



**powercool**  
**handy**

# POWERCOOL HANDY

## User Guide



Effective February 13, 2025

Please ensure you read the User Guide before using this product.

## Table of Contents

1. Safety Precautions	Page 03~04
2. Product Overview and Components	Page 05~06
3. Control Panel Functions and Instructions	Page 07~08
4. Installation and Usage Instructions	Page 09~19
5. Cleaning and Maintenance Instructions	Page 19~20
6. Refrigerant Refill Instructions	Page 21~24
7. Installation Considerations	Page 25
8. Troubleshooting Checklist	Page 26
9. Product Specifications	Page 26

Precautions are categorized into two types: 'Warning' and 'Caution', which signify the following:



This symbol is used to highlight actions or situations that may involve risks. Sections marked with this symbol should be read carefully, and the instructions must be followed to avoid potential hazards.



## **Warning**

Ignoring these warnings may lead to serious injury or even death.



## **Caution**

Disregarding these cautions may result in minor injury or damage to the product.



## **Warning**

- Do not alter or disassemble the power connection line at your own discretion. This can result in fire or electric shock.
- Do not store or use explosive or combustible materials near the product. This can lead to fire and product malfunction.
- If the product emits an unusual sound, smell, or smoke, immediately turn off the power and contact customer support. Continuing to use the product could result in fire or malfunction.
- Always remove the battery and unplug the power cord when the product is not in use or when cleaning the filter.
- Do not disassemble the product at your own discretion while it is in operation. This can lead to malfunction and electric shock.
- Keep the product in a secure location, out of reach of children.
- To avoid fire or electric shock, do not disconnect the power or touch the product with wet hands.
- Ensure that the Refrigerant Hose is not stepped on or compressed by heavy objects.
- Do not fold the Refrigerant Hose, as this can obstruct or disrupt the flow of refrigerant.
- Extending the power line or using it with other products can lead to overheating and potential fire hazards.
- When unplugging the power cord, hold the plug and pull it out, avoiding pulling the cord.
- Avoid placing the power cord under heavy objects or allowing it to come into contact with sharp edges.
- Avoid using hazardous chemicals when cleaning the product.
- Do not apply alcohol, pesticides, or flammable sprays to the product.

If the product requires repair, ensure that aftersales service is performed by a qualified technician or through the customer center.

# Safety Precautions

---



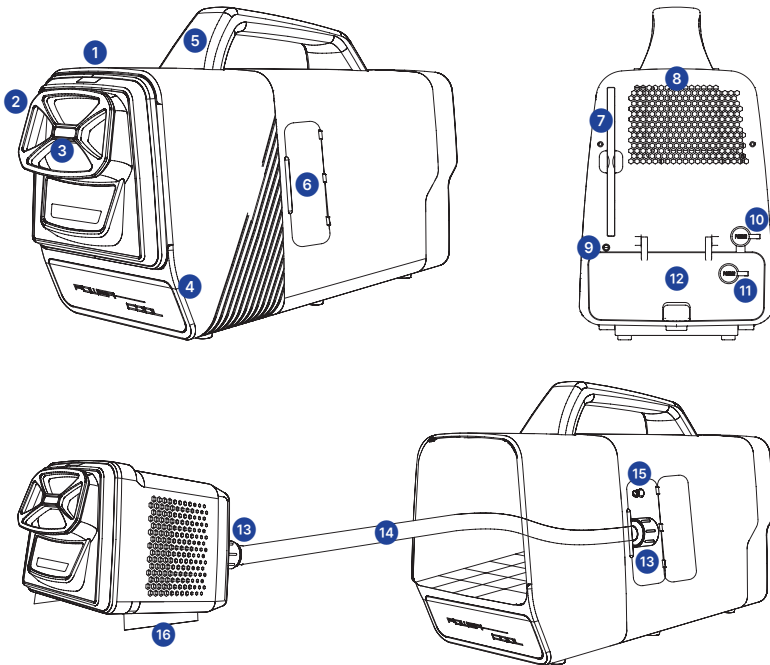
## Caution

- Assemble and use the product according to the instructions in the User Guide.
- Do not place heavy items on top of the product.
- Ensure that the product is not subjected to any impact.
- When turning the power off, do not unplug the power plug first. Instead, use the operation button to switch to the power-off state, and then unplug the power plug.
- If the surface of the heat exchanger and filter are contaminated, the cooling capacity decreases, which can cause failure. Clean and remove dust regularly.
- Ensure the product is used in a well-ventilated area to prevent clogging of the air inlet.
- Do not insert hands or other foreign objects into the air inlet or outlet during operation.
- Ensure the product is placed on a flat, stable surface in a safe location. Improper placement can cause damage, excessive noise, or vibration.
- When using adapters and batteries, avoid direct sunlight and keep them in a shaded area.
- Use the dedicated tool (the Refrigerant Hose Assembly Ratchet) for detaching and assembling indoor and outdoor units.
- When using the Refrigerant Hose Assembly Ratchet, do not apply excessive force and follow the proper usage instructions.
- Ensure that children do not use the product alone; they should only use it under adult supervision.
- Use only the appropriate components designed for this product.
- Improper use can result in electric shock or short circuit fires.
- Refrain from using the product outdoors during thunderstorms or heavy rain.
- In very high humidity, the product may not operate correctly due to potential damage to its components.
- When adding refrigerant to this product, contact the A/S center or carefully review and follow the Refrigerant Refill Instructions.



# Product Overview and Components

## Main Components



- 1 Control Panel
- 2 Air Outlet
- 3 Temperature Display
- 4 LED Lamp
- 5 Handle
- 6 Refrigerant Hose Connection Door
- 7 Filter
- 8 Exhaust Vent
- 9 Condensate Drain
- 10 Adapter Power Connection
- 11 Battery Power connection
- 12 Battery Door
- 13 Quick Connector for Refrigerant Hose Connection
- 14 Refrigerant Hose
- 15 Refrigerant Charging Port
- 16 Indoor Unit Stand

! The battery mentioned in this User Guide is sold separately.

! Design specifications may change without notice to maintain optimal product performance.

# Product Overview and Components

## Additional Components and Battery

Flexible Refrigerant Hose



Cooling Dual Duct



AC/DC Adapter



Refrigerant Hose Assembly Ratchet



Remote Control



Drain Hose



User Guide



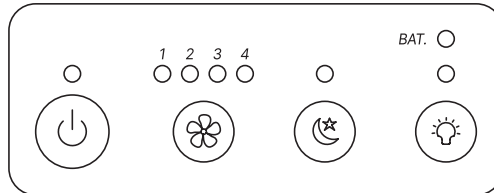
Battery (Sold Separately)



! The battery mentioned in this User Guide is sold separately.

# Control Panel Functions and Instructions

## Main Unit Control Panel Functions



### POWER Button

Start and Stop Operation



### Air Volume Control Button

Cooling Operation and Air Volume Adjustment



### SLEEP Button

Sleep Mode Activation



### LED Buttons

Lighting ON/OFF



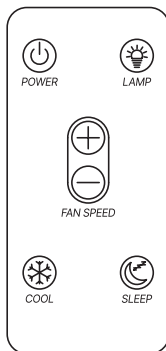
### Low Battery Warning Lamp

Red Light Indicates Low Battery

## Main Unit Control Panel Instructions

1. Upon connecting the adapter to the air conditioner (refer to Adapter Connection Instructions on page 9), power will be supplied, the temperature display will be activated, and the BAT. lamp will be illuminated.
2. When the POWER button is pressed while power is supplied, the lamp on the button will light up, indicating that the air conditioner is in ready mode.
3. In ready mode, press the Air Volume Control Button. The first-stage indicator will light up, and the Cooling Mode will begin.
4. By pressing the Air Volume Control Button repeatedly, you can adjust the air volume across four stages, from 1st to 4th.
5. When the SLEEP button is pressed, the indicator lamp above the button will light up, and the air conditioner will enter Sleep Mode.
6. When the LED button is pressed, the indicator lamp above the button will light up, and the LED light on the front of the air conditioner will turn on. Press the LED button again to turn off the LED light.
7. If you press the POWER button while the air conditioner is operating, it will stop and switch to ready mode. (Please note that even after the air conditioner stops, the outdoor unit fan and compressor will continue running for approximately 5 seconds before shutting down.)
8. When the POWER button is pressed in ready mode, the air conditioner will switch to standby mode, and the drain pump will operate for 30 seconds. (Do not disconnect the adapter during this time.)

# Control Panel Functions and Instructions



## Remote Control Functions



### POWER Button

Start and Stop Operation



### LAMP Button

Lighting ON/OFF



### Air Volume Increase Button

Increase air volume



### Air Volume Decrease Button

Decrease air volume



### COOL Button

Start Cooling Mode



### POWER Button

Start and Stop Operation

## Remote Control Instructions

1. Upon connecting the adapter to the air conditioner (refer to Adapter Connection Instructions on page 9), power will be supplied, the temperature display will be activated, and the BAT. lamp will be illuminated.
2. When the POWER button is pressed while power is supplied, the lamp on the button will light up, indicating that the air conditioner is in ready mode.
3. In ready mode, press the COOL Button. The first-stage indicator will light up, and the Cooling Mode will begin.
4. By pressing the Air Volume Control Button (+, -) repeatedly, you can adjust the air volume across four stages, from 1st to 4th
5. When the SLEEP button is pressed, the indicator lamp above the button will light up, and the air conditioner will enter Sleep Mode.
6. When the LAMP button is pressed, the indicator lamp above the button will light up, and the LED light on the front of the air conditioner will turn on. Press the LAMP button again to turn off the LED light.
7. If you press the POWER button while the air conditioner is operating, it will stop and switch to ready mode. (Please note that even after the air conditioner stops, the outdoor unit fan and compressor will continue running for approximately 5 seconds before shutting down.)
8. When the POWER button is pressed in ready mode, the air conditioner will switch to standby mode, and the drain pump will operate for 30 seconds. (Do not disconnect the adapter during this time.)



Point the remote control towards the front Temperature Display window of the air conditioner.



Impact may cause damage to the remote control.



Please use the approved CR2025 3V battery for the remote control.

# Installation and Usage Instructions

## Adapter Connection



1. Open the rubber cap of the adapter power connection located on the rear side of the POWERCOOL Handy.



2. Connect the adapter by aligning it with the groove of the power connection port.



3. Plug the adapter's 100-240V power cord into an outlet.



4. When the adapter is plugged in, a green light will illuminate on the adapter body.



5. When POWERCOOL Handy switches to Standby Mode, the Temperature Display will turn on, and the BAT. lamp on the control panel will illuminate.

# Installation and Usage Instructions

---

## Battery Installation



1. Lift the lock on the battery door located on the outdoor unit of the POWERCOOL Handy, and then open the door.



2. Insert the battery by pushing it into place with the POWER button facing upward.



3. Press the POWER button to turn it on.



4. Connect the battery power cable by aligning it with the grooves on the battery power connectors of the air conditioner and the battery.



5. When POWERCOOL Handy switches to Standby Mode, the Temperature Display will turn on, and the BAT. lamp on the control panel will illuminate.

# Installation and Usage Instructions

---

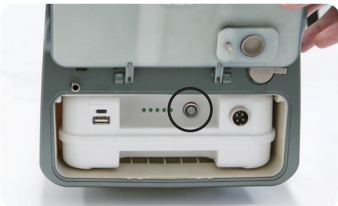
## Battery Removal



1. Disconnect the battery power cable from the air conditioner and the battery.



2. Lift the lock on the battery door of the outdoor unit and open the door.



3. Turn off the power by pressing the battery power button.



4. Pull the battery forward to remove it.

# Installation and Usage Instructions

---

## Cooling Dual Duct Connection



1. Align the upper hook of the cooling dual duct, marked with 'PUSH', with the upper groove of the indoor unit's air outlet and insert it.



2. After inserting the upper hook into the groove, gently push the duct downward to lock the bottom hook into place.

## Cooling Dual Duct Removal



1. Press the 'PUSH' mark on the upper part of the cooling dual duct with both hands.

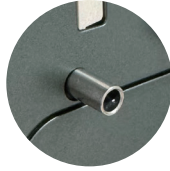


2. Remove the duct by pulling it slightly downwards.



# Installation and Usage Instructions

## Drain Hose Connection



1. Connect the drain hose to the condensate drain port located on the rear side of POWERCOOL Handy.



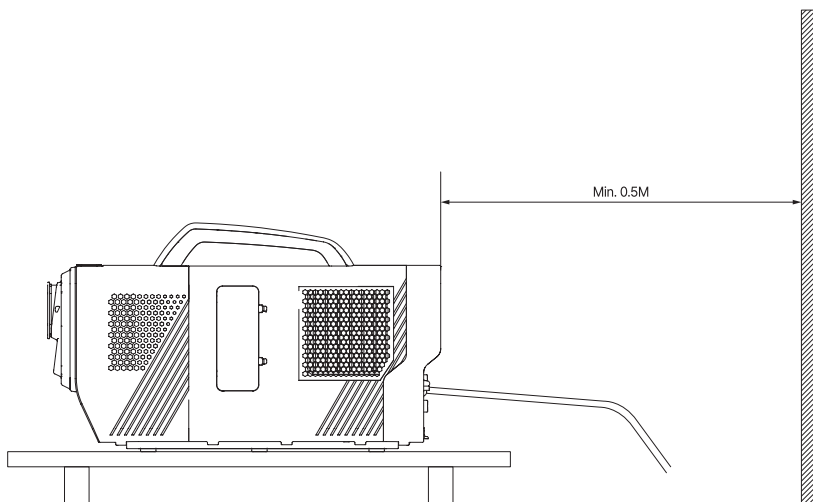
2. Position the end of the drain hose in a suitable location for proper drainage.

- ⚠ Secure the drain hose firmly, ensuring there are no twists or kinks that could obstruct water flow before use.
- ⚠ Keep the end of the drain hose facing downward as much as possible.
- ⚠ Ensure the drain hose is not twisted to allow smooth drainage.

# Installation and Usage Instructions

---

## Precautions for Use – Single Unit Operation



- Keep the unit level on a flat surface during use and installation.
- Ensure there are no walls or obstacles within 0.5 meters (1.6 feet) of the exhaust vent.
- Do not block the exhaust vent or drain. This can cause damage to the unit.
- When using an adapter or battery, avoid direct sunlight and place the unit in a shaded area.
- If the ambient temperature is outside the recommended operating range, create a cooling area using cloth, partitions, etc.. The recommended ambient temperature for use is 25°C (77°F) to 35°C (95°F).
- Be cautious about waterproofing when using the unit outdoors or during rainy days.
- Prevent foreign objects from entering or obstructing the exhaust vent or drain.
- Position the end of the drain hose facing downward to ensure smooth drainage, and make sure the drain hose is not twisted.
- Do not use the unit in an enclosed space (when operating as an integrated single unit).

# Installation and Usage Instructions

## Precautions for Use – Split Units Operation



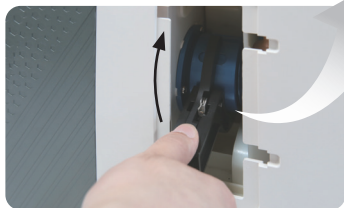
- Keep the unit level on a flat surface during use and installation.
- Ensure there are no walls or obstacles within 0.5 meters (1.6 feet) of the exhaust vent.
- Do not block the exhaust vent or drain. This can cause damage to the units.
- It is recommended to use a shade screen to prevent direct sunlight.
- When using an adapter or battery, avoid direct sunlight and place the units in a shaded area.
- If the ambient temperature is outside the recommended operating range, create a cooling area using cloth, partitions, etc.. The recommended ambient temperature for use is 25°C (77°F) to 35°C (95°F).
- Be cautious about waterproofing when using the units outdoors or during rainy days.
- If there is a vent in the area where the indoor unit is located, it is recommended to close the vent during use.
- Prevent foreign objects from entering or obstructing the exhaust vent or drain.
- Be careful not to twist the drain hose for smooth drainage.

# Installation and Usage Instructions

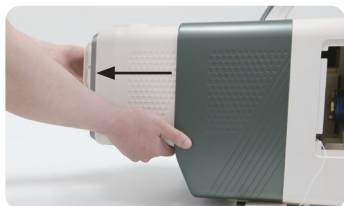
## From Single Unit to Split Units



1. Open the refrigerant hose connection cover.



2. Use the ratchet to rotate the connector nut from bottom to top until it is fully detached. (Ensure the ratchet's pawl is positioned below the nut and aligned with the nut groove of the connector before turning.)



3. Once the connector nut is fully disconnected, pull the indoor unit forward to detach it.

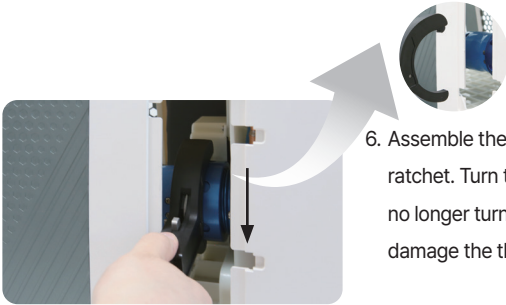


4. Position the refrigerant hose. Ensure that the side with the nut is directed towards the outdoor unit, and the side without the nut is directed towards the indoor unit.



5. Use the ratchet to align the indoor unit and refrigerant hose with the groove of the guide pin and turn the connector nut in the 'CLOSE' direction to lock it.

# Installation and Usage Instructions



6. Assemble the outdoor unit and refrigerant hose using the ratchet. Turn the connector nut from top to bottom until it no longer turns. (Avoid applying excessive force, as this may damage the threads.)



7. Close the refrigerant hose connection cover.



8. Set up the indoor unit stands, if needed.

## From Split Units to Single Unit



1. Using the ratchet, turn the connector nut to the 'OPEN' position to fully disconnect the refrigerant hose from the indoor unit. (Ensure the ratchet's pawl is aligned with the nut groove of the connector before turning.)

⚠ Be sure to refer to the precautions on page 25 when installing.

## Installation and Usage Instructions

---



2. Open the refrigerant hose connection cover.



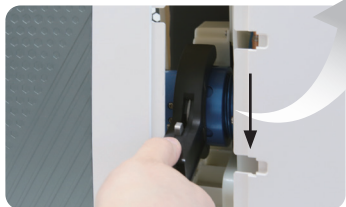
3. Using the ratchet, turn the connector nut of the refrigerant hose on the outdoor unit from bottom to top until the hose is fully detached. (Ensure the ratchet's pawl is aligned with the nut groove of the connector before turning.)



4. Insert the indoor unit into the outdoor unit. (Ensure the indoor unit stands are folded.)



5. Hand-tighten the nut slightly in a clockwise direction with the indoor and outdoor units in contact. Turn gently from top to bottom (clockwise) to secure the lock.



6. Using the ratchet, turn the connector nut from top to bottom to secure it. (Avoid applying excessive force, as this may damage the threads.)

# Cleaning and Maintenance Instructions

---



7. Close the refrigerant hose connection door.

⚠ Be sure to refer to the precautions on page 25 when installing.

## Indoor Unit Filter



1. Separate the indoor unit and outdoor unit. (applicable when used as a single unit. Please refer to the installation instructions for converting from Single Unit to Split Units).



2. Remove the honeycomb-patterned filter on the side of the indoor unit by pressing the two vertically aligned hooks.



3. Thoroughly wash the removed filter under running water.

# Cleaning and Maintenance Instructions

---



4. Dry completely before reassembling for use.

## Outdoor Unit Filter



1. Grasp the filter handle at the rear of the outdoor unit and pull it out.



2. Thoroughly wash the removed filter under running water.



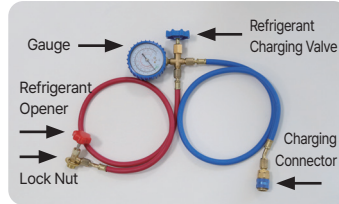
3. After drying it completely, reassemble and use it. When reassembling, ensure the top and bottom parts of the filter are correctly positioned and aligned.

⚠ The cleanliness of the filter impacts product efficiency, so clean it regularly before and after use.



# Refrigerant Refill Instructions

## Refrigerant Charging



<Refrigerant Charging Kit >



ⓘ Different refrigerant charging kit manufacturers may use varying connector types. Please refer to the manufacturer's manual for detailed instructions.

1. Prepare a 134a refrigerant charging kit. Ensure that POWERCOOL Handy is set up as Split Units, with the indoor and outdoor units separated.

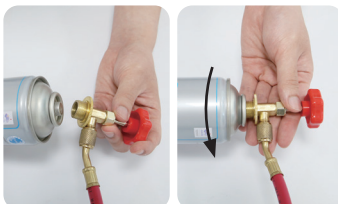


2. Precautions for refrigerant charging kit before charging the refrigerant.

(1) Completely CLOSE the refrigerant charging valve.



(2) Fully OPEN the refrigerant opener handle.



3. Connect the refrigerant opener to the refrigerant can.

(1) Connect the male screw of the refrigerant opener to the female screw of the refrigerant can. Rotate the refrigerant can to assemble.

## Refrigerant Refill Instructions

---



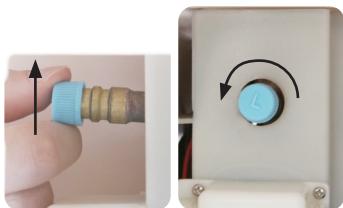
(2) Tighten and secure the lock nut.



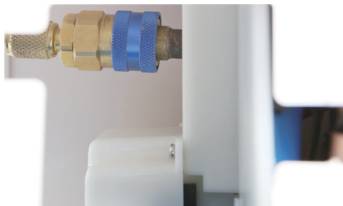
(3) CLOSE the refrigerant opener handle. (Caution: If the refrigerant charging valve is in the OPEN position, refrigerant may leak out.)"



(4) Secure the refrigerant can in an upside-down position. (For optimal refrigerant charging, it is recommended to keep the can upside down.)



4. Remove the refrigerant port protection cap on the outdoor unit by turning it.

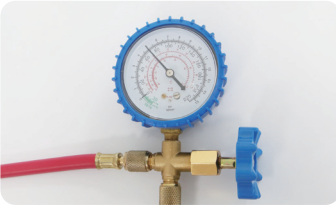


5. Connect the charging connector to the refrigerant port on the outdoor unit. (Hold the charging connector and slide it into the refrigerant port until it clicks. Ensure that the connector is fully connected.)

ⓘ Different refrigerant charging kit manufacturers may use varying connector types. Please refer to the manufacturer's manual for detailed instructions.

# Refrigerant Refill Instructions

---



6. After connecting the charging connector, check that the gauge pressure has increased. (If the gauge pressure does not rise, the refrigerant is depleted and you should contact the service center.)



7. Adjust the air volume of POWERCOOL Handy to operate at the fourth stage.



8. Fully OPEN the refrigerant opener handle.

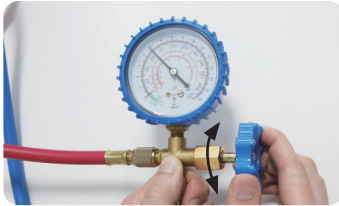


9. Slowly OPEN the refrigerant charge valve handle. Monitor the refrigerant pressure on the gauge while charging. (Charge the refrigerant according to the R-134a Temperature Pressure Chart.)



10. Alternate the valve handle between the 'OPEN' and 'CLOSE' positions to ensure the desired pressure is reached. (When opening the valve handle for the first time, refrigerant will be charged as the gauge pressure rises above the set level.) As the setting pressure is approached, close the valve and monitor the gauge pressure for approximately 10 minutes.

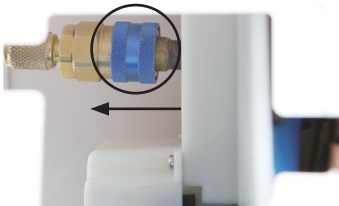
# Refrigerant Refill Instructions



11. After approximately 10 minutes, if the desired pressure has not been reached, repeat the process of turning the valve handle in the 'OPEN' and 'CLOSE' directions to adjust the pressure setting.



12. If the refrigerant charging is complete, close the refrigerant charge valve handle.



13. Pull back the sleeve of the charging connector and remove it.

R-134a Temperature Pressure Chart	
Ambient Temperature	Low-Pressure Gauge
18(°C)	25~35 psi / 1.7~2.4 bar
21(°C)	35~40 psi / 2.4~2.7 bar
24(°C)	35~45 psi / 2.4~3.1 bar
27(°C)	40~50 psi / 2.7~3.4 bar
29(°C)	45~55 psi / 3.1~3.8 bar

R-134a Temperature Pressure Chart	
Ambient Temperature	Low-Pressure Gauge
32(°C)	45~55 psi / 3.1~3.8 bar
35(°C)	45~55 psi / 3.1~3.8 bar
38(°C)	45~55 psi / 3.1~3.8 bar
41(°C)	45~55 psi / 3.1~3.8 bar
43(°C)	45~55 psi / 3.1~3.8 bar

### Precautions for Using the Ratchet

<Applicable when transitioning from Single Unit to Split Units / Split Units to Single Unit>



When rotating the connector nut with the ratchet, ensure the nut groove and the ratchet's pawl are properly aligned before turning.



After installing or removing the connector nut, push the button on the ratchet upward for easy detachment from the nut.

⚠ Tighten the nut until it no longer rotates, but avoid applying excessive force as it may damage the threads.

# Troubleshooting Checklist

## Troubleshooting Checklist

Problem : When the product doesn't turn on	
Cause	Solution
Poor power connection	Verify that the power cord is securely connected and reconnect it to a different outlet.

Problem : When air conditioning performance is weak	
Cause	Solution
Clogged air inlet or exhaust vent	Check the installation location and instructions, and remove any surrounding obstacles.
Contaminated filter	Clean the filter.
Low refrigerant level	Contact the after-sales service center.

Problem : Excessive noise and vibration	
Cause	Solution
Clogged with dust or insects	Clean the filter.
Improper installation location	Move to a flat surface.
Sound of flowing water	The sound of flowing water is normal due to refrigerant circulation.

Problem : When the compressor is not working	
Cause	Solution
Compressor protection function is activated.	Wait 10 minutes after the protection mode is complete.

Contact Information for Reporting a Breakdown

**+82-55-715-8868**  
**powerair@powercoolair.com**

## Product Specifications

Powercool Handy	
Cooling Capacity	650W
Power Source	DC 24V (220V/DC 24V, 10A Adapter)
Dimension for Indoor Unit	200(W) x 265(D) x 200(H)
Dimension for Outdoor Unit	220(W) x 620(D) x 300(H)
Weight for Indoor Unit	8 lb (appx. 3.6 kg)
Weight for Outdoor Unit	17.5 lb (appx. 7.9 kg)
Weight for Refrigerant Hose (Based on 1.5m)	5.5lb (appx. 2.5 kg)
Power Consumption	240W
Running Current	10A
Refrigerant	R-134a

Battery	
Battery Type	18650 Lithium-Ion Polymer Battery
Battery Capacity	24V 40Ah 960Wh
Dimension for Battery	195(W) x 535(D) x 68(H)
Weight for Battery	10.5 lb (appx. 4.7 kg)

## **POWERCOOL**

Address: 17, Sinsojaesandan 2-ro, Jangan-eup, Gijang-gun, Busan, 46031 South Korea

TEL: +82-55-715-8868

E-mail: [powerair@powercoolair.com](mailto:powerair@powercoolair.com)

Web: [www.powercoolair.com](http://www.powercoolair.com)