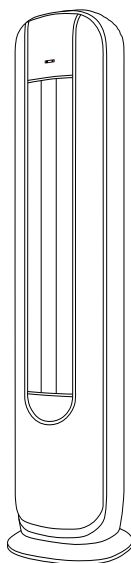




FLOOR STANDING INVERTER AIR CONDITIONER INSTRUCTION MANUAL

BAF-18IHRS
BAF-24IHRS



This instruction manual contains important information and recommendations that we would ask you to comply with to obtain best results from air conditioner.

Thank you once again.

Preface

Air conditioners are pieces of high value. In order to ensure your lawful rights and interests, please have the professional technicians to do the installation for you.

This Instruction Manual is the universal-purpose version for the models of split floor-standing air conditioners manufactured by our Co. The appearance of the units that you purchase might be slightly different from the ones described in the Manual, but it does not affect your proper operations and usage. Please read carefully the sections corresponding to the specific model you choose, and keep the Manual properly so as to facilitate your reference at later time.

Addition to the user manual:

The appliance is not intended for use by young children or infirm persons without supervision; Young children should be supervised to ensure that they do not play with the appliance.

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WARNING

● **WARNING: This air conditioner uses R32 flammable refrigerant.**

Notes: Air conditioner with R32 refrigerant, if roughly treated, may cause serious harm to the human body or surrounding things. Please read the instruction carefully before installing, using and maintaining.

	This symbol shows that this appliance uses a flammable refrigerant. If the refrigerant is leaked and exposed to an external ignition source, there is a risk of fire.
	This symbol shows that the operation manual should be read carefully.
	This symbol shows that a service personnel should be handling this equipment with reference to the installation manual.
	This symbol shows that information is available such as the operating manual or installation manual.

- 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.
- Children should be supervised to ensure that they do not play with the appliance.
- This appliance shall be installed in accordance with national wiring regulations.
- This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved.
- Cleaning and user maintenance shall not be made by children without supervision.
- Disconnect the appliance from its power source during service and when replacing parts. Disconnect the power supply before cleaning and maintenance. Before obtaining access to terminals, all supply circuits must be disconnected.
- If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or a similarly qualified person in order to avoid a hazard.
- An all-pole disconnection switch having a contact separation of at least 3mm in all poles should be connected in fixed wiring.
- The appliance shall not be installed in the laundry.
- Appliances is classified according to the accessibility as appliance not accessible to the general public.
- Do not use means to accelerate the defrosting process or to clean, other than those recommended by the manufacturer.

- The appliance shall be stored in a room without continuously operating open flames (for example an operating gas appliance) and ignition sources (for example an operating electric heater). The appliance shall be stored so as to prevent mechanical damage from occurring.
- Do not pierce or bur.
- The appliance shall be stored in a well-ventilated area where the room size corresponds to the room area as specified for operation. Keep ventilation openings clear of obstruction.
- Any person who is involved with working on or breaking into a refrigerant circuit should hold a current valid certificate from an industry- accredited assessment authority, which authorises their competence to handle refrigerants safely in accordance with an industry recognised assessment specification.
- Servicing shall only be performed as recommended by the equipment manufacturer. Maintenance and repair requiring the assistance of other skilled personnel shall be carried out under the supervision of the person competent in the use of flammable refrigerants.
- Reusable mechanical connectors and flared joints are not allowed indoors. Be aware that refrigerants may not contain an odour.



Appliance shall be installed, operated and stored in a room with a floor area larger than 15 m².

Appliance shall not be installed in an unventilated space, if that space is smaller than 15 m².



This product contains fluorinated greenhouse gases.

Refrigerant leakage contributes to climate change. Refrigerant with lower global warming potential (GWP) would contribute less to global warming than a refrigerant with higher GWP, if leaked to the atmosphere. This appliance contains a refrigerant fluid with a GWP equal to [675]. This means that if 1 kg of this refrigerant fluid would be leaked to the atmosphere, the impact on global warming would be [675] times higher than 1 kg of CO₂, over a period of 100 years. Never try to interfere with the refrigerant circuit yourself or disassemble the product yourself and always ask a profession.



Correct Disposal of this product

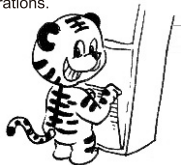


This marking indicates that this product should not be disposed with other household wastes throughout the EU. To prevent possible harm to the environment or human health from uncontrolled waste disposal, recycle it responsibly to promote the sustainable reuse of material resources. To return your used device, please use the return and collection systems or contact the retailer where the product was purchased. They can take this product for environmental safe recycling.

【User notes】

Please read the Manual carefully before using the air conditioner so as to ensure the normal operations of the units.

Do not open the air-return grids or bottom panel of the indoor unit during operations.



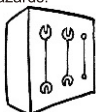
Do not put the sticks or other similar objects into the air inlet and outlet.



Do not place insecticides, paints or other inflammables near the inlet or outlet; do not spray such articles directly against the units.



Operate the machine only under the nominated voltage and frequency and with corresponding protective devices. Never use copper wires to substitute the fuses, which might lead to operational faults or fire hazards.



The grounding terminal of the units must be well connected to the grounding of the power source.



When cleaning the air-conditioner, please do not spray water on the machine. When the microcomputer parts and circuits in the air-conditioner are covered with water, it is possible to cause failure or electric shock disaster.



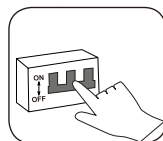
Do not block the air inlet and outlet of the indoor or outdoor units so as to avoid possible negative impacts upon the machine performances or hazards.



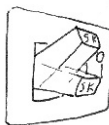
Re-start the operation after power failure. When the power supply is resumed, the air conditioner will automatically enter the standby mode. Press the On/Off button to restart the operation.



If the machine is not in use for long time, the power source should be disconnected for the sake of safety and energy-saving.



In the case that the breaker is frequently disconnected, you should stop the operation of the machine and contact the dealer or our Co. authorized maintenance shop.



When you restart the operation after a long period of non-operation, you should carefully check the air conditioner and the wire connection. If the electric wires are damaged or need to be replaced due to other reasons, please ask our Co. after-sale service person or the professional technicians in the authorized maintenance shops to do the replacement so as to avoid possible electric shock, overheating, fire hazards or other accidents.



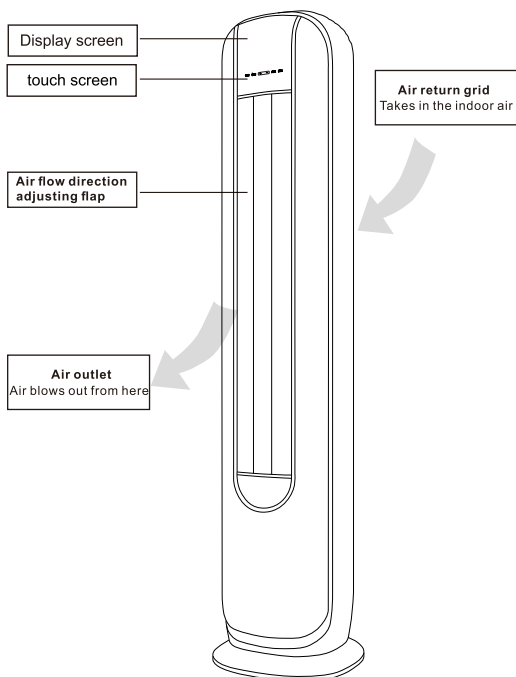
INSTRUCTIONS FOR REMOVAL AND REPAIRS

If the unit needs to be removed for installation elsewhere or for repairs, please contact our company dealer or authorized technicians.

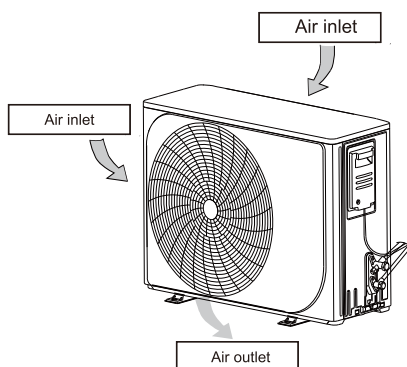
In case of occurrence of abnormality (burning smell, for example), please stop the operation of the unit, disconnect the power and contact our company dealer or authorized technicians.

【The name of each part and its function】

Indoor Unit



Outdoor Unit



Function feature: During closedown of the air conditioner when it is running in COOL/HEAT/DRY status, the air conditioner will not stop supplying air immediately, as the air conditioner is performing mould proofing functions. The Air flow direction adjusting flap will delay for 30 seconds and then automatically close.
Features and appearance will vary. All the figures give a demonstration to introduce the function.

【Icons of display screen】

Setting temperature,
timer time,
and failure code indicator



AUTO



COOL



DRY



HEAT



SILENCE



FAN SPEED Low



FAN SPEED Middle



FAN SPEED High



FAN SPEED Strong



FAN



E-HEAT



【Use of operation panel】



Press this key to turn on/ Off the air conditioner.



Press the key to choose desirable operation modes: AUTO, COOL, DRY, HEAT, FAN.



Press the key to set your favorite air flow rate: Auto, High, Middle, Low.



Press the key once to increase the setting temperature by 1°C, the setting temperature range is from 16-32 °C.



Press the key once to reduce the setting temperature by 1°C, the setting temperature range is from 16-32 °C.



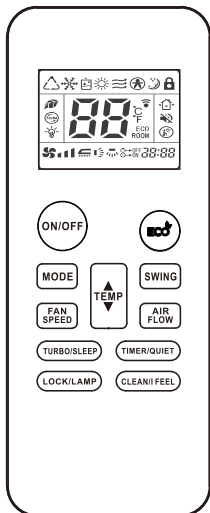
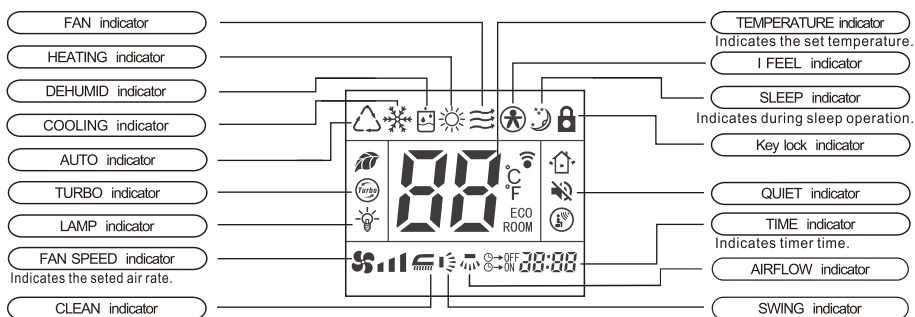
Press the key to select the left/right air flow direction.

【Use of remote controller】

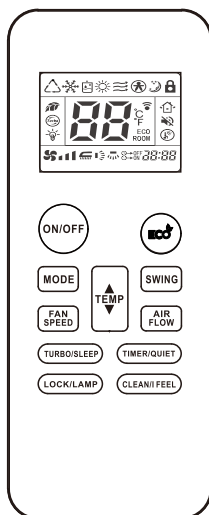
Attention:

1. The appearances of the following two remote controllers will vary, but the functions of the same button are same, Please check to refer the instructions for the identical remote controller of your air-conditioner.
2. The remote controller 1, remote controller 2 are the general one used for many types of air-conditioner in our company we beg your forgiveness that we would not introduce the button or indicator which is not applicable for units you purchased. The "HEALTHY" "I FEEL" "LAMP" and "10°C HEAT" button are applicable for special latest developed new models only instead of normal models.

Remote Controller 1



Button	Function Description
ON/OFF	This button, when pressed starts operation and stops when repressed.
ECO	This button is used to open and close the ECO(energy saving) operation function,remote control air-conditioning energy saving operation mode to enter or exit.
TEMP	This button sets the room temperature.
MODE	This button changes the operation mode: AUTO, COOL, DRY, HEAT, FAN.
SWING	This button changes the flap mode: swing or fixed wind.
FAN SPEED	This button set air rate.
AIR FLOW	This button used for selection of the left/right air flow direction.

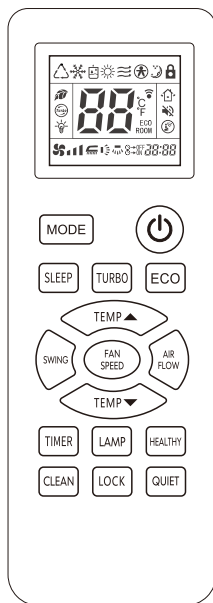
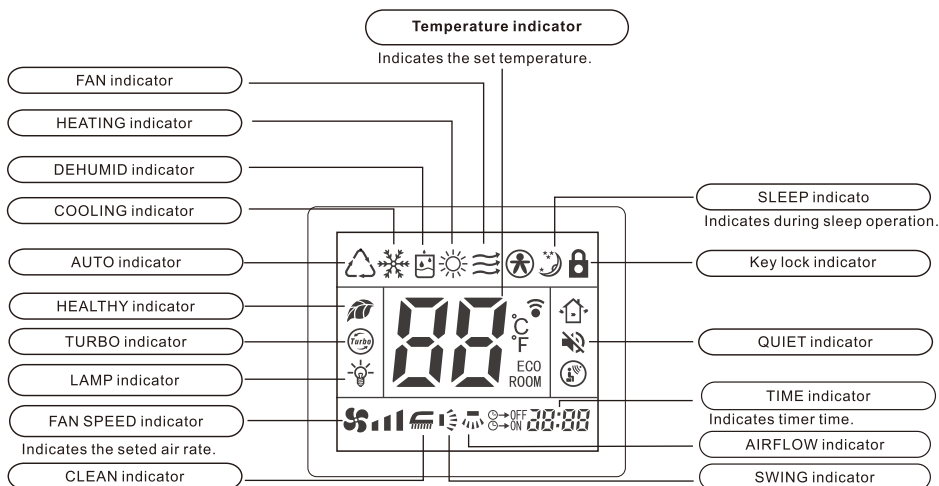


Button	Function Description
	Press the left half of the button to activate the TURBO function, to activate TURBO operation (It does not work in AUTO, DRY, and FAN mode.) Press the right half of the button to activate the SLEEP function, to activate SLEEP operation.
	Press the left half of the button to activate the TIMER function, to set the switch-on or switch-off and the timer time. Press the right half of the button to activate the QUIET function, to make the AC keep quiet.
	Press the left half of the button to activate the LOCK function, to lock or unlock the keyboard. Press the right half of the button to activate the LAMP function, to turn off the indications on the device.
	Press the left half of the button to activate the CLEAN function, to CLEAN when the device and remote control are OFF. Press the right half of the button to activate the I FEEL function, to open or close the I FEEL function.
 + 	°C/°F function: Press TURBO button and TEMP ▲ button at the same time to switch to Fahrenheit or Celsius temperature display on the remote control.
 + 	10°C HEAT function: Press TURBO button and TEMP ▼ button at the same time to start or stop the 10°C HEAT function.

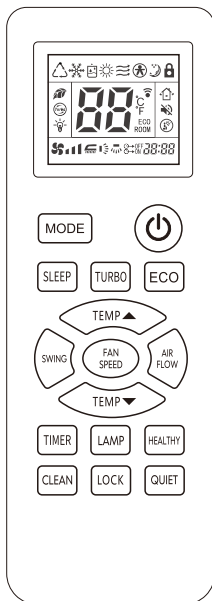
NOTE:

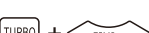
- Above figure shows all indications for the purpose of explanation, but practically only the pertinent parts are indicated. When air-conditioner is cooling-only model, the 'Heat' mode is for Fan only.
- When TURBO operation is selected, room temperature is not controlled with operation being continually. If you feel the room temperature is too cool or too hot, please cancel the TURBO operation.
- Press I FEEL button to active the function, the remote control will send out the current room temperature to air conditioner, to optimize the temperature around you and ensure the comfort.

Remote Controller 2



Button	Function Description
MODE	This button changes the operation mode: AUTO, COOL, DRY, HEAT, FAN.
	This button, when pressed starts operation and stops when repressed.
SLEEP	This button changes to SLEEP operation.
TURBO	This button changes to TURBO operation (It does not work in AUTO, DRY, and FAN mode.)
ECO	This button is used to open and close the ECO (energy saving) operation function, remote control air-conditioning energy saving operation mode to enter or exit.
TEMP ▲ TEMP ▼	This button sets the room temperature.
SWING	This button changes the flap mode: swing or fixed wind.
FAN SPEED	This button set air rate.



Button	Function Description
	This button used for selection of the left/right air flow direction.
	This button is used to set the switch-on or switch-off and the timer time.
	Press this button to CLEAN when the device and remote control are OFF.
	Press this button to turn off the indications on the device.
	Press this button to lock or unlock the keyboard.
	This button is used to turn health functions on and off.
	Press this button to make the AC keep quiet.
	°C/°F function: Press TURBO button and TEMP ▲ button at the same time to switch to Fahrenheit or Celsius temperature display on the remote control.
	10°C HEAT function: Press TURBO button and TEMP ▼ button at the same time to start or stop the 10°C HEAT function.

NOTE:

- Above figure shows all indications for the purpose of explanation, but practically only the pertinent parts are indicated. When air-conditioner is cooling-only model, the 'Heat' mode is for Fan only.
- When TURBO operation is selected, room temperature is not controlled with operation being continually. If you feel the room temperature is too cool or too hot, please cancel the TURBO operation.

Operation methods of various modes:

Operation methods of AUTO, COOL, DRY, HEAT (FAN) modes.

1. After the power is switched on, aiming the remote controller at the air conditioner, press ON/OFF key, and the air conditioner starts to operate.

2. Aim the remote controller at the air conditioner and press the MODE button to select the mode you need: AUTO, COOL, DRY, HEAT (cooling only air conditioner operate FAN)/FAN.

3. Press the TEMP button, to set your required temperature (temperature control range for 16~ 32°C). In COOL/HEAT modes, if the difference between the setting temperature and environmental temperature is 5°C, it is the most beneficial to your health.

(Note: The temperature is automatically set in FAN and DRY modes and cannot be adjusted)

4. Press the FAN SPEED button to set the appropriate fan speed: automatic /high /middle/low.

(Note: The low fan speed cannot be adjusted in DRY mode)

5. Press SWING button to adjust up and down air supply direction. In DRY mode, the wind direction is fixed and unadjustable.

(Note: only applicable to three-dimensional wind models.)

6. Press the AIR FLOW button to adjust the left and right air supply direction. The wind speed is fixed and unadjustable in the DRY mode.

Optional Steps:

7. When you want to have a quiet environment during the rest, press the SLEEP button, the air conditioner will enter into the sleep mode, and the air flow from the indoor can be decreased. In the sleep mode, if the SLEEP button is pressed again, the sleep mode can be canceled.

8. Timing turn off setting method: press the TIMER button in the power on state, continue to press the TIMER button to set the turn off time, the screen will display time in the order of 1→2→ ... →24→cancel (no display)→1, when the display time is the required time, you can stop pressing. After the setting is completed, the remaining time is displayed on the remote controller screen.

Timing turn on method: Press the TIMER button during standby, continue to press the TIMER button to set the turn on time, the screen will display time in the order of 1→2→ ... →24→cancel (no display)→1, when the display time is the required time, you can stop pressing. After the setting is completed, the remaining time is displayed on the remote controller screen.

To cancel: when the screen display the time is 24 hours, press the TIMER button again. When the screen display time is not displayed, the timing turn on/turn off can be canceled.

Way to change the battery for the remote controller:

1. Slide down the battery box cover in the direction of the arrow.
2. Replace the battery, do not mix use old and new batteries, different types of batteries.
3. The positive and negative pole of battery should be installed correctly.
4. Close the battery box cover.

Notes for using remote controller:

1. When the remote controller is not used for a long time, the battery should be removed to prevent liquid leakage from damaging the remote controller.
2. Do not place the remote controller near a hot object such as an electric blanket or stove.
3. The remote controller should be more than one meter away from the TV or audio equipment.
4. Do not let water and other liquids spill on the remote controller.
5. Do not put the remote controller under direct sunlight or strong light.
6. The battery's life with JIS or IEC standard is about 6-12 months, when the signal is transmitted, the air conditioner does not send out to receive sound or the monitor becomes blurred, the battery is exhausted and the old battery needs to be removed.

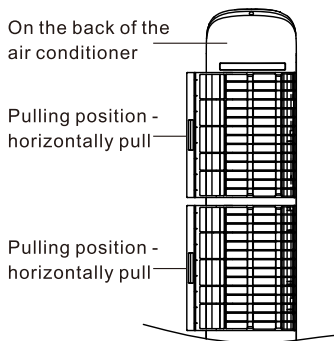
【Maintenance】

1. Be sure to disconnect the power supply before carrying out maintenance

2. The cleaning of the filter Gently pat or clean the filter by using the dust collector. If there is too much dirt on the filter screen, you can undertake cleaning with a few neuter scour, clean up and dry, and installed in the original position. (Note: the air filters should not be exposed in the sunshine or roasted near the fire, also do not use hot water (more than 40 °C) to clean it, to avoid deformation.)

Disassembly of filter: Place your hand on the suction position (concave part) of the rear shell filter, and pull it out to remove the filter (see Figure 1).

Figure 1



3. The cleaning of the air conditioner

- For the sake of safety, the power supply must be disconnected before cleaning to avoid electric shock.
- It is forbidden to wash the air conditioner with water.
- Please wipe down the dust with a soft cloth.
- Do not use volatile oil, gasoline, thinner, polish powder and others to clean.
- For fingerprints or oil stains, please use a household neutral cleaner to clean.

4. Before the using season

- Check whether the inlet and outlet of indoor and outdoor units are blocked.
- The protective cover of the outdoor unit must be removed.
- Check whether the mounting base is corrosive or rusty.
- Check whether the power line and grounding line are normal.
- Please check to see if the drain hose is bent, end raised, blocked, etc.
- Make sure the air filter is properly installed before operation. If the filter net is removed and air conditioners is still put into operation, dust and foreign matters can easily cause air conditioner malfunction.

5. After the using season

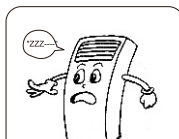
- Turn off and power off the air conditioner.
- For the air filter and other parts, please properly clean and maintain.
- To prevent dust or garbage from entering the outdoor machine, please cover it with plastic cloth.

【Phenomena diagnosis and treatment】

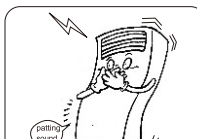
The following situation is not malfunction.



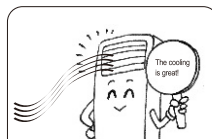
Sometimes the air sent out from the air conditioner may smell some odd odors. This is due to the cigarette smoke, the cosmetic smell, the odors of walls or furniture pieces in the room that are stained on the air conditioner.



During the operation or when the machine is stopped, some "ZZZ..." sound may be heard. This is because the refrigerant inside the air conditioner is still flowing.



When the cooling or heating operation is started or stopped, some "patting" sound may be heard. This is because some parts of the surface boards are expanded due to changes of temperature, which results in the friction of these parts. This is not a performance fault.



When cooling is in operation, sometimes the haze emits from the air outlet, which cause is that when the indoor temperature and humidity is higher, the indoor air is rapidly refrigerated, after the indoor temperature and humidity lowers, the haze will disappear.

Please read the following contents before contacting the maintenance people.

"Fault" Description	"Fault" Diagnosis
Air conditioner does not work	Whether power on. Whether connect to the power source. Whether have set timed on/off. Whether the voltage too high or too low. Whether breaker in a offposition.
Cooling or heating effect not good	Whether room temperature properly adjusted. Whether the inlet or outlet of the indoor or outdoor units blocked. Whether the air filter screen too much dust blocking. Whether door or windows close. Whether using combusting apparatuses in room.
Remote controller doesn't work	When the receiver for remote signal is shined directly by sunligh or strong light,it is likely not to receive remote signal.Under this condition,please cover the sunlight or adjust the light to be dim. Whether it is within the receiving range?Or be warded o ffby obstacle? Check whether the voltage of the battery in the remote controller is enough, or please replace the battery. When the remote controller displays obscurely ,please replace the battery.



When the following cases happen,please stop operation,disconnect the power source,then contact our co.dealer of the authorized maintenance shop.

- The fuse is burned out frequently,the current leakage switch switch off frequently.
- The line abnormally heats or cracks at the line insulation coat.
- Other states different from the normal states.

Foreword

Air conditioners are units that should have the professional technicians do the installation for you.

This Instruction Guide is the universal-purpose version for the models of split wall-mounted air conditioners manufactured by our Co. The appearance of the units that you purchase might be slightly different from the ones described in the Guide, but it does not affect your proper operations and usage.

Please read carefully the sections corresponding to the specific model you choose, and keep the Guide properly so as to facilitate your reference at later time.



Caution, risk of fire

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【Safety Precautions】

	Read the precautions in this manual carefully before operating the unit.		This appliance is filled with R32 model.
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- The precautions described herein are classified as WARNING and CAUTION. They both contain important information regarding safety. Be sure to observe all precautions without fail.

- Meaning of WARNING and CAUTION notices.

 **WARNING** Failure to follow these instructions properly may result in personal injury or loss of life.

 **CAUTION** Failure to observe these instructions properly may result in property damage or personal injury, which may be serious depending on the circumstances.

- The safety marks shown in this manual have the following meanings:

 Be sure to follow the instructions	 Be sure to establish an earth connection.	 Never attempt.
---	---	--

- After completing installation, conduct a trial operation to check for faults and explain to the customer how to operate the air conditioner and take care of it with the aid of the operation manual.
- The English text is the original instruction. Other languages are translations of the original instructions.

 WARNING
●Appliance shall be installed, operated and stored in a room with a floor area larger than 15m ²
Appliance shall not be installed in an unventilated space, if that space is smaller than 15m ² .
●Ask your dealer or qualified personnel to carry out installation work. Do not attempt to install the air conditioner yourself. Improper installation may result in water leakage, electric shocks or fire.
●Install the air conditioner in accordance with the instructions in this installation manual. Improper installation may result in water leakage, electric shocks or fire.
●Be sure to use only the specified accessories and parts for installation work. Failure to use the specified parts may result in the unit falling, water leakage, electric shocks or fire.
●Install the air conditioner on a foundation strong enough to withstand the weight of the unit. A foundation of insufficient strength may result in the equipment fling and causing injury.
●Electrical work must be performed in accordance with relevant local and national regulations and with instructions in this installation manual. Be sure to use a dedicated power supply circuit only. Insufficiency of power circuit capacity and improper workmanship may result in electric shocks or fire.

WARNING

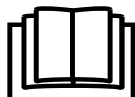
- Use a cable of suitable length.
Do not use tapped wires or an extension lead, as this may cause overheating, electric shocks or fire.
- Make sure that all wiring is secured, the specified wires are used, and that there is no strain on the terminal connections or wires.
Improper connections or securing of wires may result in abnormal heat build-up or fire.
- When wiring the power supply and connecting the wiring between the indoor and outdoor units, position the wires so that the control box lid can be securely fastened.
Improper positioning of the control box lid may result in electric shocks, fire or over heating terminals.
- If refrigerant gas leaks during installation, ventilate the area immediately. Be aware that refrigerants may not contain an odour.
Toxic gas may be produced if the refrigerant comes into contact with fire. 
- After completing installation, check for refrigerant gas leakage. Toxic gas may be produced if the refrigerant gas leaks into the room and comes into contact with a source of fire, such as a fan heater, stove or cooker. 
- When installing or relocating the air conditioner, be sure to bleed the refrigerant circuit to ensure it is free of air, and use only the specified refrigerant (R32). The presence of air or other foreign matter in the refrigerant circuit causes abnormal pressure rise, which may result in equipment damage and even injury.
- During installation, attach the refrigerant piping securely before running the compressor. If the refrigerant pipes are not attached and the stop valve is open when the compressor is run, air will be sucked in, causing abnormal pressure in the refrigeration cycle, which may result in equipment damage and even injury.
- During pump-down, stop the compressor before removing the refrigerant piping.
If the compressor is still running and the stop valve is open during pump-down, air will be sucked in when the refrigerant piping is removed causing abnormal pressure in the refrigeration cycle, which may result in equipment damage and even injury.
- Be sure to earth the air conditioner.
Do not earth the unit to a utility pipe, lightning conductor or telephone earth lead.
Imperfect earthing may result in electric shocks. 
- Be sure to install an earth leakage breaker.
Failure to install an earth leakage breaker may result in electric shocks or fire.
- During tests, never pressurize the appliances with a pressure higher than the maximum allowable pressure (as indicated on the nameplate of the unit).
- If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.
- Install personnel and air conditioners to eliminate static electricity during air conditioning installation. 

CAUTION

- Do not install the air conditioner at any place where there is a danger of flammable gas leakage.
In the event of a gas leakage, build-up of gas near the air conditioner may cause a fire to break out. 
- While following the instructions in this installation manual, install drain piping to ensure proper drainage and insulate piping to prevent condensation. Improper drain piping may result in indoor water leakage and property damage.
- Tighten the flare nut according to the specified method such as with a torque wrench.
If the flare nut is too tight, it may crack after prolonged use, causing refrigerant leakage.
- Make sure to provide for adequate measures in order to prevent that the outdoor unit be used as a shelter by small animals.
Small animals making contact with electrical parts can cause malfunctions, smoke or fire.
Please instruct the customer to keep the area around the unit clean.
- The temperature of refrigerant circuit will be high, please keep the inter-unit wire away from copper pipes that are not thermally insulated.
- The installation of the indoor unit and the connecting pipe is not allowed on the indoor side.

Safety Symbol

(A) Read the warnings



Read operator' manual



Operator's manual;
Operating instructions



Service indicator;
read technical manual

(B) Fire warnings

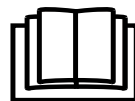


Caution, risk of fire

(C) Packaging carton warnings



Caution, risk of fire



Read operator' manual

Paste on the outdoor unit packing carton

【Precautions for installation and maintenance】

■ **Prior to beginning work on systems containing flammable refrigerants, safety check is necessary to ensure that the risk of ignition is minimized. For the repair of the refrigerant system, the following precautions shall be strictly carried out:**

- All maintenance staff and others working in the local area shall be instructed on the nature of work being carried out. Work in the confined spaces shall be avoided. The area around the workspace shall be sectioned off. Ensure that the conditions with the area have been made safe by control of flammable material.
- The area shall be checked with an appropriate refrigerant detector prior to and during work, to ensure the technician is aware of potentially flammable atmosphere. Ensure that the leak detection equipment being used is suitable for flammable refrigerants, i.e. non sparking, adequately sealed or intrinsically safe.
- If any hot work is to be conducted on the refrigeration equipment or associated parts, appropriate fire extinguishing equipment shall be available in hand. Have a dry powder or CO₂ fire extinguisher adjacent to the charging area.
- No person carrying out work in relation to a refrigerant system which involves exposing any pipe work that contained flammable refrigerant shall use any sources of ignition in such a manner that it may lead to the risk of fire or explosion. All possible ignition sources, including cigarette smoking, shall be kept sufficiently far away from the site of installation, repairing, removing and disposal, during which flammable refrigerant can possibly be released to the surrounding space. Prior to working site, the area around equipment is to be surveyed to make sure that there are flammable hazards to ignition risks. "No Smoking" warning signs shall be displayed.
- Ensure that the area is in the open or that it is adequately ventilated before breaking into the system or conducting any hot work. A degree of ventilation shall continue during the period that the work is carried out. The ventilation should be safely disperse any released refrigerant and preferably expel it externally into the atmosphere.

■ **Where electrical components are being changed, they shall be fit for the purpose and to the correct specification. At all times the manufacturer's maintenance and service guidelines shall be followed. If in doubt, consult the manufacturer's technical department for assistance. Checkpoints: the charge size is in accordance with the room size within which the refrigerant containing parts are installed; the ventilation machinery and outlets are operating adequately and are not obstructed.**

■ **Repair and maintenance to the electrical components shall include initial safety checks and component inspection procedures. If a fault exists that could compromise safety, then no electrical supply should be connected to the circuit until it is satisfactorily dealt with. If the fault cannot be corrected immediately but it is necessary to continue operation, an adequate temporary solution shall be applied. This shall be reported to the owner of the equipment so all parties are advised. Initial safety checks shall include: that capacitors are discharged that shall be done in a safe manner to avoid possibility of sparking; that there are no live electrical components and wiring are exposed while charging, recovering or purging the system; that there is continuously of earth bonding.**

■ **Repair to sealed components**

- During repair to sealed components, all electrical supplies shall be disconnected from the equipment being worked upon prior to any removal of sealed covers, etc. If it is absolutely necessary to have an electrical supply to equipment during servicing, then a permanently operating form of leak detection shall be located at the most critical point to warn of a potentially hazardous situation.
- Particular attention shall be paid to the following to ensure that by working on electrical components, the casing is not altered in such a way that the level of protection is affected: Ensure that the apparatus is mounted securely; Ensure that seals to sealing materials have not degraded such that they no longer serve the purpose of preventing the ingress of flammable atmospheres. Replacement parts shall be in accordance with the manufacturer's specifications.
- **NOTE:** The use of silicon sealant may inhibit the effectiveness of some types of leak detection equipment. Intrinsically safe components do not have to be isolated prior to working on them.

■ **Repair to intrinsically safe components**

- Do not apply any permanent inductive or capacitance loads to the circuit without ensuring that this will not exceed the permissible voltage and current permitted for the equipment in use.
- Intrinsically safe components are the only types that can be worked on while live in the presence of flammable atmosphere. The test apparatus shall be at the correct rating. Replace components only with parts specified by the manufacturer. Other parts may result in the ignition of refrigerant in the atmosphere from a leak.

■ Check that cabling will not be subject to wear, corrosion, excessive pressure, vibration, sharp edges or any other adverse environmental effects. The check shall also take into account the effects of aging or continual vibration from sources such as compressors or fans.

■ Leak detection

- Under no circumstances shall potential sources of ignition be used in the searching for or detection of refrigerant leaks. A halide torch (or any other detector using a naked flame) shall not be used.
- The following leak detection methods are deemed acceptable for system containing flammable refrigerants. Electronic leak detectors shall be used to detect flammable refrigerants, but the sensitivity may not be adequate, or may need re-calibration. (Detection equipment shall be calibrated in a refrigerant-free area.) Ensure that the detector is not a potential source of ignition and is suitable for the refrigerant used. Leak detection equipment shall be set at a percentage of LFL of the refrigerant and shall be calibrated to the refrigerant employed and the appropriate percentage of gas (25% maximum) is confirmed.
- Leak detection fluids are suitable for use with most refrigerants but the use of detergents containing chlorine shall be avoided as the chlorine may react with the refrigerant and corrode the copper pipe-work.
- If the leak is suspected, all naked flame shall be removed/extinguished.
- If a leakage of refrigerant is found which requires brazing, all of the refrigerant shall be recovered from the system, or isolated (by means of shut off valves) in a part of the system remote from the leak. Oxygen free nitrogen (OFN) shall then be purged through the system both before during the brazing process.

■ Removal and evacuation

- When breaking into the refrigerant circuit to make repair - or for any other purpose – conventional procedures shall be used. However, it is important that best practice is followed since flammability is a consideration. The following procedures shall be adhered to: Remove refrigerant; Purge the circuit with inert gas; Evacuate, Open the circuit by cutting or brazing.

- The refrigerant charge shall be recovered into the correct recovery cylinders. The system shall be "flushed" with OFN to render the unit safe. This process may need to be repeated several times. Compressed air or oxygen shall not be used for this task. Flushing shall be achieved by breaking the vacuum in the system with OFN and continuing to fill until the working pressure is achieved, then venting to atmosphere, and finally pulling down to a vacuum. This process shall be repeated until no refrigerant is within the system, when the final OFN charge is used, the system shall be vented down to atmospheric pressure to enable work to take place. This operation is absolutely vital if brazing operations on the pipe-work are to take place. Ensure that the outlet for the vacuum pump is not close to any ignition sources and there is ventilation available.

■ Charging procedures

- In addition to conventional charging procedures, the following requirements shall be followed: Ensure that contamination of different refrigerants does not occur when using charging equipment. Hoses or lines shall be as short as possible to minimize the amount of refrigerant contained in them. Cylinders shall be kept upright; Ensure that the refrigeration system is earthed prior to charging the system with refrigerant, Label the system when charging is completed (if not already); Extreme care shall be taken not to overfill the refrigerant system.
- Prior to recharging the system it shall be pressure tested with OFN. The system shall be leak tested on completion of charging but prior to commissioning. A follow up leak test shall be carried out prior to leaving the site.

■ Decommissioning

- Before carrying out this procedure, it is essential that the technician is completely familiar with the equipment and all its detail. It is recommended good practice that all refrigerants are recovered safely. Prior to the task being carried out, an oil and refrigerant sample shall be taken in case analysis is required prior to re-use of reclaimed refrigerant. It is essential that electrical power is available before the task is commenced.
 - a). Become familiar with the equipment and its operation.
 - b). Isolate system electrically.

- c). Before attempting the procedure ensure that: the mechanical handling equipment is available, if required, for handling refrigerant cylinders; all personal protective equipment is available and being used correctly; the recovery process is supervised at all time by a competent person; recovery equipment and cylinders conform to appropriate standards.
- d). Pump down refrigerant system, if possible.
- e). If a vacuum is not possible, make a manifold so that refrigerant can be removed from various parts of system.
- f). Make sure that cylinder is situated on the scales before recovery takes place.
- g). Start the recovery machine and operate in accordance with manufacturer's instructions.
- h). Do not overfill cylinders. (No more than 80% volume liquid charge.)
- i). Do not exceed the maximum working pressure of the cylinder, even temporarily.
- j). When the cylinders haven been filled correctly and the process completed, make sure that the cylinders and the equipment are removed from site promptly and all isolation valves on the equipment are closed off.
- k). Recovered refrigerant shall not be charged into another refrigeration system unless it has been cleaned and checked.

■ Recovery

- When removing refrigerant from a system, either for servicing or decommissioning, it is recommended good practice that all refrigerants are removed safely. When transferring refrigerant into cylinders, ensure that only appropriate refrigerant recovery cylinders are employed. Ensure that the correct numbers of cylinders for holding the total system charge are available. All cylinders to be used are designed for the recovered refrigerant and labeled for that refrigerant (ie. special cylinders are for the recovery of refrigerant). Cylinders shall be complete with pressure relief valve and associated shut-off valves in good working order. Empty recover cylinders are evacuated and, if possible, cooled before recovery occurs.

- The recovery equipment shall be in good working order with a set of instructions concerning the equipment that is at hand and shall be suitable for the recovery of flammable refrigerants.
- The recovered refrigerant shall be returned to the refrigerant supplier in the correct recovery cylinder and the relevant Waste Transfer Note arranged. Do not mix refrigerant in recovery units and especially not in cylinders.
- If compressors or compressor oil are to be removed ensure that they have been evacuated to an acceptable level to make certain that flammable refrigerant does not remain within the lubricant. The evacuation process shall be carried out prior to returning the compressor to the suppliers. Only electric heating to be compressor body shall be employed to accelerate this process. When oil is drained from a system, it shall be carried out safely.
- The space loading R32 refrigeration can't be enclosed in the process of transportation. Take anti electrostatic measures if necessary in transportation. In the process of transport, loading and unloading, necessary protective measures must be taken to protect the air conditioner to ensure that the air conditioner is not damaged.

【Selection of installation positions for indoor unit】

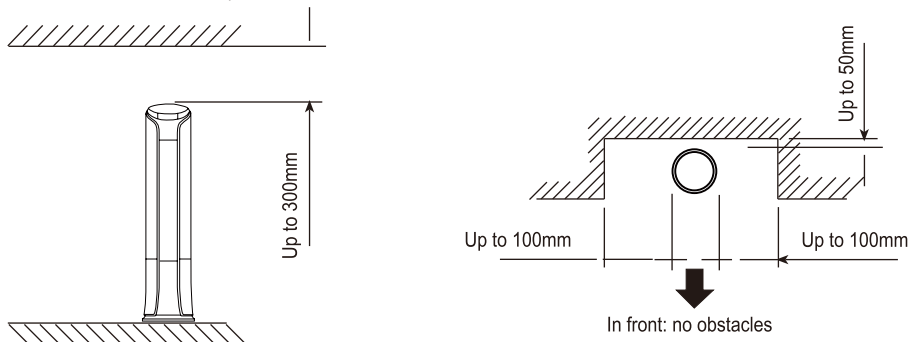
1. Selection of installation location for indoor unit

Install it where the ground is flat and firm

- ① Install it where blown air can reach all corners of the room
- ② Avoid installing in areas affected by external air intrusion
- ③ Avoid installing in areas where have obstacles for the air blow out and blow in
- ④ Avoid installing in places with oily fumes and steam
- ⑤ Avoid installing in places where flammable gases may be generated, inflow, retention or leakage
- ⑥ Avoid installing in places where has high frequency equipment (high frequency welding machine, etc.)
- ⑦ Avoid installing in places where acidic solutions and special sprayers (sulfur) are frequently used
- ⑧ Please do not install a fire alarm at the air supply outlet of air conditioner (during heating operation, the heating air blown out by the air conditioner may cause the fire alarm to misoperation).
- ⑨ For the electric auxiliary heating type air conditioner, auxiliary electric heater is generally fixed with screws in the interior of the evaporator of indoor units, and the gap between it and the combustible surface should not be less than 12mm. Users are prohibited to disassemble and repair the part by themselves, otherwise fire or other dangers may occur. The minimum clearance between the air conditioner and the combustible surface shall not be less than 1.5m.

Ensure the space for indoor unit installation and maintenance (unit: mm)

In order to operate conveniently and safely during installation, it is necessary to make sure that there is enough space between the unit and the wall as far as possible



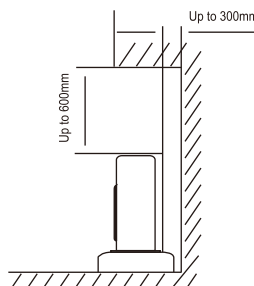
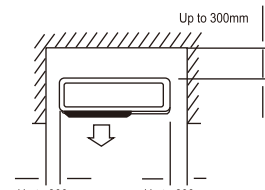
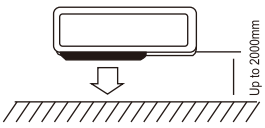
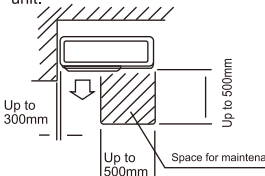
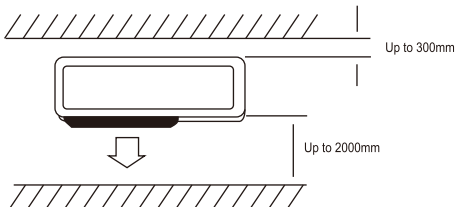
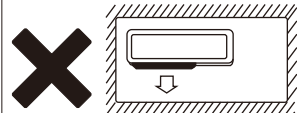
▲ Note: if it is need to install other functional devices (such as purification device) on the air conditioner. At this time, the installation space of the functional device should be taken into account.

【Selection of installation positions for outdoor unit】

1. Selection of installation location for indoor unit

- ① A place large enough to carry the weight of a machine without much vibration or noise
- ② Avoid rain or direct sunlight and have good ventilation
- ③ To install the air conditioner on the beach or in the place that has strong wind at high altitude. To ensure the normal operation of the fan, the air conditioner should be installed against the wall, and please use the baffle plate.
- ④ Installing where the noise generated by the unit is not likely to affect the neighborhood
- ⑤ Do not installed on non - dedicated metal frame.
- ⑥ Do not install in places where flammable gas may be generated, inflow, stagnation and leakage
- ⑦ Install in the place that is away from the window
- ⑧ Try to avoid facing the wind direction of the air outlets
- ⑨ Make sure there are no obstacles in front of the air outlets.
- ⑩ Please pay attention if there is condensation water discharged from the chassis during heating operation

Detailed distance of surrounding space necessary for outdoor unit (unit: mm)

1. When there are obstacles above the unit 	2. When the front (air outlet) is open 	3. When there are obstacles only in the front (air outlet)  Space for maintenance Shown as in the following figure. Keep the maintenance space in front of the unit. 
4. When there are obstacles at the front and rear sides 		5. When there are obstacles all around the unit on four sides. Although the top side is open, the installation is not to be done if there are obstacles all around.  ● At least two sides should be kept open.

【Installation fixture of indoor unit】

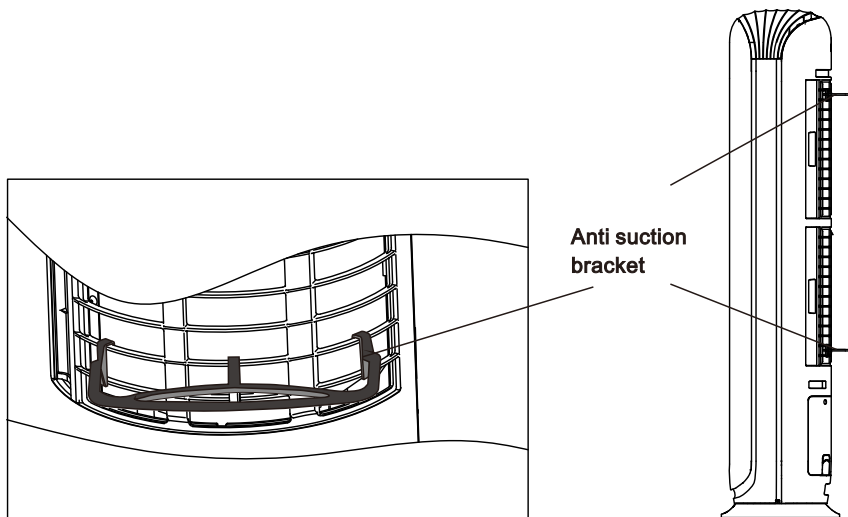
1.As the gravity center of the unit is rather high, you have to make sure that anti-falling measures are taken after the installation position is determined so as to ensure safety.

2. Installation of anti suction bracket.

As the air conditioning will be fixed after the pipeline connection, please install the anti suction bracket as much as possible before the pipeline connection.

Each set of air conditioners comes standard with 2 anti suction brackets which are installed at the back grille as shown in the diagram.

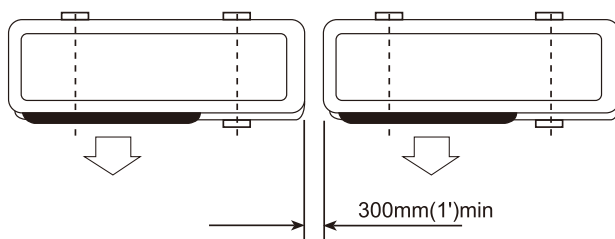
When installing, clamp both ends of an anti suction bracket onto the first and second plastic horizontal bars to install the upper anti suction bracket; Clamp the two ends of the other anti suction bracket onto the lower first and second plastic horizontal bars to install the lower anti suction bracket.



【Installation fixture of outdoor unit】

- Try to ship the product to the installation location in its original package;
- As the gravity center of the unit is not at the installation center, special caution should be taken when using hoisting cables to lift it up;
- During shipping, the outdoor unit must not be slanted to over 45 degrees (Do not store the unit in a horizontal way).
- Use expansion bolts to fix the mounting supports on the wall;
- Use bolts and nuts to fix the outdoor unit firmly on the supports and keep on the same level;
- If the unit is installed on the wall or at the rooftop, the supports have to be firmly fixed so as to resist earthquake or strong wind.

Dimensions for parallel units installations



【Ordinary pipelines connection & Air purging】

■ Ordinary pipelines connection

No dust ,foreign articles,air or moisture should be allowed to enter the air conditioning system.Careful attention should be paid when pipeline connection for outdoor unit is made.Try to avoid repeated curves as much as possible,otherwise hardening or cracks might be caused to the copper pipes. Suitable wrenches should be used when the pipeline connection is done so as to ensure appropriate torque(refer to following torque Table 1).Excessive torque might damage the joints while too little torque might lead to leakage.

Table 1 Torque based upon the wrench to be used

Outer diameter of copper pipe	Tightening torque	Strengthened tightening torque
Ø 6.35(1/4") Ø 6 mm	160kgf.cm(63kgf.inch)	200kgf.cm(79kgf.inch)
Ø 9.52(3/8") Ø 9 mm	300kgf.cm(118kgf.inch)	350kgf.cm(138kgf.inch)
Ø 12.7(1/2") Ø 12 mm	500kgf.cm(197kgf.inch)	550kgf.cm(216kgf.inch)
Ø 15.88(5/8")	750kgf.cm(295kgf.inch)	800kgf.cm(315kgf.inch)

■ Air purging with vacuum pump

1. Check that pipelines connection have been properly connected, remove the charging port cap, and connect the manifold gauge and the vacuum pump to the charging valve by service hoses as shown Fig.6.
2. Open the valve of the low pressure side of manifold gauge, then, run the vacuum pump. Vacuum the indoor unit and the connecting pipes until the pressure in them lowers to below 1.5mmHG (The operation time for vacuuming is about 10 minutes). When the desired vacuum is reached, close the valve of the low pressure of the manifold and stop the vacuum pump.
3. Disconnect the service hoses and fit the cap to the charging valve.
4. Remove the blank caps, and fully open the spindles of the 2-way and 3-ways valves with a service valve wrench.
5. Tighten the blank caps of the 2-way and 3-ways valves, applying the above torque Table 1.

Tips: • Use the R32 refrigerant special vacuum pump.

- Use tools for R32 (such as the gauge manifold, charging hose, or vacuum pump adapter.)

■ Adding refrigerant

Refrigerant must be added if the piping measures more than 5 metres (16'5") in length. This operation can only be performed by a professional technician, for the additional amount, see the table 2 below.

Table 2

(R32 model) Additional refrigerant amount	
Liquid pipe diameter $\varnothing 6.35(1/4")$ $\varnothing 6mm$	Liquid pipe diameter $\varnothing 9.52(3/8")$ $\varnothing 9mm$
(piping length-5)m x 15g or (piping length-16)ft x 0.15oz	(piping length-5)m x 30g or (piping length-16)ft x 0.3oz

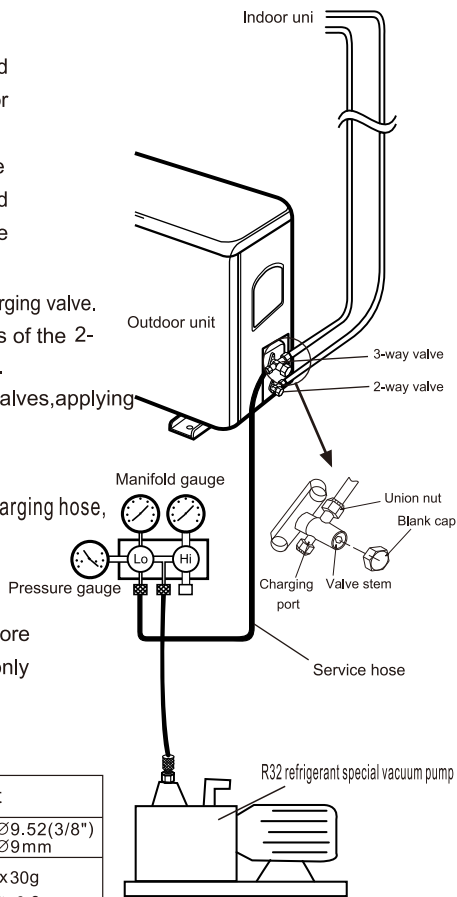


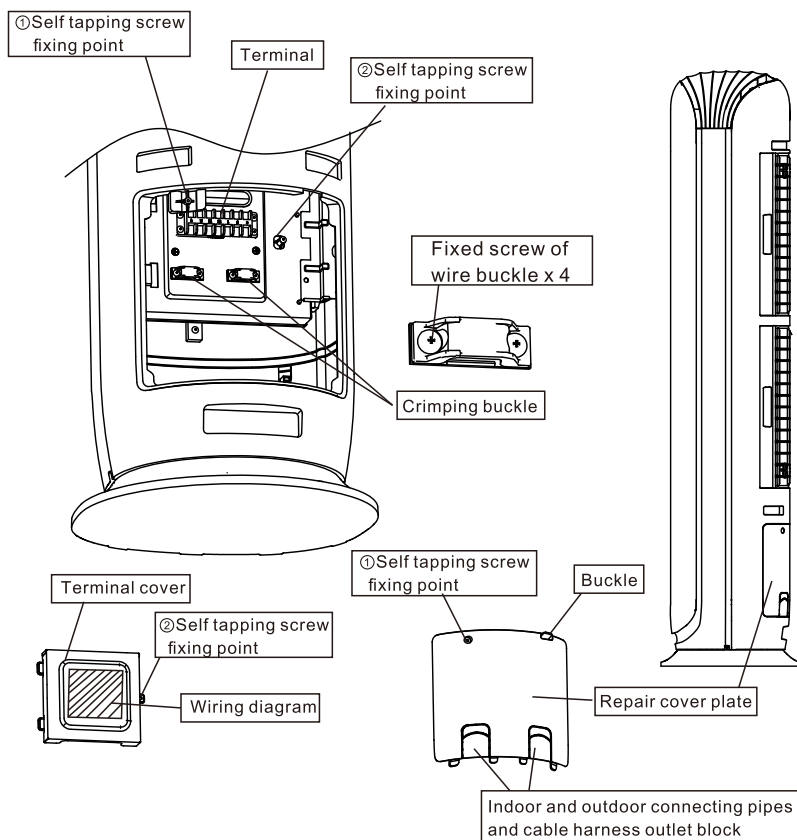
Fig.6

■ Gas leakage inspection

After the pipeline connection is done, use a leakage inspection device or soap to carefully check if there is any leakage at the joints. This is an important step to ensure the quality of installation. If refrigerant gas leaks, ventilate the area immediately. Toxic gas may be produced if refrigerant gas comes into contact with fire. Never directly touch any accidentally leaking refrigerant. This could result in severe wounds caused by frostbite.

【Indoor unit electrical circuit connection】

1. Remove the fixing screws of the repair board, and then press the buckle to remove the repair board.
2. Remove the screws from the terminal cover and then remove the terminal cover to make the wiring terminal block exposed.
3. Connect power cables and control cables according to the wiring diagram.
4. Use wire positioning pieces to fix the connected wiring at various locations.
5. Remove the fixing screws of the crimping buckle, pass the power cable harness and control cable harness through the crimping buckle holes, use the crimping buckle to fix the cable, and tighten the fixing screws.
6. After the wiring completed, the removed parts must be installed in their original state.



【Outdoor unit electrical circuit connection】

- 1.Remove the drawer of the outdoor unit.
- 2.**Non-quick coupler:**connect the indoor power and control wires with the matched outdoor wires in accordance with the electric schematic diagram and make sure that the connection is firmly done(Fig.9.)
- 3.Use a press plate to fix the wires firmly,and re-install the drawer.
- 4.Optional steps:In some cooling and heating models,you should connect the indoor wire connector with outdoor probe wire connector for defrosting,see Fig.10.

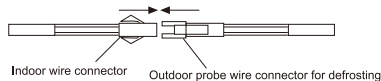
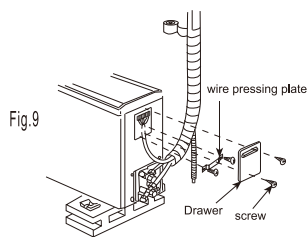


Fig.10

Note:Do not connect the wires in a wrong way,otherwise electric malfunctions will be caused and even damages to the units will occur.The appliance shall be installed in accordance with national wiring regulation.If the supply cord is damaged,it must be replaced by the manufacturer or its service agent or a similarly qualified person in order to avoid a hazard.The plug shall be accessible after installing the appliance.If the model have not plug that a switch which have a contact separation of at least 3 mm in all poles shall be added in fixed wiring.

【Finishing touches】

- wrap the pipelines tightly with ethylene tapes.
- Fix the wrapped pipelines on the exterior wall with clamps.
- Fill in the gaps left over by the pipeline hole and wall hole to prevent rain-water from entering.

【Test running】

- Connect to the power source,check if the function selection keys on the remote controller are working properly.
- Check if the room temperature adjustments and timer settings are working properly.
- Check if the drain is smooth.
- Check if there is any abnormal noise or vibration during operation.
- Check if there is leakage of refrigerant.

【Is the unit installed correctly?】

■ Suitable Installation Position

- Isn't there anything which prevents ventilation or obstructs operation in front of the indoor unit ?

Do not install the unit following place .

- Inflammable gases may leak .
- Oil splashes a lot .
- In case where the unit is used in such places as poisonous or sultry gases are generated or seaside district exposed to sea breezes corrosion may cause malfunction . Consult with your distributor .
- Air conditioner body and remote controller must be 1 m(39-3/4") or more away from a TV or a radio.

Drain the dehumidified water from the indoor unit to a place which drains well .

■ Pay attention to operation noise

- When installing the unit , choose a place which can stand the weight of the unit well and does not increase the operation noise or vibration . Especially where there is a possibility that vibration be transmitted to the house , fix the unit by inserting attached vibration -proof pads between the unit and fittings .

- Choose the place where hot air and operation noise from the outlet of the outdoor unit do not annoy the neighborhood .

- Things left near the outlet and inlet of the outdoor unit cause malfunction or increased operation noise . Do not leave obstacles near the outlet and inlet .

- If irregular sound is heard during operation , consult with your distributor .

■ Inspection and Maintenance

- According to the service conditions and operating environment , the inside of the air conditioner will become dirty after several seasons (3 to 5years) of service , resulting in decreased operating performance .Inspection and maintenance are recommended in addition to usual cleaning (The air conditioner can be used for a longer period and without anxiety .)

- As to inspection and maintenance , consult your dealer or any one of business offices of dealing companies .(Service charge is required in this case .)

- We recommend to perform inspection and maintenance during an off seasons.

【Fault display table for indoor unit】

Our company provides the thoughtful services for customer, air conditioners have been installed self diagnosis system to display the information for the units.

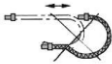
The code "dF" is displayed when running defrost mode

Fault display	Fault code
The communication faults between the indoor and outdoor units.	F1
Indoor ambient temperature sensor fault.	F2/E2
Indoor coil temperature sensor fault (Include: inlet, middle of pipe, outlet).	F3/E3
Indoor fan fault.	F4
Outdoor module fault.	F5
Outdoor ambient temperature sensor fault.	F6
Outdoor coil temperature sensor fault.	F7/E1
IPM temperature sensor fault.	F8
Compressor discharge temperature sensor fault.	F9
Inductor of current or voltage fault	FA
Compressor driving abnormally fault	FC
Power supply phase lacking or phase sequence fault	FD
1.Lack of refrigerant 2.The four-way directional valve is faulty	FF
Outdoor DC motor fault	FH
Communication failure between PC board and main control board	FL

Fault display	Fault code
The protection for AC input current is too high.	P3
Compressor discharge temperature protection.	P4
Compressor top shell overheating protection.	P5
Compressor suction temperature protection.	P6
Suction low pressure protection.	P8
Discharge high pressure protection.	P9
Condenser's coil pipe high temperature protection	PA
Outdoor environmental temperature over high protection.	PC
Fault of outside feedback.	E7
Over-current.	EA

Note: Above self check information is commonly applicable in our most air conditioners, but some are special, you can refer to the User's Manual for information or contact the dealer or authorized maintenance people for help.

【Installation Guide】

To keep the allowed bending radius, please make the packed soft pipes vertical for expanding.			Please do not expand only one side of the packed soft pipes.
Please make use of semicircle pulley to keep the allowed bending radius.			Extremely bending could damage the pipes.
Please use twisting wheel to avoid improper bending.			Over length soft pipes will lead to irregular bending.
Please use rigid elbow to keep the bending radius while soft pipes operating.			Undersize bending will damage the soft pipe.
Please Keep the minimum bending radius while installing.			Short soft pipes will have them bending undersize, it's not allowed.

Environment Friendly Disposal



*You can help protect the environment!
Please remember to respect the local regulations:
hand in the non-working electrical equipments to
an appropriate waste disposal center.*

BRUHM products are intended for household use only

BRUHM has policy of continuous improvement in product quality and design. The company, therefore reserves the right to change the specification of its model at any time.