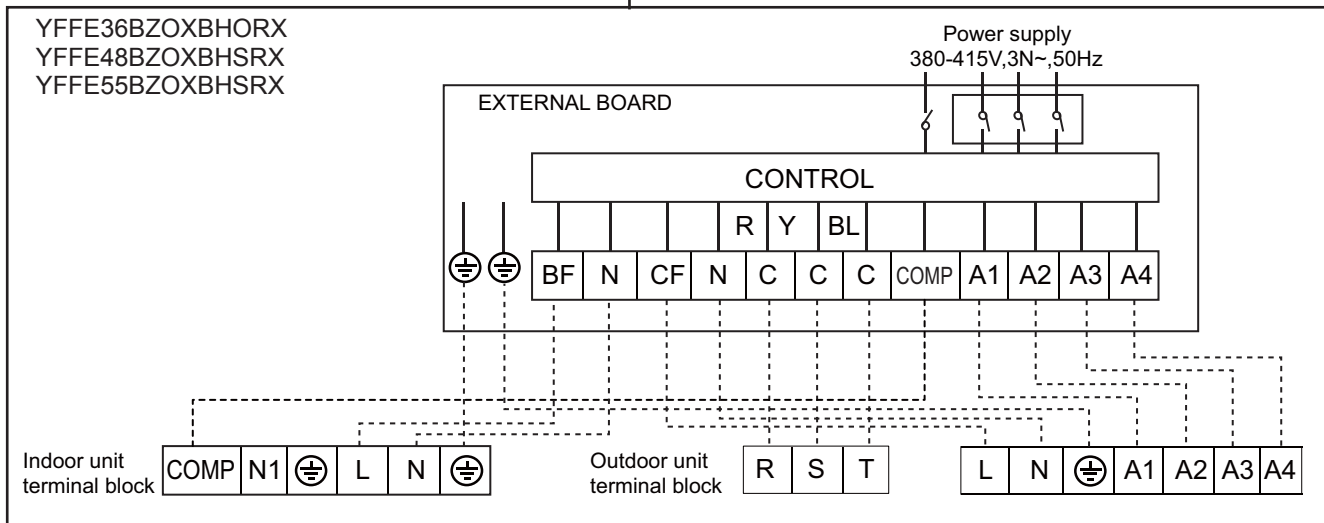
YFFE18BZEXBHORX
YFFE24BZEXBHORX



YFFE36BZEXBHORX



YFFE36BZOXBHORX
YFFE48BZOXBHSRX
YFFE55BZOXBHSRX



Purge and Vacuum

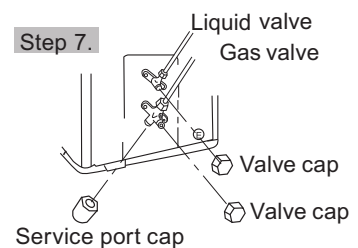
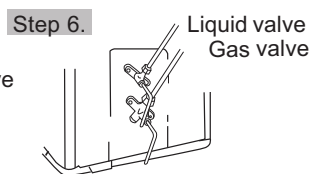
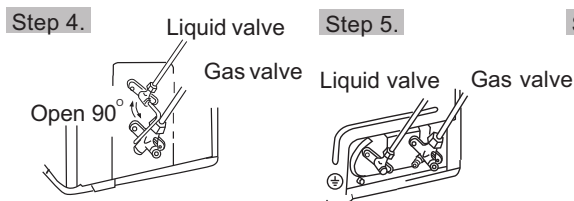
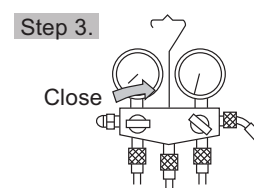
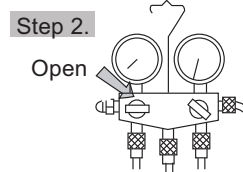
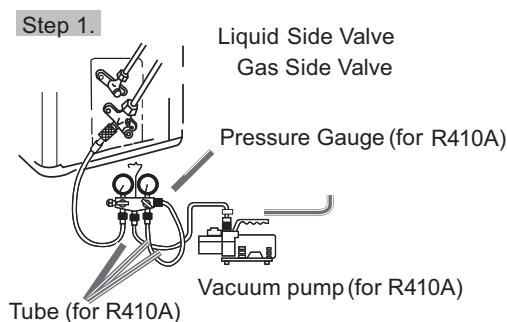
1. Connect gauge and pump as figure, step1.
2. Open low-pressure gauge, and operate vacuum pump. If the scale- moves of gauge (low) reach vacuum condition in a moment, tighten joints.
3. When pressure is 10 Pa ,stop pump and close joint, wait for 5 minutes, the pressure is not over 15 Pa.
4. Open the valve rod for the liquid valve to an angle of anticlockwise 90 degrees. After 6 seconds, close the 2-way valve and make the inspection of gas leakage.
5. No gas leakage?

In case of gas leakage, tighten parts of piping joint. If leakage stops, then proceed step 6.



If it does not stop gas leakage, discharge whole refrigerants from the service port. Repeat piping procedure and vacuumize.

6. Detach the charge hose from the service port, open liquid valve and gas valve . Turn the valve rod anticlockwise until hitting lightly.
7. To prevent the gas leakage, close service ports cap.
8. After attaching the each cap, check the gas leakage around the caps.



⚠ CAUTION

- When connecting YSM3F50AAS, please charge additional 100g refrigerant.
- If the refrigerant of the air conditioner leaks, it is necessary to discharge all the refrigerant. Vacuum first, then charge the liquid refrigerant into air conditioner according to the amount marked on the nameplate.
- Please do not let other cooling medium, except specified one (R410A), or air enter into the cooling circulation system. Otherwise, there will be abnormal high pressure in the system that will crack it and lead to personal injuries.

Test Operation

1. The test operation must be carried out after the entire installation has been completed.
2. Please confirm the following points before the test operation:
 - The indoor unit and outdoor unit are installed properly.
 - Tubing and wiring are correctly completed.
 - The refrigerant pipe system is leakage - checked.
 - The drainage is unimpeded.
 - The heating insulation works well.
 - The ground wiring is connected correctly.
 - The length of the tubing and the added stow capacity of the refrigerant have been recorded.
 - The power voltage fits the rated voltage of the air conditioner.
 - There is no obstacle at the outlet and inlet of the outdoor and indoor units.
 - The gas-side and liquid-side stop valves are both opened.
3. According to the user's requirement, install the remote controller frame where the remote controller's signal can reach the indoor unit smoothly.
4. Test operation
 - Set the air conditioner under the mode of "COOLING" with the remote controller and check the following points as per this Manual . If there is any malfunction, please resolve it through chapter "Troubleshooting" in the Manual.

(1) The indoor unit

- Whether the switch on the remote controller works well ?
- Whether the buttons on the remote controller works well ?
- Whether the air flow louver moves normally ?
- Whether the room temperature is adjusted well ?
- Whether the indicator lights normally ?
- Whether the temporary buttons works well ?
- Whether the drainage is normal ?
- Whether there is vibration or abnormal noise during operation ?

(2) The outdoor unit

- Whether there is vibration or abnormal noise during operation ?
- Whether the generated exhaust, noise, or condensed water by the air conditioner have influenced your neighborhood ?
- Whether any of the refrigerant is leaked ?

CAUTION

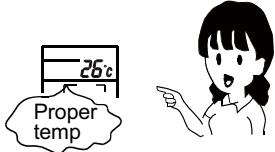
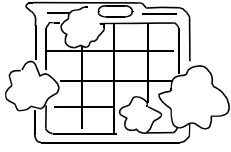


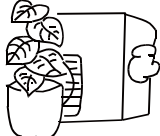


A protection device delays the start of compressor for about 3 minutes when it is restarted immediately after switching on the power.

Troubleshooting

PROBLEM	CAUSE	REMEDY
Unit does not run.	<ul style="list-style-type: none"> <input type="checkbox"/> Blown Fuse. <input type="checkbox"/> Circuit breaker tripped. <input type="checkbox"/> No electrical supply. <input type="checkbox"/> Main power switched off. 	<ul style="list-style-type: none"> <input type="checkbox"/> Replace proper fuse. <input type="checkbox"/> Reset the breaker. <input type="checkbox"/> Switch ON the power supply.
Compressor and condenser fan not working.	<ul style="list-style-type: none"> <input type="checkbox"/> Power failure. <input type="checkbox"/> Fuse blown or circuit breaker tripped. <input type="checkbox"/> Defective thermostat, contactor, transformer or control relay. <input type="checkbox"/> Insufficient line voltage. <input type="checkbox"/> Incorrect or faulty wiring. <input type="checkbox"/> Thermostat setting is not correct. 	<ul style="list-style-type: none"> <input type="checkbox"/> Call power distributor. <input type="checkbox"/> Replace fuse or reset circuit breaker. <input type="checkbox"/> Replace component. <input type="checkbox"/> Call power distributor. <input type="checkbox"/> Rewire as per wiring diagram. <input type="checkbox"/> Do the correct setting.
Compressor not working but condenser fan working.	<ul style="list-style-type: none"> <input type="checkbox"/> Faulty wiring or loose connections. <input type="checkbox"/> Compressor circuit. <input type="checkbox"/> Compressor faulty. <input type="checkbox"/> Defective compressor run/start capacitor, overload relay fault. <input type="checkbox"/> Three phase supply failure. 	<ul style="list-style-type: none"> <input type="checkbox"/> Check wiring and do repair or replace. <input type="checkbox"/> Replace compressor. <input type="checkbox"/> Replace fault component. <input type="checkbox"/> Call power distributor.
Compressor ON/OFF cycle is too short (other than normal thermostat cut off).	<ul style="list-style-type: none"> <input type="checkbox"/> Refrigerant over charge or under charge. <input type="checkbox"/> Defective compressor. <input type="checkbox"/> Insufficient line voltage. <input type="checkbox"/> Blocked condenser. <input type="checkbox"/> Defective run/start capacitor, overload, start, relay, defective thermostat, fault condenser fan motor or capacitor. <input type="checkbox"/> Obstructions in refrigerant system. 	<ul style="list-style-type: none"> <input type="checkbox"/> Reclaim refrigerant, evacuate and recharge as on nameplate. <input type="checkbox"/> Replace compressor. <input type="checkbox"/> Call power distributor. <input type="checkbox"/> Determine cause and correct. <input type="checkbox"/> Replace fault component. <input type="checkbox"/> Locate obstructions and remove.
Compressor operates continuously.	<ul style="list-style-type: none"> <input type="checkbox"/> Dirty air filter. <input type="checkbox"/> Unit undersized for load. <input type="checkbox"/> Thermostat set too low. <input type="checkbox"/> Low refrigerant charge. <input type="checkbox"/> Condenser coil dirty or blocked. 	<ul style="list-style-type: none"> <input type="checkbox"/> Replace filter. <input type="checkbox"/> Decrease load or increase unit size. <input type="checkbox"/> Reset thermostat. <input type="checkbox"/> Locate leak and repair and recharge. <input type="checkbox"/> Clean coil or remove obstructions.
Excessive head pressure.	<ul style="list-style-type: none"> <input type="checkbox"/> Dirty air filter. <input type="checkbox"/> Dirty condenser coil. <input type="checkbox"/> Refrigerant over charged. <input type="checkbox"/> Air in system. <input type="checkbox"/> Condenser air obstructed or air short cycling. 	<ul style="list-style-type: none"> <input type="checkbox"/> Replace air filter. <input type="checkbox"/> Clean coil. <input type="checkbox"/> Reclaim excess refrigerant. <input type="checkbox"/> Reclaim gas, evacuate & recharge. <input type="checkbox"/> Determine cause and correct.
Head pressure too low.	<ul style="list-style-type: none"> <input type="checkbox"/> Low refrigerant charge. <input type="checkbox"/> Compressor valves leaking. <input type="checkbox"/> Restriction in liquid tube. 	<ul style="list-style-type: none"> <input type="checkbox"/> Check for leaks, repair and recharge. <input type="checkbox"/> Replace compressor.
Excessive suction pressure.	<ul style="list-style-type: none"> <input type="checkbox"/> High head load. <input type="checkbox"/> Compressor valves leaking. <input type="checkbox"/> Refrigerant over charged. 	<ul style="list-style-type: none"> <input type="checkbox"/> Check for cause and eliminate. <input type="checkbox"/> Replace compressor. <input type="checkbox"/> Reclaim excess refrigerant.

Troubleshooting

Insufficient cooling

<p>The operation controller adjusted as required ?</p> 	<p>Air filter too dirty ?</p> 	<p>Any other heat sources in the room?</p> 	<p>Door or window left opened ?</p> 
<p>Any obstacle exists at the air inlet or outlet ?</p> 	<p>Sunlight direct into the room ?</p> 	<p>Too crowded in the room ?</p> 	

When the air conditioner does not operate properly after you have checked the above-mentioned items or when following phenomenon is observed, stop the operation of the air conditioner and contact your dealer.

1. The fuse or breaker often shuts down.
2. Water drops off during cooling or drying operation.
3. There is an irregularity in operation or abnormal sound that is audible.

Indoor Troubleshooting

LED flash times of signal receiver board	Wired controller display ①	Trouble shooting	Possible reasons
10	E0	Malfunction of drain system	CN2 on the PCB board disconnected or PCB board broken down.
1	E1	Faulty temperature Ta	Sensor disconnected, or broken, or at wrong position, or short circuit
2	E2	Faulty temperature Tm	Sensor disconnected, or broken, or at wrong position, or short circuit
8	E8	Abnormal communication between indoor wired controller and indoor unit PCB	Wrong connection, or the wired controller be disconnected, faulty PCB.
14	FC	Indoor coil temperature too high in cooling mode	Refrigerant leakage or indoor coil sensor falling off or failure on 3 phases outdoor unit.

① : Optional equipment

Troubleshooting

Outdoor Troubleshooting

LED flash times of signal receiver board	Trouble shooting	Possible reasons
4	Protection of discharging temp. too high or sensor abnormal	After compressor starts up,if TD is over 120°C, 10 seconds later compressor stop.
5	Phase sequence abnormal	Power supply phase sequence wrong.
6	Pressure abnormal	High/Low pressure switch acts abnormal. After compressor running for 3 minutes, if switch is detected unconnected for 30 seconds, it alarms, if it occurs 3 times in 30 minutes, confirm this failure.

TD: discharging temperature

