User's Manual **8HK60**

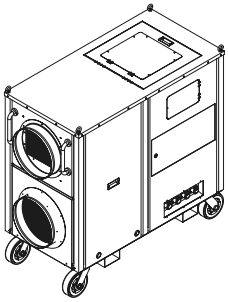
Please read and save these instructions. Read carefully before attempting to assemble, install, operate or maintain the product described.
Protect yourself and others by observing all safety information. Failure to comply with instructions could result in personal injury and / or property damage! Retain instructions for future reference.

KOLDWAVE

High Capacity Air Conditioner
(For Indoor & Outdoor)

Description

KOLDWAVE Portable Air Conditioners are specialized for "SPOT COOLING" where central cooling is impractical. **KOLDWAVE** air conditioners can also be used in enclosed areas just like conventional air conditioners. Simple digital controller and self-diagnostic functions allow users to easily operate the unit. Built-in Caster wheels enable users to move the unit without any hassle. The unit can be installed in 5 minutes and does not require any extra materials or certified technician for installation.
KOLDWAVE Portable Air Conditioner, anywhere, everywhere. Plug-and-Go!



8HK60
Figure 1

Unpacking

After unpacking the unit, carefully inspect unit for any damage that may have occurred during transit. Check for any loose, missing, or damaged parts.

Specifications

Model No.	Power Supply (Phase-V-Hz)	Cooling Capacity (Btu/h)	Power Consumption (kW)	Rated Current (Amps)
8HK60	1Phases - 220V - 60Hz	60000	6.62kW	30.2A

Model No.	Weight (Net / Gross) Lbs (kg)	Operating Ambient Temperature Range	Dimensions W x D x H - in. (mm)
8HK60	672/728lbs. (305/330kg)	64-113°F (18-45°C)	29.5 x 58.3 x 58.2 (750 x 1482 x 1478)

Specifications *(Continued)*

Model No.	Evaporator (Cool) Air Flow (CFM)	Refrigerant Type / oz (g)
8HK60	1998	For a compressor: R32, 33.5oz (950g) Total: 67oz (1900g)
Safety Devices		Compressor overload protector, Anti-freezing thermister, Automatic restart (Power interruption), Compressor time delay program, High pressure switch
Features		Temperature control, Self-diagnostic function, Optional drain pump kit, Washable filters, °F (°C) display, Off-timer

General Safety Information

Please read this manual carefully for correct installation and usage. Please read all safeguards.

1. Transport and store the unit in an upright position only. Leave unit in an upright position for at least 3 hours before first use.
2. Always place the unit on an even, level surface.
3. Ensure the unit is connected to a grounded power supply of the correct rating/capacity.
4. The unit will operate between 64°F (18°C) - 113°F (45°C) depending on the temperature setting.
5. DO NOT use this unit for other purposes that is not described in this instruction manual.
6. DO NOT tilt the unit.
7. NEVER unplug the unit under operation.

⚠ WARNING ***DO NOT use the unit in wet environments, such as a laundry room, to avoid the risk of electrical shock.***

10. DO NOT place any foreign objects on the unit.
11. DO NOT operate the unit with wet or damp hands.
12. DO NOT allow chemical substances to come into contact with the unit.
13. DO NOT operate the unit near flammable substances or vapors such as alcohols, pesticides, gasoline, etc.

⚠ WARNING ***DO NOT operate the unit in explosive or flammable environments.***

14. DO NOT unplug to turn off the unit. Always use the power switch to start and to stop the unit.
15. Always turn off the unit and unplug it before cleaning, moving or performing maintenance.
16. AVOID using adapter plugs or extension cords. If extension cord or an adapter plug is needed , ensure they are correctly rated for the application. Consult a local qualified electrician for proper setup. Any extension cord used with this device must be rated for a minimum of 30A. (220V)
17. DO NOT unplug the unit by pulling on the electrical cord. Keep electrical cord away from heat sources and always completely unroll the cord to avoid overheating. If the power cord is damaged, contact a qualified service agent, qualified electrician, or similarly qualified person for replacement.

⚠ WARNING ***DO NOT operate a unit with a damaged power cord.***

18. The filters must be used with the product at all times. When the filters are removed for cleaning, always ensure that the unit has been turned off and unplugged from the electrical outlet.
19. Regularly clean the filters to maintain efficiency. If the filters are not cleaned regularly, the units output performance and efficiency will decrease.
20. DO NOT operate the unit with a damaged power cord or plug,
21. Only use in the upright position on an even, flat surface. There must not be any objects or walls within 24 inches (60 cm) from the unit.
22. Halt the unit immediately if abnormal noise or odor is detected. Contact your local service center or manufacturer.
23. Appliance is not to be operated by children or persons with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction.
24. Children must be supervised not to play with appliance.
25. The unit must be installed in accordance with national wiring regulations.
26. If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.

WARNING

– Do not use means to accelerate the defrosting process or to clean, other than those recommended by the manufacturer.
– The appliance shall be stored in a room without continuously operating ignition sources (for example: open flames, an operating gas appliance or an operating electric heater).
– Do not pierce or burn.
– Be aware that refrigerants may not contain an odor.

General

– The installation of pipe-work shall be kept to a minimum.
– National gas regulations shall be observed.
– Mechanical connections shall be accessible for maintenance purpose.
– The appliance shall be stored in a well-ventilated area.
– Keep any required ventilation openings clear of obstruction.

Unventilated areas

– The appliance shall be stored so as to prevent mechanical damage from occurring.
– When storing the appliance, do not put in a room with any open flame appliance (for example an operating gas appliance) or other potential ignition sources. (for example an operating electric heater, hot surfaces).
– Damaged units should be repaired before storage.

Checks to the area

Prior to beginning work on systems containing flammable refrigerants, safety checks are necessary to ensure that the risk of ignition is minimized. For repair to the refrigerating system, the following precautions shall be complied with prior to conducting work on the system.

Work procedure

Work shall be undertaken under a controlled procedure so as to minimize the risk of a flammable gas or vapor being present while the work is being performed.

General work area

All maintenance staff and others working in the local area shall be instructed on the nature of work being carried out. Work in confined spaces shall be avoided.

Qualification of workers

– Use caution while handling and prevent damage to unit. Do not put any holes into product for any reason. This can cause damage to product and prevent unit from cooling.
– Service should only be performed by technicians properly trained and certified in the use of flammable refrigerants. Any service performed by unauthorized servicers/individuals will void all warranties.
– Maintenance and cleaning of unit should be performed by trained personnel. Failure to properly clean unit can result in damage to the refrigeration system and or the electrical system.
– Servicing shall only be performed as recommended by the equipment manufacturer. Maintenance and repair requiring the assistance of other skilled personnel shall be carried out under the supervision of the person competent in the use of flammable refrigerants.
– The refrigerant and insulation blowing gas used in the appliance require special disposal procedures. Consult a service agent or a similarly qualified person before disposing of them.
– Any person who is involved with working on or breaking into a refrigerant circuit or opening of sealed components or opening of ventilated enclosures should hold a current valid certificate from an industry-accredited assessment authority, which authorizes their competence to handle refrigerants safely in accordance with an industry recognized assessment specification.

Checking for presence of refrigerant

The area shall be checked with an appropriate refrigerant detector prior to and during work, to ensure the technician is aware of potentially toxic or flammable atmospheres. Ensure that the leak detection equipment being used is suitable for use with all applicable refrigerants, i.e. non-sparking, adequately sealed or intrinsically safe.

Presence of fire extinguisher

If any hot work is to be conducted on the refrigerating equipment or any associated parts, appropriate fire extinguishing equipment shall be available on hand. Have a dry powder or CO_2 fire extinguisher adjacent to the charging area.

No ignition sources

No person carrying out work in relation to a refrigerating system which involves exposing any pipe work shall use any sources of ignition in such a manner that it can lead to the risk of fire or explosion. All possible ignition sources, including cigarette smoking, should be kept sufficiently far away from the site of installation, repairing, removing and disposal, during which refrigerant can possibly be released to the surrounding space. Prior to work taking place, the area around the equipment is to be surveyed to make sure that there are no flammable hazards or ignition risks. "No Smoking" signs shall be displayed.

Ventilated area

Ensure that the area is in the open or that it is adequately ventilated before breaking into the system or conducting any hot work. A degree of ventilation shall continue during the period that the work is carried out. The ventilation should safely disperse any released refrigerant and preferably expel it externally into the atmosphere.

Checks to the refrigerating equipment

Where electrical components are being changed, they shall be fit for the purpose and to the correct specification. At all times the manufacturer's maintenance and service guidelines shall be followed. If in doubt, consult the manufacturer's technical department for assistance.

The following checks shall be applied to installations using flammable refrigerants:

- the refrigerant charge is in accordance with the room size within which the refrigerant containing parts are installed;
- the ventilation machinery and outlets are operating adequately and are not obstructed;
- if an indirect refrigerating circuit is being used, the secondary circuit shall be checked for the presence of refrigerant;
- marking to the equipment continues to be visible and legible. Markings and signs that are illegible shall be corrected;
- refrigerating pipe or components are installed in a position where they are unlikely to be exposed to any substance which can corrode refrigerant containing components, unless the components are constructed of materials which are inherently resistant to being corroded or are suitably protected against being so corroded.

Checks to electrical devices

Repair and maintenance to electrical components shall include initial safety checks and component inspection procedures. If a fault exists that could compromise safety, then no electrical supply shall be connected to the circuit until it is satisfactorily dealt with.
If the fault cannot be corrected immediately but it is necessary to continue operation, an adequate temporary solution shall be used. This shall be reported to the owner of the equipment so all parties are advised.

Initial safety checks shall include:
– that capacitors are discharged: this shall be done in a safe manner to avoid possibility of sparking;
– that no live electrical components and wiring are exposed while charging, recovering or purging the system;
– that there is continuity of earth bonding.

During repairs to sealed components, all electrical supplies shall be disconnected from the equipment being worked upon prior to any removal of sealed covers, etc. If it is absolutely necessary to have an electrical supply to equipment during servicing, then a permanently operating form of leak detection shall be located at the most critical point to warn of a potentially hazardous situation.

Particular attention shall be paid to the following to ensure that by working on electrical components, the casing is not altered in such a way that the level of protection is affected. This shall include damage to cables, excessive number of connections, terminals not made to original specification, damage to seals, incorrect fitting of glands, etc.

Sealed electrical components shall be replaced.

Ensure that seals or sealing materials have not degraded to the point that they no longer serve the purpose of preventing the ingress of flammable atmospheres. Replacement parts shall be in accordance with the manufacturer's specifications.

Repair to intrinsically safe components

Do not apply any permanent inductive or capacitance loads to the circuit without ensuring that this will not exceed the permissible voltage and current permitted for the equipment in use.

Intrinsically safe components must be replaced.

Replace components only with parts specified by the manufacturer. Other parts may result in the ignition of refrigerant in the atmosphere from a leak.

Cabling

Cabling will not be subject to wear, corrosion, excessive pressure, vibration, sharp edges or any other adverse environmental effects. The check shall also take into account the effects of aging or continual vibration from sources such as compressors or fans.

Detection of flammable refrigerants

Under no circumstances shall potential sources of ignition be used in the searching for or detection of refrigerant leaks. A halide torch (or any other detector using a naked flame) shall not be used.

The following leak detection methods are deemed acceptable for all refrigerant systems.

Electronic leak detectors may be used to detect refrigerant leaks but, in the case of flammable refrigerants, the sensitivity may not be adequate, or may need re-calibration.
(Detection equipment shall be calibrated in a refrigerant-free area.)

Ensure that the detector is not a potential source of ignition and is suitable for the refrigerant used.

Leak detection equipment shall be set at a percentage of the LFL of the refrigerant and shall be calibrated to the refrigerant employed, and the appropriate percentage of gas (25% maximum) is confirmed.

Leak detection fluids are suitable for use with most refrigerants but the use of detergents containing chlorine shall be avoided as the chlorine may react with the refrigerant and corrode the copper pipe-work.

NOTE Examples of leak detection methods are
– bubble method,
– fluorescent agent method.

If a leak is suspected, all naked flames shall be removed/extinguished.
If a leakage of refrigerant is found which requires brazing, all of the refrigerant shall be recovered from the system, or isolated (by means of shut off valves) in a part of the system remote from the leak.

Removal and evacuation

When breaking into the refrigerant circuit to make repairs – or for any other purpose – conventional procedures shall be used. However, for flammable refrigerants it is important that best practice is followed since flammability is a consideration. The following procedure shall be adhered to:
• evacuate;
• purge the circuit with inert gas (optional for A2L);
• evacuate (optional for A2L);
• continuously flush or purge with inert gas when using flame to open circuit; and
• open the circuit.

The refrigerant charge shall be recovered into the correct recovery cylinders if venting is not allowed by local and national codes. For appliances containing flammable refrigerants, the system shall be purged with oxygen-free nitrogen to render the appliance safe for flammable refrigerants. This process might need to be repeated several times.
Compressed air or oxygen shall not be used for purging refrigerant systems.

Labeling

Equipment shall be labeled stating that it has been de-commissioned and emptied of refrigerant. The label shall be dated and signed. For appliances containing flammable refrigerants, ensure that there are labels on the equipment stating the equipment contains flammable refrigerant.

For appliances containing flammable refrigerants, refrigerants purging shall be achieved by breaking the vacuum in the system with oxygen-free nitrogen and continuing to fill until the working pressure is achieved, then venting to atmosphere, and finally pulling down to a vacuum (optional for A2L). This process shall be repeated until no refrigerant is within the system (optional for A2L). When the final oxygen-free nitrogen charge is used, the system shall be vented down to atmospheric pressure to enable work to take place.

The outlet for the vacuum pump shall not be close to any potential ignition sources, and ventilation shall be available.

Decommissioning

Before carrying out this procedure, it is essential that the technician is completely familiar with the equipment and all its detail. It is recommended good practice that all refrigerants are recovered safely. Prior to the task being carried out, an oil and refrigerant sample shall be taken in case analysis is required prior to re-use of reclaimed refrigerant. It is essential that electrical power is available before the task is commenced.

a) Become familiar with the equipment and its operation.
b) Isolate system electrically.
c) Before attempting the procedure, ensure that:
- mechanical handling equipment is available, if required, for handling refrigerant cylinders;
- all personal protective equipment is available and being used correctly;
- the recovery process is supervised at all times by a competent person;
- recovery equipment and cylinders conform to the appropriate standards.

d) Pump down refrigerant system, if possible.
e) If a vacuum is not possible, make a manifold so that refrigerant can be removed from various parts of the system.
f) Make sure that cylinder is situated on the scales before recovery takes place.
g) Start the recovery machine and operate in accordance with manufacturer's instructions.
h) Do not overfill cylinders. (No more than 80 % volume liquid charge).
i) Do not exceed the maximum working pressure of the cylinder, even temporarily.
j) When the cylinders have been filled correctly and the process completed, make sure that the cylinders and the equipment are removed from site promptly and all isolation valves on the equipment are closed off.
k) Recovered refrigerant shall not be charged into another refrigeration system unless it has been cleaned and checked.

Recovery

When removing refrigerant from a system, either for servicing or decommissioning, it is recommended good practice that all refrigerants are removed safely.
When transferring refrigerant into cylinders, ensure that only appropriate refrigerant recovery cylinders are employed. Ensure that the correct number of cylinders for holding the total system charge are available. All cylinders to be used are designated for the recovered refrigerant and labelled for that refrigerant (i.e. special cylinders for the recovery of refrigerant). Cylinders shall be complete with pressure-relief valve and associated shut-off valves in good working order. Empty recovery cylinders are evacuated and, if possible, cooled before recovery occurs.
The recovery equipment shall be in good working order with a set of instructions concerning the equipment that is at hand and shall be suitable for the recovery of the flammable refrigerant. If in doubt, the manufacturer should be consulted. In addition, a set of calibrated weighing scales shall be available and in good working order. Hoses shall be complete with leak-free disconnect couplings and in good condition.

The recovered refrigerant shall be returned to the refrigerant supplier in the correct recovery cylinder, and the relevant waste transfer note arranged. Do not mix refrigerants in recovery units and especially not in cylinders.
If compressors or compressor oils are to be removed, ensure that they have been evacuated to an acceptable level to make certain that flammable refrigerant does not remain within the lubricant. The compressor body shall not be heated by an open flame or other ignition sources to accelerate this process. When oil is drained from a system, it shall be carried out safely.

Charging procedures

In addition to conventional charging procedures, the following requirements shall be followed.

– Ensure that contamination of different refrigerants does not occur when using charging equipment. Hoses or lines shall be as short as possible to minimize the amount of refrigerant contained in them.
– Cylinders shall be kept upright.
– Ensure that the refrigeration system is earthed prior to charging the system with refrigerant.
– Label the system when charging is complete (if not already).
– Extreme care shall be taken not to overfill the refrigeration system.

Prior to recharging the system, it shall be pressure-tested with the appropriate purging gas.
The system shall be leak-tested on completion of charging but prior to commissioning.
A follow up leak test shall be carried out prior to leaving the site.

Assembly

COMPONENT PARTS

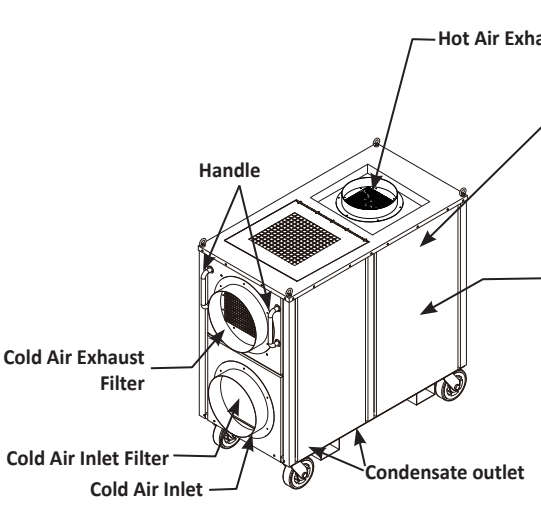


Figure 2
Front and Right Side View

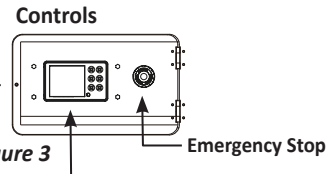


Figure 3

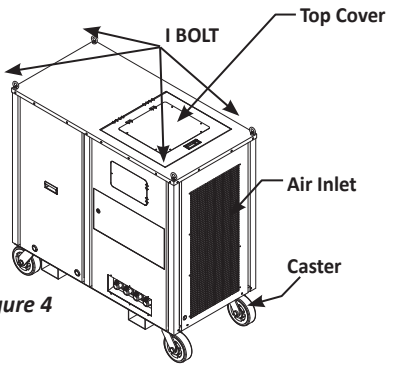
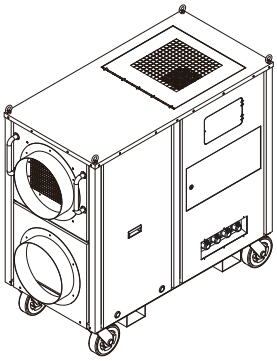
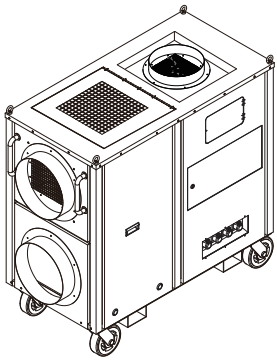


Figure 4



Not in operation
Figure 5



In operation
Figure 6

DUCT CONNECTIONS

Cool Air Duct (OUT) connection

The Cool Air Ducts (OUT) are labeled "AIR OUT". The diameter of the duct is 400Ø.
Connect the flexible air duct as following

1. Attach a flexible duct to the duct collar. Use a clamp or any appropriate apparatus around the collar to prevent any air leakage.
2. Route the flexible duct as straight as possible to the desired space without any excessive turns and pinches.
3. Please avoid any objects or walls at the end of the duct.

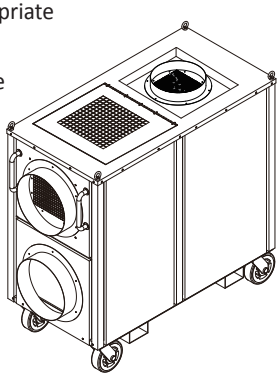


Figure 7

Cool Air in Duct (IN)

The Return Air In duct connection is labeled "AIR IN".
The diameter of the duct is 400Ø. Follow the same procedures as "Cool Air Duct (Out) connection". If you want to use the unit without any "AIR IN" duct, the unit will read the temperature of the surroundings.

Hot Air Duct

The Hot Air Out duct connection is labeled "AIR OUT"
The diameter of the duct is 450 Ø and maximum duct length is 30M. Follow the same procedures as the cool air duct connections.

Fork Lift

If a forklift is needed to move the unit, put the foot of the forklift to the forklift hole (shown in the picture: figure 8).

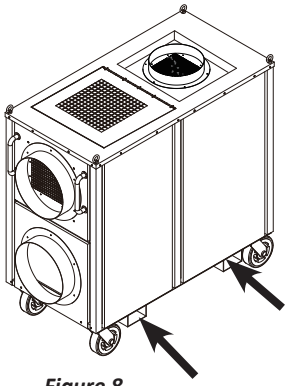
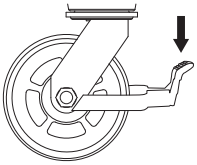


Figure 8



Casters can be locked by locking the break down

Figure 9

Installation

WARNINGS REGARDING PROPER LOCATION FOR INSTALLATION

⚠ WARNING ***Do not use the unit in explosive environments or in areas where flammable gas leakage may occur.***

⚠ WARNING ***Do not use the unit in areas where it will be exposed to rain or water.***

⚠ WARNING ***Do not use the unit in a corrosive atmosphere.***

⚠ WARNING ***Do not use the unit above 64°F (18°C) - 113°F (45°C).***

⚠ WARNING ***Do not install the unit on uneven or sloping surface. The unit may roll or topple over even if the casters are set to the locked position.***

MOVING THE UNIT

Unlock the casters and push the unit using the side handles to a flat, level surface and set the caster brakes to the locked position.

PLUGGING IN THE UNIT

Check the prongs and surface of the power cord plug for dust/dirt. If dust and/or dirt are present, wipe off with a clean, dry cloth.
Check the power cord, plug and prongs for any damages.
If you suspect any damage or deterioration, contact a qualified technician to perform replacement or repair.

⚠ WARNING ***If the power cord or plug is damaged, repair should only be performed by qualified electrical personnel.***

⚠ WARNING ***Do not connect / disconnect the power cord or attempt to operate buttons with wet hands. This could result in electrical shock.***

NOTE: Make sure the AC outlet is free of dirt, dust, oil, water, or any other foreign material. The unit is equipped with an approved NEMA plug configuration. The appropriate outlet must be used for each plug type.

Operation

CONTROL PANEL

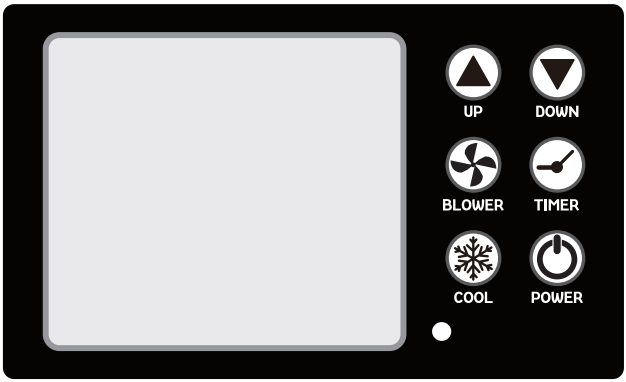


Figure 8

POWER	· Press the power button for 0.5 seconds to activate the product. · Press the power button for 0.5 seconds while driving to stop the product. · Self-diagnosis will be performed to test for abnormalities, after marking "VER" for 3 seconds when power is "ON". And the blowing is operated as "High", and the compressor is operated after 1 minute.  ← Example of "VER" sign when it's ON
TIMER UP ↔	· Press "Timer" and "UP" Button simultaneously to set Celsius or Fahrenheit. 

COOL

Cooling mode.

1) Cooling mode (SPOTCOOL Mode)

· The basic operation is based on "out" control. (discharge temperature TH1)

· On/off the operation of the compressor. (COOL ↔ BLOWER)

· The set temperature cannot be changed and it operates which is set to 0 degrees Celsius.

2) Cooling mode (ROOMCOOL Mode)

· Press "COOL" and "Blower" Button simultaneously to set the "Spotcool mode" and "Roomcool mode".

· Press "UP" or "Down" Button to set the target temperature

← Exmaple of Spotcool Mode

← Exmaple of Roomcool Mode

2) When blower is operating

· LOW → HIGH → AUTO It consists of three modes and operates in circulation.

· LOW, HIGH, AUTOIn "LCD", the middle wing of each mode rotate and operate.

← LOW Examples of moves.

← AUTO Examples of moves.

· AUTO MODE

- If the power source becomes "on" after "off", it operates as "auto" and then as "high" or "low" depending on the sensor value after 3 seconds.
- The difference between "current temp" and "target temp" operates as "high" when it is 8 degrees Celsius or higher, and "low" when it is 6 degrees Celsius or lower.

BLOWER **UP**
LOCK MODE

1) It is a mode that prevents the operation of the rest of the buttons except for power.
- It can be operated and released by pressing for 2 seconds.

← Example of a set-up.

← Example of releasing it.

BLOWER
Blowing mode

1) The compressor does not operate, but only the blowing fan operates.
- LOW → HIGH → AUTO It consists of three modes and operates in circulation.

← Example of blowing.

TIMER
Timer mode

1) Press "Time" button for 2 seconds to activate Time icon.
2) Press "Blower"button to operate time setting.
- Press "Cool" button to save after pressing "Down" button to set OFF or ON
ON -> Timer setting (when the unit is ready to operate)
OFF -> Timer setting (when the unit is operating)
3) Press "Blower" button to set the desired time.
The timer can be set maximum 720min (12Hour)
4) To cancel the timer, press "Time" and "UP" Button simultaneously, or set the time to "0"

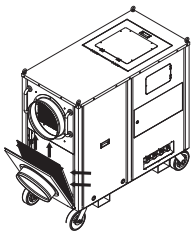
← Example of displaying the remaining time (minutes) during "timer" operation during cooling.

Maintenance

FILTER CLEANING *(See Figures 11 and 12)*

1. Unscrew 6 bolts on the front filter guard.
2. Slide filter up and use a vacuum cleaner to remove the dust from the filter.
3. If the filter is heavily covered with dust and dirt, use warm water and mild soap or neutral detergent to wash the filter. Do not use any other chemicals to clean filter.
4. Dry the filter in a shaded area before replacing it. Do not operate the unit without the filter.
5. Place the clean filter and close the filter guard.

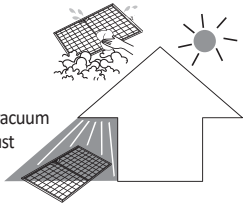
NOTE: For effective cooling, clean the filter at least once in 2 weeks



– Unscrew 6 bolts on the front filter guard.

– Slide filter up and use a vacuum cleaner to remove the dust from the filter.

Figure 11 – Removing Filters



– If the filter is heavily covered with dust and dirt, warm water and mild soap or neutral detergent may be used to wash the filter. Do not use any other chemicals to clean filter.

– Dry the filter in a shaded area before replacing it. Do not operate the unit without the filter.

Figure 12 – Removal of Dust

⚠ WARNING ***Do not operate without the filter.***

⚠ WARNING ***Do not operate the unit with a damaged cord or plug. Do not operate the unit if there is any sign of malfunction. Do not operate the unit that has been dropped or damaged***

– For your convenience, record the complete model number and product name (located on the Product Identification Plate), the purchase date, purchase location, serial number, and warranty period in the table below.
– Also, attach your purchase receipt as proof of purchase to this instruction manual for future reference.
– To ensure your product is covered by warranty, the complete faulty product along with your original purchase receipt must be provided at the place of purchase.

Maintenance *(Continued)*

– To ensure your product is covered by warranty, the complete faulty product along with your original purchase receipt must be provided at the place of purchase.

Product	Portable Air Conditioner
Model No.	
Date of Purchase	
Place of Purchase	
Serial No.	
Period of Warranty	

Customer: Please read and keep this manual for future reference and keep sales receipt as proof of purchase.

SELF-DIAGNOSTIC CODES *(See Table 1)*

The alarm will activate when the unit detects any abnormality. It will show certain alarm code to indicate the source of problem. The compressor and condenser fan will stop working when alarm goes on. The evaporator fan will still be working for 3 minutes. If no actions are taken for 3 minutes after initial alarm, the evaporator fan will stop too. Please refer to the alarm codes in next page and follow the solutions provided to fix the unit.

Shipping List

- (1) Portable Air Conditioner
- (1) User's Manual
- (1) Exhaust Flange

Obtaining Service

If the Koldwave Portable Air Conditioner requires Service:

1. Use the TROUBLESHOOTING section in this manual to eliminate obvious causes.
2. Verify there are no circuit breakers tripped.
3. Call your dealer for assistance. If you cannot reach your dealer, or if they cannot resolve the problem, call Koldwave Portable Air Conditioner Technical Support at 413-564-5520. Please have the following information available BEFORE calling the Technical Support Department:
    a. Your name and address.
    b. The serial number of the unit.
    c. Where and when the unit was purchased.
    d. All of the model information about your Koldwave Portable Air Conditioner.
    e. Any information on the failure, including LED's that may or may not be illuminated.
    f. A description of the protected equipment, including model numbers if possible.

SELF-DIAGNOSTIC ALARM CODES			
Alarm Display	Problem	Cause	Corrective Action
	Compressor overloaded	• Ambient temperature is too high • Unstable voltage supply • Defective compressor	• Do not use the air conditioner if ambient temperature is higher than 113°F (45°C) • Contact a qualified service agent • Replace compressor
	Condensate water level alarm	Condensate tank is full	• Empty the water tank • After installation of the water tank, press the SPOT/COOL or ROOM/ COOL button to resume operation
	Drain pump alarm	Drain pump defective or improper hose connection (including kink or blockage)	• Check the aconnection and hose • Replace drain pump
	Refrigerant high pressure switch	• Blocked air filter • Blocked / kinked exhaust duct • Ambient temperature is too high	• Clean air filter • Ensure exhaust duct is not blocked / kinked • Do not use the air conditioner if ambient temperature is higher than 113°F (45°C)

Table 1- Alarm Codes

SELF-DIAGNOSTIC ALARM CODES			
Alarm Display	Problem	Cause	Corrective Action
	Abnormal temperature sensor value	TH1 (Outlet) temperature sensor has a loose or broken connection	Contact a qualified service agent
	Abnormal temperature sensor value	TH2 (Inlet) temperature sensor has a loose or broken connection	Contact a qualified service agent
	Abnormal temperature sensor value	TH3 (Prevention of Freeze) Sensor open circuit or poor connection.	Contact a qualified service agent
	Frost prevention sensor and Abnormal temperature sensor value	• Indoor heat exchanger temperature too low • TH3 temperature sensor has a loose or broken connection	• Do not use the air conditioner if ambient temperature is lower than 64°F (18°C) • Contact a qualified service agent

Table 1- Alarm Codes

Wiring Diagram

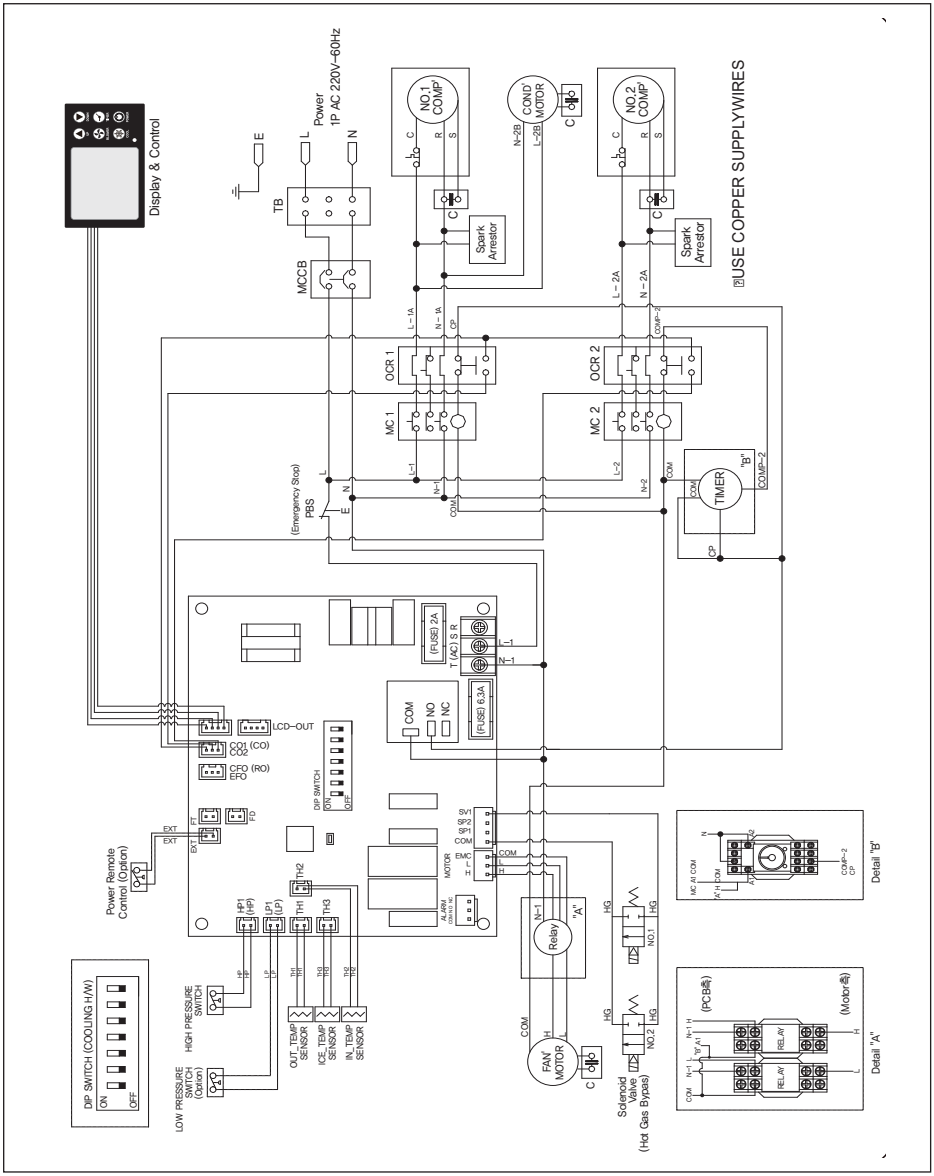


Figure 14 - Circuit Wiring Diagram

Troubleshooting chart

Symptom	Possible Cause(s)	Corrective Action
Water leakage	Position issue/Damage	1. Check that the water tank is placed on the correct position. Replace the damaged water tank with a new one. 2. Remove any object stuck underneath the Drain Pan underneath the water tank.
	Drain pump issue	1. Remove blockage from drain hose 2. Replace the defective drain pump with a new one.
The unit doesn't work	Check the power supply to verify that power is available to the unit	1. Reset the circuit breaker and restart the unit.
	Verify that the power cord is connected	1. Connect power cord.
	Trip off the circuit breaker	1. Reset the circuit breaker and restart the unit.
No cold air flows from the cold air outlet	Ambient air cannot be properly cooled if the filter is dirty and not regularly cleaned	1. Clean the filter.

A defective unit must be repaired by a qualified company.

Symptom	Possible Cause(s)	Corrective Action
	Compressor will not work if the unit is turned off and on quickly.	1. Wait 3 minutes after unit is turned off before turning the unit back on. 2. Check the Cool Icon If the light is off, A/C will be activated after light is on.
No cold air flows from the cold air outlet	Refrigerant leaking	1. Charge the refrigerant.
	The ambient air temperature may be too high	1. The temperature of the compressor can be higher when the ambient temperature is too high. The compressor will not work unless the ambient air temperature is within the acceptable operating range of the unit.
Water flow can be heard after compressor shuts off	No cause	Common to hear coolant flowing after unit shuts off.

A defective unit must be repaired by a qualified company.

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