SEVRA

Innovative Climate Solutions

Wall-mounted split-type air conditioner

Freedom

Operation and maintenance

Service and installation

As a result of the continuous development of its products, the manufacturer reserves the right to make changes to the products and to the technical documentation for the devices.

Please read this manual carefully before starting the device. Keep this user manual for the entire period of use so that you can refer to it at any time.

Table of Contents

Operation and maintenance

Warning 4
Precautions 5
Information for the user 12
Names of individual parts 14
Cleaning and maintenance 15
Troubleshooting 17

Service and installation

Installation notes 19
Installation notes for coastal areas 24
Indoor unit installation 25
Outdoor unit installation 28
Post-installation check and test run 31
Maintenance tips 32

Note: All drawings in this manual are for reference only.
The actual appearance of the device may differ from the illustrations.

Warning

Warning: This air conditioner contains flammable refrigerant R32.

Note: An air conditioner with refrigerant R32, if damaged or improperly used, may cause serious injury or damage to surrounding objects.

- The space for installing, using, repairing, and storing this air conditioner should be larger than 5m².
- The air conditioner should not be filled with more than 1.7 kg of refrigerant.
- Do not use any methods to accelerate defrosting or cleaning of frosted parts, except for special recommendations from the manufacturer.
- Do not puncture pipes or use an open flame near the air conditioner, and check if the refrigerant pipes are not damaged.
- The air conditioner should be stored in a room without a permanent open source of fire, such as an open flame from a gas appliance, a running electric heater, etc.
- Be aware that the refrigerant may be odourless.
- The air conditioner should be stored in a way that prevents mechanical damage caused by accidents.
- Maintenance or repair of air conditioners with R32 refrigerant must be carried out after a safety inspection to minimize the risk of accidents.
- The air conditioner must be installed with a shut-off valve cover.
- Read the instructions carefully before installation, use, and maintenance.

SYMBOL	NOTE	EXPLANATION
	WARNING	This symbol indicates that a flammable refrigerant is used in this device. If the device is punctured and exposed to an external ignition source, there is a risk of fire (Only air conditioners with UL or ETL-MARKING, UL60335-2-40).
	WARNING	This symbol indicates that a flammable refrigerant is used in this device. If the device is punctured and exposed to an external ignition source, there is a risk of fire (Only air conditioners with CE-MARKING and CB-MARKING, IEC 60335-2-40+A1:2016).
	WARNING	This symbol indicates that the device uses a material with a low burning velocity (Only air conditioners with CB-MARKING, IEC 60335-2-40:2018).
	NOTE	This symbol shows that the user manual should be carefully read.
	NOTE	This symbol means that the service personnel should operate this equipment according to the installation instructions.
	NOTE	This symbol shows that information is available in the user manual or installation instructions.

Precautions

Incorrect installation or operation by not following this manual may cause injury or damage to the body, objects, etc. The importance of markings is classified according to the following indications:

WARNING!
This symbol indicates the possibility of death or serious injury.

CAUTION!
This symbol indicates the possibility of injury or damage to property.

WARNING!

This device can be used and operated by children aged 8 years and older, as well as by individuals with limited physical, sensory, or mental abilities, or lack of experience and knowledge, provided they are supervised by an adult who has read and understood the user manual and knows how to operate the device safely and understands the associated hazards.

Children should not play with the device.
Cleaning and maintenance should not be carried out by children without supervision.
(Only for AC units with CE marking)

This equipment is not intended for use by persons (including children) with limited physical, sensory, or mental abilities, or who lack the appropriate experience and knowledge, unless they are supervised or have received instruction on how to use the equipment from a person responsible for their safety.

Children should be supervised to ensure that they do not play with the equipment.
(Except for AC units with CE marking)

Precautions

1. The air conditioner must be grounded. Incorrect grounding may result in electric shock. Do not connect the grounding wire to a gas pipe, water pipe, lightning rod, or telephone line grounding wire.
2. If the unit is not used for an extended period, it should be turned off and disconnected from the power supply.
3. Care must be taken to ensure that the indoor unit and remote control are not exposed to moisture or water. Contact with water may cause a short circuit.
4. A damaged power cord must be immediately replaced by the manufacturer, an authorized service technician, or a qualified person. A faulty power cord can cause electric shock.
5. Do not turn off the main power switch while the device is in operation. Touching the device with wet or damp hands may result in electric shock.
6. The power outlet must not be shared with other electrical devices. Otherwise, this may cause electric shock, or even fire or explosion.
7. The device must always be turned off and disconnected from the power supply before cleaning or performing any maintenance work.
8. Pulling on the power cord is prohibited. Damage caused by pulling the power cord may lead to severe electric shock.
9. The drains connected to the device should not contain any ignition sources.
10. The air conditioner cannot be installed near flammable gas or liquid. The device must be at least 1 meter away from sources of flammable gas or liquid. Failure to follow these safety guidelines may result in fire or explosion.

Precautions

11. Do not use liquids or corrosive cleaning agents to wipe the air conditioner. Spraying water or other liquids on the unit is prohibited. This may pose a risk of electric shock or even damage the unit.
12. Repair attempts must only be carried out by an authorized service technician or a qualified person. DIY repairs by the user are prohibited and may cause damage to the unit, fire, or explosion.
13. The air conditioner should not be used during thunderstorms. Power should be cut off in a timely manner to prevent potential hazards and damage to the unit.
14. Do not insert hands or any objects into the air intake or exhaust openings of the unit. This may cause bodily injury or damage to the unit.
15. Ensure that the mounting plate is properly installed and stable. A damaged or improperly attached mounting plate may cause the device to fall, resulting in damage or injury.
16. Do not block the air intake or exhaust. Otherwise, this may weaken the cooling or heating capacity, or even cause the unit to stop working.
17. It is prohibited to position the air conditioner in such a way that it blows air onto other heating devices. This can cause incomplete combustion and lead to poisoning.
18. To avoid the risk of electric shock, install an appropriately rated residual current circuit breaker (RCCB).
19. The device must be installed in accordance with national electrical installation regulations.

Precautions

The air conditioner must be grounded. Incomplete grounding may cause electric shock.

Do not connect the grounding wire to a gas pipe, water pipe, lightning rod, or telephone line grounding wire.

Always turn off the device and disconnect the power supply when the device will not be used for an extended period to ensure safety.

Be careful not to spill water on the remote control or the indoor unit, or make them too damp.

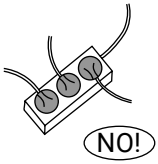
Otherwise, this may cause a short circuit.

If the power cord is damaged, it must be replaced by the manufacturer, authorized representative, or an electrician.

Do not disconnect the main power switch while the unit is running or with wet hands.

This may cause electric shock!

Do not share the power outlet with other electrical devices.

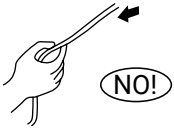


Otherwise, this may cause electric shock, fire, or even explosion.

Always turn off the device and disconnect the power supply before performing any maintenance or cleaning.

Otherwise, this may cause electric shock or damage.

Do not pull on the power cord.

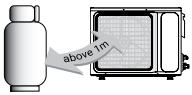


Damage caused by pulling the power cord may result in severe electric shock.

Warning: The wires connected to the device must not contain any ignition sources.

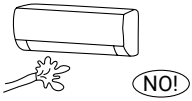
Precautions

Do not install the air conditioner in an area with flammable gas or liquid. The distance between them should be more than 1 meter.



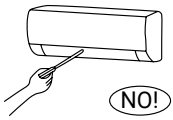
This may cause a fire due to an explosion.

Do not use liquid or corrosive cleaning agents to clean the air conditioner, and do not pour water or other liquids on it.



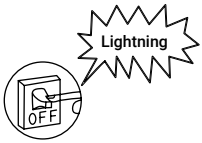
This may cause electric shock or damage to the device.

Do not attempt to repair the air conditioner yourself.



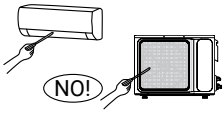
Improper repairs may cause fire or explosion. Contact a service technician for all required maintenance checks.

Do not use the air conditioner during a thunderstorm.



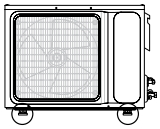
The power should be cut off in a timely manner to prevent any potential hazards.

Do not insert hands or any objects into the air intake or exhaust openings.



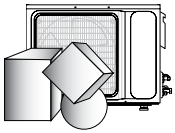
This may cause bodily injury or damage to the device.

Make sure that the installed brackets are sufficiently strong.



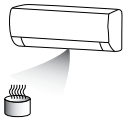
If they are damaged, they may cause the device to fall and result in injury.

Do not block the air intake or exhaust.



Otherwise, the cooling or heating performance will be weakened, and the system may stop working.

Do not allow the air conditioner to blow air onto a heating device.



Otherwise, this may lead to incomplete combustion, causing poisoning.

The device should be installed in accordance with national wiring regulations.

To prevent potential electric shocks, a residual current circuit breaker (RCCB) should be installed.

Precautions

This product contains fluorinated greenhouse gases.

Refrigerant leakage contributes to climate change. A refrigerant with a lower Global Warming Potential (GWP) would contribute less to global warming than a refrigerant with a higher GWP if it were to escape into the atmosphere.
This device contains a refrigerant with a GWP of \[675].
This means that if 1 kg of this refrigerant were to leak into the atmosphere, its impact on global warming would be \[675] times greater than 1 kg of CO2 over a 100-year period.
Never attempt to tamper with the refrigerant circuit or disassemble the product yourself; always call a qualified technician with the necessary expertise.

Make sure that there are no items near the indoor unit such as:

1. **Microwave ovens, stoves, and other hot items.**
2. **Computers and other devices with high static electricity.**
3. **Electrical panels that are frequently used to connect devices.**

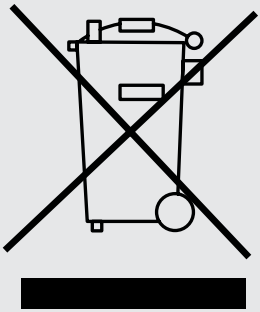
The connection fittings between the indoor and outdoor units cannot be reused unless the pipe is re-soldered.

The fuse specification is printed on the circuit board, for example: 3.15 A / 250 V AC, etc.

WEEE WARNING

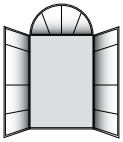
Meaning of the crossed-out waste bin symbol:
Do not dispose of electrical devices as unsorted municipal waste; use separate collection points. Contact local authorities for information on available collection systems.

If electrical devices are disposed of in landfills, hazardous substances may leak into groundwater and enter the food chain, harming your health and well-being. When replacing old devices with new ones, the seller is legally obligated to take back the old device for disposal at no charge.



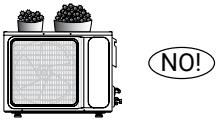
Precautions

Do not open windows or doors while the air conditioner is operating.



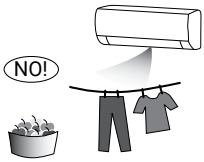
Otherwise, the cooling or heating performance may be reduced.

Do not stand on top of the outdoor unit or place heavy objects on it.

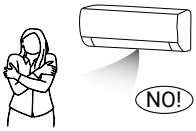


Such weight may cause injury or damage to the device.

Do not use the air conditioner for other purposes, such as drying clothes, preserving food, etc.

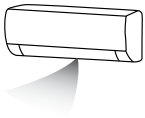


Do not expose your body to cold air for an extended period of time.



It may worsen your physical condition and cause health problems.

Set an appropriate temperature.



Proper adjustment of the airflow temperature can help prevent unnecessary energy consumption.

If your air conditioner is not equipped with a power cord and plug, an explosion-proof switch must be installed in the appropriate electrical circuit, and the distance between the wire contacts should not be less than 3.0 mm.

If your air conditioner is permanently connected to a separate electrical circuit, a residual current device (RCD) with a rated residual operating current not exceeding 30 mA should be installed in the appropriate electrical circuit, commonly known as a residual current circuit breaker.

The power circuit of the air conditioner should have both a residual current device (RCD) and a type C circuit breaker, with a capacity greater than 1.5 times the maximum current.

Information regarding the installation of the air conditioner can be found in the following sections of this manual.

Information for the user

Conditions under which the device cannot operate normally

Under the temperature range specified in the table below, the air conditioner may stop functioning, and other anomalies may occur.

Cooling	Outside	> 43 °C (applies to T1)
		> 52 °C (applies to T3)
	Inside	< 18 °C
Heating	Outside	> 24 °C
		< -15 °C
	Inside	> 27 °C

When the temperature is too high, the air conditioner may activate an automatic safety device to ensure it shuts down safely.
When the temperature is too low, the heat exchanger of the air conditioner may freeze, causing water dripping or other malfunctions.

During prolonged cooling or dehumidifying with relative humidity above 80% (when doors and windows are open), condensation may form near the air outlet, or water may drip.

T1 and T3 refer to the ISO 5151 standard

Notes regarding heating

- The fan of the indoor unit will not start immediately after heating is turned on to avoid blowing cold air.
- When it's cold and wet outside, the outdoor unit may frost on the heat exchanger when the heating power increases. The air conditioner will then activate the defrost function.
- During defrosting, the air conditioner will stop heating for approximately 5-12 minutes.
- During defrosting, vapour may come out of the outdoor unit.
- This is not a malfunction, but a result of the rapid defrosting process.
- Heating will resume after the defrosting process is completed.

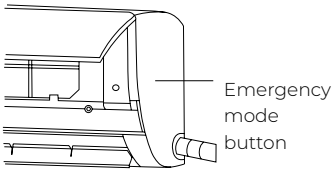
Notes regarding shut-down

When the air conditioner is turned off, the main controller will automatically decide whether to stop operation immediately or to continue running for several dozen seconds at a lower frequency and lower air speed.

Information for the user

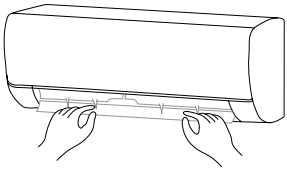
Emergency mode

- If the remote control is lost or damaged, use the emergency operation button to operate the air conditioner.
- If this button is pressed when the unit is off, the air conditioner will operate in automatic mode.
- If this button is pressed when the unit is on, the air conditioner will stop operating.



Airflow direction adjustment

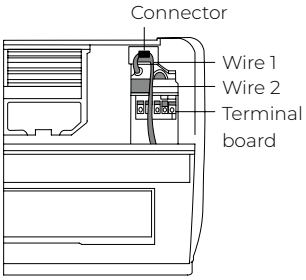
- Use the up-down and left-right louvre buttons on the remote control to adjust the airflow direction. Detailed information can be found in the remote control user manual.
- For models without the left-right louvre function, the louvres must be adjusted manually before switching on the unit.



Note: Moving the louvres while the unit is operating may result in finger injury. Never insert your hand into the air inlet or outlet while the air conditioner is running.

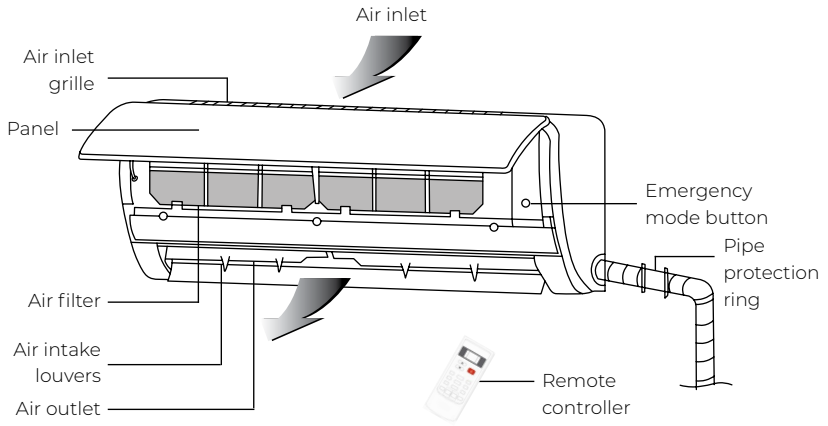
Special precautions

- Open the front panel of the indoor unit.
- The connector (as shown in the illustration) must not touch the terminal board and should be positioned s shown in the illustration.

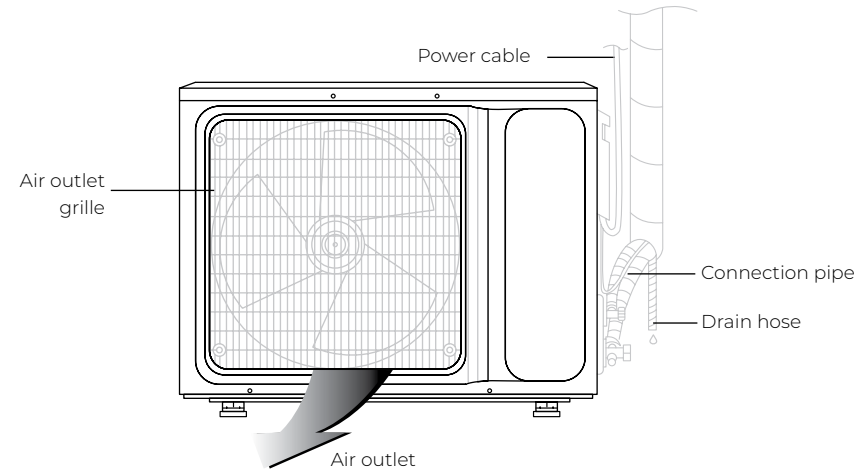


Names of individual parts

Indoor unit



Outdoor unit



Note: All drawings in this manual are for illustration purposes only. The actual appearance of the unit may vary. The wiring diagram depends on the air conditioner model

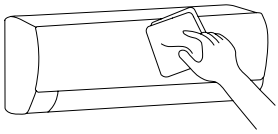
Cleaning and maintenance

Warning!

- Before cleaning the air conditioner, switch it off, and the power supply must be disconnected at least 5 minutes earlier, otherwise, there is a risk of electric shock.
- Do not spray water on the indoor unit of the air conditioner, as this could cause electric shock. Ensure that under no circumstances is it exposed to moisture.
- Volatile liquids such as thinner or gasoline can damage the air conditioner's casing, so the casing should only be cleaned with a soft, dry cloth and a damp cloth moistened with a neutral detergent.
- During use, regular cleaning of the filter should be carried out to prevent dust accumulation, which may affect the cooling/heating effect. If the air conditioner's working environment is in a very dusty area, increase the frequency of maintenance and cleaning accordingly. When removing the filter, avoid touching the internal unit's louvres or applying too much force, which could damage the refrigerant piping.

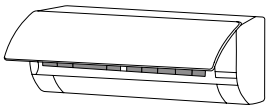
Warning!

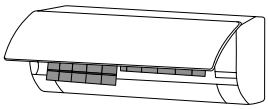
When the indoor unit's panel is dirty, gently clean it with a wrung towel using lukewarm water with a temperature below 40°C, and do not remove the panel while cleaning.



Air filter cleaning

- Remove air filter

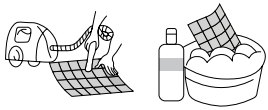




1. Use both hands to open the panel by pulling from both ends, following the direction of the arrow.
2. Release the air filter from its slot and remove it.

- Clean air filter

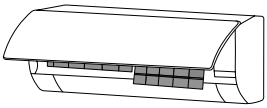
Use a vacuum cleaner or water to rinse the filter. If the filter is very dirty (e.g., with greasy stains), wash it with warm water (below 45°C) and a mild detergent dissolved in water. Then, place the filter in the shade to air dry.

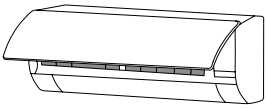


Cleaning and maintenance

- Install the filter

Reinstall the dried filter in the reverse order of removal, then close and snap the panel latches securely.





Check before the season

- Check that all air inlets and outlets in the units are not blocked.
- Check that there is no blockage at the condensate drain outlet and clean it immediately if there is one.
- Check that the grounding wire is securely attached.
- Check that the remote control batteries are installed and that the charge level is sufficient.

Post-season maintenance

- Disconnect the air conditioner's power supply, switch off the main power switch, and remove the batteries from the remote control.
- Clean the filter and the unit casing.
- Remove dust and debris from the outdoor unit.
- Check for any damage to the outdoor unit's mounting brackets, and if so, contact our local service centre.

Troubleshooting

Attention!

Do not attempt to repair the air conditioner yourself, as improper maintenance may cause electric shock, fire, or explosion. Contact the authorised service centre. Please check the following items before contacting the service – it may save you time and money.

Problem	Troubleshooting
The air conditioner is not working	■ There may be a power outage → Wait for the power to return. ■ The plug may be loose in the socket → Insert the plug securely. ■ A fuse may have blown → Replace the fuse. ■ The timer delay for start-up may still be active → Wait or cancel the timer settings.
The air conditioner does not operate immediately after restarting	■ If the air conditioner is switched on immediately after being turned off with the on-off button, the safety switch will delay start-up by 3 to 5 minutes.
The air conditioner stops operating shortly after start-up	■ It may have reached the set temperature → This is normal. ■ It may be in defrost mode → Operation will automatically resume and restart after defrosting. ■ The off-timer may be set → If you still want to use it, turn it on again.
The air conditioner is blowing air, but the cooling/heating performance is unsatisfactory	■ Excessive dust on the filter, blocked inlet/outlet or incorrect louvre angle → clean the filter, clear obstructions, adjust the louvres. ■ Open doors / windows or an active exhaust fan → close doors / windows and switch off the exhaust fan. ■ Electric heating not enabled during heating → enable the electric-heating function (on supported models). ■ Wrong mode or inappropriate temperature/fan-speed settings → select the correct mode and adjust temperature and fan speed.
The indoor unit is emitting an unpleasant odour	■ The air conditioner itself does not produce an odour. If there is a smell, it may be due to odours accumulating in the surroundings → Clean the air filter or activate the cleaning function.

Troubleshooting

When the air conditioner is switched on, you may hear a water-rushing sound	■ When the air conditioner is started or stopped, or when the compressor cycles on or off during operation, you may sometimes hear a 'hissing' water-rush sound → this is merely the refrigerant flowing, not a fault.
You may hear a faint "click" when the unit is switched on or off	■ Due to temperature changes, the panel and other parts expand and contract, causing a rubbing sound → this is normal, not a defect
The indoor unit is making an unusual noise	■ Relay click noise when the fan or compressor switches on or off. ■ Sound when defrosting starts or stops → this is due to the refrigerant reversing flow, not a malfunction. ■ Excessive dust in the indoor unit's air filter may cause noise → clean the air filters periodically. ■ High noise on "strong wind" fan speed → this is normal; if it's uncomfortable, disable the turbo airflow mode.
Water droplets appear on the surface of the indoor unit	■ High ambient humidity may cause water droplets to form around the air outlet or panel → this is a normal physical phenomenon. ■ Prolonged cooling in an open space can lead to water droplets forming → close doors and windows. ■ A too-narrow louvre angle can also cause droplets at the air inlet → increase the louvre tilt.
During cooling operation, the indoor unit may occasionally blow mist from the air outlet	■ When room temperature and humidity are high, this may occur → this happens because the air is cooled very quickly;after a while, the indoor temperature and humidity will drop and the mist will disappear.

If any of the following occurs, immediately cease all operations, disconnect the power supply and contact your local service centre

- An unusual sharp sound is heard or a terrible smell is noticed during operation.
- The power cord or plug is overheating.
- The unit or remote control is exposed to dirt or water.
- The residual current device (RCD) or circuit breaker frequently trips.

Installation notes

Important notes

- Before installation, contact a local authorised installer. If the unit is not installed by an authorised technician, warranty coverage for faults may be denied for formal reasons.
- The air conditioner must be installed by an authorised technician with valid F-gas certification, in accordance with national wiring regulations, flammable refrigerant handling rules, safety regulations, and this manual.
- A refrigerant leak test must be carried out after installation.
- To relocate and reinstall the air conditioner elsewhere, contact your local authorised service centre.

Content inspection

- Open the box and inspect the air conditioner in a well-ventilated room (with doors and windows open) and away from any ignition sources.
  Note: Air conditioning technicians must wear anti-static equipment.
- Before opening the outdoor unit's packaging, a technician must check for refrigerant leakage. If a leak is detected, installation must be halted.
- Fire safety equipment and anti-static precautions should be prepared before inspecting the contents. Then, check the refrigerant system for signs of damage and ensure the overall appearance and condition are satisfactory.

Safety guidelines for air conditioner installation

- Fire protection measures must be prepared before installation.
- Carry out the installation in a well-ventilated area (keep doors and windows open).
- Keep all ignition sources away from R32 refrigerant; smoking and mobile phone use are strictly prohibited.
- Anti-static precautions are essential during installation, such as wearing clean cotton clothing and protective gloves.
- A leak detector must remain active throughout the installation.
- If an R32 refrigerant leak occurs during installation, stop immediately, recover the refrigerant into a recovery tank, check the refrigerant circuit for leaks, and contact an authorised service centre if the cause is a factory defect.
- Electrical devices, power switches, plugs, sockets, high-temperature heat sources or high static electricity sources must be kept away from the area below the indoor unit.

Installation notes

- The air conditioner should be installed in an easily accessible location for both installation and maintenance, free from obstructions that could block the air inlets and outlets of the indoor / outdoor units, and away from heat sources, flammable or explosive materials.
- When installing or repairing the air conditioner, if the refrigerant piping is found to be of insufficient diameter, the entire connecting pipe installation must be replaced with new piping according to the original specifications. The use of reducing fittings to enlarge the diameter is not permitted.
- When using a new connecting pipe, flaring must be redone at the pipe ends.

Installation site requirements

- Avoid locations with flammable or explosive gas leaks, or strong corrosive gases.
- Avoid areas exposed to strong artificial electric or magnetic fields.
- Avoid locations prone to noise and vibration.
- Avoid harsh environmental conditions (e.g. soot, strong sand or dust-laden winds, direct sunlight, or high-temperature heat sources).
- Keep out of reach of children.
- Minimise the length of piping between the indoor and outdoor units whenever possible.
- Choose a location that allows easy access for servicing and repair, with good ventilation.
- The outdoor unit must not be installed in a way that blocks passages, stairways, exits, fire escapes, or other public areas.
- Install the outdoor unit as far as possible from neighbours' doors and windows, and away from plants.

Installation environment inspection

- Check the nameplate on the outdoor unit to confirm that R32 refrigerant is used.
- Verify the room size: the indoor unit should be installed in a space no smaller than the usable area specified (5 m^2).
- The outdoor unit should be installed in a well-ventilated location.
- When using an electric drill to make wall openings, first ensure there are no water, sewage, electrical, or gas lines in the drilling area.
- It is recommended to use a purpose-made roof opening or wall passage to route the installation for the air conditioner.

Installation notes

Mounting bracket requirements

- The mounting bracket must comply with relevant national or industry standards for strength, and welding and connection points should be protected against corrosion.
- The mounting bracket and its supporting surface must withstand four times the weight of the unit, or 200 kg, whichever is greater.
- The mounting bracket for the outdoor unit should be secured using an expansion anchor.
- Ensure secure installation regardless of the wall type to prevent any potential falling, which could cause injury.

Electrical safety requirements

- A dedicated circuit should be used to power the air conditioner, and the cross-section of the power cable must meet national requirements.
- If the maximum current of the air conditioner is ≥ 16A, an over-current circuit breaker and a residual current device (RCD) must be used. The use of an RCD does not exempt the need for protection with the appropriate fuse.
- The operational voltage range of the air conditioner is 90% - 110% of the local nominal voltage. Improper power supply poses a risk of electric shock or fire. If there is significant voltage instability in the network, it is recommended to use a voltage regulator.
- The minimum distance between the air conditioner and flammable materials should be 1.5 meters.
- The connection cable links the indoor and outdoor units. The appropriate cable size should be selected before preparing it for connection.
- The required cross-section for the power cable, communication cable, fuse, and circuit breaker is determined by the maximum current of the unit. The maximum current is specified on the nameplate located on the side panel of the device. Refer to the nameplate to select the correct cable, fuse, or circuit breaker.
- Note: The number of conductors in the cable corresponds to the detailed electrical diagram attached to the casing of the purchased unit.
- The power disconnect switch must be connected to a permanent power supply, in accordance with established standards.

WALL-MOUNTED AIR CONDITIONERS			
RAC 09 - 12 - if the power cable to the outdoor unit	ODU 3x2,5mm^2	Communication ODU - IDU 5x1,5mm^2	Fuse S1 10A
RAC 09 - 12 - if the power cable to the indoor unit	IDU 3x2,5mm^2	Communication ODU - IDU 4x1,5mm^2	Fuse S1 10A
RAC 18 - 24 - if the power cable to the outdoor unit	ODU 3x2,5mm^2	Communication ODU - IDU 5x2,5mm^2	Fuse S1 16A
RAC 18 - 24 - if the power cable to the indoor unit	IDU 3x2,5mm^2	Communication ODU - IDU 4x2,5mm^2	Fuse S1 16A

Installation notes

Requirements for working at heights

- When installing at a height of 2m or more above the base level, safety harnesses must be worn, and the ropes should be securely attached to the outdoor unit to prevent falls, which could cause serious injury or death, as well as property damage.

Grounding requirements

- The air conditioner is an electrical appliance of class 1 and must ensure reliable grounding.
- Do not connect the grounding wire to gas, water pipes, lightning rods, telephone lines, or circuits poorly grounded to earth.
- The grounding wire is specifically designed for grounding purposes and should not be used for any other purpose, nor should it be secured with ordinary threaded screws.
- The diameter of the connecting wire should be as recommended in the user manual, and the O-type terminal should fit the screw size of the device's terminal block, not exceeding 4.2 mm.

  After installation, check that the screws have been securely tightened and that there is no risk of the wires loosening.

Other

- The method of connecting the air conditioner and the power supply cable, as well as the method of connecting each independent component, must comply with the electrical schematic attached to the device.
- The device model and the rated value of the protection must match the parameters provided on the corresponding circuit breaker or fuse sleeve.

Installation notes

Content inspection

Indoor unit packaging

Item	Quantity	Unit
indoor unit	1	set
remote control	1	piece
batteries	2	piece
user manual	1	set
condensate drain pipe	1	piece

Outdoor unit packaging

Item	Quantity	Unit
outdoor unit	1	set
plastic tape	1	roll
drain nozzle	1	piece

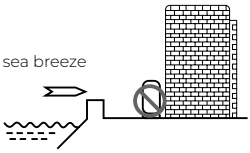
Note: All accessories are subject to factory packaging, and variations may occur depending on the production batch.

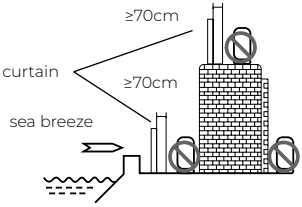
Installation notes for coastal areas

Installation instructions for coastal areas

1. Air conditioners should not be installed in areas with corrosive gases, such as acidic or alkaline gases.
2. The unit must not be installed in a location where it may be directly exposed to sea wind (containing salt), as this can lead to corrosion of the product. Corrosion, particularly on the heat exchanger and evaporator fins, can cause improper functioning or inefficiency.
3. If the outdoor unit is installed close to the sea, it should not be directly exposed to sea wind. Otherwise, additional anti-corrosion protection for the heat exchanger will be required.
4. Choose a well-drained location for the installation of the outdoor unit.
5. Selecting the outdoor unit location:

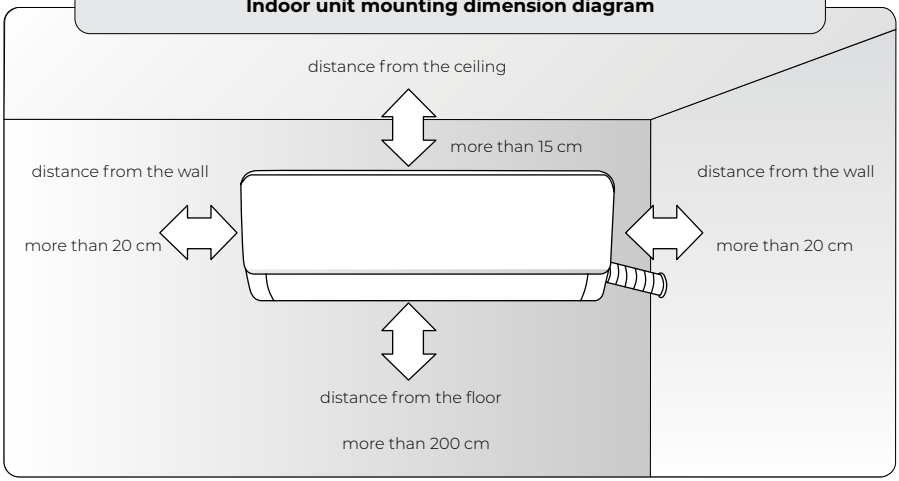
- The outdoor unit should be installed on the opposite side of the prevailing wind direction from the sea, or a protective screen should be installed to shield it from sea winds. This will protect the unit from the harmful effects of sea wind.
- The windbreak should be strong enough to protect against sea wind. Its height and width should be at least 150% of the size of the outdoor unit. It is recommended that the screen be made from concrete or other durable materials.
- Maintain a gap of at least 70 cm between the outdoor unit and the windbreak to ensure proper airflow.
  Regular cleaning of the outdoor unit from dust or salt particles that accumulate on the heat exchanger should be done with water and should be carried out more than once a year.





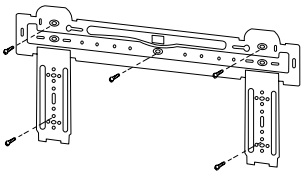
Indoor unit installation

Indoor unit mounting dimension diagram



Mounting plate

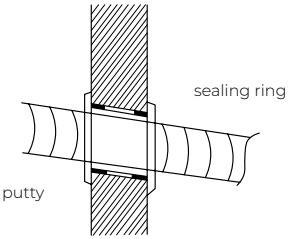
- The wall intended for installation of the indoor unit must be sufficiently strong and solid to prevent vibrations.
- Use a “+” screw to secure the mounting plate, and install it horizontally on the wall, ensuring it is level both horizontally and vertically.
- After installation, gently pull the mounted plate by hand to check that it is firmly secured.



Hole through the wall

- Drill a hole in the designated position on the wall using a rotary hammer or core drill, ensuring the hole is angled downward towards the outside at approximately 5°–10° for proper drainage.
- To protect the piping and cabling from damage and to prevent rodents (which may reside in cavity walls) from entering, install a sealing sleeve on the outer side of the wall and seal the interior side with putty.

  Note: The wall opening is typically 60–80 mm in diameter. Take care to avoid any pre-installed power cables or wall reinforcement (rebar) when drilling.



Indoor unit installation

Pipeline route

- Depending on the position of the unit, the piping can be routed from the side on the left or right (Fig. 1), or vertically from the back (Fig. 2), depending on the length of the indoor unit's pipe. For side routing, the outlet caps on the appropriate side of the unit's casing must be cut off.

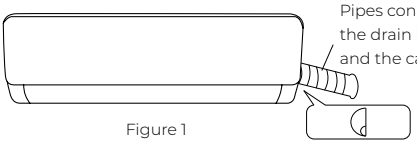


Figure 1

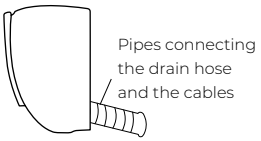


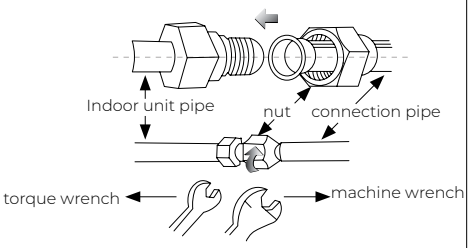
Figure 2

Refrigerant pipes connection

- Depending on the position of the unit, the piping can be routed from the side (left or right) (Fig. 1), or vertically from the back (Fig. 2), depending on the length of the indoor unit's pipe. In the case of side routing, the outlet caps on the appropriate side of the unit's casing must be cut off.

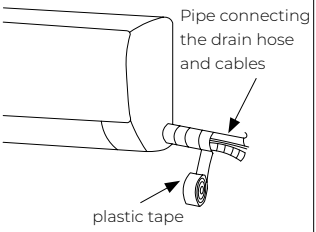
torque specification table

Pipe size (mm)	torque (Nm)
6 / 6,35	15~25
9 / 9,52	35~40
12/12,7	45~60
15,88	73~78
19,05	75~80



Refrigerant pipes connection

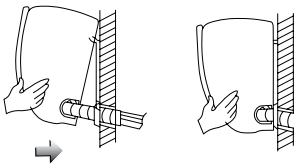
- Use insulation tape to wrap the connection between the indoor unit and the connection pipe, then use insulating material to wrap and seal the pipe to prevent condensation on the connected surface.
- Connect the condensate outlet using drain pipes, and complete the connection of the refrigerant pipes, cables, and drain hose.
- Use plastic cable ties to bundle the connection pipes, cables, and drain hose. Route the condensate pipe with a downward slope.



Indoor unit installation

Mounting the indoor unit

- Hang the indoor unit on the mounting plate and slide the unit from left to right to ensure the hook is properly positioned on the mounting plate.
- Press the lower left and upper right sides of the unit toward the mounting plate until the latch is seated in the socket and makes a “click” sound.



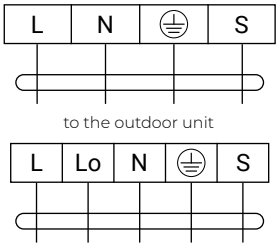
Wiring diagram

- If your air conditioner is equipped with a power cord, the internal wiring of the indoor unit is factory-connected, and no additional connection is necessary.
- If the power cord is not provided, a connection must be made according to the wiring diagram.

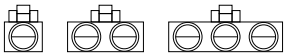
After installation, check:

1. Whether the screws have been properly tightened and there is no risk of loosening.
2. Whether the display board connector is in the correct position and the wires are not touching the terminal block.
3. Whether the control box cover is securely closed.

Inverter



connector



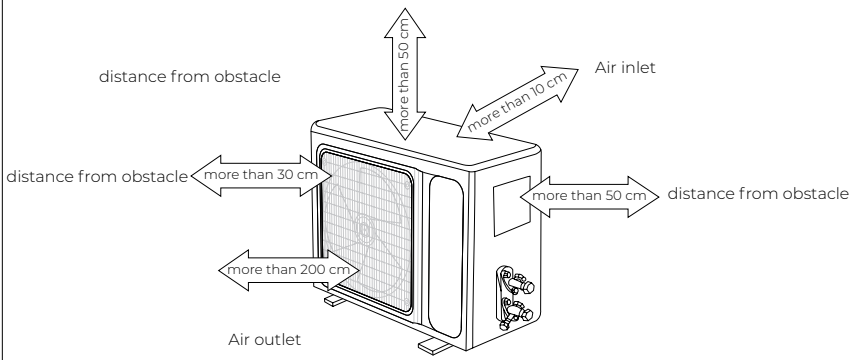
If a connector is present, connect it directly

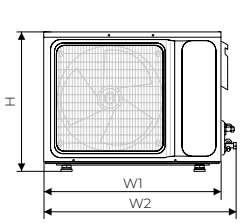
Note:
As a result of continuous product development, the manufacturer reserves the right to make changes to the technical documentation for the devices.

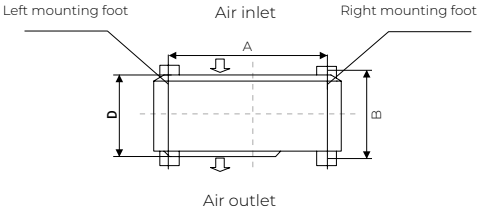
The diagram shown here is for reference only. If the unit does not match this diagram, refer to the detailed wiring diagram provided on the purchased unit.

Outdoor unit installation

Outdoor unit mounting dimension diagram



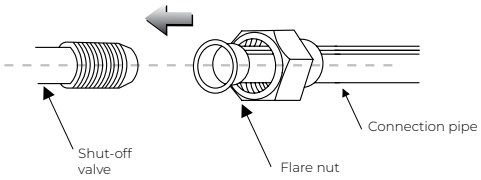


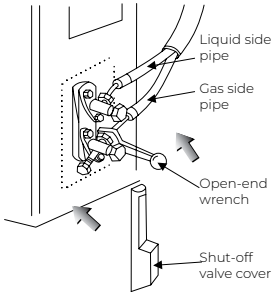


Installation of connection pipes

Connect the outdoor unit using the connection pipe:

- Align the end of the connection pipe with the flare nut at the shut-off valve and tighten it using a torque wrench.
- When extending the piping, additional refrigerant must be added to avoid impairing the operation and performance of the air conditioner.





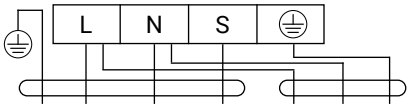
Outdoor unit installation

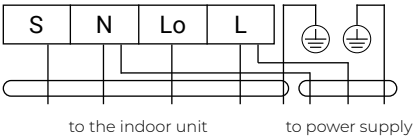
Pipe length	Amount of additional refrigerant		Amount of refrigerant for the unit
< 3M	CC≤ 12000 Btu	remove 20g/m	≤ 1kg
	CC≥ 18000 Btu	remove 40g/m	≤ 2kg
3 - 5M	Not needed		
5 - 15M	CC≤ 12000 Btu	add 16g/m	≤ 1kg
	CC≥ 18000 Btu	add 24g/m	≤ 2kg

Note: This table is for reference only. Fittings cannot be reused unless the pipe is re-soldered.
After installation, check that the shut-off valve cover is securely attached.

Wiring diagram

Inverter





connector

If a connector is present, connect it directly

Note: As part of ongoing product development, the manufacturer reserves the right to make changes to the technical documentation of the devices. The diagram shown here is for reference only. If the unit does not match this diagram, refer to the detailed electrical wiring diagram provided on the purchased unit.

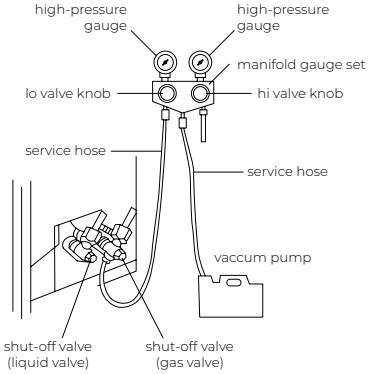
Outdoor unit installation

Creating a vacuum

To create a vacuum in a refrigeration system using R32 refrigerant, only a vacuum pump designed specifically for R32 refrigerant must be used.

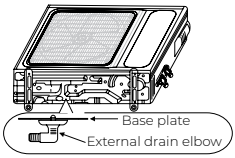
Before starting work with the air conditioner, remove the shut-off valve cover (gas and liquid valves) and remember to tighten it again afterward.

1. To prevent refrigerant leakage, tighten all flare nuts on all pipes.
2. Connect the shut-off valve, service hose, manifold gauge set, and vacuum pump.
3. Fully open the Lo valve on the manifold gauge and create a vacuum for at least 15 minutes. Check that the vacuum gauge reads -0.1 MPa (-76 cmHg).
4. After completing the vacuum process, fully open the shut-off valves on both the gas and liquid lines using a hex wrench.
5. Check that all indoor and outdoor connections are free of refrigerant leaks.



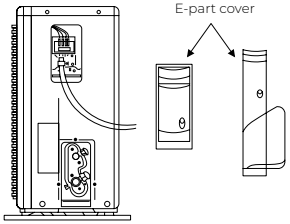
External condensate drain (heat pump type only)

When the unit operates in heating mode, condensation occurs and defrost water can be reliably drained through the condensate drainage system.
Install the external drain elbow into the 25 mm hole in the base plate and connect the drain hose to the elbow so that the condensate produced by the outdoor unit is discharged to the proper location.



Wiring connection

1. Loosen the screws and remove the E-part cover from the unit.
2. Connect the power supply wires to the appropriate terminals on the outdoor unit's terminal block (see the wiring diagram), make a simple contact connection for the communication wires, and tighten the screws securely.
3. Ground wire: Unscrew the grounding screw from the designated electrical terminal, place the ground wire lug onto the screw, and screw it into the grounding hole.
4. Secure the wire firmly and permanently using fastening elements.
5. Reattach the E-part cover to its original position and fasten it with screws.



Post-installation check and test run

Check after the installation

Electrical Safety Check:

1. Verify that the power supply voltage meets the required specifications.
2. Check for any faulty or missing connections in the power, communication, and grounding wires.
3. Ensure the air conditioner's ground wire is properly grounded.

Installation Safety Check:

1. Ensure the installation is secure.
2. Verify proper condensate drainage.
3. Make sure wiring and piping are correctly installed.
4. Check for any foreign objects or tools inside the unit.
5. Confirm that the refrigerant piping is well secured.

Refrigerant Leak Test:
Depending on the installation method, the following approaches can be used to check for suspected leaks in areas such as the four connections of the outdoor unit, and the cores of shut-off and service valves:

1. Bubble method: Apply soapy water evenly to the suspected leak area and carefully observe for the appearance of bubbles on the surface.
2. Instrument method: Detect leaks by pointing the leak detector probe, as instructed, at the suspected leak points.

Note: Ensure the room is well-ventilated before performing the check.

Operation test

Preparation for Operation Test:

- Check that all piping and connecting cables are properly connected.
- Confirm that both the gas and liquid line valves are fully open.
- Plug the power cord into an independent electrical outlet.
- Install the batteries in the remote control.

Operation Test:

1. Turn on the power and press the ON/OFF button on the remote control to start the air conditioner.
2. Select COOLING, HEATING, SWING, and other operating modes using the remote control and check if the operation is functioning correctly.

Maintenance tips

Caution!

For both maintenance and disposal of the unit, contact an authorized service centre. Work performed by unqualified individuals may pose a safety hazard. Do you have an air conditioner that uses R32 refrigerant? Maintain it in accordance with the manufacturer's requirements. This section focuses primarily on the specific maintenance requirements for units with R32 refrigerant. Ask the service technician to read the technical service manual for detailed information.

Technical personnel qualification requirements

1. Special additional training beyond standard refrigeration servicing procedures is required when working with flammable refrigerants. In many countries, this training is provided by national training organizations accredited to teach the relevant subjects. The acquired competencies must be documented with a certificate.
2. Maintenance and repair of the air conditioner must be performed according to the methods recommended by the manufacturer. If specialists from other fields are needed to assist with maintenance and repair, their work should be carried out under the supervision of personnel qualified to service air conditioners using flammable refrigerants.

On-site inspection

Before servicing equipment using R32 refrigerant, a safety inspection must be carried out to minimize the risk of fire. Check whether the area is well ventilated and whether appropriate antistatic and fire protection equipment is available. During technical work on the refrigeration system, the following precautions must be observed.

Operating procedures

1. General work area: All service personnel and others working in the area must be informed of the type of work being performed. Working in enclosed spaces should be avoided. The area surrounding the work zone must be cordoned off. Ensure that the working conditions are safe by controlling the presence of flammable materials.
2. Checking for the presence of refrigerant: The area must be inspected with an appropriate R32 refrigerant detector both before and during work, to ensure that the technician is aware of any potentially toxic or flammable atmosphere. Make sure the leak detection device used is suitable for all types of refrigerants—non-sparking, properly sealed, or intrinsically safe.
3. Fire extinguisher availability: If soldering or cutting work on the refrigeration system or its components is necessary, appropriate fire extinguishing equipment must be available. Place a powder or CO_2 extinguisher near the refrigerant charging area.

Maintenance tips

Operating procedures

4. Absence of ignition sources: No individual working on a refrigeration system that requires intervention should use any ignition source in a manner that could cause a fire or explosion. All possible sources of ignition, including smoking, must be kept sufficiently far away from the site of installation, repair, relocation, or disposal, during which refrigerant may be released into the surrounding space. Before starting work, inspect the area around the equipment to ensure there are no flammable hazards or ignition risks. No smoking signs must be posted.
5. 5. Ventilated area (open doors and windows): Ensure that the work area is either outdoors or well-ventilated before interfering with the system or carrying out any heat-producing tasks, such as soldering or cutting. Proper ventilation must be maintained throughout the work process. Ventilation should safely disperse any accidentally released refrigerant to the outside atmosphere.
6. Inspection of refrigeration equipment: When replacing electrical components, they must be fit for purpose and meet the correct specifications. Manufacturer guidelines for maintenance and servicing must be followed at all times. If in doubt, contact the manufacturer's technical support team. For systems using flammable refrigerants, perform the following checks:
   - The amount of refrigerant in the system is appropriate for the size of the room in which the refrigerant-containing components may be installed.
   - Ventilation devices and air outlets are working correctly and are not blocked.
   - If an indirect cooling circuit is used, the secondary loop must be checked for refrigerant presence.
   - Pipes or refrigerant components must be installed in locations unlikely to be exposed to any substance that may corrode them, unless these components are inherently corrosion-resistant or adequately protected.
7. Inspection of electrical components: Repair and maintenance of electrical components include initial safety checks and component testing procedures. If a fault could compromise safety, power must not be connected to the circuit until the issue is resolved satisfactorily. If immediate correction is not possible but work must continue, appropriate temporary measures must be taken. This must be reported to the equipment owner to ensure all parties are informed. Initial safety checks include:
   - Verifying that capacitors are safely discharged to prevent any risk of sparking.
   - Ensuring that no electrical components or wiring are exposed during charging, recovery, or purging of the refrigeration system.
   - Maintaining grounding continuity.

Wiring inspection

Check the wires for wear, corrosion, over-voltage, vibrations, and whether there are any sharp edges or other undesirable effects in the surrounding environment. During the inspection, take into account the impact of aging or continuous vibrations from the compressor and fan.

Maintenance tips

R32 refrigerant leak check

Note: Check for refrigerant leaks in an environment where there is no potential ignition source.
Do not use a halogen probe (or any other detector using an open flame).

Leak detection method:
For systems using R32 refrigerant, an electronic leak detector is recommended. Leak detection must not be carried out in an area where refrigerant has already been released. Ensure the detector does not become a potential ignition source and is suitable for the refrigerant being tested. The leak detector should be set to the minimum concentration (percentage) of the refrigerant. Calibrate and adjust it to the appropriate gas concentration (no more than 25%) using the specific refrigerant in use.

The leak detection fluid is compatible with most refrigerants. However, do not use chlorinated solvents to avoid reactions between chlorine and refrigerants, which can lead to corrosion of copper piping.

If a leak is suspected, remove all potential fire sources from the hazardous area. If the location of the leak requires soldering, the entire refrigerant charge must be recovered, or the refrigerant must be isolated from the leak site (using a shut-off valve). Before and during soldering, flush the system with nitrogen.

Removal and vacuum pumping

1. Make sure there is no ignited source of fire near the vacuum pump outlet, and ventilation is efficient.
2. Allow maintenance and other operations of the refrigeration circuit according to the general procedure, but the following key operations are crucial, where flammability is already considered. You should follow the following procedures:
   - Remove the refrigerant.
   - Purge the pipeline with inert gas – nitrogen.
   - Vacuum pumping.
   - Purge the pipeline again with inert gas – nitrogen.
   - Cutting or welding of the refrigeration system.
3. The refrigerant must be recovered into an appropriate recovery cylinder. To ensure safety, the system should be purged with nitrogen. This process may need to be repeated several times. This operation must not be carried out using compressed air or oxygen. Through the nitrogen purging process, the system is deprived of oxygen; then a pressure test must be performed to reach the operating pressure before starting the vacuum process. After that, the nitrogen is released into the atmosphere, and finally, vacuum is achieved in the system. Repeat this process until the refrigerant is completely removed from the system and it can be considered cleaned.
   After the final nitrogen filling, the nitrogen pressure must be reduced to atmospheric pressure, and then the system components can be welded. This operation is essential for proper welding of the electrical system.

Maintenance tips

Refrigerant charging procedures

As a supplement to the general procedure, the following requirements should be added:

- Ensure that there is no contamination between different types of refrigerants when using the refrigerant charging and recovery equipment. Hoses used for refrigerant charging should be as short as possible to minimise residual amounts of refrigerant in them.
- Accumulator tanks should remain in an upright position.
- Make sure the grounding has been completed before the refrigeration system is charged with refrigerant.
- After charging is complete, affix an appropriate label to the unit indicating that the system has been charged.
- Be careful not to overcharge the system with refrigerant.

Disposal and recovery

Disposal:
Before this procedure, technical personnel should thoroughly familiarise themselves with the equipment and all its features and recommend a safe refrigerant recovery technique. To recycle the refrigerant and oil samples must be analysed before starting the work. Ensure the required power supply is available before testing.

1. Familiarise yourself with the equipment and its operation.
2. Disconnect the power supply.
3. Before performing this process, you must ensure that:
   - If necessary, mechanical equipment should be used to facilitate the refrigerant recovery process.
   - All personal protective equipment is effective and can be applied properly.
   - The entire recovery process should be supervised by qualified personnel.
   - The recovery of equipment and refrigerant must comply with relevant standards and national regulations.
4. If possible, a vacuum should be achieved in the cooling system.
5. If a vacuum cannot be achieved, refrigerant should be extracted from each part of the system at multiple points.
6. Before beginning recovery, ensure that the capacity of the recovery tank is sufficient.
7. Operate the recovery equipment in accordance with the manufacturer's instructions.
8. Do not fill the tank to its full capacity (the volume of recovered liquid should not exceed 80% of the tank's volume).
9. Even for a short time, the maximum working pressure of the tank must not be exceeded.
10. Once the tank is filled and the process is completed, ensure both the recovery tanks and equipment are promptly cleaned, and that all shut-off valves in the device are closed.
11. The recovered refrigerant must not be released into another system before being cleaned and tested.

Note: Appropriate identification information should be placed after the unit is scrapped and the refrigerant recovered. The identification should include the date and confirmation of completion.
Ensure that the identification data on the equipment indicates the presence of flammable refrigerants in the unit.

Maintenance tips

Disposal and recovery

Recovery:

1. During the repair or scrapping of the unit, recovery of the refrigerant in the system is required. It is recommended to completely remove the refrigerant.
2. During refrigerant recovery, only a special tank designed for the refrigerant may be used as a storage container. Ensure the tank capacity is adequate for the amount of refrigerant in the entire system. All tanks intended for refrigerant recovery should be labelled with the type of refrigerant (i.e., refrigerant recovery tank). Accumulator tanks should be equipped with pressure relief valves and shut-off valves and must be in good condition. If possible, empty tanks should be evacuated and kept at room temperature before reuse.
3. Recovery equipment must be maintained in good condition and have an easily accessible user manual. The equipment must be suitable for recovering R32 refrigerant. A calibrated weighing scale, which can be used as standard, should also be used. The service hose should be connected to a detachable zero-leakage connector and be in good condition. Before using recovery equipment, check that it is in good working order and well maintained. Verify that the electrical components are sealed to prevent refrigerant leakage and the risk of fire. If you have any questions or concerns, contact the manufacturer.
4. The recovered refrigerant should be filled into suitable accumulator tanks, accompanied by transport instructions, and returned to the refrigerant manufacturer. Do not mix refrigerants in recovery devices, especially in the tank.
5. The cargo area of the transport vehicle must not be completely sealed during the transport of R32 refrigerant. If necessary, anti-electrostatic protection measures must be taken during transport. During transport, loading, and unloading, all necessary precautions must be taken to protect the air conditioner and ensure it is not damaged.
6. When removing the compressor or recovering compressor oil, make sure the compressor is emptied to the appropriate level to ensure no residual R32 refrigerant remains in the refrigerant oil. Vacuum pumping must be carried out before returning the compressor to the supplier. Ensure safety when removing oil from the system.

Connecting instructions for the app

To download the instructions for connecting the air conditioner to the application via Wi-Fi and to download the app itself, scan the QR codes below:

Scan to download the instructions
for connecting the air conditioner to the app via Wi-Fi.

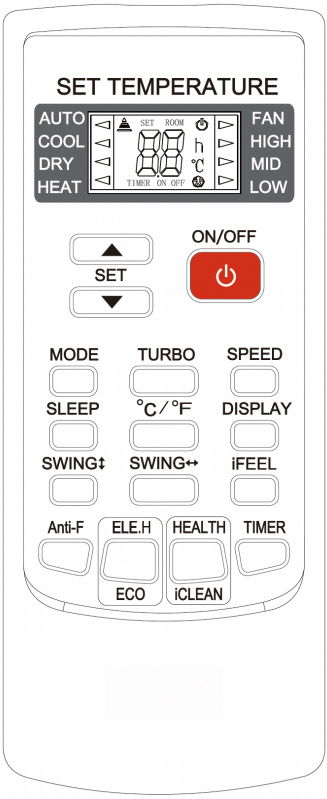
Scan to download the AC Freedom app for Android devices.

Scan to download the AC Freedom app for iOS devices.

Remote control instructions

To download the instructions for connecting the air conditioner to the application via Wi-Fi and to download the app itself, scan the QR codes below:

Wireless controller
Type H



The remote control model is indicated on the back of the remote.

The devices contain fluorinated greenhouse gases R32 (HFC-32) with a GWP of 675.

Model	Refrigerant	Environmental indicators		Amount of refrigerant	
		GWP	ODP		
SEV-09FH/O	R32	675	0	0,47kg	0,32 ton eq CO_2
SEV-12FH/O	R32	675	0	0,57kg	0,38 ton eq CO2
SEV-18FH/O	R32	675	0	0,56kg	0,38 ton eq CO_2
SEV-24FH/O	R32	675	0	1,30kg	0,88 ton eq CO_2

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