User Manual

ELECTROLUX VEGA SERIES MINI SPLIT AIR CONDITIONER

Models: SAC09SNV19-1 | SAC12SNV19-1 | SAC18SHV19-1 | SAC24SHV19-1

Electrolux

CONTENTS

OPERATION AND MAINTENANCE

Warning 02

Safety Precautions 05

Notices for usage 08

Names of each part 10

Remote control 11

Clean and care 18

Troubleshooting 20

INSTALLATION SERVICE

Notices for installation 23

Installation for indoor unit 30

Installation for outdoor unit 33

Check after installation and test operation 38

Maintenance Notice 39

NOTE

All the illustrations in this manual are for explanatory purpose only. Your air conditioner may be slightly different. The actual shape prevails. They are subject to change without notice for future improvement.

WARNING

NOTE: FCC and IC related content only applies to models with WiFi function.

FCC WARNING

WARNING: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

FCC STATEMENT

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

IC STATEMENT

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

WARNING

IC STATEMENT

This equipment complies with FCC's and IC's RF radiation exposure limits set forth for an uncontrolled environment. The antenna(s) used for this transmitter must be installed and operated to provide a separation distance of at least 20cm from all persons and must not be collocated or operating in conjunction with any other antenna or transmitter. Installers must ensure that 20cm separation distance will be maintained between the device (excluding its handset) and users.

Cet appareil est conforme aux limites d'exposition au rayonnement RF stipulées par la FCC et l'IC pour une utilisation dans un environnement non contrôlé. Les antennes utilisées pour cet émetteur doivent être installées et doivent fonctionner à au moins 20 cm de distance des utilisateurs et ne doivent pas être placées près d'autres antennes ou émetteurs ou fonctionner avec ceux-ci. Les installateurs doivent s'assurer qu'une distance de 20 cm sépare l'appareil (à l'exception du combiné) des utilisateurs.

WARNING: This air conditioner uses R32 flammable refrigerant.

Note: If R32 air conditioners are improperly handled, they may cause serious injury or property damage.

Room Size Requirements

The minimum room size required depends on the amount of refrigerant in your system:

Refrigerant Charge Amount (kg)	Minimum Room Size (m^2)
Less than 1.84	7
1.84 to 2.34	9
2.341 to 2.84	10.5
2.841 to 3.34	12.5
3.341 to 3.84	14
3.841 to 4.34	18

WARNING

Important Safety Requirements:

- Only use defrosting and cleaning methods recommended by the manufacturer.
- Never pierce or burn the air conditioner. Check that the refrigerant pipes are not damaged.
- Store the unit in a room away from open flames, operating gas appliances, or electric heaters.
- Be aware that the refrigerant may be odorless.
- Store the unit where it cannot be accidentally damaged.
- Service and repairs must be performed by qualified technicians after proper safety checks.
- The unit must be installed with a stop valve cover.
- Read all instructions carefully before installing, using, or servicing this unit.

SYMBOL	NOTE	EXPLANATION
A2L	WARNING	This appliance uses a flammable refrigerant. If refrigerant leaks near an ignition source, fire may occur. (Only for the AC with UL or ETL-MARKING, UL60335-2-40).
	WARNING	This appliance uses a flammable refrigerant. If refrigerant leaks near an ignition source, fire may occur. (For the AC with CE-MARKING & CB-MARKING, IEC 60335-2-40+A1:2016)
		This appliance uses a low burning velocity material. (Only for the AC with CB-MARKING, IEC60335-2-40:2018)
A2L		This appliance uses a low burning velocity material. (For the AC with CB-MARKING & CE-MARKING, IEC 60335-2-40:2022 & EN IEC 60335-2-40:2024 and the latest version)
	CAUTION	Read the operating manual carefully before use.
	CAUTION	This equipment should be installed and serviced by qualified service personnel following the installation manual.
	CAUTION	Additional information is available in the operating manual or installation manual.

SAFETY PRECAUTIONS

Improper installation or use can result in injury or property damage. Pay attention to these safety levels:

WARNING: Risk of death or serious injury.

CAUTION: Risk of minor injury or property damage.

WARNING

For units with CE marking:
This appliance can be used by children 8 years and older, and by people with reduced physical, sensory, or mental abilities if they are supervised and understand the risks involved. Children must not play with the appliance. Cleaning and maintenance should not be done by children without supervision.

For units without CE marking:
This appliance is not intended for use by people (including children) with reduced physical, sensory, or mental abilities unless they are supervised by someone responsible for their safety. Watch children to make sure they don't play with the unit..

Electrical Safety

1. **Ground the unit properly.** Poor grounding can cause electric shock. Never connect the ground wire to a gas pipe, water pipe, lightning rod, or telephone line.
2. **Damaged power cords must be replaced** by the manufacturer, a service agent, or a qualified technician.
3. **Never pull on the power cord.** Pulling or damaging it can cause severe electric shock.
4. **Turn off and unplug the unit** when not in use for extended periods.
5. **Don't touch the power switch with wet hands** or while the unit is running. This can cause electric shock.
6. **Don't plug other appliances into the same outlet.** This can cause electric shock, fire, or explosion.
7. **Always turn off and unplug before cleaning or maintenance** to avoid electric shock.
8. **Keep the remote and indoor unit dry.** Water can cause short circuits.
9. **Ducts connected to this unit must not contain any ignition sources.**
10. **Keep away from flammable materials.** Maintain at least 1 m (3.3 ft) distance from any flammable gas or liquid, or fire/explosion may occur.
11. **Don't use harsh cleaners or spray water** on the unit. This can cause electric shock or damage.
12. **Never try to repair it yourself.** Improper repairs can cause fire or explosion. Call a qualified service technician.

SAFETY PRECAUTIONS

13. **Don't use during thunderstorms.** Unplug the unit to prevent damage.
14. **Keep hands and objects away from air vents.** You could be injured or damage the unit
15. **Make sure the mounting bracket is secure.** If damaged, the unit could fall and cause injury.
16. **Don't block air vents.** Blocking airflow reduces performance and may shut down the system.
17. **Don't point airflow at heaters or fireplaces.** This can cause incomplete combus tion and carbon monoxide poisoning.
18. **Install a ground fault circuit breaker (GFCI)** to prevent electric shock.
19. **Installation must follow national electrical codes.**

Refrigerant and Environmental Information

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

Installation Location

DO NOT install the indoor unit above:

- Microwaves, ovens, or other heat sources
- Computers or devices that generate static electricity
- Electrical outlets that are frequently used

Additional Requirements:

- Pipe connections between indoor and outdoor units cannot be reused unless the pipe is re-flared.
- Fuse specifications are printed on the circuit board (example: 3.15A/250V AC)

SAFETY PRECAUTIONS

WEEE Disposal Information

What the crossed-out trash bin symbol means:

Don't throw this appliance in the regular trash. Use designated electronics recycling facilities. Contact your local government to find recycling locations near you.

If thrown in landfills, hazardous materials can leak into groundwater and the food chain, harming your health. When buying a new unit, retailers are required by law to take back your old one for free disposal.

CAUTION

1. **Keep doors and windows closed** while the unit is running, or cooling/heating performance will suffer.
2. **Don't stand on or place heavy items on the outdoor unit.** You could be injured or damage the equipment.
3. **Use only for cooling and heating.** Don't use to dry clothes, preserve food, or for other purposes.
4. **Don't aim cold air directly at your body for long periods.** This can negatively affect your health.
5. **Set a comfortable temperature.** Don't make the indoor temperature too different from outdoors, as this wastes electricity.
6. **Electrical requirements:**
   - If your unit doesn't have a power cord and plug, an all-pole disconnect switch must be installed in the fixed wiring with contact separation of at least 3.0 mm (0.12 in).
   - If permanently wired, install a residual current device (RCD) rated no more than 30 mA.
   - The circuit breaker capacity must be at least 1.5 times the unit's maximum current.
   - See the installation section of this manual for complete details.

NOTICES FOR USAGE

Temperature Limits

Your air conditioner may not work properly outside these temperature ranges:

Mode	Location	Temperature Limit
Cooling	Outdoor	Above 43°C (109°F) - T1 units
		Above 52°C (126°F) - T3 units
	Indoor	Below 18°C (64°F)
Heating	Outdoor	Above 24°C (75°F)
		Below -7°C (19°F)
	Indoor	Above 27°C (81°F)

What this means:

- When outdoor temperature is too high, the unit may shut down automatically to protect itself.
- When outdoor temperature is too low, frost may form inside, causing water dripping or other problems.
- During extended cooling with high humidity (above 80%) and doors/windows open, water may drip from the unit
- T1 and T3 refer to ISO 5151 climate ratings.

What this means:

- **The fan won't start right away** when you turn on heat This prevents cold air from blowing out.
- **Frost may form outside** when it's cold and wet The unit will automatically defrost itself.
- **During defrost, heating stops** for 5-12 minutes.
- **You may see steam** coming from the outdoor unit during defrost This is normal.
- **Heating resumes automatically** when defrost finishes.

When Turning Off

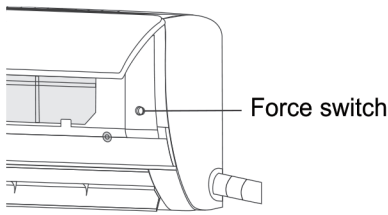
When you turn off the unit, it may keep running for a few seconds at low speed before stopping completely. This is normal.

NOTICES FOR USAGE

If You Lose the Remote Control

Use the force switch button on the indoor unit:

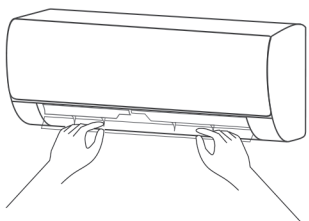
- Press when unit is OFF: starts in **Auto mode**
- Press when unit is ON: turns off



Adjusting Airflow Direction

1. **Use the remote control buttons** to adjust up-down and left-right airflow. See your remote manual for details.

2. **For models without motorized left-right swing:** manually move the air vents by hand.



WARNING: Adjust vents before turning on the unit, or you could pinch your fingers. Never put your hands near the vents while the unit is running.

Connector Positioning (For Installers)

1. Open the front panel of the indoor unit.

2. Make sure the connector does not touch the terminal board and is positioned correctly as shown in the diagram.

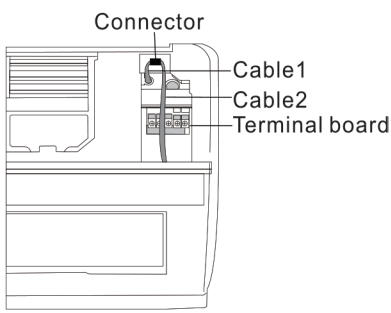


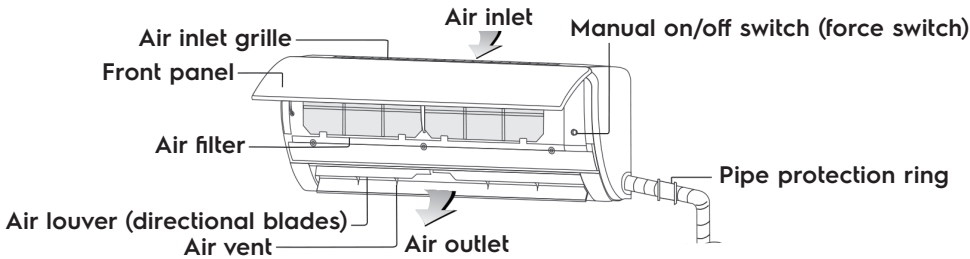
Diagram showing Cable 1, Cable 2, and Terminal Board

NAMES OF EACH PART

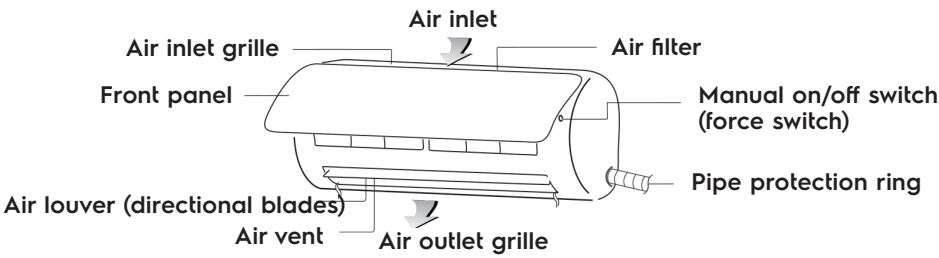
Indoor Unit

Your indoor unit may look like Fig A or Fig B. Your actual unit may vary slightly.

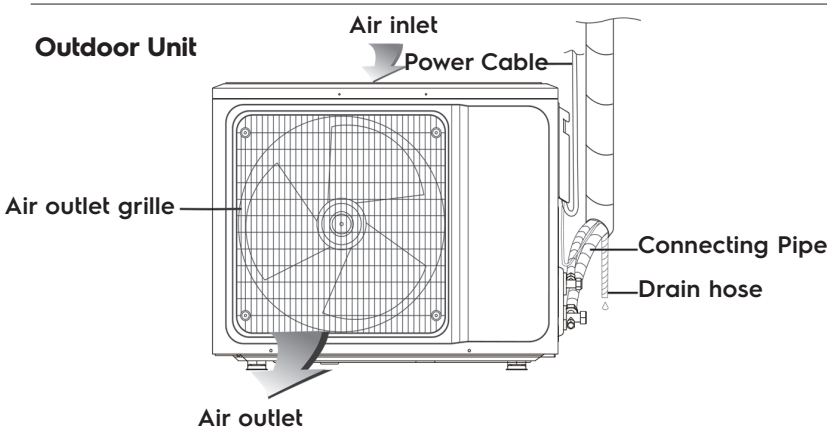
(Fig A)



(Fig B)



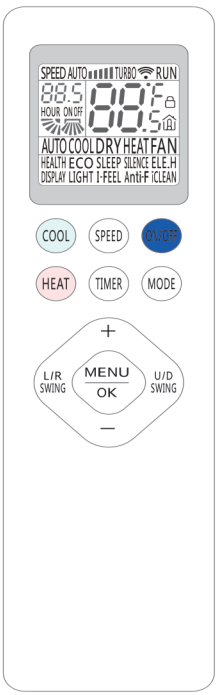
Outdoor Unit

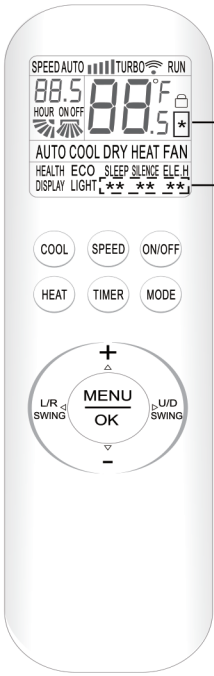


Note: Pictures in this manual are for reference only. Your unit may look slightly different. Features and appearance may change without notice.

Optional features (may not be on your model): Power plug, WiFi, negative ion generator, vertical/horizontal auto swing.

REMOTE CONTROL





Display Types:

- Type: A shown as %
- Type: B shown as ℃

Display Text Variations:

- Type: A shown as:
  COSY HUMI CLEAN
- Type: B shown as:
  FEEL ANTI CLEAN

NOTE:

1. There are two different display types of remote control (Type A and Type B). Your remote will be one of these types.
2. The remote controller display shows all symbols when powered on; other times it only displays symbols corresponding to the current operation.

1. ON/OFF Button

- Press this button to turn the unit on or off.
- This will clear any existing timer and sleep settings.

2. MODE Button

- Press this button to select the operation mode as follows:

  → AUTO → COOL → DRY → HEAT → FAN

NOTE: Heat mode is not available for cool-only units. Please read the Usage for Mode section for a detailed description.

3. TIMER Button

- **With the unit on,** press this button to set an off timer or turn off an existing on timer.
- **Press this button once**, and "**ON(OFF)**" will flash. Press "+" or "-" to set the number of hours when the unit will be turned on/off, with an interval of 0.5 hour and a range of 0.5-24 hours.
- Press the button again to confirm the setting, and "**ON (OFF)**" will stop flashing.

REMOTE CONTROL

- **If the "TIMER" button is not pressed within 10 seconds** after "**ON (OFF)**" starts flashing, the timer setting will be canceled.
- **If a timer setting is confirmed**, press this button again to cancel it.

4. HEAT Button

- Press this button to enter "**HEAT**" mode.

5. COOL Button

- Press this button to enter "**COOL**" mode.

6. SPEED Button

- Press this button to select fan speed as follows:

→ Low → Mid → High → Turbo → Auto ┐
(▪) (▪▪▪) (▪▪▪▪▪) (TURBO) (AUTO)

NOTE: Auto air speed is not available in fan mode.
Turbo air speed is not available in auto mode.
This button is invalid in dry mode.

7. + & – Button

- Each time "+" is pressed, the temperature setting will increase by 1°C (1°F), and each time "-" is pressed, it will decrease by 1°C (1°F).
- The temperature setting range: 16°C (60°F) ~ 32°C (90°F).

NOTE: The temperature cannot be set in auto or fan mode.

8. MENU & OK Button

- Press the "**MENU**" button to enter the function selection mode. Then press ▵ (+), ▿(-), ◃ (L/R SWING), and ▹ (U/D SWING) to choose the function you want. After selecting a function, press the "OK" button to activate it.
- In function selection mode, press ▵ (+), ▿(-), ◃ (L/R SWING), and ▹ (U/D SWING). The selected character in the LCD will flash if the function is available.

9. L/R SWING Button

- Press this button to activate left/right swing, and press it again to turn off the swing function.

REMOTE CONTROL

10. U/D SWING Button

- Press this button to activate up/down swing, and press it again to turn off the swing function.

NOTE:

- **To enable "Rated Swinging" mode:** With the unit on, press and hold the "**U/D SWING**" button for 3 seconds. The button will switch to "**Rated Swinging**" mode, allowing you to select specific swing positions.
- **To exit "Rated Swinging" mode:** Press and hold the "**U/D SWING**" button for 3 seconds, or remove and reinstall the remote control batteries. The power on/off button cannot be used to exit this mode.

11. HEALTH

To activate the HEALTH function:

1. With the unit on, press "**MENU**"
2. Use the ▲(+), ▼(-), ◀, and ▶ buttons to select "**HEALTH**"
3. When "**HEALTH**" flashes on the display, press "**OK**" to turn the function on or off.

12. ECO

About ECO mode:

- In cooling mode, variable-speed air conditioners will automatically enter ECO mode, which uses minimal electricity. ECO mode automatically exits after 8 hours.
- ECO mode is not available on fixed-speed air conditioners.
- Changing modes or turning off the remote will cancel ECO mode.

To activate ECO mode:

1. In cooling mode, press "**MENU**"
2. Use the ▲(+), ▼(-), ◀, and ▶ buttons to select "**ECO**"
3. When "**ECO**" flashes on the display, press "**OK**" to turn the function on or off.

NOTE: Electricity consumption depends on ambient temperature and room characteristics. When the temperature is high or the room is large, use ECO mode with caution.

13. SLEEP

To activate SLEEP mode:

1. With the unit on, press "**MENU**"
2. Use the ▲(+), ▼(-), ◀, and ▶ buttons to select "**SLEEP**"
3. When "**SLEEP**" flashes on the display, press "**OK**" to turn the function on or off.

- The unit will automatically exit SLEEP mode after 10 hours of continuous operation and return to the previous settings.

NOTE: The sleep function cannot be activated in fan or auto mode. In sleep mode, the air conditioner display screen turns off.

REMOTE CONTROL

14. SILENCE

To activate the SILENCE (quiet) mode:

1. With the unit on, press "**MENU**"
2. Use the ▲(+), ▼(-), ◀, and ▶ buttons to select "**SILENCE**"
3. When "**SILENCE**" flashes on the display, press "**OK**" to turn the function on or off.

15. ELE.H

To activate auxiliary electric heating:

1. With the unit on, press "**MENU**"
2. Use the ▲(+), ▼(-), ◀, and ▶ buttons to select "**ELE.H**"
3. When "**ELE.H**" flashes on the display, press "**OK**" to turn auxiliary heating on or off.

- The unit will automatically activate auxiliary heating based on the ambient temperature to accelerate heating.
- This button is disabled on some models.

16. DISPLAY

To control the screen display:

1. With the unit on, press "**MENU**"
2. Use the ▲(+), ▼(-), ◀, and ▶ buttons to select "**DISPLAY**"
3. When "**DISPLAY**" flashes on the display, press "**OK**" to turn the screen on or off

17. LIGHT

Automatic brightness adjustment:

The unit will automatically adjust the display brightness based on the indoor ambient light level.

To activate LIGHT (light sensing) mode:

1. With the unit on, press "**MENU**"
2. Use the ▲(+), ▼(-), ◀, and ▶ buttons to select "**LIGHT**"
3. When "**LIGHT**" flashes on the display, press "**OK**" to light sensing on or off

18. COSY (Only Type A)

To activate COSY (comfort) mode:

1. In cooling mode with the unit on, press "**MENU**"
2. Use the ▲(+), ▼(-), ◀, and ▶ buttons to select "**COSY**"
3. When "**COSY**" flashes on the display, press "**OK**" to turn comfort mode on or off

When COSY mode is active:

- Fan speed is automatically set to auto and swing function is canceled.
- COSY mode will automatically turn off if you turn off the unit, change the mode, adjust SLEEP, change fan speed, or activate swing. The unit will then return to the previous settings

REMOTE CONTROL

19. HUMI (Only Type A)

To activate HUMI (humidifying) mode:

1. Press "**MENU**"
2. Use the ▲(+), ▼(-), ◀, and ▶ buttons to select "**HUMI**"
3. When "**HUMI**" flashes on the display, press "**OK**" to turn humidifying mode on or off.

NOTE: The humidifying function is not available in dry mode.

20. iCLEAN

Automatic self-cleaning:

The unit will automatically clean dust from the evaporator and dry or blow-dry moisture.

To manually activate iCLEAN:

1. With the unit off, press "**MENU**"
2. Use the ▲(+), ▼(-), ◀, and ▶ buttons to select "**iCLEAN**"
3. When "**iCLEAN**" flashes on the display, press "**OK**" to start or stop the cleaning cycle.

NOTE: The cleaning function will automatically stop within one hour.

21. Child-lock

To activate child-lock:

Press and hold the "**HEAT**" and "**MODE**" buttons at the same time for at least 3 seconds.

NOTE: When child-lock is active, the remote control will display a lock icon "🔒"

22. Anti-F (Only Type B)

Anti-F function: When the unit shuts down after operating in cooling, dry, or auto (cooling) mode, it will continue running for about 3 minutes to dry moisture from the evaporator. This prevents bacteria buildup on the evaporator, which causes mold and unpleasant odors that are harmful to health.

To activate Anti-F manually:

1. With the unit off, press "**MENU**"
2. Use the ▲(+), ▼(-), ◀, and ▶ buttons to select "**Anti-F**"
3. When "**Anti-F**" flashes on the display, press "**OK**" to turn the function on or off.

REMOTE CONTROL

23. I-FEEL (Only Type B)

To activate I-FEEL (remote sensor) mode:

1. With the unit on, press "**MENU**"
2. Use the ▲(+), ▼(-), ◀, and ▶ buttons to select "**I-FEEL**"
3. When "**I-FEEL**" flashes on the display, press "**OK**" to turn the function on or off.

24. °C/°F

- The temperature is displayed in Celsius by default.
- Press and hold the "**COOL**" and "**HEAT**" buttons at the same time for 3 seconds or more to switch between °C or °F.

NOTE: Temperature display in Fahrenheit is not available for some models. When temperature is displayed in Fahrenheit on the remote controller, it might be in Celsius on the unit, the function and operation of which will not be affected.

25. 8°C Heating Function

8°C heating function is only available for YKR-T/111E and YKR-T/121E remote control.

To activate 8°C heating:

- Only in heating mode while the unit is on, press and hold the "**MODE**" and "+" buttons at the same time for 3 seconds or more

When 8°C heating mode is active:

a. Pressing "**HEAT**," switching to another mode, or selecting sleep function will exit 8°C heating.
b. The "**SPEED**," "**+**", "**–**" buttons become inactive.
c. Fahrenheit/Celsius switching function becomes inactive.
d. Turning the unit off and back on will retain the 8°C heating function.
e. In the "MENU" menu, ELE.H function cannot be selected.

26. Temperature Setting Function:

Only T121E has this function:

1. Only T121E remote controls have this feature.
2. To set maximum temperature: In shutdown state, press and hold "**Cool**" and "**Mode**" at the same time for 10 seconds or more. The display will show the maxi mum temperature (32°C/90°F), and "**H**" will flash. Press [+/-] to adjust the range, then press "**Mode**" to confirm. The minimum temperature setting (16°C/60°F) will display, and "**L**" will flash. Press [+/-] to adjust the minimum range. Press "**Mode**" to confirm, and the setting is complete.
3. To switch between min/max settings: When setting the minimum temperature, long press "**Cool**" and "**Mode**" for 10 seconds or more to switch to the maximum temperature setting.
4. You must reset this function after replacing the battery.

REMOTE CONTROL

Usage for Mode

★ Auto Operation Mode

1. Press "**ON/OFF**" to start the air conditioner.
2. Press "**MODE**" to select auto operation mode.
3. Press "**SPEED**" to select fan speed from Low, Mid, High, Auto.
4. Press "**ON/OFF**" again to stop the air conditioner.

NOTE: In auto mode, the temperature settings is non-effective.

★ Cool/Heat Operation Mode

1. Press "**ON/OFF**" to start the air conditioner.
2. Press "**MODE**" to select cool or heat operation mode.
3. Press "+" or "-" to set the temperature from 16°C (60°F) to 32°C (90°F). The display changes as you press the button.
4. Press "**SPEED**" to select fan speed from Low, Mid, High, Turbo, Auto.
5. Press "**ON/OFF**" again to stop the air conditioner.

NOTE: The cold wind type has no heating function.

★ Fan Operation Mode

1. Press "**ON/OFF**" to start the air conditioner.
2. Press "**MODE**" to select fan operation mode.
3. Press "**SPEED**" to select fan speed from Low, Mid, High.
4. Press "**ON/OFF**" again to stop the air conditioner.

NOTE: In fan mode, the temperature settings is non-effective.

★ Dry Operation Mode

1. Press "**ON/OFF**" to start the air conditioner.
2. Press "**MODE**" to select dry operation mode.
3. Press "+" or "-" to set the temperature from 16°C (60°F) to 32°C (90°F). The display changes as you press the button..
4. Press "**ON/OFF**" again to stop the air conditioner.

NOTE: In dry mode, the speed settings is non-effective.

★ Fix Batteries

1. Slide to open the battery cover in the direction indicated by the arrow.
2. Insert two brand new batteries (7#), and position the batteries correctly according to the polarity markings (+ & -).
3. Replace the battery cover.

CLEAN AND CARE

⚠ WARNING

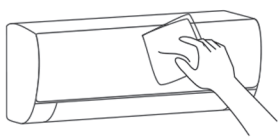
- Turn off the air conditioner and disconnect power for at least 5 minutes before cleaning. There is a risk of electric shock if you clean it while powered.
- Do not wet or rinse the air conditioner with water. Water on electrical parts can cause electric shock.

Use only a soft dry cloth or a cloth slightly moistened with a mild, neutral detergent to clean the housing. Do not use thinner, gasoline, or other harsh solvents, as they may damage the surface.

Clean the air filter regularly to prevent dust buildup, which can reduce performance. If the environment is especially dusty, clean the filter more often. After removing the filter, do not touch the aluminum fins of the indoor unit with your fingers or bend the refrigerant pipes.

Cleaning the Front Panel

- If the front panel is dirty, wipe it gently with a soft cloth wrung out in lukewarm water (below 40°C / 104°F).
- Do not remove the panel while cleaning.



Removing the Air Filter

Fig A type units

1. Use both hands to open the front panel from both ends, following the direction of the arrows.
2. Slide or lift the air filter out of its slot and remove it.

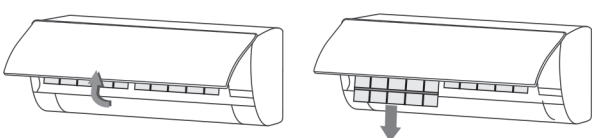


Fig A

Fig B type units

- The air filter is located above the main body of the unit. Pull it upward to remove it, as shown.

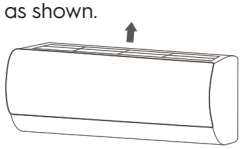
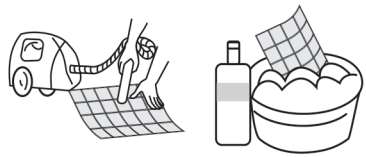


Fig B

CLEAN AND CARE

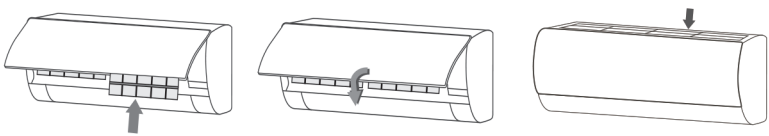
Cleaning the Air Filter



- Use a vacuum cleaner or clean water to remove dust from the filter.
- If the filter is very dirty (for example, greasy), wash it with warm water (below 45°C / 113°F) and a mild detergent
- Shake off excess water and let the filter dry completely in the shade. Do not expose it to direct sunlight or use heat sources to dry it

Reinstalling the Air Filter

1. Once the filter is completely dry, reinstall it in the reverse order of removal.
2. Make sure it is seated correctly, then close and lock the front panel.



Before Using the Air Conditioner

Before you use the unit after a long stop:

1. Check that all air inlets and outlets on both indoor and outdoor units are clear and not blocked.
2. Check that the drain hose and drain outlet are not blocked. Clean if necessary.
3. Confirm that the ground wire is securely connected.
4. Check that fresh batteries are installed in the remote control and that they have enough power.
5. Inspect the outdoor unit mounting bracket for damage. If damaged, contact local service for inspection.

After Using the Air Conditioner (Seasonal Shutdown)

If you will not use the unit for a long time:

1. Turn off the air conditioner, switch off the main power, and remove the remote control batteries.
2. Clean the air filter and wipe the unit housing.
3. Remove dust and debris from around the outdoor unit.
4. Check the outdoor unit bracket again for any signs of damage and contact service if needed.

TROUBLESHOOTING

CAUTION

Do not attempt to repair the air conditioner yourself. Incorrect repairs may cause electric shock, fire, or explosion. Contact an authorized service center for repairs.

Before calling for service, you can check the following items. This may save you time and service costs.

Common Issues and Checks

	Possible causes and checks
The air conditioner does not work	● There may be a power outage. → Wait until power is restored. ● The power plug may be loose. → Make sure the plug is fully inserted into the outlet. ● A fuse may have blown or the circuit breaker may have tripped. → Replace the fuse or reset the breaker if appropriate. ● A timer may be set for future startup.→ Cancel the timer or wait until the set time.
The unit will not restart immediately after being turned off	● If you turn the unit back on right after turning it off, the system may delay for 3-5 minutes to protect the compressor. → This delay is normal.
The unit stops shortly after it starts	● The room may have already reached the set temperature. → This is normal operation. ● In heating mode, the unit may be in defrost mode. → It will resume heating automatically when defrosting is complete. ● A shutdown timer may be active. → Turn the unit back on if you want continued operation.

TROUBLESHOOTING

Common Issues and Checks

	Possible causes and checks
Air is blowing, but cooling/ heating is poor	● The air filter may be clogged with dust, or the inlet/outlet may be blocked. The louver angle may be too small. → Clean the filter, remove obstructions, and adjust the louvers. ● Doors or windows may be open, or an exhaust fan may be running. → Close doors and windows and turn off unnecessary exhaust fans. ● On heating models with auxiliary electric heat, the auxiliary heat may be off. → Turn on the auxiliary heating function (if your model has it). ● Mode, temperature, or fan speed may be set incorrectly. → Select the correct mode and adjust the set temperature and fan speed.
The indoor unit blows an unpleasant odor	● The air conditioner itself does not create odors. Smells usually come from the room (furniture, cigarettes, pets, etc.) and accumulate on the filter and inside the unit. → Clean the air filter. If your model has a cleaning function, activate it.

Unusual Sounds or Appearances

	Possible causes and checks
Sound of running water	● You may hear a "hissing" or "gurgling" sound when the unit or compressor starts or stops. → This is the sound of refrigerant flowing and is normal.
Clicking sound at startup or shutdown	● Due to temperature changes, plastic panels and other parts may expand or contract and make a slight clicking sound. → This is normal and not a fault.

TROUBLESHOOTING

Unusual Sounds or Appearances

	Possible causes and checks
Indoor unit makes abnormal sounds	● Relay or fan starting and stopping can cause audible clicks. ● During defrosting, the flow of refrigerant reversing can create noise. → These are normal operating sounds. ● Heavy dust on the air filter may cause airflow noise to change. → Clean the filters. ● In "Strong" or "Turbo" fan mode, airflow noise will be higher. → This is normal. If it is uncomfortable, reduce the fan speed.
Water droplets on the indoor unit	● When the room humidity is high, moisture may condense around the air outlet or on the panel. → This is a normal physical phenomenon. ● Operating for a long time in cooling mode with open doors/windows can cause more condensation and dripping. → Close doors and windows. ● If the louvers are set to a very small angle, cold air may blow directly onto the air inlet area, causing condensation. → Increase the louver opening angle.
Mist or fog coming from the air outlet	● When indoor temperature and humidity are high, cool air may cause visible mist near the outlet. → After some time, as the room cools and dries, the mist will disappear.

When to Stop Immediately and Call for Service

Stop using the air conditioner, turn off the power, and contact your local service center immediately if:

- You hear harsh, unusual noises or smell burning or other strange odors from the unit.
- The power cord or plug becomes abnormally hot.
- Any liquid or foreign object enters the unit or remote control.
- The circuit breaker or safety device frequently trips.

⚠ **Do not continue to operate the unit in these situations.**

INSTALLATION NOTICES

Important Notice

This air conditioner must be installed by a qualified professional in accordance with national electrical codes and this manual. Contact an authorized service center before installation.

- A leak test must be performed after installation.
- To move the unit to a new location, contact your local authorized service center.

Unpacking and Inspection

Open the carton in a well-ventilated area (open doors and windows) away from any ignition sources.

Note: Installers must wear anti-static equipment.

Before opening the outdoor unit box:

- Check for refrigerant leaks. Stop installation immediately if leakage is found.
- Have fire safety equipment ready before inspection.
- Inspect refrigerant pipes for damage, dents, or collision marks.

Safety Requirements for R32 Refrigerant Installation

R32 is a flammable refrigerant. Follow these safety precautions:

- Have fire safety equipment ready before starting.
- Keep the installation area well-ventilated (doors and windows open).
- **No smoking, open flames, or phone use** in areas where R32 refrigerant is present.
- Installers must wear pure cotton clothing and gloves to prevent static discharge.
- Keep a leak detector running during the entire installation.

If refrigerant leaks during installation:

- Immediately measure the refrigerant concentration in the room until it reaches a safe level.
- If leakage affects performance, stop work immediately, evacuate the system, and return it to an authorized service station.

Keep these items away from the area below the indoor unit:

- Electrical appliances, power switches, outlets.
- High-temperature heat sources.
- Static-generating equipment.

INSTALLATION NOTICES

Installation Location Requirements:

- Install in an accessible location for service and maintenance.
- Do not block air inlets or outlets.
- Keep away from heat sources and flammable materials.

Connecting Lines

If the connecting line is not long enough during installation or **repair, replace the entire line with the original specification**. Do not extend or splice the line.

Where to Install

Avoid these locations:

- Areas with flammable or explosive gas leaks, or corrosive gases.
- Areas with strong electromagnetic fields.
- Areas with excessive noise or vibration.
- Areas with heavy grease, sand, direct sunlight, or high heat.
- Within reach of children.

Installation best practices:

- Keep the connecting lines between indoor and outdoor units as short as possible.
- Choose a location that is easy to service and has good ventilation.
- **Do not install the outdoor unit** in aisles, stairways, exits, fire escapes, or other public areas.
- Install the outdoor unit away from neighbors' doors, windows, and plants.

Installation Site Inspection

Before installing:

1. **Check the outdoor unit nameplate** to confirm the refrigerant type is R32.
2. **Verify room size meets minimum requirements** (see Page 2 refrigerant charge table). The outdoor unit must be in a well-ventilated location.
3. **R32 units must not be installed in enclosed spaces** within a building.
4. **Before drilling holes in walls,** check for hidden water, electrical, or gas lines. Use existing wall openings when possible.

INSTALLATION NOTICES

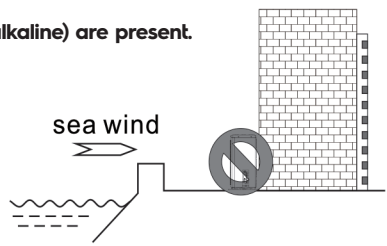
Mounting Bracket Requirements

- The mounting bracket must meet national or industry standards for strength.
- Welded areas must be rust-proofed.
- **The bracket and mounting surface must support at least 4 times the weight of the unit, or 200 kg (440 lbs), whichever is greater.**

Installation Near the Coast

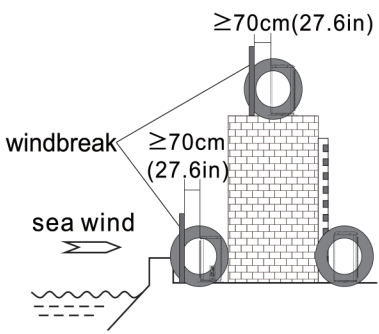
If installing near the ocean or salty air:

1. **Do not install where corrosive gases (acid or alkaline) are present.**
2. **Do not expose the unit to direct sea wind (salt spray).** Salt corrosion on the condenser and evaporator fins can cause malfunction or poor performance.
3. **If the outdoor unit is near the coast,** shield it from direct sea wind or apply additional anti-corrosion treatment to the heat exchanger.
4. **Choose a well-drained location.**



Windbreak Installation (Coastal Areas)

- Install the outdoor unit on the side opposite the sea wind, or install a windbreak.
- The windbreak should be made of concrete or similarly strong material.
- **Windbreak dimensions:** Height and width should be at least 150% of the outdoor unit size.
- **Maintain at least 70 cm (27.6 in) clearance** between the outdoor unit and windbreak for proper airflow.



Maintenance: Clean dust and salt from the heat exchanger with water at least once per year.

INSTALLATION NOTICES

Power Supply Requirements

- Use the rated voltage and a **dedicated circuit** for the air conditioner.
- Power cable size must meet national electrical code requirements.
- **For units with maximum current ≥16A**, install a circuit breaker or GFCI with appropriate protection.
- Operating voltage range: **90–110% of rated voltage**. If voltage is unstable, install a voltage regulator.
- **Maintain at least 1.5 m (4.9 ft) clearance** between the air conditioner and any combustible materials.

Cable Requirements (Compliance-Specific)

The supply cord of appliances for outdoor use shall be between 1.5 (4.9 ft) and 3 m (9.8 ft) long and shall be either an EXTRA HARD USAGE or a HARD USAGE CORD. (Only for the AC with UL or ETL-MARKING, UL60335-2-40)

Cable Types: Outdoor Power Cable: H07RN-F or H05RN-F; Interconnection cord: H07RN-F or H05RN-F; (For the AC with CE-MARKING & CB-MARKING, IEC 60335-2-40+A1:2016)

Wire Size Tables

UL Certification:

Circuit Amps (A)	Recommended Wire Size (AWG)
<10	18
<13	16
<18	14
<25	12
<30	10
<40	8
<55	6

NOTE: To ensure safety, the wire diameter can be larger and smaller is prohibited.

INSTALLATION NOTICES

VDE Certification:

Circuit Amps (A)	Nominal Cross-Sectional Area (mm^2)
6	0.75
<10	1.0
<16	1.5
<25	2.5
<32	4
<40	6

NOTE: To ensure safety, the wire diameter can be larger and smaller is prohibited.

Cable Selection

The size of the interconnection cord, power cable, fuse, and circuit breaker depends on the unit's maximum current. Check the nameplate on the side panel of the unit for the maximum current rating. Use this information to select the correct cable, fuse, and breaker.

NOTE: For the number of conductors needed, refer to the wiring diagram on the unit you purchased.

Means for disconnection must be incorporated in the fixed wiring in accordance with the wiring rules.

Working at Heights

When installing at 2 m (6.6 ft) or higher above ground level:

- Wear safety harnesses and use ropes strong enough to secure the outdoor unit.
- This prevents falls that could cause serious injury, death, or property damage.

Grounding Requirements

This air conditioner is a Class I electrical appliance and must be properly grounded.

Do NOT connect the ground wire to:

- Gas pipes
- Water pipes
- Lightning rods
- Telephone lines
- Improperly grounded circuits

INSTALLATION NOTICES

The ground wire is for safety only and must not be used for other purposes or fastened with standard screws.

Interconnection cord requirements:

- Use wire diameter recommended in this manual
- Use ring (O-type) terminals that meet local codes
- **Terminal inner diameter must match screw size (no more than 4.2 mm / 0.17 in)**
- After installation, verify all screws are tight with no risk of loosening

Wiring and Fuse Information
All wiring connections must follow the wiring diagram attached to the unit. Fuse ratings are printed on the circuit board or fuse sleeve.

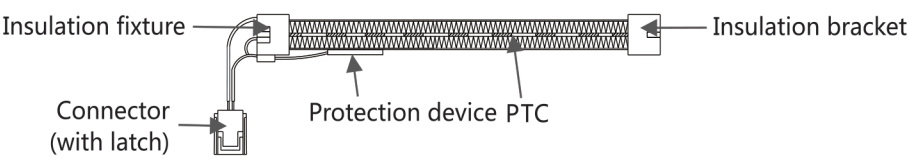
Auxiliary Electric Heating (Select Models Only)

NOTE: Only applicable to models with auxiliary heating part.

The electric auxiliary heating components are ceramic PTC (Positive Temperature Coefficient) elements installed inside the indoor evaporator. Input power is shown on the nameplate under "Electric Heating Input Power" (some models may not have this).

Safety Requirements:

- Maintain **12 mm clearance** between the auxiliary heater and the unit casing to prevent fire hazards.
- If the heater, PTC, or protection device is damaged, it must be replaced by a qualified technician using manufacturer-supplied parts.



NOTE: This diagram is for reference only. Refer to your actual indoor unit.

INSTALLATION NOTICES

Packing List

Indoor Unit Package:

Item	Quantity	Unit
Indoor Unit	1	Set
Remote Controller (*)	1	PC
Batteries AAA (*)	2	PC
Owner's Manual	1	Set
Drain Pipe (*)	1	PC

Outdoor Unit Package:

Item	Quantity	Unit
Outdoor Unit	1	Set
Connecting Pipes (*)	2	PC
Plastic Strap (*)	1	Roll
Pipe Protection Ring (*)	1	PC
Putty (*)	1	Packet

NOTE: Optional parts (*) - some models may not include these items.

Interconnection cord and sound-dampening pads are optional accessories. Actual contents may vary.

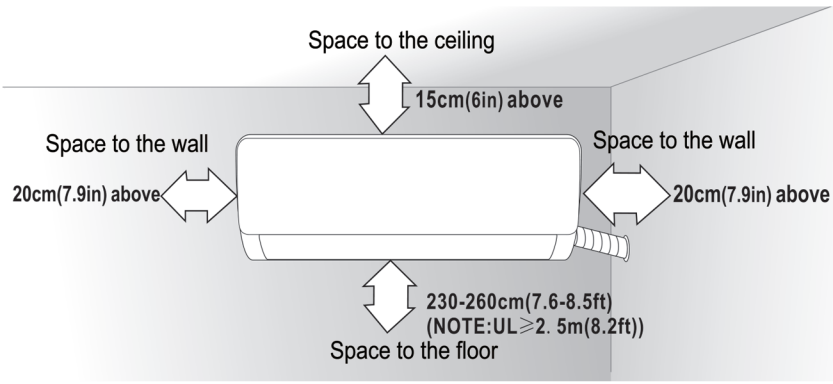
INDOOR UNIT INSTALLATION

Installation Clearances

Maintain the following clearances around the indoor unit:

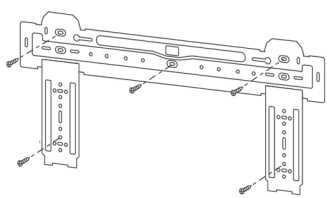
- **Distance from ceiling**: At least 15 cm (6 in)
- **Distance from side walls**: At least 20 cm (7.9 in) on each side
- **Height above floor:** 230-260 cm (7.6-8.5 ft)

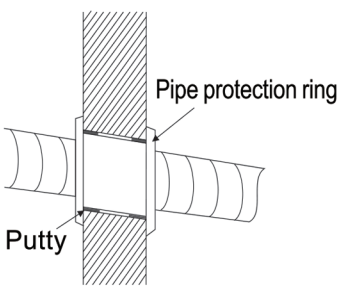
NOTE: For UL certified units, install at least 2.5 m (8.2 ft) above floor



Mounting the Wall Bracket

1. **Choose a solid wall** that can support the unit without vibrating.
2. **Install the mounting bracket horizontally** on the wall using Phillips-head screws. Use a level to ensure it is perfectly horizontal and vertical.
3. **Pull firmly on the bracket after installation** to confirm it is securely mounted.





Drilling the Wall Hole

1. **Drill a hole** at the predetermined location using a hammer drill or core drill.
2. **Angle the hole 5-10° downward toward the outside** so condensate drains properly.
3. **Install a pipe protection ring** and seal it with putty to:

- Protect pipes and cables from damage
- Prevent rodents from entering through the wall cavity

NOTE: Wall hole diameter is typically 60-80 mm. Check for hidden electrical wiring and avoid solid structures when drilling.

INDOOR UNIT INSTALLATION

Routing the Pipes

Depending on your installation, pipes can be routed:

- **Sideways** from the left or right (Fig 1)
- **Vertically** from the back (Fig 2)

For sideways routing: Cut off the knockout panel on the unused side.

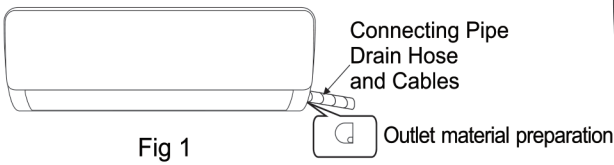


Fig 1

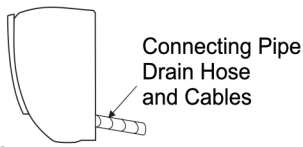


Fig 2

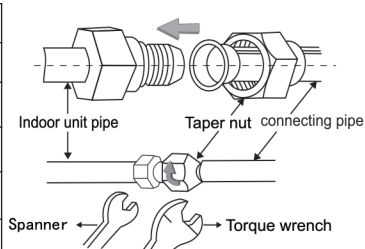
Connecting the Refrigerant Pipes

1. **Remove the factory pipe caps** from the indoor unit. Hand-tighten the flare nut onto the connection.
2. **Align the pipe carefully,** then finger-tighten the flare nut. Use a torque wrench to tighten to the specified torque.

Important: Inspect flare connections for damage before installation. **Do not reuse flare connections unless you re-flare the pipe.**

Tightening Torque Table

Pipe Size (mm / in)	Torque (N·m)
Φ6 / Φ6.35 (1/4)	15-25
Φ9 / Φ9.52 (3/8)	35-40
Φ12 / Φ12.7 (1/2)	45-60
Φ15.88 (5/8)	73-78
Φ19.05 (3/4)	75-80



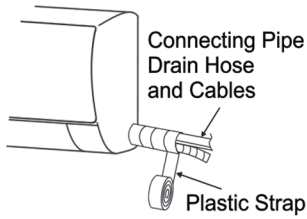
Important: If your unit uses quick connectors, refer to the separate quick connector installation guide.

Connecting the Refrigerant Pipes

1. **Wrap the connection joint** between the indoor unit and refrigerant pipe with insulation sleeve.
2. **Seal all insulation** to prevent condensation from forming on the connection.
3. **Connect the drain hose** to the drain outlet and straighten all pipes and cables.
4. **Bundle the pipes, cables, and drain hose together** using plastic cable ties. Make sure the drain hose slopes downward.

INDOOR UNIT INSTALLATION

Mounting the Indoor Unit



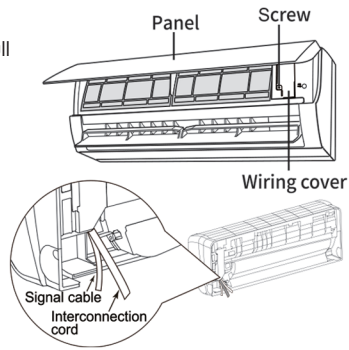
1. **Hang the indoor unit on** the wall bracket. Move it left and right to ensure the hooks are properly seated.
2. **Push the unit firmly** toward the wall until the hooks click into place.

Connecting Wiring to the Indoor Unit

1. **Open the front panel** and remove the screw from the wiring cover. Take off the cover.
2. **Route the interconnection cord** through the cable passage hole at the back of the indoor unit and pull it out from the front.

NOTE: Some models do not have a signal cable.

3. **Remove the wire clip.** Connect the interconnection cord to the terminal block according to the wiring diagram. Tighten the terminal screws and secure the cord with the wire clip.



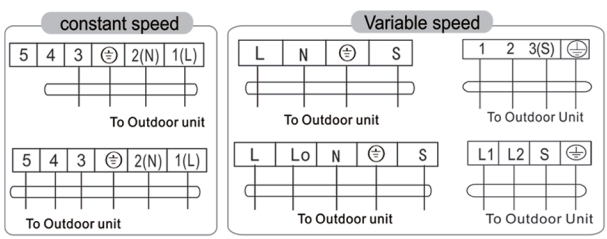
NOTE: This manual includes wiring diagrams for several air conditioner types. If your specific model's wiring diagram is not shown, refer to the wiring diagram attached to your unit.

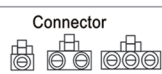
Wiring Diagrams (Examples)

Constant Speed Models:
Terminals: 5 4 3 2(N) 1(L)
Connect to outdoor unit

Variable Speed Models:
Terminals: L N S or 1 2 3(S)
Connect to outdoor unit

Models with Connector:
If a quick-connect plug is present, simply plug it in.





If there is a connector, connect it directly.

4. **Replace the wiring cover** and tighten the screw.
5. **Close the front panel.**

After Installation - Check These Items:

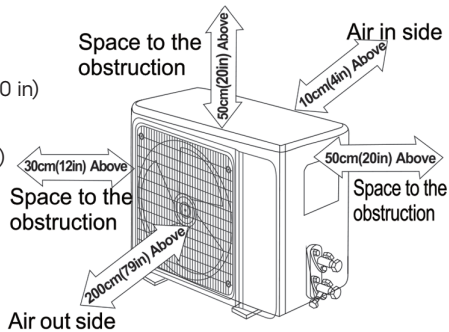
1. **Terminal screws are tight** with no risk of loosening.
2. **Display board connector is positioned correctly** and not touching the terminal block.
3. **Control box cover is securely closed.**

OUTDOOR UNIT INSTALLATION

Outdoor Unit Installation Clearances

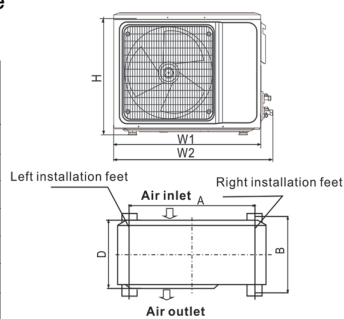
Maintain the following minimum clearances around the outdoor unit for proper airflow and service access:

- **Above the unit:** At least 200 cm (79 in)
- **In front (air outlet side):** At least 50 cm (20 in)
- **On each side:** At least 30 cm (12 in)
- **Behind (air inlet side):** At least 10 cm (4 in)



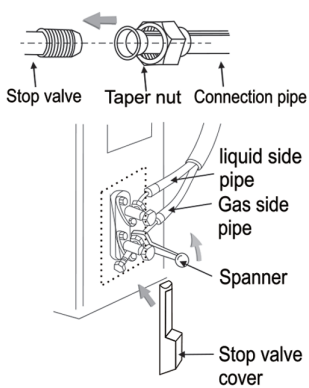
Mounting Bolt Spacing

Use the table below to determine the correct mounting bolt spacing (dimensions A and B) for your outdoor unit:



Outdoor Unit Size W(D)×H×D (mm/in)	Dimension A (mm/in)	Dimension B (mm/in)
665(710)×420×280 (26.2(28.0)×16.5×11.0)	430 (16.9)	280 (11.0)
660(710)×500×240 (26.0(28.0)×19.7×9.4)	500 (19.7)	260 (10.2)
790(780)×545×285 (31.1(30.7)×21.5×11.2)	540 (21.3)	280 (11.0)
709(761)×538×280 (27.9(30.0)×21.2×11.0)	480 (18.9)	283 (11.1)
840(880)×545×315 (33.1(34.6)×21.5×12.4)	545 (21.5)	315 (12.4)
750(880)×545×285 (29.5(34.6)×21.5×11.2)	480 (18.9)	283 (11.1)
800(880)×545×315 (31.5(34.6)×21.5×12.4)	545 (21.5)	315 (12.4)
785(845)×555×300 (30.9(33.3)×21.9×11.8)	546 (21.5)	316 (12.4)
825(880)×555×335 (32.5(34.6)×21.9×13.2)	540 (21.3)	335 (13.2)
900(960)×700×360 (35.4(37.8)×27.6×14.2)	632 (24.9)	352 (13.9)
970(1044)×805×395 (38.2(41.1)×31.7×15.6)	675 (26.6)	410 (16.1)
940(1010)×1320×370 (37.0(39.8)×52.0×14.6)	625 (24.6)	364 (14.3)
950(1044)×985×395 (37.4(41.1)×38.8×15.6)	610 (24.0)	388 (15.3)
650(703)×455×233 (25.6(27.7)×17.9×9.2)	460 (18.9)	253 (10.0)

Connecting Refrigerant Pipes to the Outdoor Unit



Follow these steps to connect the refrigerant lines:

1. **Align the connecting pipe** with the center of the stop valve port on the outdoor unit.
2. **Hand-tighten the flare nut** onto the valve connection.
3. **Use a torque wrench** to tighten the connection to the specified torque value (see torque table on page 22).
4. **Check all connections** to ensure screws and fittings are secure with no risk of loosening.

OUTDOOR UNIT INSTALLATION

Refrigerant Charge Adjustment

If the pipe length is changed from the standard length, you may need to add or remove refrigerant to maintain proper system performance.

Refrigerant Adjustment Guidelines:

Connection Pipe Length	Refrigerant Adjustment	Amount of Refrigerant in Unit
≤5 m (16.4 ft)	R32=1200BTU: Reduce 20g/m R32=1800BTU: Reduce 40g/m	≤1 Kg
5-10 m (16.4-32.8 ft)	No adjustment needed	-
>10 m (32.8 ft)	R32=1200BTU: Add 15g/m R32=1800BTU: Add 25g/m	≤1 Kg ≥2 Kg

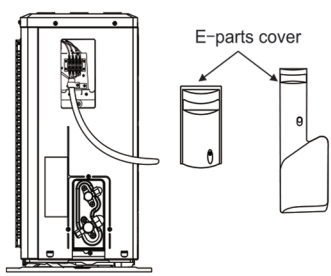
NOTE: This table is for reference only.

Important Installation Notes

- **Do not reuse flare connections** unless the pipe has been re-flared.
- **Verify all connection screws are tight** and properly secured.
- **IMPORTANT: If your unit uses quick connectors, refer to the separate quick connector installation booklet.**

Wiring Connection

Follow these steps to wire the outdoor unit:



1. **Loosen the screws and remove the electrical box cover** from the outdoor unit
2. **Connect the cables to the corresponding terminals** on the terminal board according to the wiring diagram. If there are signal wires connected to the plug, simply connect the plug.
3. **Ground wire installation:** Remove the grounding screw from the electrical box, attach the grounding wire end to the grounding screw, and reinstall the screw into the grounding hole.
4. **Secure the cable** with the cable clamp (pressing board).
5. **Replace the electrical box cover** in its original position and secure it with the screws.

OUTDOOR UNIT INSTALLATION

Wiring Diagram

Use the appropriate wiring diagram for your unit type:

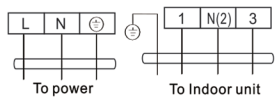
Constant Speed Models

Configuration 1:

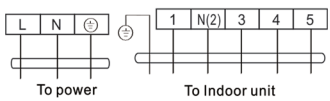
- Terminals: L | N | ⏚
- Connect to power and indoor unit as shown

Configuration 2:

- Terminals: L | N | ⏚ and 1 | N(2) | 3
- Connect to power and indoor unit as shown



Constant Speed



Variable Speed Models

Standard Configuration:

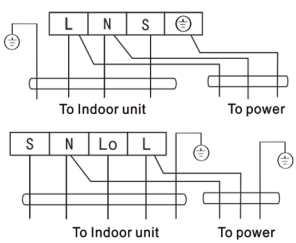
- Terminals: L | N | S | ⏚
- Connect to indoor unit and power as shown

Alternate Configuration:

- Terminals: S | N | Lo | L
- Connect to indoor unit and power as shown

With Multiple Connections:

- Terminals: L | N(2) | 3 | 4 | 5 and S | N | Lo | L
- Connect to indoor unit and power as shown



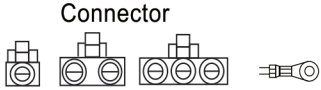
Variable Speed

Units with Quick-Connect Plug

Connector Options:

If your unit has a connector plug, simply plug it in directly.

Connector



If there is a connector, connect it directly.

OUTDOOR UNIT INSTALLATION

Voltage-Specific Wiring (Variable Speed)

115V Configuration:

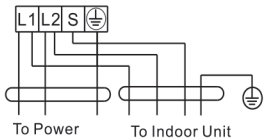
- Terminals: L | T2 | N(S) | L | N | ⏚

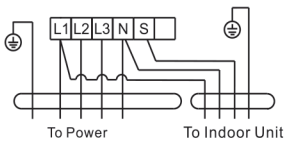
  Connect to indoor unit and power as shown

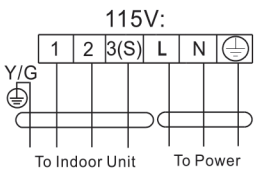
220V Configuration:

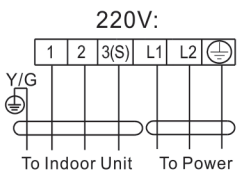
- Terminals: L | T2 | N(S) | L(1) | 2 | ⏚

  Connect to indoor unit and power as shown









NOTE: This manual includes wiring diagrams for different air conditioner types. If your specific model's wiring diagram is not shown here, **refer to the wiring diagram label attached to your actual unit.**

NOTE: This manual includes wiring diagrams for different types of air conditioners. We cannot guarantee that all specialized wiring configurations are included.

The diagrams shown are for reference only. I**f your unit's wiring is different from these diagrams, refer to the detailed wiring diagram label attached to your specific unit.**

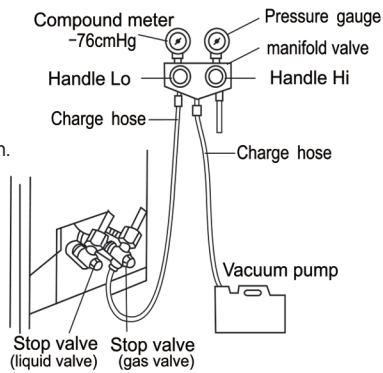
OUTDOOR UNIT INSTALLATION

Vacuuming (Evacuating the System)

★ **An R32-rated vacuum pump must be used for R32 refrigerant systems.**

Before starting work on the air conditioner:

1. **Remove the covers from the stop valves** (gas valve and liquid valve) and ensure you tighten all connections properly to prevent air leakage
2. **To prevent air leakage and spilling, tighten all connecting nuts on all flare tubes.**
3. **Connect the stop valve, charge hose, manifold gauge, and vacuum pump as** shown in the diagram.
4. **Fully open the handle Lo of the manifold valve** and run the vacuum pump for at least 15 minutes. Verify that the compound vacuum gauge r eads -0.1 MPa (-76 cmHg).
5. **After the vacuum process, fully open the stop valve with a hex wrench.**
6. **Check that both indoor and outdoor connections are free of air leakage.**



IMPORTANT: Units with quick connectors do not require vacuum pumping.

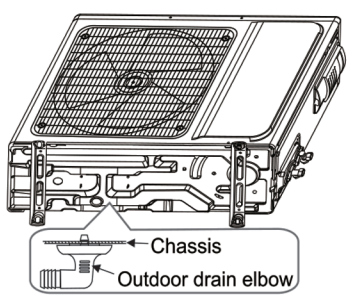
Vacuuming (Evacuating the System)

For units with heating capability:

When the unit is in heating mode, condensing water and defrost water can drain reliably through the drain hose installation.

To install the outdoor drain elbow:

1. **Drill a Φ25 mm (1 in) hole** in the base plate of the outdoor unit
2. **Attach the drain hose to the elbow** so that wastewater from the outdoor unit can drain out to a proper drainage location.



CHECK AFTER INSTALLATION AND TEST OPERATION

Check After Installation

★ Electricity Safety Check

1. Verify that the supply voltage meets the unit's requirements.
2. Check for loose or missing connections in the power, signal, and grounding wires.
3. Confirm that the ground wire of the air conditioner is securely grounded.

★ Installation Safety Check

1. Verify that all piping is secure.
2. Check that the condensate drain flows smoothly.
3. Verify that all wiring and piping are correctly installed.
4. Make sure no foreign materials or tools are left inside the unit.
5. Check the refrigerant pipeline for signs of damage.

★ Refrigerant Leak Test

Depending on the installation method, use one of the following methods to check for leaks, particularly at the four connections on the outdoor unit and the connection points of valves:

Method 1 - Bubble Method:
Apply a uniform layer of soapy water over the suspected leak area and observe carefully for bubbles.

Method 2 - Instrument Method:
Use a leak detector by pointing the probe at the leak area according to the detector's instructions.

NOTE: Make sure the area is well-ventilated before checking for leaks.

Check After Installation

Test Operation Preparation:
Before starting the test, verify the following:

- All wiring and connection cables are properly connected.
- The valves on the gas side and liquid side are fully open.
- The power cable is connected to an independent power outlet.
- Batteries are installed in the remote control.
- The area is well-ventilated before testing.

Test Operation Method:

1. **Turn on the power** and press the ON/OFF switch button on the remote controller to start the air conditioner.
2. **Select COOL, HEAT (not available on cool-only models),** SWING, and other operation modes with the remote controller and verify that the operation functions correctly.

MAINTENANCE NOTICE

Attention:

- For maintenance or repair, contact authorized service centers.
- Maintenance by unqualified personnel may cause serious safety hazards.
- Refer to the service handbook for R32 refrigerant when maintaining or repairing R32 air conditioner units.
- This manual focuses on special maintenance requirements for R32 refrigerant appliances.
- Ask the manufacturer or refer to the detailed service handbook for detailed information.

Qualification Requirements for Maintenance Personnel

1. Special Training Required for Refrigerant Enforcement

An individual authorized to work on refrigeration equipment containing R32 refrigerant must be properly trained. This training must be conducted by nationally recognized training organizations that are accredited to teach the relevant national competency standards established by law or regulation. Proof of completed training should be documented by a certificate.

2. Maintenance and Repair of Equipment

Maintenance and repair must be conducted according to the manufacturer's recommended methods. If professionals other than the manufacturer's technicians are needed to help maintain and repair the equipment, they must work under the supervision of individuals qualified to repair equipment containing flammable refrigerant.

Inspection of the Site

A safety inspection must be performed before working on equipment with R32 refrigerant to minimize the risk of fire. Check whether the installation location is well-ventilated and whether the fire prevention equipment is in good working condition. While maintaining the refrigeration system, follow these precautions before starting work:

Operating Procedures

1. General Work Area:

All maintenance staff and others working in the immediate area must be informed about the nature of the work being performed. Work should be conducted in a controlled area. The area around the workspace must be cordoned off. Ensure that conditions in the work area remain safe by limiting access to qualified personnel only.

MAINTENANCE NOTICE

2. Checking for Refrigerant Presence:

Before beginning any work, check the area with an appropriate refrigerant detector. This ensures the technician is aware of any potentially toxic or flammable atmospheres. Make sure the leak detection equipment being used is suitable for R32 and is properly maintained with adequately sealed or intrinsically safe components.

3. Presence of Fire Extinguisher:

If hot work (welding, brazing, etc.) will be performed on the refrigeration equipment or any associated components, appropriate fire extinguishing equipment must be readily available. Keep a dry powder or CO2 fire extinguisher near the work area.

4. No Ignition Sources:

Do not perform any work on a refrigeration system that involves exposing refrigerant piping without ensuring that all ignition sources are eliminated. This includes welding torches, open flames, portable heating equipment, and smoking. All possible ignition sources must be kept far enough away from the installation site, as well as from any area where refrigerant may be released into the surrounding space during installation, repair, or disposal. Prior to starting work, inspect the area around the equipment to verify there are no flammable materials or ignition sources. Post "No Smoking" signs at the work location.

5. Ventilated Area (Keep Doors and Windows Open):

Before beginning work, ensure the area is open and adequately ventilated. Ventilation must continue throughout the work period. Proper ventilation safely disperses any released refrigerant and prevents it from accumulating in the atmosphere.

6. Checks on Refrigeration Equipment:

When replacing electrical components, verify they are suitable for the intended purpose and meet the correct specifications. Always follow the manufacturer's maintenance and service guidelines. Contact the manufacturer's technical support department if you have questions. The following safety checks must be performed when working with flammable refrigerants:

- Verify that the charge size is appropriate for the room size in which the refrigerant-containing components are installed.
- Confirm that ventilation machinery and outlets are operating adequately and are not obstructed.
- If using an indirect refrigeration circuit, check that the secondary circuit has been inspected for refrigerant presence.
- Ensure refrigerant components or connections are installed in a location where they are unlikely to be exposed to any substance that may corrode refrigerant-containing components. If using components made of materials that are inherently resistant to corrosion or are suitably protected against corrosion, this check may be omitted.

MAINTENANCE NOTICE

7. Checks on Electrical Equipment:

Repair and maintenance of electrical components must include initial safety checks and proper component inspection procedures. If a fault could compromise safety, disconnect the electrical supply from the circuit until repairs are complete. If the fault cannot be corrected immediately but continued operation is necessary, use an adequate temporary solution. This should be reported to the owner of the equipment so all parties are aware of the condition.

Initial Safety Checks Include:

- Verify that capacitors are discharged in a safe manner to avoid sparking.
- Confirm that no live electrical components or wiring are exposed while charging, recovering, or purging the system.
- Maintain continuity of grounding (earthing).

Inspection of Cable

Check cables for wear, corrosion, overvoltage, vibration, and sharp edges or other adverse effects from the surrounding environment. During inspection, consider the impact of aging on the continuous vibration of the compressor and fan.

Leakage Check of R32 Refrigerant

NOTE: Check for leaks in an environment where there is no potential ignition source. Do not use halogen probes or any other detector that uses an open flame.

Leak Detection Method:

For systems with R32 refrigerant, an electronic leak detection instrument is available to detect and locate leaks. Leak detection should not be conducted in an environment with refrigerant present. Make sure the leak detector is fully powered (with external ignition source) and is suitable for the refrigerant being used. Set the detector to detect the minimum ignitable fuel concentration (percentage) of the refrigerant. Calibrate and adjust the detector to the proper gas concentration (no more than 25%) using the gas type being serviced.

The fluid used in leak detection must be suitable for most refrigerants. Do not use chlorine-based solvents, as they may react with the refrigerant and cause corrosion of copper piping.

If gas leakage is detected, remove all fire sources from the scene or extinguish any open flames. If a leak requiring brazing is found, all refrigerants must be recovered, isolated, or evacuated away from the leak site (using suitable valving) before and during welding. Use only dry nitrogen during the welding process.

MAINTENANCE NOTICE

Removal and Vacuum Pumping

1. **Verify there is no ignition source near the outlet of the vacuum pump** and that ventilation is adequate.
2. **Allow the maintenance and other operations** of the refrigeration circuit to proceed according to standard procedures. However, the following best practices regarding flammability must always be kept in mind. You should follow these safety procedures:

- Remove the refrigerant
- Decontaminate the pipelines by purging with inert gases.
- Evacuate the system.
- Decontaminate the pipeline again by purging with inert gases.
- Open the system by cutting or brazing.

3. **The refrigerant should be returned to the appropriate storage tank.** The system should be blown with oxygen-free nitrogen to ensure safety. This process may need to be repeated several times. Do not perform this operation using compressed air or oxygen.

4. **Purging with Nitrogen:**
   Through the purging process, the system is charged with anaerobic nitrogen to reach the working pressure under which work can be performed. After purging, nitrogen is released to the atmosphere, and the system is evacuated to clear any remaining gas. Repeat this process until all refrigerants in the system are removed. After the refrigerant is evacuated, break the vacuum by releasing gas into the atmosphere under pressure, then the system can be welded. This operation is necessary for welding the pipeline.

Procedures of Charging Refrigerants

In addition to the general procedure, the following requirements must be followed:

- Ensure that contamination between different refrigerants does not occur when using a refrigerant charging device. The pipeline for charging refrigerants should be as short as possible to reduce the amount of residual refrigerants in it.
- Storage tanks should remain vertically upright.
- Verify that all purging solutions have been used before charging the refrigeration system.
- After finishing the charging process (or when it is not yet complete), label the system with the appropriate markings.
- Do not overcharge refrigerants.

MAINTENANCE NOTICE

Scrap and Recovery

Scrap:

Before performing this procedure, the technical personnel must be thoroughly familiar with the equipment and all its features, and must adopt a recommended practice for refrigerant-safe recovery. For recycling the refrigerant, analyze the refrigerant and oil samples before disposal. Ensure power is available before starting work.

Safety Procedures:

1. Be familiar with the equipment and its operation.
2. Disconnect power before beginning work.
3. Before carrying out this process, ensure the following:
   - All necessary mechanical equipment operation is properly facilitated.
   - The area is well-ventilated.
   - All personal protective equipment (PPE) is effective and can be used correctly.
   - The whole recovery process should be carried out under the supervision of qualified personnel.
   - The recovery equipment and storage tank comply with all relevant national standards.
4. If possible, the refrigerating system should be vacuumed.
5. Even if the vacuum cannot be achieved, extract the refrigerant from each part of the system as completely as possible.
6. Before starting recovery, verify that the storage tank has sufficient capacity.
7. Start and operate the recovery equipment according to the manufacturer's instructions.
8. Do not fill the tank to full capacity (the liquid injection volume must not exceed 80% of the tank volume).
9. Even if the saturation is short, it must not exceed the maximum working pressure of the tank.
10. After the completion of the tank filling and the end of the operation process, verify that the tanks and equipment are removed quickly and all closing valves in the equipment are closed.
11. The recovered refrigerants are not allowed to be injected into another system be fore being purified and tested.

NOTE: The identification label should be made after the appliance is scrapped and refrigerants are evacuated. The identification label should indicate that the appliance has been scrapped and that the flammable refrigerant has been removed. This reflects that the appliance can safely contain flammable refrigerants.

MAINTENANCE NOTICE

Records:

1. The clearance of refrigerants in the system is required when repairing or scrapping the appliance. It is recommended to completely remove the refrigerant from the appliance to ensure safety.

2. Sampling is required prior to starting work on the refrigeration circuit or storage tank. Verify that the capacity of the tank is appropriate for the refrigerant injection quantity being used. All tanks intended for use in the recovery of refrigerants should have a refrigerant identification label (e.g., refrigerant recovery tank). Storage tanks should be equipped with pressure relief valves.

3. The recovered refrigerant, whether recycled or not, should be returned to storage tanks. The tanks should be evacuated and maintained at room temperature before use.

4. The recovery equipment should be kept in a good working condition and equipped with operational instructions for easy access. The equipment should be suitable for recovering various refrigerants and have on-site residues that can be safely stored. Only use hoses and assembly apparatus which can be normally used. The hose should be linked with detachable connection joints or zero-leakage valves and be kept in a good condition.

5. Before using the recovery equipment, check that it is in good condition and properly maintained. If electrical components are sealed to prevent electrical damage, verify they are not adversely affected or damaged by wear. If you have any questions, consult the manufacturer.

6. If the recovered refrigerant is loaded into a cylinder attached with a transporting instruction, return it to the refrigerant manufacturer. Do not mix refrigerant types in recovery equipment or storage tanks.

7. The space loading R32 refrigeration cannot be enclosed in the process of transportation. Take all electrostatic measures if necessary during transportation. In the process of transport, loading, and unloading, necessary protective measures must be taken to protect the air conditioner to ensure it meets national air-conditioning standards that apply when used.

8. When removing the compressor or clearing the compressor oil, verify that the compressor is pumped to an appropriate level to ensure there is no residual R32 refrigerant in the lubricating oil. Vacuum pumping should be carried out before the compressor is returned to the supplier. Ensure that you are not discharging oil from the system.

ELECTROLUX is a pending or registered trademark used under license from AB Electrolux (publ).