



7000 BTU Air Conditioning Unit

Model No. MPPHA-07CRN7-QB6



Care & Instruction Manual





For household and indoor use only

Please read these instructions before use and retain for future reference

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Safety

Explanation of symbols on product

	WARNING	This symbol shows that the product has a flammable refrigerant. Contains refrigerant R290
	CAUTION	This symbol indicates that this manual should be read carefully and retained for future reference.
	CAUTION	This symbol indicates that servicing personnel should make reference to this manual.
	CAUTION	This symbol indicates that information is available.

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 the refrigerants may not contain an odour.
- The appliance shall be installed, operated and stored in a room with a floor area larger than 9m².

Electrical safety

- You should only plug the appliance into a 220V-240V AC, 50Hz supply. Connecting it to other power sources may damage the appliance and will invalidate the guarantee.
- Switch off and unplug when not in use and before cleaning or servicing the appliance.
- Keep the appliance and its cord out of reach of children less than 8 years.
- Do not allow children to use the appliance without supervision.
- This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children unless they are older than 8 and supervised.
- Keep cable, plug and appliance dry and away from areas where it is likely to get splashed. Never immerse in water.
- Do not pull on the cable to disconnect from mains supply.
- Do not operate the appliance if damaged or after it malfunctions. In the event the supply cord is damaged, in order to avoid a hazard it must only be replaced by a qualified service engineer, with a suitably approved part.
- This appliance must be positioned so that the plug is accessible and the plug socket is within easy reach of the power cord. Ensure that the cable is not covered (e.g. by carpets or rugs), close to any sharp or hot surfaces or where it is likely to cause a trip hazard.
- This appliance must be plugged in to an earthed socket outlet.

Warning!

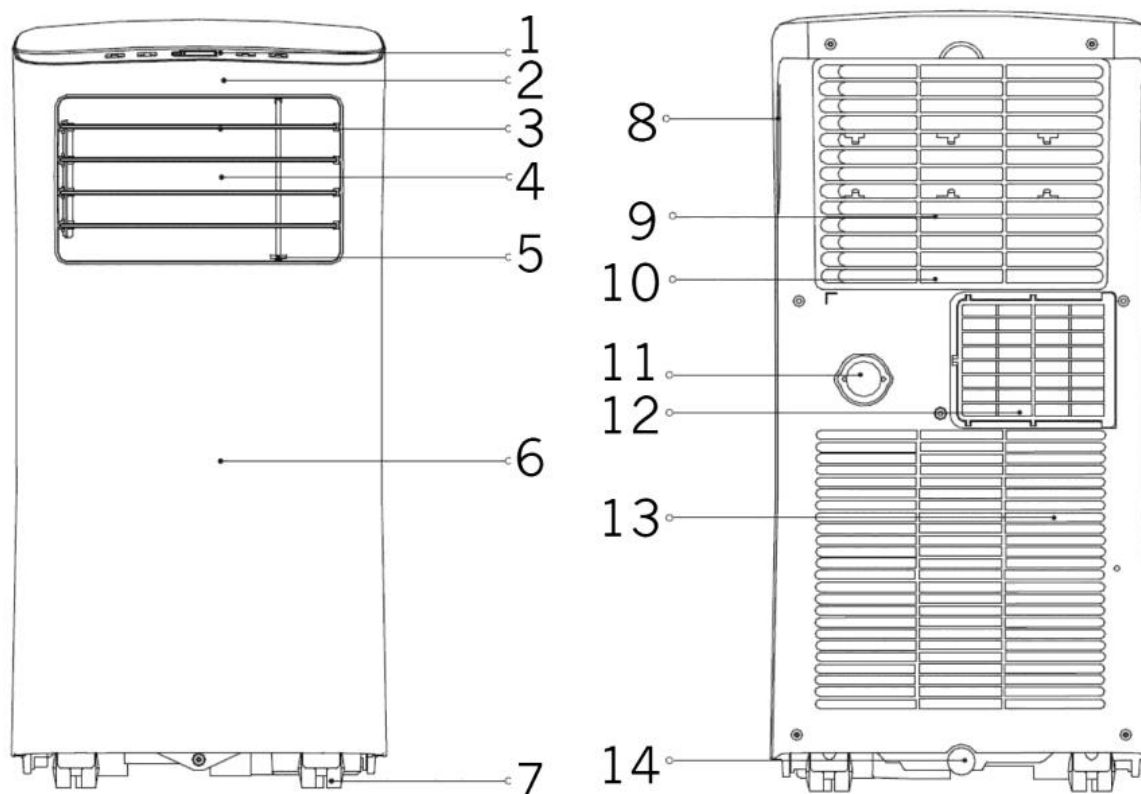
- This appliance is intended exclusively for use in domestic households. It is not suitable for commercial use.
- Store in a cool, well ventilated room that has no continuously operating ignition source (e.g. open flames, operating gas appliance or electric heater) with a floor area larger than 8m².
- Do not cover, obstruct the inlet or outlet grilles and allow the appliance to cool to room temperature before storing.
- 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 authorises their competence to handle refrigerants safely in accordance with an industry recognised assessment specification.
- Compliance with national gas regulations shall be observed.
- 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.
- If moving the air conditioner, always transport in an upright position and avoid mechanical damage.
- Only use for the intended purpose described in this manual.
- Trip Hazard. Beware of trailing cables when in use and while in storage.
- Strangulation Hazard. Children have STRANGLED in cords. Keep power cords out of reach of children. Never leave a cord positioned where a child could reach it.

Battery warnings

- CAUTION – Danger of explosion if batteries are incorrectly fitted / replaced.
- Batteries should be installed by an adult. Keep new and used batteries away from children.
- Only use 'AAA' 1.5V batteries in this remote control.
- Be sure to insert correctly taking care to observe the correct polarity (+ and -).
- Use only batteries of the same or equivalent type as recommended.
- Do not recharge non-rechargeable batteries.
- Remove rechargeable batteries from the remote control before recharging.
- Never mix old and new batteries (replace all batteries at the same time).
- Never try to dismantle batteries.
- Do not short-circuit the supply terminals.
- Always remove exhausted or dead batteries from the product.
- Remove batteries from the product before extended storage.
- Dispose of used batteries responsibly at local authority household waste recycling facility.
- **DO NOT dispose of batteries in a fire as the batteries may explode.**

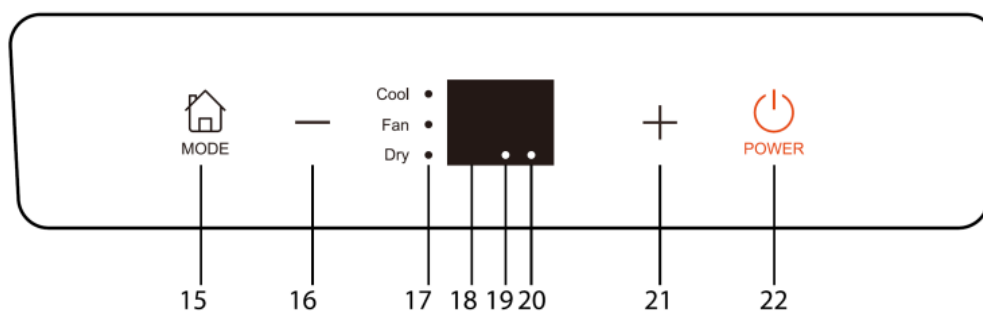
Parts

Main unit



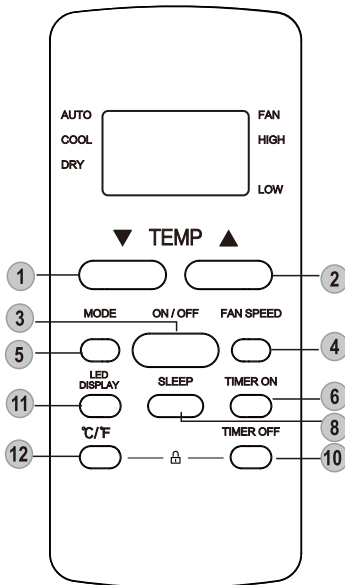
- | | |
|--------------------------|-------------------------------|
| 1. Operation panel | 8. Carry handles |
| 2. Remote control sensor | 9. Air filter (behind grille) |
| 3. Horizontal louvres | 10. Upper air intake |
| 4. Cold air outlet | 11. Upper drain outlet |
| 5. Vertical louvre lever | 12. Air outlet |
| 6. Housing | 13. Lower air intake |
| 7. Castor | 14. Lower tray drain |

Operation panel main unit



- | | |
|------------------------------|------------------------------|
| 15. Mode pad | 19. Power indicator |
| 16. Temperature decrease pad | 20. Timer indicator |
| 17. Mode indicators | 21. Temperature increase pad |
| 18. Display | 22. Power pad |

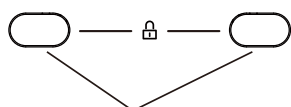
Remote control



RG51H3(1)/CE-M

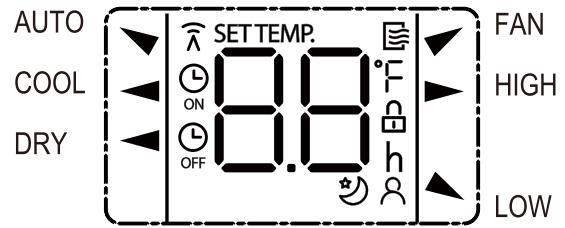
- 1 **TEMP ▼** : Decreases temperate in 1°C/1°F increments. Min. temperature is 17°C/62°F.
- 2 **TEMP ▲** : Increases temperate in 1°C/1°F increments. Max. temperature is 30°C/86°F.
- 3 **ON/OFF**: Turns the unit on or off.
- 4 **FAN SPEED**: Selects fan speeds in the following order: **AUTO**→ **LOW** → **HIGH**
- 5 **MODE**: Scrolls through operation modes as follows:
AUTO → **COOL** → **DRY**→ **HEAT**(cooling models without) → **FAN**
NOTE: Please do not select HEAT mode if the machine you purchased is cooling only type. Heat mode is not supported by the cooling only appliance.
- 6 **TIMER ON**: Sets timer to turn unit on (see **How to Use Basic Functions** for instructions).
- 8 **SLEEP**: Saves energy during sleeping hours .
- 10 **TIMER OFF**: Sets timer to turn unit off (see **How to Use Basic Functions** for instructions).
- 11 **LED DISPLAY**: Press this button to turn on and turn off the display on the indoor unit.
- 12 **°C/°F**: Press this button to alternate the temperature display between the °C & °F.

NOTE: Press together the two buttons simultaneously for 5 seconds to lock the keyboard. Press together the two buttons for 2 seconds to unlock the keyboard.



Press together simultaneously

Information are displayed when the remote controller is power up.



Mode display

AUTO ▼ COOL ◀ DRY ◀
◀ FAN

	Displayed when data transmitted.
	Displayed when remote controller is ON.
	Displayed when TIMER ON time is set
	Displayed when TIMER OFF time is set
	Shows set temperature or room temperature, or time under TIMER setting
	Indicated all the current settings are locked
	Displayed when I SENSE feature is activated(some units)
	Displayed when SLEEP feature is activated

Fan speed indication




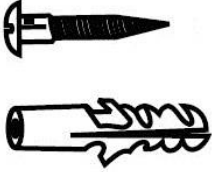
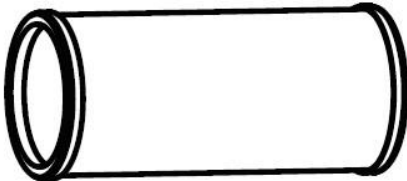
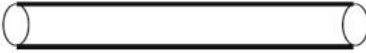
▶ HIGH	High speed
▲ LOW	Low speed
NO display	Auto fan speed

Note:

All indicators shown in the figure are for the purpose of clear presentation. But during the actual operation, only the relative function signs are shown on the display window.

Accessories supplied

Accessories have been supplied for the unit to be vented via the wall.

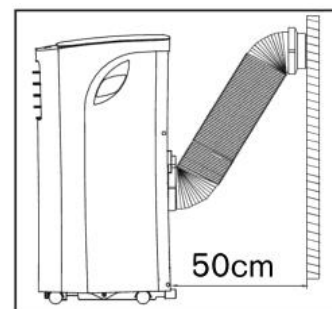
Unit adaptor	Wall adaptor – part A	Wall adaptor – part B	Wall fixings
			
1	1	1	4
Exhaust hose			1
Drainage pipe			1

Installation

This unit is designed to be free standing and is required to be vented to the outside if being used in cooling (air conditioning) or auto modes.

General

- The unit shall be installed, operated and stored in a room with a floor area larger than 8m².
- The room must not have any continuously operating ignition sources (e.g. open flames, operating gas appliance or electric heater).
- Place the unit on a firm level surface (to minimise noise and vibration) that is able to support the weight of the unit.
- Ensure adequate ventilation. The preferred clearance surrounding the main unit is 50cm but a minimum clearance of 30cm is mandatory.
- Check that the plug will safely reach an earthed socket. Ensure that the cable is not close to any sharp or hot surfaces and or where it is likely to cause a trip hazard.
- Do not cover the air intakes and check that the collection tray drain is accessible.



This unit has four operational modes and the type of installation required will depend on the mode being used.

Mode	Installation required / recommended
Fan	No further installation required
Dry	Hose recommended to be fitted to upper drain point for continuous water drainage.
Cool	Requires to be vented to the outside via window or wall.
Auto	Requires to be vented to the outside via window or wall.

Fittings have been supplied to be able to connect the hose to a hole drilled through an internal wall.

- If venting through an external wall, additional parts (specific to your wall type) will need to be purchased to complete the installation. If in doubt how to proceed, contact a builder or consult specialist literature before starting work.
- For venting to the outside via tilt-&-turn window or casement window, additional venting kits will need to be purchased to

complete the installation. The kits (CAT no.: 8763480) which are available for purchase from Argos.

Venting through a wall

This will require a hole to be drilled through the exterior property wall and additional parts to be purchased to complete the installation. If in doubt how to proceed, contact a builder or consult specialist literature.

Fixings have been supplied to connect the air conditioner to the internal side of the property wall. Additional parts to be purchased will depend on construction of the particular wall but are likely to include

- Channel ducting (125mm) – to extend vent through the wall
- Hose connector – to connect wall adaptor to channel ducting
- Louvre vent – to cover external hole and prevent insect and rodent ingress.

Warnings

- Before drilling, check for hidden cables or pipes.
- Wear safety goggles and dust mask when drilling or cutting.
- The use of a residual current device (RCD) is recommended when working with power tools.

Tools required

Drill	Hole cutter	Masonry drill bit
Screwdriver	Ruler	Pencil
Cable & pipe detector		

1. Push fit the unit adaptor onto one end of the exhaust hose. A click will be heard when correctly fitted (fig. 1).
2. Push fit part A of the wall adaptor onto the remaining end of the exhaust hose. A click will be heard when correctly fitted (fig. 1).

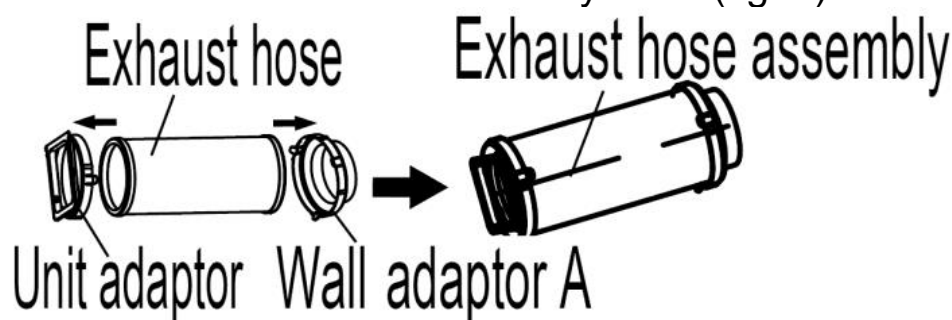


Fig. 1

3. Slide the unit adaptor onto the rear of the air conditioning unit (fig. 2).

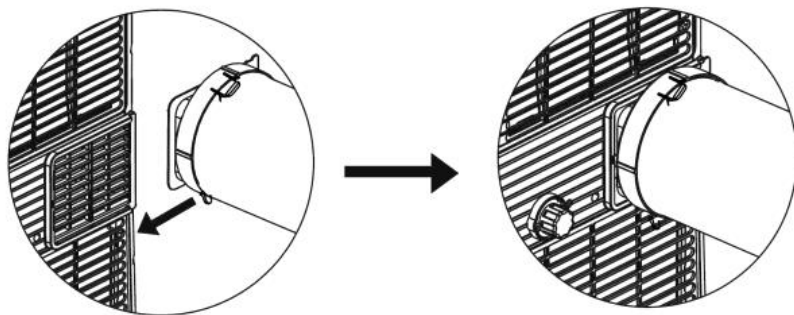


Fig. 2

4. Decide of the location for the wall vent, the recommended height of the hole is between 30cm – 120cm above the floor (fig. 3).

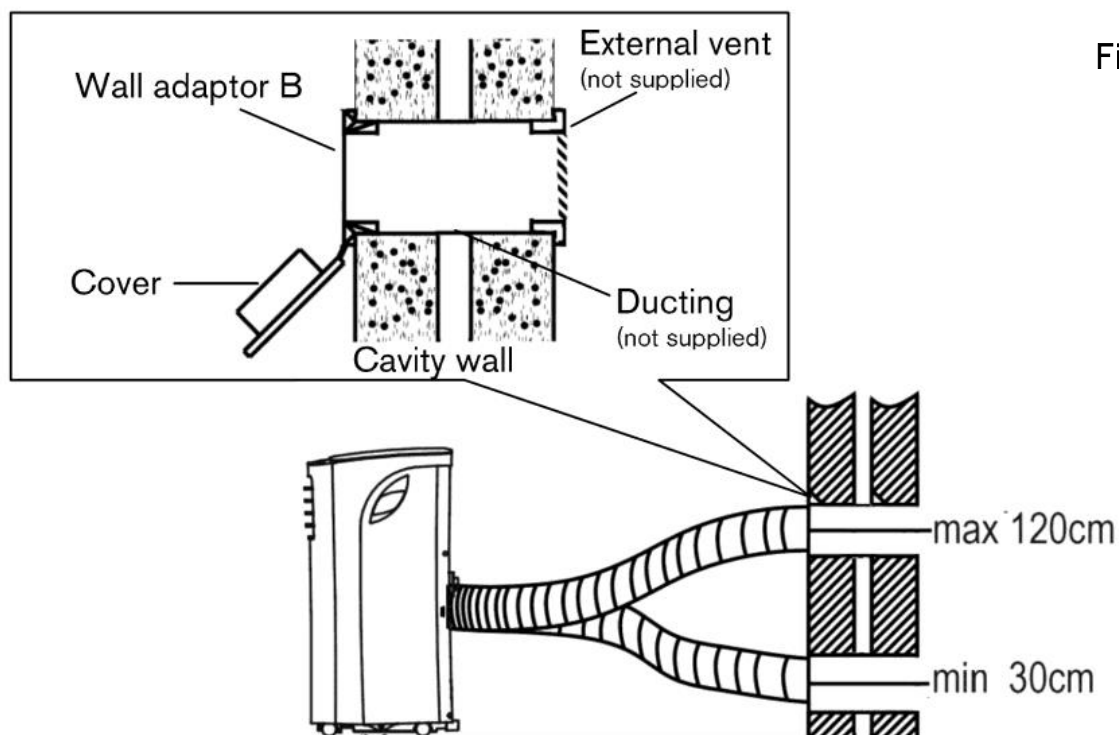
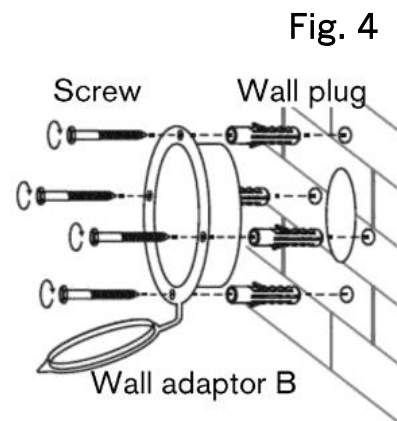


Fig. 3

5. Mark the centre point for the hole and before cutting -
- Use a cable and pipe detector to check for hidden pipes and electrical cables.
 - Check that exhaust hose will reach and that it will not be unsightly
 - Check the plug will reach the socket.

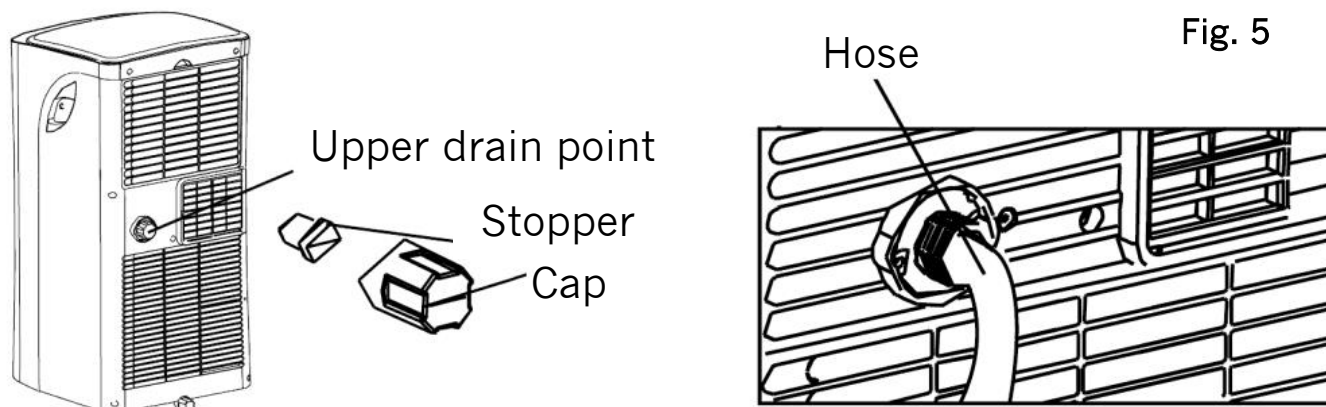
6. Cut a 125mm hole through the wall.
7. Insert part B of the wall adaptor into the hole and using a pencil, mark the fixing points through the rim of the adaptor.
8. Remove the adaptor and drill holes to a depth of 37mm.
9. Insert the wall plugs into the holes (fig. 4).
10. Fit ducting (not supplied) into the hole and attach to the back of the wall adaptor (part B) using a suitable connector (not supplied) – fig. 3.
11. Secure the wall adaptor assembly to the wall using the screws provided (fig. 4).
12. Open the cover and insert part A of the wall adaptor into part B. When not use, disconnect the exhaust hose assembly and close the cover.
13. On the exterior of the wall, cut the ducting to the required length and fit an external vent (not supplied).



Continuous water drainage

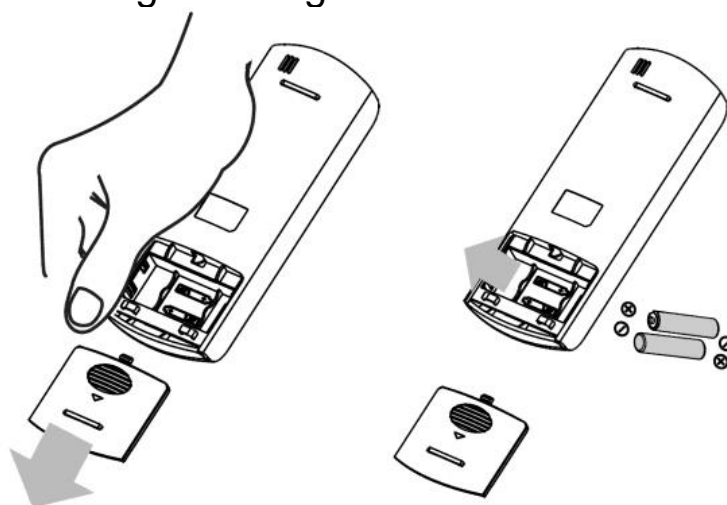
Recommended for dry (dehumidifier) mode

1. Ensure that unit is not connected to the mains supply.
2. Unscrew and remove upper drain cap and remove the stopper. Keep in a safe place for future use.
3. Fit the hose supplied and secure into position (fig. 5).
4. Place the open end of the hose directly over the drain.



Fitting the batteries into the remote

1. To use the remote control, slide off the battery compartment cover on the reverse of the remote control (fig. 6).
2. Insert 2 x AAA 1.5V battery (supplied) in accordance with the diagram in the battery compartment. Take care to observe the correct polarity (+/-) marked in the battery compartment and refit the cover.
3. Do not expose the battery or the installed battery to excessive heat (e.g. fire, sunshine or position close to radiators etc.).
4. Point the infrared transmitter on the remote control towards the remote control sensor on the air conditioner and select the function button of choice. Point remote control unit no more than 8m from the remote sensor and at an angle of no greater than 30°.



Operation

General

This air conditioner is suitable for use

- In room sizes 9 – 14m². Using in rooms above this size may make the conditioning effect less noticeable.
- With a room temperature below 35°C. Operating the unit in room above this temperature will result in the unit stopping frequently and may result in damage.
- With a room temperature above 17°C (cool mode) / 13°C (dry mode). Operating the unit in room below this temperature will result in the compressor and fan not functioning and may result in damage.

This unit has four modes of operation

Mode	Function
Fan	Circulates air around the room No change in room temperature but moving air feels cooler.
Dry	Removes moisture from the air and circulates the air. Negligible cooling of the room air but will help reduce condensation in the room and it will feel less sticky.
Cool	Cools and circulates air in the room. Air is also drier as cool air holds less water.
Auto	The unit will automatically select cool, fan or dry mode based on the set temperature.

1. After reference to the general installation section, place the unit in the desired position.
2. If using in
 - Cooling and Auto mode - ensure that the exhaust hose is connected and vented to the outside.
 - Dry mode – ensure exhaust is disconnected and preferably connect continuous drain.
 - Fan mode - ensure exhaust is disconnected.
3. If the unit has been moved allow the unit to stand for 3 minutes before plugging in.
4. Connect to the mains supply and switch on. The display on top of the unit will briefly illuminate and then just the power indicator will stay lit to show that the unit is connected to the mains.
5. The unit may now be controlled by the touch pads on top of the main unit or by using the remote control.

Basic operation - using the controls on the main unit

1. Press the POWER pad to activate the unit. The unit will start operating and the display will activate.
2. Press the MODE pad to select the desired mode. An indicator under the mode will illuminate to show which mode has been selected. When operating in
 - Fan and dry modes – the display will show the room temperature.
 - Cool mode – the display will show the 'set' temperature. To increase or decrease the set temperature use the + / - pads.
3. The default temperature display is in centigrade (°C). To change the display to Fahrenheit (F), press and hold the + and – pads simultaneously for 3 seconds.
4. The fan speed cannot be adjusted using the controls on the main unit. To adjust the fan, see next section.
5. The direction of the air flow can be directed by adjusting the louvers. The vertical louvres are adjusted by moving the lever left or right. Adjust the horizontal louvers upward or downward with the hand.
6. In the event that the drain tray becomes full, an alarm will sound and P1 will be shown in the display. Stop use and empty the water – see maintenance section.
7. To place the unit into standby, press the POWER pad again.

Basic operation - Using the controls on the remote control

1. Fit the batteries into the remote control.
2. Plug in the main unit and switch on at the mains.
3. Press the MODE button repeatedly until the desired mode is shown in the remote control display.
4. If using in cool mode, set the desired room temperature using the TEMPERATURE up (▲) or down (▼) buttons. The temperature can be set between 17 - 30°C. Press and hold this button to switch the display to Fahrenheit (F).
5. Set the fan speed using the FAN button (cool and fan modes only). The fan settings available are low, medium and auto.
6. Press the ON/OFF button to start the unit operating.
7. Pressing the LED button on the remote will illuminate the display.
8. Press the ON/OFF button again to place the unit into standby mode.

Notes:

- Ensure that curtains doors etc. do not block the signal between remote and receiver.
- Bright sunlight can interfere with an infrared signal and prevent it reaching the receiver. If this occurs, close a curtain near the unit to create shade.

Using the timer function

This unit has two timer functions that can be used independently or in sequence.

- Timer on – sets the time interval after which the unit will automatically turn on. For example to turn the unit on just before you return home from work.
- Timer off - sets the time interval after which the unit will automatically turn off.

Setting timer on function

1. Plug in the main unit and switch on at the mains.
2. Select cool mode and set the desired room temperature.
3. Press the TIMER ON button repeatedly until the desired switch on time interval is displayed on the screen. Each press of the button will increment the time by half an hour (for 0 - 10 hrs) and an hour (for 10-24 hrs).
4. Wait two seconds a bleep will be heard and the timer will be activated. The display screen will return to the usual temperature display but the timer on indicator will be illuminated.
5. When the set time has passed, the unit will activate and will need to be switched off manually.

Setting timer off function

1. Plug in the main unit and switch on at the mains.
2. Select cool mode and set the desired room temperature.
3. Press the TIMER OFF button repeatedly until the desired switch off time interval is displayed on the screen. Each press of the button will increment the time by half an hour (for 0 - 10 hrs) and an hour (for 10-24 hrs).
4. Wait two seconds a bleep will be heard and the timer will be activated. The display screen will return to the usual temperature display but the timer off indicator will be illuminated.
5. When the set time has passed, the unit will switch off automatically.

Setting timer on and timer off function in sequence

1. Plug in the main unit and switch on at the mains.
2. Select cool mode and set the desired room temperature.
3. Press the TIMER ON button repeatedly until the desired switch on time interval is displayed on the screen.
4. Wait two seconds a bleep will be heard and the on timer will be activated.
5. Press the TIMER OFF button repeatedly until the desired switch off time interval is displayed on the screen.
6. Wait two seconds a bleep will be heard and the off timer will be activated. The display screen will return to the usual temperature display but the timer on and the timer off indicators will both be illuminated.
7. When the set 'on' time interval has passed, the unit will activate and will then switch off automatically when the set 'off' time interval has lapsed.

Example

If the current time is 1pm and you want the unit to switch on automatically at 7pm and then switch off two hours later at 9pm.

- Press TIMER ON button until display shows '6.0hr' and wait until bleep is heard.
- Press TIMER OFF button until display shows '8.0hr' and wait until bleep is heard.

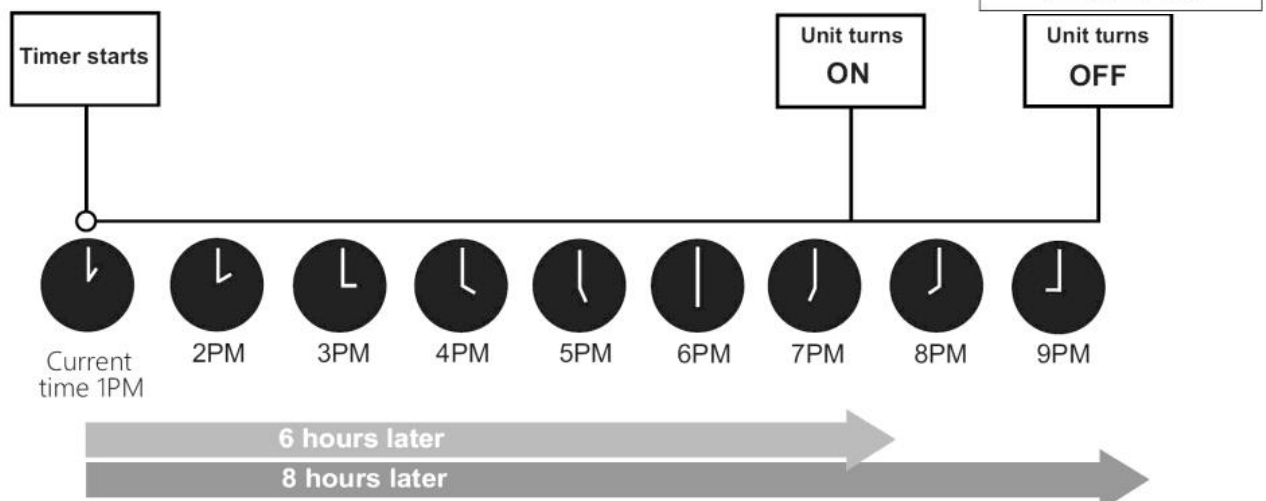


Fig. 7

Using the sleep function – cool mode only

This function can help improve air conditioner energy use over the night time period. When sleep mode is activated the set temperature will increase by 1°C after 30 minutes. After a further 30 minutes, it will increase again by 1°C. This new temperature will be maintained for 7 hours before reverting to the original set temperature.

1. Plug in the main unit and switch on at the mains.
2. Select cool mode and set the desired room temperature.
3. Press the ON/OFF button to start the unit operating.
4. Press the SLEEP button to activate the sleep mode. The display will now show the sleep indicator and the unit will proceed as described above.
5. The sleep mode can be deselected by pressing the SLEEP button again. The sleep indicator will extinguish.

Using the short cut button

This function sets and activates your favourite settings. The button can be used to store current settings or resume previous settings.

- When the remote control is on, press the SHORT CUT button for two seconds to store the current operation settings (operational mode, set temperature, fan speed level and sleep feature if activated).
- Pressing the SHORT CUT button when the unit is operational will automatically revert the settings back to the stored settings.

Tips for improving air conditioner efficiency

- Use the unit in the recommended room size 9 – 14m².
- Locate the unit where furniture cannot obstruct the air flow.
- Keep blinds and curtains closed during the sunniest part of the day.
- Keep filter clean.
- Keep windows and doors closed to keep the cool air in and the warm air out.
- Do not over extend or twist the exhaust hose (fig. 8).

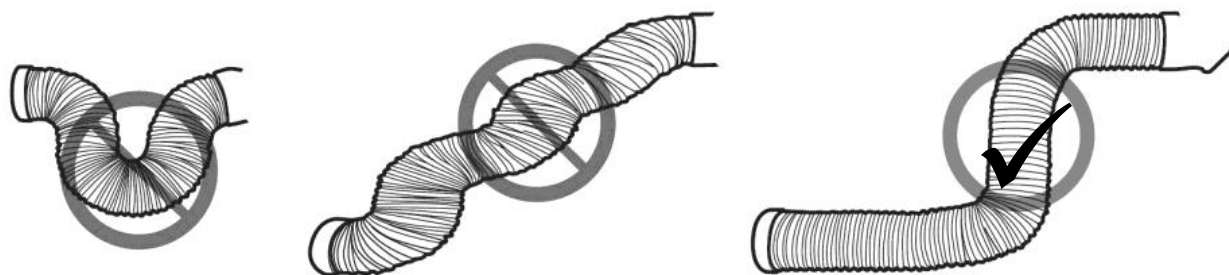


Fig. 8

Maintenance

Regular cleaning, maintenance and the correct storage will help ensure safe and efficient use and prolong the life of the product.

General

Switch off and disconnect from the mains supply before carrying out cleaning and maintenance.

Keep the air vents and air conditioner surface free from dirt and clean the air filter regularly.

1. Wipe the outside of the air conditioner and fittings with a damp (not wet) cloth and then wipe dry. Do not use detergents, solvents or abrasives as these may scratch or damage the surface. Never immerse the air conditioner, cable, plug or remote control in water.
2. Allow to dry fully before use.

Cleaning the air filter

The frequency that the air filter should be cleaned will depend on appliance usage. When in regular use, cleaning every two weeks is recommended

1. Switch off and unplug the air conditioner and allow it to come to room temperature.
2. Press the catch at the top the filter cover and lift off the cover (fig. 9).
3. Wash the filter in warm water with a neutral detergent. Rinse under cold running water until the water runs clear. **Allow to air dry fully.** Using a damp or wet filter will reduce performance.
4. Refit the filter and the cover into the air conditioner.

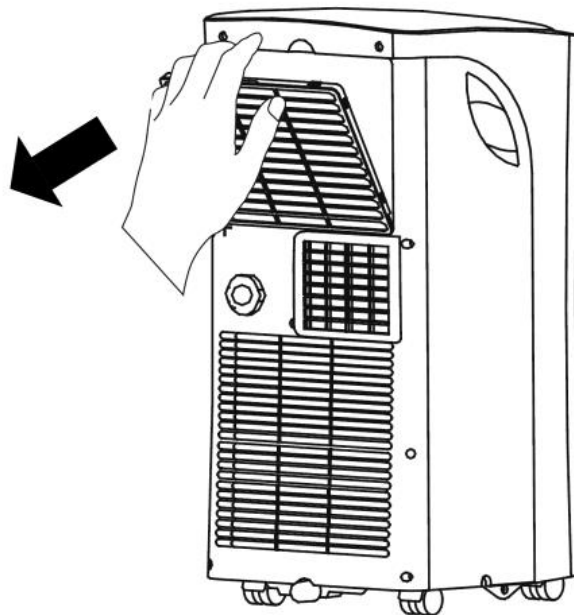


Fig. 9

Draining the collection tray

1. Ensure that unit is not connected to the mains supply and disconnect the exhaust hose (if fitted).
2. Move the unit to an area with a suitable drain (e.g. shower tray).
3. Unscrew and remove the lower drain cap and remove the stopper (fig. 10).
4. Allow the water to fully drain out before refitting the stopper and cap.
5. Move the unit back to the desired position, reconnect the exhaust and allow the unit to stand 3 minutes before resuming operation.

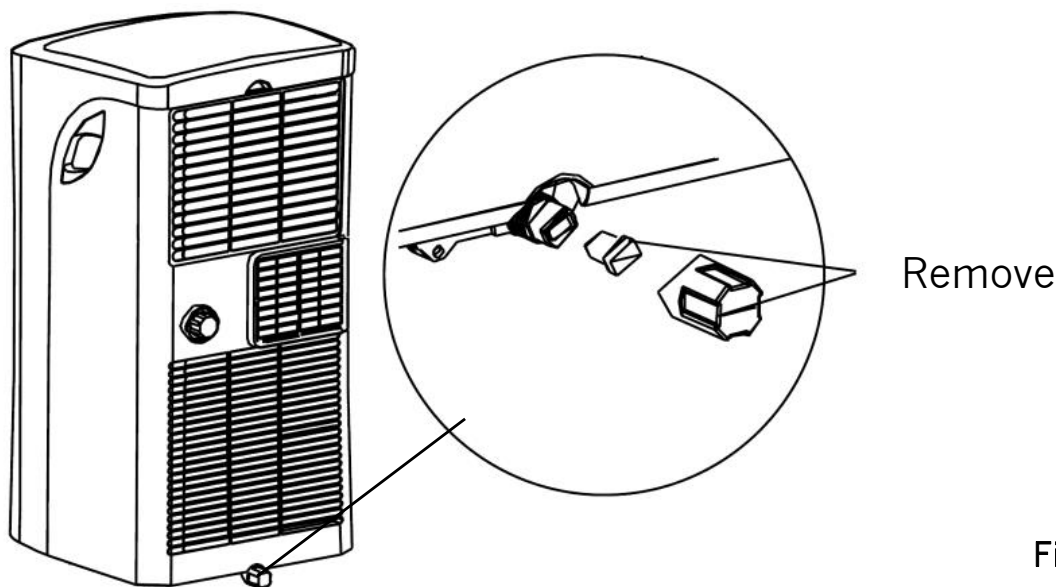


Fig. 10

Storage

When the unit is stored or not being used for prolonged periods it is necessary to ensure the unit is fully dry to prevent the build up of mould.

1. Drain the water collection tray.
2. Disconnect all hoses.
3. Select fan mode and operate for 12 hours in warm room.
4. Remove and clean air filter. Allow to fully dry before refitting.
5. Unplug and store unit in a cool well ventilated room that has no continuously operating ignition source (e.g. open flames, operating gas appliance or electric heater) with a floor area larger than 8m². Protect from mechanical damage.

Servicing

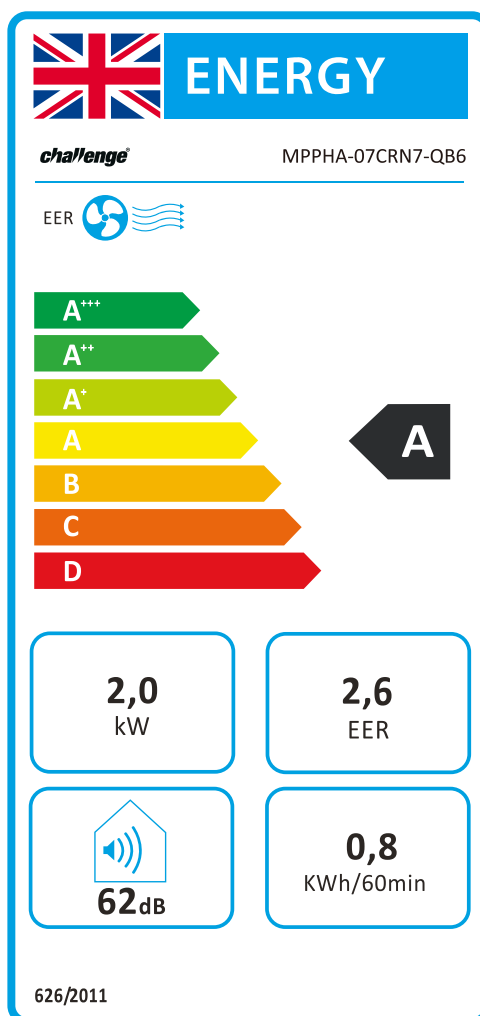
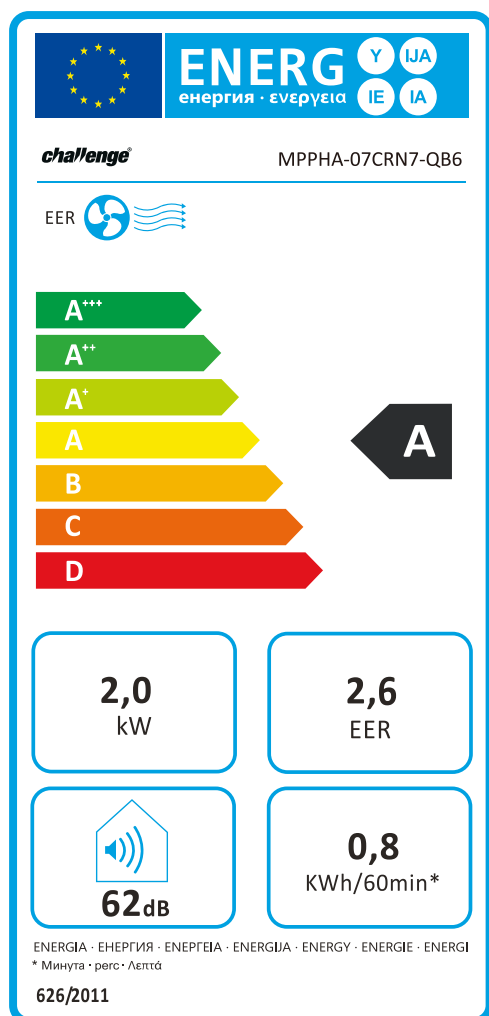
Servicing of this air conditioner must be carried out by a qualified service engineer that is demonstrated to be competent to handle refrigerants safely.

Troubleshooting

Observation	Potential cause / solution
Unit will not start	Plug not fully inserted into the mains socket or not switched on
	P1 is displayed. Drain water in bottom tray
	Cooling mode - Room temperature lower than set temperature. Reset temperature
	Do you have a power cut?
Room not cool enough	Doors or windows in the room are not closed.
	Room size over 14m ²
	There are heat sources within the room. Switch off or remove the sources.
	Unit is low on refrigerant. Call helpline 0345 640 2020
	Temperature setting on unit too high.
	Air filter blocked by dust. Clean the air filter.
Noisy or vibrating	Air filter blocked by dust. Clean the air filter.
	The ground is not level
Gurgling sound	This is normal and is the refrigerant flowing inside the air conditioner.
Error code E1	Room temperature sensor error. Unplug the unit and then restart the unit. If code still displayed call helpline 0345 640 2020
Error code E2	Evaporator temperature sensor error. Unplug the unit and then restart the unit. If code still displayed call helpline 0345 640 2020
Error code E4	Display panel communication error. Unplug the unit and then restart the unit. If code still displayed call helpline 0345 640 2020
LED display code P1	Bottom tray is full. Empty tray - see maintenance section. If code still displayed call helpline 0345 640 2020

Technical specification

Challenge 7000 BTU Air Conditioning Unit		
Model		MPPHA-07CRN7-QB6
Rated Voltage & Frequency		220 - 240V ~ AC 50Hz
Cooling capacity		7000BTU
		2.0kW
Dehumidifying capacity		1.94L/h
Refrigerant	Type	R290
	Weight	0.14kg
Air flow volume		272m ³ /h
Timer		24h
Suitable for room size up to		9 - 14m ²
Dimensions (w x h x d)		32.9 x 31.8 x 63.4 cm
Net weight		21.5kg
Class rating		I (earthed)
BS 1362 fuse		13A
Remote control model number		RG51H3(1)/CE-M



Plug / Wiring advice

The wires in this mains lead are coloured in accordance with the following UK electrical code:

BLUE = NEUTRAL

BROWN = LIVE

GREEN + YELLOW = EARTH

Non-rewireable plug

This appliance may be fitted with a “non-rewireable” plug. If you need to change the fuse in a “non-rewireable” plug, the fuse cover must be refitted. If the fuse cover is lost or damaged, the appliance must not be used.

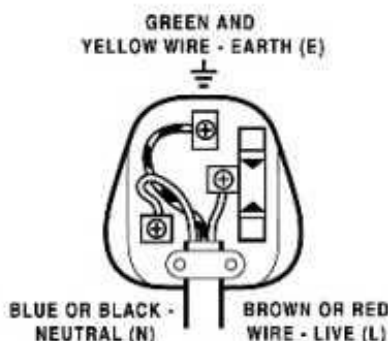
Rewireable plug

The colours of the wires in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in a rewireable plug. **Rewireable plugs should only be replaced by a suitably competent person. If in doubt, consult a qualified electrician.**

The BLUE wire must be connected to the terminal marked with the letter N

The BROWN wire must be connected to the terminal marked with the letter L

The GREEN & YELLOW wire must be connecting to the terminal marked with the letter E or the earth symbol .



Recycling electrical products



This marking indicates that this product should not be disposed with other household wastes throughout the EU. To prevent possible harm to the environment or human health from uncontrolled waste disposal, recycle it responsibly to promote the sustainable reuse of material resources. To return your used device, please use the return and collection systems or contact the retailer where the product was purchased. They can take this product for environmental safe recycling.



PRODUCT GUARANTEE

This product is guaranteed against manufacturing defects for a period of



Year

This product is guaranteed for twelve months from the date of original purchase.

Any defect that arises due to faulty materials or workmanship will either be replaced, refunded or repaired free of charge where possible during this period by the dealer from whom you purchased the unit.

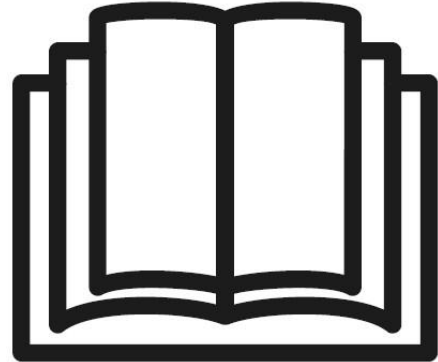
The guarantee is subject to the following provisions:

- The guarantee does not cover accidental damage, misuse, cabinet parts, knobs or consumable items.
- The product must be correctly installed and operated in accordance with the instructions contained in this manual. A replacement copy of this instruction manual can be obtained from www.argos-support.co.uk
- It must be used solely for domestic purpose.
- The guarantee will be rendered invalidated if the product is re-sold or has been damaged by inexpert repair.
- Specifications are subject to change without notice.
- The manufacturer disclaims any liability for the incidental or consequential damages.
- The guarantee is in addition to, and does not diminish your statutory or legal rights.

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United Kingdom, BT8 6FX. Argos Distributors (Ireland) Limited, Unit 7,
Ashbourne Retail Park, Ballybin Road, Ashbourne, Country Meath,
Ireland



Caution: Risk of fire / flammable materials



Read the manual carefully

Contains flammable refrigerant R290

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 the refrigerants may not contain an odour.
- The appliance unit shall be installed, operated and stored in a room with a floor area larger than 8m².

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 minimised. 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 minimise the risk of a flammable gas or vapour 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. The area around the workspace shall be sectioned off. Ensure that the conditions within the area have been made safe by control of flammable material.

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.

Presence of fire extinguisher

If any hot work is to be conducted on the refrigeration 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.

No ignition sources

No person carrying out work in relation to a refrigeration 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.

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 refrigeration 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 charge size 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;
- Refrigeration 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.

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.

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.

NOTE: The use of silicon sealant may inhibit the effectiveness of some types of leak detection equipment. Intrinsically safe components do not have to be isolated prior to working on them.

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.

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.

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.

Leak detection methods

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. Oxygen free nitrogen (OFN) shall then be purged through the system both before and during the brazing process.

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;
- Evacuate;
- Purge again with inert gas;
- Open the circuit by cutting or brazing.

The refrigerant charge shall be recovered into the correct recovery cylinders. The system shall be flushed with OFN to render the unit safe. This process may need to be repeated several times. Compressed air or oxygen shall not be used for this task.

Flushing shall be achieved by breaking the vacuum in the system with OFN 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 OFN 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 ignition sources and there is ventilation available.

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 minimise 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 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.

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.

Labelling

Equipment shall be labelled 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.

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 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 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.

If you encounter any problems with this product please call our customer care team on 0345 640 20 20

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