improve your life

CE

SPLIT TYPE FLOOR-STANDING AIR CONDITIONERS

INVERTER

INDOOR UNIT

AFSI ECO 120HL1

OUTDOOR UNIT

AFSI ECO 120SH

Please read this manual carefully before installing and using the air conditioner, and retain for future reference.

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This product is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities or who lack adequate experience and knowledge, unless they have been supervised or instructed in use of the product by a person responsible for their safety.

Children must be supervised to prevent them from playing with the appliance.

If you need to install, move or service the air conditioner, please contact your dealer or local service center first for the procedure.

The air conditioner must be installed, moved or maintained by authorized personnel. Failure to do so risks serious damage, personal injury, or death.

Operating frequency band(s) of the radio equipment: 2400MHz-2483.5MHz Maximum radio frequency power transmitted at the operating band frequencies of the radio equipment: 20 dBm.

REQUIREMENTS FOR INSTALLATION AND MAINTENANCE PERSONNEL

All personnel who carry out installation and/or maintenance operations on the units must be equipped with PEF (European Refrigerators License) as required by the D.P.R. n. 146/2018 implementing Regulation (EU) no. 517/2014. If another technician is required to maintain and repair the equipment, this will need to be supervised by the person who is qualified to use flammable refrigerants. The repair must be performed according to the methodology indicated by the manufacturer of the equipment. If you need to install, move or service the air conditioner, please contact your dealer or local service center for the procedure first. The air conditioner must be installed, moved or maintained by authorized personnel. Failure to do so could result in serious damage, personal injury or death.



INFORMATION FOR CORRECT DISPOSAL OF THE PRODUCT IN ACCORDANCE WITH THE EUROPEAN DIRECTIVE 2012/19/EU

At the end of its working life this equipment must not be disposed of as an household waste. It must be taken to special local community waste collection centres or to a dealer providing this service. Disposing of electrical and electronic equipment separately avoids possible negative effects on the environment and human health deriving from an inappropriate disposal and enables its components to be recovered and recycled to obtain significant savings in energy and resources. In order to underline the duty to dispose of this equipment separately, the product is marked with a crossed-out dustbin

EXPLANATION OF SYMBOLS

WARNING	Indicates a hazardous situation that, if not avoided, could result in death or serious injury.
CAUTION	Indica una situazione di pericolo che, se non evitata, potrebbe provocare lesioni di entità lieve o moderata.
NOTICE	Indicates a hazardous situation that, if not avoided, may result in minor or moderate injury.



Indicates a hazard that would be assigned a signal word WARNING or CAUTION.

EXCEPTION CAUSES

The manufacturer is not responsible in any way for personal injury or material loss caused by the following reasons:

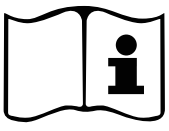
1. Damage to the product due to incorrect or improper use of the same;
2. Alterations, modifications, maintenance, or use of the product with other equipment not in accordance with the manufacturer's instruction manual;
3. After verification, the product defect is directly caused by corrosive gas;
4. After verification, the defects are caused by improper use during transportation of the product;
5. Use, repair, maintenance of the appliance in a manner that does not comply with the instruction manual or relevant standards;
6. After verification, the problem or dispute arises from the quality specification or performance of parts or components manufactured by other manufacturers;
7. Damage due to natural disasters, unsuitable use environment or force majeure.



Appliance filled with flammable gas R32.



Before using the appliance, read the owner's manual.



Before installing the appliance, read the installation manual.

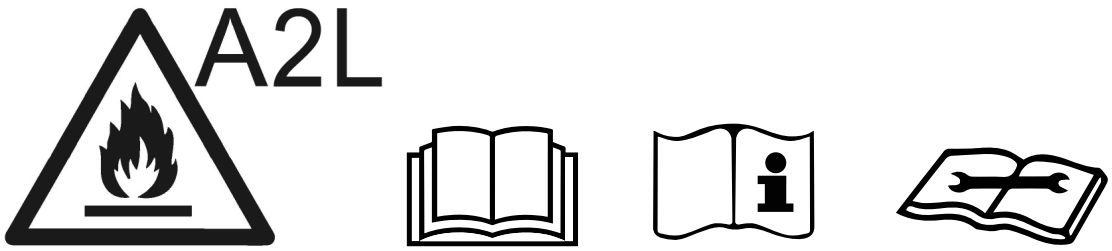


For any repairs, always contact an authorized Service Center and strictly follow the contents of the service manual.

THE REFRIGERANT R32

- To realize the function of the air conditioner unit, a special refrigerant circulates in the system. The refrigerant is the fluoride R32 = GWP (Global warming potential). This refrigerant is flammable and inodorous. It can lead to explosions under certain conditions, however the flammability of this refrigerant is very low and it can be ignited only by fire.
- Compared to other common refrigerants, R32 is a non-polluting refrigerant with no harm to the ozonosphere and a lower effect upon the greenhouse effect. R32 has very good thermodynamic features which lead to a really high energy efficiency. The units therefore need less filling.

Warning:
Do not try to accelerate the defrosting process or to clean the appliance in different ways other than those recommended by the manufacturer. Should repair be necessary, contact your nearest authorized Argoclima Service Centre. Any repairs carried out by unqualified personnel may be dangerous. The appliance has to be stored in a room that doesn't have any continuously operating ignition sources. (for example: open flames, an operating gas appliance or an operating electric heater.) Do not pierce or burn. Appliance has to be installed, operated and stored in a room with a floor area larger than X m^2. (Please refer to table "a" in section of " Safety Operation of Inflammable Refrigerant" for Space X.) For repairs, strictly follow manufacturer's instructions only for appliances filled with R32 flammable gas. Be aware that refrigerants do not have any odour.



INFORMATION FOR USE

Precautions for use

⚠ WARNING

Operation and maintenance

- 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.
- Children shall not play with the appliance.
- Cleaning and user maintenance shall not be made by children without supervision.
- Do not connect air conditioner to multi-purpose socket. Otherwise, it may cause fire hazard.
- Do disconnect power supply when cleaning air conditioner. Otherwise, it may cause electric shock.
- 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.
- Do not wash the air conditioner with water to avoid electric shock.
- Do not spray water on indoor unit. It may cause electric shock or malfunction.
- After removing the filter, do not touch fins to avoid injury.
- Do not use fire or hair dryer to dry the filter to avoid deformation or fire hazard.
- Maintenance must be performed by qualified professionals. Otherwise, it may cause personal injury or damage.
- Do not repair air conditioner by yourself. It may cause electric shock or damage. Please contact dealer when you need to repair air conditioner.
- Do not extend fingers or objects into air inlet or air outlet. It may cause personal injury or damage.
- Do not block air outlet or air inlet. It may cause malfunction.
- Do not spill water on the remote controller, otherwise the remote controller may be broken.
- When below phenomenon occurs, please turn off air conditioner and disconnect power immediately, and then contact the dealer or qualified professionals for service.
  -

- Power cord is overheating or damaged.
- There's abnormal sound during operation.
- Circuit break trips off frequently.
- Air conditioner gives off burning smell.
- Indoor unit is leaking.

- If the air conditioner operates under abnormal conditions, it may cause malfunction, electric shock or fire hazard.
- When turning on or turning off the unit by emergency operation switch, please press this switch with an insulating object other than metal.
- Do not step on top panel of outdoor unit, or put heavy objects. It may cause damage or personal injury.

ATTACHMENT

- Installation must be carried out by qualified professionals. Failure to do so may result in damage or personal injury. It is necessary to respect the electrical safety regulations when installing the unit.
- In accordance with local safety regulations, use a compliant power circuit and circuit breaker.
- Always install the power switch. Otherwise, malfunctions may occur. An omnipolar disconnect switch with contact separation of at least 3 mm in all poles must be connected in the fixed wiring.
- Insert a power switch with sufficient power. The air switch must include a magnetic and thermal function to protect against short circuits and overloads.
- The air conditioner must be properly earthed. Incorrect grounding can cause electric shocks.
- The yellow-green wire in the air conditioner is a grounding wire, which cannot be used for other purposes.
- Do not use non-compliant power cables.
- Make sure the power supply matches the requirements of the air conditioner. An unstable power supply or incorrect wiring can cause malfunctions. Install suitable power cables before operating the air conditioner.
- Correctly connect the phase, neutral and earth wires of the power socket.
- Be sure to switch off the power supply before carrying out any work relating to the electrical circuit and safety.
- Do not connect the power before finishing the installation.

- If the power cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid danger.
- Since the temperature of the refrigerant circuit is high, keep the interconnection cable away from the copper pipe.
- The appliance must be installed in accordance with national wiring regulations.
- The air conditioner belongs to the first-class household appliances. Earthing must be correctly carried out with the appropriate device by a professional. Check that the appliance is always effectively earthed, otherwise electric shocks may occur.
- The earth resistance must comply with national electrical safety standards.
- The appliance must be positioned so that the plug is accessible.
- All indoor and outdoor unit wires should be connected by a professional.
- If the length of the power cord is not enough, contact your supplier for a new one. Do not make extensions yourself.
- For air conditioners equipped with a plug, this must be in a position that can be reached once installation has been completed.
- For the air conditioner without a plug, equip the line with a power switch.
- If it is necessary to move the air conditioner to another location, contact qualified personnel. Failure to do so may result in damage or personal injury.
- Choose a location out of reach of children and away from animals or plants. If this is not possible, install a safety fence.
- The indoor unit must be installed close to the wall.
- Bear in mind that the appliance is filled with flammable gas R32. Improper treatment of the appliance carries the risk of serious injury to people and damage to materials. Details relating to this refrigerant can be found in the “refrigerant” chapter.
- Check that the maintenance area or room surface meets the requirements of the identification plate.
- Use is permitted only in rooms that meet the requirements indicated on the identification plate.
- Check that the maintenance area is adequately ventilated.
- Continuous ventilation conditions must be maintained during the operation process.
- Check that the area intended for maintenance has no sources of combustion, even potential ones.

- The introduction of open flames into the maintenance area is prohibited, while the posting of a "no smoking" sign is mandatory.
- Check that the markings on the appliance are in good condition.
- Replace any unclear or damaged warning markings.
- Check for the presence of flammable gases with the appropriate detector before unloading and opening the container.
- Do not introduce sources of combustion and do not smoke.
- Respect local regulations and laws.
- The use of the air conditioner is not permitted in rooms with open flame (for example, combustion sources, coal gasification plants, gas heating systems).
- It is not permitted to drill holes or burn the connecting pipe.
- Respect local regulations and laws.
- The use of the air conditioner is not permitted in rooms with open flame (for example, combustion sources, coal gasification plants, gas heating systems).
- It is not permitted to drill holes or burn the connecting pipe.
- The air conditioner must be installed in a room larger than the minimum surface area of the room. Check the minimum surface area of the room on the identification plate or on table a.
- At the end of the installation it is necessary to carry out a leak test.
- Instructions for installation and use of this product are provided by the manufacturer.
- Electrical components that can generate arcs or sparks and are not considered ignition sources should be replaced with parts specified in the manufacturer's manual. Replacement with other parts could create an ignition source in the event of a refrigerant leak.

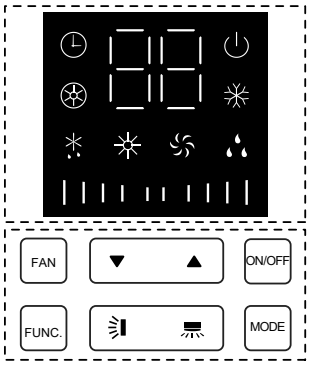
WORKING TEMPERATURE RANGE

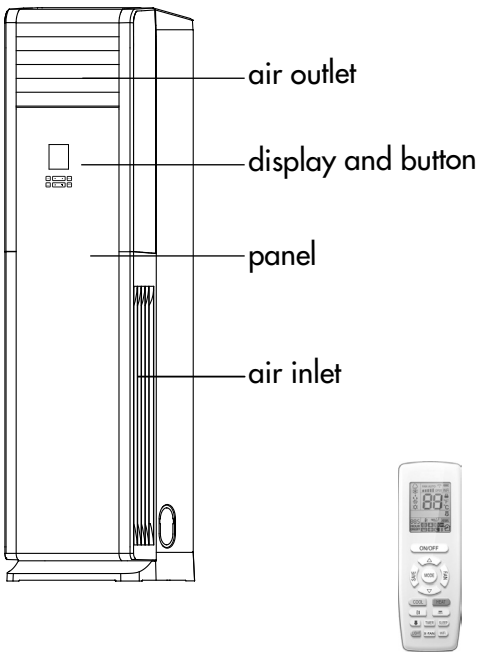
WORKING TEMPERATURE RANGE (outdoor temperature)

Cooling: -15°C ~ +50°C
Heating: -15°C ~ +30°C
ROOM TEMPERATURE ADJUSTMENT RANGE: 16-30°C.

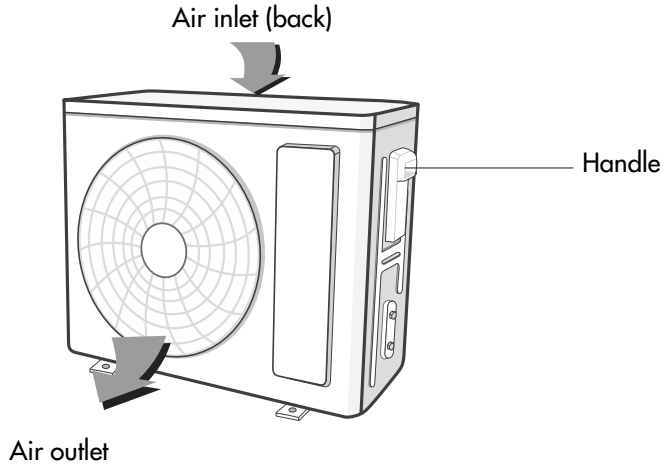
DESCRIPTION OF PARTS

INDOOR UNIT





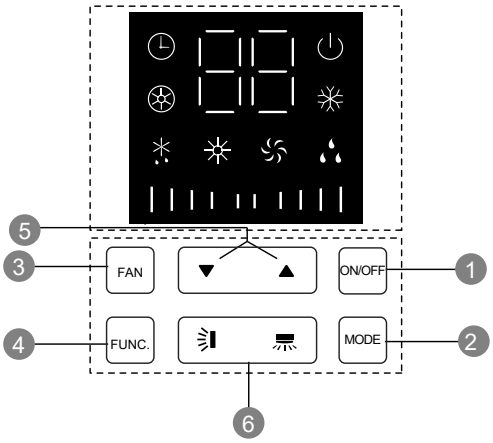
OUTDOOR UNIT



(Display content or position may be different from above graphics, please refer to actual products.

DISPLAY GUIDE

BUTTONS NAME AND FUNCTION



1. ON/OFF button
2. MODE button
3. FAN button
4. FUNCTION button
5. ▼/▲ button
6. / button

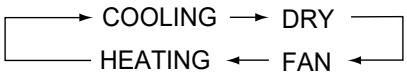
Introduction to the buttons

1. ON/OFF button

Press this button to turn on or turn off the unit.
Under X-FAN mode, press this button to turn on the unit directly.

2. MODE button

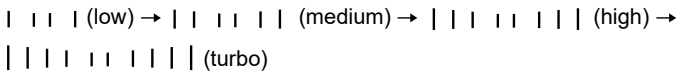
By touching this button it is possible to select the operating mode in the following circular sequence:



Not: In Cooling mode the Heating operating signal is not received.

3. FAN SPEED button

Press this button and then fan speed can be selected and displayed in the sequence as below: low -> medium -> high -> turbo



In dehumidification mode, only the low fan speed is available, which cannot be adjusted when the unit is operating in this mode. Turbo fan speed cannot be selected when the unit is operating in fan mode.

4. FUNCTION button

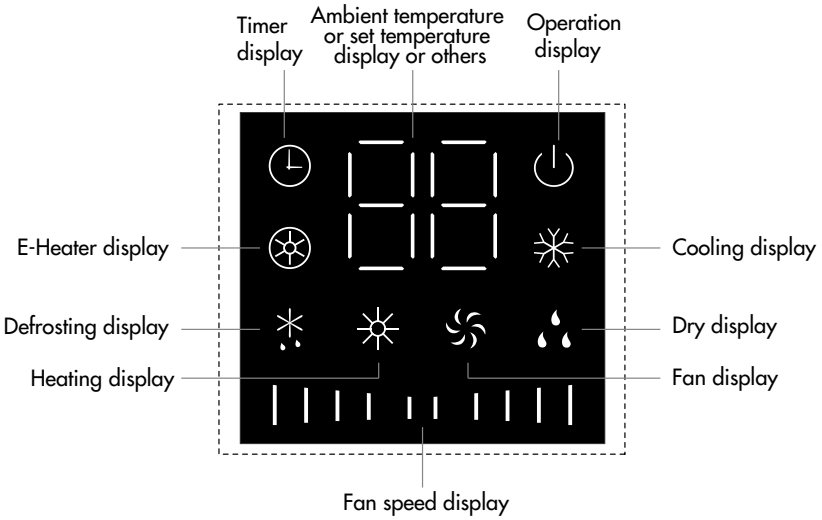
With the air conditioner on, press the Function button to switch from Timer to setting the auxiliary heating function (auxiliary heating can only be set in heating mode). When the Timer or the auxiliary heating icon flashes, it means that this function can be set. Press ▲ ▼ to set the function. If no change is made to the operation within 5 seconds the setting is finished, the function setting will be confirmed. Or press the Function key again to exit or confirm the function.
When the function is selected using the Function button, if the unit is not turned off and no signal is received from the remote control within 2 minutes, press the Function button again to return to the previously set function. After 2 minutes or if the unit is turned off or the remote control signal is received, press the Function button again to switch to Timer.
Note: Only when the unit is in heating mode and with auxiliary heating function, the auxiliary heating function can be turned on or off via the Function button.
With the air conditioner off, if the unit is in the X-FAN state, press the Function button to turn off the unit directly; If the unit is not in the X-FAN state, press the Function key to set the timer.

5. ▲▼ button

Temperature adjustment: each time the button ▲▼ is pressed the set temperature increases or decreases by 1 °C. The temperature adjustment range is 16 °C - 30 °C. In automatic mode, the temperature setting button is deactivated. The Timer can be set from 1 to 24 hours.
When adjusted during auxiliary heating set with the Function button, press this button to turn the auxiliary heating function on or off.
Screen Lock: By pressing the keys ▲▼ at the same time for 3 seconds, all keys on the display panel are locked. Meanwhile, the display panel shows "LC" to warn the user that the keys are locked. By pressing the keys ▲▼ again at the same time for 3 seconds to unlock the keys, the display will return to operation.

6. button
Press this button to set the swing from right to left, pressing it once can activate or deactivate this function.
Press this button to set the swing from top to bottom, pressing it once can activate or deactivate this function.

INTRODUCTION OF ICONS ON DISPLAY

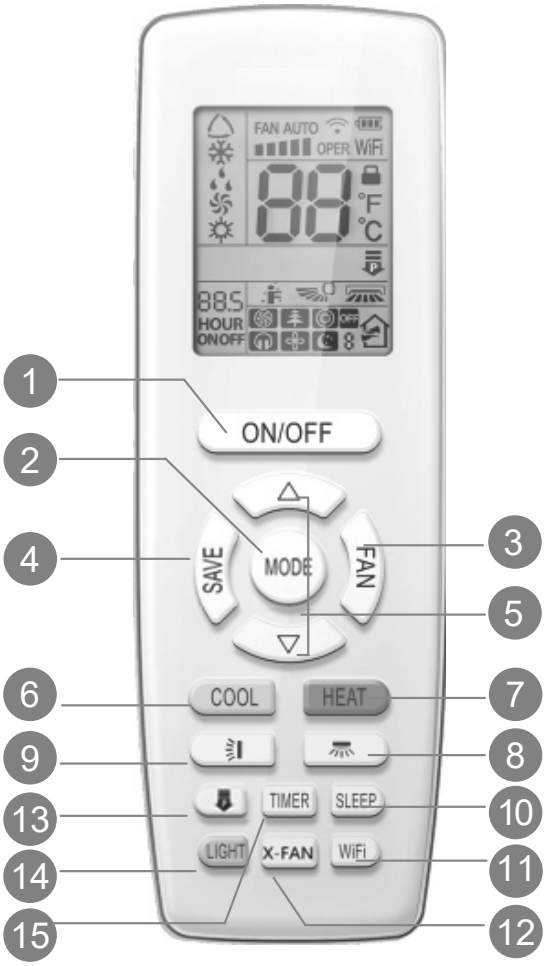


Operation display: It indicates the air conditioner is put through the power. Under on status, this indicator is on; under off status, this indicator is off.
Timer display: When this indicator is on, it indicates the timer function is turned on.
Heating display: When this indicator is on, it indicates the heating mode is turned on.
Defrosting display: When this indicator is on, it indicates the defrosting function is turned on.
Dry display: When this indicator is on, it indicates the dry mode is turned on.
E-Heater display: When this indicator is on, it indicates the E-heater function is turned on. This function is only available for some models.
Cooling display: When this indicator is on, it indicates the cooling mode is turned on.
Fan display: When this indicator is on, it indicates the fan mode is turned on.
Fan speed display: Displays the fan speed. The fan speed is displayed as below:

(low) → (medium) → (high) →
(turbo)

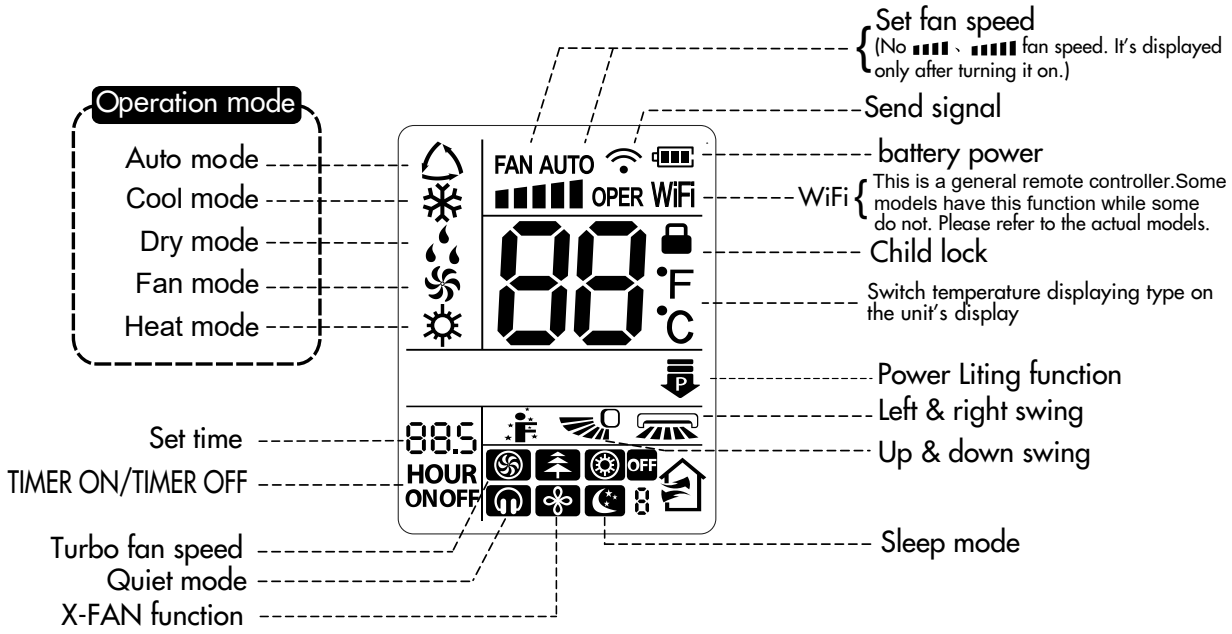
OPERATION AND DESCRIPTION OF THE REMOTE CONTROL

REMOTE CONTROL BUTTONS



1. ON/OFF button
2. MODE button
3. FAN button
4. SAVE button
5. ▲/▼ button
6. COOL button
7. HEAT button
8. button
9. button
10. SLEEP button
11. WiFi button
12. X-FAN button
13. button
14. LIGHT button
15. TIMER button

INTRODUCTION TO THE DISPLAY ICONS



INTRODUCTION TO THE REMOTE CONTROL BUTTONS

Note:

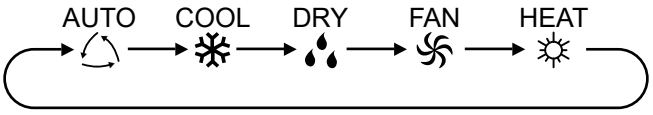
- This is a universal remote control. It can be used for multifunctional air conditioners. For functions that the model does not have, pressing the corresponding button on the remote control keeps the unit in its original operating state.
- Once the power is connected, the air conditioner emits an acoustic signal. The power indicator ⏻ it turns on. At this point, you can operate the air conditioner via the remote control.
- In the power-on state, by pressing the button on the remote control, the signal icon on the remote control display flashes once, and the air conditioner emits a "di" beep, indicating that the signal has been sent to the air conditioner.

ON/OFF BUTTON

Press this button to turn on the unit. Press this button again to turn off the unit. After turning on the air conditioner, indoor unit will give out a sound.

MODE BUTTON

Press this button to select the desired operating mode, in the following circular sequence:



- When selecting auto mode, air conditioner will operate automatically according to the sensed temperature. Set temperature can't be adjusted and will not be displayed as well. Press "FAN" button can adjust fan speed. Press / button can adjust fan blowing angle.
- After selecting cool mode, air conditioner will operate under cool mode. Cool indicator on indoor unit is ON. (This indicator is not available for some models). Press ▲ or ▼ button to adjust set temperature. Press "FAN" button to adjust fan speed. Press / button to adjust fan blowing angle.
- When selecting dry mode, the air conditioner operates at low speed under dry mode. Dry indicator on indoor unit is ON. (This indicator is not available for some models). Under dry mode, fan speed can't be adjusted. Press / button to adjust fan blowing angle.
- When selecting fan mode, the air conditioner will only blow fan, no cooling and no heating. Fan indicator on indoor unit is ON. Press "FAN" button to adjust fan speed. Press / button to adjust fan blowing angle.
- When selecting heating mode, the air conditioner operates under heat mode. Heat indicator on indoor unit is ON(This indicator is not available for some models). Press ▲ or ▼ button to adjust set temperature. Press "FAN" button to adjust fan speed. Press / button to adjust fan blowing angle. (Cooling only unit won't receive heating mode signal. If setting heat mode with remote controller, press ON/OFF button can't start up the unit).

Note:

- To avoid blowing out cold air, the indoor unit delays air supply by 1~5 minutes after starting Heat mode (the actual delay time depends on the indoor ambient temperature).
- Temperature range that can be set by remote control: 16~30°C (61-86°F).
- Fan speed: auto, quiet speed, low speed, medium speed, high speed, turbo speed.

FAN BUTTON

This button is used to set the fan speed according to the sequence AUTO, (QUIET), (low), (medium), (high), (Turbo) then back to Auto.



Note:

- Under AUTO speed, air conditioner will select proper fan speed automatically according to ex-factory setting.
- It's Low fan speed under Dry mode.
- Turbo cannot be set in FAN mode.

SAVE BUTTON

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

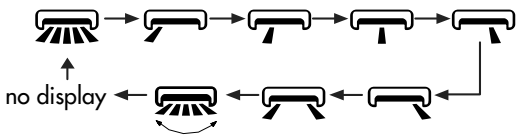
▲▼ BUTTON

Press ▲ or ▼ button once increase or decrease set temperature 1°C (°F). Holding ▲ or ▼ button, 2s later, set temperature on remote controller will change quickly. On releasing button after setting is finished, temperature indicator on indoor unit will change accordingly. (Temperature can't be adjusted under Auto mode. When setting TIMER ON, TIMER OFF, press ▲ or ▼ button to adjust time. (Refer to TIMER button for details).

COOL BUTTON
Press this button, unit will operate in cool mode.

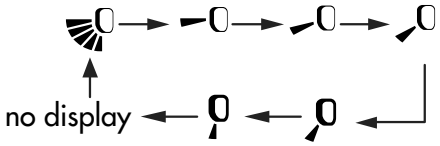
HEAT BUTTON
Press this button, unit will operate in heat mode.

L&R SWING
Under simple swing mode, press this button can turn on (icon is displayed) or turn off (icon is not displayed) the left&right swing function.
When the unit is turned off by remote controller, press ▲ button and mode and fixed-angle swing mode (on the remote controller will flash twice).
Under fixed-angle swing mode, press this button and then left&right swing status will circulate as shown below:



This remote controller is the general type remote controller. When remote controller receives the signal of , swing status is same as ; when remote controller receives , swing status is same as left&right swing OFF.

UD-SWING BUTTON
Under simple swing mode, press this button can turn on (icon is displayed) or turn off (icon is not displayed) the up&down swing function.
When the unit is turned off by remote controller, press ▲button and button can switch between single swing mode and fixed-angle swing mode. on the remote controller will flash twice.
Under fixed-angle swing mode, press this button and the up&down swing status will circulate as shown in the right figure:



SLEEP BUTTON
Under COOL or HEAT mode, press this button to start up sleep function. icon is displayed on remote controller. Press this button again to cancel sleep function and icon will disappear.After powered on, Sleep Off is defaulted. After the unit is turned off, the Sleep function is canceled. In this mode, set temperature will be adjusted with the change of time.
Under Fan, DRY and Auto modes, this function is not available.

WIFI BUTTON
Press "WiFi" button to turn on WiFi function, WIFI icon will be displayed on the remote controller; hold "WiFi" button for 5s to turn off WiFi function and "WiFi" icon will disappear. Under off status, press "MODE" and "WiFi" buttons simultaneously for 1s, WiFi module will restore factory settings.
This function it's available only for some models.

X-FAN BUTTON
Pressing this button in COOL or DRY mode, the icon is displayed and the indoor fan will continue operation for a few minutes in order to dry the indoor unit even though you have turned off the unit. After energization, X-FAN OFF is defaulted. X-FAN is not available in AUTO, FAN or HEAT mode. This function indicates that moisture on evaporator of indoor unit will be blowed after the unit is stopped to avoid mould.

- Having set X-FAN function on: After turning off the unit by pressing ON/OFF button indoor fan will continue running for about a few minutes at low speed. In this period, press X-FAN button to stop indoor fan directly.
- Having set X-FAN function off: After turning off the unit by pressing ON/OFF button, the complete unit will be off directly.
- Only under cooling mode and dry mode, press this button can turn on (characters of "X-FAN" are displayed) or turn off (characters of "X-FAN" are not displayed) X-FAN function.

POWER LIMITING OPERATION BUTTON
Function is for limiting power of the whole unit. Press this button, the remote controller will circularly display as the following:



The maximum power limited in the mode is lower than that in the mode .

If you want to cancel the power limitation function, press this button until the icon disappears on the remote control display.
When the remote control is turned off, the power limitation function is canceled. To activate the function, press again this button.
If the current power is less than the maximum power of the mode , the power will not be limited when entering this mode.
For the model with one outdoor unit and two indoor units, if the power limitation function is activated for one of the indoor units, the outdoor unit will enter the indoor unit power limitation mode; When two indoor units enter the power limitation mode, the power of the outdoor unit will be limited by taking into consideration the lower power between the two indoor units.
Note: This button is only available for the model with the relevant function.

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

TIMER BUTTON
With the unit turned on, pressing this button once can set the TIMER OFF function. The HOUR and OFF symbols flash. By pressing the ▲▼ button within 5 seconds you can adjust the time of the TIMER ON function. Each time ▲▼ button is pressed, the time increases or decreases by 30 minutes. Press and hold the ▲▼ buttons for 2 seconds to change the time quickly, until the desired value is reached. Then press the "Timer" button to confirm. The HOUR and OFF symbols no longer flash.
Cancel TIMER OFF function: Press the "Timer" button again in the TIMER OFF state.
With the unit turned off, pressing this button once can set the TIMER ON function. For more information on operation, refer to TIMER.
Cancel TIMER ON function: Press the "Timer" button again in the TIMER ON state.
Note:
- Timer setting range: 0.5-24h.
- The time interval between two operations cannot exceed 5 seconds. Otherwise, the remote control automatically exits the setting state.

FUNCTION INTRODUCTION FOR COMBINATION BUTTONS

CHILD LOCK FUNCTION
Press ▲▼ simultaneously to turn on or turn off child lock function. When child lock function is on, icon is displayed on remote controller. If you operate the remote controller, the icon will blink three times without sending signal to the unit.

AUTOCLEAN FUNCTION
With the unit turned off, press and hold the MODE and FAN buttons at the same time for 5 seconds to activate or deactivate the automatic cleaning function. When the automatic cleaning function is activated, the indoor unit displays the value "CL". During automatic evaporator cleaning, the unit will perform rapid cooling or rapid heating. This may generate noise caused by flowing liquid, thermal expansion, or shrinkage due to cold. The air conditioner can deliver cold or hot air: this is a normal phenomenon. During cleaning operations, ensure that the room is well ventilated to ensure maximum comfort.

Note:
- Automatic cleaning can only be performed at normal room temperature. If the room is dusty, clean it once a month; otherwise, perform it once every three months. After activating the automatic cleaning function, you can leave the room. After automatic cleaning is finished, the air conditioner will enter standby.
- This feature is only available for some models.

Replacement of batteries in remote controller

1. Lift the cover along the direction of arrow (as shown in Fig 1-1).
2. Take out the original batteries (as shown in Fig 1-2).
3. Place two 7# (AAA 1.5V) dry batteries, and make sure the position of "+" polar and "-" polar is correct (as shown in Fig 2-3).
4. Reinstall the cover (as shown in Fig 2-4).

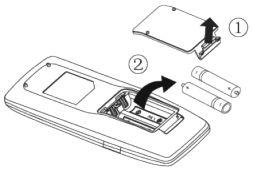


Fig.1

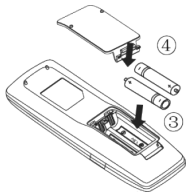


Fig.2

NOTICE:

- During operation, point the remote control signal transmitter towards the receiving window of the indoor unit.
- The distance between the transmitter and the window must not exceed 8 meters, without the presence of obstacles between the two devices.
- If there is a fluorescent lamp or wireless telephone in the room, interference with the signal is likely to occur. During operation, keep the remote control next to the indoor unit.
- When it is necessary to replace the batteries, use new batteries of the same model.
- If the remote control is not used for a long time, remove the batteries.
- If the images on the remote control display appear blurry or are not visible, replace the batteries.



INFORMATION FOR CORRECT DISPOSAL OF BATTERIES IN ACCORDANCE WITH EUROPEAN DIRECTIVE 2023/1542

Please replace the battery when its electrical charge is exhausted: at the end of its useful life this battery must not be disposed of with unsorted waste. It must be delivered to special waste collection centers or to retailers who provide this service. Disposing of a battery separately allows you to avoid possible negative effects on the environment and human health deriving from inadequate disposal and allows you to recover and recycle the materials it is made of, with significant savings in energy and resources. To underline the obligation to dispose of batteries separately, the crossed-out wheelie bin symbol appears on the battery. Illegal disposal of the product by the user entails the application of administrative sanctions provided for by current legislation.

WIFI GUIDE

HOW TO CONFIGURE AND OPERATE THE AIR CONDITIONER WITH WIFI

1. Make sure that the device (smartphone or tablet) used is equipped with a standard version of Android (version 4.4 or higher) and iOS (iOS7.0 or higher) as the operating system. For further details, refer to the App.
2. The units can only be connected and controlled via Wi-Fi network or via Hotspot function.
3. Routers with WEP encryption are not supported.
4. The application interface is universal for all products and many functions may not match for all units. It may vary depending on the operating system used or the update in use.
5. Please refer to the current version.
6. If access protection is enabled on your router in the "MAC filter"/"MAC address filter" item, enable access to the device's MAC address to the network.

INSTALLATION AND USE INSTRUCTIONS

Scan the QR code or search for the "Ewpe smart" App in Google play or Apple Store, then download and install the App on your smartphone. Create an account and add the device to get WiFi control of the air conditioner. For further information, please refer to the "Help" section in the App.

Download EWPE SMART App

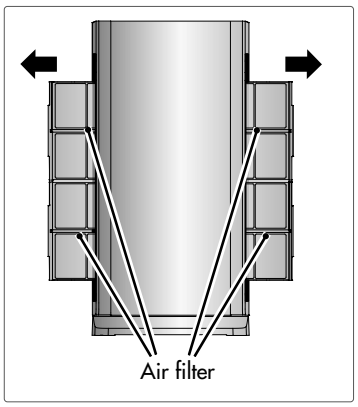
MAINTENANCE AND CLEAN

NOTE

- Turn off the appliance and unplug the power before cleaning the unit and to avoid electric shock.
- Do not wash the unit with water to avoid electric shock.
- Do not use volatile liquid to clean the unit.
- Do not use corrosive liquids or detergents to clean the unit, do not spray water or other liquids, these could damage the plastic components and cause electric shocks.

Cleaning of the external surface

When the surface of the indoor unit is dirty, it is advisable to use a soft dry or damp cloth to clean it.



Note: Do not remove the panel when cleaning.

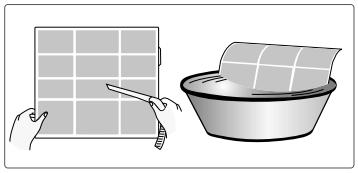
Cleaning of air filter

1. Remove the filter

- Take out and pull the filter on both sides of the air inlet panel in the direction of the arrow, as shown in the figure.
- Reinstall the filter by following the reverse procedure. During installation, you need to pay attention to the front and back sides of the filter, the characters "front" and "back" are marked on the filter.

2. Clean the filter

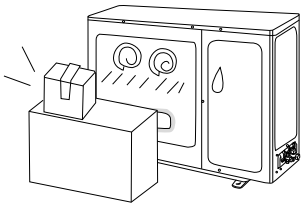
- Pat the filter or use electric dust catcher to clean the filter.
- If there are too much dust on the filter, please use warm water with little neutral detergent to clean it, and then use warm water to wash it.
- When cleaning is finished, dry it and then reinstall it.



Note: Do not expose the filter to direct sunlight and do not use heat sources to dry it more quickly, this may cause the filter to deform.

Checking before use-season

1. Check that the air outlets and inlets are not obstructed.
2. Check that the air switch, plug and socket are in good condition.
3. Check if the filter is clean.
4. Check that the remote control has batteries.
5. Check whether the mounting bracket for the outdoor unit is damaged or corroded. In this case, contact your dealer.
6. Check that the drain hose is not damaged.



Checking after use-season

1. Disconnect power supply.
2. Clean filter and indoor unit's panel.
3. Clear dust and obstructions from the outdoor unit.
4. Check whether mounting bracket for outdoor unit is damaged or corroded. If yes, please contact dealer.

Notice for recovery

1. Many packing materials are recyclable materials. Please dispose them in appropriate recycling unit.
2. If you want to dispose the air conditioner, please contact local dealer or consultant service center for the correct disposal method.

TROUBLESHOOTING

POSSIBLE OPERATING ANOMALIES AND SOLUTION

CAUTION: Do not attempt to repair the unit yourself. Incorrect intervention can cause electric shock or fire, so please contact your local Technical Assistance service after disconnecting the power supply to the unit. Before contacting the Technical Assistance Service, carry out the following checks:

ANALYSIS OF OPERATING ANOMALIES
ERROR CODE

Phenomenon	Check	Solution
Indoor unit can't receive remote controller's signal or remote controller has no action.	Esiste un'interferenza notevole (ad es. elettricità statica, tensione stabile)?	Pull out the plug. Reinsert the plug after about 3 minutes, then turn the unit back on.
	Is the remote control within the signal reception distance? Are there any obstacles?	The maximum signal reception distance is 8 m: it does not work beyond that. Remove obstacles.
	Is the remote control pointed at the receiver?	Point the remote control at the receiver on the indoor unit.
	Is the sensitivity of the remote control low? Blurry or absent images?	Check the batteries. If the battery charge is too low, replace them.
	No images appear when you operate the remote control?	Check whether the remote control is damaged. If so, replace it.
	Fluorescent lamp in the room?	Place the remote control next to the indoor unit. Turn off the fluorescent lamp and try again.
No air emission from the indoor unit	Indoor unit air outlet or inlet blocked?	Remove obstructions.
	In heating mode, has the indoor temperature reached the set temperature?	Once the set temperature is reached, the indoor unit stops blowing air.
	Has the heating mode just been activated?	To avoid the introduction of cold air, the exit occurs with a delay of a few minutes (normal phenomenon).
The air conditioner doesn't work	Is there no electricity supply?	Wait for the power supply to return.
	Loose plug?	Reinsert the plug.
	Has the circuit breaker tripped or has the fuse blown?	Ask a professional to replace the circuit breaker or fuse.
	Is the wiring faulty?	Ask a professional to replace it.
	Did the unit restart immediately after shutdown?	Wait 3 minutes and then turn the unit back on.
	Is the remote control function setting correct?	Reset the function.
A mist is dispensed from the air outlet of the indoor unit	High internal temperature and humidity?	Indoor air cools quickly. Wait for the internal temperature and humidity to drop, causing the mist to disappear.
The set temperature cannot be adjusted	Does the unit operate in automatic mode?	In automatic mode it is not possible to adjust the temperature. Change the operating mode if you want to adjust the temperature.
	Does the requested temperature exceed the settable temperature range?	Settable temperature range: 16°C ~30°C.
Cooling/Heating effect is not good.	Voltage is too low?	Wait until the voltage resumes normal.
	Filter is dirty?	Clean the filter.
	Set temperature is in proper range?	Adjust temperature to proper range.
	Door and window are open?	Close door and window.
Odors are emitted	Is there a source of odors (e.g. furniture, cigarettes, etc.)?	Eliminate the source of odors. Clean the filter.
The air conditioner suddenly turns on	Is there interference (e.g. thunder, wireless devices, etc.)?	Disconnect the power, then restore it. Turn the unit on again.
The outdoor unit produces steam	Is the heating mode active?	During defrosting in heating mode, steam production is a normal phenomenon.

Sound of flowing water	Has the air conditioner just been turned on or off?	The noise is produced by the refrigerant flowing inside the unit (normal phenomenon).
Noises similar to creaking	Has the air conditioner just been turned on or off?	It is the friction noise caused by the expansion and/or contraction of the panel or other parts due to changes in temperature.

In case of malfunction, the temperature LED on the indoor unit flashes to show the corresponding error code. Refer to the following list to identify the error code.

Note: In case of other error codes, contact a qualified technician for assistance.

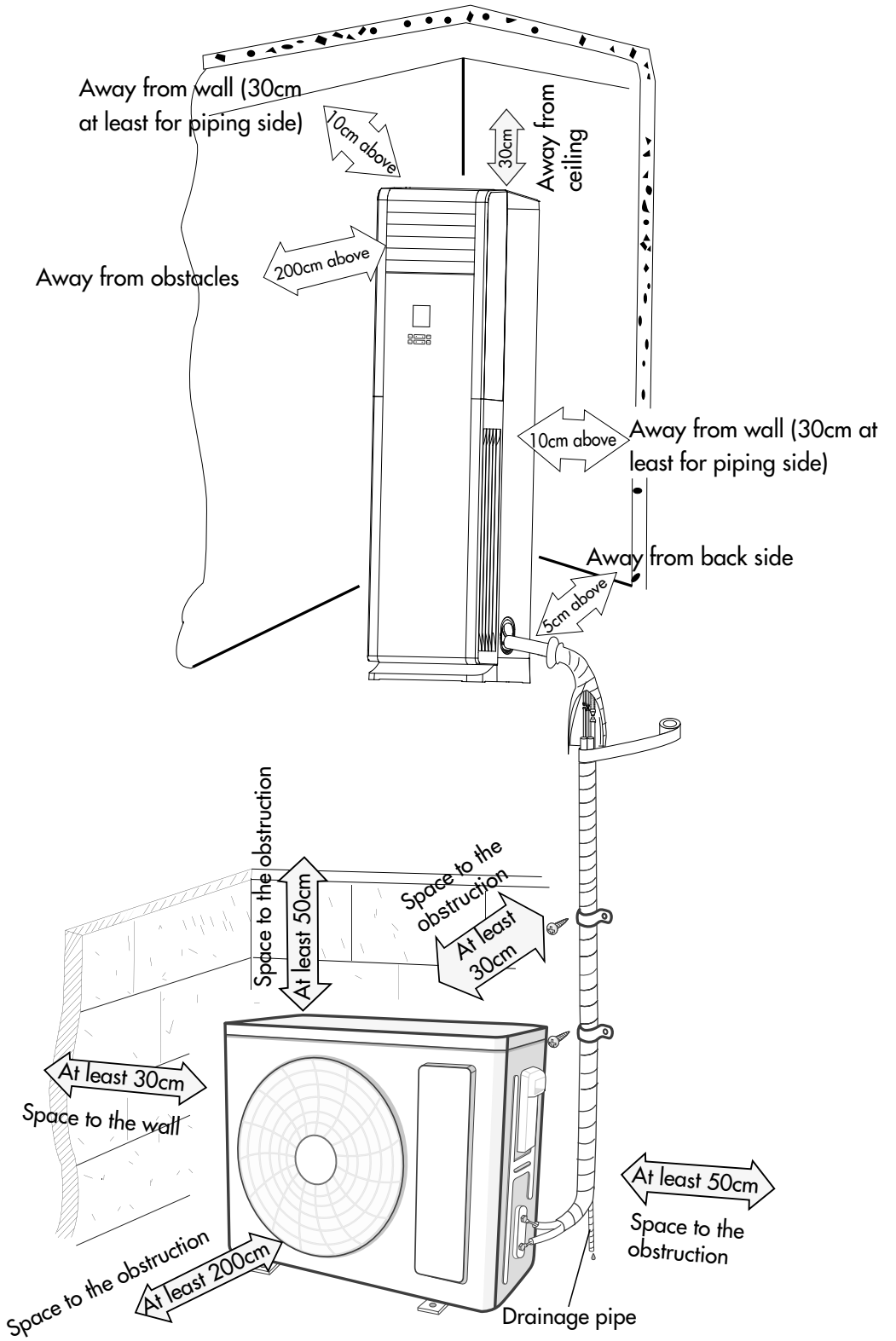
WARNING

- When any of the following problems occur, turn off the air conditioner and disconnect the power immediately. Then contact your local Technical Assistance Service.
- The power cord is overheated or damaged.
- There is an abnormal noise during operation.
- The life-saving switch trips often.
- A burning smell comes out of the air conditioner.
- There are leaks from the indoor unit.
- Do not attempt to repair or reinstall the air conditioner. alone.
- If the air conditioner operates under abnormal conditions, malfunction, electric shock or fire hazard may occur.

Error code	Operating anomalies and solutions
H3 - H6 - E1 - E3 - E4 - E5 - E6 - E8 - E6	It can be eliminated by turning off and restarting the unit. If not, contact a qualified technician for assistance.
F0 - F1 - F2 - F3 - F4 - F5	Contact a qualified technician for assistance.

INSTALLATION INSTRUCTIONS

INSTALLATION DIMENSION DIAGRAM



INSTALLATION WARNINGS

- WARNING: Make sure that the power supply is disconnected before carrying out any work on the unit.
- WARNING: Wear appropriate personal protective equipment before carrying out any work on the unit.
- WARNING: The appliance must be reinstalled in accordance with national system regulations.
- WARNING: Wiring and installation must only be performed by a qualified technician trained to install, modify, extend and service the unit and perform safety and functionality tests.
- WARNING: Install a device, master switch or electric plug that will allow all the power from the appliance to be switched off.
- The following information is essential for correct unit installation. However, the installer should use his or her experience to install the unit according to specific requirements.
- Do not install the unit in locations where there are flammable gases or acid or alkaline substances that may irreparably damage the copper-aluminium heat exchangers or internal plastic components.
- Do not install the unit in offices or kitchens where oil vapours mixed with treated air may settle on the exchange coils, reducing performance, or on the unit's internal parts, damaging the plastic components.
- ATTENTION: For the connection between the units, use only annealed and deoxidized copper pipe for conditioning and refrigeration and insulated with expanded polyethylene of min. 8 mm.

- Do not install the unit in rooms where flammable gases or acidic or alkaline substances are present which could irreparably damage the copper-aluminium heat exchangers or the internal plastic components.
- Do not install the unit in workshops or kitchens, where the oil vapors mixed with the treated air can deposit on the exchange coils, reducing their performance, or on the internal parts of the unit, damaging the plastic components.
- When installing or relocating the unit, be sure to keep the refrigerant circuit free of air or substances other than the specified refrigerant.
- Any presence of air or other foreign substance in the refrigerant circuit will cause increased system pressure or compressor failure, resulting in damage.
- When installing or relocating the unit, do not charge refrigerant that does not conform to that indicated on the nameplate or unidentified refrigerant. Otherwise, it may cause abnormal operation or an accident.
- When refrigerant needs to be recovered, when relocating or repairing the unit, make sure the unit is operating in cooling mode. Then, completely close the valve on the high pressure side (liquid valve). Approximately 30-40 seconds later, completely close the valve on the low pressure side (gas valve), immediately stop the unit and disconnect the power. Refrigerant recovery time should not exceed 1 minute.
- If refrigerant recovery takes too long, air can be sucked in and cause pressure buildup or compressor failure, resulting in injury.
- When recovering refrigerant, make sure the liquid valve and gas valve are fully closed and the power is turned off before disconnecting the connecting hose.
- If the compressor starts running when the stop valve is open and the connecting hose is not connected, air will be sucked in and cause the pressure to increase or the compressor to rupture, resulting in injury.
- When installing the unit, make sure the connecting hose is securely connected before the compressor starts working.
- Prohibit the installation of the unit in the place where there may be leakage of corrosive gas or flammable gas.
- If gas leaks from the unit, explosions and other accidents may occur.
- Do not use extension cords for electrical connections. If the power cord is not long enough, please contact a local authorized service center and ask for a suitable power cord.
- Inadequate connections can cause electric shock or fire.
- Use the specified wire types for electrical connections between indoor and outdoor units. Clamp the cables securely so that their terminals do not receive external stress.
- Electrical cables with insufficient capacity, incorrect cable connections and unsafe cable terminals can cause electric shock or fire.

CHOICE OF THE INSTALLATION PLACE

ELECTRICAL CONNECTION REQUIREMENTS

Safety precautions

1. Electrical safety standards must be met when installing the unit.
2. Use a power supply circuit and circuit breaker that comply with local safety regulations.
3. Make sure that the power supply matches the requirements of the air conditioner. An unstable power supply or incorrect wiring may result in a fault. Install suitable power cables before switching on the air conditioner.
4. Correctly connect the live, neutral and earth wires to the power outlet.
5. Disconnect the power supply before carrying out any work on the electrical circuit or carrying out any safety work. For models with a plug, make sure the plug is easily accessible after installation.
6. Do not connect the power before installation is complete.
7. Do not use the appliance if the power cable or plug are damaged. If the power cable is damaged it must be replaced by the manufacturer, retailer or other qualified person to avoid a hazard.
8. Since the temperature of the cooling circuit is high, keep the interconnecting cable away from the copper pipe.
9. The unit must be installed in accordance with national wiring regulations.
10. Installation must only be performed by trained individuals in accordance with regulations.

Grounding

1. The air conditioner belongs to class I appliances. Earthing must be correctly carried out with the appropriate device by a professional. Check that the appliance is always effectively earthed, otherwise electric shock may occur.
2. The yellow-green wire of the air conditioner is the grounding wire which cannot be used for other purposes.
3. The earth resistance must comply with national electrical safety standards.
4. Use a circuit breaker with adequate capacity, refer to the table below. The thermomagnetic switch can protect against the risks of short circuit and current overload. (Attention: Don't just use the fuse to protect the circuit)

Model	Power switch
48K	32A

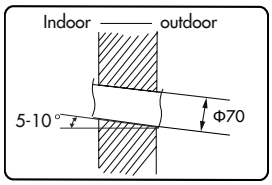
Essential requirements	Indoor unit
Do not install the unit in the following places: it may cause malfunctions. 1. Places with strong heat sources, vapours, flammable or explosive gases. 2. Places with high-frequency devices (e.g. welding machines, medical equipment). 3. Places near coastal areas. 4. Places with oils or fumes in the air. 5. Places with sulfur gas. 6. Other places that present particular conditions. 7. Places where fluorescent lamps are present 8. On unstable or moving surfaces and in environments where chemical or corrosive substances are present. Do not use the unit in the immediate vicinity of laundries, bathrooms, showers or swimming pools.	1. Avoid installing the indoor unit where flammable gas leaks could occur. 2. Avoid installing the indoor unit in a humid place or a place where oil splashes could hit the unit. 3. Choose a place where the air outlet can reach every corner of the room. 4. Choose a place where the connecting pipe can be taken outside without problems. 5. Choose a place where the air inlet and outlet are not blocked. 6. Choose a place with the least contact with outside air. 7. Choose a place with a flat and stable floor. 8. Reserve sufficient space for maintenance and installation. 9. Make sure that the installation complies with the requirements of the dimensional drawing relating to the installation. 10. Do not use the unit in the immediate vicinity of laundries, bathrooms, showers or swimming pools.
Outdoor unit	
1. Choose a location where the noise and the flow of air emitted by the outdoor unit do not bother the neighbors. 2. The place must be well ventilated and dry; the outdoor unit should not be exposed to direct sunlight or strong winds. 3. The location must be able to support the weight of the outdoor unit. 4. Check that the installation complies with the requirements of the dimensional drawing relating to the installation. 5. Choose a location out of reach of children and away from animals or plants. If this is not possible, install a safety fence. 6. The difference in height between the internal and external units must not exceed 5 metres. The length of the connecting pipe must not exceed 10 meters.	

INSTALLATION

INSTALLATION OF INDOOR UNIT

Step one: choosing installation location
Recommend the installation location to the client and then confirm it with the client.

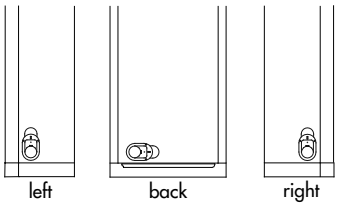
Step two: open piping hole
Choose the position of the piping hole according to the direction of the outlet pipe. The position of the pipe hole must be slightly lower than the wall frame, as indicated below. Drill the Ø55 or Ø70 diameter pipe hole in the specifically chosen exit position. For correct drainage, the pipe hole on the wall must be slightly inclined downwards on the external side, with a slope of 5-10°.

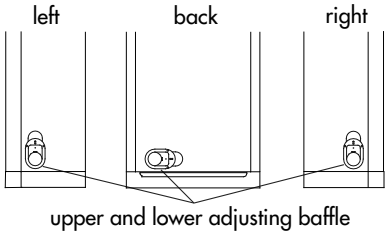


Nota:
- Pay attention to dust prevention and take relevant safety measures when opening the hole.

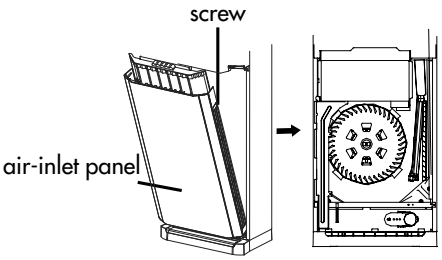
Step three: outlet pipe
1.The pipe can be led out in the direction of left, right or rear.

2. After confirming the direction of the outlet pipe, loosen the screws on the upper and lower adjustable baffle for the connecting pipe/drain pipe to be connected to the indoor unit.

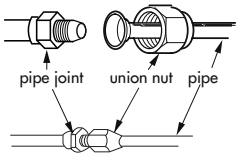




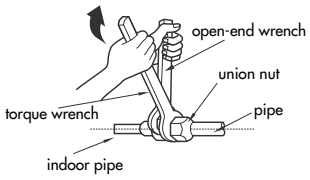
Step four: connect the pipe of indoor unit
1.Take out the left and right screw cover and then remove the screws on air-inlet panel to remove the panel.



2.Aim the pipe joint at the corresponding bellmouth.

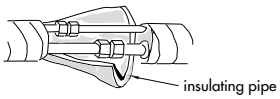


3. Pretighten the union nut with hand. Adjust the torque force by referring to the following sheet.
4. Place the openend wrench on the pipe joint and place the torque wrench on the union nut. Tighten the union nut with torque wrench.

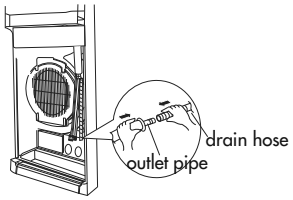


Hex nut diameter	Tightening torque (N.m)
1/4"	15,7 (1.6kg.m)
3/8"	29.4 (3.0kg.m)
1/2"	49.0 (5.kg.m)
5/8"	73.6 (7.5kg.m)

5. Wrap the indoor pipe and joint of connection pipe with insulating pipe, and then wrap it with tape.

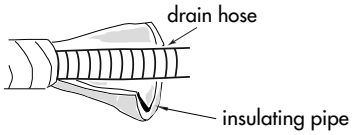


Step five: install drain hose
1. Collegare il tubo di scarico al tubo d'uscita dell'unità interna.



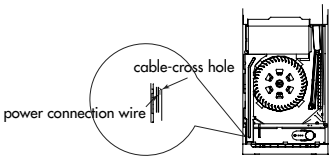
2. Bind the joint with tape

Note:
- Add the insulation pipe to the internal drain pipe to prevent condensation from forming.
- Plastic expansion plugs are not supplied.

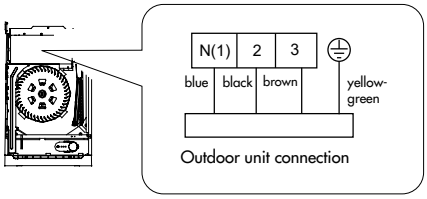


Step six: connect wire of indoor unit

1. Make the power connection wire go through the cable-cross hole of indoor unit and then pull it out.



2. Remove the wire clip; connect the power connection wire to the wiring terminal according to the color; tighten the screw and then fix the power connection wire with wire clip.



3. Adjust the position of upper and lower adjusting baffle; clamp the connection pipe and drain pipe as firm as possible.
4. Tighten the screws.

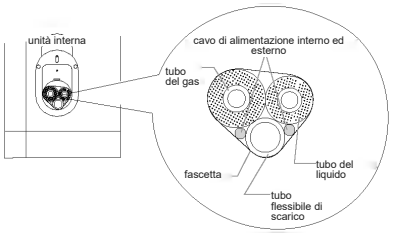
Note:

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

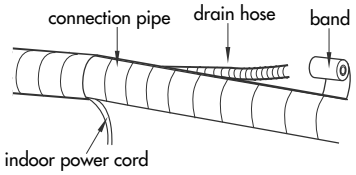
- If the length of power connection wire is insufficient, please contact the supplier for a new one. Avoid extending the wire by yourself.
- For the air conditioner with plug, the plug should be reachable after finishing installation.
- For the air conditioner without plug, an air switch must be installed in the line. The air switch should be all-pole parting and the contact parting distance should be more than 3mm..

Step seven: bind up pipe

1. Bind up the connection pipe, power cord and drain hose with the band.



2. Dedicate a section of the drain hose and power cable to the installation, while proceeding with the wrapping. Once you reach a certain point in the wrapping operation, separate the internal cable and then the exhaust pipe.



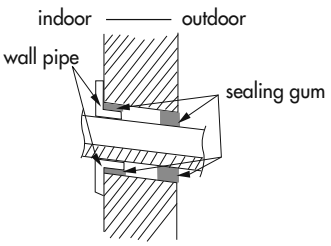
3. Wrap it evenly, and rolling width should be 1/3 of bandaging belt. Do not wrap it too tight or too loose.
4. The liquid pipe and gas pipe should be bound separately at the end.

Note: The power cord and control cord must not be wrapped or rolled. The drain hose must be wrapped at the bottom.

Step eight: place the indoor unit

1. Put the bound pipes in the wall pipe and then make them pass through the wall hole.
2. Stuff the gap between pipes and wall hole with sealing gum.
3. Fix the wall pipe.

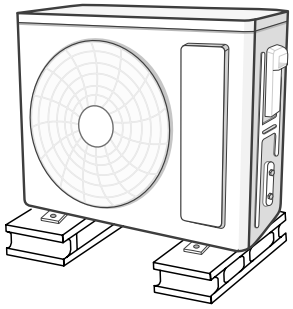
Note: do not bend the drain hose excessively to avoid blockages.



INSTALLATION OF OUTDOOR UNIT

Step one: Fix the support of outdoor unit

1. Choose the location of the system based on the structure of the house.
2. Fix the external unit support in the chosen position using expansion screws.



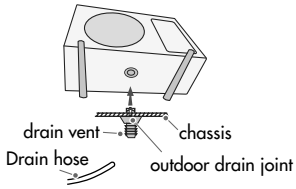
At least 3cm above the floor

Note:

- Adopt sufficient protective measures when installing the outdoor unit.
- Make sure the stand can support at least four times the weight of the unit.
- The outdoor unit must be placed at least 3 cm above the floor to be able to install the drain joint.
- For the unit with cooling capacity of 2300W ~ 5000W, 6 expansion screws are required; for the unit with a cooling capacity of 6000 W ~ 8000 W, 8 expansion screws are required; For the unit with 10000W ~ 16000W cooling capacity, 10 expansion screws are required.

Step two: install drain joint

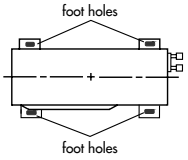
1. Connect the outdoor drain joint into the hole on the chassis, as shown in the picture below.
2. Connect the drain hose into the drain vent.



Note: As for the shape of drainage joint, please refer to the current product. Do not install the drainage joint in the severe cold area. Otherwise,it will be frosted and then cause malfunction.

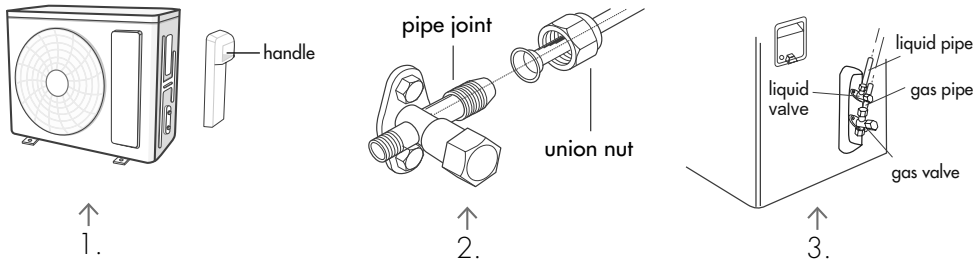
Step three: fix the outdoor unit

1. Place the outdoor unit on the support.
2. Fix the foot holes of outdoor unit with bolts.



Step four: connect indoor and outdoor pipes

3. Remove the screw on the right handle of the outdoor unit and remove the handle.
4. Remove the valve screw cap and place the pipe joint into the pipe flare.
5. Pre-tighten the fitting nut by hand.

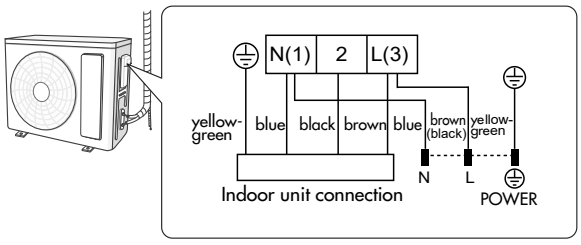


6. Tighten the union nut with torque wrench by referring to the sheet below.

Hex nut diameter	Tightening torque (N.m)
1/4"	15.7 (1.6kg.m)
3/8"	29.4 (3.kg.m)
1/2"	49 (5.0kg.m)
5/8"	73.6 (7.5kg.m)

Step five: connect outdoor electric wire

1. Remove the wire clip, connect the power wire and signal control wire (only for cooling and heating units) to the wiring terminal according to color. Secure them with screws.
2. Secure the power cable and signal control cable with the appropriate clip (only for cooling and heating units).

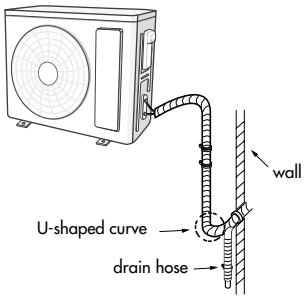


Note:

1. After tightening the screw, pull the power cord slightly to check if it is firm.
   Never cut the power connection wire to prolong or shorten the distance.

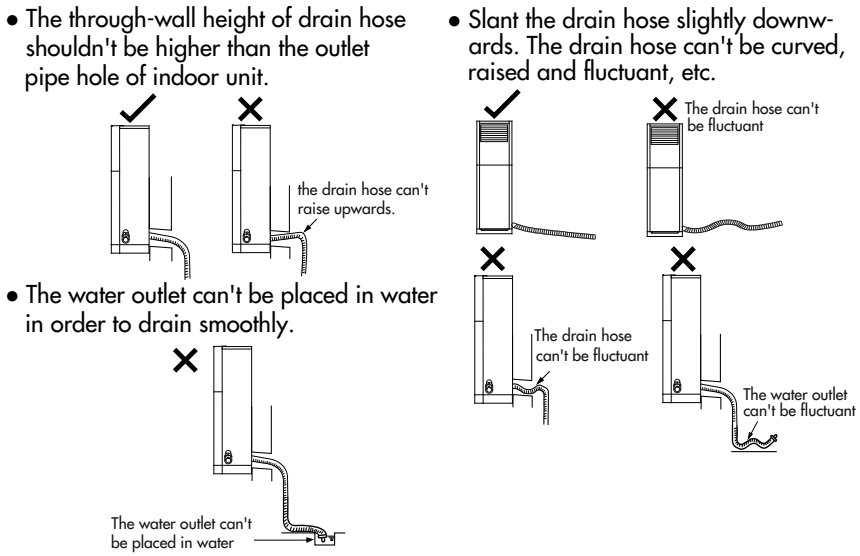
Step six: neaten the pipes

1. The pipes should be placed along the wall, bent as necessary and possibly hidden. Minimum tube bending semidiameter: 10 cm.
2. If the outdoor unit is higher than the hole in the wall, it is necessary to create a U-bend in the pipe before placing it in the room to prevent rain from entering the room.



Note:

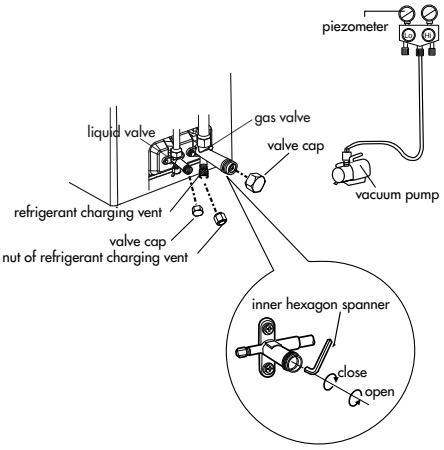
- The height of the drain pipe through the wall should not be higher than that of the outlet pipe hole of the indoor unit.
- Slightly tilt the drain hose downwards. The drain hose should not be bent, raised, waving, etc.
- The water outlet must not be placed in the water, so that the discharge is uniform.



VACUUM PUMPING

Use vacuum pump

- Remove the valve caps on the liquid valve and gas valve and the nut ofrefrigerant charging vent.
- Connect the charging hose of piezometer to the refrigerant charging vent of gas valve and then connect the other charging hose to the vacuum pump.
- Open the piezometer completely and operate for 10-15min to check if the pressure of piezometer remains in -0.1MPa.
- Close the vacuum pump and maintain this status for 1-2min to check if the pressure of piezometer remains in -0.1MPa. If the pressure decreases, there may be leakage.
- Remove the piezometer, open the valve completely with inner hexagon spanner.
- Tighten the screw caps of valves and refrigerant charging vent.
- Reinstall the handle.



Leakage detection

1. With a leak detector: check for leaks.
2. With soapy water: If a leak detector is not available, soapy water can be used to detect leaks. Apply soapy water to the suspected point, keeping it for more than 3 minutes. The escape of air bubbles indicates the presence of a leak.

CHECKS AFTER INSTALLATION

Once the installation is completed, carry out the checks according to the following requirements.

Checks	Possible malfunction
Has the unit been installed securely?	The unit may drop, shake or emit noise.
Have you done the refrigerant leakage test?	It may cause insufficient cooling/heating capacity.
The heat insulation of pipeline is sufficient?	It may cause condensation and water dripping.
Is water drained well?	It may cause condensation and water dripping.
Is the voltage of power supply accord-ing to the voltage marked on the nameplate?	It may cause malfunction or damaging the parts.
Is electric wiring and pipeline installed correctly?	It may cause malfunction or damaging the parts.
Is the unit grounded securely?	It may cause electric leakage.
Does the power cord follow the specifications?	It may cause malfunction or damaging the parts.
Is there any obstruction in the air inlet and outlet?	It may cause insufficient cooling/heating capacity.
The dust and sundries caused during installation are removed?	It may cause malfunction or damaging the parts.
The gas valve and liquid valve of connection pipe are open completely?	It may cause insufficient cooling/heating capacity.
Is the inlet and outlet of piping hole been covered?	It may cause condensation and water dripping.

TESTS AND OPERATION

PREPARATION FOR OPERATIONAL TESTS

- The customer approves the air conditioner.
- Specify the important notes of the air conditioner to the customer.

Operational test

- Connect the power and press the ON/OFF button on the remote control to start the operation.
- Press the MODE button to select AUTO, COOL, DRY, FAN and HEAT mode and check whether the air conditioner works normally.
- If the ambient temperature is below 16°C, the air conditioner cannot start cooling.

APPENDIX

Anti-collapse chain installation instruction
• To avoid accidental collapse of the indoor unit, install the anti-collapse chain.
Installation steps:
1. Remove the screw from the anti-collapse hole on the top of the indoor unit cover (see Fig. 3);
2. Extract the anti-collapse chain and place it in the anti-collapse hole, then tighten it with the screw (see Fig. 4);
3. Fix the other end of the anti-collapse chain to the wall with the screw (ST4.2X38) (see Fig. 4).

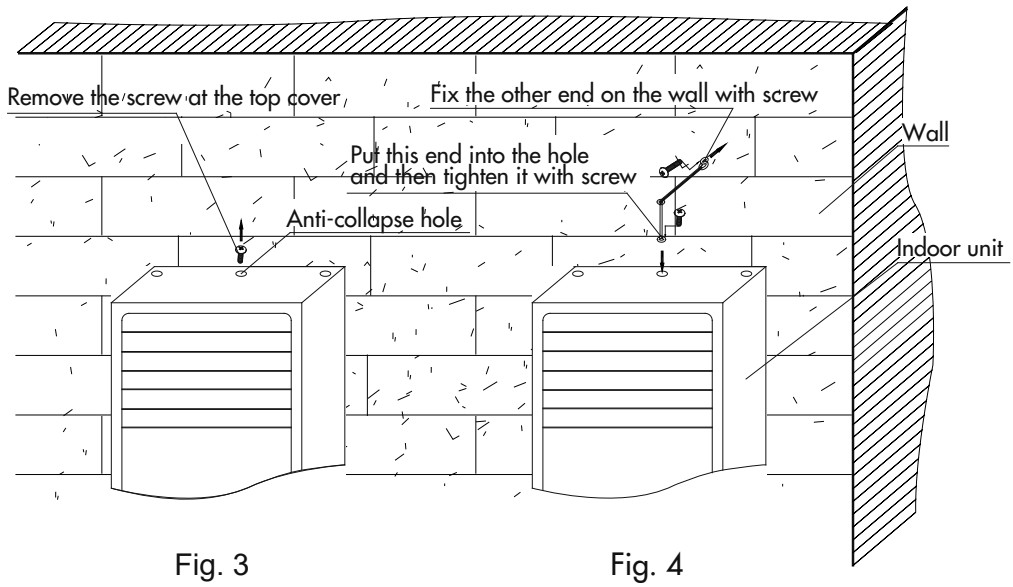


Fig. 3 Fig. 4

CONFIGURATION OF CONNECTING PIPE

1. Standard connecting hose length: 5, 7.5, 8m.
2. Minimum connection hose length: 3 m.
3. For the unit with a 5m connecting hose, there is no limit on the average hose length. For units with standard connection hose of 7.5 m and 8 m, the minimum length of the connection hose is 3 m.
4. Maximum connection pipe length.

Refrigerant oil and refrigerant charge to be added after lengthening the connection pipe

• If the connecting hose length is increased by 10 m from the standard length, add 5 ml of refrigerant oil for every 5 m of hose added.

Capacity	48000 BTU/h
Min.-max length of pipes with standard charge (m)	3-5
Maximum length of pipes with additional charge. (m)	30
Additional gas charge (g/m)	50
Maximum height difference (outdoor unit above)	20
Maximum height difference (indoor unit above)	20

• Method to calculate the amount of additional refrigerant charge (liquid pipe):

(1) Amount of additional refrigerant charge = additional length of liquid pipe = additional amount of refrigerant charge per meter

(2) According to the standard hose length, add refrigerant as needed as shown in the table. The amount of additional refrigerant charge per meter is different depending on the diameter of the liquid pipe. Refer to the table below.

Connection hose configuration

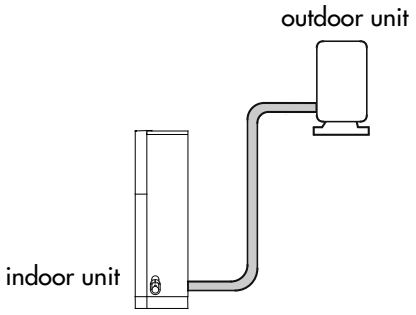
Amount of additional refrigerant charge for R32 refrigerant per meter.

	Connection pipe diameter		Additional refrigerant
Model:	Liquid tube (mm)	Gas tube (mm)	(g/m)
48 K	Ø9,52	Ø15,88	16

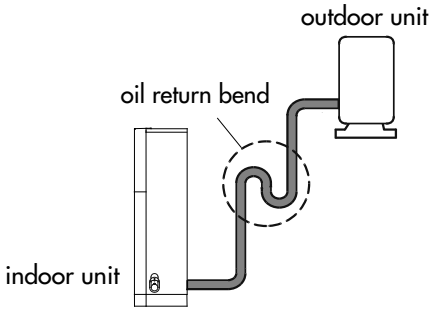
Attention! Note the additional charge on the appropriate plate affixed to the outdoor unit.

The additional refrigerant charge in the table above is a recommended value, not mandatory.

5. If the outdoor unit is higher than the indoor unit by more than 5 m, an oil return bend is required.



Below 5m



Above 5m

NOTICES FOR INSTALLATION

SAFETY OPERATION OF FLAMMABLE REFRIGERANT

Qualification requirement for installation and maintenance

- All workers who engage with the refrigeration system should bear the valid certification awarded by the authoritative organization, and the qualification recognized by the industry for dealing with the refrigeration system.
- The refrigeration system can only be repaired following the methods suggested by the equipment's manufacturer.

Installation notes

- The air conditioner mustn't be used in a room that has running fire or heat sources (such as, working coal gas ware, operating heater).
- Do not drill holes in the circuit or burn the connection pipe.
- The air conditioner must be installed in a room that is larger than the minimum room area. The minimum room area is shown on the following "table a".
- Leak test is mandatory after installation.

table a - Minimum room area (m^2)

	Charge amount (kg)	floor location	window mounted	wall mounted	ceiling mounted
Minimum room area (m^2)	≤1.2	/	/	/	/
	1.3	14.5	5.2	1.6	2.6
	1.4	16.8	6.1	1.9	2.8
	1.5	19.3	7	2.1	3
	1.6	22	7.9	2.4	3.2
	1.7	24.8	8.9	2.8	3.4
	1.8	27.8	10	3.1	3.6
	1.9	31	11.2	3.4	3.8
	2.0	34.3	12.4	3.8	4
	2.1	37.8	13.6	4.2	4.2
	2.2	41.5	15	4.6	4.4
	2.3	45.4	16.3	5	4.6
	2.4	49.4	17.8	5.5	4.8
	2.5	53.6	19.3	6	5
	2.6	58.1	20.9	6.5	5.2
	2.7	62.6	22.6	7	5.4
	2.8	67.4	24.3	7.5	5.6
	2.9	72.3	26	8.1	5.8
	3.0	77.3	27.9	8.6	6
	3.1	82.6	29.8	9.2	6.2
	3.2	88	31.7	9.8	6.6
	3.3	93.6	33.7	10.4	7
	3.4	99.3	35.8	11.1	7.4
	3.5	105.2	37.9	11.7	7.9
	3.6	111.3	40.1	12.4	8.3
	3.7	117.6	42.4	13.1	8.8
	3.8	124	44.7	13.8	9.3
	3.9	130.7	47.1	14.6	9.8
	4.0	137.4	49.5	15.3	10.3

Maintenance notes

- Check whether the maintenance area or the room area meet the requirement of "table a" the unit is only allowed to be operated in rooms that meet these requirements.
- Check whether the maintenance area is well-ventilated. The continuous ventilation status should be kept during the entire operation process.
- Check whether there is a fire source or potential fire source in the maintenance area. Running fire is prohibited in the maintenance area and the "no smoking" sign should be hanged.
- Check whether the warning sign is in good condition, otherwise replace it.

Welding

- If it is necessary to cut or weld the refrigerant system pipes in the maintenance procedures, please follow the steps here below:
  - Shut down the unit and cut power supply
  - Eliminate the refrigerant
  - Vacuum with a vacuum machine
  - Clean the pipes with the N2 gas
  - Cut and weld or
  - Bring the unit to a service centre for welding
- The refrigerant should be recycled in a specialized storage tank.
- Make sure there aren't any free flames near the outlet of the vacuum pump and that it's well-ventilated.

Filling the refrigerator circuit

- Use refrigerant filling appliances specialized for R32. Make sure that different kinds of refrigerant don't contaminate one another.
- The refrigerant tank should be kept upright when filling with the refrigerant.
- Stick the label on the system after filling is finished.
- Don't overfill.
- After filling is finished, please test the unit for leakage detection before the operation test; another test for leakage detection should be carried out when the refrigerant is removed.
- Refer to the nameplate for the maximum refrigerant charge volume.

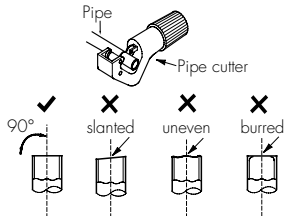
Safety instructions for transportation and storage

- Please use a flammable gas detector to check before unloading and opening the container.
- No fire source and no-smoking.
- According to the local rules and laws.

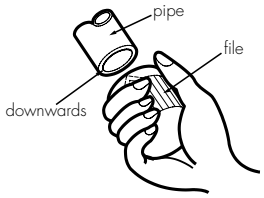
PROCEDURE FOR EXTENDING THE PIPING

Note: improper extension of piping is the main cause of refrigerant leaks. Proceed as shown below:

1. Cut the pipe.
   - Check the length of the pipe based on the distance between the indoor unit and outdoor unit.
   - Cut the required pipe using a pipe cutter.

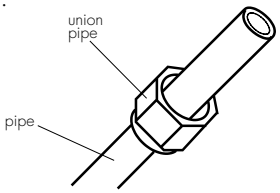


2. Remove burrs.
   - Remove burrs with a file, ensuring they do not go into the pipe.

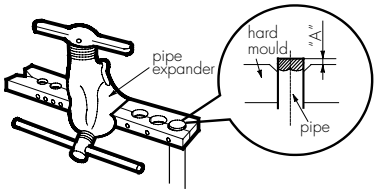


3. Secure an insulating tube.

4. Install a union nut
   - Remove the union nut on the indoor connecting pipe and outdoor valve. Install the union nut on the pipe.



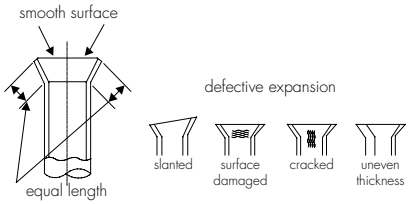
5. Expand the port
   - Expand the port using a pipe expander:



   - NB: varies according to diameter

Outdoor diameter (mm)	A (mm)	
	Max.	Min.
6.35(1/4")	1.3	0.7
9.52 (3/8")	1.6	1.0
12.7 (1/2")	1.8	1.0
15.88 (5/8")	2.4	2.2

6. Inspection.
   - Check the quality of the expanded port. If defective, expand the port again following the procedure described above.



WARNINGS FOR THE REFRIGERATION SYSTEM SPECIALIST

Here are warnings and safety instructions for the maintenance of systems containing flammable refrigerant (repairs should only be carried out by specialists).

1. **Any person involved** in the work or in the interruption of a refrigeration circuit must be equipped with PEF (European Refrigerators License) as required by the D.P.R. n.146/2018 implementing Regulation (EU) no. 517/2014.

2. **Maintenance** should only be performed as recommended by the equipment manufacturer. Maintenance and repairs that require the assistance of other qualified personnel must be performed under the supervision of the person competent in the use of flammable refrigerants.

Before starting work on systems containing flammable refrigerants, safety checks are required to ensure that the risk of ignition is minimized.

1. **Checks to be carried out on systems that use flammable refrigerants:**
   - Before starting work on a system containing flammable refrigerant, safety checks are required to ensure the ignition risk is minimal. For repairs to the refrigerant system, procedures for working with ignition sources must be completed before starting work on the system.
   - the charge must be proportionate to the size of the room in which the units containing refrigerant are installed;
   - units and ventilation openings must function properly and are not obstructed;
   - if an indirect refrigerant circuit is used, the secondary circuit must be checked for the presence of refrigerant;
   - the marking on the equipment must be visible and indelible. Illegible markings and signs must be corrected;
   - refrigerant piping or components must be installed in a location where they are unlikely to be exposed to any substance that can corrode the component-containing refrigerant, unless the components are constructed from materials that are inherently resistant to corrosion or are adequately protected against corrosion.

2. **Checks on electrical devices.** Repair and maintenance of electrical components must include initial safety checks and component inspection procedures. If there is a fault that could compromise safety, do not connect the power supply to the circuit until it is satisfactorily resolved. If the fault cannot be remedied immediately, but operation must continue, a suitable interim solution must be used. This must be reported to the owner of the equipment so that all parties are informed.
   Initial security checks include:
   - Check that the capacitors are discharged: this must be done safely to avoid the risk of sparks;
   - Verify that no electrical components and wiring are exposed while charging, restoring or draining the system;
   - Check that there is ground continuity.

3. **Check for refrigerant leaks.** The area should be checked with an appropriate refrigerant detector before and during work, to ensure that the technician is aware of potentially toxic or flammable atmospheres. Make sure that the leak detection equipment in use is suitable for use with all applicable refrigerants, i.e. non-sparking, properly sealed or intrinsically safe.
   Check for R32 refrigerant leaks. Note: check for refrigerant leakage in an environment where there are no potential sources of ignition. No halogen probe (or any other detector that uses an open flame) should be used.
   Leak Detection Method: For systems with R32 refrigerant, an electronic leak detection tool is available to detect and leak detection should not be conducted in a refrigerant environment. Make sure the leak detector does not become a potential source of ignition and is applicable to the measured refrigerant. The leak detector must be set for the minimum flammable fuel concentration (percentage) of the refrigerant. Calibrate and adjust to the correct gas concentration (no more than 25%) with the refrigerant used. The fluid used in leak detection is applicable to most refrigerants. But do not use chloride based solvents to prevent the reaction between chlorine and refrigerants and corrosion of copper piping. If you suspect a leak, remove all fire from the scene or put out the fire. If the location of the leak is to be welded, then all refrigerants must be recovered or isolate all refrigerants away from the leak site (using the shut-off valve). Before and during soldering, use OFN to purify the entire system.

4. **Presence of fire extinguisher.** If hot work is to be performed on the refrigeration equipment or any associated part, adequate fire fighting equipment must be available. It is necessary to have a dry powder or CO_2 extinguisher adjacent to the charging area.

5. **Ventilated area.** Make sure the area is outdoors or is adequately ventilated before breaking into the system or performing any hot work. Continuous ventilation must be present during the period in which the work is being

carried out. Ventilation should safely disperse the released refrigerant and preferably expel it to the atmosphere.

Controls on refrigeration equipment. When replacing electrical components, they must be fit for purpose and with the correct specifications. The manufacturer's maintenance and service guidelines should always be followed. If in doubt, consult the manufacturer's technical department for assistance.

1. Repairs on sealed components. During repairs to sealed components, all electrical supplies must be disconnected from the equipment being worked on before removing the sealed covers, etc. If it is absolutely necessary to have an electrical power supply to the equipment during maintenance, then a leak detection device must be placed at the most critical point to warn of a potentially dangerous situation. Particular attention must be paid to the following to ensure that, by working on the electrical components, the casing is not altered in such a way as to compromise the level of protection. This includes damage to cables, excessive number of connections, terminals not made to original specifications, damage to gaskets, incorrect assembly of cable glands, etc.
   - Make sure the appliance is mounted securely.
   - Ensure that gaskets or sealing materials are not degraded to the point that they no longer serve the purpose of preventing the entry of flammable atmospheres. Replacement parts must conform to the manufacturer's specifications.

   Note: the use of silicone sealant can inhibit the effectiveness of some types of leak detection equipment. Intrinsically safe components do not need to be isolated before working on them.

2. Repair of intrinsically safe components. Do not apply permanent inductive or capacitive loads to the circuit without ensuring that it does not exceed the voltage and current allowed for the equipment in use. The intrinsically safe components are the only ones that can be worked on in the presence of a flammable atmosphere. The test equipment must be of the correct evaluation. Replace components only with parts specified by the manufacturer. Other parts can cause the refrigerant to ignite in the atmosphere due to a leak..

3. Wiring. Verify that the wiring is not subject to wear, corrosion, excessive pressure, vibration, sharp edges, or other adverse environmental effects. The control must also take into account the effects of aging or continuous vibrations from sources such as compressors or fans.

4. Deactivation. Before carrying out this procedure, it is essential that the technician is fully familiar with the equipment and all its details. Good practice is recommended that all refrigerants be recovered safely. Before the task is performed, a sample of the oil and refrigerant must be taken in case an analysis is required before reuse of the recovered refrigerant. It is essential that electricity is available before the start of the activity.
   A. Become familiar with the equipment and its operation.
   B. Electrically isolate the system.
   C. Before attempting the procedure, make sure that:
      - mechanical handling equipment is available, if required, for handling the refrigerant cylinders;
      - all personal protective equipment is available and used correctly;
      - the recovery process is supervised at all times by a competent person;
      - Recovery equipment and cylinders comply with appropriate standards.
   D. If possible, drain the refrigerant system.
   E. If vacuum is not possible, make a manifold so that the refrigerant can be removed from the various parts of the system.
   F. Make sure the cylinder is placed on the scale before recovery takes place.
   G. Start the recovery machine and operate according to the manufacturer's instructions
   H. Do not overfill the cylinders. (Not more than 80% by volume of liquid charge).
   I. Do not exceed, even temporarily, the maximum working pressure of the cylinder.
   J. When the cylinders have been filled correctly and the process is complete, ensure that the cylinders and equipment are promptly removed from the site and that all isolation valves on the equipment are closed.
   K. Recovered refrigerant should not be charged to another refrigeration system unless it has been cleaned and checked.

5. Labeling. The equipment must be labeled indicating that it has been shut down and drained of refrigerant. The label must be dated and signed. For appliances containing flammable refrigerants, make sure there are labels on the appliance indicating that the appliance contains flammable refrigerant.

Recovery

When removing refrigerant from a system, whether for maintenance or decommissioning, It is recommended that all refrigerants be removed safely. When transferring refrigerant to cylinders, ensure that only appropriate refrigerant recovery cylinders are used. Make sure the correct number of cylinders are available to maintain full system charge.

All cylinders to be used are designated for the recovered refrigerant and labeled for that refrigerant (i.e. special cylinders for recovering refrigerant). The cylinders must be complete with pressure relief valve and relative shut-off valves in good working order. Empty recovery cylinders are evacuated and, if possible, cooled before recovery takes place. If compressors or compressor oils need to be removed, make sure they have been evacuated to an acceptable level to ensure that flammable refrigerant does not remain within the lubricant. The evacuation process must be carried out before returning the compressor to suppliers. To speed up this process, only electrical heating of the compressor body must be used. When oil is drained from a system, it must be done safely.

Work procedure.

The work must be carried out according to a controlled procedure in order to minimize the risk of the presence of flammable gas or vapor during the execution of the work.

1. General work area: all maintenance personnel and others working in the local area should be educated on the nature of the work being performed. Work in confined spaces must be avoided. The area around the work area must be sectioned. Ensure that conditions within the area have been secured by the control of flammable material.
2. No ignition sources: No person carrying out work in relation to a refrigeration system involving exposure to piping must use sources of ignition in a way that creates the risk of fire or explosion. All possible sources of ignition, including cigarette smoke, must be kept sufficiently far from the place of installation, repair, removal and disposal, during which the refrigerant may possibly be released into the surrounding space. Before starting work, the area around the equipment must be checked to ensure that there is no risk of flammability or ignition hazards. "No smoking" signs must be displayed.

Removal and evacuation.

When breaking into the refrigerant circuit to make repairs or for any other purpose, conventional procedures must be used. However, for flammable refrigerants it is important to follow the best procedures as there is a risk of flammability. The following procedure must be followed:

- remove the refrigerant;
- purge the circuit with inert gas; evacuate;
- purge again with inert gas;
- open the circuit by cutting or brazing.

The refrigerant charge must be recovered in the correct recovery cylinders. For appliances containing flammable refrigerants, the system must be flushed with OFN to make the unit safe. You may need to repeat this process several times. Compressed air or oxygen must not be used for purging refrigerant systems. For appliances containing flammable refrigerants, flushing must be achieved by breaking the vacuum in the system with OFN and continuing to fill until the operating pressure is reached, then discharging to the atmosphere and finally lowering the vacuum. This process must be repeated until there is no more refrigerant in the system. When the final OFN charge is used, the system must be vented to atmospheric pressure to allow the work to be carried out. This operation is absolutely essential if you want to carry out brazing operations on the pipes. Make sure that the vacuum pump outlet is not close to ignition sources and that ventilation is available..

Charging procedures.

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

- Make sure that contamination of different refrigerants does not occur when using charging equipment. Hoses or lines should be as short as possible to minimize the amount of refrigerant they contain.
- The cylinders must be kept upright.
- Make sure the refrigeration system is grounded before charging the system with refrigerant.
- Label the system when charging is complete (if not already done).
- Be very careful not to overfill the refrigeration system.

Before recharging the system, it must be pressure tested with the appropriate purge gas. The system must undergo a leak test upon completion of the charge but prior to commissioning. A subsequent leak test must be carried out before leaving the site.

REGULATION (EU) No. 573/2024- F-GAS

The unit contains R32, a fluorinated greenhouse gas with global warming potential (GWP) = 675. Do not release R32 into the atmosphere.

AFSI ECO 120SH - Kg. 2,0 = 1,35 Tonn CO_2 equiv.

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