

mistral[®]

Portable Air Conditioner



Instruction Manual

Model: MA02016KRY30



Important Safeguards

When using electrical appliances, in order to reduce the risk of fire, electric shock and/or injury, these basic safety precautions should always be followed:

For Your Safety

Read all instructions carefully, even if you are familiar with the appliance.

- This appliance is not intended for use by persons (including children) with reduced physical, sensory and mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
- Children should be supervised to ensure that they do not play with the appliance.
- Switch off and remove the plug from the power outlet before cleaning or when not in use. To unplug, grasp the plug and pull from the power outlet. Never pull cord.
- For indoor use only.
- Do not operate any appliance with a damaged power cord or plug, after the appliance malfunctions, or is dropped or damaged in any manner.
- Do not use any appliance for anything other than its intended use. This product is intended for household use only.
- This appliance is intended to be plugged in or connected to a 220-240V 50Hz grounded power outlet only.
- Do not misuse the power cord. Never carry the appliance by the power cord or pull to disconnect it from the outlet. Instead, grasp the plug and pull to disconnect.
- Do not attempt to repair, disassemble or modify the appliance. There are no user serviceable parts.
- Arrange the power cord away from traffic areas where it will not be tripped over.
- Do not insert or allow foreign objects to enter the air inlet/outlet or openings as this may cause damage to the appliance and/or injury to the user.
- Do not plug this appliance into or use with Extension cords, Double adaptors or Power Boards. It should only ever be plugged directly into Domestic Power outlet.
- Be sure the air conditioner has been securely and correctly installed according to the separate installation instructions provided with this manual. Save this manual and the installation instructions for possible future use in removing or reinstalling this unit.
- Always install the filter securely and clean it regularly. Operating the unit without filters will cause it to fail.
- Do not drink water drained from the air conditioner.
- Do not cover or obstruct the appliance inlet or outlet when in use.
- Be sure the air conditioner is properly grounded. To minimize shock and fire hazards, proper grounding is important.
- Do not run air conditioner with outside protective cover in place. This could result in mechanical damage within the air conditioner.
- Do not modify or use an extension cord. Do not use a loose or damaged socket. Do not use an adapter plug. Do not disassemble or modify the product. The heat generated will cause an electric shock, fire or product failure.
- Be cautious when unpacking and installing as sharp edges may cause injury.
- Do not store flammables like gasoline, benzene, thinner etc. near the air conditioner. If a gas leak occurs, ventilate the room well before operating the unit. Doing so may cause an explosion or fire.
- Do not place heavy objects on top of the power cord, or bend or pinch the cord. Do not place the power cord near a heater. Do not allow water to run into the electric parts.
- Do not sit or stand on the unit and do not place anything on top of the appliance.
- Unplug the unit if strange sounds, odors, or smoke come from it. Failure to follow this warning may result in electric shock and fire.
- Unplug the unit when not using it for a long time to prevent accidental startup and the possibility of injury.

- The refrigerant used in air conditioner is the environmentally friendly hydrocarbon R32. This refrigerant is odorless, and compared to the alternative refrigerant, the R32 is an ozone-free refrigerant, and its effect is very low.
- Do not pierce or burn.
- Be aware that refrigerants may not contain an odour.
- The appliance should stay away from gasoline, flammable gas, stoves and other heat sources.
- Spaces where refrigerant pipes shall be compliance with national gas regulations.
- Keep any required ventilation openings clear of obstruction;
- Don't disassemble, overhaul and modify the machine arbitrarily, otherwise it will cause a machine malfunction or even bring harm to persons and properties. Do not use insecticide sprays or other flammable substances near the air conditioning.
- All working procedure that affects safety means shall only be carried by competent persons.
- Transport of equipment containing flammable refrigerants Compliance with the transport regulations.
- Marking of equipment using signs Compliance with local regulations.
- Disposal of equipment using flammable refrigerants Compliance with national regulations.
- Any person who is involved with working on or breaking into a refrigerant circuit 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.
- Servicing shall be performed only as recommended by the manufacturer.
- Do not use means to accelerate the defrosting process or to clean, other than those recommended by the 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 air conditioner must be used, stored and transported in an upright position, otherwise the compressor could be damaged.
- Leave the unit in an upright position for at least 12 hours before use to allow the compressor contents to settle.
- Don't place anything on top of appliance as the Air Deflector will be turned up automatically when the appliance was turning on.

Storage of equipment/appliances:

- The storage of equipment should be in accordance with the manufacturer's instructions.
- Appliance shall be installed, operated and stored in a room with a floor area larger than 4 m².
- The appliance shall be stored so as to prevent mechanical damage from occurring.
- The appliance shall be stored in an area where the room size corresponds to the room area as specified for operation.
- 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.)
- Storage of packed (unsold) equipment Storage package protection should be constructed such that mechanical damage to the equipment inside the package will not cause a leak of the refrigerant charge.
- The maximum number of pieces of equipment permitted to be stored together will be determined by local regulations.

Warning

If the supply power cord is damaged, the power cord must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.

This product has not been designed for any uses other than those specified in this booklet.



Warning: Low burning velocity material R32



Save These Instructions

Getting to Know Your Air Conditioner

Congratulations on the purchase of your new Portable Air Conditioner.

Before the first use of your new appliance, it is most important that you read and follow the instructions in this Use & Care booklet, even if you feel you are quite familiar with this type of appliance. Find a place and keep this booklet handy for future reference. Attention is particularly drawn to the section dealing with "IMPORTANT SAFEGUARDS".

This appliance has been designed to operate from a standard outlet. It is not intended for industrial or commercial use.

Carefully unpack the appliance and remove all packing materials.

WARNING: The air conditioner is heavy! Use two or more people to lift and install the unit. Failure to do so could result in injuries.

Hints for Economical Operation

- Do not block the inlet or outlet of air flow inside with blinds, curtains or furniture.
- The size of the room must fit the capacity of the Air Conditioner for efficient and satisfactory operation.
- Position and vent the Air Conditioner near windows and walls that receive the most shade during the heat of the day.
- Close the fireplace damper, floor and wall registers so cool air does not escape up the chimney and into the duct work.
- Keep blinds and drapes in other windows closed during the sunniest part of the day.
- Proper insulation in your home will help keep warm air out and cool air in.
- External house shading with trees, plants or awnings will help reduce the air conditioner's work load.
- Clean air filter. A clogged air filter reduces cooling efficiency and should be cleaned once every two weeks, depending on usage.
- Avoid opening doors and windows more often than necessary.
- When cooling, close the curtains. This will prevent counteracting cooling effect in summer.

- Use the timer effectively. Set the timer for the desired operating time.
- Try to create a uniform circulation of room air. Adjust air flow direction for even circulation of room air.
- To ensure optimal efficiency of the product, keep doors and windows closed when it is used as an air conditioner or dehumidifier. If the product is being used with the fan function only, an open window could improve air circulation.

NOTE: For optimum performance, operate the unit under the usable operating temperature and humidity conditions indicated in this owner's manual. If the unit operates beyond these conditions, it may cause malfunctions of the unit or condensation to drip from the unit.

Performance Parameters

Model	MA02016KRY30
Power	220-240V 50Hz a.c.
Rated cooling capacity(W)	16000BTU (4.68KW)
Rated input power(W) Cool	1750W
Refrigerant/Charge	R32/580g
Air flow volume(m ³ /h)	500
Dehumidifying capacity (L/h)	1.375
Waterproof class	IP20
Protection class	Class I
Climate type	T

Note: As a result of continual improvements, the design and specifications of the product within may differ slightly to the unit illustrated on the packaging.

NOTICE:

1. The indicated noise parameter is measured in laboratories before leaving factory.
2. The rated cooling capacity is tested under the following conditions:

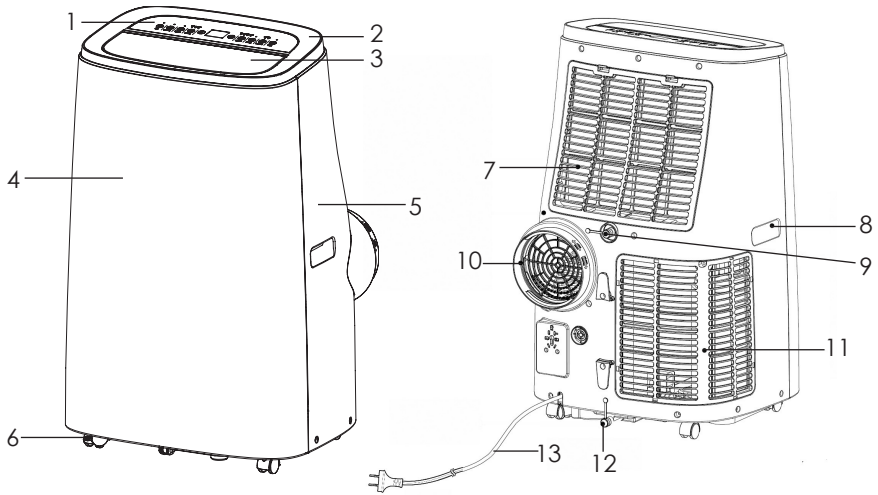
Cooling operation	35°C(DB)	24°C(WB)
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3. We will not make formal notice for any change in parameters, Please take the name plate attached to the air conditioner as major reference.
4. Operating temperature range:

	Maximum cooling	Minimum cooling
DB/WB(°C)	35/24	21/15

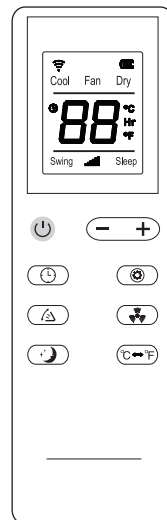
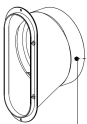
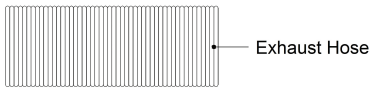
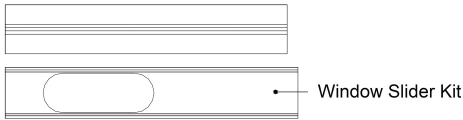
5. Wiring diagram of the air conditioner is attached on the unit.
6. If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.

Features of Your Portable Air Conditioner



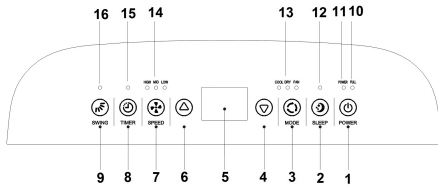
- 1. Control Panel
- 2. Top cover
- 3. Air Outlet / Swing air deflector
- 4. Front Housing
- 5. Rear Housing
- 6. Omni-directional wheel


- 7. Air Filter with Cover
- 8. Handle
- 9. Continuous Drain Port
- 10. Exhaust Connector with Air Outlet
- 11. Air Filter with Cover
- 12. Drain Port
- 13. Power Cord



Note: Check all the accessories are included in the package and please refer to the installation instructions for their usage.

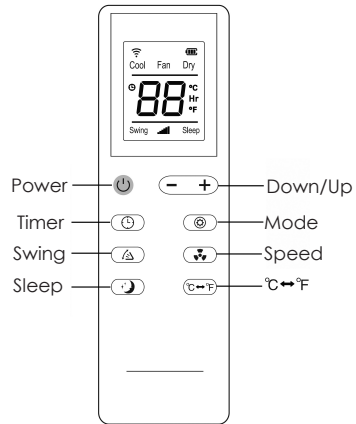
Operation Panel



1. **POWER:** press this key to turn ON/OFF machine. After machine turns ON, default setting is cooling mode with low fan speed.
2. **SLEEP:** In cooling mode, press this key to turn ON/OFF sleeping function.
3. **MODE:** after machine turns ON, press this key to select either cooling, dehumidifying or fan mode.
4. **DOWN:** In cooling mode, press this key to reduce setting temperature from 31-16°C.
5. **DISPLAY:** Shows the selected mode, set temperature or the selected timer delay.
6. **UP:** In cooling mode, press this key to increase temperature from 16-31°C.
7. **SPEED:** after machine turns ON, press this key to select fan speed (high, mid and low).
8. **TIMER:** In power-on or standby mode, press this key in conjunction with UP/DOWN keys to setup ON/OFF time from 1~24 hours.
9. **SWING(air flow):** after machine turns ON, press this key, the air deflector will swing continuously up and down; by pressing the  button again the movement will stop and the air deflector remain in that position.

Indicators:

10. Water Full indicator
11. Power on/Standby indicator
12. Sleep indicator
13. Mode selection indicators
14. Fan speed indicators
15. Timer indicator
16. Swing operation indicator



°C/ °F: Switch between Centigrade and Fahrenheit.

Operation of functions is the same when using the remote or the control panel.

Air Conditioner Features

Cooling mode

In this mode, the exhaust hose **MUST** be installed before using.

- After machine turns on, default setting is cooling temperature of 22°C with low fan speed.
- Press " MODE" to select cooling mode, "COOL" mode indicator turns ON .
- Press " UP" or " DOWN" to adjust temperature (from 16°C to 31°C).
- Press "SPEED" to select high, mid or low fan speed.

Fan mode

In this mode, there is no requirement to use the exhaust hose. However, if you require stale or smoky air to be removed from the room, install the exhaust hose as described in the "Exhaust hose installation" section.

- Press " MODE" to select fan mode, fan mode indicator turns on and "FA" shows on display.
- Press "SPEED" to select high, mid or low speed.
- In fan mode, the sleep function cannot be activated and temperature cannot be adjusted.

Dehumidifying mode

Dehumidifying mode is used to remove humidity from the room without additional cooling. In this mode, you do not need to use the exhaust hose, but the water collected must be discharged regularly.

- Press "MODE" to select dehumidifying mode, "DRY" mode indicator turns on and "dh" shows on display.
- In dehumidifying mode, sleep function cannot be activated, and the fan speed is pre-set at low and cannot be adjusted. Keep doors and windows closed for best effect.

Timer mode

This feature allows you to set a delay from 1 to 24 hours that will turn the air conditioner ON or OFF automatically.

- In standby mode, press "TIMER" to activate the Auto start program, and then press "UP"/"DOWN" keys to adjust the time setting. Timer indicator turns on.
- In power-on mode, press "TIMER" to activate the Auto stop program, and then press "UP"/"DOWN" keys to adjust the time setting. Timer indicator turns on.
- To deactivate the timer function, press Timer key until Timer indicator turns off.

Sleeping mode

- Press "SLEEP" to enter into sleeping mode, default setting of fan speed is low.
- When sleeping mode turns on, in cooling mode, after the first hour of operation, setting temperature will rise by 1°C, after the second hour of operation, setting temperature will go up another 1°C, and then remain at that temperature. This serves to ensure that room does not get too cold during the night.
- Sleeping mode cannot be activated together with either dehumidifying or fan mode.

Auto restart

If there is a power failure during operation, the unit will resume operation with the same setting (except for Timer, sleep and swing) as before the power failure. The timer, sleep and swing features will be deactivated.

Operation Mode Adjustment

Plug appliance in, the buzzer will make a "beep" sound, and the appliance goes to Standby mode.

Warning: Don't place anything on top of appliance as the Air Deflector will turn up automatically when the appliance turns on. The foreign objects may fall into the appliance and cause damage to the unit and/or injury to the user.

ON/OFF:

Press the Power key to turn on the machine. The Air Deflector will turn up automatically to direct the airflow.

Press the Power key again to turn the machine to Standby mode.

MODE:

After machine turns on, press this key to select cooling, dehumidifying or fan mode.

SPEED:

After machine turns on, press this key to select fan speed (high, mid and low).

DOWN:

In cooling mode, press this key to decrease temperature setting between 31-16°C in one degree increments.

UP:

In cooling mode, press this key to increase temperature setting between 31-16°C in one degree increments.

SLEEP:

In cooling mode, press this key to turn ON/OFF sleeping function.

TIMER:

In cooling mode, when the Timer function is selected, you can set the air conditioner to either automatically turn OFF or turn ON after a delay of up to 24 hours.

- **Auto Stop:**

While the air conditioner is running, press the Timer button to activate the Auto Stop program, the Timer indicator illuminates and "01" shows on display. Press UP/DOWN buttons repeatedly to set the time by 1 hour increments up to 24 hours. The hour(s) will show on display. When the set time has elapsed, the air conditioner automatically stops and enter into Standby mode.

- **Auto Start:**

While the air conditioner is in Standby mode, press the Timer button to activate the Auto Start program, the Timer indicator illuminates and "01" shows on display. Press UP/DOWN buttons repeatedly to set the time by 1 hour increments up to 24 hours. The hour(s) will show on display. When the set time has elapsed, the air conditioner automatically turns on.

- **To deactivate the timer function:**

Turning the unit ON/OFF at any time or pressing the timer button repeatedly until the timer indicator extinguished, the Auto Start/Stop function will be cancelled.

SWING (air flow):

After machine turns on, press this key, the Air Deflector will swing continuously up and down; by pressing this key again the movement will stop and the Air Deflector remain in that position.

DEHUMIDIFIER (Dehumi):

Press MODE key repeatedly to select Dehumidifying. The "DRY" indicator will illuminate, and "dh" shows on display.

Air is dehumidified as it passes through the unit, without being in full cooling mode.

Note: If the unit will be used mainly as a dehumidifier, do not connect the exhaust hose and let the warm air return in the room. Continuous drainage is then necessary and more efficient.

Under dehumidifying mode, sleeping function cannot be activated, and fan speed is preset at low and cannot be adjusted.

TANK FULL:

- This machine is equipped with auto-water-evaporating system. Condensed-water cycles to cool down the condenser, which will not only improve cooling efficiency, but also save energy.

- If inner water tank is full, "Full" indicator

will flash and the machine enters into standby mode, buzzer sounds, compressor stops and all keys are invalid till machine recovers to be normal. At this point, you need to empty the water tank as per below steps.

- Disconnect appliance from the power supply, detach the exhaust hose from back of unit (If not in dehumidifying mode operation).

- Move the appliance to a suitable drain location or outdoors where water can safely be drained from the unit. You may also place a pan under the drain port that will hold 1.5L of water to drain the water directly.

- Pull out drain plug from Drain Port and drain water from the unit.

- Once the water collection tank is drained, reinstall the drain plug, making sure it is on securely. Move the unit back to its position, reconnect exhaust hose (not required if going to operate appliance in dehumidifying mode), plug back in to Domestic Power Outlet and switch appliance ON , reselect your desired operation mode.

- The appliance will now operate normally.

Use of a drain hose when using the Dehumidifying mode

- If you wish to use the Dehumidifying mode because the unit is running in high humidity or for other reasons, a drain hose can be connected for continuous draining.

- Pull out the rubber plug from Continuous Drain Port carefully which is located at middle back of the unit.

- Install the supplied drain hose to the Continuous Drain Port on the back of the unit and place the open end of the hose in a suitable drain location or outdoors. Always protect carpeting or floors from possible water spillage.

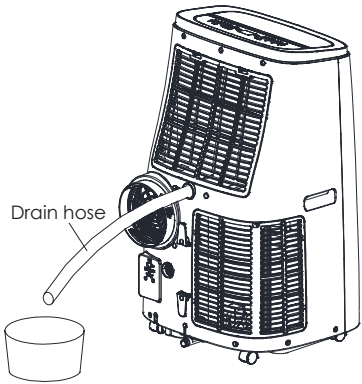
- The drain hose must point downwards from drain point and route smoothly without bends or kinks.

Installation Guide

Location Requirements

In the cooling mode, the appliance must be placed close to a window or opening so that the warm exhaust air can be ducted outside.

1. The unit must be stood upright at all times. Position the unit on a flat floor where it is within reach of a switched power outlet and make sure there is a minimum of 50cm clearance around the unit.

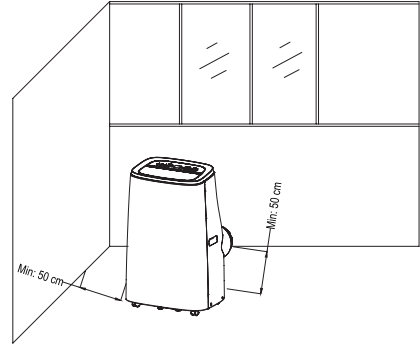


- When the continuous drain feature is not being used, remove the drain hose from the Continuous Drain Port. Reinstall the drain plug, making sure it is on securely.

Warning: Do not use drain hose in Cooling mode.

Note: The drain hose must be put lower than the Continuous Drain Port. water can not be drained if the hose set higher than the Continuous Drain Port.

Note: the compressor can only be restarted after 3 minutes, as a protective measure against damage to the compressor unit.



2. The extending range of the flexible exhaust hose should not exceed 1.5m (4.92ft).
3. Do not block the air outlet.
4. Place the appliance with it's unbound supply cord within reach of the nearest Domestic Power Outlet.
5. Do not plug supply cord into extension cords , double adaptors or power boards of any kind at any time, it should only ever be plugged directly into Domestic Power Outlet.

Insert batteries into the Remote Control

1. Press down on the arrow and slide the battery cover on the back of the remote, then you can remove the cover.
2. Insert two new AAA 1.5V alkaline batteries align with polarity indicator markings (+/-) inside the compartment.
3. Reattach the battery cover, making sure the locking tab clicks into place.

Using the Remote Control to operate the appliance

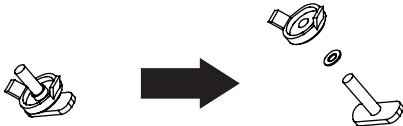
1. For the best results, aim the remote control directly at the Remote Sensor on the front panel of the appliance.
2. Do not put any objects between the remote control and the appliance while operating the appliance.
3. Operate the remote control within a 5-metre range and an angle of 60 degrees.

Notes:

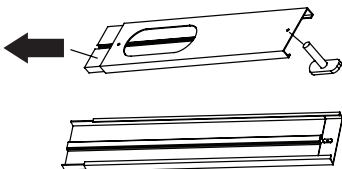
1. Use only alkaline batteries. Do not use rechargeable batteries. Keep batteries out of children's reach.
2. Do not use old and new or different types of batteries in combination. Do not use the remote if the batteries have leaked.
3. Remove the batteries if they are discharged or if the remote control is not being used for a long time. Don't let the drained battery acid discharge damage the remote control.
4. When there is a strong ambient light source, the performance of the infrared remote sensor may be degraded, causing unreliable operation.
5. Batteries contain chemical substances, so they should be disposed of properly.

How To Assemble The Window Slider Kit

1. Disassemble the screw, washer and nut.



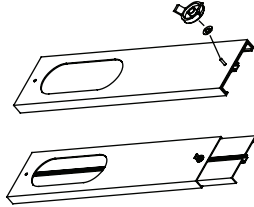
2. Separate 2 pieces of the slide bar and insert the screw into the hole.



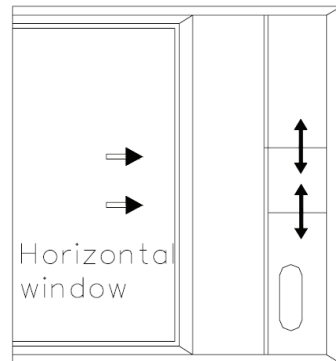
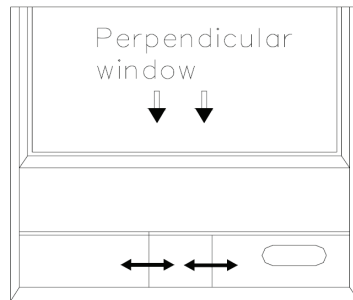
3. Assemble the slide kit.



4. Adjust the length of window slider kit as per your window and tighten the washer and nut.

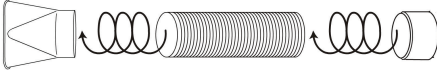


5. The Window Slider Kit (Minimum: 93cm Maximum: 125cm) has been designed to fit most standard vertical and horizontal sliding window applications.

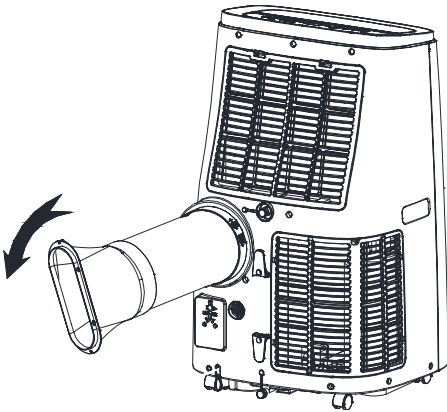


Exhaust Hose Installation

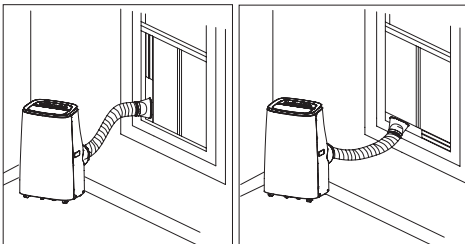
1. Move air conditioner to desired location. See "Location Requirements."
2. Screw one end of flexible exhaust hose into the window slider connector and screw the other end of the exhaust hose into the exhaust connector. Ensure proper fit on both ends.



3. After connectors assembled, insert the exhaust connector into the air outlet at the middle back of the appliance. Push-in and then rotate the exhaust hose anti-clockwise to secure it onto the appliance. Ensure that all connections are tight and installed properly.



4. Extend the exhaust hose and insert window slider connector into window slider kit. Push the connector to the shorter end of Window Slider Kit and fix it by using the screw provided. Place window slider kit in window opening and slide window to close against the window slider. Alternatively, hang exhaust hose through window opening if window slider cannot practically be used.



Important Note

- Ensure that there are no obstructions, kinks in flexible exhaust hose that impedes the exhaust airflow as this will affect the performance of the Portable Air Conditioner and may damage the appliance.
- Do not over-bend or twist the venting hose. Adjust hose length to shorter for better performance efficiency.
- Avoid exhaust-pipe with sharp bend.
- Make sure air in exhaust pipe can run smoothly.
- The exhaust hose can be extended from its original length of 50cm up to 150cm, but it is best to keep the length to the minimum required. Also make sure that the hose does not have any sharp bends or sags.

Service And Maintenance



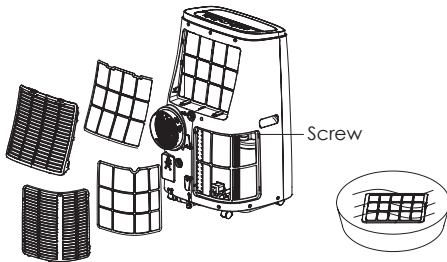
Before cleaning or servicing this unit, be sure to disconnect the unit from any electrical supply outlet.

1. Wipe the case with a slightly damp cloth, then wipe dry with a dry cloth towel.
2. Never pour water onto or into the air conditioner. It could damage internal components and create a shock and fire hazard.
3. Do not use gasoline, thinner or other chemicals to clean the unit. As these substances may cause damage to the finish and deformation of plastic parts.
4. Do not wash the unit directly under a tap or using a hose.
5. If the power cord is damaged, it should be repaired by manufacturer or its agency.

Cleaning the Air Filter

If the air filter becomes clogged with dust/dirt, the air filter should be cleaned every two weeks. Depending on indoor air quality, more frequent cleaning may be needed. A dirty air filter will decrease airflow and reduce efficiency.

1. Press the Power button to turn OFF the air conditioner and pull out the plug from the wall socket.
2. Remove the screw on bottom of filter. Take off up and bottom filters from the air inlet vents. (See illustration below).



3. Dust/Dirt clogged in the filter can be removed by vacuum cleaner. If filter is very dirty, wash it in lukewarm soapy water while rubbing it gently with a brush. A mild detergent is recommended.
4. Wipe the filter with a soft cloth soaked in water and dry it up in the shade. Do not use harsh cleaners or very hot water. Do not wash in a dishwasher.
5. Allow filters to dry completely before reinstalling. Replace the air filter as it was. Do not operate the air conditioner without the air filters in place.

After a Long Idle period and before next use

1. Remove the drain plug and drain water completely.
2. Set the fan going for a few hours to dry out the inside completely.
3. Switch the air conditioner OFF and unplug it from the wall socket. Clean the filter and outer surface.
4. Allow it to dry completely, then reinstall the filter.
5. Take out batteries from remote controller and store with air conditioner in a clean, dry location, away from direct sunlight, extreme temperatures, and excessive dust.
6. Remove air exhaust hose and store with air conditioner in a clean, dry area.

Warning Display

Water Full Indicator flashing indicates that internal water tank is full.

This must be emptied first or will be unable to operate the appliance.

Trouble Shooting

1. Information on servicing

1. 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.

2. Work procedure

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

3. 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.

4. 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 flammable atmospheres. Ensure that the leak detection equipment being used is suitable for use with flammable refrigerants, i.e. non-sparking, adequately sealed or intrinsically safe.

5. 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 to hand. Have a dry powder or CO₂ fire extinguisher adjacent to the charging area.

6. No ignition sources

No person carrying out work in relation to a refrigerating system which involves exposing any pipe work that contains or has contained flammable refrigerant shall use any sources of ignition in such a manner that it may 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 flammable 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.

7. 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.

8. 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 actual 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 may 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.

9. 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 there no live electrical components and wiring are exposed while charging, recovering or purging the system;
- That there is continuity of earth bonding.

2. Repairs to sealed components

1. 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.
2. 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.

Ensure that apparatus is mounted securely.
Ensure that seals or sealing materials have not degraded such 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.

3. 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 are the only types that can be worked on while live in the presence of a flammable atmosphere. The test apparatus shall be at the correct rating.

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

4. Cabling

Check that 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.

5. 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 systems containing flammable refrigerants.

Electronic leak detectors shall be used to detect flammable refrigerants, but 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.

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.

6. Removal and evacuation

When breaking into the refrigerant circuit to make repairs – or for any other purpose – conventional procedures shall be used. However, it is important that best practice is followed since flammability is a consideration. The following procedure shall be adhered to:

- Remove refrigerant;
- Purge the circuit with inert gas (optional for A2L);
- Evacuate (optional for A2L);
- Purge with inert gas (optional for A2L);
- Open the circuit by cutting or brazing.

The refrigerant charge shall be recovered into the correct recovery cylinders. For appliances containing flammable refrigerants other than A2L refrigerants, the system shall be purged with oxygen-free nitrogen to render the appliance safe for flammable refrigerants. This process may need to be repeated several times. Compressed air or oxygen shall not be used for purging refrigerant systems.

For appliances containing flammable refrigerants, other than A2L 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. This process shall be repeated until no refrigerant is within the system. When the final oxygen-free nitrogen charge is used, the system shall be vented down to atmospheric pressure to enable work to take place. This operation is absolutely vital if brazing operations on the pipe-work are to take place.

Ensure that the outlet for the vacuum pump is not close to any potential ignition sources and there is ventilation available.

7. 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 in an appropriate position according to the instructions.
- Ensure that the refrigerating 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 refrigerating system.

Prior to recharging the system it shall be pressure tested with OFN. 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.

8. 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 recovered 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 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 refrigerating system unless it has been cleaned and checked.

9. Labeling

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

10. 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 is available. All cylinders to be used are designated for the recovered refrigerant and labeled 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 flammable refrigerants. 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. Before using the recovery machine, check that it is in satisfactory working order, has been properly maintained and that any associated electrical components are sealed to prevent ignition in the event of a refrigerant release. Consult manufacturer if in doubt.

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 evacuation process shall be carried out prior to returning the compressor to the suppliers. Only electric heating to the compressor body shall be employed to accelerate this process. When oil is drained from a system, it shall be carried out safely.

PROBLEM	POSSIBLE CAUSES	SUGGEST REMEDIES
UNIT DOES NOT START	Water full indicator lamp blinks, water tank is full.	Drain the water collection tank and reset your settings.
	Room temperature is lower than the setting temperature.	Adjust the temperature setting.
AIR CONDITIONER DOES NOT COOL AS IT SHOULD	The windows or doors in the room are not closed.	Make sure all the windows and doors are closed.
	There are heat sources inside the room.	Remove the heat sources if possible.
	Exhaust air hose is not connected or blocked.	Connect the hose and make sure it can function properly.
	Temperature setting is too high.	Decrease the setting temperature.
	Air filter is blocked by dust.	Clean the air filter.
THE UNIT GIVES OUT ODOUR	Air conditioner may have absorbed odours from wall, carpet and furniture.	Remove the objects with odour smell if possible.
NOISY OR VIBRATION	The ground is not level or not flat enough.	Place the unit on a flat, level ground if possible.
GURGLING SOUND	The sound comes from the flowing of the refrigerant inside the air conditioner.	It is normal.
WATER DRIPS FROM CABINET INTO YOUR HOUSE	The drain plug is not installed properly.	Install the drain plug properly.

Warranty Conditions for purchase in Australia & New Zealand

Any claim under this warranty must be made within 2 years of the date of purchase of the product. To make a claim under the warranty in Australia, take the product (with proof of purchase) to any Bunnings store (see www.bunnings.com.au in Australia or www.bunnings.co.nz in New Zealand for store locations).

GSM International Pty Ltd bears reasonable, direct, expenses of claiming under the warranty in Australia. You may submit details and proof to a Bunnings store for consideration or contact our service agent below.

This warranty is provided in addition to other rights and remedies you may have under law: our goods come with guarantees which cannot be excluded under the Australian Consumer Law (if purchased in Australia) or the Consumer Guarantees Act 1993 (if purchased in New Zealand). You are entitled to replacement or refund for a major failure and to compensation for other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

The warranty excludes damage resulting from product misuse or product neglect. The warranty covers domestic use only and does not apply to commercial applications.

This warranty is given by GSM International Pty Ltd

ABN: 53007682475

For Warranty and technical queries: 1300 373 199 Aus Or 0800 200 037 NZ

Warranty Exclusions

Damage to the base or diffuser or any part through accident, misuse or negligence.

G | S | M

Gerard Sourcing & Manufacturing

GSM International Ltd.

Consumer Service Centre :

Aus: 1300 373 199

NZ: 0800 200 037

GSM International Ltd has a policy of continual improvement throughout the product range.
As such the unit contained within may differ slightly from the unit illustrated on the pack.

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