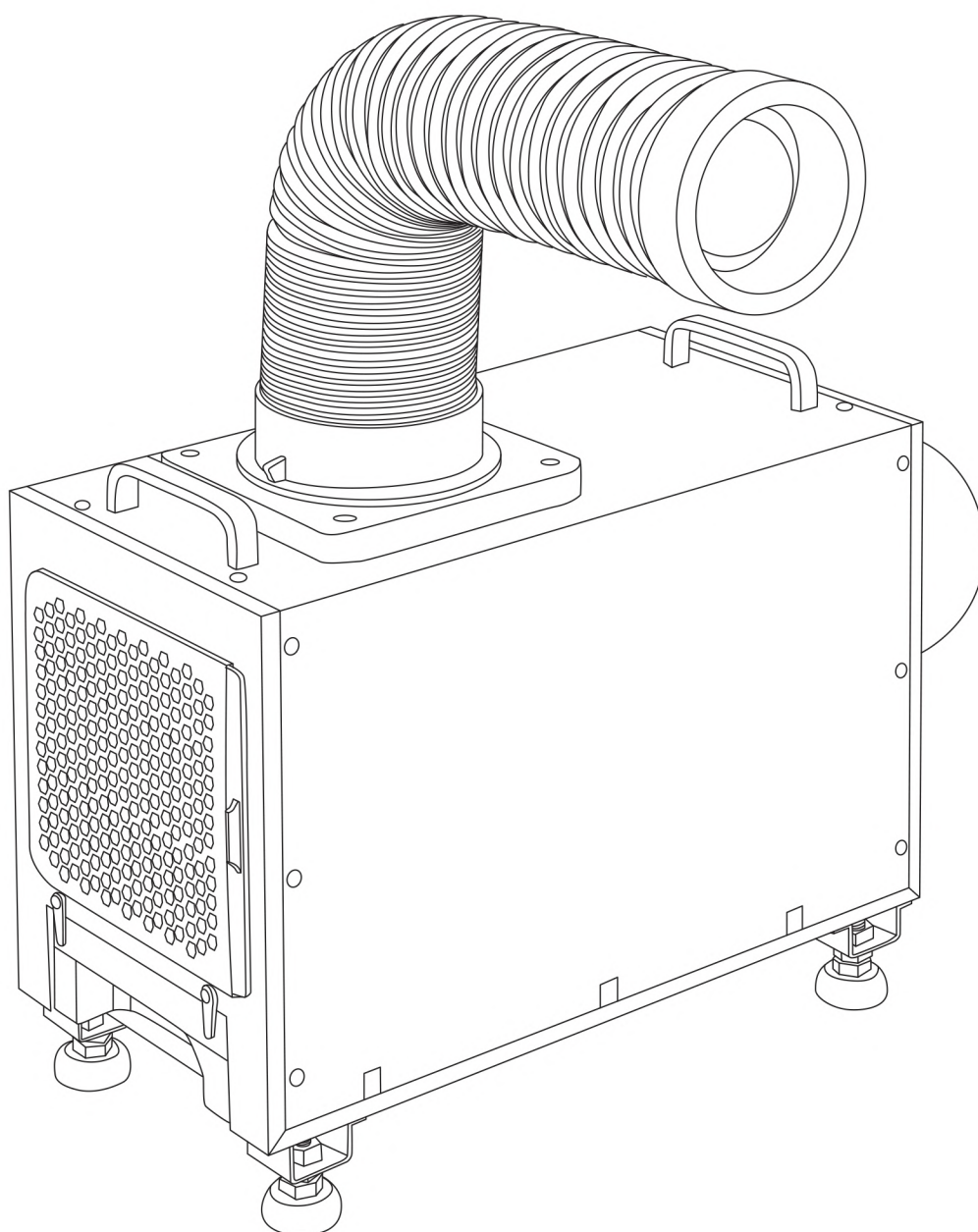




COMPACT DC COOLER

SAC-500

Instruction Manual



Thank you for purchasing our product.

Please be sure to read this instruction manual before use.

Also, please keep this manual in a safe place.



BEFORE USE

- This device should be used in an environment where the surrounding temperature is between 59°F and 104°F (or up to 113°F when using a high-temperature direct connection cord). If used below 59°F, cold air may condense and cause damage to the unit.





FILTER MAINTENANCE



- Regularly clean the filter. If the filter is dirty, condensation may form inside the unit, leading to malfunctions.

【Safety Precautions】







- Before use, carefully read and follow the safety precautions to ensure proper operation.
- The warnings listed here contain important information that could result in serious injury or damage if not followed. Please adhere to them strictly.
- After reading, store this document in a location where it can be easily referenced if needed.

○ Displays and Their Meanings
















Display	Meaning of Display
 Warning	Indicates content that, if handled incorrectly, may result in death or serious injury.
 Caution	Indicates content that, if handled incorrectly, may result in injury or property damage.

Symbol	Meaning of Symbol
	⊘ This symbol indicates prohibited actions (things not to do). Specific prohibited actions will be described in text or illustrations.
	● This symbol indicates actions that must be performed. Specific mandatory actions will be described in text or illustrations.






Warning

	Do not modify the device under any circumstances. There is a risk of fire, electric shock, or injury.
	Use only DC 12V/24V/36V/48V power sources. Using a power source other than DC 12V/24V/36V/48V may cause fire or electric shock.
	Check the polarity (+ and -) of the battery carefully before connecting. Incorrect connection may cause damage to the device.
	Do not short-circuit the battery terminals (+ and -). This can lead to accidents. If using a high-temperature direct connection cord, disconnect the power connector from the unit and ensure it is protected from dust or debris.
	Only qualified technicians should disassemble or repair the device. There is a risk of fire, electric shock, or injury. If repair is needed, please contact the retailer or customer service.
	Use only the provided DC plug and insert it firmly into the cigarette lighter socket. If the DC plug is not inserted all the way into the socket, it may generate heat, leading to deformation or fire around the socket.










Warning

	When performing maintenance or installation, always unplug the DC plug from the cigarette lighter socket. Do not unplug it with wet hands, as this may cause electric shock.
	Do not damage, modify, forcibly bend, pull, twist, or place heavy objects on the included cord. Also, do not bundle or store it in a bent state, as this may cause fire or electric shock.
	Do not use a rapid charger for the vehicle battery while the device is in operation. If the rapid charger supplies power to the device, it may cause fire or damage.
	If the DC plug is loose, do not use it. Loose connections in the cigarette lighter socket may cause short circuits, sparks, or fire.
	Do not use the device near flammable substances such as kerosene, gasoline, thinner, paint, etc. There is a risk of fire or explosion.
	Regularly wipe off dust from the DC plug with a dry cloth. If dust accumulates on the DC plug, it may cause poor contact and lead to fire.
	Do not pour water or other liquids on the device, nor use compressed air to clean it. This may cause electric shock or fire.
	Keep the device away from open flames. Deformation due to heat may cause short circuits.
	Do not insert fingers or objects into the cooling and exhaust vents.
	When unplugging the DC plug, always hold the plug itself, not the cord. Pulling the cord may cause damage, leading to fire or electric shock.
	If you are not using the device for an extended period, unplug the DC plug from the cigarette lighter socket. Prolonged connection may lead to fire or electric shock.
	Do not use the device near reactive metals such as aluminum powder, zinc, magnesium, or titanium, as well as gas or steam. There is a risk of fire or explosion.
	If any abnormalities (such as strange smells, unusual noise, smoke, or abnormal heat) occur, stop using the device immediately and unplug the DC plug. Continuing to use it may cause fire or electric shock.
	Use the device in an environment where the ambient temperature is between 59°F and 104°F (or up to 113°F when using a high-temperature direct connection cord). If used below 59°F, condensation may form inside, potentially damaging the device.
	Ensure that the device is placed on a level surface.

Warning

	Prolonged exposure to cold air may be harmful to your health. Avoid direct exposure for extended periods.
	Do not use the device outdoors or in areas where water may come into contact with it.
	If using a power source other than the included battery cord, ensure that the voltage and current capacity of the power source are appropriate before use. Using an improper power source may cause overheating, fire, electric shock, or serious accidents.
	When replacing the fuse, always use one with the specified rating (amperage). Do not use a fuse other than the specified type, and never bypass the fuse.
	Even when the DC plug is securely inserted into the cigarette lighter socket, vibrations may cause slight movement. This can lead to a poor connection, causing the metal parts to heat up or become dirty.

Caution

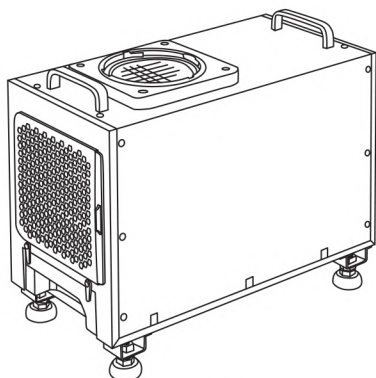
	Do not block the air duct filter or the exhaust vent. Obstruction may reduce airflow, leading to device malfunction.
	Do not place the device on a car seat.
	Do not sit or lean on the device. Doing so may cause it to fall or break, leading to injury.
	Do not place objects on top of the device. In particular, avoid placing liquids on it, as they may seep into the unit and cause damage.
	Do not operate the device without the filter installed. A clogged heat exchanger may cause condensation buildup or damage.
	Do not leave the device running unattended. If you must leave, turn off the switch, unplug the DC plug from the cigarette lighter socket, and cover it.
	When arranging cords, avoid placing them in high-temperature areas.
	Use the device only for its intended purpose.
	Never cut cords or cables during use.

【Specifications】

Power Source	DC12V	DC24V	DC36V	DC48V
Rated Current	12A	5.5A	3.5A	2.5A
Cooling Capacity	0.33kW (1126.62 BTU)			
Compressor	Fully enclosed rotary (Rated output: 25W)			
Drain Water Disposal	1.6L Drain Tank			
Refrigerant	HFC R134a (GWP Value: 1430)			
Refrigerant Charge	80g			
Noise Level	Approximately 60dB			
Rated Operating Time	3 hours			
Dimensions (excluding duct)	Width 8.27" x Depth 22.83" x Height 13.78" - 15.35"			
Weight	Approximately 11kg (24.25lbs)			
Operating Temperature Range	59°F-113°F (with High-temperature Direct Connection Cord)			
	59°F-104°F (with Standard Connection Cord)			

- ※The cooling capacity and electrical characteristics are measured under conditions of 95°F ambient temperature and 60% relative humidity.
- ※Product design and specifications may be changed for improvement without prior notice.
- ※The rated operating time refers to continuous operation. If the unit is used for close to 3 hours continuously, it will stop operating temporarily to allow the unit temperature to decrease before resuming operation.

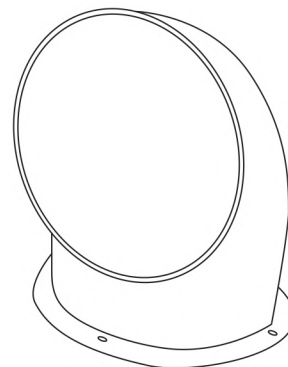
【Package Contents】 ※Actual contents may differ slightly from the images.



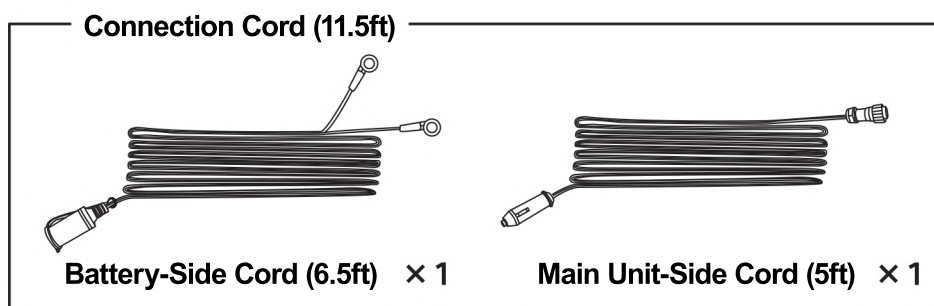
Main Unit × 1



Cooling Air Duct × 1



Exhaust Elbow × 1



Connection Cord (11.5ft)

Battery-Side Cord (6.5ft) × 1

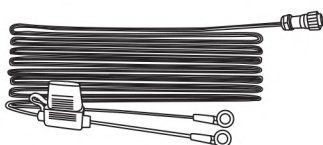
Main Unit-Side Cord (5ft) × 1



Exhaust Elbow Mounting Screws × 4



Magnet Hooks for Cords × 4



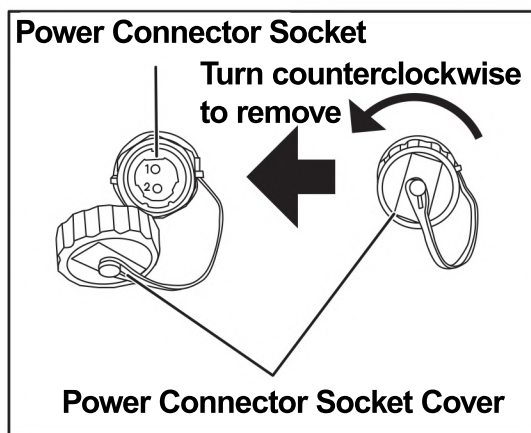
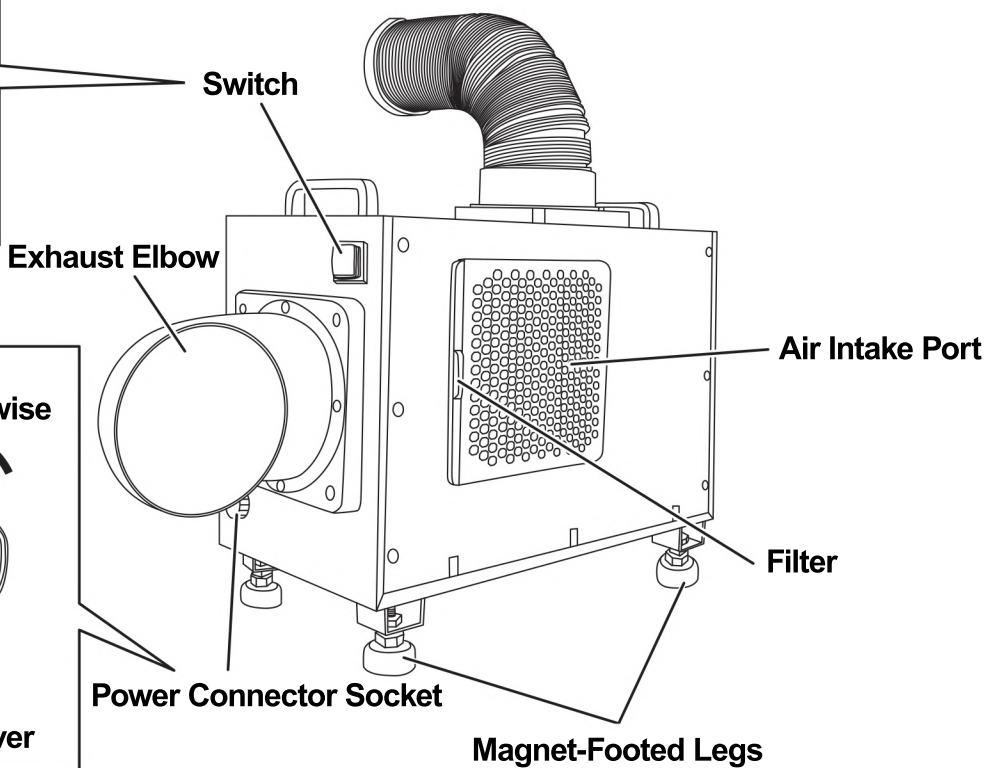
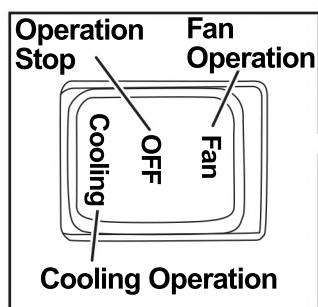
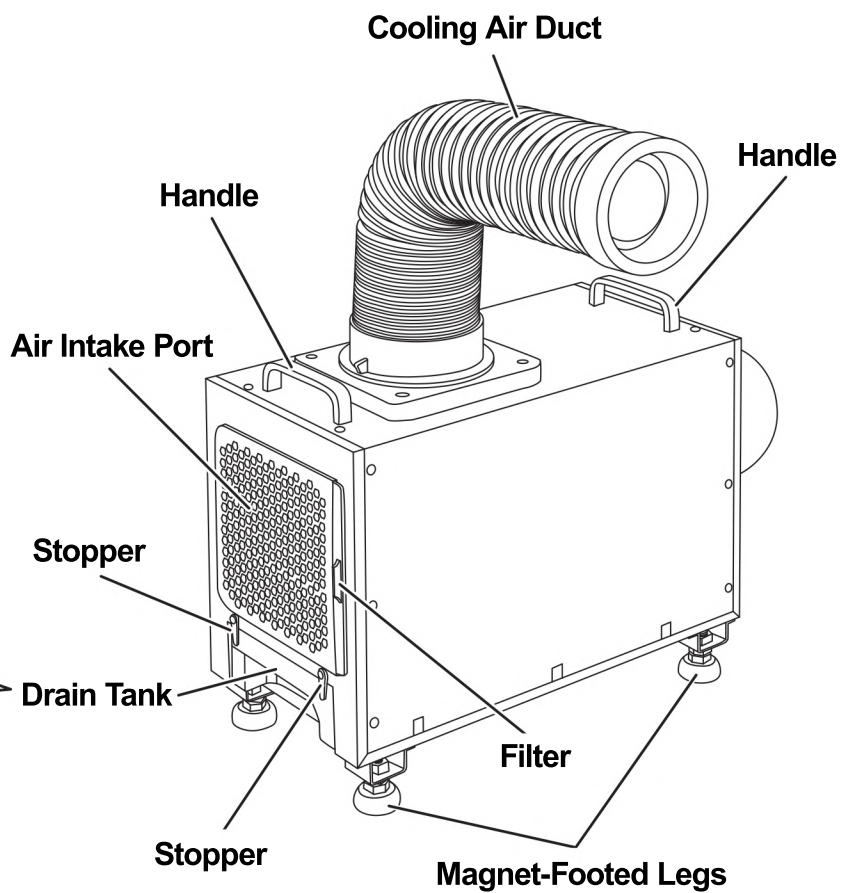
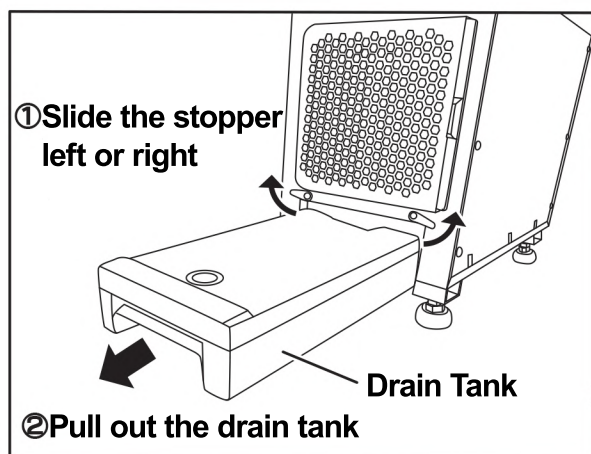
High-Temperature Direct Connection Cord (10ft) × 1

○For Continuous Use Customers

⚠ Caution

- ◆ If using the device at temperatures between 104°F–113°F or for long periods, the cigarette lighter socket and DC plug may generate heat, potentially compromising safety and performance. To ensure safe operation, it is recommended to use the high-temperature direct connection cord and connect the unit directly to the battery instead of the cigarette lighter socket. Always follow the rated operating time to avoid overheating.

【Component Names】



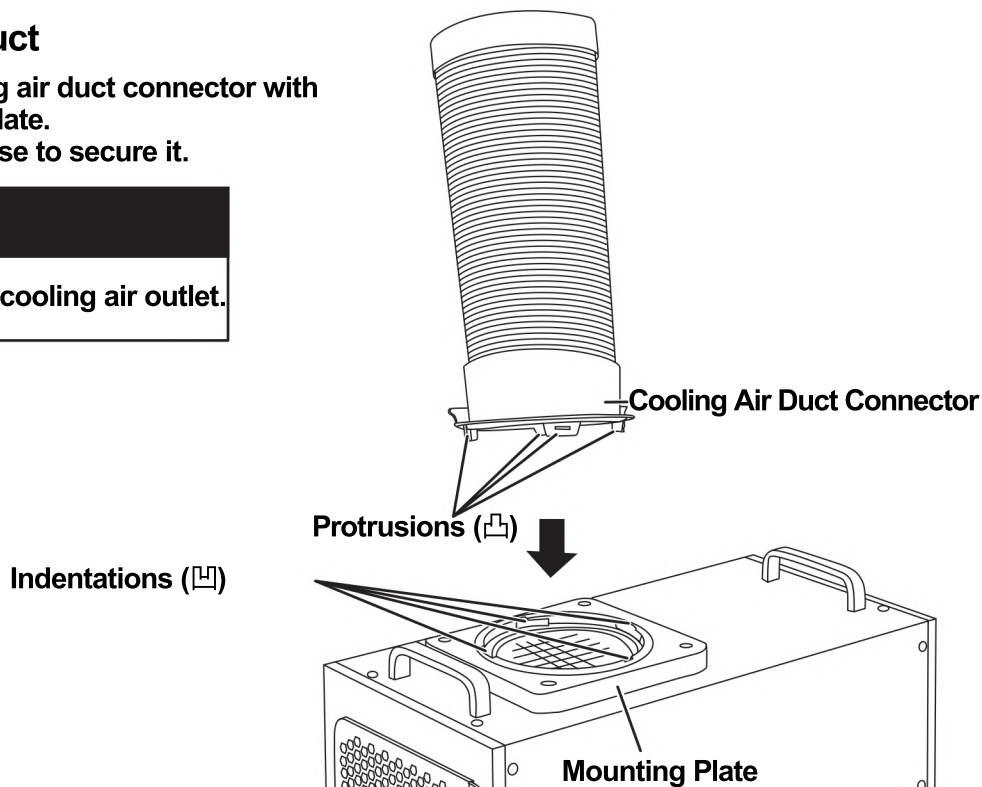
【Installation Instructions】

○Installing the Cooling Air Duct

- Align the protrusions on the cooling air duct connector with the indentations on the mounting plate.
Insert the duct and rotate it clockwise to secure it.

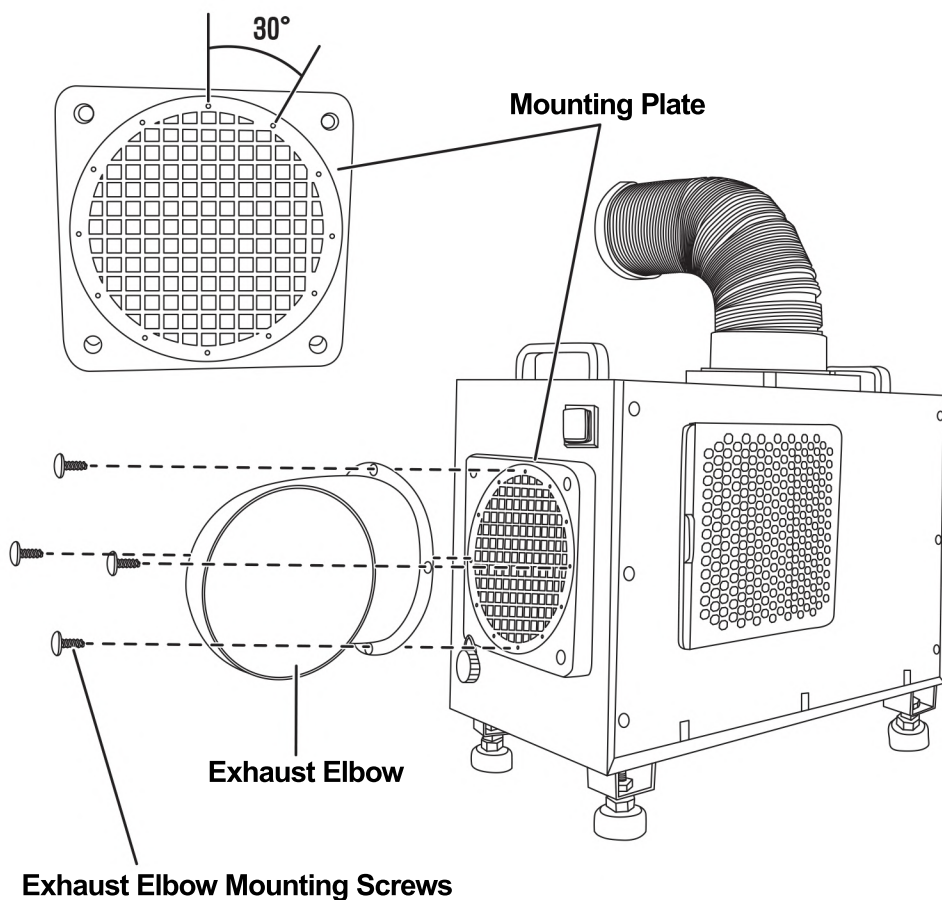
! Caution

- ◆Do not insert any objects into the cooling air outlet.

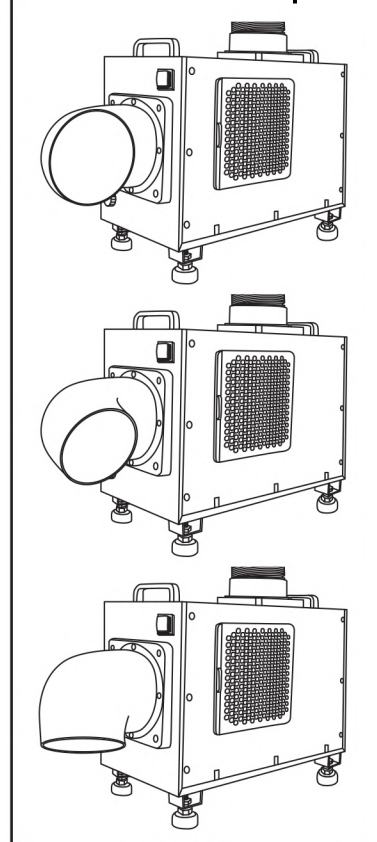


○Installing the Exhaust Elbow

- Securely fasten the exhaust elbow to the mounting plate using the four exhaust elbow mounting screws.
The elbow can be rotated in 30-degree increments for the desired positioning.
Adjust the angle as needed before fully tightening the screws.



Installation Example



○Battery-Side Cable Connection

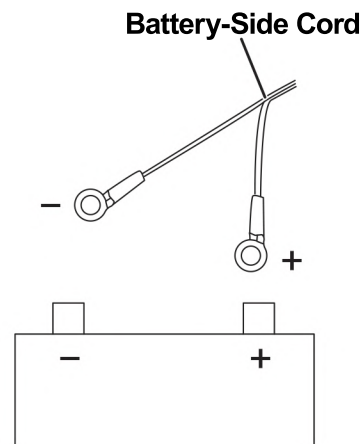
⚠ Caution

- ◆ Do not install on vehicle seats.

- ① Pass the round terminal of the battery-side cord through the cord magnet hook. Check the battery's + and - terminals carefully and securely attach the round terminal of the battery-side cord. Ensure that the round terminal is firmly attached, matching the shape and size of the mounting position.
- ② Attach the cord magnet hook at an appropriate position and route the battery-side cord to avoid entanglement, ensuring that the cigarette socket appears at the installation site.
Warning: Incorrect connection may cause damage to the device. Ensure that the magnet's contact surface is clean before attachment. Avoid pinching the cord in openings or wrapping it around moving parts. Route the cord away from high-temperature areas.

- ◇ The high-temperature-resistant direct connection cord should be attached using the same procedure as the battery-side cord.

Example of Installation
※ Please check carefully with the vehicle manufacturer for proper installation.



○Main Unit Installation

⚠ Caution

- ◆ Do not place obstacles in front of filters, cooling ducts, or exhaust turbo outlets.
- ◆ Do not install in locations with corrosive gases such as salt or sulfuric acid, as they can cause gas leaks and performance degradation.
- ◆ Ensure the unit is installed horizontally. Using it in a tilted or unstable position is extremely dangerous.

- The unit's legs are equipped with magnets, so adjust them to ensure the unit is level.

※ The height of the legs can be adjusted.

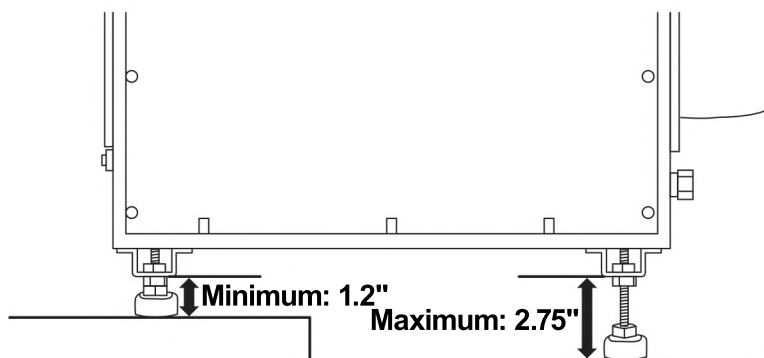
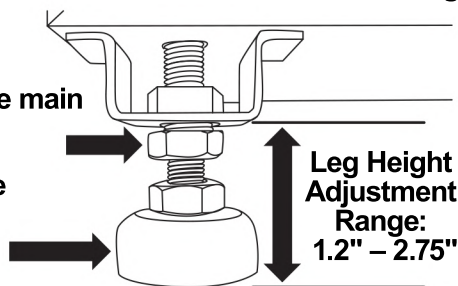
※ Installation may not be possible on certain surfaces or uneven areas.

※ Ensure that the magnet's installation surface is free of foreign objects or dirt.

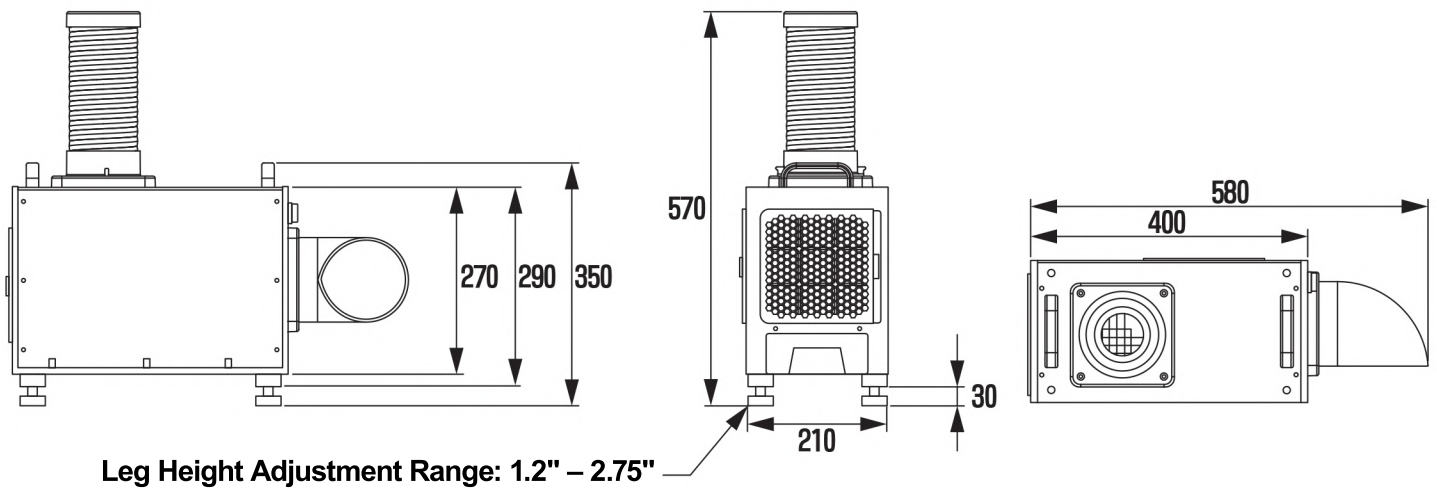
- ② Tighten the nut toward the main unit to secure it.

※ If readjusting the height, loosen the nut first before making adjustments.

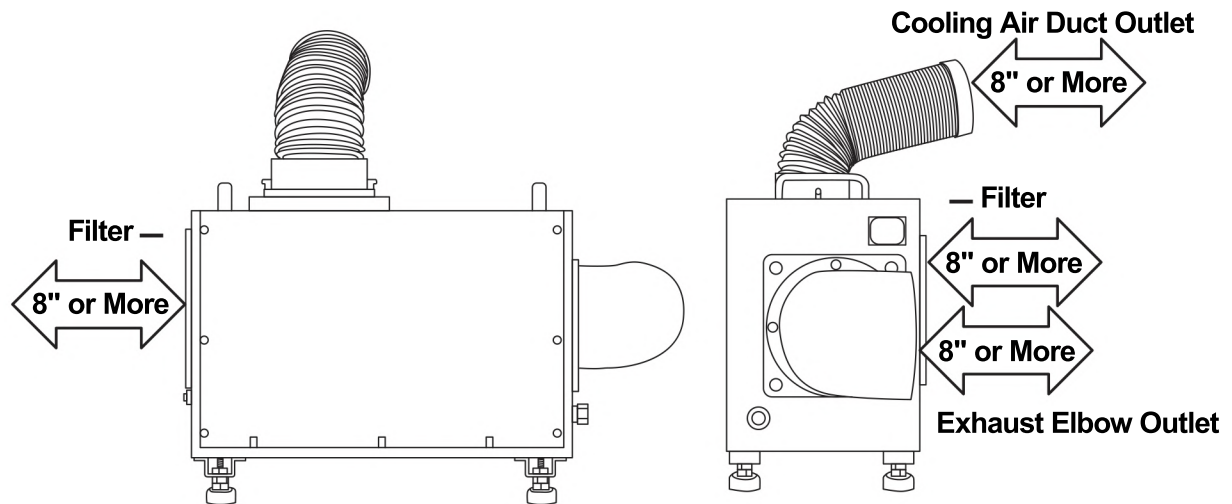
- ① Turn the legs to adjust the height.



※ Ensure proper installation by consulting the vehicle manufacturer and prioritizing safety.



- Ensure that the filter, cooling air duct outlet, and exhaust elbow outlet are installed at least 8" away.
- ※The exhaust elbow releases warm air. When installing, pay attention to the direction of the exhaust elbow outlet.

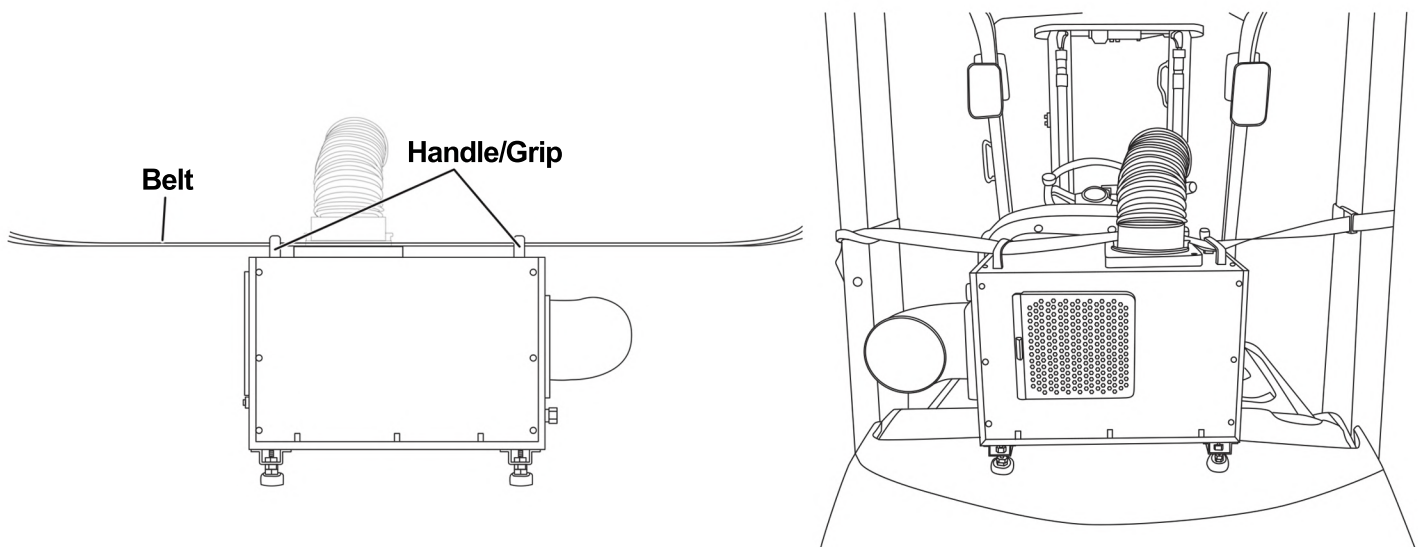


- Keep a distance of at least 40" from other electronic devices.

○Installing the Fall Prevention Belt

- To prevent accidental falls, always use a commercially available cargo collapse prevention belt (length varies depending on the installation method, but around 6.5ft to 10ft is recommended).

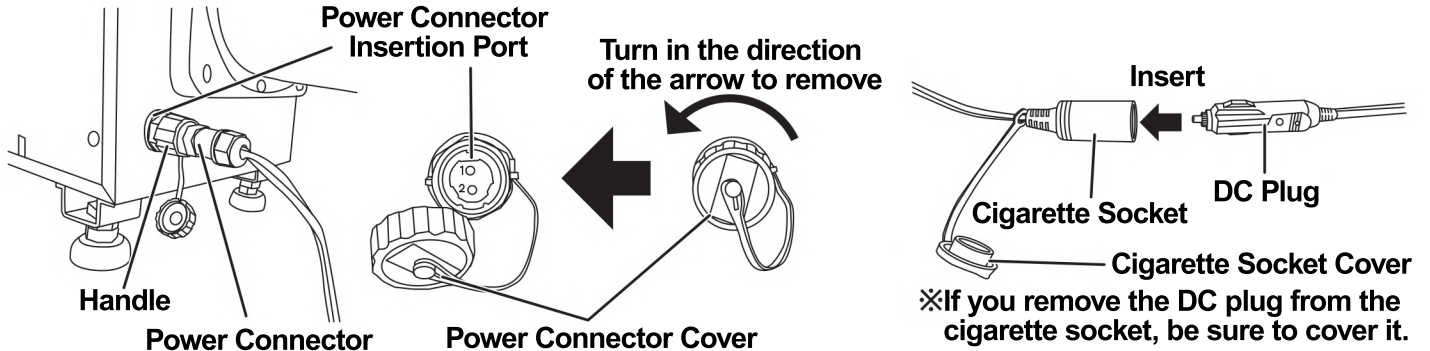
Ensure that the belt passes through two attachment points on the main unit and is securely fastened.



○Connecting the Main Unit Cord

- ① Remove the power connector cover, insert the power connector into the power connector socket, and securely fasten the handle section.
 - ② Insert the DC plug into the cigarette socket.
- ※If you remove the DC plug from the cigarette socket, be sure to cover it.

◇ Attach the high-temperature-resistant direct connection cord in the same manner.



【Installation Instructions】

⚠ Caution

- ◆ This device should be used in an environment where the surrounding temperature is between 59°F and 104°F (or up to 113°F when using the high-temperature direct cord). If used below 59°F, condensation may form inside the unit, potentially leading to glass breakage.
- ◆ After turning the switch off, wait at least 3 minutes before operating again. The protective mechanism may activate, preventing operation.

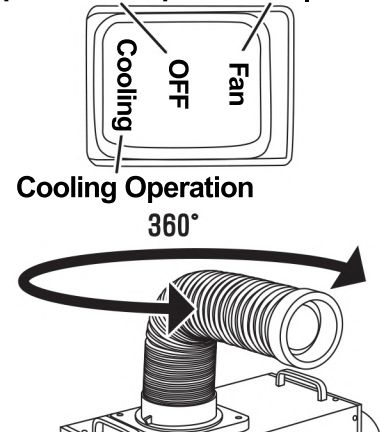
○Operating Method

- Set the side switch to "Cool Air" to start the cooling operation, or set it to "Fan" to start the fan operation.
- ※This device has a specified continuous operation time.
If operated continuously for about 3 hours, stop the operation temporarily and resume once the unit has cooled down.

○Airflow Direction Adjustment

- Operating Range
The cool air duct can be adjusted 360 degrees.

Operation Stop Fan Operation

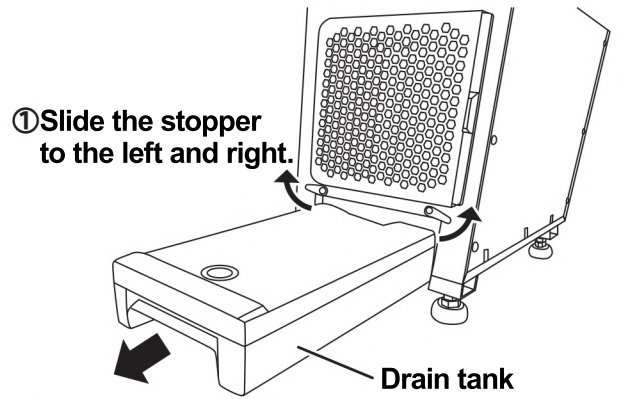


○ Drain Tank

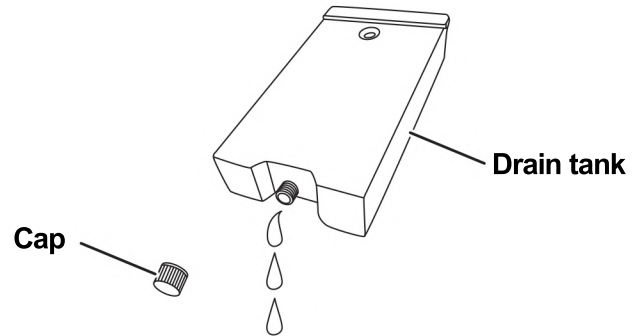
- ① Move the two stoppers holding the drain tank left and right.
- ② Pull out the drain tank.
- ③ Remove the drain tank cap and dispose of the water inside.
※The dehumidified water will collect in the drain tank.
The capacity of the drain tank is 1.6L.

! Caution

- ◆ Dehumidified water will overflow if the tank becomes full, so please dispose of the water early.
※ There is no function to detect drain water levels.
- ◆ When moving the unit, drain water may leak inside the unit. Please dispose of the drain water before moving it.
- ◆ Ensure the drain tank is fully inserted. If it is not securely in place, water leakage may occur.
- ◆ Depending on the usage environment, most drain water may evaporate, and only a small amount may accumulate in the tank. This is not a malfunction.
※ The amount of drain water varies significantly based on temperature, humidity, and filter cleanliness. During humid seasons such as the rainy season, more drain water may accumulate, so please be cautious.



- ② Pull out the drain tank.



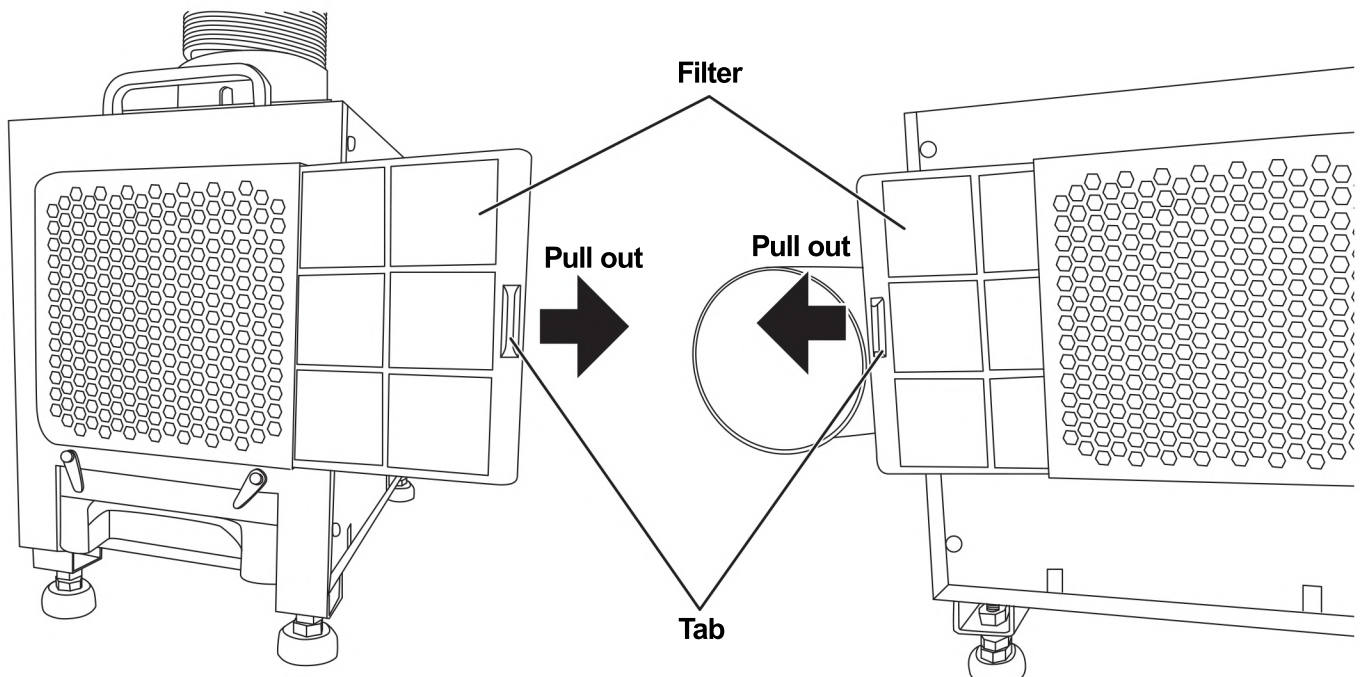
【 Maintenance and Storage 】

! Caution

- ◆ Clean the filter regularly. If the filter is dirty, condensation will form inside the unit, which may cause a malfunction.
- ◆ Do not use thinner, benzene, chemicals, or scouring powder when cleaning, as these may damage the coated surface and cause malfunctions.

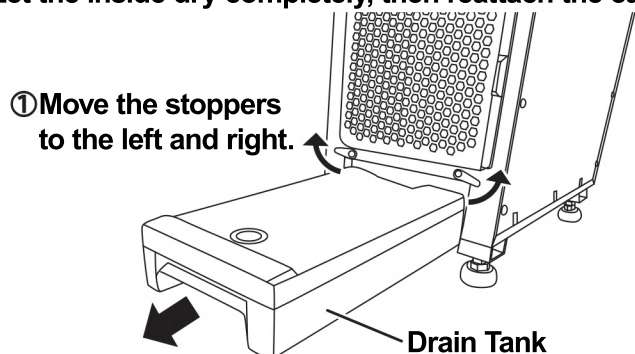
○ Filter Cleaning

- ① Hold the filter tab and slide it sideways to remove it.
- ② Use a vacuum cleaner to remove dust from the filter, wash it with water, and let it dry completely before reattaching.

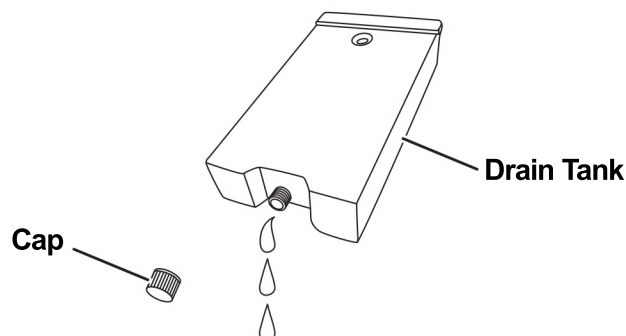


○Cleaning the Drain Tank

- ① Move the stoppers (two locations) that hold the drain tank to the left and right.
- ② Pull out the drain tank.
- ③ Remove the cap of the drain tank and discard the water inside.
- ④ Pour clean water into the drain tank, rinse it, and then discard the water.
- ⑤ Let the inside dry completely, then reattach the cap and reinstall it. Store it to prevent dust accumulation.



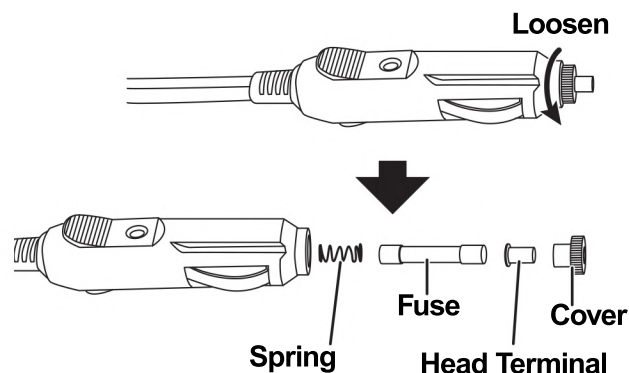
- ② Pull out the drain tank.



○Fuse Replacement (For DC Plug)

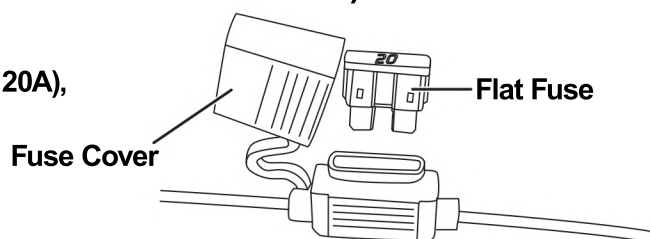
※If the device does not start running, the fuse may be blown.
In such a case, please replace the fuse.

- ① Remove the DC plug cover.
※Be careful not to lose small parts.
- ② Remove the cover and head terminal, take out the fuse, and replace it with a new fuse (Glass tube fuse 20A, $\Phi 6.4\text{mm} \times 30\text{mm}$).
- ③ Reattach the head terminal and cover.



○Fuse Replacement (For High-Temperature Direct Connection Cord)

- ① Open the fuse cover.
- ② Remove the fuse and replace it with a new fuse (flat fuse 20A), then close the fuse cover.



○Other Information

- ※When storing the unit, always remove the DC plug from the cigarette socket and attach the cigarette socket cover before storing.
- ※If a high-temperature direct connection cord is connected, remove the power connector from the unit and protect it to prevent dust from entering.
- ※Do not store the unit in outdoor or humid areas, or in places exposed to water.
- ※Do not store the unit in a horizontal position.

【Maintenance and Storage】

! Caution

- ◆ When performing maintenance, inspections, or part replacements, always remove the DC plug from the cigarette socket and attach the cigarette socket cover before proceeding.
- ※ If a high-temperature direct connection cord is connected, remove the power connector from the unit and protect it to prevent dust from entering.

- Check that screws and other fasteners are not loose; if they are, tighten them.
- After use, wipe off any dirt with a dry cloth. Avoid using thinner, benzene, chemicals, or polishing powder for cleaning, as they may damage the unit.
- Store the unit in a place out of reach of children, avoiding humid areas, places exposed to rain, or direct sunlight.

【Disposal Method】

This product contains fluorine gas and is classified as a Type 1 Specified Product under the Fluorocarbon Emissions Control Law. When disposing of this product, please take note of the following precautions:

This product is not covered under the Home Appliance Recycling Law (Household Appliance Recycling Act). Disposal must be handled at the user's expense by entrusting it to a registered professional waste disposal service.

If you have any questions about disposal, please check with your local municipal office.

【Causes of Trouble and Countermeasures】

Type of Failure	Cause	Countermeasure
Does not operate	Plug or connector is not properly inserted.	Ensure that the plug and connectors are securely inserted.
	Overcurrent protection device is activated.	Turn the switch to "OFF" and wait at least 3 minutes before restarting.
	Operation has not been started.	Set the switch to "Cooling" or "Fan."
	Battery charge is low.	Charge the battery or replace it with a new one.
	Cigarette socket is dirty.	Clean the cigarette socket.
	The vehicle's fuse is blown.	Replace the vehicle's fuse.
	The DC plug fuse is blown.	Replace the DC plug fuse.
	The high-temperature direct connection cord fuse is blown.	Replace the fuse in the fuse holder.
Does not cool	The filter, air outlet, or exhaust vent is blocked by an obstruction.	Remove any obstructions.
	The filter is dirty.	Clean the filter.
	The ambient temperature is below 59°F or above 113°F (for high-temperature direct connection cord use) or below 59°F or above 104°F (for extension cord use).	Use within the temperature range of 59°F-113°F (for high-temperature direct connection cord use) or 59°F-104°F (for extension cord use).
Water leakage	The drain hole is clogged.	Clean the drain hole.
	The drain tank is not properly set.	Set the drain tank correctly.
	The filter is dirty.	Clean the filter.
Frost formation	The ambient temperature is below 59°F.	Use in temperatures above 59°F.
	The filter is dirty.	Clean the filter.

- If the symptoms do not change even after the above inspection, stop using the device immediately to prevent accidents. Turn off the power, unplug the DC plug from the cigarette socket, and contact the store where you purchased it for repairs.
- Disassembling or repairing it yourself is dangerous. Do not attempt to do so under any circumstances, as there is a risk of accidents, electric shock, or injury.

【Optional Accessories Guide】

Product Name	Model Number
Filter (1 piece)	FL-17
Dust Filter (1 piece)	FL-D17
Extension Spacer (set of 2)	ES-60

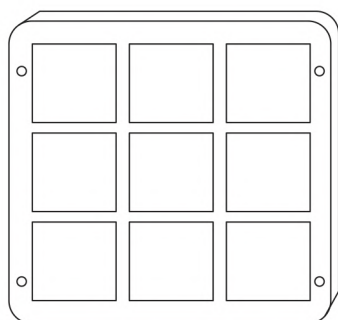
○About the Dust Filter FL-D17

※If used in a dusty environment, please use the dust filter.

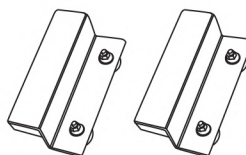
○Place the dust filter over the air intake and install it.

※To prevent the dust filter from falling off, attach the included magnet plate.

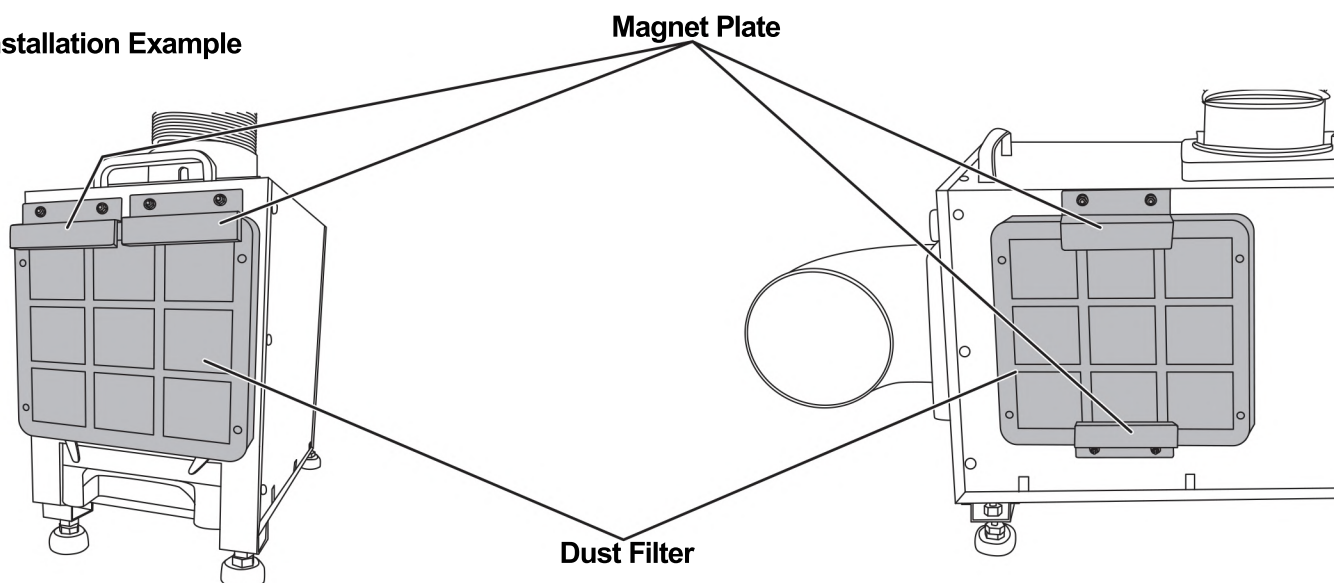
Dust Filter



Magnet Plate × 2



Installation Example



※If the dust filter becomes clogged, normal cooling operation will not be possible. Remove the dust filter from the small DC cooler and clean it regularly. After washing, dry it thoroughly before use.



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