

CABINET TYPE AIR CONDITIONER

Operation & Installation Manual

HPU-42CF03

HPU-42HF03

No.0010576728A

- Please read this operation manual before using the air conditioner.
- Please keep this manual carefully and safely.

■ Content

Operation

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■ Cautions

Disposal of the old air conditioner

Before disposing an old air conditioner that goes out of use, please make sure it's inoperative and safe. Unplug the air conditioner in order to avoid the risk of child entrapment.

It must be noticed that air conditioner system contains refrigerants, which require specialized waste disposal. The valuable materials contained in a air conditioner can be recycled. Contact your local waste disposal center for proper disposal of an old air conditioner and contact your local authority or your dealer if you have any question. Please ensure that the pipework of your air conditioner does not get damaged prior to being picked up by the relevant waste disposal center, and contribute to environmental awareness by insisting on an appropriate, anti-pollution method of disposal.

Disposal of the packaging of your new air conditioner

All the packaging materials employed in the package of your new air conditioner may be disposed without any danger to the environment.

The cardboard box may be broken or cut into smaller pieces and given to a waste paper disposal service. The wrapping bag made of polyethylene and the polyethylene foam pads contain no fluorochloric hydrocarbon.

All these valuable materials may be taken to a waste collecting center and used again after adequate recycling.

Consult your local authorities for the name and address of the waste materials collecting centers and waste paper disposal services nearest to your house.

Safety Instructions and Warnings

Before starting the air conditioner, read the information given in the User's Guide carefully. The User's Guide contains very important observations relating to the assembly, operation and maintenance of the air conditioner.

The manufacturer does not accept responsibility for any damages that may arise due to non-observation of the following instruction.

- Damaged air conditioners are not to be put into operation. In case of doubt, consult your supplier.
- Use of the air conditioner is to be carried out in strict compliance with the relative instructions set forth in the User's Guide.
- Installation shall be done by professional people, don't install unit by yourself.

■ Cautions

- For the purpose of safety, the air conditioner must be properly grounded in accordance with specifications.
- Always remember to unplug the air conditioner before opening inlet grill. Never unplug your air conditioner by pulling on the power cord. Always grip plug firmly and pull straight out from the outlet.
- All electrical repairs must be carried out by qualified electricians. Inadequate repairs may result in a major source of danger for the user of the air conditioner.
- Do not damage any parts of the air conditioner that carry refrigerant by piercing or perforating the air conditioner's tubes with sharp or pointed items, crushing or twisting any tubes, or scraping the coatings off the surfaces. If the refrigerant spurts out and gets into eyes, it may result in serious eye injuries.
- Do not obstruct or cover the ventilation grille of the air conditioner. Do not put fingers or any other things into the inlet/outlet and swing louver.
- Do not allow children to play with the air conditioner. In no case should children be allowed to sit on the outdoor unit.

Specifications

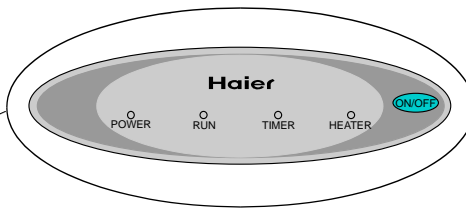
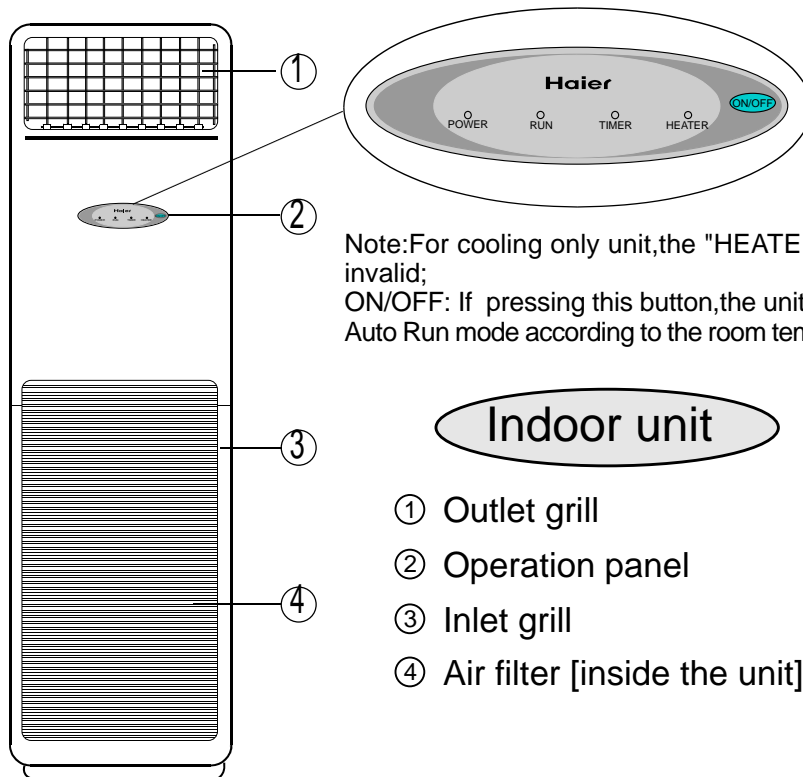
- The refrigerating circuit is leak-proof.

The machine is adaptive in following situation

Applicable ambient temperature range:

			Rated	Maximum	Minimum
Cooling	Indoor	DB °C	27	32	18
		WB °C	19	23	14
	outdoor	DB °C	35	43	10
		WB °C	24	26	6
Heating	Indoor	DB °C	20	27	15
		WB °C	14.5	--	--
	outdoor	DB °C	7	24	-7
		WB °C	6	18	--

Parts



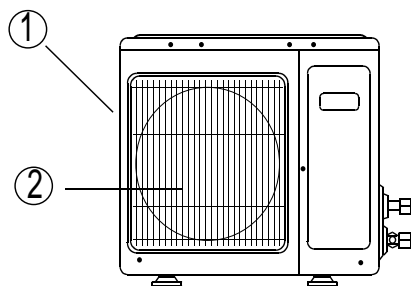
Note: For cooling only unit, the "HEATER" light is invalid;
 ON/OFF: If pressing this button, the unit will enter Auto Run mode according to the room temperature.

Indoor unit

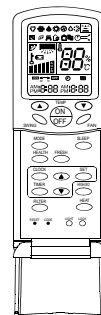
- ① Outlet grill
- ② Operation panel
- ③ Inlet grill
- ④ Air filter [inside the unit]

Outdoor unit

- ① Inlet grill
- ② Outlet grill

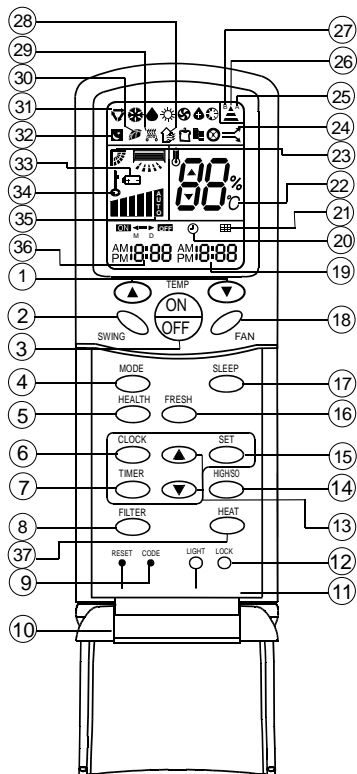


Remote controller



Parts

Remote controller



1.TEMP Setting Button

(Used to set temperature. Setting ranges: 16°C to 30°C)

In Up/Down function, for controlling up and down filter.

2.SWING Button

If you press this button once, auto swing will be activated.

If you press this button again, the louver will fix in the present position.

3.Power ON/OFF Button

Used for unit start and stop

After power on, the LCD of remote controller will display the previous operation state (except for TIMER,SLEEP and SWING state).

37.HEAT Button

Used to start/stop auxiliary electric heater when in heating mode.

4.Operation MODE

Used to select operation mode.

Every time you press MODE button, operation mode changes according to following sequence:



5.HEALTH Button

6.CLOCK Button

Used to set correct time.

7.TIMER Button

Used to select TIMER mode:TIMER ON,TIMER OFF, TIMER ON/OFF.

(Note: if time of TIMER ON is the same as TIMER OFF,TIMER ON/OFF cannot be set)

8. FILTER Button

Used to set up/down function of filter.

9.CODE Button

Used to select Code A or B, this manual is for Code A.

10.RESET Button

Press this button by using a sharp article to resume the correct operation of the remote controller in case of need, i.e. for example in case of malfunctions due to electromagnetic disturbance.

11.LIGHT Button

Used to light the control panel (only for cabinet unit)

12.LOCK Button

Used to lock operation button and LCD display contents: by pressing this button, other buttons comes out of function and lock state display appears; if you press it again, lock state will be no more active and lock state display will disappear.

13.HOUR Adjustment

Used to set clock and timer setting

14.HIGH/SO Button

Used to select HIGH or SOFT operation.

15.SET Button

Used to confirm TIMER and CLOCK settings when heating or cooling.

16.FRESH Button

Used to set fresh mode, the unit will draw in fresh air.

NOTE: 1.The cooling only unit does not have the functions related to heating.

2.This kind of units does not have the following related functions : (5)(8)(11)(14)(16)(37)

Parts

17.SLEEP Button

(The clock must be corrected before setting sleep function)

Used to set sleep mode.

18.FAN Button

Used to select fan speed:LOW,MID,HIGH,AUTO.

19.TIMER OFF Display

20.TIMER Display

21.FILTER Display

When the filter need be cleaned, the sign will appear automatically.

22.TEMPERATURE Display

23.AUTO SWING Display

24.HIGN/SO Run Display

25.Code A display

Code A is used for this unit

26.SIGNAL SENDING Display

27.Code B display

28.Fresh Display

29.Auxiliary ELECTRICAL HEATING Display

30.HEALTH Display

Displays when healthy run function is set.

31.Operation MODE Display

AUTO RUN	COOL RUN	DRY RUN	HEAT RUN	FAN RUN

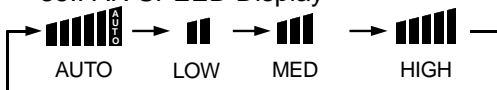
32.SLEEP State Display

33.BATTERY Energy Display

Notify the user when it is time to change the batteries.

34.LOCK State Display

35.FAN SPEED Display



36.TIMER ON Display

Remote Controller Operation

- When in use, direct signal transmission head to the receiver placed on the indoor unit

- The distance between the remote controller and the receiver should be max 7m and there should be no obstacle between them.

- Do not throw the remote controller; prevent it from being damaged.

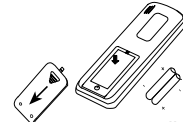
- When operating the remote controller in an area where electronically controlled lights are installed or wireless handsets are used, please move closer to the indoor unit as the function of the remote controller might be affected by signals emitted by the above mentioned equipments.

Battery loading

Battery loading

Batteries are fitted as follows:

Remove the battery compartment lid



Slightly press and disengage the battery compartment lid marked with "⚠" and then hold the remote controller by the upper section and then remove the battery compartment lid by pressing in the direction of the arrow as shown in the figure above.

Loading the battery

Ensure that batteries are correctly placed in the compartment as required for positive and negative terminals.

Replacing the battery compartment lid

The battery compartment lid is reinstalled in the reverse sequence.

Display review

Press the button to see if batteries are properly fitted. If no display appears, refit the batteries.

Confirmation indicator

If no indication is displayed after press ON/OFF button, reload the batteries.

Caution:

If the remote controller does not operate as designed after fitting new batteries of the same type, press the Reset button (marked ↓) with a pointed article.

Note:

It is recommended that the batteries be removed from the compartment if the remote controller is not used for an extended period.

The remote controller is programmed for automatic test of operation mode after the batteries are replaced. When the test is conducted, all icons will appear on the screen and then disappear if the batteries are properly fitted.

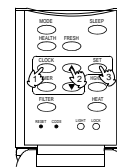
When throw away the waste batteries, please perform in accordance with the local regulation.

Clock Set

When unit is started for the first time and after replacing batteries in remote controller, clock should be adjusted as follows:

- Press CLOCK button, clock indication of " AM " or " PM " flashes.
- Press ▲ or ▼ to set correct time. Each press will increase or decrease 1 min. If the button is kept pressed, time will increase or decrease quickly.
- After time setting is confirmed, press "SET" : AM or PM stop flashing, while clock starts working.

Note:AM means morning and PM means afternoon.

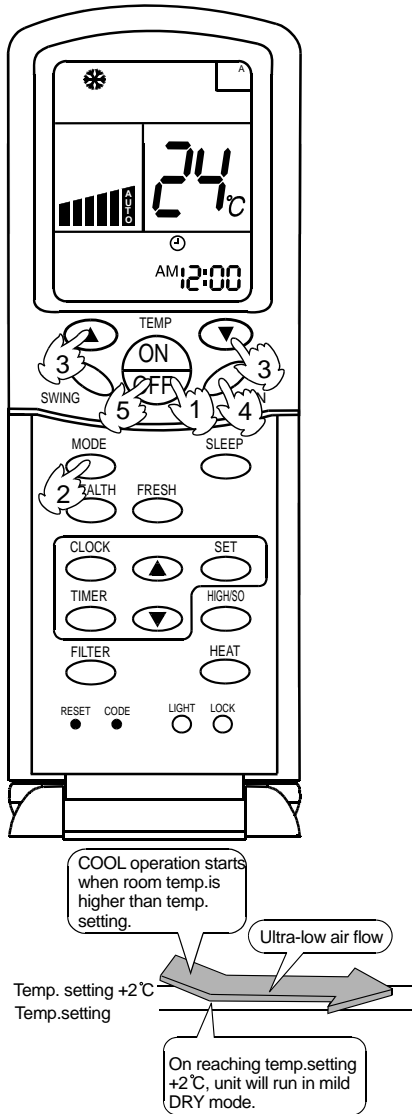


Operation

AUTO, COOL, HEAT and DRY Operation

Manual Operation

Remote-control unit



1. Unit start

Press ON/OFF button, unit starts.

Previous operation status appears on LCD (except for TIMER, SLEEP and SWING setting)

2. Select operation mode

Press MODE button. At each press, operation mode changes as follows:



Then select **AUTO** run or select **COOL** operation or select **DRY** operation or select **HEAT** operation

3. Temperature setting

Press TEMP button.

- ▲ Every time the button is pressed, temp. setting increases 1°C; if the button is kept pressed, temp. setting will increase quickly.
- ▼ Every time the button is pressed, temp. setting decreases 1°C; if the button is kept pressed, temp. setting will decrease quickly.

Set proper temperature

4. Adjust FAN button

Press FAN button. At each press, fan speed changes as follows:



Air conditioner will run at the selected fan speed.

5. Unit stop

Press ON/OFF button, unit stops.

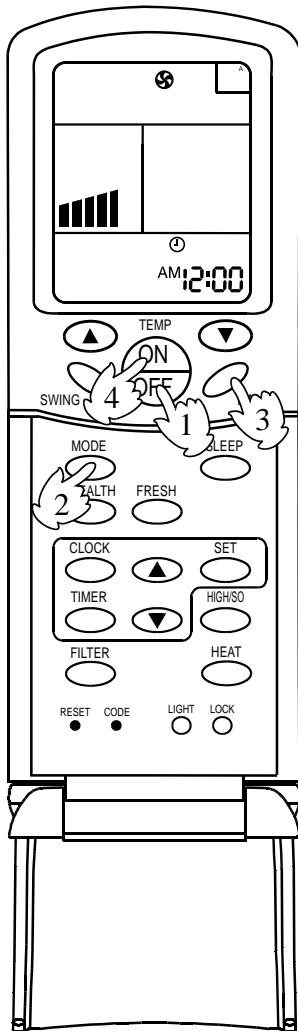
In AUTO mode, the temperature setting is displayed on LCD. In this mode, during running air conditioner will select COOL, HEAT or FAN mode automatically according to the room temperature.

In DRY mode, when room temperature becomes 2°C higher than temperature setting, unit will run intermittently at LOW speed regardless of FAN setting. When room temperature is lower than temperature setting, unit will only run FAN operation.

In HEAT mode, warm air will blow out after a short period of time due to cold-draft prevention function.

Manual Operation

Remote-control unit



1. Unit start

Press ON/OFF button to start your air conditioner.
Previous operation status appears on LCD (except for
TIMER, SLEEP, and SWING setting).

2. Select operating mode

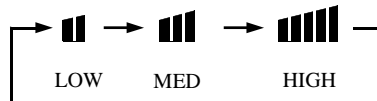
Press MODE button. At each press, operation mode
changes as follows:



Then select FAN

3. Adjust fan speed

Press FAN button. At each press, fan speed changes as
follows:



Air conditioner will run at the selected fan speed.

4. Unit stop

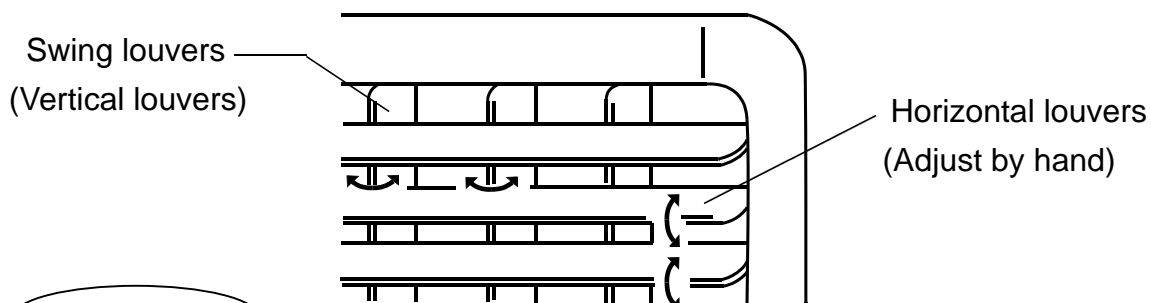
Press ON/OFF button to stop unit.

About FAN mode

When the air conditioner runs in FAN mode,
it is not possible to select AUTO FAN or to
set temperature.

Operation

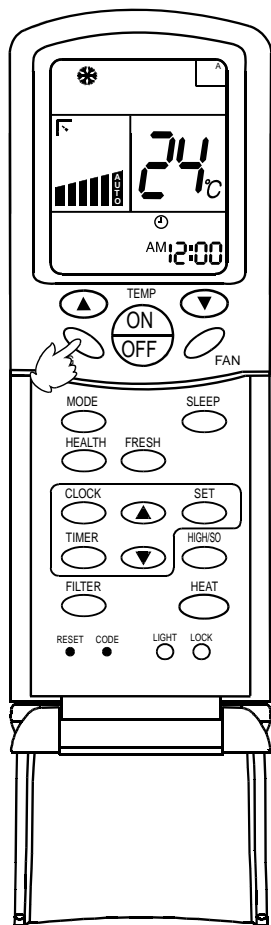
Adjusting air flow direction



- Adjust the louvers by hand to proper position.

Note: Put louvers at up position in cooling and down position in heating mode. This will be helpful to keep an even room temp.

Notice: In cooling or dry operation, don't put horizontal louvers at downward position for a long time, or outlet grill might get frosted. Don't expose your skin to cool or warm air for a long time.



Side from side

Swing

Press SWING " ⇄ " appears on the display, the vertical louvers move from side to side.

Fixed position

- Press the SWING again to fix the vertical louvers at your desired position.

Before going to bed you can press down the SLEEP button and the air conditioner will run so as to make you sleep more comfortably.

Before using this function, the clock must be set.

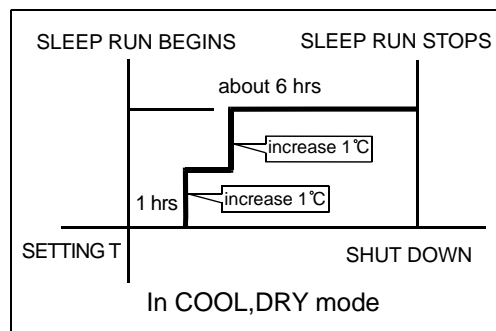
Use of SLEEP function

After the unit's start, set running mode and then press SLEEP button once to make the air conditioner have the previous-set sleep time (first power-on is "1h"). The sleep symbol will appear. Press time button ▲/▼: you can choose the time in 1~8 hours. Each time the button is pressed, the time increases/decreases 1 hour: "xh" and "OFF" indications appear on the display.

Operation Mode

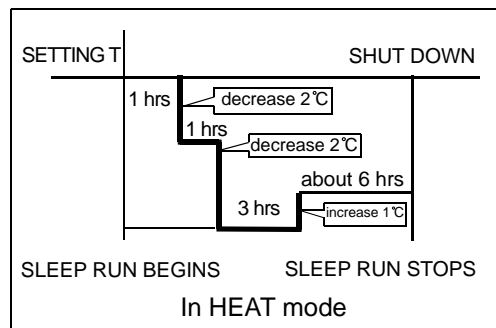
1. In COOL, DRY mode

One hour after sleeping operation start, the temperature is 1°C higher than the setting one. After another hour, temperature rises 1°C: sleep run continuously for another 6 hours and then stops. The actual temperature is higher than the setting one which is to prevent from being too cold to your sleep.



2. In HEAT mode

One hour after sleeping operation start, the temperature is 2°C lower than the setting one. After another hour, temperature decreases by 2°C more. Temperature will automatically rise by 1°C after another 3 hours' continuous operation. The actual temperature is lower than the setting one which is to prevent from being too hot to your sleep.

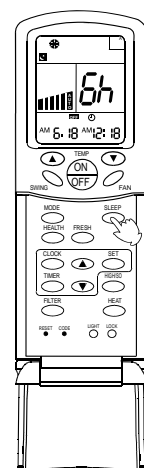


3. In AUTO mode.

The air conditioner will run in corresponding sleep operation according to the automatically selected operation mode.

Notes:

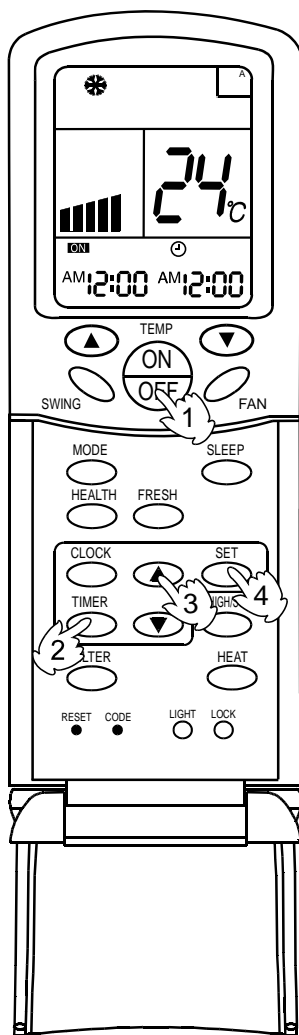
- After setting SLEEP function, it is not possible to set clock.
- If set-sleep time does not reach 8 hours, unit will automatically stop operation after set time is reached.
- Set "TIMER ON" or "TIMER OFF" in COOL, DRY mode function first, then set SLEEP. After set SLEEP function, the TIMER function cannot be set.



Manual Operation

Remote control unit

Set clock correctly before starting TIMER operation

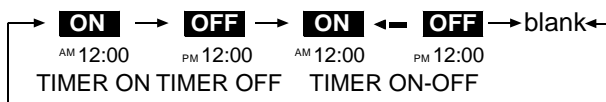


1. Unit start

After unit start, select your desired operation mode (operation mode will be displayed on LCD)

2. TIMER mode selection

Press TIMER button on the remote controller to change TIMER mode. Every time the button is pressed, display of TIMER mode changes as follows:



Then select TIMER mode as needed (TIMER ON or TIMER OFF). Now **ON** or **OFF** will flash.

3. TIMER setting (press time adjust buttons ▲ ▼)

▲ Every time the button is pressed, time increases 10 mins. If the button is kept pressed, time changes quickly.

▼ Every time the button is pressed, time decreases 10 mins. If the button is kept pressed, time changes quickly. It can be adjusted within 24 hours at will.

4. Confirm setting

After setting correct time, press SET button to confirm time. Now **ON** or **OFF** stop flashing.

5. Cancel TIMER mode

Just press TIMER button several times until TIMER mode disappears.

Hints:

After replacing batteries or if a power failure occurs, TIMER setting must be reset.

Remote controller has memory function. When you use TIMER mode next time, just press SET button after mode selection if timer setting is the same as the previous one.

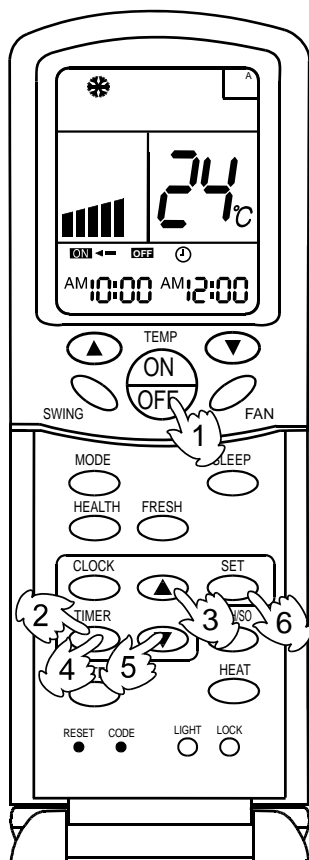
Note:

After setting TIMER function, the remote controller displays TIMER time.

Manual Operation

Remote controller operation

Set clock correctly before starting TIMER operation



1. Unit start

After unit start, select your desired operation mode (operation mode will be displayed on LCD)

2. TIMER mode selection

Press TIMER button on the remote controller to change TIMER mode. Every time the button is pressed, display of TIMER mode changes as follows:



Then select TIMER ON-OFF mode. **ON** will flash.

3. Time setting for TIMER ON

Press time button \blacklozenge

\blacktriangle Every time the button is pressed, time increases 10 minutes. If the button is kept pressed, time will change quickly.

\blacktriangledown Every time the button is pressed, time decreases 10 minutes. If the button is kept pressed, time will change quickly.

It can be adjusted within 24 hours at will. AM refers to morning and PM refers to afternoon.

4. Timer confirming for TIMER ON

After setting correct time, press TIMER button to confirm time. Now **ON** stops to flash, while **OFF** starts flashing.

5. Timer setting for TIMER OFF

Press time buttons \blacklozenge and follow the same procedures in " Time setting for TIMER ON"

6. Time confirming for TIMER OFF

After time setting, press SET button to confirm time. **OFF** stops to flash.

7. Canel TIMER mode

Just press TIMER button several times until TIMER mode disappears.

According to the time setting sequence of TIMER ON and TIMER OFF, either start-stops or stops-start can be realized.

If the time setting of TIMER ON is the same as TIMER OFF, TIMER ON-OFF function cannot be set.

■ Operation hints

Unit operation

- Protection devices inside the unit will activate to stop unit operation, when ambient temp. is extremely low or high.
- When unit is running under high humidity in cooling or dehumidifying mode, condensate might appear at outlet grill.

3-min delay protection

- Unit will not restart until 3 min have elapsed for the protection of the unit.

Fan speed changes

- When Fan speed is set at Auto in cooling mode, it will be automatically reduced as room temp. is approaching temp. setting.
- In dry mode, fan speed will change automatically.

Cold draft prevention

- In heating mode, indoor fan will not run for the first 2-5 min. due to cold draft prevention.

Defrosting

- When frost accumulates on heat exchanger in heating mode, unit will start defrosting automatically.
- During defrosting, both indoor and outdoor fan stop.
- After defrosting, unit resumes running.

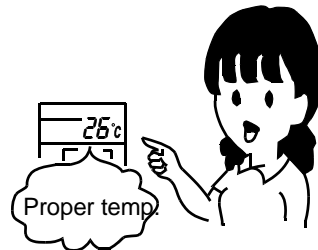
Use objectively

- Heat pump works by means of absorbing outside heat to warm room air, so outdoor temp. degree will affect unit's heating efficiency.

■ Energy saving

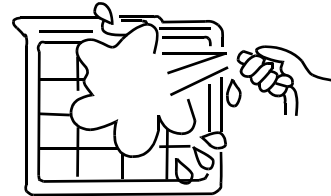
Keep proper room temp.

Too cold or too warm is no good to your health, and power consumption will be increased as well.



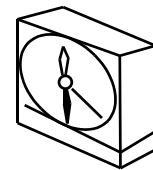
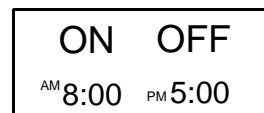
Air filter should be periodically cleaned

If air filter is clogged:
It will cause poor cooling and heating efficiency, higher power consumption and even problem may occur. In cooling operation, water will flow out.

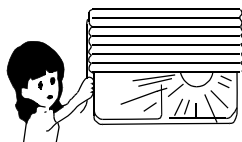


Use Timer effectively

You may use Timer mode to keep a comfortable room temp. when you wake up or come home from outside.



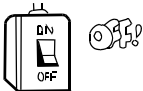


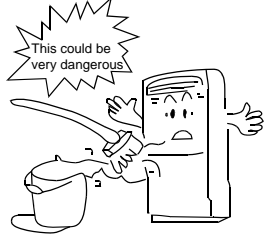
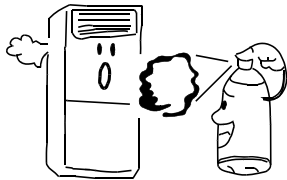
Avoid direct sunlight and air flow



Adjust air flow properly

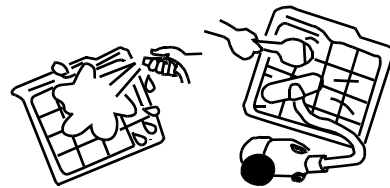
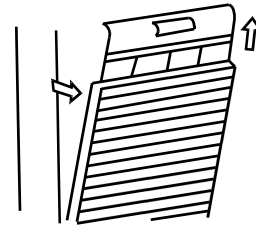


■ Maintenance

Disconnect power supply	Don't touch it with wet hand	Don't wash with hot water or solvent to clean the unit
		
<p>Don't splash water directly on indoor unit.</p> 		<p>Don't spray any paint or insecticide on the unit.</p>  <p>This will cause damage or even fire accident.</p>

Air filter cleaning

- Pull it out from top as shown in Fig.
- Use water or vacuum cleaner to clean it. If it is extremely dirty, wash it with neutral detergent or soap water.
- Wash it with clean water and install it after complete dry.



Caution:

- Don't use hot water over 40 °C, as this may cause damage to air filter.
- Wipe air filter carefully.

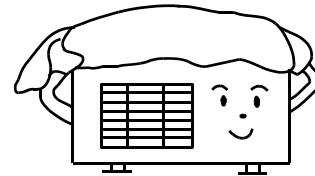
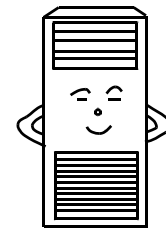
■ Maintenance

Indoor and outdoor cleaning

- Clean it with warm and wet cloth or with neutral detergent, then wipe it dry with clean and soft cloth.
- If air conditioner is very dirty, clean it with cloth soaked in neutral detergent, then wipe off the detergent with clean water.
- Don't use water higher than 40°C, which will cause discoloring and deformation.
- Don't use insecticide or other chemical detergents.

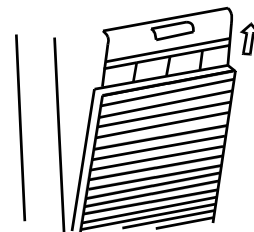
After season maintenance

- Let the unit run in Fan mode for half a day in a fine weather to dry completely the unit inside.
- Turn off the unit and pull out power plug.
- There might be certain power consumption even if unit is stopped.
- Clean air filter and indoor unit, cover outdoor unit after cleaning.



Before season maintenance

- Check if there are obstacles at inlet and outlet of indoor and outdoor unit, which will reduce unit efficiency.
- Don't fail to attach air filter after making sure it is cleaned.
- Dust will enter into unit causing damages or faults if it is running without air filter.
- To protect compressor at start, please connect external power supply to the unit 12 hrs prior to starting. Also please keep the power supply switch ON during the whole season.



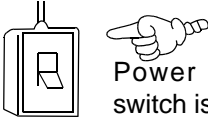
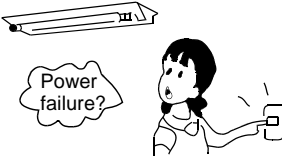
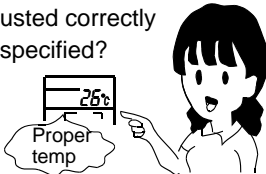
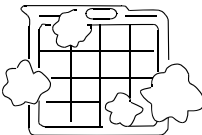

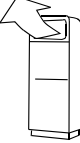
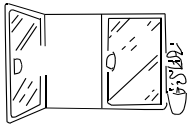
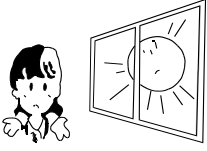

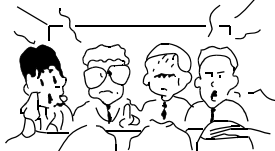
■ Trouble shooting

Followings are not problems

<p>Sound of water flowings are not problems.</p>	<p>During unit start and operation or at stop, a swishing or gurgling noise may be heard. This noise is generated by refrigerant flowing in the system.</p>
<p>Sound of cracking is heard.</p>	<p>During unit operation, a cracking noise may be heard. This noise is generated by the casing expanding or shrinking because of temperature changes.</p>
<p>Smells are generated.</p>	<p>This is because the system circulates smells from the interior air such as the smell of cigarettes or the painting on the unit.</p>
<p>During operation, white fog or steam comes out of indoor unit.</p>	<p>When unit is running at places like restaurant where dense edible oil fumes always exist, this will happen.</p>
<p>In cooling operation, unit switches to fan operation.</p>	<p>To prevent frost from accumulating on indoor heat exchanger, unit will switch to fan operation for a while then resume cooling operation.</p>
<p>Unit will not restart after stop. Won't start?</p>	<p>Though ON/OFF button is set to ON, unit won't resume cooling, dry or heating operation in 3 min after it is stopped, this is because of 3-min-delay protection circuit.</p> <p style="text-align: right;">Please wait 3 minutes</p>
<p>No outlet air or fan speed can't be changed in dry mode.</p>	<p>Unit will reduce fan speed repeatedly and automatically if room temp. is too low in dry operation.</p>
<p>In heating operation, water or steam are blown out of indoor unit.</p>	<p>This occurs when frost accumulated on the outdoor unit is removed. (during defrosting operation)</p>
<p>In heating operation, indoor fan won't stop even if unit is stopped.</p>	<p>After unit stops, indoor fan will go on running until indoor unit cools down.</p>

■ When problems occur

Before asking services, please firstly check your unit according to following.

Air conditioner won't start.		
<p>Is power supply switch turned on?</p>  <p>Power supply switch is not set at ON.</p>	<p>Is city power supply normal?</p>  <p>Power failure?</p>	<p>Is leakage current breaker activated?</p> <p>This is very dangerous, please disconnect power supply immediately and contact your dealer.</p>
Poor cooling or heating		
<p>Are operation controls adjusted correctly as specified?</p>  <p>Proper temp</p>	<p>Is air filter too dirty?</p> 	<p>Are there any obstacles at inlet or outlet grill?</p> 
<p>Are horizontal louvers at up position (in heating mode)?</p> 	<p>Any doors or windows left open?</p> 	
Poor cooling		
<p>Is there any direct sunlight in the room?</p> 	<p>If there are unexpected heat sources in the room?</p> 	<p>Too many people in the room?</p> 

If your unit still can't work properly after above mentioned checks, or following problems occur, please stop it immediately and contact your dealer.

- Fuses or circuit breakers often blow out.
- Water comes out in cooling/dry operation.
- Operation is abnormal or sound is heard.

If the fuse on PC board is broken please change it with the type of T3.15A/250VAC.

■ When problems occur

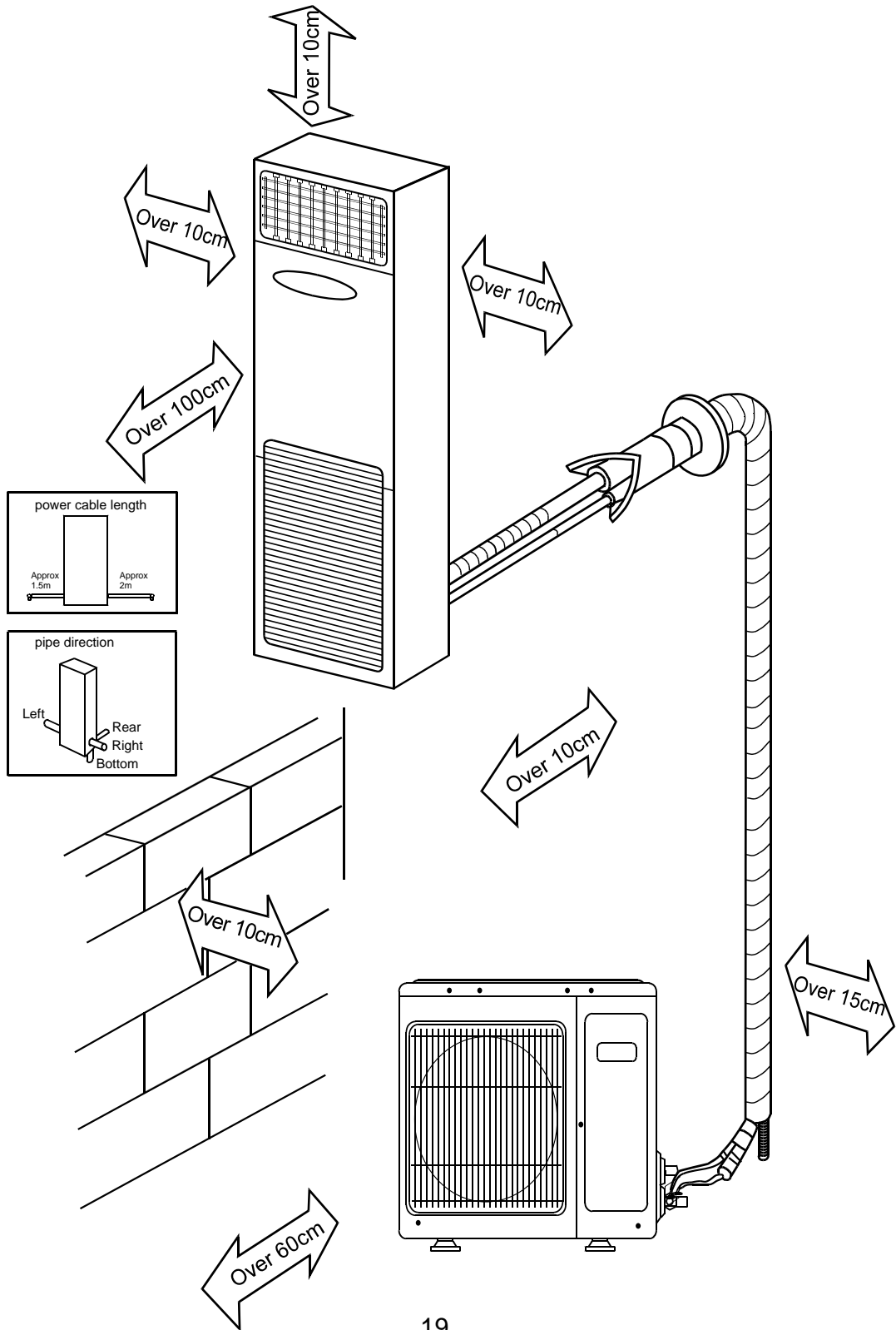
1. Errors display

Inspection display	Contents of breakdown
The "Power" light flashes once	Room temp. sensor abnormal
The "Power" light flashes twice	Indoor coil temp. sensor abnormal
The "Power" light flashes sixteen times	Outdoor low pressure or compressor discharge temperature abnormal
The "Power" light flashes four times	Outdoor defrosting sensor abnormal (Heat pump unit)

2. Power supply

- The parameter of power cord is over 2.5mm²x5.
- The parameter of connect cord is 0.75mm²x4 .
- Air conditioner must use an exclusive line (over 30A)
- When installation air conditioner in a wet place, try to use a circuit breaker against current leakage.
- For installation in other places, use circuit breaker as far as possible.
- The breaker of the air conditioner should be all-pole switch ; and the distance between its two contacts should be no less than 3 mm.
- Such means for disconnection must be incorporation in the fixed wiring

■ Indoor & outdoor unit connection



■ Tools necessary

Tools necessary

1. Screw driver
2. Hacksaw
3. 70mm dia. hole core drill
4. Spanner (dia. 17, 27mm)
5. Spanner (14, 17, 27mm)
6. Pipe cutter
7. Flaring tool
8. Knife
9. Nipper
10. Gas leakage detector or soap water
11. Measuring tape
12. Reamer
13. Refrigerant oil

Standard accessories

Following parts shall be field supplied

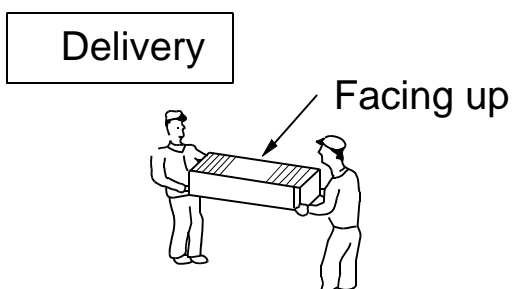
Mark	Parts name
Ⓐ	Adhesive tape
Ⓑ	Pipe clip
Ⓒ	Connecting hose
Ⓓ	Insulation material
Ⓔ	Putty
Ⓕ	Drain hose

■ Installation procedures

Display of whole unit

- Try to bring the packed unit to the installation place.
- When it is inevitable to unpack the unit, be careful not to damage the unit. Wrap it with nylon etc.
- After unpacking, be sure to put it with the front side of the unit facing up.

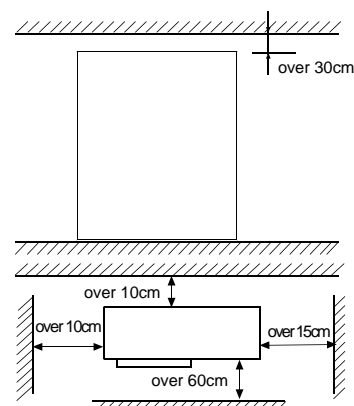
- Note: When delivering, don't hold plastic parts like inlet and outlet grill etc.



Installation of outdoor unit

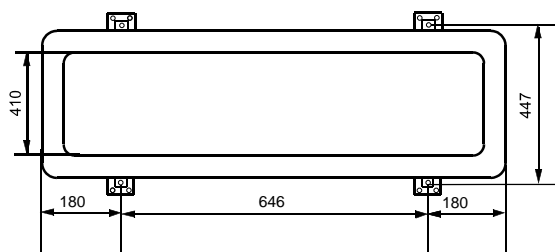
Selection of installation place

- Place strong enough to support the unit and will not cause vibration and noise.
- Place where discharged wind and noise doesn't cause a nuisance to the neighbors.
- Place where is less affected by rain or direct sunlight and is sufficiently ventilated, or to install a shield.
- Place with enough space for smooth air flow.



Fixing of the unit

- Fix outdoor unit using M10 bolt to concrete floor horizontally.
- If installed on the wall or on top of a roof, bracket should be fixed securely to resist earthquake or storms.
- Use rubber pad during installation against unit vibration.



Installation dimension of outdoor unit (mm)

■ Installation procedures

Installation of indoor unit

Selection of installation place

Place where it is easy to route drainage pipe and outdoor piping.

Place away from heat source and with less direct sunlight.

Place where cool and warm air could be delivered evenly to every corner of the room.

Place near power supply socket. Leave enough space around the unit (refer to installation drawings).

Fixing of the unit

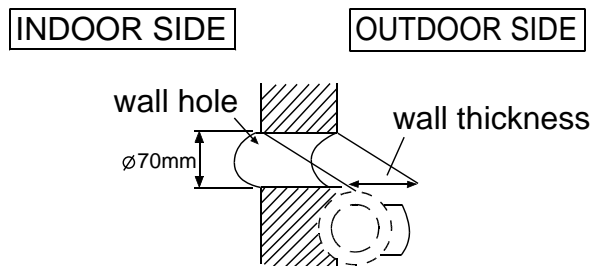
1. Position of the wall hole

Wall hole should be decided according to installation place and piping direction. (refer to installation drawings)

2. Making a wall hole

Drill a hole of 70mm dia. with a little slope towards outside.

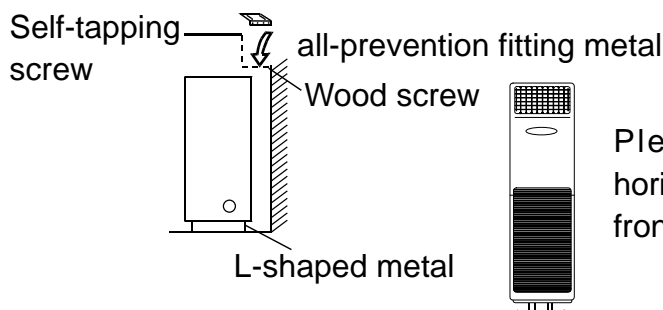
Install piping hole cover and seal it with putty after installation.



(Cross section of wall hole)

Fixing of indoor unit

To prevent it from fall off, please fix the unit with fall-prevention fitting at wall and L-shaped metal at floor.

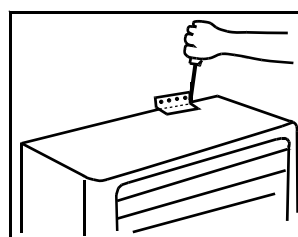
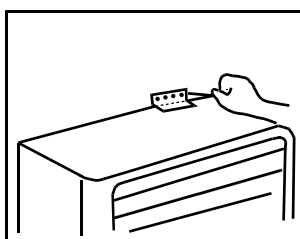


Please install the whole unit horizontally, with a slope of 1 degree at front and rear, left and right.

■ Installation procedures

Installation of fall-prevention fitting metal:

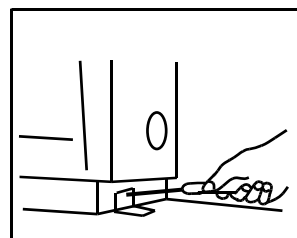
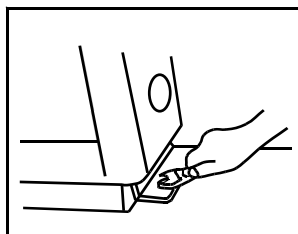
Fix the fitting metal to the wall by screws so that there is no clearance between them.
With the unit set up vertically, fix the fitting metal to the unit with screws while making an adjustment at the long portion of the hole so that there is no clearance between the upper surface and the fitting metal.



Installation of L-shaped metal

Fix to the unit by screws so that there is no clearance between the fitting metal and the unit.

After confirming that the unit has been set up vertically to the floor, fix it to the floor by bolt.



Piping connection

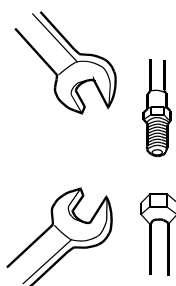
1. Connecting method

Apply refrigerant oil at half union and flare nut.

To bend a pipe, give the roundness as large as possible not to crash the pipe.

When connecting pipe, hold the pipe centre to centre then screw nut on by hand, refer to Fig.

Be careful not to let sundries, such as sands enter the pipe.



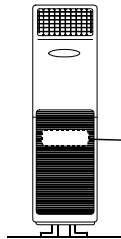
Forced fastening without centering may damage the threads and cause a gas leakage.

Pipe dia	Fastening torque
Liquid pipe 9.52mm(3/8")	29.4N·m
Gas pipe 19.05mm(3/4")	117.7N·m

■ Installation procedures

2. Piping connection of indoor unit

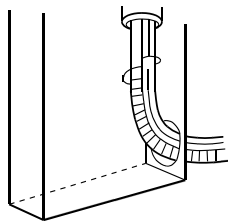
Arrangement of piping and drainage pipe



After opening inlet grill, you will see a control box as shown in the Fig.

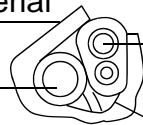
Remove the cover before wiring work.

Cut away, with a hammer or a saw, the lid for piping according to piping direction.



Insulation material

Copper tube



Drain hose

Connecting electric cable for indoor and outdoor unit

According to the piping method, connect the piping on indoor unit with union of connecting pipe.

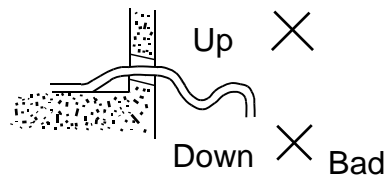
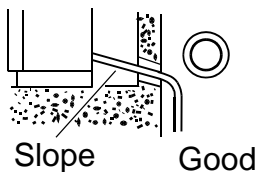
Arrange the piping as per the wall hole and bind drain hose connecting electric cable and piping together with polyethylene tape.

Insert the bound piping connecting electric cable and drain hose through wall hole to connect with outdoor unit.

Arrangement of drain hose

- Drain hose shall be placed in under place.
- There should be a slope when arrange drain hose. Avoid up and down waves in drain hose.

Indoor unit



If humidity is high, drain pipe(especially in room and indoor unit) must be covered with insulation material.

■ Installation procedures

3. Piping connection of outdoor unit.

Connect the connecting pipe and inlet and outlet liquid pipe according to the piping method.

4. Purgig method

Discharge the air out of the indoor unit and the refrigerant pipe by vacuumizing

(1) Fasten all the nuts of the indoor and outdoor pipes to make these parts out of leakage.

(2) Under the condition of the complete close of the indoor and outdoor valve center (both liquid and gas side),dismount the repair valve cap.Vacuumizing through the charge mouth of the repair valve.

(3) After vacuumizing fasten the repair valve,and dismount the cap of the big and small stop valve,then loosen the stop valve center completely and fasten the big and small stop valve.

5.Extra charging amount of the refrigerant

When piping is longer than 5 m, charge additional refrigerant specified in this list.

Pipe length	5m	10m	15m	20m	25m	30m
Refrigerant charge (g)	—	325	650	975	1300	1625

Installation procedures

Electric wiring

Note:

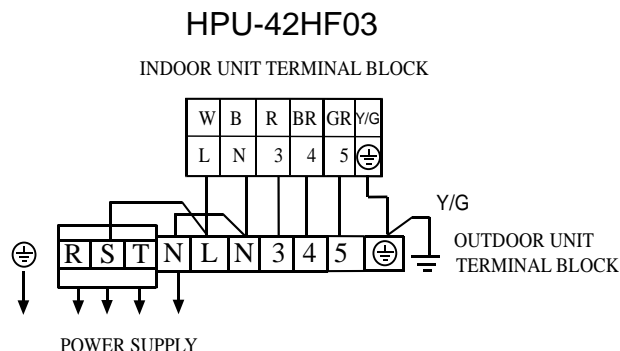
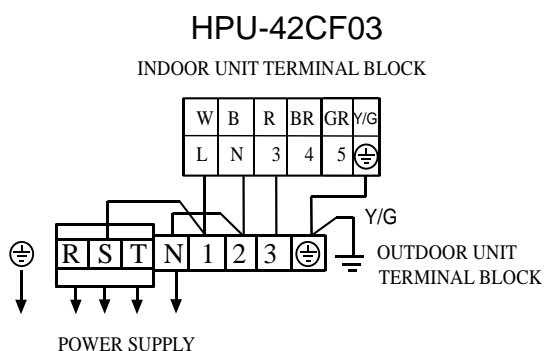
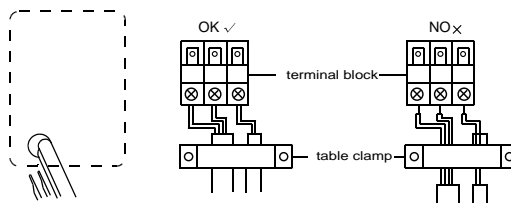
- Electric wiring must be done by qualified person.
- Use copper wire only, the parameter of connecting cable is H07RN-F 4G 0.75mm².
- The power cable should be over 5G2.5mm², the power cable is self-provided.
- The power supply connects from the outdoor unit.

Wiring of indoor unit

- Insert the cable from outside the wall hole where piping already exist.
- Pull it out from front.
- Loosen terminal screws and insert cable end fully into terminal block, then tighten it.
- Pull the cable gently to make sure it is tight.
- Replace cover after wiring.

Wiring of outdoor unit

- Insert the cable from inside the wall hole where piping already exists.
- Pull it out from front.
- Loose terminal screw and insert cable end fully into terminal block, then tighten it.
- Pull the cable gently to make sure it is tight.
- Replace cover after wiring.



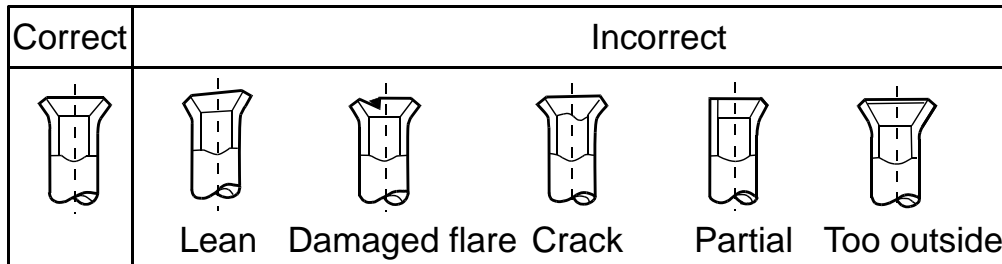
Note:

- When connecting indoor and outdoor wire, check the number on indoor and outdoor terminal blocks. Incorrect wiring may damage air conditioner's controller or cause operation failure.
- Connect the black terminal of indoor unit with the black terminal of outdoor unit properly using the connecting wire which has both white terminals in the accessory bag, and connect the blue terminal of indoor unit with the white terminal of outdoor unit as the same (For heat pump model). For cooling only unit, just connect the black terminal of indoor unit with the black terminal of outdoor unit properly.

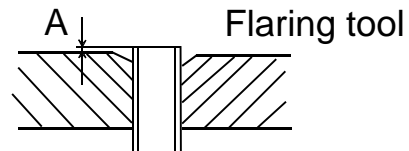
Others

1. Pipe cutting and flaring

- Be sure to carry out deburring after pipe cutting with a pipe cutter.
- Insert flaring tool to make a flare.



	Pipe dia.	Dimension A(mm)
Liquid pipe	∅ 9.52mm (3/8")	1.0 ~ 1.8
Gas pipe	∅ 19.05mm (3/4")	1.4 ~ 2.2



2. Installation inspection and test run:

Please operate unit according to this Manual.

Items to be checked during test run. Please made a "✓" in "□"

- Are there any gas leakage?
- How is insulation at piping connection carried out?
- Are electric wires of indoor and outdoor unit firmly inserted into terminal block?
- Is electric wiring of indoor and outdoor securely fixed?
- Is drainage securely carried out?
- Is earth line (grounding) securely connected?
- Is power supply voltage abided by the code?
- Is there any noise?
- Is control display normal?
- Is cooling operation normal?
- Is room temp. regulator normal?